

NSWC TR 84-364

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**MACH 14 FLOW RESTRICTOR THERMAL
STRESS ANALYSIS**

BY E. J. BECKER

STRATEGIC SYSTEMS DEPARTMENT

1 AUGUST 1984

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FOREWORD

This report documents a thermal stress analysis conducted at the Naval Surface Weapons Center/White Oak (NSWC/WO) between January and April of 1984. The objective of the study was to determine the effects of heating and mechanical pressure loading on the flow restrictor plate used in the Mach 14 leg of NSWC/WO Hypervelocity Wind Tunnel (Tunnel #9). Of concern were the compressive and tensile yielding that might be occurring during tunnel runs for different supply conditions.

Included in this report are the procedures for model generation using PATRAN-G, model translation into ABAQUS format, transient heat transfer analysis and thermal stress analysis input decks, results translation from ABAQUS to PATRAN-G, and any problems encountered while performing some of the above analyses. It also outlines the method used to determine the heat transfer film coefficients needed for ABAQUS. The results of these analyses were then reviewed and appropriate recommendations were made for future analyses.

This work was performed in support of the Wind Tunnel Safety Committee for the Aerodynamics Facilities Branch (K23).

Approved by:



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INTRODUCTION

A blowdown wind tunnel subjects many components to compression and expansion waves due to the sudden expansion of high pressure gas. Sometimes, as an expansion wave moves against the flow of air in the tunnel, components in the flow path can be damaged by the oscillating pressure load, coupled with high gas temperatures. In the Mach 14 leg of the Naval Surface Weapons Center/White Oak Hypervelocity Wind Tunnel (NSWC/WO Tunnel #9), a flow restrictor plate was introduced to alleviate this problem. It lessened the effect of the high pressure expansion wave on the heater element by reducing the magnitude of the expansion wave. This reduced the loading effects on the heater element. However, this causes a pressure drop across the flow restrictor which resulted in a pressure load on the plate. Under normal conditions, this pressure drop is about 2000 psi.

What has become of interest is the pressure drop across the plate that can be run at a certain temperature. Different pressure drops will give different tunnel conditions, and thus enhance the capabilities of the wind tunnel. Unfortunately, as the pressure drop goes up, so does the load across the flow restrictor. This causes a problem as undesirable effects, such as material yielding, can occur on the flow restrictor. In Tunnel #9, the flow restrictor plate is made out of Columbian C-103 and is 5.25 inches in diameter with a 2.79 inch thickness (see Figure 1). Because of the flow restrictors location in the wind tunnel, it encounters high temperatures due to the flow of the supply gas passing through it. The thermal stresses from these high temperatures, coupled with the pressure loading, can result in yielding that leads to fatigue failure at a later time. Thus the question arises, how large a pressure drop can be safely run at a given temperature.

The analysis conducted addresses this problem. This was accomplished by first making a transient heat transfer analysis. After this was completed, a particular temperature gradient field was selected and a thermal stress analysis made which included pressure loading. The procedure used to make the necessary computer runs are included in this report. Also included are some of the problems encountered while making the computer runs. Lastly, the results of the analysis are reviewed with conclusions and recommendations made for future studies. This will help define what conditions could be run in future wind tunnel tests.

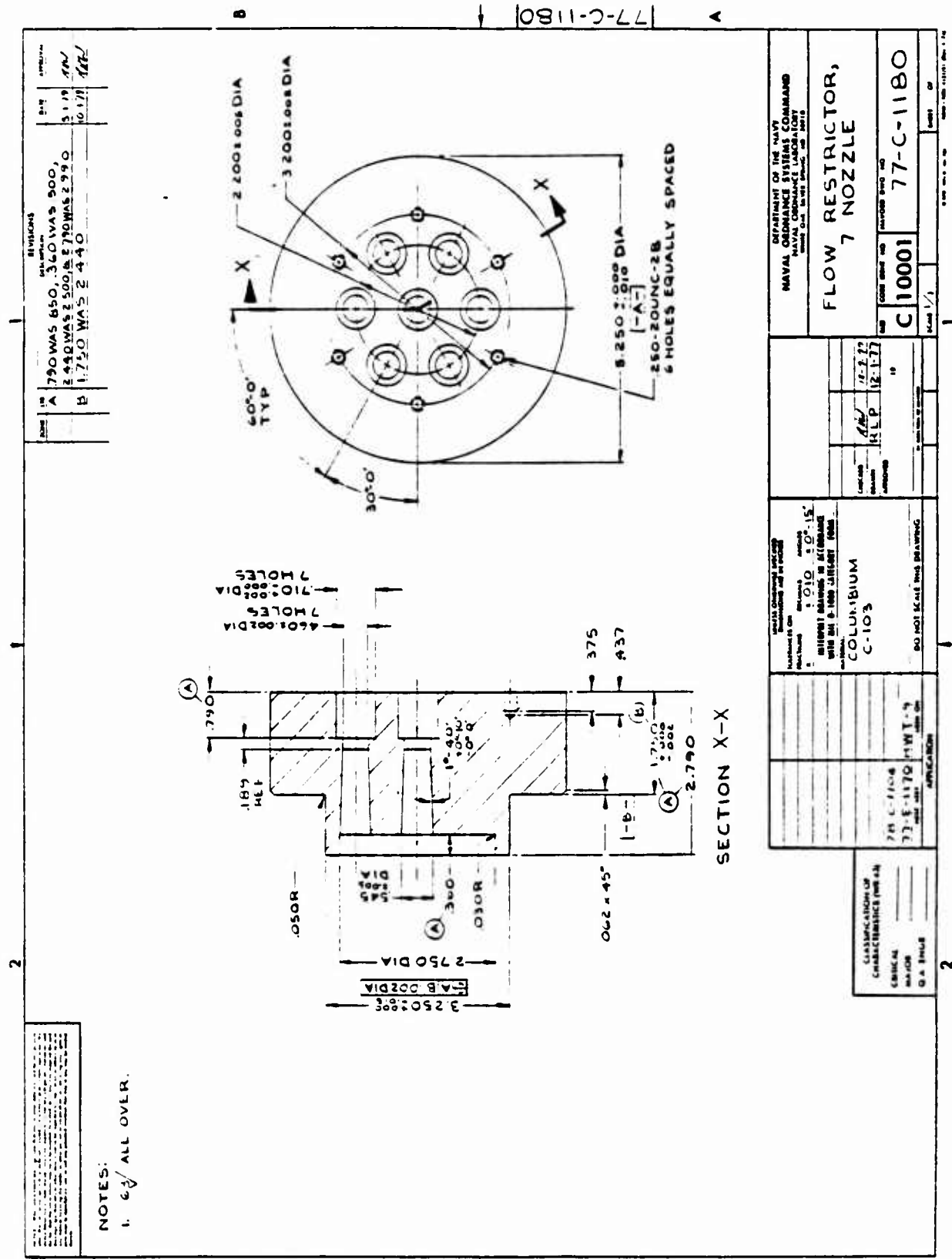


FIGURE 1. MECHANICAL DRAWING OF MACH 14 FLOW RESTRICTOR PLATE

MODEL GENERATION

The finite element model that was used in this analysis was created using PATRAN-G. PATRAN-G is an interactive solids modeling graphics program and is supplied by PDA Engineering of Santa Ana, CA. The model dimensions were taken from a mechanical drawing of the Mach 14 flow restrictor plate (see Figure 1). Due to the symmetry of the plate, a 30 degree wedge was used for the final finite element model. The section that was used is shown in Figure 2. Figure 3 shows the finite element model used in this analysis.

The procedure for generating the finite element model is given in Appendix A. This appendix includes the listing of the commands input to PATRAN-G to develop the geometry of the model and then the finite element model. These are the session files generated while using PATRAN-G.

It was decided to use 20 node bricks for the finite element model. There were 2 main reasons for this choice. The first was that less elements would be needed to make up the model. This was an important consideration as the number of elements affects the run time for a computer analysis. Even with the increased number of integration points for a 20 node brick (27 as compared to 8 for the 8 node brick), less time was used to obtain a reasonably accurate solution. With 8 node bricks, 8 times as many elements would have been needed for the same number of nodes. This, in turn, would have increased the wavefront number in ABAQUS and dramatically increased the run time. The second reason was that 3 node sides allowed for quadratic equations to define the side of an element. This meant that a curved surface, such as a half-circle, could be exactly defined. This was desired as the model became more realistic than if 8 node bricks had been used, which have straight sides.

After the model had been completed, a neutral file was created using PATRAN-G. This was necessary in order to use the translators available at this time. Also, it is important to have a property identification (PID) number associated with each element. This can be done at the same time that elements are generated for the model using the PFEG command. If there is no PID number, the translator will give a warning message to the terminal screen for each element without a PID number. Refer to Appendix A as to where this command occurs in the finite element generation process.

MODEL TRANSLATION FROM PATRAN-G TO ABAQUS

Once the finite element model was completed and a neutral file existed, a process was gone through to obtain the node and element data for an ABAQUS input deck. This was initiated by using 1 of 2 commands. These are PATNAS and PATCOS, and are part of the translator capability supplied by PDA Engineering with PATRAN-G. Both will result in the creation of a NASTRAN bulk data file. It was found that only PATCOS is capable of translating 20 node brick elements.

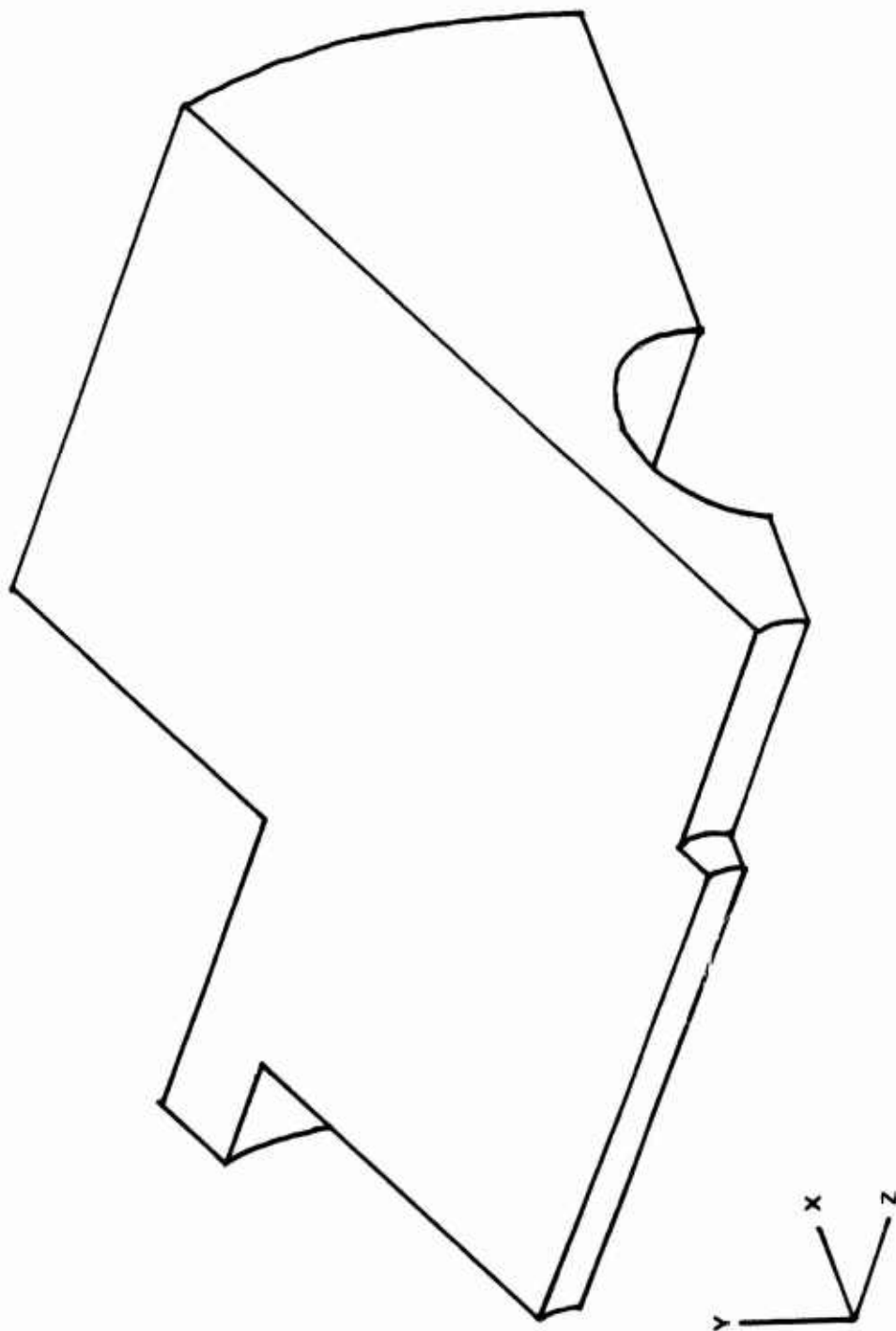


FIGURE 2. SECTION OF FLOW RESTRICTOR USED FOR FINITE ELEMENT MODEL

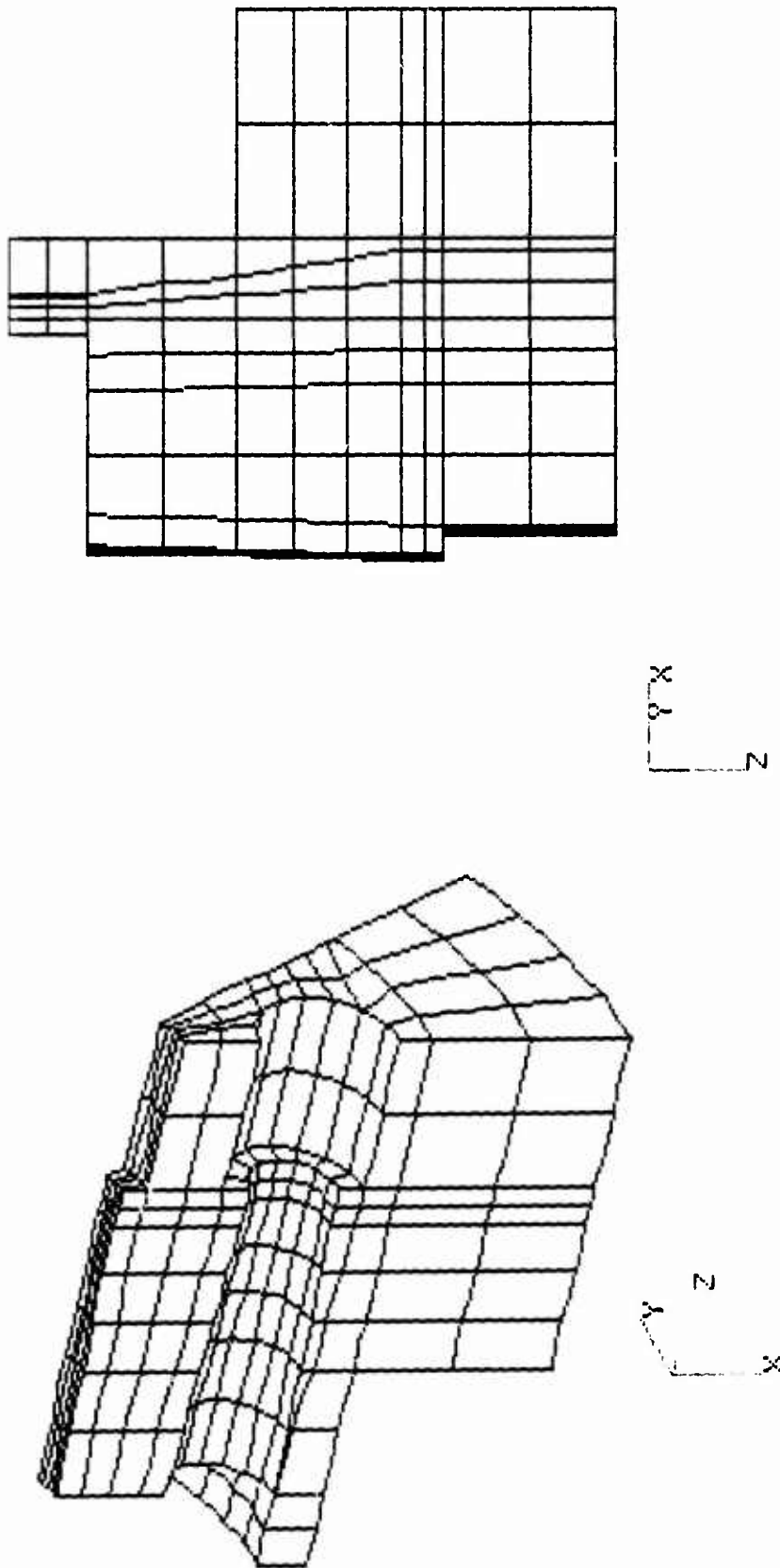


FIGURE 3. FINITE ELEMENT MODEL OF MACH 14 FLOW RESTRICTOR PLATE

The translation process is started by typing the command

\$ PATCOS

and answering the menu according to what is desired at the time. The underlined letters represent the users response. The other part of a command line is the prompt issued by PATCOS, or the system as is the case with the \$. After PATCOS has been initiated, it responds with a menu selection that the user must select from for the translation to start. For this analysis, a menu response of

Selection > 1

was first selected, which requests translation to be done. The response to the questions following are dependent on what has been done while using PATRAN-G.

PATRAN-G Neutral File name?
 (Just <ret> if latest "PATRAN.OUT")
 >FRABAQ.OUT

FLOW RESTRICTOR ANALYSIS

16-JAN-84

10:02:45

1.5

Is this the correct file? (Y/N)

> Y

Enter title for the bulk data file.
 Just <ret> to use the neutral file title.
 > <ret>

TRANSLATION INITIATED

1952 GRID record(s) written on "NASTRAN.BDF".

328 CXXXX record(s) written on "NASTRAN.BDF".

----- Translation done -----

2280 logical records (2936 card images) have been written on file "NASTRAN.BDF".

Hit <ret> to continue. > <ret>

At this point, the NASTRAN bulk data file has been created and is called NASTRAN.BDF. This is the default name given by PATCOS. The file FRABAQ.OUT is the neutral file output from PATRAN-G. Its original name, PATRAN.OUT, was changed so as not to confuse it with other existing neutral files. After the response to continue, the PATCOS menu again presents itself to the user. A response of

Selection > 6

was chosen since the translation was completed at this time. PATCOS responds to this with the message

PATCOS execution completed

and the user will be returned to the regular system \$ prompt. This ends the PATCOS translation process.

As a result of this translation, PATCOS has created a couple of new files. These were the NASTRAN bulk data file NASTRAN.BDF and PATCOS.MSG. The second of these files, PATCOS.MSG, is just an informational file of what has been done by PATCOS. A listing of PATCOS.MSG is included in Appendix B.

It was now possible to create an ABAQUS input deck by using the translator COSABA. A procedure file, TRANSL1.COM, was used for setting up and submitting COSABA via another procedure file TRANSL.COM. Copies of COSABA, TRANSL1.COM, and TRANSL.COM can be found in Appendix B.

In order to use TRANSL1.COM, an INPUT.DAT file must exist with at least two lines of information. These two lines

4
C3D20

are the element identifier number (4) and the element type (C3D20). These two lines are needed for every different type of element used in the NASTRAN.BDF file with the first element type used first, the second element type used second, and so on.

With this file and NASTRAN.BDF available, it was possible to use TRANSL1.COM. This was done by typing the command

\$ @TRANSL1

and responding to the questions asked by the procedure file.

Input data file (or RETURN for INPUT.DAT):<ret>
 NASTRAN input file name (or RETURN for NASTRAN.BDF):<ret>
 ABAQUS output file identifier (or RETURN for ABAQUS.DAT):FRABAQ.DAT

TRANSL.COM was automatically submitted after all the questions were answered. This resulted in the creation of an ABAQUS input file which contained only the node and element data for the flow restrictor finite element model. The ABAQUS input file, FRABAQ.DAT, had to be edited and the remaining information input by the user. This included the rest of the model definition (such as node and element sets), material definition, and history definition. Each of these will be defined in the following sections of this report.

A flow chart of this forward translation process is given in Figure 4. With this figure and the files in Appendix B, the entire process can be understood. Special attention is directed to the informational notes contained in COSABA. These were of help in generating the proper INPUT.DAT file format.

ABAQUS CONSIDERATIONS

In completing the ABAQUS input file, a number of considerations must be made. These included what options will be used, model connectivity, and desired accuracy for the results. Each of these areas impact the analysis time, but in different ways. Some take longer computer time, while others require user supplied computer coding. In any event, care must be taken when assembling the remainder of the FRABAQ.DAT file.

The model definition of the input file is usually taken care of in PATRAN-G. Unfortunately, PATRAN-G does not always generate elements and nodes in the optimum way. Due to the way ABAQUS works, this can become critical in relation to the run time. ABAQUS optimizes on the element wavefront number. This means that consecutive numbering of adjacent elements is the optimum manner in which to number them. This, however, becomes somewhat difficult with a 3-dimensional model. The way to optimize the model is to start numbering the elements at one corner and continue sequentially along the shortest side. When that row of elements is numbered, start with the adjacent row in the next shortest side of the model. Continue in this manner until the first layer is finished. When the first layer of elements is done, go to the next layer and number them in the same manner as the first layer. Do this until all the elements are numbered. This will give a reasonable wavefront number that is

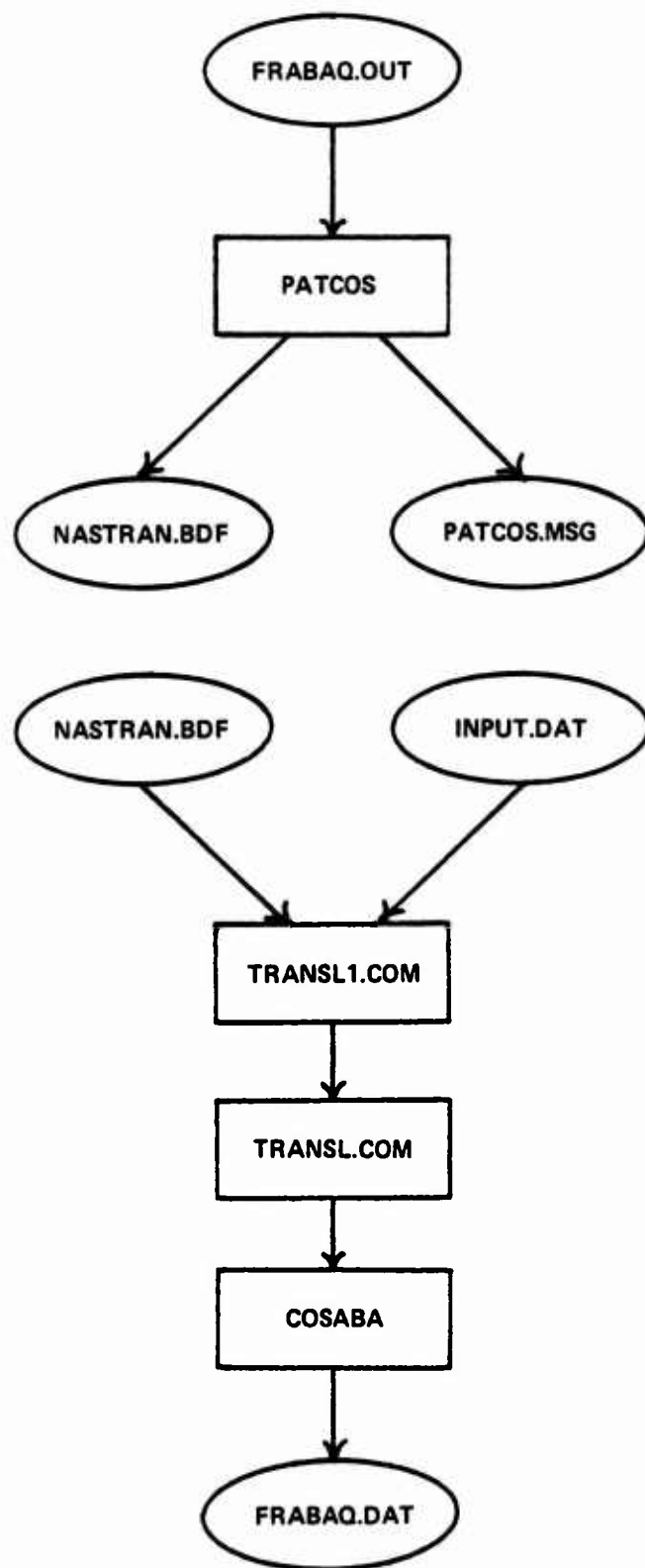


FIGURE 4. FORWARD TRANSLATION FLOW CHART

better than what would have been obtained from PATRAN-G directly without intervention. This was done on the flow restrictor model and saved substantial amounts of time for analysis runs.

Another part of the model definition was the boundary conditions. These consisted of symmetry conditions and actual constraints. The symmetry conditions were the x-z plane and this plane rotated 30 degrees in a counterclockwise direction about the z-axis. Both of these planes were constrained from motion perpendicular to the plane. For the x-z plane, this was simply a restriction in the y-direction. The rotated plane required the use of a *TRANSFORM option card. It was put into a cylindrical coordinate system with the θ -direction restricted from motion. Using the *TRANSFORM option meant that all output was then done in the cylindrical coordinate system for the transformed nodes. This caused some problems when using the reverse translator ABAPAT and viewing the displacement results. More will be said about this in a later section. The two outer circular edges were restricted from motion in the radial direction. This required the use of another *TRANSFORM card with the r-direction constrained from movement. Also, the x-y plane that connected these two edges was not allowed to move in the z-direction. This was all that was needed for the actual constraint conditions.

For the rest of the ABAQUS option cards mentioned, refer to the appropriate section where each is used for that part of the analysis. Those options that were used are listed below.

- *PLASTIC
- *HEAT TRANSFER
- *FILM
- *STEP, LINEAR=OLD
- *FIELD
- *TEMPERATURE

All of these options dealt with the history definition of the analysis except *PLASTIC. This was used in the material properties definition.

MATERIAL PROPERTIES OF COLUMBIUM C-103

The material definition of the model consists of the known mechanical properties. The material used for the Mach 14 flow restrictor plate is Columbiium C-103. What was needed by ABAQUS for the transient heat transfer and thermal stress analysis were the following:

1. Modulus of Elasticity as a function of temperature
2. Poisson's ratio as a function of temperature
3. Thermal conductivity as a function of temperature

4. Density
5. Specific Heat
6. Thermal Expansion Coefficient as a function of temperature
7. Yield Strength as a function of temperature
8. Plastic Strain as a function of temperature
9. Plastic Tangent Modulus as a function of temperature

Most of these properties were obtained from a memorandum written by Charles Rozanski (K23) on 23 December 1983. The rest were attained from graphs supplied by Robert Waser (K23). Appendix C gives the values for each of these properties along with the corresponding ABAQUS input. All of the * option cards used are well defined in the ABAQUS User's Manual except the *PLASTIC card. This one merits further explanation.

In order to arrive at the proper values needed on the *PLASTIC card, one must have available stress-strain curves at different temperatures. A minimum of two temperatures is sufficient, but the more available, the better. The values needed are the yield stress point, failure stress point, and the associated strain values at both of these points. Two lines are used for each temperature. The first line has the yield stress, a zero value, and then the temperature on it. The second line has the failure stress, difference between the yield strain and the failure strain, and the same temperature as the first line on it. In this manner, by repeating the properties at different temperatures, a fairly good material model can be made. If the stress-strain curve was to be more accurately modeled, segments could be done in a linear piecewise fashion.

USER SUBROUTINE FILM

In order to make a transient heat transfer analysis, it is necessary to supply ABAQUS with a heat transfer film coefficient. This can be done in two ways. One way is to assume a constant value per element face throughout the run time of the computer code. The other is to assume that the film coefficient is non-uniform and changes during the run. Since the film coefficient is pressure and temperature dependent, it was thought best to input the coefficient as non-uniform. Also, due to the geometry of the flow restrictor, three different equations were needed to calculate the coefficient at different locations. With these restrictions in mind, it was decided to make use of a user subroutine within ABAQUS.

The user subroutine that was used is called FILM. A listing of FILM.FOR can be found in Appendix D. The theory behind the subroutine coding is presented here as well as a way of checking the subroutine for accuracy. Also

included in this section is the methodology needed to change the subroutine for a different set of conditions.

There were three equations used to define the film coefficients for this model. A memorandum by Mark Opeka (K22) dated 23 January 1984 was used to obtain two of these equations. The other equation was obtained from a memorandum by Robert Kavetsky (K23) dated 23 April 1980. With these three equations, the film coefficients could be determined on all of the surfaces that would experience heating.

On the front surface of the flow restrictor, the following equation was used.

$$\bar{h}_F = 0.228 \frac{K_f}{d} \sqrt{1 + \frac{d}{D}} \left(\frac{U_\infty d \rho_f}{\mu_f} \right)^{0.731} (Pr)^{1/3} \quad (1)$$

The Bartz equation

$$\bar{h}_N = 0.052 \frac{C_p}{D^{0.2}} \frac{\mu_f^{0.2}}{Pr^{0.6}} (U_\infty \rho_f)^{0.8} \quad (2)$$

was used for the nozzle section of the flow restrictor. On the back side of the flow restrictor, the equation

$$\bar{h}_B = 0.221 \frac{K_f}{d} \left(\frac{U_\infty d \rho_f}{\mu_f} \right)^{2/3} (Pr)^{1/3} \quad (3)$$

was used. For the vertical section of the step inside the nozzle, an average of Equations (1) and (2) was used to determine the film coefficient. On the flange section that sticks out in the back, the coefficient was calculated as an average of Equations (2) and (3). These two equations take on the following form.

$$\bar{h}_V = \frac{1}{2} (\bar{h}_F + \bar{h}_N) \quad (4)$$

$$\bar{h}_f = \frac{1}{2} (\bar{h}_N + \bar{h}_B) \quad (5)$$

The variables used in Equations (1), (2), and (3) are defined below.

k_f = Gas thermal conductivity at film temperature

d = Effective wetted surface diameter

D = Diameter of external duct or nozzle

U_∞ = Free stream gas velocity

μ_f = Gas dynamic viscosity at film temperature

ρ_f = Gas density at film temperature

Pr = Prandtl number, taken as a constant equal to 0.74

C_p = Specific heat at constant pressure, taken as a constant equal to 0.295 Btu/lb °R

In calculating U_∞ , the mass flow rate used was for Mach 14 conditions. This is given as 128.3668 lbm/sec. The velocity is now found at any point by rearranging the mass flow equation.

$$U_\infty = \frac{\dot{m}}{\rho A} \quad (6)$$

where: \dot{m} is the mass flow rate

ρ is the density at the free stream temperature

A is the area of flow passage

The free stream temperature is defined by the user as the sink temperature. This is one of two variables defined by the user in subroutine FILM for use by ABAQUS. The other is the heat transfer film coefficient. The sink temperature follows the curve as depicted in Figure 5. At time equal to zero, the sink temperature is taken as being 70°F. It was found that a sink temperature of 0°F at time equal to zero caused numerical difficulties.

To calculate the area of flow at a particular point in the restrictor plate, one had to look at the dimensions of the plate. This was done for each surface that was seeing flow and tabulated in Table 1. Also included in Table 1 are the associated element sets and diameters used at these points. The wetted surface diameter is found from the surface area perpendicular to the gas flow. Knowing the surface area, the wetted surface diameter is the corresponding diameter that would give the same area.

In determining the pressure at a certain point, one must be aware of the wind tunnel run conditions. For this particular analysis, the pressure on the

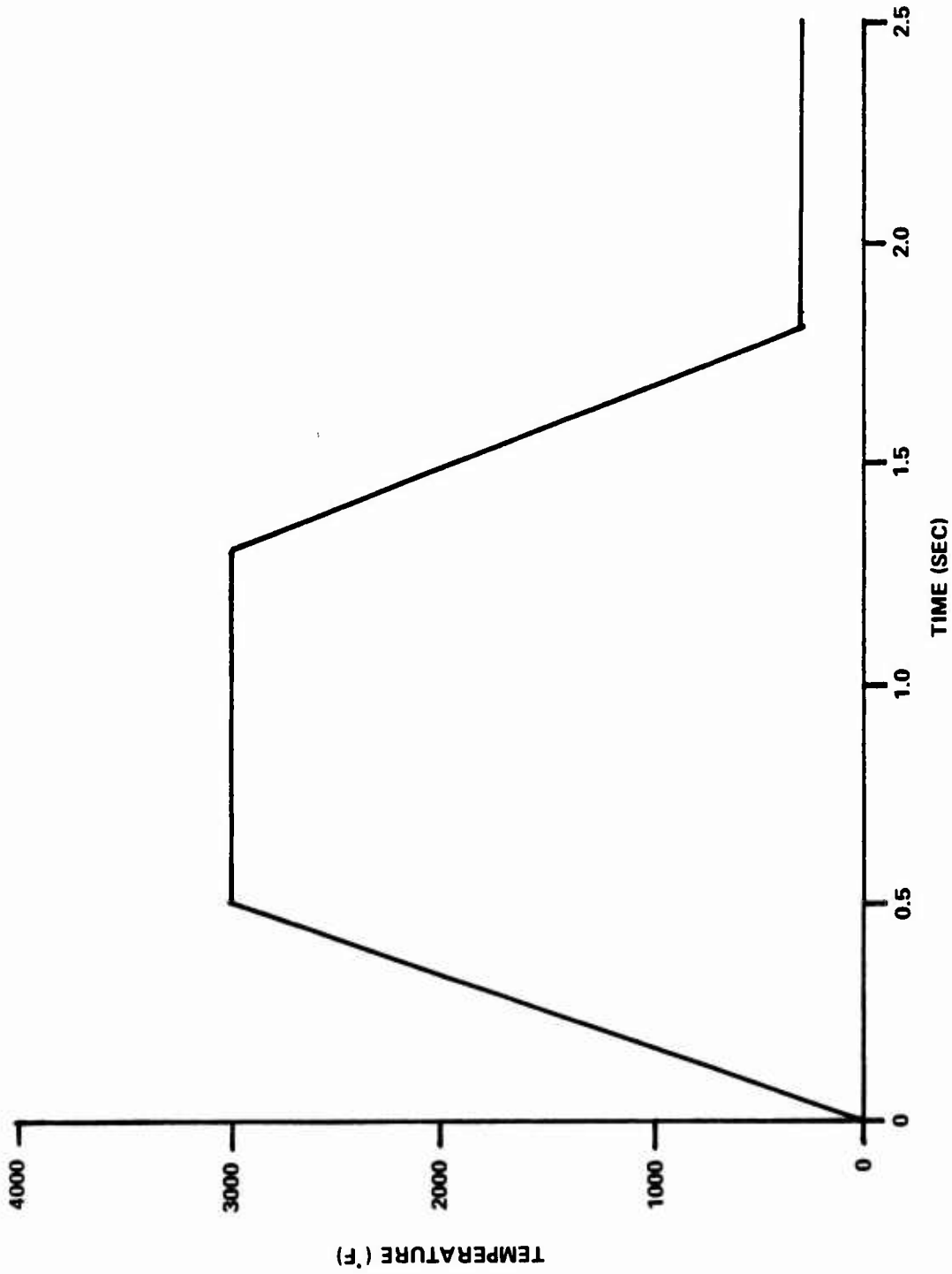


FIGURE 5. SINK TEMPERATURE VS. TIME

TABLE 1. DIAMETER, AREA, AND PRESSURE FOR EACH ELEMENT SET

ELEMENT SET	DIAMETER D (IN)	WETTED DIAMETER d (IN)	AREA (FT ²)	PRESSURE (PSI)
FSUR1	5.25	4.9024	0.150330	22,000.0
HOL13	0.71	----	0.002749	21,500.0
HOL14	0.71	----	0.002749	21,500.0
HOL16	0.71	----	0.002749	21,500.0
FSUR2	0.71	0.5408	0.002749	21,500.0
HOL2	0.46	----	0.001154	21,500.0
HOL3	0.468	----	0.001192	21,000.0
HOL4	0.482	----	0.001270	21,000.0
HOL5	0.498	----	0.001351	21,000.0
HOL6	0.515	----	0.001447	20,500.0
HOL7	0.535	----	0.001561	20,500.0
RSUR1	---	2.3358	0.041097	20,000.0
FLNG1	0.545	2.3358	0.001620	20,500.0
FLNG2	2.745	2.3358	0.041097	20,000.0
RSUR2	---	1.7400	0.057610	20,000.0

front surface was 22,000.0 psi and 20,000.0 psi on the back surface. In between these two locations, pressure values were assigned between 20,000.0 and 22,000.0 psi. All of these values are listed in Table 1.

To calculate the remaining 3 values, gas thermal conductivity, dynamic viscosity, and density, a separate subroutine was used which is called FINTERP. This subroutine returns the value for each of these by interpolating from a user supplied table of values. These tabulated values are a function of pressure and temperature (see Tables 2, 3, and 4). At this point, the film temperature was used as an input to subroutine FINTERP. It is given as the average between the free stream (sink) temperature and the wall temperature.

$$T_f = \frac{1}{2} (T_\infty + T_w) \quad (7)$$

Given the pressure and temperature from Equation (7), the proper values are found by FINTERP and then used in subroutine FILM.

Subroutine FILM was written so that this procedure would be done transparent to the user. All of the theory behind the equations has been outlined above and coded in the subroutine. This was first checked out for accuracy by using the program FILMTEST which is included in Appendix D. All that FILMTEST did was to exercise subroutine FILM and give the user output. With this output, the user could make sure that subroutine FILM was working properly. This was accomplished without having to run ABAQUS and resulted in appreciable time and cost savings.

This subroutine was written solely for the Mach 14 flow restrictor problem and model. It was not intended to change except for different run conditions. Both the temperature and pressure are easily altered and doing this is straightforward. In changing the pressure values, all that is needed is a redefinition of the PRESSFS array values. Each location corresponds to one element set and the pressure differential should be divided in some way between them (see Table 1 for example). The temperature profile is not quite as easy, but not difficult nonetheless. As long as the profile can be put into equation form as a function of time, there is no problem. Just replace the coding for defining the sink temperature. Additional data may also be needed for the density table in FINTERP depending on the pressure values used in array PRESSFS. The program will extrapolate outside of the current values, but if more accuracy is desired, additional values will have to be added to the table. With these changes, many different run conditions can be analyzed to identify potential problems. All that is needed now is to complete the history definition of the ABAQUS input.

TABLE 2. DYNAMIC VISCOSITY AS A FUNCTION OF PRESSURE AND TEMPERATURE

PRESSURE (PSI)	14.6959	14,695.9	29,391.8
	VISCOSITY (lb/hr • ft)		
TEMPERATURE (°R)			
750	0.053	0.099	0.18
1000	0.635	0.118	0.18
1500	0.084	0.125	0.1825
2000	0.104	0.14	0.186
2500	0.119	0.153	0.191
3000	0.133	0.165	0.2
3500	0.147	0.176	0.21

TABLE 3. THERMAL CONDUCTIVITY AS A FUNCTION OF PRESSURE AND TEMPERATURE

PRESSURE (PSI)	14.6959	14,695.9	29,391.8
TEMPERATURE (°R)	CONDUCTIVITY (Btu/hr • ft °R)		
750	0.0205	0.0435	0.08
1000	0.252	0.0475	0.0805
1500	0.0339	0.055	0.083
2000	0.042	0.0625	0.086
2500	0.0495	0.0695	0.09
3000	0.0565	0.076	0.096
3500	0.064	0.082	0.102

TABLE 4. DENSITY AS A FUNCTION OF PRESSURE AND TEMPERATURE

PRESSURE (PSI)	20,000.0	20,400.0	20,800.0	21,200.0	21,600.0	22,000.0
	DENSITY (lb/ft ³)					
TEMPERATURE (°R)						
760	33.2401	33.5083	33.7726	34.0331	34.2900	34.5435
835	31.6982	31.9658	32.2295	32.4894	32.7457	32.9985
1210	25.9477	26.2139	26.4751	26.7316	26.9838	27.2319
1585	21.9185	22.2011	22.4763	22.7444	23.0060	23.2614
1960	18.7722	19.0428	19.3112	19.5778	19.8436	20.1073
2335	16.4698	16.7145	16.9571	17.1975	17.4360	17.6724
2710	14.6965	14.9216	15.1447	15.3660	15.5853	15.8029
3085	13.2777	13.4865	13.6936	13.8991	14.1029	14.3051
3460	12.1128	12.3076	12.5009	12.6928	12.8833	13.0724

TRANSIENT HEAT TRANSFER ANALYSIS

In making a transient heat transfer analysis, there are a number of variables that need to be defined by the user. They have to do with either the accuracy of the solution or the time stepping of the analysis. All of these are associated with the *HEAT TRANSFER option card. The values input from this card and also the *FILM card make up the history definition for a run.

When choosing the values for the *HEAT TRANSFER card, one must be careful as these variables greatly impact the computer run time. The finite element model also determines to some extent the values used for the time step. For the values used, please refer to Appendix E. The time stepping values used are thought to be the best possible at this time. The values for TEMTOL and DELMAX are not necessarily the best. Further studies would have to be done, which were outside the scope of this problem, in order to determine the optimum values. What was chosen worked well for this particular analysis.

In contrast to the *HEAT TRANSFER values, those used in conjunction with the *FILM card are rigidly set by the problem. There should be no reason to change these values because of different wind tunnel conditions. These correspond to the face of each element that requires a film coefficient for transient heat transfer analysis. The fact that the description was taken as non-uniform automatically called user subroutine FILM. The user need do nothing except supply the subroutine FILM when making the computer run. This is done when the command procedure file ABAQUS1.COM is executed. Appendix F contains a listing of this file along with a listing of ABAQUS.COM.

Once the ABAQUS input file was completed, the analysis was submitted using the procedure files mentioned above. This is relatively straight-forward and will not be discussed here. After the analysis is completed and the results obtained, another translation was done between ABAQUS and PATRAN-G. This was done with the nodal results file and the procedure outlined in the next section.

RESULTS TRANSLATION FROM ABAQUS TO PATRAN-G

After the nodal results file was obtained, translation could be made back to PATRAN-G so as to look at the results graphically. This was done with the procedure files and program listed in Appendix G. The program, ABAPAT.FOR, will only translate nodal results. The capability to translate element results does not exist at present and will not in the near future. In order to get element values at node points, it was necessary to use the fourth card in the *EL FILE input stream. These were all nodal averaged values, and were helpful in visualization of the stress and strain fields of the flow restrictor.

One problem that occurred in translation from ABAQUS to PATRAN-G was with displacements. Because of the use of *TRANSFORM cards in applying some of the boundary conditions, difficulty arose in getting the proper coordinate system

and values for displaced nodes. ABAQUS does not translate displacements back into global coordinates for printed output or file results. The values were output in the local (transformed) coordinate system. In order to use PATRAN-G to look at the displacement results, it was necessary to translate the values back into the global coordinate system. This was done within the ABAPAT program by adding the coordinate frame transformation capability to the coding. With this addition to ABAPAT, the translation process could be completed.

The translation of results into the proper PATRAN-G format is initiated by typing the command

\$ @WRIT1

and then answering the questions asked by WRIT1.COM. The first one asked is about the TITLE.DAT file. This file consists of four lines with the first three being a title supplied by the user. These are 80 character lines that will be used as title information for any post-processing done with PATRAN-G. The fourth line is either .TRUE. or .FALSE., and depends on whether or not some nodal data needs to be transformed. This line will also determine the response to the next question asked by WRIT1.COM. This question will ask for the file containing the nodes to be transformed within ABAPAT. The first line of this file (TRANS.DAT in Appendix G) is the number of nodes. The second and following lines are the nodes that will need to have some results transformed into global coordinates. These are in I6 format with 15 values per line. After these two questions are answered, the last question asked is which nodal results file is to be used. This is the results file from the ABAQUS run. The results will then be translated and usable with PATRAN-G. Figure 6 is a flow chart of this reverse translation process.

TRANSIENT HEAT TRANSFER RESULTS

With both the visual results of PATRAN-G and the printed output (see Appendix H), a determination was made as to what increment of the step should be used for the thermal stress analysis. This was expected to occur sometime during the maximum sink temperature. In viewing the results of the heat transfer analysis, it was decided that the worst temperature gradient occurred near the 0.5 second mark in the run. Figure 7 shows this particular gradient. This was then used for the *TEMPERATURE input in the thermal stress analysis.

The computer run time for this analysis was about 18 cpu hours. The main reason for such a long run time was the large wavefront number of the model. Originally the wavefront was 843, but this was reduced to 528 by optimizing the element numbering. This was done in the manner outlined in a previous section. With this change in the wavefront number, it is expected the analysis would take approximately 6 cpu hours.

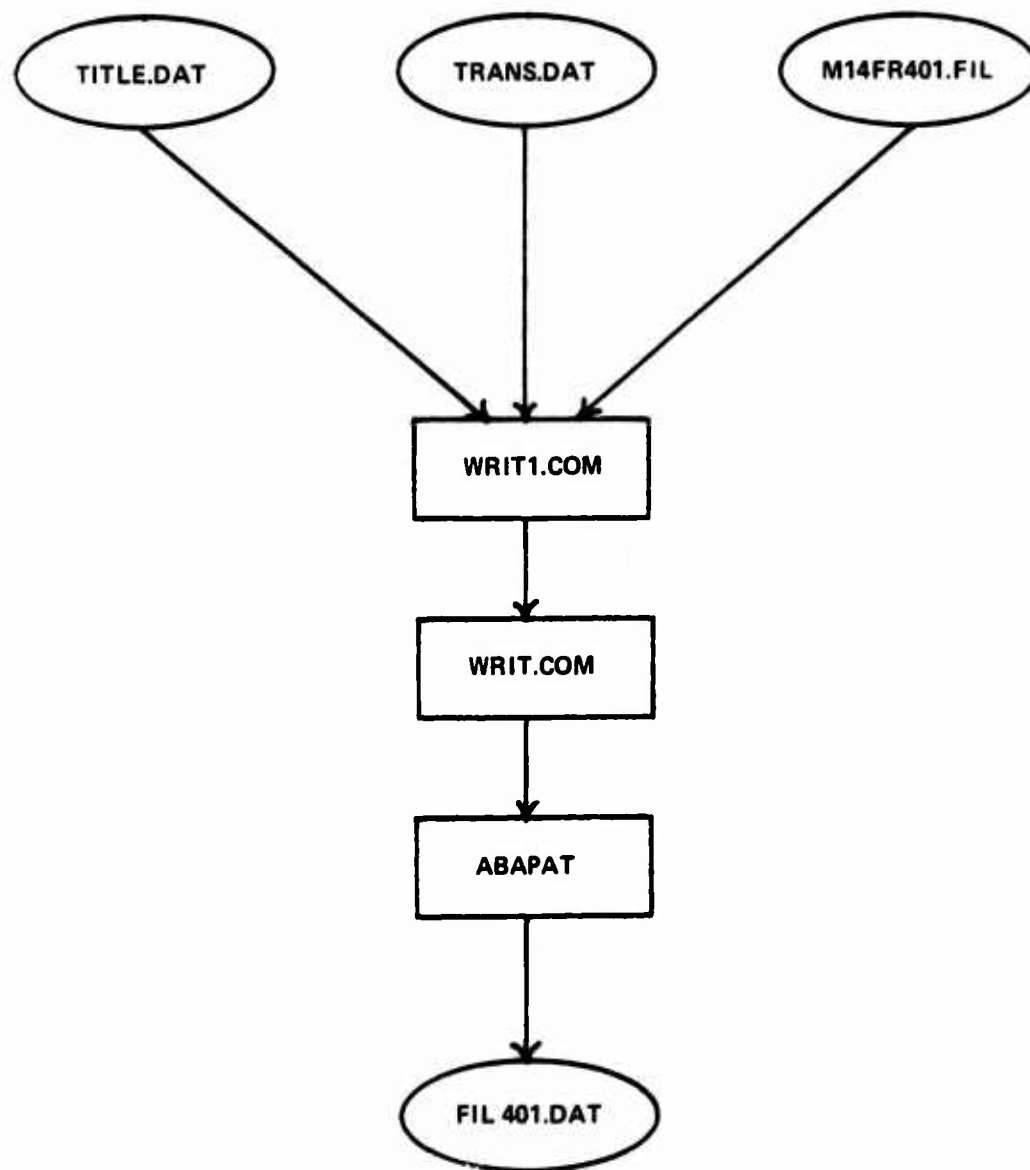
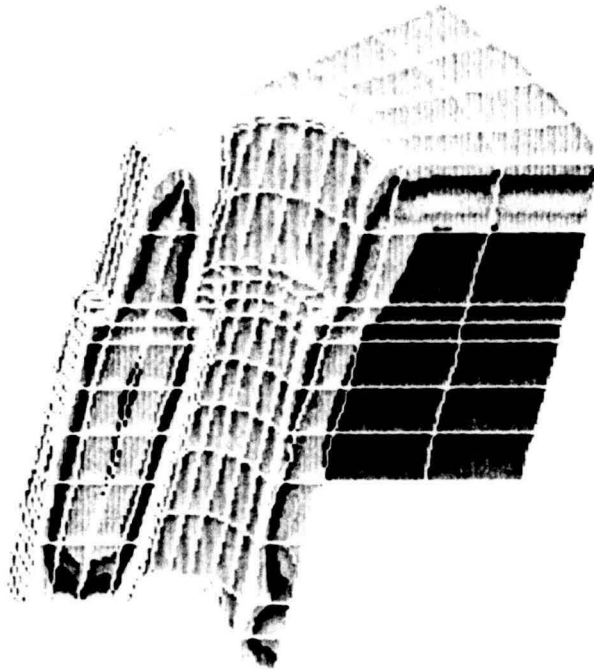
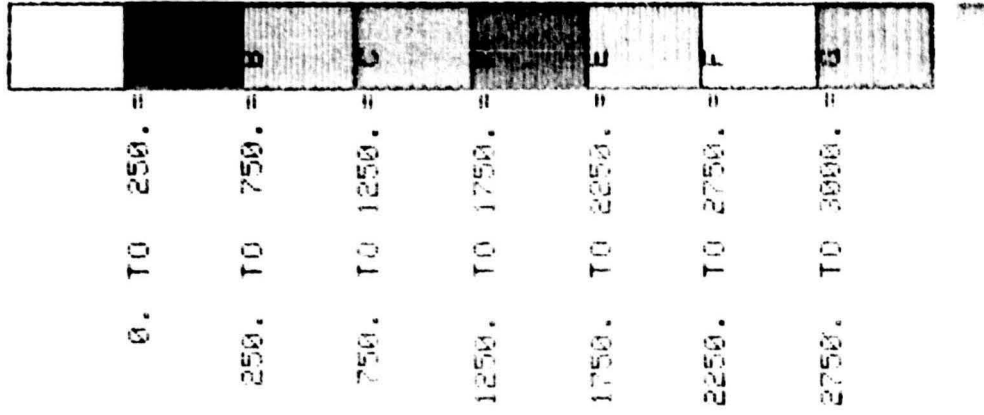


FIGURE 6. REVERSE TRANSLATION FLOW CHART



MACH 14 FLOW RESTRICTOR
 TRANSIENT HEAT TRANSFER ANALYSIS
 FUN M14FR401

FIGURE 7 TEMPERATURE GRADIENT AT TIME EQUALS 0.57 SECONDS

THERMAL STRESS ANALYSIS

The thermal stress analysis used the results of the transient heat transfer analysis. The temperature gradient selected not only supplied the proper thermal load, but also allowed material properties to be evaluated at the correct temperature. All of the material properties were temperature dependent, so this became an important factor. This was accomplished by using the *FIELD card.

In making the thermal stress run, it was decided to do the analysis in two parts. The first step was the pressure loading at the proper temperature. The pressure was put on the same element faces as the film coefficients using the *DLOAD card. The values used are those listed in Table 1. This step was taken to be linear and static as it was not expected that the pressure loading would cause any of the material to plastically yield.

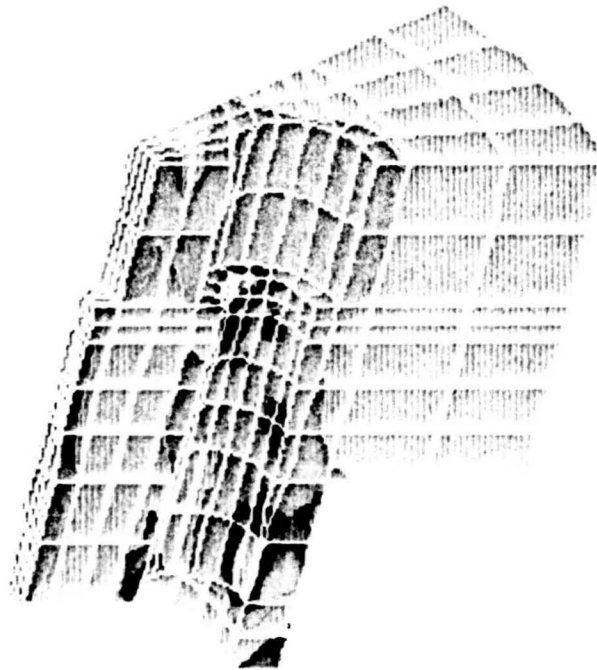
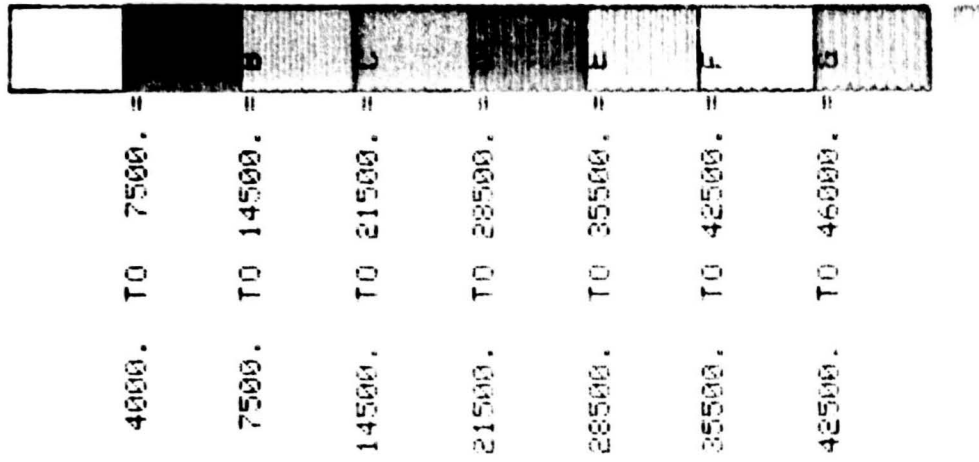
Unlike the pressure loading, the thermal loading was not expected to be linear. But, due to the large run time involved with non-linear analysis, it was decided to also run the temperature load as linear static. Here is where the *TEMPERATURE card was used as input to apply the thermal load. This made up the second step of the thermal stress analysis.

Both of these steps were run within one ABAQUS analysis. The pressure was done first so as to see the effects on the flow restrictor plate. Then the thermal load was added for the combined effect. This was accomplished by using the option card *STEP,LINEAR=OLD. As a result of this card, ABAQUS does not recalculate the stiffness matrix for the new loading and saves an enormous amount of computer time in the process. Since both the *FIELD and *TEMPERATURE cards were used, ABAQUS tried to open too many scratch files. This caused a fatal error and an end of execution within ABAQUS. This problem was solved by adding CORE=1000000.0 to the *HEADING card. The analysis was run with reduced integration elements. Instead of 27 integration points per element, only 8 points were used. It was hoped this would also lower the cpu run time, but it seemed to have little, if any, effect. As a result though, less output would be available due to only 8 points per element. Some accuracy of results may have been lost, but the effects were not noticeable. Appendix I contains a listing of the thermal stress analysis input file.

THERMAL STRESS RESULTS

The results of the thermal stress analysis were viewed using PATRAN-G via the ABAPAT translator. This included the displacement results and the stress-strain fields. Figures 8-14 show some of these results and each of these will be discussed in the following paragraphs.

Figure 8 shows the Von Mises stress field due to the pressure loading. The range of values is 4,780 to 42,100 psi. Overall, not much of the plate is in



MACH 14 FLOW RESTRICTOR
 THERMAL STRESS ANALYSIS
 RUN M14FR031 --- PRESSURE LOAD

FIGURE 8. VON MISES STRESS FIELD -- PRESSURE LOAD ONLY

yielding at this temperature gradient for just the pressure loading. In looking at the deformed displacement plots corresponding to this stress field (see Figure 9), nothing surprising is seen. These correspond well to what happens according to classical theory and anticipated results.

The next figure (see Figure 10) is the Von Mises stress field for the combined thermal and pressure load. Here, much of the flow restrictor is yielding, and at very high magnitudes. The corresponding range of values is 4,400 to 205,000 psi. Even at room temperature, vast portions of the plate are yielding. By looking at Figures 11, 12, and 13, it is seen that most of this yielding is in compression. Figure 11 is the r-direction stress field and Figure 12 is the θ -direction stress field. These are the radial and hoop stress respectively. The z-direction stress field is shown by Figure 13 and represents the axial stress. The range of values for these three figures all fall between -298,000 and 84,300 psi. The greatest range occurs in the hoop stress (see Figure 12), with corresponding strain values of -0.005 to 0.015 inches per inch. This clearly shows what effect a large thermal gradient will have on a stress field. It becomes even more apparent when viewing the deformed displacement plots (see Figure 14). The bulge in the middle of the plate was not unexpected and corresponds well with what is seen in actual wind tunnel runs. The maximum displacement is about 0.006 inches.

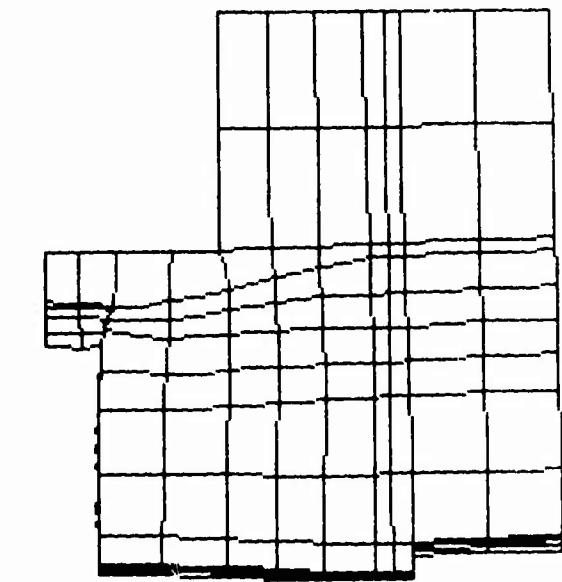
Appendix J contains a listing of all the thermal stress results mentioned above. From this data and the corresponding figures presented in this report, it is found that severe compressive yielding is occurring in much of the flow restrictor plate. This is a potential yielding problem and warrants further study in the future.

RESULTS AND CONCLUSIONS

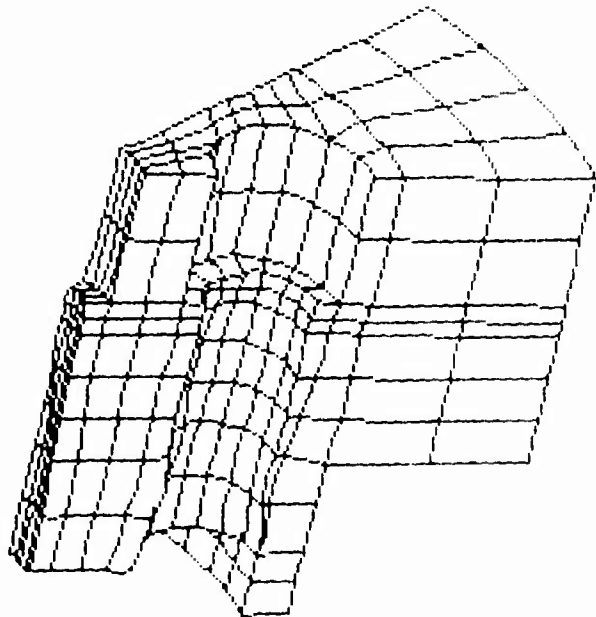
The results that were obtained with both of the analyses were expected and made sense. For the given supply conditions, the temperature gradient arrived at with the transient heat transfer analysis was within reason and proved to be accurate. It was proven by the results from the thermal stress analysis.

This analysis predicts that there is extensive compressive yielding occurring in a large portion of the Mach 14 flow restrictor plate. In reality this is true. The plate does have a permanent set in it after a wind tunnel run. The middle of the plate actually bulges out, just as exhibited in Figure 14. To my knowledge, the strains on the flow restrictor have never been measured, but I'm confident they would compare with those arrived at in this analysis.

In conclusion, I would say that this analysis was accurate and of value to the Wind Tunnel #9 Safety Committee. It verifies what has been observed by a computer analysis and gives at least relative numbers for stresses, strains, and displacements. It is a valid analysis and can be used as a guide for subsequent analysis at different conditions.

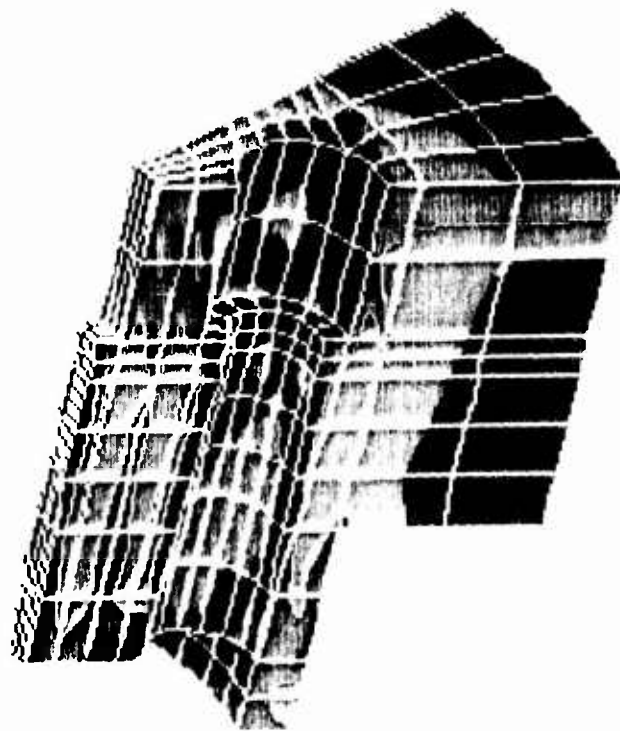
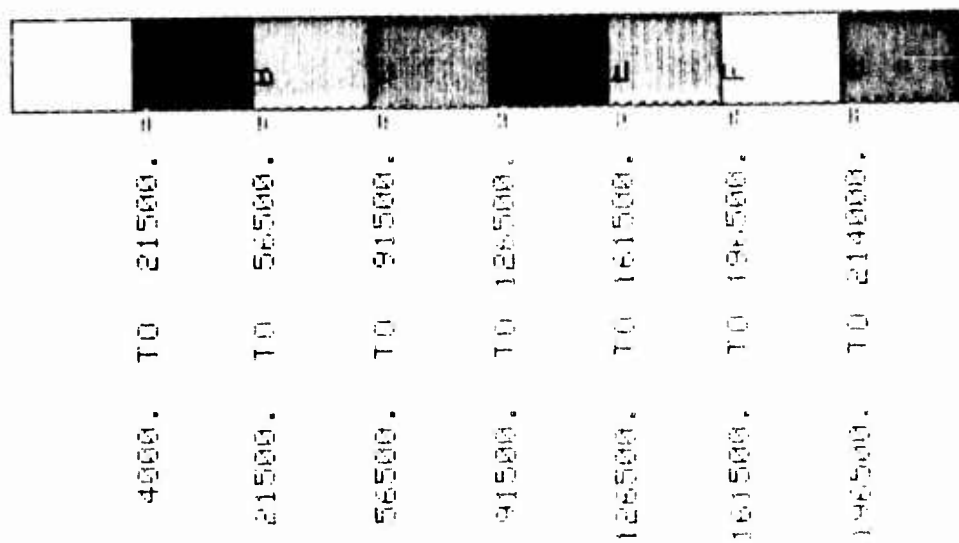


MACH 14 FLOW RESTRICTOR
THERMAL STRESS ANALYSIS
RUN M14FR031 --- PRESSURE ONLY



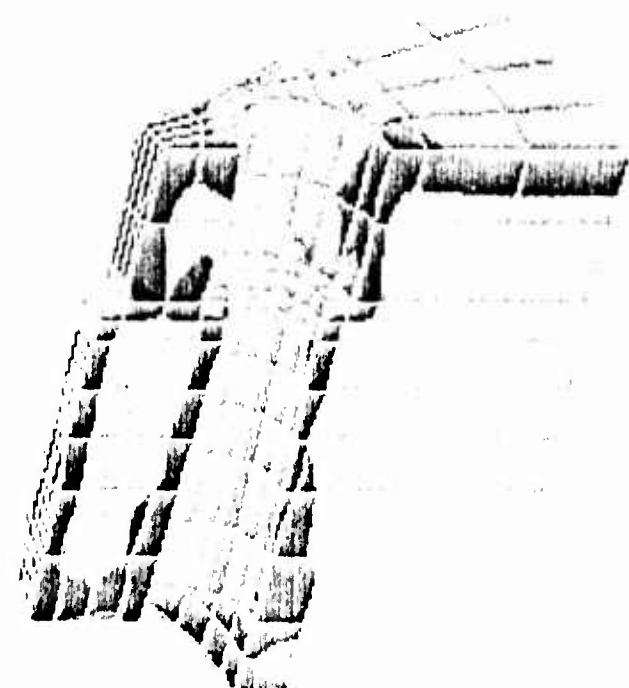
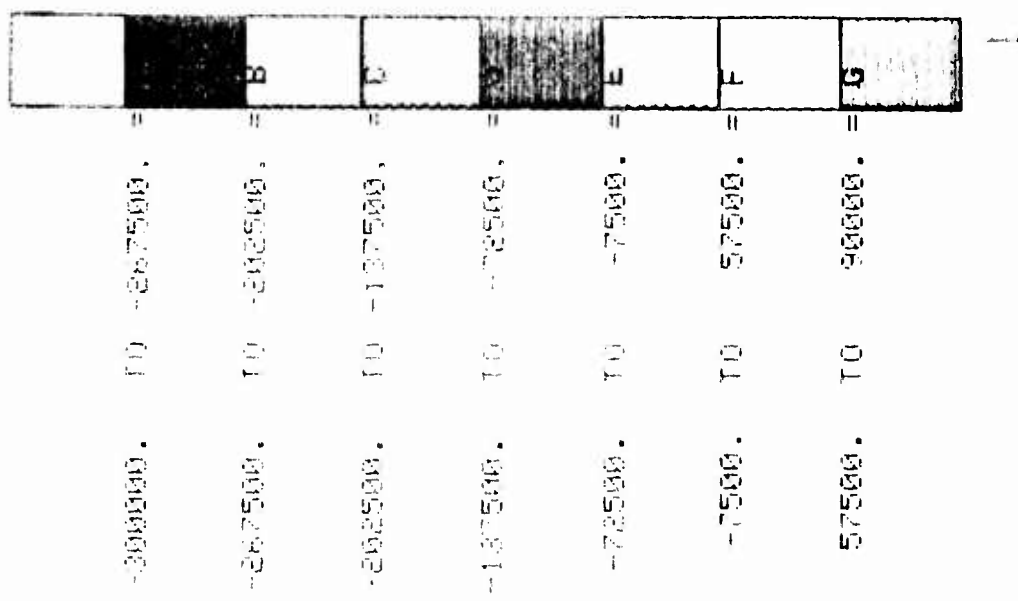
MACH 14 FLOW RESTRICTOR
THERMAL STRESS ANALYSIS
RUN M14FR031 --- PRESSURE ONLY

FIGURE 9. DEFORMED DISPLACEMENT PLOT - PRESSURE LOAD ONLY



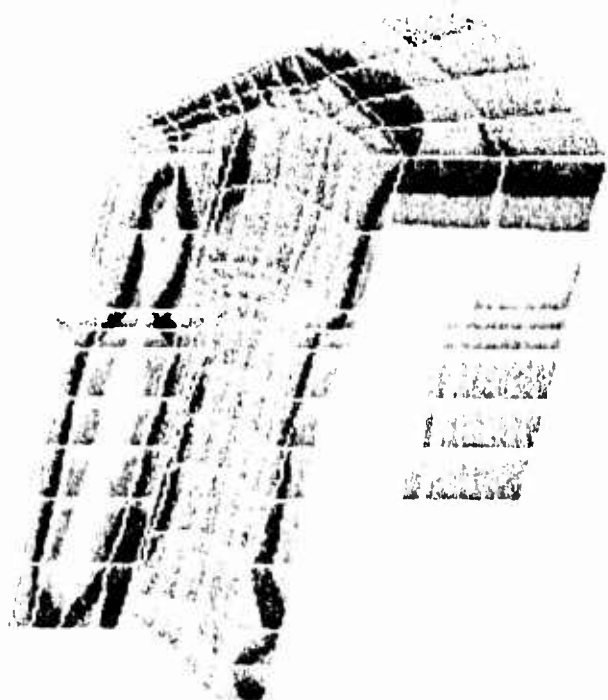
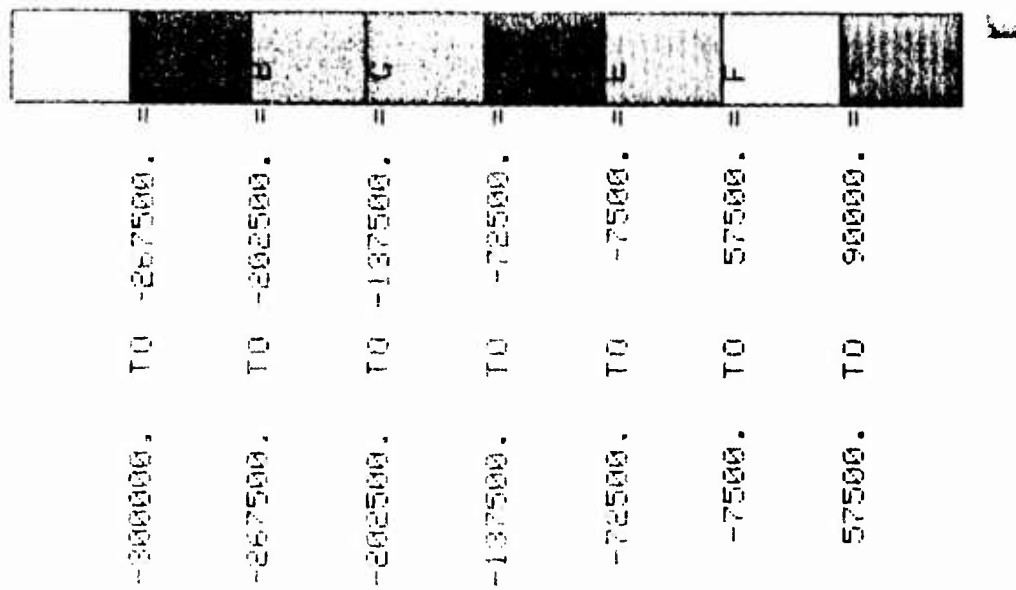
MACH 14 FLOW RESTRICTOR
 THERMAL STRESS ANALYSIS
 8014 M14FP031 - - - - PRESSURE AND TEMPERATURE LOAD

FIGURE 10 VON MISES STRESS FIELD - PRESSURE AND TEMPERATURE LOAD



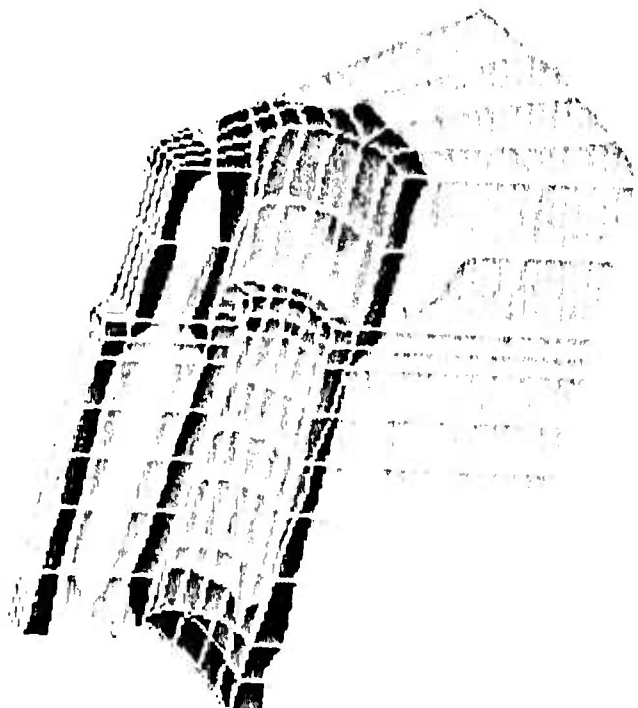
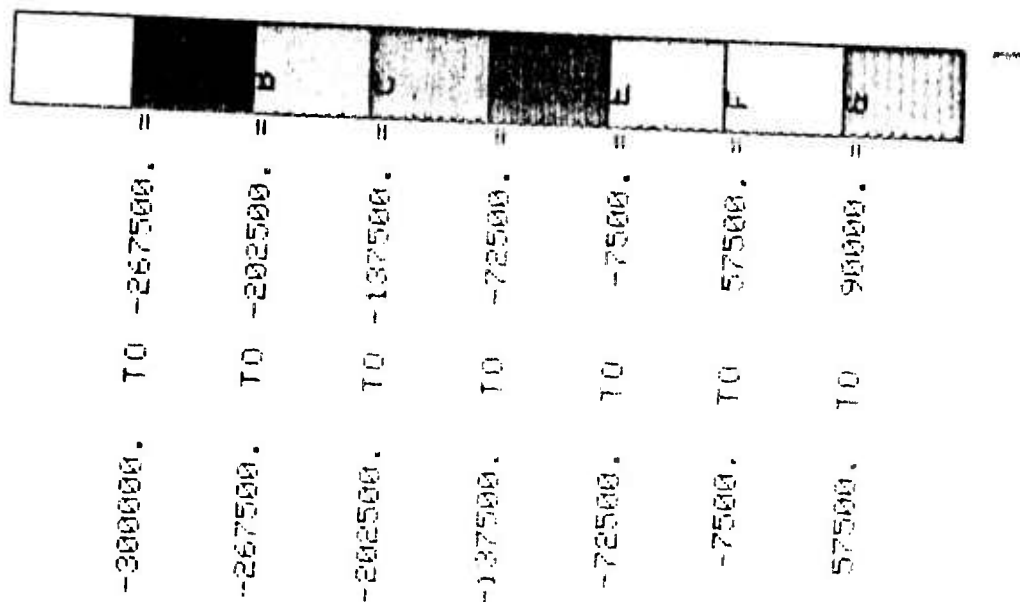
MACH 14 FLOW RESTRICTOR
 THERMAL STRESS ANALYSIS
 PUN M14FR001 --- PRESSURE AND TEMPERATURE LOAD

FIGURE 11. σ_x STRESS FIELD - PRESSURE AND TEMPERATURE LOAD



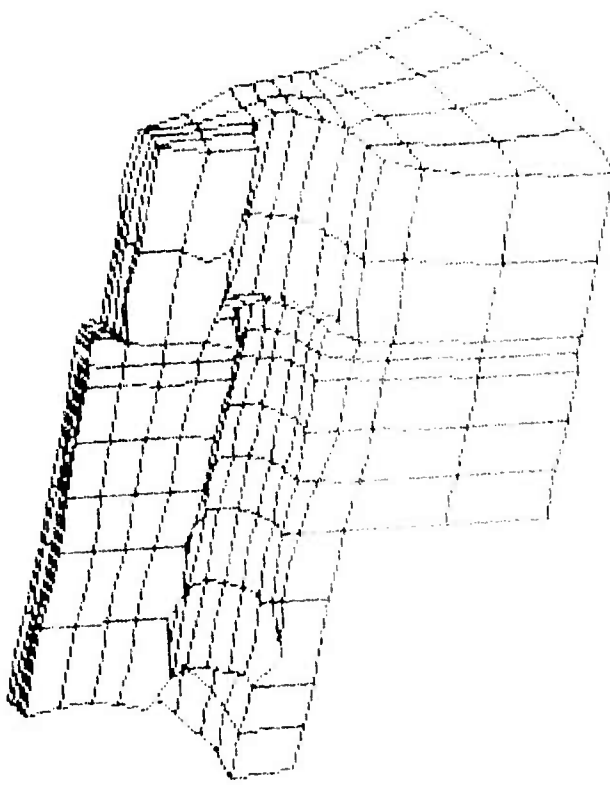
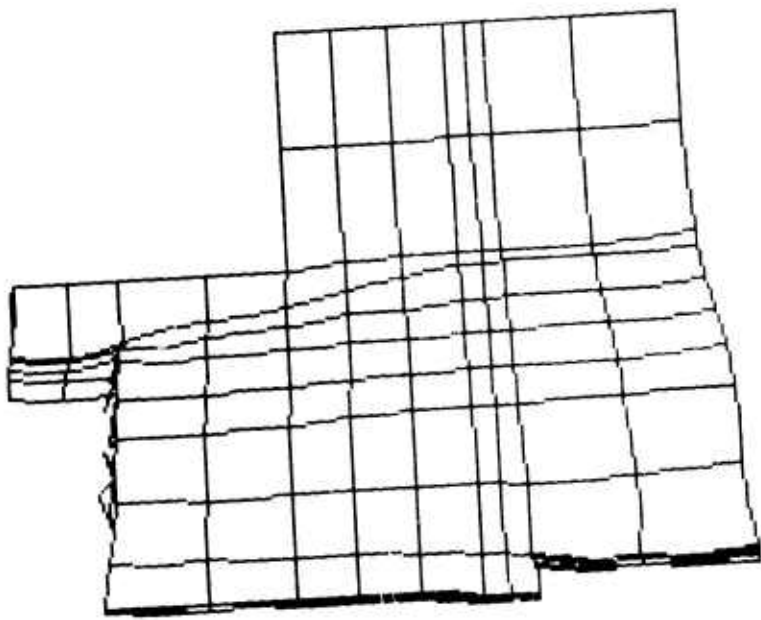
Y
Z
X
MACH 14 FLOW RESTRICTOR
THERMAL STRESS ANALYSIS
RUN M14FR031 --- PRESSURE AND TEMPERATURE LOAD

FIGURE 12. σ_y STRESS FIELD - PRESSURE AND TEMPERATURE LOAD



MACH 14 FLOW RESTRICTOR
 THERMAL STRESS ANALYSIS
 --- PRESSURE AND TEMPERATURE LOAD

FIGURE 13. σ_z STRESS FIELD - PRESSURE AND TEMPERATURE LOAD



Y X

MACH 14 FLOW RESTRICTOR
THERMAL STRESS ANALYSIS

PLIN M14FF001

FIGURE 14. DEFORMED DISPLACEMENT PLOT - PRESSURE AND TEMPERATURE LOAD

RECOMMENDATIONS

In order to further investigate this problem, more analysis needs to be done. Not only a nonlinear thermal stress analysis, but a fatigue analysis as well. The nonlinear analysis will give more accurate strain and stress values, as compressive yielding is obviously occurring in a large portion of the flow restrictor plate. The fatigue calculations will give some idea as to how many times the plate may be able to withstand this particular loading.

If the loading is changed for a wind tunnel run, this procedure can be used to arrive at preliminary results of stresses and displacements. It is my opinion that a larger pressure differential will cause even more compressive yielding. This in turn will weaken the plate and cause it to be unusable sooner. In view of this, care must be taken if structural integrity is to be maintained for this particular wind tunnel component. An analysis of this type should be completed for any new tunnel run condition before the run is actually made. Then, the possible effects may be seen and a decision made as to whether or not the tunnel will be run at the new conditions.

APPENDIX A

PATRAN-G MODEL GENERATION PROCEDURE FILES

GD
 1
 1
 2
 SET, LAB1, OFF
 SET, LINES, 0
 GR. 1. . 23//2. 79
 GR. 2. . 355//2. 79
 GR. 3. . 1 33//2. 79
 GR. 4. . 1. 455//2. 79
 GR. 5. . 1 625//2. 79
 GR. 6. . 2 625//2. 79
 DATA. 1. 5(0). 1. 30.
 LI. 8#. ARC. D1. 1/2/5/6
 DATA. 2. 1 1. 2(0). 1. 1. 0. 1. 160.
 LI. 8#. ARC. D2. 3/4
 LI. 40. ST. . 10. 12
 GR. 40. TR. / . 5. 21
 GR. 41. TR. / . 7. 19
 GR. 42. TR. / . 5. 20
 LI. 3#. ST. . 21/20/19. 40/42/41
 GR. 23T25. INT. . 40. 41T43
 LI. 40T#. DEL
 GR. 40T#. DEL
 LI. 17T20. ST. . 21/23/24/19. 23T25/25
 PA. 1/2/9/10. 2L. . 1/3/2/4. 3/16/4/17
 PA. 6/5/4/3. 2L. . 9T12. 13T16
 PA. 7/8/11T14. 2L. . 13/5/15/14/20/6. 5/7/18/19/6/8
 PA. 11. LAB. . 21/20
 PA. 12. LAB. . 20/19
 PA. 1T14. REV
 PA. 15T28. TR. //- 79. 1T14
 PA. 29T42. TR. //- 189. 15T28
 GR. #. . 2725// 36
 GR. #. . 4// 36
 GR. #. . 7//. 36
 GR. #. . 1 3725//. 36
 GR. #. . 1 625// 36
 GR. #. . 2 625// 36
 LI. 4#. ARC. D1. 76/77
 LI. 27T30. ARC. D1. 80/81
 LI. 50/51. ARC. D1. 79
 LI. 31T34. ARC. D2. 79
 LI. 35T38. ARC. 1 1/2(0)/1 1/0/1/-180. . 78
 LI. 38. DEL
 LI. #. ARC. D1. 79
 GR. 90. INT. . 50. 37
 Y
 LI. 25/26. BR. 90. 52
 LI. 50T#. DEL
 LI. 50. ST. . 85. 91
 GR. 200/201. TR. / . 5. 96/97
 LI. 2#. ST. . 96/97. 200/201
 GR. 99/100. INT. . 50. 51/52
 LI. 38T40. ST. . 96/99/97. 99/100/100
 LI. 50T#. DEL
 GR. 200/201. DEL
 LI. 37. ST. . 97. 90
 S
 LI. 35/36. REV
 LI. 21T40. PL
 PA. 57/58. 2L. . 21/23. 23/35

PA 59T62, 2L, , 34/33/32/31, 35T37/25
 PA, 63T66, 2L, , 25/27/22/24, 27/29/24/38
 PA, 69T70, 2L, , 40/26/28, 26/28/30
 PA, 67, 2L, , 36, 39
 PA, 67, LAB, , 96/97
 PA, 57T70, REV
 PA, 2#, TR, //-, 36, 63/69
 PA, 50/56, TR, //, 68, 64/70
 GR, 300, , //1, 04
 LI, 2#, ST, , 300/300, 110/112
 PA, 80, 2L, , 41, 42
 HP, 1/2/3, 2P, , 16/21/22, 2/7/8
 HP, 5#, 2P, , 24T28, 10T14
 HP, 14#, 2P, , 29T42, 15T28
 HP, 30/36, 2P, , 50/56, 36/42
 HP, 60T71, 2P, , 57T63/65T69, 29T35/37T41
 FA, 10#, HPAT, 1, 60T68/71
 PA, 6#, HPAT, 2, 62T64/66/68/71
 FA, #, HPAT, 4, 69
 PA, 98, HPAT, 1, 70
 LI, 18#, INT, 1, 80, 81T98
 PA, 43T49, 2L, , 43T49, 44/53/53T55/49/56
 LI, 48, REV
 PA, 48, 2L, , 48, 49
 Y
 PA, 51T55, 2L, , 50/51/54/60/52, 51/57/59/52/58
 LI, #, PAT, 1, 54
 PA, 200, 2L, , 60, 52
 PA, 54, 2L, 200, 55, 61
 Y
 FA, 45, LAB, , 306/316
 PA, 48, LAB, , 309/310
 PA, 51, LAB, , 302/304
 PA, 52, LAB, , 304/316
 PA, 53, LAB, , 316/317
 FA, 54, LAB, , 317/311
 PA, 55, LAB, , 311/108
 PA, 43T49/51T55, REV
 HP, 23T29, 2P, , 43T49, 29T35
 HP, 31T35, 2P, , 51T55, 37T41
 HP, 37T43, 2P, , 57T63, 43T49
 HP, 44T48, 2P, , 65T69, 51T55
 HP, 49/50, 2P, , 71/72, 63/69
 GR, 300, DEL
 LI, 41/42, DEL
 PA, 1/3T6/9/80T99/200, DEL
 HP, 60T71, DEL
 VIEW
 1
 23, 56
 HP, 1T50, PL

GO
3
2
1
LOC. 1
SET. PH1. OFF
SET. LABEL. OFF
ERASE
CF. H1/3T6/5/10/16/18T20/22/38/45T47. . 3/3/3
CF. H2/7/9/11T15/17/21/37/39T44/48T50. . 2/3/3
CF. H23/25T29/31/35. . 2/3/4
CF. H24/30/32T34/36. . 3/3/4
END
2
CF. HIT50. HEX/20
END
3
N
2
Y
1
1
3
PF. HIT50. HEX/20. . 1
END
3
4
1
1
FLOW RESTRICTOR ANALYSIS
N
STOP

APPENDIX B

MODEL TRANSLATION FROM PATRAN-G TO ABAQUS FILES

```
*****  
*  
* PATCOS VERSION 1 4 *  
* PDA ENGINEERING *  
*  
*****
```

Translation of PATRAN-G neutral file to COSMIC/NASTRAN bulk data file

----- Program Diagnostics -----

PATRAN-G input file:
FRABAQ OUT
FLOW RESTRICTOR ANALYSIS
16-JAN-84 10 02 45 1.5

NASTRAN output file:
NASTRAN BDF
FLOW RESTRICTOR ANALYSIS
16-JAN-84 10:10 54

1952 GRID record(s) written on "NASTRAN BDF"

328 CXXXX record(s) written on "NASTRAN BDF".

----- Translation done -----
2280 logical records (2936 card images)
have been written on file "NASTRAN BDF".

```
$ INQUIRE INT "Input data file (or RETURN for INPUT.DAT)"  
$ IF INT .EQS. "" THEN INT="INPUT.DAT"  
$ INQUIRE DFILE "NASTRAN input file name (or RETURN for NASTRAN.BDF)"  
$ IF DFILE .EQS. "" THEN DFILE="NASTRAN.BDF"  
$ INQUIRE ABAQ "ABAQUS output file identifier (or RETURN for ABAQUS.DAT)"  
$ IF ABAQ .EQS. "" THEN ABAQ="ABAQUS.DAT"  
$ SUBMIT/NOPRINTER/PARAMETERS=('INT', 'DFILE', 'ABAG') TRANSL.COM  
$ EXIT
```

```
4K29ZZSAF
* RENAME TRANSL LOG DUAO [EBECKER PATRAN]TRANSL LOG
* SET DEF DUAO [EBECKER.PATRAN]
* ASSIGN 'P1' FOR008
* ASSIGN 'P2' FOR003
* ASSIGN 'P3' FOR004
* RUN PATRAN$DIR COSABA
```

```

C
C *****
C * PROGRAM TO CONVERT PATCOS OR PATNAS OUTPUT TO ABAGUS FORMAT *
C * (NODES AND ELEMENTS ONLY) *
C *****
C
C
C PROGRAM COSABA
C
C CHARACTER*8 NTYPE, LTYPE, NTITLE, NOCASE, NCARD, ELCARD, NAME, IELSET,
+ NINE, IPROP, INCB, OUTCARD, TLZ, EIGHT
C
C INTEGER ELINC, DATINC
C
C DIMENSION NTYPE(14), NCARD(3, 10), ELCARD(2000, 22),
+ OUTCARD(2000, 22), IELSET(2000), NOCASE(36), IPROP(42), N(42)
C
C DATA NTYPE(1)/'GRID' '//, NTYPE(2)/'CQUAD2' '//,
+ NTYPE(3)/'CSHELL1' '//, NTYPE(4)/'CIHEX1' '//,
+ NTYPE(5)/'CIHEX2' '//, NTYPE(6)/'ENDDATA' '//,
+ NTYPE(7)/'CQUAD4' '//, NTYPE(8)/'CQUADB' '//, NTITLE/'$' '//,
+ NTYPE(9)/'CHEXA' '//, NINE/' 9' '//, EIGHT/' 8' '//,
+ NTYPE(10)/'CBAR' '//, NTYPE(11)/'RSPLINE' '//,
+ NTYPE(12)/'CWEDGE' '//, NTYPE(13)/'CPENTA' '//, TLZ/'INITLIZE' //
C
C OPEN(UNIT=4, STATUS='NEW', CARRIAGECONTROL='LIST')
C
C *****
C * SOME INITIALIZATIONS *
C *****
C
C DO 1 I=1,42
C N(I)=0
C IPROP(I)=TLZ
C 1 CONTINUE
C DO 2 I=1,2000
C DO 3 J=1,22
C ELCARD(I, J)=TLZ
C OUTCARD(I, J)=TLZ
C 3 CONTINUE
C 2 CONTINUE
C
C
C
C *****
C *
C * NOTES.
C *
C * 1. CURRENTLY LIMITED TO 2000 ELEMENTS--CHANGE DIMENSION
C * STATEMENT IF NECESSARY
C *
C * 2. TRANSLATE NASTRAN.BDF OUTPUT FROM EITHER PATNAS.EXE OR
C * PATCOS.EXE
C *
C * *PATCOS DOES NOT SUPPORT ANY 8-NODE QUADS, 3-NODE BEAMS
C * OR 15-NODE WEDGES: USE PATNAS
C *
C * *IF PATNAS IS USED TO PRODUCE 20-NODE 3D ELEMENTS (OR
C * 15-NODE WEDGE ELEMENTS), THE ELEMENTS MUST BE FLAGGED
C * WITH AN "B" IN TH PROPERTY ID COLUMN (USE PFE0 IN PATRAN)
C *
C * 3. INPUT.DAT FILE MUST EXIST FOR EVERY TRANSLATION. USE THE

```


FOLLOWING FORMAT:

```

123456789***** C (COLUMNS)
n (an integer, IELMNT)
CPE4 (eg )(ABAQUS ELEMENT NAME)
M
CPE8
*
* (etc.)
    
```

WHERE :

- IELMNT = 1 IF 4-NODE QUADS ARE TO BE TRANSLATED
- = 2 IF 8-NODE QUADS ARE TO BE TRANSLATED
- = 3 IF 8-NODE 3D ELEMENTS ARE TO BE TRANSLATED
- = 4 IF 20-NODE 3D ELEMENTS ARE TO BE TRANSLATED
- = 5 IF 2-NODE BEAM ELEMENTS ARE TO BE TRANSLATED
- = 6 IF 3-NODE BEAM ELEMENTS ARE TO BE TRANSLATED
- = 7 IF 6-NODE WEDGE ELEMENTS ARE TO BE TRANSLATED
- = 8 IF 15-NODE WEDGE ELEMENTS ARE TO BE TRANSLATED

EACH PAIR OF CARDS (IELMNT,name) IN INPUT DAT MUST CORRESPOND TO A PROPERTY ID IN THE NASTRAN BDF FILE. IN THE ORDER IN WHICH THE PROPERTY ID'S FIRST APPEAR. THIS CODE REARRANGES THE ELEMENTS TO BE GROUPED BY PROPERTY ID, RESULTING IN A DIFFERENT *ELEMENT,ELSET= CARD FOR EACH SET OF ELEMENTS.

- 4 INTERFACE ELEMENTS MUST BE FLAGGED WITH A "9" IN THE PROPERTY ID COLUMN (USE PFEG IN PATRAN). IN PATRAN, INTERFACE ELEMENTS ARE CREATED AS THEIR CORRESPONDING "REAL" ELEMENTS (eg. A 6-NODE 2D INTERFACE ELEMENT IS CREATED AS AN 8-NODE QUAD) THIS TRANSLATOR TAKES CARE OF SORTING OUT CONNECTIVITY WITHIN EACH ELEMENT.

```

ELINC=1
READ(3,1019) (NOCASE(M),M=13,24)
READ(3,1019) (NOCASE(M),M=1,12)
IF(NOCASE(1).EQ.NTITLE) GO TO 4
GO TO 34
    
```

```

*****
* CREATE HEADING CARD *
*****
    
```

```

4 WRITE(4,2001)
WRITE(4,2003) (NOCASE(M),M=2,12)
    
```

```

*****
* CREATE NODE CARD *
*****
    
```

```

WRITE(4,3001)
    
```

```

*****
* DETERMINE NODAL COORDINATES AND ELEMENT CARD TYPE *
*****
    
```

```

READ(3,1019) (NOCASE(M),M=25,36)
B DATINC=1
    
```

```

READ(3,1003) (NCARD(1,J),J=1,10)
IF(NCARD(1,1).EQ.NTYPE(1)) GO TO 160
IELSET(ELINC)=NCARD(1,3)
DO 10 K=1,14
IF(NCARD(1,1).EQ.NTYPE(K)) GO TO (160,13,70,100,200,31,13,
+70,100,40,50,80,80) K
10 CONTINUE
GO TO 33

C
C *****
C * TRANSLATE QUADRILATERAL ELEMENT DATA TO ABAQUS FORMAT *
C *****
C
13 IF (NCARD(1,3).EQ.NINE) GO TO 15
ELCARD(ELINC,DATINC)=NCARD(1,2)
DATINC=DATINC+1
DO 14 J=4,7
ELCARD(ELINC,DATINC)=NCARD(1,J)
DATINC=DATINC+1
14 CONTINUE
ELINC=ELINC+1
GO TO 8

C
C *****
C * TRANSLATE 4-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT *
C *****
C
15 ELCARD(ELINC,1)=NCARD(1,2)
ELCARD(ELINC,2)=NCARD(1,4)
ELCARD(ELINC,3)=NCARD(1,5)
ELCARD(ELINC,4)=NCARD(1,7)
ELCARD(ELINC,5)=NCARD(1,6)
ELINC=ELINC+1
GO TO 8

C
C *****
C * TRANSLATE 2-NODE BEAM ELEMENTS TO ABAQUS FORMAT *
C *****
C
40 ELCARD(ELINC,1)=NCARD(1,2)
ELCARD(ELINC,2)=NCARD(1,4)
ELCARD(ELINC,3)=NCARD(1,5)
ELINC=ELINC+1
GO TO 8

C
C *****
C * TRANSLATE 3-NODE BEAM ELEMENTS TO ABAQUS FORMAT *
C *****
C
50 ELCARD(ELINC,1)=NCARD(1,2)
ELCARD(ELINC,2)=NCARD(1,4)
ELCARD(ELINC,3)=NCARD(1,5)
ELCARD(ELINC,4)=NCARD(1,7)
ELINC=ELINC+1
GO TO 8

C
C *****
C * TRANSLATE NASTRAN 8 NODE--2D ELEMENTS TO ABAQUS FORMAT (PATNAS) *
C *****
C
70 READ(3,1003)(NCARD(2,J),J=1,10)
IF(NCARD(1,3).EQ.NINE) GO TO 75

```

```

    ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,5)
    ELCARD(ELINC,4)=NCARD(1,6)
    ELCARD(ELINC,5)=NCARD(1,7)
    ELCARD(ELINC,6)=NCARD(1,8)
    ELCARD(ELINC,7)=NCARD(1,9)
    ELCARD(ELINC,8)=NCARD(2,2)
    ELCARD(ELINC,9)=NCARD(2,3)
    ELINC=ELINC+1
    GO TO B
C
C *****
C * TRANSLATE 6-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT (PATNAS) *
C *****
C
    75 ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,8)
    ELCARD(ELINC,4)=NCARD(1,5)
    ELCARD(ELINC,5)=NCARD(1,7)
    ELCARD(ELINC,6)=NCARD(2,2)
    ELCARD(ELINC,7)=NCARD(1,6)
    ELINC=ELINC+1
    GO TO B
C
C *****
C * TRANSLATE 6-NODE WEDGE ELEMENTS TO ABAQUS FORMAT *
C *****
C
    80 IF(NCARD(1,3).EQ.EIGHT) GO TO 350
    ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,5)
    ELCARD(ELINC,4)=NCARD(1,6)
    ELCARD(ELINC,5)=NCARD(1,4)
    ELCARD(ELINC,6)=NCARD(1,7)
    ELCARD(ELINC,7)=NCARD(1,8)
    ELCARD(ELINC,8)=NCARD(1,9)
    ELCARD(ELINC,9)=NCARD(1,7)
    ELINC=ELINC+1
    GO TO B
C
C *****
C * TRANSLATE NASTRAN 8 NODE--3D ELEMENTS TO ABAQUS FORMAT *
C *****
C
    100 IF(NCARD(1,3).EQ.EIGHT) GO TO 300
    READ(3,1003) (NCARD(2,J),J=1,10)
    IF(NCARD(1,3).EQ.NINE) GO TO 105
    ELCARD(ELINC,1)=NCARD(1,2)
    DO 101 K=2,7
    ELCARD(ELINC,K)=NCARD(1,K+2)
    101 CONTINUE
    ELCARD(ELINC,8)=NCARD(2,2)
    ELCARD(ELINC,9)=NCARD(2,3)
    ELINC=ELINC+1
    GO TO B
C
C *****
C * TRANSLATE 3-D 8-NODE INTERFACE ELEMENT DATA TO ABAQUS FORMAT *
C *****

```

```

C
105 ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,8)
    ELCARD(ELINC,4)=NCARD(1,9)
    ELCARD(ELINC,5)=NCARD(1,5)
    ELCARD(ELINC,6)=NCARD(1,7)
    ELCARD(ELINC,7)=NCARD(2,3)
    ELCARD(ELINC,8)=NCARD(2,2)
    ELCARD(ELINC,9)=NCARD(1,6)
    ELINC=ELINC+1
    GO TO 8

```

```

*****
* TRANSLATE 20 NODE ELEMENT DATA TO ABAQUS FORMAT (PATCOS) *
*****

```

```

C
200 DO 201 K=2,3
    READ(3,1003) (NCARD(K,J),J=1,10)
201 CONTINUE
    IF(NCARD(1,3).EQ.NINE) GO TO 205
    ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,6)
    ELCARD(ELINC,4)=NCARD(1,8)
    ELCARD(ELINC,5)=NCARD(2,2)
    ELCARD(ELINC,6)=NCARD(2,8)
    ELCARD(ELINC,7)=NCARD(3,2)
    ELCARD(ELINC,8)=NCARD(3,4)
    ELCARD(ELINC,9)=NCARD(3,6)
    ELCARD(ELINC,10)=NCARD(1,5)
    ELCARD(ELINC,11)=NCARD(1,7)
    ELCARD(ELINC,12)=NCARD(1,9)
    ELCARD(ELINC,13)=NCARD(2,3)
    ELCARD(ELINC,14)=NCARD(2,9)
    ELCARD(ELINC,15)=NCARD(3,3)
    ELCARD(ELINC,16)=NCARD(3,5)
    ELCARD(ELINC,17)=NCARD(3,7)
    ELCARD(ELINC,18)=NCARD(2,4)
    ELCARD(ELINC,19)=NCARD(2,5)
    ELCARD(ELINC,20)=NCARD(2,6)
    ELCARD(ELINC,21)=NCARD(2,7)
    ELINC=ELINC+1
    GO TO 8

```

```

*****
* TRANSLATE 16-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT (PATCOS) *
*****

```

```

C
205 ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(2,8)
    ELCARD(ELINC,4)=NCARD(3,2)
    ELCARD(ELINC,5)=NCARD(1,6)
    ELCARD(ELINC,6)=NCARD(2,4)
    ELCARD(ELINC,7)=NCARD(2,9)
    ELCARD(ELINC,8)=NCARD(2,5)
    ELCARD(ELINC,9)=NCARD(1,5)
    ELCARD(ELINC,10)=NCARD(2,2)
    ELCARD(ELINC,11)=NCARD(3,6)
    ELCARD(ELINC,12)=NCARD(3,4)
    ELCARD(ELINC,13)=NCARD(1,8)

```

```

ELCARD(ELINC, 14)=NCARD(2, 7)
ELCARD(ELINC, 15)=NCARD(3, 5)
ELCARD(ELINC, 16)=NCARD(2, 6)
ELCARD(ELINC, 17)=NCARD(1, 9)
ELINC=ELINC+1
GO TO 8

```

0
0
0
0

```

*****
* TRANSLATE 20 NODE ELEMENT DATA TO ABAQUS FORMAT (PATNAS) *
*****

```

```

300 DO 301 K=2,3
    READ(3,1003) (NCARD(K, J), J=1, 10)
301 CONTINUE
    IF(NCARD(1, 3).EQ.NINE) GO TO 305
    ELCARD(ELINC, 1)=NCARD(1, 2)
    ELCARD(ELINC, 2)=NCARD(1, 4)
    ELCARD(ELINC, 3)=NCARD(1, 5)
    ELCARD(ELINC, 4)=NCARD(1, 6)
    ELCARD(ELINC, 5)=NCARD(1, 7)
    ELCARD(ELINC, 6)=NCARD(1, 8)
    ELCARD(ELINC, 7)=NCARD(1, 9)
    ELCARD(ELINC, 8)=NCARD(2, 2)
    ELCARD(ELINC, 9)=NCARD(2, 3)
    ELCARD(ELINC, 10)=NCARD(2, 4)
    ELCARD(ELINC, 11)=NCARD(2, 5)
    ELCARD(ELINC, 12)=NCARD(2, 6)
    ELCARD(ELINC, 13)=NCARD(2, 7)
    ELCARD(ELINC, 14)=NCARD(3, 4)
    ELCARD(ELINC, 15)=NCARD(3, 5)
    ELCARD(ELINC, 16)=NCARD(3, 6)
    ELCARD(ELINC, 17)=NCARD(3, 7)
    ELCARD(ELINC, 18)=NCARD(2, 8)
    ELCARD(ELINC, 19)=NCARD(2, 9)
    ELCARD(ELINC, 20)=NCARD(3, 2)
    ELCARD(ELINC, 21)=NCARD(3, 3)
    ELINC=ELINC+1
GO TO 8

```

0
0
0
0

```

*****
* TRANSLATE 16-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT (PATNAS) *
*****

```

```

305 ELCARD(ELINC, 1)=NCARD(1, 2)
    ELCARD(ELINC, 2)=NCARD(1, 4)
    ELCARD(ELINC, 3)=NCARD(1, 8)
    ELCARD(ELINC, 4)=NCARD(1, 9)
    ELCARD(ELINC, 5)=NCARD(1, 5)
    ELCARD(ELINC, 6)=NCARD(2, 8)
    ELCARD(ELINC, 7)=NCARD(3, 4)
    ELCARD(ELINC, 8)=NCARD(2, 9)
    ELCARD(ELINC, 9)=NCARD(2, 4)
    ELCARD(ELINC, 10)=NCARD(1, 7)
    ELCARD(ELINC, 11)=NCARD(2, 3)
    ELCARD(ELINC, 12)=NCARD(2, 2)
    ELCARD(ELINC, 13)=NCARD(1, 6)
    ELCARD(ELINC, 14)=NCARD(3, 3)
    ELCARD(ELINC, 15)=NCARD(3, 6)
    ELCARD(ELINC, 16)=NCARD(3, 2)
    ELCARD(ELINC, 17)=NCARD(2, 6)
    ELINC=ELINC+1
GO TO 8

```

```

C *****
C * TRANSLATE 15-NODE WEDGE ELEMENTS TO ABAQUS FORMAT (PATNAS) *
C *****
350 DO 351 K=2,3
    READ(3,1003) (NCARD(K,J),J=1,10)
351 CONTINUE
    ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,5)
    ELCARD(ELINC,4)=NCARD(1,6)
    ELCARD(ELINC,5)=NCARD(1,4)
    ELCARD(ELINC,6)=NCARD(1,7)
    ELCARD(ELINC,7)=NCARD(1,8)
    ELCARD(ELINC,8)=NCARD(1,9)
    ELCARD(ELINC,9)=NCARD(1,7)
    ELCARD(ELINC,10)=NCARD(2,2)
    ELCARD(ELINC,11)=NCARD(2,3)
    ELCARD(ELINC,12)=NCARD(2,4)
    ELCARD(ELINC,13)=NCARD(2,4)
    ELCARD(ELINC,14)=NCARD(2,5)
    ELCARD(ELINC,15)=NCARD(2,6)
    ELCARD(ELINC,16)=NCARD(2,7)
    ELCARD(ELINC,17)=NCARD(2,5)
    ELCARD(ELINC,18)=NCARD(2,8)
    ELCARD(ELINC,19)=NCARD(2,9)
    ELCARD(ELINC,20)=NCARD(3,2)
    ELCARD(ELINC,21)=NCARD(3,2)
    ELINC=ELINC+1
    GO TO 8

C *****
C * TRANSLATE GRID POINT CARDS TO ABAQUS FORMAT *
C *****
160 WRITE(4,1011) NCARD(1,2), (NCARD(1,J),J=4,6)
    GO TO 8

C *****
C * REARRANGE ELEMENT CARDS TO BE GROUPED BY PID *
C *****
31 NUMEL=ELINC-1
    IPID=1

C *****
C * COUNT THE ELSETS *
C *****

    DO 520 INC=1,NUMEL
    IF(INC.EQ.1) GO TO 515
    DO 510 II=1,IPID
    IF(IELSET(INC).NE.IPROP(II)) GO TO 510
    N(II)=N(II)+1
    GO TO 520
510 CONTINUE
515 N(IPID)=1
    IPROP(IPID)=IELSET(INC)
    IPID=IPID+1
520 CONTINUE

```

```

C *****
C * REARRANGE THE CARDS *
C *****
C
  LOOP2=IPID-1
  ICARD=1
  DO 560 INC2=1, LOOP2
  DO 540 INC3=1, NUMEL
  IF (IELSET(INC3).EQ. IPROP(INC2)) GO TO 530
  GO TO 540
530 DO 535 INC4=1, 22
  OUTCARD(ICARD, INC4)=ELCARD(INC3, INC4)
535 CONTINUE
  ICARD=ICARD+1
540 CONTINUE
560 CONTINUE

C *****
C * CREATE ELEMENT CARD AND WRITE CONNECTIVITIES *
C *****
C
  III=1
  INC6=1
  INC7=N(1)
  INCB=IPROP(1)
  READ(8, 1000) IELMNT
  READ(8, 1001) LTYPE
  WRITE(4, 1017) LTYPE, INCB
600 DO 700 INC5=INC6, INC7
  IF (IELMNT EQ. 1) GO TO 730
  IF (IELMNT EQ. 3) GO TO 720
  IF (IELMNT EQ. 4) GO TO 710
  IF (IELMNT EQ. 2) GO TO 720
  IF (IELMNT EQ. 5) GO TO 740
  IF (IELMNT EQ. 6) GO TO 750
  IF (IELMNT EQ. 7) GO TO 720
  IF (IELMNT EQ. 8) GO TO 710
  GO TO 30
720 IF ((INCB EQ. NINE).AND. (IELMNT EQ. 2)) GO TO 725
  WRITE(4, 1009) (OUTCARD(INC5, J), J=1, 9)
  GO TO 700
725 WRITE(4, 1008) (OUTCARD(INC5, J), J=1, 7)
  GO TO 700
710 IF (INCB EQ. NINE) GO TO 715
  WRITE(4, 1010) (OUTCARD(INC5, J)(5:8), J=1, 21)
  GO TO 700
715 WRITE(4, 1006) (OUTCARD(INC5, J)(5:8), J=1, 17)
  GO TO 700
740 WRITE(4, 1004) (OUTCARD(INC5, J), J=1, 3)
  GO TO 700
750 WRITE(4, 1005) (OUTCARD(INC5, J), J=1, 4)
  GO TO 700
730 WRITE(4, 1007) (OUTCARD(INC5, J), J=1, 5)
700 CONTINUE
  III=III+1
  IF (N(III).EQ. 0) GO TO 32
  READ(8, 1000) IELMNT
  READ(8, 1001) LTYPE
  INCB=IPROP(III)
  WRITE(4, 1017) LTYPE, INCB
  INC6=INC7+1
  INC7=INC7+N(III)

```

```
GO TO 600
33 WRITE(4, 1018)
GO TO 32
34 WRITE(4, 1014)
GO TO 32
29 WRITE(4, 1013)
GO TO 32
30 WRITE(4, 1012)
32 STOP
1000 FORMAT(I1)
1001 FORMAT(AB)
1003 FORMAT(10AB)
1004 FORMAT(2(AB, ', '), AB)
1005 FORMAT(3(AB, ', '), AB)
1006 FORMAT(16(A4, ', ')/A4)
1007 FORMAT(4(AB, ', '), AB)
1008 FORMAT(6(AB, ', '), AB)
1009 FORMAT(8(AB, ', '), AB)
1010 FORMAT(16(A4, ', ')/5X, 4(A4, ', '), A4)
1011 FORMAT(3(AB, ', '), AB)
1012 FORMAT(10X, 'ERROR IN ELEMENT TYPE NAME USED AS INPUT')
1013 FORMAT(10X, 'ERROR IN SPECIFICATION OF INPUT PARAMETERS')
1014 FORMAT(10X, 'ERROR IN FIRST 3 CARDS OF NASTRAN INPUT DECK')
1015 FORMAT(10X, 'ERROR DUE TO LATEST MODIFICATIONS')
1017 FORMAT(15H*ELEMENT, TYPE=, AB, ', ELSET= PID', AB)
1018 FORMAT(10X, 'ERROR: UNSUPPORTED NASTRAN ELEMENT TYPE')
1019 FORMAT(A1, 9AB, A3, A4)
2001 FORMAT(8H*HEADING)
3003 FORMAT(9AB, A3, A4)
3001 FORMAT(5H*NODE)
END
```


APPENDIX C
MATERIAL PROPERTIES OF COLUMBIUM C-103

<u>Modulus of Elasticity</u> <u>lb/in²</u>	<u>Poisson's Ratio</u>	<u>Temperature</u> <u>°F</u>	<u>ABAQUS</u>	<u>INPUT</u>
			*ELASTIC	
15.0 x 10 ⁶	0.33	70.0	15000000.0, 0.33,	70.0
13.4 x 10 ⁶	0.33	392.0	13400000.0, 0.33,	392.0
12.9 x 10 ⁶	0.33	752.0	12900000.0, 0.33,	752.0
12.4 x 10 ⁶	0.33	1112.0	12400000.0, 0.33,	1112.0
11.9 x 10 ⁶	0.33	1472.0	11900000.0, 0.33,	1472.0
11.5 x 10 ⁶	0.33	1832.0	11500000.0, 0.33,	1832.0
11.0 x 10 ⁶	0.33	2192.0	11000000.0, 0.33,	2192.0
10.5 x 10 ⁶	0.33	2552.0	10500000.0, 0.33,	2552.0
9.0 x 10 ⁶	0.33	2912.0	9000000.0, 0.33,	2912.0

<u>Thermal Conductivity</u> <u>Btu/in sec °F</u>	<u>Temperature</u> <u>°F</u>	<u>ABAQUS</u>	<u>INPUT</u>
		*CONDUCTIVITY	
6.01 x 10 ⁻⁴	0.0	0.000601,	0.0
6.48 x 10 ⁻⁴	500.0	0.000648,	500.0
7.17 x 10 ⁻⁴	1000.0	0.000717,	1000.0
7.41 x 10 ⁻⁴	1500.0	0.000741,	1500.0
8.10 x 10 ⁻⁴	2000.0	0.000810,	2000.0
8.79 x 10 ⁻⁴	2500.0	0.000879,	2500.0
9.26 x 10 ⁻⁴	3000.0	0.000926,	3000.0

<u>Density</u> <u>lb/in³</u>	<u>ABAQUS</u>	<u>INPUT</u>
0.31	*DENSITY 0.31	

<u>SPECIFIC HEAT</u> <u>Btu/lbm °F</u>	<u>TEMPERATURE</u> <u>°F</u>	<u>ABAQUS</u>	<u>INPUT</u>
0.075	1000.0	*SPECIFIC HEAT 0.075, 1000.0	

<u>Thermal Expansion Coefficient</u>	<u>Temperature °F</u>	<u>ABAQUS</u>	<u>INPUT</u>
		*EXPANSION, ZERO = 70.0	
0.0 x 10 ⁻⁶	70.0	0.0, 70.0	
3.5 x 10 ⁻⁶	500.0	0.0000035, 500.0	
3.8 x 10 ⁻⁶	1000.0	0.0000038, 1000.0	
4.1 x 10 ⁻⁶	1500.0	0.0000041, 1500.0	
4.2 x 10 ⁻⁶	2000.0	0.0000042, 2000.0	
4.4 x 10 ⁻⁶	2500.0	0.0000044, 2500.0	
4.6 x 10 ⁻⁶	3000.0	0.0000046, 3000.0	
4.8 x 10 ⁻⁶	3500.0	0.0000048, 3500.0	

<u>Yield Strength lb/in²</u>	<u>Plastic Strain in/in</u>	<u>Temperature °F</u>	<u>ABAQUS</u>	<u>INPUT</u>
			*PLASTIC	
40,000.0	0.0	70.0	40000.0, 0.0, . 70.0	
50,000.0	0.0066	70.0	50000.0, 0.0066, 70.0	
21,000.0	0.0	1832.0	21000.0, 0.0, 1832.0	
26,000.0	0.0045	1832.0	26000.0, 0.0045, 1832.0	

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APPENDIX D

USER SUBROUTINE FILM AND FILMTEST FILES

```

SUBROUTINE FILM(H, SINK, TEMP, KSTEP, KING, TIME, NOEL, NPT, COORDS,
+             JLTYP)
IMPLICIT REAL*8(A-H, O-Z)
DIMENSION COORDS(3), COND(3), AREA(13), PRESSFS(13)
INTEGER FSUR1(28), HOL1(24), FSUR2(12), HOL2(24), HOL3(12),
+       HOL4(12), HOL5(12), HOL6(12), HOL7(12), RSUR1(32),
+       FLNG1(4), FLNG2(4), RSUR2(4)

```

C
C
C
C

```

AREA IS IN FEET SQUARED
PRESSURE IS IN POUNDS PER SQUARE INCH

```

```

DATA AREA /0.150330, 0.002749, 0.002749, 0.001154, 0.001192,
+         0.001270, 0.001351, 0.001447, 0.001561, 0.041097,
+         0.001620, 0.041097, 0.057610/
DATA PRESSFS /22000 0, 21500 0, 21500 0, 21500 0, 21000 0,
+          21000 0, 21000 0, 20500 0, 20500 0, 20000 0,
+          20500 0, 20000 0, 20000 0/

```

C
C
C
C

```

THESE ARRAYS CONSIST OF ALL THE ELEMENTS IN THE PARTICULAR
ELEMENT SET NAME

```

```

DATA FSUR1 / 5, 6, 7, 8, 11, 12, 17, 18, 19, 20, 25, 26,
+          27, 28, 33, 34, 35, 36, 41, 42, 43, 44, 47, 48,
+          53, 54, 55, 56/
DATA HOL1 / 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,
+          21, 23, 25, 27, 29, 30, 33, 34, 37, 38, 41, 42/
DATA FSUR2 /59, 60, 71, 72, 75, 76, 79, 80, 83, 84, 99, 100/
DATA HOL2 /57, 58, 59, 60, 69, 70, 71, 72, 73, 74, 75, 76,
+          77, 78, 79, 80, 81, 82, 83, 84, 97, 98, 99, 100/
DATA HOL3 /141, 142, 159, 160, 165, 166, 171, 172, 177, 178,
+          201, 202/
DATA HOL4 /139, 140, 157, 158, 163, 164, 169, 170, 175, 176,
+          199, 200/
DATA HOL5 /137, 138, 155, 156, 161, 162, 167, 168, 173, 174,
+          197, 198/
DATA HOL6 /259, 260, 271, 272, 275, 276, 279, 280, 283, 284,
+          291, 292/
DATA HOL7 /257, 258, 269, 270, 273, 274, 277, 278, 281, 282,
+          289, 290/
DATA RSUR1 /257, 258, 261, 262, 263, 264, 269, 270, 273, 274,
+          277, 278, 281, 282, 285, 286, 289, 290, 293, 294,
+          295, 296, 301, 302, 303, 304, 309, 310, 311, 312,
+          317, 318/
DATA FLNG1 /323, 324, 327, 328/
DATA FLNG2 /321, 322, 325, 326/
DATA RSUR2 /321, 322, 325, 326/

```

C
C
C
C

```

SINK TEMPERATURE DEFINITION
THESE ARE DEGREE FAHRENHEIT

```

```

IF(TIME.EQ.0.0)SINK = 70 0
IF(TIME.LT.0.5)SINK = 6000.0 * TIME
IF(TIME.GE.0.5 AND TIME.LE.1.3)SINK = 3000.0
IF(TIME.GT.1.3 AND TIME.LT.1.8)SINK = -5400.0 * TIME + 10020.0
IF(TIME.GE.1.8)SINK = 300.0

```

C
C
C
C
C

```

CONSTANTS USED IN CALCULATIONS
MDOT IS IN POUND MASS PER SEC
PRANDTL NUMBER IS DIMENSIONLESS
SPECIFIC HEAT AT CONSTANT PRESSURE IS IN BTU PER POUND DEGREE RANKINE

```

```

MDOT = 128.3668

```

PR = 0.74
CP = 0.295

C
C
C
C

LOGIC TO DETERMINE WHICH EQUATION TO USE

DIAMETERS AND WETTED AREA DIAMETERS ARE IN INCHES

```

DO 10 II = 1, 28
  IF (NOEL. EQ. FSUR1(II). AND. JLTYP. EQ. 12) THEN
    NEG = 1
    LOC = 1
    DIAM = 5.25
    WETD = 4.9024
    GO TO 60
  ENDIF
10 CONTINUE
DO 20 IJ = 1, 24
  IF (NOEL. EQ. HOL1(IJ). AND. JLTYP. EQ. 13) THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF (NOEL. EQ. HOL1(IJ). AND. JLTYP. EQ. 14) THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF (NOEL. EQ. HOL1(IJ). AND. JLTYP. EQ. 16) THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF (NOEL. EQ. HOL2(IJ). AND. JLTYP. EQ. 16) THEN
    NEG = 2
    LOC = 4
    DIAM = 0.46
    GO TO 60
  ENDIF
20 CONTINUE
DO 30 IK = 1, 12
  IF (NOEL. EQ. FSUR2(IK). AND. JLTYP. EQ. 12) THEN
    NEG = 3
    LOC = 3
    DIAM = 0.71
    WETD = 0.5408
    GO TO 60
  ENDIF
  IF (NOEL. EQ. HOL3(IK). AND. JLTYP. EQ. 16) THEN
    NEG = 2
    LOC = 5
    DIAM = 0.468
    GO TO 60
  ENDIF
  IF (NOEL. EQ. HOL4(IK). AND. JLTYP. EQ. 16) THEN
    NEG = 2
    LOC = 6
    DIAM = 0.482
    GO TO 60
  ENDIF

```

```

      IF (NOEL. EQ. HOL5(IK) AND JLTYP. EQ. 16) THEN
        NEG = 2
        LOC = 7
        DIAM = 0.498
        GO TO 60
      ENDIF
      IF (NOEL. EQ. HOL6(IK) AND JLTYP. EQ. 16) THEN
        NEG = 2
        LOC = 8
        DIAM = 0.515
        GO TO 60
      ENDIF
      IF (NOEL. EQ. HOL7(IK) AND JLTYP. EQ. 16) THEN
        NEG = 2
        LOC = 9
        DIAM = 0.535
        GO TO 60
      ENDIF
30 CONTINUE
      DO 40 IL = 1,32
        IF (NOEL. EQ. RSUR1(IL) AND JLTYP. EQ. 11) THEN
          NEG = 4
          LOC = 10
          WETD = 2.3358
          GO TO 60
        ENDIF
40 CONTINUE
      DO 50 IM = 1,4
        IF (NOEL. EQ. FLNG1(IM) AND JLTYP. EQ. 16) THEN
          NEG = 5
          LOC = 11
          DIAM = 0.545
          WETD = 2.3358
          GO TO 60
        ENDIF
        IF (NOEL. EQ. FLNG2(IM) AND JLTYP. EQ. 16) THEN
          NEG = 5
          LOC = 12
          DIAM = 2.745
          WETD = 2.3358
          GO TO 60
        ENDIF
        IF (NOEL. EQ. RSUR2(IM) AND JLTYP. EQ. 11) THEN
          NEG = 4
          LOC = 13
          WETD = 1.7400
          GO TO 60
        ENDIF
50 CONTINUE
C
C   FREE STREAM VELOCITY CALCULATION
C
60 COND(1) = PRESSFS(LOC)
   COND(2) = SINK + 460.0
   CALL FINTERP(3,2,COND,RHOF5)
C
C   FREE STREAM VELOCITY IS IN INCHES PER SECOND
C
   VELFS = (MDOT / (RHOF5 * AREA(LOC))) * 12.0
C
C   GAS PROPERTY DEFINITION FOR FILM TEMPERATURE
C

```

```

TFILM = 0.5 * (SINK + TEMP)
COND(2) = TFILM + 460.0
CALL FINTERP(1,2,COND,VISFS)
CALL FINTERP(2,2,COND,CONDFS)
CALL FINTERP(3,2,COND,DENFS)

C
C
C RETURNED VALUES ARE AS FOLLOWS:
C DYNAMIC VISCOSITY (POUND PER HOUR FOOT)
C THERMAL CONDUCTIVITY (BTU PER FOOT HOUR DEGREE RANKINE)
C DENSITY (POUND PER CUBIC FOOT)
C

VISFS = VISFS / (3600.0 * 12.0)
CONDFS = CONDFS / (3600.0 * 12.0)
DENFS = DENFS / 1728.0

C
C HEAT TRANSFER COEFFICIENT H CALCUALTION
C
C THESE ARE IN BTU PER SQUARE INCH SECOND DEGREE RANKINE
C
C GO TO (70,80,90,100,110), NEG

C
C NEG = 1 --- FRONT SURFACE ONLY --- FSUR1 ELEMENTS
C
70 H = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM))**0.5) * ((VELFS*
+ WETD*DENFS/VISFS)**0.731) * (PR**(1.0/3.0))
GO TO 120

C
C NEG = 2 --- NOZZLE ONLY --- HOL1, HOL2, HOL3, HOL4, HOL5,
C HOL6, AND HOL7 ELEMENTS
C
80 H = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) * ((DENFS*
+ VELFS)**0.8)
GO TO 120

C
C NEG = 3 --- FRONT SURFACE AND NOZZLE COMBINED --- FSUR2 ELEMENTS
C
90 HFSUR = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM))**0.5) *
+ ((VELFS*WETD*DENFS/VISFS)**0.731) * (PR**(1.0/3.0))
HHOL = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) *
+ ((DENFS*VELFS)**0.8)
H = 0.5 * (HFSUR + HHOL)
GO TO 120

C
C NEG = 4 --- BACK SURFACE ONLY --- RSUR1 AND RSUR2 ELEMENTS
C
100 H = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)**
+ (2.0/3.0)) * (PR**(1.0/3.0))
GO TO 120

C
C NEG = 5 --- BACK SURFACE AND NOZZLE COMBINED --- FLNG1 AND FLNG2
C ELEMENTS
C
110 HHOL = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) *
+ ((DENFS*VELFS)**0.8)
HRSUR = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)
+ ** (2.0/3.0)) * (PR**(1.0/3.0))
H = 0.5 * (HHOL+HRSUR)

C
C END OF SUBROUTINE FILM
C
120 RETURN
END

```



```

SUBROUTINE FINTERP(ITAB, NUM, U, A)
IMPLICIT REAL*8(A-H, O-Z)
DIMENSION U(3), N(3), INDEX(3), FAC(3), T(137), ISEQ(3)

```

```

TABLE T DATA

```

```

IN ORDER THESE ARE:

```

- 1) DYNAMIC VISCOSITY (POUND PER HOUR FOOT)
- 2) THERMAL CONDUCTIVITY (BTU PER FOOT HOUR DEGREE RANKINE)
- 3) DENSITY (POUND PER CUBIC FOOT)

```

ALL ARE A FUNCTION OF PRESSURE (PSI) AND TEMPERATURE (DEGREE R).

```

```

DATA T /3.0, 7.0, 14.6959, 14695.9, 29391.8, 750.0, 1000.0,
+ 1500.0, 2000.0, 2500.0, 3000.0, 3500.0, 0.053, 0.0635,
+ 0.084, 0.104, 0.119, 0.133, 0.147, 0.099, 0.118,
+ 0.125, 0.14, 0.153, 0.165, 0.176, 0.18, 0.18,
+ 0.1825, 0.186, 0.191, 0.2, 0.21, 3.0, 7.0,
+14.6959, 14695.9, 29391.8, 750.0, 1000.0, 1500.0, 2000.0,
+ 2500.0, 3000.0, 3500.0, 0.0205, 0.0252, 0.0339, 0.042,
+ 0.0495, 0.0565, 0.064, 0.0435, 0.0475, 0.055, 0.0625,
+ 0.0695, 0.076, 0.082, 0.08, 0.0805, 0.083, 0.086,
+ 0.09, 0.096, 0.102, 6.0, 9.0, 20000.0, 20400.0,
+20800.0, 21200.0, 21600.0, 22000.0, 760.0, 835.0, 1210.0,
+ 1585.0, 1960.0, 2335.0, 2710.0, 3085.0, 3460.0, 33.2401,
+31.6982, 25.9477, 21.9185, 18.7722, 16.4698, 14.6965, 13.2777,
+12.1128, 33.5083, 31.9658, 26.2139, 22.2011, 19.0428, 16.7145,
+14.9216, 13.4865, 12.3076, 33.7726, 32.2295, 26.4751, 22.4763,
+19.3112, 16.9571, 15.1447, 13.6916, 12.5009, 34.0331, 32.4894,
+26.7316, 22.7444, 19.5778, 17.1975, 15.3660, 13.8991, 12.6928,
+34.2900, 32.7457, 26.9838, 23.0060, 19.8436, 17.4360, 15.5853,
+14.1029, 12.8633, 34.5435, 32.9985, 27.2319, 23.2614, 20.1073,
+17.6724, 15.8029, 14.3051, 13.0724/
DATA ISEQ /1, 34, 67/

```

```

THIS IS THE END OF THE DATA TABLES

```

```

F(T1, T2, FF)=T2+FF*(T1-T2)

```

```

PLACE START LOCATION OF THE TABLE INTO K.

```

```

K=ISEQ(ITAB)

```

```

PUT NUMBER OF VALUES OF EACH INDEPENDENT VARIABLE INTO
N-ARRAY

```

```

DO 10 I=1, NUM
  NN=K+I-1
  N(I)=T(NN)

```

```

10 CONTINUE

```

```

FIND INDEX VALUES FOR EACH INDEPENDENT VARIABLE SUCH
THAT DESIRED VALUE LIES BETWEEN INDICES

```

```

INITIALIZE KBEG TO THE START OF THE LIST OF INDEPENDENT
VARIABLES AND KEND TO THE END OF THE LIST OF THE
FIRST INDEPENDENT VARIABLE.

```

```

KBEG=K+NUM
KEND=KBEG+N(1)-1

```

```

C      DO:  FOR THE NUMBER OF INDEPENDENT VARIABLES
C
C      DO 500 J=1,NUM
C      I=N(J)
C
C      IF-THEN-ELSE
C
C      IF  THIS IS THE FIRST INDEPENDENT VARIABLE
C
C      IF (.NOT. (J .EQ. 1)) GO TO 50
C
C      THEN:  DO NOTHING SINCE KBEG AND KEND HAVE
C      ALREADY BEEN INITIALIZED
C
C      GO TO 60
C
C      ELSE:  INCREMENT KBEG AND KEND
C
C      50  CONTINUE
C      KBEG=KEND+1
C      KEND=KBEG+N(J)-1
C
C      60  CONTINUE
C
C      FI.  END OF IF-THEN-ELSE
C
C      IF-THEN-ELSE
C
C      IF:  THE VALUE WANTED IS LESS THAN OR EQUAL TO
C      THE FIRST VALUE IN THE TABLE.
C
C      IF(.NOT. (U(J) .LE. T(KBEG))) GO TO 65
C
C      THEN:  SET INDEX(J) TO 2 AND GO TO THE ROUTINE
C      TO COMPUTE THE INTERPOLATION FACTOR
C
C      INDEX(J)=2
C      GO TO 140
C
C      ELSE:
C
C      65  CONTINUE
C
C      IF-THEN-ELSE
C
C      IF:  THE VALUE WANTED IS GREATER THAN OR EQUAL
C      TO THE LAST VALUE OF THE VARIABLE IN THE
C      TABLE
C
C      IF (.NOT. (U(J) .GE. T(KEND))) GO TO 75
C
C      THEN:  SET THE INDEX TO THE NUMBER OF VALUES OF
C      THE INDEPENDENT VARIABLE AND GO TO THE
C      ROUTINE TO COMPUTE THE INTERPOLATION FACTOR
C
C      INDEX(J)=N(J)
C      GO TO 140
C
C      ELSE:  COMPUTE THE INDEX VALUES SUCH THAT THE
C      DESIRED VALUE U(J) LIES BETWEEN THE TABLE
C      VALUES FOR THOSE COMPUTED INDICES

```

```

75      CONTINUE
        II=1
        KKBEQ=KBEQ+1
C
C      DD:  FOR THE NUMBER OF VALUES OF EACH
C      INDEPENDENT VARIABLE
C
C      DO 100 JJ=KKBEQ, KEND
C      II=II+1
C
C      IF-THEN-ELSE
C
C      IF:  THE DESIRED VALUE IS LESS THAN OR
C      EQUAL TO THE TABLE VALUE--THE
C      INDEPENDENT VARIABLE VALUE
C
C      IF (.NOT. (U(J) .LE. T(JJ))) GO TO 100
C
C      THEN:  SET THE INDEX TO POINT TO THE TABLE
C      VALUE AND GO TO THE ROUTINE TO
C      COMPUTE THE INTERPOLATION FACTOR
C
C      INDEX(J)=II
C      GO TO 140
C
C      ELSE:  CONTINUE
C
C      FI:  END OF IF-THEN-ELSE
C
100     CONTINUE
C
C      DD:  END OF DO-FOR
C
C      FI:  END OF IF-THEN-ELSE
C
C      FI:  END OF IF-THEN-ELSE
C
C      COMPUTE THE INTERPOLATION FACTOR FAC(J)
C
140     CONTINUE
        IND=KBEQ+INDEX(J)-1
        T1=T(IND)
        T2=T(IND-1)
        FAC(J)=(U(J)-T2)/(T1-T2)
C
C      500  CONTINUE
C
C      DD:  END OF DO-FOR
C
C      *****INTERPOLATION ROUTINE*****
C
C      INITIALIZE KBEQ TO THE BEGINNING OF THE DEPENDENT
C      VARIABLES
C
C      KBEQ=KEND+1
C
C      CASES:  3 CASES (NUM=1,2,3)
C
C      IF (NUM .EQ. 1) GO TO 70
C      IF (NUM .EQ. 2) GO TO 80

```

```

      IF (NUM .EQ. 3) GO TO 90
C
C   PART: (NUM=1)
C
70   CONTINUE
C
C   THERE IS ONLY ONE INDEPENDENT VARIABLE.  COMPUTE
C   THE INTERPOLATED TABLE VALUE A AND RETURN.
C
      I3=INDEX(1)+KBEG-1
      A=F(T(I3),T(I3-1),FAC(1))
      GO TO 95
C
C   PART: (NUM=2)
C
80   CONTINUE
C
C   THERE ARE TWO INDEPENDENT VARIABLES.  THUS AN
C   INTERPOLATION WILL BE BASED ON 4 NUMBERS--TWO FOR
C   EACH VARIABLE.  FIND THE LOCATION OF THE 1ST TWO
C   VALUES BEING INTERPOLATED IN THE T-ARRAY.
C
      I3=INDEX(2)+KBEG-1
      I2=INDEX(1)
      KLOC=(I2-1)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   NOT INTERPOLATE A1, A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA1=F(A1, A2, FAC(2))
C
C   NOW FIND THE LOCATION OF THE 2ND TWO VALUES BEING
C   INTERPOLATED IN THE T-ARRAY
C
      KLOC=(I2-2)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   AGAIN INTERPOLATE A1, A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA2=F(A1, A2, FAC(2))
C
C   NOW INTERPOLATE AA1, AA2 BASED ON THE 1ST INTERPOLATION FACTOR
C
      A=F(AA1, AA2, FAC(1))
      GO TO 95
C
C   PART: (NUM=3)
C
90   CONTINUE
C
C   SINCE THERE ARE THREE INDEPENDENT VARIABLES, THE
C   INTERPOLATION VALUE RETURNED WILL BE BASED ON 8 VALUES
C   FROM THE T-ARRAY.
C
C   FIND THE T-ARRAY LOCATION OF THE 1ST 2 VALUES TO BE
C   INTERPOLATED.
C
      I3=INDEX(3)+KBEG-1
      I2=INDEX(2)
      I1=INDEX(1)

```

```

KLOC=((I1-1)*N(2)+(I2-1))*N(3)+I3
A1=T(KLOC)
A2=T(KLOC-1)
C
C
C
INTERPOLATE
C
C
C
AA1=F(A1, A2, FAC(3))
C
C
C
FIND THE T-ARRAY LOCATION OF THE 2ND 2 VALUES TO BE
INTERPOLATED
C
C
C
KLOC=((I1-1)*N(2)+(I2-2))*N(3)+I3
A1=T(KLOC)
A2=T(KLOC-1)
C
C
C
INTERPOLATE
C
C
C
AA2=F(A1, A2, FAC(3))
C
C
C
FIND THE T-ARRAY LOCATION OF THE 3RD 2 VALUES TO BE
INTERPOLATED
C
C
C
KLOC=((I1-2)*N(2)+(I2-1))*N(3)+I3
A1=T(KLOC)
A2=T(KLOC-1)
C
C
C
INTERPOLATE
C
C
C
AA3=F(A1, A2, FAC(3))
C
C
C
FIND THE T-ARRAY LOCATION OF THE 4TH 2 VALUES TO BE
INTERPOLATED
C
C
C
KLOC=((I1-2)*N(2)+(I2-2))*N(3)+I3
A1=T(KLOC)
A2=T(KLOC-1)
C
C
C
INTERPOLATE
C
C
C
AA4=F(A1, A2, FAC(3))
C
C
C
INTERPOLATE AA1, AA2 USING THE 2ND INTERPOLATION FACTOR
C
C
C
A1=F(AA1, AA2, FAC(2))
C
C
C
INTERPOLATE AA3, AA4 USING THE 2ND INTERPOLATION FACTOR
C
C
C
A2=F(AA3, AA4, FAC(2))
C
C
C
NOW MAKE THE FINAL INTERPOLATION USING FACTOR ONE.
C
C
C
A=F(A1, A2, FAC(1))
C
95 CONTINUE
RETURN
END

```

```

PROGRAM FILMTEST
IMPLICIT REAL*8(A-H, O-Z)
DIMENSION LMNT(192), LFACE(192), COORDS(3)
DATA LMNT/ 5, 6, 7, 8, 11, 12, 17, 18, 19, 20, 25,
+ 26, 27, 28, 33, 34, 35, 36, 41, 42, 43, 44,
+ 47, 48, 53, 54, 55, 56, 1, 2, 3, 4, 5,
+ 6, 7, 8, 9, 10, 11, 12, 21, 23, 25, 27,
+ 29, 30, 33, 34, 37, 38, 41, 42, 59, 60, 71,
+ 72, 75, 76, 79, 80, 83, 84, 99, 100, 57, 58,
+ 59, 60, 69, 70, 71, 72, 73, 74, 75, 76, 77,
+ 78, 79, 80, 81, 82, 83, 84, 97, 98, 99, 100,
+ 141, 142, 159, 160, 165, 166, 171, 172, 177, 178, 201,
+ 202, 139, 140, 157, 158, 163, 164, 169, 170, 175, 176,
+ 199, 200, 137, 138, 155, 156, 161, 162, 167, 168, 173,
+ 174, 197, 198, 259, 260, 271, 272, 275, 276, 279, 280,
+ 283, 284, 291, 292, 257, 258, 269, 270, 273, 274, 277,
+ 278, 281, 282, 289, 290, 257, 258, 261, 262, 263, 264,
+ 269, 270, 273, 274, 277, 278, 281, 282, 285, 286, 289,
+ 290, 293, 294, 295, 296, 301, 302, 303, 304, 309, 310,
+ 311, 312, 317, 318, 323, 324, 327, 328, 321, 322, 325,
+ 326, 321, 322, 325, 326/
DATA LFACE/28*12, 24*16, 12*12, 24*16, 60*16, 32*11, 8*16, 4*11/
DATA COORDS/1, 0, 3, 0, 2, 0/
OPEN(10, FILE='FILM', FORM='FORMATTED', STATUS='NEW')
NPT = 1
WRITE(10, 100)
100 FORMAT('1'///5X, 'KSTEP', 5X, 'KINC', 5X, 'TIME', 5X, 'NOEL', 5X,
+ 'JLTYP', 7X, 'TEMP', 9X, 'SINK', 11X, 'H'///)
TIME = -0.2
DO 20 I = 1, 11
  KSTEP = I
  TIME = TIME + 0.2
  TEMP = 1000.0 * TIME + 70
  DO 10 J = 1, 192
    KINC = J
    NOEL = LMNT(J)
    JLTYP = LFACE(J)
    CALL FILM(H, SINK, TEMP, KSTEP, KINC, TIME, NOEL, NPT, COORDS,
+ JLTYP)
    WRITE(10, 110) KSTEP, KINC, TIME, NOEL, JLTYP, TEMP, SINK, H
110 FORMAT(/6X, I2, 7X, I3, 6X, F4.2, 5X, I3, 7X, I2, 7X, F8.3, 5X,
+ F8.3, 5X, E9.3)
  10 CONTINUE
20 CONTINUE
STOP
END

```

```

SUBROUTINE FILM(H, SINK, TEMP, KSTEP, KINC, TIME, NOEL, NPT, COORDS,
+             JLTP)
  IMPLICIT REAL*8(A-H, O-Z)
  DIMENSION COORDS(3), COND(3), AREA(13), PRESSFS(13)
  INTEGER FSUR1(28), HOL1(24), FSUR2(12), HOL2(24), HOL3(12),
+       HOL4(12), HOL5(12), HOL6(12), HOL7(12), RSUR1(32),
+       FLNG1(4), FLNG2(4), RSUR2(4)

```

```

  AREA IS IN FEET SQUARED
  PRESSURE IS IN POUNDS PER SQUARE INCH

```

```

  DATA AREA /0.150330, 0.002749, 0.002749, 0.001154, 0.001192,
+           0.001270, 0.001351, 0.001447, 0.001561, 0.041097,
+           0.001620, 0.041097, 0.057610/
  DATA PRESSFS /22000.0, 21500.0, 21500.0, 21500.0, 21000.0,
+             21000.0, 21000.0, 20500.0, 20500.0, 20000.0,
+             20500.0, 20000.0, 20000.0/

```

```

  THESE ARRAYS CONSIST OF ALL THE ELEMENTS IN THE PARTICULAR
  ELEMENT SET NAME

```

```

  DATA FSUR1 / 5, 6, 7, 8, 11, 12, 17, 18, 19, 20, 25, 26,
+             27, 28, 33, 34, 35, 36, 41, 42, 43, 44, 47, 48,
+             53, 54, 55, 56/
  DATA HOL1 / 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,
+            21, 23, 25, 27, 29, 30, 33, 34, 37, 38, 41, 42/
  DATA FSUR2 /59, 60, 71, 72, 75, 76, 79, 80, 83, 84, 99, 100/
  DATA HOL2 /57, 58, 59, 60, 69, 70, 71, 72, 73, 74, 75, 76,
+            77, 78, 79, 80, 81, 82, 83, 84, 97, 98, 99, 100/
  DATA HOL3 /141, 142, 159, 160, 165, 166, 171, 172, 177, 178,
+            201, 202/
  DATA HOL4 /139, 140, 157, 158, 163, 164, 169, 170, 175, 176,
+            199, 200/
  DATA HOL5 /137, 138, 155, 156, 161, 162, 167, 168, 173, 174,
+            197, 198/
  DATA HOL6 /259, 260, 271, 272, 275, 276, 279, 280, 283, 284,
+            291, 292/
  DATA HOL7 /257, 258, 269, 270, 273, 274, 277, 278, 281, 282,
+            289, 290/
  DATA RSUR1 /257, 258, 261, 262, 263, 264, 269, 270, 273, 274,
+            277, 278, 281, 282, 285, 286, 289, 290, 293, 294,
+            295, 296, 301, 302, 303, 304, 309, 310, 311, 312,
+            317, 318/
  DATA FLNG1 /323, 324, 327, 328/
  DATA FLNG2 /321, 322, 325, 326/
  DATA RSUR2 /321, 322, 325, 326/

```

```

  SINK TEMPERATURE DEFINITION
  THESE ARE DEGREE FAHRENHEIT

```

```

  IF(TIME.LT.0.5)SINK = 6000.0 * TIME
  IF(TIME.GE.0.5.AND.TIME.LE.1.3)SINK = 3000.0
  IF(TIME.GT.1.3.AND.TIME.LT.1.8)SINK = -3400.0 * TIME + 10020.0
  IF(TIME.GE.1.8)SINK = 300.0

```

```

  CONSTANTS USED IN CALCULATIONS
  MDOT IS IN POUND MASS PER SEC
  PRANDTL NUMBER IS DIMENSIONLESS
  CP IS IN BTU PER POUND DEGREE FAHRENHEIT

```

```

  MDOT = 128.3668
  PR = 0.74

```

```

C
C
C
CP = 0.295
LOGIC TO DETERMINE WHICH EQUATION TO USE
DO 10 II = 1,28
  IF(NOEL. EQ. FSUR1(II). AND. JLTYP. EQ. 12)THEN
    NEG = 1
    LOC = 1
    DIAM = 5.25
    WETD = 4.9024
    GO TO 60
  ENDIF
10 CONTINUE
DO 20 IJ = 1,24
  IF(NOEL. EQ. HOL1(IJ). AND. JLTYP. EQ. 16)THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF(NOEL. EQ. HOL2(IJ). AND. JLTYP. EQ. 16)THEN
    NEG = 2
    LOC = 4
    DIAM = 0.46
    GO TO 60
  ENDIF
20 CONTINUE
DO 30 IK = 1,12
  IF(NOEL. EQ. FSUR2(IK). AND. JLTYP. EQ. 12)THEN
    NEG = 3
    LOC = 3
    DIAM = 0.71
    WETD = 0.5408
    GO TO 60
  ENDIF
  IF(NOEL. EQ. HOL3(IK). AND. JLTYP. EQ. 16)THEN
    NEG = 2
    LOC = 5
    DIAM = 0.468
    GO TO 60
  ENDIF
  IF(NOEL. EQ. HOL4(IK). AND. JLTYP. EQ. 16)THEN
    NEG = 2
    LOC = 6
    DIAM = 0.482
    GO TO 60
  ENDIF
  IF(NOEL. EQ. HOL5(IK). AND. JLTYP. EQ. 16)THEN
    NEG = 2
    LOC = 7
    DIAM = 0.498
    GO TO 60
  ENDIF
  IF(NOEL. EQ. HOL6(IK). AND. JLTYP. EQ. 16)THEN
    NEG = 2
    LOC = 8
    DIAM = 0.515
    GO TO 60
  ENDIF
  IF(NOEL. EQ. HOL7(IK). AND. JLTYP. EQ. 16)THEN
    NEG = 2
    LOC = 9

```



```

        DIAM = 0.535
        GO TO 60
    ENDIF
30 CONTINUE
    DO 40 IL = 1,32
        IF(NOEL. EQ. RSUR1(IL). AND. JLTYP. EQ. 11)THEN
            NEG = 4
            LOC = 10
            WETD = 2.3358
            GO TO 60
        ENDIF
40 CONTINUE
    DO 50 IM = 1,4
        IF(NOEL. EQ. FLNG1(IM). AND. JLTYP. EQ. 16)THEN
            NEG = 5
            LOC = 11
            DIAM = 0.545
            WETD = 2.3358
            GO TO 60
        ENDIF
        IF(NOEL. EQ. FLNG2(IM). AND. JLTYP. EQ. 16)THEN
            NEG = 5
            LOC = 12
            DIAM = 2.745
            WETD = 2.3358
            GO TO 60
        ENDIF
        IF(NOEL. EQ. RSUR2(IM). AND. JLTYP. EQ. 11)THEN
            NEG = 4
            LOC = 13
            WETD = 1.7400
            GO TO 60
        ENDIF
50 CONTINUE
C
C   FREE STREAM VELOCITY CALCULATION
C
60 COND(1) = PRESSFS(LOC)
   COND(2) = SINK + 460.0
   CALL FINTERP(3,2,COND,RHOFS)
   VELFS = (MDOT / (RHOFS * AREA(LOC))) * 12.0
C
C   GAS PROPERTY DEFINITION FOR FILM TEMPERATURE
C
   TFILM = 0.5 * (SINK + TEMP)
   COND(2) = TFILM + 460.0
   CALL FINTERP(1,2,COND,VISFS)
   CALL FINTERP(2,2,COND,CONDFS)
   CALL FINTERP(3,2,COND,DENFS)
   VISFS = VISFS / (3600.0 * 12.0)
   CONDFS = CONDFS / (3600.0 * 12.0)
   DENFS = DENFS / 1728.0
C
C   HEAT TRANSFER COEFFICIENT H CALCULATION
C
   GO TO (70,80,90,100,110), NEG
C
C   NEG = 1 --- FRONT SURFACE ONLY --- FSUR1 ELEMENTS
C
70 H = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM)**0.5) * ((VELFS*
+ WETD*DENFS/VISFS)**0.731) * (PR**(1.0/3.0))
   GO TO 120

```

```

C
C   NEG = 2 --- NOZZLE ONLY --- HOL1, HOL2, HOL3, HOL4, HOL5,
C   HOL6, AND HOL7 ELEMENTS
C
80 H = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) * ((DENFS*
+   VELFS)**0.8)
   GO TO 120
C
C   NEG = 3 --- FRONT SURFACE AND NOZZLE COMBINED --- FSUR2 ELEMENTS
C
90 HFSUR = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM)**0.5) *
+   ((VELFS*WETD*DENFS/VISFS)**0.731) * (PR**(1.0/3.0))
   HHOL = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) *
+   ((DENFS*VELFS)**0.8)
   H = 0.5 * (HFSUR + HHOL)
   GO TO 120
C
C   NEG = 4 --- BACK SURFACE ONLY --- RSUR1 AND RSUR2 ELEMENTS
C
100 H = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)**
+   (2.0/3.0)) * (PR**(1.0/3.0))
   GO TO 120
C
C   NEG = 5 --- BACK SURFACE AND NOZZLE COMBINED --- FLNG1 AND FLNG2
C   ELEMENTS
C
110 HHOL = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) *
+   ((DENFS*VELFS)**0.8)
   HRSUR = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)
+   **(2.0/3.0)) * (PR**(1.0/3.0))
   H = 0.5 * (HHOL+HRSUR)
C
C   END OF SUBROUTINE FILM
C
120 RETURN
   END

```

```

SUBROUTINE FINTERP(ITAB,NUM,U,A)
IMPLICIT REAL*8(A-H,O-Z)
DIMENSION U(3),N(3),INDEX(3),FAC(3),T(137),ISEQ(3)

```

```

TABLE T DATA

```

```

IN ORDER THESE ARE

```

- 1) DYNAMIC VISCOSITY (POUND PER HOUR FOOT)
- 2) THERMAL CONDUCTIVITY (BTU PER FOOT HOUR DEGREE FAHRENHEIT)
- 3) DENSITY (POUND PER CUBIC FOOT)

```

ALL ARE A FUNCTION OF PRESSURE (PSI) AND TEMPERATURE (DEGREE R).

```

```

DATA T /3. 0, 7. 0, 14. 6959, 14695. 9, 29391. 8, 750. 0, 1000. 0,
+ 1500. 0, 2000. 0, 2500. 0, 3000. 0, 3500. 0, 0. 053, 0. 0635,
+ 0. 084, 0. 104, 0. 119, 0. 133, 0. 147, 0. 099, 0. 118,
+ 0. 125, 0. 14, 0. 153, 0. 165, 0. 176, 0. 18, 0. 18,
+ 0. 1825, 0. 186, 0. 191, 0. 2, 0. 21, 3. 0, 7. 0,
+14. 6959, 14695. 9, 29391. 8, 750. 0, 1000. 0, 1500. 0, 2000. 0,
+ 2500. 0, 3000. 0, 3500. 0, 0. 0205, 0. 0252, 0. 0339, 0. 042,
+ 0. 0495, 0. 0565, 0. 064, 0. 0435, 0. 0475, 0. 055, 0. 0625,
+ 0. 0695, 0. 076, 0. 082, 0. 08, 0. 0805, 0. 083, 0. 086,
+ 0. 09, 0. 096, 0. 102, 6. 0, 9. 0, 20000. 0, 20400. 0,
+20800. 0, 21200. 0, 21600. 0, 22000. 0, 760. 0, 835. 0, 1210. 0,
+ 1585. 0, 1960. 0, 2335. 0, 2710. 0, 3085. 0, 3460. 0, 33. 2401,
+31. 6982, 25. 9477, 21. 9185, 18. 7722, 16. 4698, 14. 6965, 13. 2777,
+12. 1128, 33. 5083, 31. 9658, 26. 2139, 22. 2011, 19. 0428, 16. 7145,
+14. 9216, 13. 4865, 12. 3076, 33. 7726, 32. 2295, 26. 4751, 22. 4763,
+19. 3112, 16. 9571, 15. 1447, 13. 6916, 12. 5009, 34. 0331, 32. 4894,
+26. 7316, 22. 7444, 19. 5778, 17. 1979, 15. 3660, 13. 8991, 12. 6928,
+34. 2900, 32. 7457, 26. 9838, 23. 0060, 19. 8436, 17. 4360, 15. 5853,
+14. 1029, 12. 8833, 34. 5435, 32. 9985, 27. 2319, 23. 2614, 20. 1073,
+17. 6724, 15. 8029, 14. 3051, 13. 0724/
DATA ISEQ /1, 34, 67/

```

```

THIS IS THE END OF THE DATA TABLES

```

```

F(T1,T2,FF)=T2+FF*(T1-T2)

```

```

PLACE START LOCATION OF THE TABLE INTO K.

```

```

K=ISEQ(ITAB)

```

```

PUT NUMBER OF VALUES OF EACH INDEPENDENT VARIABLE INTO
N-ARRAY

```

```

DO 10 I=1,NUM
  NN=K+I-1
  N(I)=T(NN)

```

```

10 CONTINUE

```

```

FIND INDEX VALUES FOR EACH INDEPENDENT VARIABLE SUCH
THAT DESIRED VALUE LIES BETWEEN INDICES

```

```

INITIALIZE KBEG TO THE START OF THE LIST OF INDEPENDENT
VARIABLES AND KEND TO THE END OF THE LIST OF THE
FIRST INDEPENDENT VARIABLE.

```

```

KBEG=K+NUM
KEND=KBEG+N(1)-1

```

```

C      DO:  FOR THE NUMBER OF INDEPENDENT VARIABLES
C
C          DO 500 J=1,NUM
C              I=N(J)
C
C          IF-THEN-ELSE
C
C          IF:  THIS IS THE FIRST INDEPENDENT VARIABLE
C
C              IF (.NOT. (J .EQ. 1)) GO TO 50
C
C          THEN:  DO NOTHING SINCE KBEG AND KEND HAVE
C                ALREADY BEEN INITIALIZED
C
C              GO TO 60
C
C          ELSE:  INCREMENT KBEG AND KEND
C
C          50      CONTINUE
C                KBEG=KEND+1
C                KEND=KBEG+N(J)-1
C
C          60      CONTINUE
C
C          FI:  END OF IF-THEN-ELSE
C
C          IF-THEN-ELSE
C
C          IF:  THE VALUE WANTED IS LESS THAN OR EQUAL TO
C                THE FIRST VALUE IN THE TABLE.
C
C              IF(.NOT. (U(J) .LE. T(KBEG))) GO TO 65
C
C          THEN:  SET INDEX(J) TO 2 AND GO TO THE ROUTINE
C                TO COMPUTE THE INTERPOLATION FACTOR
C
C              INDEX(J)=2
C              GO TO 140
C
C          ELSE:
C
C          65      CONTINUE
C
C              IF-THEN-ELSE
C
C              IF:  THE VALUE WANTED IS GREATER THAN OR EQUAL
C                    TO THE LAST VALUE OF THE VARIABLE IN THE
C                    TABLE
C
C                  IF (.NOT. (U(J) .GE. T(KEND))) GO TO 75
C
C              THEN:  SET THE INDEX TO THE NUMBER OF VALUES OF
C                    THE INDEPENDENT VARIABLE AND GO TO THE
C                    ROUTINE TO COMPUTE THE INTERPOLATION FACTOR
C
C                  INDEX(J)=N(J)
C                  GO TO 140
C
C              ELSE:  COMPUTE THE INDEX VALUES SUCH THAT THE
C                    DESIRED VALUE U(J) LIES BETWEEN THE TABLE
C                    VALUES FOR THOSE COMPUTED INDICES

```

```

75      CONTINUE
        II=1
        KKBEG=KKBEG+1
C
C      DO:  FOR THE NUMBER OF VALUES OF EACH
C          INDEPENDENT VARIABLE
C
C      DO 100 JJ=KKBEG,KEND
C          II=II+1
C
C          IF-THEN-ELSE
C
C          IF:  THE DESIRED VALUE IS LESS THAN OR
C              EQUAL TO THE TABLE VALUE--THE
C              INDEPENDENT VARIABLE VALUE
C
C              IF (.NOT. (U(J) .LE. T(JJ))) GO TO 100
C
C              THEN:  SET THE INDEX TO POINT TO THE TABLE
C                    VALUE AND GO TO THE ROUTINE TO
C                    COMPUTE THE INTERPOLATION FACTOR
C
C                    INDEX(J)=II
C                    GO TO 140
C
C          ELSE:  CONTINUE
C
C          FI:  END OF IF-THEN-ELSE
C
100     CONTINUE
C
C      OD:  END OF DO-FOR
C
C      FI:  END OF IF-THEN-ELSE
C
C      FI:  END OF IF-THEN-ELSE
C
C      COMPUTE THE INTERPOLATION FACTOR FAC(J)
C
140     CONTINUE
        IND=KKBEG+INDEX(J)-1
        T1=T(IND)
        T2=T(IND-1)
        FAC(J)=(U(J)-T2)/(T1-T2)
C
500     CONTINUE
C
C      OD:  END OF DO-FOR
C
C          *****INTERPOLATION ROUTINE*****
C
C      INITIALIZE KKBEG TO THE BEGINNING OF THE DEPENDENT
C      VARIABLES
C
C          KKBEG=KEND+1
C
C      CASES:  3 CASES (NUM=1,2,3)
C
C          IF (NUM .EQ. 1) GO TO 70
C          IF (NUM .EQ. 2) GO TO 80

```

```

      IF (NUM .EQ. 3) GO TO 90
C
C   PART: (NUM=1)
C
70   CONTINUE
C
C   THERE IS ONLY ONE INDEPENDENT VARIABLE.  COMPUTE
C   THE INTERPOLATED TABLE VALUE A AND RETURN.
C
      I3=INDEX(1)+KBEG-1
      A=F(T(I3),T(I3-1),FAC(1))
      GO TO 95
C
C   PART: (NUM=2)
C
80   CONTINUE
C
C   THERE ARE TWO INDEPENDENT VARIABLES.  THUS AN
C   INTERPOLATION WILL BE BASED ON 4 NUMBERS--TWO FOR
C   EACH VARIABLE.  FIND THE LOCATION OF THE 1ST TWO
C   VALUES BEING INTERPOLATED IN THE T-ARRAY.
C
      I3=INDEX(2)+KBEG-1
      I2=INDEX(1)
      KLOC=(I2-1)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   NOT INTERPOLATE A1, A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA1=F(A1, A2, FAC(2))
C
C   NOW FIND THE LOCATION OF THE 2ND TWO VALUES BEING
C   INTERPOLATED IN THE T-ARRAY
C
      KLOC=(I2-2)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   AGAIN INTERPOLATE A1, A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA2=F(A1, A2, FAC(2))
C
C   NOW INTERPOLATE AA1, AA2 BASED ON THE 1ST INTERPOLATION FACTOR
C
      A=F(AA1, AA2, FAC(1))
      GO TO 95
C
C   PART: (NUM=3)
C
90   CONTINUE
C
C   SINCE THERE ARE THREE INDEPENDENT VARIABLES, THE
C   INTERPOLATION VALUE RETURNED WILL BE BASED ON 8 VALUES
C   FROM THE T-ARRAY.
C
C   FIND THE T-ARRAY LOCATION OF THE 1ST 2 VALUES TO BE
C   INTERPOLATED.
C
      I3=INDEX(3)+KBEG-1
      I2=INDEX(2)
      I1=INDEX(1)

```

```

      KLOC=((I1-1)*N(2)+(I2-1))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C
C   INTERPOLATE
      AA1=F(A1, A2, FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 2ND 2 VALUES TO BE
C   INTERPOLATED
      KLOC=((I1-1)*N(2)+(I2-2))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
      AA2=F(A1, A2, FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 3RD 2 VALUES TO BE
C   INTERPOLATED
      KLOC=((I1-2)*N(2)+(I2-1))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
      AA3=F(A1, A2, FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 4TH 2 VALUES TO BE
C   INTERPOLATED
      KLOC=((I1-2)*N(2)+(I2-2))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
      AA4=F(A1, A2, FAC(3))
C
C   INTERPOLATE AA1, AA2 USING THE 2ND INTERPOLATION FACTOR
      A1=F(AA1, AA2, FAC(2))
C
C   INTERPOLATE AA3, AA4 USING THE 2ND INTERPOLATION FACTOR
      A2=F(AA3, AA4, FAC(2))
C
C   NOW MAKE THE FINAL INTERPOLATION USING FACTOR ONE.
      A=F(A1, A2, FAC(1))
C
95  CONTINUE
      RETURN
      END

```

APPENDIX E

ABAQUS HEAT TRANSFER ANALYSIS INPUT FILES

*HEADING
MACH 14 FLOW RESTRICTOR
TRANSIENT
HEAT TRANSFER ANALYSIS
*NODE. NSET=NALL

1.	0.	35500.	0.		2.	00000
2.	0.	55000.	0.		2.	00000
3.	0.	74500.	0.		2.	00000
4.	0.	35196.	0.	04634.	2.	00000
5.	0.	56199.	0.	09109.	2.	00000
6.	0.	77202.	0.	13585.	2.	00000
7.	0.	34290.	0.	09188.	2.	00000
8.	0.	59594.	0.	17145.	2.	00000
9.	0.	84898.	0.	25102.	2.	00000
10.	0.	35500.	0.		2.	39500
11.	0.	55000.	0.		2.	39500
12.	0.	74500.	0.		2.	39500
13.	0.	35196.	0.	04634.	2.	39500
14.	0.	56199.	0.	09109.	2.	39500
15.	0.	77202.	0.	13585.	2.	39500
16.	0.	34290.	0.	09188.	2.	39500
17.	0.	59594.	0.	17145.	2.	39500
18.	0.	84898.	0.	25102.	2.	39500
19.	0.	35500.	0.		2.	79000
20.	0.	55000.	0.		2.	79000
21.	0.	74500.	0.		2.	79000
22.	0.	35196.	0.	04634.	2.	79000
23.	0.	56199.	0.	09109.	2.	79000
24.	0.	77202.	0.	13585.	2.	79000
25.	0.	34290.	0.	09188.	2.	79000
26.	0.	59594.	0.	17145.	2.	79000
27.	0.	84898.	0.	25102.	2.	79000
28.	1.	62500.	0.		2.	00000
29.	2.	12500.	0.		2.	00000
30.	2.	62500.	0.		2.	00000
31.	1.	61110.	0.	21211.	2.	00000
32.	2.	10682.	0.	27737.	2.	00000
33.	2.	60254.	0.	34263.	2.	00000
34.	1.	56963.	0.	42058.	2.	00000
35.	2.	05259.	0.	54999.	2.	00000
36.	2.	53556.	0.	67940.	2.	00000
37.	1.	62500.	0.		2.	39500
38.	2.	12500.	0.		2.	39500
39.	2.	62500.	0.		2.	39500
40.	1.	61110.	0.	21211.	2.	39500
41.	2.	10682.	0.	27737.	2.	39500
42.	2.	60254.	0.	34263.	2.	39500
43.	1.	56963.	0.	42058.	2.	39500
44.	2.	05259.	0.	54999.	2.	39500
45.	2.	53556.	0.	67940.	2.	39500
46.	1.	62500.	0.		2.	79000
47.	2.	12500.	0.		2.	79000
48.	2.	62500.	0.		2.	79000
49.	1.	61110.	0.	21211.	2.	79000
50.	2.	10682.	0.	27737.	2.	79000
51.	2.	60254.	0.	34263.	2.	79000
52.	1.	56963.	0.	42058.	2.	79000
53.	2.	05259.	0.	54999.	2.	79000
54.	2.	53556.	0.	67940.	2.	79000
58.	0.	32798.	0.	13585.	2.	00000
59.	0.	58820.	0.	25306.	2.	00000
60.	0.	84842.	0.	37027.	2.	00000

61.	0.	30744.	0.	17750.	2.	00000
62.	0.	57765.	0.	33351.	2.	00000
63.	0.	84786.	0.	48951.	2.	00000
67.	0.	32798.	0.	13585.	2.	39500
68.	0.	58820.	0.	25306.	2.	39500
69.	0.	84842.	0.	37027.	2.	39500
70.	0.	30744.	0.	17750.	2.	39500
71.	0.	57765.	0.	33351.	2.	39500
72.	0.	84786.	0.	48951.	2.	39500
76.	0.	32798.	0.	13585.	2.	79000
77.	0.	58820.	0.	25306.	2.	79000
78.	0.	84842.	0.	37027.	2.	79000
79.	0.	30744.	0.	17750.	2.	79000
80.	0.	57765.	0.	33351.	2.	79000
81.	0.	84786.	0.	48951.	2.	79000
83.	0.	96415.	0.	32798.	2.	00000
84.	1.	10000.	0.	35500.	2.	00000
86.	0.	96901.	0.	44512.	2.	00000
87.	1.	09995.	0.	49501.	2.	00000
89.	0.	97388.	0.	56227.	2.	00000
90.	1.	09989.	0.	63502.	2.	00000
92.	0.	96415.	0.	32798.	2.	39500
93.	1.	10000.	0.	35500.	2.	39500
95.	0.	96901.	0.	44512.	2.	39500
96.	1.	09995.	0.	49501.	2.	39500
98.	0.	97388.	0.	56227.	2.	39500
99.	1.	09989.	0.	63502.	2.	39500
101.	0.	96415.	0.	32798.	2.	79000
102.	1.	10000.	0.	35500.	2.	79000
104.	0.	96901.	0.	44512.	2.	79000
105.	1.	09995.	0.	49501.	2.	79000
107.	0.	97388.	0.	56227.	2.	79000
108.	1.	09989.	0.	63502.	2.	79000
110.	1.	23585.	0.	32798.	2.	00000
111.	1.	35102.	0.	25102.	2.	00000
113.	1.	23067.	0.	51776.	2.	00000
114.	1.	35106.	0.	51554.	2.	00000
116.	1.	22550.	0.	70754.	2.	00000
117.	1.	35110.	0.	78006.	2.	00000
119.	1.	23585.	0.	32798.	2.	39500
120.	1.	35102.	0.	25102.	2.	39500
122.	1.	23067.	0.	51776.	2.	39500
123.	1.	35106.	0.	51554.	2.	39500
125.	1.	22550.	0.	70754.	2.	39500
126.	1.	35110.	0.	78006.	2.	39500
128.	1.	23585.	0.	32798.	2.	79000
129.	1.	35102.	0.	25102.	2.	79000
131.	1.	23067.	0.	51776.	2.	79000
132.	1.	35106.	0.	51554.	2.	79000
134.	1.	22550.	0.	70754.	2.	79000
135.	1.	35110.	0.	78006.	2.	79000
139.	1.	50130.	0.	62186.	2.	00000
140.	1.	96324.	0.	81320.	2.	00000
141.	2.	42518.	1.	00454.	2.	00000
142.	1.	40729.	0.	81250.	2.	00000
143.	1.	84030.	1.	06250.	2.	00000
144.	2.	27332.	1.	31250.	2.	00000
148.	1.	50130.	0.	62186.	2.	39500
149.	1.	96324.	0.	81320.	2.	39500
150.	2.	42518.	1.	00454.	2.	39500
151.	1.	40729.	0.	81250.	2.	39500
152.	1.	84030.	1.	06250.	2.	39500

153.	2. 27332.	1. 31250.	2. 39500
157.	1. 50130.	0. 62186.	2. 79000
158.	1. 96324.	0. 81320.	2. 79000
159.	2. 42518.	1. 00454.	2. 79000
160.	1. 40729.	0. 81250.	2. 79000
161.	1. 84030.	1. 06250.	2. 79000
162.	2. 27332.	1. 31250.	2. 79000
163.	0. 35500.	0.	1. 81100
164.	0. 55000.	0.	1. 81100
165.	0. 74500.	0.	1. 81100
166.	0. 35196.	0. 04634.	1. 81100
167.	0. 56199.	0. 09109.	1. 81100
168.	0. 77202.	0. 13585.	1. 81100
169.	0. 34290.	0. 09188.	1. 81100
170.	0. 59594.	0. 17145.	1. 81100
171.	0. 84898.	0. 25102.	1. 81100
172.	0. 35500.	0.	1. 90550
173.	0. 55000.	0.	1. 90550
174.	0. 74500.	0.	1. 90550
175.	0. 35196.	0. 04634.	1. 90550
176.	0. 56199.	0. 09109.	1. 90550
177.	0. 77202.	0. 13585.	1. 90550
178.	0. 34290.	0. 09188.	1. 90550
179.	0. 59594.	0. 17145.	1. 90550
180.	0. 84898.	0. 25102.	1. 90550
190.	1. 62500.	0.	1. 81100
191.	2. 12500.	0.	1. 81100
192.	2. 62500.	0.	1. 81100
193.	1. 61110.	0. 21211.	1. 81100
194.	2. 10682.	0. 27737.	1. 81100
195.	2. 60254.	0. 34263.	1. 81100
196.	1. 56963.	0. 42058.	1. 81100
197.	2. 05259.	0. 54999.	1. 81100
198.	2. 93556.	0. 67940.	1. 81100
199.	1. 62500.	0.	1. 90550
200.	2. 12500.	0.	1. 90550
201.	2. 62500.	0.	1. 90550
202.	1. 61110.	0. 21211.	1. 90550
203.	2. 10682.	0. 27737.	1. 90550
204.	2. 60254.	0. 34263.	1. 90550
205.	1. 56963.	0. 42058.	1. 90550
206.	2. 05259.	0. 54999.	1. 90550
207.	2. 93556.	0. 67940.	1. 90550
220.	0. 32798.	0. 13585.	1. 81100
221.	0. 58820.	0. 25306.	1. 81100
222.	0. 84842.	0. 37027.	1. 81100
223.	0. 30744.	0. 17750.	1. 81100
224.	0. 57765.	0. 33351.	1. 81100
225.	0. 84786.	0. 48951.	1. 81100
229.	0. 32798.	0. 13585.	1. 90550
230.	0. 58820.	0. 25306.	1. 90550
231.	0. 84842.	0. 37027.	1. 90550
232.	0. 30744.	0. 17750.	1. 90550
233.	0. 57765.	0. 33351.	1. 90550
234.	0. 84786.	0. 48951.	1. 90550
245.	0. 96415.	0. 32798.	1. 81100
246.	1. 10000.	0. 35500.	1. 81100
248.	0. 96901.	0. 44512.	1. 81100
249.	1. 09995.	0. 49501.	1. 81100
251.	0. 97388.	0. 56227.	1. 81100
252.	1. 09989.	0. 63502.	1. 81100
254.	0. 96415.	0. 32798.	1. 90550

255.	1.	10000.	0.	35500.	1.	90550
257.	0.	96901.	0.	44512.	1.	90550
258.	1.	09995.	0.	49501.	1.	90550
260.	0.	97388.	0.	56227.	1.	90550
261.	1.	09989.	0.	63502.	1.	90550
272.	1.	23585.	0.	32798.	1.	81100
273.	1.	35102.	0.	25102.	1.	81100
275.	1.	23067.	0.	51776.	1.	81100
276.	1.	35106.	0.	51554.	1.	81100
278.	1.	22550.	0.	70754.	1.	81100
279.	1.	35110.	0.	78006.	1.	81100
281.	1.	23585.	0.	32798.	1.	90550
282.	1.	35102.	0.	25102.	1.	90550
284.	1.	23067.	0.	51776.	1.	90550
285.	1.	35106.	0.	51554.	1.	90550
287.	1.	22550.	0.	70754.	1.	90550
288.	1.	35110.	0.	78006.	1.	90550
301.	1.	50130.	0.	62186.	1.	81100
302.	1.	96324.	0.	81320.	1.	81100
303.	2.	42518.	1.	00454.	1.	81100
304.	1.	40729.	0.	81250.	1.	81100
305.	1.	84030.	1.	06250.	1.	81100
306.	2.	27332.	1.	31250.	1.	81100
310.	1.	50130.	0.	62186.	1.	90550
311.	1.	96324.	0.	81320.	1.	90550
312.	2.	42518.	1.	00454.	1.	90550
313.	1.	40729.	0.	81250.	1.	90550
314.	1.	84030.	1.	06250.	1.	90550
315.	2.	27332.	1.	31250.	1.	90550
325.	0.	40000.	0.		0.	36000
326.	0.	55000.	0.		0.	36000
327.	0.	70000.	0.		0.	36000
328.	0.	39658.	0.	05221.	0.	36000
329.	0.	56351.	0.	10264.	0.	36000
330.	0.	73045.	0.	15307.	0.	36000
331.	0.	38637.	0.	10353.	0.	36000
332.	0.	60176.	0.	19319.	0.	36000
333.	0.	81716.	0.	28284.	0.	36000
334.	0.	38946.	0.		0.	70000
335.	0.	55000.	0.		0.	70000
336.	0.	71054.	0.		0.	70000
337.	0.	38612.	0.	05083.	0.	70000
338.	0.	56317.	0.	09993.	0.	70000
339.	0.	74021.	0.	14903.	0.	70000
340.	0.	37619.	0.	10080.	0.	70000
341.	0.	60040.	0.	18809.	0.	70000
342.	0.	82461.	0.	27539.	0.	70000
343.	0.	37891.	0.		1.	04000
344.	0.	55000.	0.		1.	04000
345.	0.	72109.	0.		1.	04000
346.	0.	37567.	0.	04946.	1.	04000
347.	0.	56282.	0.	09722.	1.	04000
348.	0.	74997.	0.	14498.	1.	04000
349.	0.	36600.	0.	09807.	1.	04000
350.	0.	59903.	0.	18300.	1.	04000
351.	0.	83207.	0.	26793.	1.	04000
355.	0.	36955.	0.	15307.	0.	36000
356.	0.	59358.	0.	26532.	0.	36000
357.	0.	81760.	0.	37757.	0.	36000
358.	0.	34641.	0.	20000.	0.	36000
359.	0.	58223.	0.	33615.	0.	36000
360.	0.	81805.	0.	47230.	0.	36000

364.	0.	35981.	0.	14904.	0.	70000
365.	0.	59232.	0.	26245.	0.	70000
366.	0.	82482.	0.	37586.	0.	70000
367.	0.	33728.	0.	19473.	0.	70000
368.	0.	58116.	0.	33553.	0.	70000
369.	0.	82503.	0.	47633.	0.	70000
373.	0.	35007.	0.	14500.	1.	04000
374.	0.	59106.	0.	25958.	1.	04000
375.	0.	83204.	0.	37415.	1.	04000
376.	0.	32815.	0.	18946.	1.	04000
377.	0.	58008.	0.	33491.	1.	04000
378.	0.	83202.	0.	48037.	1.	04000
380.	0.	94693.	0.	36955.	0.	36000
381.	1.	10000.	0.	40000.	0.	36000
383.	0.	95323.	0.	46177.	0.	36000
384.	1.	10052.	0.	51784.	0.	36000
386.	0.	95954.	0.	55399.	0.	36000
387.	1.	10103.	0.	63568.	0.	36000
389.	0.	95097.	0.	35979.	0.	70000
390.	1.	10000.	0.	38946.	0.	70000
392.	0.	95693.	0.	45786.	0.	70000
393.	1.	10038.	0.	51249.	0.	70000
395.	0.	96290.	0.	55593.	0.	70000
396.	1.	10076.	0.	63553.	0.	70000
398.	0.	95501.	0.	35003.	1.	04000
399.	1.	10000.	0.	37891.	1.	04000
401.	0.	96064.	0.	45395.	1.	04000
402.	1.	10025.	0.	50714.	1.	04000
404.	0.	96626.	0.	55787.	1.	04000
405.	1.	10050.	0.	63537.	1.	04000
407.	1.	21670.	0.	36262.	0.	36000
408.	1.	33341.	0.	32523.	0.	36000
410.	1.	18727.	0.	51418.	0.	36000
411.	1.	27402.	0.	51051.	0.	36000
413.	1.	14482.	0.	66097.	0.	36000
414.	1.	18862.	0.	68625.	0.	36000
416.	1.	22097.	0.	35453.	0.	70000
417.	1.	33757.	0.	30771.	0.	70000
419.	1.	19708.	0.	51518.	0.	70000
420.	1.	29219.	0.	51106.	0.	70000
422.	1.	16373.	0.	67188.	0.	70000
423.	1.	22669.	0.	70823.	0.	70000
425.	1.	22523.	0.	34644.	1.	04000
426.	1.	34173.	0.	29020.	1.	04000
428.	1.	20689.	0.	51619.	1.	04000
429.	1.	31035.	0.	51160.	1.	04000
431.	1.	18263.	0.	68279.	1.	04000
432.	1.	26477.	0.	73021.	1.	04000
433.	1.	45500.	0.	.	2.	00000
435.	1.	42798.	0.	13585.	2.	00000
439.	1.	45500.	0.	.	2.	39500
441.	1.	42798.	0.	13585.	2.	39500
445.	1.	45500.	0.	.	2.	79000
447.	1.	42798.	0.	13585.	2.	79000
469.	0.	23000.	0.	.	1.	81100
471.	0.	22803.	0.	03002.	1.	81100
473.	0.	22216.	0.	05953.	1.	81100
475.	0.	23000.	0.	.	1.	90550
477.	0.	22803.	0.	03002.	1.	90550
479.	0.	22216.	0.	05953.	1.	90550
481.	0.	23000.	0.	.	2.	00000
483.	0.	22803.	0.	03002.	2.	00000

485.	0.	22216.	0	05953.	2	00000
487.	0.	93737.	0.	16263.	1	81100
489.	0.	88751.	0.	08802.	1.	81100
491.	0.	87000.	0.		1.	81100
493.	0.	93737.	0.	16263.	1.	90550
495.	0.	88751.	0.	08802.	1.	90550
497.	0.	87000.	0.		1.	90550
499.	0.	93737.	0.	16263.	2.	00000
501.	0.	88751.	0.	08802.	2.	00000
503.	0.	87000.	0.		2.	00000
505.	1.	10000.	0.	23000.	1.	81100
507.	1.	01198.	0.	21249.	1.	81100
511.	1.	10000.	0.	23000.	1.	90550
513.	1.	01198.	0.	21249.	1.	90550
517.	1.	10000.	0.	23000.	2.	00000
519.	1.	01198.	0.	21249.	2.	00000
523.	1.	26263.	0.	16263.	1.	81100
525.	1.	18802.	0.	21249.	1.	81100
529.	1.	26263.	0.	16263.	1.	90550
531.	1.	18802.	0.	21249.	1.	90550
535.	1.	26263.	0.	16263.	2.	00000
537.	1.	18802.	0.	21249.	2.	00000
541.	1.	33000.	0.		1.	81100
542.	1.	45500.	0.		1.	81100
543.	1.	31249.	0.	08802.	1.	81100
544.	1.	42798.	0.	13585.	1.	81100
547.	1.	33000.	0.		1.	90550
548.	1.	45500.	0.		1.	90550
549.	1.	31249.	0.	08802.	1.	90550
550.	1.	42798.	0.	13585.	1.	90550
553.	1.	33000.	0.		2.	00000
555.	1.	31249.	0.	08802.	2.	00000
579.	0.	21249.	0.	08802.	1.	81100
581.	0.	19919.	0.	11500.	1.	81100
585.	0.	21249.	0.	08802.	1.	90550
587.	0.	19919.	0.	11500.	1.	90550
591.	0.	21249.	0.	08802.	2.	00000
593.	0.	19919.	0.	11500.	2.	00000
613.	0.	27250.	0.		0.	36000
615.	0.	27017.	0.	03557.	0.	36000
617.	0.	26321.	0.	07053.	0.	36000
619.	0.	26254.	0.		0.	70000
621.	0.	26030.	0.	03427.	0.	70000
623.	0.	25360.	0.	06795.	0.	70000
625.	0.	25298.	0.		1.	04000
627.	0.	25042.	0.	03297.	1.	04000
629.	0.	24398.	0.	06537.	1.	04000
631.	0.	90731.	0.	19269.	0.	36000
633.	0.	84824.	0.	10428.	0.	36000
635.	0.	82790.	0.		0.	36000
637.	0.	91436.	0.	18564.	0.	70000
639.	0.	85746.	0.	10046.	0.	70000
641.	0.	83746.	0.		0.	70000
643.	0.	92140.	0.	17860.	1.	04000
645.	0.	86667.	0.	09665.	1.	04000
647.	0.	84742.	0.		1.	04000
649.	1.	10000.	0.	27250.	0.	36000
651.	0.	99972.	0.	25176.	0.	36000
655.	1.	10000.	0.	26254.	0.	70000
657.	0.	99948.	0.	24255.	0.	70000
661.	1.	10000.	0.	25298.	1.	04000
663.	1.	00325.	0.	23334.	1.	04000

667.	1	29269.	0	19269.	0	36000
669.	1	20428.	0	25176.	0	36000
673.	1	28564.	0	18564.	0	70000
675.	1	20047.	0	24254.	0	70000
679.	1	27860.	0	17860.	1	04000
681.	1	19665.	0	23333.	1	04000
685.	1	37250.	0		0	36000
687.	1	35176.	0	10428.	0	36000
688.	1	36265.	0	16413.	0	36000
691.	1	36254.	0		0	70000
692.	1	39183.	0		0	70000
693.	1	34254.	0	10047.	0	70000
694.	1	37814.	0	15674.	0	70000
697.	1	35258.	0		1	04000
698.	1	41116.	0		1	04000
699.	1	33333.	0	09665.	1	04000
700.	1	39363.	0	14936.	1	04000
704.	1	62500.	0		0	36000
706.	1	61110.	0	21211.	0	36000
708.	1	56963.	0	42058.	0	36000
710.	1	62500.	0		0	70000
712.	1	61110.	0	21210.	0	70000
714.	1	56963.	0	42058.	0	70000
716.	1	62500.	0		1	04000
718.	1	61110.	0	21210.	1	04000
720.	1	56963.	0	42058.	1	04000
723.	0	25176.	0	10428.	0	36000
725.	0	23599.	0	13625.	0	36000
729.	0	24256.	0	10047.	0	70000
731.	0	22737.	0	13127.	0	70000
735.	0	23336.	0	09666.	1	04000
737.	0	21874.	0	12629.	1	04000
742.	1	50130.	0	62186.	0	36000
744.	1	40729.	0	81250.	0	36000
748.	1	50130.	0	62186.	0	70000
750.	1	40729.	0	81250.	0	70000
754.	1	50130.	0	62186.	1	04000
756.	1	40729.	0	81250.	1	04000
757.	1	37250.	0		0	
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759.	1	36265.	0	16413.	0	
760.	1	61110.	0	21211.	0	
761.	1	33341.	0	32523.	0	
762.	1	56963.	0	42058.	0	
763.	1	37250.	0		0	18000
764.	1	62500.	0		0	18000
765.	1	36265.	0	16413.	0	18000
766.	1	61110.	0	21211.	0	18000
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768.	1	56963.	0	42058.	0	18000
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780.	1	40729.	0	81250.	0	
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801.	0	24296.	0	03199.	1	29700
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809.	0	22943.	0	06148.	1	55400
810.	0	35060.	0	09394.	1	55400
823.	0	92672.	0	17328.	1	29700
824.	0	83771.	0	26229.	1	29700
825.	0	87361.	0	09377.	1	29700
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827.	0	85494.	0		1	29700
828.	0	72906.	0		1	29700
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833.	0	86247.	0		1	55400
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848.	1	10000.	0	37094.	1	29700
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946.	0	34270.	0	14195.	1	29700
947.	0	21222.	0	12253.	1	29700
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970.	1	50130.	0	62186.	1	29700
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1454.	1	23326.	0	42287.	2	00000
1455.	1	23585.	0	32798.	2	19750
1456.	1	35104.	0	38328.	2	00000
1458.	1	16486.	0	50948.	2	00000
1461.	1	29097.	0	51961.	2	00000
1462.	1	22809.	0	61265.	2	00000
1463.	1	23067.	0	51776.	2	19750
1464.	1	35108.	0	64780.	2	00000
1465.	1	35106.	0	51554.	2	19750
1466.	1	16270.	0	67128.	2	00000
1468.	1	28830.	0	74380.	2	00000
1469.	1	22550.	0	70754.	2	19750
1470.	1	35110.	0	78006.	2	19750
1471.	1	16931.	0	34817.	2	39500
1474.	1	29718.	0	29520.	2	39500
1475.	1	23326.	0	42287.	2	39500
1476.	1	23585.	0	32798.	2	59250
1477.	1	35104.	0	38328.	2	39500
1479.	1	16486.	0	50948.	2	39500
1482.	1	29097.	0	51961.	2	39500
1483.	1	22809.	0	61265.	2	39500
1484.	1	23067.	0	51776.	2	59250
1485.	1	35108.	0	64780.	2	39500
1486.	1	35106.	0	51554.	2	59250
1487.	1	16270.	0	67128.	2	39500
1489.	1	28830.	0	74380.	2	39500
1490.	1	22550.	0	70754.	2	59250
1491.	1	35110.	0	78006.	2	59250
1492.	1	16931.	0	34817.	2	79000
1494.	1	29718.	0	29520.	2	79000
1495.	1	23326.	0	42287.	2	79000
1496.	1	35104.	0	38328.	2	79000
1497.	1	16486.	0	50948.	2	79000
1499.	1	29097.	0	51961.	2	79000
1500.	1	22809.	0	61265.	2	79000

1501.	1.	35108.	0.	64780.	2.	79000
1502.	1.	16270.	0.	67128.	2.	79000
1503.	1.	28830.	0.	74380.	2.	79000
1507.	1.	53874.	0.	52239.	2.	00000
1509.	1.	42618.	0.	56870.	2.	00000
1512.	1.	45744.	0.	71867.	2.	00000
1513.	1.	50130.	0.	62186.	2.	19750
1514.	1.	37920.	0.	79628.	2.	00000
1516.	1.	40729.	0.	81250.	2.	19750
1520.	1.	53874.	0.	52239.	2.	39500
1522.	1.	42618.	0.	56870.	2.	39500
1525.	1.	45744.	0.	71867.	2.	39500
1526.	1.	50130.	0.	62186.	2.	59250
1527.	1.	37920.	0.	79628.	2.	39500
1529.	1.	40729.	0.	81250.	2.	59250
1532.	1.	53874.	0.	52239.	2.	79000
1533.	1.	42618.	0.	56870.	2.	79000
1535.	1.	45744.	0.	71867.	2.	79000
1536.	1.	37920.	0.	79628.	2.	79000
1541.	2.	01220.	0.	68313.	2.	00000
1543.	2.	48566.	0.	84387.	2.	00000
1545.	1.	73227.	0.	71753.	2.	00000
1548.	2.	19421.	0.	90887.	2.	00000
1549.	1.	90589.	0.	93980.	2.	00000
1550.	1.	96324.	0.	81320.	2.	19750
1551.	2.	35433.	1.	16093.	2.	00000
1552.	2.	42518.	1.	00454.	2.	19750
1553.	1.	62380.	0.	93750.	2.	00000
1555.	2.	05681.	1.	18750.	2.	00000
1556.	1.	84030.	1.	06250.	2.	19750
1557.	2.	27332.	1.	31250.	2.	19750
1562.	2.	01220.	0.	68313.	2.	39500
1564.	2.	48566.	0.	84387.	2.	39500
1566.	1.	73227.	0.	71753.	2.	39500
1569.	2.	19421.	0.	90887.	2.	39500
1570.	1.	90589.	0.	93980.	2.	39500
1571.	1.	96324.	0.	81320.	2.	59250
1572.	2.	35433.	1.	16093.	2.	39500
1573.	2.	42518.	1.	00454.	2.	59250
1574.	1.	62380.	0.	93750.	2.	39500
1576.	2.	05681.	1.	18750.	2.	39500
1577.	1.	84030.	1.	06250.	2.	59250
1578.	2.	27332.	1.	31250.	2.	59250
1582.	2.	01220.	0.	68313.	2.	79000
1583.	2.	48566.	0.	84387.	2.	79000
1584.	1.	73227.	0.	71753.	2.	79000
1586.	2.	19421.	0.	90887.	2.	79000
1587.	1.	90589.	0.	93980.	2.	79000
1588.	2.	35433.	1.	16093.	2.	79000
1589.	1.	62380.	0.	93750.	2.	79000
1590.	2.	05681.	1.	18750.	2.	79000
1591.	0.	29250.	0.		1.	81100
1592.	0.	22951.	0.	01505.	1.	81100
1593.	0.	23000.	0.		1.	85825
1594.	0.	35424.	0.	02323.	1.	81100
1595.	0.	35500.	0.		1.	85825
1596.	0.	29000.	0.	03818.	1.	81100
1597.	0.	22558.	0.	04486.	1.	81100
1598.	0.	22803.	0.	03002.	1.	85825
1599.	0.	34818.	0.	06924.	1.	81100
1600.	0.	35196.	0.	04634.	1.	85825
1601.	0.	28253.	0.	07570.	1.	81100

1602.	0.	22216.	0.	05953.	1	85825
1603.	0.	34290.	0.	09188.	1	85825
1604.	0.	29250.	0.		1	90550
1605.	0.	22951.	0.	01505.	1	90550
1606.	0.	23000.	0.		1	95275
1607.	0.	35424.	0.	02323.	1	90550
1608.	0.	35500.	0.		1	95275
1609.	0.	29000.	0.	03818.	1	90550
1610.	0.	22558.	0.	04486.	1	90550
1611.	0.	22803.	0.	03002.	1	95275
1612.	0.	34818.	0.	06924.	1	90550
1613.	0.	35196.	0.	04634.	1	95275
1614.	0.	28253.	0.	07570.	1	90550
1615.	0.	22216.	0.	05953.	1	95275
1616.	0.	34290.	0.	09188.	1	95275
1617.	0.	29250.	0.		2	00000
1618.	0.	22951.	0.	01505.	2	00000
1620.	0.	29000.	0.	03818.	2	00000
1621.	0.	22558.	0.	04486.	2	00000
1623.	0.	28253.	0.	07570.	2	00000
1624.	0.	45250.	0.		1	81100
1627.	0.	64750.	0.		1	81100
1628.	0.	55299.	0.	04587.	1	81100
1629.	0.	55000.	0.		1	85825
1630.	0.	75183.	0.	06931.	1	81100
1631.	0.	74500.	0.		1	85825
1632.	0.	45698.	0.	06872.	1	81100
1635.	0.	66701.	0.	11347.	1	81100
1636.	0.	57608.	0.	13231.	1	81100
1637.	0.	56199.	0.	09109.	1	85825
1638.	0.	80480.	0.	19718.	1	81100
1639.	0.	77202.	0.	13585.	1	85825
1640.	0.	46942.	0.	13167.	1	81100
1642.	0.	72246.	0.	21124.	1	81100
1643.	0.	59594.	0.	17145.	1	85825
1644.	0.	84898.	0.	25102.	1	85825
1645.	0.	45250.	0.		1	90550
1648.	0.	64750.	0.		1	90550
1649.	0.	55299.	0.	04587.	1	90550
1650.	0.	55000.	0.		1	95275
1651.	0.	75183.	0.	06931.	1	90550
1652.	0.	74500.	0.		1	95275
1653.	0.	45698.	0.	06872.	1	90550
1656.	0.	66701.	0.	11347.	1	90550
1657.	0.	57608.	0.	13231.	1	90550
1658.	0.	56199.	0.	09109.	1	95275
1659.	0.	80480.	0.	19718.	1	90550
1660.	0.	77202.	0.	13585.	1	95275
1661.	0.	46942.	0.	13167.	1	90550
1663.	0.	72246.	0.	21124.	1	90550
1664.	0.	59594.	0.	17145.	1	95275
1665.	0.	84898.	0.	25102.	1	95275
1678.	0.	89317.	0.	20683.	1	81100
1679.	0.	90874.	0.	12775.	1	81100
1680.	0.	93737.	0.	16263.	1	85825
1683.	0.	82977.	0.	11193.	1	81100
1684.	0.	87443.	0.	04491.	1	81100
1685.	0.	88751.	0.	08802.	1	85825
1688.	0.	80750.	0.		1	81100
1689.	0.	87000.	0.		1	85825
1691.	0.	89317.	0.	20683.	1	90550
1692.	0.	90874.	0.	12775.	1	90550

1693,	0.93737,	0.16263,	1.95275
1696,	0.82977,	0.11193,	1.90550
1697,	0.87443,	0.04491,	1.90550
1698,	0.88751,	0.08802,	1.95275
1701,	0.80750,	0.	1.90550
1702,	0.87000,	0.	1.95275
1704,	0.89317,	0.20683,	2.00000
1705,	0.90874,	0.12775,	2.00000
1707,	0.82977,	0.11193,	2.00000
1708,	0.87443,	0.04491,	2.00000
1710,	0.80750,	0.	2.00000
1711,	1.10000,	0.29250,	1.81100
1712,	1.05509,	0.22557,	1.81100
1713,	1.10000,	0.23000,	1.85825
1714,	1.03069,	0.34817,	1.81100
1715,	1.10000,	0.35500,	1.85825
1716,	0.98806,	0.27023,	1.81100
1717,	0.97225,	0.19126,	1.81100
1718,	1.01198,	0.21249,	1.85825
1719,	0.90282,	0.29521,	1.81100
1720,	0.96415,	0.32798,	1.85825
1724,	1.10000,	0.29250,	1.90550
1725,	1.05509,	0.22557,	1.90550
1726,	1.10000,	0.23000,	1.95275
1727,	1.03069,	0.34817,	1.90550
1728,	1.10000,	0.35500,	1.95275
1729,	0.98806,	0.27023,	1.90550
1730,	0.97225,	0.19126,	1.90550
1731,	1.01198,	0.21249,	1.95275
1732,	0.90282,	0.29521,	1.90550
1733,	0.96415,	0.32798,	1.95275
1737,	1.10000,	0.29250,	2.00000
1738,	1.05509,	0.22557,	2.00000
1740,	0.98806,	0.27023,	2.00000
1741,	0.97225,	0.19126,	2.00000
1744,	1.30683,	0.20683,	1.81100
1745,	1.22775,	0.19126,	1.81100
1746,	1.26263,	0.16263,	1.85825
1747,	1.29718,	0.29521,	1.81100
1748,	1.35102,	0.25102,	1.85825
1749,	1.21193,	0.27023,	1.81100
1750,	1.14491,	0.22557,	1.81100
1751,	1.18802,	0.21249,	1.85825
1752,	1.16931,	0.34817,	1.81100
1753,	1.23585,	0.32798,	1.85825
1757,	1.30683,	0.20683,	1.90550
1758,	1.22775,	0.19126,	1.90550
1759,	1.26263,	0.16263,	1.95275
1760,	1.29718,	0.29521,	1.90550
1761,	1.35102,	0.25102,	1.95275
1762,	1.21193,	0.27023,	1.90550
1763,	1.14491,	0.22557,	1.90550
1764,	1.18802,	0.21249,	1.95275
1765,	1.16931,	0.34817,	1.90550
1766,	1.23585,	0.32798,	1.95275
1770,	1.30683,	0.20683,	2.00000
1771,	1.22775,	0.19126,	2.00000
1773,	1.21193,	0.27023,	2.00000
1774,	1.14491,	0.22557,	2.00000
1777,	1.39250,	0.	1.81100
1778,	1.32557,	0.04491,	1.81100
1779,	1.33000,	0.	1.85825

1780.	1	44817.	0	06931.	1	81100
1781.	1	45500.	0		1	85825
1782.	1	37023.	0	11193.	1	81100
1783.	1	29126.	0	12775.	1	81100
1784.	1	31249.	0	08802.	1	85825
1785.	1	39520.	0	19718.	1	81100
1786.	1	42798.	0	13585.	1	85825
1790.	1	39250.	0		1	90550
1791.	1	32557.	0	04491.	1	90550
1792.	1	33000.	0		1	95275
1793.	1	44817.	0	06931.	1	90550
1794.	1	45500.	0		1	95275
1795.	1	37023.	0	11193.	1	90550
1796.	1	29126.	0	12775.	1	90550
1797.	1	31249.	0	08802.	1	95275
1798.	1	39520.	0	19718.	1	90550
1799.	1	42798.	0	13585.	1	95275
1803.	1	39250.	0		2	00000
1804.	1	32557.	0	04491.	2	00000
1806.	1	37023.	0	11193.	2	00000
1807.	1	29126.	0	12775.	2	00000
1810.	1	54000.	0		1	81100
1813.	1	62152.	0	10634.	1	81100
1814.	1	62500.	0		1	85825
1815.	1	51954.	0	17398.	1	81100
1818.	1	59379.	0	31697.	1	81100
1819.	1	61110.	0	21211.	1	85825
1820.	1	46033.	0	33580.	1	81100
1822.	1	56963.	0	42058.	1	85825
1823.	1	54000.	0		1	90550
1826.	1	62152.	0	10634.	1	90550
1827.	1	62500.	0		1	95275
1828.	1	51954.	0	17398.	1	90550
1831.	1	59379.	0	31697.	1	90550
1832.	1	61110.	0	21211.	1	95275
1833.	1	46033.	0	33580.	1	90550
1835.	1	56963.	0	42058.	1	95275
1843.	1	87500.	0		1	81100
1846.	2	37500.	0		1	81100
1847.	2	12045.	0	13906.	1	81100
1848.	2	12500.	0		1	85825
1849.	2	61937.	0	17177.	1	81100
1850.	2	62500.	0		1	85825
1851.	1	85896.	0	24474.	1	81100
1854.	2	35468.	0	31000.	1	81100
1855.	2	08418.	0	41449.	1	81100
1856.	2	10682.	0	27737.	1	85825
1857.	2	57458.	0	51202.	1	81100
1858.	2	60254.	0	34263.	1	85825
1859.	1	81111.	0	48529.	1	81100
1861.	2	29407.	0	61470.	1	81100
1862.	2	05259.	0	54999.	1	85825
1863.	2	53556.	0	67940.	1	85825
1864.	1	87500.	0		1	90550
1867.	2	37500.	0		1	90550
1868.	2	12045.	0	13906.	1	90550
1869.	2	12500.	0		1	95275
1870.	2	61937.	0	17177.	1	90550
1871.	2	62500.	0		1	95275
1872.	1	85896.	0	24474.	1	90550
1875.	2	35468.	0	31000.	1	90550
1876.	2	08418.	0	41449.	1	90550

1877.	2	10682.	0.	27737.	1.	95275
1878.	2	57458.	0.	51202.	1.	90550
1879.	2	60254.	0.	34263.	1.	95275
1880.	1	81111.	0.	48529.	1.	90550
1882.	2	29407.	0.	61470.	1.	90550
1883.	2	05259.	0.	54999.	1.	95275
1884.	2	53556.	0.	67940.	1.	95275
1898.	0	21779.	0.	07394.	1.	81100
1900.	0	33616.	0.	11412.	1.	81100
1902.	0	27023.	0.	11193.	1.	81100
1903.	0	20628.	0.	10172.	1.	81100
1904.	0	21249.	0.	08802.	1.	85825
1905.	0	31840.	0.	15700.	1.	81100
1906.	0	32798.	0.	13585.	1.	85825
1907.	0	25331.	0	14625.	1	81100
1908.	0	19919.	0	11500.	1.	85825
1909.	0	30744.	0.	17750.	1.	85825
1911.	0	21779.	0.	07394.	1.	90550
1913.	0	33616.	0.	11412.	1.	90550
1915.	0	27023.	0.	11193.	1.	90550
1916.	0	20628.	0.	10172.	1.	90550
1917.	0	21249.	0.	08802.	1.	95275
1918.	0	31840.	0.	15700.	1.	90550
1919.	0	32798.	0.	13585.	1.	95275
1920.	0	25331.	0.	14625.	1.	90550
1921.	0	19919.	0.	11500.	1.	95275
1922.	0	30744.	0.	17750.	1.	95275
1924.	0	21779.	0.	07394.	2.	00000
1926.	0	27023.	0.	11193.	2.	00000
1927.	0	20628.	0	10172.	2.	00000
1929.	0	25331.	0.	14625.	2.	00000
1934.	0	59244.	0.	21222.	1.	81100
1936.	0	84870.	0.	31065.	1.	81100
1938.	0	45809.	0.	19446.	1	81100
1941.	0	71831.	0.	31166.	1.	81100
1942.	0	58329.	0	29329.	1.	81100
1943.	0	58820.	0.	25306.	1.	85825
1944.	0	84814.	0.	42989.	1.	81100
1945.	0	84842.	0.	37027.	1.	85825
1946.	0	44254.	0.	25550.	1.	81100
1948.	0	71276.	0.	41151.	1.	81100
1949.	0	57765.	0.	33351.	1.	85825
1950.	0	84786.	0.	48951.	1.	85825
1955.	0	59244.	0.	21222.	1.	90550
1957.	0	84870.	0.	31065.	1.	90550
1959.	0	45809.	0.	19446.	1	90550
1962.	0	71831.	0	31166.	1.	90550
1963.	0	58329.	0.	29329.	1.	90550
1964.	0	58820.	0.	25306.	1	95275
1965.	0	84814.	0.	42989.	1.	90550
1966.	0	84842.	0.	37027.	1.	95275
1967.	0	44254.	0.	25550.	1.	90550
1969.	0	71276.	0.	41151.	1.	90550
1970.	0	57765.	0.	33351.	1.	95275
1971.	0	84786.	0.	48951.	1	95275
1988.	0	96658.	0.	38655.	1.	81100
1990.	1	09997.	0.	42501.	1	81100
1992.	0	90696.	0.	41062.	1.	81100
1995.	1	03340.	0.	47328.	1.	81100
1996.	0	97145.	0.	50370.	1.	81100
1997.	0	96901.	0.	44512.	1.	85825
1998.	1	09992.	0.	56502.	1.	81100

1999	1	09995	0	49501	1	85825
2000	0	91087	0	52589	1	81100
2002	1	03689	0	59865	1	81100
2003	0	97388	0	56227	1	85825
2004	1	09989	0	63502	1	85825
2009	0	96658	0	38655	1	90550
2011	1	09997	0	42501	1	90550
2013	0	90696	0	41062	1	90550
2016	1	03340	0	47328	1	90550
2017	0	97145	0	50370	1	90550
2018	0	96901	0	44512	1	95275
2019	1	09992	0	56502	1	90550
2020	1	09995	0	49501	1	95275
2021	0	91087	0	52589	1	90550
2023	1	03689	0	59865	1	90550
2024	0	97388	0	56227	1	95275
2025	1	09989	0	63502	1	95275
2042	1	23326	0	42287	1	81100
2044	1	35104	0	38328	1	81100
2046	1	16486	0	50948	1	81100
2049	1	29097	0	51961	1	81100
2050	1	22809	0	61265	1	81100
2051	1	23067	0	51776	1	85825
2052	1	35108	0	64780	1	81100
2053	1	35106	0	51554	1	85825
2054	1	16270	0	67128	1	81100
2056	1	28830	0	74380	1	81100
2057	1	22550	0	70754	1	85825
2058	1	35110	0	78006	1	85825
2063	1	23326	0	42287	1	90550
2065	1	35104	0	38328	1	90550
2067	1	16486	0	50948	1	90550
2070	1	29097	0	51961	1	90550
2071	1	22809	0	61265	1	90550
2072	1	23067	0	51776	1	95275
2073	1	35108	0	64780	1	90550
2074	1	35106	0	51554	1	95275
2075	1	16270	0	67128	1	90550
2077	1	28830	0	74380	1	90550
2078	1	22550	0	70754	1	95275
2079	1	35110	0	78006	1	95275
2095	1	53874	0	52239	1	81100
2097	1	42618	0	56870	1	81100
2100	1	45744	0	71867	1	81100
2101	1	50130	0	62186	1	85825
2102	1	37920	0	79628	1	81100
2104	1	40729	0	81250	1	85825
2108	1	53874	0	52239	1	90550
2110	1	42618	0	56870	1	90550
2113	1	45744	0	71867	1	90550
2114	1	50130	0	62186	1	95275
2115	1	37920	0	79628	1	90550
2117	1	40729	0	81250	1	95275
2129	2	01220	0	68313	1	81100
2131	2	48566	0	84387	1	81100
2133	1	73227	0	71753	1	81100
2136	2	19421	0	90887	1	81100
2137	1	90589	0	93980	1	81100
2138	1	96324	0	81320	1	85825
2139	2	35433	1	16093	1	81100
2140	2	42518	1	00454	1	85825
2141	1	62380	0	93750	1	81100

2143,	2.05681,	1.18750,	1.81100
2144,	1.84030,	1.06250,	1.85825
2145,	2.27332,	1.31250,	1.85825
2150,	2.01220,	0.68313,	1.90550
2152,	2.48566,	0.84387,	1.90550
2154,	1.73227,	0.71753,	1.90550
2157,	2.19421,	0.90887,	1.90550
2158,	1.90589,	0.93980,	1.90550
2159,	1.96324,	0.81320,	1.95275
2160,	2.35433,	1.16093,	1.90550
2161,	2.42518,	1.00454,	1.95275
2162,	1.62380,	0.93750,	1.90550
2164,	2.05681,	1.18750,	1.90550
2165,	1.84030,	1.06250,	1.95275
2166,	2.27332,	1.31250,	1.95275
2179,	0.31575,	0.	1.04000
2180,	0.25204,	0.01652,	1.04000
2181,	0.24882,	0.	1.16850
2182,	0.37810,	0.02478,	1.04000
2183,	0.37493,	0.	1.16850
2184,	0.31305,	0.04121,	1.04000
2185,	0.24773,	0.04928,	1.04000
2186,	0.24669,	0.03248,	1.16850
2187,	0.37163,	0.07392,	1.04000
2188,	0.37172,	0.04894,	1.16850
2189,	0.30499,	0.08172,	1.04000
2190,	0.24034,	0.06440,	1.16850
2191,	0.36215,	0.09704,	1.16850
2192,	0.30800,	0.	1.29700
2193,	0.24453,	0.01603,	1.29700
2194,	0.24129,	0.	1.42550
2195,	0.37015,	0.02426,	1.29700
2196,	0.36696,	0.	1.42550
2197,	0.30536,	0.04020,	1.29700
2198,	0.24035,	0.04781,	1.29700
2199,	0.23923,	0.03149,	1.42550
2200,	0.36381,	0.07236,	1.29700
2201,	0.36382,	0.04790,	1.42550
2202,	0.29750,	0.07972,	1.29700
2203,	0.23307,	0.06245,	1.42550
2204,	0.35445,	0.09498,	1.42550
2205,	0.30025,	0.	1.55400
2206,	0.23702,	0.01554,	1.55400
2207,	0.23376,	0.	1.68250
2208,	0.36219,	0.02375,	1.55400
2209,	0.35899,	0.	1.68250
2210,	0.29768,	0.03919,	1.55400
2211,	0.23296,	0.04633,	1.55400
2212,	0.23176,	0.03051,	1.68250
2213,	0.35600,	0.07080,	1.55400
2214,	0.35591,	0.04686,	1.68250
2215,	0.29002,	0.07771,	1.55400
2216,	0.22580,	0.06050,	1.68250
2217,	0.34675,	0.09291,	1.68250
2225,	0.46446,	0.	1.04000
2228,	0.63554,	0.	1.04000
2229,	0.55319,	0.04917,	1.04000
2230,	0.55000,	0.	1.16850
2231,	0.72833,	0.07393,	1.04000
2232,	0.72507,	0.	1.16850
2233,	0.46924,	0.07334,	1.04000
2236,	0.65639,	0.12110,	1.04000

2237.	0	57791.	0	14138.	1	04000
2238.	0	56268.	0	09620.	1	16850
2239.	0	78491.	0	21052.	1	04000
2240.	0	75364.	0	14346.	1	16850
2241.	0	48252.	0	14053.	1	04000
2243.	0	71555.	0	22547.	1	04000
2244.	0	59852.	0	18108.	1	16850
2245.	0	83489.	0	26511.	1	16850
2246.	0	46047.	0		1	29700
2249.	0	63953.	0		1	29700
2250.	0	55314.	0	04819.	1	29700
2251.	0	55000.	0		1	42550
2252.	0	73618.	0	07248.	1	29700
2253.	0	73304.	0		1	42550
2254.	0	46515.	0	07180.	1	29700
2257.	0	65993.	0	11856.	1	29700
2258.	0	57730.	0	13836.	1	29700
2259.	0	56241.	0	09416.	1	42550
2260.	0	79149.	0	20600.	1	29700
2261.	0	76099.	0	14042.	1	42550
2262.	0	47815.	0	13758.	1	29700
2264.	0	71785.	0	22072.	1	29700
2265.	0	59749.	0	17723.	1	42550
2266.	0	84052.	0	25948.	1	42550
2267.	0	45649.	0		1	55400
2270.	0	64351.	0		1	55400
2271.	0	55304.	0	04684.	1	55400
2272.	0	55000.	0		1	68250
2273.	0	74398.	0	07076.	1	55400
2274.	0	74101.	0		1	68250
2275.	0	46107.	0	07026.	1	55400
2278.	0	66347.	0	11602.	1	55400
2279.	0	57669.	0	13533.	1	55400
2280.	0	56213.	0	09212.	1	68250
2281.	0	79822.	0	20171.	1	55400
2282.	0	76835.	0	13737.	1	68250
2283.	0	47379.	0	13462.	1	55400
2285.	0	72016.	0	21598.	1	55400
2286.	0	59646.	0	17338.	1	68250
2287.	0	84616.	0	25384.	1	68250
2300.	0	87673.	0	22327.	1	04000
2301.	0	88996.	0	14033.	1	04000
2302.	0	92406.	0	17594.	1	16850
2305.	0	80832.	0	12081.	1	04000
2306.	0	85225.	0	04929.	1	04000
2307.	0	87014.	0	09521.	1	16850
2310.	0	78425.	0		1	04000
2311.	0	85118.	0		1	16850
2313.	0	88221.	0	21779.	1	29700
2314.	0	89619.	0	13609.	1	29700
2315.	0	92938.	0	17062.	1	42550
2318.	0	81547.	0	11785.	1	29700
2319.	0	85965.	0	04788.	1	29700
2320.	0	87709.	0	09233.	1	42550
2323.	0	79200.	0		1	29700
2324.	0	85871.	0		1	42550
2326.	0	88769.	0	21231.	1	55400
2327.	0	90252.	0	13200.	1	55400
2328.	0	93470.	0	16530.	1	68250
2331.	0	82262.	0	11489.	1	55400
2332.	0	86702.	0	04630.	1	55400
2333.	0	88403.	0	08946.	1	68250

2336.	0.79975,	0.	1.55400
2337.	0.86624,	0.	1.68250
2346.	1.10000,	0.31575,	1.04000
2347.	1.05068,	0.24785,	1.04000
2348.	1.10000,	0.24882,	1.16850
2349.	1.02606,	0.37167,	1.04000
2350.	1.10000,	0.37493,	1.16850
2351.	0.97913,	0.29168,	1.04000
2352.	0.95955,	0.20995,	1.04000
2353.	1.00471,	0.22986,	1.16850
2354.	0.88947,	0.31509,	1.04000
2355.	0.95653,	0.34636,	1.16850
2359.	1.10000,	0.30800,	1.29700
2360.	1.05209,	0.24042,	1.29700
2361.	1.10000,	0.24129,	1.42550
2362.	1.02752,	0.36382,	1.29700
2363.	1.10000,	0.36696,	1.42550
2364.	0.98211,	0.28453,	1.29700
2365.	0.96383,	0.20375,	1.29700
2366.	1.00762,	0.22292,	1.42550
2367.	0.89400,	0.30851,	1.29700
2368.	0.95958,	0.33900,	1.42550
2372.	1.10000,	0.30025,	1.55400
2373.	1.05368,	0.23301,	1.55400
2374.	1.10000,	0.23376,	1.68250
2375.	1.02924,	0.35602,	1.55400
2376.	1.10000,	0.35899,	1.68250
2377.	0.98509,	0.27738,	1.55400
2378.	0.96796,	0.19745,	1.55400
2379.	1.01053,	0.21597,	1.68250
2380.	0.89829,	0.30178,	1.55400
2381.	0.96262,	0.33165,	1.68250
2392.	1.31016,	0.23440,	1.04000
2393.	1.24034,	0.21004,	1.04000
2394.	1.27594,	0.17594,	1.16850
2395.	1.28487,	0.32120,	1.04000
2396.	1.34328,	0.28367,	1.16850
2397.	1.21094,	0.28989,	1.04000
2398.	1.14928,	0.24775,	1.04000
2399.	1.19521,	0.22986,	1.16850
2400.	1.16341,	0.36574,	1.04000
2401.	1.22700,	0.34336,	1.16850
2405.	1.30905,	0.22521,	1.29700
2406.	1.23610,	0.20381,	1.29700
2407.	1.27062,	0.17062,	1.42550
2408.	1.28890,	0.31259,	1.29700
2409.	1.34637,	0.27061,	1.42550
2410.	1.21127,	0.28334,	1.29700
2411.	1.14788,	0.24035,	1.29700
2412.	1.19233,	0.22291,	1.42550
2413.	1.16547,	0.35986,	1.29700
2414.	1.23054,	0.33721,	1.42550
2418.	1.30794,	0.21602,	1.55400
2419.	1.23200,	0.19748,	1.55400
2420.	1.26530,	0.16530,	1.68250
2421.	1.29293,	0.30397,	1.55400
2422.	1.34947,	0.25755,	1.68250
2423.	1.21160,	0.27679,	1.55400
2424.	1.14630,	0.23298,	1.55400
2425.	1.18946,	0.21597,	1.68250
2426.	1.16726,	0.35405,	1.55400
2427.	1.23408,	0.33105,	1.68250

2438.	1	38187.	0.		1	04000
2439.	1	34775.	0.	04929.	1	04000
2440.	1	34882.	0.		1	16850
2441.	1	40676.	0.	07519.	1	04000
2442.	1	41847.	0.		1	16850
2443.	1	36348.	0.	12300.	1	04000
2444.	1	31004.	0.	14034.	1	04000
2445.	1	32986.	0.	09521.	1	16850
2446.	1	37189.	0.	22146.	1	04000
2447.	1	39935.	0.	14711.	1	16850
2451.	1	38542.	0.		1	29700
2452.	1	34035.	0.	04789.	1	29700
2453.	1	34129.	0.		1	42550
2454.	1	42059.	0.	07304.	1	29700
2455.	1	43308.	0.		1	42550
2456.	1	36573.	0.	11931.	1	29700
2457.	1	30381.	0	13609.	1	29700
2458.	1	32291.	0.	09233.	1	42550
2459.	1	37971.	0.	21329.	1	29700
2460.	1	41080.	0.	14261.	1	42550
2464.	1	38896.	0.		1	55400
2465.	1	33298.	0.	04630.	1	55400
2466.	1	33376.	0.		1	68250
2467.	1	43438.	0	07117.	1	55400
2468.	1	44769.	0.		1	68250
2469.	1	36798.	0	11562.	1	55400
2470.	1	29748.	0	13200.	1	55400
2471.	1	31597.	0	08946.	1	68250
2472.	1	38753.	0	20512.	1	55400
2473.	1	42225.	0.	13810.	1	68250
2484.	1	51808.	0.		1	04000
2487.	1	62152.	0.	10628.	1	04000
2488.	1	62500.	0.		1	16850
2489.	1	50236.	0.	18073.	1	04000
2492.	1	59378.	0.	31702.	1	04000
2493.	1	61110.	0.	21210.	1	16850
2494.	1	45563.	0	35552.	1	04000
2496.	1	56963.	0	42058.	1	16850
2497.	1	52539.	0		1	29700
2500.	1	62152.	0.	10630.	1	29700
2501.	1	62500.	0.		1	42550
2502.	1	50809.	0.	17848.	1	29700
2505.	1	59378.	0	31700.	1	29700
2506.	1	61110.	0.	21210.	1	42550
2507.	1	45721.	0.	34895.	1	29700
2509.	1	56963.	0	42058.	1	42550
2510.	1	53269.	0		1	55400
2513.	1	62152.	0	10632.	1	55400
2514.	1	62500.	0.		1	68250
2515.	1	51381.	0.	17623.	1	55400
2518.	1	59378.	0.	31698.	1	55400
2519.	1	61110.	0.	21211.	1	68250
2520.	1	45877.	0	34237.	1	55400
2522.	1	56963.	0.	42058.	1	68250
2530.	1	87500.	0		1	04000
2533.	2	37500.	0.		1	04000
2534.	2	12043.	0	13906.	1	04000
2535.	2	12500.	0.		1	16850
2536.	2	61937.	0.	17177.	1	04000
2537.	2	62500.	0.		1	16850
2538.	1	85896.	0.	24474.	1	04000
2541.	2	35468.	0.	31000.	1	04000

2542.	2.	08418.	0.	41449.	1.	04000
2543.	2.	10682.	0.	27737.	1.	16850
2544.	2.	57458.	0.	51202.	1.	04000
2545.	2.	60254.	0.	34263.	1.	16850
2546.	1.	81111.	0.	48529.	1.	04000
2548.	2.	29407.	0.	61470.	1.	04000
2549.	2.	05259.	0.	54999.	1.	16850
2550.	2.	53556.	0.	67940.	1.	16850
2551.	1.	87500.	0.		1.	29700
2554.	2.	37500.	0.		1.	29700
2555.	2.	12045.	0.	13906.	1.	29700
2556.	2.	12500.	0.		1.	42550
2557.	2.	61937.	0.	17177.	1.	29700
2558.	2.	62500.	0.		1.	42550
2559.	1.	85896.	0.	24474.	1.	29700
2562.	2.	35468.	0.	31000.	1.	29700
2563.	2.	08418.	0.	41449.	1.	29700
2564.	2.	10682.	0.	27737.	1.	42550
2565.	2.	57458.	0.	51202.	1.	29700
2566.	2.	60254.	0.	34263.	1.	42550
2567.	1.	81111.	0.	48529.	1.	29700
2569.	2.	29407.	0.	61470.	1.	29700
2570.	2.	05259.	0.	54999.	1.	42550
2571.	2.	53556.	0.	67940.	1.	42550
2572.	1.	87500.	0.		1.	55400
2575.	2.	37500.	0.		1.	55400
2576.	2.	12045.	0.	13906.	1.	55400
2577.	2.	12500.	0.		1.	68250
2578.	2.	61937.	0.	17177.	1.	55400
2579.	2.	62500.	0.		1.	68250
2580.	1.	85896.	0.	24474.	1.	55400
2583.	2.	35468.	0.	31000.	1.	55400
2584.	2.	08418.	0.	41449.	1.	55400
2585.	2.	10682.	0.	27737.	1.	68250
2586.	2.	57458.	0.	51202.	1.	55400
2587.	2.	60254.	0.	34263.	1.	68250
2588.	1.	81111.	0.	48529.	1.	55400
2590.	2.	29407.	0.	61470.	1.	55400
2591.	2.	05259.	0.	54999.	1.	68250
2592.	2.	53556.	0.	67940.	1.	68250
2606.	0.	23918.	0.	08119.	1.	04000
2608.	0.	35880.	0.	12180.	1.	04000
2610.	0.	29171.	0.	12083.	1.	04000
2611.	0.	22653.	0.	11171.	1.	04000
2612.	0.	22988.	0.	09522.	1.	16850
2613.	0.	33984.	0.	16759.	1.	04000
2614.	0.	34639.	0.	14348.	1.	16850
2615.	0.	27344.	0.	15787.	1.	04000
2616.	0.	21548.	0.	12441.	1.	16850
2617.	0.	32470.	0.	18746.	1.	16850
2619.	0.	23205.	0.	07877.	1.	29700
2621.	0.	35125.	0.	11924.	1.	29700
2623.	0.	28455.	0.	11787.	1.	29700
2624.	0.	21978.	0.	10838.	1.	29700
2625.	0.	22292.	0.	09234.	1.	42550
2626.	0.	33269.	0.	16406.	1.	29700
2627.	0.	33902.	0.	14043.	1.	42550
2628.	0.	26673.	0.	15400.	1.	29700
2629.	0.	20896.	0.	12065.	1.	42550
2630.	0.	31779.	0.	18348.	1.	42550
2632.	0.	22492.	0.	07636.	1.	55400
2634.	0.	34371.	0.	11668.	1.	55400

2636,	0	27739,	0.	11490,	1.	55400
2637,	0	21303,	0.	10505,	1.	55400
2638,	0	21597,	0.	08946,	1.	68250
2639,	0	32554,	0.	16053,	1.	55400
2640,	0	33166,	0.	13738,	1.	68250
2641,	0	26002,	0.	15012,	1.	55400
2642,	0	20245,	0.	11688,	1.	68250
2643,	0	31089,	0.	17949,	1.	68250
2655,	0	59545,	0.	22127,	1.	04000
2657,	0	83206,	0.	32104,	1.	04000
2659,	0	47056,	0.	20229,	1.	04000
2662,	0	71155,	0.	31686,	1.	04000
2663,	0	58596,	0.	29728,	1.	04000
2664,	0	59058,	0.	25849,	1.	16850
2665,	0	83203,	0.	42726,	1.	04000
2666,	0	83477,	0.	37350,	1.	16850
2667,	0	45412,	0.	26218,	1.	04000
2669,	0	70605,	0.	40764,	1.	04000
2670,	0	57968,	0.	33468,	1.	16850
2671,	0	83466,	0	48189,	1.	16850
2676,	0	59444,	0.	21825,	1.	29700
2678,	0	83760,	0	31758,	1.	29700
2680,	0	46640,	0.	19968,	1.	29700
2683,	0	71380,	0.	31513,	1.	29700
2684,	0	58507,	0.	29595,	1.	29700
2685,	0	58963,	0.	25632,	1.	42550
2686,	0	83740,	0.	42814,	1.	29700
2687,	0	84023,	0.	37221,	1.	42550
2689,	0	45026,	0	25996,	1.	29700
2690,	0	70829,	0.	40893,	1.	29700
2691,	0	57887,	0.	33421,	1.	42550
2692,	0	83994,	0.	48494,	1.	42550
2697,	0	59344,	0.	21524,	1.	55400
2699,	0	84315,	0.	31411,	1.	55400
2701,	0	46225,	0.	19707,	1.	55400
2704,	0	71606,	0.	31340,	1.	55400
2705,	0	58418,	0.	29462,	1.	55400
2706,	0	58867,	0.	25415,	1.	68250
2707,	0	84277,	0.	42901,	1.	55400
2708,	0	84569,	0.	37092,	1.	68250
2709,	0	44640,	0.	25773,	1.	55400
2711,	0	71052,	0.	41022,	1.	55400
2712,	0	57806,	0.	33374,	1.	68250
2713,	0	84522,	0.	48799,	1.	68250
2730,	0	95782,	0.	40199,	1.	04000
2732,	1.	10012,	0.	44303,	1.	04000
2734,	0	89431,	0.	41710,	1.	04000
2737,	1	02890,	0	48383,	1	04000
2738,	0	96345,	0.	50591,	1	04000
2739,	0	96203,	0.	45248,	1.	16850
2740,	1	10037,	0.	57126,	1.	04000
2741,	1.	10020,	0.	50512,	1.	16850
2742,	0	89914,	0.	51912,	1	04000
2744,	1.	03338,	0.	59662,	1	04000
2745,	0	96753,	0.	55860,	1.	16850
2746,	1.	10040,	0.	63531,	1.	16850
2751,	0	96074,	0.	39684,	1.	29700
2753,	1	10007,	0.	43702,	1.	29700
2755,	0	89852,	0.	41494,	1.	29700
2758,	1.	03076,	0.	48045,	1.	29700
2759,	0	96611,	0.	50517,	1	29700
2760,	0	96482,	0.	44954,	1.	42550

2761.	1.	10022.	0.	56918.	1.	29700
2762.	1.	10010.	0.	50108.	1.	42550
2763.	0.	90305.	0.	52138.	1.	29700
2765.	1.	03455.	0.	59730.	1.	29700
2766.	0.	97007.	0.	56007.	1.	42550
2767.	1.	10020.	0.	63520.	1.	42550
2772.	0.	96366.	0.	39170.	1.	55400
2774.	1.	10002.	0.	43101.	1.	55400
2776.	0.	90274.	0.	41278.	1.	55400
2779.	1.	03208.	0.	47687.	1.	55400
2780.	0.	96878.	0.	50443.	1.	55400
2781.	0.	96762.	0.	44659.	1.	68250
2782.	1.	10007.	0.	56710.	1.	55400
2783.	1.	10000.	0.	49703.	1.	68250
2784.	0.	90696.	0.	52363.	1.	55400
2786.	1.	03572.	0.	59797.	1.	55400
2787.	0.	97261.	0.	56154.	1.	68250
2788.	1.	10000.	0.	63508.	1.	68250
2805.	1.	21686.	0.	43135.	1.	04000
2807.	1.	32779.	0.	40124.	1.	04000
2809.	1.	15330.	0.	51329.	1.	04000
2812.	1.	25886.	0.	51563.	1.	04000
2813.	1.	19553.	0.	59958.	1.	04000
2814.	1.	21085.	0.	51645.	1.	16850
2815.	1.	28936.	0.	62126.	1.	04000
2816.	1.	31713.	0.	51226.	1.	16850
2817.	1.	14156.	0.	65908.	1.	04000
2819.	1.	22370.	0.	70650.	1.	04000
2820.	1.	18978.	0.	68692.	1.	16850
2821.	1.	27915.	0.	73852.	1.	16850
2826.	1.	22233.	0.	42840.	1.	29700
2828.	1.	33554.	0.	39525.	1.	29700
2830.	1.	15732.	0.	51205.	1.	29700
2833.	1.	26961.	0.	51696.	1.	29700
2834.	1.	20638.	0.	60382.	1.	29700
2835.	1.	21878.	0.	51697.	1.	42550
2836.	1.	30993.	0.	63011.	1.	29700
2837.	1.	33070.	0.	51357.	1.	42550
2838.	1.	14861.	0.	66315.	1.	29700
2840.	1.	24523.	0.	71893.	1.	29700
2841.	1.	20406.	0.	65 17.	1.	42550
2842.	1.	30793.	0.	75514.	1.	42550
2847.	1.	22778.	0.	42581.	1.	55400
2849.	1.	34329.	0.	38927.	1.	55400
2851.	1.	16087.	0.	51074.	1.	55400
2854.	1.	28031.	0.	51829.	1.	55400
2855.	1.	21722.	0.	60840.	1.	55400
2856.	1.	22671.	0.	51750.	1.	68250
2857.	1.	33051.	0.	63895.	1.	55400
2858.	1.	34428.	0.	51488.	1.	68250
2859.	1.	15565.	0.	66722.	1.	55400
2861.	1.	26677.	0.	73137.	1.	55400
2862.	1.	21835.	0.	70342.	1.	68250
2863.	1.	33671.	0.	77175.	1.	68250
2879.	1.	53876.	0.	52234.	1.	04000
2881.	1.	40583.	0.	56672.	1.	04000
2884.	1.	45742.	0.	71872.	1.	04000
2885.	1.	50130.	0.	62186.	1.	16850
2886.	1.	33603.	0.	77136.	1.	04000
2888.	1.	40729.	0.	81250.	1.	16850
2892.	1.	53876.	0.	52236.	1.	29700
2894.	1.	41261.	0.	56738.	1.	29700

2897.	1	45743.	0.	71870.	1	29700
2898.	1	50130.	0	62186.	1.	42550
2899.	1	35042.	0	77966.	1	29700
2901.	1	40729.	0.	81250.	1	42550
2905.	1	53875.	0.	52238.	1	55400
2907.	1	41940.	0	56804.	1.	55400
2910.	1	45744.	0	71869.	1.	55400
2911.	1	50130.	0	62186.	1.	68250
2912.	1.	36481.	0.	78797.	1	55400
2914.	1.	40729.	0.	81250.	1.	68250
2926.	2.	01220.	0.	68313.	1	04000
2928.	2.	48566.	0.	84387.	1.	04000
2930.	1	73227.	0.	71753.	1	04000
2933.	2	19421.	0	90887.	1	04000
2934.	1.	90589.	0.	93980.	1.	04000
2935.	1.	96324.	0.	81320.	1.	16850
2936.	2	35433.	1.	16093.	1	04000
2937.	2	42518.	1	00454.	1	16850
2938.	1	62380.	0.	93750.	1	04000
2940.	2.	05681.	1.	18750.	1.	04000
2941.	1	84030.	1	06250.	1	16850
2942.	2	27332.	1	31250.	1	16850
2947.	2	01220.	0	68313.	1.	29700
2949.	2	48566.	0	84387.	1	29700
2951.	1	73227.	0.	71753.	1	29700
2954.	2.	19421.	0.	90887.	1	29700
2955.	1	90589.	0.	93980.	1.	29700
2956.	1.	96324.	0.	81320.	1.	42550
2957.	2	35433.	1.	16093.	1	29700
2958.	2	42518.	1	00454.	1.	42550
2959.	1.	62380.	0.	93750.	1	29700
2961.	2.	05681.	1.	18750.	1.	29700
2962.	1.	84030.	1	06250.	1	42550
2963.	2.	27332.	1.	31250.	1.	42550
2968.	2	01220.	0.	68313.	1	55400
2970.	2	48566.	0.	84387.	1	55400
2972.	1	73227.	0.	71753.	1	55400
2975.	2	19421.	0.	90887.	1	55400
2976.	1.	90589.	0.	93980.	1	55400
2977.	1.	96324.	0.	81320.	1.	68250
2978.	2	35433.	1.	16093.	1	55400
2979.	2	42518.	1	00454.	1	68250
2980.	1.	62380.	0.	93750.	1	55400
2982.	2.	05681.	1.	18750.	1	55400
2983.	1	84030.	1.	06250.	1.	68250
2984.	2	27332.	1.	31250.	1.	68250
2997.	0	33625.	0.		0	36000
2998.	0	27192.	0.	01783.	0	36000
2999.	0	26752.	0.		0	53000
3000.	0.	39914.	0.	02618.	0	36000
3001.	0.	39473.	0.		0	53000
3002.	0.	33337.	0.	04389.	0	36000
3003.	0	26727.	0.	05315.	0	36000
3004.	0	26523.	0.	03492.	0	53000
3005.	0	39232.	0	07802.	0	36000
3006.	0	39135.	0.	05152.	0	53000
3007.	0	32479.	0.	08703.	0	36000
3008.	0	25841.	0.	06924.	0.	53000
3009.	0	38128.	0.	10216.	0.	53000
3010.	0	32600.	0.		0.	70000
3011.	0	26198.	0.	01718.	0.	70000
3012.	0.	25756.	0.		0	87000

3013.	0.	38862.	0.	02548.	0	70000
3014.	0.	38418.	0.		0	87000
3015.	0.	32321.	0.	04255.	0	70000
3016.	0.	25750.	0.	05121.	0	70000
3017.	0.	25536.	0.	03362.	0	87000
3018.	0.	38197.	0.	07597.	0	70000
3019.	0.	38090.	0.	05015.	0	87000
3020.	0.	31489.	0.	08437.	0	70000
3021.	0.	24879.	0.	06666.	0.	87000
3022.	0.	37109.	0.	09943.	0.	87000
3030.	0.	47500.	0.		0	36000
3033.	0.	62500.	0.		0.	36000
3034.	0.	55337.	0.	05168.	0	36000
3035.	0.	55000.	0.		0.	53000
3036.	0.	70770.	0.	07810.	0	36000
3037.	0.	70527.	0.		0	53000
3038.	0.	48005.	0.	07743.	0	36000
3041.	0.	64698.	0.	12786.	0	36000
3042.	0.	57939.	0.	14908.	0.	36000
3043.	0.	56334.	0.	10129.	0	53000
3044.	0.	76737.	0.	22218.	0	36000
3045.	0.	73533.	0.	15105.	0	53000
3046.	0.	49407.	0.	14836.	0	36000
3048.	0.	70946.	0.	23801.	0.	36000
3049.	0.	60108.	0.	19064.	0	53000
3050.	0.	82089.	0.	27911.	0.	53000
3051.	0.	46973.	0.		0	70000
3054.	0.	63027.	0.		0.	70000
3055.	0.	55326.	0.	05023.	0	70000
3056.	0.	55000.	0.		0.	87000
3057.	0.	71799.	0.	07587.	0.	70000
3058.	0.	71582.	0.		0.	87000
3059.	0.	47464.	0.	07538.	0.	70000
3062.	0.	65169.	0.	12448.	0.	70000
3063.	0.	57865.	0.	14523.	0.	70000
3064.	0.	56299.	0.	09857.	0.	87000
3065.	0.	77622.	0.	21647.	0.	70000
3066.	0.	74509.	0.	14700.	0.	87000
3067.	0.	48829.	0.	14445.	0.	70000
3069.	0.	71251.	0.	23174.	0.	70000
3070.	0.	59972.	0.	18555.	0.	87000
3071.	0.	82834.	0.	27166.	0.	87000
3084.	0.	86224.	0.	23776.	0.	36000
3085.	0.	87340.	0.	15136.	0.	36000
3086.	0.	91083.	0.	18917.	0.	53000
3089.	0.	78935.	0.	12868.	0.	36000
3090.	0.	83274.	0.	05321.	0.	36000
3091.	0.	85285.	0.	10237.	0.	53000
3094.	0.	76375.	0.		0.	36000
3095.	0.	83248.	0.		0.	53000
3097.	0.	86948.	0.	23052.	0.	70000
3098.	0.	88173.	0.	14593.	0.	70000
3099.	0.	91788.	0.	18212.	0.	87000
3102.	0.	79883.	0.	12475.	0.	70000
3103.	0.	84248.	0.	05115.	0.	70000
3104.	0.	86206.	0.	09856.	0.	87000
3107.	0.	77400.	0.		0.	70000
3108.	0.	84244.	0.		0.	87000
3117.	1.	10000.	0.	33625.	0.	36000
3118.	1.	04679.	0.	26726.	0.	36000
3119.	1.	10000.	0.	26752.	0.	53000
3120.	1.	02190.	0.	39230.	0.	36000

3121.	1	10000.	0	39473.	0	53000
3122.	0	97132.	0	31065.	0	36000
3123.	0	94864.	0	22660.	0	36000
3124.	0	99760.	0	24715.	0	53000
3125.	0	87783.	0	33263.	0	36000
3126.	0	94895.	0	36467.	0	53000
3130.	1	10000.	0	32600.	0	70000
3131.	1	04883.	0	25757.	0	70000
3132.	1	10000.	0	25756.	0	87000
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3134.	1	10000.	0	38418.	0	87000
3135.	0	97523.	0	30117.	0	70000
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3137.	1	00137.	0	23794.	0	87000
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3151.	1	25136.	0	22660.	0	36000
3152.	1	28917.	0	18917.	0	53000
3153.	1	27515.	0	34356.	0	36000
3154.	1	33558.	0	31611.	0	53000
3155.	1	21052.	0	30707.	0	36000
3156.	1	15321.	0	26726.	0	36000
3157.	1	20237.	0	24715.	0	53000
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3163.	1	31164.	0	24656.	0	70000
3164.	1	24593.	0	21827.	0	70000
3165.	1	28212.	0	18212.	0	87000
3166.	1	28001.	0	33238.	0	70000
3167.	1	33968.	0	29884.	0	87000
3168.	1	21073.	0	29843.	0	70000
3169.	1	15115.	0	25752.	0	70000
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3171.	1	16089.	0	37346.	0	70000
3172.	1	2231.	0	35042.	0	87000
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3184.	1	36752.	0	.	0	53000
3185.	1	37003.	0	08234.	0	36000
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3187.	1	35720.	0	13421.	0	36000
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3191.	1	37040.	0	16044.	0	53000
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3196.	1	35752.	0	05115.	0	70000
3197.	1	35756.	0	.	0	87000
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3218.	1	62152.	0	10634.	0	36000
3219.	1	62500.	0	.	0	53000
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3237.	1	61110.	0	21210.	0	87000
3238.	1	45358.	0	36421.	0	70000
3240.	1	56963.	0	42058.	0	87000
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3253.	0	31065.	0	12868.	0	36000
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3271.	0	28232.	0	16300.	0	70000
3272.	0	22306.	0	12878.	0	87000
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3293.	0	58831.	0	30078.	0	36000
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3296.	0	82121.	0	37672.	0	53000
3297.	0	46432.	0	26808.	0	36000
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3313.	0	70857.	0	31915.	0	70000
3314.	0	58713.	0	29903.	0	70000
3315.	0	59169.	0	26101.	0	87000
3316.	0	82493.	0	42610.	0	70000
3317.	0	82843.	0	37500.	0	87000
3318.	0	45922.	0	26513.	0	70000
3320.	0	70310.	0	40593.	0	70000
3321.	0	58062.	0	33522.	0	87000
3322.	0	82853.	0	47835.	0	87000
3339.	0	95008.	0	41566.	0	36000
3341.	1	10026.	0	45892.	0	36000
3343.	0	88344.	0	42297.	0	36000
3346.	1	02565.	0	49343.	0	36000
3347.	0	95639.	0	50788.	0	36000
3348.	0	95508.	0	45982.	0	53000
3349.	1	10077.	0	57676.	0	36000
3350.	1	10045.	0	51517.	0	53000
3351.	0	88879.	0	51314.	0	36000

3353,	1	03028,	0.	59484,	0.	36000
3354,	0	96122,	0.	55496,	0.	53000
3355,	1	10090,	0.	63560,	0.	53000
3360,	0	95395,	0.	40883,	0.	70000
3362,	1	10019,	0.	45097,	0.	70000
3364,	0	88887,	0.	42004,	0.	70000
3367,	1	02755,	0.	48873,	0.	70000
3368,	0	95992,	0.	50690,	0.	70000
3369,	0	95878,	0.	45591,	0.	87000
3370,	1	10057,	0.	57401,	0.	70000
3371,	1	10032,	0.	50982,	0.	87000
3372,	0	89397,	0.	51613,	0.	70000
3374,	1	03183,	0.	59573,	0.	70000
3375,	0	96458,	0.	55690,	0.	87000
3376,	1	10063,	0.	63545,	0.	87000
3393,	1	20369,	0.	43861,	0.	36000
3395,	1	30702,	0.	41889,	0.	36000
3397,	1	14389,	0.	51601,	0.	36000
3400,	1	23065,	0.	51235,	0.	36000
3401,	1	16773,	0.	58797,	0.	36000
3402,	1	19217,	0.	51468,	0	53000
3403,	1	23452,	0.	59975,	0.	36000
3404,	1	28310,	0	51079,	0	53000
3405,	1	12293,	0.	64832,	0.	36000
3407,	1	16672,	0.	67361,	0.	36000
3408,	1	15428,	0.	66642,	0.	53000
3409,	1	20766,	0.	69724,	0.	53000
3414,	1	21028,	0.	43498,	0.	70000
3416,	1	31740,	0.	41006,	0.	70000
3418,	1	14872,	0.	51467,	0	70000
3421,	1	24467,	0.	51399,	0	70000
3422,	1	18163,	0.	59378,	0	70000
3423,	1	20199,	0.	51569,	0	87000
3424,	1	26194,	0.	61051,	0.	70000
3425,	1	30127,	0.	51133,	0.	87000
3426,	1	13225,	0.	65370,	0.	70000
3428,	1	19521,	0.	69005,	0.	70000
3429,	1	17318,	0.	67734,	0.	87000
3430,	1	24573,	0.	71922,	0.	87000
3446,	1	53874,	0.	52239,	0.	36000
3448,	1	38766,	0	56619,	0	36000
3451,	1	45744,	0.	71867,	0	36000
3452,	1	50130,	0.	62186,	0.	53000
3453,	1	29796,	0.	74937,	0.	36000
3455,	1	40729,	0.	81250,	0	53000
3459,	1	53875,	0.	52237,	0.	70000
3461,	1	39674,	0.	56645,	0	70000
3464,	1	45743,	0.	71869,	0.	70000
3465,	1	50130,	0.	62186,	0.	87000
3466,	1	31699,	0.	76037,	0.	70000
3468,	1	40729,	0.	81250,	0.	87000
3476,	1	49875,	0.	,	0.	
3477,	1	37003,	0.	08234,	0	
3478,	1	37250,	0.	,	0.	09000
3479,	1	62152,	0.	10634,	0.	
3480,	1	62500,	0.	,	0.	09000
3481,	1	48687,	0.	18812,	0.	
3482,	1	35043,	0	24517,	0.	
3483,	1	36265,	0.	16413,	0.	09000
3484,	1	59379,	0.	31697,	0.	
3485,	1	61110,	0	21211,	0.	09000
3486,	1	45152,	0	37291,	0.	

3427.	1.	33341.	0.	32523.	0.	09000
3428.	1.	56963.	0.	42058.	0.	09000
3429.	1.	49875.	0.		0.	18000
3490.	1.	37003.	0.	08234.	0.	18000
3491.	1.	37250.	0.		0.	27000
3492.	1.	62152.	0.	10634.	0.	18000
3493.	1.	62500.	0.		0.	27000
3494.	1.	48687.	0.	18812.	0.	18000
3495.	1.	35043.	0.	24517.	0.	18000
3496.	1.	36265.	0.	16413.	0.	27000
3497.	1.	59379.	0.	31697.	0.	18000
3498.	1.	61110.	0.	21211.	0.	27000
3499.	1.	45152.	0.	37291.	0.	18000
3500.	1.	33341.	0.	32523.	0.	27000
3501.	1.	56963.	0.	42058.	0.	27000
3510.	1.	30702.	0.	41889.	0.	
3512.	1.	53874.	0.	52239.	0.	
3514.	1.	38766.	0.	56619.	0.	
3515.	1.	23452.	0.	59975.	0.	
3516.	1.	27402.	0.	51051.	0.	09000
3517.	1.	45744.	0.	71867.	0.	
3518.	1.	50130.	0.	62186.	0.	09000
3519.	1.	29796.	0.	74937.	0.	
3520.	1.	18862.	0.	68625.	0.	09000
3521.	1.	40729.	0.	81250.	0.	09000
3523.	1.	30702.	0.	41889.	0.	18000
3525.	1.	53874.	0.	52239.	0.	18000
3527.	1.	38766.	0.	56619.	0.	18000
3528.	1.	23452.	0.	59975.	0.	18000
3529.	1.	27402.	0.	51051.	0.	27000
3530.	1.	45744.	0.	71867.	0.	18000
3531.	1.	50130.	0.	62186.	0.	27000
3532.	1.	29796.	0.	74937.	0.	18000
3533.	1.	18862.	0.	68625.	0.	27000
3534.	1.	40729.	0.	81250.	0.	27000

*ELEMENT, TYPE=DC3D20, ELSET= P1D1

1.	1.	2.	5.	4.	10.	11.	14.	13.	1201, 1205, 1209, 1202, 1222, 1226, 1230,
									1223, 1203, 1206, 1214, 1211
2.	2.	3.	6.	5.	11.	12.	15.	14.	1204, 1207, 1212, 1205, 1225, 1228, 1233,
									1226, 1206, 1208, 1216, 1214
3.	4.	5.	8.	7.	13.	14.	17.	16.	1209, 1213, 1217, 1210, 1230, 1234, 1238,
									1231, 1211, 1214, 1220, 1218
4.	5.	6.	9.	8.	14.	15.	18.	17.	1212, 1215, 1219, 1213, 1233, 1236, 1240,
									1234, 1214, 1216, 1221, 1220
5.	10.	11.	14.	13.	19.	20.	23.	22.	1222, 1226, 1230, 1223, 1243, 1246, 1248,
									1244, 1224, 1227, 1235, 1232
6.	11.	12.	15.	14.	20.	21.	24.	23.	1225, 1228, 1233, 1226, 1245, 1247, 1250,
									1246, 1227, 1229, 1237, 1235
7.	13.	14.	17.	16.	22.	23.	26.	25.	1230, 1234, 1238, 1231, 1248, 1251, 1253,
									1249, 1232, 1235, 1241, 1239
8.	14.	15.	18.	17.	23.	24.	27.	26.	1233, 1236, 1240, 1234, 1250, 1252, 1254,
									1251, 1235, 1237, 1242, 1241
9.	433.	28.	31.	435.	439.	37.	40.	441.	1255, 1258, 1260, 1256, 1268, 1271, 1273,
									1269, 1257, 1259, 1264, 1262
10.	435.	31.	34.	111.	441.	40.	43.	120.	1260, 1263, 1265, 1261, 1273, 1276, 1278,
									1274, 1262, 1264, 1267, 1266
11.	439.	37.	40.	441.	445.	46.	49.	447.	1268, 1271, 1273, 1269, 1281, 1283, 1284,
									1282, 1270, 1272, 1277, 1275
12.	441.	40.	43.	120.	447.	49.	52.	129.	1273, 1276, 1278, 1274, 1284, 1286, 1287,
									1285, 1275, 1277, 1280, 1279
13.	28.	29.	32.	31.	37.	38.	41.	40.	1288, 1292, 1296, 1258, 1309, 1313, 1317,
									1271, 1259, 1293, 1301, 1264

14,	29,	30,	33,	32,	38,	39,	42,	41,	1291,	1294,	1299,	1292,	1312,	1315,	1320,
	1313,	1293,	1295,	1303,	1301										
15,	31,	32,	35,	34,	40,	41,	44,	43,	1296,	1300,	1304,	1263,	1317,	1321,	1325,
	1276,	1264,	1301,	1307,	1267										
16,	32,	33,	36,	35,	41,	42,	45,	44,	1299,	1302,	1306,	1300,	1320,	1323,	1327,
	1321,	1301,	1303,	1308,	1307										
17,	37,	38,	41,	40,	46,	47,	50,	49,	1309,	1313,	1317,	1271,	1330,	1333,	1335,
	1283,	1272,	1314,	1322,	1277										
18,	38,	39,	42,	41,	47,	48,	51,	50,	1312,	1315,	1320,	1313,	1332,	1334,	1337,
	1333,	1314,	1316,	1324,	1322										
19,	40,	41,	44,	43,	49,	50,	53,	52,	1317,	1321,	1325,	1276,	1335,	1338,	1340,
	1286,	1277,	1322,	1328,	1280										
20,	41,	42,	45,	44,	50,	51,	54,	53,	1320,	1323,	1327,	1321,	1337,	1339,	1341,
	1338,	1322,	1324,	1329,	1328										
21,	7,	8,	59,	58,	16,	17,	68,	67,	1217,	1346,	1350,	1343,	1238,	1367,	1371,
	1364,	1218,	1220,	1355,	1352										
22,	8,	9,	60,	59,	17,	18,	69,	68	1219,	1348,	1353,	1346,	1240,	1369,	1374,
	1367,	1220,	1221,	1357,	1355										
23,	58,	59,	62,	61,	67,	68,	71,	70,	1350,	1354,	1358,	1351,	1371,	1375,	1379,
	1372,	1352,	1355,	1361,	1359										
24,	59,	60,	63,	62,	68,	69,	72,	71,	1353,	1356,	1360,	1354,	1374,	1377,	1381,
	1375,	1355,	1357,	1362,	1361										
25,	16,	17,	68,	67,	25,	26,	77,	76,	1238,	1367,	1371,	1364,	1253,	1387,	1389,
	1385,	1239,	1241,	1376,	1373										
26,	17,	18,	69,	68,	26,	27,	78,	77,	1240,	1369,	1374,	1367,	1254,	1388,	1391,
	1387,	1241,	1242,	1378,	1376										
27,	67,	68,	71,	70,	76,	77,	80,	79,	1371,	1375,	1379,	1372,	1389,	1392,	1394,
	1390,	1373,	1376,	1382,	1380										
28,	68,	69,	72,	71,	77,	78,	81,	80,	1374,	1377,	1381,	1375,	1391,	1393,	1395,
	1392,	1376,	1378,	1383,	1382										
29,	9,	83,	86,	60,	18,	92,	95,	69,	1396,	1400,	1404,	1348,	1417,	1421,	1425,
	1369,	1221,	1401,	1409,	1357										
30,	83,	84,	87,	86,	92,	93,	96,	95,	1399,	1402,	1407,	1400,	1420,	1423,	1428,
	1421,	1401,	1403,	1411,	1409										
31,	60,	86,	89,	63,	69,	95,	98,	72,	1404,	1408,	1412,	1356,	1425,	1429,	1433,
	1377,	1357,	1409,	1415,	1362										
32,	86,	87,	90,	89,	95,	96,	99,	98,	1407,	1410,	1414,	1408,	1428,	1431,	1435,
	1429,	1409,	1411,	1416,	1415										
33,	18,	92,	95,	69,	27,	101,	104,	78,	1417,	1421,	1425,	1369,	1438,	1441,	1443,
	1388,	1242,	1422,	1430,	1378										
34,	92,	93,	96,	95,	101,	102,	105,	104,	1420,	1423,	1428,	1421,	1440,	1442,	1445,
	1441,	1422,	1424,	1432,	1430										
35,	69,	95,	98,	72,	78,	104,	107,	81,	1425,	1429,	1433,	1377,	1443,	1446,	1448,
	1393,	1378,	1430,	1436,	1383										
36,	95,	96,	99,	98,	104,	105,	108,	107,	1428,	1431,	1435,	1429,	1445,	1447,	1449,
	1446,	1430,	1432,	1437,	1436										
37,	84,	110,	113,	87,	93,	119,	122,	96,	1450,	1454,	1458,	1402,	1471,	1475,	1479,
	1423,	1403,	1455,	1463,	1411										
38,	110,	111,	114,	113,	119,	120,	123,	122,	1453,	1456,	1461,	1454,	1474,	1477,	1482,
	1475,	1455,	1266,	1465,	1463										
39,	87,	113,	116,	90,	96,	122,	125,	99,	1458,	1462,	1466,	1410,	1479,	1483,	1487,
	1431,	1411,	1463,	1469,	1416										
40,	113,	114,	117,	116,	122,	123,	126,	125,	1461,	1464,	1468,	1462,	1482,	1485,	1489,
	1483,	1463,	1465,	1470,	1469										
41,	93,	119,	122,	96,	102,	128,	131,	105,	1471,	1475,	1479,	1423,	1492,	1495,	1497,
	1442,	1424,	1476,	1484,	1432										
42,	119,	120,	123,	122,	128,	129,	132,	131,	1474,	1477,	1482,	1475,	1494,	1496,	1499,
	1495,	1476,	1279,	1486,	1484										
43,	96,	122,	125,	99,	105,	131,	134,	108,	1479,	1483,	1487,	1431,	1497,	1500,	1502,
	1447,	1432,	1484,	1490,	1437										
44,	122,	123,	126,	125,	131,	132,	135,	134,	1482,	1485,	1489,	1483,	1499,	1501,	1503,
	1500,	1484,	1486,	1491,	1490										

45, 111, 34, 139, 114, 120, 1477, 1266, 1267, 1513, 1465	43, 148, 123, 1265, 1507, 1509, 1456, 1278, 1520, 1522,
46, 114, 139, 142, 117, 123, 1485, 1465, 1513, 1516, 1470	148, 151, 126, 1509, 1512, 1514, 1464, 1522, 1525, 1527,
47, 120, 43, 148, 123, 129, 1496, 1279, 1280, 1526, 1486	52, 157, 132, 1278, 1520, 1522, 1477, 1287, 1532, 1533,
48, 123, 148, 151, 126, 132, 1501, 1486, 1526, 1529, 1491	157, 160, 135, 1522, 1525, 1527, 1485, 1533, 1535, 1536,
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51, 139, 140, 143, 142, 148, 1525, 1513, 1550, 1556, 1516	149, 152, 151, 1545, 1549, 1553, 1512, 1566, 1570, 1574,
52, 140, 141, 144, 143, 149, 1570, 1550, 1552, 1557, 1556	150, 153, 152, 1548, 1551, 1555, 1549, 1569, 1572, 1576,
53, 43, 44, 149, 148, 52, 1532, 1280, 1328, 1571, 1526	53, 158, 157, 1325, 1562, 1566, 1520, 1340, 1582, 1584,
54, 44, 45, 150, 149, 53, 1582, 1328, 1329, 1573, 1571	54, 159, 158, 1327, 1564, 1569, 1562, 1341, 1583, 1586,
55, 148, 149, 152, 151, 157, 1535, 1526, 1571, 1577, 1529	158, 161, 160, 1566, 1570, 1574, 1525, 1584, 1587, 1589,
56, 149, 150, 153, 152, 158, 1587, 1571, 1573, 1578, 1577	159, 162, 161, 1569, 1572, 1576, 1570, 1586, 1588, 1590,
57, 469, 163, 166, 471, 475, 1605, 1593, 1595, 1600, 1598	172, 175, 477, 1591, 1594, 1596, 1592, 1604, 1607, 1609,
58, 471, 166, 169, 473, 477, 1610, 1598, 1600, 1603, 1602	175, 178, 479, 1596, 1599, 1601, 1597, 1609, 1612, 1614,
59, 475, 172, 175, 477, 481, 1618, 1606, 1608, 1613, 1611	1, 4, 483, 1604, 1607, 1609, 1605, 1617, 1202, 1620,
60, 477, 175, 178, 479, 483, 1621, 1611, 1613, 1616, 1615	4, 7, 485, 1609, 1612, 1614, 1610, 1620, 1210, 1623,
61, 163, 164, 167, 166, 172, 1607, 1595, 1629, 1637, 1600	173, 176, 175, 1624, 1628, 1632, 1594, 1645, 1649, 1653,
62, 164, 165, 168, 167, 173, 1649, 1629, 1631, 1639, 1637	174, 177, 176, 1627, 1630, 1635, 1628, 1648, 1651, 1656,
63, 166, 167, 170, 169, 175, 1612, 1600, 1637, 1643, 1603	176, 179, 178, 1632, 1636, 1640, 1599, 1653, 1657, 1661,
64, 167, 168, 171, 170, 176, 1657, 1637, 1639, 1644, 1643	177, 180, 179, 1635, 1638, 1642, 1636, 1656, 1659, 1663,
65, 172, 173, 176, 175, 1, 1202, 1608, 1650, 1658, 1613	2, 5, 4, 1645, 1649, 1653, 1607, 1201, 1205, 1209,
66, 173, 174, 177, 176, 2, 1205, 1650, 1652, 1660, 1658	3, 6, 5, 1648, 1651, 1656, 1649, 1204, 1207, 1212,
67, 175, 176, 179, 178, 4, 1210, 1613, 1658, 1664, 1616	5, 8, 7, 1653, 1657, 1661, 1612, 1209, 1213, 1217,
68, 176, 177, 180, 179, 5, 1213, 1658, 1660, 1665, 1664	6, 9, 8, 1656, 1659, 1663, 1657, 1212, 1215, 1219,
69, 487, 171, 168, 489, 493, 1692, 1680, 1644, 1639, 1685	180, 177, 495, 1678, 1638, 1683, 1679, 1691, 1659, 1696,
70, 489, 168, 165, 491, 495, 1697, 1685, 1639, 1631, 1689	177, 174, 497, 1683, 1630, 1688, 1684, 1696, 1651, 1701,
71, 493, 180, 177, 495, 499, 1705, 1693, 1665, 1660, 1698	9, 6, 501, 1691, 1659, 1696, 1692, 1704, 1215, 1707,
72, 495, 177, 174, 497, 501, 1708, 1698, 1660, 1652, 1702	6, 3, 503, 1696, 1651, 1701, 1697, 1707, 1207, 1710,
73, 505, 246, 245, 507, 511, 1725, 1713, 1715, 1720, 1718	255, 254, 513, 1711, 1714, 1716, 1712, 1724, 1727, 1729,
74, 507, 245, 171, 487, 513, 1730, 1718, 1720, 1644, 1680	254, 180, 493, 1716, 1719, 1678, 1717, 1729, 1732, 1691,
75, 511, 255, 254, 513, 517, 1738, 1726, 1728, 1733, 1731	84, 83, 519, 1724, 1727, 1729, 1725, 1737, 1399, 1740,

76.	513, 254, 180, 493, 519, 1741, 1731, 1733, 1665, 1693	83.	9, 499, 1729, 1732, 1691, 1730, 1740, 1396, 1704,
77.	523, 273, 272, 525, 529, 1758, 1746, 1748, 1753, 1751	282.	281, 531, 1744, 1747, 1749, 1745, 1757, 1760, 1762,
78.	525, 272, 246, 505, 531, 1763, 1751, 1753, 1715, 1713	281.	255, 511, 1749, 1752, 1711, 1750, 1762, 1765, 1724,
79.	529, 282, 281, 531, 535, 1771, 1759, 1761, 1766, 1764	111.	110, 537, 1757, 1760, 1762, 1758, 1770, 1453, 1773,
80.	531, 281, 255, 511, 537, 1774, 1764, 1766, 1728, 1726	110.	84, 517, 1762, 1765, 1724, 1763, 1773, 1450, 1737,
81.	541, 542, 544, 543, 547, 1791, 1779, 1781, 1786, 1784	548.	550, 549, 1777, 1780, 1782, 1778, 1790, 1793, 1795,
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17, 20, 1

25, 28, 1

33, 36, 1

41, 44, 1

47, 48, 1

53, 56, 1

*ELSET, ELSET=HOL13, GENERATE

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30, 42, 4

*ELSET, ELSET=HOL14, GENERATE

2, 8, 2

*ELSET, ELSET=HOL16, GENERATE

1, 7, 2

9, 12, 1

21, 27, 2

*ELSET, ELSET=FSUR2

59, 60, 71, 72, 75, 76, 79, 80, 83, 84, 99, 100

*ELSET, ELSET=HOL2, GENERATE

57, 60, 1

69, 84, 1

97, 100, 1

*ELSET, ELSET=HOL3, GENERATE

141, 142, 1

159, 177, 6

160, 178, 6

201, 202, 1

*ELSET, ELSET=HOL4, GENERATE

139, 140, 1

157, 175, 6

158, 176, 6

199, 200, 1

*ELSET, ELSET=HOL5, GENERATE

137, 138, 1

155, 173, 6

156, 174, 6

197, 198, 1

*ELSET, ELSET=HOL6, GENERATE

259, 260, 1

271, 283, 4

272, 284, 4

291, 292, 1

*ELSET, ELSET=HOL7, GENERATE

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269, 281, 4

270, 282, 4

289, 290, 1

*ELSET, ELSET=RSUR1, GENERATE

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261, 264, 1

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289, 290, 1
293, 296, 1
301, 304, 1
309, 312, 1
317, 318, 1
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*ELSET, ELSET=FLNG2
321, 322, 325, 326
*ELSET, ELSET=RSUR2
321, 322, 325, 326
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*RESTART, WRITE
*MATERIAL
*ELASTIC
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13400000, 0, 0, 33, 392, 0
12900000, 0, 0, 33, 752, 0
12400000, 0, 0, 33, 1112, 0
11900000, 0, 0, 33, 1472, 0
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9000000, 0, 0, 33, 2912, 0
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0, 000717, 1000, 0
0, 000741, 1500, 0
0, 000810, 2000, 0
0, 000879, 2500, 0
0, 000926, 3000, 0
*DENSITY
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*SPECIFIC HEAT
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*STEP, INC=100
TRANSIENT HEAT TRANSFER ANALYSIS
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*FILM, OP=NEW
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HOL13, F3NU
HOL14, F4NU
HOL16, F6NU
FSUR2, F2NU
HOL2, F6NU
HOL3, F6NU
HOL4, F6NU
HOL5, F6NU
HOL6, F6NU
HOL7, F6NU
RSUR1, F1NU
FLNG1, F6NU
FLNG2, F6NU
RSUR2, F1NU
*NODE PRINT, FREQ=10
2, 2, 1, 1, 2, 2, 1, 1

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*NODE FILE, NSET=NALL
2, 2, 1, 1, 2, 2, 1, 1
*END STEP

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*HEADING
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS
CONTINUATION OF M14FR401 RUN
*RESTART, READ, WRITE, STEP=1, INC=10, ENDSTEP
*STEP, INC=100
TRANSIENT HEAT TRANSFER ANALYSIS
*HEAT TRANSFER, TEMTOL=50. 0, DELMAX=500. 0, END=SS
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*FILM, OP=NEW
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HOL13, F3NU
HOL14, F4NU
HOL16, F6NU
FSUR2, F2NU
HOL2, F6NU
HOL3, F6NU
HOL4, F6NU
HOL5, F6NU
HOL6, F6NU
HOL7, F6NU
RSUR1, F1NU
FLNG1, F6NU
FLNG2, F6NU
RSUR2, F1NU
*NODE PRINT, FREQ=10
2, 2, 1, 1, 1, 1, 1, 1
*NODE FILE, NSET=NALL
2, 2, 1, 1, 1, 1, 1, 1
*END STEP
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*HEADING
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS
CONTINUATION OF M14FR402 RUN
*RESTART, READ, WRITE, STEP=2, INC=11

APPENDIX F
PROCEDURE FILES TO RUN ABAQUS


```
! COMMAND PROCEDURE TO RUN ABAQUS
$ INQUIRE IDENT "JOB IDENTIFIER"
$ INQUIRE DFILE "INPUT DATA FILE"
$ INQUIRE SUBFILE "USER SUBROUTINE FILE OR RETURN"
$ IF SUBFILE .EQS. "" THEN SUBFILE="9999"
$ INQUIRE RESIN "RESTART INPUT FILE OR RETURN"
$ IF RESIN .EQS. "" THEN RESIN="9999"
$ INQUIRE RESOUT "RESTART OUTPUT FILE OR RETURN"
$ IF RESOUT .EQS. "" THEN RESOUT="9999"
$ INQUIRE QUIT "RETURN if data check only, otherwise any symbol "
$ IF QUIT .EQS. "" THEN QUIT="9999"
$ SUBMIT/Q=SYS$LONG_BATCH/CPUTIME=INFINITE/PARAMETERS=( 'IDENT', 'DFILE', -
'SUBFILE', 'RESIN', 'RESOUT', 'QUIT' ) DUAO [E]BECKER.ABAGUSJABAGUS.COM
$ EXIT
```

```

4K29ZISAF
: PARAMETERS 'P1' JOB IDENTIFIER, MUST BE UNIQUE FROM OTHER
:           JOBS THAT MAY EXECUTE SIMULTANEOUSLY
:           'P2' ABAGUS DATA INPUT FILE
:           'P3' FORTRAN SOURCE CODE OF USER SUBROUTINES
:           'P4' RESTART READ FILE
:           'P5' OLD FILE IF THIS IS A RESTART READ RUN
:           'P6' SET TO NON-BLANK TO FINISH AFTER DATA CHECK
$ RENAME ABAGUS.LOG [EBECKER.ABAGUSJABAGUS.LOG
$ ASS _NLO_ SYS*PRINT
$ SET VERIFY
$ SET DEF DUAO [EBECKER.ABAGUS]
$ ASS 'P1'.023 FOR023
$ ASS 'P1'.028 FOR028
$ ASS 'P1'.006 FOR006
$ ASS 'P1'.FIL FOR008
$ ASS 'P1'.PPL FOR077
$ IF P4 .EQS. "9999" THEN GOTO B
$ ASS 'P4' FOR011
$ B
$ IF P5 .EQS. "9999" THEN GOTO C
$ COPY 'P5' FOR008
$ C
$ ASS 'P1'.RES FOR012
$ ASS 'P1'.015 FOR015
$ ASS 'P1'.016 FOR016
$ ASS 'P1'.017 FOR017
$ ASS 'P1'.018 FOR018
$ ASS 'P2' FOR005
$ RUN ABAGUS*DIR.ABAGPRE
$ COPY 'P1'.006 'P1'.DAT
$ DELETE 'P1'.006;*
$ IF P6 .EQS. "9999" THEN GOTO D
$ SHOW PROC/ACC
$ FOR 'P1'.028
$ IF P3 .EQS. "9999" THEN GOTO A
$ FOR/OBJECT='P1'.OBJ 'P3'
$ APP 'P1'.OBJ 'P1'.OBJ
$ DELETE 'P1'.OBJ;*
$ DELETE 'P3'.LIS;*
$ A
$ ASS 'P1'.MPL FOR077
$ LINK/NOMAP/EXE='P1' 'P1'.ABAGUS*DIR.ABAGLIB/LIB
$ DELETE 'P1'.OBJ;*
$ DELETE 'P1'.LIS;*
$ RUN 'P1'
$ APP 'P1'.006 'P1'.DAT
$ DELETE 'P1'.EXE;*
$ DELETE 'P1'.006;*
$ D
$ DELETE 'P1'.023;*
$ DELETE 'P1'.028;*

```

APPENDIX G

RESULTS TRANSLATION FROM ABAQUS TO PATRAN-G FILES

```
$ INQUIRE TIT "File with title (or RETURN for TITLE DAT)"
$ IF TIT .EQS. "" THEN TIT="[EBECKER RESULTS]TITLE.DAT"
$ INQUIRE TRANS "File with transformations (or RETURN for no transformations)"
$ IF TRANS .EQS. "" THEN TRANS="9999"
$ INQUIRE INP "File from ABAQUS run ( FIL)"
$ SUBMIT/Q=SYS$FAST_BATCH/CPUTIME=INFINITE/NOPRINTER/PARAMETERS=('TIT', -
'TRANS', 'INP') WRIT COM
```

```
4K25BEPUT
$ RENAME WRIT. LOG DUAO: [EBECKER RESULTS]* *
$ ASSIGN 'P1' FOR004
$ IF P2 .EQS. "9999" THEN GOTO A
$ ASSIGN 'P2' FOR009
$ A:
$ ASSIGN 'P3' FOR008
$ SET DEF DUAO [EBECKER RESULTS]
$ RUN ABAPAT
```

```

PROGRAM ABAPAT
DOUBLE PRECISION ARRAY
LOGICAL TRANS1, TRANS2, CYLIN
REAL MAXDEF, LAMBDAX, LAMBDAY, LAMBDAZ, MUX, MUY, MUZ, NUX, NUY, NUZ
DIMENSION ARRAY(513), JRRAY(2, 513), TITLE(80), NCARDS(200),
+ NDMAX(200), INODE(4000), STITLE1(80), STITLE2(80), MAXDEF(200),
+ WRIT(4000, 60), NODTRAN(9999), NODE(9999), XDRG(9999), YDRG(9999),
+ ZDRG(9999)
EQUIVALENCE (ARRAY(1), JRRAY(1, 1))

```

```

C *****
C *
C * Latest revision : April 26, 1984
C *
C * This program is an ABAQUS-to-PATRAN results translator.
C * Nodal results (only), produced by *EL FILE or *NODE FILE cards
C * in ABAQUS, are translated into PATRAN post-processing format.
C *
C * INITF and DBFILE are subroutines in the ABAQUS library--this
C * code is linked with ABAQUS*DIR.ABAQLIB/LIB to produce the
C * executable. The ABAQUS output file must be located on UNIT 8
C * to be accessed by the ABAQUS subroutines.
C *
C * A three-record file, containing a title and two subtitles, must
C * be located on UNIT 4.
C *****

```

```

C *****
C *
C * VARIABLE DEFINITIONS
C *
C * 'ARRAY' is a single record from the ABAQUS output file
C *
C * NU is the number of data blocks in the ABAQUS output file.
C * NCARDS is the number of records in each data block.
C * NNODES is the number of nodes in each data block.
C * NDMAX is the node having the largest deflection.
C * MAXNOD is the highest node ID.
C * MAXDEF is the largest deflection (occurring at NDMAX).
C *
C * WRIT is the array of nodal results which have been translated
C * into PATRAN postprocessing format. A separate file is
C * produced for each increment, each is output on UNIT 10
C * In other words, there will be a separate FOR010.DAT output
C * by this program for every increment in the results file from
C * ABAQUS; the output files will be distinguishable on the basis
C * of version number.
C *****

```

```

C *****
C *
C * Determine NU, NNODES, and MAXNOD
C *
C *****
C
CALL INITF
MAXNOD=0
NU=0

```

```

      NNODES=0
      I2001=0
      NWIDTH=59
      DO 10 K=1,99999
      CALL DBFILE(0,ARRAY,JCRD)
      IF (JCRD.NE.0) GO TO 20
      IF (JRRAY(1,2).EQ.1901) THEN
      NNODES=NNODES+1
      NODE(JRRAY(1,3)) = JRRAY(1,3)
      XORG(JRRAY(1,3)) = ARRAY(4)
      YORG(JRRAY(1,3)) = ARRAY(5)
      ZORG(JRRAY(1,3)) = ARRAY(6)
      ENDIF
      IF (JRRAY(1,2).EQ.2001) NU=NU+1
      IF (JRRAY(1,2).EQ.1901.AND.JRRAY(1,3)
+ .GT.MAXNOD)MAXNOD=JRRAY(1,3)
10    CONTINUE
20    REWIND B
C
C *****
C *
C *   Determine MAXDEF, NDMAX, NCARDS
C *
C *****
C
      DO 30 K=1,NU
      MAXDEF(K)=0.0
      DO 25 J=1,99999
      ARRAY(4)=0.0
      ARRAY(5)=0.0
      ARRAY(6)=0.0
      CALL DBFILE(0,ARRAY,JCRD)
      IF (JCRD.NE.0) GO TO 35
      IF (JRRAY(1,2).EQ.2001) GO TO 23
      IF (JRRAY(1,2).NE.101) GO TO 25
      CALL DEFLECTION (ARRAY,DEFMAX)
      IF (ABS(DEFMAX).GT.ABS(MAXDEF(K))) GO TO 22
      GO TO 25
22    MAXDEF(K)=DEFMAX
      NDMAX(K)=JRRAY(1,3)
      GO TO 25
23    NCARDS(K)=J
      GO TO 30
25    CONTINUE
30    CONTINUE
35    REWIND B
C
C *****
C *
C *   Assign ABAGUS output quantities to appropriate locations
C *   in WRIT.
C *
C *****
C
      TRANS1=.FALSE.
      TRANS2=.FALSE.
      READ(4,1000)TITLE
      READ(4,1000)STITLE1
      READ(4,1000)STITLE2
      READ(4,1010,END=7)TRANS1
      IF(TRANS1)THEN
      READ(9,1050) NUMNODE

```

```

DO 5 II=1,4000,15
  READ(9,1040,ERR=6) (NODTRAN(K),K=II,II+14)
5  CONTINUE
6  XZCOS=0.0
  YZCOS=0.0
  ZXCOS=0.0
  ZYCOS=0.0
  ZZCOS=1.0
  ENDIF
7  CONTINUE
  DO 50 J=9,(NU+8)
  DO 40 K=1,NCARDS(J-8)
  DO 42 MM=4,10
  ARRAY(MM)=0.0
42 CONTINUE
  CALL DBFILE(0,ARRAY,JCRD)
  IF (JCRD.NE.0) GO TO 60
  IF (JRRAY(1,2).EQ.2001) I2001=I2001+1
  IF (I2001.LE.1 AND JRRAY(1,2).EQ.2001) GO TO 50
  IF (JRRAY(1,2).EQ.1901) INODE(JRRAY(1,3))=JRRAY(1,3)
C
C *****
C *
C * THIS TRANSFORMATION ASSUMES A CYLINDRICAL COORDINATE *
C * TRANSFORMATION. THE Z-AXIS REMAINS THE SAME FOR BOTH *
C * THE ORIGINAL SYSTEM AND THE TRANSFORMED SYSTEM. ALSO, *
C * THE ORIGIN NEVER MOVES. *
C *
C *****
C
  IF (TRANS1.AND.(JRRAY(1,2).EQ.101.OR.JRRAY(1,2).EQ.102.OR
+ JRRAY(1,2).EQ.103))THEN
  DO 71 IK=1,NUMNODE
  IF(JRRAY(1,3).EQ.NODTRAN(IK))THEN
  TRANS2=.TRUE.
  R=(XORG(NODTRAN(IK))**2.0+YORG(NODTRAN(IK))**2.0)**0.5
  XXCOS=XORG(NODTRAN(IK))/R
  XYCOS=-YORG(NODTRAN(IK))/R
  YXCOS=YORG(NODTRAN(IK))/R
  YYCOS=XORG(NODTRAN(IK))/R
  GO TO 72
  ENDIF
71 CONTINUE
  TRANS2=.FALSE.
  ENDIF
72 CONTINUE
  IF (JRRAY(1,2).EQ.101) GO TO 102
  IF (JRRAY(1,2).EQ.51) GO TO 104
  IF (JRRAY(1,2).EQ.54) GO TO 106
  IF (JRRAY(1,2).EQ.52) GO TO 108
  IF (JRRAY(1,2).EQ.55) GO TO 110
  IF (JRRAY(1,2).EQ.56) GO TO 112
  IF (JRRAY(1,2).EQ.57) GO TO 114
  IF (JRRAY(1,2).EQ.58) GO TO 116
  IF (JRRAY(1,2).EQ.102) GO TO 118
  IF (JRRAY(1,2).EQ.103) GO TO 120
  IF (JRRAY(1,2).EQ.104) GO TO 122
  IF (JRRAY(1,2).EQ.106) GO TO 124
  IF (JRRAY(1,2).EQ.201) GO TO 126
  IF (JRRAY(1,2).EQ.204) GO TO 128
  IF (JRRAY(1,2).EQ.206) GO TO 130
  IF (JRRAY(1,2).EQ.214) GO TO 132

```



```

      GO TO 40
C
C *****
C *
C *   Displacements
C *
C *****
C
102  IF(TRANS2)GO TO 103
      WRIT(JRRAY(1,3),2)=ARRAY(4)
      WRIT(JRRAY(1,3),3)=ARRAY(5)
      WRIT(JRRAY(1,3),4)=ARRAY(6)
      GO TO 40
103  WRIT(JRRAY(1,3),2)=XXCOS*ARRAY(4)+XYCOS*ARRAY(5)+XZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),3)=YXCOS*ARRAY(4)+YYCOS*ARRAY(5)+YZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),4)=ZXCOS*ARRAY(4)+ZYCOS*ARRAY(5)+ZZCOS*ARRAY(6)
      GO TO 40
C
C *****
C *
C *   Stresses
C *
C *****
C
104  WRIT(JRRAY(1,3),5)=ARRAY(5)
      WRIT(JRRAY(1,3),6)=ARRAY(6)
      WRIT(JRRAY(1,3),7)=ARRAY(7)
      WRIT(JRRAY(1,3),8)=ARRAY(8)
      WRIT(JRRAY(1,3),9)=ARRAY(9)
      WRIT(JRRAY(1,3),10)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),8)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),8).EQ.ARRAY(7))WRIT(JRRAY(1,3),7)=0.0
      GO TO 40
C
C *****
C *
C *   Principle stresses, stress invariants
C *
C *****
C
106  WRIT(JRRAY(1,3),11)=ARRAY(5)
      WRIT(JRRAY(1,3),12)=ARRAY(6)
      WRIT(JRRAY(1,3),13)=ARRAY(7)
      WRIT(JRRAY(1,3),14)=ARRAY(8)
      WRIT(JRRAY(1,3),15)=ARRAY(9)
      WRIT(JRRAY(1,3),16)=ARRAY(10)
      GO TO 40
C
C *****
C *
C *   Strains
C *
C *****
C
108  WRIT(JRRAY(1,3),17)=ARRAY(5)
      WRIT(JRRAY(1,3),18)=ARRAY(6)
      WRIT(JRRAY(1,3),19)=ARRAY(7)
      WRIT(JRRAY(1,3),20)=ARRAY(8)
      WRIT(JRRAY(1,3),21)=ARRAY(9)
      WRIT(JRRAY(1,3),22)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),20)=ARRAY(7)

```

```

IF(WRIT(JRRAY(1,3),20).EQ.ARRAY(7))WRIT(JRRAY(1,3),19)=0.0
GO TO 40
C
C *****
C *
C *   Plastic strains   *
C *
C * *****
C
110  WRIT(JRRAY(1,3),23)=ARRAY(5)
      WRIT(JRRAY(1,3),24)=ARRAY(6)
      WRIT(JRRAY(1,3),25)=ARRAY(7)
      WRIT(JRRAY(1,3),26)=ARRAY(8)
      WRIT(JRRAY(1,3),27)=ARRAY(9)
      WRIT(JRRAY(1,3),28)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),26)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),26).EQ.ARRAY(7))WRIT(JRRAY(1,3),25)=0.0
      GO TO 40
C
C *****
C *
C *   Creep strains    *
C *
C * *****
C
112  WRIT(JRRAY(1,3),29)=ARRAY(5)
      WRIT(JRRAY(1,3),30)=ARRAY(6)
      WRIT(JRRAY(1,3),31)=ARRAY(7)
      WRIT(JRRAY(1,3),32)=ARRAY(8)
      WRIT(JRRAY(1,3),33)=ARRAY(9)
      WRIT(JRRAY(1,3),34)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),32)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),32).EQ.ARRAY(7))WRIT(JRRAY(1,3),31)=0.0
      GO TO 40
C
C *****
C *
C *   Inelastic strains *
C *
C * *****
C
114  WRIT(JRRAY(1,3),35)=ARRAY(5)
      WRIT(JRRAY(1,3),36)=ARRAY(6)
      WRIT(JRRAY(1,3),37)=ARRAY(7)
      WRIT(JRRAY(1,3),38)=ARRAY(8)
      WRIT(JRRAY(1,3),39)=ARRAY(9)
      WRIT(JRRAY(1,3),40)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),38)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),38).EQ.ARRAY(7))WRIT(JRRAY(1,3),37)=0.0
      GO TO 40
C
C *****
C *
C *   Elastic strains   *
C *
C * *****
C
116  WRIT(JRRAY(1,3),41)=ARRAY(5)
      WRIT(JRRAY(1,3),42)=ARRAY(6)

```

```

      WRIT(JRRAY(1,3),43)=ARRAY(7)
      WRIT(JRRAY(1,3),44)=ARRAY(8)
      WRIT(JRRAY(1,3),45)=ARRAY(9)
      WRIT(JRRAY(1,3),46)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),44)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),44).EQ.ARRAY(7))WRIT(JRRAY(1,3),43)=0.0
      GO TO 40
C
C *****
C *
C *   Velocities
C *
C *****
C
118   IF(TRANS2)GO TO 119
      WRIT(JRRAY(1,3),47)=ARRAY(4)
      WRIT(JRRAY(1,3),48)=ARRAY(5)
      WRIT(JRRAY(1,3),49)=ARRAY(6)
      GO TO 40
119   WRIT(JRRAY(1,3),47)=XXCOS*ARRAY(4)+XYCOS*ARRAY(5)+XZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),48)=YXCOS*ARRAY(4)+YYCOS*ARRAY(5)+YZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),49)=ZXCOS*ARRAY(4)+ZYCOS*ARRAY(5)+ZZCOS*ARRAY(6)
      GO TO 40
C
C *****
C *
C *   Accelerations
C *
C *****
C
120   IF(TRANS2)GO TO 121
      WRIT(JRRAY(1,3),50)=ARRAY(4)
      WRIT(JRRAY(1,3),51)=ARRAY(5)
      WRIT(JRRAY(1,3),52)=ARRAY(6)
      GO TO 40
121   WRIT(JRRAY(1,3),50)=XXCOS*ARRAY(4)+XYCOS*ARRAY(5)+XZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),51)=YXCOS*ARRAY(4)+YYCOS*ARRAY(5)+YZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),52)=ZXCOS*ARRAY(4)+ZYCOS*ARRAY(5)+ZZCOS*ARRAY(6)
      GO TO 40
C
C *****
C *
C *   The remaining nodal quantities
C *
C *****
C
122   WRIT(JRRAY(1,3),53)=ARRAY(4)
      WRIT(JRRAY(1,3),54)=ARRAY(5)
      WRIT(JRRAY(1,3),55)=ARRAY(6)
      GO TO 40
124   WRIT(JRRAY(1,3),56)=ARRAY(4)
      GO TO 40
126   WRIT(JRRAY(1,3),57)=ARRAY(4)
      GO TO 40
128   WRIT(JRRAY(1,3),58)=ARRAY(4)
      GO TO 40
130   WRIT(JRRAY(1,3),59)=ARRAY(4)
      GO TO 40
132   WRIT(JRRAY(1,3),60)=ARRAY(4)
40    CONTINUE
C

```

```

C *****
C *
C *   Write output to PATRAN nodal results file(s) *
C *
C *****
41  OPEN(UNIT=10, STATUS='NEW', FORM='UNFORMATTED')
    WRITE (10) TITLE, NNODES, MAXNOD, MAXDEF(J-8), NDMAX(J-8), NWIDTH
    WRITE (10) STITLE1
    WRITE (10) STITLE2
    DO 47 JK=1, MAXNOD
    IF (INODE(JK).EQ.0) GO TO 47
    WRITE (10) INODE(JK), (WRIT(JK, KK), KK=2, 60)
47  CONTINUE
    CLOSE(UNIT=10)
50  CONTINUE
1000 FORMAT (B0A1)
1010 FORMAT (L2)
1020 FORMAT (3F8.3)
1030 FORMAT (4X, I4, 3(2X, F7.5))
1040 FORMAT (15(I6))
1050 FORMAT (I4)
60  END
C
C
C   SUBROUTINE DEFLECTION (ARRAY, DEFMAX)
C
C *****
C *
C *   Determine the maximum deflection at a node. *
C *
C *****
C
    DIMENSION ARRAY(513)
    DOUBLE PRECISION ARRAY
    IF (ABS(ARRAY(4)).GT.ABS(ARRAY(5))) GO TO 10
    GO TO 20
10  IF (ABS(ARRAY(4)).GT.ABS(ARRAY(6))) GO TO 30
    DEFMAX=ARRAY(6)
    GO TO 50
20  IF (ABS(ARRAY(5)).GT.ABS(ARRAY(6))) GO TO 40
    DEFMAX=ARRAY(6)
    GO TO 50
30  DEFMAX=ARRAY(4)
    GO TO 50
40  DEFMAX=ARRAY(5)
50  RETURN
    END

```

MACH 14 FLOW RESTRICTOR
THERMAL STRESS ANALYSIS
DISPLACEMENTS OF NODES --- PRESSURE LOAD ONLY
TRUE

472	61	62	63	70	71	72	79	80	81	89	90	98	99	107	108
	116	117	125	126	134	135	142	143	144	151	152	153	160	161	162
	223	224	225	232	233	234	251	252	260	261	278	279	287	288	304
	305	306	313	314	315	358	359	360	367	368	369	376	377	378	386
	387	395	396	404	405	413	414	422	423	431	432	581	587	593	725
	731	737	744	750	756	779	780	785	786	947	948	953	954	971	972
	977	978	1073	1074	1082	1083	1109	1110	1118	1119	1145	1154	1172	1173	1181
	1182	1190	1191	1358	1359	1360	1361	1362	1379	1380	1381	1382	1383	1394	1395
	1412	1414	1415	1416	1433	1435	1436	1437	1448	1449	1466	1468	1469	1470	1487
	1489	1490	1491	1502	1503	1514	1516	1527	1529	1536	1553	1555	1556	1557	1574
	1576	1577	1578	1589	1590	1907	1908	1909	1920	1921	1922	1929	1946	1948	1949
	1950	1967	1969	1970	1971	2000	2002	2003	2004	2021	2023	2024	2025	2054	2056
	2057	2058	2075	2077	2078	2079	2102	2104	2115	2117	2141	2143	2144	2145	2162
	2164	2165	2166	2615	2616	2617	2628	2629	2630	2641	2642	2643	2667	2669	2670
	2671	2688	2690	2691	2692	2709	2711	2712	2713	2742	2744	2745	2746	2763	2765
	2766	2767	2784	2786	2787	2788	2817	2819	2820	2821	2838	2840	2841	2842	2859
	2861	2862	2863	2886	2888	2899	2901	2912	2914	2938	2940	2941	2942	2959	2961
	2962	2963	2980	2982	2983	2984	3258	3259	3260	3271	3272	3273	3297	3299	3300
	3301	3318	3320	3321	3322	3351	3353	3354	3355	3372	3374	3375	3376	3405	3407
	3408	3409	3426	3428	3429	3430	3453	3455	3466	3468	3519	3520	3521	3532	3533
	30	33	36	39	42	45	48	51	54	141	144	150	153	159	162
	192	195	198	201	204	207	303	306	312	315	704	706	708	710	712
	714	716	718	720	742	744	748	750	754	756	758	760	762	764	766
	768	778	780	784	786	1023	1026	1029	1032	1035	1038	1041	1044	1047	1170
	1173	1179	1182	1188	1191	1294	1295	1302	1303	1308	1315	1316	1323	1324	1329
	1334	1339	1543	1551	1552	1557	1564	1572	1573	1578	1583	1588	1849	1850	1857
	1858	1863	1870	1871	1878	1879	1884	2131	2139	2140	2145	2152	2160	2161	2166
	2487	2492	2536	2537	2544	2545	2550	2557	2558	2565	2566	2571	2578	2579	2586
	2587	2592	2879	2884	2928	2936	2937	2942	2949	2957	2958	2963	2970	2978	2979
	2984	3218	3219	3223	3224	3227	3231	3232	3236	3237	3240	3446	3451	3452	3455
	3459	3464	3465	3468	3479	3480	3484	3485	3488	3492	3493	3497	3498	3501	3512
	3517	3518	3521	3525	3530	3531	3534								

APPENDIX H

ABAQUS HEAT TRANSFER ANALYSIS RESULTS

ABAGUS VERSION 4-4-67
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

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STEP 1

INCREMENT 1

S T E P 1 TRANSIENT HEAT TRANSFER ANALYSIS
THE MINIMUM TIME INCREMENT ALLOWED IS 5.000E-02
THE MAXIMUM TIME INCREMENT ALLOWED IS 0.300
THE MAXIMUM TEMPERATURE CHANGE ALLOWED PER INCREMENT IS 500
THE CONVERGENCE TOLERANCE MEASURES ARE -
TEMPERATURE CORRECTIONS BETWEEN ITERATIONS 50.0
THE STEP IS TERMINATED IF THE LARGEST TEMPERATURE
CHANGE RATE IN AN INCREMENT IS LESS THAN 10.0
MAXIMUM NUMBER OF INCREMENTS ALLOWED IS 100
MAXIMUM NUMBER OF ITERATIONS ALLOWED IS 6

INCREMENT NUMBER 1 ATTEMPT NUMBER 1
TIME INCREMENT = 0.100

MAXIMUM TEMPERATURE CHANGE IN THIS INCREMENT IS 526 AND OCCURS AT NODE 537
THIS EXCEEDS THE TOLERANCE SPECIFIED
THE INCREMENT WILL BE RECYCLED WITH A TIME INCREMENT OF 5.701E-02

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STEP 1 INCREMENT 1

INCREMENT NUMBER 1 ATTEMPT NUMBER 2
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -20.5 AND OCCURS AT NODE 1274

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 5.701E-02. TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 9.502E-02
TOTAL ACCUMULATED TIME IS 5.701E-02
TOTAL HEAT TIME IS 5.701E-02

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 1

INCREMENT NUMBER 2 ATTEMPT NUMBER 1
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -48.0 AND OCCURS AT NODE 1236

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.114. TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.190
TOTAL ACCUMULATED TIME IS 0.114
TOTAL HEAT TIME IS 0.114

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 2

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 STEP 1 INCREMENT 3

INCREMENT NUMBER 3 ATTEMPT NUMBER 1
 TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -64.0 AND OCCURS AT NODE 1417
 THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 1.24 AND OCCURS AT NODE 1236

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.171 TIME INCREMENT COMPLETED IS 5.701E-02, FRACTION OF STEP IS 0.285
 TOTAL ACCUMULATED TIME IS 0.171
 TOTAL HEAT TIME IS 0.171

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 3

INCREMENT NUMBER 4 ATTEMPT NUMBER 1
 TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -75.5 AND OCCURS AT NODE 1236
 THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 1.84 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.228 TIME INCREMENT COMPLETED IS 5.701E-02, FRACTION OF STEP IS 0.380
 TOTAL ACCUMULATED TIME IS 0.228
 TOTAL HEAT TIME IS 0.228

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 4

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STEP 1 INCREMENT 4

INCREMENT NUMBER 5 ATTEMPT NUMBER 1
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -77.4 AND OCCURS AT NODE 1417
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 2.82 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.285 . TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.475
TOTAL ACCUMULATED TIME IS 0.285
TOTAL HEAT TIME IS 0.285

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 5

INCREMENT NUMBER 6 ATTEMPT NUMBER 1
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -90.8 AND OCCURS AT NODE 1417
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 2.81 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.342 . TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.570
TOTAL ACCUMULATED TIME IS 0.342
TOTAL HEAT TIME IS 0.342

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 6

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STEP 1 INCREMENT 6

INCREMENT NUMBER 7 ATTEMPT NUMBER 1
TIME INCREMENT = 5 701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -103 AND OCCURS AT NODE 1236
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 2 48 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0 399 . TIME INCREMENT COMPLETED IS 5 701E-02, FRACTION OF STEP IS 0 665
TOTAL ACCUMULATED TIME IS 0 399
TOTAL HEAT TIME IS 0 399

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 7

INCREMENT NUMBER 8 ATTEMPT NUMBER 1
TIME INCREMENT = 5 701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -106 AND OCCURS AT NODE 1216
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -2 77 AND OCCURS AT NODE 1421

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0 456 . TIME INCREMENT COMPLETED IS 5 701E-02, FRACTION OF STEP IS 0 760
TOTAL ACCUMULATED TIME IS 0 456
TOTAL HEAT TIME IS 0 456

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 8

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STEP 1 INCREMENT 8

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INCREMENT NUMBER 9 ATTEMPT NUMBER 1
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -89.8 AND OCCURS AT NODE 1401
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -2.05 AND OCCURS AT NODE 1423

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.513 . TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.855
TOTAL ACCUMULATED TIME IS 0.513
TOTAL HEAT TIME IS 0.513

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 9

INCREMENT NUMBER 10 ATTEMPT NUMBER 1
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 43.1 AND OCCURS AT NODE 1322

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.570 . TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.950
TOTAL ACCUMULATED TIME IS 0.570
TOTAL HEAT TIME IS 0.570

N O D E P O I N T O U T P U T S E T A L L

T O T A L T E M P E R A T U R E S

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	2752	2	518.9	3	2766	4	2751.	5	449.9				
6	2767	7	2749	8	419.9	9	2755.	10	2803.				
11	796.9	12	2819	13	2805	14	716.0	15	2817.				
16	2822	17	668.9	18	2814.	19	2937.	20	2360.				
21	2939.	22	2942.	23	2333.	24	2938.	25	2966.				
26	2316.	27	2929	28	380.6	29	101.0	30	67.19				
31	272.2	32	89.47	33	67.57	34	115.5	35	77.53				
36	64.36	37	565.9	38	159.4	39	106.2	40	418.2				
41	141.0	42	108.0	43	215.7	44	111.5	45	111.7				
46	2251	47	2136.	48	2112.	49	2318.	50	2128.				
51	2113	52	2178.	53	2116.	54	2115.	58	2746.				
59	322.7	60	1075.	61	2741.	62	305.9	63	581.6				
67	2819.	68	512.6	69	1364.	70	2821.	71	473.7				
72	805.3	76	2964.	77	2359.	78	2440.	79	2970.				
80	2256	81	2282.	83	2765.	84	2754.	86	882.8				
87	590.8	89	423.3	90	227.9	92	2808.	93	2802.				
95	1165.	96	832.6	98	615.3	99	343.6	101	2924.				
102	2927	104	2392.	105	2316.	107	2255.	108	2188.				
110	2763.	111	2726.	113	339.3	114	193.3	116	131.4				
117	96.22	119	2801	120	2820.	122	541.4	123	348.9				
125	195.0	126	136.6	128	2923	129	2962	131	2258.				
132	2204.	134	2142	135	2122	139	80.27	140	71.48				
141	67.68	142	73.35	143	69.14	144	68.63	148	135.9				
149	110.8	150	110.7	151	115.4	152	112.6	153	109.9				
157	2120.	158	2116	159	2114.	160	2115.	161	2114				
162	2114.	163	1082.	164	281.7	165	1085.	166	1079				
167	256.7	168	1081	169	1070	170	237.8	171	1081				
172	1473	173	360.5	174	1459.	175	1474	176	320.8				
177	1453	178	1472	179	301.6	180	1459	190	199.3				
191	79.11	192	70.86	193	159.8	194	75.96	195	70.86				
196	95.29	197	73.65	198	69.78	199	274.9	200	88.05				
201	69.96	202	201.9	203	81.60	204	69.89	205	100.2				

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				STEP	INCREMENT	IO
206	72.70	207	69.63	221	182.3	468.8
223	1060.	224	177.5	229	1465	235.6
231	704.5	232	1462	234	412.3	1083
246	1078.	248	403.3	251	213.7	130.5
254	1455.	255	1444	258	410.6	309.5
261	177.6	272	1084.	275	205.5	130.4
278	87.80	279	77.19	282	1456.	255.4
285	144.0	287	108.2	301	72.08	71.69
303	69.81	304	72.68	306	70.33	82.55
311	70.42	312	70.49	314	71.27	70.09
325	2181	326	2000	328	2183	1989
330	2178.	331	2187.	333	2174.	944.5
335	309.2	336	948.6	337	278.5	943.6
340	940.5	341	264.7	343	905.8	236.0
345	913.5	346	902.7	348	909.9	895.9
350	198.3	351	907.0	356	1964.	2024.
358	2187.	359	1964.	364	939.0	215.1
366	447.6	367	935.6	369	300.8	893.1
374	155.5	375	388.0	377	153.7	238.8
380	2176.	381	2184	384	2010.	1975.
387	2008.	389	943.1	392	906.3	386
395	248.7	396	147.7	399	906.3	401
402	234.3	404	187.6	407	2280	333.2
410	2078.	411	2556.	414	2545.	2616.
417	930.9	419	226.0	422	102.0	1066
425	1020	426	904.3	429	145.9	134.5
432	86.71	433	2743.	439	2790.	91.44
445	2927.	447	2927.	471	2912.	2791.
475	2936.	477	2936.	481	2968	2968
485	2967.	487	2910.	491	2910.	2933
495	2931.	497	2933.	501	2959.	2961.
505	2910.	507	2910.	511	2933	503
519	2961.	523	2912.	529	2940	517
535	2967.	537	2963	541	2940	2931
544	1075.	547	2935.	542	1072.	2911.
553	2965.	555	2967.	549	2936.	1448
587	2940.	591	2967.	581	2911.	2940
617	2941.	619	2881.	613	2943	2943
627	2884.	629	2883.	623	2880.	2884.
637	2880.	639	2880.	633	2942	2942
647	2883.	649	2940.	641	2883	2883
661	2882.	663	2884.	655	2878.	2881.
675	2877.	679	2879.	669	2942	2870.
688	2781.	691	2882.	681	2916.	2949
697	2881.	698	1802.	693	2882	1860
706	1593.	708	1540.	700	1507.	1628.
				712	312.4	120.1

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716	216.0	718	171.0	720	105.0	723	2942.	725	2941
729	2880	731	2880	735	2883	737	2883	742	1509
748	1505	748	30.26	750	41.11	754	75.01	756	79.03
757	2466	758	1884	759	2464	760	1882.	761	2465.
762	1877	763	2736	764	759.1	765	2712.	766	775.7
767	2681	768	797.7	777	2464.	778	1875	779	2462
780	1875	783	2674	784	806.3	785	2676	786	805.6
799	2890	800	910.2	801	2890.	802	907.5	803	2889
804	901.4	805	2896.	806	918.0	807	2896	808	914.7
809	2896.	810	907.3	823	2889	824	909.9	825	2889
826	913.8	827	2889	828	916.9	829	2895.	830	919.1
831	2895.	832	923.0	833	2895	834	926.2	837	2889.
848	908.2	849	2890	850	913.2	853	2895	854	918.9
855	2896.	856	922.7	871	2887	872	894.8	873	2888
874	985.9	877	2895.	878	897.7	879	2895.	880	962.5
895	2887.	896	1440	897	2887.	898	1281	901	2894.
902	1159	903	2894	904	1094	920	163.8	922	135.1
924	88.99	926	153.6	928	128.2	930	86.34	945	2889
946	898.1	947	2889	948	893.5	951	2896.	952	904.1
953	2896	954	898.9	969	120.4	970	68.44	971	76.56
972	70.43	975	107.7	976	68.98	977	74.58	978	72.03
995	221.5	998	197.5	1001	187.3	1004	207.9	1007	185.8
1010	176.3	1022	78.95	1023	71.95	1025	74.11	1026	71.74
1028	72.16	1029	69.95	1031	76.12	1032	70.79	1034	73.19
1035	70.79	1037	71.46	1038	69.81	1040	75.90	1041	70.86
1043	72.80	1044	70.89	1046	72.11	1047	69.56	1070	147.4
1071	371.2	1073	148.0	1074	220.0	1079	139.2	1080	359.1
1082	141.8	1083	206.0	1106	317.2	1107	224.0	1109	173.6
1110	110.9	1115	305.7	1116	217.3	1118	162.2	1119	105.8
1142	177.2	1145	86.09	1151	165.5	1154	81.33	1159	72.25
1170	69.03	1172	70.34	1173	70.01	1178	71.16	1179	69.40
1181	69.90	1182	70.06	1187	71.93	1188	69.22	1190	69.85
1191	70.21	1201	1116	1202	2763.	1203	2814	1204	1063.
1205	498.2	1206	789.1	1207	2755	1208	2824	1209	1017
1210	2762	1211	2813	1212	1123	1213	423.2	1214	710.2
1215	2749	1216	2815	1217	783.8	1218	2820	1219	1308
1220	650.1	1221	2832	1222	1336.	1223	2820	1224	2817
1225	1308.	1226	773.5	1227	690.1	1228	2804	1229	2827
1230	1222	1231	2829	1232	2813	1233	1369	1234	681.8
1235	827.3	1236	2795	1237	2820	1238	956.4	1239	2806
1240	1551	1241	775.9	1242	2830	1243	2399	1244	2946
1245	2353	1246	2933	1247	2933	1248	2358	1249	2961
1250	2396	1251	2320	1252	2925	1253	2260	1254	2482
1255	1203	1256	2734	1257	2804	1258	349.5	1259	517.3
1260	1044.	1261	2749	1262	2805	1263	189.8	1264	380.1
1265	706.0	1266	2827	1267	175.6	1268	1411	1269	2804

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2809.	1271	523 9	1272	698 2	1273	1239.	1274	2815.
2812.	1276	312 3	1277	573 2	1278	828 2	1279	2803.
377 8	1281	2420	1282	2932	1283	2246	1284	2359.
2953.	1286	2196.	1287	2244.	1288	48 80	1291	70.73
89.15	1293	111 2	1294	70.32	1295	83 92	1296	55 70
70.18	1300	83 84	1301	98 20	1302	67 07	1303	84.13
62 47	1306	70 18	1307	83 09	1308	82 75	1309	77 73
115 0	1313	141 9	1314	349 6	1315	111 1	1316	333 9
91 46	1320	113 3	1321	126 7	1322	343 8	1323	109 9
332 2	1325	118 3	1327	109 9	1328	340 0	1329	327 5
2094.	1332	2116.	1333	2130	1334	2114.	1335	2102.
2116.	1338	2122	1339	2114.	1340	2116.	1341	2114.
2750.	1346	374 6	1348	1820	1350	704 6	1351	2748.
2825	1352	689 1	1354	303 5	1355	464 4	1356	709 4
1355.	1358	599 1	1359	2819	1360	490 0	1361	434 7
774 1	1364	2827	1367	583 0	1369	2039.	1371	850 5
2827.	1373	2808.	1374	936 5	1375	475 6	1376	628 5
943 2	1378	1475.	1379	732 1	1380	2800.	1381	723 1
585 0	1383	959 6	1385	2967.	1387	2289.	1388	2638.
2231.	1390	2970	1391	2333	1392	2252	1393	2295.
2191.	1395	2258	1396	2758	1399	2760.	1400	1656.
2807.	1402	1392	1403	2809	1404	1007.	1407	741 2
540 4	1409	1162.	1410	304 6	1411	821 2	1412	523 0
317 1	1415	571 3	1416	293 5	1417	2803.	1420	2806.
1893	1422	2820	1423	1627.	1424	2816.	1425	1303.
1007.	1429	756 0	1430	1289.	1431	450 3	1432	966 9
742 7	1433	461	1436	754 2	1437	503 0	1438	2925.
2926.	1440	2577.	1442	2487	1443	2432	1445	2356.
2263.	1441	2195.	1447	2281.	1449	2217.	1450	2757.
2749.	1454	1144.	1455	2808.	1456	1023.	1458	464 9
1461	1462	151 4	1463	532 3	1464	98 81	1465	309 9
164 9	1468	107 9	1469	142 5	1470	96 13	1471	2800.
2805.	1475	1370.	1476	2822.	1477	1207	1479	675 5
433 5	1482	242 4	1484	688 9	1485	162 0	1486	504 5
245 4	1489	154 4	1490	377 9	1491	348 3	1492	2924.
2946	1495	2397.	1496	2386.	1497	2282.	1499	2223.
2148	1501	2130	1502	2157	1503	2129.	1507	124 7
137 2	1512	74 98	1513	97 94	1514	82 64	1516	87 21
182 1	1520	194 1	1521	123 9	1522	341 3	1527	140 6
335 2	1532	2160	1533	2159.	1535	2117	1536	2119.
66 94	1543	70 41	1545	67 65	1548	69 15	1549	70 22
84 16	1550	48 36	1551	80 94	1552	67 74	1553	68 73
82 76	1556	81 65	1562	109 0	1564	111 9	1565	113 8
110 3	1569	111 7	1571	331 7	1572	110 4	1573	329 5
107 2	1574	111 0	1576	330 4	1577	330 0	1578	2113
2116.	1583	2113	1584	2115.	1587	330 0	1588	2114

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1589	2114	1590	2114	1591	1834	1592	2910	1593	2914
1594	1084	1595	1214	1596	1833	1597	2910	1598	2914
1599	1078	1600	1214	1601	1831	1602	2910	1603	1214
1604	2135	1605	2934	1606	2961	1607	2914	1608	1976
1609	2135	1610	2934	1611	2961	1612	1476	1613	1978
1614	2133	1615	2959	1616	1990	1617	2979	1618	2963
1620	2979	1621	2962	1623	2981	1624	468 1	1627	445 7
1628	274 3	1629	324 0	1630	1079	1631	1210	1632	432 1
1635	464 0	1636	242 9	1637	293 3	1638	1077	1639	1203
1640	346 6	1642	532 6	1643	274 7	1644	1202	1645	719 7
1648	699 5	1649	349 5	1650	512 2	1651	1450	1652	1965
1653	664 1	1656	727 5	1657	307 6	1658	461 4	1659	1445
1660	1947	1661	536 1	1663	807 4	1664	424 5	1665	1961
1678	1835	1679	2910	1680	2913	1683	1835	1684	2911
1685	2912	1688	1836	1689	2913	1691	2128	1692	2933
1693	2957	1696	2130	1697	2933	1699	2958	1701	2129
1702	2957	1704	2983	1705	2964	1707	2984	1708	2964
1710	2983	1711	1834	1712	2910	1713	2913	1714	1081
1715	1197	1716	1835	1717	2910	1718	2913	1719	1084
1720	1202	1722	2125	1725	2931	1726	2959	1727	1449
1728	1939	1729	2130	1730	2932	1731	2962	1732	1454
1733	1926	1737	2981	1738	2961	1740	2980	1741	2962
1744	1826	1745	2910	1746	2913	1747	1071	1748	1198
1749	1834	1750	2910	1751	2913	1752	1080	1753	1202
1757	2123	1758	2937	1759	2955	1760	1450	1761	1999
1762	2131	1763	2932	1764	2960	1765	1446	1766	1950
1770	2981	1771	2963	1773	2981	1774	2963	1777	1832
1778	2910	1779	2914	1780	1078	1781	1194	1782	1830
1791	2935	1792	2959	1785	1067	1786	1200	1790	2126
1796	2938	1797	2960	1793	1449	1794	1956	1795	2128
1804	2962	1806	2979	1798	1460	1799	1968	1803	2981
1814	234 7	1815	2979	1807	2963	1810	485 5	1813	187 2
1822	102 4	1823	425 5	1818	125 9	1819	180 9	1820	311 0
1831	148 2	1832	751 4	1826	252 3	1827	344 1	1828	671 4
1846	70 65	1847	254 6	1833	468 4	1835	124 4	1843	68 21
1851	69 23	1854	75 55	1848	84 14	1849	71 82	1850	70 24
1858	70 46	1859	70 52	1855	74 98	1856	78 79	1857	70 34
1864	62 00	1867	68 55	1861	70 83	1862	72 04	1863	70 35
1871	70 87	1872	71 39	1868	81 19	1869	90 94	1870	71 68
1878	69 72	1879	64 97	1875	71 20	1876	77 54	1877	81 65
1884	70 31	1898	71 16	1880	70 47	1882	70 86	1883	71 47
1904	2913	1905	2911	1900	1068	1902	1830	1903	2911
1909	1209	1911	1063	1906	1211	1907	1829	1908	2913
1917	2956	1918	2938	1913	1470	1915	2130	1916	2939
1922	2000	1924	1466	1919	2002	1920	2129	1921	2956
			2966	1926	2981	1927	2965	1929	2982

ABARUS VERSION 4-4-67		MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS		DATE22-FEB-84		TIME 18 05 51		PAGE 12	
						STEP	INCREMENT		
1934	213.6	1936	728.0	1938	312.9	1941	320.1	1942	176.9
1943	212.2	1944	332.3	1945	562.5	1946	275.7	1948	241.1
1949	199.3	1950	333.9	1955	264.0	1957	1066	1959	487.3
1962	465.8	1963	217.2	1964	298.6	1965	491.1	1966	906.3
1967	428.5	1969	352.6	1970	284.7	1971	485.8	1988	658.2
1990	558.7	1992	445.3	1995	348.5	1996	268.7	1997	480.1
1998	174.4	1999	343.7	2000	254.1	2002	169.4	2003	256.0
2004	151.3	2009	994.8	2011	857.5	2013	663.1	2016	502.4
2017	384.7	2018	775.4	2019	232.1	2020	543.3	2021	374.2
2023	238.4	2024	357.1	2025	185.6	2042	464.9	2044	425.2
2046	244.8	2049	162.5	2050	111.3	2051	230.3	2052	85.25
2053	152.0	2054	104.2	2056	80.93	2057	96.44	2058	77.47
2063	734.8	2065	640.3	2067	327.6	2070	204.9	2071	129.9
2072	352.1	2073	92.65	2074	207.2	2075	132.8	2077	91.82
2078	100.4	2079	76.10	2095	94.80	2097	105.5	2100	72.04
2101	76.81	2102	72.47	2104	72.69	2108	93.82	2110	100.3
2113	76.28	2114	78.18	2115	86.16	2117	74.40	2129	69.60
2131	71.18	2133	69.56	2136	70.67	2137	70.92	2138	71.25
2139	70.23	2140	70.33	2141	70.33	2143	70.37	2144	70.82
2145	70.36	2150	70.70	2152	70.34	2154	71.90	2157	70.25
2158	70.90	2159	72.29	2160	70.33	2161	69.06	2162	68.81
2164	70.56	2165	70.27	2166	69.94	2179	1718	2180	2883
2181	2887	2182	907.6	2183	908.0	2184	1717	2185	2882
2186	2838	2187	903.2	2188	905.1	2189	1715	2190	2887
2191	898.7	2192	1720	2193	2889	2194	2893	2195	912.2
2196	911.0	2197	1720	2198	2889	2199	2893	2200	908.4
2201	908.1	2202	1719	2203	2892	2204	901.7	2205	1724
2206	2895	2207	2898	2208	919.6	2209	933.6	2210	1723
2211	2895	2212	2898	2213	914.7	2214	931.2	2215	1721
2216	2898	2217	925.7	2225	388.6	2228	368.2	2229	228.6
2230	228.6	2231	907.0	2232	915.3	2233	351.6	2236	385.5
2237	198.9	2238	203.7	2239	904.4	2240	911.9	2241	265.6
2243	450.1	2244	192.7	2245	908.5	2246	369.8	2249	347.0
2250	314.6	2251	213.7	2252	910.7	2253	918.4	2254	334.3
2257	366.5	2258	187.4	2259	190.8	2260	908.0	2261	915.2
2262	251.3	2264	434.0	2265	181.0	2266	911.3	2267	359.4
2270	335.0	2271	187.4	2272	216.7	2273	920.1	2274	939.7
2275	326.5	2278	355.2	2279	176.5	2280	920.0	2281	917.9
2282	936.9	2283	248.7	2285	422.5	2286	185.1	2287	930.8
2300	1721	2301	2883	2302	2887	2305	1722	2306	2883
2307	2887	2310	1723	2311	2887	2313	1723	2314	2890
2315	2892	2318	1725	2319	2890	2320	2892	2323	1725
2324	2892	2326	1727	2327	2896	2328	2898	2331	1729
2332	2896	2333	2897	2336	1730	2337	2897	2346	1724
2347	2883	2348	2884	2349	908.5	2350	907.1	2351	1722
2352	2883	2353	2887	2354	910.3	2355	912.0	2359	1725

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				STEP	INCREMENT	IO
2360	2889	2361	2892	910 2	2364	1724
2365	2889	2366	2893	914 8	2372	1729
2373	2896	2374	2897	930 9	2377	1728
2378	2896	2379	2898	935 8	2392	1732
2393	2883	2394	2884	899 8	2397	1809
2398	2884	2399	2885	1004	2401	1728
2406	2889	2407	2890	894 0	2410	1781
2411	2890	2412	2891	970 7	2418	1725
2419	2895	2420	2897	906 9	2423	1757
2424	2896	2425	2898	955 2	2428	2318
2439	2883	2440	2885	1616	2443	2151
2444	2884	2445	2884	1392	2451	2110
2452	2889	2453	2890	1291	2456	2004
2457	2889	2458	2890	1182	2464	1913
2465	2895	2466	2897	1042	2469	1862
2470	2895	2471	2897	1013	2484	606 0
2487	196 8	2488	179 1	129 9	2493	146 3
2494	338 6	2495	94 65	152 7	2501	158 2
2502	399 6	2503	108 0	235 2	2509	87 45
2510	430 5	2511	145 2	353 0	2518	103 8
2519	135 1	2520	230 2	67 93	2533	69 43
2534	75 89	2535	80 20	70 17	2538	71 05
2541	69 39	2542	75 11	70 00	2545	70 52
2546	70 30	2547	70 14	69 62	2551	68 47
2554	69 92	2555	73 94	71 12	2558	70 70
2559	70 17	2562	69 82	73 09	2565	69 94
2566	70 75	2567	70 03	73 09	2571	69 65
2572	68 37	2575	69 87	80 15	2578	71 37
2579	69 53	2580	70 34	73 15	2585	76 22
2586	69 98	2587	69 91	80 15	2591	72 81
2592	69 61	2606	2883	70 33	2591	72 81
2612	2887	2613	891 7	1714	2611	2883
2617	891 1	2619	2889	1714	2616	2887
2625	2892	2626	896 6	1717	2624	2889
2630	893 7	2632	2896	1717	2629	2892
2638	2897	2639	902 3	1720	2637	2895
2643	916 7	2655	179 0	1719	2642	2897
2663	151 7	2664	151 3	235 6	2662	265 1
2669	203 2	2670	150 7	379 6	2667	204 8
2680	222 9	2683	232 4	170 3	2678	595 3
2687	363 1	2688	191 8	142 6	2686	258 0
2697	161 5	2699	590 9	144 3	2692	211 7
2706	147 4	2707	246 4	242 6	2705	138 7
2712	149 2	2713	212 6	189 6	2711	180 2
2737	284 6	2738	227 1	452 0	2734	371 9
2742	221 3	2744	148 8	146 0	2741	228 7
				113 7	2751	536 3
				2746		
				2740		
				2732		
				189 6		
				2709		
				366 7		
				2708		
				2701		
				220 6		
				191 2		
				2684		
				145 2		
				2685		
				170 3		
				2678		
				379 6		
				2666		
				2659		
				605 8		
				921 1		
				2640		
				2634		
				898 5		
				2628		
				2623		
				2615		
				2610		
				2590		
				73 15		
				2585		
				80 15		
				2577		
				71 81		
				2570		
				2564		
				73 09		
				2557		
				71 12		
				2550		
				72 40		
				2544		
				70 16		
				2536		
				72 14		
				2530		
				90 35		
				163 7		
				2522		
				131 2		
				2506		
				505 2		
				2497		
				464 5		
				2489		
				1007		
				2472		
				1147		
				2460		
				2468		
				1042		
				2455		
				1182		
				2446		
				2447		
				1392		
				1616		
				2423		
				2427		
				955 2		
				2414		
				970 7		
				2409		
				2401		
				1004		
				899 8		
				2396		
				935 8		
				2381		
				930 9		
				2376		
				2377		
				1729		
				2372		
				1728		
				2364		
				1724		

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MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS		STEP	INCREMENT
2753	440.3	2755	354.2
2761	137.3	2762	219.4
2767	107.9	2772	528.5
2780	200.0	2781	313.5
2786	131.5	2787	169.9
2809	210.5	2812	158.8
2816	131.3	2817	101.5
2826	393.9	2828	357.2
2835	170.4	2836	83.4
2841	83.73	2842	75.99
2854	130.5	2855	97.89
2859	91.30	2861	77.89
2881	92.86	2884	78.10
2892	89.75	2894	101.6
2901	71.16	2905	92.12
2912	67.83	2914	71.90
2933	70.55	2934	70.72
2938	70.13	2940	70.04
2949	71.00	2951	69.14
2958	69.86	2958	69.30
2963	70.12	2968	68.03
2976	70.76	2977	71.56
2982	69.93	2983	70.13
2999	2882.	2999	2184.
3004	2882.	3000	2187.
3009	1083.	3010	1726.
3014	916.2	3015	1726.
3019	913.6	3020	1727.
3033	2004.	3034	1998.
3038	1999.	3041	2011.
3045	1101.	3046	1961.
3051	443.0	3054	421.1
3058	920.2	3059	400.7
3065	937.5	3066	916.3
3071	914.6	3084	2432.
3070	2942.	3091	2881.
3098	2880.	3099	2881.
3107	1729.	3108	2880.
3120	2176.	3121	1116.
3125	2176.	3126	1106.
3133	939.2	3134	906.9
3138	943.6	3139	915.8
3153	2434.	3154	1121.
3158	2248.	3159	1316.
3166	1052.	3167	899.7
3171	1041.	3172	1042.
2759	271.2	2758	2758
2765	203.5	2763	203.5
2776	436.4	2774	2774
2783	134.2	2782	2782
2805	113.3	2788	2788
2814	110.5	2813	2813
2820	86.42	2819	2819
2833	197.9	2830	2830
2838	113.8	2837	2837
2849	369.9	2847	2847
2857	167.5	2856	2856
2863	86.71	2862	2862
2879	77.93	2877	2877
2888	64.14	2886	2886
2899	68.58	2898	2898
2911	70.18	2910	2910
2930	71.53	2928	2928
2937	69.86	2936	2936
2947	70.00	2942	2942
2956	70.36	2955	2955
2962	69.98	2961	2961
2975	68.25	2972	2972
2980	69.53	2979	2979
2998	2433	2997	2997
3003	2434	3002	3002
3008	2436.	3007	3007
3013	2882.	3012	3012
3018	2882.	3017	2879.
3030	908.5	3022	2881.
3037	2177	3036	2881.
3044	534.4	3043	559.5
3050	520.4	3049	1983.
3057	264.0	3056	2039
3064	265.1	3063	301.1
3070	506.7	3069	438.0
3089	2882	3086	303.0
3097	2881.	3095	2942
3104	2881.	3103	2433
3119	2681	3117	1728.
3124	2943	3123	2439.
3132	2880.	3131	2432
3152	2880.	3136	3122
3157	2946	3156	3130
3170	2878	3169	1728.
3185	2888	3184	906.9
2760	2760	2760	2760
2766	2766	2766	2766
2779	2779	2779	2779
2784	2784	2784	2784
2807	2807	2807	2807
2815	2815	2815	2815
2821	2821	2821	2821
2834	2834	2834	2834
2840	2840	2840	2840
2851	2851	2851	2851
2858	2858	2858	2858
111.1	111.1	111.1	111.1
106.3	106.3	106.3	106.3
74.48	74.48	74.48	74.48
73.41	73.41	73.41	73.41
71.08	71.08	71.08	71.08
68.49	68.49	68.49	68.49
69.17	69.17	69.17	69.17
68.25	68.25	68.25	68.25
71.54	71.54	71.54	71.54
69.86	69.86	69.86	69.86
70.45	70.45	70.45	70.45
70.17	70.17	70.17	70.17
2942	2942	2942	2942
2998	2998	2998	2998
2941	2941	2941	2941
3003	3003	3003	3003
3008	3008	3008	3008
3013	3013	3013	3013
3018	3018	3018	3018
2015	2015	2015	2015
1105	1105	1105	1105
2174.	2174.	2174.	2174.
3050	3050	3050	3050
3057	3057	3057	3057
235.4	235.4	235.4	235.4
3064	3064	3064	3064
222.4	222.4	222.4	222.4
3089	3089	3089	3089
2433	2433	2433	2433
1727.	1727.	1727.	1727.
2880.	2880.	2880.	2880.
2681	2681	2681	2681
3119	3119	3119	3119
2882	2882	2882	2882
2879.	2879.	2879.	2879.
3132	3132	3132	3132
2880.	2880.	2880.	2880.
2943	2943	2943	2943
2880.	2880.	2880.	2880.
3137	3137	3137	3137
2881	2881	2881	2881
3152	3152	3152	3152
2879.	2879.	2879.	2879.
3157	3157	3157	3157
2878	2878	2878	2878
3170	3170	3170	3170
2888	2888	2888	2888
3185	3185	3185	3185

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 MACH 14 FLOW RESTRICTOR
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 STEP 1 INCREMENT 10

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 10

INCREMENT NUMBER 11 ATTEMPT NUMBER 1
 TIME INCREMENT = 2.989E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 16.7 AND OCCURS AT NODE 1322

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.600 , TIME INCREMENT COMPLETED IS 2.989E-02, FRACTION OF STEP IS 1.00
 TOTAL ACCUMULATED TIME IS 0.600
 TOTAL HEAT TIME IS 0.600

NODE POINT OUTPUT SET ALL

TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	2762	2	576.8	3	2776	4	2761.	5	506.2
6	2776	7	2760	8	470.2	9	2767	10	2813.
11	863.9	12	2829	13	2815.	14	782.1	15	2827.
16	2831.	17	727.6	18	2824	19	2946.	20	2417.
21	2947.	22	2951.	23	2392.	24	2948.	25	2973.
26	2373.	27	2939.	28	418.1	29	102.4	30	66.54
31	298.6	32	90.53	33	66.94	34	124.1	35	76.48
36	66.16	37	610.4	38	156.1	39	98.52	40	448.4
41	137.5	42	100.4	43	221.7	44	105.3	45	104.8
46	2310.	47	2188.	48	2162	49	2274.	50	2180.
51	2163.	52	2229.	53	2167.	54	2165.	58	2757.
59	359.4	60	1147.	61	2752.	62	333.9	63	642.6

ABAGUS VERSION 4-4-67 MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS DATE22-FEB-84 TIME18 05 51 PAGE 17 STEP 1 INCREMENT 11

67	68	69	70	71	507 1
2826	557 2	69	2828	71	2976
980 9	2969	77	2504	79	2976
2308	2349	83	2765	86	951 8
643 6	468 0	90	2819	93	2812
1241	894 5	98	368 8	101	2934
2936	2455	105	2316	108	2245
2772	2740	113	220 1	116	138 3
97 54	2810	120	579 7	123	376 5
200 8	135 6	128	2968	131	2312
2261	2197	135	83 30	140	70 23
67 46	73 34	143	67 93	148	133 8
102 9	104 2	151	106 1	153	102 8
2173	2166	159	2165	161	2165
2165	1163	164	1165	166	1160
286 3	1160	169	264 9	171	1161
1559	410 3	174	1560	176	367 8
1538	1559	179	1544	190	219 4
80 05	70 87	193	76 55	195	70 88
100 5	73 65	198	304 7	200	89 64
69 79	223 6	202	69 77	205	108 6
72 72	69 68	220	202 7	222	519 3
1141	195 3	225	1552	230	265 5
768 9	1549	232	458 9	245	1162
1156	447 3	249	238 3	252	142 1
1540	1529	257	455 7	260	343 7
194 2	1162	273	225 1	276	142 8
91 34	77 80	281	1542	284	285 3
183 7	113 4	288	73 34	302	71 65
69 83	73 01	305	70 42	310	83 94
70 17	70 41	313	71 25	315	69 91
2245	2060	327	2247	329	2047
2241	2252	332	2238	334	1010
336 4	1014	337	302 7	339	1008
1007	286 3	342	974 8	344	261 6
982 0	971 7	347	977 6	349	965 1
218 9	975 8	355	2022	357	2085
2252	2021	360	1005	365	230 9
488 2	1002	368	329 2	373	962 3
170 3	428 3	376	166 7	378	265 5
2240	2248	383	2068	386	2033
2065	1008	390	973 5	393	306 2
269 8	157 1	398	430 7	401	368 1
257 6	207 2	405	2347	408	2646
2136	2583	411	108 4	423	135 9
998 1	245 9	420	157 5	431	95 70
1088	972 4	428			

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MACH 14 FLOW RESTRICTOR
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STEP 1 INCREMENT 11

432	87.15	433	2753	2757	439	2799	441	2800
445	2934.	447	2934	2917.	471	2917	473	2917.
475	2941.	477	2941.	2943.	481	2969	483	2969
495	2968.	487	2915.	2943.	491	2915.	493	2938
505	2936.	497	2938.	2962	501	2960	503	2963.
519	2916.	507	2916.	2938.	513	2934	517	2964
535	2963	523	2917.	2916.	529	2945	531	2936.
544	2968.	537	2964	2916.	541	1151.	543	2917.
553	2966.	547	2940	1526.	549	2940	550	1532.
587	2944.	555	2968.	2917.	581	2917.	585	2945.
617	2947.	591	2968.	2968.	613	2949.	615	2949.
627	2890.	629	2887.	2887.	623	2886.	625	2890.
637	2886.	639	2889.	2948.	633	2948.	635	2948.
647	2889.	649	2886.	2886.	643	2889	645	2889.
661	2888.	663	2890.	2947.	655	2884	657	2887.
675	2883.	679	2886.	2887.	669	2949	673	2877.
688	2803.	691	2890.	2887.	685	2922.	687	2955.
697	2888.	698	1872	2368.	692	2890.	694	1926.
706	1652	708	1601	457.9	700	1581	704	1684
716	237.0	718	184.9	109.1	712	337.1	714	138.0
729	2886.	731	2886	2889	723	2948	725	2947.
744	1563.	748	39.64	46.55	754	75.55	756	78.30
757	2512.	758	1942.	2511.	760	1940	761	2511
762	1935.	763	2754.	840.1	765	2733	766	852.6
767	2703.	768	869.6	2510.	778	1933	779	2508
780	1933.	783	2695	877.2	785	2697.	786	876.8
799	2896.	800	978.9	2896.	802	976.2	803	2895
804	970.5	805	2902.	987.4	806	2902.	808	984.2
809	2901.	810	977.0	2895.	824	978.3	825	2895
826	981.2	827	2895.	985.0	829	2901	830	988.3
831	2901.	832	991.0	2901.	834	994.9	837	2894.
848	975.3	849	2896.	980.8	853	2901.	854	986.8
855	2901.	856	990.8	2893	872	964.1	873	2894.
874	1054.	877	2901.	967.6	879	2900.	880	1031.
895	2894.	896	1514.	2893.	898	1353	901	2900.
902	1231.	903	2900.	1165.	920	177.9	922	144.3
924	92.25	926	166.8	137.0	930	89.14	945	2895.
946	967.1	947	2895	962.5	951	2901.	952	973.8
953	2901.	954	968.6	130.8	970	69.41	971	77.71
972	70.66	975	116.1	69.66	977	75.15	978	72.14
995	244.3	998	217.9	205.8	1004	229.3	1007	204.9
1010	193.7	1022	80.28	72.06	1023	74.87	1026	71.84
1028	72.07	1029	70.04	1031	1032	70.83	1034	73.61
1035	70.82	1037	71.48	69.87	1040	76.72	1041	70.92
1043	73.25	1044	70.94	72.10	1047	69.61	1070	160.7

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 MACH 14 FLOW RESTRICTOR
 TRANSIENT HEAT TRANSFER ANALYSIS

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STEP 1 INCREMENT 11

1071	409 7	1073	159 6	1074	244 2	1079	151 5	1080	396 6
1082	152 6	1083	228 6	1106	350 2	1107	246 1	1109	191 2
1110	118 7	1115	337 6	1116	239 1	1118	178 5	1119	112 9
1142	1145	1145	89 55	1151	179 3	1154	83 87	1169	72 12
1170	69 06	1172	70 38	1173	69 95	1178	71 17	1179	69 43
1181	69 98	1182	70 04	1187	71 93	1188	69 24	1190	69 91
1191	70 19	1201	1182	1202	2773	1203	2824	1204	1136
1205	556 0	1206	864 9	1207	2765	1208	2835	1209	1082
1210	2773	1211	2823	1212	1194	1213	477 0	1214	784 2
1215	2760	1216	2825	1217	847 3	1218	2830	1219	1370
1220	717 2	1221	2842	1222	1411	1223	2829	1224	2830
1225	1394	1226	841 0	1227	1000	1228	2814	1229	2841
1230	1298	1231	2838	1232	2827	1233	1449	1234	744 6
1235	936 8	1236	2806	1237	2834	1238	1033	1239	2821
1240	1620	1241	878 4	1242	2944	1243	2463	1244	2954
1245	2439	1246	2411	1247	2942	1248	2424	1249	2968
1250	2463	1251	2378	1252	2935	1253	2331	1254	2968
1255	1262	1256	2764	1257	2814	1258	383 3	1259	566 7
1260	1104	1261	2759	1262	2814	1263	207 6	1264	416 5
1265	752 7	1266	2839	1267	190 6	1268	1479	1269	2813
1270	2823	1271	563 5	1272	780 1	1273	1309	1274	2822
1275	2825	1276	331 0	1277	645 1	1278	886 0	1279	2821
1280	432 8	1281	2482	1282	2939	1283	2304	1284	2426
1285	2959	1286	2249	1287	2310	1288	48 76	1289	70 36
1292	89 91	1293	114 5	1294	69 90	1295	84 90	1296	55 21
1299	69 78	1300	83 80	1301	101 1	1302	66 67	1303	85 15
1304	63 25	1306	69 45	1307	83 73	1308	84 29	1309	69 94
1312	108 7	1313	137 9	1314	391 2	1315	103 8	1316	375 5
1317	83 02	1320	106 9	1321	121 7	1322	385 5	1323	102 7
1324	373 8	1325	111 4	1327	103 0	1328	380 2	1329	369 4
1330	2144	1332	2167	1333	2181	1334	2164	1335	2151
1337	2166	1338	2174	1339	2164	1340	2166	1341	2165
1343	2761	1346	415 8	1348	1874	1350	764 0	1351	2760
1352	2834	1353	747 2	1354	334 3	1355	517 4	1356	775 1
1357	1439	1358	656 6	1359	2829	1360	542 3	1361	477 7
1362	854 3	1364	2835	1367	632 7	1369	2098	1371	924 2
1372	2835	1373	2823	1374	1002	1375	513 0	1376	717 6
1377	1021	1378	1579	1379	804 4	1380	2816	1381	786 5
1382	665 9	1383	1067	1385	2973	1387	2344	1388	2685
1389	2303	1390	2376	1391	2394	1392	2305	1393	2363
1394	2265	1395	2349	1396	2769	1399	2771	1400	1717
1401	2819	1402	1455	1403	2820	1404	1079	1407	804 2
1408	596 9	1409	1243	1410	337 7	1411	889 1	1412	578 8
1414	350 2	1415	633 9	1416	326 8	1417	2814	1420	2814
1421	1962	1422	2834	1423	1697	1424	2829	1425	1383
1428	1077	1429	822 7	1430	1394	1431	488 8	1432	1064

1433	811.9	1435	509.7	1436	848.4	1437	571.6	1438	2935
1440	2926.	1441	2631.	1442	2547.	1443	2496.	1443	2418
1446	2327.	1447	2253.	1448	2346.	1449	2276.	1445	2767
1453	2758.	1454	1209.	1455	2817.	1456	1075.	1458	509.7
1461	294.1	1462	165.8	1463	578.8	1464	133.7	1465	346.4
1474	177.2	1468	110.6	1469	154.9	1470	100.2	1471	2811.
1482	2812.	1475	1443.	1476	2834.	1477	1267.	1479	725.7
1487	467.2	1483	255.3	1484	771.2	1485	161.4	1486	579.4
1494	258.2	1489	154.7	1490	427.0	1491	389.6	1492	2933
1500	2201.	1495	2463.	1496	2446.	1497	2339.	1499	2278
1509	139.5	1501	2180.	1502	2212.	1503	2183.	1507	124.3
1520	176.4	1512	76.58	1513	103.5	1514	87.36	1516	89.08
1529	376.9	1522	192.0	1525	120.1	1526	385.8	1527	141.4
1541	67.47	1532	2207.	1533	2206.	1535	2169.	1536	2173
1550	84.45	1543	69.39	1545	68.17	1548	68.41	1549	69.52
1556	84.27	1551	67.89	1552	82.42	1553	66.71	1555	68.26
1569	103.1	1557	82.60	1562	104.1	1564	104.2	1566	108.2
1574	99.82	1570	104.5	1571	372.3	1572	103.6	1573	371.0
1583	2166.	1576	104.1	1577	371.9	1578	371.1	1582	2164.
1594	2164.	1584	2164.	1586	2165.	1587	2165.	1588	2165.
1599	1165.	1590	2165.	1591	1907.	1592	2916.	1593	2921.
1599	1160.	1595	1300.	1596	1906.	1597	2916.	1598	2921.
1604	2207.	1600	1299.	1601	1904.	1602	2920.	1603	1300.
1609	2207.	1605	2939.	1606	1904.	1607	2920.	1608	2039.
1614	2205.	1610	2940.	1611	2966.	1612	1563.	1613	2041.
1620	2982.	1615	2864.	1616	2052.	1617	2982.	1618	2964.
1628	305.8	1621	2963.	1623	2984.	1624	517.4	1627	495.1
1635	514.0	1629	363.6	1630	1158.	1631	17.75	1632	478.2
1640	383.2	1636	271.1	1637	330.1	1638	1155.	1639	1287.
1648	760.6	1642	585.7	1643	307.8	1644	1287.	1645	779.7
1653	721.0	1649	398.7	1650	560.8	1651	1536.	1652	2028.
1660	2010.	1656	788.1	1657	351.9	1658	507.5	1659	1530.
1678	1907.	1661	585.3	1663	870.8	1664	465.5	1665	2025.
1685	2919.	1679	2916.	1680	2920.	1683	1907.	1684	2916.
1693	2961.	1688	1909.	1689	2919.	1691	2200.	1692	2938.
1702	2962.	1696	2202.	1697	2938.	1698	2963.	1701	2201.
1710	2986.	1704	2986.	1705	2966.	1707	2987.	1708	2966.
1715	1281.	1711	1906.	1712	2916.	1713	2920.	1714	1160.
1720	1286.	1716	1907.	1717	2916.	1718	2920.	1719	1163.
1728	2002.	1724	2196.	1725	2936.	1726	2964.	1727	1535.
1733	1991.	1729	2201.	1730	2937.	1731	2967.	1732	1540.
1744	1906.	1737	2984.	1738	2963.	1740	2983.	1741	2964.
1749	1906.	1745	2916.	1746	2919.	1747	1150.	1748	1284.
1757	2196.	1750	2916.	1751	2920.	1752	1159.	1753	1285.
1762	2202.	1758	2942.	1759	2960.	1760	1534.	1761	2059.
		1763	2937.	1764	2965.	1765	1531.	1766	2011.

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1770	2985.	1771	2965.	1773	2984.	1774	2964	1777	1904.
1778	2916.	1779	2920.	1780	1157.	1781	1277	1782	1903.
1783	2916.	1784	2920.	1785	1148.	1786	1283.	1790	2197
1791	2940.	1792	2964	1793	1533.	1794	2016	1795	2199
1796	2943	1797	2965	1798	1545.	1799	2028	1803	2983.
1804	2964.	1806	2983	1807	2964.	1810	533.2	1813	205.4
1814	259.3	1815	468.6	1818	135.5	1819	198.5	1820	341.4
1822	108.9	1823	808.5	1826	279.5	1827	376.8	1828	724.0
1831	163.2	1832	277.6	1833	507.0	1835	131.4	1843	68.56
1846	70.71	1847	76.04	1848	85.51	1849	71.97	1850	70.14
1851	69.53	1854	70.55	1855	75.28	1856	79.77	1857	70.38
1858	70.39	1859	68.96	1861	70.79	1862	72.15	1863	70.38
1864	61.94	1867	71.39	1868	82.17	1869	92.70	1870	71.73
1871	70.40	1872	64.85	1875	71.15	1876	78.12	1877	83.03
1878	69.69	1879	70.72	1880	70.78	1882	70.65	1883	71.38
1884	70.10	1898	2917	1900	1149	1902	1903.	1903	2916.
1904	2920.	1905	1145.	1906	1297.	1907	1902.	1908	2919.
1909	1294.	1911	2943	1913	1557	1915	2202	1916	2944.
1917	2961.	1918	1552	1919	2062	1920	2202.	1921	2961.
1922	2061.	1924	2967	1926	2984.	1927	2966.	1929	2984.
1934	236.7	1936	794.3	1938	347.6	1941	355.3	1942	195.4
1943	236.5	1944	370.4	1945	619.7	1946	306.8	1948	269.7
1949	220.8	1950	373.3	1955	300.1	1957	1140	1959	532.1
1962	514.1	1963	244.5	1964	330.1	1965	542.8	1966	974.1
1967	469.4	1969	392.2	1970	309.8	1971	540.8	1988	721.2
1990	613.9	1992	493.7	1995	386.6	1996	299.6	1997	530.9
1998	192.2	1999	381.1	2000	284.2	2002	187.3	2003	285.1
2004	165.6	2009	1066.	2011	921.9	2013	726.3	2016	555.0
2017	427.9	2018	837.1	2019	257.1	2020	590.4	2021	416.5
2023	263.5	2024	397.2	2025	205.9	2042	512.7	2044	466.6
2046	270.1	2049	178.3	2050	119.2	2051	254.4	2052	88.45
2053	167.3	2054	111.0	2056	82.42	2057	101.1	2058	78.88
2063	792.0	2065	691.4	2067	364.9	2070	229.4	2071	141.0
2072	381.7	2073	96.65	2074	228.1	2075	142.4	2077	94.29
2078	107.6	2079	78.59	2095	97.46	2097	109.7	2100	72.75
2101	78.25	2102	73.68	2104	73.02	2108	97.31	2110	106.5
2113	77.25	2114	80.67	2115	88.17	2117	74.59	2129	69.71
2131	71.15	2133	69.71	2136	70.63	2137	70.93	2138	71.11
2139	70.22	2140	70.17	2141	70.25	2143	70.37	2144	70.86
2145	70.27	2150	70.96	2152	70.14	2154	72.05	2157	70.07
2158	70.74	2159	71.52	2160	70.21	2161	68.98	2162	68.55
2164	70.45	2165	70.24	2166	69.53	2179	1782	2180	2889
2181	2893.	2182	976.8	2183	976.9	2184	1781.	2185	2888
2186	2893.	2187	972.5	2188	974.0	2189	1779	2190	2893.
2191	967.9	2192	1785	2193	2895.	2194	2898	2195	981.1
2196	979.9	2197	1784	2198	2894	2199	2898.	2200	977.5

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2201	1783	2202	2203	2898	2204	970.9	2205	1788
2206	2904	2207	2208	989.2	2209	1005	2210	1787
2211	2900	2212	2209	984.5	2214	1003	2215	1785
2214	2903	2217	2225	422.2	2228	407.5	2229	253.4
2230	252.8	2231	2232	983.6	2233	387.9	2236	423.3
2237	220.3	2238	2239	977.2	2240	979.5	2241	294.4
2243	493.2	2244	2245	977.2	2246	407.5	2249	384.5
2250	236.8	2251	2252	978.2	2253	986.6	2254	369.0
2257	404.7	2258	2259	210.3	2260	975.2	2261	982.8
2262	278.8	2264	2265	198.7	2266	979.9	2267	396.1
2270	371.1	2271	2272	239.2	2273	988.3	2274	1010
2275	360.2	2278	2279	194.5	2280	988.3	2281	985.9
2282	1007	2283	2285	463.3	2286	203.8	2287	1002
2300	1785	2301	2302	2893	2305	1786	2306	2889
2307	2892	2310	2311	2892	2313	1787	2314	2895
2315	2898	2318	2319	2895	2320	2897	2323	1789
2324	2897	2326	2327	2901	2328	2903	2331	1792
2332	2901	2333	2336	1793	2338	2902	2346	1787
2347	2899	2348	2349	976.2	2350	974.4	2351	1786
2352	2889	2353	2354	978.4	2355	979.8	2359	1788
2360	2895	2361	2362	978.3	2363	977.5	2364	1788
2365	2895	2366	2367	981.0	2368	982.4	2372	1792
2373	2901	2374	2375	989.1	2376	1001	2377	1792
2378	2901	2379	2380	991.5	2381	1006	2392	1796
2393	2889	2394	2395	1051	2396	968.5	2397	1796
2398	2890	2399	2400	1053	2401	1072	2405	1871
2406	2895	2407	2408	1029	2409	963.4	2410	1844
2411	2896	2412	2413	1031	2414	1039	2418	1789
2419	2901	2420	2421	1011	2422	978.7	2423	1820
2424	2901	2425	2426	1016	2427	1025	2438	2359
2439	2890	2440	2441	1786	2442	1689	2443	2201
2444	2891	2445	2446	1289	2447	1465	2451	2161
2452	2895	2453	2454	1477	2455	1363	2456	2060
2457	2895	2458	2459	1172	2460	1254	2464	1973
2465	2901	2466	2467	1219	2468	1113	2469	1923
2470	2901	2471	2472	1078	2473	1085	2484	658.7
2487	216.0	2488	2489	509.7	2492	138.4	2493	156.8
2494	263.8	2496	2497	551.8	2500	165.2	2501	171.7
2502	439.9	2505	2506	140.1	2507	257.6	2509	90.42
2510	472.0	2513	2514	178.6	2515	388.9	2518	109.4
2519	143.3	2520	2522	93.76	2530	67.75	2533	69.44
2534	76.48	2535	2536	81.67	2537	70.07	2538	71.08
2541	69.39	2542	2543	76.16	2544	70.06	2545	70.47
2546	70.76	2548	2549	72.42	2550	69.67	2551	68.48
2554	69.95	2555	2556	77.00	2557	71.28	2558	70.73
2559	70.32	2562	2563	73.55	2564	73.56	2565	69.95

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	70 77	2567	70 31	2569	70 15	2570	71 83	2571	69 69
2566	2567	2567	70 31	2569	70 15	2570	71 83	2571	69 69
2572	68 34	2575	69 89	2576	73 69	2577	81.42	2578	71 55
2579	69 40	2580	70 44	2583	69 78	2584	73 41	2585	77 05
2586	70 02	2587	69 83	2588	69 38	2590	70 32	2591	72 94
2592	59 62	2606	2889	2608	963.7	2610	1778	2611	2889
2612	2893	2613	960.9	2614	964.8	2615	1777	2616	2893
2617	940.2	2619	2895	2621	968.7	2623	1781	2624	2895
2625	2897	2626	965.7	2627	967.6	2628	1781	2629	2897
2630	962.8	2632	2901	2634	975.1	2636	1783	2637	2901
2638	2903	2639	972.1	2640	993.1	2641	1783	2642	2903
2643	988.7	2655	196.3	2657	660.2	2659	261.1	2662	292.4
2663	185.1	2664	165.3	2665	307.8	2666	419.0	2667	227.3
2669	225.1	2670	162.9	2671	254.6	2676	185.7	2678	648.7
2680	247.2	2683	278.1	2684	157.2	2685	155.2	2686	286.2
2687	400.9	2688	213.1	2690	211.3	2691	155.3	2692	234.9
2697	176.0	2699	644.0	2701	244.2	2702	267.2	2705	149.9
2706	161.2	2707	273.1	2708	406.4	2709	210.3	2711	199.0
2712	141.2	2713	236.8	2730	601.9	2732	495.7	2734	410.9
2737	314.1	2738	251.5	2739	359.3	2740	158.8	2741	251.5
2742	245.7	2744	162.6	2745	198.9	2746	121.9	2751	586.6
2753	483.3	2755	391.2	2758	299.0	2759	232.6	2760	342.1
2761	149.0	2762	241.2	2763	225.5	2765	152.1	2766	184.0
2767	115.4	2768	578.1	2774	478.9	2776	376.2	2779	288.8
2780	221.0	2781	347.2	2782	145.4	2783	248.5	2784	209.3
2786	143.0	2787	187.5	2788	121.5	2803	468.8	2807	424.6
2809	230.8	2812	173.5	2813	117.8	2814	203.2	2815	101.7
2816	142.3	2817	107.5	2819	88.61	2820	94.23	2821	80.16
2826	433.9	2828	391.2	2830	216.5	2833	156.8	2834	107.2
2835	184.6	2836	86.51	2837	123.1	2838	102.0	2840	84.09
2841	86.72	2842	76.85	2847	407.4	2849	372.9	2851	205.9
2854	141.5	2855	103.0	2856	181.7	2857	84.43	2858	120.0
2859	95.64	2861	78.65	2862	89.83	2863	78.99	2879	107.9
2881	97.30	2884	78.12	2885	72.07	2886	66.21	2888	74.25
2892	91.62	2894	104.3	2897	69.93	2898	69.38	2899	74.42
2901	71.32	2905	93.73	2907	101.2	2910	70.57	2911	72.09
2912	68.79	2914	72.10	2926	67.79	2928	71.50	2930	68.78
2933	70.53	2934	70.64	2935	71.76	2936	69.87	2937	69.19
2938	70.07	2940	70.08	2941	70.25	2942	69.97	2947	68.32
2949	71.00	2951	69.25	2954	70.30	2955	70.39	2956	71.55
2957	69.87	2958	69.32	2959	69.96	2961	70.00	2962	69.93
2963	70.11	2968	68.05	2970	71.23	2972	68.35	2975	70.44
2976	70.78	2977	71.54	2978	69.84	2979	69.57	2980	70.08
2982	69.95	2983	70.20	2984	70.19	2997	2491	2998	2948
2999	2890	3000	2248	3001	1191	3002	2492	3003	2947
3004	2891	3005	2251	3006	1186	3007	2495	3008	2891
3009	1:77	3010	1791	3011	2886	3012	2888	3013	1013

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MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 1 INCREMENT 11

3014	985.6	3015	1791	2885	3017	2888	3018	1013
3019	983.1	3020	1792	2887	3022	978.1	3030	2076
3033	2066.	3034	2057	627.3	3036	2241.	3037	1199
3045	2059.	3041	2072	2101.	3043	599.6	3044	2237.
3051	1194.	3046	2019	3048	3049	582.9	3050	1194.
3058	482.8	3054	460.7	3055	3056	291.8	3057	1006.
3065	989.0	3059	437.0	3062	3063	287.7	3064	260.3
3071	1001.	3066	984.4	3067	3069	549.7	3070	244.9
3090	983.6	3084	2490	3085	3086	2890.	3089	2492.
3098	2948.	3091	2890.	3094	3095	2890	3097	1791.
3107	2886.	3099	2887.	3102	3103	2886.	3104	2887.
3120	1794.	3108	2887.	3117	3118	2948.	3119	2890.
3125	2240.	3121	1210	3122	3123	2948.	3124	2890.
3133	2239.	3126	1200	3130	3131	2886.	3132	2886.
3138	1003.	3134	974.3	3135	3136	2886.	3137	2886.
3153	1008.	3139	984.1	3150	3151	2957.	3152	2889.
3158	2489.	3154	1212	3155	3156	2952.	3157	2888.
3166	2314.	3159	1410	3163	3164	2885.	3165	2883.
3171	1118.	3167	970.3	3168	3169	2887.	3170	2884.
3184	2673.	3172	1112	3183	3184	2894.	3185	2899.
3191	2125.	3187	2878.	3188	3189	2884.	3190	2722.
3199	2114.	3195	2624.	3196	3197	2890.	3198	2273.
3204	1736.	3200	2410.	3201	3202	2886.	3203	1460.
3223	1621.	3215	1903.	3218	3219	574.3	3220	1863.
3231	397.2	3224	526.1	3225	3227	455.3	3228	818.1
3238	336.0	3232	379.3	3233	3236	219.5	3237	286.1
3254	2947.	3240	133.1	3247	3251	2252.	3253	2495.
3259	2890.	3255	2890	3256	3257	1174.	3258	2495.
3267	2885.	3260	1169	3262	3264	1006.	3266	1791.
3272	2887.	3268	2887.	3269	3270	975.4	3271	1791.
3292	2048.	3273	971.1	3285	3287	2143.	3289	2008.
3308	1997.	3293	2019	3294	3295	2046.	3296	772.1
3316	706.1	3299	2032	3300	3301	642.6	3306	259.2
3322	367.0	3310	294.4	3313	3314	223.7	3315	192.8
3347	291.0	3317	452.4	3318	3320	286.4	3321	188.6
3353	2039.	3339	2129.	3341	3343	2087.	3346	2062.
3402	475.9	3348	723.3	3349	3350	645.7	3351	2042.
3408	2027.	3354	590.3	3355	3360	531.2	3362	531.6
3421	271.1	3367	370.3	3368	3369	391.1	3370	196.2
3426	2157.	3372	312.7	3374	3375	228.6	3376	134.7
3448	675.6	3395	2595.	3397	3400	2319.	3401	2132.
	3403	3403	2570.	3404	3405	585.7	3407	2361.
	3409	3409	494.5	3414	3416	472.4	3418	277.6
	3422	3422	135.3	3423	3424	148.9	3425	172.8
	135.3	3428	131.0	3429	3430	90.48	3446	1584.
	1788	3451	1566	438.0	3452	1783.	3455	441.4

MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

ABAGUS VERSION 4-4-67		DATE22-FEB-84		TIME18 05.51		PAGE 25	
		STEP	1	INCREMENT	11		
3459	114 9	3461	176 1				
3468	67 80	3476	2115				
3480	1178	3481	2115				
3485	1180	3486	2115				
3490	2732	3491	2890				
3495	2719	3496	2902				
3500	2919	3501	916 1				
3515	2508	3516	2299				
3520	2300	3521	1189				
3528	2698	3529	2922				
3533	2919	3534	885 8				
		3464	48 73				
		3477	2517				
		3482	2511				
		3487	2303				
		3492	850 8				
		3497	861 1				
		3510	2508				
		3517	1933				
		3523	2705				
		3530	876 2				
		3465	63 22				
		3478	2316				
		3483	2312				
		3488	1185				
		3493	1003				
		3498	969 2				
		3512	1935				
		3518	1189				
		3525	871 0				
		3531	888 3				
		3466					146 1
		3479					1940
		3484					1938
		3489					1303
		3494					1288
		3499					1267
		3514					2115
		3519					2114
		3527					1258
		3532					1257

ABAQUS INPUT ECHO

	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80															
CARD 5	*HEADING	MACH 14 FLOW RESTRICTOR	TRANSIENT HEAT TRANSFER ANALYSIS	CONTINUATION OF M14FR401 RUN	*RESTART, READ, WRITE, STEP=1, INC=10, ENDSTEP	*STEP, INC=100	TRANSIENT HEAT TRANSFER ANALYSIS	*HEAT TRANSFER, TEMTOL=.50, 0, DELMAX=500 0, END=SS	0. 1. 2. 5. 0. 05. 0. 3. 10. 0	*FILM, DP=NEW	FSUR1, F2NU	HOL13, F3NU	HOL14, F4NU	HOL16, F6NU	FSUR2, F2NU	HOL2, F6NU	HOL3, F6NU	HOL4, F6NU	HOL5, F6NU	HOL6, F6NU	HOL7, F6NU	RSUR1, F1NU	FLNG1, F6NU	FLNG2, F6NU	RSUR2, F1NU	*NODE PRINT, FREQ=10	2. 2. 1. 1. 1. 1. 1. 1	*NODE FILE, NSET=NALL	2. 2. 1. 1. 1. 1. 1. 1	*END STEP	
CARD 10																															
CARD 15																															
CARD 20																															
CARD 25																															
CARD 30																															

DATE 24-FEB-84 TIME 13 33 06 PAGE 6

ABRUS VERSION 4-4-67
MACH 14 FLOW RESTRICTOR

R E S T A R T C O N D I T I O N

RESTART FILE WILL BE WRITTEN EVERY 1 INCREMENTS
RESTART IS MADE FROM STEP 1 INCREMENT 10 AT TIME 0 5701
NEXT INCREMENT WILL BE STEP 2 INCREMENT 1

ABAGUS VERSION 4-4-67
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

DATE24-FEB-84
TIME13 46.15
PAGE 1
STEP 2 INCREMENT 1

STEP 2 TRANSIENT HEAT TRANSFER ANALYSIS

TRANSIENT HEAT TRANSFER

AUTOMATIC CONTROL WITH -
A SUGGESTED INITIAL TIME INCREMENT OF 0.100
AND A TOTAL TIME PERIOD OF 2.50
THE MINIMUM TIME INCREMENT ALLOWED IS 5.000E-02
THE MAXIMUM TIME INCREMENT ALLOWED IS 0.300
THE MAXIMUM TEMPERATURE CHANGE ALLOWED PER INCREMENT IS 500.
THE CONVERGENCE TOLERANCE MEASURES ARE -
TEMPERATURE CORRECTIONS BETWEEN ITERATIONS 50.0
THE STEP IS TERMINATED IF THE LARGEST TEMPERATURE
CHANGE RATE IN AN INCREMENT IS LESS THAN 10.0
MAXIMUM NUMBER OF INCREMENTS ALLOWED IS 100
MAXIMUM NUMBER OF ITERATIONS ALLOWED IS 6

THE FILE OUTPUT WILL NOT BE A CONTINUATION OF THE PREVIOUS FILE
BECAUSE THAT FILE WAS NOT MADE AVAILABLE

INCREMENT NUMBER 1 ATTEMPT NUMBER 1
TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 76.7 AND OCCURS AT NODE 1322

ABAGUS VERSION 4-4-67 DATE24-FEB-84 TIME13 46 15 PAGE 2

MACH 14 FLOW RESTRICTOR STEP 2 INCREMENT 1
 TRANSIENT HEAT TRANSFER ANALYSIS

THIS EXCEEDS TOLERANCE
 MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -2.63 AND OCCURS AT NODE 1571

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.100 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 4.000E-02
 TOTAL ACCUMULATED TIME IS 0.670
 TOTAL HEAT TIME IS 0.670

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 1

INCREMENT NUMBER 2 ATTEMPT NUMBER 1
 TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 51.8 AND OCCURS AT NODE 1322
 THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.73 AND OCCURS AT NODE 1571

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.200 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 8.000E-02
 TOTAL ACCUMULATED TIME IS 0.770
 TOTAL HEAT TIME IS 0.770

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 2

INCREMENT NUMBER 3 ATTEMPT NUMBER 1
 TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 37.3 AND OCCURS AT NODE 1322

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MACH 14 FLOW RESTRICTOR STEP 2 INCREMENT 3
TRANSIENT HEAT TRANSFER ANALYSIS

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.300 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 0.120
TOTAL ACCUMULATED TIME IS 0.870
TOTAL HEAT TIME IS 0.870

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 3

INCREMENT NUMBER 4 ATTEMPT NUMBER 1
TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 26.8 AND OCCURS AT NODE 1322

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.400 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 0.160
TOTAL ACCUMULATED TIME IS 0.970
TOTAL HEAT TIME IS 0.970

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 4

INCREMENT NUMBER 5 ATTEMPT NUMBER 1
TIME INCREMENT = 0.200

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 44.2 AND OCCURS AT NODE 1317

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.600 , TIME INCREMENT COMPLETED IS 0.200 , FRACTION OF STEP IS 0.240
TOTAL ACCUMULATED TIME IS 1.17
TOTAL HEAT TIME IS 1.17

ABAQUS VERSION 4-4-67 DATE:24-FEB-84 TIME:13:46:15 PAGE 4
MACH 14 FLOW RESTRICTOR STEP 2 INCREMENT 5
TRANSIENT HEAT TRANSFER ANALYSIS

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 5

INCREMENT NUMBER 6 ATTEMPT NUMBER 1
TIME INCREMENT = 0.200

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -43.0 AND OCCURS AT NODE 1571

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.800 . TIME INCREMENT COMPLETED IS 0.200 . FRACTION OF STEP IS 0.320
TOTAL ACCUMULATED TIME IS 1.37
TOTAL HEAT TIME IS 1.37

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 6

INCREMENT NUMBER 7 ATTEMPT NUMBER 1
TIME INCREMENT = 0.200

MAXIMUM TEMPERATURE CHANGE IN THIS INCREMENT IS -1.065E+03 AND OCCURS AT NODE 535
THIS EXCEEDS THE TOLERANCE SPECIFIED
THE INCREMENT WILL BE RECYCLED WITH A TIME INCREMENT OF 5.633E-02

INCREMENT NUMBER 7 ATTEMPT NUMBER 2
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -18.4 AND OCCURS AT NODE 1571

ABAGUS VERSION 4-4-67
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

DATE 24-FEB-84

TIME 13 46 15

PAGE 5

STEP 2 INCREMENT 7

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.856 , TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.343
TOTAL ACCUMULATED TIME IS 1.43
TOTAL HEAT TIME IS 1.43

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 7

INCREMENT NUMBER 8 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -22.4 AND OCCURS AT NODE 1237

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.913 , TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.365
TOTAL ACCUMULATED TIME IS 1.48
TOTAL HEAT TIME IS 1.48

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 8

INCREMENT NUMBER 9 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -37.0 AND OCCURS AT NODE 1422

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.969 , TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.388
TOTAL ACCUMULATED TIME IS 1.54
TOTAL HEAT TIME IS 1.54

STEP 2 INCREMENT 9

RESULTS IN FLOW RESISTANCE
TRANSIENT HEAT TRANSFER ANALYSIS

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 9

INCREMENT NUMBER 10 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -48.1 AND OCCURS AT NODE 1422

NODE POINT OUTPUT SET ALL

TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	1505.	2	1847	3	1502.	4	1506.	5	1831.
6	1497	7	1510	8	1785.	9	1511	10	1523.
11	2148.	12	1519	13	1523.	14	2149.	15	1518.
16	1519	17	2120.	18	1530.	19	1490.	20	1926.
21	1486.	22	1489	23	1936.	24	1487	25	1482
26	1937.	27	1497.	28	1127.	29	108.7	30	83.08
31	985.9	32	108.6	33	83.13	34	667.6	35	98.85
36	85.78	37	1448.	38	399.0	39	373.3	40	1320
41	400.8	42	372.6	43	1016.	44	394.4	45	374.3
46	1819	47	1639	48	1637.	49	1796.	50	1641.
51	1636.	52	1743	53	1640.	54	1636.	58	1510.
59	1708.	60	1850	61	1514.	62	1661.	63	1803.

ABAGUS VERSION 4-4-67
 MACH 14 FLOW RESTRICTOR
 TRANSIENT HEAT TRANSFER ANALYSIS

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STEP	2	INCREMENT	10
67	1515	68	2093
72	2131	76	1478
80	1936	81	1973
87	1521	89	1584
95	2013	96	1818
102	1486	104	1902
110	1460	111	1487
117	368.6	119	1481
125	1089	126	725.5
132	1803	134	1779
141	87.11	142	268.7
149	381.5	150	377.2
157	1712	158	1636
162	1636	163	1812
167	1500	168	1798
172	1835	173	1723
177	1845	178	1855
191	91.44	192	73.10
196	518.0	197	82.65
201	76.64	202	890.2
206	89.52	207	78.42
223	1810	224	1341
231	1752	232	1854
246	1710	248	1503
234	1822	255	1763
261	1042	272	1648
278	545.3	279	281.6
285	861.3	287	622.0
303	74.93	304	204.8
311	81.97	312	78.73
325	1885	326	1885
330	1880	331	1882
335	1601	336	1786
340	1781	341	1524
345	1638	346	1637
350	1242	351	1625
358	1880	359	1847
366	1656	367	1774
374	1159	375	1417
380	1880	381	1841
387	1785	389	1760
395	1443	396	1148
402	1074	404	1133
410	1801	411	1633
417	1685	419	1258
425	1526	426	1504
69	2072	70	1519
77	1956	78	1909
83	1492	84	1479
90	1167	92	1519
98	1940	99	1556
105	1878	107	1931
113	1197	114	963.2
120	1490	122	1526
128	1482	129	1483
135	1712	139	384.3
143	89.40	144	85.91
151	602.9	152	380.8
159	1637	160	1683
164	1530	165	1813
169	1812	170	1454
174	1840	175	1854
179	1644	180	1848
193	784.2	194	89.59
198	74.56	199	1019
203	96.76	204	76.98
220	1810	221	1373
225	1486	229	1854
233	1518	234	1647
249	1254	251	1286
257	1659	258	1400
273	1648	275	971.8
281	1699	282	1704
288	321.8	301	288.4
305	75.45	306	74.58
313	233.9	314	80.00
327	1885	328	1884
332	1867	333	1883
337	1784	338	1569
342	1774	343	1639
347	1293	348	1620
355	1880	356	1853
360	1887	364	1775
368	1434	369	1588
375	1628	377	1131
381	1879	384	1830
389	1760	392	1584
396	1607	393	1537
404	1148	401	1324
411	1133	408	1650
419	1633	414	1616
426	1258	422	1011
	1504	429	762.0
			903.5
71	2053	71	1519
79	1479	79	1909
86	1766	86	1479
93	1499	93	1519
101	1494	101	1556
108	1864	108	1931
116	710.5	116	963.2
123	1307	123	1526
131	1819	131	1483
140	89.87	140	384.3
148	729.9	148	85.91
153	376.0	153	380.8
161	1638	161	1683
166	1812	166	1813
171	1800	171	1454
176	1697	176	1854
190	905.2	190	1848
195	73.37	195	89.59
200	98.01	200	1019
205	594.7	205	76.98
222	1612	222	1373
230	1549	230	1854
243	1776	243	1647
252	924.1	252	1286
260	1434	260	1400
276	756.5	276	971.8
284	1097	284	1704
302	76.81	302	288.4
310	328.4	310	74.58
315	78.55	315	80.00
329	1879	329	1884
334	1786	334	1883
339	1769	339	1569
344	1330	344	1639
349	1635	349	1620
357	1894	357	1853
365	1457	365	1775
373	1659	373	1588
378	1308	378	1131
386	1854	386	1830
393	1368	393	1584
401	1324	401	1537
408	1660	408	1650
416	1698	416	1616
423	875.6	423	1011
431	573.3	431	762.0

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	STEP	2	INCREMENT	10
432	395 5	1461.	433	1479
445	1481	1479	447	1453
475	1440	1440	477	1412
485	1412	1452.	487	1439
495	1441.	1440.	497	1412
505	1449	1451.	507	1442
510	1413	1446	523	1410.
535	1403.	1404.	537	1436.
544	1622.	1434	547	1446
553	1405.	1403	555	1478
587	1437.	1411.	591	1437.
617	1460.	1461	619	1460.
627	1452	1460.	629	615
637	1459	1459	639	1460.
647	1451.	1462	649	1460.
661	1448.	1450	663	1450
675	1457.	1449.	679	1459
688	1602.	1468.	691	1456.
697	1451.	1673.	698	1463.
706	2018.	1968.	708	1769.
716	1016	872 0	718	2019.
729	1460	1460.	731	714
744	1886.	876 7	748	1206.
757	1881.	2107	758	1460.
762	2104	1626	763	1910.
767	1641	2271	767	756
780	2095.	783	780	211.7
799	1448	1610	800	761
804	1606.	1447	805	1882.
809	1447	1632	810	2314.
826	1593	1447	827	779
831	1446.	1617	832	1877
848	1516.	1446.	849	786
855	1445.	1601	856	2244
874	1492	1441	877	803
895	1443	1586.	896	1448
902	1544	1441.	903	808
924	411 4	754.2	926	1446
946	1601	1448	947	1622
953	1447	1627	954	847
972	160 5	641 2	975	1445.
995	1260.	1224	998	1443
1010	1190.	90 90	1022	1502.
1028	78 52	73 39	1029	901
1035	71 01	73 58	1037	1441.
1043	84 68	70 88	1044	647 6
				1448.
				1628
				296.1
				163 5
				1236.
				1007
				72 35
				78 59
				1041
				70 57
				1070
				1091.

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1071	1363	1073	1061.	1074	1240.	1079	1106	1080	1376.
1082	1077.	1083	1242	1106	1268.	1107	1025.	1109	1063.
1110	731.1	1115	1277.	1116	1041.	1118	1064	1119	738.9
1142	827.9	1145	484.3	1151	816.7	1154	457.5	1169	71.77
1170	73.06	1172	70.79	1173	72.14	1178	70.59	1179	71.58
1181	70.40	1182	70.98	1187	72.46	1188	71.78	1190	71.79
1191	71.22	1192	1846.	1187	72.46	1203	1516.	1204	1891.
1205	1845.	1206	2067	1207	1502.	1208	1515.	1209	1841.
1210	1506.	1211	1518.	1212	1857.	1213	1811.	1214	2058.
1215	1497.	1216	1512.	1217	1830.	1218	1521.	1219	1797.
1220	2019.	1221	1522.	1222	2093.	1223	1519.	1224	1550.
1225	2149.	1226	2151.	1227	2355.	1228	1525.	1229	1545.
1230	2110.	1231	1516.	1232	2355.	1233	2107.	1234	2141.
1235	2361.	1236	1520.	1237	1543.	1238	2151.	1239	1562.
1240	2011.	1241	2343.	1242	1543.	1243	1932	1244	1486.
1245	1968.	1246	1930.	1247	1491.	1248	1931	1249	1480.
1250	1947.	1251	1942	1252	1490.	1253	1997	1254	1878.
1255	1462.	1256	1459	1257	1472.	1258	1086.	1259	1259
1260	1418.	1261	1465	1262	1467.	1263	839.4	1264	1140.
1265	1246.	1266	1497	1267	806.9	1268	1692	1269	1474.
1270	1519.	1271	1411.	1272	1859.	1273	1676	1274	1470.
1275	1515.	1276	1183.	1277	1780.	1278	1556.	1279	1555.
1280	1599.	1281	1830.	1282	1477.	1283	1811.	1284	1855.
1285	1471.	1286	1774	1287	1854.	1288	289.8	1291	92.55
1292	104.9	1293	151.1	1294	85.20	1295	138.7	1296	252.8
1299	91.68	1300	101.1	1301	151.8	1302	85.71	1303	138.4
1304	186.0	1306	88.08	1307	144.6	1308	140.0	1309	619.4
1312	383.6	1313	397.7	1314	1175.	1315	374.3	1316	1167.
1317	575.8	1320	383.1	1321	394.8	1322	1176	1323	374.7
1324	1167.	1325	493.2	1327	380.1	1328	1169	1329	1169
1330	1689	1332	1636.	1333	1640.	1334	1636.	1335	1677.
1337	1637.	1338	1640.	1339	1636.	1340	1660.	1341	1637.
1343	1513.	1346	1733.	1348	1749.	1350	1797	1351	1512
1352	1518.	1353	1790.	1354	1675.	1355	1971.	1356	1829.
1357	1999.	1358	1785.	1359	1524.	1360	1782.	1361	1927.
1362	2029.	1364	1520.	1367	2093.	1369	1880	1371	2147.
1372	1516.	1373	1562.	1374	2093.	1375	2067	1376	2330.
1377	2130.	1378	2201.	1379	2093.	1380	1570.	1381	2123.
1382	2304.	1383	2301.	1385	1482.	1387	1937.	1388	1772.
1389	2009	1390	1477.	1391	1486.	1392	1945.	1393	1968.
1394	2025.	1395	1945	1396	1497.	1399	1486.	1400	1760.
1401	1511	1402	1660.	1403	1492.	1404	1833.	1407	1663.
1408	1681.	1409	1930.	1410	1321.	1411	1706	1412	1728.
1414	1397.	1415	1386	1416	1321.	1417	1520	1420	1510.
1421	1919.	1422	1539.	1423	1859	1424	1530.	1425	2061.
1428	1936.	1429	2006.	1430	2188	1431	1690.	1432	2094

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1433	2064	1435	1774	1436	2197	1437	1955	1438	1490
1440	1441	1441	1824	1442	1443	1443	1908	1445	1895
1446	1447	1447	1886	1448	1449	1449	1904	1450	1469
1453	1460	1454	1533	1455	1456	1456	1389	1458	1360
1466	1078	1461	902.8	1463	1380	1463	562.2	1465	1134
1474	932.4	1468	517.6	1469	875.4	1470	475.3	1471	1491
1482	1470	1475	1772	1476	1510	1477	1639	1479	1678
1487	1416	1483	1275	1484	1925	1485	919.2	1486	1799
1494	1321	1489	886.5	1490	1644	1491	1389	1492	1485
1500	1471	1495	1869	1496	1820	1497	1851	1499	1816
1509	1808	1501	1740	1502	1823	1503	1740	1507	486.2
1520	593.4	1512	305.6	1513	487.4	1514	330.9	1516	354.2
1529	829.7	1522	943.3	1525	643.5	1526	1401	1527	674.7
1541	1317	1532	1705	1533	1723	1535	1693	1536	1707
1550	102.8	1543	82.33	1545	134.5	1548	85.55	1549	92.79
1556	138.7	1551	84.74	1552	139.9	1553	113.6	1555	85.64
1569	376.3	1557	138.0	1562	396.9	1564	371.4	1566	435.9
1574	411.7	1570	384.3	1571	1167	1572	374.7	1573	1168
1583	1634	1576	376.1	1577	1168	1578	1167	1582	1644
1589	1643	1584	1651	1586	1636	1587	1637	1588	1636
1594	1813	1590	1636	1591	1804	1592	1453	1593	1456
1599	1814	1595	1849	1596	1804	1597	1452	1598	1456
1604	1818	1600	1848	1601	1804	1602	1456	1603	1847
1609	1819	1605	1440	1606	1454	1607	1855	1608	1771
1614	1819	1610	1439	1611	1454	1612	1854	1613	1769
1620	1434	1615	1455	1616	1763	1617	1434	1618	1412
1628	1523	1621	1413	1623	1433	1624	1624	1627	1636
1635	1623	1620	1620	1630	1805	1631	1625	1632	1636
1640	1534	1626	1476	1637	1591	1638	1791	1639	1836
1648	1766	1642	1624	1643	1542	1644	1840	1645	1750
1653	1730	1649	1717	1650	1747	1651	1854	1652	1779
1678	1774	1656	1743	1657	1670	1658	1725	1659	1840
1685	1794	1661	1679	1663	1740	1664	1682	1665	1772
1693	1453	1679	1453	1680	1454	1683	1798	1684	1453
1702	1454	1688	1802	1689	1455	1691	1814	1692	1440
1710	1433	1696	1814	1697	1441	1698	1452	1701	1818
1715	1433	1704	1435	1705	1414	1707	1435	1708	1412
1720	1748	1711	1753	1712	1450	1713	1452	1714	1746
1728	1815	1716	1783	1717	1452	1718	1454	1719	1792
1733	1770	1724	1777	1725	1440	1726	1452	1727	1796
1744	1719	1729	1800	1730	1441	1731	1450	1732	1841
1749	1745	1737	1433	1738	1411	1740	1434	1741	1413
1757	1751	1745	1447	1746	1449	1747	1434	1748	1681
1762	1752	1758	1434	1759	1449	1752	1674	1753	1684
		1763	1437	1764	1452	1765	1761	1766	1645
					1449	1765	1761	1766	1658

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1770	1436	1771	1408	1773	1436	1774	1407	1777	1708
1778	1446	1779	1449	1780	1623	1781	1659	1782	1711
1783	1446	1784	1449	1785	1635	1786	1659	1790	1739
1791	1434	1792	1451	1793	1680	1794	1638	1795	1741
1796	1433	1797	1450	1798	1690	1799	1633	1803	1434
1804	1405	1806	1435	1807	1406	1810	1276	1813	869.2
1814	959.7	1815	1213	1818	658.8	1819	834.7	1820	1039
1822	553.8	1823	1377	1826	981.6	1827	1068	1828	1315
1831	752.1	1832	931.4	1833	1144	1835	623.5	1843	226.7
1846	79.13	1847	86.90	1848	94.74	1849	75.20	1850	74.38
1851	200.3	1854	78.24	1855	84.32	1856	93.24	1857	74.89
1858	74.67	1859	149.4	1861	75.76	1862	86.23	1863	75.94
1864	256.2	1867	83.86	1868	93.72	1869	104.0	1870	78.83
1871	78.65	1872	225.0	1875	82.87	1876	90.97	1877	103.5
1878	78.78	1879	78.72	1880	164.8	1882	80.09	1883	95.29
1884	80.64	1898	1452	1900	1812	1902	1803	1903	1452
1904	1456	1905	1811	1906	1843	1907	1803	1908	1456
1909	1842	1911	1438	1913	1855	1915	1915	1916	1436
1917	1456	1918	1855	1919	1751	1920	1820	1921	1456
1922	1732	1924	1410	1926	1433	1927	1411	1929	1433
1934	1409	1936	1711	1938	1491	1941	1497	1942	1348
1943	1456	1944	1525	1945	1682	1946	1457	1948	1453
1949	1424	1950	1566	1955	1595	1957	1799	1959	1638
1962	1658	1963	1525	1964	1620	1965	1682	1966	1797
1967	1611	1969	1619	1970	1577	1971	1736	1988	1656
1990	1496	1992	1581	1995	1393	1996	1376	1997	1579
1998	1056	1999	1323	2000	1414	2002	1118	2003	1359
2004	982.7	2009	1746	2011	1598	2013	1727	2016	1545
2017	1533	2018	1695	2019	1188	2020	1443	2021	1572
2023	1253	2024	1517	2025	1113	2026	1328	2044	1207
2046	1111	2049	858.8	2050	705.4	2051	1030	2052	434.7
2053	804.7	2054	727.9	2056	394.8	2057	583.7	2058	302.4
2063	1433	2065	1312	2067	1247	2070	973.5	2071	803.1
2072	1130	2073	495.5	2074	900.9	2075	826.4	2077	452.0
2078	673.9	2079	350.7	2095	386.2	2097	474.6	2100	232.4
2101	308.1	2102	247.9	2104	218.5	2108	441.2	2110	543.4
2113	264.5	2114	357.2	2115	281.7	2117	250.1	2129	82.71
2131	73.22	2133	109.9	2136	74.01	2137	78.21	2138	79.03
2139	73.58	2140	76.53	2141	95.68	2143	73.75	2144	77.50
2145	76.20	2150	89.36	2152	76.75	2154	119.3	2157	78.19
2158	83.37	2159	84.86	2160	77.29	2161	82.45	2162	103.3
2164	77.77	2165	84.17	2166	81.51	2179	1702	2180	1452
2181	1450	2182	1640	2183	1620	2184	1701	2185	1451
2186	1450	2187	1639	2188	1618	2189	1700	2190	1450
2191	1616	2192	1688	2193	1448	2194	1447	2195	1611
2196	1610	2197	1688	2198	1447	2199	1447	2200	1610

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2201	1609	2202	1687
2206	1447	2207	1450
2211	1446	2212	1450
2216	1450	2217	1694
2230	1289	2231	1629
2237	1265	2238	1252
2243	1420	2244	1201
2250	1231	2251	1247
2257	1363	2258	1198
2262	1260	2264	1372
2270	1389	2271	1261
2275	1351	2278	1378
2282	1682	2283	1276
2300	1694	2301	1452
2307	1448	2310	1700
2315	1446	2318	1682
2324	1446	2326	1694
2332	1447	2333	1448
2347	1449	2348	1446
2352	1431	2353	1448
2360	1445	2361	1444
2365	1447	2366	1445
2373	1444	2374	1446
2378	1446	2379	1448
2393	1445	2394	1445
2406	1441	2407	1442
2411	1442	2412	1442
2419	1441	2420	1443
2424	1442	2425	1443
2439	1448	2440	1445
2444	1446	2445	1445
2452	1440	2453	1441
2457	1441	2458	1442
2465	1440	2466	1443
2470	1440	2471	1443
2487	979.2	2488	846.9
2494	966.6	2496	462.3
2502	1119	2505	533.3
2510	1153	2513	721.7
2519	690.3	2520	871.5
2534	82.14	2535	96.47
2541	72.98	2542	81.36
2546	134.8	2548	70.67
2554	73.41	2555	75.61
2559	168.4	2562	72.73
2204	1447	2205	1607
2209	1635	2210	1697
2214	1635	2215	1696
2228	1425	2229	1430
2233	1620	2236	1392
2239	1613	2240	1602
2245	1608	2246	1371
2253	1601	2254	1610
2259	1213	2260	1586
2265	1165	2267	1599
2272	1351	2274	1625
2279	1211	2280	1320
2285	1389	2287	1275
2302	1448	2306	1695
2311	1449	2314	1681
2319	1448	2323	1446
2327	1447	2328	1448
2336	1699	2346	1449
2349	1575	2351	1522
2354	1622	2355	1590
2362	1551	2363	1519
2367	1594	2372	1581
2375	1574	2377	1599
2380	1616	2381	1663
2395	1519	2396	1476
2400	1534	2401	1505
2408	1479	2409	1466
2413	1505	2414	1488
2421	1492	2422	1536
2426	1520	2427	1548
2441	1678	2442	1621
2446	1597	2447	1596
2454	1582	2455	1557
2459	1525	2460	1533
2467	1542	2468	1554
2472	1513	2473	1545
2489	1281	2492	723.7
2497	1213	2500	726.7
2506	634.4	2507	868.7
2514	803.5	2518	1077.
2522	448.1	2533	198.3
2536	75.76	2537	66.52
2543	92.64	2544	73.81
2549	82.28	2550	69.79
2556	85.02	2558	72.85
2563	75.20	2564	82.86

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2566	69.95	2567	128.9	2569	70.98	2570	76.42	2571	70.94
2572	181.0	2575	74.23	2576	82.09	2577	91.30	2578	72.79
2579	69.82	2580	161.9	2583	73.49	2584	79.70	2585	88.97
2586	72.00	2587	70.14	2588	125.8	2590	71.54	2591	81.39
2592	71.34	2606	1431	2608	1633	2610	1699	2611	1431
2612	1449	2613	1630	2614	1611	2615	1698	2616	1449
2617	1609	2619	1448	2621	1605	2623	1686	2624	1447
2625	1447	2626	1602	2627	1603	2628	1685	2629	1447
2630	1602	2632	1447	2634	1631	2636	1700	2637	1446
2638	1450	2639	1629	2640	1690	2641	1699	2642	1450
2643	1690	2655	1196	2657	1519	2659	1666	2662	1290
2649	1136	2664	1118	2665	1339	2666	1385	2667	1230
2659	1249	2670	1089	2671	1268	2676	1129	2678	1479
2680	1212	2683	1230	2684	1087	2685	1081	2686	1276
2687	1355	2688	1176	2690	1183	2691	1051	2692	1226
2697	1144	2699	1497	2701	1230	2704	1244	2705	1083
2706	1194	2707	1281	2708	1454	2709	1194	2711	1195
2712	1163	2713	1320	2730	1468	2732	1302	2734	1397
2737	1212	2738	1209	2739	1290	2740	898.8	2741	1043
2742	1253	2744	973.9	2745	1092	2746	753.2	2741	1427
2753	1267	2755	1340	2758	1158	2759	1144	2760	1258
2761	843.6	2762	1020	2763	1181	2765	908.6	2766	1049
2767	722.8	2772	1442	2774	1287	2776	1349	2779	1170
2780	1147	2781	1351	2782	854.4	2783	1110	2784	1181
2786	912.3	2787	1134	2788	800.1	2805	1216	2807	1122
2809	987.9	2812	831.2	2813	685.1	2814	858.2	2815	507.4
2816	705.5	2817	678.1	2819	477.4	2820	519.7	2821	335.1
2826	1160	2828	1053	2830	925.1	2833	744.9	2834	602.8
2835	810.8	2836	412.7	2837	644.3	2838	602.3	2840	379.9
2841	461.8	2842	270.2	2847	1155	2849	1047	2851	927.7
2854	724.6	2855	583.0	2856	862.2	2857	377.1	2858	672.6
2859	591.0	2861	344.6	2862	484.1	2863	264.7	2879	411.8
2881	481.3	2884	240.5	2885	252.9	2886	299.6	2888	177.8
2892	304.8	2894	393.0	2897	183.1	2898	223.6	2899	223.4
2901	159.3	2905	306.1	2907	386.2	2910	185.3	2911	251.6
2912	212.8	2914	179.8	2926	79.57	2928	70.98	2930	102.6
2933	69.43	2934	74.63	2935	74.40	2936	70.82	2937	70.88
2938	89.96	2940	69.55	2941	72.68	2942	70.62	2947	74.67
2949	70.30	2951	97.96	2954	69.96	2955	71.96	2956	72.01
2957	70.46	2958	71.24	2959	86.40	2961	70.02	2962	71.37
2963	70.80	2968	77.50	2970	70.41	2972	96.75	2975	70.42
2976	73.77	2978	74.67	2979	70.60	2979	72.18	2980	85.69
2982	70.44	2983	73.28	2984	71.89	2997	1830	2998	1460
2999	1480	3000	1883	3001	2021	3002	1829	3003	1460
3004	1480	3005	1883	3006	2020	3007	1828	3008	1480
3009	2018	3010	1795	3011	1460	3012	1456	3013	1786

ABAGUS VERSION 4-4-67
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

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STEP	2	INCREMENT	10
3014	1482	3015	1795
3019	1680	3020	1793
3038	1901	3034	1884
3045	1893	3041	1893
3051	2007	3046	1884
3058	1664	3054	1659
3065	1684	3059	1638
3071	1762	3064	1645
3090	1671	3084	1828
3098	1460	3091	1479
3107	1460	3099	1454
3120	1793	3108	1455
3125	1872	3121	1960
3133	1883	3126	2004
3138	1730	3134	1582
3158	1774	3139	1655
3166	1777	3154	1933
3171	1853	3159	1930
3186	1697	3167	1559
3199	1623	3172	1579
3204	1851	3195	1540
3223	1684	3200	1661
3231	1699	3215	2074
3238	1991	3224	1880
3254	1682	3232	1479
3267	1316	3240	889.3
3272	1460	3255	2014
3292	1460	3260	1460
3297	1455	3273	1455
3308	1874	3293	1848
3316	1717	3310	1537
3347	1607	3317	1494
3353	1401	3339	1889
3364	1825	3348	1931
3393	157	3372	1545
3402	1853	3395	1654
3408	1720	3403	1620
3421	1199	3421	1092
3426	1077	3428	936.4
3448	1913	3451	1892
3017	1456	3018	1785
3022	1675	3030	1897
3036	1883	3037	2020
3043	1928	3044	1878
3049	1897	3050	2011
3056	1416	3057	1778
3062	1545	3064	1380
3069	1648	3070	1329
3086	1479	3089	1828
3095	1480	3097	1789
3103	1460	3104	1454
3118	1460	3119	1479
3123	1460	3124	1479
3131	1458	3132	1452
3136	1459	3137	1454
3151	1454	3152	1479
3156	1458	3157	1478
3164	1455	3165	1453
3169	1454	3170	1451
3184	1478	3185	1527
3188	1483	3190	1647
3197	1455	3198	1726
3202	1455	3203	1769
3219	2001	3220	2042
3227	1617	3228	1812
3236	1385	3237	1300
3251	1882	3253	1828
3257	2014	3258	1828
3264	1779	3266	1792
3270	1669	3271	1791
3287	1893	3289	1875
3295	1890	3296	1969
3301	1938	3306	1487
3314	1438	3315	1251
3320	1532	3321	1224
3343	1891	3346	1859
3350	1795	3351	1878
3360	1680	3362	1541
3369	1406	3370	1233
3375	1231	3376	892.7
3400	1739	3401	1768
3409	1769	3407	1688
3416	1425	3418	1313
3424	957.8	3425	690.2
3430	549.1	3446	1931
3453	1887	3455	1315

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MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

	STEP	2	INCREMENT	10
3459	1006.	3461	893 5	778 2
3468	396 7	3476	2036.	1881.
3480	2303.	3481	2031	1885.
3485	2293.	3486	2025.	1963.
3490	1638.	3491	1515.	2331.
3495	1634.	3496	1507.	2295.
3500	1499.	3501	2294.	1881.
3515	1877.	3516	1958.	2096.
3520	1955.	3521	2258.	1633.
3528	1629.	3529	1501.	2244.
3533	1503.	3534	2242.	
		3464		
		3477		
		3482		
		3487		
		3492		
		3497		
		3510		
		3517		
		3523		
		3530		
		3465		
		3478		
		3483		
		3488		
		3493		
		3498		
		3512		
		3518		
		3525		
		3531		
		531 8		
		1968.		
		1966		
		2274		
		2301		
		2315		
		2100		
		2260.		
		2260.		
		2258.		
		3466		
		3479		
		3484		
		3489		
		3494		
		3499		
		3514		
		3519		
		3527		
		3532		
		729 6		
		2109.		
		2105.		
		2306.		
		2306.		
		2312		
		2306.		
		2021.		
		2019		
		2290.		
		2282.		

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 10

INCREMENT NUMBER 11 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -59 2 AND OCCURS AT NODE 1237
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.05 AND OCCURS AT NODE 1237

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.08 TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.433
TOTAL ACCUMULATED TIME IS 1.65
TOTAL HEAT TIME IS 1.65

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 11

INCREMENT NUMBER 12 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

ABRAGUS VERSION 4-4-67 DATE24-FEB-84 TIME13 46 15 PAGE 16

MACH 14 FLOW RESTRICTOR STEP 2 INCREMENT 12
TRANSIENT HEAT TRANSFER ANALYSIS

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -68 1 AND OCCURS AT NODE 1417
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1 48 AND OCCURS AT NODE 1237

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1 14 TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.455
TOTAL ACCUMULATED TIME IS 1.71
TOTAL HEAT TIME IS 1.71

ABAGUS INPUT ECHO

```
5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80
*HEADING
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS
CONTINUATION OF M14FR402 RUN
*RESTART. READ. WRITE. STEP=2, INC=11
5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80
```

CARD 5

ABAGUS VERSION 4-4-67 MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS

DATE 27-FEB-84 TIME 17:37:43 PAGE 1

STEP 2 INCREMENT 1

STEP 2 TRANSIENT HEAT TRANSFER ANALYSIS

TRANSIENT HEAT TRANSFER

AUTOMATIC CONTROL WITH -
 A SUGGESTED INITIAL TIME INCREMENT OF 0.100
 AND A TOTAL TIME PERIOD OF 2.50
 THE MINIMUM TIME INCREMENT ALLOWED IS 5.000E-02
 THE MAXIMUM TIME INCREMENT ALLOWED IS 0.300
 THE MAXIMUM TEMPERATURE CHANGE ALLOWED PER INCREMENT IS 500
 THE CONVERGENCE TOLERANCE MEASURES ARE -
 TEMPERATURE CORRECTIONS BETWEEN ITERATIONS 50.0
 THE STEP IS TERMINATED IF THE LARGEST TEMPERATURE
 CHANGE RATE IN AN INCREMENT IS LESS THAN 10.0
 MAXIMUM NUMBER OF INCREMENTS ALLOWED IS 100
 MAXIMUM NUMBER OF ITERATIONS ALLOWED IS 6

THE FILE OUTPUT WILL NOT BE A CONTINUATION OF THE PREVIOUS FILE
BECAUSE THAT FILE WAS NOT MADE AVAILABLE

INCREMENT NUMBER 12 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -68.1 AND OCCURS AT NODE 1417

ABAQUS VERSION 4-4-67 DATE 27-FEB-84 TIME 17:37:43 PAGE 2
MACH 14 FLOW RESTRICTOR STEP 2 INCREMENT 12
TRANSIENT HEAT TRANSFER ANALYSIS

THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.48 AND OCCURS AT NODE 1237

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.14 . TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.455
TOTAL ACCUMULATED TIME IS 1.71
TOTAL HEAT TIME IS 1.71

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 12

INCREMENT NUMBER 13 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -93.5 AND OCCURS AT NODE 1422
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -3.30 AND OCCURS AT NODE 1236

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.19 . TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.478
TOTAL ACCUMULATED TIME IS 1.76
TOTAL HEAT TIME IS 1.76

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 13

INCREMENT NUMBER 14 ATTEMPT NUMBER 1
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -62.0 AND OCCURS AT NODE 1236

ABAGUS VERSION 4-4-67 DATE27-FEB-84 TIME 17 37 43 PAGE 3
MACH 14 FLOW RESTRICTOR STEP 2 INCREMENT 14
TRANSIENT HEAT TRANSFER ANALYSIS

THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.73 AND OCCURS AT NODE 1237

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.25 . TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.500
TOTAL ACCUMULATED TIME IS 1.82
TOTAL HEAT TIME IS 1.82

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 14

INCREMENT NUMBER 15 ATTEMPT NUMBER 1
TIME INCREMENT = 0.113

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -37.6 AND OCCURS AT NODE 1337

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.36 . TIME INCREMENT COMPLETED IS 0.113 . FRACTION OF STEP IS 0.545
TOTAL ACCUMULATED TIME IS 1.93
TOTAL HEAT TIME IS 1.93

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 15

INCREMENT NUMBER 16 ATTEMPT NUMBER 1
TIME INCREMENT = 0.113

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -23.2 AND OCCURS AT NODE 1341

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.48 . TIME INCREMENT COMPLETED IS 0.113 . FRACTION OF STEP IS 0.590
TOTAL ACCUMULATED TIME IS 2.05
TOTAL HEAT TIME IS 2.05

ABAQUS VERSION 4-4-67
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS
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STEP 2 INCREMENT 16

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 16

INCREMENT NUMBER 17 ATTEMPT NUMBER 1
TIME INCREMENT = 0.225

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 24.9 AND OCCURS AT NODE 1277

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.70 TIME INCREMENT COMPLETED IS 0.225 FRACTION OF STEP IS 0.681
TOTAL ACCUMULATED TIME IS 2.27
TOTAL HEAT TIME IS 2.27

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 17

INCREMENT NUMBER 18 ATTEMPT NUMBER 1
TIME INCREMENT = 0.225

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 15.7 AND OCCURS AT NODE 1277

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.93 TIME INCREMENT COMPLETED IS 0.225 FRACTION OF STEP IS 0.771
TOTAL ACCUMULATED TIME IS 2.50
TOTAL HEAT TIME IS 2.50

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 18

ABAGUS VERSION 4-4-67 DATE: 27 FCD-64 TIME: 17 37 43 PAGE 5
MACH 14 FLOW RESTRICTOR STEP 2 INCREMENT 19
TRANSIENT HEAT TRANSFER ANALYSIS

INCREMENT NUMBER 19 ATTEMPT NUMBER 1
TIME INCREMENT = 0.225

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 9.61 AND OCCURS AT NODE 1374

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 2.15 . TIME INCREMENT COMPLETED IS 0.225 . FRACTION OF STEP IS 0.861
TOTAL ACCUMULATED TIME IS 2.72
TOTAL HEAT TIME IS 2.72

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 19

INCREMENT NUMBER 20 ATTEMPT NUMBER 1
TIME INCREMENT = 0.300

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 8.46 AND OCCURS AT NODE 1375

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 2.45 . TIME INCREMENT COMPLETED IS 0.300 . FRACTION OF STEP IS 0.981
TOTAL ACCUMULATED TIME IS 3.02
TOTAL HEAT TIME IS 3.02

ABAGUS VERSION 4-4-67
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MACH 14 FLOW RESTRICTOR
 TRANSIENT HEAT TRANSFER ANALYSIS

STEP 2
 INCREMENT 20

N O D E P O I N T O U T P U T S E T A L L

T O T A L T E M P E R A T U R E S

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	353.3	2	862.3	3	349.1	4	354.4	5	886.1						
6	348.9	7	355.5	8	909.7	9	350.7	10	335.7						
11	739.9	12	331.7	13	336.4	14	764.7	15	332.4						
16	334.9	17	794.0	18	332.7	19	305.3	20	391.2						
21	305.2	22	305.1	23	397.6	24	305.3	25	302.2						
26	406.4	27	305.4	28	543.4	29	246.0	30	168.5						
31	556.1	32	237.9	33	167.1	34	567.1	35	218.9						
36	163.9	37	660.4	38	598.6	39	536.7	40	696.1						
41	593.0	42	535.3	43	760.3	44	579.7	45	531.9						
46	401.6	47	421.2	48	413.8	49	413.1	50	420.8						
51	413.5	52	434.6	53	420.0	54	412.7	58	357.0						
59	955.5	60	706.0	61	358.3	62	965.7	63	790.2						
67	336.1	68	849.6	69	613.5	70	336.1	71	865.2						
72	708.4	76	302.7	77	425.0	78	372.1	79	301.5						
80	429.4	81	398.8	83	341.5	84	338.1	86	704.7						
87	721.5	89	789.0	90	790.6	92	330.3	93	331.2						
95	640.6	96	716.0	98	758.0	99	845.7	101	306.7						
102	306.3	104	380.9	105	402.8	107	414.0	108	443.6						
110	330.1	111	330.0	113	707.3	114	665.7	116	730.6						
117	603.5	119	329.2	120	326.3	122	772.3	123	790.6						
125	884.0	126	844.4	128	306.8	129	301.6	131	422.0						
132	433.7	134	463.8	135	463.1	139	552.5	140	201.3						
141	160.8	142	540.4	143	194.0	144	159.6	148	802.6						
149	565.7	150	528.9	151	814.0	152	559.8	153	527.7						
157	455.5	158	418.4	159	412.1	160	461.5	161	417.8						
162	411.8	163	727.1	164	974.1	165	724.4	166	728.1						
167	988.0	168	725.5	169	730.2	170	1004.	171	705.6						
172	635.8	173	930.1	174	636.8	175	636.1	176	948.0						
177	639.6	178	637.4	179	966.2	180	622.0	190	542.5						
191	179.3	192	107.1	193	540.8	194	171.7	195	106.0						
196	522.1	197	153.8	198	103.4	199	541.9	200	205.8						
201	130.2	202	547.0	203	197.9	204	129.0	205	541.5						

MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS

206	207	220	732	291	1038	222	853
223	733	732	891	229	640	230	1003
231	791	233	1016	234	845	245	664
246	610	249	777	251	851	252	796
254	589	257	769	258	754	260	822
261	793	281	509	275	715	276	642
278	689	288	503	282	464	284	713
285	651	305	565	301	483	302	136
303	101	305	129	306	100	310	512
311	161	313	496	314	154	315	122
325	460	327	460	338	461	329	530
330	462	332	536	333	459	334	786
335	977	337	787	338	993	339	788
340	789	342	775	343	787	344	992
345	784	347	1006	348	785	349	790
350	1020	355	461	356	547	357	502
358	461	360	515	364	792	365	1040
366	900	368	1047	369	936	373	792
374	1048	376	793	377	1053	378	924
380	451	383	499	384	504	386	516
387	513	390	728	392	888	393	908
395	933	398	724	399	674	401	856
402	824	405	840	407	419	408	366
410	486	413	485	414	394	416	688
417	721	420	925	422	972	423	970
425	611	428	784	429	750	431	792
432	727	435	324	439	326	441	326
445	305	469	315	471	315	473	315
475	310	479	310	481	307	483	306
485	307	489	315	491	315	493	310
495	311	499	308	501	309	503	308
505	311	511	308	513	310	517	306
519	307	525	309	529	304	531	306
535	303	541	306	542	485	543	306
544	489	548	448	549	304	550	451
553	303	579	315	581	315	585	309
587	309	593	307	613	307	615	307
617	307	621	322	623	323	625	321
627	321	631	307	633	307	635	307
637	322	641	323	643	321	645	322
647	322	651	306	655	320	657	321
661	317	667	306	669	306	673	321
675	320	679	315	685	310	687	306
688	334	692	442	693	320	694	536
697	313	699	314	700	313	704	578
706	594	708	849	712	895	714	964

MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

ADAGUS VERSION 4-4-67		DATE: 27-FEB-84		TIME: 17 37 43		PAGE 8	
				STEP	INCREMENT	20	
716	634.3	718	636.4	720	623.0	723	307.2
729	323.3	731	323.4	735	322.2	737	322.2
744	629.9	748	987.1	750	482.1	754	578.9
757	381.5	758	510.9	759	382.1	760	511.6
762	512.6	763	339.6	764	689.9	765	343.4
767	349.5	768	688.4	777	382.4	778	512.6
780	511.9	783	352.7	784	686.0	785	353.1
799	320.2	800	775.9	801	320.1	802	776.8
804	778.6	805	319.2	806	782.8	807	319.2
809	319.3	810	785.5	823	319.3	824	751.2
826	772.2	827	320.4	828	772.4	829	318.4
831	319.4	832	778.2	833	319.5	834	778.8
848	641.4	849	317.2	850	704.5	853	313.9
855	316.4	856	708.4	871	310.5	872	538.4
874	569.5	877	309.5	878	529.3	879	311.3
895	309.5	896	461.5	897	309.7	898	481.4
902	479.6	903	308.7	904	490.5	905	308.5
924	494.6	926	531.0	928	522.7	930	489.5
946	780.4	947	320.4	948	781.6	951	319.5
953	319.4	954	788.3	969	640.4	970	438.9
972	410.1	975	625.6	976	435.4	977	519.6
995	986.1	998	998.6	1001	1010.0	1004	1008.0
1010	1032.0	1022	136.7	1023	79.56	1025	1026.0
1028	117.0	1029	76.50	1031	135.2	1032	131.0
1035	78.04	1037	113.3	1038	76.00	1040	78.98
1043	138.6	1044	81.97	1046	123.1	1047	145.0
1071	877.8	1073	1040.0	1074	905.4	1079	79.88
1082	1062.0	1083	919.9	1090	830.3	1095	1057.0
1110	772.9	1115	841.5	1116	781.6	1107	774.9
1142	707.8	1145	681.3	1151	704.1	1118	860.6
1170	74.87	1172	97.14	1173	74.23	1154	663.4
1181	93.04	1182	73.59	1187	108.0	1178	98.76
1191	77.45	1201	735.0	1188	108.0	1188	78.12
1205	868.7	1206	766.8	1202	350.9	1203	334.4
1210	351.0	1211	335.5	1207	351.9	1208	331.3
1215	353.7	1216	333.8	1212	738.2	1213	901.4
1220	825.3	1221	330.3	1217	826.2	1218	335.3
1225	636.6	1226	746.1	1222	636.1	1223	332.7
1230	662.6	1231	331.5	1227	643.7	1228	334.8
1235	662.7	1236	338.1	1233	327.2	1234	636.9
1240	608.8	1241	687.7	1236	325.1	1237	726.5
1245	384.0	1246	392.3	1242	324.2	1243	382.3
1250	476.6	1251	402.7	1247	306.0	1248	389.7
1255	496.4	1256	322.2	1252	307.0	1249	408.1
1260	551.5	1261	324.3	1257	320.2	1253	408.1
1265		1266	320.9	1262	321.1	1258	548.7
		1267		1265	657.0	1263	563.3
						1264	533.1
						1268	
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ABAQUS VERSION 4-4-67
 MACH 14 FLOW RESTRICTOR ANALYSIS
 TRANSIENT HEAT TRANSFER

DATE: 7-FEB-84

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STEP 2 INCREMENT 20

1270	323 1	1271	671 4	1272	645 5	1273	565 1	1274	323 9
1275	323 2	1276	727 8	1277	677 7	1278	649 8	1279	325 7
1280	740 7	1281	370 8	1282	305 4	1283	403 8	1284	381 2
1285	303 0	1286	423 2	1287	406 5	1288	432 9	1291	175 8
1292	246 1	1293	399 8	1294	166 4	1295	317 5	1296	416 4
1299	174 0	1300	239 9	1301	391 9	1302	165 0	1303	316 5
1304	372 9	1306	170 0	1307	372 6	1308	314 2	1309	725 6
1312	541 4	1313	600 0	1314	665 5	1315	534 5	1316	616 6
1317	717 5	1320	539 9	1321	587 9	1322	661 0	1323	533 0
1324	616 2	1325	692 9	1327	536 9	1328	649 8	1329	615 4
1330	447 9	1332	414 1	1333	422 1	1334	413 3	1335	446 6
1337	413 9	1338	420 9	1339	412 9	1340	441 9	1341	413 4
1343	355 8	1346	931 7	1348	556 0	1350	856 6	1351	356 1
1352	335 0	1353	838 4	1354	966 0	1355	888 8	1356	774 4
1357	627 5	1358	887 9	1359	336 6	1360	873 0	1361	902 3
1362	725 8	1364	334 5	1367	823 3	1369	488 8	1371	760 9
1372	334 4	1373	328 8	1374	736 2	1375	863 9	1376	733 3
1377	687 1	1378	544 4	1379	792 1	1380	330 1	1381	771 1
1382	747 3	1383	622 3	1385	302 1	1387	415 9	1388	345 0
1389	417 3	1390	301 4	1391	401 3	1392	429 3	1393	395 1
1394	426 0	1395	409 3	1396	346 3	1399	340 2	1400	563 4
1401	330 4	1402	580 4	1403	328 4	1404	698 9	1407	714 7
1408	768 7	1409	642 1	1410	780 1	1411	698 7	1412	782 4
1414	794 2	1415	758 4	1416	815 3	1417	332 2	1420	330 7
1421	505 8	1422	323 2	1423	558 3	1424	325 0	1425	614 9
1428	675 9	1429	721 5	1430	571 5	1431	808 7	1432	646 2
1433	720 0	1435	802 8	1436	674 7	1437	763 2	1438	306 2
1440	306 5	1441	352 4	1442	368 5	1443	371 8	1445	390 2
1446	405 5	1447	434 0	1448	400 9	1449	428 3	1450	334 4
1453	328 6	1454	574 3	1455	325 3	1456	548 6	1458	720 1
1461	689 3	1462	746 5	1463	727 4	1464	661 7	1465	721 5
1466	770 7	1468	674 8	1469	811 5	1470	725 7	1471	330 9
1474	327 7	1475	596 9	1476	323 9	1477	605 3	1479	749 7
1482	785 8	1483	863 5	1484	709 1	1485	858 2	1486	739 5
1487	875 2	1489	874 5	1490	817 0	1491	810 4	1492	306 9
1494	304 3	1495	383 3	1496	385 6	1497	414 0	1499	429 8
1500	456 8	1501	464 8	1502	456 9	1503	466 9	1507	558 4
1509	622 8	1512	541 4	1513	673 2	1514	569 9	1516	672 0
1520	783 5	1522	818 3	1525	808 4	1526	781 0	1527	826 7
1529	793 1	1532	446 1	1533	452 3	1535	459 7	1536	461 6
1541	209 0	1543	162 7	1545	324 7	1548	166 2	1549	195 0
1550	353 4	1551	160 9	1552	312 1	1553	304 2	1555	164 5
1556	345 9	1557	311 2	1562	571 4	1564	530 9	1566	664 4
1569	533 8	1570	560 0	1571	640 0	1572	529 2	1573	614 2
1574	651 5	1576	532 3	1577	635 9	1578	613 8	1582	418 9
1583	412 5	1584	437 3	1586	412 8	1587	417 4	1588	412 2

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 STEP 2 INCREMENT 20

2360	316.0	2361	314.3	2362	674.9	2363	639.6	2364	543.3
2365	318.4	2366	316.8	2367	730.5	2368	705.3	2372	507.8
2373	315.2	2374	313.6	2375	677.3	2376	641.9	2377	546.5
2378	317.5	2379	316.0	2380	735.1	2381	704.9	2392	484.4
2393	314.1	2394	311.8	2395	603.5	2396	559.9	2397	485.9
2398	315.6	2399	313.2	2400	637.1	2401	584.4	2405	445.2
2406	311.0	2407	309.9	2408	549.0	2409	528.5	2410	462.4
2411	313.1	2412	311.7	2413	601.2	2414	566.5	2418	442.0
2419	310.2	2420	309.3	2421	544.9	2422	530.3	2423	465.3
2424	312.4	2425	311.2	2426	603.3	2427	572.6	2438	399.3
2434	313.5	2440	310.9	2441	484.6	2442	459.7	2443	452.6
2444	313.4	2445	311.1	2446	555.5	2447	487.6	2451	393.6
2452	309.4	2453	308.8	2454	465.2	2455	467.0	2456	406.2
2457	309.8	2458	309.0	2459	504.8	2460	481.5	2464	408.1
2465	308.5	2466	308.3	2467	480.9	2468	492.4	2469	415.9
2470	308.9	2471	308.5	2472	504.7	2473	500.1	2484	624.0
2487	636.6	2488	577.9	2489	647.4	2492	634.6	2493	572.7
2494	686.4	2496	543.6	2497	544.3	2500	537.9	2501	527.6
2502	555.7	2505	516.4	2506	519.0	2507	577.9	2509	483.3
2510	539.7	2513	530.1	2514	536.2	2515	548.4	2518	509.3
2519	530.1	2520	568.9	2522	501.1	2530	336.3	2533	83.92
2534	137.1	2535	138.7	2536	77.87	2537	77.82	2538	317.3
2541	82.66	2542	124.2	2543	133.1	2544	77.49	2545	76.62
2546	270.1	2548	79.65	2549	119.5	2550	74.12	2551	324.0
2554	84.58	2555	134.4	2556	138.4	2557	77.71	2558	80.07
2559	303.7	2562	83.24	2563	121.4	2564	132.1	2565	76.93
2566	79.03	2567	259.9	2569	80.16	2570	117.2	2571	76.79
2572	323.3	2575	90.08	2576	144.5	2577	155.7	2578	81.61
2579	91.36	2580	304.7	2583	88.65	2584	131.3	2585	148.9
2586	80.79	2587	90.23	2588	258.7	2590	85.34	2591	132.9
2592	87.67	2606	322.2	2608	791.2	2610	596.6	2611	332.4
2612	321.0	2613	792.6	2614	783.1	2615	596.9	2616	321.0
2617	784.2	2619	320.5	2621	779.4	2623	588.5	2624	320.6
2625	320.0	2626	780.6	2627	783.0	2628	588.8	2632	320.0
2630	784.1	2632	319.5	2634	786.2	2636	593.9	2637	319.7
2638	319.0	2639	787.2	2640	781.3	2641	594.1	2642	319.0
2643	782.3	2655	1034.	2657	839.6	2659	1010	2662	979.3
2663	1053	2664	1037.	2665	921.4	2666	881.5	2667	1024
2669	992.2	2670	1042.	2671	910.2	2676	1023	2678	824.3
2680	997.2	2683	966.8	2684	1041.	2685	1044.	2686	904.1
2687	882.9	2688	1011	2690	978.5	2691	1048	2692	910.6
2697	1045	2699	834.3	2701	1016	2704	985.3	2705	1062
2706	1061.	2707	918.8	2708	890.0	2709	1030	2711	997.6
2712	1066.	2713	920.8	2730	804.8	2732	771.1	2734	872.3
2737	842.3	2738	881.5	2739	838.1	2740	844.8	2741	791.6
2742	902.0	2744	867.5	2745	861.5	2746	796.6	2751	782.3

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 TRANSIENT HEAT TRANSFER ANALYSIS

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2753	2759	851 0	2760	833 3
2761	2765	817 1	2766	851 5
2767	2776	866 0	2779	814 8
2780	2783	788 5	2784	890 1
2786	2805	727 2	2807	703 1
2809	2814	735 9	2815	747 7
2816	2820	723 6	2821	656 0
2826	2830	674 4	2834	707 5
2835	2838	731 3	2840	626 1
2841	2849	609 1	2851	749 5
2854	2857	581 3	2858	633 8
2859	2863	519 4	2879	600 0
2881	2886	644 6	2888	462 4
2892	2898	488 7	2899	484 9
2901	2910	414 1	2911	453 1
2912	2926	76 14	2930	221 6
2933	2935	105 6	2937	72 21
2938	2940	99 77	2942	2947
2949	2951	77 13	2956	105 1
2957	2958	74 91	2959	103 7
2963	2968	114 7	2972	96 94
2976	2977	117 4	2975	82 06
2982	2983	111 1	2980	192 4
2999	3000	460 3	2998	307 2
3004	3005	460 1	3003	307 4
3009	3010	598 7	3008	319 7
3014	3015	598 9	3013	785 8
3019	3020	599 5	3018	786 9
3033	3034	524 7	3022	511 0
3038	3041	513 7	3037	692 3
3045	3046	534 0	3044	463 7
3051	3054	933 3	3050	686 9
3058	3059	947 8	3056	3057
3065	3066	801 1	3063	788 0
3071	3084	399 6	3070	1035
3090	3091	320 0	3086	401 5
3098	3099	3102	3095	590 2
3107	3108	323 5	3103	323 5
3120	3121	654 0	3118	317 9
3125	3126	667 2	3123	318 4
3133	3134	713 6	3131	319 4
3138	3139	749 2	3136	320 8
3153	3154	661 4	3151	3137
3158	3159	612 6	3155	3152
3166	3167	671 5	3156	318 0
3171	3172	659 4	3164	319 9
			3169	318 1
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3184	371.3	3187	320.2	3188	304.9	3189	320.1	3190	350.1
3191	484.2	3195	382.3	3196	370.0	3197	317.6	3198	463.5
3199	469.6	3200	432.0	3201	319.9	3202	317.6	3203	628.1
3204	535.6	3215	427.1	3218	583.7	3219	809.4	3220	538.3
3221	606.6	3224	838.9	3225	560.5	3227	889.6	3228	765.8
3231	846.3	3232	796.4	3233	810.8	3236	933.7	3237	826.5
3238	893.8	3240	861.3	3249	307.3	3251	461.2	3253	401.5
3254	307.4	3255	319.9	3256	461.7	3257	701.6	3258	401.5
3259	319.9	3260	703.1	3262	323.4	3264	790.7	3266	600.3
3267	323.5	3268	323.5	3269	792.4	3270	807.4	3271	600.3
3272	323.5	3273	808.8	3285	542.5	3287	484.7	3289	541.2
3292	527.7	3293	550.5	3294	893.5	3295	513.8	3296	784.1
3297	546.9	3299	532.4	3300	899.5	3301	812.0	3306	1026
3308	847.4	3310	1007.	3313	976.6	3314	1047	3315	1045
3316	931.1	3317	913.3	3318	1022.	3320	990.9	3321	1071.
3322	947.6	3339	480.6	3341	483.8	3343	497.4	3346	902.5
3347	511.8	3348	777.4	3349	514.9	3350	799.2	3351	511.6
3353	517.9	3354	815.2	3355	840.7	3360	831.3	3362	840.9
3364	887.5	3367	896.0	3368	920.8	3369	888.6	3370	947.3
3371	883.8	3372	927.1	3374	946.0	3375	927.7	3376	918.8
3393	466.3	3395	380.6	3397	497.0	3400	443.1	3401	494.4
3402	799.0	3403	394.5	3404	827.9	3405	501.2	3407	444.0
3408	850.1	3409	875.1	3414	833.2	3416	847.7	3418	911.5
3421	917.7	3422	960.6	3423	866.9	3424	961.5	3425	855.8
3426	966.9	3428	970.1	3429	901.1	3430	876.7	3446	623.9
3448	573.3	3451	629.2	3452	907.8	3453	575.3	3455	906.9
3459	977.6	3461	951.7	3464	981.4	3465	855.1	3466	958.5
3468	843.3	3476	463.6	3477	380.7	3478	413.7	3479	511.5
3480	631.8	3481	463.5	3482	382.2	3483	414.3	3484	512.2
3485	631.7	3486	463.2	3487	416.1	3489	631.2	3489	602.7
3490	343.7	3491	318.2	3492	688.4	3493	671.8	3494	607.1
3495	346.4	3496	316.2	3497	689.0	3498	682.8	3499	612.8
3500	313.1	3501	698.0	3510	382.9	3512	512.5	3514	462.0
3515	382.8	3516	416.9	3517	512.0	3518	629.4	3519	462.0
3520	416.6	3521	628.5	3523	350.1	3525	687.8	3527	614.9
3528	351.9	3529	311.8	3530	685.2	3531	703.8	3532	614.7
3533	311.7	3534	704.9						

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 20

ABAQUS VERSION 4-4-67
 MACH 14 FLOW RESTRICTOR
 TRANSIENT HEAT TRANSFER ANALYSIS

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 STEP 2 INCREMENT 21
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INCREMENT NUMBER 21 ATTEMPT NUMBER 1
 TIME INCREMENT = 4.798E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 0.679 AND OCCURS AT NODE 1375

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 2.50 TIME INCREMENT COMPLETED IS 4.798E-02, FRACTION OF STEP IS 1.00
 TOTAL ACCUMULATED TIME IS 3.07
 TOTAL HEAT TIME IS 3.07

NODE POINT OUTPUT SET ALL

TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	350.9	2	842.6	3	346.9	4	352.0	5	865.7
6	346.8	7	353.0	8	888.6	9	348.3	10	333.5
11	717.1	12	329.7	13	334.1	14	740.8	15	330.4
16	332.8	17	768.8	18	330.6	19	305.0	20	384.2
21	304.9	22	304.8	23	390.0	24	305.0	25	302.2
26	398.2	27	305.1	28	535.0	29	251.3	30	171.7
31	548.2	32	243.2	33	170.3	34	561.9	35	223.9
36	167.2	37	647.5	38	595.7	39	532.7	40	682.8
41	590.1	42	531.4	43	747.6	44	576.8	45	528.1
46	395.7	47	416.2	48	408.5	49	406.7	50	415.7
51	408.3	52	427.7	53	414.9	54	407.5	58	354.4
59	932.8	60	690.6	61	355.7	62	942.6	63	771.9
67	333.9	68	821.8	69	596.4	70	333.9	71	836.7
72	687.0	76	302.6	77	415.4	78	366.7	79	301.5
80	419.5	81	391.3	83	339.6	84	336.5	86	689.7
87	707.9	89	772.1	90	777.0	92	328.4	93	329.6

ABAGUS VERSION 4-4-67		MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS		DATE 27-FEB-84	TIME 17:37:43	PAGE 16	
				STEP	INCREMENT	21	
95	623 4	96	698 3	99	824 9	101	306 3
102	306 0	104	375 2	107	406 0	108	434 9
110	329 0	111	328 7	114	696 6	116	723 1
117	603 1	119	827 8	120	325 2	122	775 7
125	867 1	126	833 3	129	301 7	131	415 0
132	426 6	134	455 2	139	551 9	140	206 0
141	164 0	142	542 3	144	162 8	148	792 2
149	562 8	150	525 1	151	805 1	153	523 9
157	448 5	158	413 2	160	454 6	161	412 7
162	406 6	163	714 5	165	955 2	166	715 6
167	988 8	168	712 8	170	985 0	171	692 9
172	624 7	173	910 3	175	625 1	176	927 8
177	628 2	178	626 4	180	610 8	190	533 5
191	183 1	192	108 7	194	175 3	195	107 6
196	517 8	197	157 2	199	533 1	200	210 3
201	132 5	202	539 1	204	131 4	205	536 7
206	183 7	207	128 5	221	1018	222	836 5
223	721 2	224	1026	229	629 4	230	981 6
231	775 1	232	630 0	234	826 9	245	652 0
246	599 8	248	799 2	251	835 1	252	785 1
254	579 1	255	540 8	258	740 6	260	805 6
261	780 8	272	541 7	275	705 4	284	635 8
278	684 0	279	534 9	282	494 8	284	703 5
285	644 4	287	701 7	301	484 3	302	139 8
303	102 7	304	464 7	306	101 8	310	512 8
311	165 7	312	125 8	314	158 1	315	124 9
325	452 5	326	511 8	328	452 6	329	518 1
330	454 5	331	452 5	333	451 1	334	770 9
335	955 8	336	768 8	338	971 8	339	772 9
340	774 0	341	988 0	343	776 0	344	977 0
345	772 6	346	777 1	348	774 1	349	779 3
350	1005	351	755 1	356	535 1	357	491 8
358	453 5	359	537 5	364	776 4	365	1017
366	881 5	367	777 6	369	915 9	373	781 3
374	1032	375	879 6	377	1038	378	909 7
380	443 5	381	437 6	384	494 4	386	505 0
387	503 7	389	733 1	392	869 3	393	892 3
395	914 2	396	945 4	399	665 1	401	843 5
402	814 6	404	873 0	407	413 8	408	362 3
410	478 0	411	383 7	414	390 0	416	676 3
417	708 3	419	901 5	422	959 0	423	958 6
425	604 4	426	598 0	429	745 0	431	788 5
432	727 9	433	322 3	439	325 1	441	325 7
445	305 7	447	306 0	471	314 5	473	314 6
475	310 1	477	310 1	481	306 7	483	306 6
485	307 0	487	314 2	491	315 0	493	310 3

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TRANSIENT HEAT TRANSFER ANALYSIS

	STEP	2	INCREMENT	21					
495	311 2	497	310 7	499	308 1	501	309 0	503	308 0
505	310 8	507	310 6	511	307 9	513	310 0	517	306 0
319	306 8	523	307 2	529	308 8	529	308 5	531	306 6
535	303 1	537	304 6	541	306 3	542	476 6	543	306 5
544	481 1	547	304 4	548	441 4	549	304 6	550	445 1
553	302 9	555	302 7	558	314 7	561	314 6	565	309 2
587	309 2	591	307 3	593	307 2	613	306 7	615	306 7
617	306 9	619	322 0	621	321 9	623	322 2	625	321 2
627	321 2	629	321 4	631	306 7	633	307 0	635	306 8
637	321 7	639	322 4	641	322 3	643	320 4	645	321 4
647	321 4	649	306 4	651	306 3	655	319 8	657	320 3
661	316 5	663	318 5	667	306 4	669	306 1	673	320 5
675	319 4	679	313 8	681	314 8	685	310 1	687	305 6
685	331 9	691	319 3	692	435 6	693	319 3	694	526 9
697	313 2	698	466 4	699	313 4	700	506 2	704	560 2
706	576 4	708	598 6	710	828 1	712	874 2	714	946 3
716	623 0	718	626 7	720	618 1	723	306 9	725	307 0
729	322 4	731	322 4	735	321 5	737	321 5	742	610 6
744	613 5	748	974 8	750	972 8	754	580 2	756	554 3
757	374 5	758	493 8	759	375 1	760	494 5	761	375 4
762	495 7	763	336 4	764	644 6	765	340 0	766	664 0
767	345 9	768	664 1	777	375 6	778	495 8	779	375 7
780	495 3	783	349 1	784	662 3	785	349 6	786	661 2
799	319 6	800	765 7	801	319 6	802	766 7	803	319 7
804	768 6	805	318 7	806	771 8	807	318 6	808	772 7
809	318 8	810	774 5	823	318 7	824	740 7	825	319 7
826	761 9	827	319 8	828	762 0	829	317 8	830	745 0
831	318 8	832	767 0	833	318 9	834	767 6	847	314 3
848	632 7	849	316 7	850	694 4	853	313 4	854	622 8
855	315 8	856	697 3	871	310 1	872	530 9	873	311 8
874	562 2	877	309 1	878	521 0	879	310 9	880	561 5
895	309 1	896	454 9	897	309 3	898	474 4	901	308 0
902	471 6	903	308 2	904	482 5	920	530 5	922	523 5
924	492 1	926	522 9	928	515 8	930	485 5	945	319 9
946	770 4	947	319 8	948	771 6	951	318 9	952	776 2
953	318 9	954	777 4	969	635 9	970	441 2	971	566 4
972	414 6	975	620 3	976	437 1	977	521 1	978	411 6
995	972 4	998	984 9	1001	996 6	1004	993 2	1007	1005
1010	1010	1022	139 3	1023	79 76	1025	133 4	1026	78 74
1028	118 9	1029	76 69	1031	137 9	1032	79 25	1034	131 2
1035	78 31	1037	115 4	1038	76 25	1040	147 8	1041	83 51
1043	141 2	1044	82 52	1046	125 3	1047	80 41	1073	1022
1071	864 8	1073	1026	1074	891 7	1079	1042	1080	877 0
1082	1046	1083	904 9	1106	818 0	1107	765 3	1109	838 2
1110	765 6	1115	828 0	1116	770 8	1118	847 6	1119	769 0
1142	701 1	1145	678 6	1151	696 5	1154	660 1	1169	104 5

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 MACH 14 FLOW RESTRICTOR
 TRANSIENT HEAT TRANSFER ANALYSIS

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STEP 2 INCREMENT 21

1170	75 01	1172	98 63	1173	74 32	1176	107 4	1179	74 44
1181	94 54	1182	73 76	1187	109 9	1188	78 58	1190	103 7
1191	77 87	1201	719 2	1202	348 6	1203	332 5	1204	726 8
1205	845 8	1206	745 9	1207	347 5	1208	329 5	1209	745 0
1210	348 7	1211	333 6	1212	722 2	1213	880 5	1214	771 2
1215	351 3	1216	332 0	1217	807 6	1218	333 2	1219	684 6
1220	802 3	1221	328 5	1222	617 7	1223	330 7	1224	324 4
1225	617 7	1226	723 1	1227	622 6	1228	332 6	1229	321 8
1230	642 9	1231	329 6	1232	325 2	1233	618 2	1234	757 5
1235	640 6	1236	335 8	1237	323 3	1238	703 7	1239	326 3
1240	591 8	1241	664 5	1242	322 3	1243	376 0	1244	304 1
1245	377 5	1246	385 1	1247	305 6	1248	382 8	1249	302 4
1250	377 5	1251	394 8	1252	306 6	1253	399 8	1254	368 5
1255	469 6	1256	321 2	1257	319 3	1258	540 3	1259	583 3
1260	489 3	1261	323 2	1262	320 2	1263	556 5	1264	608 3
1265	544 2	1266	320 1	1267	649 9	1268	523 5	1269	322 8
1270	321 8	1271	658 3	1272	630 3	1273	554 7	1274	322 9
1275	321 9	1276	714 5	1277	661 9	1278	637 6	1279	324 2
1280	724 3	1281	366 4	1282	305 2	1283	397 7	1284	376 3
1285	303 0	1286	416 5	1287	400 4	1288	432 9	1289	179 8
1292	251 3	1293	404 3	1294	169 6	1295	320 4	1296	417 3
1299	177 9	1300	235 0	1301	396 4	1302	168 2	1303	319 4
1304	376 0	1306	173 7	1307	377 1	1308	317 1	1309	716 6
1312	538 2	1313	597 0	1314	655 2	1315	530 6	1316	605 9
1317	709 3	1320	536 7	1321	585 1	1322	650 8	1323	529 1
1324	605 6	1325	687 0	1327	533 4	1328	639 8	1329	604 8
1330	441 1	1332	409 0	1333	417 0	1334	408 0	1335	440 0
1337	408 7	1338	415 8	1339	407 7	1340	435 9	1341	408 2
1343	353 3	1346	910 0	1348	545 9	1350	837 2	1351	353 6
1352	332 9	1353	819 2	1354	942 9	1355	863 3	1356	756 6
1357	612 0	1358	867 5	1359	334 5	1360	852 5	1361	876 3
1362	706 5	1364	332 3	1367	796 8	1369	478 0	1371	736 5
1372	332 3	1373	326 6	1374	713 4	1375	835 4	1376	707 8
1377	666 6	1379	528 9	1379	766 3	1380	327 8	1381	746 5
1382	721 1	1383	602 7	1385	302 1	1387	407 1	1388	341 7
1389	408 3	1390	301 5	1391	393 5	1392	419 5	1393	387 9
1394	416 4	1395	400 9	1396	344 1	1399	338 4	1400	552 9
1401	328 8	1402	570 6	1403	327 1	1404	683 7	1407	700 1
1408	752 0	1409	626 0	1410	765 7	1411	684 0	1412	764 8
1414	778 6	1415	739 8	1416	798 8	1417	330 2	1420	328 9
1421	494 4	1422	321 6	1423	546 2	1424	323 4	1425	598 1
1428	658 3	1429	701 0	1430	555 5	1431	788 2	1432	628 6
1433	698 9	1435	781 4	1436	654 3	1437	741 9	1438	305 8
1440	306 1	1441	348 6	1442	364 0	1443	366 5	1445	384 0
1446	398 1	1447	425 5	1448	393 4	1449	419 8	1450	333 0
1453	327 5	1454	566 0	1455	324 3	1456	541 4	1458	707 8

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	STEP	2	INCREMENT	21	
1461	680 1	1462	736 8	1463	715 0
1466	759 8	1468	670 9	1469	800 4
1474	326 6	1475	585 5	1476	322 6
1482	770 0	1483	845 4	1484	691 2
1487	855 8	1489	860 3	1490	797 5
1494	304 2	1495	378 3	1496	380 7
1500	448 2	1501	456 8	1502	447 9
1509	618 6	1512	542 6	1513	670 0
1520	772 0	1522	805 3	1525	799 2
1529	778 9	1532	439 1	1533	444 9
1541	213 9	1543	165 9	1545	329 9
1550	357 9	1551	164 2	1552	315 0
1556	350 3	1557	314 1	1562	568 5
1569	530 1	1570	557 1	1571	630 0
1574	648 6	1576	528 7	1577	625 9
1583	407 3	1584	431 7	1586	407 6
1589	429 5	1590	407 4	1591	544 8
1594	713 8	1595	681 0	1596	545 1
1599	715 1	1600	681 6	1601	545 8
1604	473 6	1605	310 6	1606	305 0
1609	473 7	1610	310 4	1611	304 9
1614	474 6	1615	305 5	1616	516 9
1620	302 3	1621	308 4	1623	301 9
1628	958 8	1629	933 3	1630	714 1
1635	892 0	1636	978 2	1637	948 6
1640	943 4	1642	870 9	1643	965 5
1648	818 5	1649	914 9	1650	860 5
1653	837 2	1656	817 2	1657	937 6
1660	525 4	1661	880 3	1663	798 3
1678	530 8	1679	314 4	1680	313 3
1685	314 2	1688	543 7	1689	314 1
1693	305 8	1696	473 3	1697	310 7
1702	305 9	1704	301 1	1705	307 2
1710	301 6	1711	477 0	1712	311 7
1715	578 7	1716	507 7	1717	313 5
1720	625 8	1724	427 8	1725	308 9
1728	465 7	1729	448 5	1730	304 9
1733	495 9	1737	301 2	1738	306 3
1744	421 1	1745	308 0	1746	306 9
1749	444 7	1750	309 7	1751	308 3
1757	387 0	1758	305 4	1759	303 1
1762	403 9	1763	307 2	1764	303 1
1770	301 1	1771	304 3	1773	301 2
1778	306 6	1779	306 0	1780	476 2
1783	307 0	1784	306 2	1785	486 5
1791	304 6	1792	302 3	1793	441 0
1465	657 5	1464	715 0	1470	721 9
1471	721 9	1470	800 4	1476	845 4
1479	594 3	1475	322 6	1483	860 3
1486	844 2	1484	691 2	1490	797 5
1492	794 5	1491	380 7	1496	407 1
1499	422 7	1497	447 9	1502	456 8
1507	555 7	1503	670 0	1507	542 6
1516	671 1	1514	799 2	1519	805 3
1527	816 9	1526	444 9	1532	439 1
1536	454 6	1535	165 9	1541	164 2
1549	199 6	1548	329 9	1552	164 2
1555	168 0	1553	315 0	1557	314 1
1566	660 5	1564	568 5	1571	557 1
1573	603 6	1572	630 0	1577	528 7
1582	413 8	1578	625 9	1584	431 7
1588	407 0	1587	407 6	1591	407 4
1593	313 6	1592	544 8	1595	681 0
1598	313 7	1597	545 1	1599	715 1
1603	682 4	1602	545 8	1600	681 6
1608	518 9	1607	305 0	1605	310 6
1613	519 1	1612	304 9	1611	310 4
1618	308 0	1617	516 9	1616	1615
1627	892 8	1624	301 9	1623	1621
1632	907 8	1631	714 1	1630	1629
1639	681 9	1638	948 6	1637	978 2
1645	818 7	1644	965 5	1643	870 9
1652	519 7	1651	860 5	1650	914 9
1659	626 5	1658	937 6	1657	817 2
1665	511 4	1664	798 3	1663	880 3
1684	314 7	1683	313 3	1680	314 4
1692	310 4	1691	314 1	1689	543 7
1701	474 6	1698	310 7	1697	473 3
1708	307 5	1707	307 2	1705	301 1
1714	627 3	1713	311 7	1712	477 0
1719	674 3	1718	313 5	1717	507 7
1727	561 2	1726	308 9	1725	427 8
1732	597 2	1731	304 9	1730	448 5
1741	307 4	1740	306 3	1738	301 2
1748	484 1	1747	306 9	1746	308 0
1753	525 4	1752	308 3	1751	309 7
1761	402 6	1760	303 1	1758	305 4
1766	433 4	1765	307 2	1763	307 2
1777	407 1	1776	304 3	1773	304 3
1782	409 9	1781	476 2	1780	306 0
1790	376 9	1786	486 5	1785	306 2
1795	395 3	1794	441 0	1793	302 3

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MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

DATE: 17-FEB-84	TIME: 17:37:43	PAGE: 20							
STEP	INCREMENT	21							
1796	304.6	1797	302.2	1798	447.3	1799	397.2	1803	301.1
1804	303.5	1806	301.3	1807	303.9	1810	528.7	1813	534.9
1814	533.0	1815	531.6	1818	527.9	1819	535.4	1820	568.5
1822	526.0	1823	505.0	1824	536.4	1827	531.6	1828	517.2
1831	540.0	1832	540.9	1833	558.0	1835	546.4	1843	364.1
1846	118.0	1847	184.7	1849	195.1	1849	107.1	1850	119.2
1851	347.0	1854	116.2	1855	167.2	1856	187.2	1857	106.0
1858	118.0	1859	302.9	1861	112.2	1862	169.0	1863	115.2
1864	392.9	1867	141.8	1868	209.8	1869	229.0	1870	130.8
1878	129.5	1872	376.4	1875	139.9	1876	194.1	1877	221.0
1884	145.4	1879	148.4	1880	332.9	1882	135.8	1883	202.0
1904	314.0	1898	314.8	1900	718.6	1902	546.4	1903	314.9
1909	684.9	1905	720.0	1906	684.3	1907	546.7	1908	314.1
1917	306.2	1911	309.8	1913	627.3	1915	475.6	1916	309.5
1922	515.4	1918	629.0	1919	515.0	1920	475.8	1921	306.1
1934	1002.	1924	307.4	1926	301.5	1927	307.8	1929	301.6
1949	1010	1936	774.7	1938	963.0	1941	938.0	1942	1025
1962	887.3	1944	859.5	1945	810.2	1946	980.2	1948	953.5
1967	925.2	1950	853.3	1955	965.6	1957	686.9	1959	903.7
1998	789.3	1963	991.7	1964	953.0	1965	818.6	1966	729.2
2004	783.6	1967	907.1	1970	962.6	1971	801.8	1988	740.8
2017	794.7	1992	815.8	1995	783.6	1996	829.6	1997	779.3
2023	797.4	1999	753.5	2000	851.9	2002	814.6	2003	822.0
2046	738.1	2009	670.4	2011	651.0	2013	760.2	2016	748.7
2053	639.6	2018	713.9	2019	778.6	2030	717.2	2031	811.7
2063	614.5	2024	790.5	2025	781.3	2042	650.0	2044	598.4
2072	693.7	2049	671.5	2050	712.1	2051	704.5	2052	601.9
2078	714.3	2054	742.0	2056	614.0	2057	692.6	2058	549.3
2101	497.5	2065	577.0	2067	726.1	2070	675.3	2071	723.3
2113	500.4	2073	626.6	2074	647.5	2075	749.8	2077	639.5
2131	104.2	2079	584.6	2095	500.0	2097	568.9	2100	468.4
2139	102.8	2102	497.7	2104	480.3	2108	525.4	2110	592.4
2145	111.9	2114	531.3	2115	528.7	2117	518.6	2129	147.3
2158	159.6	2133	256.1	2136	108.4	2137	134.3	2138	151.2
2164	130.0	2140	112.8	2141	236.3	2143	106.7	2144	143.9
2181	320.1	2150	173.1	2152	127.7	2154	286.1	2157	131.8
2186	320.1	2159	183.5	2160	126.0	2161	142.7	2162	266.6
2191	770.8	2165	176.2	2166	141.6	2179	587.9	2180	321.6
2196	768.6	2182	775.3	2183	767.9	2184	587.6	2185	321.8
2201	769.5	2187	776.6	2188	768.9	2189	588.6	2190	320.2
2206	319.1	2192	580.3	2193	320.0	2194	319.2	2195	765.0
2211	319.2	2197	580.6	2198	320.1	2199	319.2	2200	766.1
2216	318.3	2202	581.2	2203	319.3	2204	771.2	2205	585.1
		2207	318.1	2208	771.1	2209	764.7	2210	585.4
		2212	318.1	2213	772.2	2214	765.6	2215	586.0
		2217	767.2	2225	926.5	2228	927.9	2229	980.7

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	STEP	INCREMENT
2230	970 8	2236
2237	999 8	2241
2243	906 7	2249
2250	975 7	2254
2257	919 7	2261
2262	967 8	2267
2270	939 1	2274
2275	951 7	2281
2282	760 7	2287
2300	573 2	2306
2307	320 3	2314
2315	318 3	2323
2324	319 4	2331
2332	318 7	2346
2347	317 6	2351
2352	319 6	2359
2360	315 5	2364
2365	317 8	2372
2373	314 7	2377
2378	316 9	2392
2393	313 6	2397
2398	315 2	2405
2406	310 6	2410
2411	312 7	2418
2419	309 8	2423
2424	312 0	2438
2439	313 0	2443
2444	312 9	2448
2452	309 0	2451
2457	309 4	2456
2465	308 1	2464
2470	308 5	2469
2487	625 6	2484
2494	678 3	2493
2502	540 0	2501
2510	530 2	2507
2519	522 8	2518
2534	139 6	2533
2541	83 37	2538
2546	272 5	2545
2554	85 41	2551
2559	306 7	2558
2566	79 41	2565
2572	323 9	2571
2579	92 24	2578
2586	81 31	2591
2232	775 3	2233
2239	983 9	2240
2245	996 5	2246
2252	981 6	2253
2259	992 3	2259
2266	897 2	2266
2272	996 3	2273
2279	936 1	2280
2285	984 6	2286
2302	320 9	2305
2311	585 8	2313
2319	576 2	2320
2327	567 1	2328
2336	318 3	2337
2349	315 0	2350
2354	317 2	2355
2362	313 8	2363
2368	316 3	2368
2375	313 1	2376
2380	315 4	2381
2395	312 8	2396
2400	309 5	2401
2408	311 2	2409
2413	308 9	2414
2421	310 7	2422
2426	310 4	2427
2441	310 6	2442
2446	308 4	2447
2454	308 6	2455
2459	307 8	2460
2472	308 1	2468
2489	568 9	2473
2497	540 4	2492
2506	511 7	2501
2513	522 3	2507
2520	561 4	2515
2535	141 2	2530
2542	126 5	2537
2548	80 20	2544
2555	137 1	2550
2562	84 00	2557
2567	262 3	2564
2575	91 19	2570
2580	306 0	2577
2587	91 11	2584
2590	261 3	2590
941 8	764 5	941 8
920 5	770 3	920 5
764 7	744 8	764 7
756 9	764 2	756 9
742 4	993 6	742 4
769 7	1005	769 7
1004	991 6	1004
584 5	1012	584 5
563 6	912 4	563 6
319 3	319 3	319 3
319 3	320 3	319 3
317 3	319 7	317 3
318 4	318 2	318 4
643 8	582 5	643 8
700 6	690 6	700 6
536 7	736 3	536 7
501 3	665 3	501 3
539 3	720 0	539 3
480 9	666 9	480 9
440 1	723 8	440 1
457 4	596 0	457 4
436 4	629 1	436 4
459 6	541 8	459 6
389 6	593 3	389 6
401 9	536 8	401 9
403 1	594 5	403 1
410 7	477 5	410 7
612 5	547 7	612 5
565 2	477 5	565 2
480 7	458 5	480 7
504 2	497 6	504 2
84 70	497 6	84 70
318 1	483 6	318 1
76 91	491 3	76 91
324 4	626 9	324 4
80 44	474 2	80 44
77 17	483 6	77 17
77 14	491 3	77 14
82 16	571 2	82 16
152 0	530 5	152 0
2591	2509	2591
2585	2518	2585
135 5	2533	135 5
86 21	2518	86 21
86 21	2533	86 21
77 65	2538	77 65
74 38	2545	74 38
134 6	2551	134 6
119 3	2558	119 3
158 9	2565	158 9
133 8	2571	133 8
89 69	2578	89 69
86 21	2584	86 21
86 21	2590	86 21

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MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS		STEP	INCREMENT
2592	88.55	2606	321.6
2612	320.4	2613	781.5
2617	773.9	2619	319.9
2625	319.5	2626	770.5
2630	774.0	2632	319.0
2638	318.4	2639	776.3
2643	770.2	2655	1019.
2663	1038	2664	1023.
2669	976.9	2670	1028
2680	984.1	2683	953.4
2687	869.6	2688	998.2
2697	1029.	2699	821.3
2706	1044.	2707	904.0
2712	1049.	2713	904.2
2737	830.6	2738	868.5
2742	888.0	2744	854.9
2753	720.1	2755	840.3
2761	777.5	2762	763.4
2767	760.8	2772	778.5
2780	849.1	2781	828.0
2786	813.6	2787	851.0
2809	797.5	2812	762.5
2816	673.8	2817	813.4
2826	658.8	2828	609.6
2835	692.3	2836	610.5
2841	660.6	2842	532.5
2854	658.6	2855	691.5
2859	719.6	2861	593.2
2881	683.1	2884	560.1
2892	464.8	2894	548.6
2901	404.9	2905	459.2
2912	463.7	2914	431.2
2933	77.01	2934	99.98
2938	205.2	2941	75.66
2949	75.66	2951	216.2
2957	74.43	2958	75.20
2963	74.49	2968	116.7
2976	105.3	2977	119.7
2982	81.36	2983	113.3
2999	318.7	3000	452.0
3004	318.7	3005	451.8
3009	683.5	3010	588.3
3014	787.9	3015	588.5
3019	789.3	3020	589.0
3033	501.5	3034	513.0
3038	506.5	3041	502.6
2610	589.4	2611	321.7
2615	589.6	2616	320.4
2623	581.9	2624	320.0
2628	582.1	2629	319.5
2636	586.6	2637	319.1
2641	586.8	2642	318.4
2659	995.1	2662	964.6
2666	868.2	2667	812.4
2676	1010	2678	1010
2685	1030	2686	890.6
2691	1034	2692	896.6
2704	970.6	2705	1047
2709	1016.	2711	982.2
2732	761.0	2734	858.5
2740	835.8	2741	782.2
2746	789.5	2751	770.6
2759	838.7	2760	820.7
2765	807.2	2766	839.4
2776	851.9	2779	802.3
2783	776.3	2784	875.8
2805	718.9	2807	695.5
2814	729.3	2815	745.8
2820	720.7	2821	627.0
2833	668.8	2834	702.9
2838	726.2	2840	625.5
2849	601.0	2851	736.2
2857	580.1	2858	627.7
2863	520.7	2879	598.4
2886	647.3	2888	467.0
2898	430.7	2899	488.3
2910	417.3	2911	454.3
2928	76.31	2930	225.1
2936	75.06	2937	72.40
2942	71.75	2947	106.9
2955	96.04	2956	104.5
2961	76.25	2962	98.51
2972	215.4	2975	82.80
2979	86.25	2980	196.3
2997	396.1	2998	306.9
3002	396.0	3003	307.0
3007	395.8	3008	318.7
3011	322.4	3013	770.1
3016	322.7	3018	771.3
3021	322.5	3024	500.1
3025	820.0	3030	676.4
3035	502.6	3037	3037
3042	522.1	3044	455.3

ABAQUS VERSION 4-4-67
 MACH 14 FLOW RESTRICTOR
 TRANSIENT HEAT TRANSFER ANALYSIS

DATE 27-FEB-84

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STEP 2 INCREMENT 21

3045	680 9	3046	522 0	3048	496 4	3049	847 7	3050	671 0
3051	911 0	3054	913 2	3055	959 7	3056	986 1	3057	772 1
3058	785 1	3059	927 5	3062	915 3	3063	982 0	3064	1002
3065	771 9	3066	787 9	3067	966 3	3069	897 7	3070	1017
3071	770 9	3084	394 2	3085	306 7	3086	318 5	3089	396 1
3090	306 8	3091	319 0	3094	396 0	3095	318 9	3097	579 8
3098	321 9	3099	321 8	3102	587 3	3103	322 2	3104	322 7
3107	987 3	3108	322 7	3117	385 7	3118	306 2	3119	317 0
3120	440 7	3121	640 3	3122	390 1	3123	306 5	3124	317 5
3125	446 8	3126	652 0	3130	591 6	3131	319 9	3132	318 8
3133	723 0	3134	702 9	3135	564 9	3136	321 0	3137	320 1
3138	745 8	3139	736 6	3150	351 5	3151	304 9	3152	317 5
3153	387 7	3154	647 5	3155	368 6	3156	305 6	3157	317 1
3158	421 4	3159	600 7	3163	541 8	3164	319 0	3165	317 3
3166	680 4	3167	661 7	3168	522 9	3169	318 7	3170	317 5
3171	685 7	3172	650 5	3183	309 3	3184	318 1	3185	314 2
3186	367 5	3187	319 0	3188	304 6	3189	319 1	3190	347 1
3191	475 6	3195	378 5	3196	319 1	3197	316 8	3198	458 2
3199	462 8	3200	426 4	3201	319 0	3202	316 9	3203	616 7
3204	527 4	3215	512 5	3218	565 5	3219	786 2	3220	523 6
3223	588 4	3224	816 3	3225	545 9	3227	869 3	3228	747 1
3231	844 4	3232	778 6	3233	792 4	3236	913 7	3237	810 0
3238	877 3	3240	850 0	3249	307 0	3251	452 9	3253	396 1
3254	307 0	3255	318 9	3256	453 4	3257	685 7	3258	396 0
3259	318 9	3260	687 2	3262	322 5	3264	775 1	3266	589 8
3267	322 6	3268	322 7	3269	776 7	3270	794 4	3271	590 1
3272	322 7	3273	795 8	3285	475 0	3287	475 0	3289	528 9
3292	515 9	3293	537 7	3294	530 1	3295	502 6	3296	764 8
3308	829 5	3299	520 3	3300	877 3	3301	791 7	3306	1004
3316	910 6	3317	897 1	3318	999 9	3314	1024	3315	1047
3322	930 4	3339	471 1	3341	999 9	3320	969 1	3321	1053
3347	500 9	3348	758 7	3349	474 9	3343	486 9	3346	492 3
3353	507 4	3354	795 9	3355	505 0	3350	781 9	3351	500 4
3364	868 3	3367	878 2	3368	823 5	3360	814 0	3362	825 1
3371	871 5	3372	907 0	3374	901 5	3369	873 3	3370	920 7
3393	458 6	3395	376 3	3397	928 1	3375	912 6	3376	908 2
3402	782 8	3403	389 9	3404	488 0	3400	438 5	3401	485 9
3408	833 9	3409	859 9	3414	811 5	3405	492 4	3407	437 7
3421	903 5	3422	945 9	3423	818 7	3416	492 4	3418	895 8
3426	951 9	3428	957 4	3429	857 0	3424	949 1	3425	847 5
3448	559 5	3451	612 7	3452	893 8	3430	872 6	3446	606 4
3459	962 8	3461	939 8	3464	891 2	3453	562 1	3455	892 2
3468	842 9	3476	450 5	3477	971 5	3465	851 1	3466	949 6
3480	609 2	3481	450 5	3482	373 8	3478	404 6	3479	494 4
3485	609 4	3486	450 4	3487	375 2	3483	405 4	3484	495 2
					407 2	3488	609 2	3489	582 3

ABRAGUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS

	340.3	3491	316.8	3492	663.3	3493	648.3	STEP	INCREMENT	PAGE
3490								2	21	24
3495	343.0	3496	315.0	3497	664.3	3498	659.1	3494	586.6	
3500	312.0	3501	674.6	3510	376.0	3512	495.6	3499	592.4	
3515	376.0	3516	408.1	3517	495.3	3518	607.7	3514	449.8	
3520	407.8	3521	606.9	3523	346.6	3525	663.8	3519	449.5	
3528	348.4	3529	310.7	3530	661.8	3531	683.0	3527	594.9	
3533	310.6	3534	684.4					3532	595.0	

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 21

THE ANALYSIS HAS BEEN COMPLETED

END OF RUN

APPENDIX I

ABAQUS THERMAL STRESS ANALYSIS INPUT FILES

*HEADING, CORE=1000000
 MACH 14 FLOW RESTRICTOR
 THERMAL STRESS ANALYSIS ---- ELEMENT NUMBERING #2
 PRESSURE FROM 22,000.0 ON THE FRONT FACE TO 20,000.0 ON THE BACK FACE
 *NODE, NSET=NALL

1.	0	35500.	0.		2	00000
2.	0	55000.	0.		2	00000
3.	0.	74500.	0.		2	00000
4.	0	35196.	0.	04634.	2	00000
5.	0.	56199.	0.	09109.	2	00000
6.	0	77202.	0.	13585.	2	00000
7.	0.	34290.	0.	09188.	2	00000
8.	0.	59594.	0.	17145.	2	00000
9.	0.	84898.	0.	25102.	2	00000
10.	0.	35500.	0.		2	39500
11.	0.	55000.	0.		2	39500
12.	0.	74500.	0.		2	39500
13.	0	35196.	0.	04634.	2	39500
14.	0.	56199.	0.	09109.	2	39500
15.	0.	77202.	0.	13585.	2	39500
16.	0.	34290.	0.	09188.	2	39500
17.	0	59594.	0	17145.	2	39500
18.	0	84898.	0	25102.	2	39500
19.	0	35500.	0.		2	79000
20.	0.	55000.	0.		2	79000
21.	0	74500.	0.		2	79000
22.	0.	35196.	0.	04634.	2	79000
23.	0.	56199.	0.	09109.	2	79000
24.	0	77202.	0.	13585.	2	79000
25.	0.	34290.	0.	09188.	2	79000
26.	0	59594.	0	17145.	2	79000
27.	0	84898.	0	25102.	2	79000
28.	1	62500.	0.		2	00000
29.	2	12500.	0.		2	00000
30.	2	62500.	0.		2	00000
31.	1	61110.	0.	21211.	2	00000
32.	2	10682.	0.	27737.	2	00000
33.	2	60254.	0.	34263.	2	00000
34.	1	56963.	0.	42058.	2	00000
35.	2.	05259.	0.	54999.	2	00000
36.	2.	53556.	0.	67940.	2	00000
37.	1	62500.	0.		2	39500
38.	2.	12500.	0.		2	39500
39.	2.	62500.	0.		2	39500
40.	1	61110.	0	21211.	2	39500
41.	2.	10682.	0.	27737.	2	39500
42.	2	60254.	0.	34263.	2	39500
43.	1	56963.	0	42058.	2	39500
44.	2	05259.	0	54999.	2	39500
45.	2	53556.	0	67940.	2	39500
46.	1.	62500.	0.		2	79000
47.	2	12500.	0.		2	79000
48.	2.	62500.	0.		2	79000
49.	1.	61110.	0.	21211.	2	79000
50.	2.	10682.	0.	27737.	2	79000
51.	2	60254.	0.	34263.	2	79000
52.	1	56963.	0	42058.	2	79000
53.	2	05259.	0.	54999.	2	79000
54.	2.	53556.	0.	67940.	2	79000
58.	0	32798.	0.	13585.	2	00000
59.	0.	58820.	0.	25306.	2	00000
60.	0.	84842.	0.	37027.	2	00000

61.	0.	30744.	0.	17750.	2.	00000
62.	0.	57765.	0.	33351.	2.	00000
63.	0.	84786.	0.	48951.	2.	00000
67.	0.	32798.	0.	13585.	2.	39500
68.	0.	58820.	0.	25306.	2.	39500
69.	0.	84842.	0.	37027.	2.	39500
70.	0.	30744.	0.	17750.	2.	39500
71.	0.	57765.	0.	33351.	2.	39500
72.	0.	84786.	0.	48951.	2.	39500
76.	0.	32798.	0.	13585.	2.	79000
77.	0.	58820.	0.	25306.	2.	79000
78.	0.	84842.	0.	37027.	2.	79000
79.	0.	30744.	0.	17750.	2.	79000
80.	0.	57765.	0.	33351.	2.	79000
81.	0.	84786.	0.	48951.	2.	79000
83.	0.	96415.	0.	32798.	2.	00000
84.	1.	10000.	0.	35500.	2.	00000
86.	0.	96901.	0.	44512.	2.	00000
87.	1.	09995.	0.	49501.	2.	00000
89.	0.	97388.	0.	56227.	2.	00000
90.	1.	09989.	0.	63502.	2.	00000
92.	0.	96415.	0.	32798.	2.	39500
93.	1.	10000.	0.	35500.	2.	39500
95.	0.	96901.	0.	44512.	2.	39500
96.	1.	09995.	0.	49501.	2.	39500
98.	0.	97388.	0.	56227.	2.	39500
99.	1.	09989.	0.	63502.	2.	39500
101.	0.	96415.	0.	32798.	2.	79000
102.	1.	10000.	0.	35500.	2.	79000
104.	0.	96901.	0.	44512.	2.	79000
105.	1.	09995.	0.	49501.	2.	79000
107.	0.	97388.	0.	56227.	2.	79000
108.	1.	09989.	0.	63502.	2.	79000
110.	1.	23585.	0.	32798.	2.	00000
111.	1.	35102.	0.	25102.	2.	00000
113.	1.	23067.	0.	51776.	2.	00000
114.	1.	35106.	0.	51554.	2.	00000
116.	1.	22550.	0.	70754.	2.	00000
117.	1.	35110.	0.	78006.	2.	00000
119.	1.	23585.	0.	32798.	2.	39500
120.	1.	35102.	0.	25102.	2.	39500
122.	1.	23067.	0.	51776.	2.	39500
123.	1.	35106.	0.	51554.	2.	39500
125.	1.	22550.	0.	70754.	2.	39500
126.	1.	35110.	0.	78006.	2.	39500
128.	1.	23585.	0.	32798.	2.	79000
129.	1.	35102.	0.	25102.	2.	79000
131.	1.	23067.	0.	51776.	2.	79000
132.	1.	35106.	0.	51554.	2.	79000
134.	1.	22550.	0.	70754.	2.	79000
135.	1.	35110.	0.	78006.	2.	79000
139.	1.	50130.	0.	62186.	2.	00000
140.	1.	96324.	0.	81320.	2.	00000
141.	2.	42518.	1.	00454.	2.	00000
142.	1.	40729.	0.	81250.	2.	00000
143.	1.	84030.	1.	06250.	2.	00000
144.	2.	27332.	1.	31250.	2.	00000
148.	1.	50130.	0.	62186.	2.	39500
149.	1.	96324.	0.	81320.	2.	39500
150.	2.	42518.	1.	00454.	2.	39500
151.	1.	40729.	0.	81250.	2.	39500
152.	1.	84030.	1.	06250.	2.	39500

153.	2.	27332.	1.	31250.	2.	39500
157.	1.	50130.	0.	62186.	2.	79000
158.	1.	96324.	0.	81320.	2.	79000
159.	2.	42518.	1.	00454.	2.	79000
160.	1.	40729.	0.	81250.	2.	79000
161.	1.	84030.	1.	06250.	2.	79000
162.	2.	27332.	1.	31250.	2.	79000
163.	0.	35500.	0.		1.	81100
164.	0.	55000.	0.		1.	81100
165.	0.	74500.	0.		1.	81100
166.	0.	35196.	0.	04634.	1.	81100
167.	0.	56199.	0.	09109.	1.	81100
168.	0.	77202.	0.	13585.	1.	81100
169.	0.	34290.	0.	09188.	1.	81100
170.	0.	59594.	0.	17145.	1.	81100
171.	0.	84898.	0.	25102.	1.	81100
172.	0.	35500.	0.		1.	90550
173.	0.	55000.	0.		1.	90550
174.	0.	74500.	0.		1.	90550
175.	0.	35196.	0.	04634.	1.	90550
176.	0.	56199.	0.	09109.	1.	90550
177.	0.	77202.	0.	13585.	1.	90550
178.	0.	34290.	0.	09188.	1.	90550
179.	0.	59594.	0.	17145.	1.	90550
180.	0.	84898.	0.	25102.	1.	90550
190.	1.	62500.	0.		1.	81100
191.	2.	12500.	0.		1.	81100
192.	2.	62500.	0.		1.	81100
193.	1.	61110.	0.	21211.	1.	81100
194.	2.	10682.	0.	27737.	1.	81100
195.	2.	60254.	0.	34263.	1.	81100
196.	1.	56963.	0.	42058.	1.	81100
197.	2.	05259.	0.	54999.	1.	81100
198.	2.	53556.	0.	67940.	1.	81100
199.	1.	62500.	0.		1.	90550
200.	2.	12500.	0.		1.	90550
201.	2.	62500.	0.		1.	90550
202.	1.	61110.	0.	21211.	1.	90550
203.	2.	10682.	0.	27737.	1.	90550
204.	2.	60254.	0.	34263.	1.	90550
205.	1.	56963.	0.	42058.	1.	90550
206.	2.	05259.	0.	54999.	1.	90550
207.	2.	53556.	0.	67940.	1.	90550
220.	0.	32798.	0.	13585.	1.	81100
221.	0.	58820.	0.	25306.	1.	81100
222.	0.	84842.	0.	37027.	1.	81100
223.	0.	30744.	0.	17750.	1.	81100
224.	0.	57765.	0.	33351.	1.	81100
225.	0.	84786.	0.	48951.	1.	81100
229.	0.	32798.	0.	13585.	1.	90550
230.	0.	58820.	0.	25306.	1.	90550
231.	0.	84842.	0.	37027.	1.	90550
232.	0.	30744.	0.	17750.	1.	90550
233.	0.	57765.	0.	33351.	1.	90550
234.	0.	84786.	0.	48951.	1.	90550
245.	0.	96415.	0.	32798.	1.	81100
246.	1.	10000.	0.	35500.	1.	81100
248.	0.	96901.	0.	44512.	1.	81100
249.	1.	09995.	0.	49501.	1.	81100
251.	0.	97388.	0.	56227.	1.	81100
252.	1.	09989.	0.	63502.	1.	81100
254.	0.	96415.	0.	32798.	1.	90550

255,	1.	10000,	0.	35500,	1.	90550
257,	0.	96901,	0.	44512,	1.	90550
258,	1.	09995,	0.	49501,	1.	90550
260,	0.	97388,	0.	56227,	1.	90550
261,	1.	09989,	0.	63502,	1.	90550
272,	1.	23585,	0.	32798,	1.	81100
273,	1.	35102,	0.	25102,	1.	81100
275,	1.	23067,	0.	51776,	1.	81100
276,	1.	35106,	0.	51554,	1.	81100
278,	1.	22550,	0.	70754,	1.	81100
279,	1.	35110,	0.	78006,	1.	81100
281,	1.	23585,	0.	32798,	1.	90550
282,	1.	35102,	0.	25102,	1.	90550
284,	1.	23067,	0.	51776,	1.	90550
285,	1.	35106,	0.	51554,	1.	90550
287,	1.	22550,	0.	70754,	1.	90550
288,	1.	35110,	0.	78006,	1.	90550
301,	1.	50130,	0.	62186,	1.	81100
302,	1.	96324,	0.	81320,	1.	81100
303,	2.	42518,	1.	00454,	1.	81100
304,	1.	40729,	0.	81250,	1.	81100
305,	1.	84030,	1.	06250,	1.	81100
306,	2.	27332,	1.	31250,	1.	81100
310,	1.	50130,	0.	62186,	1.	90550
311,	1.	96324,	0.	81320,	1.	90550
312,	2.	42518,	1.	00454,	1.	90550
313,	1.	40729,	0.	81250,	1.	90550
314,	1.	84030,	1.	06250,	1.	90550
315,	2.	27332,	1.	31250,	1.	90550
325,	0.	40000,	0.	,	0.	36000
326,	0.	55000,	0.	,	0.	36000
327,	0.	70000,	0.	,	0.	36000
328,	0.	39658,	0.	05221,	0.	36000
329,	0.	56351,	0.	10264,	0.	36000
330,	0.	73045,	0.	15307,	0.	36000
331,	0.	38637,	0.	10355,	0.	36000
332,	0.	60176,	0.	19319,	0.	36000
333,	0.	81716,	0.	28284,	0.	36000
334,	0.	38946,	0.	,	0.	70000
335,	0.	55000,	0.	,	0.	70000
336,	0.	71054,	0.	,	0.	70000
337,	0.	38612,	0.	05083,	0.	70000
338,	0.	56317,	0.	09993,	0.	70000
339,	0.	74021,	0.	14903,	0.	70000
340,	0.	37619,	0.	10080,	0.	70000
341,	0.	60040,	0.	18809,	0.	70000
342,	0.	82461,	0.	27539,	0.	70000
343,	0.	37891,	0.	,	1.	04000
344,	0.	55000,	0.	,	1.	04000
345,	0.	72109,	0.	,	1.	04000
346,	0.	37567,	0.	04946,	1.	04000
347,	0.	56282,	0.	09722,	1.	04000
348,	0.	74997,	0.	14498,	1.	04000
349,	0.	36600,	0.	09807,	1.	04000
350,	0.	59903,	0.	18300,	1.	04000
351,	0.	83207,	0.	26793,	1.	04000
355,	0.	36955,	0.	15307,	0.	36000
356,	0.	59358,	0.	26532,	0.	36000
357,	0.	81760,	0.	37757,	0.	36000
358,	0.	34641,	0.	20000,	0.	36000
359,	0.	58223,	0.	33615,	0.	36000
360,	0.	81805,	0.	47230,	0.	36000

364,	0.	35981,	0.	14904,	0.	70000
365,	0.	59232,	0.	26245,	0.	70000
366,	0.	82482,	0.	37586,	0.	70000
367,	0.	33728,	0.	19473,	0.	70000
368,	0.	58116,	0.	33553,	0.	70000
369,	0.	82503,	0.	47633,	0.	70000
373,	0.	35007,	0.	14500,	1.	04000
374,	0.	59106,	0.	25958,	1.	04000
375,	0.	83204,	0.	37415,	1.	04000
376,	0.	32815,	0.	18946,	1.	04000
377,	0.	58008,	0.	33491,	1.	04000
378,	0.	83202,	0.	48037,	1.	04000
380,	0.	94693,	0.	36955,	0.	36000
381,	1.	10000,	0.	40000,	0.	36000
383,	0.	95323,	0.	46177,	0.	36000
384,	1.	10052,	0.	51784,	0.	36000
386,	0.	95954,	0.	55399,	0.	36000
387,	1.	10103,	0.	63568,	0.	36000
389,	0.	95097,	0.	35979,	0.	70000
390,	1.	10000,	0.	38946,	0.	70000
392,	0.	95693,	0.	45786,	0.	70000
393,	1.	10038,	0.	51249,	0.	70000
395,	0.	96290,	0.	55593,	0.	70000
396,	1.	10076,	0.	63553,	0.	70000
398,	0.	95501,	0.	35003,	1.	04000
399,	1.	10000,	0.	37891,	1.	04000
401,	0.	96064,	0.	45395,	1.	04000
402,	1.	10025,	0.	50714,	1.	04000
404,	0.	96626,	0.	55787,	1.	04000
405,	1.	10050,	0.	63537,	1.	04000
407,	1.	21670,	0.	36262,	0.	36000
408,	1.	33341,	0.	32523,	0.	36000
410,	1.	18727,	0.	51418,	0.	36000
411,	1.	27402,	0.	51051,	0.	36000
413,	1.	14482,	0.	66097,	0.	36000
414,	1.	18862,	0.	68625,	0.	36000
416,	1.	22097,	0.	35453,	0.	70000
417,	1.	33757,	0.	30771,	0.	70000
419,	1.	19708,	0.	51518,	0.	70000
420,	1.	29219,	0.	51106,	0.	70000
422,	1.	16373,	0.	67188,	0.	70000
423,	1.	22669,	0.	70823,	0.	70000
425,	1.	22523,	0.	34644,	1.	04000
426,	1.	34173,	0.	29020,	1.	04000
428,	1.	20689,	0.	51619,	1.	04000
429,	1.	31035,	0.	51160,	1.	04000
431,	1.	18263,	0.	68279,	1.	04000
432,	1.	26477,	0.	73021,	1.	04000
433,	1.	45500,	0.		2.	00000
435,	1.	42798,	0.	13585,	2.	00000
439,	1.	45500,	0.		2.	39500
441,	1.	42798,	0.	13585,	2.	39500
445,	1.	45500,	0.		2.	79000
447,	1.	42798,	0.	13585,	2.	79000
469,	0.	23000,	0.		1.	81100
471,	0.	22803,	0.	03002,	1.	81100
473,	0.	22216,	0.	05953,	1.	81100
475,	0.	23000,	0.		1.	90550
477,	0.	22803,	0.	03002,	1.	90550
479,	0.	22216,	0.	05953,	1.	90550
481,	0.	23000,	0.		2.	00000
483,	0.	22803,	0.	03002,	2.	00000

485.	0.	22216.	0.	05953.	2.	00000
487.	0.	93737.	0.	16263.	1.	81100
489.	0.	88751.	0.	08802.	1.	81100
491.	0.	87000.	0.		1.	81100
493.	0.	93737.	0.	16263.	1.	90550
495.	0.	88751.	0.	08802.	1.	90550
497.	0.	87000.	0.		1.	90550
499.	0.	93737.	0.	16263.	2.	00000
501.	0.	88751.	0.	08802.	2.	00000
503.	0.	87000.	0.		2.	00000
505.	1.	10000.	0.	23000.	1.	81100
507.	1.	01198.	0.	21249.	1.	81100
511.	1.	10000.	0.	23000.	1.	90550
513.	1.	01198.	0.	21249.	1.	90550
517.	1.	10000.	0.	23000.	2.	00000
519.	1.	01198.	0.	21249.	2.	00000
523.	1.	26263.	0.	16263.	1.	81100
525.	1.	18802.	0.	21249.	1.	81100
529.	1.	26263.	0.	16263.	1.	90550
531.	1.	18802.	0.	21249.	1.	90550
535.	1.	26263.	0.	16263.	2.	00000
537.	1.	18802.	0.	21249.	2.	00000
541.	1.	33000.	0.		1.	81100
542.	1.	45500.	0.		1.	81100
543.	1.	31249.	0.	08802.	1.	81100
544.	1.	42798.	0.	13585.	1.	81100
547.	1.	33000.	0.		1.	90550
548.	1.	45500.	0.		1.	90550
549.	1.	31249.	0.	08802.	1.	90550
550.	1.	42798.	0.	13585.	1.	90550
553.	1.	33000.	0.		2.	00000
555.	1.	31249.	0.	08802.	2.	00000
579.	0.	21249.	0.	08802.	1.	81100
581.	0.	19919.	0.	11500.	1.	81100
585.	0.	21249.	0.	08802.	1.	90550
587.	0.	19919.	0.	11500.	1.	90550
591.	0.	21249.	0.	08802.	2.	00000
593.	0.	19919.	0.	11500.	2.	00000
613.	0.	27250.	0.		0.	36000
615.	0.	27017.	0.	03557.	0.	36000
617.	0.	26321.	0.	07053.	0.	36000
619.	0.	26254.	0.		0.	70000
621.	0.	26030.	0.	03427.	0.	70000
623.	0.	25360.	0.	06795.	0.	70000
625.	0.	25258.	0.		1.	04000
627.	0.	25042.	0.	03297.	1.	04000
629.	0.	24398.	0.	06537.	1.	04000
631.	0.	90731.	0.	19269.	0.	36000
633.	0.	84824.	0.	10428.	0.	36000
635.	0.	82750.	0.		0.	36000
637.	0.	91436.	0.	18564.	0.	70000
639.	0.	85746.	0.	10046.	0.	70000
641.	0.	83746.	0.		0.	70000
643.	0.	92140.	0.	17860.	1.	04000
645.	0.	86667.	0.	09665.	1.	04000
647.	0.	84742.	0.		1.	04000
649.	1.	10000.	0.	27250.	0.	36000
651.	0.	99572.	0.	25176.	0.	36000
655.	1.	10000.	0.	26254.	0.	70000
657.	0.	99948.	0.	24255.	0.	70000
661.	1.	10000.	0.	25258.	1.	04000
663.	1.	00325.	0.	23334.	1.	04000

667.	1	29269.	0	19269.	0	36000
669.	1	20428.	0	25176.	0	36000
673.	1	28564.	0	18564.	0	70000
675.	1	20047.	0	24254.	0	70000
679.	1	27860.	0	17860.	1	04000
681.	1	19665.	0	23333.	1	04000
685.	1	37250.	0		0	36000
687.	1	35176.	0	10428.	0	36000
688.	1	36265.	0	16413.	0	36000
691.	1	36254.	0		0	70000
692.	1	39183.	0		0	70000
693.	1	34254.	0	10047.	0	70000
694.	1	37814.	0	15674.	0	70000
697.	1	35258.	0		1	04000
698.	1	41116.	0		1	04000
699.	1	33333.	0	09665.	1	04000
700.	1	39363.	0	14936.	1	04000
704.	1	62500.	0		0	36000
706.	1	61110.	0	21211.	0	36000
708.	1	56963.	0	42058.	0	36000
710.	1	62500.	0		0	70000
712.	1	61110.	0	21210.	0	70000
714.	1	56963.	0	42058.	0	70000
716.	1	62500.	0		1	04000
718.	1	61110.	0	21210.	1	04000
720.	1	56963.	0	42058.	1	04000
723.	0	25176.	0	10428.	0	36000
725.	0	23599.	0	13625.	0	36000
729.	0	24256.	0	10047.	0	70000
731.	0	22737.	0	13127.	0	70000
735.	0	23336.	0	09666.	1	04000
737.	0	21874.	0	12629.	1	04000
742.	1	50130.	0	62186.	0	36000
744.	1	40729.	0	81250.	0	36000
748.	1	50130.	0	62186.	0	70000
750.	1	40729.	0	81250.	0	70000
754.	1	50130.	0	62186.	1	04000
756.	1	40729.	0	81250.	1	04000
757.	1	37250.	0		0	
758.	1	62500.	0		0	
759.	1	36265.	0	16413.	0	
760.	1	61110.	0	21211.	0	
761.	1	33341.	0	32523.	0	
762.	1	56963.	0	42058.	0	
763.	1	37250.	0		0	18000
764.	1	62500.	0		0	18000
765.	1	36265.	0	16413.	0	18000
766.	1	61110.	0	21211.	0	18000
767.	1	33341.	0	32523.	0	18000
768.	1	56963.	0	42058.	0	18000
777.	1	27402.	0	51051.	0	
778.	1	50130.	0	62186.	0	
779.	1	18862.	0	68625.	0	
780.	1	40729.	0	81250.	0	
783.	1	27402.	0	51051.	0	18000
784.	1	50130.	0	62186.	0	18000
785.	1	18862.	0	68625.	0	18000
786.	1	40729.	0	81250.	0	18000
799.	0	24506.	0		1	29700
800.	0	37094.	0		1	29700
801.	0	24296.	0	03199.	1	29700
802.	0	36777.	0	04842.	1	29700

803,	0.	23671,	0.	06342,	1.	29700
804,	0.	35830,	0.	09601,	1.	29700
805,	0.	23753,	0.		1.	55400
806,	0.	36297,	0.		1.	55400
807,	0.	23550,	0.	03100,	1.	55400
808,	0.	35986,	0.	04738,	1.	55400
809,	0.	22943,	0.	06148,	1.	55400
810,	0.	35060,	0.	09394,	1.	55400
823,	0.	92672,	0.	17328,	1.	29700
824,	0.	83771,	0.	26229,	1.	29700
825,	0.	87361,	0.	09377,	1.	29700
826,	0.	75732,	0.	14194,	1.	29700
827,	0.	85494,	0.		1.	29700
828,	0.	72906,	0.		1.	29700
829,	0.	93204,	0.	16796,	1.	55400
830,	0.	84334,	0.	25666,	1.	55400
831,	0.	88056,	0.	09089,	1.	55400
832,	0.	76467,	0.	13890,	1.	55400
833,	0.	86247,	0.		1.	55400
834,	0.	73703,	0.		1.	55400
847,	1.	10000,	0.	24506,	1.	29700
848,	1.	10000,	0.	37094,	1.	29700
849,	1.	00616,	0.	22639,	1.	29700
850,	0.	95806,	0.	34268,	1.	29700
853,	1.	10000,	0.	23753,	1.	55400
854,	1.	10000,	0.	36297,	1.	55400
855,	1.	00907,	0.	21944,	1.	55400
856,	0.	96110,	0.	33533,	1.	55400
871,	1.	27328,	0.	17328,	1.	29700
872,	1.	34483,	0.	27714,	1.	29700
873,	1.	19377,	0.	22638,	1.	29700
874,	1.	22877,	0.	34029,	1.	29700
877,	1.	26796,	0.	16796,	1.	55400
878,	1.	34792,	0.	26408,	1.	55400
879,	1.	19089,	0.	21944,	1.	55400
880,	1.	23231,	0.	33413,	1.	55400
895,	1.	34506,	0.		1.	29700
896,	1.	42578,	0.		1.	29700
897,	1.	32638,	0.	09377,	1.	29700
898,	1.	40508,	0.	14486,	1.	29700
901,	1.	33753,	0.		1.	55400
902,	1.	44039,	0.		1.	55400
903,	1.	31944,	0.	09089,	1.	55400
904,	1.	41653,	0.	14035,	1.	55400
920,	1.	62500,	0.		1.	29700
922,	1.	61110,	0.	21210,	1.	29700
924,	1.	56963,	0.	42058,	1.	29700
926,	1.	62500,	0.		1.	55400
928,	1.	61110,	0.	21210,	1.	55400
930,	1.	56963,	0.	42058,	1.	55400
945,	0.	22640,	0.	09378,	1.	29700
946,	0.	34270,	0.	14195,	1.	29700
947,	0.	21222,	0.	12253,	1.	29700
948,	0.	32124,	0.	18547,	1.	29700
951,	0.	21945,	0.	09090,	1.	55400
952,	0.	33534,	0.	13890,	1.	55400
953,	0.	20570,	0.	11876,	1.	55400
954,	0.	31434,	0.	18149,	1.	55400
969,	1.	32392,	0.	51290,	1.	29700
970,	1.	50130,	0.	62186,	1.	29700
971,	1.	29354,	0.	74683,	1.	29700
972,	1.	40729,	0.	81250,	1.	29700

975,	1	33749,	0	51422,	1	55400
976,	1	50130,	0	62186,	1	55400
977,	1	32232,	0	76344,	1	55400
978,	1	40729,	0	81250,	1	55400
995,	0	55000,	0	,	1	29700
998,	0	56254,	0	09518,	1	29700
1001,	0	59800,	0	17915,	1	29700
1004,	0	55000,	0	,	1	55400
1007,	0	56227,	0	09314,	1	55400
1010,	0	59697,	0	17530,	1	55400
1022,	2	12500,	0	,	1	04000
1023,	2	62500,	0	,	1	04000
1025,	2	10682,	0	27737,	1	04000
1026,	2	60254,	0	34263,	1	04000
1028,	2	05259,	0	54999,	1	04000
1029,	2	53556,	0	67940,	1	04000
1031,	2	12500,	0	,	1	29700
1032,	2	62500,	0	,	1	29700
1034,	2	10682,	0	27737,	1	29700
1035,	2	60254,	0	34263,	1	29700
1037,	2	05259,	0	54999,	1	29700
1038,	2	53556,	0	67940,	1	29700
1040,	2	12500,	0	,	1	55400
1041,	2	62500,	0	,	1	55400
1043,	2	10682,	0	27737,	1	55400
1044,	2	60254,	0	34263,	1	55400
1046,	2	05259,	0	54999,	1	55400
1047,	2	53556,	0	67940,	1	55400
1070,	0	59010,	0	25740,	1	29700
1071,	0	83750,	0	37286,	1	29700
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1074,	0	83730,	0	48342,	1	29700
1079,	0	58915,	0	25523,	1	55400
1080,	0	84296,	0	37156,	1	55400
1082,	0	57846,	0	33397,	1	55400
1083,	0	84258,	0	48646,	1	55400
1106,	0	96343,	0	45101,	1	29700
1107,	1	10015,	0	50310,	1	29700
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1110,	1	10030,	0	63526,	1	29700
1115,	0	96622,	0	44807,	1	55400
1116,	1	10005,	0	49906,	1	55400
1118,	0	97134,	0	56080,	1	55400
1119,	1	10010,	0	63514,	1	55400
1142,	1	21482,	0	51671,	1	29700
1145,	1	19692,	0	69104,	1	29700
1151,	1	22275,	0	51724,	1	55400
1154,	1	21121,	0	69929,	1	55400
1169,	1	96324,	0	81320,	1	04000
1170,	2	42518,	1	00454,	1	04000
1172,	1	84030,	1	06250,	1	04000
1173,	2	27332,	1	31250,	1	04000
1178,	1	96324,	0	81320,	1	29700
1179,	2	42518,	1	00454,	1	29700
1181,	1	84030,	1	06250,	1	29700
1182,	2	27332,	1	31250,	1	29700
1187,	1	96324,	0	81320,	1	55400
1188,	2	42518,	1	00454,	1	55400
1190,	1	84030,	1	06250,	1	55400
1191,	2	27332,	1	31250,	1	55400
1201,	0	45250,	0	,	2	00000
1202,	0	35424,	0	02323,	2	00000

1203.	0.	35500.	0.		2.	19750
1204.	0.	64750.	0.		2.	00000
1205.	0.	55299.	0.	04587.	2.	00000
1206.	0.	55000.	0.		2.	19750
1207.	0.	75183.	0.	06931.	2.	00000
1208.	0.	74500.	0.		2.	19750
1209.	0.	45698.	0.	06872.	2.	00000
1210.	0.	34818.	0.	06924.	2.	00000
1211.	0.	35196.	0.	04634.	2.	19750
1212.	0.	66701.	0.	11347.	2.	00000
1213.	0.	57608.	0.	13231.	2.	00000
1214.	0.	56199.	0.	09109.	2.	19750
1215.	0.	80480.	0.	19718.	2.	00000
1216.	0.	77202.	0.	13585.	2.	19750
1217.	0.	46942.	0.	13167.	2.	00000
1218.	0.	34290.	0.	09188.	2.	19750
1219.	0.	72246.	0.	21124.	2.	00000
1220.	0.	59594.	0.	17145.	2.	19750
1221.	0.	84898.	0.	25102.	2.	19750
1222.	0.	45250.	0.		2.	39500
1223.	0.	35424.	0.	02323.	2.	39500
1224.	0.	35500.	0.		2.	59250
1225.	0.	64750.	0.		2.	39500
1226.	0.	55299.	0.	04587.	2.	39500
1227.	0.	55000.	0.		2.	59250
1228.	0.	75183.	0.	06931.	2.	39500
1229.	0.	74500.	0.		2.	59250
1230.	0.	45698.	0.	06872.	2.	39500
1231.	0.	34818.	0.	06924.	2.	39500
1232.	0.	35196.	0.	04634.	2.	59250
1233.	0.	66701.	0.	11347.	2.	39500
1234.	0.	57608.	0.	13231.	2.	39500
1235.	0.	56199.	0.	09109.	2.	59250
1236.	0.	80480.	0.	19718.	2.	39500
1237.	0.	77202.	0.	13585.	2.	59250
1238.	0.	46942.	0.	13167.	2.	39500
1239.	0.	34290.	0.	09188.	2.	59250
1240.	0.	72246.	0.	21124.	2.	39500
1241.	0.	59594.	0.	17145.	2.	59250
1242.	0.	84898.	0.	25102.	2.	59250
1243.	0.	45250.	0.		2.	79000
1244.	0.	35424.	0.	02323.	2.	79000
1245.	0.	64750.	0.		2.	79000
1246.	0.	55299.	0.	04587.	2.	79000
1247.	0.	75183.	0.	06931.	2.	79000
1248.	0.	45698.	0.	06872.	2.	79000
1249.	0.	34818.	0.	06924.	2.	79000
1250.	0.	66701.	0.	11347.	2.	79000
1251.	0.	57608.	0.	13231.	2.	79000
1252.	0.	80480.	0.	19718.	2.	79000
1253.	0.	46942.	0.	13167.	2.	79000
1254.	0.	72246.	0.	21124.	2.	79000
1255.	1.	54000.	0.		2.	00000
1256.	1.	44817.	0.	06931.	2.	00000
1257.	1.	45500.	0.		2.	19750
1258.	1.	62152.	0.	10634.	2.	00000
1259.	1.	62500.	0.		2.	19750
1260.	1.	51954.	0.	17398.	2.	00000
1261.	1.	39520.	0.	19718.	2.	00000
1262.	1.	42798.	0.	13585.	2.	19750
1263.	1.	59379.	0.	31697.	2.	00000
1264.	1.	61110.	0.	21211.	2.	19750

1265.	1.	46033.	0.	33580.	2.	00000
1266.	1.	35102.	0.	25102.	2.	19750
1267.	1.	56963.	0.	42058.	2.	19750
1268.	1.	54000.	0.		2.	39500
1269.	1.	44817.	0.	06931.	2.	39500
1270.	1.	45500.	0.		2.	59250
1271.	1.	62152.	0.	10634.	2.	39500
1272.	1.	62500.	0.		2.	59250
1273.	1.	51954.	0.	17398.	2.	39500
1274.	1.	39520.	0.	19718.	2.	39500
1275.	1.	42798.	0.	13585.	2.	59250
1276.	1.	59379.	0.	31697.	2.	39500
1277.	1.	61110.	0.	21211.	2.	59250
1278.	1.	46033.	0.	33580.	2.	39500
1279.	1.	35102.	0.	25102.	2.	59250
1280.	1.	56963.	0.	42058.	2.	59250
1281.	1.	54000.	0.		2.	79000
1282.	1.	44817.	0.	06931.	2.	79000
1283.	1.	62152.	0.	10634.	2.	79000
1284.	1.	51954.	0.	17398.	2.	79000
1285.	1.	39520.	0.	19718.	2.	79000
1286.	1.	59379.	0.	31697.	2.	79000
1287.	1.	46033.	0.	33580.	2.	79000
1288.	1.	87500.	0.		2.	00000
1291.	2.	37500.	0.		2.	00000
1292.	2.	12045.	0.	13906.	2.	00000
1293.	2.	12500.	0.		2.	19750
1294.	2.	61937.	0.	17177.	2.	00000
1295.	2.	62500.	0.		2.	19750
1296.	1.	85896.	0.	24474.	2.	00000
1299.	2.	35468.	0.	31000.	2.	00000
1300.	2.	08418.	0.	41449.	2.	00000
1301.	2.	10682.	0.	27737.	2.	19750
1302.	2.	57458.	0.	51202.	2.	00000
1303.	2.	60254.	0.	34263.	2.	19750
1304.	1.	81111.	0.	48529.	2.	00000
1306.	2.	29407.	0.	61470.	2.	00000
1307.	2.	05259.	0.	54999.	2.	19750
1308.	2.	53556.	0.	67940.	2.	19750
1309.	1.	87500.	0.		2.	39500
1312.	2.	37500.	0.		2.	39500
1313.	2.	12045.	0.	13906.	2.	39500
1314.	2.	12500.	0.		2.	59250
1315.	2.	61937.	0.	17177.	2.	39500
1316.	2.	62500.	0.		2.	59250
1317.	1.	85896.	0.	24474.	2.	39500
1320.	2.	35468.	0.	31000.	2.	39500
1321.	2.	08418.	0.	41449.	2.	39500
1322.	2.	10682.	0.	27737.	2.	59250
1323.	2.	57458.	0.	51202.	2.	39500
1324.	2.	60254.	0.	34263.	2.	59250
1325.	1.	81111.	0.	48529.	2.	39500
1327.	2.	29407.	0.	61470.	2.	39500
1328.	2.	05259.	0.	54999.	2.	59250
1329.	2.	53556.	0.	67940.	2.	59250
1330.	1.	87500.	0.		2.	79000
1332.	2.	37500.	0.		2.	79000
1333.	2.	12045.	0.	13906.	2.	79000
1334.	2.	61937.	0.	17177.	2.	79000
1335.	1.	85896.	0.	24474.	2.	79000
1337.	2.	35468.	0.	31000.	2.	79000
1338.	2.	08418.	0.	41449.	2.	79000

1339.	2.	57458.	0.	51202.	2.	79000
1340.	1.	81111.	0.	48529.	2.	79000
1341.	2.	29407.	0.	61470.	2.	79000
1343.	0.	33616.	0.	11412.	2.	00000
1346.	0.	59244.	0.	21222.	2.	00000
1348.	0.	84870.	0.	31065.	2.	00000
1350.	0.	45809.	0.	19446.	2.	00000
1351.	0.	31840.	0.	15700.	2.	00000
1352.	0.	32798.	0.	13585.	2.	19750
1353.	0.	71831.	0.	31166.	2.	00000
1354.	0.	58329.	0.	29329.	2.	00000
1355.	0.	58820.	0.	25306.	2.	19750
1356.	0.	84814.	0.	42989.	2.	00000
1357.	0.	84842.	0.	37027.	2.	19750
1358.	0.	44254.	0.	25550.	2.	00000
1359.	0.	30744.	0.	17750.	2.	19750
1360.	0.	71276.	0.	41151.	2.	00000
1361.	0.	57765.	0.	33351.	2.	19750
1362.	0.	84786.	0.	48951.	2.	19750
1364.	0.	33616.	0.	11412.	2.	39500
1367.	0.	59244.	0.	21222.	2.	39500
1369.	0.	84870.	0.	31065.	2.	39500
1371.	0.	45809.	0.	19446.	2.	39500
1372.	0.	31840.	0.	15700.	2.	39500
1373.	0.	32798.	0.	13585.	2.	59250
1374.	0.	71831.	0.	31166.	2.	39500
1375.	0.	58329.	0.	29329.	2.	39500
1376.	0.	58820.	0.	25306.	2.	59250
1377.	0.	84814.	0.	42989.	2.	39500
1378.	0.	84842.	0.	37027.	2.	59250
1379.	0.	44254.	0.	25550.	2.	39500
1380.	0.	30744.	0.	17750.	2.	59250
1381.	0.	71276.	0.	41151.	2.	39500
1382.	0.	57765.	0.	33351.	2.	59250
1383.	0.	84786.	0.	48951.	2.	59250
1385.	0.	33616.	0.	11412.	2.	79000
1387.	0.	59244.	0.	21222.	2.	79000
1388.	0.	84870.	0.	31065.	2.	79000
1389.	0.	45809.	0.	19446.	2.	79000
1390.	0.	31840.	0.	15700.	2.	79000
1391.	0.	71831.	0.	31166.	2.	79000
1392.	0.	58329.	0.	29329.	2.	79000
1393.	0.	84814.	0.	42989.	2.	79000
1394.	0.	44254.	0.	25550.	2.	79000
1395.	0.	71276.	0.	41151.	2.	79000
1396.	0.	90282.	0.	29520.	2.	00000
1399.	1.	03069.	0.	34817.	2.	00000
1400.	0.	96658.	0.	38655.	2.	00000
1401.	0.	96415.	0.	32798.	2.	19750
1402.	1.	09997.	0.	42501.	2.	00000
1403.	1.	10000.	0.	35500.	2.	19750
1404.	0.	90696.	0.	41062.	2.	00000
1407.	1.	03340.	0.	47328.	2.	00000
1408.	0.	97145.	0.	50370.	2.	00000
1409.	0.	96901.	0.	44512.	2.	19750
1410.	1.	09992.	0.	56502.	2.	00000
1411.	1.	09995.	0.	49501.	2.	19750
1412.	0.	91087.	0.	52589.	2.	00000
1414.	1.	03689.	0.	59865.	2.	00000
1415.	0.	97388.	0.	56227.	2.	19750
1416.	1.	09989.	0.	63502.	2.	19750
1417.	0.	90282.	0.	29520.	2.	39500

1420.	1.	03069.	0	34817.	2.	39500
1421.	0.	96658.	0	38655.	2.	39500
1422.	0.	96415.	0	32798.	2.	59250
1423.	1.	09997.	0	42501.	2.	39500
1424.	1.	10000.	0	35500.	2.	59250
1425.	0.	90696.	0	41062.	2.	39500
1428.	1.	03340.	0	47328.	2.	39500
1429.	0.	97145.	0	50370.	2.	39500
1430.	0.	96901.	0	44512.	2.	59250
1431.	1.	09992.	0	56502.	2.	39500
1432.	1.	09995.	0	49501.	2.	59250
1433.	0.	91087.	0	52589.	2.	39500
1435.	1.	03689.	0	59865.	2.	39500
1436.	0.	97388.	0	56227.	2.	59250
1437.	1.	09989.	0	63502.	2.	59250
1438.	0.	90282.	0	29520.	2.	79000
1440.	1.	03069.	0	34817.	2.	79000
1441.	0.	96658.	0	38655.	2.	79000
1442.	1.	09997.	0	42501.	2.	79000
1443.	0.	90696.	0	41062.	2.	79000
1445.	1.	03340.	0	47328.	2.	79000
1446.	0.	97145.	0	50370.	2.	79000
1447.	1.	09992.	0	56502.	2.	79000
1448.	0.	91087.	0	52589.	2.	79000
1449.	1.	03689.	0	59865.	2.	79000
1450.	1.	16931.	0	34817.	2.	00000
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1454.	1.	23326.	0	42287.	2.	00000
1455.	1.	23585.	0	32798.	2.	19750
1456.	1.	35104.	0	38328.	2.	00000
1458.	1.	16486.	0	50948.	2.	00000
1461.	1.	29097.	0	51961.	2.	00000
1462.	1.	22809.	0	61265.	2.	00000
1463.	1.	23067.	0	51776.	2.	19750
1464.	1.	35108.	0	64780.	2.	00000
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1466.	1.	16270.	0	67128.	2.	00000
1468.	1.	28830.	0	74380.	2.	00000
1469.	1.	22550.	0	70754.	2.	19750
1470.	1.	35110.	0	78006.	2.	19750
1471.	1.	16931.	0	34817.	2.	39500
1474.	1.	29718.	0	29520.	2.	39500
1475.	1.	23326.	0	42287.	2.	39500
1476.	1.	23585.	0	32798.	2.	59250
1477.	1.	35104.	0	38328.	2.	39500
1479.	1.	16486.	0	50948.	2.	39500
1482.	1.	29097.	0	51961.	2.	39500
1483.	1.	22809.	0	61265.	2.	39500
1484.	1.	23067.	0	51776.	2.	59250
1485.	1.	35108.	0	64780.	2.	39500
1486.	1.	35106.	0	51554.	2.	59250
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1490.	1.	22550.	0	70754.	2.	59250
1491.	1.	35110.	0	78006.	2.	59250
1492.	1.	16931.	0	34817.	2.	79000
1494.	1.	29718.	0	29520.	2.	79000
1495.	1.	23326.	0	42287.	2.	79000
1496.	1.	35104.	0	38328.	2.	79000
1497.	1.	16486.	0	50948.	2.	79000
1499.	1.	29097.	0	51961.	2.	79000
1500.	1.	22809.	0	61265.	2.	79000

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1507.	1.	53874.	0.	52239.	2.	00000
1509.	1.	42618.	0.	56870.	2.	00000
1512.	1.	45744.	0.	71867.	2.	00000
1513.	1.	50130.	0.	62186.	2.	19750
1514.	1.	37920.	0.	79628.	2.	00000
1516.	1.	40729.	0.	81250.	2.	19750
1520.	1.	53874.	0.	52239.	2.	39500
1522.	1.	42618.	0.	56870.	2.	39500
1525.	1.	45744.	0.	71867.	2.	39500
1526.	1.	50130.	0.	62186.	2.	59250
1527.	1.	37920.	0.	79628.	2.	39500
1529.	1.	40729.	0.	81250.	2.	59250
1532.	1.	53874.	0.	52239.	2.	79000
1533.	1.	42618.	0.	56870.	2.	79000
1535.	1.	45744.	0.	71867.	2.	79000
1536.	1.	37920.	0.	79628.	2.	79000
1541.	2.	01220.	0.	68313.	2.	00000
1543.	2.	48566.	0.	84387.	2.	00000
1545.	1.	73227.	0.	71753.	2.	00000
1548.	2.	19421.	0.	90887.	2.	00000
1549.	1.	90589.	0.	93980.	2.	00000
1550.	1.	96324.	0.	81320.	2.	19750
1551.	2.	35433.	1.	16093.	2.	00000
1552.	2.	42518.	1.	00454.	2.	19750
1553.	1.	62380.	0.	93750.	2.	00000
1555.	2.	05681.	1.	18750.	2.	00000
1556.	1.	84030.	1.	06250.	2.	19750
1557.	2.	27332.	1.	31250.	2.	19750
1562.	2.	01220.	0.	68313.	2.	39500
1564.	2.	48566.	0.	84387.	2.	39500
1566.	1.	73227.	0.	71753.	2.	39500
1569.	2.	19421.	0.	90887.	2.	39500
1570.	1.	90589.	0.	93980.	2.	39500
1571.	1.	96324.	0.	81320.	2.	59250
1572.	2.	35433.	1.	16093.	2.	39500
1573.	2.	42518.	1.	00454.	2.	59250
1574.	1.	62380.	0.	93750.	2.	39500
1576.	2.	05681.	1.	18750.	2.	39500
1577.	1.	84030.	1.	06250.	2.	59250
1578.	2.	27332.	1.	31250.	2.	59250
1582.	2.	01220.	0.	68313.	2.	79000
1583.	2.	48566.	0.	84387.	2.	79000
1584.	1.	73227.	0.	71753.	2.	79000
1586.	2.	19421.	0.	90887.	2.	79000
1587.	1.	90589.	0.	93980.	2.	79000
1588.	2.	35433.	1.	16093.	2.	79000
1589.	1.	62380.	0.	93750.	2.	79000
1590.	2.	05681.	1.	18750.	2.	79000
1591.	0.	29250.	0.		1.	81100
1592.	0.	22951.	0.	01505.	1.	81100
1593.	0.	23000.	0.		1.	85825
1594.	0.	35424.	0.	02323.	1.	81100
1595.	0.	35500.	0.		1.	85825
1596.	0.	29000.	0.	03818.	1.	81100
1597.	0.	22558.	0.	04486.	1.	81100
1598.	0.	22803.	0.	03002.	1.	85825
1599.	0.	34818.	0.	06924.	1.	81100
1600.	0.	35196.	0.	04634.	1.	85825
1601.	0.	28253.	0.	07570.	1.	81100

1602.	0.	22216.	0.	05953.	1	85825
1603.	0.	34290.	0.	09188.	1	85825
1604.	0.	29250.	0.			1.90550
1605.	0.	22951.	0.	01505.	1.	90550
1606.	0.	23000.	0.			1.95275
1607.	0.	35424.	0.	02323.	1.	90550
1608.	0.	35500.	0.			1.95275
1609.	0.	29000.	0.	03818.	1.	90550
1610.	0.	22558.	0.	04486.	1.	90550
1611.	0.	22803.	0.	03002.	1.	95275
1612.	0.	34818.	0.	06924.	1.	90550
1613.	0.	35196.	0.	04634.	1.	95275
1614.	0.	28253.	0.	07570.	1.	90550
1615.	0.	22216.	0.	05953.	1.	95275
1616.	0.	34290.	0.	09188.	1.	95275
1617.	0.	29250.	0.			2.00000
1618.	0.	22951.	0.	01505.	2.	00000
1620.	0.	29000.	0.	03818.	2.	00000
1621.	0.	22558.	0.	04486.	2.	00000
1623.	0.	28253.	0.	07570.	2.	00000
1624.	0.	45250.	0.			1.81100
1627.	0.	64750.	0.			1.81100
1628.	0.	55299.	0.	04587.	1.	81100
1629.	0.	55000.	0.			1.85825
1630.	0.	75183.	0.	06931.	1.	81100
1631.	0.	74500.	0.			1.85825
1632.	0.	45698.	0.	06872.	1.	81100
1635.	0.	66701.	0.	11347.	1.	81100
1636.	0.	57608.	0.	13231.	1.	81100
1637.	0.	56199.	0.	09109.	1.	85825
1638.	0.	80480.	0.	19718.	1.	81100
1639.	0.	77202.	0.	13585.	1.	85825
1640.	0.	46942.	0.	13167.	1.	81100
1642.	0.	72246.	0.	21124.	1.	81100
1643.	0.	59594.	0.	17145.	1.	85825
1644.	0.	84898.	0.	25102.	1.	85825
1645.	0.	45250.	0.			1.90550
1648.	0.	64750.	0.			1.90550
1649.	0.	55299.	0.	04587.	1.	90550
1650.	0.	55000.	0.			1.95275
1651.	0.	75183.	0.	06931.	1.	90550
1652.	0.	74500.	0.			1.95275
1653.	0.	45698.	0.	06872.	1.	90550
1656.	0.	66701.	0.	11347.	1.	90550
1657.	0.	57608.	0.	13231.	1.	90550
1658.	0.	56199.	0.	09109.	1.	95275
1659.	0.	80480.	0.	19718.	1.	90550
1660.	0.	77202.	0.	13585.	1.	95275
1661.	0.	46942.	0.	13167.	1.	90550
1663.	0.	72246.	0.	21124.	1.	90550
1664.	0.	59594.	0.	17145.	1.	95275
1665.	0.	84898.	0.	25102.	1.	95275
1678.	0.	89317.	0.	20683.	1.	81100
1679.	0.	90874.	0.	12775.	1.	81100
1680.	0.	93737.	0.	16263.	1.	85825
1683.	0.	82977.	0.	11193.	1.	81100
1684.	0.	87443.	0.	04491.	1.	81100
1685.	0.	88751.	0.	08802.	1.	85825
1688.	0.	80750.	0.			1.81100
1689.	0.	87000.	0.			1.85825
1691.	0.	89317.	0.	20683.	1.	90550
1692.	0.	90874.	0.	12775.	1.	90550

1693.	0.	93737.	0.	16263.	1.	95275
1696.	0.	82977.	0.	11193.	1.	90550
1697.	0.	87443.	0.	04491.	1.	90550
1698.	0.	88751.	0.	08802.	1.	95275
1701.	0.	80750.	0.		1.	90550
1702.	0.	87000.	0.		1.	95275
1704.	0.	89317.	0.	20683.	2.	00000
1705.	0.	90874.	0.	12775.	2.	00000
1707.	0.	82977.	0.	11193.	2.	00000
1708.	0.	87443.	0.	04491.	2.	00000
1710.	0.	80750.	0.		2.	00000
1711.	1.	10000.	0.	29250.	1.	81100
1712.	1.	05509.	0.	22557.	1.	81100
1713.	1.	10000.	0.	23000.	1.	85825
1714.	1.	03069.	0.	34817.	1.	81100
1715.	1.	10000.	0.	35500.	1.	85825
1716.	0.	98806.	0.	27023.	1.	81100
1717.	0.	97225.	0.	19126.	1.	81100
1718.	1.	01198.	0.	21249.	1.	85825
1719.	0.	90282.	0.	29521.	1.	81100
1720.	0.	96415.	0.	32798.	1.	85825
1724.	1.	10000.	0.	29250.	1.	90550
1725.	1.	05509.	0.	22557.	1.	90550
1726.	1.	10000.	0.	23000.	1.	95275
1727.	1.	03069.	0.	34817.	1.	90550
1728.	1.	10000.	0.	35500.	1.	95275
1729.	0.	98806.	0.	27023.	1.	90550
1730.	0.	97225.	0.	19126.	1.	90550
1731.	1.	01198.	0.	21249.	1.	95275
1732.	0.	90282.	0.	29521.	1.	90550
1733.	0.	96415.	0.	32798.	1.	95275
1737.	1.	10000.	0.	29250.	2.	00000
1738.	1.	05509.	0.	22557.	2.	00000
1740.	0.	98806.	0.	27023.	2.	00000
1741.	0.	97225.	0.	19126.	2.	00000
1744.	1.	30683.	0.	20683.	1.	81100
1745.	1.	22775.	0.	19126.	1.	81100
1746.	1.	26263.	0.	16263.	1.	85825
1747.	1.	29718.	0.	29521.	1.	81100
1748.	1.	35102.	0.	25102.	1.	85825
1749.	1.	21193.	0.	27023.	1.	81100
1750.	1.	14491.	0.	22557.	1.	81100
1751.	1.	18802.	0.	21249.	1.	85825
1752.	1.	16931.	0.	34817.	1.	81100
1753.	1.	23585.	0.	32798.	1.	85825
1757.	1.	30683.	0.	20683.	1.	90550
1758.	1.	22775.	0.	19126.	1.	90550
1759.	1.	26263.	0.	16263.	1.	95275
1760.	1.	29718.	0.	29521.	1.	90550
1761.	1.	35102.	0.	25102.	1.	95275
1762.	1.	21193.	0.	27023.	1.	90550
1763.	1.	14491.	0.	22557.	1.	90550
1764.	1.	18802.	0.	21249.	1.	95275
1765.	1.	16931.	0.	34817.	1.	90550
1766.	1.	23585.	0.	32798.	1.	95275
1770.	1.	30683.	0.	20683.	2.	00000
1771.	1.	22775.	0.	19126.	2.	00000
1773.	1.	21193.	0.	27023.	2.	00000
1774.	1.	14491.	0.	22557.	2.	00000
1777.	1.	39250.	0.		1.	81100
1778.	1.	32557.	0.	04491.	1.	81100
1779.	1.	33000.	0.		1.	85825

1780,	1.	44817,	0.	06931,	1.	81100
1781,	1.	45500,	0.		1.	85825
1782,	1.	37023,	0.	11193,	1.	81100
1783,	1.	29126,	0.	12775,	1.	81100
1784,	1.	31249,	0.	08802,	1.	85825
1785,	1.	39520,	0.	19718,	1.	81100
1786,	1.	42798,	0.	13585,	1.	85825
1790,	1.	39250,	0.		1.	90550
1791,	1.	32557,	0.	04491,	1.	90550
1792,	1.	33000,	0.		1.	95275
1793,	1.	44817,	0.	06931,	1.	90550
1794,	1.	45500,	0.		1.	95275
1795,	1.	37023,	0.	11193,	1.	90550
1796,	1.	29126,	0.	12775,	1.	90550
1797,	1.	31249,	0.	08802,	1.	95275
1798,	1.	39520,	0.	19718,	1.	90550
1799,	1.	42798,	0.	13585,	1.	95275
1803,	1.	39250,	0.		2.	00000
1804,	1.	32557,	0.	04491,	2.	00000
1806,	1.	37023,	0.	11193,	2.	00000
1807,	1.	29126,	0.	12775,	2.	00000
1810,	1.	54000,	0.		1.	81100
1813,	1.	62152,	0.	10634,	1.	81100
1814,	1.	62500,	0.		1.	85825
1815,	1.	51954,	0.	17398,	1.	81100
1818,	1.	59379,	0.	31697,	1.	81100
1819,	1.	61110,	0.	21211,	1.	85825
1820,	1.	46033,	0.	33580,	1.	81100
1822,	1.	56963,	0.	42058,	1.	85825
1823,	1.	54000,	0.		1.	90550
1826,	1.	62152,	0.	10634,	1.	90550
1827,	1.	62500,	0.		1.	95275
1828,	1.	51954,	0.	17398,	1.	90550
1831,	1.	59379,	0.	31697,	1.	90550
1832,	1.	61110,	0.	21211,	1.	95275
1833,	1.	46033,	0.	33580,	1.	90550
1835,	1.	56963,	0.	42058,	1.	95275
1843,	1.	87500,	0.		1.	81100
1846,	2.	37500,	0.		1.	81100
1847,	2.	12045,	0.	13906,	1.	81100
1848,	2.	12500,	0.		1.	85825
1849,	2.	61937,	0.	17177,	1.	81100
1850,	2.	62500,	0.		1.	85825
1851,	1.	85896,	0.	24474,	1.	81100
1854,	2.	35468,	0.	31000,	1.	81100
1855,	2.	08418,	0.	41449,	1.	81100
1856,	2.	10682,	0.	27737,	1.	85825
1857,	2.	57458,	0.	51202,	1.	81100
1858,	2.	60254,	0.	34263,	1.	85825
1859,	1.	81111,	0.	48529,	1.	81100
1861,	2.	29407,	0.	61470,	1.	81100
1862,	2.	05259,	0.	54999,	1.	85825
1863,	2.	53556,	0.	67940,	1.	85825
1864,	1.	87500,	0.		1.	90550
1867,	2.	37500,	0.		1.	90550
1868,	2.	12045,	0.	13906,	1.	90550
1869,	2.	12500,	0.		1.	95275
1870,	2.	61937,	0.	17177,	1.	90550
1871,	2.	62500,	0.		1.	95275
1872,	1.	85896,	0.	24474,	1.	90550
1875,	2.	35468,	0.	31000,	1.	90550
1876,	2.	08418,	0.	41449,	1.	90550

1877,	2.	10682,	0.	27737,	1.	95275
1878,	2.	57458,	0.	51202,	1.	90550
1879,	2.	60254,	0.	34263,	1.	95275
1880,	1.	81111,	0.	48529,	1.	90550
1882,	2.	29407,	0.	61470,	1.	90550
1883,	2.	05259,	0.	54999,	1.	95275
1884,	2.	53556,	0.	67940,	1.	95275
1898,	0.	21779,	0.	07394,	1.	81100
1900,	0.	33616,	0.	11412,	1.	81100
1902,	0.	27023,	0.	11193,	1.	81100
1903,	0.	20628,	0.	10172,	1.	81100
1904,	0.	21249,	0.	08802,	1.	85825
1905,	0.	31840,	0.	15700,	1.	81100
1906,	0.	32798,	0.	13585,	1.	85825
1907,	0.	25331,	0.	14625,	1.	81100
1908,	0.	19919,	0.	11500,	1.	85825
1909,	0.	30744,	0.	17750,	1.	85825
1911,	0.	21779,	0.	07394,	1.	90550
1913,	0.	33616,	0.	11412,	1.	90550
1915,	0.	27023,	0.	11193,	1.	90550
1916,	0.	20628,	0.	10172,	1.	90550
1917,	0.	21249,	0.	08802,	1.	95275
1918,	0.	31840,	0.	15700,	1.	90550
1919,	0.	32798,	0.	13585,	1.	95275
1920,	0.	25331,	0.	14625,	1.	90550
1921,	0.	19919,	0.	11500,	1.	95275
1922,	0.	30744,	0.	17750,	1.	95275
1924,	0.	21779,	0.	07394,	2.	00000
1926,	0.	27023,	0.	11193,	2.	00000
1927,	0.	20628,	0.	10172,	2.	00000
1929,	0.	25331,	0.	14625,	2.	00000
1934,	0.	59244,	0.	21222,	1.	81100
1936,	0.	84870,	0.	31065,	1.	81100
1938,	0.	45809,	0.	19446,	1.	81100
1941,	0.	71831,	0.	31166,	1.	81100
1942,	0.	58329,	0.	29329,	1.	81100
1943,	0.	58820,	0.	25306,	1.	85825
1944,	0.	84814,	0.	42989,	1.	81100
1945,	0.	84842,	0.	37027,	1.	85825
1946,	0.	44254,	0.	25550,	1.	81100
1948,	0.	71276,	0.	41151,	1.	81100
1949,	0.	57765,	0.	33351,	1.	85825
1950,	0.	84786,	0.	48951,	1.	85825
1955,	0.	59244,	0.	21222,	1.	90550
1957,	0.	84870,	0.	31065,	1.	90550
1959,	0.	45809,	0.	19446,	1.	90550
1962,	0.	71831,	0.	31166,	1.	90550
1963,	0.	58329,	0.	29329,	1.	90550
1964,	0.	58820,	0.	25306,	1.	95275
1965,	0.	84814,	0.	42989,	1.	90550
1966,	0.	84842,	0.	37027,	1.	95275
1967,	0.	44254,	0.	25550,	1.	90550
1969,	0.	71276,	0.	41151,	1.	90550
1970,	0.	57765,	0.	33351,	1.	95275
1971,	0.	84786,	0.	48951,	1.	95275
1988,	0.	96658,	0.	38655,	1.	81100
1990,	1.	09997,	0.	42501,	1.	81100
1992,	0.	90696,	0.	41062,	1.	81100
1995,	1.	03340,	0.	47328,	1.	81100
1996,	0.	97145,	0.	50370,	1.	81100
1997,	0.	96901,	0.	44512,	1.	85825
1998,	1.	09992,	0.	56502,	1.	81100

1999.	1.	09995.	0.	49501.	1.	85825
2000.	0.	91087.	0.	52589.	1.	81100
2002.	1.	03689.	0.	59865.	1.	81100
2003.	0.	97388.	0.	56227.	1.	85825
2004.	1.	09989.	0.	63502.	1.	85825
2009.	0.	96658.	0.	38655.	1.	90550
2011.	1.	09997.	0.	42501.	1.	90550
2013.	0.	90696.	0.	41062.	1.	90550
2016.	1.	03340.	0.	47328.	1.	90550
2017.	0.	97145.	0.	50370.	1.	90550
2018.	0.	96901.	0.	44512.	1.	95275
2019.	1.	09992.	0.	56502.	1.	90550
2020.	1.	09995.	0.	49501.	1.	95275
2021.	0.	91087.	0.	52589.	1.	90550
2023.	1.	03689.	0.	59865.	1.	90550
2024.	0.	97388.	0.	56227.	1.	95275
2025.	1.	09989.	0.	63502.	1.	95275
2042.	1.	23326.	0.	42287.	1.	81100
2044.	1.	35104.	0.	38328.	1.	81100
2046.	1.	16486.	0.	50948.	1.	81100
2049.	1.	29097.	0.	51961.	1.	81100
2050.	1.	22809.	0.	61265.	1.	81100
2051.	1.	23067.	0.	51776.	1.	85825
2052.	1.	35108.	0.	64780.	1.	81100
2053.	1.	35106.	0.	51554.	1.	85825
2054.	1.	16270.	0.	67128.	1.	81100
2056.	1.	28830.	0.	74380.	1.	81100
2057.	1.	22550.	0.	70754.	1.	85825
2058.	1.	35110.	0.	78006.	1.	85825
2063.	1.	23326.	0.	42287.	1.	90550
2065.	1.	35104.	0.	38328.	1.	90550
2067.	1.	16486.	0.	50948.	1.	90550
2070.	1.	29097.	0.	51961.	1.	90550
2071.	1.	22809.	0.	61265.	1.	90550
2072.	1.	23067.	0.	51776.	1.	95275
2073.	1.	35108.	0.	64780.	1.	90550
2074.	1.	35106.	0.	51554.	1.	95275
2075.	1.	16270.	0.	67128.	1.	90550
2077.	1.	28830.	0.	74380.	1.	90550
2078.	1.	22550.	0.	70754.	1.	95275
2079.	1.	35110.	0.	78006.	1.	95275
2095.	1.	53874.	0.	52239.	1.	81100
2097.	1.	42618.	0.	56870.	1.	81100
2100.	1.	45744.	0.	71867.	1.	81100
2101.	1.	50130.	0.	62186.	1.	85825
2102.	1.	37920.	0.	79628.	1.	81100
2104.	1.	40729.	0.	81250.	1.	85825
2108.	1.	53874.	0.	52239.	1.	90550
2110.	1.	42618.	0.	56870.	1.	90550
2113.	1.	45744.	0.	71867.	1.	90550
2114.	1.	50130.	0.	62186.	1.	95275
2115.	1.	37920.	0.	79628.	1.	90550
2117.	1.	40729.	0.	81250.	1.	95275
2129.	2.	01220.	0.	68313.	1.	81100
2131.	2.	48566.	0.	84387.	1.	81100
2133.	1.	73227.	0.	71753.	1.	81100
2136.	2.	19421.	0.	90887.	1.	81100
2137.	1.	90589.	0.	93980.	1.	81100
2138.	1.	96324.	0.	81320.	1.	85825
2139.	2.	35433.	1.	16093.	1.	81100
2140.	2.	42518.	1.	00454.	1.	85825
2141.	1.	62380.	0.	93750.	1.	81100

2143.	2.	05681.	1.	18750.	1.	81100
2144.	1.	84030.	1.	06250.	1.	85825
2145.	2.	27332.	1.	31250.	1.	85825
2150.	2.	01220.	0.	68313.	1.	90550
2152.	2.	48566.	0.	84387.	1.	90550
2154.	1.	73227.	0.	71753.	1.	90550
2157.	2.	19421.	0.	90887.	1.	90550
2158.	1.	90589.	0.	93980.	1.	90550
2159.	1.	96324.	0.	81320.	1.	95275
2160.	2.	35433.	1.	16093.	1.	90550
2161.	2.	42518.	1.	00454.	1.	95275
2162.	1.	62380.	0.	93750.	1.	90550
2164.	2.	05681.	1.	18750.	1.	90550
2165.	1.	84030.	1.	06250.	1.	95275
2166.	2.	27332.	1.	31250.	1.	95275
2179.	0.	31575.	0.		1.	04000
2180.	0.	25204.	0.	01652.	1.	04000
2181.	0.	24882.	0.		1.	16850
2183.	0.	37810.	0.	02478.	1.	04000
2183.	0.	37493.	0.		1.	16850
2184.	0.	31305.	0.	04121.	1.	04000
2185.	0.	24773.	0.	04928.	1.	04000
2186.	0.	24669.	0.	03248.	1.	16850
2187.	0.	37163.	0.	07392.	1.	04000
2188.	0.	37172.	0.	04894.	1.	16850
2189.	0.	30499.	0.	08172.	1.	04000
2190.	0.	24034.	0.	06440.	1.	16850
2191.	0.	36215.	0.	09704.	1.	16850
2192.	0.	30800.	0.		1.	29700
2193.	0.	24453.	0.	01603.	1.	29700
2194.	0.	24129.	0.		1.	42550
2195.	0.	37015.	0.	02426.	1.	29700
2196.	0.	36696.	0.		1.	42550
2197.	0.	30536.	0.	04020.	1.	29700
2198.	0.	24035.	0.	04781.	1.	29700
2199.	0.	23923.	0.	03149.	1.	42550
2200.	0.	36381.	0.	07236.	1.	29700
2201.	0.	36382.	0.	04790.	1.	42550
2202.	0.	29750.	0.	07972.	1.	29700
2203.	0.	23307.	0.	06245.	1.	42550
2204.	0.	35445.	0.	09498.	1.	42550
2205.	0.	30025.	0.		1.	55400
2206.	0.	23702.	0.	01554.	1.	55400
2207.	0.	23376.	0.		1.	68250
2208.	0.	36219.	0.	02375.	1.	55400
2209.	0.	35899.	0.		1.	68250
2210.	0.	29768.	0.	03919.	1.	55400
2211.	0.	23296.	0.	04633.	1.	55400
2212.	0.	23176.	0.	03051.	1.	68250
2213.	0.	35600.	0.	07080.	1.	55400
2214.	0.	35591.	0.	04686.	1.	68250
2215.	0.	29002.	0.	07771.	1.	55400
2216.	0.	22580.	0.	06050.	1.	68250
2217.	0.	34675.	0.	09291.	1.	68250
2225.	0.	46446.	0.		1.	04000
2228.	0.	63554.	0.		1.	04000
2229.	0.	55319.	0.	04917.	1.	04000
2230.	0.	55000.	0.		1.	16850
2231.	0.	72833.	0.	07393.	1.	04000
2232.	0.	72507.	0.		1.	16850
2233.	0.	46924.	0.	07334.	1.	04000
2236.	0.	65639.	0.	12110.	1.	04000

2237.	0	57791.	0.	14138.	1	04000
2238.	0	56268.	0	09620.	1	16850
2239.	0	78491.	0.	21052.	1	04000
2240.	0	75364.	0.	14346.	1	16850
2241.	0	48252.	0.	14053.	1	04000
2243.	0	71555.	0	22547.	1	04000
2244.	0.	59852.	0	18108.	1	16850
2245.	0	83489.	0.	26511.	1	16850
2246.	0	46047.	0.		1	29700
2249.	0.	63953.	0.		1	29700
2250.	0	55314.	0.	04819.	1	29700
2251.	0	55000.	0.		1	42550
2252.	0	73618.	0.	07248.	1	29700
2253.	0	73304.	0.		1	42550
2254.	0	46515.	0.	07180.	1	29700
2257.	0	65993.	0.	11856.	1	29700
2258.	0.	57730.	0	13836.	1	29700
2259.	0	56241.	0	09416.	1	42550
2260.	0	79149.	0.	20600.	1	29700
2261.	0.	76099.	0.	14042.	1	42550
2262.	0	47815.	0.	13758.	1	29700
2264.	0	71785.	0	22072.	1	29700
2265.	0.	59749.	0.	17723.	1	42550
2266.	0.	84052.	0.	25948.	1	42550
2267.	0.	45649.	0.		1	55400
2270.	0.	64351.	0.		1	55400
2271.	0	55304.	0.	04684.	1	55400
2272.	0	55000.	0.		1	68250
2273.	0	74398.	0.	07076.	1	55400
2274.	0	74101.	0		1	68250
2275.	0	46107.	0	07026.	1	55400
2278.	0.	66347.	0.	11602.	1	55400
2279.	0.	57669.	0.	13533.	1	55400
2280.	0	56213.	0	09212.	1	68250
2281.	0	79822.	0.	20171.	1	55400
2282.	0	76835.	0.	13737.	1	68250
2283.	0	47379.	0.	13462.	1	55400
2285.	0	72016.	0	21598.	1	55400
2286.	0.	59646.	0	17338.	1	68250
2287.	0	84616.	0	25384.	1	68250
2300.	0.	87673.	0.	22327.	1	04000
2301.	0.	88996.	0.	14033.	1	04000
2302.	0	92406.	0	17594.	1	16850
2305.	0	80832.	0	12081.	1	04000
2306.	0	85225.	0.	04929.	1	04000
2307.	0.	87014.	0.	09521.	1	16850
2310.	0.	78425.	0.		1	04000
2311.	0.	85118.	0		1	16850
2313.	0.	88221.	0.	21779.	1	29700
2314.	0.	89619.	0.	13609.	1	29700
2315.	0	92938.	0.	17062.	1	42550
2318.	0	81547.	0	11785.	1	29700
2319.	0.	85965.	0	04788.	1	29700
2320.	0	87709.	0	09233.	1	42550
2323.	0.	79200.	0.		1	29700
2324.	0.	85871.	0		1	42550
2326.	0	88769.	0	21231.	1	55400
2327	0	90252.	0	13200.	1	55400
2328.	0	93470.	0	16530.	1	68250
2331.	0	82262.	0	11489.	1	55400
2332.	0	86702.	0	04630.	1	55400
2333.	0	88403.	0	08946.	1	68250

2336.	0.	79975.	0.		1.	55400
2337.	0.	86624.	0.		1.	68250
2346.	1.	10000.	0	31575.	1.	04000
2347.	1.	05068.	0	24785.	1.	04000
2348.	1.	10000.	0	24882.	1.	16850
2349.	1.	02606.	0.	37167.	1.	04000
2350.	1.	10000.	0.	37493.	1.	16850
2351.	0.	97913.	0.	29168.	1.	04000
2352.	0	95955.	0	20995.	1.	04000
2353.	1.	00471.	0.	22986.	1.	16850
2354.	0.	88947.	0	31509.	1.	04000
2355.	0.	95653.	0.	34636.	1.	16850
2359.	1.	10000.	0.	30800.	1.	29700
2360.	1.	05209.	0.	24042.	1.	29700
2361.	1.	10000.	0.	24129.	1.	42550
2362.	1.	02752.	0.	36382.	1.	29700
2363.	1.	10000.	0.	36696.	1.	42550
2364.	0.	98211.	0	28453.	1.	29700
2365.	0.	96383.	0.	20375.	1.	29700
2366.	1.	00762.	0.	22292.	1.	42550
2367.	0.	89400.	0.	30851.	1.	29700
2368.	0.	95958.	0.	33900.	1.	42550
2372.	1.	10000.	0.	30025.	1.	55400
2373.	1.	05368.	0.	23301.	1.	55400
2374.	1.	10000.	0.	23376.	1.	68250
2375.	1.	02924.	0.	35602.	1.	55400
2376.	1.	10000.	0.	35899.	1.	68250
2377.	0	98509.	0.	27738.	1.	55400
2378.	0.	96796.	0.	19745.	1.	55400
2379.	1.	01053.	0.	21597.	1.	68250
2380.	0.	89829.	0.	30178.	1.	55400
2381.	0.	96262.	0.	33165.	1.	68250
2392.	1.	31016.	0.	23440.	1.	04000
2393.	1.	24034.	0.	21004.	1.	04000
2394.	1.	27594.	0.	17594.	1.	16850
2395.	1.	28487.	0.	32120.	1.	04000
2396.	1.	34328.	0.	28367.	1.	16850
2397.	1.	21094.	0.	28989.	1.	04000
2398.	1.	14928.	0.	24775.	1.	04000
2399.	1.	19521.	0.	22986.	1.	16850
2400.	1.	16341.	0.	36574.	1.	04000
2401.	1.	22700.	0.	34336.	1.	16850
2405.	1.	30905.	0.	22521.	1.	29700
2406.	1.	23610.	0.	20381.	1.	29700
2407.	1.	27062.	0.	17062.	1.	42550
2408.	1.	28890.	0.	31259.	1.	29700
2409.	1.	34637.	0.	27061.	1.	42550
2410.	1.	21127.	0.	28334.	1.	29700
2411.	1.	14788.	0.	24035.	1.	29700
2412.	1.	19233.	0.	22291.	1.	42550
2413.	1.	16547.	0.	35986.	1.	29700
2414.	1.	23054.	0.	33721.	1.	42550
2418.	1.	30794.	0.	21602.	1.	55400
2419.	1.	23200.	0.	19748.	1.	55400
2420.	1.	26530.	0.	16530.	1.	68250
2421.	1.	29293.	0.	30397.	1.	55400
2422.	1.	34947.	0.	25755.	1.	68250
2423.	1.	21160.	0.	27679.	1.	55400
2424.	1.	14630.	0	23298.	1.	55400
2425.	1.	18946.	0.	21597.	1.	68250
2426.	1.	16726.	0.	35405.	1.	55400
2427.	1.	23408.	0.	33105.	1.	68250

2438.	1	38187.	0.		1	04000
2439.	1	34775.	0	04929.	1	04000
2440.	1	34882.	0.		1	16850
2441.	1	40676.	0	07519.	1	04000
2442.	1	41847.	0		1	16850
2443.	1	36348.	0	12300.	1	04000
2444.	1	31004.	0	14034.	1	04000
2445.	1	32986.	0	09521.	1	16850
2446.	1	37189.	0	22146.	1	04000
2447.	1	39935.	0	14711.	1	16850
2451.	1	38542.	0.		1	29700
2452.	1	34035.	0	04789.	1	29700
2453.	1	34129.	0.		1	42550
2454.	1	42059.	0	07304.	1	29700
2455.	1	43308.	0.		1	42550
2456.	1	36573.	0	11931.	1	29700
2457.	1	30381.	0	13609.	1	29700
2458.	1	32291.	0	09233.	1	42550
2459.	1	37971.	0	21329.	1	29700
2460.	1	41080.	0	14261.	1	42550
2464.	1	38896.	0.		1	55400
2465.	1	33298.	0	04630.	1	55400
2466.	1	33376.	0.		1	68250
2467.	1	43438.	0	07117.	1	55400
2468.	1	44769.	0.		1	68250
2469.	1	36798.	0	11562.	1	55400
2470.	1	29748.	0	13200.	1	55400
2471.	1	31597.	0	08946.	1	68250
2472.	1	38753.	0	20512.	1	55400
2473.	1	42225.	0	13810.	1	68250
2484.	1	51808.	0		1	04000
2487.	1	62152.	0	10628.	1	04000
2488.	1	62500.	0		1	16850
2489.	1	50236.	0	18073.	1	04000
2492.	1	59378.	0	31702.	1	04000
2493.	1	61110.	0	21210.	1	16850
2494.	1	45565.	0	35552.	1	04000
2496.	1	56963.	0	42058.	1	16850
2497.	1	52539.	0.		1	29700
2500.	1	62152.	0	10630.	1	29700
2501.	1	62500.	0.		1	42550
2502.	1	50809.	0	17848.	1	29700
2505.	1	59378.	0	31700.	1	29700
2506.	1	61110.	0	21210.	1	42550
2507.	1	45721.	0	34893.	1	29700
2509.	1	56963.	0	42058.	1	42550
2510.	1	53269.	0.		1	55400
2513.	1	62152.	0	10632.	1	55400
2514.	1	62500.	0.		1	68250
2515.	1	51381.	0	17623.	1	55400
2518.	1	59378.	0	31698.	1	55400
2519.	1	61110.	0	21211.	1	68250
2520.	1	45877.	0	34237.	1	55400
2522.	1	56963.	0	42058.	1	68250
2530.	1	87500.	0		1	04000
2533.	2	37500.	0		1	04000
2534.	2	12045.	0	13906.	1	04000
2535.	2	12500.	0		1	16850
2536.	2	61937.	0	17177.	1	04000
2537.	2	62500.	0		1	16850
2538.	1	85896.	0	24474.	1	04000
2541.	2	35468.	0	31000.	1	04000

2542,	2.	08418,	0.	41449,	1.	04000
2543,	2.	10682,	0.	27737,	1.	16850
2544,	2.	57458,	0.	51202,	1.	04000
2545,	2.	60254,	0.	34263,	1.	16850
2546,	1.	81111,	0.	48529,	1.	04000
2548,	2.	29407,	0.	61470,	1.	04000
2549,	2.	05259,	0.	54999,	1.	16850
2550,	2.	53556,	0.	67940,	1.	16850
2551,	1.	87500,	0.		1.	29700
2554,	2.	37500,	0.		1.	29700
2555,	2.	12045,	0.	13906,	1.	29700
2556,	2.	12500,	0.		1.	42550
2557,	2.	61937,	0.	17177,	1.	29700
2558,	2.	62500,	0.		1.	42550
2559,	1.	85896,	0.	24474,	1.	29700
2562,	2.	35468,	0.	31000,	1.	29700
2563,	2.	08418,	0.	41449,	1.	29700
2564,	2.	10682,	0.	27737,	1.	42550
2565,	2.	57458,	0.	51202,	1.	29700
2566,	2.	60254,	0.	34263,	1.	42550
2567,	1.	81111,	0.	48529,	1.	29700
2569,	2.	29407,	0.	61470,	1.	29700
2570,	2.	05259,	0.	54999,	1.	42550
2571,	2.	53556,	0.	67940,	1.	42550
2572,	1.	87500,	0.		1.	55400
2575,	2.	37500,	0.		1.	55400
2576,	2.	12045,	0.	13906,	1.	55400
2577,	2.	12500,	0.		1.	68250
2578,	2.	61937,	0.	17177,	1.	55400
2579,	2.	62500,	0.		1.	68250
2580,	1.	85896,	0.	24474,	1.	55400
2583,	2.	35468,	0.	31000,	1.	55400
2584,	2.	08418,	0.	41449,	1.	55400
2585,	2.	10682,	0.	27737,	1.	68250
2586,	2.	57458,	0.	51202,	1.	55400
2587,	2.	60254,	0.	34263,	1.	68250
2588,	1.	81111,	0.	48529,	1.	55400
2590,	2.	29407,	0.	61470,	1.	55400
2591,	2.	05259,	0.	54999,	1.	68250
2592,	2.	53556,	0.	67940,	1.	68250
2606,	0.	23918,	0.	08119,	1.	04000
2608,	0.	35880,	0.	12180,	1.	04000
2610,	0.	29171,	0.	12083,	1.	04000
2611,	0.	22653,	0.	11171,	1.	04000
2612,	0.	22988,	0.	09522,	1.	16850
2613,	0.	33984,	0.	16759,	1.	04000
2614,	0.	34639,	0.	14348,	1.	16850
2615,	0.	27344,	0.	15787,	1.	04000
2616,	0.	21548,	0.	12441,	1.	16850
2617,	0.	32470,	0.	18746,	1.	16850
2619,	0.	23205,	0.	07877,	1.	29700
2621,	0.	35125,	0.	11924,	1.	29700
2623,	0.	28455,	0.	11787,	1.	29700
2624,	0.	21978,	0.	10838,	1.	29700
2625,	0.	22292,	0.	09234,	1.	42550
2626,	0.	33269,	0.	16406,	1.	29700
2627,	0.	33902,	0.	14043,	1.	42550
2628,	0.	26673,	0.	15400,	1.	29700
2629,	0.	20896,	0.	12065,	1.	42550
2630,	0.	31779,	0.	18348,	1.	42550
2632,	0.	22492,	0.	07636,	1.	55400
2634,	0.	34371,	0.	11668,	1.	55400

2636.	0	27739.	0	11490.	1	55400
2637.	0	21303.	0	10505.	1	55400
2638.	0	21597.	0	08946.	1	68250
2639.	0	32554.	0	16053.	1	55400
2640.	0	33166.	0	13738.	1	68250
2641.	0	26002.	0	15012.	1	55400
2642.	0	20245.	0	11688.	1	68250
2643.	0	31089.	0	17949.	1	68250
2655.	0	59545.	0	22127.	1	04000
2657.	0	83206.	0	32104.	1	04000
2659.	0	47056.	0	20229.	1	04000
2662.	0	71155.	0	31686.	1	04000
2663.	0	58596.	0	29728.	1	04000
2664.	0	59058.	0	25849.	1	16850
2665.	0	83203.	0	42726.	1	04000
2666.	0	83477.	0	37350.	1	16850
2667.	0	45412.	0	26218.	1	04000
2669.	0	70605.	0	40764.	1	04000
2670.	0	57968.	0	33468.	1	16850
2671.	0	83466.	0	48189.	1	16850
2676.	0	59444.	0	21825.	1	29700
2678.	0	83760.	0	31758.	1	29700
2680.	0	46640.	0	19968.	1	29700
2683.	0	71380.	0	31513.	1	29700
2684.	0	58507.	0	29595.	1	29700
2685.	0	58963.	0	25632.	1	42550
2686.	0	83740.	0	42814.	1	29700
2687.	0	84023.	0	37221.	1	42550
2688.	0	45026.	0	25996.	1	29700
2690.	0	70829.	0	40893.	1	29700
2691.	0	57887.	0	33421.	1	42550
2692.	0	83994.	0	48494.	1	42550
2697.	0	59344.	0	21524.	1	55400
2699.	0	84315.	0	31411.	1	55400
2701.	0	46225.	0	19707.	1	55400
2704.	0	71606.	0	31340.	1	55400
2705.	0	58418.	0	29462.	1	55400
2706.	0	58867.	0	25415.	1	68250
2707.	0	84277.	0	42901.	1	55400
2708.	0	84569.	0	37092.	1	68250
2709.	0	44640.	0	25773.	1	55400
2711.	0	71052.	0	41022.	1	55400
2712.	0	57806.	0	33374.	1	68250
2713.	0	84522.	0	48799.	1	68250
2730.	0	95782.	0	40199.	1	04000
2732.	1	10012.	0	44303.	1	04000
2734.	0	89431.	0	41710.	1	04000
2737.	1	02890.	0	48383.	1	04000
2738.	0	96345.	0	50591.	1	04000
2739.	0	96203.	0	45248.	1	16850
2740.	1	10037.	0	57126.	1	04000
2741.	1	10020.	0	50512.	1	16850
2742.	0	89914.	0	51912.	1	04000
2744.	1	03338.	0	59662.	1	04000
2745.	0	96753.	0	55860.	1	16850
2746.	1	10040.	0	63531.	1	16850
2751.	0	96074.	0	39684.	1	29700
2753.	1	10007.	0	43702.	1	29700
2755.	0	89852.	0	41494.	1	29700
2758.	1	03076.	0	48045.	1	29700
2759.	0	96611.	0	50517.	1	29700
2760.	0	96482.	0	44954.	1	42550

2761.	1.	10022.	0.	56918.	1.	29700
2762.	1.	10010.	0.	50108.	1.	42550
2763.	0.	90305.	0.	52138.	1.	29700
2765.	1.	03455.	0.	59730.	1.	29700
2766.	0.	97007.	0.	56007.	1.	42550
2767.	1.	10020.	0.	63520.	1.	42550
2772.	0.	96366.	0.	39170.	1.	55400
2774.	1.	10002.	0.	43101.	1.	55400
2776.	0.	90274.	0.	41278.	1.	55400
2779.	1.	03208.	0.	47687.	1.	55400
2780.	0.	96878.	0.	50443.	1.	55400
2781.	0.	96762.	0.	44659.	1.	68250
2782.	1.	10007.	0.	56710.	1.	55400
2783.	1.	10000.	0.	49703.	1.	68250
2784.	0.	90696.	0.	52363.	1.	55400
2786.	1.	03572.	0.	59797.	1.	55400
2787.	0.	97261.	0.	56154.	1.	68250
2788.	1.	10000.	0.	63508.	1.	68250
2805.	1.	21686.	0.	43135.	1.	04000
2807.	1.	32779.	0.	40124.	1.	04000
2809.	1.	15330.	0.	51329.	1.	04000
2812.	1.	25886.	0.	51563.	1.	04000
2813.	1.	19553.	0.	59958.	1.	04000
2814.	1.	21085.	0.	51645.	1.	16850
2815.	1.	28936.	0.	62126.	1.	04000
2816.	1.	31713.	0.	51226.	1.	16850
2817.	1.	14156.	0.	65908.	1.	04000
2819.	1.	22370.	0.	70650.	1.	04000
2820.	1.	18978.	0.	68692.	1.	16850
2821.	1.	27915.	0.	73852.	1.	16850
2826.	1.	22233.	0.	42840.	1.	29700
2828.	1.	33554.	0.	39525.	1.	29700
2830.	1.	15732.	0.	51205.	1.	29700
2833.	1.	26961.	0.	51696.	1.	29700
2834.	1.	20638.	0.	60382.	1.	29700
2835.	1.	21878.	0.	51697.	1.	42550
2836.	1.	30993.	0.	63011.	1.	29700
2837.	1.	33070.	0.	51357.	1.	42550
2838.	1.	14861.	0.	66315.	1.	29700
2840.	1.	24523.	0.	71893.	1.	29700
2841.	1.	20406.	0.	69517.	1.	42550
2842.	1.	30793.	0.	75514.	1.	42550
2847.	1.	22778.	0.	42581.	1.	55400
2849.	1.	34329.	0.	38927.	1.	55400
2851.	1.	16087.	0.	51074.	1.	55400
2854.	1.	28031.	0.	51829.	1.	55400
2855.	1.	21722.	0.	60840.	1.	55400
2856.	1.	22671.	0.	51750.	1.	68250
2857.	1.	33051.	0.	63895.	1.	55400
2858.	1.	34428.	0.	51488.	1.	68250
2859.	1.	15565.	0.	66722.	1.	55400
2861.	1.	26677.	0.	73137.	1.	55400
2862.	1.	21835.	0.	70342.	1.	68250
2863.	1.	33671.	0.	77175.	1.	68250
2879.	1.	53876.	0.	52234.	1.	04000
2881.	1.	40583.	0.	56672.	1.	04000
2884.	1.	45742.	0.	71872.	1.	04000
2885.	1.	50130.	0.	62186.	1.	16850
2886.	1.	33603.	0.	77136.	1.	04000
2888.	1.	40729.	0.	81250.	1.	16850
2892.	1.	53876.	0.	52236.	1.	29700
2894.	1.	41261.	0.	56738.	1.	29700

2897,	1	45743,	0	71870,	1	29700
2898,	1	50130,	0	62186,	1	42550
2899,	1	35042,	0	77966,	1	29700
2901,	1	40729,	0	81250,	1	42550
2905,	1	53875,	0	52238,	1	55400
2907,	1	41940,	0	56804,	1	55400
2910,	1	45744,	0	71869,	1	55400
2911,	1	50130,	0	62186,	1	68250
2912,	1	36481,	0	78797,	1	55400
2914,	1	40729,	0	81250,	1	68250
2926,	2	01220,	0	68313,	1	04000
2928,	2	48566,	0	84387,	1	04000
2930,	1	73227,	0	71753,	1	04000
2933,	2	19421,	0	90887,	1	04000
2934,	1	90589,	0	93980,	1	04000
2935,	1	96324,	0	81320,	1	16850
2936,	2	35433,	1	16093,	1	04000
2937,	2	42518,	1	00454,	1	16850
2938,	1	62380,	0	93750,	1	04000
2940,	2	05681,	1	18750,	1	04000
2941,	1	84030,	1	06250,	1	16850
2942,	2	27332,	1	31250,	1	16850
2947,	2	01220,	0	68313,	1	29700
2949,	2	48566,	0	84387,	1	29700
2951,	1	73227,	0	71753,	1	29700
2954,	2	19421,	0	90887,	1	29700
2955,	1	90589,	0	93980,	1	29700
2956,	1	96324,	0	81320,	1	42550
2957,	2	35433,	1	16093,	1	29700
2958,	2	42518,	1	00454,	1	42550
2959,	1	62380,	0	93750,	1	29700
2961,	2	05681,	1	18750,	1	29700
2962,	1	84030,	1	06250,	1	42550
2963,	2	27332,	1	31250,	1	42550
2968,	2	01220,	0	68313,	1	55400
2970,	2	48566,	0	84387,	1	55400
2972,	1	73227,	0	71753,	1	55400
2975,	2	19421,	0	90887,	1	55400
2976,	1	90589,	0	93980,	1	55400
2977,	1	96324,	0	81320,	1	68250
2978,	2	35433,	1	16093,	1	55400
2979,	2	42518,	1	00454,	1	68250
2980,	1	62380,	0	93750,	1	55400
2982,	2	05681,	1	18750,	1	55400
2983,	1	84030,	1	06250,	1	68250
2984,	2	27332,	1	31250,	1	68250
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2998,	0	27192,	0	01783,	0	36000
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3002,	0	33337,	0	04389,	0	36000
3003,	0	26727,	0	05315,	0	36000
3004,	0	26523,	0	03492,	0	53000
3005,	0	39232,	0	07802,	0	36000
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3008,	0	25841,	0	06924,	0	53000
3009,	0	38128,	0	10216,	0	53000
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3011,	0	26198,	0	01718,	0	70000
3012,	0	25756,	0	,	0	87000

3013,	0.	38862,	0	02548,	0	70000
3014,	0.	38418,	0.	,	0.	87000
3015,	0.	32321,	0.	04255,	0.	70000
3016,	0.	25750,	0.	05121,	0	70000
3017,	0.	25536,	0.	03362,	0.	87000
3018,	0.	38197,	0.	07597,	0.	70000
3019,	0.	38090,	0.	05015,	0.	87000
3020,	0.	31489,	0.	08437,	0.	70000
3021,	0	24879,	0.	06666,	0.	87000
3022,	0.	37109,	0.	09943,	0.	87000
3030,	0.	47500,	0.	,	0.	36000
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3035,	0.	55000,	0.	,	0.	53000
3036,	0.	70770,	0.	07810,	0.	36000
3037,	0.	70527,	0.	,	0	53000
3038,	0	48005,	0	07743,	0	36000
3041,	0.	64698,	0	12786,	0.	36000
3042,	0.	57939,	0.	14908,	0.	36000
3043,	0	56334,	0.	10129,	0.	53000
3044,	0.	76737,	0.	22218,	0.	36000
3045,	0.	73533,	0.	15105,	0.	53000
3046,	0.	49407,	0.	14836,	0.	36000
3048,	0.	70946,	0.	23801,	0.	36000
3049,	0.	60108,	0.	19064,	0.	53000
3050,	0.	82089,	0.	27911,	0.	53000
3051,	0.	46973,	0.	,	0	70000
3054,	0.	63027,	0.	,	0.	70000
3055,	0.	55326,	0.	05023,	0.	70000
3056,	0.	55000,	0.	,	0.	87000
3057,	0.	71799,	0.	07587,	0.	70000
3058,	0.	71582,	0.	,	0.	87000
3059,	0.	47464,	0.	07538,	0.	70000
3062,	0.	65169,	0.	12448,	0.	70000
3063,	0.	57865,	0.	14523,	0.	70000
3064,	0	56299,	0.	09857,	0.	87000
3065,	0.	77622,	0.	21647,	0	70000
3066,	0.	74509,	0.	14700,	0.	87000
3067,	0.	48829,	0.	14445,	0.	70000
3069,	0.	71251,	0.	23174,	0.	70000
3070,	0.	59972,	0.	18555,	0	87000
3071,	0.	82834,	0.	27166,	0.	87000
3084,	0	86224,	0.	23776,	0.	36000
3085,	0.	87340,	0.	15136,	0.	36000
3086,	0.	91083,	0.	18917,	0.	53000
3089,	0	78935,	0.	12868,	0.	36000
3090,	0.	83274,	0.	05321,	0	36000
3091,	0.	85285,	0	10237,	0.	53000
3094,	0.	76375,	0.	,	0.	36000
3095,	0.	83248,	0.	,	0.	53000
3097,	0	86948,	0.	23052,	0.	70000
3098,	0.	88173,	0.	14593,	0.	70000
3099,	0.	91788,	0.	18212,	0.	87000
3102,	0.	79883,	0.	12475,	0.	70000
3103,	0.	84248,	0.	05115,	0.	70000
3104,	0.	86206,	0.	09856,	0.	87000
3107,	0.	77400,	0.	,	0.	70000
3108,	0.	84244,	0.	,	0.	87000
3117,	1.	10000,	0.	33625,	0.	36000
3118,	1	04679,	0.	26726,	0.	36000
3119,	1.	10000,	0	26752,	0.	53000
3120,	1.	02190,	0.	39230,	0.	36000

3121.	1	10000.	0	39473.	0	53000
3122.	0.	97132.	0.	31065.	0	36000
3123.	0.	94864.	0.	22660.	0	36000
3124.	0.	99760.	0.	24715.	0.	53000
3125.	0.	87783.	0	33263.	0	36000
3126.	0	94895.	0.	36467.	0	53000
3130.	1.	10000.	0.	32600.	0.	70000
3131.	1.	04883.	0.	25757.	0	70000
3132.	1.	10000.	0.	25756.	0.	87000
3133.	1.	02412.	0.	38201.	0	70000
3134.	1.	10000.	0.	38418.	0.	87000
3135.	0.	97523.	0.	30117.	0	70000
3136.	0	95418.	0	21833.	0	70000
3137.	1.	00137.	0.	23794.	0	87000
3138.	0.	88353.	0	32378.	0.	70000
3139.	0.	95299.	0.	35491.	0.	87000
3150.	1.	31311.	0.	25872.	0	36000
3151.	1.	25136.	0	22660.	0	36000
3152.	1.	28917.	0	18917.	0	53000
3153.	1	27515.	0.	34356.	0	36000
3154.	1.	33558.	0.	31611.	0	53000
3155.	1.	21052.	0	30707.	0.	36000
3156.	1	15321.	0.	26726.	0	36000
3157.	1	20237.	0	24715.	0.	53000
3158.	1.	15838.	0	38119.	0	36000
3159.	1	21888.	0.	35839.	0.	53000
3163.	1.	31164.	0	24656.	0.	70000
3164.	1.	24593.	0	21827.	0	70000
3165.	1.	28212.	0.	18212.	0	87000
3166.	1.	28001.	0	33238.	0	70000
3167.	1	33968.	0.	29884.	0	87000
3168.	1.	21073.	0.	29848.	0	70000
3169.	1	15115.	0.	25752.	0	70000
3170.	1.	19856.	0.	23794.	0.	87000
3171.	1.	16089.	0.	37346.	0.	70000
3172.	1.	22311.	0.	35042.	0.	87000
3183.	1.	36726.	0.	05321.	0.	36000
3184.	1	36752.	0.			53000
3185.	1.	37003.	0.	08234.	0.	36000
3186.	1.	38217.	0.			53000
3187.	1.	35720.	0	13421.	0	36000
3188.	1.	32660.	0.	15136.	0	36000
3189.	1.	34715.	0	10237.	0.	53000
3190.	1.	35043.	0.	24517.	0	36000
3191.	1.	37040.	0.	16044.	0.	53000
3195.	1.	37719.	0.			70000
3196.	1.	35752.	0	05115.	0.	70000
3197.	1.	35756.	0.			87000
3198.	1	38840.	0	07876.	0.	70000
3199.	1.	40150.	0			87000
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3201.	1.	31827.	0	14593.	0	70000
3202.	1.	33794.	0.	09856.	0.	87000
3203.	1.	36116.	0	23332.	0	70000
3204.	1	38589.	0.	15305.	0	87000
3215.	1.	49875.	0			36000
3218.	1.	62152.	0.	10634.	0.	36000
3219.	1	62500.	0.			53000
3220.	1.	48687.	0.	18812.	0.	36000
3223.	1	59379.	0.	31697.	0.	36000
3224.	1.	61110.	0	21210.	0	53000
3225.	1.	45152.	0.	37291.	0.	36000

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3231,	1.	62152,	0.	10631,	0.	70000
3232,	1.	62500,	0.			0. 87000
3233,	1.	49462,	0.	18442,	0.	70000
3236,	1.	59378,	0.	31699,	0.	70000
3237,	1.	61110,	0.	21210,	0.	87000
3238,	1.	45358,	0.	36421,	0.	70000
3240,	1.	56963,	0.	42058,	0.	87000
3249,	0.	25804,	0.	08760,	0.	36000
3251,	0.	37877,	0.	12859,	0.	36000
3253,	0.	31065,	0.	12868,	0.	36000
3254,	0.	24440,	0.	12052,	0.	36000
3255,	0.	24716,	0.	10238,	0.	53000
3256,	0.	35876,	0.	17690,	0.	36000
3257,	0.	36468,	0.	15106,	0.	53000
3258,	0.	29120,	0.	16813,	0.	36000
3259,	0.	23168,	0.	13376,	0.	53000
3260,	0.	34184,	0.	19736,	0.	53000
3262,	0.	24861,	0.	08440,	0.	70000
3264,	0.	36879,	0.	12519,	0.	70000
3266,	0.	30118,	0.	12475,	0.	70000
3267,	0.	23547,	0.	11611,	0.	70000
3268,	0.	23796,	0.	09856,	0.	87000
3269,	0.	34930,	0.	17225,	0.	70000
3270,	0.	35494,	0.	14702,	0.	87000
3271,	0.	28232,	0.	16300,	0.	70000
3272,	0.	22306,	0.	12878,	0.	87000
3273,	0.	33271,	0.	19209,	0.	87000
3285,	0.	59809,	0.	22926,	0.	36000
3287,	0.	81738,	0.	33021,	0.	36000
3289,	0.	48156,	0.	20920,	0.	36000
3292,	0.	70559,	0.	32145,	0.	36000
3293,	0.	58831,	0.	30078,	0.	36000
3294,	0.	59295,	0.	26389,	0.	53000
3295,	0.	81783,	0.	42494,	0.	36000
3296,	0.	82121,	0.	37672,	0.	53000
3297,	0.	46432,	0.	26808,	0.	36000
3299,	0.	70014,	0.	40423,	0.	36000
3300,	0.	58169,	0.	33584,	0.	53000
3301,	0.	82154,	0.	47432,	0.	53000
3306,	0.	59677,	0.	22526,	0.	70000
3308,	0.	82472,	0.	32562,	0.	70000
3310,	0.	47606,	0.	20574,	0.	70000
3313,	0.	70857,	0.	31915,	0.	70000
3314,	0.	58713,	0.	29903,	0.	70000
3315,	0.	59169,	0.	26101,	0.	87000
3316,	0.	82493,	0.	42610,	0.	70000
3317,	0.	82843,	0.	37500,	0.	87000
3318,	0.	45922,	0.	26513,	0.	70000
3320,	0.	70310,	0.	40593,	0.	70000
3321,	0.	58062,	0.	33522,	0.	87000
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3339,	0.	95008,	0.	41566,	0.	36000
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3343,	0.	88344,	0.	42297,	0.	36000
3346,	1.	02965,	0.	49343,	0.	36000
3347,	0.	95639,	0.	50788,	0.	36000
3348,	0.	95508,	0.	45982,	0.	53000
3349,	1.	10077,	0.	57676,	0.	36000
3350,	1.	10045,	0.	51517,	0.	53000
3351,	0.	88879,	0.	51314,	0.	36000

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3354,	0.	96122,	0.	55496,	0.	53000
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3360,	0.	95395,	0.	40883,	0.	70000
3362,	1.	10019,	0.	45097,	0.	70000
3364,	0.	88887,	0.	42004,	0.	70000
3367,	1.	02755,	0.	48873,	0.	70000
3368,	0.	95992,	0.	50690,	0.	70000
3369,	0.	95878,	0.	45591,	0.	87000
3370,	1.	10057,	0.	57401,	0.	70000
3371,	1.	10032,	0.	50982,	0.	87000
3372,	0.	89397,	0.	51613,	0.	70000
3374,	1.	03183,	0.	59573,	0.	70000
3375,	0.	96458,	0.	55690,	0.	87000
3376,	1.	10063,	0.	63545,	0.	87000
3393,	1.	20369,	0.	43861,	0.	36000
3395,	1.	30702,	0.	41889,	0.	36000
3397,	1.	14389,	0.	51601,	0.	36000
3400,	1.	23065,	0.	51235,	0.	36000
3401,	1.	16773,	0.	58797,	0.	36000
3402,	1.	19217,	0.	51468,	0.	53000
3403,	1.	23452,	0.	59975,	0.	36000
3404,	1.	28310,	0.	51079,	0.	53000
3405,	1.	12293,	0.	64832,	0.	36000
3407,	1.	16672,	0.	67361,	0.	36000
3408,	1.	15428,	0.	66642,	0.	53000
3409,	1.	20766,	0.	69724,	0.	53000
3414,	1.	21028,	0.	43498,	0.	70000
3416,	1.	31740,	0.	41006,	0.	70000
3418,	1.	14872,	0.	51467,	0.	70000
3421,	1.	24467,	0.	51399,	0.	70000
3422,	1.	18163,	0.	59378,	0.	70000
3423,	1.	20199,	0.	51569,	0.	87000
3424,	1.	26194,	0.	61051,	0.	70000
3425,	1.	30127,	0.	51133,	0.	87000
3426,	1.	13225,	0.	65370,	0.	70000
3428,	1.	19521,	0.	69005,	0.	70000
3429,	1.	17318,	0.	67734,	0.	87000
3430,	1.	24573,	0.	71922,	0.	87000
3446,	1.	53874,	0.	52239,	0.	36000
3448,	1.	38766,	0.	56619,	0.	36000
3451,	1.	45744,	0.	71867,	0.	36000
3452,	1.	50130,	0.	62186,	0.	53000
3453,	1.	29796,	0.	74937,	0.	36000
3455,	1.	40729,	0.	81250,	0.	53000
3459,	1.	53875,	0.	52237,	0.	70000
3461,	1.	39674,	0.	56645,	0.	70000
3464,	1.	45743,	0.	71869,	0.	70000
3465,	1.	50130,	0.	62186,	0.	87000
3466,	1.	31699,	0.	76037,	0.	70000
3468,	1.	40729,	0.	81250,	0.	87000
3476,	1.	49875,	0.	,	0.	
3477,	1.	37003,	0.	08234,	0.	
3478,	1.	37250,	0.	,	0.	09000
3479,	1.	62152,	0.	10634,	0.	
3480,	1.	62500,	0.	,	0.	09000
3481,	1.	48687,	0.	18812,	0.	
3482,	1.	35043,	0.	24517,	0.	
3483,	1.	36265,	0.	16413,	0.	09000
3484,	1.	59379,	0.	31697,	0.	
3485,	1.	61110,	0.	21211,	0.	09000
3486,	1.	45152,	0.	37291,	0.	

3487,	1.	33341,	0.	32523,	0.	09000
3488,	1.	56963,	0.	42058,	0.	09000
3489,	1.	49875,	0.		0.	18000
3490,	1.	37053,	0.	08234,	0.	18000
3491,	1.	37250,	0.		0.	27000
3492,	1.	62152,	0.	10634,	0.	18000
3493,	1.	62500,	0.		0.	27000
3494,	1.	48687,	0.	18812,	0.	18000
3495,	1.	35043,	0.	24517,	0.	18000
3496,	1.	36265,	0.	16413,	0.	27000
3497,	1.	59379,	0.	31697,	0.	18000
3498,	1.	61110,	0.	21211,	0.	27000
3499,	1.	45152,	0.	37291,	0.	18000
3500,	1.	33341,	0.	32523,	0.	27000
3501,	1.	56963,	0.	42058,	0.	27000
3510,	1.	30702,	0.	41889,	0.	
3512,	1.	53874,	0.	52239,	0.	
3514,	1.	38766,	0.	56619,	0.	
3515,	1.	23452,	0.	59975,	0.	
3516,	1.	27402,	0.	51051,	0.	09000
3517,	1.	45744,	0.	71867,	0.	
3518,	1.	50130,	0.	62186,	0.	09000
3519,	1.	29796,	0.	74937,	0.	
3520,	1.	18862,	0.	68625,	0.	09000
3521,	1.	40729,	0.	81250,	0.	09000
3523,	1.	30702,	0.	41889,	0.	18000
3525,	1.	53874,	0.	52239,	0.	18000
3527,	1.	38766,	0.	56619,	0.	18000
3528,	1.	23452,	0.	59975,	0.	18000
3529,	1.	27402,	0.	51051,	0.	27000
3530,	1.	45744,	0.	71867,	0.	18000
3531,	1.	50130,	0.	62186,	0.	27000
3532,	1.	29796,	0.	74937,	0.	18000
3533,	1.	18862,	0.	68625,	0.	27000
3534,	1.	40729,	0.	81250,	0.	27000

*NSET, NSET=TOP, GENERATE

61, 79, 9
62, 161, 9
63, 162, 9
142, 160, 9
223, 232, 9
224, 314, 9
225, 315, 9
304, 313, 9
358, 376, 9
359, 431, 9
360, 432, 9
581, 593, 6
725, 737, 6
744, 756, 6
779, 780, 1
785, 786, 1
947, 977, 6
948, 978, 6
1073, 1190, 9
1074, 1191, 9
1358, 1362, 1
1379, 1383, 1
1394, 1395, 1
1412, 1416, 1
1433, 1437, 1
1448, 1449, 1

1466, 1470, 1
1487, 1491, 1
1502, 1514, 12
1503, 1529, 13
1527, 1536, 9
1553, 1557, 1
1574, 1578, 1
1589, 1590, 1
1907, 1909, 1
1920, 1922, 1
1929, 1946, 17
1948, 1950, 1
1967, 1971, 1
2000, 2004, 1
2021, 2025, 1
2054, 2058, 1
2075, 2079, 1
2102, 2115, 13
2104, 2117, 13
2141, 2145, 1
2162, 2166, 1
2615, 2617, 1
2628, 2630, 1
2641, 2643, 1
2667, 2671, 1
2688, 2692, 1
2709, 2713, 1
2742, 2746, 1
2763, 2767, 1
2784, 2788, 1
2817, 2821, 1
2838, 2842, 1
2859, 2863, 1
2886, 2912, 13
2888, 2914, 13
2938, 2942, 1
2959, 2963, 1
2980, 2984, 1
3258, 3260, 1
3271, 3273, 1
3297, 3301, 1
3318, 3322, 1
3351, 3355, 1
3372, 3376, 1
3405, 3409, 1
3426, 3430, 1
3453, 3455, 2
3466, 3468, 2
3519, 3521, 1
3532, 3534, 1
#NSET, NSET=BOT, GENERATE
1, 46, 9
2, 47, 9
3, 48, 9
163, 199, 9
164, 200, 9
165, 201, 9
325, 343, 9
326, 344, 9
327, 345, 9
433, 481, 6
491, 503, 6

541, 553, 6
542, 554, 6
613, 625, 6
635, 647, 6
685, 715, 6
686, 716, 6
757, 763, 6
758, 764, 6
799, 805, 6
800, 806, 6
827, 833, 6
828, 834, 6
895, 901, 6
896, 902, 6
920, 926, 6
995, 1004, 9
1022, 1040, 9
1023, 1041, 9
1201, 1203, 2
1204, 1208, 2
1222, 1226, 2
1227, 1229, 2
1243, 1245, 2
1255, 1259, 2
1268, 1272, 2
1281, 1288, 7
1291, 1295, 2
1309, 1312, 3
1314, 1316, 2
1330, 1332, 2
1591, 1595, 2
1604, 1608, 2
1617, 1624, 7
1627, 1631, 2
1645, 1748, 3
1650, 1652, 2
1688, 1689, 1
1701, 1803, 102
1777, 1781, 2
1790, 1794, 2
1810, 1814, 4
1823, 1827, 4
1843, 1864, 21
1846, 1850, 2
1867, 1871, 2
2179, 2183, 2
2192, 2196, 2
2205, 2209, 2
2225, 2267, 21
2228, 2232, 2
2249, 2253, 2
2270, 2274, 2
2310, 2336, 13
2311, 2337, 13
2438, 2442, 2
2451, 2455, 2
2464, 2468, 2
2484, 2510, 13
2488, 2514, 13
2530, 2572, 21
2533, 2537, 2
2551, 2572, 21

2554, 2558, 2
2575, 2579, 2
2997, 3001, 2
3010, 3014, 2
3030, 3051, 21
3033, 3037, 2
3054, 3058, 2
3094, 3095, 2
3107, 3108, 2
3284, 3286, 2
3195, 3199, 2
3215, 3219, 2
3228, 3232, 4
3476, 3480, 2
3489, 3493, 2
*NSET, NSET=BACK, GENERATE
716, 720, 2
754, 756, 2
1022, 1029, 1
1169, 1173, 1
2487, 2492, 5
2530, 2548, 2
2533, 2541, 8
2879, 2884, 5
2926, 2940, 2
2933, 2939, 6
*NSET, NSET=SIDE1, GENERATE
30, 54, 3
141, 162, 3
192, 207, 3
303, 315, 3
704, 720, 2
742, 786, 2
1023, 1047, 3
1170, 1191, 3
1294, 1295, 1
1302, 1303, 1
1308, 1315, 7
1316, 1323, 7
1324, 1339, 5
1543, 1551, 8
1552, 1557, 5
1564, 1572, 8
1573, 1588, 5
1849, 1850, 1
1857, 1858, 1
1863, 1884, 21
1870, 1871, 1
1878, 1879, 1
2131, 2145, 14
2139, 2140, 1
2152, 2166, 14
2160, 2161, 1
2487, 2492, 5
2536, 2537, 1
2544, 2545, 1
2550, 2592, 21
2557, 2558, 1
2565, 2566, 1
2578, 2579, 1
2586, 2587, 1
2879, 2884, 5

2928, 2942, 14
 2936, 2937, 1
 2949, 2963, 14
 2957, 2958, 1
 2970, 2984, 14
 2978, 2979, 1
 3218, 3219, 1
 3223, 3224, 1
 3227, 3240, 13
 3231, 3232, 1
 3236, 3237, 1
 3446, 3468, 22
 3451, 3452, 1
 3455, 3459, 4
 3464, 3465, 1
 3479, 3480, 1
 3484, 3485, 1
 3488, 3501, 13
 3492, 3493, 1
 3497, 3498, 1
 3512, 3521, 9
 3517, 3518, 1
 3525, 3534, 9
 3530, 3531, 1

*ELEMENT, TYPE=C3D20R, ELSET= PID1

29,	1,	2,	5,	4,	10,	11,	14,	13,	1201,	1205,	1209,	1202,	1222,	1226,	1230,
									1223,	1203,	1206,	1214,	1211		
33,	2,	3,	6,	5,	11,	12,	15,	14,	1204,	1207,	1212,	1205,	1225,	1228,	1233,
									1226,	1206,	1208,	1216,	1214		
30,	4,	5,	8,	7,	13,	14,	17,	16,	1209,	1213,	1217,	1210,	1230,	1234,	1238,
									1231,	1211,	1214,	1220,	1218		
34,	5,	6,	9,	8,	14,	15,	18,	17,	1212,	1215,	1219,	1213,	1233,	1236,	1240,
									1234,	1214,	1216,	1221,	1220		
1,	10,	11,	14,	13,	19,	20,	23,	22,	1222,	1226,	1230,	1223,	1243,	1246,	1248,
									1244,	1224,	1227,	1235,	1232		
5,	11,	12,	15,	14,	20,	21,	24,	23,	1225,	1228,	1233,	1226,	1245,	1247,	1250,
									1246,	1227,	1229,	1237,	1235		
2,	13,	14,	17,	16,	22,	23,	26,	25,	1230,	1234,	1238,	1231,	1248,	1251,	1253,
									1249,	1232,	1235,	1241,	1239		
6,	14,	15,	18,	17,	23,	24,	27,	26,	1233,	1236,	1240,	1234,	1250,	1252,	1254,
									1251,	1235,	1237,	1242,	1241		
45,	433,	28,	31,	435,	439,	37,	40,	441,	1255,	1258,	1260,	1256,	1268,	1271,	1273,
									1269,	1257,	1259,	1264,	1262		
46,	435,	31,	34,	111,	441,	40,	43,	120,	1260,	1263,	1265,	1261,	1273,	1276,	1278,
									1274,	1262,	1264,	1267,	1266		
17,	439,	37,	40,	441,	445,	46,	49,	447,	1268,	1271,	1273,	1269,	1281,	1283,	1284,
									1282,	1270,	1272,	1277,	1275		
18,	441,	40,	43,	120,	447,	49,	52,	129,	1273,	1276,	1278,	1274,	1284,	1286,	1287,
									1285,	1275,	1277,	1280,	1279		
49,	28,	29,	32,	31,	37,	38,	41,	40,	1288,	1292,	1296,	1258,	1309,	1313,	1317,
									1271,	1259,	1293,	1301,	1264		
53,	29,	30,	33,	32,	38,	39,	42,	41,	1291,	1294,	1299,	1292,	1312,	1315,	1320,
									1313,	1293,	1295,	1303,	1301		
50,	31,	32,	35,	34,	40,	41,	44,	43,	1296,	1300,	1304,	1263,	1317,	1321,	1325,
									1276,	1264,	1301,	1307,	1267		
54,	32,	33,	36,	35,	41,	42,	45,	44,	1299,	1302,	1306,	1300,	1320,	1323,	1327,
									1321,	1301,	1303,	1308,	1307		
21,	37,	38,	41,	40,	46,	47,	50,	49,	1309,	1313,	1317,	1271,	1330,	1333,	1335,
									1283,	1272,	1314,	1322,	1277		
25,	38,	39,	42,	41,	47,	48,	51,	50,	1312,	1315,	1320,	1313,	1332,	1334,	1337,
									1333,	1314,	1316,	1324,	1322		
22,	40,	41,	44,	43,	49,	50,	53,	52,	1317,	1321,	1325,	1276,	1335,	1338,	1340,

	1286, 1277, 1322, 1328, 1280				
26.	41, 42, 45, 44, 50,	51,	54,	53, 1320, 1323, 1327, 1321, 1337, 1339, 1341,	
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31.	7, 8, 59, 58, 16,	17,	68,	67, 1217, 1346, 1350, 1343, 1238, 1367, 1371,	
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35.	8, 9, 60, 59, 17,	18,	69,	68, 1219, 1348, 1353, 1346, 1240, 1369, 1374,	
	1367, 1220, 1221, 1357, 1355				
32.	58, 59, 62, 61, 67,	68,	71,	70, 1350, 1354, 1358, 1351, 1371, 1375, 1379,	
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36.	59, 60, 63, 62, 68,	69,	72,	71, 1353, 1356, 1360, 1354, 1374, 1377, 1381,	
	1375, 1355, 1357, 1362, 1361				
3.	16, 17, 68, 67, 25,	26,	77,	76, 1238, 1367, 1371, 1364, 1253, 1387, 1389,	
	1385, 1239, 1241, 1376, 1373				
7.	17, 18, 69, 68, 26,	27,	78,	77, 1240, 1369, 1374, 1367, 1254, 1388, 1391,	
	1387, 1241, 1242, 1378, 1376				
4.	67, 68, 71, 70, 76,	77,	80,	79, 1371, 1375, 1379, 1372, 1389, 1392, 1394,	
	1390, 1373, 1376, 1382, 1380				
8.	68, 69, 72, 71, 77,	78,	81,	80, 1374, 1377, 1381, 1375, 1391, 1393, 1395,	
	1392, 1376, 1378, 1383, 1382				
37.	9, 83, 86, 60, 18,	92,	95,	69, 1396, 1400, 1404, 1348, 1417, 1421, 1425,	
	1369, 1221, 1401, 1409, 1357				
39.	83, 84, 87, 86, 92,	93,	96,	95, 1399, 1402, 1407, 1400, 1420, 1423, 1428,	
	1421, 1401, 1403, 1411, 1409				
38.	60, 86, 89, 63, 69,	95,	98,	72, 1404, 1408, 1412, 1356, 1425, 1429, 1433,	
	1377, 1357, 1409, 1415, 1362				
40.	86, 87, 90, 89, 95,	96,	99,	98, 1407, 1410, 1414, 1408, 1428, 1431, 1435,	
	1429, 1409, 1411, 1416, 1415				
9.	18, 92, 95, 69, 27,	101,	104,	78, 1417, 1421, 1425, 1369, 1438, 1441, 1443,	
	1388, 1242, 1422, 1430, 1378				
11.	92, 93, 96, 95, 101,	102,	105,	104, 1420, 1423, 1428, 1421, 1440, 1442, 1445,	
	1441, 1422, 1424, 1432, 1430				
10.	69, 95, 98, 72, 78,	104,	107,	81, 1425, 1429, 1433, 1377, 1443, 1446, 1448,	
	1393, 1378, 1430, 1436, 1383				
12.	95, 96, 99, 98, 104,	105,	108,	107, 1428, 1431, 1435, 1429, 1445, 1447, 1449,	
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41.	84, 110, 113, 87, 93,	119,	122,	96, 1450, 1454, 1458, 1402, 1471, 1475, 1479,	
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43.	110, 111, 114, 113, 119,	120,	123,	122, 1453, 1456, 1461, 1454, 1474, 1477, 1482,	
	1475, 1455, 1266, 1465, 1463				
42.	87, 113, 116, 90, 96,	122,	125,	99, 1458, 1462, 1466, 1410, 1479, 1483, 1487,	
	1431, 1411, 1465, 1469, 1416				
44.	113, 114, 117, 116, 122,	123,	126,	25, 1461, 1464, 1468, 1462, 1482, 1485, 1489,	
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13.	93, 119, 122, 96, 102,	128,	131,	105, 1471, 1475, 1479, 1423, 1492, 1495, 1497,	
	1442, 1424, 1476, 1484, 1432				
15.	119, 120, 123, 122, 128,	129,	132,	131, 1474, 1477, 1482, 1475, 1494, 1496, 1499,	
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14.	95, 122, 125, 99, 105,	131,	134,	108, 1479, 1483, 1487, 1431, 1497, 1500, 1502,	
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16.	122, 123, 126, 125, 131,	132,	135,	134, 1482, 1485, 1489, 1483, 1499, 1501, 1503,	
	1500, 1484, 1486, 1491, 1490				
47.	111, 34, 139, 114, 120,	43,	148,	123, 1465, 1507, 1509, 1456, 1278, 1520, 1522,	
	1477, 1266, 1267, 1513, 1465				
48.	114, 139, 142, 117, 123,	148,	151,	126, 1509, 1512, 1514, 1464, 1522, 1525, 1527,	
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19.	120, 43, 148, 123, 129,	52,	157,	132, 1278, 1520, 1522, 1477, 1287, 1532, 1533,	
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20.	123, 148, 151, 126, 132,	157,	160,	135, 1522, 1525, 1527, 1485, 1533, 1535, 1536,	
	1501, 1486, 1526, 1529, 1491				
51.	34, 35, 140, 139, 43,	44,	149,	148, 1304, 1541, 1545, 1507, 1325, 1562, 1566,	
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55.	35, 36, 141, 140, 44,	45,	150,	149, 1306, 1543, 1548, 1541, 1327, 1564, 1569,	

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 52, 139, 140, 143, 142, 148, 149, 152, 151, 1545, 1549, 1553, 1512, 1566, 1570, 1574,
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 56, 140, 141, 144, 143, 149, 150, 153, 152, 1548, 1551, 1555, 1549, 1569, 1572, 1576,
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 97, 469, 163, 166, 471, 475, 172, 175, 477, 1591, 1594, 1596, 1592, 1604, 1607, 1609,
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 98, 471, 166, 169, 473, 477, 175, 178, 479, 1596, 1599, 1601, 1597, 1609, 1612, 1614,
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 57, 475, 172, 175, 477, 481, 1, 4, 483, 1604, 1607, 1609, 1605, 1617, 1202, 1620,
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 58, 477, 175, 178, 479, 483, 4, 7, 485, 1609, 1612, 1614, 1610, 1620, 1210, 1623,
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 101, 163, 164, 167, 166, 172, 173, 176, 175, 1624, 1628, 1632, 1594, 1645, 1649, 1653,
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 105, 164, 165, 168, 167, 173, 174, 177, 176, 1627, 1630, 1635, 1628, 1648, 1651, 1656,
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 102, 166, 167, 170, 169, 175, 176, 179, 178, 1632, 1636, 1640, 1599, 1653, 1657, 1661,
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 106, 167, 168, 171, 170, 176, 177, 180, 179, 1635, 1638, 1642, 1636, 1656, 1659, 1663,
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 61, 172, 173, 176, 175, 1, 2, 5, 4, 1645, 1649, 1653, 1607, 1201, 1205, 1209,
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 65, 173, 174, 177, 176, 2, 3, 6, 5, 1648, 1651, 1656, 1649, 1204, 1207, 1212,
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 62, 175, 176, 179, 178, 4, 5, 8, 7, 1653, 1657, 1661, 1612, 1209, 1213, 1217,
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 66, 176, 177, 180, 179, 5, 6, 9, 8, 1656, 1659, 1663, 1657, 1212, 1215, 1219,
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 110, 487, 171, 168, 489, 493, 180, 177, 495, 1678, 1638, 1683, 1679, 1691, 1659, 1696,
 1692, 1680, 1644, 1639, 1685
 109, 489, 168, 165, 491, 495, 177, 174, 497, 1683, 1630, 1688, 1684, 1696, 1651, 1701,
 1697, 1685, 1639, 1631, 1689
 70, 493, 180, 177, 495, 499, 9, 6, 501, 1691, 1659, 1696, 1692, 1704, 1215, 1707,
 1705, 1693, 1665, 1660, 1698
 69, 495, 177, 174, 497, 501, 6, 3, 503, 1696, 1651, 1701, 1697, 1707, 1207, 1710,
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 114, 505, 246, 245, 507, 511, 255, 254, 513, 1711, 1714, 1716, 1712, 1724, 1727, 1729,
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 111, 507, 245, 171, 487, 513, 254, 180, 493, 1716, 1719, 1678, 1717, 1729, 1732, 1691,
 1730, 1718, 1720, 1644, 1680
 74, 511, 255, 254, 513, 517, 84, 83, 519, 1724, 1727, 1729, 1725, 1737, 1399, 1740,
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 71, 513, 254, 180, 493, 519, 83, 9, 499, 1729, 1732, 1691, 1730, 1740, 1396, 1704,
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37, 43, 2
*ELSET, ELSET=HOL14, GENERATE
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33, 34, 1
*ELSET, ELSET=HOL16, GENERATE
1, 4, 1
17, 18, 1
29, 32, 1
45, 46, 1
*ELSET, ELSET=FSUR2, GENERATE
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74, 80, 3
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*ELSET, ELSET=HOL2, GENERATE
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74, 80, 3
83, 84, 1
97, 100, 1
109, 111, 1
114, 120, 3
123, 124, 1
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149, 151, 1
154, 160, 3
163, 164, 1
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189, 191, 1
194, 200, 3
203, 204, 1
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229, 231, 1
234, 240, 3
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274, 280, 3
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306, 312, 3
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TOP,2
BOT,2
BACK,3
*RESTART,WRITE
*MATERIAL
*ELASTIC
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0.000926,3000.0
*DENSITY
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*SPECIFIC HEAT
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*STEP, LINEAR
STRESS ANALYSIS --- PRESSURE LOAD ONLY
*STATIC
*FIELD, FILE=16, BSTEP=1( INC=10), ESTEP=1( INC=10)
*DLOAD
FSUR1, P2, 22000.0
HOL13, P3, 21500.0
HOL14, P4, 21500.0
HOL16, P6, 21500.0
FSUR2, P2, 21500.0
HOL2, P6, 21500.0
HOL3, P6, 21000.0
HOL4, P6, 21000.0
HOL5, P6, 21000.0
HOL6, P6, 20500.0
HOL7, P6, 20500.0

```

```
RSUR1, P1, 20000. 0
FLNG1, P6, 20500 0
FLNG2, P6, 20000 0
RSUR2, P1, 20000. 0
*NODE PRINT
1. 1. 1. 1. 1. 1. 1. 1
*EL PRINT
1. 1. 1. 1. 1. 1
1. 1. 1. 1. 1
1. 1. 1. 1. 1. 1. 1. 1
*NODE FILE, NSET=NALL
2. 1. 1. 1. 1. 1. 1. 1
*END STEP
*STEP, LINEAR=OLD
STRESS ANALYSIS --- PRESSURE AND TEMPERATURE LOAD
*STATIC
*TEMPERATURE, FILE=15, BSTEP=1( INC=10), ESTEP=1( INC=10)
*NODE PRINT
1. 1. 1. 1. 1. 1. 1. 1
*EL PRINT
1. 1. 1. 1. 1. 1
1. 1. 1. 1. 1
1. 1. 1. 1. 1. 1. 1. 1
*NODE FILE, NSET=NALL
2. 1. 1. 1. 1. 1. 1. 1
*END STEP
```

```
*HEADING
MACH 14 FLOW RESTRICTOR
THERMAL STRESS ANALYSIS M14FRO31
POST OUTPUT OF ELEMENT VALUES TO NODAL POINTS --- PRESSURE ONLY !!!!!
*POST OUTPUT,STEP=1
1
*NODE PRINT
1,1,1,1,1,1,1,1,1
*EL PRINT
1,1,1,1,1,1
1,1,1,1,1
1,1,1,1,1,1,1,1,1
*EL FILE
1,1,1,1,1,1
1,1,1,1,1
2,2,1,2,2,2,2,2
```

*HEADING
MACH 14 FLOW RESTRICTOR
THERMAL STRESS ANALYSIS M14FRO31
POST OUTPUT OF ELEMENT VALUES TO NODAL POINTS --- PRESSURE AND TEMPERATURE
*POST OUTPUT, STEP=2
1
*NODE PRINT
1.1.1.1.1.1.1.1
*EL PRINT
1.1.1.1.1.1
1.1.1.1.1
1.1.1.1.1.1.1.1
*EL FILE
1.1.1.1.1.1
1.1.1.1.1
2.2.1.2.2.2.2.2

APPENDIX J

ABAQUS THERMAL STRESS ANALYSIS RESULTS

ABAQUS VERSION 4-4-72
MACH 14 FLOW RESTRICTOR
STRESS ANALYSIS ---- PRESSURE LOAD ONLY

DATE 15-MAY-84
TIME 10:37:29
PAGE 1
STEP 1 INCREMENT 1

STEP 1 STRESS ANALYSIS ---- PRESSURE LOAD ONLY

STATIC ANALYSIS

USER SPECIFIED INCREMENTS OF 1.00 FOR A TIME PERIOD OF 1.00
SHALL DISPLACEMENT THEORY WILL BE USED
MAXIMUM NUMBER OF INCREMENTS ALLOWED IN THIS STEP IS 10
MAXIMUM NUMBER OF ITERATIONS ALLOWED PER INCREMENT IS 1
PRINT OF INCREMENT NUMBER, TIME, ETC., EVERY 1 INCREMENTS

INCREMENT NUMBER 1 ATTEMPT NUMBER 1
TIME INCREMENT = 1.00

TIME COMPLETED DURING THIS STEP 1.00 , TIME INCREMENT COMPLETED IS 1.00 , FRACTION OF STEP IS 1.00
TOTAL ACCUMULATED TIME IS 1.00
RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 1

ARAGUS VERSION 4-4-72
MACH 14 FLOW RESTRICTOR
STRESS ANALYSIS --- PRESSURE AND TEMPERATURE LOAD

DATE15-MAY-84
TIME10:37:29
PAGE 2
STEP 2 INCREMENT 1

STEP 2 STRESS ANALYSIS --- PRESSURE AND TEMPERATURE LOAD

STATIC ANALYSIS

USER SPECIFIED INCREMENTS OF 1.00 FOR A TIME PERIOD OF 1.00

SMALL DISPLACEMENT THEORY WILL BE USED

MAXIMUM NUMBER OF INCREMENTS ALLOWED IN THIS STEP IS 10

MAXIMUM NUMBER OF ITERATIONS ALLOWED PER INCREMENT IS 1

PRINT OF INCREMENT NUMBER, TIME, ETC., EVERY 1 INCREMENTS

INCREMENT NUMBER 1 ATTEMPT NUMBER 1
TIME INCREMENT = 1.00

TIME COMPLETED DURING THIS STEP 1.00 . TIME INCREMENT COMPLETED IS 1.00 . FRACTION OF STEP IS 1.00
TOTAL ACCUMULATED TIME IS 2.00

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 1

THE ANALYSIS HAS BEEN COMPLETED

END OF RUN

ABAGUS VERSION 4-4-75
 MACH 14 FLOW RESTRICTOR

DATE 20-AUG-84

TIME 12:34:02

PAGE 1

STEP 0 INCREMENT 0

STEP NUMBER 2 INCREMENT NUMBER 1

ELEMENT OUTPUT FOR ALL ELEMENTS

STRESSES

NODE POINT	11	22	33	12	13	23
1	-1.759E+05	-2.188E+05	-1.823E+05	267.	-3.539E+04	-1.304E+03
2	-7.763E+04	-1.411E+04	1.931E+04	-2.693E+03	5.539E+03	1.857E+03
3	-1.654E+05	-1.940E+05	-1.804E+05	-4.293E+04	2.875E+04	-523.
4	-1.737E+05	-2.295E+05	-1.857E+05	-1.921E+03	-3.708E+04	-979.
5	-5.847E+04	9.050E+03	4.274E+04	1.936E+04	837.	2.827E+03
6	-1.836E+05	-2.012E+05	-1.892E+05	-3.109E+04	2.531E+04	-2.348E+04
7	-1.695E+05	-2.131E+05	-1.788E+05	-843.	-3.238E+04	6.032E+03
8	-4.017E+04	-4.984E+03	5.213E+04	1.770E+04	-662.	-9.131E+03
9	-2.130E+05	-1.895E+05	-2.003E+05	-2.241E+04	1.090E+04	-3.251E+04
10	-1.192E+05	-2.102E+05	-1.792E+05	-2.893E+04	4.154E+03	-72.6
11	-1.950E+04	8.427E+04	5.628E+04	-1.559E+04	-837.	527.
12	-3.565E+04	-2.040E+05	-1.531E+05	5.805E+04	-4.099E+03	-203.
13	-1.013E+05	-2.158E+05	-1.729E+05	2.695E+04	4.648E+03	-590.
14	-2.901E+04	3.757E+04	3.883E+04	-1.385E+04	-1.666E+03	-2.263E+03
15	-1.491E+05	-1.669E+05	-1.960E+05	-2.638E+04	-6.278E+03	-583.
16	-7.999E+04	-1.968E+05	-1.535E+05	-6.480E+03	3.428E+03	-436.
17	-1.605E+04	3.847E+04	4.238E+04	1.273E+04	-2.356E+03	-4.557E+03
18	-1.975E+05	-1.520E+05	-2.083E+05	-4.665E+04	-8.026E+03	2.882E+03
19	-1.415E+05	-2.075E+05	-1.361E+05	1.586E+03	-6.468E+03	2.761E+03
20	-1.170E+05	-1.460E+05	-6.394E+04	316.	5.064E+03	-2.279E+03
21	-1.292E+05	-2.256E+05	-1.394E+05	-2.564E+03	1.548E+03	-5.489E+03
22	-1.316E+05	-2.223E+05	-1.334E+05	2.663E+03	-6.503E+03	-6.417E+03
23	-1.145E+05	-1.199E+05	-6.496E+04	3.229E+03	4.136E+03	7.088E+03
24	-1.531E+05	-1.976E+05	-1.278E+05	-4.531E+04	3.696E+03	-1.005E+03
25	-1.340E+05	-2.091E+05	-1.261E+05	39.7	-1.165E+04	-383.
26	-1.185E+05	-1.228E+05	-6.738E+04	-3.276E+03	3.475E+03	-6.768E+03
27	-2.061E+05	-1.601E+05	-1.464E+05	-4.028E+04	5.537E+03	-564.
28	-5.887E+04	4.776E+03	-6.468E+03	440.	-750.	-49.2

ABAGUS VERSION 4-4-75

MACH 14 FLOW RESTRICTOR

29	1	-2.278E+04	-9.140E+03	-1.448E+04	-129.	-3.635E+03	14.8
30	1	-1.851E+04	-1.272E+04	-1.911E+04	109.	219	-26.7
31	1	-5.439E+04	1.006E+04	2.408E+03	-1.329E+04	1.042E+03	2.227E+03
32	1	-2.278E+04	-1.106E+04	-1.601E+04	-68.6	-3.898E+03	-927.
33	1	-1.886E+04	-1.206E+04	-1.900E+04	451.	-52.6	-79.4
34	1	-2.490E+04	1.501E+04	2.316E+04	-2.187E+04	1.138E+03	3.278E+03
35	1	-2.194E+04	-9.062E+03	-1.603E+04	-452.	-3.382E+03	-671.
36	1	-1.870E+04	-1.336E+04	-1.956E+04	-137.	-200.	-82.6
37	1	-1.634E+04	1.359E+04	-559	888.	-2.048E+04	247.
38	1	-5.510E+03	6.279E+03	-1.564E+04	-123.	-5.235E+03	25.2
39	1	-6.416E+03	1.731E+03	-1.608E+04	66.2	107.	-93.2
40	1	-1.630E+04	2.285E+04	7.376E+03	-6.193E+03	-2.198E+04	-4.444E+03
41	1	-5.807E+03	3.924E+03	-1.689E+04	317.	-4.402E+03	-302.
42	1	-6.917E+03	2.561E+03	-1.592E+04	280.	289	-178.
43	1	5.432E+03	3.795E+04	3.022E+04	-1.495E+04	-2.169E+04	-7.270E+03
44	1	-6.446E+03	6.188E+03	-1.615E+04	366.	-3.286E+03	-139.
45	1	-7.041E+03	1.191E+03	-1.634E+04	-168.	459	-345.
46	1	-1.300E+05	-1.362E+05	-6.034E+04	1.345E+03	-1.321E+04	51.8
47	1	-1.538E+05	-1.350E+05	-5.694E+04	-135.	2.001E+03	-46.5
48	1	-1.519E+05	-1.420E+05	-5.934E+04	-31.8	459	76.7
49	1	-1.372E+05	-1.302E+05	-5.879E+04	5.127E+03	-1.187E+04	-2.610E+03
50	1	-1.541E+05	-1.369E+05	-5.756E+04	-662.	1.752E+03	158.
51	1	-1.523E+05	-1.419E+05	-5.966E+04	-38.9	210	131.
52	1	-1.422E+05	-1.261E+05	-5.442E+04	-47.9	-5.236E+03	-2.348E+03
53	1	-1.548E+05	-1.392E+05	-5.904E+04	-518.	702.	109.
54	1	-1.523E+05	-1.420E+05	-5.946E+04	-152.	-5.40	192.
55	1	-1.708E+05	-2.219E+05	-1.797E+05	-920.	-3.262E+04	-158.
56	1	-3.283E+04	-767	5.108E+04	1.230E+04	-857	1.685E+03
57	1	-6.195E+04	-8.898E+04	-4.711E+04	5.506E+03	-5.630E+03	-7.066E+03
58	1	-1.694E+05	-2.128E+05	-1.749E+05	-1.340E+03	-3.042E+04	-323.
59	1	-1.876E+04	-2.272E+03	5.637E+04	1.262E+03	-3.300E+03	312.
60	1	-1.516E+04	-7.976E+04	-1.010E+04	2.238E+03	-8.475E+03	995.
61	1	-9.522E+04	-2.004E+05	-1.607E+05	-6.848E+03	2.212E+03	-609.
62	1	-1.706E+03	4.048E+04	5.358E+04	7.923E+03	-2.895E+03	-2.900E+03
63	1	-7.231E+04	-5.532E+04	-6.380E+04	-1.814E+03	-7.844E+03	505.
64	1	-1.051E+05	-1.962E+05	-1.615E+05	-1.531E+03	1.080E+03	-157.
65	1	-8.871E+03	-3.702E+04	-4.473E+03	3.033E+03	-1.023E+04	-72.8
66	1	-1.358E+05	-2.139E+05	-1.305E+05	-453.	-1.122E+04	-282.
67	1	-1.244E+05	-1.144E+05	-5.852E+04	-3.285E+03	443.	-3.181E+03
68	1	-1.591E+05	-1.192E+05	-9.294E+04	-6.572E+03	5.439E+03	-1.530E+04
69	1	-1.402E+05	-2.134E+05	-1.289E+05	45.1	-1.238E+04	-335.
70	1	-1.280E+05	-1.118E+05	-6.113E+04	-474.	819	-275.
71	1	-1.333E+05	-1.144E+05	-6.721E+04	2.003E+03	877.	-665.
72	1	-2.322E+05	-1.898E+05	-2.117E+05	-978.	-5.550E+03	-4.028E+04
73	1	-2.312E+05	-1.935E+05	-2.160E+05	1.592E+04	-1.421E+04	-3.519E+04

ABAQUS VERSION 4.4-75

MACH 14 FLOW RESTRICTOR

86	1	-4	280E+04	-8	958E+04	-3	560E+04	8	649E+03	-6	646E+03	-4	738E+03
87	1	-2	130E+04	-7	054E+04	-1	489E+04	-3	906E+03	-5	843E+03	1	280E+03
89	1	-3	723E+03	-7	081E+04	-1	741E+03	-600	-5	345E+03	1	009E+03	
90	1	898	-4	114E+04	1	601E+04	-2	581E+03	262			1	872E+03
92	1	-2	354E+05	-1	181E+05	-2	069E+05	-3	989E+03	-1	237E+04	6	264E+03
93	1	-2	342E+05	-1	315E+05	-2	134E+05	4	070E+04	-1	214E+04	1	045E+04
95	1	-3	482E+04	-5	423E+04	-4	678E+04	1	239E+04	-1	308E+04	1	076E+03
96	1	-1	919E+04	-3	998E+04	-1	878E+04	6	144E+03	-1	722E+04	-2	616E+03
98	1	4	607E+03	-3	671E+04	4	781E+03	-794	-1	672E+04	-590		
99	1	2	369E+04	-4	561E+03	3	192E+04	-1	383E+03	-2	295E+04	-868	
101	1	-2	317E+05	-1	347E+05	-1	380E+05	-3	792E+03	11.8		4	973E+03
102	1	-2	293E+05	-1	459E+05	-1	354E+05	3	294E+04	-1	651E+03	1	608E+03
104	1	-1	545E+05	-1	238E+05	-9	224E+04	8	701E+03	-4	174E+03	-1	677E+04
105	1	-1	421E+05	-1	304E+05	-7	875E+04	1	072E+04	-1	011E+04	-1	736E+04
107	1	-1	277E+05	-1	232E+05	-6	004E+04	299	-6	361E+03	-223		
108	1	-1	333E+05	-1	314E+05	-5	584E+04	-204	-3	904E+03	598		
110	1	-2	238E+05	-1	920E+05	-2	160E+05	2	817E+04	-2	779E+04	-3	185E+04
111	1	-1	865E+05	-1	945E+05	-2	092E+05	2	014E+04	-3	172E+04	-1	536E+04
113	1	-1	182E+04	-3	824E+03	1	744E+04	-2	196E+04	-623		7	071E+03
114	1	-1	960E+04	-6	248E+03	1	744E+04	-2	308E+04	1	319E+03	6	033E+03
116	1	-2	272E+04	-2	504E+04	4	009E+03	-1	096E+03	-1	865E+03	1	194E+03
117	1	-1	363E+04	-1	614E+04	1	538E+03	2	204E+03	-4	282E+03	-933	
119	1	-1	952E+05	-1	937E+05	-2	082E+05	6	654E+04	-5	753E+03	1	247E+04
120	1	-1	385E+05	-1	764E+05	-1	914E+05	4	834E+04	-3	908E+03	9	013E+03
122	1	3	011E+03	-1	151E+04	9	049E+03	-1	170E+04	-2	103E+04	-6	954E+03
123	1	318		1	829E+04	2	240E+04	-1	509E+04	-2	294E+04	-8	503E+03
125	1	4	229E+03	8	984E+03	1	499E+04	2	701E+03	-2	264E+04	-1	727E+03
126	1	1	035E+04	9	422E+03	2	145E+03	2	574E+03	-1	589E+04	-343	
128	1	-2	024E+05	-1	690E+05	-1	335E+05	5	463E+04	-873		1	818E+03
129	1	-1	684E+05	-1	940E+05	-1	297E+05	4	281E+04	-1	032E+04	-5	823E+03
131	1	-1	418E+05	-1	332E+05	-6	927E+04	5	302E+03	-1	172E+04	-1	434E+04
132	1	-1	458E+05	-1	285E+05	-6	140E+04	3	997E+03	-7	591E+03	-6	585E+03
134	1	-1	398E+05	-1	303E+05	-5	500E+04	-1	274E+03	1	494E+03	1	947E+03
135	1	-1	474E+05	-1	359E+05	-5	844E+04	-1	842E+03	2	122E+03	1	378E+03
139	1	-2	440E+04	-1	324E+04	-4	891E+03	-8	894E+03	-4	182E+03	968	
140	1	-2	110E+04	-1	094E+04	-1	677E+04	-352	-3	308E+03	-287		
141	1	-1	863E+04	-1	275E+04	-1	935E+04	381	-108			-169	
142	1	-3	014E+04	-1	595E+04	-7	035E+03	-3.22	-4	657E+03	0.848		
143	1	-2	139E+04	-1	121E+04	-1	741E+04	20.0	-3	119E+03	-27.5		
144	1	-1	880E+04	-1	277E+04	-1	963E+04	57.7	-94.8			-25.4	
148	1	-641		9	412E+03	-3	522E+03	-6	115E+03	-1	513E+04	-4	045E+03
149	1	-7	272E+03	4	344E+03	-1	642E+04	273		-2	452E+03	-357	
150	1	-7	164E+03	1	793E+03	-1	631E+04	266		357		-102	
151	1	-9	199E+03	6	240E+03	-8	815E+03	-209		-1	317E+04	-86.9	
152	1	-8	283E+03	3	971E+03	-1	654E+04	45.8		-2	322E+03	32.8	
153	1	-7	300E+03	1	832E+03	-1	639E+04	23.7		350		-11.5	

ABAGUS VERSION 4-4-75

MACH 14 FLOW RESTRICTOR

157	1	-1.499E+05	-1.336E+05	-5.879E+04	-437	1.200E+03	-650
158	1	-1.552E+05	-1.396E+05	-5.932E+04	-164	387	29.1
159	1	-1.524E+05	-1.425E+05	-5.945E+04	55.0	-79.1	138
160	1	-1.543E+05	-1.370E+05	-6.141E+04	-719	-198	189
161	1	-1.552E+05	-1.398E+05	-5.922E+04	-17.5	323	11.1
162	1	-1.528E+05	-1.424E+05	-5.936E+04	12.4	-153	67.1
163	1	-5.973E+04	-5.791E+04	-5.525E+04	-375	-1.030E+04	98.9
164	1	-3.818E+04	-1.549E+04	-1.562E+04	793	-3.122E+03	37.6
165	1	-5.760E+04	-6.340E+04	-5.997E+04	-942	1.145E+04	-23.2
166	1	-5.904E+04	-5.716E+04	-5.292E+04	99.6	-1.029E+04	196
167	1	-3.261E+04	-1.463E+04	-1.369E+04	1.025E+04	-2.502E+03	1.646E+03
168	1	-5.760E+04	-6.171E+04	-5.559E+04	-3.186E+03	1.079E+04	-9.443E+03
169	1	-5.694E+04	-5.427E+04	-5.229E+04	325	-9.916E+03	-1.427E+03
170	1	-2.224E+04	-1.282E+03	-2.189E+04	1.413E+04	-674	4.959E+03
171	1	-6.280E+04	-5.172E+04	-5.715E+04	-3.820E+03	2.329E+03	-8.202E+03
172	1	-6.678E+04	-9.603E+04	-8.595E+04	465	-1.549E+04	1.032E+03
173	1	-5.720E+04	-4.435E+03	-2.085E+04	-442	-1.910E+03	-2.441E+03
174	1	-7.154E+04	-1.097E+05	-9.571E+04	6.914E+03	1.031E+04	-2.193E+03
175	1	-6.437E+04	-8.905E+04	-8.261E+04	2.045E+03	-1.396E+04	2.011E+03
176	1	-5.824E+04	-2.644E+04	-1.864E+04	5.437E+03	2.313E+03	2.094E+03
177	1	-6.588E+04	-8.831E+04	-7.294E+04	-1.733E+04	1.693E+04	-1.163E+04
178	1	-6.462E+04	-9.830E+04	-7.907E+04	-220	-1.241E+04	-1.520E+03
179	1	-9.362E+04	-8.649E+04	-9.667E+04	1.594E+04	-1.253E+03	1.125E+04
180	1	-3.422E+04	-1.143E+04	-1.087E+04	-2.079E+04	3.448E+03	-2.075E+04
191	1	-2.298E+04	-9.041E+03	-1.358E+04	166	3.086E+03	31.2
192	1	-1.810E+04	-1.216E+04	-1.864E+04	-173	-1.857E+03	0.682
193	1	-3.339E+04	-9.879E+03	-8.478E+03	85.9	141	-8.26
194	1	-2.284E+04	-9.624E+03	-1.411E+04	-7.942E+03	3.357E+03	2.302E+03
195	1	-1.841E+04	-1.214E+04	-1.879E+04	-402	-2.070E+03	-159
196	1	-2.293E+04	-1.309E+03	-4.910E+03	262	27.2	-80.5
197	1	-2.160E+04	-9.337E+03	-1.441E+04	-1.377E+04	2.878E+03	2.652E+03
198	1	-1.819E+04	-1.262E+04	-1.907E+04	-975	-2.024E+03	-181
199	1	-4.567E+04	-4.988E+03	-1.247E+04	-167	8.95	-137
200	1	-2.233E+04	-8.996E+03	-1.391E+04	-8.77	1.010E+04	-153
201	1	-4.082E+04	-8.702E+03	-4.241E+03	-133	-3.313E+03	45.9
202	1	-2.229E+04	-1.002E+04	-1.486E+04	105	-255	-43.3
203	1	-1.871E+04	-1.215E+04	-1.871E+04	-216	-3.285E+03	-443
204	1	-2.725E+04	-4.754E+03	-5.095E+03	275	305	-101
205	1	-2.157E+04	-9.534E+03	-1.564E+04	-597	-2.711E+03	-589
206	1	-1.848E+04	-1.277E+04	-1.896E+04	159	159	-71.6
207	1	-5.693E+04	-5.615E+04	-5.311E+04	753	-8.650E+03	774
221	1	-1.747E+04	-4.958E+03	-2.528E+04	9.142E+03	-1.425E+03	-339
222	1	-3.685E+03	-3.976E+04	-1.684E+04	5.541E+03	-5.028E+03	-7.882E+03
223	1	-5.409E+04	-5.201E+04	-4.937E+04	-65.8	-8.862E+03	-84.8

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224	1	-1.328E+04	-1.261E+04	2.215E+04	718	-1.575E+03	8.14
225	1	-1.466E+04	-3.290E+04	-4.035E+03	-5.03	-5.286E+03	414.
229	1	-6.229E+04	-8.983E+04	-7.728E+04	899	-1.083E+04	139
230	1	-2.302E+04	456	3.541E+04	1.022E+04	-979	2.651E+03
231	1	-2.751E+04	-5.453E+04	-4.063E+04	2.938E+03	-9.770E+03	4.724E+03
232	1	-6.154E+04	-8.816E+04	-7.597E+04	36.7	-1.007E+04	596
233	1	-1.800E+04	-8.249E+03	3.673E+04	697	-2.454E+03	-451
234	1	-6.578E+03	-5.225E+04	-1.455E+03	1.008E+03	-6.185E+03	701
243	1	-6.332E+04	-5.816E+04	-6.179E+04	-1.255E+04	-8.716E+03	-2.371E+04
246	1	-4.010E+04	-5.426E+04	-7.272E+04	2.315E+04	-4.750E+03	-7.693E+03
248	1	1.004E+03	-1.812E+04	-2.332E+04	2.324E+03	-5.636E+03	-5.960E+03
249	1	9.628E+03	-2.150E+04	-1.373E+04	281	-1.044E+03	1.260E+03
251	1	1.216E+04	-2.449E+04	-3.950E+03	579	-1.072E+03	1.875E+03
252	1	-331	-2.231E+04	-1.741E+03	-2.353E+03	600	582
254	1	-7.969E+04	-7.684E+04	-1.022E+05	1.216E+04	4.373E+03	-8.572E+03
255	1	-8.684E+04	-6.484E+04	-9.578E+04	7.819E+03	-8.522E+03	-1.611E+04
257	1	-2.278E+04	-5.123E+04	-3.174E+04	8.308E+03	-4.597E+03	1.700E+04
258	1	-5.235E+03	-4.261E+04	-1.452E+04	-2.791E+03	5.647E+03	1.615E+04
260	1	1.344E+04	-4.248E+04	6.484E+03	-2.131E+03	552	848
261	1	-966	-2.914E+04	5.516E+03	-509	1.969E+03	1.631E+03
272	1	-5.929E+04	-2.758E+04	-7.247E+04	-1.162E+04	-8.113E+03	-6.106E+03
273	1	-4.546E+04	-7.160E+04	-7.614E+04	1.781E+04	-1.100E+04	-3.330E+03
275	1	-842	-1.729E+04	-1.023E+04	-8.988E+03	717	2.775E+03
276	1	-1.474E+04	-2.932E+03	-8.248E+03	-1.101E+04	2.244E+03	3.592E+03
278	1	-1.401E+04	-1.913E+04	-3.629E+03	1.716E+03	559	-337
279	1	-1.628E+04	-1.349E+04	-1.999E+03	-2.159E+03	-874	-17.5
281	1	-8.723E+04	-7.034E+04	-1.036E+05	1.977E+04	-1.410E+04	-1.150E+04
282	1	-6.906E+04	-7.427E+04	-1.028E+05	1.374E+04	-1.195E+04	-2.337E+03
284	1	-8.044E+03	-2.320E+04	-2.635E+03	1.587E+04	8.224E+03	1.595E+04
285	1	-1.640E+04	-7.012E+03	6.819E+03	-1.438E+04	9.170E+03	9.568E+03
287	1	-1.610E+04	-1.892E+04	389	556	-339	686
288	1	-1.591E+04	-1.586E+04	-3.948E+03	1.340E+03	-4.181E+03	1.035E+03
301	1	-2.240E+04	-1.150E+04	-8.112E+03	-6.199E+03	-1.492E+03	1.620E+03
302	1	-2.077E+04	-1.083E+04	-1.584E+04	-455	-2.010E+03	-163
303	1	-1.779E+04	-1.223E+04	-1.865E+04	157	178	-91.0
304	1	-2.128E+04	-1.277E+04	-8.317E+03	64.9	-1.933E+03	94.2
305	1	-2.048E+04	-1.067E+04	-1.595E+04	-128	-1.989E+03	-20.0
306	1	-1.783E+04	-1.254E+04	-1.895E+04	36.8	65.3	-13.2
310	1	-2.255E+04	-1.211E+04	-6.740E+03	-7.675E+03	-3.396E+03	1.572E+03
311	1	-2.103E+04	-1.062E+04	-1.613E+04	-374	-2.665E+03	-172
312	1	-1.861E+04	-1.275E+04	-1.929E+04	185	-131	-195
313	1	-2.595E+04	-1.435E+04	-8.216E+03	-182	-2.002E+03	-553
314	1	-2.116E+04	-1.103E+04	-1.668E+04	-14.5	-2.564E+03	89.8
315	1	-1.846E+04	-1.270E+04	-1.927E+04	28.7	319	-88.9
325	1	-1.327E+05	-1.491E+05	-7.049E+04	1.154E+03	1.534E+04	197
326	1	-1.551E+05	-1.189E+05	-5.651E+04	-2.233E+03	-2.082E+03	-1.512E+03

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327	1	-1.573E+05	-1.982E+05	-7.808E+04	-9.778E+03	-1.440E+04	5.607E+03
328	1	-1.329E+05	-1.436E+05	-6.846E+04	2.418E+03	-1.516E+04	-439
329	1	-1.385E+05	-1.434E+05	-5.777E+04	9.240E+03	-1.748E+03	3.465E+03
330	1	-1.294E+05	-1.147E+05	-6.759E+04	-3.412E+04	-9.657E+03	8.831E+03
331	1	-1.262E+05	-1.436E+05	-6.593E+04	4.336E+03	-1.512E+04	-152
332	1	-1.378E+05	-1.349E+05	-5.750E+04	4.736E+03	-2.692E+03	3.996E+03
333	1	-1.536E+05	-1.101E+05	-7.182E+04	-2.198E+03	-8.409E+03	1.586E+04
334	1	-4.759E+04	-4.429E+04	-2.949E+04	1.620E+03	1.247E+04	-181
335	1	-3.536E+04	4.047E+04	3.230E+04	-2.806E+03	5.305E+03	505
336	1	-8.181E+04	-1.059E+05	-6.903E+04	-5.640E+03	-2.635E+03	-1.074E+03
337	1	-4.800E+04	-3.768E+04	-2.706E+04	344	1.264E+04	367
338	1	-1.333E+04	9.719E+03	2.798E+04	1.938E+04	3.983E+03	1.476E+03
339	1	-2.719E+04	-1.077E+04	-1.962E+04	-2.864E+04	-3.173E+03	4.253E+03
340	1	-4.289E+04	-3.308E+04	-2.293E+04	2.221E+03	1.299E+04	308
341	1	4.211E+03	1.634E+04	3.129E+04	5.072E+03	1.417E+03	4.172E+03
342	1	-5.004E+04	-1.436E+04	-3.113E+04	4.284E+03	1.291E+03	7.206E+03
343	1	-6.267E+04	-5.033E+04	-4.534E+04	734	939	-145
344	1	-5.379E+04	2.156E+04	2.521E+04	-1.177E+03	4.204E+03	308
345	1	-7.261E+04	-7.476E+04	-5.818E+04	-3.398E+03	5.771E+03	-3.465E+03
346	1	-6.270E+04	-4.703E+04	-4.362E+04	-288	1.083E+03	-246
347	1	-4.187E+04	4.196E+03	2.486E+04	1.689E+04	1.707E+03	-2.610E+03
348	1	-4.927E+04	-3.771E+04	-3.933E+04	-1.198E+04	-7.976E+03	8.538E+03
349	1	-5.984E+04	-4.245E+04	-3.895E+04	677	648	-414
350	1	-2.550E+04	-3.078E+03	2.751E+04	1.291E+04	-944	-189
351	1	-5.532E+04	-4.371E+04	-4.723E+04	3.066E+03	5.562E+03	9.796E+03
355	1	-1.269E+05	-1.491E+05	-6.695E+04	2.768E+03	1.485E+04	-37.8
356	1	-1.421E+05	-1.289E+05	-5.740E+04	-3.138E+03	-1.251E+03	2.168E+03
357	1	-1.424E+05	-1.243E+05	-6.294E+04	2.371E+03	-3.174E+03	9.070E+03
358	1	-1.259E+05	-1.493E+05	-6.621E+04	60.6	1.477E+04	53.7
359	1	-1.434E+05	-1.266E+05	-5.717E+04	0.359	-1.269E+03	-11.8
360	1	-1.374E+05	-1.315E+05	-6.127E+04	580	-848	-100
364	1	-4.149E+04	-3.852E+04	-2.408E+04	1.661E+03	1.329E+04	108
365	1	3.897E+03	2.140E+04	2.832E+04	2.016E+03	2.486E+03	3.137E+03
366	1	-2.823E+03	-6.815E+03	5.306E+03	7.831E+03	4.081E+03	6.511E+03
367	1	-3.980E+04	-3.779E+04	-2.292E+04	62.0	1.332E+04	144
368	1	4.471E+03	2.268E+04	2.657E+04	121	2.411E+03	133
369	1	1.612E+04	-7.592E+03	1.803E+04	378	7.275E+03	255
373	1	-5.933E+04	-4.576E+04	-3.943E+04	856	104	-447
374	1	-2.317E+04	-8.439E+03	2.555E+04	7.268E+03	337	731
375	1	-8.463E+03	-3.977E+04	-2.200E+03	8.819E+03	7.695E+03	3.093E+03
376	1	-5.779E+04	-4.429E+04	-3.753E+04	79.3	-107	59.4
377	1	-1.966E+04	-1.181E+04	2.510E+04	273	1.408E+03	106
378	1	6.354E+03	-4.562E+04	8.729E+03	261	8.570E+03	-134
380	1	-1.471E+05	-1.270E+05	-7.041E+04	4.458E+03	-382	1.660E+04
381	1	-1.564E+05	-1.299E+05	-7.224E+04	6.151E+03	7.818E+03	1.523E+04
383	1	-1.383E+05	-1.368E+05	-6.155E+04	2.873E+03	2.052E+03	7.031E+03

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384	1	-1.522E+05	-1.426E+05	-6.298E+04	1.112E+03	6.800E+03	5.918E+03
386	1	-1.391E+05	-1.414E+05	-6.034E+04	-95.0	2.615E+03	-455
387	1	-1.604E+05	-1.516E+05	-6.523E+04	-255	8.334E+03	-1.160E+03
389	1	-4.104E+04	-4.133E+04	-3.662E+04	1.005E+04	8.392E+03	9.061E+03
390	1	-4.164E+04	-5.012E+04	-4.588E+04	3.217E+03	1.557E+04	1.164E+04
392	1	8.834E+03	-2.179E+04	5.456E+03	2.029E+03	1.243E+04	6.952E+03
393	1	1.667E+04	-1.187E+04	5.092E+03	-6.871E+03	1.784E+04	8.385E+03
395	1	1.811E+04	-1.433E+04	1.166E+04	-800	1.588E+04	341
396	1	4.918E+04	-2.322E+03	-3.586E+03	-101	1.596E+04	302
398	1	-5.044E+04	-6.624E+04	-5.679E+04	1.032E+04	9.506E+03	3.612E+03
399	1	1.241E+03	-3.052E+04	-431	3.791E+03	7.224E+03	-1.277E+03
401	1	-1.578E+03	-4.151E+04	7.722E+03	-7.771E+03	8.231E+03	-365
402	1	3.960E+03	-4.670E+04	7.343E+03	-870	8.133E+03	-116
404	1	-1.174E+04	-3.524E+04	6.394E+03	-370	8.619E+03	134
407	1	-1.757E+05	-1.280E+05	-7.423E+04	1.361E+04	1.681E+04	1.381E+04
408	1	-1.766E+05	-1.870E+05	-1.557E+05	1.939E+04	4.137E+04	5.848E+03
410	1	-1.677E+05	-1.477E+05	-4.088E+04	1.147E+03	1.381E+04	4.045E+03
411	1	-1.760E+05	-1.958E+05	-1.464E+05	-865	3.063E+04	4.949E+03
413	1	-1.749E+05	-1.640E+05	-7.440E+04	-530	1.595E+04	-2.154E+03
414	1	-1.731E+05	-1.984E+05	-1.447E+05	-1.028E+03	2.614E+04	72.0
416	1	-5.794E+04	-5.653E+04	-7.136E+04	3.180E+03	1.406E+04	1.209E+04
417	1	-4.024E+04	-2.045E+04	-3.558E+04	-522	3.861E+03	1.277E+04
419	1	1.950E+04	-2.945E+03	578	-1.104E+04	1.249E+04	1.071E+04
420	1	1.167E+04	1.503E+04	1.668E+04	-9.881E+03	2.295E+03	1.061E+04
422	1	1.660E+04	4.289E+03	-6.850E+03	809	6.537E+03	467
423	1	1.062E+04	9.585E+03	7.305E+03	264	-1.412E+03	160
425	1	-7.101E+04	-6.901E+04	-7.172E+04	1.600E+03	6.309E+03	-1.224E+03
426	1	-6.242E+04	-4.947E+04	-5.019E+04	-2.554E+03	3.799E+03	-2.083E+03
428	1	-1.192E+04	-3.325E+04	4.980E+03	-1.368E+04	8.239E+03	-764
429	1	-2.124E+04	1.948E+04	1.118E+04	-1.362E+04	5.305E+03	-457
431	1	-2.153E+04	-3.107E+04	841	876	9.307E+03	207
432	1	-2.032E+04	-2.439E+04	6.137E+03	363	6.823E+03	194
433	1	-1.856E+05	-2.350E+05	-2.303E+05	-795	-4.413E+04	8.024E-02
435	1	-1.817E+05	-2.275E+05	-2.232E+05	1.542E+04	-4.418E+04	-1.034E+04
439	1	-1.145E+05	-2.317E+05	-2.129E+05	-942	4.260E+03	-296
441	1	-1.084E+05	-2.130E+05	-2.014E+05	3.235E+04	3.467E+03	5.007E+03
445	1	-1.374E+05	-2.331E+05	-1.413E+05	-1.171E+03	-2.895E+03	222
447	1	-1.402E+05	-2.214E+05	-1.345E+05	2.764E+04	-3.129E+03	434
469	1	-1.311E+05	-2.581E+05	-2.210E+05	307	-2.606E+03	-75.1
471	1	-1.324E+05	-2.579E+05	-2.219E+05	-842	-1.969E+03	262
473	1	-1.334E+05	-2.593E+05	-2.216E+05	205	-1.817E+03	960
475	1	-1.701E+05	-2.444E+05	-1.885E+05	279	-2.238E+04	-553
477	1	-1.613E+05	-2.740E+05	-1.886E+05	4.065E+03	-2.498E+04	-302
479	1	-1.427E+05	-2.691E+05	-1.892E+05	-328	-2.346E+04	915
481	1	-1.506E+05	-2.273E+05	-1.271E+05	859	3.066E+04	-28.4

MACH 14 FLOW RESTRICTOR

483	1	-1.421E+05	-2.162E+05	-1.210E+05	2.557E+03	3.060E+04	1.382E+03
485	1	-1.450E+05	-2.262E+05	-1.214E+05	-1.877E+03	3.030E+04	-3.659E+03
487	1	-2.050E+05	-1.891E+05	-2.183E+05	-4.316E+04	-1.890E+03	-1.225E+04
489	1	-1.985E+05	-2.524E+05	-2.183E+05	-5.575E+04	2.526E+03	-1.788E+03
491	1	-1.227E+05	-2.246E+05	-2.156E+05	-785	3.234E+03	458
493	1	-2.249E+05	-2.105E+05	-1.775E+05	-5.119E+04	2.023E+04	-3.792E+03
495	1	-1.841E+05	-2.251E+05	-1.705E+05	-5.089E+04	1.819E+04	-1.922E+04
497	1	-1.578E+05	-2.975E+05	-2.008E+05	-9.839E+03	2.440E+04	1.117E+03
499	1	-1.923E+05	-2.435E+05	-1.374E+05	-2.999E+04	-1.360E+04	2.049E+04
501	1	-1.609E+05	-1.800E+05	-1.282E+05	7.741E+03	-2.653E+04	2.905E+04
503	1	-8.316E+04	-1.159E+05	-1.223E+05	7.879E+04	-1.634E+04	2.001E+04
505	1	-2.481E+05	-1.360E+05	-2.038E+05	3.001E+04	-1.936E+03	-777
507	1	-2.557E+05	-1.792E+05	-2.152E+05	-4.147E+04	1.312E+03	-1.513E+04
511	1	-2.757E+05	-1.967E+05	-1.972E+05	2.340E+04	-8.447E+03	-1.353E+04
513	1	-2.499E+05	-1.292E+05	-1.646E+05	-1.022E+04	4.488E+03	-1.809E+04
517	1	-2.205E+05	-1.830E+05	-1.271E+05	4.071E+03	5.859E+03	1.571E+04
519	1	-2.071E+05	-1.351E+05	-1.169E+05	-1.544E+04	937	4.877E+04
523	1	-1.658E+05	-2.069E+05	-2.091E+05	5.281E+04	-3.433E+03	-595
525	1	-2.288E+05	-1.697E+05	-2.136E+05	6.096E+04	-3.845E+03	-5.866E+03
529	1	-2.058E+05	-2.366E+05	-1.955E+05	4.921E+04	-2.322E+04	-8.613E+03
531	1	-2.334E+05	-1.899E+05	-1.849E+05	4.980E+04	-1.782E+04	-2.036E+04
535	1	-1.614E+05	-1.827E+05	-1.088E+05	3.322E+04	3.304E+04	2.052E+04
537	1	-1.819E+05	-1.524E+05	-1.151E+05	3.662E+04	2.399E+04	3.772E+04
541	1	-1.288E+05	-2.623E+05	-2.287E+05	1.344E+03	-2.871E+03	-70.7
542	1	-5.803E+04	-5.889E+04	-7.895E+04	-670	-1.474E+04	121
543	1	-1.459E+05	-2.496E+05	-2.277E+05	4.116E+04	-3.057E+03	-651
544	1	-5.466E+04	-5.991E+04	-7.497E+04	1.859E+03	-1.386E+04	-4.591E+03
547	1	-1.684E+05	-2.704E+05	-1.905E+05	481	-2.877E+04	-347
548	1	-6.130E+04	-9.371E+04	-1.093E+05	346	-2.082E+04	154
549	1	-1.761E+05	-2.589E+05	-1.888E+05	3.125E+04	-2.985E+04	-5.592E+03
550	1	-6.251E+04	-9.255E+04	-1.104E+05	1.088E+04	-1.848E+04	-3.454E+03
553	1	-1.244E+05	-2.047E+05	-1.100E+05	1.441E+03	4.225E+04	227
555	1	-1.412E+05	-1.946E+05	-1.098E+05	1.965E+04	4.092E+04	1.254E+04
579	1	-1.314E+05	-2.583E+05	-2.295E+05	-573	-2.605E+03	-114
581	1	-1.346E+05	-2.614E+05	-2.229E+05	-323	-1.691E+03	111
585	1	-1.658E+05	-2.750E+05	-1.916E+05	969	-2.360E+04	-109
587	1	-1.642E+05	-2.756E+05	-1.914E+05	-441	-2.423E+04	-218
591	1	-1.438E+05	-2.197E+05	-1.183E+05	-3.574E+03	3.032E+04	461
593	1	-1.531E+05	-2.267E+05	-1.222E+05	-163	3.032E+04	233
613	1	-1.403E+05	-2.392E+05	-1.391E+05	-866	3.157E+03	11.5
615	1	-1.394E+05	-2.453E+05	-1.410E+05	1.461E+03	3.546E+03	145
617	1	-1.408E+05	-2.471E+05	-1.418E+05	-254	3.479E+03	-426
619	1	-1.325E+05	-2.539E+05	-2.221E+05	-1.117E+03	4.154E+03	162
621	1	-1.312E+05	-2.594E+05	-2.236E+05	1.208E+03	4.034E+03	-19.1
623	1	-1.335E+05	-2.615E+05	-2.250E+05	-844	4.107E+03	24.4
625	1	-1.337E+05	-2.504E+05	-2.295E+05	-404	3.514E+03	159

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627	1	-1.327E+05	-2.528E+05	-2.301E+05	799	3.751E+03	-83.7
629	1	-1.344E+05	-2.550E+05	-2.315E+05	-120	3.624E+03	-82.0
631	1	-2.080E+05	-1.608E+05	-1.334E+05	-4.231E+04	-4.221E+03	-642
633	1	-1.632E+05	-1.616E+05	-1.945E+05	-2.960E+04	-4.434E+03	4.288E+03
635	1	-1.245E+05	-8.610E+04	-5.019E+04	1.854E+04	-1.048E+04	6.782E+04
637	1	-2.070E+05	-1.528E+05	-2.264E+05	-5.640E+04	3.945E+03	5.445E+03
639	1	-1.467E+05	-1.610E+05	-1.869E+05	-3.958E+04	-470	5.181E+03
641	1	-1.131E+05	-1.039E+05	-1.629E+05	-2.078E+04	-613	-5.321E+03
643	1	-2.092E+05	-1.570E+05	-2.286E+05	-5.929E+04	3.660E+03	9.372E+03
645	1	-1.171E+05	-1.919E+05	-2.148E+05	-4.935E+04	1.777E+03	2.459E+04
647	1	-1.171E+05	-1.846E+05	-2.033E+05	7.445E+03	4.235E+03	3.249E+04
649	1	-2.549E+05	-1.470E+05	-1.409E+05	2.997E+04	4.950E+03	1.219E+03
651	1	-2.524E+05	-1.409E+05	-1.430E+05	-1.393E+04	-1.074E+03	4.234E+03
653	1	-2.444E+05	-1.410E+05	-2.414E+05	3.389E+04	1.333E+04	1.591E+03
657	1	-2.638E+05	-1.263E+05	-2.324E+05	-1.488E+04	1.060E+04	5.003E+03
661	1	-2.597E+05	-1.412E+05	-2.432E+05	3.185E+04	7.201E+03	2.340E+03
663	1	-2.534E+05	-1.257E+05	-2.342E+05	-1.420E+04	5.757E+03	5.215E+03
667	1	-1.845E+05	-1.974E+05	-1.379E+05	4.470E+04	2.644E+03	2.644E+03
669	1	-2.264E+05	-1.776E+05	-1.505E+05	5.438E+04	1.073E+04	4.171E+03
673	1	-1.784E+05	-2.108E+05	-2.542E+05	5.903E+04	1.198E+03	8.459E+03
675	1	-2.273E+05	-1.746E+05	-2.505E+05	6.593E+04	8.210E+03	-1.059E+03
679	1	-1.847E+05	-2.188E+05	-2.475E+05	6.718E+04	8.145E+03	-4.435E+03
681	1	-2.290E+05	-1.814E+05	-2.444E+05	6.601E+04	7.909E+03	-433
685	1	-1.798E+05	-2.174E+05	-1.988E+05	1.124E+04	7.808E+03	-4.284E+04
687	1	-1.424E+05	-1.990E+05	-1.676E+05	2.427E+04	7.356E+03	-1.670E+04
691	1	-1.634E+05	-2.455E+05	-2.443E+05	3.717E+04	1.918E+04	-2.800E+04
694	1	-9.615E+04	-1.492E+05	-1.714E+05	-6.313E+03	-1.901E+03	2.974E+04
698	1	-1.527E+05	-2.179E+05	-2.363E+05	-3.157E+03	-1.161E+03	2.463E+04
699	1	-9.511E+04	-1.044E+05	-1.208E+05	2.912E+04	-5.995E+03	2.601E+04
697	1	-1.388E+05	-2.497E+05	-2.422E+05	2.939E+04	2.004E+03	2.672E+04
698	1	-9.012E+04	-1.336E+05	-1.363E+05	-1.855E+03	1.852E+03	4.234E+03
699	1	-1.514E+05	-2.562E+05	-2.509E+05	8.464E+03	4.935E+03	1.159E+04
700	1	-8.638E+04	-1.011E+05	-1.130E+05	3.805E+04	5.790E+03	-7.553E+03
704	1	-1.167E+05	-1.226E+05	-2.539E+04	1.504E+04	6.654E+03	3.870E+03
706	1	-7.371E+04	-7.546E+04	-1.443E+03	-2.979E+03	-6.894E+03	3.684E+03
708	1	-6.434E+04	-7.040E+04	1.442E+03	-1.030E+03	-9.215E+03	1.169E+03
710	1	-5.448E+03	3.480E+04	3.789E+04	1.804E+04	-4.068E+03	-3.171E+03
712	1	-7.694E+03	1.511E+04	1.824E+03	-7.071E+03	4.421E+03	1.118E+04
714	1	-3.557E+04	2.044E+04	1.824E+03	-4.868E+03	-1.184E+03	1.389E+04
716	1	-4.083E+04	7.801E+03	3.785E+03	-7.348E+03	2.332E+04	-690
718	1	-2.969E+04	-9.178E+03	2.246E+03	-9.735E+03	2.223E+04	-3.458E+03
720	1	-1.404E+05	-2.464E+05	-1.414E+05	1.031E+03	3.289E+03	-2.203E+03
723	1	-1.393E+05	-2.471E+05	-1.415E+05	13.6	3.428E+03	-142
725	1	-1.333E+05	-2.600E+05	-2.245E+05	697	3.428E+03	-175
729	1	-1.333E+05	-2.600E+05	-2.245E+05	697	3.891E+03	67.8

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731	1	-1.326E+05	-2.607E+05	-2.245E+05	-239	4.011E+03	-66.7
735	1	-1.338E+05	-2.540E+05	-2.309E+05	240	3.874E+03	-31.6
737	1	-1.346E+05	-2.553E+05	-2.317E+05	-344	3.705E+03	-61.3
742	1	-9.572E+04	-7.217E+04	-371	-298	-7.274E+03	670
744	1	-9.746E+04	-7.405E+04	-1.737E+03	-24.4	-5.936E+03	-4.37
748	1	-1.051E+04	-1.037E+03	-6.573E+03	958	-3.281E+03	7.168E+03
750	1	-1.053E+04	-3.147E+03	-8.353E+03	349	-2.871E+03	73.0
754	1	-2.489E+04	-1.995E+04	-6.693E+03	-3.622E+03	2.037E+04	-848
756	1	-2.512E+04	-2.174E+04	-8.007E+03	354	1.963E+04	-168
757	1	-1.024E+05	-1.625E+05	-9.226E+04	-3.163E+03	5.140E+03	4.399E+03
759	1	-1.225E+05	-1.340E+05	-6.787E+04	-20.4	6.858E+03	-486
759	1	-1.043E+05	-1.651E+05	-9.124E+04	1.963E+03	6.607E+03	2.486E+03
760	1	-1.214E+05	-1.368E+05	-6.907E+04	-3.413E+03	3.421E+03	495
761	1	-1.064E+05	-1.734E+05	-9.100E+04	14.7	7.601E+03	-683
762	1	-1.205E+05	-1.421E+05	-6.898E+04	-1.513E+03	1.659E+03	-499
763	1	-8.716E+04	-1.830E+05	-1.360E+05	7.060E+03	3.942E+03	-9.374E+03
764	1	-1.303E+04	7.112E+03	1.643E+04	316	3.278E+03	1.984E+03
765	1	-8.705E+04	-1.910E+05	-1.299E+05	-6.645E+03	5.008E+03	1.182E+04
766	1	7.921E+03	-170	2.832E+04	4.265E+03	8.854E+03	884
767	1	-7.771E+04	-1.823E+05	-1.244E+05	-2.282E+03	-1.757E+03	1.384E+03
777	1	-1.080E+05	-1.743E+05	-9.215E+04	1.491E+03	1.283E+04	-2.110E+03
779	1	-1.185E+05	-1.413E+05	-6.963E+04	-371	7.267E+03	815
779	1	-1.078E+05	-1.754E+05	-9.133E+04	-194	2.387E+03	-289
780	1	-1.177E+05	-1.414E+05	-6.850E+04	-4.51	6.970E+03	-42.0
783	1	-7.601E+04	-1.801E+05	-1.274E+05	-46.3	2.716E+03	43.5
784	1	-338	5.700E+03	2.162E+04	-215	-1.948E+03	734
785	1	-7.604E+04	-1.806E+05	-1.262E+05	261	1.190E+04	-443
786	1	143	4.603E+03	2.151E+04	48.5	-1.498E+03	202
799	1	-1.345E+05	-2.524E+05	-2.334E+05	267	1.064E+04	40.7
800	1	-6.190E+04	-4.633E+04	-4.584E+04	-405	2.937E+03	-31.7
801	1	-1.348E+05	-2.521E+05	-2.333E+05	-266	704	0.762
802	1	-6.179E+04	-4.585E+04	-4.524E+04	-551	2.741E+03	-7.53
803	1	-1.354E+05	-2.533E+05	-2.339E+05	588	652	-35.7
804	1	-6.015E+04	-4.247E+04	-4.200E+04	-579	2.964E+03	4.96
805	1	-1.356E+05	-2.519E+05	-2.392E+05	49.6	3.670E+03	-11.3
806	1	-6.118E+04	-4.421E+04	-4.424E+04	-35.3	767	47.2
807	1	-1.351E+05	-2.523E+05	-2.392E+05	344	3.603E+03	-42.4
808	1	-6.119E+04	-4.283E+04	-4.534E+04	-912	813	50.6
809	1	-1.357E+05	-2.533E+05	-2.401E+05	356	3.522E+03	-40.1
810	1	-5.992E+04	-3.934E+04	-4.151E+04	-937	756	136
823	1	-2.178E+05	-1.697E+05	-2.354E+05	-5.554E+04	647	3.911E+03
824	1	-5.209E+04	-6.334E+04	-5.105E+04	4.950E+03	3.056E+03	1.174E+03
825	1	-1.617E+05	-2.284E+05	-2.442E+05	-5.434E+04	-3.234E+03	-7.263E+03
826	1	-6.121E+04	-5.449E+04	-4.825E+04	7.590E+03	2.663E+03	-993
827	1	-1.236E+05	-2.500E+05	-2.343E+05	-7.899E+03	-4.313E+03	8.285E+03

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828	1	-6.386E+04	-3.972E+04	-4.712E+04	-2.450E+03	-583.	359
829	1	-2.202E+03	-1.639E+05	-2.423E+05	-6.152E+04	-3.186E+03	2.650E+03
830	1	-4.758E+04	-6.150E+04	-5.348E+04	7.129E+03	187	1.714E+03
831	1	-1.632E+05	-2.240E+05	-2.429E+05	-5.325E+04	-3.546E+03	-976
832	1	-5.648E+04	-4.632E+04	-4.791E+04	6.229E+03	-957	717
833	1	-1.315E+05	-2.641E+05	-2.420E+05	-1.319E+03	-5.043E+03	-2.416E+03
834	1	-6.213E+04	-4.049E+04	-4.709E+04	913.	428.	30.0
847	1	-2.527E+05	-1.414E+05	-2.467E+05	3.040E+04	5.911E+03	1.783E+03
848	1	-4.810E+04	-6.531E+04	-6.019E+04	3.411E+03	5.275E+03	-326
849	1	-2.517E+05	-1.340E+05	-2.399E+05	-1.827E+04	4.405E+03	1.889E+03
850	1	-4.963E+04	-6.529E+04	-5.642E+04	5.313E+03	5.768E+03	2.138E+03
853	1	-2.484E+05	-1.390E+05	-2.549E+05	2.777E+04	2.438E+03	4.562E+03
854	1	-4.632E+04	-6.218E+04	-5.880E+04	-2.862E+03	1.478E+03	1.543E+03
855	1	-2.483E+05	-1.279E+05	-2.476E+05	-1.315E+04	-3.483E+03	284.
856	1	-4.178E+04	-6.284E+04	-5.724E+04	8.925E+03	2.928E+03	3.838E+03
871	1	-1.805E+05	-2.151E+05	-2.531E+05	6.195E+04	7.869E+03	-1.898E+03
872	1	-5.592E+04	-4.858E+04	-4.349E+04	-6.232E+03	6.036E+03	-266.
873	1	-2.238E+05	-1.733E+05	-2.514E+05	6.012E+04	6.434E+03	-1.879E+03
874	1	-4.008E+04	-6.158E+04	-7.230E+04	-2.751E+03	4.408E+03	-734.
877	1	-1.812E+05	-2.155E+05	-2.640E+05	6.207E+04	4.578E+03	-114.
878	1	-5.393E+04	-3.813E+04	-5.608E+04	-1.365E+04	356.	639.
879	1	-2.183E+05	-1.742E+05	-2.589E+05	5.672E+04	2.443E+03	2.724E+03
880	1	-5.293E+04	-6.364E+04	-6.549E+04	-1.692E+03	1.084E+03	1.831E+03
885	1	-1.395E+05	-2.638E+05	-2.649E+05	-1.031E+03	5.183E+03	-575.
896	1	-7.568E+04	-9.810E+04	-1.245E+05	531.	7.347E+03	-2.764E+03
897	1	-1.503E+05	-2.464E+05	-2.607E+05	3.734E+04	5.978E+03	-2.841E+03
898	1	-7.492E+04	-8.180E+04	-1.076E+05	3.985E+03	6.673E+03	-1.560E+03
901	1	-1.364E+05	-2.569E+05	-2.612E+05	-242.	4.299E+03	-15.5
902	1	-4.960E+04	-6.649E+04	-9.235E+04	1.275E+03	1.749E+03	444.
903	1	-1.477E+05	-2.429E+05	-2.604E+05	2.637E+04	5.334E+03	-954.
904	1	-6.550E+04	-5.908E+04	-8.350E+04	-2.602E+03	1.281E+03	-629.
920	1	-3.162E+04	1.629E+04	3.067E+03	-433.	725.	231.
922	1	-2.805E+04	1.316E+04	2.989E+03	-9.647E+03	1.276E+03	69.0
924	1	-2.022E+04	-249.	-1.658E+03	-1.204E+04	1.545E+03	81.9
926	1	-3.604E+04	1.333E+04	-4.378E+03	-447.	-622.	-75.0
928	1	-3.388E+04	9.250E+03	-4.317E+03	-8.917E+03	-910.	59.8
930	1	-2.379E+04	-1.765E+03	-5.671E+03	-1.101E+04	-1.088E+03	-238.
945	1	-1.344E+05	-2.530E+05	-2.335E+05	-301.	2.774E+03	1.24
946	1	-4.000E+04	-4.303E+04	-4.152E+04	128.	523.	-63.4
947	1	-1.367E+05	-2.549E+05	-2.350E+05	-325.	2.935E+03	-7.24
948	1	-5.836E+04	-4.056E+04	-3.927E+04	133.	391.	-4.56
951	1	-1.350E+05	-2.533E+05	-2.399E+05	-86.2	3.723E+03	-80.1
952	1	-6.003E+04	-3.947E+04	-4.083E+04	-401.	717.	165.
953	1	-1.369E+05	-2.531E+05	-2.412E+05	-401.	3.481E+03	5.85
954	1	-5.848E+04	-3.863E+04	-3.846E+04	157.	762.	-7.54
959	1	-1.863E+04	-1.870E+04	-3.051E+03	-1.951E+04	6.493E+03	-1.292E+03

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MACH 14 FLOW RESTRICTOR

970	1	-1.667E+04	-1.073E+04	-7.961E+03	-5.035E+03	1.416E+03	8.05
971	1	-1.632E+04	-2.128E+04	-9.366E+03	7.20	6.811E+03	147
972	1	-1.643E+04	-1.251E+04	-7.534E+03	-60.5	1.154E+03	5.36
973	1	-1.379E+04	-1.214E+04	-877.	-1.349E+04	-2.379E+03	-2.865E+03
976	1	-2.016E+04	-1.138E+04	-1.021E+04	-4.891E+03	-291.	195.
977	1	-1.461E+04	-1.534E+04	-8.802E+03	553.	-247.	133.
978	1	-2.162E+04	-1.342E+04	-1.057E+04	106.	-370.	-35.8
995	1	-4.808E+04	1.579E+04	2.283E+04	1.023E+03	1.385E+03	-111.
998	1	-4.129E+04	1.383E+04	2.596E+04	1.272E+04	997.	-701.
1001	1	-2.872E+04	-2.265E+03	2.645E+04	1.809E+04	689.	-738.
1004	1	-4.412E+04	2.107E+04	2.454E+04	86.9	335.	6.831E-02
1007	1	-3.920E+04	1.375E+04	2.536E+04	1.326E+04	597.	-91.2
1010	1	-2.542E+04	1.709E+03	2.506E+04	1.759E+04	554.	-486.
1022	1	-1.804E+04	-1.254E+04	-2.125E+04	91.8	-5.020E+03	88.6
1023	1	-1.389E+04	-9.752E+03	-1.750E+04	83.9	-89.5	-38.2
1025	1	-1.781E+04	-1.119E+04	-2.060E+04	194.	-4.519E+03	333.
1026	1	-1.422E+04	-1.038E+04	-1.774E+04	317.	-69.6	-76.0
1028	1	-1.732E+04	-9.801E+03	-1.946E+04	147.	-3.663E+03	399.
1039	1	-1.439E+04	-1.104E+04	-1.792E+04	163.	-73.9	-68.3
1031	1	-1.327E+04	-7.849E+03	-1.526E+04	-67.6	3.039E+03	-62.0
1032	1	-1.478E+04	-1.056E+04	-1.781E+04	47.4	425.	46.5
1034	1	-1.377E+04	-8.400E+03	-1.543E+04	42.5	2.647E+03	172.
1035	1	-1.491E+04	-1.053E+04	-1.788E+04	112.	364.	61.4
1037	1	-1.425E+04	-7.997E+03	-1.519E+04	-220.	2.016E+03	213.
1040	1	-1.488E+04	-1.118E+04	-1.810E+04	-106.	259.	91.6
1041	1	-2.008E+04	-9.250E+03	-1.480E+04	-16.1	1.224E+03	32.7
1043	1	-1.672E+04	-1.126E+04	-1.793E+04	64.5	-601.	-3.11
1044	1	-2.014E+04	-9.649E+03	-1.512E+04	-202.	1.026E+03	232.
1046	1	-1.683E+04	-1.126E+04	-1.800E+04	229.	-452.	-46.8
1047	1	-1.959E+04	-9.134E+03	-1.501E+04	-339.	311.	470.
1047	1	-1.668E+04	-1.188E+04	-1.831E+04	122.	-349.	-113.
1070	1	-2.285E+04	-1.413E+04	2.318E+04	1.107E+04	610.	-134.
1071	1	-3.595E+03	-5.184E+04	-1.374E+03	8.673E+03	4.659E+03	170.
1073	1	-1.719E+04	-2.012E+04	2.249E+04	370.	942.	-9.92
1074	1	8.760E+03	-5.427E+04	8.627E+03	-105.	5.415E+03	-29.9
1079	1	-1.997E+04	-1.209E+04	-1.985E+04	1.100E+04	322.	-351.
1080	1	2.041E+03	-4.889E+04	-1.698E+03	9.009E+03	824.	-107.
1082	1	-1.390E+04	-1.848E+04	1.907E+04	466.	463.	15.5
1083	1	1.200E+04	-5.041E+04	5.919E+03	-382.	953.	-138.
1106	1	2.857E+03	-5.277E+04	-648.	332.	5.073E+03	-808.
1107	1	812.	-4.044E+04	4.383E+03	-8.456E+03	5.084E+03	-1.493E+03
1109	1	2.953E+03	-4.838E+04	4.602E+03	-639.	5.581E+03	142.
1110	1	-9.092E+03	-3.390E+04	1.444E+03	-565.	5.156E+03	-77.0
1115	1	7.892E+03	-4.966E+04	326.	-144.	751.	-1.280E+03
1116	1	4.502E+03	-3.476E+04	4.197E+03	-9.669E+03	-2.749E+03	-2.948E+03
1118	1	6.478E+03	-3.964E+04	3.565E+03	-906.	-1.024E+03	-461.

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117	1	-5.613E+03	-2.654E+04	-2.257E+03	-5.06	-1.366E+03	55.8
1142	1	-6.054E+03	-2.930E+04	4.057E+03	-1.491E+04	6.324E+03	-1.826E+03
1145	1	-1.601E+04	-2.654E+04	-4.624E+03	832	7.618E+03	113
1151	1	-2.858E+03	-2.053E+04	3.794E+03	-1.467E+04	-1.513E+03	-3.350E+03
1154	1	-1.331E+04	-1.903E+04	-5.727E+03	619	-939	48.8
1169	1	-1.723E+04	-1.069E+04	-1.884E+04	281	-2.998E+03	134
1170	1	-1.448E+04	-1.085E+04	-1.795E+04	219	-86.9	17.9
1172	1	-1.727E+04	-1.049E+04	-1.824E+04	-73.3	-2.758E+03	31.9
1173	1	-1.448E+04	-1.105E+04	-1.814E+04	18.9	-76.9	-11.9
1178	1	-1.490E+04	-1.116E+04	-1.807E+04	-216	1.449E+03	179
1179	1	-1.490E+04	-1.116E+04	-1.807E+04	61.0	156	49.7
1181	1	-1.491E+04	-9.364E+03	-1.590E+04	-41.4	1.259E+03	21.4
1182	1	-1.494E+04	-1.125E+04	-1.801E+04	28.5	116	1.76
1187	1	-1.698E+04	-1.004E+04	-1.527E+04	-443	30.7	124
1188	1	-1.648E+04	-1.184E+04	-1.843E+04	153	-279	-6.43
1190	1	-1.690E+04	-1.041E+04	-1.550E+04	-11.8	-134	-1.71
1191	1	-1.634E+04	-1.184E+04	-1.845E+04	16.9	-228	12.9
1201	1	-1.044E+05	-1.065E+05	-7.398E+04	-1.238E+03	-9.610E+03	1.275E+03
1202	1	-1.770E+05	-2.264E+05	-1.852E+05	-927	-3.620E+04	-691
1203	1	-1.281E+05	-2.057E+05	-1.788E+05	-1.307E+04	-3.393E+03	-1.127E+03
1204	1	-1.077E+05	-1.115E+05	-7.681E+04	3.919E+03	4.624E+03	4.359E+03
1205	1	-6.511E+04	2.981E+03	3.381E+04	9.198E+03	-2.287E+03	2.165E+03
1206	1	-5.444E+04	2.045E+04	3.078E+04	-8.821E+03	-4.823E+03	-2.660E+03
1207	1	-1.720E+05	-1.911E+05	-1.814E+05	-3.556E+04	2.755E+04	-1.320E+04
1208	1	-7.975E+04	-2.116E+05	-1.649E+05	3.262E+04	2.557E+03	-2.402E+03
1209	1	-9.673E+04	-9.324E+04	-6.136E+04	5.642E+03	-6.223E+03	697
1210	1	-1.701E+05	-2.164E+05	-1.799E+05	-1.024E+03	-3.489E+04	2.121E+03
1211	1	-1.178E+05	-2.150E+05	-1.759E+05	1.301E+04	-5.880E+03	697
1212	1	-1.033E+05	-9.270E+04	-6.772E+04	-9.528E+03	2.438E+03	-5.078E+03
1213	1	-5.412E+04	-7.434E+04	4.287E+04	1.771E+04	348	-3.183E+03
1214	1	-5.120E+04	1.178E+04	3.104E+04	1.278E+03	249	-1.375E+03
1215	1	-2.014E+05	-2.023E+05	-1.942E+05	-2.847E+04	1.894E+04	-2.877E+04
1216	1	-1.487E+05	-1.823E+05	-1.872E+05	-3.836E+04	-1.948E+03	-9.310E+03
1217	1	-8.928E+04	-8.293E+04	-4.474E+04	7.173E+03	-5.843E+03	-3.269E+03
1218	1	-1.057E+05	-1.974E+05	-1.593E+05	-4.447E+03	-3.392E+03	1.460E+03
1219	1	-1.099E+05	-9.705E+04	-7.673E+04	7.403E+03	549	-1.199E+04
1220	1	-3.947E+04	6.229E+03	3.590E+04	1.368E+04	-1.815E+03	-3.947E+03
1221	1	-2.000E+05	-1.607E+05	-2.088E+05	-4.226E+04	-4.845E+03	-8.767E+03
1222	1	-8.399E+04	-1.110E+05	-8.273E+04	1.859E+04	1.604E+03	-33.1
1223	1	-1.055E+05	-2.046E+05	-1.718E+05	4.642E+03	4.360E+03	-192
1224	1	-1.327E+05	-2.090E+05	-1.611E+05	-1.405E+04	-7.440E+03	1.273E+03
1225	1	-1.294E+04	-1.184E+04	-2.714E+04	-1.942E+04	-2.415E+03	423
1226	1	-2.717E+04	6.018E+04	4.621E+04	-2.041E+04	-1.212E+03	-945
1227	1	-5.739E+04	-1.988E+04	6.709E+03	-7.975E+03	3.225E+03	2.094E+03
1228	1	-9.998E+04	-1.950E+05	-1.805E+05	2.113E+04	-5.234E+03	-463
1229	1	-8.618E+04	-2.158E+05	-1.504E+05	2.843E+04	5.481E+03	1.491E+03

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1230	1	-5.529E+04	-9.699E+04	-6.489E+04	-1.111E+04	969.	-1.300E+03
1231	1	-9.223E+04	-2.099E+05	-1.650E+05	3.508E+03	4.124E+03	-664.
1232	1	-1.197E+05	-2.208E+05	-1.578E+05	1.371E+04	-5.531E+03	-677.
1233	1	-9.893E+04	-5.681E+04	-8.074E+04	-2.456E+03	-3.450E+03	-1.550E+03
1234	1	-1.949E+04	3.817E+04	4.191E+04	6.105E+03	-2.054E+03	-3.303E+03
1235	1	-5.826E+04	-2.672E+04	-601.	-4.920E+03	1.469E+03	-4.391E+03
1236	1	-1.630E+05	-1.576E+05	-1.974E+05	-4.448E+04	-7.120E+03	1.341E+03
1237	1	-1.554E+05	-1.857E+05	-1.695E+05	-3.444E+04	7.600E+03	2.55
1238	1	-9.503E+04	-7.314E+04	-5.072E+04	3.282E+03	-136.	-2.203E+03
1239	1	-1.081E+05	-2.034E+05	-1.427E+05	-4.558E+03	1.045E+04	-1.897E+03
1240	1	-9.422E+04	-6.322E+04	-8.555E+04	-1.817E+04	4.530E+03	-1.073E+03
1241	1	-5.296E+04	-2.640E+04	-2.139E+03	5.702E+03	2.208E+03	-3.831E+03
1242	1	-2.049E+05	-1.504E+05	-1.820E+05	-4.227E+04	2.487E+03	-4.092E+03
1243	1	-1.272E+05	-1.777E+05	-1.004E+05	-370.	-4.797E+03	-1.908E+03
1244	1	-1.369E+05	-2.135E+05	-1.351E+05	1.780E+03	-6.005E+03	-2.384E+03
1245	1	-1.251E+05	-1.849E+05	-1.013E+05	198.	7.400E+03	-1.735E+03
1246	1	-1.143E+05	-1.300E+05	-6.288E+04	2.170E+03	3.856E+03	2.520E+03
1247	1	-1.413E+05	-2.139E+05	-1.347E+05	-2.428E+04	3.020E+03	-1.769E+03
1248	1	-1.243E+05	-1.636E+05	-9.758E+04	-5.84	-6.433E+03	1.138E+03
1249	1	-1.317E+05	-2.141E+05	-1.287E+05	1.647E+03	-9.731E+03	-3.289E+03
1250	1	-1.329E+05	-1.643E+05	-9.797E+04	-1.809E+04	9.165E+03	2.239E+03
1251	1	-1.177E+05	-1.243E+05	-6.781E+04	-243.	4.619E+03	151.
1252	1	-1.780E+05	-1.789E+05	-1.363E+05	-4.462E+04	4.597E+03	-2.203E+03
1253	1	-1.287E+05	-1.631E+05	-9.514E+04	164.	-7.871E+03	-1.718E+03
1254	1	-1.569E+05	-1.436E+05	-1.068E+05	-2.474E+04	8.776E+03	-5.734E+03
1255	1	-1.031E+05	-1.032E+05	-1.142E+05	335.	-8.486E+03	-118.
1256	1	-1.817E+05	-2.297E+05	-2.256E+05	7.139E+03	-4.425E+04	-4.980E+03
1257	1	-1.326E+05	-2.321E+05	-2.330E+05	2.70	-6.538E+03	30.1
1258	1	-9.826E+04	6.371E+03	-3.267E+03	-6.154E+03	172.	968.
1259	1	-4.464E+04	150.	-8.207E+03	625.	-9.278E+03	157.
1260	1	-1.001E+05	-9.282E+04	-1.020E+05	1.706E+03	-7.853E+03	285.
1261	1	-1.948E+05	-2.192E+05	-2.229E+05	1.549E+04	-4.012E+04	-1.529E+04
1262	1	-1.254E+05	-2.133E+05	-2.201E+05	2.788E+04	-7.444E+03	1.297E+03
1263	1	-3.486E+04	1.584E+04	1.680E+04	1.693E+04	962.	2.857E+03
1264	1	-4.280E+04	7.084E+03	935.	-9.527E+03	-9.274E+03	-803.
1265	1	-8.137E+04	-5.979E+04	-6.580E+04	-5.537E+03	-4.001E+03	983.
1266	1	-1.531E+05	-1.816E+05	-2.070E+05	3.822E+04	-9.125E+03	772.
1267	1	-1.683E+04	1.686E+04	2.474E+04	-1.867E+04	-9.308E+03	-1.286E+03
1268	1	-6.524E+04	-1.095E+05	-1.081E+05	508.	-8.003E+03	229.
1269	1	-1.103E+05	-2.226E+05	-2.072E+05	1.545E+04	3.955E+03	2.334E+03
1270	1	-1.279E+05	-2.321E+05	-1.768E+05	-1.040E+03	-6.659E+03	-137.
1271	1	-1.647E+04	1.798E+04	3.422E+03	-2.106E+03	-2.126E+04	-2.045E+03
1272	1	-6.248E+04	-9.053E+04	-2.508E+04	1.188E+03	-1.899E+04	116.
1273	1	-6.481E+04	-9.453E+04	-9.689E+04	1.251E+04	-9.728E+03	160.
1274	1	-1.295E+05	-1.984E+05	-2.002E+05	3.858E+04	-655.	4.699E+03
1275	1	-1.295E+05	-2.182E+05	-1.678E+05	2.916E+04	-6.989E+03	782.

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1276	1	-1.892E+03	3.242E+04	2.067E+04	-1.015E+04	-2.151E+04	-5.720E+03
1277	1	-6.616E+04	-4.289E+04	-2.066E+04	-534	-1.870E+04	-3.859E+03
1278	1	-5.439E+04	-4.919E+04	-3.992E+04	1.027E+04	-1.470E+04	-1.584E+03
1279	1	-1.522E+05	-1.842E+05	-1.576E+05	4.517E+04	-1.163E+04	-2.770E+03
1280	1	-5.735E+04	-3.255E+04	-7.887E+03	-7.176E+03	-1.462E+04	-5.358E+03
1281	1	-1.273E+05	-1.794E+05	-9.504E+04	579	-1.046E+04	11.6
1282	1	-1.373E+05	-2.269E+05	-1.373E+05	1.322E+04	-2.653E+03	14.4
1283	1	-1.342E+05	-1.341E+05	-6.028E+04	3.273E+03	-1.266E+04	-1.100E+03
1284	1	-1.348E+05	-1.709E+05	-9.165E+04	1.704E+04	-1.032E+04	-1.832E+03
1285	1	-1.584E+05	-2.102E+05	-1.348E+05	3.384E+04	-7.524E+03	-2.319E+03
1286	1	-1.379E+05	-1.263E+05	-5.508E+04	3.065E+03	-8.414E+03	-2.667E+03
1287	1	-1.493E+05	-1.529E+05	-8.504E+04	1.905E+04	-1.052E+04	-4.990E+03
1288	1	-3.701E+04	-3.751E+03	-1.068E+04	53.2	-2.989E+03	66.1
1291	1	-2.172E+04	-1.091E+04	-1.744E+04	-53.5	-1.627E+03	6.71
1292	1	-2.279E+04	-9.952E+03	-1.529E+04	-145	-3.763E+03	-240
1293	1	-2.207E+04	-8.991E+03	-1.590E+04	-182	-4.825E+03	5.56
1294	1	-1.888E+04	-1.279E+04	-1.924E+04	278	82.4	-44.8
1295	1	-2.065E+04	-1.381E+04	-2.015E+04	87.8	209	-58.6
1296	1	-3.297E+04	-3.116E+03	-9.004E+03	-4.957E+03	-3.102E+03	488
1299	1	-2.154E+04	-1.154E+04	-1.772E+04	-389	-1.583E+03	-180
1300	1	-2.239E+04	-9.819E+03	-1.594E+04	-357	-3.652E+03	-610
1301	1	-2.252E+04	-1.136E+04	-1.743E+04	-47.1	-4.610E+03	-495
1302	1	-1.861E+04	-1.246E+04	-1.914E+04	172	-136	-104
1303	1	-2.113E+04	-1.321E+04	-2.030E+04	395	149	-87.2
1304	1	-2.847E+04	-9.580E+03	-1.063E+04	-5.935E+03	-3.561E+03	534
1306	1	-2.076E+04	-1.133E+04	-1.779E+04	-384	-1.623E+03	-304
1307	1	-2.285E+04	-9.717E+03	-1.783E+04	-199	-3.819E+03	-613
1308	1	-2.104E+04	-1.458E+04	-2.081E+04	-98.4	195	-141
1309	1	-1.003E+04	1.049E+04	-6.996E+03	9.64	-1.358E+04	-187
1312	1	-7.043E+03	3.903E+03	1.565E+04	9.46	-1.948E+03	36.4
1313	1	-5.562E+03	5.317E+03	-1.614E+04	-16.4	-4.820E+03	-137
1314	1	-7.177E+04	-5.676E+04	-3.526E+04	-92.7	-1.353E+03	-15.1
1315	1	-6.813E+03	1.844E+03	-1.615E+04	178	192	-125
1316	1	-7.108E+04	-6.194E+04	-3.547E+04	17.0	285	-4.66
1320	1	-7.229E+03	3.279E+03	-1.589E+04	-111	-1.756E+03	-244
1321	1	-6.142E+03	5.195E+03	-1.653E+04	301	-3.854E+03	-270
1322	1	-7.191E+04	-5.874E+04	-3.609E+04	-52.3	-1.070E+03	-70.4
1323	1	-6.843E+03	2.057E+03	-1.603E+04	65.0	387	-260
1324	1	-7.144E+04	-6.132E+04	-3.527E+04	104	243	6.37
1325	1	-7.349E+03	7.725E+03	-8.780E+03	-2.563E+03	-1.105E+04	-3.305E+03
1327	1	-7.155E+03	3.717E+03	-1.579E+04	-4.26	-1.326E+03	-254
1328	1	-7.213E+04	-5.821E+04	-3.571E+04	40.4	-1.123E+03	21.4
1329	1	-7.147E+04	-6.196E+04	-3.527E+04	-197	221	-73.6
1330	1	-1.486E+05	-1.389E+05	-6.346E+04	-21.8	-1.964E+03	44.3
1332	1	-1.524E+05	-1.404E+05	-5.911E+04	52.6	-1.95	-5.56

1333	1	-1.539E+05	-1.340E+05	-5.721E+04	-387	1.871E+03	72.9
1334	1	-1.521E+05	-1.418E+05	-5.944E+04	-25.2	334	48.4
1335	1	-1.502E+05	-1.374E+05	-6.287E+04	-1.157E+03	-1.092E+03	-258.
1337	1	-1.529E+05	-1.404E+05	-5.890E+04	51.9	-156.	-79.6
1338	1	-1.547E+05	-1.380E+05	-5.843E+04	-733.	1.220E+03	96.7
1339	1	-1.522E+05	-1.419E+05	-5.949E+04	-117.	109.	197.
1340	1	-1.527E+05	-1.343E+05	-6.098E+04	302.	341.	-39.0
1341	1	-1.531E+05	-1.404E+05	-5.893E+04	132.	-194.	-123.
1343	1	-1.713E+05	-2.200E+05	-1.804E+05	-1.378E+03	-3.234E+04	2.859E+03
1344	1	-3.527E+04	877.	9.282E+04	1.479E+04	-1.210E+03	-3.457E+03
1348	1	-1.354E+05	-1.340E+05	-1.269E+05	1.001E+04	-1.340E+03	-1.312E+04
1350	1	-7.899E+04	-7.857E+04	-3.532E+04	6.359E+03	-4.703E+03	453.
1351	1	-1.701E+05	-2.174E+05	-1.771E+05	-890.	-3.154E+04	-207.
1352	1	-1.159E+05	-2.014E+05	-1.641E+05	-5.207E+03	-2.417E+03	510.
1353	1	-4.527E+04	-6.404E+04	-1.332E+04	9.787E+03	-4.643E+03	-2.783E+03
1354	1	-2.517E+04	-4.414E+03	5.429E+04	6.840E+03	-1.953E+03	940.
1355	1	-2.832E+04	6.414E+03	4.758E+04	9.107E+03	-3.123E+03	-1.631E+03
1354	1	-3.450E+04	-8.344E+04	-2.725E+04	-2.535E+03	-7.024E+03	-2.440E+03
1357	1	-7.785E+04	-7.811E+04	-6.490E+04	647.	-8.512E+03	-4.012E+03
1358	1	-7.998E+04	-7.184E+04	-3.034E+04	795.	-4.362E+03	-82.2
1359	1	-1.240E+05	-1.949E+05	-1.632E+05	-1.011E+03	-2.027E+03	130.
1360	1	-1.489E+04	-6.103E+04	5.431E+03	298.	-7.478E+03	582.
1361	1	-1.484E+04	-3.492E+03	5.401E+04	59.3	-4.109E+03	-89.5
1362	1	-2.007E+04	-6.458E+04	-1.180E+04	-2.508E+03	-9.428E+03	83.3
1364	1	-9.037E+04	-2.034E+03	-1.593E+05	-5.579E+03	2.778E+03	-582.
1367	1	-9.123E+03	4.049E+04	4.809E+04	9.334E+03	-2.622E+03	-3.784E+03
1369	1	-1.381E+05	-9.872E+04	-1.368E+05	-2.271E+04	-7.930E+03	1.715E+03
1371	1	-4.841E+04	-6.273E+04	-4.015E+04	4.387E+03	-1.190E+03	-1.528E+03
1372	1	-1.003E+05	-1.981E+05	-1.612E+05	-4.192E+03	1.644E+03	-313.
1373	1	-1.154E+05	-2.044E+05	-1.469E+05	-4.510E+03	-1.096E+04	-234.
1374	1	-3.483E+04	-2.970E+04	-1.797E+04	-751.	-4.360E+03	-1.449E+03
1375	1	5.164E+03	4.040E+04	5.820E+04	4.105E+03	-2.849E+03	-1.458E+03
1376	1	-4.954E+04	-2.204E+04	-3.113E+03	2.810E+03	139.	-4.289E+03
1377	1	-3.859E+04	-4.758E+04	-3.273E+04	425.	-9.054E+03	139.
1378	1	-1.044E+05	-7.908E+04	-7.003E+04	-3.720E+03	-240.	-8.377E+03
1379	1	-4.321E+04	-5.270E+04	-3.010E+04	919.	-1.495E+03	14.1
1380	1	-1.214E+05	-2.031E+05	-1.458E+05	-1.243E+03	-1.192E+04	-484.
1381	1	-4.010E+03	-2.413E+04	8.402E+03	311.	-5.684E+03	-150.
1382	1	-4.288E+04	-1.791E+04	8.084E+03	232.	579.	-34.7
1383	1	-6.273E+04	-6.773E+04	-3.144E+04	4.523E+03	-4.492E+03	-504.
1387	1	-1.360E+05	-2.137E+05	-1.294E+05	-12.0	-1.119E+04	-225.
1389	1	-1.210E+05	-1.182E+05	-6.293E+04	-3.611E+03	1.908E+03	-4.829E+03
1388	1	-1.823E+05	-1.357E+05	-1.178E+05	-2.240E+04	5.443E+03	-8.064E+03
1389	1	-1.292E+05	-1.984E+05	-8.979E+04	134.	-8.633E+03	-942.
1390	1	-1.374E+05	-2.124E+05	-1.292E+05	-349.	-1.187E+04	30.3
1391	1	-1.427E+05	-1.227E+05	-8.051E+04	-7.443E+03	7.081E+03	-1.027E+04

MACH 14 FLOW RESTRICTOR

1392	1	-1.261E+05	-1.135E+05	-5.979E+04	-1.727E+03	613	-1.980E+03
1393	1	-1.473E+05	-1.198E+05	-8.177E+04	-2.224E+03	3.012E+03	-7.883E+03
1394	1	-1.304E+05	-1.540E+05	-8.834E+04	154.	-9.056E+03	301.
1395	1	-1.354E+05	-1.220E+05	-7.149E+04	244.	4.760E+03	-1.087E+03
1396	1	-2.262E+05	-1.943E+05	-2.101E+05	-7.723E+03	3.881E+03	-3.840E+04
1399	1	-2.305E+05	-1.913E+05	-2.130E+05	6.417E+03	9.592E+03	-3.959E+04
1400	1	-1.330E+05	-1.296E+05	-1.224E+05	3.798E+03	-7.328E+03	-1.356E+04
1401	1	-2.302E+05	-1.279E+05	-2.122E+05	-3.153E+03	-1.018E+04	-4.184E+03
1402	1	-1.143E+05	-1.195E+05	-1.117E+05	8.775E+03	-7.991E+03	-4.325E+03
1403	1	-2.287E+05	-1.428E+05	-2.204E+05	3.954E+04	-1.130E+04	-1.285E+03
1404	1	-9.476E+04	-8.881E+04	-4.277E+04	6.970E+03	-6.298E+03	-9.685E+03
1407	1	-3.237E+04	-8.040E+04	-2.991E+04	2.673E+03	-6.354E+03	-1.977E+03
1408	1	-2.140E+04	-7.396E+04	-1.736E+04	3.007E+03	-5.734E+03	-1.467E+03
1409	1	-9.917E+04	-7.643E+04	-5.412E+04	-1.163E+04	-1.032E+04	-1.678E+03
1410	1	-1.366E+04	-9.103E+04	-2.143E+03	-3.014E+03	-2.537E+03	-1.971E+03
1411	1	-3.034E+04	-6.441E+04	-2.702E+04	3.494E+03	-1.039E+04	111.
1412	1	-1.044E+04	-7.932E+04	-6.312E+03	905.	-7.245E+03	1.259E+03
1414	1	-870.	-9.594E+04	8.335E+03	-1.072E+03	-2.299E+03	1.205E+03
1415	1	-8.749E+03	-6.329E+04	-2.680E+03	-927.	-1.024E+04	409.
1416	1	-1.441E+03	-3.913E+04	2.266E+04	-1.340E+03	-9.653E+03	263.
1417	1	-2.266E+05	-1.338E+05	-2.115E+05	-2.343E+04	-9.941E+03	4.261E+03
1420	1	-2.348E+05	-1.231E+05	-2.094E+05	1.800E+04	-1.294E+04	8.645E+03
1421	1	-1.477E+05	-8.814E+04	-1.294E+05	5.243E+03	-1.261E+04	3.793E+03
1422	1	-2.393E+05	-1.340E+05	-1.833E+05	-4.249E+03	-5.489E+03	-9.164E+03
1423	1	-1.227E+05	-8.604E+04	-1.139E+05	2.418E+04	-1.445E+04	4.038E+03
1424	1	-2.353E+05	-1.434E+05	-1.804E+05	3.953E+04	-1.030E+04	-2.878E+03
1425	1	-6.646E+04	-9.382E+04	-9.656E+04	4.952E+03	-1.061E+04	790.
1428	1	-3.633E+04	-6.683E+04	-3.202E+04	1.008E+04	-1.520E+04	-712.
1429	1	-2.252E+04	-4.347E+04	-1.840E+04	4.752E+03	-1.501E+04	120.
1430	1	-9.227E+04	-7.784E+04	-5.777E+04	1.001E+04	-9.204E+03	-8.103E+03
1431	1	-1.766E+03	-2.196E+04	4.336E+03	1.621E+03	-2.032E+04	-1.763E+03
1432	1	-6.925E+04	-7.308E+04	-3.907E+04	7.317E+03	-1.451E+04	-1.032E+04
1433	1	-1.014E+03	-3.475E+04	1.915E+03	1.096E+03	-1.349E+04	-380.
1435	1	-1.609E+04	-2.237E+04	1.741E+04	-708.	-1.964E+04	-707.
1436	1	-9.335E+04	-7.152E+04	-2.400E+04	-470.	-1.298E+04	-1.072E+03
1437	1	-4.318E+04	-9.598E+04	-9.705E+03	-1.400E+03	-1.604E+04	-751.
1438	1	-2.246E+05	-1.483E+05	-1.453E+05	-2.022E+04	-1.914E+03	2.713E+03
1440	1	-2.302E+05	-1.393E+05	-1.364E+05	2.993E+03	-1.840E+03	-6.692E+03
1441	1	-1.912E+05	-1.273E+05	-1.130E+05	2.227E+04	-5.723E+03	-9.004E+03
1442	1	-1.820E+05	-1.354E+05	-1.040E+05	1.333E+03	-438.	-1.552E+04
1443	1	-1.569E+05	-1.208E+05	-9.241E+04	1.015E+04	-6.941E+03	-1.728E+04
1445	1	-1.484E+05	-1.279E+05	-8.589E+04	3.959E+03	-5.509E+03	-7.704E+03
1446	1	-1.430E+05	-1.254E+05	-7.831E+04	4.812E+03	-7.167E+03	-7.250E+03
1447	1	-1.414E+05	-1.335E+05	-7.044E+04	4.812E+03	-7.167E+03	-7.250E+03
1448	1	-1.300E+05	-1.190E+05	-6.358E+04	1.383E+03	-3.330E+03	-318.
1449	1	-1.294E+05	-1.269E+05	-5.721E+04	-80.9	-5.440E+03	198.

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MACH 14 FLOW RESTRICTOR

1450	1	-2.263E+05	-1.916E+05	-2.157E+05	2.245E+04	-2.130E+04	-3.258E+04
1453	1	-2.205E+05	-2.100E+05	-2.249E+05	2.552E+04	-3.383E+04	-2.580E+04
1454	1	-1.037E+05	-1.025E+05	-9.810E+04	4.853E+03	-7.124E+03	-1.431E+03
1455	1	-1.972E+05	-1.595E+05	-2.202E+05	5.748E+04	-9.907E+03	627.
1456	1	-7.405E+04	-8.029E+04	-7.590E+04	-1.191E+03	-6.455E+03	1.885E+03
1458	1	-1.429E+04	-5.395E+04	-2.610E+03	1.307E+04	-3.031E+03	4.114E+03
1461	1	-1.438E+04	-1.983E+04	1.325E+04	-2.257E+04	189.	6.626E+03
1462	1	-1.448E+04	-2.772E+04	5.055E+03	-7.642E+03	-1.751E+03	2.988E+03
1463	1	-1.630E+04	-3.750E+04	453.	-1.487E+04	-9.622E+03	752.
1464	1	-2.742E+04	-1.869E+04	-1.143E+03	-7.458E+03	-2.165E+03	2.269E+03
1465	1	-2.387E+04	-7.254E+03	1.510E+04	-1.895E+04	-9.229E+03	133.
1466	1	-1.042E+04	-3.192E+04	1.033E+04	-2.537E+03	-924.	1.738E+03
1468	1	-2.092E+04	-2.392E+04	522.	845.	-2.841E+03	236.
1469	1	-1.492E+04	-1.641E+04	1.339E+04	-2.295E+03	-1.074E+04	-281.
1470	1	-1.160E+04	-1.289E+04	2.407E+03	1.588E+03	-1.031E+04	-497.
1471	1	-2.160E+05	-1.445E+05	-2.118E+05	5.438E+04	-8.982E+03	1.166E+04
1474	1	-1.766E+05	-1.768E+05	-2.108E+05	6.088E+04	-4.001E+03	8.782E+03
1475	1	-9.600E+04	-8.323E+04	-9.913E+04	2.538E+04	-1.249E+04	1.841E+03
1476	1	-2.023E+05	-1.644E+05	-1.739E+05	5.908E+04	-9.542E+03	1.161E+03
1477	1	-5.675E+04	-6.947E+04	-7.398E+04	1.620E+04	-1.302E+04	-1.850E+03
1479	1	-8.156E+03	-2.657E+04	-5.284E+03	-3.289E+03	-1.911E+04	-4.830E+03
1482	1	3.588E+03	5.481E+03	1.591E+04	-1.380E+04	-2.172E+04	-7.557E+03
1483	1	3.310E+03	-624.	1.158E+04	-3.157E+03	-2.154E+04	-3.426E+03
1484	1	-5.476E+04	-5.682E+04	-2.014E+04	-3.879E+03	-1.701E+04	-1.168E+04
1485	1	-4.483E+03	6.249E+03	3.558E+03	-4.727E+03	-1.945E+04	-4.151E+03
1486	1	-5.844E+04	-4.137E+04	-1.346E+04	-3.399E+03	-1.649E+04	-8.958E+03
1487	1	1.595E+04	5.078E+03	2.539E+04	-2.887E+03	-2.299E+04	-1.357E+03
1489	1	3.142E+03	5.331E+03	5.507E+03	258.	-1.959E+04	-906.
1490	1	-6.050E+04	-5.304E+04	-2.328E+04	-2.072E+03	-1.260E+04	-131.
1491	1	-5.907E+04	-5.432E+04	-2.867E+04	843.	-7.396E+03	485.
1492	1	-2.179E+05	-1.589E+05	-1.357E+05	4.424E+04	-1.505E+03	1.801E+03
1494	1	-1.890E+05	-1.880E+05	-1.373E+05	5.114E+04	-4.094E+03	-1.889E+03
1495	1	-1.674E+05	-1.464E+05	-9.630E+04	2.903E+04	-7.247E+03	-8.259E+03
1496	1	-1.523E+05	-1.556E+05	-9.067E+04	2.381E+04	-9.647E+03	-7.504E+03
1497	1	-1.416E+05	-1.319E+05	-7.393E+04	7.897E+03	-1.105E+04	-1.599E+04
1499	1	-1.417E+05	-1.284E+05	-6.323E+04	4.783E+03	-9.674E+03	-1.036E+04
1500	1	-1.454E+05	-1.365E+05	-6.721E+04	2.930E+03	-4.163E+03	-4.218E+03
1501	1	-1.503E+05	-1.368E+05	-6.378E+04	1.374E+03	-1.823E+03	-1.334E+03
1502	1	-1.453E+05	-1.303E+05	-5.494E+04	-789.	-818.	1.068E+03
1507	1	-3.590E+04	-4.309E+03	2.743E+03	-1.719E+04	-1.204E+03	1.648E+03
1509	1	-2.160E+04	-1.358E+04	5.431E+03	-1.662E+04	-1.254E+03	2.152E+03
1512	1	-2.117E+04	-1.164E+04	-2.348E+03	-3.560E+03	-4.635E+03	3.731E+03
1513	1	-2.164E+04	-1.040E+04	-4.604E+03	-8.510E+03	-9.493E+03	-1.287E+03
1514	1	-2.215E+04	-1.571E+04	-2.264E+03	1.120E+03	-4.328E+03	-340.
1516	1	-2.898E+04	-1.393E+04	-9.098E+03	-526.	-9.231E+03	15.0

1520	1	-7.190E+03	1.924E+04	8.146E+03	-1.260E+04	-1.913E+04	-5.982E+03
1522	1	157.	1.156E+04	9.754E+03	-1.176E+04	-1.964E+04	-6.866E+03
1525	1	1.239E+03	1.049E+04	-2.853E+03	-2.052E+03	-1.373E+04	-1.932E+03
1526	1	-6.656E+04	-5.384E+04	-3.040E+04	-2.558E+03	-7.289E+03	-2.670E+03
1527	1	243.	7.746E+03	-3.093E+03	1.305E+03	-1.471E+04	-210.
1529	1	-7.234E+04	-5.615E+04	-3.319E+04	-133.	-6.578E+03	21.5
1532	1	-1.480E+05	-1.307E+05	-5.752E+04	912.	-2.326E+03	-1.423E+03
1533	1	-1.492E+05	-1.322E+05	-6.115E+04	1.298E+03	-2.735E+03	-4.032E+03
1535	1	-1.513E+05	-1.354E+05	-5.999E+04	-471.	799	-298
1536	1	-1.513E+05	-1.369E+05	-6.019E+04	-1.576E+03	899	1.005E+03
1541	1	-2.185E+04	-1.107E+04	-1.689E+04	-462.	-3.330E+03	-425
1543	1	-1.864E+04	-1.279E+04	-1.949E+04	115.	-136.	-141.
1545	1	-2.393E+04	-1.022E+04	-1.064E+04	-3.029E+03	-4.119E+03	-11.3
1548	1	-2.031E+04	-1.214E+04	-1.822E+04	-526.	-1.447E+03	-152.
1549	1	-2.097E+04	-1.039E+04	-1.691E+04	36.5	-3.219E+03	-218.
1550	1	-2.265E+04	-1.168E+04	-1.897E+04	-70.7	-3.186E+03	-393.
1551	1	-1.871E+04	-1.287E+04	-1.962E+04	213.	-110.	-66.9
1552	1	-2.108E+04	-1.398E+04	-2.070E+04	300.	203.	-97.3
1553	1	-2.229E+04	-1.084E+04	-1.070E+04	-77.2	-4.474E+03	65.5
1555	1	-1.997E+04	-1.239E+04	-1.839E+04	-62.2	-1.391E+03	0.205
1556	1	-2.314E+04	-1.205E+04	-1.937E+04	55.4	-2.931E+03	-19.6
1557	1	-2.123E+04	-1.394E+04	-2.074E+04	38.9	175.	-11.7
1562	1	-7.212E+03	4.217E+03	-1.673E+04	290.	-2.859E+03	-280.
1564	1	-7.071E+03	1.742E+03	-1.625E+04	8.30	392.	-214.
1566	1	-5.649E+03	8.006E+03	-1.039E+04	-866.	-8.326E+03	-1.747E+03
1569	1	-7.418E+03	3.001E+03	-1.608E+04	-280.	-1.175E+03	-250.
1570	1	-7.505E+03	4.873E+03	-1.617E+04	341.	-2.386E+03	-80.7
1571	1	-7.278E+04	-5.919E+04	-3.553E+04	83.0	-818.	-85.5
1572	1	-7.255E+03	1.684E+03	-1.440E+04	111.	363.	-77.7
1573	1	-7.166E+04	-6.187E+04	-3.525E+04	124.	114.	-3.29
1574	1	-5.080E+03	7.781E+03	-1.111E+04	-143.	-7.082E+03	-111.
1576	1	-7.378E+03	2.740E+03	-1.615E+04	-81.1	-1.119E+03	5.26
1577	1	-7.342E+04	-5.950E+04	-3.549E+04	-7.56	-893.	27.4
1578	1	-7.181E+04	-6.184E+04	-3.526E+04	20.0	70.8	27.2
1582	1	-1.549E+05	-1.394E+05	-5.905E+04	-278.	554	27.7
1583	1	-1.526E+05	-1.424E+05	-5.961E+04	-43.3	-49.8	200.
1584	1	-1.540E+05	-1.377E+05	-6.042E+04	-52.6	742	261.
1586	1	-1.533E+05	-1.407E+05	-5.889E+04	-45.8	-130.	-115.
1587	1	-1.533E+05	-1.397E+05	-5.931E+04	-21.3	357.	80.8
1588	1	-1.526E+05	-1.424E+05	-5.935E+04	39.7	-115.	68.0
1589	1	-1.543E+05	-1.378E+05	-6.005E+04	-122.	405.	64.6
1590	1	-1.535E+05	-1.410E+05	-5.898E+04	2.97	67.7	-52.6
1591	1	-9.654E+04	-1.570E+05	-1.387E+05	-132.	-8.142E+03	75.9
1592	1	-1.319E+05	-2.584E+05	-2.216E+05	-404.	-2.255E+03	48.7
1593	1	-1.481E+05	-2.594E+05	-2.006E+05	331.	-1.109E+04	-256.
1594	1	-5.923E+04	-5.735E+04	-5.394E+04	-120.	-1.034E+04	251.

1595	1	-6.590E+04	-8.154E+04	-7.250E+04	27.8	-1.362E+04	473.
1596	1	-9.429E+04	-1.578E+05	-1.385E+05	1.377E+03	-8.056E+03	-131.
1597	1	-1.325E+05	-2.576E+05	-2.213E+05	-361.	-1.971E+03	658.
1598	1	-1.443E+05	-2.634E+05	-2.003E+05	1.462E+03	-1.200E+04	859.
1599	1	-5.859E+04	-5.668E+04	-5.314E+04	219.	-1.001E+04	-746.
1600	1	-6.437E+04	-7.573E+04	-7.092E+04	1.131E+03	-1.277E+04	510.
1601	1	-9.521E+04	-1.584E+05	-1.391E+05	1.029E+03	-8.235E+03	-402.
1602	1	-1.452E+05	-2.617E+05	-1.998E+05	32.7	-1.156E+04	71.4
1603	1	-4.378E+04	-7.896E+04	-7.000E+04	113.	-1.126E+04	866.
1604	1	-1.132E+05	-1.844E+05	-1.344E+05	-79.1	-2.072E+04	329.
1605	1	-1.657E+05	-2.694E+05	-1.883E+05	2.433E+03	-2.364E+04	-190.
1606	1	-1.413E+05	-2.495E+05	-1.607E+05	554.	1.973E+03	-375.
1607	1	-4.473E+04	-9.208E+04	-8.352E+04	839.	-1.474E+04	1.007E+03
1608	1	-1.269E+05	-1.595E+05	-1.319E+05	-65.6	-2.804E+04	269.
1609	1	-1.104E+05	-1.799E+05	-1.322E+05	47.8	-2.098E+04	338.
1610	1	-1.414E+05	-2.723E+05	-1.890E+05	1.602E+03	-2.425E+04	-13.8
1611	1	-1.528E+05	-2.481E+05	-1.587E+05	3.460E+03	657.	-274.
1612	1	-4.582E+04	-9.613E+04	-8.212E+04	835.	-1.317E+04	1.039E+03
1613	1	-1.255E+05	-1.599E+05	-1.301E+05	330.	-2.813E+04	-909.
1614	1	-1.107E+05	-1.840E+05	-1.324E+05	2.007E+03	-2.115E+04	-705.
1615	1	-1.951E+05	-2.499E+05	-1.593E+05	-1.330E+03	1.794E+03	133.
1616	1	-1.228E+05	-1.569E+05	-1.274E+05	548.	-2.533E+04	247.
1617	1	-2.003E+05	-2.463E+05	-1.694E+05	-674.	-2.197E+04	-55.6
1618	1	-1.454E+05	-2.210E+05	-1.232E+05	1.547E+03	3.033E+04	63.5
1619	1	-2.032E+05	-2.515E+05	-1.724E+05	-20.0	-2.171E+04	-1.004E+03
1620	1	-1.449E+05	-2.234E+05	-1.228E+05	-352.	3.066E+04	-553.
1621	1	-1.985E+05	-2.492E+05	-1.723E+05	3.226E+03	-2.098E+04	2.188E+03
1622	1	-4.760E+04	-2.259E+04	-1.930E+04	321.	-4.489E+03	-91.0
1623	1	-4.677E+04	-2.322E+04	-2.104E+04	-654.	2.193E+03	120.
1624	1	-3.578E+04	-1.487E+04	-1.438E+04	5.531E+03	-2.750E+03	534.
1625	1	-4.543E+04	-1.229E+04	-1.553E+04	255.	-2.728E+03	-628.
1626	1	-5.642E+04	-6.142E+04	-5.662E+04	-1.347E+03	1.143E+04	-4.320E+03
1627	1	-6.702E+04	-8.991E+04	-7.801E+04	3.151E+03	1.172E+04	4.156E+03
1628	1	-4.592E+04	-2.219E+04	-1.824E+04	3.542E+03	-4.305E+03	1.347E+03
1629	1	-4.387E+04	-2.159E+04	-2.062E+04	4.422E+03	2.410E+03	-2.973E+03
1630	1	-2.616E+04	9.773E+03	1.901E+04	1.240E+04	-1.808E+03	3.801E+03
1631	1	-4.407E+04	-5.073E+03	-1.516E+04	7.733E+03	-3.497E+03	411.
1632	1	-6.169E+04	-5.472E+04	-5.700E+04	-6.138E+03	6.679E+03	-9.517E+03
1633	1	-4.424E+04	-7.787E+04	-6.719E+04	-1.018E+04	1.532E+04	-1.236E+04
1634	1	-4.168E+04	-2.143E+04	-1.099E+04	6.184E+03	-2.143E+03	2.598E+03
1635	1	-3.609E+04	-3.226E+04	-1.958E+04	3.390E+03	-785.	-1.245E+03
1636	1	-2.920E+04	1.039E+04	2.493E+04	1.495E+04	-4.202E+03	-1.541E+03
1637	1	-8.034E+04	-6.893E+04	-7.691E+04	-1.372E+04	2.762E+03	-1.721E+04
1638	1	-4.537E+04	-4.465E+04	-3.508E+04	67.1	-2.402E+03	-836.
1639	1	-7.058E+04	-5.528E+04	-3.972E+04	4.132E+03	-1.715E+03	3.626E+03
1640	1	-5.928E+04	-1.350E+04	1.815E+04	3.845E+03	-2.194E+03	457.

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STEP 2 INCREMENT 1

ABAGUS VERSION 4-4-75
MACH 14 FLOW RESTRICTOR

1650	1	-7.383E+04	-3.149E+03	1.935E+04	-1.607E+03	-2.822E+03	9.55
1651	1	-6.788E+04	-9.704E+04	-8.264E+04	-5.739E+03	1.443E+04	-6.299E+03
1652	1	-1.242E+05	-1.424E+05	-1.359E+05	-3.112E+04	1.990E+04	-7.642E+03
1653	1	-6.607E+04	-4.895E+04	-3.172E+04	1.190E+03	-1.328E+03	413
1654	1	-6.337E+04	-6.414E+04	-3.264E+04	-1.928E+03	1.931E+03	-1.889E+03
1657	1	-4.334E+04	1.083E+03	2.628E+04	9.509E+03	-1.685E+03	6.049E+03
1658	1	-6.609E+04	-1.239E+04	2.756E+04	1.350E+04	2.209E+03	1.189E+04
1659	1	-8.204E+04	-9.852E+04	-8.901E+04	-1.923E+04	8.799E+03	-1.656E+04
1660	1	-1.288E+05	-1.414E+05	-1.280E+05	-2.050E+04	2.164E+04	-1.850E+04
1661	1	-5.503E+04	-3.273E+04	-2.098E+04	8.069E+03	-245	3.159E+03
1663	1	-6.052E+04	-4.897E+04	-4.406E+04	-48.7	-2.794E+03	-2.380E+03
1664	1	-4.260E+04	2.639E+03	4.189E+04	1.742E+04	850	7.388E+03
1665	1	-1.524E+05	-1.408E+05	-1.422E+05	-1.760E+04	1.073E+04	-2.043E+04
1678	1	-1.351E+05	-1.118E+05	-1.357E+05	-2.116E+04	1.473E+03	-1.213E+04
1679	1	-1.725E+05	-2.195E+05	-2.144E+05	-6.038E+04	224	-6.674E+03
1680	1	-2.093E+05	-1.907E+05	-1.899E+05	-4.819E+04	4.244E+03	-2.019E+04
1683	1	-1.084E+05	-1.578E+05	-1.374E+05	-3.047E+04	8.231E+03	-6.607E+03
1684	1	-1.430E+05	-2.459E+05	-2.201E+05	-2.690E+04	2.934E+03	-287
1685	1	-1.691E+05	-2.402E+05	-1.894E+05	-5.317E+04	1.137E+04	-7.416E+03
1688	1	-9.151E+04	-1.443E+05	-1.388E+05	-299	8.781E+03	200
1689	1	-1.411E+05	-2.594E+05	-2.087E+05	-5.381E+03	1.064E+04	7.604E+03
1691	1	-1.570E+05	-1.429E+05	-1.302E+05	-3.902E+04	1.224E+04	-1.130E+04
1692	1	-2.012E+05	-2.074E+05	-1.731E+05	-4.525E+04	1.945E+04	-1.198E+04
1693	1	-2.118E+05	-2.331E+05	-1.632E+05	-3.994E+04	6.076E+03	1.188E+04
1696	1	-1.214E+05	-1.604E+05	-1.199E+05	-3.242E+04	1.764E+04	-1.615E+04
1697	1	-1.724E+05	-2.565E+05	-1.821E+05	-3.049E+04	1.963E+04	-9.089E+03
1698	1	-1.732E+05	-2.010E+05	-1.523E+05	-2.154E+04	-4.571E+03	-1.178E+03
1701	1	-1.103E+05	-2.009E+05	-1.463E+05	-1.963E+03	1.876E+04	-6.439E+03
1702	1	-1.184E+05	-2.074E+05	-1.599E+05	-3.458E+04	8.089E+03	3.303E+03
1704	1	-2.242E+05	-2.402E+05	-1.714E+05	-1.675E+04	1.034E+04	-2.785E+04
1705	1	-1.623E+05	-1.754E+05	-1.229E+05	-1.029E+04	-1.865E+04	2.794E+04
1707	1	-2.042E+05	-2.038E+05	-1.710E+05	2.139E+03	1.534E+04	-6.053E+03
1708	1	-1.361E+05	-1.748E+05	-1.347E+05	4.814E+04	-2.214E+04	2.363E+04
1710	1	-1.594E+05	-1.346E+05	-1.590E+05	-3.426E+04	1.807E+04	-248
1711	1	-1.461E+05	-9.885E+04	-1.407E+05	2.693E+04	-3.966E+03	-6.605E+03
1712	1	-2.493E+05	-1.450E+05	-2.040E+05	-1.605E+03	-547	-8.029E+03
1713	1	-2.953E+05	-1.545E+05	-1.900E+05	2.721E+04	-7.364E+03	-1.044E+04
1714	1	-5.064E+04	-5.415E+04	-6.680E+04	6.556E+03	-6.202E+03	-1.281E+04
1715	1	-6.403E+04	-5.993E+04	-8.776E+04	1.688E+04	-4.021E+03	-3.356E+03
1716	1	-1.667E+05	-1.437E+05	-3.361E+04	-2.944E+03	-2.944E+03	-2.073E+04
1717	1	-2.420E+05	-1.908E+05	-2.236E+05	-4.353E+04	47.2	-1.474E+04
1718	1	-2.536E+05	-1.615E+05	-1.868E+05	-2.643E+04	3.888E+03	-2.063E+04
1719	1	-6.187E+04	-6.025E+04	-6.000E+04	-1.115E+03	-3.482E+03	-1.808E+04
1720	1	-7.252E+04	-6.908E+04	-8.111E+04	-302	-1.140E+03	-1.504E+04
1724	1	-1.744E+05	-1.208E+05	-1.348E+05	-1.780E+04	-7.794E+03	-1.212E+04
1725	1	-2.572E+05	-1.609E+05	-1.789E+05	1.255E+04	-2.051E+03	-1.526E+04

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STEP 2 INCREMENT 1

ABAGUS VERSION 4-4-75

MACH 14 FLOW RESTRICTOR

1726	1	-2.533E+05	-1.978E+05	-1.678E+05	1.338E+04	295	6.686E+03
1727	1	-8.445E+04	-7.135E+04	-9.985E+04	0.164E+04	-2	1.021E+04
1728	1	-1.583E+05	-1.354E+05	-1.480E+05	8.390E+03	-1	0.264E+04
1729	1	-1.678E+05	-1.152E+05	-1.346E+05	-5.214E+03	5	3.13E+03
1730	1	-2.384E+05	-1.875E+05	-1.754E+05	-3.033E+04	1	5.62E+04
1731	1	-2.289E+05	-1.301E+05	-1.403E+05	-1.314E+04	1	4.03E+03
1732	1	-9.434E+04	-7.299E+04	-9.864E+04	-1.393E+04	5	3.38E+03
1733	1	-1.534E+05	-1.402E+05	-1.500E+05	5.865E+03	418	-2.227E+04
1737	1	-2.424E+05	-2.230E+05	-1.734E+05	4.001E+03	-9	6.74E+03
1738	1	-2.101E+05	-1.682E+05	-1.255E+05	8.348E+03	5	6.37E+03
1740	1	-2.324E+05	-1.949E+05	-1.694E+05	-6.121E+03	-370	-1.445E+04
1741	1	-1.994E+05	-1.984E+05	-1.259E+05	-3.224E+04	-8	3.82E+03
1744	1	-1.098E+05	-1.590E+05	-1.515E+05	3.311E+04	-9	9.67E+03
1745	1	-1.972E+05	-1.844E+05	-2.104E+05	5.341E+04	-3	5.09E+03
1746	1	-1.828E+05	-2.190E+05	-1.943E+05	5.161E+04	-1	1.04E+04
1747	1	-5.537E+04	-5.773E+04	-7.938E+04	4.679E+03	-1	1.001E+04
1748	1	-5.906E+04	-7.489E+04	-9.073E+04	1.594E+04	-1	1.23E+04
1749	1	-1.465E+05	-1.126E+05	-1.477E+05	2.280E+04	-7	2.61E+03
1750	1	-2.360E+05	-1.432E+05	-2.051E+05	5.280E+04	-2	9.11E+03
1751	1	-2.293E+05	-1.798E+05	-1.952E+05	5.637E+04	-9	0.65E+03
1752	1	-5.015E+04	-4.604E+04	-7.410E+04	5.742E+03	-7	1.82E+03
1753	1	-7.521E+04	-5.053E+04	-8.915E+04	4.094E+03	-9	7.07E+03
1757	1	-1.291E+05	-1.492E+05	-1.411E+05	3.537E+04	-2	2.00E+04
1758	1	-2.193E+05	-2.132E+05	-1.900E+05	4.873E+04	-2	0.25E+04
1759	1	-1.850E+05	-2.117E+05	-1.559E+05	4.143E+04	2	5.79E+03
1760	1	-7.759E+04	-7.457E+04	-1.042E+05	1.857E+04	-1	3.97E+04
1761	1	-1.324E+05	-1.378E+05	-1.527E+05	1.503E+04	-1	3.66E+04
1762	1	-1.573E+05	-1.251E+05	-1.375E+05	3.512E+04	-1	5.43E+04
1763	1	-2.614E+05	-1.949E+05	-1.938E+05	2.644E+04	-1	3.44E+04
1764	1	-2.091E+05	-1.719E+05	-1.514E+05	4.284E+04	417	3.204E+03
1765	1	-8.452E+04	-6.810E+04	-9.909E+04	1.742E+04	-1	0.90E+04
1766	1	-1.579E+05	-1.347E+05	-1.539E+05	1.998E+04	-2	0.24E+04
1770	1	-2.195E+05	-2.236E+05	-1.785E+05	2.043E+04	-2	3.90E+04
1771	1	-1.703E+05	-1.659E+05	-1.110E+05	3.215E+04	2	9.39E+04
1773	1	-2.327E+05	-2.052E+05	-1.750E+05	2.191E+04	-1	5.05E+04
1774	1	-2.060E+05	-1.590E+05	-1.194E+05	1.230E+04	1	3.38E+04
1777	1	-9.364E+04	-1.595E+05	-1.534E+05	-0.918	-1	0.76E+04
1778	1	-1.354E+05	-2.574E+05	-2.287E+05	2.071E+04	-2	9.05E+03
1779	1	-1.452E+05	-2.638E+05	-2.039E+05	982	-1	4.70E+04
1780	1	-5.529E+04	-5.801E+04	-7.609E+04	752	-1	4.33E+04
1781	1	-4.128E+04	-7.825E+04	-9.583E+04	-130	-1	8.66E+04
1782	1	-1.005E+05	-1.558E+05	-1.525E+05	2.187E+04	-1	0.68E+04
1783	1	-1.553E+05	-2.380E+05	-2.219E+05	5.115E+04	-3	4.75E+03
1784	1	-1.568E+05	-2.511E+05	-2.019E+05	3.656E+04	-1	5.38E+04
1785	1	-5.515E+04	-4.440E+04	-7.681E+04	5.791E+03	-1	2.78E+04
1786	1	-6.066E+04	-7.888E+04	-9.528E+04	6.547E+03	-1	7.45E+04

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1790	1	-1.088E+05	-1.787E+05	-1.423E+05	36.4	-2.548E+04	-47.8
1791	1	-1.736E+05	-2.646E+05	-1.897E+05	1.573E+04	-2.909E+04	-3.018E+03
1792	1	-1.529E+05	-2.407E+05	-1.541E+05	985	4.711E+03	-12.5
1793	1	-6.157E+04	-9.359E+04	-1.099E+05	5.458E+03	-1.980E+04	-1.283E+03
1794	1	-1.288E+05	-1.632E+05	-1.632E+05	-429	-3.510E+04	-8.60
1795	1	-1.161E+05	-1.737E+05	-1.433E+05	2.169E+04	-2.501E+04	-5.207E+03
1796	1	-1.913E+05	-2.461E+05	-1.913E+05	3.978E+04	-2.670E+04	-6.880E+03
1797	1	-1.613E+05	-2.290E+05	-1.541E+05	2.561E+04	3.445E+03	2.732E+03
1798	1	-6.595E+04	-8.490E+04	-1.065E+05	1.319E+04	-1.659E+04	-3.864E+03
1799	1	-1.286E+05	-1.610E+05	-1.605E+05	1.177E+04	-3.381E+04	-8.303E+03
1803	1	-1.999E+05	-2.416E+05	-1.773E+05	-411	-2.741E+04	109
1804	1	-1.386E+05	-2.021E+05	-1.104E+05	1.039E+04	4.161E+04	6.097E+03
1806	1	-2.071E+05	-2.376E+05	-1.784E+05	1.396E+04	-2.649E+04	-7.138E+03
1807	1	-1.512E+05	-1.887E+05	-1.095E+05	2.696E+04	3.673E+04	1.709E+04
1810	1	-4.323E+04	-2.056E+04	-4.311E+04	88.6	-3.750E+03	-8.82
1813	1	-3.414E+04	1.066E+04	-1.002E+04	-3.775E+03	3.247E+03	1.122E+03
1814	1	-4.028E+04	7.597E+03	-1.429E+04	104	6.949E+03	-39.0
1815	1	-4.170E+04	-1.949E+04	-3.855E+04	-3.932E+03	-2.599E+03	-77.3
1818	1	-2.574E+04	8.148E+03	-4.942E+03	-1.104E+04	3.075E+03	2.487E+03
1819	1	-3.813E+04	8.171E+03	-9.269E+03	-9.161E+03	6.834E+03	3.507E+03
1820	1	-3.172E+04	-1.579E+04	-3.061E+04	-6.019E+03	-952	824
1822	1	-2.531E+04	2.634E+03	-1.404E+03	-1.462E+04	4.864E+03	2.781E+03
1823	1	-5.791E+04	-4.612E+04	-6.803E+04	563	-2.019E+03	-74.6
1826	1	-4.345E+04	7.223E+03	-8.440E+03	-4.982E+03	9.876E+03	1.838E+03
1827	1	-5.549E+04	3.602E+03	-8.216E+03	198	5.806E+03	-129
1828	1	-5.522E+04	-4.041E+04	-6.119E+04	-950	-156	1.823E+03
1831	1	-3.222E+04	7.644E+03	-1.513E+03	-1.275E+04	7.524E+03	4.299E+03
1832	1	-4.970E+04	9.008E+03	180	-1.211E+04	6.123E+03	3.320E+03
1833	1	-4.718E+04	-2.994E+04	-4.495E+04	-6.072E+03	3.833E+03	3.178E+03
1835	1	-2.945E+04	8.562E+03	1.328E+04	-1.885E+04	3.616E+03	3.573E+03
1843	1	-3.132E+04	-3.381E+03	-1.403E+04	50.4	341	59.0
1846	1	-2.049E+04	-1.030E+04	-1.656E+04	-90.3	-708	-6.61
1847	1	-2.302E+04	-9.463E+03	-1.389E+04	-244	-1.965E+03	-70.5
1848	1	-2.280E+04	-9.197E+03	-1.406E+04	-157	-2.665E+03	9.12
1849	1	-1.834E+04	-1.230E+04	-1.880E+04	178	83.9	-42.9
1850	1	-1.803E+04	-1.211E+04	-1.839E+04	95.4	-79.4	-19.5
1851	1	-2.921E+04	-4.627E+03	-1.334E+04	-3.731E+03	-102	706.
1854	1	-2.012E+04	-1.057E+04	-1.667E+04	-385	-705	-38.3
1855	1	-2.220E+04	-9.486E+03	-1.424E+04	-728	-2.049E+03	-170
1856	1	-2.277E+04	-1.004E+04	-1.488E+04	-311	-2.784E+03	-306
1857	1	-1.817E+04	-1.215E+04	-1.882E+04	44.4	18.0	-113
1858	1	-1.843E+04	-1.202E+04	-1.853E+04	269	164	-108
1859	1	-2.601E+04	-8.755E+03	-1.327E+04	-4.588E+03	-1.021E+03	724
1861	1	-1.949E+04	-1.088E+04	-1.682E+04	-437	-790	-51.3
1862	1	-2.169E+04	-9.540E+03	-1.521E+04	-792	-2.438E+03	-304
1863	1	-1.827E+04	-1.264E+04	-1.892E+04	2.40	97.4	-230

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1864	1	-3.465E+04	-3.574E+03	-1.266E+04	-36.0	206	-35.7
1867	1	-2.130E+04	-1.070E+04	-1.703E+04	-66.7	-1.251E+03	9.36
1868	1	-2.237E+04	-9.482E+03	-1.437E+04	-197	-3.297E+03	-158
1869	1	-2.243E+04	-9.007E+03	-1.437E+04	-108	-3.331E+03	58.0
1870	1	-1.862E+04	-1.248E+04	-1.881E+04	190	22.4	-85.8
1871	1	-1.842E+04	-1.254E+04	-1.885E+04	106	-56.4	-43.9
1872	1	-3.172E+04	-4.279E+03	-1.131E+04	-4.350E+03	-759	877.
1875	1	-2.095E+04	-1.104E+04	-1.721E+04	-379	-1.095E+03	-93.4
1876	1	-2.185E+04	-9.640E+03	-1.517E+04	-486	-3.011E+03	-467
1877	1	-2.225E+04	-1.034E+04	-1.530E+04	-91.6	-3.337E+03	-440
1878	1	-1.853E+04	-1.233E+04	-1.877E+04	218	224	-114.
1879	1	-1.883E+04	-1.211E+04	-1.879E+04	351	81.5	-155
1880	1	-2.732E+04	-8.633E+03	-1.140E+04	-5.295E+03	-2.072E+03	1.007E+03
1882	1	-2.030E+04	-1.125E+04	-1.739E+04	-470	-1.124E+03	-177
1883	1	-2.155E+04	-9.221E+03	-1.582E+04	-490	-2.614E+03	-303.
1884	1	-1.869E+04	-1.310E+04	-1.925E+04	-0.999	-102	-190.
1898	1	-1.328E+05	-2.598E+05	-2.215E+05	-67.5	-2.143E+03	366
1900	1	-5.631E+04	-5.398E+04	-5.208E+04	641.	-9.388E+03	-264.
1902	1	-9.512E+04	-1.599E+05	-1.398E+05	1.298E+03	-7.774E+03	180.
1903	1	-1.328E+05	-2.594E+05	-2.215E+05	-386	-2.170E+03	53.0
1904	1	-1.457E+05	-2.638E+05	-2.007E+05	306	-1.149E+04	152
1905	1	-5.574E+04	-5.453E+04	-5.147E+04	216	-8.744E+03	310.
1906	1	-6.224E+04	-7.575E+04	-6.829E+04	824	-1.099E+04	84.1
1907	1	-9.362E+04	-1.592E+05	-1.388E+05	275	-7.980E+03	-78.6
1908	1	-1.463E+05	-2.655E+05	-2.016E+05	-397	-1.166E+04	-45.7
1909	1	-6.067E+04	-7.310E+04	-6.624E+04	5.44	-1.028E+04	324
1911	1	-1.655E+05	-2.730E+05	-1.911E+05	6.83	-2.353E+04	379.
1913	1	-6.247E+04	-9.211E+04	-7.717E+04	1.213E+03	-1.165E+04	-681
1915	1	-1.094E+05	-1.830E+05	-1.327E+05	1.092E+03	-2.132E+04	-35.8
1916	1	-1.643E+05	-2.743E+05	-1.910E+05	583	-2.392E+04	-57.6
1917	1	-1.559E+05	-2.499E+05	-1.587E+05	-1.424E+03	982	-240
1918	1	-6.240E+04	-8.996E+04	-7.710E+04	89.2	-1.042E+04	77.6
1919	1	-1.232E+05	-1.589E+05	-1.286E+05	1.161E+03	-2.407E+04	182
1920	1	-1.079E+05	-1.835E+05	-1.325E+05	453	-2.111E+04	137
1921	1	-1.601E+05	-2.538E+05	-1.610E+05	-297	1.154E+03	0.912
1922	1	-1.194E+05	-1.524E+05	-1.239E+05	-682	-2.332E+04	14.6
1924	1	-1.444E+05	-2.230E+05	-1.199E+05	-1.529E+03	3.011E+04	-1.440E+03
1926	1	-2.027E+05	-2.554E+05	-1.742E+05	3.192E+03	-2.215E+04	-111
1927	1	-1.478E+05	-2.217E+05	-1.195E+05	-2.211E+03	3.032E+04	214.
1929	1	-1.990E+05	-2.536E+05	-1.725E+05	423	-2.144E+04	-77.1
1934	1	-2.091E+04	-3.800E+03	-2.278E+04	1.118E+04	-805	2.237E+03
1936	1	-3.567E+04	-5.293E+04	-4.104E+04	478	-1.898E+03	-7.036E+03
1938	1	-3.670E+04	-2.194E+04	-7.158E+03	3.892E+03	-1.469E+03	294
1941	1	-1.066E+04	-2.906E+04	882	8.182E+03	-5.368E+03	-3.553E+03
1942	1	-1.519E+04	-8.451E+03	2.377E+04	5.173E+03	-1.588E+03	-284
1943	1	-2.049E+04	-2.249E+03	2.895E+04	9.523E+03	-274	1.759E+03

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1944	1	6.810E+03	-3.617E+04	-8.674E+03	1.742E+03	-5.447E+03	-3.201E+03
1945	1	-1.644E+04	-4.845E+04	-2.983E+04	3.962E+03	-7.202E+03	-2.715E+03
1946	1	-3.572E+04	-2.414E+04	-6.892E+03	169	-1.067E+03	2.86
1948	1	-2.576E+03	-2.883E+04	5.109E+03	90.4	-4.963E+03	357.
1949	1	-1.563E+04	-1.036E+04	2.880E+04	786	-2.192E+03	-394.
1950	1	1.069E+04	-4.085E+04	-5.338E+03	640	-5.755E+03	761
1955	1	-3.099E+04	9.505E+03	3.122E+04	1.272E+04	-1.128E+03	6.572E+03
1957	1	-6.032E+04	-6.114E+04	-6.860E+04	-5.673E+03	-3.921E+03	-9.008E+03
1959	1	-4.839E+04	-3.801E+04	-1.779E+04	3.905E+03	1.084E+03	756
1962	1	-2.507E+04	-3.514E+04	-8.448E+03	8.146E+03	-7.674E+03	4.391E+03
1963	1	-2.085E+04	-4.689E+03	3.573E+04	5.648E+03	-1.721E+03	1.448E+03
1964	1	-2.979E+04	-1.716E+03	4.472E+04	1.165E+04	-2.216E+03	2.911E+03
1965	1	-1.097E+04	-5.436E+04	-2.155E+04	1.923E+03	-7.430E+03	2.628E+03
1966	1	-4.294E+04	-7.328E+04	-4.024E+04	5.139E+03	-7.664E+03	563.
1967	1	-4.622E+04	-3.778E+04	-1.394E+04	294	1.442E+03	-363.
1969	1	-1.776E+03	-4.027E+04	1.117E+04	-9.61	-8.348E+03	613.
1970	1	-2.044E+04	-6.444E+03	4.514E+04	1.377E+03	-3.042E+03	160.
1971	1	-4.935E+03	-6.914E+04	-4.344E+03	1.750E+03	-6.723E+03	1.540E+03
1988	1	-2.461E+04	-1.120E+04	-3.561E+04	829	-8.138E+03	-1.509E+04
1990	1	-9.397E+03	-3.171E+04	-3.899E+04	1.257E+04	-2.470E+03	-1.483E+03
1992	1	-348	-2.732E+04	-2.015E+04	68.1	-4.321E+03	-7.485E+03
1995	1	4.050E+03	-1.856E+04	-1.860E+04	5.081E+03	-3.639E+03	-2.301E+03
1996	1	7.216E+03	-2.317E+04	-1.184E+04	2.108E+03	-3.151E+03	-483.
1997	1	-1.031E+04	-3.026E+04	-3.019E+04	6.581E+03	-5.612E+03	6.365E+03
1998	1	832	-2.434E+04	-9.545E+03	-2.239E+03	-46.1	1.558E+03
1999	1	1.084E+03	-3.358E+04	-1.562E+04	-1.078E+03	2.448E+03	8.010E+03
2000	1	1.242E+04	-2.815E+04	-4.193E+03	470	-3.356E+03	946.
2002	1	6.869E+03	-2.360E+04	-2.632E+03	-1.395E+03	10.8	1.413E+03
2003	1	1.202E+04	-3.352E+04	-1.310E+03	-822	152	1.779E+03
2004	1	-1.967E+03	-2.669E+04	-1.201E+03	-1.162E+03	1.997E+03	1.082E+03
2009	1	-4.601E+04	-4.859E+04	-6.413E+04	1.635E+04	-757	7.409E+03
2011	1	-5.228E+04	-6.134E+04	-6.547E+04	1.881E+03	-1.589E+03	-380
2013	1	-2.455E+04	-5.008E+04	-3.538E+04	7.355E+03	-8.143E+03	1.081E+04
2016	1	-1.199E+04	-4.917E+04	-2.276E+04	1.601E+03	1.210E+03	1.637E+04
2017	1	-6.808E+03	-5.009E+04	-1.422E+04	3.157E+03	-1.261E+02	6.105E+03
2018	1	-3.532E+04	-7.990E+04	-3.304E+04	7.556E+03	-4.843E+03	5.930E+03
2019	1	-3.567E+03	-3.828E+04	-3.901E+03	-3.112E+03	3.468E+03	6.585E+03
2020	1	-1.361E+04	-5.815E+04	-1.362E+04	-4.525E+03	-325	8.174E+03
2021	1	8.001E+03	-4.615E+04	-2.136E+03	-552	-2.734E+03	989.
2023	1	7.554E+03	-3.591E+04	5.547E+03	-924	1.563E+03	1.182E+03
2024	1	5.489	-3.470E+04	6.094E+03	-1.328E+03	-1.500E+03	1.384E+03
2025	1	-2.610E+04	-7.647E+03	-3.607E+04	-1.917E+03	2.039E+03	2.976E+03
2042	1	-1.577E+04	-1.496E+04	-2.897E+04	9.057E+03	-2.318E+03	57.6
2046	1	3.597E+03	-2.281E+04	-1.320E+04	-7.578E+03	-1.988E+03	1.832E+03
2049	1	-7.192E+03	-4.689E+03	-7.487E+03	-8.965E+03	21.1	2.268E+03
							2.806E+03

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2050	1	-8	903E+03	-1	908E+04	-7	511E+03	-3	020E+03	539	1	464E+03				
2051	1	-3	258E+03	-1	891E+04	-6	726E+03	-1	213E+04	4	274E+03	8	377E+03			
2052	1	-2	094E+04	-1	277E+04	-9	074E+03	-5	910E+03	94	0	1	574E+03			
2053	1	-1	536E+04	-4	556E+03	-1	012E+03	-1	260E+04	6	036E+03	5	448E+03			
2054	1	-6	924E+03	-1	950E+04	-2	115E+03	314		692	11	9				
2056	1	-1	501E+04	-1	770E+04	-3	020E+03	-746		-313	-137					
2057	1	-1	650E+04	-2	050E+04	-4	147E+03	1	247E+03	454	-10	2				
2058	1	-4	928E+04	-1	558E+04	-4	239E+03	-366		-2	181E+03	746				
2063	1	-4	183E+04	-3	893E+04	-4	768E+04	1	250E+03	-1	405E+03	5	692E+03			
2065	1	-7	093E+03	-3	215E+04	-6	778E+03	-9	050E+03	4	017E+03	6	859E+03			
2067	1	-1	143E+04	-1	311E+04	-2	759E+03	-1	529E+04	8	770E+03	1	654E+04			
2070	1	-1	343E+04	-2	256E+04	-1	678E+03	-7	295E+03	1	880E+03	4	777E+03			
2071	1	-1	363E+04	-3	431E+04	900		-1	983E+04	2	824E+03	1	114E+04			
2072	1	-2	256E+04	-1	658E+04	-3	948E+03	-5	304E+03	633	3	424E+03	3	424E+03		
2074	1	-1	825E+04	-7	046E+03	1	101E+04	-1	911E+04	4	546E+03	7	529E+03			
2075	1	-8	188E+03	-2	393E+04	3	267E+03	-210		574	1	315E+03				
2077	1	-1	772E+04	-1	893E+04	-2	759E+03	1	280E+03	-1	712E+03	733				
2078	1	-1	802E+04	-2	045E+04	3	931E+03	-2	21	-227	1	435E+03				
2079	1	-1	348E+04	-1	480E+04	210		1	917E+03	-3	189E+03	336				
2095	1	-2	584E+04	-8	313E+03	-8	781E+03	-1	035E+04	739	2	309E+03				
2097	1	-1	724E+04	-1	295E+04	-9	238E+03	-7	382E+03	487	2	989E+03				
2100	1	-2	074E+04	-1	149E+04	-7	554E+03	-2	624E+03	-1	742E+03	719				
2101	1	-2	231E+04	-1	189E+04	-7	367E+03	-6	988E+03	-2	514E+03	1	795E+03			
2102	1	-2	002E+04	-1	345E+04	-5	857E+03	-972		-1	211E+03	27	0			
2104	1	-2	364E+04	-1	355E+04	-8	096E+03	-84	4	-1	942E+03	-287				
2108	1	-2	955E+04	-6	448E+03	-3	519E+03	-1	302E+04	1	755E+03	3	103E+03			
2110	1	-2	034E+04	-1	175E+04	-596		-1	201E+04	2	261E+03	6	427E+03			
2113	1	-2	121E+04	-1	174E+04	-5	784E+03	-3	211E+03	-3	045E+03	713				
2114	1	-2	320E+04	-1	249E+04	-6	112E+03	-8	058E+03	425	-3	538E+03	1	429E+03		
2115	1	-2	097E+04	-1	528E+04	-6	246E+03	425		-2	743E+03	102				
2117	1	-2	804E+04	-1	524E+04	-8	400E+03	-0	756	-3	127E+03	-290				
2129	1	-2	129E+04	-1	028E+04	-1	531E+04	-793		-2	001E+03	-179				
2131	1	-1	803E+04	-1	249E+04	-1	866E+04	-3	64	95	1	116				
2133	1	-2	208E+04	-9	810E+03	-1	155E+04	-2	871E+03	-1	864E+03	413				
2136	1	-1	911E+04	-1	163E+04	-1	743E+04	-380		-849	-35	5				
2137	1	-2	033E+04	-1	043E+04	-1	569E+04	-218		-2	013E+03	-93	1			
2138	1	-2	086E+04	-1	068E+04	-1	591E+04	-413		-2	360E+03	-205				
2139	1	-1	781E+04	-1	241E+04	-1	883E+04	93	6	120	-47	7				
2140	1	-1	815E+04	-1	246E+04	-1	891E+04	172		86	0	-155				
2141	1	-2	118E+04	-1	106E+04	-1	189E+04	109		-2	195E+03	20	4			
2143	1	-1	874E+04	-1	172E+04	-1	741E+04	-89	2	-863	1	43				
2144	1	-2	097E+04	-1	090E+04	-1	642E+04	-69	1	-2	293E+03	50	4			
2145	1	-1	812E+04	-1	261E+04	-1	907E+04	32	6	229	-59	5				
2150	1	-2	145E+04	-1	056E+04	-1	615E+04	-485		-2	654E+03	-343				
2152	1	-1	853E+04	-1	265E+04	-1	906E+04	189		35	3	-143				

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2154	1	-2	319E+04	-1	044E+04	-1	157E+04	-2	899E+03	-2	896E+03	61	8
2157	1	-1	959E+04	-1	177E+04	-1	765E+04	-471	-1	045E+03	-32	6	
2158	1	-2	096E+04	-1	051E+04	-1	624E+04	-93.0	-2	639E+03	-168		
2159	1	-2	110E+04	-1	086E+04	-1	671E+04	-358	-2	901E+03	-274		
2160	1	-1	852E+04	-1	273E+04	-1	929E+04	87.7	84.1		-91.2		
2161	1	-1	869E+04	-1	276E+04	-1	939E+04	282	-219		-180		
2162	1	-2	173E+04	-1	080E+04	-1	131E+04	-106	-3	096E+03	-108		
2164	1	-1	937E+04	-1	207E+04	-1	785E+04	-56.6	-1	069E+03	31.7		
2165	1	-2	125E+04	-1	109E+04	-1	698E+04	0.102	-2	726E+03	47.3		
2166	1	-1	871E+04	-1	276E+04	-1	943E+04	43.2	71.3		-63.6		
2179	1	-9	877E+04	-1	494E+05	-1	373E+05	374	2	265E+03	-88.2		
2180	1	-1	335E+05	-2	522E+05	-2	301E+05	296	3	633E+03	26.3		
2181	1	-1	339E+05	-2	517E+05	-2	316E+05	-105	3	337E+03	40.0		
2182	1	-6	198E+04	-4	724E+04	-4	377E+04	-24.1	1	002E+03	-125		
2183	1	-6	197E+04	-4	839E+04	-4	530E+04	207	710		-10.8		
2184	1	-9	782E+04	-1	486E+05	-1	365E+05	878	2	135E+03	-96.7		
2185	1	-1	332E+05	-2	533E+05	-2	305E+05	81.6	3	687E+03	-62.9		
2186	1	-1	335E+05	-2	526E+05	-2	318E+05	220	3	380E+03	-84.5		
2187	1	-6	199E+04	-4	619E+04	-4	204E+04	409	888		-414		
2188	1	-6	206E+04	-4	671E+04	-4	419E+04	-425	739		-58.8		
2189	1	-9	646E+04	-1	491E+05	-1	361E+05	1	617E+03	2	091E+03	-135	
2190	1	-1	346E+05	-2	543E+05	-2	327E+05	164	3	442E+03	-95.4		
2191	1	-5	991E+04	-4	269E+04	-4	038E+04	-14.2	547		-21.4		
2192	1	-9	842E+04	-1	472E+05	-1	392E+05	-184	1	828E+03	-1.26		
2193	1	-1	346E+05	-2	522E+05	-2	333E+05	-52.6	2	840E+03	-39.2		
2194	1	-1	338E+05	-2	516E+05	-2	347E+05	194	2	813E+03	4.91		
2195	1	-6	193E+04	-4	640E+04	-4	566E+04	-391	675		-4.83		
2196	1	-6	242E+04	-4	655E+04	-4	703E+04	-229	740		-5.37		
2197	1	-9	857E+04	-1	480E+05	-1	395E+05	1	098E+03	1	836E+03	-16.2	
2198	1	-1	352E+05	-2	527E+05	-2	336E+05	101	2	852E+03	36.0		
2199	1	-1	339E+05	-2	518E+05	-2	348E+05	48.3	2	643E+03	44.4		
2200	1	-6	096E+04	-4	392E+04	-4	358E+04	-693	596		-44.8		
2201	1	-6	219E+04	-4	537E+04	-4	593E+04	-676	720		-84.8		
2202	1	-9	743E+04	-1	487E+05	-1	393E+05	1	031E+03	1	735E+03	14.2	
2203	1	-1	345E+05	-2	528E+05	-2	354E+05	489	2	634E+03	24.3		
2204	1	-6	075E+04	-4	205E+04	-4	253E+04	-682	717		-110		
2205	1	-9	874E+04	-1	460E+05	-1	423E+05	-13.9	2	523E+03	9.39		
2206	1	-1	340E+05	-2	521E+05	-2	395E+05	204	3	638E+03	-24.6		
2207	1	-1	360E+05	-2	556E+05	-2	329E+05	142	2	052E+03	-15.1		
2208	1	-6	108E+04	-4	340E+04	-4	571E+04	-488	790		44.0		
2209	1	-6	004E+04	-4	941E+04	-4	954E+04	-204	-4	410E+03	3.67		
2210	1	-9	858E+04	-1	462E+05	-1	423E+05	836	2	539E+03	19.4		
2211	1	-1	353E+05	-2	527E+05	-2	396E+05	222	3	560E+03	-68.5		
2212	1	-1	363E+05	-2	557E+05	-2	330E+05	-233	2	276E+03	-56.6		
2213	1	-6	085E+04	-4	154E+04	-4	370E+04	-957	784		121		
2214	1	-6	009E+04	-4	860E+04	-4	878E+04	-481	-4	341E+03	161		

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2215	1	-9	748E+04	-1	468E+05	-1	418E+05	1	028E+03	2	564E+03	29	9
2216	1	-1	373E+05	-2	569E+05	-2	337E+05	412		2	239E+03	-74	2
2217	1	-5	802E+04	-4	529E+04	-4	545E+04	-465		-3	979E+03	362	
2225	1	-5	480E+04	-1	586E+04	-9	612E+03	-1	033E+03	1	925E+03	222	
2228	1	-6	608E+04	-2	743E+04	-1	718E+04	6	934E+03	4	996E+03	-1	972E+03
2229	1	-4	817E+04	1	240E+04	2	467E+04	8	191E+03	3	101E+03	-1	165E+03
2230	1	-5	064E+04	1	872E+04	2	457E+04	-229		2	576E+03	74	9
2231	1	-6	021E+04	-5	801E+04	-4	904E+04	-8	096E+03	-2	120E+03	1	438E+03
2232	1	-6	200E+04	-5	384E+04	-5	308E+04	4	490E+03	3	854E+03	-2	548E+03
2233	1	-5	242E+04	-1	925E+04	-8	227E+03	5	564E+03	1	450E+03	-889	
2236	1	-4	375E+04	-2	276E+04	-9	190E+03	3	902E+03	-1	532E+03	1	222E+03
2237	1	-3	349E+04	676	2	637E+04	1	447E+04	172		-1	432E+03	
2238	1	-4	277E+04	8	031E+03	2	450E+04	1	511E+04	1	326E+03	-1	629E+03
2239	1	-5	245E+04	-3	824E+04	-4	227E+04	-3	812E+03	-156		1	067E+04
2240	1	-5	445E+04	-4	733E+04	-4	030E+04	-765		-2	619E+03	3	520E+03
2241	1	-4	677E+04	-2	217E+04	-4	866E+03	6	834E+03	588		-860	
2243	1	-3	683E+04	-2	478E+04	-1	065E+04	5	134E+03	1	279E+03	5	444E+03
2244	1	-3	705E+04	-2	588E+03	2	722E+04	1	574E+04	-316		-457	
2245	1	-5	445E+04	-5	617E+04	-4	737E+04	4	544E+03	4	300E+03	5	474E+03
2246	1	-5	469E+04	-1	819E+04	-1	228E+04	614		1	015E+03	-29	2
2249	1	-5	468E+04	-1	147E+04	-1	081E+04	-1	143E+03	585		-48	7
2250	1	-4	479E+04	1	525E+04	2	441E+04	6	672E+03	1	222E+03	-350	
2251	1	-4	610E+04	1	835E+04	2	387E+04	603		738		5	91
2252	1	-6	302E+04	-4	702E+04	-4	790E+04	2	903E+03	1	192E+03	-339	
2253	1	-6	529E+04	-4	304E+04	-4	792E+04	-225		-190		164	
2254	1	-5	183E+04	-1	750E+04	-9	555E+03	4	030E+03	890		-310	
2257	1	-5	085E+04	-2	163E+04	-1	154E+04	1	082E+04	1	050E+03	-734	
2258	1	-3	503E+04	5	356E+03	2	622E+04	1	581E+04	806		-808	
2259	1	-3	979E+04	1	385E+04	2	549E+04	1	274E+04	723		-192	
2260	1	-5	511E+04	-5	815E+04	-4	837E+04	5	677E+03	2	574E+03	5	41
2261	1	-6	005E+04	-5	164E+04	-4	993E+04	6	267E+03	444		42	3
2262	1	-4	732E+04	-1	883E+04	-5	413E+03	6	771E+03	711		-474	
2264	1	-3	850E+04	-3	812E+04	-1	438E+04	1	174E+04	1	564E+03	369	
2265	1	-2	710E+04	-259	2	554E+04		1	765E+04	578		-263	
2266	1	-5	120E+04	-6	305E+04	-5	374E+04	5	434E+03	1	534E+03	703	
2267	1	-5	186E+04	-1	462E+04	-1	153E+04	174		101		-23	4
2270	1	-5	461E+04	-9	991E+03	-1	168E+04	392		794		103	
2271	1	-4	197E+04	1	722E+04	2	472E+04	6	603E+03	466		-1	76
2272	1	-4	209E+04	1	790E+04	1	963E+04	399		-1	378E+03	62	7
2273	1	-5	951E+04	-4	323E+04	-4	758E+04	3	235E+03	-313		286	
2274	1	-5	940E+04	-4	940E+04	-5	179E+04	5	95	5	999E+03	-176	
2275	1	-4	958E+04	-1	486E+04	-9	384E+03	3	648E+03	139		60	3
2278	1	-4	780E+04	-1	878E+04	-1	235E+04	1	056E+04	458		34	8
2279	1	-3	200E+04	8	290E+03	2	552E+04	1	560E+04	576		-397	
2280	1	-3	552E+04	1	464E+04	2	180E+04	1	199E+04	-623		967	
2281	1	-5	012E+04	-5	390E+04	-4	949E+04	7	945E+03	-346		1	458E+03

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2282	1	-5.641E+04	-5.168E+04	-5.041E+04	1.725E+03	3.997E+03	-2.866E+03
2283	1	-4.547E+04	-1.633E+04	-6.734E+03	6.196E+03	126	-66.4
2285	1	-3.489E+04	-3.271E+04	-1.553E+04	1.325E+04	910	286.
2286	1	-2.399E+04	1.546E+03	2.345E+04	1.605E+04	116	886.
2287	1	-9.355E+04	-5.630E+04	-5.531E+04	3.711E+03	-634	-6.644E+03
2300	1	-1.314E+05	-9.825E+04	-1.361E+05	-2.643E+04	4.930E+03	9.687E+03
2301	1	-1.779E+05	-1.749E+05	-2.224E+05	-5.224E+04	4.339E+03	1.580E+04
2302	1	-2.191E+05	-1.705E+05	-2.367E+05	-5.794E+04	3.511E+03	6.468E+03
2305	1	-9.979E+04	-1.123E+05	-1.265E+05	-3.020E+04	-4.475E+03	1.770E+04
2306	1	-1.317E+05	-1.886E+05	-2.089E+05	-2.270E+04	1.798E+03	2.985E+04
2307	1	-1.655E+05	-2.343E+05	-2.275E+05	-5.695E+04	-82.6	1.074E+04
2310	1	-9.479E+04	-1.283E+05	-1.307E+05	-6.495E+03	5.602E+03	1.486E+04
2311	1	-1.350E+05	-2.451E+05	-2.412E+05	7.308E+03	-3.247E+03	-1.043E+04
2313	1	-1.326E+05	-1.125E+05	-1.404E+05	-2.443E+04	2.041E+03	2.374E+03
2314	1	-1.925E+05	-2.028E+05	-2.423E+05	-5.787E+04	-1.625E+03	-947.
2315	1	-2.169E+05	-1.648E+05	-2.385E+05	-5.772E+04	-140	3.242E+03
2316	1	-1.113E+05	-1.396E+05	-1.457E+05	-2.349E+04	291	-4.306E+03
2319	1	-1.382E+05	-2.353E+05	-2.361E+05	-2.994E+04	-3.474E+03	-24.1
2320	1	-1.572E+05	-2.212E+05	-2.351E+05	-5.400E+04	-2.969E+03	3.283E+03
2323	1	-9.511E+04	-1.446E+05	-1.417E+05	-5.934E+03	-2.609E+03	4.455E+03
2324	1	-1.301E+05	-2.623E+05	-2.389E+05	-4.590E+03	-1.314E+03	2.190E+03
2326	1	-1.316E+05	-1.123E+05	-1.461E+05	-2.666E+04	-2.040E+03	2.593E+03
2327	1	-1.937E+05	-1.966E+05	-2.446E+05	-5.612E+04	-3.175E+03	153
2328	1	-2.172E+05	-1.807E+05	-2.355E+05	-5.201E+04	-1.909E+03	2.174E+03
2331	1	-1.101E+05	-1.337E+05	-1.450E+05	-2.292E+04	-2.654E+03	53.1
2332	1	-1.436E+05	-2.420E+05	-2.414E+05	-2.729E+04	4.395E+03	-1.444E+03
2333	1	-1.639E+05	-2.386E+05	-2.349E+05	-5.495E+04	-1.574E+03	2.314E+03
2336	1	-9.578E+04	-1.510E+05	-1.439E+05	-222.	-2.574E+03	-1.229E+03
2337	1	-1.303E+05	-2.482E+05	-2.290E+05	-750.	-1.714E+03	-652.
2346	1	-1.524E+05	-1.032E+05	-1.484E+05	1.777E+04	7.186E+03	316.
2347	1	-2.563E+05	-1.357E+05	-2.399E+05	7.778E+03	6.553E+03	3.703E+03
2348	1	-2.552E+05	-1.402E+05	-2.440E+05	3.056E+04	6.923E+03	2.116E+03
2349	1	-4.953E+04	-6.329E+04	-5.468E+04	7.201E+03	8.445E+03	995
2350	1	-4.938E+04	-6.571E+04	-5.882E+04	3.573E+03	6.738E+03	-1.147E+03
2351	1	-1.487E+05	-9.110E+04	-1.414E+05	-1.708E+03	7.771E+03	4.340E+03
2352	1	-2.309E+05	-1.388E+05	-2.303E+05	-3.873E+04	4.186E+03	7.196E+03
2353	1	-2.532E+05	-1.331E+05	-2.385E+05	-1.774E+04	5.395E+03	4.506E+03
2354	1	-5.310E+04	-5.069E+04	-5.003E+04	7.062E+03	7.725E+03	6.405E+03
2355	1	-4.948E+04	-6.298E+04	-5.325E+04	4.777E+03	7.434E+03	1.254E+03
2359	1	-1.478E+05	-1.024E+05	-1.520E+05	1.719E+04	5.601E+03	779
2360	1	-2.505E+05	-1.361E+05	-2.423E+05	7.564E+03	5.212E+03	1.758E+03
2361	1	-2.493E+05	-1.377E+05	-2.456E+05	2.880E+04	5.584E+03	2.265E+03
2362	1	-4.846E+04	-6.491E+04	-5.801E+04	4.253E+03	5.523E+03	1.062E+03
2363	1	-4.819E+04	-6.453E+04	-6.203E+04	511	2.922E+03	-633
2364	1	-1.474E+05	-9.736E+04	-1.456E+05	-6.080E+03	5.076E+03	1.945E+03
2365	1	-2.378E+05	-1.537E+05	-2.393E+05	-3.780E+04	2.559E+03	2.717E+03

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2366	1	-2.499E+05	-1.329E+05	-2.403E+05	-1.653E+04	2.396E+03	5.363E+03
2367	1	-5.087E+04	-6.394E+04	-5.382E+04	6.013E+03	4.645E+03	1.606E+03
2368	1	-4.674E+04	-6.537E+04	-5.707E+04	6.805E+03	2.264E+03	-882
2372	1	-1.440E+05	-9.953E+04	-1.548E+05	1.258E+04	2.111E+03	3.289E+03
2373	1	-2.500E+05	-1.365E+05	-2.528E+05	5.385E+03	-599	2.233E+03
2374	1	-2.514E+05	-1.441E+05	-2.400E+05	2.938E+04	1.302E+03	878
2375	1	-4.335E+04	-6.312E+04	-5.787E+04	3.552E+03	2.093E+03	1.873E+03
2376	1	-4.245E+04	-5.804E+04	-6.171E+04	8.825E+03	-3.784E+03	-1.053E+04
2377	1	-1.416E+05	-9.122E+04	-1.493E+05	-39.7	-339	2.357E+03
2378	1	-2.298E+05	-1.415E+05	-2.420E+05	-3.578E+04	-3.459E+03	2.220E+03
2379	1	-2.497E+05	-1.435E+05	-2.375E+05	-2.540E+04	-1.442E+03	1.931E+03
2380	1	-4.724E+04	-6.098E+04	-5.608E+04	5.225E+03	1.322E+03	3.299E+03
2381	1	-5.173E+04	-5.944E+04	-6.043E+04	-1.060E+03	-2.338E+03	-8.174E+03
2392	1	-1.238E+05	-1.340E+05	-1.510E+05	3.384E+04	7.103E+03	-3.027E+03
2393	1	-2.081E+05	-2.016E+05	-2.476E+05	6.575E+04	8.202E+03	-2.698E+03
2394	1	-1.830E+05	-2.147E+05	-2.486E+05	6.374E+04	6.248E+03	-2.177E+03
2395	1	-6.734E+04	-6.434E+04	-6.509E+04	168	6.025E+03	-1.927E+03
2396	1	-5.994E+04	-4.858E+04	-5.714E+04	-4.396E+03	6.180E+03	-2.077E+03
2397	1	-1.502E+05	-1.242E+05	-1.590E+05	3.300E+04	6.935E+03	-1.007E+03
2398	1	-2.458E+05	-1.584E+05	-2.441E+05	4.987E+04	7.697E+03	1.006E+03
2399	1	-2.263E+05	-1.750E+05	-2.493E+05	6.265E+04	7.719E+03	-261
2400	1	-6.144E+04	-6.762E+04	-6.471E+04	2.713E+03	7.004E+03	-1.261E+03
2401	1	-6.566E+04	-6.464E+04	-7.089E+04	-481	5.484E+03	-1.879E+03
2403	1	-1.169E+05	-1.317E+05	-1.603E+05	2.916E+04	6.281E+03	-1.137E+03
2406	1	-2.035E+05	-1.957E+05	-2.532E+05	6.064E+04	7.233E+03	-1.976E+03
2407	1	-1.794E+05	-2.146E+05	-2.566E+05	6.150E+04	4.261E+03	-415
2408	1	-5.786E+04	-5.913E+04	-7.157E+04	-4.342E+03	5.701E+03	-284
2409	1	-5.645E+04	-4.474E+04	-5.994E+04	-9.889E+03	2.131E+03	-1.152E+03
2410	1	-1.412E+05	-1.185E+05	-1.642E+05	2.831E+04	6.503E+03	-1.170E+03
2411	1	-2.382E+05	-1.550E+05	-2.482E+05	4.520E+04	5.982E+03	144
2412	1	-2.191E+05	-1.735E+05	-2.517E+05	5.866E+04	4.947E+03	1.338E+03
2413	1	-5.441E+04	-6.408E+04	-6.668E+04	743	5.650E+03	-701
2414	1	-5.757E+04	-6.430E+04	-7.173E+04	-1.861E+03	2.318E+03	-1.623E+03
2418	1	-1.167E+05	-1.225E+05	-1.601E+05	2.560E+04	3.151E+03	416
2419	1	-1.997E+05	-1.949E+05	-2.614E+05	6.005E+04	3.447E+03	1.536E+03
2420	1	-1.773E+05	-2.133E+05	-2.434E+05	5.773E+04	1.393E+03	-1.466E+03
2421	1	-5.493E+04	-5.486E+04	-6.453E+04	-7.910E+03	470	393
2422	1	-4.779E+04	-5.144E+04	-6.374E+04	1.378E+03	-6.009E+03	-8.363E+03
2423	1	-1.347E+05	-1.177E+05	-1.616E+05	2.705E+04	1.887E+03	2.571E+03
2424	1	-2.348E+05	-1.595E+05	-2.583E+05	4.151E+04	2.575E+03	3.392E+03
2425	1	-2.245E+05	-1.702E+05	-2.428E+05	5.841E+04	11.4	2.520E+03
2426	1	-4.939E+04	-6.137E+04	-6.164E+04	-2.555E+03	1.849E+03	2.444E+03
2427	1	-5.439E+04	-4.365E+04	-6.594E+04	-7.143E+03	-4.825E+03	-9.665E+03
2438	1	-1.192E+05	-1.991E+05	-1.960E+05	3.672E+03	3.123E+03	6.027E+03
2439	1	-1.444E+05	-2.510E+05	-2.451E+05	1.754E+04	4.260E+03	-1.472E+03
2440	1	-1.412E+05	-2.620E+05	-2.526E+05	-1.639E+03	3.589E+03	1.277E+03

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2441	1	-8	526E+04	-1	158E+05	-1	229E+05	9	502E+03	5	442E+03	-382
2442	1	-8	248E+04	-1	183E+05	-1	300E+05	3	817E+03	6	441E+03	4 061E+03
2443	1	-1	244E+05	-1	844E+05	-1	887E+05	2	792E+04	6	411E+03	-8 014E+03
2444	1	-1	658E+05	-2	357E+05	-2	484E+05	5	289E+04	6	248E+03	-5 909E+03
2445	1	-1	524E+05	-2	514E+05	-2	535E+05	3	843E+04	5	092E+03	-1 660E+03
2446	1	-8	026E+04	-7	559E+04	-8	449E+04	4	056E+03	2	630E+03	-3 136E+03
2447	1	-7	842E+04	-9	021E+04	-1	071E+05	8	678E+03	7	404E+03	-2 343E+03
2451	1	-1	072E+05	-1	838E+05	-1	975E+05	189		5	549E+03	-1 731E+03
2452	1	-1	434E+05	-2	533E+05	-2	619E+05	1	818E+04	5	379E+03	-1 541E+03
2453	1	-1	379E+05	-2	608E+05	-2	619E+05	-588		2	635E+03	-107
2454	1	-7	567E+04	-9	148E+04	-1	172E+05	2	469E+03	6	772E+03	-1 518E+03
2455	1	-7	436E+04	-8	353E+04	-1	075E+05	891		2	843E+03	-1 130E+03
2456	1	-1	135E+05	-1	659E+05	-1	878E+05	2	190E+04	5	414E+03	-2 325E+03
2457	1	-1	658E+05	-2	332E+05	-2	577E+05	5	025E+04	7	181E+03	-2 574E+03
2458	1	-1	485E+05	-2	439E+05	-2	592E+05	3	693E+04	3	122E+03	-646
2459	1	-6	874E+04	-6	370E+04	-8	649E+04	-1	838E+03	6	769E+03	-1 544E+03
2460	1	-7	172E+04	-7	143E+04	-9	455E+04	829		2	752E+03	100
2464	1	-1	038E+05	-1	631E+05	-1	786E+05	625		3	785E+03	207
2465	1	-1	419E+05	-2	495E+05	-2	605E+05	1	818E+04	4	812E+03	-533
2466	1	-1	364E+05	-2	615E+05	-2	494E+05	522		3	164E+03	-75 8
2467	1	-6	722E+04	-6	318E+04	-8	798E+04	-915		1	540E+03	-223
2468	1	-6	288E+04	-6	070E+04	-8	221E+04	180		-5	875E+03	199
2469	1	-1	092E+05	-1	526E+05	-1	744E+05	1	764E+04	4	095E+03	-553
2470	1	-1	641E+05	-2	274E+05	-2	615E+05	4	849E+04	5	001E+03	-580
2471	1	-1	493E+05	-2	484E+05	-2	482E+05	3	822E+04	3	490E+03	-1 074E+03
2472	1	-6	253E+04	-4	943E+04	-7	200E+04	-7	279E+03	966		384
2473	1	-5	954E+04	-5	694E+04	-7	791E+04	-946		-5	412E+03	-2 010E+03
2484	1	-7	153E+04	-4	934E+04	-5	945E+04	3	397E+03	1	314E+04	5 211E+03
2487	1	-3	840E+04	1	404E+04	2	647E+03	-3	578E+03	2	254E+04	-2 015E+03
2488	1	-2	828E+04	1	617E+04	-2	041E+03	-567		1	463E+04	-113
2489	1	-7	248E+04	-4	212E+04	-4	585E+04	-45 5		1	098E+04	-6 787E+03
2492	1	-3	276E+04	1	032E+03	4	946E+03	-4	236E+03	2	229E+04	-2 960E+03
2493	1	-2	862E+04	8	492E+03	-4	050E+03	-8	406E+03	1	444E+04	-545
2494	1	-5	421E+04	-2	655E+04	-1	580E+04	-8	456E+03	1	128E+04	-2 272E+03
2497	1	-2	165E+04	-6	168E+03	-8	490E+03	-1	076E+04	1	368E+04	-688
2497	1	-4	878E+04	-2	921E+04	-4	990E+04	-660		4	183E+03	-1 203E+03
2500	1	-2	930E+04	1	591E+04	3	575E+03	-4	825E+03	1	056E+03	134
2501	1	-3	509E+04	1	392E+04	-1	928E+03	-377		1	491E+03	137
2502	1	-4	577E+04	-2	368E+04	-4	108E+04	-5	785E+03	4	446E+03	-751
2503	1	-2	286E+04	6	733E+03	1	594E+03	-1	078E+04	1	360E+03	94 0
2506	1	-3	194E+04	-1	059E+04	-1	706E+03	-9	137E+03	1	306E+03	-21 3
2507	1	-3	287E+04	-1	545E+04	-2	203E+04	-1	320E+04	4	445E+03	-305
2509	1	-2	249E+04	-1	391E+03	-4	176E+03	-1	133E+04	1	103E+03	94 8
2510	1	-5	211E+04	-2	053E+04	-4	318E+04	177		-397		199
2513	1	-3	524E+04	1	140E+04	-4	442E+03	-4	452E+03	9 27		-761
2514	1	-3	571E+04	1	217E+04	-7	335E+03	-123		609		-59 9

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2515	1	-4.842E+04	-1.969E+04	-3.865E+04	-7.367E+03	-8A3	-580.
2518	1	-2.686E+04	4.773E+03	-3.527E+03	-9.877E+03	-976	-78.2
2519	1	-3.408E+04	9.138E+03	-6.305E+03	-8.355E+03	625	841
2520	1	-3.493E+04	-1.555E+04	-2.420E+04	-1.319E+04	-1.175E+03	590.
2522	1	-2.431E+04	-904.	-5.731E+03	-1.273E+04	486	1.944E+03
2530	1	-1.318E+03	2.994E+03	-1.314E+04	-81.8	1.093E+04	-61.4
2533	1	-1.454E+04	-9.731E+03	-1.806E+04	97.5	-1.804E+03	25.5
2534	1	-1.752E+04	-1.101E+04	-2.052E+04	136.	-4.780E+03	214.
2535	1	-1.580E+04	-1.013E+04	-1.779E+04	31.8	-368	28.7
2536	1	-1.434E+04	-1.062E+04	-1.790E+04	196.	-80.2	-61.0
2537	1	-1.443E+04	-1.043E+04	-1.837E+04	65.3	145.	-5.75
2538	1	-2.170E+03	-474.	-1.359E+04	-2.370E+03	9.792E+03	-354
2541	1	-1.437E+04	-9.604E+03	-1.792E+04	-257	-1.564E+03	33.6
2542	1	-1.779E+04	-1.096E+04	-2.024E+04	223.	-4.092E+03	369.
2543	1	-1.590E+04	-9.741E+03	-1.760E+04	150.	-416	236
2544	1	-1.415E+04	-1.042E+04	-1.771E+04	255.	-71.3	-71.3
2545	1	-1.464E+04	-1.069E+04	-1.845E+04	207.	128	24.9
2546	1	-3.567E+03	-5.728E+03	-1.425E+04	-2.863E+03	8.030E+03	-372.
2548	1	-1.429E+04	-9.821E+03	-1.777E+04	-330.	-1.248E+03	25.9
2549	1	-1.582E+04	-8.814E+03	-1.687E+04	-3.86	-423	270
2550	1	-1.471E+04	-1.131E+04	-1.856E+04	23.6	71.7	60.1
2551	1	-2.561E+04	-4.246E+03	-1.333E+04	91.9	2.918E+03	98.3
2554	1	-1.614E+04	-9.597E+03	-1.725E+04	-82.3	1.264E+03	-22.9
2555	1	-1.354E+04	-8.063E+03	-1.533E+04	-17.4	2.839E+03	62.0
2556	1	-1.660E+04	-8.623E+03	-1.538E+04	-59.2	1.522E+03	-34.9
2557	1	-1.494E+04	-1.075E+04	-1.794E+04	75.8	397	44.0
2558	1	-1.574E+04	-1.075E+04	-1.745E+04	56.1	-44.3	34.8
2559	1	-2.405E+04	-5.093E+03	-1.322E+04	-2.822E+03	2.758E+03	332.
2562	1	-1.602E+04	-9.858E+03	-1.724E+04	-203	1.148E+03	35.0
2563	1	-1.396E+04	-8.098E+03	-1.527E+04	-156.	2.336E+03	180.
2564	1	-1.689E+04	-9.086E+03	-1.559E+04	-112	1.325E+03	231.
2565	1	-1.485E+04	-1.078E+04	-1.795E+04	11.8	309.	91.6
2566	1	-1.589E+04	-1.078E+04	-1.761E+04	180.	-12.2	-25.5
2567	1	-2.170E+04	-9.066E+03	-1.386E+04	-3.621E+03	2.340E+03	443
2569	1	-1.573E+04	-1.006E+04	-1.713E+04	-266	908	41.8
2570	1	-1.691E+04	-8.617E+03	-1.542E+04	-423	841	220.
2571	1	-1.577E+04	-1.142E+04	-1.789E+04	27.9	-7.84	10.0
2572	1	-2.797E+04	-3.010E+03	-1.274E+04	-48.7	524	-13.1
2575	1	-1.839E+04	-9.846E+03	-1.659E+04	-30.0	288	-0.522
2576	1	-2.005E+04	-9.216E+03	-1.486E+04	-126.	1.131E+03	130
2577	1	-2.139E+04	-9.084E+03	-1.420E+04	-96.4	-267	27.1
2578	1	-1.691E+04	-1.153E+04	-1.810E+04	14.	-526	-29.0
2579	1	-1.736E+04	-1.159E+04	-1.798E+04	75.4	-239	-11.2
2580	1	-2.608E+04	-4.151E+03	-1.236E+04	-325	360	225
2583	1	-1.815E+04	-1.009E+04	-1.666E+04	-325	226	69.5
2584	1	-1.986E+04	-9.378E+03	-1.506E+04	-424	764	349

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2585	1	-2	135E+04	-9	533E+03	-1	465E+04	-299	-473.	61 4	
2586	1	-1	470E+04	-1	146E+04	-1	810E+04	190	-398	-70 7	
2587	1	-1	755E+04	-1	159E+04	-1	806E+04	242	-223	-53 3	
2588	1	-2	333E+04	-8	341E+03	-1	273E+04	-4	101E+03	-1 11	
2590	1	-1	760E+04	-1	033E+04	-1	665E+04	-420	96 2	134	
2591	1	-2	052E+04	-9	246E+03	-1	484E+04	-736	-778	66 0	
2592	1	-1	734E+04	-1	210E+04	-1	835E+04	-50 3	-177	-31 2	
2606	1	-1	341E+05	-2	342E+03	-2	312E+05	138	3	793E+03	
2608	1	-3	987E+04	-4	467E+04	-3	943E+04	898	384	-452	
2610	1	-9	591E+04	-1	310E+05	-1	367E+05	982.	1	941E+03	
2611	1	-1	343E+05	-2	349E+05	-2	314E+05	29 1	3	788E+03	
2612	1	-1	340E+05	-2	538E+05	-2	324E+05	-64. 9	3	429E+03	
2613	1	-5	828E+04	-4	445E+04	-3	820E+04	370	-4. 39	-138	
2614	1	-5	937E+04	-4	411E+04	-4	019E+04	416.	349.	-222.	
2615	1	-9	576E+04	-1	310E+05	-1	363E+05	223	1	948E+03	
2616	1	-1	355E+05	-2	553E+05	-2	334E+05	-370	3	423E+03	
2617	1	-9	785E+04	-4	233E+04	-3	831E+04	94. 4	221	37 1	
2619	1	-1	351E+05	-2	535E+05	-2	338E+05	195.	2	869E+03	
2621	1	-5	999E+04	-4	263E+04	-4	166E+04	-72. 9	531	-40 8	
2623	1	-9	734E+04	-1	497E+05	-1	395E+05	1. 057E+03	1	777E+03	
2624	1	-1	355E+05	-2	538E+05	-2	341E+05	-251	2	854E+03	
2625	1	-1	334E+05	-2	526E+05	-2	350E+05	-195	2	694E+03	
2626	1	-5	920E+04	-4	184E+04	-4	042E+04	19. 5	456.	-31 1	
2627	1	-6	088E+04	-4	259E+04	-4	220E+04	-1. 04	652.	-79 9	
2628	1	-9	439E+04	-1	495E+05	-1	390E+05	315.	1	773E+03	
2629	1	-1	356E+05	-2	546E+05	-2	364E+05	-359.	2	608E+03	
2630	1	-5	925E+04	-3	989E+04	-3	992E+04	169.	633.	-12 7	
2632	1	-1	354E+05	-2	537E+05	-2	402E+05	183	3	523E+03	
2634	1	-9	744E+04	-3	902E+04	-4	093E+04	-447	736	105	
2636	1	-9	759E+04	-1	479E+05	-1	420E+05	912.	2	468E+03	
2637	1	-1	358E+05	-2	539E+05	-2	404E+05	-172	3	602E+03	
2638	1	-1	342E+05	-2	544E+05	-2	333E+05	-303	2	062E+03	
2639	1	-5	929E+04	-3	822E+04	-3	968E+04	-137	741	102.	
2640	1	-5	800E+04	-4	645E+04	-4	528E+04	134	-3	605E+03	
2641	1	-9	654E+04	-1	475E+05	-1	414E+05	311	2	504E+03	
2642	1	-1	387E+05	-2	589E+05	-2	349E+05	-334	2	379E+03	
2643	1	-5	596E+04	-4	300E+04	-4	270E+04	45. 2	-3	464E+03	
2655	1	-2	426E+04	-5	461E+03	-2	667E+04	9	929E+03	-243	
2657	1	-3	361E+04	-4	330E+04	-2	682E+04	5	372E+03	6	191E+03
2659	1	-4	083E+04	-2	184E+04	-1	719E+03	4	147E+03	148	-229
2662	1	-1	478E+04	-2	682E+04	9	508E+03	7	626E+03	4	065E+03
2663	1	-2	133E+04	-1	006E+04	2	537E+04	3	826E+03	877	380.
2664	1	-2	313E+04	-1	195E+04	2	414E+04	9	364E+03	290	519
2665	1	-488		-4	248E+04	3	776E+03	4	236E+03	8	140E+03
2666	1	-6	709E+03	-4	762E+04	-1	450E+03	8	766E+03	6	156E+03
2667	1	-3	914E+04	-2	306E+04	-814		-30 3	149.	-13 4	

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2669	1	-6.383E+03	-3	201E+04	1	340E+04	168	5	332E+03	79.2
2670	1	-1.860E+04	-1	669E+04	2	362E+04	349	1	008E+03	118.
2671	1	7.075E+03	-5	111E+04	8	938E+03	6.56	6	972E+03	-77.3
2676	1	-2.573E+04	-8	172E+03	2	496E+04	1.439E+04	1	656	-424
2678	1	-3.008E+04	-5	946E+04	-2	854E+04	6.772E+03	3	811E+03	882
2680	1	-4.226E+04	-2	169E+04	-3	571E+03	4.551E+03	4	489	-272
2683	1	-1.154E+04	-3	794E+04	8	347E+03	1.024E+04	2	546E+03	176.
2684	1	-1.994E+04	-1	715E+04	2	296E+04	5.703E+03	776	-52.1	
2685	1	-2.107E+04	-1	248E+04	2	168E+04	1.094E+04	547	-5.40	
2686	1	2.436E+03	-5	402E+04	3	501E+03	3.989E+03	5	028E+03	56.2
2687	1	-1.721E+03	-5	049E+04	-2	880E+03	8.838E+03	2	481E+03	10.3
2688	1	-4.016E+04	-2	393E+04	-2	755E+03	67.9	456	-30.5	
2690	1	-2.837E+03	-4	217E+04	1	204E+04	30.4	3	385E+03	-18.2
2691	1	-1.517E+04	-1	902E+04	2	125E+04	390	774	41.5	
2692	1	1.051E+04	-5	182E+04	6	977E+03	-129.	2	928E+03	-59.4
2697	1	-2.284E+04	-5	640E+03	2	227E+04	1.421E+04	440	-357	
2699	1	-2.493E+04	-5	529E+04	-2	919E+04	7.908E+03	743	553	
2701	1	-4.055E+04	-1	907E+04	-5	212E+03	4.269E+03	125	-22.8	
2704	1	-7.452E+03	-3	544E+04	6	465E+03	1.042E+04	831	-353	
2705	1	-1.680E+04	-1	520E+04	1	957E+04	5.706E+03	390	-164.	
2706	1	-1.938E+04	-8	707E+03	2	140E+04	1.029E+04	-311	244.	
2707	1	7.289E+03	-4	934E+04	2	251E+03	4.097E+03	963	-283.	
2708	1	865.	-4	309E+04	-7	441E+03	7.372E+03	-1	375E+03	-2.973E+03
2709	1	-3.847E+04	-2	162E+04	4	679E+03	33.7	115	21.9	
2711	1	623.	-3	907E+04	9	337E+03	35.9	708.	-93.2	
2712	1	-1.373E+04	-1	557E+04	2	074E+04	520.	-696	-32.0	
2713	1	1.345E+04	-4	240E+04	2	298E+03	-389	-2	418E+03	-23.9
2730	1	-2.643E+04	-5	638E+04	-2	853E+04	5.574E+03	8	711E+03	1.689E+03
2732	1	-2.613E+04	-5	403E+04	-2	387E+04	-2.332E+03	7	293E+03	-1.045E+03
2734	1	-5.055E+03	-4	669E+04	-3	062E+03	5.515E+03	8	111E+03	1.217E+03
2737	1	-609.	-4	669E+04	3	406E+03	-2.573E+03	7	800E+03	-847
2738	1	2.402E+03	-4	794E+04	3	485E+03	236	8	200E+03	-233.
2739	1	1.672E+03	-5	186E+04	-650	1.176E+03	1.176E+03	7	192E+03	-67.6
2740	1	-9.304E+03	-3	883E+04	4	829E+03	-3.674E+03	8	022E+03	-517
2741	1	-793.	-4	131E+04	4	621E+03	-8.042E+03	6	996E+03	-658
2742	1	4.536E+03	-4	693E+04	7	550E+03	-299.	8	495E+03	-215
2744	1	-5.026E+03	-4	140E+04	6	426E+03	-499	8	322E+03	-4.25
2745	1	3.499E+03	-4	761E+04	6	310E+03	-868	7	295E+03	68.6
2746	1	-1.083E+04	-3	495E+04	2	330E+03	-416	7	025E+03	170.
2751	1	-2.597E+04	-6	130E+04	-3	065E+04	2.687E+03	5	399E+03	749
2753	1	-2.364E+04	-5	378E+04	-2	719E+03	-3.169E+03	5	178E+03	-939
2755	1	-1.104E+03	-5	278E+04	-2	353E+03	3.915E+03	4	943E+03	-354
2758	1	2.384E+03	-4	615E+04	2	400E+03	-3.878E+03	5	020E+03	-1.140E+03
2759	1	2.221E+03	-5	056E+04	1	545E+03	-415	5	359E+03	-348
2760	1	4.807E+03	-5	068E+04	-1	831E+03	422.	3	038E+03	-261.
2761	1	-6.783E+03	-3	730E+04	657	-4.148E+03	-4.148E+03	5	114E+03	-805

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2762	1	2	665E+03	-3	769E+04	2	601E+03	-8	719E+03	2	503E+03	-1	136E+03
2763	1	6	021E+03	-5	101E+04	6	652E+03	-522		5	392E+03	64	0
2765	1	-3	066E+03	-4	099E+04	3	116E+03	-691		5	293E+03	121	
2766	1	3	498E+03	-4	300E+04	4	565E+03	-686		2	557E+03	-267	
2767	1	-6	522E+03	-3	014E+04	197		-348		2	311E+03	208	
2772	1	-1	873E+04	-5	952E+04	-3	006E+04	3	280E+03	2	070E+03	1	128E+03
2774	1	-2	149E+04	-4	882E+04	-2	686E+04	-6	948E+03	-827	-1	044E+03	
2776	1	3	984E+03	-4	973E+04	-1	819E+03	4	738E+03	688	-604		
2779	1	6	711E+03	-4	272E+04	2	260E+03	-5	677E+03	-999	-2	151E+03	
2780	1	5	553E+03	-4	555E+04	458		-1	487E+03	-303	-1	014E+03	
2781	1	6	342E+03	-3	575E+04	-5	209E+03	-440		-2	429E+03	-5	756E+03
2782	1	-3	350E+03	-3	133E+04	-1	539E+03	4	261E+03	-2	019E+03	-1	341E+03
2783	1	7	764E+03	-2	794E+04	-2	356E+03	-5	411E+03	-2	788E+03	-1	545E+03
2784	1	8	884E+03	-4	508E+04	4	413E+03	-902		207	-251		
2785	1	270		-3	265E+04	791		352		-1	367E+03	-310	
2787	1	7	777E+03	-3	365E+04	-1	941E+03	-109		-2	006E+03	366	
2788	1	-3	559E+03	-2	423E+04	-4	131E+03	-1	047E+03	-759	-206		
2805	1	-3	878E+04	-4	549E+04	-2	856E+04	-6	642E+03	7	366E+03	-862	
2807	1	-3	703E+04	-3	319E+04	-1	406E+04	-9	984E+03	4	323E+03	-1	574E+03
2809	1	-6	585E+03	-3	698E+04	7	435E+03	-1	108E+04	8	111E+03	-1	066E+03
2812	1	-1	417E+04	-2	402E+04	1	082E+04	-1	370E+04	7	437E+03	-681	
2813	1	-1	925E+04	-3	239E+04	1	026E+03	-4	979E+03	8	895E+03	-233	
2814	1	-9	530E+03	-3	086E+04	6	135E+03	-1	413E+04	6	311E+03	-942	
2815	1	-2	377E+04	-2	438E+04	5	161E+03	-5	154E+03	6	062E+03	-203	
2816	1	-1	893E+04	-1	780E+04	5	828E+03	-1	452E+04	9	281E+03	110	
2817	1	-1	525E+04	-3	240E+04	4	227E+03	42	5	8	131E+03	155	
2819	1	-2	040E+04	-2	812E+04	3	552E+03	573		7	157E+03	143	
2820	1	-1	896E+04	-2	803E+04	547		988		9	490E+03	233	
2821	1	-1	731E+04	-2	192E+04	-516		117		6	323E+03	-1	308E+03
2826	1	-3	155E+04	-4	468E+04	-3	089E+04	-9	980E+03	4	486E+03	-821	
2828	1	-3	214E+04	-3	052E+04	-2	665E+04	-1	253E+04	5	670E+03	-1	628E+03
2830	1	-3	977E+03	-3	564E+04	3	467E+03	-1	198E+04	5	649E+03	-1	442E+03
2833	1	-9	152E+03	-2	083E+04	2	862E+03	-1	309E+04	6	932E+03	-967	
2834	1	-1	333E+04	-2	766E+04	-2	958E+03	-5	511E+03	1	889E+03	-1	182E+03
2835	1	-4	403E+03	-2	452E+04	2	830E+03	-1	449E+04	6	642E+03	-605	
2836	1	-2	037E+04	-2	227E+04	-9	636E+03	-5	806E+03	2	269E+03	-1	058E+03
2837	1	-1	637E+04	-1	451E+04	-381		-1	433E+04	6	508E+03	-73	1
2838	1	-1	364E+04	-3	040E+04	-2	063E+03	383		6	498E+03	341	
2840	1	-1	447E+04	-2	372E+04	-6	430E+03	147		1	767E+03	75	9
2841	1	-1	442E+04	-2	256E+04	-3	794E+03	705		2	282E+03	103	
2842	1	-1	584E+04	-1	784E+04	-6	266E+03	300		-375	-1	343E+03	
2847	1	-2	324E+04	-4	199E+04	-2	788E+04	-9	027E+03	-1	552E+03	-1	466E+03
2849	1	-3	019E+04	-2	505E+04	-2	394E+04	-1	640E+04	-2	189E+03	-3	213E+03
2851	1	655		-2	688E+04	4	227E+03	-1	150E+04	-1	568E+03	-3	063E+03
2854	1	-7	123E+03	-1	518E+04	2	755E+03	-1	426E+04	-1	184E+03	-1	361E+03
2855	1	-1	167E+04	-2	106E+04	-4	495E+03	-5	715E+03	-1	184E+03	-1	361E+03

2856	1	-2.024E+03	-2.003E+04	-1.844E+03	-1.242E+04	-625	-166
2857	1	-1.714E+04	-1.673E+04	-8.175E+03	-4.599E+03	-1.203E+03	-1.178E+03
2858	1	-1.409E+04	-8.282E+03	-3.535E+03	-1.221E+04	-1.054E+03	843
2859	1	-9.880E+03	-2.325E+04	-4.286E+03	268	-1.081E+03	133
2861	1	-1.519E+04	-1.804E+04	-7.948E+03	781	-347	-98.7
2862	1	-1.368E+04	-1.856E+04	-6.831E+03	1.401E+03	-689	-227
2863	1	-1.599E+04	-1.415E+04	-6.851E+03	-476	-737	-214
2879	1	-3.074E+04	-1.635E+04	-4.689E+03	-6.957E+03	2.109E+04	-1.452E+03
2881	1	-3.427E+04	-2.556E+04	1.320E+03	-8.031E+03	1.257E+04	-580
2884	1	-2.383E+04	-2.060E+04	-6.658E+03	-1.108E+03	1.999E+04	-531
2885	1	-1.848E+04	-1.608E+04	-1.504E+04	-4.644E+03	1.228E+04	-444
2886	1	-3.230E+04	-2.637E+04	-304	484	1.371E+04	154
2888	1	-1.854E+04	-1.830E+04	-1.603E+04	131	1.161E+04	-103
2892	1	-2.144E+04	-7.477E+03	-7.023E+03	-8.911E+03	1.464E+03	22.4
2894	1	-1.548E+04	-1.584E+04	-5.256E+03	-1.008E+04	4.309E+03	-852
2897	1	-1.534E+04	-1.112E+04	-7.011E+03	-2.483E+03	1.294E+03	27.3
2898	1	-1.935E+04	-1.189E+04	-9.864E+03	-5.054E+03	1.009E+03	100
2899	1	-1.464E+04	-1.570E+04	-7.112E+03	162	4.144E+03	-92.3
2901	1	-1.987E+04	-1.370E+04	-1.007E+04	-16.7	911	5.53
2905	1	-2.492E+04	-8.206E+03	-1.002E+04	-8.387E+03	-740	-23.0
2907	1	-1.809E+04	-1.349E+04	-7.308E+03	-9.667E+03	-1.514E+03	-1.335E+03
2910	1	-1.944E+04	-1.192E+04	-9.687E+03	-2.269E+03	-297	53.1
2911	1	-2.090E+04	-1.119E+04	-9.450E+03	-5.270E+03	-671	722
2912	1	-1.791E+04	-1.431E+04	-9.700E+03	325	-513	217
2914	1	-2.172E+04	-1.323E+04	-9.619E+03	146	-1.005E+03	73.9
2926	1	-1.759E+04	-1.089E+04	-1.947E+04	155	-3.302E+03	262
2928	1	-1.432E+04	-1.072E+04	-1.783E+04	189	-80.8	-21.9
2930	1	-3.999E+03	-7.702E+03	-1.429E+04	-1.924E+03	6.585E+03	-52.1
2933	1	-1.430E+04	-1.055E+04	-1.771E+04	-260	-1.021E+03	-18.9
2934	1	-1.712E+04	-1.035E+04	-1.841E+04	117	-2.895E+03	81.1
2935	1	-1.591E+04	-9.832E+03	-1.688E+04	49.6	-431	164
2936	1	-1.447E+04	-1.091E+04	-1.802E+04	110	-81.3	2.72
2937	1	-1.472E+04	-1.113E+04	-1.838E+04	139	15.8	49.2
2938	1	-4.442E+03	-9.069E+03	-1.500E+04	90.9	6.044E+03	-9.58
2940	1	-1.421E+04	-1.074E+04	-1.757E+04	-68.8	-949	8.10
2941	1	-6.19E+04	-9.940E+03	-1.689E+04	-54.0	-439	30.9
2942	1	-1.471E+04	-1.124E+04	-1.836E+04	23.7	4.83	-7.89
2947	1	-1.447E+04	-8.868E+03	-1.550E+04	-248	1.741E+03	207
2949	1	-1.487E+04	-1.106E+04	-1.805E+04	-21.0	207	70.1
2951	1	-1.903E+04	-1.083E+04	-1.344E+04	-2.199E+03	2.007E+03	220
2954	1	-1.556E+04	-1.065E+04	-1.722E+04	-280	687	35.1
2955	1	-1.462E+04	-9.020E+03	-1.562E+04	-26.9	1.343E+03	95.3
2956	1	-1.678E+04	-9.639E+03	-1.581E+04	-338	478	166
2957	1	-1.490E+04	-1.119E+04	-1.803E+04	38.2	136	21.2
2958	1	-1.567E+04	-1.140E+04	-1.794E+04	107	-33.2	3.43
2959	1	-1.778E+04	-1.159E+04	-1.299E+04	-24.6	1.761E+03	2.40

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2961	1	-1	544E+04	-1	087E+04	-1	759E+04	-64	9	639	-4	55
2962	1	-1	683E+04	-9	879E+03	-1	585E+04	-26	6	288	10	2
2963	1	-1	568E+04	-1	150E+04	-1	805E+04	22	8	-38	6	7
2968	1	-1	941E+04	-9	981E+03	-1	532E+04	-49	2	268	285	2
2970	1	-1	653E+04	-1	171E+04	-1	830E+04	138		-318	-57	2
2972	1	-2	044E+04	-1	020E+04	-1	243E+04	-2	356E+03	-319	207	
2975	1	-1	720E+04	-1	092E+04	-1	680E+04	-376		-79	3	45
2976	1	-1	689E+04	-1	010E+04	-1	532E+04	-157		-51	1	77
2977	1	-1	978E+04	-1	041E+04	-1	542E+04	-463		-1	044E+03	33
2978	1	-1	640E+04	-1	183E+04	-1	844E+04	74	8	-252	-4	60
2979	1	-1	713E+04	-1	198E+04	-1	845E+04	156		-75	8	-51
2980	1	-1	941E+04	-1	082E+04	-1	220E+04	-67	2	-348	-13	9
2982	1	-1	704E+04	-1	117E+04	-1	688E+04	-33	5	-154	-2	39
2983	1	-1	975E+04	-1	052E+04	-1	571E+04	-73	8	-1	097E+03	-30
2984	1	-1	705E+04	-1	214E+04	-1	855E+04	26	9	-101	11	4
2997	1	-1	343E+05	-1	934E+05	-1	023E+05	663		1	001E+04	35
2998	1	-1	404E+05	-2	435E+05	-1	404E+05	517		3	381E+03	-103
2999	1	-1	360E+05	-2	478E+05	-1	746E+05	-980		5	509E+03	94
3000	1	-1	317E+05	-1	438E+05	-6	828E+04	1	195E+03			
3001	1	-8	114E+04	-9	034E+04	-4	604E+04	1	459E+03			
3002	1	-1	327E+05	-1	912E+05	-1	010E+05	808		1	008E+04	-33
3003	1	-1	395E+05	-2	450E+05	-1	409E+05	303		3	454E+03	-185
3004	1	-1	348E+05	-2	535E+05	-1	811E+05	1	291E+03	5	624E+03	89
3005	1	-1	313E+05	-1	457E+05	-6	813E+04	3	996E+03	1	521E+04	-204
3006	1	-8	172E+04	-8	437E+04	-4	396E+04	1	217E+03	1	785E+04	-47
3007	1	-1	318E+05	-1	924E+05	-1	007E+05	2	314E+03	1	024E+04	242
3008	1	-1	269E+05	-2	554E+05	-1	824E+05	-616		5	684E+03	-273
3009	1	-7	692E+04	-8	177E+04	-4	040E+04	3	033E+03	1	797E+04	190
3010	1	-9	144E+04	-1	494E+05	-1	259E+05	876		8	125E+03	-93
3011	1	-1	325E+05	-2	581E+05	-2	234E+05	334		4	090E+03	17
3012	1	-1	337E+05	-2	507E+05	-2	270E+05	-758		1	617E+03	149
3013	1	-4	638E+04	-3	788E+04	-2	678E+04	307		1	255E+04	161
3014	1	-6	435E+04	-5	355E+04	-4	146E+04	1	085E+03	2	922E+03	-199
3015	1	-8	947E+04	-1	459E+05	-1	245E+05	719		8	131E+03	165
3016	1	-1	314E+05	-2	592E+05	-2	234E+05	-236		4	076E+03	47
3017	1	-1	328E+05	-2	549E+05	-2	280E+05	1	069E+03	1	675E+03	-7
3018	1	-4	671E+04	-3	819E+04	-2	636E+04	1	923E+03	1	282E+04	327
3019	1	-6	421E+04	-4	844E+04	-3	930E+04	212		3	059E+03	-89
3020	1	-8	823E+04	-1	476E+05	-1	245E+05	-361		8	226E+03	293
3021	1	-1	345E+05	-2	569E+05	-2	294E+05	-361		1	594E+03	-47
3022	1	-6	007E+04	-4	414E+04	-3	479E+04	1	742E+03	2	951E+03	-118
3030	1	-1	435E+05	-1	342E+05	-6	349E+04	-2	147E+03	6	948E+03	-720
3033	1	-1	603E+05	-1	630E+05	-7	108E+04	1	376E+04	-8	279E+03	3
3034	1	-1	465E+05	-1	311E+05	-5	652E+04	5	070E+03	-1	811E+03	872
3035	1	-8	420E+04	-3	054E+04	-9	407E+03	-2	968E+03	1	455E+03	-348
3036	1	-1	415E+05	-1	595E+05	-7	336E+04	-2	289E+04	-1	074E+04	7

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3037	-1.137E+05	-1.455E+05	-7.114E+04	-9.631E+03	-1.267E+04	2.965E+03
3038	-1.414E+05	-1.436E+05	-6.683E+04	5.963E+03	6.242E+04	1.261E+03
3041	-1.324E+05	-1.375E+05	-6.576E+04	-1.150E+04	-6.314E+03	5.811E+03
3042	-1.383E+05	-1.394E+05	-5.778E+04	679.	-2.344E+03	3.751E+03
3043	-6.534E+04	-5.827E+04	-1.272E+04	1.414E+04	431	3.591E+03
3044	-1.448E+05	-1.073E+05	-6.880E+04	-1.712E+04	-1.095E+04	1.221E+04
3045	-7.211E+04	-5.761E+04	-3.916E+04	-3.033E+04	-1.026E+04	1.067E+04
3046	-1.378E+05	-1.451E+05	-6.600E+04	2.848E+03	5.072E+03	1.369E+03
3048	-1.459E+05	-1.205E+05	-6.634E+04	-8.498E+03	-5.524E+03	8.835E+03
3049	-5.578E+04	-4.912E+04	-1.089E+04	-272	-1.555E+03	5.421E+03
3050	-9.486E+04	-5.564E+04	-4.646E+04	863	-5.790E+03	1.504E+04
3051	-3.560E+04	-1.859E+03	2.505E+03	-2.718E+03	9.494E+03	406.
3054	-6.343E+04	-3.524E+04	-2.067E+04	1.611E+04	661	-1.286E+03
3055	-2.474E+04	2.416E+04	2.967E+04	9.819E+03	4.671E+03	977
3056	-5.54E+04	2.241E+04	2.549E+04	-1.825E+03	5.068E+03	176.
3057	-5.194E+04	-6.127E+04	-4.442E+04	-1.805E+04	-3.332E+03	2.451E+03
3058	-8.784E+04	-9.875E+04	-6.640E+04	-1.052E+04	5.004E+03	-1.890E+03
3059	-3.171E+04	-9.672E+03	1.370E+03	7.513E+03	9.428E+03	858.
3062	-1.789E+04	-1.058E+04	1.007E+03	-3.043E+03	-975	4.056E+03
3063	-4.178E+03	1.349E+04	2.995E+04	1.067E+04	2.652E+03	2.775E+03
3064	-3.748E+04	-1.005E+03	2.465E+04	1.791E+04	3.484E+03	-1.619E+03
3065	-4.211E+04	-7.946E+03	-2.506E+04	-1.074E+04	-536	6.725E+03
3066	-4.482E+04	-2.900E+04	-3.595E+04	-2.203E+04	-1.145E+03	3.857E+03
3067	-2.243E+04	-1.036E+04	4.245E+03	6.017E+03	8.565E+03	1.567E+03
3069	-2.024E+04	2.545E+03	-926	-1.268E+03	-118	6.728E+03
3070	-2.165E+04	-3.509E+03	2.711E+04	9.217E+03	1.300E+03	235
3071	-5.899E+04	-3.354E+04	-4.528E+04	3.194E+03	5.732E+03	5.208E+03
3084	-1.774E+05	-1.313E+05	-9.769E+04	-2.018E+04	-6.839E+03	9.354E+03
3085	-1.848E+05	-1.599E+05	-1.603E+05	-3.366E+04	-8.035E+03	3.798E+03
3086	-2.105E+05	-1.624E+05	-1.825E+05	-4.996E+04	-2.064E+03	5.705E+03
3089	-1.454E+05	-1.330E+05	-1.279E+05	-3.180E+04	-6.498E+03	7.035E+03
3090	-1.425E+05	-1.252E+05	-1.251E+05	-7.939E+03	-4.565E+03	-3.378E+04
3091	-1.552E+05	-1.591E+05	-1.889E+05	-3.123E+04	-5.340E+03	-4.043E+03
3094	-1.394E+05	-1.382E+05	-6.085E+04	-1.429E+04	-1.348E+04	-3.231E+04
3095	-1.186E+05	-8.144E+04	-1.224E+05	1.642E+04	616.	-2.670E+04
3097	-1.279E+05	-8.113E+04	-1.267E+05	-2.344E+04	3.009E+03	5.710E+03
3098	-1.751E+05	-1.597E+05	-2.056E+05	-4.385E+04	2.312E+03	4.297E+03
3099	-1.994E+05	-1.430E+05	-2.178E+05	-5.747E+04	4.781E+03	6.000E+03
3102	-8.839E+04	-8.177E+04	-1.018E+05	-3.329E+04	-1.354E+03	5.599E+03
3103	-1.307E+05	-1.312E+05	-1.862E+05	-1.367E+04	-1.098E+03	1.004E+03
3104	-1.394E+05	-1.591E+05	-2.104E+05	-4.194E+04	2.927E+03	1.349E+04
3107	-9.710E+04	-1.015E+05	-1.247E+05	-1.128E+04	-1.373E+03	-2.355E+03
3108	-9.624E+04	-1.015E+05	-1.651E+05	7.639E+03	-4.578E+03	-1.802E+04
3117	-2.024E+05	-1.365E+05	-1.034E+05	1.761E+04	6.717E+03	9.427E+03
3118	-2.529E+05	-1.423E+05	-1.411E+05	8.787E+03	1.769E+03	3.083E+03
3119	-2.611E+05	-1.441E+05	-1.908E+05	3.215E+04	1.093E+04	2.941E+03

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3120	1	-1	503E+05	-1	275E+05	-7	044E+04	4	959E+03	4	180E+03	1	586E+04	
3121	1	-9	242E+04	-8	167E+04	-5	362E+04	5	161E+03	1	398E+04	1	732E+04	
3122	1	-1	959E+05	-1	320E+05	-1	030E+05	-4	391E+03	-950		1	165E+04	
3123	1	-2	330E+05	-1	526E+05	-1	399E+05	-2	880E+04	-1	687E+03	1	736E+03	
3124	1	-2	605E+05	-1	354E+05	-1	875E+05	-1	616E+04	4	643E+03	7	037E+03	
3125	1	-1	481E+05	-1	201E+05	-7	057E+04	2	423E+03	-3	788E+03	1	639E+04	
3126	1	-8	831E+04	-7	645E+04	-4	849E+04	6	982E+03	4	025E+03	1	667E+04	
3130	1	-1	504E+05	-9	515E+04	-1	420E+05	1	833E+04	1	422E+04	6	572E+03	
3131	1	-2	657E+05	-1	355E+05	-2	380E+05	8	903E+03	1	212E+04	3	403E+03	
3132	1	-2	612E+05	-1	419E+05	-2	431E+05	3	306E+04	8	240E+03	19	3	
3133	1	-4	051E+04	-4	588E+04	-4	070E+04	6	407E+03	1	188E+04	1	040E+04	
3134	1	-5	279E+04	-6	664E+04	-5	649E+04	3	244E+03	8	264E+03	1	489E+03	
3135	1	-1	495E+05	-8	318E+04	-1	325E+05	-2	289E+03	9	330E+03	6	811E+03	
3136	1	-2	356E+05	-1	370E+05	-2	288E+05	-3	785E+04	7	094E+03	5	148E+03	
3137	1	-2	571E+05	-1	238E+05	-2	327E+05	-1	538E+04	8	730E+03	3	340E+03	
3138	1	-4	436E+04	-2	814E+04	-3	316E+04	8	079E+03	4	967E+03	7	944E+03	
3139	1	-5	088E+04	-5	722E+04	-5	044E+04	1	070E+04	8	887E+03	1	947E+03	
3150	1	-1	886E+05	-1	863E+05	-1	435E+05	3	807E+04	3	224E+04	1	437E+03	
3151	1	-2	045E+05	-1	859E+05	-1	429E+05	4	848E+04	7	203E+03	-6	133E+03	
3152	1	-1	769E+05	-2	031E+05	-2	054E+05	5	121E+04	8	653E+03	-1	039E+03	
3153	1	-1	858E+05	-1	542E+05	-1	147E+05	1	900E+04	3	345E+04	1	177E+04	
3154	1	-8	701E+04	-7	906E+04	-8	052E+04	1	124E+04	2	160E+04	1	316E+04	
3155	1	-2	006E+05	-1	507E+05	-1	106E+05	3	334E+04	1	401E+04	5	554E+03	
3156	1	-2	412E+05	-1	618E+05	-1	457E+05	4	237E+04	7	992E+03	-1	731E+03	
3157	1	-2	258E+05	-1	771E+05	-1	981E+05	6	073E+04	1	218E+04	-2	285E+03	
3158	1	-1	649E+05	-1	286E+05	-7	296E+04	9	775E+03	1	181E+04	1	456E+04	
3159	1	-1	106E+05	-8	837E+04	-7	488E+04	8	805E+03	2	139E+04	1	599E+04	
3163	1	-2	037E+05	-1	973E+05	-2	537E+05	3	020E+04	355		1	008E+04	
3164	1	-1	849E+05	-2	174E+05	-2	406E+05	6	233E+04	4	648E+03	3	976E+03	
3166	1	-4	767E+04	-4	169E+04	-5	583E+04	6	598E+04	885		2	717E+03	
3167	1	-6	867E+04	-5	282E+04	-5	316E+04	2	061E+03	7	526E+03	1	242E+04	
3168	1	-1	429E+05	-1	181E+05	-1	619E+05	-1	447E+03	4	655E+03	3	670E+03	
3169	1	-2	461E+05	-1	568E+05	-2	454E+05	3	377E+04	1	114E+04	5	575E+03	
3170	1	-2	307E+05	-1	779E+05	-2	478E+05	5	081E+04	1	090E+04	130		
3171	1	-5	069E+04	-5	322E+04	-5	900E+04	3	196E+03	4	481E+03	-889		
3172	1	-7	126E+04	-6	761E+04	-7	002E+04	1	664E+03	1	489E+04	1	185E+04	
3183	1	-1	521E+05	-1	726E+05	-1	559E+05	5	422E+03	5	422E+03	2	153E+03	
3184	1	-1	323E+05	-1	362E+05	-1	654E+05	-1	230E+03	5	119E+03	-5	007E+04	
3185	1	-1	486E+05	-2	055E+05	-1	640E+05	4	570E+03	4	570E+03	-3	481E+03	
3186	1	-1	151E+05	-1	245E+05	-1	462E+05	1	871E+04	1	196E+04	-3	815E+04	
3187	1	-1	595E+05	-2	057E+05	-1	968E+05	6	332E+03	-2	355E+03	3	201E+03	
3188	1	-1	753E+05	-1	965E+05	-1	625E+05	3	356E+04	2	255E+04	-1	831E+04	
3189	1	-1	577E+05	-1	985E+05	-2	233E+05	1	592E+04	1	159E+04	-1	700E+04	
3190	1	-1	577E+05	-1	879E+05	-1	586E+05	2	734E+04	1	512E+03	2	813E+03	
3191	1	-1	100E+05	-1	251E+05	-1	534E+05	3	249E+04	2	852E+04	-7	215E+03	
													2	594E+03

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3199	1	-1.306E+05	-2.072E+05	-2.167E+05	-4.450E+03	1.526E+03	2.620E+04
3196	1	-1.559E+05	-2.232E+05	-2.362E+05	8.422E+03	-1.787E+03	2.675E+04
3197	1	-1.514E+05	-2.777E+05	-2.486E+05	-4.312E+03	3.627E+03	-1.061E+04
3198	1	-9.885E+04	-1.347E+05	-1.513E+05	1.534E+04	-1.183E+03	2.910E+04
3199	1	-1.009E+05	-1.714E+05	-1.699E+05	-16.4	2.847E+03	-1.448E+04
3200	1	-1.290E+05	-1.697E+05	-1.860E+05	2.971E+04	-5.506E+03	2.635E+04
3201	1	-1.661E+05	-2.202E+05	-2.480E+05	4.725E+04	-4.620E+03	1.817E+04
3202	1	-1.575E+05	-2.556E+05	-2.391E+05	4.136E+04	1.059E+03	6.037E+03
3203	1	-6.789E+04	-5.606E+04	-7.414E+04	1.180E+04	4.725E+03	1.610E+04
3204	1	-9.806E+04	-1.250E+05	-1.198E+05	2.274E+04	3.339E+03	7.233E+03
3205	1	-1.232E+05	-1.606E+05	-8.667E+04	694	1.098E+04	-8.724E+03
3218	1	-9.136E+04	-9.682E+04	-1.136E+05	5.644E+03	-528	4.197E+03
3219	1	-9.038E+04	-5.422E+04	2.939E+03	3.583E+04	3.824E+03	1.715E+03
3220	1	-1.087E+05	-1.384E+05	-7.774E+04	1.618E+04	1.498E+03	-1.418E+04
3221	1	-8.501E+04	-7.487E+04	-1.804E+05	-1.757E+03	-6.376E+03	1.773E+03
3224	1	-3.532E+04	-1.619E+04	1.348E+04	-2.937E+03	898	7.207E+03
3225	1	-1.259E+05	-1.303E+05	-7.733E+04	6.384E+03	9.729E+03	2.165E+03
3227	1	-5.004E+04	-2.510E+04	-1.410E+03	-2.448E+03	-4.222E+03	7.070E+03
3228	1	-7.944E+04	-6.139E+04	-6.603E+04	7.157E+03	-5.671E+03	1.172E+04
3231	1	-3.284E+04	1.952E+04	2.987E+04	5.584E+03	1.264E+03	3.051E+03
3232	1	-6.058E+04	1.561E+04	1.656E+04	-2.202E+03	631	-4.198E+03
3233	1	-4.514E+04	-2.848E+04	-3.402E+04	1.071E+04	6.724E+03	1.894E+04
3236	1	-6.794E+03	2.739E+04	2.661E+04	-6.484E+03	347	1.369E+04
3237	1	-3.767E+04	2.196E+04	3.867E+04	8.853E+03	4.434E+03	1.902E+03
3238	1	-2.382E+04	-499	-8.882E+03	-4.004E+03	4.190E+03	1.353E+04
3240	1	-2.756E+04	1.427E+03	2.630E+04	-7.732E+03	4.585E+03	5.730E+03
3249	1	-1.404E+05	-2.459E+05	-1.413E+05	456	3.413E+03	-192
3251	1	-1.282E+05	-1.474E+05	-6.699E+04	3.670E+03	1.495E+04	-233
3253	1	-1.315E+05	-1.948E+05	-1.011E+05	1.142E+03	1.033E+04	84.6
3254	1	-1.401E+05	-2.474E+05	-1.417E+05	536	3.359E+03	-25.1
3255	1	-1.369E+05	-2.543E+05	-1.820E+05	818	5.509E+03	-17.8
3256	1	-1.261E+05	-1.486E+05	-6.629E+04	1.269E+03	1.482E+04	-78.9
3257	1	-7.565E+04	-8.706E+04	-4.179E+04	2.049E+03	1.799E+04	19.1
3258	1	-1.307E+05	-1.952E+05	-1.009E+05	141	1.035E+04	93.9
3259	1	-1.359E+05	-2.531E+05	-1.819E+05	-175	5.632E+03	-151
3260	1	-7.433E+04	-8.677E+04	-4.092E+04	-0.639	1.798E+04	171
3262	1	-1.333E+05	-2.600E+05	-2.245E+05	6.86	3.996E+03	45.1
3264	1	-4.277E+04	-3.692E+04	-2.403E+04	2.081E+03	1.314E+04	179
3266	1	-8.856E+04	-1.501E+05	-1.255E+05	937	8.392E+03	177
3267	1	-1.331E+05	-2.609E+05	-2.247E+05	279	3.952E+03	10.9
3268	1	-1.338E+05	-2.555E+05	-2.287E+05	537	1.623E+03	25.5
3269	1	-4.023E+04	-3.733E+04	-2.309E+04	754	1.330E+04	96.9
3270	1	-5.923E+04	-4.909E+04	-3.568E+04	1.488E+03	2.740E+03	-239
3271	1	-8.737E+04	-1.503E+05	-1.253E+05	163	8.478E+03	50.0
3272	1	-1.338E+05	-2.567E+05	-2.292E+05	-216	1.554E+03	-33.9
3273	1	-5.749E+04	-4.795E+04	-3.397E+04	159	2.646E+03	2.78

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3285	1	-1	400E+05	-1	314E+05	-5	741E+04	-4	079E+03	-1	969E+03	3	129E+03	
3287	1	-1	489E+05	-1	197E+05	-6	971E+04	-842	-5	134E+03	1	114E+04		
3289	1	-1	361E+05	-1	418E+05	-6	437E+04	1	078E+03	5	829E+03	985		
3292	1	-1	445E+05	-1	264E+05	-6	187E+04	-1	126E+03	-2	703E+03	5	309E+03	
3293	1	-1	428E+05	-1	281E+05	-5	739E+04	-1	420E+03	-1	242E+03	1	116E+03	
3294	1	-5	882E+04	-4	323E+04	-1	280E+04	-849	158			3	610E+03	
3295	1	-1	409E+05	-1	296E+05	-6	326E+04	1	208E+03	-2	014E+03	4	512E+03	
3296	1	-6	403E+04	-5	518E+04	-2	550E+04	137	-480			1	034E+04	
3297	1	-1	365E+05	-1	410E+05	-6	412E+04	216		5	595E+03	-47	8	
3299	1	-1	416E+05	-1	287E+05	-6	024E+04	54.6		-1	534E+03	-145		
3300	1	-5	959E+04	-4	144E+04	-1	375E+04	387		2	970E+03	101		
3301	1	-5	203E+04	-5	817E+04	-1	883E+04	3	492E+03	1	958E+03	360		
3306	1	4	117E+03	1	932E+04	3	002E+04	4	596E+03	2	481E+03	3	742E+03	
3308	1	-2	796E+04	-1	306E+04	-1	552E+04	2	836E+03	8	918E+03	7	341E+03	
3310	1	-1	611E+04	-4	866E+03	6	851E+03	4	378E+03	2	177E+03	1	233E+03	
3313	1	-50	3	6	986E+03	4	510E+04	1	145E+03	2	463E+03	1	610E+03	
3314	1	4	152E+03	2	207E+04	2	739E+04	4	795E+03	1	986E+03	856		
3315	1	-1	981E+04	-3	516E+03	2	551E+04	3	973E+03	5	696E+03	3	364E+03	
3316	1	7	777E+03	-7	116E+03	-2	046E+03	8	771E+03	6	936E+03	2	097E+03	
3317	1	-1	461E+04	-3	378E+03	7	227E+03	-27	0	8	843E+03	-52	8	
3320	1	8	277E+03	5	581E+03	1	866E+04	259		3	761E+03	450		
3321	1	-1	729E+04	-4	554E+03	2	474E+04	169		2	409E+03	29	7	
3322	1	3	131E+03	-3	701E+04	1	075E+04	421		8	188E+03	-263		
3339	1	-1	457E+05	-1	331E+05	-6	879E+04	3	426E+03	1	140E+03	1	069E+04	
3341	1	-1	566E+05	-1	376E+05	-7	012E+04	2	947E+03	7	046E+03	9	596E+03	
3343	1	-1	388E+05	-1	311E+05	-6	161E+04	2	947E+03	-50	8	7	995E+03	
3346	1	-1	439E+05	-1	393E+05	-6	159E+04	1	678E+03	4	428E+03	6	566E+03	
3347	1	-1	396E+05	-1	398E+05	-6	180E+04	1	302E+03	2	249E+03	3	181E+03	
3348	1	-5	669E+04	-6	814E+04	-2	486E+04	2	302E+03	8	308E+03	9	704E+03	
3349	1	-1	573E+05	-1	478E+05	-6	482E+04	537		7	498E+03	2	157E+03	
3350	1	-5	781E+04	-6	583E+04	-2	534E+04	-2	507E+03	1	475E+04	8	944E+03	
3351	1	-1	367E+05	-1	370E+05	-6	056E+04	0	560		1	670E+03	-602	
3353	1	-1	483E+05	-1	452E+05	-6	132E+04	-250		4	962E+03	-479		
3354	1	-5	149E+04	-6	555E+04	-2	110E+04	-498		1	067E+04	209		
3355	1	-6	124E+04	-6	537E+04	-3	307E+04	-155		1	490E+04	-89	6	
3360	1	-1	937E+04	-3	281E+04	-1	806E+04	5	335E+03	1	052E+04	8	351E+03	
3362	1	1	286E+04	-3	110E+04	-2	013E+04	-1	943E+03	1	688E+04	1	028E+04	
3364	1	1	867E+03	-1	705E+04	3	358E+03	4	778E+03	8	288E+03	6	684E+03	
3367	1	1	290E+04	-1	701E+04	5	743E+03	-2	417E+03	1	527E+04	7	665E+03	
3368	1	1	382E+04	-1	748E+04	9	206E+03	187		1	432E+04	3	524E+03	
3369	1	-3	031E+03	-4	710E+04	-1	759E+03	2	564E+03	9	537E+03	870		
3370	1	1	395E+04	-7	375E+03	-1	199E+03	-3	147E+03	1	696E+04	4	120E+03	
3371	1	-2	387E+03	-3	772E+04	4	424E+03	-7	652E+03	8	913E+03	1	500E+03	
3372	1	1	728E+04	-1	226E+04	1	459E+04	-339		1	151E+04	360		
3374	1	1	623E+04	-8	444E+03	3	979E+03	-451		1	647E+04	127		

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3375	1	2	194E+03	-4	284E+04	6	614E+03	-735	1	017E+04	-166				
3376	1	-9	053E+03	-3	006E+04	2	907E+03	-312	8	640E+03	-301				
3393	1	-1	719E+05	-1	394E+05	-6	859E+04	7	364E+03	1	525E+04	8	401E+03		
3395	1	-1	754E+05	-1	931E+05	-1	528E+05	7	245E+03	3	352E+04	4	611E+03		
3397	1	-1	592E+05	-1	450E+05	-6	162E+04	1	052E+03	9	260E+03	5	293E+03		
3400	1	-1	869E+05	-1	761E+05	-1	135E+03	-266	2	941E+04	4	636E+03			
3401	1	-1	713E+05	-1	565E+05	-6	832E+04	977	1	470E+04	739	1	470E+04		
3402	1	-6	308E+04	-6	724E+04	-3	617E+04	-4	312E+03	1	851E+04	9	532E+03		
3403	1	-1	745E+05	-1	974E+05	-1	454E+05	-616	2	819E+04	2	189E+03			
3404	1	-9	861E+04	-6	506E+04	-5	237E+04	-4	646E+03	9	132E+03	8	546E+03		
3405	1	-1	680E+05	-1	580E+05	-6	990E+04	-171	1	116E+04	-1	570E+03			
3407	1	-1	876E+05	-1	872E+05	-1	222E+05	-818	2	687E+04	-1	057E+03			
3408	1	-6	578E+04	-7	056E+04	-4	840E+04	170	1	465E+04	-428	1	465E+04		
3409	1	-9	744E+04	-6	909E+04	-5	541E+04	-219	2	566E+03	356	2	566E+03		
3414	1	-1	656E+04	-2	732E+04	-3	149E+04	-4	211E+03	1	350E+04	1	186E+04		
3416	1	-9	571E+03	-2	372E+03	-5	049E+03	-6	477E+03	3	919E+03	1	238E+04		
3418	1	1	851E+04	-6	745E+03	3	087E+03	-9	083E+03	1	521E+04	9	564E+03		
3421	1	1	955E+04	9	624E+03	1	199E+04	-4	076E+03	9	285E+03	5	072E+03		
3422	1	1	563E+04	266	-6	025E+03	-1	317E+04	316	5	235E+03	5	235E+03		
3423	1	-6	819E+03	-2	613E+04	9	325E+03	-1	317E+04	7	321E+03	2	619E+03		
3424	1	8	232E+03	1	042E+04	8	627E+03	-3	582E+03	7	803E+03	4	193E+03		
3425	1	-2	373E+04	-2	001E+04	2	925E+03	-1	233E+04	1	111E+04	523	1	111E+04	
3426	1	1	767E+04	1	859E+03	-4	534E+03	180	971	349	971	349	971	349	
3428	1	1	647E+04	8	314E+03	2	313E+03	695	7	216E+03	-28	2	7	216E+03	
3429	1	-1	522E+04	-2	352E+04	3	276E+03	583	8	232E+03	-21	8	8	232E+03	
3430	1	-2	291E+04	-2	467E+04	-4	446E+03	75	0	-8	426E+03	1	154E+03		
3446	1	-9	345E+04	-7	135E+04	285	-690	-690	8	447E+03	332	8	447E+03		
3448	1	-1	294E+05	-1	320E+05	-6	897E+04	-225	-4	583E+03	4	039E+03			
3451	1	-9	643E+04	-7	333E+04	-1	060E+03	7	78	7	730E+03	-2	38	7	730E+03
3452	1	-5	828E+04	-3	561E+04	-9	772E+03	607	-4	583E+03	4	039E+03			
3453	1	-1	292E+05	-1	337E+05	-6	746E+04	-507	7	30E+03	-2	38	7	30E+03	
3455	1	-6	078E+04	-3	768E+04	-1	014E+04	278	-3	256E+03	99	0	-3	256E+03	
3459	1	-1	204E+04	6	330E+03	612	-2	215E+03	-1	979E+03	1	035E+04			
3461	1	-3	779E+03	3	527E+03	1	414E+03	-4	640E+03	1	327E+03	8	802E+03		
3464	1	-9	347E+03	-2	420E+03	-6	796E+03	1	308E+03	-3	146E+03	3	602E+03		
3465	1	-2	384E+04	-1	334E+04	8	613E+03	-1	017E+03	4	405E+03	3	053E+03		
3466	1	-3	654E+03	1	262E+03	-3	151E+03	309	-607	-0	526	-607	-0	526	
3468	1	-2	216E+04	-1	403E+04	8	052E+03	306	4	329E+03	-99	6	4	329E+03	
3476	1	-1	125E+05	-1	483E+05	-8	006E+04	-1	592E+03	5	999E+03	1	954E+03		
3477	1	-1	032E+05	-1	624E+05	-9	271E+04	219	6	091E+03	2	242E+03			
3478	1	-8	834E+04	-1	684E+05	-1	076E+05	1	641E+03	8	390E+03	-2	553E+03		
3479	1	-1	211E+05	-1	342E+05	-6	756E+04	-1	717E+03	5	050E+03	27	6	5	050E+03
3480	1	-5	561E+04	-6	347E+04	-2	526E+04	154	6	395E+03	931	6	395E+03		
3481	1	-1	129E+05	-1	510E+05	-8	016E+04	-725	5	014E+03	1	490E+03			
3482	1	-1	061E+05	-1	721E+05	-9	092E+04	40	8	6	932E+03	2	219E+03		
3483	1	-8	698E+04	-1	704E+05	-1	059E+05	-1	693E+03	8	153E+03	3	998E+03		

3484	1	-1	222E+05	-1	409E+05	-7	023E+04	-2	439E+03	2	639E+03	-301
3485	1	-5	785E+04	-6	926E+04	-2	181E+04	1	222E+03	7	881E+03	1 450E+03
3486	1	-1	134E+05	-1	577E+05	-7	999E+04	-750	4 530E+03	4	630E+03	-591
3487	1	-8	450E+04	-1	694E+05	-1	063E+05	-614	7 797E+03	1	538E+03	
3488	1	-6	130E+04	-6	881E+04	-2	288E+04	198	9 910E+03	1	053E+03	
3489	1	-3	706E+04	-8	794E+04	-5	977E+04	3 688E+03	3 410E+03	-3	694E+03	
3490	1	-8	423E+04	-1	830E+05	-1	285E+05	-893	4 186E+03	3	560E+03	
3491	1	-1	280E+05	-2	287E+05	-1	637E+05	-8 600E+03	3 701E+03	1	864E+04	
3492	1	8	919E+03	1	732E+03	2	150E+04	2 297E+03	6 337E+03	2	165E+03	
3493	1	-4	759E+04	-5	604E+04	-2	295E+03	-903	3 910E+03	3	336E+03	
3494	1	-3	977E+04	-9	557E+04	-5	078E+04	-1 190E+03	6 931E+03	6	353E+03	
3495	1	-8	473E+04	-1	892E+05	-1	312E+05	-3 337E+03	1 910E+03	3	854E+03	
3496	1	-1	299E+05	-2	203E+05	-1	398E+05	1 257E+04	3 843E+03	-1	461E+04	
3497	1	6	078E+03	5	340E+03	2	653E+04	2 979E+03	1 056E+04	-1	205E+03	
3498	1	-3	073E+04	-3	558E+04	1	963E+04	-1 230E+03	-1 746E+03	1	476E+03	
3499	1	-3	783E+04	-8	754E+04	-5	075E+04	-396	5 537E+03	-363		
3500	1	-1	436E+05	-2	141E+05	-1	581E+05	3 920E+03	1 434E+04	-229		
3501	1	-3	587E+04	-2	659E+04	2	092E+04	-395	-1 691E+03	-630		
3510	1	-1	067E+05	-1	739E+05	-9	090E+04	-340	7 368E+03	75 5		
3512	1	-1	193E+05	-1	413E+05	-6	869E+04	-1 006E+03	2 025E+03	-140		
3514	1	-1	133E+05	-1	588E+05	-8	059E+04	-478	4 837E+03	273		
3515	1	-1	078E+05	-1	754E+05	-9	169E+04	-185	7 140E+03	258		
3516	1	-8	275E+04	-1	689E+05	-1	049E+05	-242	6 872E+03	686		
3517	1	-1	181E+05	-1	415E+05	-6	883E+04	-149	2 540E+03	-80 7		
3518	1	-6	203E+04	-6	957E+04	-2	338E+04	-285	9 838E+03	-381		
3519	1	-1	128E+05	-1	584E+05	-7	998E+04	-79 4	4 843E+03	0 779		
3520	1	-8	317E+04	-1	693E+05	-1	048E+05	85 6	7 021E+03	71 6		
3521	1	-6	153E+04	-7	014E+04	-2	340E+04	18 5	9 328E+03	45 1		
3523	1	-7	747E+04	-1	823E+05	-1	263E+05	-1 005E+03	-1 777E+03	1 364E+03		
3525	1	936	6 377E+03	2	223E+04	654		654	1 235E+04	-1 406E+03		
3527	1	-3	817E+04	-8	722E+04	-5	290E+04	-131	4 978E+03	147		
3528	1	-7	594E+04	-1	806E+05	-1	267E+05	-77 0	-1 794E+03	580		
3529	1	-1	466E+05	-2	161E+05	-1	531E+05	-727	1 367E+04	2 679E+03		
3530	1	-115	5 110E+03	2	153E+04	-208		-208	1 300E+04	-209		
3531	1	-3	720E+04	-2	672E+04	1	867E+04	-368	-1 109E+03	-58 1		
3532	1	-3	795E+04	-8	799E+04	-5	235E+04	155	4 569E+03	121		
3533	1	-1	455E+05	-2	169E+05	-1	490E+05	-548	1 225E+04	95 4		
3534	1	-3	744E+04	-2	840E+04	1	722E+04	-18 7	-1 192E+03	-1 94		

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NODE POINT	11	22	33	12	13	23
1	6.354E-03	1.514E-03	5.880E-03	3.319E-05	-8.984E-03	-2.791E-04
2	-5.821E-03	8.669E-04	4.140E-03	-5.803E-04	-1.122E-03	3.458E-04
3	6.210E-03	3.353E-03	4.901E-03	-1.126E-02	7.112E-03	-3.974E-04
4	6.584E-03	5.659E-04	5.790E-03	4.208E-04	-9.300E-03	-2.261E-04
5	-5.697E-03	1.312E-03	4.616E-03	4.107E-03	1.932E-04	6.030E-04
6	5.590E-03	3.523E-03	5.011E-03	-7.244E-03	6.424E-03	-5.868E-03
7	6.098E-03	1.306E-03	5.411E-03	1.436E-06	-8.204E-03	1.376E-03
8	-4.412E-03	8.637E-04	4.858E-03	3.684E-03	-9.075E-05	-1.739E-03
9	3.241E-03	6.141E-03	4.915E-03	-5.238E-03	2.760E-03	-8.187E-03
10	1.108E-02	3.207E-04	4.127E-03	-6.373E-03	9.987E-04	-2.486E-05
11	-4.837E-03	6.464E-03	3.299E-03	-3.343E-03	1.952E-04	1.032E-04
12	1.739E-02	-2.041E-03	3.681E-03	1.311E-02	-9.813E-04	-2.926E-05
13	1.241E-02	-1.061E-03	4.098E-03	6.001E-03	1.087E-03	-1.506E-04
14	-4.107E-03	3.048E-03	3.058E-03	-2.805E-03	3.370E-04	-4.604E-04
15	1.764E-03	5.944E-03	2.333E-03	-6.110E-03	1.520E-03	-1.710E-04
16	1.222E-02	-1.030E-03	3.974E-03	-1.413E-03	7.881E-04	-1.337E-04
17	-3.384E-03	2.300E-03	2.649E-03	2.854E-03	-4.656E-04	-9.250E-04
18	4.131E-03	9.839E-03	2.908E-03	-1.131E-02	-2.011E-03	6.724E-04
19	9.168E-03	6.447E-04	9.874E-03	2.515E-04	-1.664E-03	6.512E-04
20	2.625E-03	-1.738E-04	8.836E-03	-5.929E-06	1.171E-03	-4.683E-04
21	1.091E-02	-1.498E-03	9.609E-03	-3.835E-04	4.866E-04	-1.349E-03
22	1.033E-02	-1.151E-03	1.012E-02	7.594E-04	-1.670E-03	-1.523E-03
23	2.039E-03	1.800E-03	7.775E-03	7.817E-04	9.094E-04	1.534E-03
24	7.445E-03	1.741E-03	1.065E-02	-1.139E-02	1.048E-03	-2.057E-04
25	9.132E-03	-3.487E-04	1.012E-02	-3.045E-05	-2.931E-03	-1.234E-04
26	1.792E-03	1.511E-03	7.590E-03	-5.510E-04	8.126E-04	-1.535E-03
27	1.943E-03	7.963E-03	9.792E-03	-1.047E-02	1.465E-03	-2.560E-04
28	-4.189E-03	2.198E-03	1.117E-03	8.066E-05	-4.521E-05	-9.951E-06
29	1.000E-03	1.715E-04	-3.129E-04	-2.246E-05	-6.425E-04	2.290E-06
30	-5.319E-04	-2.163E-05	-5.865E-04	1.933E-05	3.944E-05	4.715E-06
31	-4.613E-03	1.767E-03	1.064E-03	-2.667E-03	3.188E-04	4.463E-04
32	-9.214E-04	9.698E-05	-3.391E-04	-2.593E-06	-6.904E-04	-9.537E-05
33	-5.730E-04	2.778E-03	-5.861E-04	7.995E-05	9.070E-06	-1.399E-05
34	-3.715E-03	8.690E-05	8.872E-04	-4.031E-03	2.930E-04	6.064E-04
35	-9.075E-04	2.304E-04	-3.874E-04	-7.719E-05	-5.984E-04	-1.197E-04
36	-5.225E-04	-4.980E-05	-5.991E-04	4.425E-05	-3.553E-05	-1.457E-05
37	-1.796E-03	1.474E-03	-1.209E-04	1.750E-04	4.004E-03	5.063E-05
38	-7.756E-04	1.820E-04	-1.947E-03	-2.099E-05	-8.961E-04	5.651E-06
39	-7.216E-04	-3.074E-05	-1.820E-03	1.191E-05	1.716E-05	-1.693E-05
40	-2.685E-03	1.376E-03	-2.911E-04	-1.396E-03	-4.205E-03	-8.735E-04

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41	1	-6.982E-04	9.211E-05	-1.945E-03	6.484E-05	-7.629F-04	-4.935E-05
42	1	-7.759E-04	3.190E-03	-1.816E-03	4.991E-05	5.034E-03	-3.229E-05
43	1	-2.988E-03	5.715E-05	-7.720E-04	3.017E-03	-3.878E-03	-1.327E-03
44	1	-8.123E-04	2.582E-04	-1.923E-03	6.888E-05	-5.812E-04	-2.402E-05
45	1	-7.437E-04	4.499E-05	-1.812E-03	2.878E-05	8.099E-05	-6.206E-05
46	1	1.180E-03	7.288E-04	9.007E-03	3.150E-04	-3.144E-03	1.102E-05
47	1	-1.734E-03	3.805E-04	8.694E-03	3.004E-05	3.822E-04	-1.018E-05
48	1	-1.163E-03	-2.897E-05	8.849E-03	-6.234E-06	1.017E-04	1.583E-05
49	1	2.351E-05	1.070E-03	8.775E-03	1.017E-03	-2.846E-03	-6.244E-04
50	1	-1.634E-03	2.996E-04	8.772E-03	-1.400E-04	3.392E-04	3.095E-05
51	1	-1.187E-03	8.048E-06	8.837E-03	-5.772E-06	4.902E-05	2.741E-05
52	1	-1.099E-03	8.603E-04	8.511E-03	-2.325E-04	-1.371E-03	-5.822E-04
53	1	-1.801E-03	2.813E-04	8.850E-03	-1.066E-04	1.217E-04	2.337E-05
54	1	-1.183E-03	-6.558E-06	8.859E-03	-3.599E-05	3.835E-04	3.833E-05
55	1	6.225E-03	5.663E-04	5.632E-03	2.218E-05	-8.265E-03	-2.859E-05
56	1	-4.077E-03	-8.728E-04	4.071E-03	2.350E-03	-1.189E-04	3.350E-04
57	1	2.433E-03	-5.208E-04	4.042E-03	1.271E-03	-1.232E-03	-1.458E-03
58	1	5.737E-03	9.351E-04	5.598E-03	-2.597E-04	-7.753E-03	-7.562E-05
59	1	-3.243E-03	-1.679E-04	3.840E-03	2.248E-04	-6.042E-04	6.074E-05
60	1	2.877E-03	-3.666E-03	3.381E-03	4.460E-04	-1.710E-03	2.116E-04
61	1	1.114E-02	-6.605E-04	3.915E-03	-1.450E-03	4.920E-04	-1.646E-04
62	1	-3.189E-03	1.185E-03	2.334E-03	1.589E-03	-5.735E-04	-5.572E-04
63	1	1.882E-03	3.604E-03	2.775E-03	-2.488E-04	-1.728E-03	1.289E-04
64	1	9.930E-03	-1.699E-04	3.823E-03	-3.204E-04	2.241E-04	-3.349E-05
65	1	-2.722E-03	3.075E-04	2.278E-03	3.707E-05	-5.415E-04	-1.240E-05
66	1	9.164E-03	-6.032E-04	2.545E-03	6.217E-04	-2.102E-03	-8.956E-06
67	1	6.653E-04	2.013E-03	8.094E-03	-6.819E-04	1.323E-04	-7.662E-05
68	1	7.947E-04	5.446E-03	8.510E-03	-1.451E-03	1.237E-03	-3.590E-03
69	1	8.524E-03	-5.579E-04	9.984E-03	-6.785E-07	-3.104E-03	-7.885E-05
70	1	2.939E-04	2.308E-03	7.801E-03	-9.734E-05	2.224E-04	-6.149E-05
71	1	1.254E-03	3.295E-03	8.731E-03	4.791E-04	1.370E-04	-1.380E-04
72	1	2.185E-03	7.080E-03	4.481E-03	-6.823E-05	-1.370E-03	-1.026E-02
73	1	2.354E-03	6.636E-03	4.053E-03	3.816E-03	-3.606E-03	-8.939E-03
74	1	2.896E-03	-2.199E-03	3.630E-03	-1.834E-03	-1.384E-03	-9.093E-04
75	1	1.139E-03	-3.069E-03	2.811E-03	-9.141E-04	-1.150E-03	3.317E-04
76	1	2.401E-03	-4.291E-03	2.602E-03	-1.349E-04	-1.053E-03	2.102E-04
77	1	3.389E-04	-3.496E-03	1.748E-03	4.708E-04	8.589E-05	3.438E-04
78	1	-3.412E-04	1.430E-02	3.223E-03	-8.648E-04	-3.187E-03	1.569E-03
79	1	2.535E-04	1.271E-02	2.751E-03	1.007E-02	-3.134E-03	2.588E-03
80	1	1.919E-03	-5.360E-04	1.824E-03	1.058E-03	-3.790E-03	2.449E-04
81	1	2.024E-03	-2.183E-03	1.915E-03	-1.851E-04	-3.336E-03	-1.169E-04
82	1	9.542E-05	-2.588E-03	7.499E-04	-2.752E-04	4.277E-03	-1.483E-04
83	1	-1.578E-03	1.123E-02	1.079E-02	-9.037E-04	4.515E-05	1.140E-03
84	1	-9.947E-04	9.773E-03	1.109E-02	8.523E-03	-5.059E-04	2.741E-04

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104	1	9	918E-04	4	427E-03	8	125E-03	2	089E-03	-1	043E-03	-3	918E-03
105	1	1	215E-03	2	393E-03	8	303E-03	2	377E-03	-2	400E-03	-3	976E-03
107	1	1	376E-03	1	733E-03	8	927E-03	5	122E-05	-1	547E-03	4	278E-05
108	1	5	834E-04	6	373E-04	9	063E-03	7	859E-05	-1	114E-03	1	289E-04
110	1	2	626E-03	6	301E-03	3	568E-03	6	422E-03	-7	001E-03	8	040E-03
111	1	4	838E-03	3	950E-03	2	505E-03	4	286E-03	-7	882E-03	3	873E-03
113	1	3	212E-03	-2	635E-03	2	068E-03	4	452E-03	-3	098E-05	1	466E-03
114	1	-2	208E-03	-9	238E-04	1	365E-03	4	483E-03	3	302E-04	1	159E-03
116	1	-1	164E-03	-1	331E-03	1	201E-03	-1	463E-04	-3	289E-04	1	948E-04
117	1	-5	871E-04	-8	237E-04	7	351E-04	4	137E-04	-7	405E-04	1	021E-04
119	1	3	985E-03	9	900E-03	2	407E-03	1	589E-02	-1	403E-03	2	914E-03
120	1	7	981E-03	3	817E-03	2	017E-03	1	090E-02	-1	212E-03	1	052E-03
122	1	2	898E-04	-1	274E-03	8	369E-04	-2	725E-03	-4	170E-03	-1	400E-03
123	1	-1	979E-03	-2	458E-04	5	604E-05	-3	162E-03	-4	313E-03	-1	601E-03
125	1	-1	091E-03	-6	559E-04	-3	626E-04	-4	400E-04	-3	913E-03	-2	894E-04
126	1	-1	899E-04	-3	214E-04	-1	162E-04	-4	857E-04	-2	784E-03	-5	754E-05
128	1	2	088E-03	6	365E-03	1	094E-02	1	394E-02	-3	342E-04	3	485E-04
129	1	5	475E-03	2	336E-03	1	047E-02	1	070E-02	-2	587E-03	1	454E-03
131	1	5	310E-04	1	410E-03	8	548E-03	9	506E-04	-2	774E-03	-3	283E-03
132	1	-6	323E-04	4	356E-04	8	592E-03	3	246E-04	-6	157E-04	4	026E-04
134	1	-4	326E-04	2	419E-04	8	555E-03	-3	689E-04	2	745E-04	2	973E-04
135	1	-1	006E-03	-1	530E-04	5	662E-04	-1	536E-03	-7	512E-04	1	631E-04
139	1	-1	134E-03	-1	069E-04	4	270E-04	-6	210E-05	-5	856E-04	-5	074E-05
141	1	-5	311E-04	-1	083E-05	-6	138E-04	-6	761E-05	-1	919E-05	-2	994E-05
142	1	-1	505E-03	-2	455E-04	5	458E-04	-1	217E-06	-8	225E-04	5	458E-07
143	1	-7	960E-04	1	047E-04	-4	435E-04	3	527E-06	-5	524E-04	-4	876E-06
144	1	-5	404E-04	-7	028E-06	-6	147E-04	1	023E-05	-1	726E-05	-4	500E-06
148	1	-7	023E-04	1	160E-04	-1	234E-03	-1	029E-03	-2	639E-03	-6	892E-04
149	1	-8	214E-04	1	638E-04	-1	882E-03	4	886E-05	-4	363E-04	-6	357E-05
150	1	-7	674E-04	-4	030E-06	-1	821E-03	3	612E-05	6	364E-05	-1	866E-05
151	1	-1	163E-03	1	580E-04	-1	364E-03	-3	565E-05	-2	332E-03	-1	682E-05
152	1	-8	769E-04	1	636E-04	-1	860E-03	8	251E-06	-4	131E-04	5	679E-06
153	1	-7	752E-04	2	843E-06	-1	825E-03	4	131E-06	6	292E-05	-2	413E-06
157	1	-1	227E-03	6	097E-04	8	643E-03	-1	493E-04	7	561E-05	-1	996E-04
158	1	-1	490E-03	2	814E-04	8	883E-03	-3	226E-05	6	213E-05	4	125E-06
159	1	-1	187E-03	-2	744E-05	8	891E-03	1	419E-05	-1	389E-05	2	854E-05
160	1	-1	425E-03	5	609E-04	8	668E-03	-1	522E-04	-1	876E-04	3	974E-05
161	1	-1	489E-03	2	637E-04	8	903E-03	-3	808E-06	4	720E-05	2	905E-06
162	1	-1	204E-03	-1	882E-05	8	904E-03	3	016E-06	-3	031E-05	1	455E-05
163	1	1	283E-03	1	814E-03	2	066E-03	-8	140E-05	-2	192E-03	2	132E-05
164	1	-3	813E-03	1	301E-03	1	301E-03	1	580E-04	-5	922E-04	8	252E-06
165	1	1	689E-03	1	362E-03	1	696E-03	-1	938E-04	2	418E-03	-1	223E-05
166	1	1	217E-03	1	742E-03	2	115E-03	6	655E-05	-2	195E-03	4	052E-05
167	1	-3	398E-03	1	072E-03	9	692E-04	1	951E-03	-4	711E-04	3	238E-04
168	1	1	605E-03	1	421E-03	1	992E-03	-4	243E-04	2	283E-03	-2	001E-03

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169	1	1	161E-03	1	758E-03	1	904E-03	1	143E-04	-2	113E-03	-2	966E-04
170	1	-2	522E-03	-3	500E-04	1	593E-03	2	675E-03	-1	156E-04	9	529E-04
171	1	1	205E-03	2	387E-03	1	861E-03	-6	058E-04	5	076E-04	-1	684E-03
172	1	4	401E-03	1	172E-03	2	346E-03	9	760E-05	-3	224E-03	2	281E-04
173	1	-4	475E-03	1	713E-03	3	342E-03	-1	041E-04	-3	695E-04	-5	057E-04
174	1	4	435E-03	5	219E-04	1	880E-03	1	783E-03	2	130E-03	-5	615E-04
175	1	4	197E-03	1	774E-03	2	305E-03	3	844E-04	-2	865E-03	4	461E-04
176	1	-3	964E-03	-7	761E-04	3	694E-03	1	113E-03	-4	797E-04	4	274E-04
177	1	3	831E-03	1	385E-03	3	051E-03	-3	541E-03	3	562E-03	-2	416E-03
178	1	4	184E-03	7	792E-04	2	720E-03	2	793E-03	-2	560E-03	-3	591E-04
179	1	-3	929E-03	1	786E-03	2	573E-03	3	141E-03	-2	556E-04	2	291E-03
180	1	2	354E-03	3	149E-03	1	967E-03	4	427E-03	6	479E-04	-4	403E-03
190	1	-2	608E-03	1	627E-03	-4	215E-04	2	737E-05	5	929E-04	6	323E-06
191	1	-1	032E-03	1	919E-04	-2	044E-04	-3	064E-05	-3	306E-04	2	867E-08
192	1	-5	286E-04	-2	888E-06	-5	765E-04	1	525E-05	2	511E-05	-1	465E-06
193	1	-2	632E-03	1	325E-03	-3	460E-04	-1	435E-03	6	365E-04	4	290E-04
194	1	-9	989E-04	1	673E-04	-2	286E-04	-6	870E-05	-3	677E-04	-2	872E-05
195	1	-5	464E-04	9	005E-06	-9	806E-04	4	643E-05	4	887E-06	-1	427E-05
196	1	-1	772E-03	3	720E-04	-1	451E-04	-2	470E-03	5	305E-04	4	742E-04
197	1	-9	167E-04	1	695E-04	-2	806E-04	-1	720E-04	-3	589E-04	-3	226E-05
198	1	-5	151E-04	-2	167E-05	-5	938E-04	-2	967E-05	1	613E-06	-2	425E-05
199	1	-2	965E-03	1	917E-03	2	528E-04	-8	238E-06	2	014E-03	-2	765E-05
200	1	-9	842E-04	1	780E-04	-2	523E-04	-2	322E-05	-5	912E-04	8	128E-06
201	1	-5	365E-04	7	372E-06	-5	705E-04	1	858E-05	-4	492E-05	-7	688E-06
202	1	-3	229E-03	1	473E-03	2	834E-04	-1	994E-03	1	876E-03	7	971E-04
203	1	-9	363E-04	1	403E-04	-2	859E-04	-3	332E-05	-5	835E-04	-7	996E-05
204	1	-5	482E-04	1	332E-05	-5	684E-04	4	885E-05	5	435E-05	-1	795E-05
205	1	-2	564E-03	3	139E-04	4	020E-04	-2	867E-03	1	085E-03	8	195E-04
206	1	-8	928E-04	1	825E-04	-3	593E-04	-1	042E-04	-4	804E-04	-1	048E-04
207	1	-5	340E-04	-2	788E-05	-5	764E-04	2	829E-05	2	828E-05	-1	269E-05
220	1	1	191E-03	1	577E-03	1	853E-03	2	059E-04	-1	843E-03	1	631E-04
221	1	-1	991E-03	-8	468E-04	1	908E-03	1	664E-03	-2	472E-04	-6	216E-05
222	1	2	162E-03	-1	457E-03	8	659E-04	1	126E-03	-1	010E-03	-1	573E-03
223	1	1	155E-03	1	653E-03	1	897E-03	-2	323E-06	-1	891E-03	-2	030E-05
224	1	-1	374E-03	-1	344E-03	1	810E-03	1	312E-04	-2	813E-04	7	301E-07
225	1	2	088E-03	-2	379E-03	3	287E-04	-9	895E-06	-9	844E-04	9	140E-05
229	1	4	081E-03	1	327E-03	2	553E-03	2	080E-04	-2	209E-03	4	071E-05
230	1	-2	874E-03	-6	385E-04	2	683E-03	1	947E-03	-1	949E-04	4	914E-04
231	1	2	602E-03	-1	821E-04	1	276E-03	6	349E-04	-2	019E-03	9	993E-04
232	1	3	979E-03	1	313E-03	2	528E-03	2	671E-05	-2	042E-03	1	269E-04
233	1	-2	250E-03	-1	318E-03	2	839E-03	1	244E-04	-4	654E-04	-8	560E-05
234	1	2	554E-03	-3	310E-03	1	772E-03	1	965E-04	-1	233E-03	1	751E-04
245	1	1	593E-03	1	896E-03	1	653E-03	-2	573E-03	-1	865E-03	-5	007E-03
246	1	3	631E-03	1	846E-03	3	808E-05	4	816E-03	-9	996E-04	-1	628E-03
248	1	1	807E-03	-1	214E-04	-6	086E-04	4	491E-04	-1	101E-03	-1	143E-03
249	1	1	584E-03	-1	398E-03	-6	315E-04	1	532E-05	-1	996E-04	2	361E-04

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251	1	535E-03	-1	835E-03	6	525E-05	1	003E-04	-1	859E-04	3	550E-04
252	1	4.754E-04	-1	483E-03	3	672E-04	-4	217E-04	1	108E-04	1	018E-04
254	1	3.563E-03	3	572E-03	8	503E-04	2	695E-03	9	478E-04	-1	664E-03
255	1	2.348E-03	4	597E-03	1	161E-03	1	656E-03	-1	799E-03	3	333E-03
257	1	2.168E-03	-7	608E-04	1	265E-03	1	644E-03	-9	443E-04	3	485E-03
258	1	1.874E-03	-1	855E-03	9	640E-04	-5	556E-04	1	191E-03	3	260E-03
260	1	1.988E-03	-3	404E-03	1	305E-03	-4	305E-04	1	198E-04	1	427E-04
261	1	3.737E-04	-2	125E-03	9	864E-04	-7	457E-05	3	455E-04	2	644E-04
272	1	1.281E-03	4	444E-03	-1	780E-04	-2	780E-03	-1	707E-03	-1	258E-03
273	1	3.142E-03	4	276E-04	1	275E-06	3	464E-03	-2	299E-03	-6	782E-04
275	1	3.549E-04	-1	225E-03	-4	964E-04	-1	651E-03	1	414E-04	5	052E-04
276	1	-1.050E-03	3	592E-05	-4	201E-04	-2	070E-03	4	235E-04	6	459E-04
278	1	-4.542E-04	9	005E-04	4	740E-04	3	156E-04	9	943E-05	-6	293E-05
279	1	-7.441E-04	-5	009E-04	5	198E-04	-3	780E-04	-1	553E-04	-4	352E-06
281	1	2.605E-03	4	361E-03	6	754E-04	4	110E-03	-2	925E-03	-2	277E-03
282	1	3.843E-03	3	361E-03	2	095E-04	2	777E-03	-2	411E-03	-3	825E-04
284	1	1.331E-04	-1	325E-03	6	801E-04	-3	090E-03	1	637E-03	3	123E-03
285	1	-1.474E-03	-5	899E-04	7	325E-04	-2	684E-03	1	719E-03	1	775E-03
287	1	-7.112E-04	-9	458E-04	7	558E-04	1	268E-04	-6	859E-05	1	080E-04
288	1	-6.267E-04	-6	270E-04	4	250E-04	2	474E-04	-7	462E-04	1	793E-04
301	1	-1.030E-03	-5	965E-05	-3	362E-04	1	096E-03	-2	675E-04	2	865E-04
302	1	-7.981E-04	8	361E-05	-3	606E-04	-8	065E-05	-3	564E-04	-2	893E-05
303	1	-5.069E-04	-1	354E-05	-5	828E-04	1	148E-05	-3	159E-05	-1	615E-05
304	1	-9.550E-04	-2	002E-04	1	59E-04	2	778E-05	3	428E-04	1	675E-05
305	1	-7.931E-04	9	442E-05	-3	734E-04	-2	275E-05	-3	528E-04	-3	543E-06
306	1	-4.951E-04	-2	832E-05	-5	949E-04	6	528E-06	1	158E-05	-2	342E-06
310	1	-1.040E-03	-1	188E-04	3	477E-04	-1	346E-03	-6	125E-04	2	689E-04
311	1	-8.128E-04	1	092E-04	-3	794E-04	-6	612E-03	-4	725E-04	-3	051E-05
312	1	-5.355E-04	-1	610E-05	-5	966E-04	3	276E-05	-2	327E-05	-3	453E-05
313	1	-1.234E-03	-2	045E-04	3	401E-04	3	287E-05	-3	545E-04	-9	798E-05
314	1	-8.014E-04	9	718E-05	-4	036E-04	-2	625E-06	-4	547E-04	1	595E-05
315	1	-5.276E-04	-1	675E-05	-5	989E-04	5	085E-06	5	666E-05	-1	577E-05
325	1	1.980E-03	2	465E-04	9	086E-03	2	744E-04	3	582E-03	4	221E-05
326	1	-2.152E-03	2	120E-03	8	833E-03	-5	228E-04	-4	172E-04	-3	328E-04
327	1	1.523E-03	-3	234E-03	1	045E-02	-2	384E-03	-3	300E-03	1	520E-03
328	1	1.725E-03	6	534E-04	9	083E-03	5	402E-04	3	537E-03	-9	686E-05
329	1	-6.024E-05	-5	131E-04	8	859E-03	2	194E-03	-3	588E-04	7	900E-04
330	1	1.245E-03	2	940E-03	8	353E-03	-7	807E-03	-2	236E-03	2	054E-03
331	1	1.977E-03	3	988E-04	9	079E-03	9	874E-04	3	524E-03	-2	777E-05
332	1	-2.514E-04	9	931E-05	8	540E-03	-9	995E-04	-5	836E-04	9	284E-04
333	1	-7.220E-04	4	253E-03	8	488E-03	-3	880E-04	-1	920E-03	3	689E-03
334	1	1.847E-04	8	876E-04	2	269E-03	3	350E-04	2	557E-03	-3	875E-05
335	1	-5.089E-03	2	072E-03	1	122E-03	-5	845E-04	1	000E-03	1	057E-04
336	1	1.480E-04	-2	213E-03	1	620E-03	-1	446E-03	-4	970E-04	-2	061E-04
337	1	-1.225E-04	1	305E-03	2	256E-03	9	084E-03	-2	592E-03	8	148E-05
338	1	-2.818E-03	-6	584E-04	8	807E-04	3	683E-03	7	348E-04	2	437E-04

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339	1	7	773E-04	2	543E-03	1	641E-03	-5	685E-03	-6	238E-04	1	54E-03
340	1	-9	117E-05	1	255E-03	2	168E-03	5	056E-04	2	652E-03	7	527E-05
341	1	-1	794E-03	-7	149E-04	5	135E-04	9	380E-04	2	308E-04	7	444E-04
342	1	-3	653E-04	3	225E-03	1	568E-03	1	119E-03	2	850E-04	1	450E-03
343	1	3	771E-05	1	664E-03	2	144E-03	1	516E-04	1	886E-04	-3	094E-05
344	1	-5	215E-03	1	832E-03	2	147E-03	-2	499E-04	7	731E-04	6	639E-05
345	1	2	111E-04	2	309E-04	2	004E-03	-2	295E-04	1	210E-03	-8	614E-04
346	1	-1	438E-04	1	830E-03	2	151E-03	-2	743E-05	2	109E-04	-5	374E-05
347	1	-4	011E-03	2	484E-04	2	160E-03	3	140E-03	3	240E-04	-5	007E-04
348	1	6	784E-04	2	050E-03	1	950E-03	-2	246E-03	-1	689E-03	1	687E-03
349	1	-2	894E-04	1	825E-03	2	179E-03	2	005E-04	1	241E-04	-8	798E-05
350	1	-2	731E-03	-7	104E-04	2	117E-03	2	385E-03	-1	929E-04	-5	146E-05
351	1	8	534E-04	1	984E-03	1	776E-03	8	801E-04	1	154E-03	2	021E-03
352	1	2	269E-03	-9	335E-05	9	103E-03	6	232E-04	3	464E-03	-7	667E-06
353	1	-8	987E-04	6	393E-04	8	367E-03	-6	723E-04	-2	526E-04	5	244E-04
354	1	-2	285E-04	1	767E-03	8	552E-03	5	700E-04	-6	867E-04	2	072E-03
355	1	2	321E-03	-1	773E-04	9	117E-03	1	375E-05	3	445E-03	1	533E-05
356	1	-1	121E-03	8	084E-04	8	295E-03	5	726E-07	-2	548E-04	-4	590E-07
357	1	1	475E-04	7	238E-04	8	478E-03	1	309E-04	-1	358E-04	-1	372E-05
358	1	1	390E-04	7	928E-04	2	137E-03	3	435E-04	2	719E-03	3	173E-05
359	1	-1	754E-03	-1	939E-04	2	352E-04	3	604E-04	4	068E-04	5	484E-04
360	1	1	369E-04	-3	032E-04	8	370E-04	1	540E-03	8	275E-04	1	252E-03
361	1	1	584E-04	7	188E-04	2	099E-03	1	813E-05	2	722E-03	2	964E-05
362	1	-1	648E-03	-4	107E-05	1	130E-04	2	261E-05	3	888E-04	2	486E-05
363	1	5	079E-04	-1	754E-03	5	372E-04	5	698E-05	1	382E-03	3	586E-05
364	1	-1	957E-04	1	516E-03	2	175E-03	2	083E-04	4	405E-06	-9	169E-05
365	1	-2	221E-03	-9	007E-04	2	143E-03	1	300E-03	4	993E-05	1	314E-04
366	1	1	070E-03	-2	029E-03	1	709E-03	2	739E-03	1	515E-03	6	015E-04
367	1	-2	130E-04	1	473E-03	2	183E-03	2	401E-05	-3	440E-05	1	316E-05
368	1	-1	843E-03	-1	167E-03	2	135E-03	4	980E-05	2	537E-04	1	988E-05
369	1	3	582E-04	2	503E-03	8	962E-03	3	523E-05	-4	138E-05	3	863E-03
370	1	1	444E-03	-3	408E-03	1	646E-03	1	102E-03	-4	138E-05	3	863E-03
371	1	-2	512E-04	2	610E-03	9	188E-03	1	338E-03	1	868E-03	3	572E-03
372	1	3	624E-04	4	461E-04	8	783E-03	6	450E-04	5	454E-04	1	626E-03
373	1	-6	684E-04	2	791E-04	9	039E-03	1	942E-04	1	674E-03	1	393E-03
374	1	1	429E-04	-2	257E-04	8	677E-03	-2	079E-05	7	396E-04	-8	969E-05
375	1	1	113E-03	2	211E-04	9	164E-03	5	858E-05	2	051E-03	-2	420E-04
376	1	1	287E-03	9	024E-04	1	582E-03	2	189E-03	1	729E-03	1	842E-03
377	1	1	711E-03	4	804E-04	1	103E-03	4	957E-04	3	215E-03	2	410E-03
378	1	1	043E-03	-1	988E-03	6	037E-04	3	773E-04	2	439E-03	1	326E-03
379	1	7	438E-04	-1	992E-03	5	307E-04	1	322E-03	3	333E-03	1	543E-03
380	1	7	644E-04	-2	223E-03	7	452E-06	-1	512E-04	2	924E-03	5	193E-05
381	1	5	454E-04	-1	088E-03	1	428E-03	-8	468E-06	2	813E-03	4	878E-05
382	1	1	984E-03	6	717E-04	1	575E-03	2	255E-03	1	985E-03	7	367E-04
383	1	2	152E-03	1	846E-04	1	454E-03	6	440E-04	1	501E-03	-2	829E-04
384	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	-7	679E-05

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402	1	6.140E-04	-3.128E-03	1.500E-03	-1.475E-03	1.370E-03	-2.295E-04
404	1	1.196E-03	-3.434E-03	1.512E-03	-1.623E-04	1.485E-03	-2.073E-05
405	1	-1.742E-04	-2.267E-03	1.457E-03	-5.720E-03	1.541E-03	2.558E-05
407	1	-1.399E-03	4.054E-03	1.020E-02	2.984E-03	3.977E-03	3.300E-03
408	1	3.352E-03	2.173E-03	5.859E-03	4.435E-03	9.739E-03	1.457E-03
410	1	-1.568E-03	5.098E-04	1.001E-02	1.624E-04	3.248E-03	1.020E-03
411	1	2.954E-03	6.574E-04	6.444E-03	-2.752E-04	7.029E-03	1.238E-03
413	1	-1.240E-03	-1.932E-04	9.494E-03	-1.103E-04	3.688E-03	-4.592E-04
414	1	3.064E-03	1.138E-04	6.398E-03	-2.355E-04	5.923E-03	2.148E-05
416	1	1.931E-03	1.890E-03	4.174E-04	3.433E-04	2.950E-03	2.575E-03
417	1	3.415E-03	2.200E-03	6.693E-04	4.353E-04	6.549E-04	2.638E-03
419	1	6.291E-04	-1.493E-03	-1.369E-03	-2.097E-03	2.250E-03	1.963E-03
420	1	-9.594E-04	-6.344E-04	-5.605E-04	-1.805E-03	2.632E-04	1.851E-03
422	1	4.657E-04	-6.511E-04	-1.885E-03	1.586E-04	1.054E-03	8.134E-05
423	1	-4.900E-04	-5.238E-04	8.372E-04	5.648E-03	-3.439E-04	1.844E-05
425	1	1.372E-03	1.435E-03	1.347E-03	1.907E-03	1.327E-03	-2.634E-04
426	1	2.064E-03	1.491E-03	1.521E-03	-8.266E-04	8.517E-04	-4.202E-04
428	1	-4.407E-04	-2.420E-03	1.313E-03	-2.543E-03	1.513E-03	-1.411E-04
429	1	-1.462E-03	-1.313E-03	1.454E-03	-2.457E-03	9.501E-04	-7.993E-05
431	1	-7.855E-04	-1.628E-03	1.200E-03	1.673E-04	1.653E-03	3.779E-05
432	1	-9.549E-04	-1.317E-03	1.384E-03	7.019E-05	1.204E-03	3.509E-05
433	1	7.664E-03	2.103E-03	2.473E-03	-1.957E-04	-1.122E-02	-1.653E-06
435	1	7.355E-03	2.264E-03	2.651E-03	3.533E-03	-1.117E-02	-2.653E-03
439	1	1.383E-02	-1.998E-04	1.947E-03	-9.845E-05	8.330E-04	-6.204E-05
441	1	1.292E-02	6.858E-04	1.942E-03	7.672E-03	5.951E-04	1.153E-03
445	1	1.070E-02	-1.534E-03	1.031E-02	-2.774E-04	-8.507E-04	5.393E-05
447	1	9.680E-03	-6.150E-04	1.053E-02	7.062E-03	-9.077E-04	8.723E-05
449	1	1.454E-02	-1.365E-03	3.274E-03	7.214E-05	-7.594E-04	-1.680E-05
471	1	1.444E-02	-1.283E-03	3.231E-03	-1.837E-04	-6.022E-03	6.085E-05
473	1	1.440E-02	-1.387E-03	3.329E-03	6.688E-05	-5.687E-04	2.284E-04
475	1	1.081E-02	-1.749E-03	8.229E-03	6.598E-05	-6.090E-03	-1.343E-04
477	1	1.187E-02	-2.723E-03	8.183E-03	1.014E-03	-6.750E-03	-8.104E-05
479	1	1.161E-02	-2.215E-03	8.009E-03	-4.723E-03	-6.365E-03	2.442E-04
481	1	9.552E-03	-2.440E-03	1.317E-02	2.337E-04	8.081E-03	-1.474E-05
483	1	9.964E-03	-2.030E-03	1.320E-02	7.712E-04	8.050E-03	3.609E-04
485	1	5.309E-03	7.431E-03	1.352E-02	-4.726E-04	8.011E-03	-9.755E-04
487	1	1.171E-02	7.511E-05	4.212E-03	-1.081E-02	-4.443E-04	-3.181E-03
491	1	1.413E-02	1.349E-03	2.474E-03	-1.906E-04	9.236E-04	1.075E-04
493	1	3.222E-03	5.240E-03	9.256E-03	-1.336E-02	5.348E-03	-1.173E-03
495	1	7.552E-03	2.113E-03	9.177E-03	-1.329E-02	4.947E-03	-5.257E-03
497	1	1.335E-02	-4.906E-03	7.715E-03	-2.795E-03	6.523E-03	1.927E-05
499	1	5.514E-03	-1.978E-03	1.419E-02	-9.455E-03	-3.435E-03	5.263E-03
501	1	6.520E-03	3.616E-03	1.644E-02	1.813E-03	-7.091E-03	7.910E-03
503	1	1.279E-02	7.699E-03	6.981E-03	2.174E-02	-3.985E-03	5.598E-03
505	1	-7.390E-04	1.325E-02	4.664E-03	7.722E-03	-5.318E-04	-2.870E-04

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507	1	1	911E-04	9	645E-03	5	249E-03	-1	062E-02	2	611E-04	-4	036E-03
511	1	-1	445E-03	8	837E-03	8	516E-03	-1	199E-03	-2	250E-03	-3	579E-03
513	1	-2	089E-03	1	335E-02	8	693E-03	-2	601E-03	1	690E-03	-5	058E-03
517	1	-4	195E-04	5	507E-03	1	412E-02	1	466E-03	1	404E-03	3	660E-03
519	1	-1	069E-03	1	024E-02	1	297E-02	-4	718E-03	2	796E-04	1	328E-02
523	1	9	441E-03	4	049E-03	3	831E-03	1	359E-02	-9	914E-04	-2	075E-04
525	1	2	359E-03	9	807E-03	4	180E-03	1	516E-02	-1	049E-03	-1	561E-03
529	1	6	597E-03	2	592E-03	7	658E-03	1	282E-02	-6	334E-03	-2	379E-03
531	1	2	038E-03	7	707E-03	8	143E-03	1	294E-02	-4	838E-03	-5	566E-03
535	1	5	810E-03	2	545E-03	1	386E-02	1	049E-02	8	734E-03	5	463E-03
537	1	2	378E-03	7	138E-03	1	283E-02	1	146E-02	6	327E-03	1	017E-02
541	1	1	516E-02	-1	572E-03	2	545E-03	3	316E-04	-8	656E-04	-1	587E-05
542	1	2	106E-03	2	362E-03	1	251E-04	-1	513E-04	-3	131E-03	-2	605E-05
543	1	1	340E-02	1	462E-03	2	675E-03	1	034E-02	-9	081E-04	-2	113E-04
544	1	2	263E-03	2	006E-03	3	311E-04	2	030E-04	-2	938E-03	-9	758E-04
547	1	1	119E-02	-2	064E-03	8	053E-03	1	164E-04	-7	814E-03	-8	860E-05
548	1	5	396E-03	2	070E-03	1	564E-04	7	523E-05	-4	321E-03	3	523E-05
549	1	9	817E-03	-7	069E-04	8	158E-03	8	139E-03	-8	078E-03	-1	543E-03
550	1	5	298E-03	2	214E-03	8	309E-05	2	242E-03	-3	785E-03	-6	995E-04
553	1	9	967E-03	-1	337E-03	1	363E-02	4	097E-04	1	121E-02	6	487E-05
555	1	8	696E-03	3	007E-04	1	345E-02	6	252E-03	1	086E-02	3	378E-03
579	1	1	452E-02	-1	398E-03	3	340E-03	-1	183E-04	-7	533E-04	-2	555E-05
581	1	1	440E-02	-1	506E-03	3	319E-03	-7	351E-05	-5	342E-04	2	578E-05
585	1	1	158E-02	-2	608E-03	8	059E-03	2	725E-04	-6	412E-03	-3	273E-05
587	1	1	177E-02	-2	719E-03	8	044E-03	-1	035E-04	-6	564E-03	-5	354E-05
591	1	9	748E-03	-2	263E-03	1	361E-02	-9	523E-04	7	963E-03	1	231E-04
593	1	9	164E-03	-2	552E-03	1	377E-02	-4	065E-05	8	009E-03	6	355E-05
613	1	1	086E-02	-1	932E-03	1	117E-02	-2	108E-04	9	146E-04	3	818E-06
615	1	1	119E-02	-2	470E-03	1	111E-02	3	756E-04	1	012E-03	3	535E-05
617	1	1	114E-02	-2	576E-03	1	113E-02	-3	821E-05	9	977E-04	-1	036E-04
619	1	1	395E-02	-1	071E-03	2	906E-03	-2	516E-04	1	139E-03	3	738E-05
621	1	1	428E-02	-1	556E-03	2	904E-03	3	011E-04	1	110E-03	-1	920E-06
623	1	1	420E-02	-1	635E-03	2	911E-03	-1	644E-04	1	130E-03	1	167E-05
625	1	1	407E-02	-3	884E-04	2	217E-03	9	055E-05	8	837E-04	3	670E-05
627	1	1	425E-02	-6	169E-04	2	216E-03	2	072E-04	9	384E-04	-2	178E-05
629	1	1	422E-02	-7	261E-04	2	208E-03	7	670E-07	9	077E-04	-2	203E-05
631	1	1	554E-03	7	752E-03	1	133E-02	-1	089E-02	-1	136E-03	-2	661E-05
633	1	7	888E-03	8	148E-03	4	073E-03	7	813E-03	-1	193E-03	1	128E-03
635	1	4	661E-03	9	480E-03	1	433E-02	4	487E-03	-2	754E-03	-1	708E-02
637	1	4	011E-03	1	090E-02	1	647E-03	-1	390E-02	1	000E-03	1	415E-03
639	1	8	696E-03	7	040E-03	3	785E-03	-1	006E-02	-1	344E-04	1	345E-03
641	1	9	937E-03	1	103E-02	1	307E-03	4	765E-03	-1	713E-04	1	296E-03
643	1	4	105E-03	1	068E-02	1	752E-03	-1	471E-02	9	649E-04	2	420E-03
645	1	1	057E-02	5	084E-03	2	212E-03	-1	238E-02	3	502E-04	6	217E-03
647	1	1	280E-02	4	393E-03	2	125E-03	1	727E-03	1	115E-03	8	061E-03
649	1	-3	176E-03	1	082E-02	1	169E-02	7	728E-03	1	332E-03	4	236E-04

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651	1	-3.062E-03	1.137E-02	1.119E-02	-3.563E-03	-2.649E-04	1.210E-03
655	1	-1.137E-03	1.412E-02	1.661E-03	8.427E-03	3.446E-03	4.996E-04
657	1	-1.840E-03	1.518E-02	2.042E-03	-4.077E-03	2.707E-03	1.320E-03
661	1	-5.779E-04	1.411E-02	1.450E-03	7.963E-03	1.856E-03	5.735E-04
663	1	-7.749E-04	1.509E-02	1.619E-03	-3.923E-03	1.518E-03	1.328E-04
667	1	5.133E-03	3.419E-03	1.125E-02	1.259E-02	1.109E-03	-1.966E-03
669	1	6.694E-04	7.314E-03	1.098E-02	1.433E-02	2.972E-03	9.897E-04
673	1	9.467E-03	5.602E-03	6.217E-05	1.464E-02	3.116E-04	2.197E-03
675	1	3.848E-03	1.018E-02	8.277E-04	1.645E-02	2.154E-03	-1.981E-04
679	1	8.935E-03	4.752E-03	1.152E-03	1.677E-02	2.085E-03	-1.117E-03
681	1	3.458E-03	1.002E-02	1.532E-03	1.653E-02	2.030E-03	-1.213E-04
685	1	8.745E-03	3.206E-03	8.071E-03	-2.725E-03	1.950E-03	-1.135E-02
687	1	8.408E-03	2.704E-03	5.247E-03	8.027E-03	2.301E-03	-4.732E-03
688	1	8.727E-03	1.829E-03	5.744E-03	9.059E-03	4.770E-03	-6.631E-03
691	1	1.002E-02	3.962E-03	8.517E-04	-1.659E-03	-5.353E-04	8.717E-03
692	1	1.263E-02	3.340E-04	1.306E-03	-6.055E-04	2.003E-04	6.126E-03
693	1	1.238E-02	3.753E-03	1.196E-03	7.922E-03	-1.610E-03	7.063E-03
694	1	4.539E-03	3.493E-03	1.918E-03	6.472E-03	3.707E-04	6.023E-03
697	1	1.500E-02	1.295E-04	1.084E-03	-3.600E-04	5.350E-04	1.227E-03
698	1	6.358E-03	1.807E-03	1.435E-03	1.944E-03	1.199E-03	2.629E-03
699	1	1.397E-02	5.367E-04	1.141E-03	9.884E-03	1.552E-03	-2.039E-03
700	1	3.739E-03	2.463E-03	1.120E-03	2.685E-03	1.012E-03	-1.954E-03
704	1	-1.790E-03	-2.117E-03	8.212E-03	3.380E-03	1.755E-03	1.009E-03
706	1	-1.392E-04	8.620E-05	7.721E-03	-8.674E-04	-1.515E-03	1.041E-03
708	1	-1.658E-03	5.293E-04	8.123E-03	-3.065E-04	-2.135E-03	2.989E-04
710	1	-7.023E-03	1.534E-04	1.581E-03	3.451E-03	-7.559E-04	-8.537E-04
712	1	-3.717E-03	9.819E-05	3.535E-04	-1.577E-03	7.802E-04	1.909E-03
714	1	-2.023E-03	-1.226E-04	-4.547E-04	-8.492E-04	-2.460E-04	2.386E-03
716	1	-3.815E-03	1.609E-03	-1.315E-04	-1.724E-04	4.305E-03	-1.846E-04
718	1	-3.783E-03	7.238E-04	3.977E-04	-1.385E-03	4.038E-03	-5.997E-04
720	1	-2.112E-03	-3.486E-04	6.552E-04	-1.693E-03	3.865E-03	-3.844E-04
723	1	1.115E-02	-2.550E-03	1.115E-02	2.716E-04	9.509E-04	-3.438E-05
725	1	1.128E-02	-2.652E-03	1.113E-02	4.265E-06	9.860E-04	-4.274E-05
729	1	1.415E-02	-1.529E-03	2.905E-03	1.830E-04	1.081E-03	1.956E-05
731	1	1.423E-02	-1.615E-03	2.913E-03	-5.432E-05	1.112E-03	-1.483E-05
735	1	1.423E-02	-6.784E-04	2.215E-03	7.467E-05	9.646E-04	-1.017E-05
737	1	1.423E-02	-7.466E-04	2.213E-03	-7.882E-05	9.245E-04	-1.401E-05
742	1	-2.009E-03	5.955E-04	8.136E-03	-5.244E-05	-1.707E-03	1.478E-04
744	1	-2.070E-03	5.447E-04	8.128E-03	1.905E-06	-1.402E-03	-4.303E-08
748	1	-8.502E-04	-7.793E-05	-7.090E-04	1.798E-04	-5.56E-04	1.270E-03
750	1	-8.037E-04	-2.259E-04	-8.243E-04	6.064E-05	-4.916E-04	1.350E-05
754	1	-1.045E-03	-6.029E-04	5.691E-04	-6.399E-04	3.616E-03	-1.553E-04
756	1	-1.020E-03	-7.220E-04	4.993E-04	6.201E-05	3.484E-03	-2.988E-05
757	1	7.106E-03	-8.286E-05	8.359E-03	-7.410E-04	1.245E-03	1.025E-03
758	1	1.855E-03	6.013E-04	7.981E-03	1.184E-05	1.566E-03	-1.196E-04
759	1	7.015E-03	-2.761E-04	8.590E-03	4.427E-04	1.576E-03	5.946E-04

MACH 14 FLOW RESTRICTOR

760	1	2	026E-03	3	437E-04	7	940E-03	7	505E-04	8	143E-04	1	200E-04
761	1	7	084E-03	9	403E-04	8	933E-03	4	256E-06	1	799E-03	-1	567E-04
762	1	2	238E-03	-1	213E-04	8	038E-03	-3	327E-04	4	424E-04	-1	146E-04
763	1	1	089E-02	-3	293E-04	5	187E-03	1	690E-03	9	135E-04	-2	237E-03
764	1	5	396E-04	3	260E-04	9	333E-04	2	105E-05	6	222E-04	4	616E-04
765	1	1	097E-02	-1	229E-03	6	031E-03	1	569E-03	1	213E-03	2	848E-03
766	1	-3	408E-05	-3	996E-04	2	132E-03	9	373E-04	1	791E-03	8	892E-05
767	1	1	139E-02	-8	573E-04	6	022E-03	-5	377E-04	-3	943E-04	2	992E-04
768	1	-5	368E-04	4	139E-04	1	634E-03	3	285E-04	2	664E-03	-4	410E-04
777	1	7	064E-03	-1	121E-03	8	961E-03	1	390E-04	1	721E-03	1	932E-04
778	1	2	379E-03	-1	140E-04	7	958E-03	-8	258E-05	6	018E-04	-6	469E-05
779	1	7	033E-03	-1	070E-03	8	994E-03	-3	607E-05	1	653E-03	-9	580E-06
780	1	2	435E-03	-1	552E-04	7	975E-03	-1	014E-07	6	710E-04	1	028E-05
783	1	1	157E-02	-6	292E-04	5	624E-03	-1	230E-05	-4	371E-04	1	678E-04
784	1	-6	659E-04	3	770E-04	1	642E-03	-4	146E-05	2	469E-03	-9	778E-05
785	1	1	155E-02	-7	020E-04	5	751E-03	6	228E-05	-3	388E-04	4	794E-05
786	1	-4	014E-04	2	834E-04	1	643E-03	8	602E-06	2	204E-03	6	806E-06
799	1	1	420E-02	-4	026E-04	1	962E-03	6	112E-05	7	380E-04	-7	641E-06
800	1	4	608E-06	1	975E-03	1	985E-03	-8	495E-05	1	382E-04	3	968E-07
801	1	1	416E-02	-3	656E-04	1	967E-03	-4	498E-05	6	909E-04	-2	094E-06
802	1	-5	903E-05	1	941E-03	1	975E-03	-6	977E-05	1	298E-04	-8	867E-06
803	1	1	416E-02	-4	346E-04	1	977E-03	1	593E-04	7	428E-04	1	443E-06
804	1	-2	319E-04	1	919E-03	1	959E-03	-6	506E-05	1	011E-04	-6	627E-06
805	1	1	427E-02	-1	175E-04	1	425E-03	1	163E-05	9	262E-04	-2	539E-06
806	1	-4	713E-05	2	053E-03	1	811E-03	-7	310E-06	1	506E-04	9	588E-06
807	1	1	433E-02	-1	694E-04	1	425E-03	9	752E-05	9	103E-04	-9	872E-06
808	1	-1	733E-04	2	087E-03	1	804E-03	-1	535E-04	1	611E-04	1	124E-05
809	1	1	434E-02	-2	194E-04	1	411E-03	1	034E-04	8	912E-04	-9	050E-06
810	1	-3	853E-04	2	069E-03	1	843E-03	-1	348E-04	1	508E-04	2	738E-05
823	1	3	982E-03	9	933E-03	1	791E-03	-1	378E-02	1	909E-04	2	303E-04
824	1	1	127E-02	3	012E-03	1	907E-03	1	275E-03	6	427E-04	2	303E-04
826	1	3	919E-04	1	316E-03	2	012E-03	1	859E-03	-7	727E-04	-1	821E-03
827	1	1	517E-02	-4	632E-04	1	456E-03	-2	483E-03	5	796E-04	-1	809E-04
828	1	-3	385E-04	2	552E-03	1	743E-03	-4	674E-04	-1	082E-03	2	069E-03
829	1	3	817E-03	1	074E-02	1	039E-03	-1	526E-02	-1	017E-04	4	052E-05
830	1	2	033E-03	4	694E-04	1	494E-03	1	750E-03	8	022E-04	6	810E-04
831	1	1	096E-02	3	457E-03	1	079E-03	-1	320E-02	4	890E-04	3	555E-04
832	1	4	707E-04	1	745E-03	1	629E-03	-1	584E-03	-8	990E-04	-2	347E-04
833	1	1	513E-02	-1	298E-03	1	426E-03	-3	212E-04	-1	890E-04	1	575E-04
834	1	-2	570E-04	2	388E-03	1	648E-03	1	965E-04	-1	258E-03	-6	026E-04
847	1	2	264E-04	1	400E-02	9	123E-04	7	610E-03	1	069E-04	1	679E-05
848	1	2	390E-03	2	670E-04	1	104E-03	5	713E-04	1	519E-03	4	426E-04
849	1	-1	409E-04	1	445E-02	1	292E-03	-4	499E-03	1	094E-03	-7	858E-05
850	1	2	223E-03	2	854E-04	1	477E-03	1	202E-03	1	147E-03	1	879E-04
853	1	8	163E-04	1	437E-02	-6	135E-05	6	896E-03	6	231E-04	1	154E-03

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MACH 14 FLOW RESTRICTOR

854	1	2	330E-03	3	496E-04	1	028E-03	7	487E-04	2	983E-04	3	068E-04
855	1	2	568E-04	1	518E-02	2	735E-04	-3	362E-03	-8	450E-04	1	059E-04
856	1	2	737E-03	2	242E-04	1	102E-03	1	959E-03	6	351E-04	8	154E-04
871	1	9	461E-03	5	177E-03	3	451E-04	1	543E-02	2	004E-03	-4	763E-04
872	1	8	482E-04	1	492E-03	2	191E-04	-1	589E-03	1	236E-03	-5	027E-05
873	1	4	081E-03	1	038E-02	5	759E-04	1	501E-02	1	664E-03	-4	731E-04
874	1	1	872E-03	1	559E-03	6	438E-04	-8	837E-04	1	346E-03	-1	510E-04
877	1	9	701E-03	5	531E-03	-6	297E-04	1	538E-02	1	156E-03	-2	062E-05
878	1	3	890E-04	2	145E-03	3	545E-04	-3	123E-03	5	826E-05	1	308E-04
879	1	4	846E-03	1	031E-02	-2	772E-04	1	413E-02	6	212E-04	7	000E-04
880	1	2	043E-03	7	872E-04	8	138E-04	-6	492E-04	2	171E-04	3	703E-04
895	1	1	983E-02	-1	089E-04	-3	486E-04	-2	444E-04	1	365E-03	-1	717E-04
896	1	4	757E-03	2	991E-03	-3	492E-04	1	230E-04	1	590E-03	-6	112E-04
897	1	1	591E-02	1	696E-03	-2	230E-04	9	524E-03	1	552E-03	-7	349E-04
898	1	3	163E-03	2	675E-03	-1	207E-04	6	898E-04	1	414E-03	-3	275E-04
901	1	1	541E-02	2	348E-04	-4	136E-04	-4	398E-05	1	108E-03	-6	909E-07
902	1	2	179E-03	2	840E-03	3	879E-05	2	738E-04	3	604E-04	9	595E-05
903	1	1	378E-02	1	863E-03	-4	365E-04	9	183E-03	1	362E-03	-2	417E-04
904	1	1	703E-03	2	674E-03	8	102E-05	-7	335E-04	2	544E-04	1	267E-04
920	1	-3	079E-03	1	336E-03	1	737E-04	-8	374E-05	9	429E-05	5	158E-05
922	1	-2	709E-03	1	014E-03	1	395E-04	-1	756E-03	1	960E-04	1	690E-05
924	1	-1	527E-03	2	125E-04	1	052E-04	-2	092E-03	2	441E-04	1	638E-05
926	1	-3	022E-03	1	478E-03	-9	902E-05	-8	864E-05	-1	146E-04	-1	511E-05
928	1	-2	765E-03	1	107E-03	-7	515E-05	-1	594E-03	-1	632E-04	1	399E-05
930	1	-1	626E-03	2	937E-04	-3	163E-05	-1	895E-03	-1	888E-04	-4	524E-05
945	1	1	425E-02	-4	643E-04	1	971E-03	-5	399E-05	6	977E-04	7	191E-07
946	1	-2	560E-04	1	799E-03	1	967E-03	7	675E-05	1	009E-04	-1	382E-05
947	1	1	415E-02	-5	221E-04	1	971E-03	-7	272E-05	7	364E-04	-1	841E-06
948	1	-2	961E-04	1	816E-03	1	974E-03	3	675E-05	7	256E-05	-1	104E-06
951	1	1	440E-02	-2	506E-04	1	409E-03	-4	609E-06	9	381E-04	-1	871E-05
952	1	-4	443E-04	1	985E-03	1	859E-03	-2	385E-06	1	385E-04	3	395E-05
953	1	1	433E-02	-3	135E-04	1	406E-03	-9	091E-05	8	804E-04	1	661E-06
954	1	-4	987E-04	2	013E-03	1	871E-03	4	221E-05	1	510E-04	-1	107E-06
969	1	-9	903E-04	-1	003E-03	4	186E-04	-2	723E-03	1	151E-03	-2	311E-04
970	1	-6	803E-04	-1	499E-04	9	228E-05	-8	935E-04	2	524E-04	1	477E-06
971	1	-4	143E-04	-8	547E-04	2	000E-04	6	098E-06	1	206E-03	2	662E-05
972	1	-6	547E-04	-3	068E-04	1	348E-04	-1	092E-05	2	046E-04	8	938E-07
975	1	-8	487E-04	-7	138E-04	3	098E-04	-2	372E-03	-4	253E-04	-5	157E-04
976	1	-8	515E-04	-6	952E-05	3	216E-05	-8	705E-04	-4	978E-05	3	576E-05
977	1	-4	430E-04	-5	079E-04	7	038E-05	1	010E-04	-4	305E-05	2	442E-05
978	1	-9	130E-04	-1	867E-04	6	626E-05	1	881E-05	-6	564E-05	-6	435E-06
995	1	-4	642E-03	1	260E-03	1	916E-03	1	996E-04	2	562E-04	-2	084E-05
998	1	-4	228E-03	8	436E-04	1	948E-03	2	341E-03	1	792E-04	-1	279E-04
1001	1	-2	978E-03	-5	765E-04	2	072E-03	3	334E-03	1	187E-04	-1	383E-04
1004	1	-4	545E-03	1	417E-03	1	744E-03	1	473E-05	6	033E-05	-4	537E-07
1007	1	-4	082E-03	7	384E-04	1	802E-03	2	427E-03	1	106E-04	-1	862E-05

1010	1	-2	825E-03	-3	804E-04	1	749E-03	3	211E-03	1	003E-04	-9	374E-05
1022	1	-4	654E-04	1	886E-05	-7	454E-04	1	651E-05	-9	036E-04	1	584E-05
1023	1	-3	285E-04	4	037E-05	-6	461E-04	1	487E-05	-1	564E-05	-6	772E-06
1025	1	-4	918E-04	9	572E-05	-7	358E-04	3	649E-05	-8	096E-04	5	935E-05
1026	1	-3	288E-04	1	161E-05	-6	429E-04	5	622E-05	-1	222E-05	-1	348E-05
1028	1	-5	122E-04	1	557E-04	-7	004E-04	2	703E-05	-6	521E-04	7	090E-05
1029	1	-3	220E-04	-2	502E-05	-6	355E-04	2	884E-05	-1	307E-05	-1	211E-05
1031	1	-3	740E-04	1	001E-04	-5	550E-04	-1	196E-05	5	386E-04	-1	108E-05
1032	1	-3	611E-04	3	302E-05	-6	297E-04	8	413E-06	7	516E-05	8	252E-06
1034	1	-3	915E-04	8	008E-05	-5	422E-04	8	995E-06	4	690E-04	3	039E-05
1035	1	-3	690E-04	1	931E-05	-6	321E-04	1	981E-05	6	440E-05	1	089E-05
1037	1	-4	394E-04	1	146E-04	-5	234E-04	-3	842E-05	3	574E-04	3	774E-05
1038	1	-3	478E-04	-1	962E-05	-6	336E-04	-1	876E-05	4	598E-05	1	625E-05
1040	1	-8	075E-04	1	469E-04	-3	434E-04	-2	732E-06	2	171E-04	5	818E-06
1041	1	-4	726E-04	1	191E-05	-5	794E-04	1	145E-05	-1	067E-04	-5	532E-07
1043	1	-7	964E-04	1	304E-04	-3	535E-04	-3	447E-05	1	820E-04	4	107E-05
1044	1	-4	785E-04	1	527E-05	-5	815E-04	4	045E-05	-8	022E-05	-8	300E-06
1046	1	-7	741E-04	1	521E-04	-3	692E-04	-9	502E-05	9	060E-05	8	344E-05
1047	1	-4	474E-04	-2	192E-05	-5	928E-04	-2	156E-05	-6	182E-05	-2	009E-05
1070	1	-2	008E-03	-1	239E-03	2	098E-03	1	992E-03	1	029E-04	-2	301E-05
1071	1	1	609E-03	-3	126E-03	1	848E-03	1	704E-03	9	125E-04	3	195E-05
1073	1	1	423E-03	-1	736E-03	2	100E-03	6	653E-05	1	678E-04	-1	524E-06
1074	1	1	766E-03	-4	074E-03	1	755E-03	-3	324E-05	1	002E-03	-5	730E-06
1079	1	-1	770E-03	-1	086E-03	1	762E-03	1	972E-03	5	697E-05	-6	434E-05
1080	1	1	795E-03	-3	169E-03	1	453E-03	1	754E-03	1	619E-04	-1	870E-05
1082	1	-1	148E-03	-1	615E-03	1	743E-03	8	450E-05	8	403E-05	2	743E-06
1083	1	1	904E-03	-3	833E-03	1	348E-03	-8	454E-05	1	769E-04	-2	529E-05
1106	1	1	826E-03	-3	582E-03	1	489E-03	5	435E-05	9	818E-04	-1	594E-04
1107	1	1	072E-04	-3	045E-03	1	155E-03	-1	977E-03	9	430E-04	-2	788E-04
1109	1	1	209E-03	-3	458E-03	1	365E-03	-1	169E-04	1	017E-03	2	738E-05
1110	1	8	609E-05	-2	115E-03	1	031E-03	-9	195E-05	9	198E-04	-1	203E-05
1115	1	1	952E-03	-3	598E-03	1	234E-03	-3	322E-05	1	421E-04	-2	471E-04
1116	1	8	827E-04	-2	759E-03	8	732E-04	-1	806E-03	-5	161E-04	-5	528E-04
1118	1	1	251E-03	-2	913E-03	9	935E-04	-1	623E-04	1	881E-04	-8	244E-05
1119	1	2	412E-04	-1	611E-03	5	426E-04	9	192E-06	-2	420E-04	1	331E-05
1142	1	-9	122E-05	-2	228E-03	8	531E-04	-2	739E-03	1	148E-03	-3	318E-04
1145	1	-3	933E-04	-1	323E-03	6	154E-04	1	624E-04	1	351E-03	2	191E-05
1151	1	-9	294E-05	-1	685E-03	5	330E-04	-2	673E-03	-2	785E-04	-6	156E-04
1154	1	-3	503E-04	-8	532E-04	3	206E-04	1	184E-04	-1	658E-04	1	088E-05
1167	1	-4	994E-04	8	091E-05	-6	419E-04	4	995E-05	-5	322E-04	-2	380E-05
1170	1	-3	314E-04	-9	692E-06	-6	394E-04	3	893E-05	-1	540E-05	3	177E-06
1172	1	-5	193E-04	8	172E-05	-6	050E-04	-1	297E-05	-4	895E-04	5	665E-06
1173	1	-3	246E-04	-1	852E-05	-6	470E-04	3	357E-06	-1	364E-05	-2	104E-06
1178	1	-4	252E-04	5	705E-05	-3	168E-04	-3	822E-05	2	569E-04	3	178E-05
1179	1	-3	506E-04	-1	850E-05	-6	312E-04	1	082E-05	2	760E-05	8	819E-06
1181	1	-4	384E-04	5	355E-05	-5	256E-04	-7	345E-06	2	226E-04	3	797E-06

MACH 14 FLOW RESTRICTOR

1182	1	-3.520E-04	-2.528E-05	-6.247E-04	5.061E-06	2.052E-05	3.117E-07
1187	1	-7.077E-04	8.276E-05	-3.795E-04	-7.841E-05	5.454E-06	2.204E-05
1188	1	-4.328E-04	-2.098E-03	-6.059E-04	-2.719E-05	-4.940E-05	-1.141E-06
1190	1	-6.904E-04	6.318E-03	-3.885E-04	-2.085E-06	-2.378E-05	-3.032E-07
1191	1	-4.242E-04	-2.334E-03	-6.098E-04	2.998E-06	-4.045E-05	2.287E-06
1201	1	1.418E-03	9.642E-04	4.501E-03	-2.556E-04	-2.174E-03	2.539E-04
1202	1	6.467E-03	9.179E-04	5.829E-03	-2.107E-04	-9.133E-03	-1.383E-04
1203	1	1.003E-02	8.731E-04	4.265E-03	-2.875E-03	-8.318E-04	-2.433E-04
1204	1	1.238E-03	5.006E-04	4.313E-03	9.170E-04	1.120E-03	9.905E-04
1205	1	-5.742E-03	1.373E-03	4.384E-03	1.950E-03	-4.502E-04	4.450E-04
1206	1	-4.691E-03	3.468E-03	4.390E-03	-1.904E-03	-9.870E-04	-5.354E-04
1207	1	5.729E-03	3.933E-03	4.976E-03	-8.877E-03	6.901E-03	-3.415E-03
1208	1	1.395E-02	-1.348E-03	3.921E-03	7.416E-03	5.472E-04	-6.454E-04
1209	1	1.097E-03	1.175E-03	4.643E-03	1.172E-03	-1.473E-03	1.436E-04
1210	1	6.350E-03	1.209E-03	5.601E-03	-1.141E-04	-8.790E-03	4.722E-04
1211	1	1.090E-02	-4.530E-04	4.310E-03	2.943E-03	-1.373E-03	1.588E-04
1212	1	8.713E-04	1.810E-03	4.498E-03	-2.382E-03	6.153E-04	-1.210E-03
1213	1	-9.066E-03	-2.689E-04	4.747E-03	3.729E-03	1.000E-04	-5.816E-04
1214	1	-4.412E-03	2.321E-03	4.211E-03	3.732E-04	8.703E-05	-2.334E-04
1215	1	4.262E-03	4.242E-03	5.154E-03	-6.713E-03	4.819E-03	-7.266E-03
1216	1	7.773E-03	4.056E-03	3.514E-03	-9.001E-03	-4.910E-04	-2.251E-03
1217	1	2.381E-04	6.617E-04	4.691E-03	1.431E-03	-1.313E-03	-6.216E-04
1218	1	1.014E-02	-2.317E-04	4.321E-03	-9.089E-04	-7.930E-04	3.077E-04
1219	1	9.821E-04	2.419E-03	4.494E-03	-1.804E-03	1.542E-04	-2.683E-03
1220	1	-3.629E-03	1.102E-03	4.132E-03	2.982E-03	-3.398E-04	-7.735E-04
1221	1	4.026E-03	8.932E-03	3.148E-03	-1.029E-02	-1.240E-03	-2.161E-03
1222	1	3.837E-03	5.908E-04	3.691E-03	3.738E-03	3.901E-04	-1.210E-06
1223	1	1.181E-02	6.214E-03	4.111E-03	1.087E-03	1.032E-03	-5.545E-05
1224	1	9.926E-03	5.876E-04	6.689E-03	-3.135E-03	-1.839E-03	2.940E-04
1225	1	5.557E-03	5.015E-03	3.512E-03	-3.714E-03	-5.766E-04	7.730E-05
1226	1	-4.624E-03	4.833E-03	3.187E-03	-4.297E-03	-2.553E-04	-1.952E-04
1227	1	-1.348E-03	2.889E-03	5.717E-03	-1.733E-03	7.101E-04	4.125E-04
1228	1	1.386E-02	-1.632E-03	2.985E-03	4.756E-03	1.263E-03	-1.180E-04
1229	1	1.386E-02	-1.632E-03	6.355E-03	6.491E-03	1.390E-03	4.058E-04
1230	1	4.932E-03	3.762E-03	3.574E-03	-2.126E-03	2.645E-04	-2.798E-04
1231	1	1.232E-02	-1.229E-03	4.041E-03	7.768E-04	9.584E-04	-1.750E-04
1232	1	1.117E-02	-1.042E-03	6.778E-03	3.094E-03	-1.413E-03	-2.245E-04
1233	1	9.841E-04	5.451E-03	2.699E-03	-7.325E-04	-8.179E-04	-3.415E-04
1234	1	-3.588E-03	2.546E-03	2.841E-03	1.468E-03	-4.125E-04	-6.724E-04
1235	1	-1.211E-03	2.317E-03	5.068E-03	-9.236E-04	-2.890E-04	-8.741E-04
1236	1	6.587E-03	7.540E-03	2.625E-03	-1.059E-02	-1.740E-03	2.855E-04
1237	1	7.408E-03	8.846E-03	5.967E-03	-8.348E-03	1.866E-03	-4.318E-05
1238	1	3.188E-03	8.385E-04	3.285E-03	6.336E-04	1.988E-05	-4.591E-04
1239	1	1.057E-02	-6.608E-04	6.731E-03	-1.025E-03	-2.538E-03	-4.593E-04
1240	1	1.972E-03	5.458E-03	2.801E-03	-4.306E-03	-1.079E-03	-1.971E-04
1241	1	-8.859E-04	1.938E-03	4.560E-03	1.349E-03	5.221E-04	-8.162E-04

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1242	1	2	987E-03	8	673E-03	6	077E-03	-1	053E-02	6	610E-04	-1	070E-03
1243	1	6	151E-03	4	167E-03	9	312E-03	3	661E-05	-1	175E-03	-4	284E-04
1244	1	9	742E-03	-2	682E-04	1	001E-02	4	481E-04	-1	549E-03	-5	711E-04
1245	1	6	514E-03	-6	420E-04	9	266E-03	-1	085E-04	1	758E-03	-3	888E-04
1246	1	2	327E-03	9	843E-04	8	326E-03	4	493E-04	8	682E-04	5	571E-04
1247	1	9	273E-03	-5	704E-05	1	010E-02	-5	956E-03	8	643E-04	-4	126E-04
1248	1	5	840E-03	7	449E-04	8	957E-03	-7	034E-05	-1	564E-03	1	901E-04
1249	1	9	752E-03	-6	724E-04	1	015E-02	4	034E-04	-2	460E-03	-7	928E-04
1250	1	9	068E-03	1	349E-03	9	216E-03	-4	461E-03	2	163E-03	4	810E-04
1251	1	1	944E-03	1	481E-03	7	652E-03	1	079E-04	1	049E-03	-1	456E-04
1252	1	4	884E-03	4	762E-03	1	021E-02	-1	135E-02	1	257E-03	-5	689E-04
1253	1	4	898E-03	7	363E-04	8	794E-03	5	869E-05	-1	900E-03	-4	024E-04
1254	1	2	680E-03	4	423E-03	8	736E-03	-6	071E-03	2	103E-03	-1	374E-03
1255	1	2	465E-03	2	371E-03	1	148E-03	7	103E-05	-1	973E-03	-2	469E-05
1256	1	7	585E-03	2	227E-03	2	549E-03	1	627E-03	-1	122E-02	-1	278E-03
1257	1	1	262E-02	7	773E-04	6	331E-04	2	369E-05	-1	641E-03	1	071E-05
1258	1	-4	431E-03	2	009E-03	1	094E-03	-1	233E-03	-1	410E-04	1	932E-04
1259	1	-2	688E-03	1	981E-03	1	144E-03	1	216E-04	-1	818E-03	3	109E-05
1260	1	1	757E-03	2	234E-03	1	214E-03	5	126E-04	-1	824E-03	3	571E-05
1261	1	5	767E-03	3	209E-03	2	692E-03	3	433E-03	-1	013E-02	-3	907E-03
1262	1	1	183E-02	1	606E-03	7	511E-04	6	576E-03	-1	845E-03	3	068E-04
1263	1	-4	021E-03	8	498E-04	9	821E-04	-3	278E-03	2	945E-04	5	538E-04
1264	1	-3	398E-03	1	674E-03	1	093E-03	-1	994E-03	-1	775E-03	-1	660E-04
1265	1	6	710E-05	2	049E-03	1	365E-03	-8	870E-04	-9	220E-04	-1	688E-04
1266	1	7	171E-03	4	065E-03	1	239E-02	8	552E-03	-2	218E-03	1	771E-04
1267	1	-3	261E-03	8	050E-05	8	726E-04	-3	614E-03	-1	667E-03	-2	458E-04
1268	1	6	086E-03	8	376E-04	9	911E-04	1	083E-04	-1	644E-03	4	577E-05
1270	1	1	353E-02	2	010E-04	1	941E-03	3	689E-03	7	358E-04	5	425E-04
1271	1	-2	260E-03	1	407E-03	-2	023E-04	-5	001E-04	-1	819E-03	-2	943E-05
1272	1	-4	046E-04	9	976E-04	3	741E-03	2	571E-04	-3	909E-03	2	433E-05
1273	1	4	785E-03	1	189E-03	9	074E-04	2	918E-03	1	989E-03	8	648E-05
1274	1	1	020E-02	2	279E-03	1	963E-03	8	914E-03	-3	898E-04	1	048E-03
1275	1	1	111E-02	-4	985E-05	6	229E-03	7	136E-03	-1	896E-03	1	489E-04
1276	1	-2	698E-03	7	286E-04	-5	279E-04	-2	172E-03	-4	005E-03	-1	084E-03
1277	1	-1	400E-03	1	146E-03	3	543E-03	-1	924E-04	-3	782E-03	-7	940E-04
1278	1	1	567E-03	1	900E-03	6	676E-04	2	407E-03	-2	931E-03	-2	591E-04
1279	1	4	634E-03	2	974E-03	6	311E-03	1	063E-02	-2	970E-03	-7	647E-04
1280	1	-2	050E-03	4	463E-04	3	097E-03	-1	549E-03	-2	751E-03	-1	022E-03
1281	1	6	070E-03	-3	514E-04	9	747E-03	1	342E-04	-2	535E-03	2	886E-05
1282	1	1	030E-02	-1	123E-03	1	041E-02	3	388E-03	-7	879E-04	-3	746E-06
1283	1	6	110E-04	8	809E-04	8	898E-03	6	781E-04	-3	026E-03	-2	649E-04
1284	1	4	767E-03	3	135E-04	9	712E-03	4	154E-03	-2	496E-03	-4	331E-04
1285	1	7	414E-03	8	710E-04	1	050E-02	8	558E-03	-1	964E-03	-5	963E-04
1286	1	-4	949E-04	1	008E-03	8	641E-03	5	039E-04	-2	062E-03	-6	425E-04
1287	1	2	059E-03	1	620E-03	9	413E-03	4	537E-03	-2	562E-03	-1	200E-03

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1288	1	-2.140E-03	9.159E-04	2.812E-04	7.892E-06	-5.372E-04	1.260E-05
1291	1	-8.256E-04	1.331E-04	-4.457E-04	-9.546E-06	-2.888E-04	1.181E-06
1292	1	-9.667E-04	1.417E-04	-3.263E-04	-2.008E-05	-6.658E-04	-4.363E-05
1293	1	-9.539E-04	1.676E-04	-4.427E-04	-3.190E-05	-8.359E-04	1.208E-06
1294	1	-5.527E-04	-1.497E-05	-5.858E-04	4.941E-05	1.498E-05	-7.894E-06
1295	1	-6.307E-04	-2.295E-05	-5.860E-04	1.567E-05	3.813E-05	-1.046E-05
1296	1	-1.940E-03	7.667E-04	2.353E-04	-9.058E-04	-5.530E-04	9.152E-05
1299	1	-7.930E-04	9.329E-05	-4.547E-04	-6.909E-05	-2.808E-04	-3.197E-05
1300	1	-9.158E-04	1.794E-04	-3.646E-04	-5.809E-05	-6.469E-04	-1.093E-04
1301	1	-8.780E-04	8.669E-05	-4.498E-04	1.541E-06	-8.040E-04	-8.624E-05
1302	1	-5.450E-04	-1.229E-06	-5.921E-04	3.059E-05	-2.391E-05	-1.832E-05
1303	1	-6.722E-04	3.241E-05	-5.984E-04	7.048E-05	3.068E-05	-1.553E-05
1304	1	-1.461E-03	2.206E-04	1.297E-04	-1.060E-03	-6.314E-04	9.689E-05
1306	1	-7.447E-04	9.059E-05	-4.774E-04	-6.818E-05	-2.876E-04	-5.397E-05
1307	1	-9.192E-04	2.450E-04	-4.786E-04	-3.131E-05	-6.747E-04	-1.080E-04
1308	1	-6.244E-04	-4.833E-05	-6.037E-04	1.753E-05	3.485E-05	-2.516E-05
1309	1	-1.283E-03	5.877E-04	-1.170E-03	1.245E-06	-2.484E-03	-3.946E-05
1312	1	-8.197E-04	1.156E-04	-1.826E-03	1.239E-06	-3.456E-04	6.479E-06
1313	1	-7.392E-04	1.448E-04	-1.946E-03	1.902E-06	-8.288E-04	-2.161E-05
1314	1	-1.200E-03	2.857E-04	2.705E-03	-1.879E-05	-2.131E-04	-2.952E-06
1315	1	-7.487E-04	-1.342E-05	-1.818E-03	3.172E-05	3.262E-05	-2.258E-05
1316	1	-9.350E-04	-3.197E-05	2.882E-03	2.800E-06	5.806E-05	-1.083E-08
1317	1	-1.282E-03	5.953E-04	-1.255E-03	-3.682E-04	-2.346E-03	-4.062E-04
1320	1	-8.130E-04	8.272E-05	-1.825E-03	-2.012E-05	-3.103E-03	-4.266E-05
1321	1	-7.581E-04	1.867E-04	-1.935E-03	6.024E-05	-6.753E-04	-4.567E-05
1322	1	-1.111E-03	1.999E-04	2.736E-03	-1.690E-05	-1.718E-04	-9.746E-06
1323	1	-7.570E-04	3.861E-07	-1.813E-03	1.232E-05	6.801E-05	-4.707E-05
1324	1	-9.781E-04	1.816E-05	2.890E-03	1.877E-05	4.735E-05	2.647E-06
1325	1	-1.073E-03	2.222E-04	-1.429E-03	-4.623E-04	-1.965E-03	-5.862E-04
1327	1	-8.189E-04	1.069E-04	-1.831E-03	1.448E-06	-2.338E-04	-4.420E-05
1328	1	-1.109E-03	2.690E-04	2.800E-03	1.662E-06	-2.011E-04	5.092E-06
1329	1	-9.694E-04	-2.537E-05	2.908E-03	-3.817E-05	4.097E-05	-1.150E-05
1330	1	-6.265E-04	5.241E-04	8.662E-03	-3.087E-06	-5.803E-04	7.683E-06
1332	1	-1.230E-03	1.550E-04	8.874E-03	1.206E-05	-2.150E-05	-8.190E-07
1333	1	-1.680E-03	3.270E-04	8.733E-03	-8.387E-05	3.593E-04	1.400E-05
1334	1	-1.175E-03	4.150E-07	8.843E-03	-3.728E-06	7.520E-05	1.403E-05
1335	1	-8.867E-04	6.107E-04	8.624E-03	2.404E-04	-3.867E-04	-8.250E-05
1337	1	-1.244E-03	1.415E-04	8.894E-03	1.016E-05	-5.330E-05	-2.051E-05
1338	1	-1.573E-03	3.092E-04	8.811E-03	-1.549E-04	2.291E-04	1.883E-05
1339	1	-1.183E-03	-6.227E-06	8.848E-03	-2.548E-05	2.810E-05	4.051E-05
1340	1	-1.294E-03	9.750E-04	8.656E-03	4.675E-05	-4.723E-05	-4.817E-05
1341	1	-1.288E-03	1.413E-04	8.910E-03	2.833E-05	-5.575E-05	-2.983E-05
1343	1	6.161E-03	7.976E-04	5.537E-03	1.331E-04	-8.199E-03	6.506E-04
1346	1	-4.264E-03	-6.248E-04	4.447E-03	4.447E-03	-1.901E-04	-6.460E-04
1348	1	2.988E-03	3.020E-03	4.007E-03	-2.353E-03	-2.858E-04	-3.060E-03
1350	1	2.702E-04	2.967E-04	4.477E-03	1.205E-03	-1.067E-03	1.313E-04

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1351	1	3	976E-03	7	389E-04	5	625E-03	5	341E-05	8	013E-03	4	089E-05
1352	1	9	650E-03	-2	085E-04	4	300E-03	-1	037E-05	5	813E-04	1	016E-04
1353	1	7	599E-04	-1	222E-03	4	006E-03	9	688E-04	5	740E-04	5	740E-04
1354	1	-3	645E-03	-1	309E-03	3	957E-03	1	313E-03	3	391E-04	1	850E-04
1355	1	-3	489E-03	1	176E-04	4	112E-03	1	791E-03	5	982E-04	-3	196E-04
1356	1	2	721E-03	-2	121E-03	3	692E-03	5	264E-04	1	452E-03	5	574E-04
1357	1	2	226E-03	2	135E-03	3	468E-03	2	586E-04	1	857E-03	8	437E-04
1358	1	3	309E-05	1	632E-04	4	362E-03	1	209E-04	9	604E-04	-1	924E-05
1359	1	8	327E-03	2	124E-04	4	326E-03	-2	024E-04	4	993E-04	2	902E-05
1360	1	1	356E-03	-3	079E-03	3	572E-03	5	765E-05	-1	496E-03	1	202E-04
1361	1	-2	872E-03	-7	931E-04	4	053E-03	5	799E-06	-7	903E-04	-1	826E-05
1362	1	2	640E-03	-1	941E-03	3	493E-03	5	146E-04	-1	972E-03	2	473E-05
1364	1	1	163E-02	-1	131E-03	3	941E-03	-1	191E-03	6	300E-04	-1	633E-04
1365	1	-3	303E-03	1	836E-03	2	500E-03	5	370E-03	5	191E-04	-7	506E-04
1366	1	2	717E-03	7	386E-03	2	859E-03	5	302E-03	-1	874E-03	4	055E-04
1367	1	2	592E-03	6	727E-04	3	102E-03	8	402E-04	-2	024E-04	-3	147E-04
1368	1	1	052E-02	-3	779E-04	3	870E-03	8	824E-04	3	578E-04	8	439E-05
1369	1	1	011E-02	-5	428E-04	6	677E-03	9	910E-04	-2	460E-03	8	123E-05
1370	1	-2	945E-03	7	054E-04	2	567E-03	1	013E-04	9	470E-04	-2	674E-04
1371	1	-1	296E-03	1	682E-03	4	309E-03	5	306E-04	8	469E-05	8	850E-04
1372	1	2	098E-03	1	126E-03	2	651E-03	9	074E-05	-1	917E-03	4	674E-05
1373	1	1	263E-03	4	312E-03	3	429E-03	-7	370E-04	-3	748E-05	-1	912E-03
1374	1	2	016E-03	6	232E-04	3	005E-03	1	643E-04	-3	037E-04	1	246E-06
1375	1	1	294E-03	-2	704E-04	6	660E-03	-2	669E-04	-2	873E-03	-1	092E-04
1376	1	1	417E-03	1	127E-03	4	459E-03	6	929E-05	-1	177E-03	-2	497E-05
1377	1	-1	242E-03	1	440E-03	4	114E-03	3	585E-05	1	903E-04	-7	606E-06
1378	1	9	151E-03	-6	066E-04	1	000E-02	-3	759E-05	-2	823E-03	-7	395E-05
1379	1	1	196E-03	1	817E-03	7	858E-03	-7	072E-04	4	596E-04	-1	099E-03
1380	1	1	186E-03	7	011E-03	9	187E-03	5	683E-03	1	336E-03	-1	978E-03
1381	1	4	416E-03	8	530E-04	8	934E-03	5	836E-05	-2	068E-03	-2	293E-04
1382	1	1	213E-03	3	537E-03	8	341E-03	-1	101E-04	-2	988E-03	8	913E-07
1383	1	4	883E-04	2	108E-03	7	942E-03	3	524E-04	1	610E-03	-2	382E-03
1384	1	1	066E-03	4	199E-03	8	600E-03	5	124E-04	6	530E-04	-4	532E-04
1385	1	3	951E-03	1	080E-03	8	793E-03	6	790E-05	-2	164E-03	6	637E-05
1386	1	1	170E-03	2	614E-03	8	359E-03	3	930E-05	1	049E-03	-2	406E-04
1387	1	2	627E-03	6	742E-03	4	730E-03	4	311E-03	1	022E-03	-9	776E-03
1388	1	2	334E-03	6	835E-03	4	311E-03	1	535E-03	-2	423E-03	-1	007E-02
1389	1	2	428E-03	3	042E-03	3	609E-03	8	389E-04	-1	670E-03	-3	176E-03
1390	1	5	317E-04	1	323E-02	2	799E-03	-6	634E-04	-2	614E-03	-1	029E-03
1391	1	2	431E-03	2	128E-03	2	705E-03	-2	067E-03	-1	709E-03	-1	055E-03
1392	1	1	206E-03	1	154E-02	2	194E-03	8	775E-03	-2	851E-03	-2	855E-04
1393	1	2	376E-03	-1	169E-03	3	842E-03	1	463E-03	-1	350E-03	-1	145E-03
1394	1	2	529E-03	-2	628E-03	3	224E-03	5	207E-04	-1	284E-03	-2	513E-04

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1408	1	2.602E-03	-2	745E-03	3	014E-03	6	146E-04	-1	164E-03	-3	001E-04
1409	1	2.550E-03	4	839E-04	3	061E-03	2	525E-03	-2	197E-03	-3	366E-04
1410	1	1.057E-03	-2	555E-03	2	175E-03	-5	990E-04	-4	919E-04	-3	097E-04
1411	1	2.241E-03	-1	469E-03	2	619E-03	5	693E-04	-2	121E-03	2	972E-05
1412	1	2.582E-03	-3	934E-03	2	988E-03	1	746E-04	-1	448E-03	2	619E-04
1414	1	1.293E-03	-3	968E-03	2	170E-03	-2	105E-04	-4	330E-04	2	346E-04
1415	1	2.422E-03	-3	074E-03	3	037E-03	-1	272E-04	-2	053E-03	8	654E-05
1416	1	2.817E-04	-3	174E-03	2	329E-03	-2	606E-04	-1	844E-03	4	922E-05
1417	1	1.204E-03	1	287E-02	3	073E-03	-5	819E-03	-2	577E-03	1	073E-03
1420	1	-9.959E-05	1	366E-02	2	992E-03	4	533E-03	-3	230E-03	2	127E-03
1421	1	8.329E-04	7	994E-03	2	956E-03	1	177E-03	-2	965E-03	9	241E-04
1422	1	-9.361E-04	1	249E-02	6	348E-03	-9	709E-04	-1	447E-03	-1	342E-03
1423	1	1.313E-03	5	743E-03	2	305E-03	5	647E-03	-3	271E-03	1	000E-03
1424	1	-3.972E-04	1	097E-02	6	578E-03	8	936E-03	-2	663E-03	-7	862E-04
1425	1	1.750E-03	2	918E-03	2	740E-03	1	164E-03	-2	297E-03	1	902E-04
1428	1	1.928E-03	5	319E-04	2	251E-03	2	045E-03	-3	163E-03	-1	379E-04
1429	1	1.947E-03	-2	291E-04	2	288E-03	9	851E-04	-3	086E-03	4	670E-05
1430	1	1.346E-03	2	907E-03	5	285E-03	2	251E-03	-2	026E-03	-1	833E-03
1431	1	7.796E-04	-1	217E-03	1	270E-03	3	098E-04	-3	962E-03	-3	243E-04
1432	1	1.430E-03	8	566E-04	4	702E-03	1	463E-03	-3	106E-03	-2	267E-03
1433	1	2.042E-03	-1	440E-03	2	235E-03	-1	592E-04	-2	719E-03	-7	380E-05
1435	1	1.133E-03	-2	485E-03	1	336E-03	-2	122E-04	-2	797E-03	-1	307E-04
1436	1	1.532E-03	-3	425E-04	4	747E-03	-1	101E-04	-2	712E-03	-2	126E-04
1437	1	2.897E-04	-8	975E-04	3	862E-03	-2	870E-04	-3	115E-03	-1	212E-04
1438	1	-3.214E-04	9	948E-02	1	032E-02	-5	396E-03	4	902E-04	5	687E-04
1440	1	-1.268E-03	1	036E-02	1	095E-02	3	867E-03	-2	887E-04	6	809E-04
1441	1	-2.690E-04	7	808E-03	9	471E-03	7	355E-04	-4	891E-04	-1	603E-03
1442	1	2.489E-04	6	023E-03	9	713E-03	5	519E-03	-1	427E-03	-2	129E-03
1443	1	8.859E-04	5	027E-03	8	351E-03	2	337E-03	-1	600E-03	-3	995E-03
1445	1	1.135E-03	3	360E-03	8	217E-03	2	274E-04	-1	350E-03	-1	766E-03
1446	1	1.160E-03	3	102E-03	8	513E-03	9	274E-04	-1	350E-03	-1	766E-03
1447	1	7.607E-04	1	575E-03	8	667E-03	1	081E-03	-1	783E-03	-1	646E-03
1448	1	1.380E-03	2	514E-03	8	852E-03	3	201E-04	-8	445E-04	-6	142E-05
1449	1	1.013E-03	1	159E-03	8	993E-03	-3	558E-05	-1	385E-03	4	755E-05
1450	1	2.572E-03	6	515E-03	3	764E-03	5	266E-03	-5	371E-03	-8	249E-03
1451	1	3.665E-03	4	924E-03	3	194E-03	5	801L-03	-8	534E-03	-6	538E-03
1454	1	1.727E-03	1	999E-03	2	228E-03	1	364E-03	-1	640E-03	-4	230E-04
1455	1	4.163E-03	8	579E-03	1	476E-03	1	368E-02	-2	462E-03	1	757E-04
1456	1	1.866E-03	1	241E-03	1	592E-03	-1	007E-04	-1	436E-03	3	606E-04
1458	1	1.029E-03	-2	896E-03	2	432E-03	-2	763E-03	-5	482E-04	8	888E-04
1461	1	-1.014E-03	-1	570E-03	1	736E-03	-4	148E-03	-1	352E-04	1	331E-03
1462	1	-4.913E-04	-1	531E-03	1	498E-03	-1	43E-03	-3	115E-04	5	628E-04
1463	1	3.514E-04	-1	848E-03	2	120E-03	-3	268E-03	-1	914E-03	1	413E-04
1464	1	-1.402E-03	-6	051E-04	9	691E-04	-1	356E-03	-3	811E-04	4	140E-04
1465	1	-2.206E-03	-5	530E-04	1	645E-03	-3	825E-03	-1	758E-03	1	453E-05
1466	1	-3.844E-04	-2	315E-03	1	475E-03	-4	312E-04	-1	489E-04	3	066E-04

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1468	1	-9	290E-04	-1	190E-03	9	576E-04	1	840E-04	-5	029E-04	2	969E-05
1469	1	-1	268E-03	-1	168E-03	1	436E-03	3	682E-04	-1	907E-03	-5	374E-05
1470	1	-5	420E-04	-6	961E-04	6	510E-04	3	132E-04	-1	823E-03	-8	740E-05
1471	1	2	112E-03	1	069E-02	2	583E-03	1	316E-02	-2	371E-03	2	773E-03
1474	1	6	278E-03	6	281E-03	2	205E-03	1	443E-02	-1	184E-03	2	029E-03
1475	1	2	141E-03	3	673E-03	1	668E-03	5	995E-03	-2	952E-03	5	351E-04
1476	1	2	862E-03	7	493E-03	6	535E-03	1	448E-02	-2	484E-03	1	701E-04
1477	1	3	101E-03	1	701E-03	1	092E-03	3	641E-03	-2	760E-03	-3	359E-04
1479	1	1	137E-03	-9	538E-04	1	326E-03	9	521E-04	-3	653E-03	-9	854E-04
1482	1	-7	029E-04	-5	519E-04	4	625E-04	-3	047E-03	-4	202E-03	-1	470E-03
1483	1	-4	043E-04	-8	254E-04	1	913E-04	-9	954E-04	-3	976E-03	-6	225E-04
1484	1	3	138E-04	6	122E-05	4	045E-03	-1	019E-03	-3	518E-03	-2	487E-03
1485	1	-1	132E-03	-1	921E-04	-5	978E-04	-8	786E-04	-3	321E-03	-7	384E-04
1486	1	-1	231E-03	5	634E-04	3	544E-03	-1	205E-03	-3	246E-03	-1	802E-03
1487	1	-5	274E-04	-1	508E-03	1	852E-04	-5	159E-04	-4	102E-03	-2	276E-04
1489	1	-7	437E-04	-5	796E-04	-7	730E-04	8	434E-05	-3	406E-03	-1	484E-04
1490	1	-7	462E-04	6	138E-06	3	159E-03	-3	897E-04	-2	265E-03	1	758E-05
1491	1	-4	444E-04	5	272E-05	2	858E-03	1	391E-04	-1	336E-03	1	102E-04
1492	1	4	292E-04	8	007E-03	1	103E-02	1	135E-02	-4	788E-04	3	316E-04
1494	1	4	084E-03	4	264E-03	1	080E-02	1	304E-02	-1	127E-03	-5	483E-04
1495	1	1	300E-03	3	880E-03	9	779E-03	7	155E-03	-1	779E-03	-1	932E-03
1496	1	2	61E-03	1	991E-03	9	586E-03	5	728E-03	-2	343E-03	-1	773E-03
1497	1	9	024E-04	1	873E-03	8	418E-03	1	634E-03	-2	611E-03	-3	659E-03
1499	1	-3	914E-05	1	472E-03	8	637E-03	8	145E-04	-2	333E-03	-2	384E-03
1500	1	-4	120E-05	9	304E-04	8	548E-03	6	020E-04	-1	159E-03	-9	752E-04
1501	1	-8	324E-04	7	128E-04	8	618E-03	2	657E-04	-6	327E-04	-3	523E-04
1502	1	-1	533E-05	5	506E-04	8	817E-03	-2	223E-04	-4	787E-04	2	188E-04
1503	1	-9	155E-04	3	278E-04	8	561E-03	-3	147E-04	5	186E-05	3	478E-04
1507	1	-2	753E-03	8	146E-05	7	094E-04	-3	074E-03	-1	877E-04	3	808E-04
1509	1	-1	519E-03	-8	026E-04	9	551E-04	-3	055E-03	-1	997E-04	6	891E-04
1512	1	-1	109E-03	-2	633E-04	5	621E-04	-6	298E-04	-8	211E-04	8	331E-05
1513	1	-1	046E-03	-6	028E-05	4	305E-04	-1	470E-03	-1	686E-03	-2	297E-04
1514	1	-1	084E-03	-5	178E-04	6	711E-04	2	075E-04	-7	657E-04	-6	289E-05
1516	1	-1	459E-03	-8	393E-05	3	472E-04	-9	518E-05	-1	649E-03	2	793E-06
1520	1	-2	200E-03	1	533E-04	-1	013E-03	-2	338E-03	-3	343E-03	-1	048E-03
1522	1	-1	320E-03	-3	077E-04	-5	972E-04	-2	233E-03	-3	549E-03	-1	234E-03
1525	1	-6	978E-04	7	576E-05	-1	296E-03	-3	620E-04	-2	430E-03	-3	383E-04
1526	1	-8	682E-04	3	894E-04	2	977E-03	-4	513E-04	-1	317E-03	-4	918E-04
1527	1	-7	007E-04	8	047E-05	-1	233E-03	-2	429E-04	-2	595E-03	-3	972E-05
1529	1	-1	210E-03	3	886E-04	2	940E-03	-3	290E-05	-1	223E-03	5	715E-06
1532	1	-1	307E-03	7	408E-04	8	574E-03	-3	499E-04	-7	378E-04	-3	830E-04
1533	1	-9	637E-04	9	508E-04	6	649E-03	-1	608E-04	-8	156E-04	-9	717E-04
1535	1	-1	234E-03	5	547E-04	8	655E-03	-1	159E-04	-1	935E-05	-9	024E-05
1536	1	-1	214E-03	3	911E-04	8	631E-03	-3	207E-04	2	640E-05	-7	552E-05
1541	1	-8	388E-04	1	121E-04	-4	034E-04	-7	962E-05	-5	889E-04	-7	552E-05
1543	1	-5	324E-04	-1	508E-05	-6	081E-04	2	041E-05	-2	419E-05	-2	505E-05

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1545	1	-1.128E-03	7	840E-05	4	186E-05	4	377E-04	-7	298E-04	-1	761E-04
1548	1	-6.862E-04	3	720E-05	-5	0.12E-04	-9	330E-05	-2	563E-04	-2	691E-05
1549	1	-7.973E-04	1	393E-04	-4	374E-04	6	437E-06	-5	703E-04	-3	866E-05
1550	1	-8.363E-04	1	399E-04	-5	104E-04	-1	218E-05	-5	664E-04	-6	986E-05
1551	1	-5.324E-04	-1	591E-05	-6	135E-04	3	747E-05	-1	956E-05	-1	184E-05
1552	1	-6.431E-04	-9	937E-06	-6	085E-04	5	340E-05	3	629E-05	-1	733E-05
1553	1	-1.012E-03	2	135E-06	1	519E-05	-1	358E-05	-7	919E-04	1	162E-05
1555	1	-6.540E-04	1	649E-05	-5	145E-04	9	102E-05	-2	464E-04	3	678E-08
1556	1	-8.537E-04	1	357E-04	-5	168E-04	9	823E-06	-5	218E-04	-3	485E-06
1557	1	-6.529E-04	-3	323E-06	-6	088E-04	6	916E-06	3	123E-05	-2	082E-06
1562	1	-8.074E-04	1	581E-04	-1	901E-03	5	361E-05	-5	064E-04	-4	910E-05
1564	1	-7.608E-04	-1	048E-05	-1	818E-03	1	826E-06	6	953E-05	-3	896E-05
1566	1	-9.299E-04	2	342E-04	-1	591E-03	-1	550E-04	-1	478E-03	-3	099E-04
1569	1	-8.129E-04	7	258E-05	-1	827E-03	4	915E-05	-2	077E-04	-4	365E-05
1570	1	-8.536E-04	1	972E-04	-1	872E-03	6	045E-05	-4	246E-04	-1	489E-05
1571	1	-1.128E-03	2	191E-04	2	860E-03	1	357E-05	-1	474E-04	-1	553E-05
1572	1	-7.688E-04	-7	547E-06	-1	823E-03	1	940E-05	6	486E-05	-1	406E-05
1573	1	-9.781E-04	-1	390E-05	2	917E-03	2	365E-05	2	017E-05	9	231E-07
1574	1	-8.694E-04	2	217E-04	-1	648E-03	-2	500E-05	-1	255E-03	-1	977E-05
1576	1	-8.026E-04	5	669E-05	-1	827E-03	-1	433E-05	-1	987E-04	1	216E-06
1577	1	-1.165E-03	2	116E-04	2	886E-03	-1	597E-06	-1	620E-04	5	199E-06
1578	1	-9.891E-04	-6	648E-06	2	920E-03	3	856E-06	1	143E-05	5	793E-06
1582	1	-1.492E-03	-2	664E-04	8	866E-03	-5	635E-05	9	396E-05	4	289E-06
1583	1	-1.188E-03	-2	140E-05	8	875E-03	-9	837E-06	-6	872E-06	4	118E-05
1584	1	-1.402E-03	4	585E-04	8	740E-03	-1	458E-05	6	972E-05	3	583E-05
1586	1	-1.313E-03	1	297E-04	8	912E-03	-1	356E-05	-3	953E-05	-2	784E-05
1587	1	-1.491E-03	2	819E-04	8	894E-03	-6	701E-07	5	529E-05	1	769E-05
1588	1	-1.194E-03	-2	263E-05	8	897E-03	9	863E-06	-2	177E-05	1	377E-05
1589	1	-1.436E-03	4	373E-04	8	768E-03	-2	553E-05	1	379E-05	1	268E-05
1590	1	-1.315E-03	1	129E-04	8	914E-03	-4	000E-07	3	442E-06	-1	145E-05
1591	1	7.779E-03	4	255E-04	2	637E-03	-2	718E-05	-1	854E-03	1	643E-05
1592	1	1.449E-02	-1	352E-03	3	252E-03	8	845E-05	-6	731E-04	1	172E-05
1593	1	1.264E-02	-1	518E-03	5	970E-03	7	957E-05	-2	949E-03	-5	978E-05
1594	1	1.254E-03	1	787E-03	2	062E-03	-1	901E-06	-2	202E-03	5	326E-05
1595	1	2.834E-03	1	383E-03	2	259E-03	1	859E-06	-2	928E-03	1	034E-04
1596	1	7.808E-03	3	431E-04	2	667E-03	3	034E-04	-1	829E-03	-2	740E-05
1597	1	1.441E-02	-1	275E-03	3	280E-03	-6	744E-05	-6	044E-04	1	553E-04
1598	1	1.311E-02	-2	029E-03	6	019E-03	3	691E-04	-3	174E-03	2	060E-04
1599	1	1.184E-03	1	703E-03	2	010E-03	9	390E-05	-2	135E-03	-1	562E-04
1600	1	2.703E-03	1	751E-03	2	160E-03	2	351E-04	-2	737E-03	9	353E-05
1601	1	7.919E-02	2	640E-04	2	598E-03	2	329E-04	-1	868E-03	-8	444E-05
1602	1	1.297E-02	-1	847E-03	6	017E-03	3	320E-05	-3	070E-03	1	201E-05
1603	1	2.669E-03	1	304E-03	2	169E-03	8	942E-05	-2	423E-03	1	818E-04
1604	1	8.146E-03	-5	437E-04	5	508E-03	-1	449E-05	-5	008E-03	7	325E-05
1605	1	1.130E-02	-2	174E-03	6	209E-03	6	041E-04	-6	409E-03	-4	763E-05
1606	1	1.031E-02	-2	201E-03	1	054E-02	1	450E-04	3	201E-04	-9	605E-05

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1607	1	4	304E-03	1	541E-03	2	322E-03	1	506E-04	-3	050E-03	2	235E-04
1608	1	4	881E-03	1	402E-03	4	528E-03	4	071E-05	-6	790E-03	6	322E-05
1609	1	8	242E-03	-3	233E-04	5	493E-03	4	540E-05	5	091E-03	8	079E-05
1610	1	1	182E-02	-2	549E-03	8	938E-03	4	211E-04	-6	567E-03	1	863E-06
1611	1	1	104E-02	-2	402E-03	1	041E-02	9	263E-04	-2	731E-05	-6	227E-05
1612	1	4	185E-03	1	157E-03	2	515E-03	1	901E-04	-2	707E-03	2	152E-04
1613	1	4	852E-03	1	218E-03	4	600E-03	4	205E-05	-6	766E-03	-1	949E-04
1614	1	8	335E-03	-6	462E-04	5	587E-03	4	584E-04	-5	120E-03	-1	674E-04
1615	1	1	092E-02	-2	520E-03	1	049E-02	-3	173E-04	2	807E-04	1	034E-05
1616	1	4	756E-03	1	173E-03	4	500E-03	2	640E-04	-6	162E-03	9	094E-05
1617	1	6	409E-03	-4	085E-04	1	052E-02	-1	693E-04	5	652E-03	-1	297E-05
1618	1	9	742E-03	-2	108E-03	1	319E-02	4	570E-04	8	034E-03	5	117E-06
1620	1	6	397E-03	-7	104E-04	1	052E-02	2	877E-05	-5	590E-03	-2	453E-04
1621	1	9	993E-03	-2	630E-03	1	335E-02	-3	630E-05	8	092E-03	-1	474E-04
1623	1	6	801E-03	-6	767E-04	1	032E-02	8	462E-04	-5	411E-03	5	295E-04
1624	1	-1	097E-03	1	338E-03	1	647E-03	6	328E-05	-8	997E-04	-1	729E-05
1627	1	-1	023E-03	1	248E-03	1	466E-03	-1	385E-04	4	614E-04	2	113E-05
1628	1	-3	615E-03	1	197E-03	1	128E-03	1	058E-03	-5	222E-04	1	057E-04
1629	1	-4	087E-03	1	612E-03	1	911E-03	4	417E-05	-5	308E-04	-1	327E-04
1630	1	1	664E-03	1	437E-03	1	880E-03	-1	564E-04	2	416E-03	-9	213E-04
1631	1	3	027E-03	8	290E-04	2	019E-03	7	127E-04	2	499E-03	8	714E-04
1632	1	-1	093E-03	1	198E-03	1	585E-03	6	697E-04	-8	571E-04	2	648E-04
1635	1	-8	448E-04	1	319E-03	1	411E-03	8	578E-04	4	995E-04	-6	087E-04
1636	1	-2	947E-03	4	274E-04	1	280E-03	2	353E-03	-3	336E-04	7	365E-04
1637	1	-3	661E-03	1	330E-04	2	107E-03	1	524E-03	-6	915E-04	9	552E-05
1638	1	1	215E-03	2	118E-03	1	856E-03	-1	059E-03	1	425E-03	-1	983E-03
1639	1	2	747E-03	1	408E-03	2	507E-03	1	970E-03	3	268E-03	-2	654E-03
1640	1	-1	140E-03	7	889E-04	1	785E-03	1	162E-03	-4	308E-04	4	885E-04
1642	1	8	831E-03	4	488E-04	1	702E-03	6	430E-04	-1	483E-04	-2	491E-04
1643	1	-3	200E-03	6	094E-04	1	990E-03	2	893E-03	-8	211E-04	-2	849E-04
1644	1	1	650E-03	2	894E-03	2	025E-03	-2	811E-03	5	765E-04	-3	675E-03
1645	1	-4	322E-04	1	657E-03	2	619E-03	1	981E-05	-5	306E-04	-1	665E-04
1648	1	-5	347E-04	9	707E-04	2	563E-03	8	642E-04	-3	267E-04	7	631E-04
1649	1	-4	218E-03	3	727E-04	3	519E-03	7	721E-04	-4	418E-04	8	484E-05
1650	1	-5	568E-03	1	659E-03	3	842E-03	-3	528E-04	-5	601E-04	-3	245E-05
1651	1	4	114E-03	1	031E-03	2	523E-03	-9	915E-04	3	009E-03	-1	349E-03
1652	1	4	483E-03	2	933E-03	3	496E-03	7	985E-03	4	731E-03	-1	943E-03
1653	1	-6	968E-04	1	007E-03	2	735E-03	2	771E-04	-3	094E-04	9	923E-05
1656	1	7	594E-05	-1	230E-05	3	185E-03	-4	484E-04	4	611E-04	-4	221E-04
1657	1	-3	957E-03	6	788E-04	3	142E-03	1	906E-03	-3	472E-04	1	248E-03
1659	1	-5	144E-03	2	999E-04	4	266E-03	2	795E-03	4	528E-04	2	420E-03
1659	1	3	294E-03	1	523E-03	2	510E-03	-4	022E-03	1	786E-03	-3	494E-03
1660	1	4	072E-03	2	790E-03	4	310E-03	-4	508E-03	5	207E-03	-4	362E-03
1661	1	-8	926E-04	1	244E-03	2	428E-03	1	570E-03	-7	444E-03	6	308E-04
1663	1	4	345E-04	1	555E-03	2	062E-03	-4	681E-05	-5	545E-04	-5	242E-04
1664	1	-4	361E-03	1	356E-04	4	021E-03	3	516E-03	1	536E-04	1	476E-03

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1665	1	2.694E-03	4	143E-03	3	994E-03	-3	850E-03	2	530E-03	-4	982E-03
1678	1	2.836E-03	5	542E-03	3	712E-03	-5	127E-03	3	137E-04	-2	834E-03
1679	1	9.228E-03	3	380E-03	3	981E-03	-1	521E-02	1	249E-04	-1	774E-03
1680	1	4.244E-03	6	708E-03	6	748E-03	-1	232E-02	1	133E-03	-5	224E-03
1683	1	6.633E-03	6	966E-04	3	133E-03	-7	341E-03	1	874E-03	-1	506E-03
1684	1	1.304E-02	1	121E-04	3	354E-03	-6	747E-03	8	499E-04	-1	196E-04
1685	1	9.705E-03	6	242E-04	7	096E-03	-1	353E-02	3	018E-03	-1	988E-03
1688	1	7.837E-03	1	457E-03	2	107E-03	-7	407E-05	2	005E-03	4	242E-05
1689	1	1.357E-02	-1	495E-03	4	971E-03	-1	337E-03	2	811E-03	1	961E-03
1691	1	2.681E-03	4	426E-03	5	927E-03	-9	524E-03	3	025E-03	-2	583E-03
1692	1	5.352E-03	4	538E-03	8	860E-03	-1	184E-02	5	244E-03	-3	264E-03
1693	1	4.452E-03	1	393E-03	1	147E-02	-1	128E-02	1	751E-03	2	959E-03
1696	1	6.152E-03	1	407E-03	6	317E-03	-8	056E-03	4	255E-03	-3	970E-03
1697	1	1.002E-02	-9	617E-04	8	688E-03	-8	135E-03	5	308E-03	-2	615E-03
1698	1	7.058E-03	3	165E-03	1	010E-02	-5	898E-03	-1	084E-03	-3	501E-04
1701	1	9.259E-03	-2	004E-03	4	850E-03	-4	575E-04	4	618E-03	-1	566E-03
1702	1	1.330E-02	1	117E-03	7	500E-03	9	333E-03	2	398E-03	7	992E-04
1704	1	3.582E-03	1	196E-03	1	095E-02	-5	057E-03	2	694E-03	7	134E-03
1705	1	5.930E-03	3	945E-03	1	212E-02	-3	622E-03	-4	841E-03	-7	529E-03
1707	1	4.477E-03	4	290E-03	9	049E-03	4	009E-04	3	858E-03	-1	422E-03
1708	1	9.375E-03	3	618E-03	9	779E-03	-1	332E-02	-5	759E-03	6	483E-03
1710	1	6.660E-03	9	147E-03	6	375E-03	-8	167E-03	4	757E-03	-7	372E-06
1711	1	1.481E-03	7	280E-03	2	269E-03	6	332E-03	-9	051E-04	-1	481E-03
1712	1	-5.980E-04	1	237E-02	5	005E-03	-4	267E-04	-1	835E-04	-2	156E-03
1713	1	-1.180E-03	1	160E-02	6	985E-03	7	044E-03	-1	908E-03	-2	680E-03
1714	1	2.627E-03	1	974E-03	7	960E-04	1	368E-03	-1	314E-03	-2	699E-03
1715	1	3.112E-03	3	355E-03	3	925E-04	3	564E-03	-8	528E-04	6	907E-04
1716	1	1.214E-03	4	113E-03	3	575E-03	-7	945E-03	-6	591E-04	-4	817E-03
1717	1	2.097E-03	8	475E-03	4	389E-03	-1	094E-02	-1	716E-05	-3	890E-03
1718	1	-9.107E-04	1	063E-02	7	519E-03	-6	845E-03	9	955E-04	-3	330E-03
1719	1	1.703E-03	1	721E-03	1	844E-03	-5	690E-05	-7	415E-04	-3	804E-03
1720	1	2.565E-03	2	675E-03	1	477E-03	6	165E-06	-2	587E-04	-3	186E-03
1724	1	5.409E-04	7	143E-03	5	174E-03	4	367E-03	-1	863E-03	-2	824E-03
1725	1	-1.379E-03	1	110E-02	8	550E-03	3	278E-03	-5	917E-04	-4	170E-03
1726	1	-9.887E-04	6	798E-03	1	120E-02	3	744E-03	-3	248E-05	1	436E-03
1727	1	2.887E-03	4	117E-03	9	868E-04	2	196E-03	-6	077E-04	-2	028E-03
1728	1	2.360E-03	4	769E-03	3	439E-03	1	874E-03	-2	455E-03	-6	387E-03
1729	1	8.998E-04	7	492E-03	5	025E-03	-1	301E-03	1	290E-03	-3	391E-03
1730	1	1.174E-03	7	741E-03	9	141E-03	-7	926E-03	4	138E-03	-3	173E-03
1731	1	-1.678E-03	1	207E-02	1	082E-02	-3	691E-03	3	979E-04	1	100E-03
1732	1	2.134E-03	4	323E-03	1	476E-03	-3	008E-03	1	105E-03	-3	328E-03
1733	1	3.048E-03	4	271E-03	3	325E-03	1	422E-03	5	381E-05	-5	462E-03
1737	1	9.668E-04	3	928E-03	1	075E-02	1	222E-03	-2	518E-03	-9	081E-03
1738	1	1.688E-04	6	826E-03	1	335E-02	2	631E-03	1	525E-03	9	172E-03
1740	1	8.758E-04	6	458E-03	9	823E-03	-1	835E-03	-6	872E-05	-3	409E-03
1741	1	2.560E-03	3	012E-03	1	406E-02	-9	876E-03	-2	181E-03	8	202E-03

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1744	1	6	847E-03	1	118E-03	1	957E-03	7	916E-03	-2	269E-03	-8	394E-04
1745	1	5	821E-03	7	058E-03	4	019E-03	1	339E-02	-9	842E-04	-9	470E-04
1746	1	7	991E-03	3	276E-03	6	134E-03	6	131E-02	-2	953E-03	-8	100E-04
1747	1	2	452E-03	2	116E-03	-8	078E-05	6	748E-04	-2	110E-03	-7	027E-04
1748	1	3	488E-03	1	846E-03	1	497E-04	3	168E-03	-2	348E-03	1	086E-03
1749	1	2	134E-03	6	213E-03	2	054E-03	5	647E-03	-1	666E-03	-1	836E-03
1750	1	6	265E-04	1	224E-02	4	395E-03	1	329E-02	-8	045E-04	-8	497E-04
1751	1	2	214E-03	8	532E-03	6	480E-03	1	425E-02	-2	379E-03	-3	489E-03
1752	1	2	592E-03	2	748E-03	-4	529E-05	9	720E-04	-1	515E-03	-1	832E-03
1753	1	1	918E-03	4	444E-03	3	301E-04	6	518E-04	-2	067E-03	1	333E-05
1757	1	5	802E-03	3	300E-03	4	335E-03	6	657E-03	5	307E-03	-1	859E-03
1758	1	4	341E-03	5	137E-03	7	910E-03	1	270E-02	-5	520E-03	-3	985E-03
1759	1	6	283E-03	2	550E-03	1	051E-02	1	175E-02	4	775E-04	1	151E-03
1760	1	3	332E-03	3	833E-03	5	267E-04	3	869E-03	-2	875E-03	-9	162E-04
1761	1	3	991E-03	3	596E-03	1	923E-03	3	097E-03	-5	699E-03	-2	653E-03
1762	1	2	337E-03	6	250E-03	4	750E-03	8	580E-03	-3	742E-03	-3	847E-03
1763	1	-2	056E-04	8	409E-03	8	328E-03	6	973E-03	-3	600E-03	-4	642E-03
1764	1	2	159E-03	7	472E-03	1	043E-02	1	213E-02	-2	888E-05	7	782E-04
1765	1	2	489E-03	4	340E-03	9	074E-04	3	732E-03	-2	261E-03	-3	413E-03
1766	1	2	324E-03	4	900E-03	2	808E-03	4	294E-03	-4	858E-03	-5	254E-03
1770	1	3	839E-03	3	093E-03	9	554E-03	1	335E-02	6	141E-03	-4	026E-03
1771	1	4	142E-03	4	920E-03	1	335E-02	1	015E-02	7	783E-03	7	798E-03
1773	1	1	557E-03	5	484E-03	9	654E-03	6	470E-03	-3	824E-03	-4	127E-03
1774	1	3	628E-05	7	411E-03	1	352E-02	3	974E-03	3	386E-03	6	553E-03
1777	1	8	902E-03	5	136E-04	1	342E-03	1	105E-05	-2	451E-03	1	527E-05
1778	1	1	438E-02	-9	130E-04	2	602E-03	5	198E-03	-8	722E-04	-9	896E-05
1779	1	1	320E-02	-1	880E-03	5	642E-03	2	415E-04	-3	900E-03	-7	366E-05
1780	1	2	208E-03	2	248E-03	2	333E-04	6	144E-05	-3	040E-03	-4	659E-04
1781	1	3	779E-03	2	209E-03	1	611E-04	-3	411E-05	-3	985E-03	5	828E-05
1782	1	7	734E-03	1	051E-03	1	513E-03	5	278E-03	-2	433E-03	-7	750E-04
1783	1	1	173E-02	1	291E-03	3	256E-03	1	288E-02	-1	007E-03	-1	459E-04
1784	1	1	162E-02	-3	808E-04	5	798E-03	9	308E-03	-4	065E-03	-5	260E-04
1785	1	2	334E-03	1	568E-03	2	033E-04	9	678E-04	-2	700E-03	-1	073E-03
1786	1	3	801E-03	2	073E-03	1	718E-04	1	260E-03	-3	709E-03	-1	044E-03
1790	1	8	569E-03	2	363E-06	4	451E-03	1	320E-05	-6	161E-03	-1	435E-05
1791	1	1	048E-02	-1	374E-03	8	109E-03	4	089E-03	-7	888E-03	-8	247E-04
1792	1	1	068E-02	-1	729E-03	1	058E-02	2	672E-04	1	025E-03	-9	847E-07
1793	1	5	386E-03	2	093E-03	1	147E-04	1	124E-03	-4	084E-03	-2	529E-04
1794	1	5	805E-03	2	166E-03	2	023E-03	-1	137E-04	-8	485E-03	-2	019E-06
1795	1	7	781E-03	7	344E-04	4	474E-03	5	313E-03	-6	064E-03	-1	257E-03
1796	1	8	181E-03	1	059E-03	7	898E-03	1	037E-02	-7	250E-03	-1	914E-03
1797	1	9	364E-03	-2	085E-04	1	047E-02	7	263E-03	7	002E-04	6	841E-04
1798	1	4	642E-03	2	716E-03	2	257E-04	2	719E-03	-3	396E-03	-7	588E-04
1799	1	5	630E-03	2	211E-03	2	167E-03	2	556E-03	-8	166E-03	-2	031E-03
1803	1	6	571E-03	3	627E-04	9	581E-03	-9	181E-05	-6	969E-03	3	174E-05
1804	1	9	330E-03	-6	365E-04	1	356E-02	3	281E-03	1	104E-02	1	640E-03

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1806	1	5	693E-03	1	118E-03	9	578E-03	4	091E-03	-6	762E-03	-1	796E-03
1807	1	7	267E-03	1	427E-03	1	363E-02	8	524E-03	9	740E-03	4	576E-03
1810	1	-2	331E-04	1	957E-03	-2	703E-04	1	517E-05	-7	752E-04	-1	065E-06
1813	1	-2	637E-03	1	497E-03	-3	898E-04	-6	935E-04	6	196E-04	2	096E-04
1814	1	-2	769E-03	1	773E-03	-2	940E-04	1	396E-05	1	363E-03	-6	271E-06
1815	1	-3	746E-04	1	720E-03	-1	330E-04	-6	681E-04	-5	465E-04	-3	318E-05
1818	1	-2	153E-03	9	090E-04	-2	521E-04	-2	005E-03	5	789E-04	4	556E-04
1819	1	-2	917E-03	1	407E-03	-1	957E-04	-1	720E-03	1	322E-03	6	652E-04
1820	1	-2	425E-04	1	238E-03	-1	931E-04	-1	074E-03	-1	407E-04	1	495E-04
1822	1	-2	151E-03	3	441E-04	2	405E-05	-2	645E-03	8	878E-04	4	813E-04
1823	1	9	744E-04	2	136E-03	-1	553E-04	1	175E-04	-4	897E-04	-1	350E-05
1826	1	-3	117E-03	1	743E-03	2	670E-04	-9	584E-04	1	961E-03	3	550E-04
1827	1	-3	779E-03	2	019E-03	9	001E-04	2	378E-03	1	177E-03	-2	404E-05
1828	1	5	270E-04	1	952E-03	-1	954E-04	-1	519E-04	-1	135E-04	3	517E-04
1831	1	-2	834E-03	8	654E-04	3	385E-04	-2	378E-03	1	450E-03	7	990E-04
1832	1	-4	105E-03	1	598E-03	7	871E-04	-2	372E-03	1	238E-03	6	418E-04
1833	1	-8	087E-03	1	528E-03	1	622E-05	-1	105E-03	6	890E-04	6	212E-04
1835	1	-3	226E-03	2	037E-04	6	822E-04	-3	451E-03	6	666E-04	6	240E-04
1843	1	-1	712E-03	7	953E-04	-1	612E-04	8	665E-06	6	327E-05	1	070E-05
1846	1	-7	755E-04	1	284E-04	-4	270E-04	-1	604E-05	-1	256E-04	-1	173E-06
1847	1	-1	019E-03	1	747E-04	-2	146E-04	-4	174E-05	-3	494E-04	-1	284E-05
1849	1	-5	380E-04	-2	786E-06	-5	794E-04	3	156E-05	1	495E-05	-7	599E-06
1850	1	-5	316E-04	-6	142E-06	-5	624E-04	1	694E-05	-1	391E-05	-3	463E-06
1851	1	-1	558E-03	6	392E-04	-1	400E-04	-6	688E-04	-1	662E-05	1	267E-04
1854	1	-7	420E-04	1	047E-04	-4	366E-04	-6	842E-05	-1	252E-04	-6	785E-06
1855	1	-9	572E-04	1	675E-04	-2	529E-04	-1	277E-04	-3	637E-04	-3	044E-05
1856	1	-9	676E-04	1	526E-04	-2	742E-04	-5	160E-05	-4	947E-04	-5	514E-05
1857	1	-5	298E-04	3	947E-06	-5	876E-04	7	925E-06	3	263E-06	-2	003E-05
1858	1	-5	560E-04	1	139E-05	-5	653E-04	4	769E-05	2	928E-05	-1	909E-05
1859	1	-1	252E-03	2	814E-04	-1	192E-04	-8	162E-04	-1	813E-04	1	289E-04
1861	1	-6	903E-04	7	372E-05	-4	531E-04	-7	746E-05	-1	402E-04	-9	092E-06
1862	1	-9	008E-04	1	756E-04	-3	275E-04	-1	393E-04	-4	322E-04	-5	411E-05
1863	1	-5	232E-04	-2	473E-05	-5	817E-04	4	399E-07	1	731E-05	-4	082E-05
1864	1	-1	958E-03	8	582E-04	3	408E-05	-7	372E-06	4	500E-05	-6	252E-06
1867	1	-8	110E-04	1	303E-04	-4	317E-04	-1	187E-05	-2	222E-04	1	665E-06
1868	1	-9	651E-04	1	613E-04	-2	679E-04	-3	202E-05	-5	870E-04	-2	874E-05
1869	1	-9	834E-04	1	790E-04	-2	910E-04	-1	877E-05	-5	912E-04	1	021E-05
1870	1	-5	522E-04	-8	715E-06	-5	698E-04	3	382E-05	4	184E-06	-1	521E-05
1871	1	-5	365E-04	-1	652E-05	-5	752E-04	1	890E-05	-9	626E-06	-7	797E-06
1872	1	-1	776E-03	6	907E-04	4	087E-05	-7	653E-04	-1	326E-04	1	592E-04
1875	1	-7	756E-04	1	035E-04	-4	437E-04	-6	730E-05	-1	945E-04	-1	658E-05
1876	1	-9	092E-04	1	680E-04	-3	215E-04	-8	350E-05	-5	342E-04	-8	360E-05
1877	1	-9	169E-04	1	216E-04	-3	136E-04	-9	262E-06	-5	911E-04	-7	920E-05
1878	1	-5	508E-04	-1	171E-06	-5	727E-04	3	879E-05	3	985E-05	-2	019E-05
1879	1	-5	753E-04	2	007E-05	-5	715E-04	6	231E-05	1	466E-05	-2	742E-05

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1880	1	-1	384E-03	2	777E-04	3	280E-05	-9	435E-04	-3	686E-04	1	796E-04
1882	1	-7	233E-04	7	924E-05	-4	652E-04	-8	333E-05	-1	994E-04	-3	136E-05
1883	1	-8	842E-04	2	067E-04	-3	787E-04	-8	466E-05	-4	629E-04	-5	391E-05
1884	1	-5	346E-04	-3	838E-05	-5	840E-04	-1	650E-07	-1	809E-05	-3	373E-05
1898	1	1	447E-02	1	453E-03	3	336E-03	1	086E-06	-6	446E-04	8	848E-05
1900	1	1	176E-03	1	730E-03	1	875E-03	1	772E-04	-1	995E-03	-5	290E-05
1902	1	7	985E-03	1	449E-04	2	565E-03	2	885E-04	-1	770E-03	4	044E-05
1903	1	1	446E-02	-1	424E-03	3	329E-03	-8	099E-05	-6	489E-04	1	282E-05
1904	1	1	302E-02	-2	004E-03	6	022E-03	9	525E-05	-3	048E-03	3	615E-05
1905	1	1	174E-03	1	590E-03	1	875E-03	7	565E-05	-1	860E-03	6	330E-05
1906	1	2	627E-03	1	421E-03	2	144E-03	2	114E-04	-2	354E-03	1	658E-05
1907	1	8	053E-03	1	322E-04	2	579E-03	5	912E-05	-1	809E-03	-1	697E-05
1908	1	1	305E-02	-2	112E-03	6	005E-03	-9	182E-05	-3	093E-03	-1	036E-05
1909	1	2	560E-03	1	452E-03	2	125E-03	1	657E-05	-2	202E-03	6	636E-05
1911	1	1	153E-02	-2	441E-03	8	034E-03	3	092E-05	-6	389E-03	9	903E-05
1913	1	4	133E-03	1	159E-03	2	638E-03	3	109E-04	-2	392E-03	-1	560E-04
1915	1	8	420E-03	-3	959E-04	5	510E-03	2	557E-04	-5	154E-03	-7	807E-06
1916	1	1	170E-02	-2	616E-03	8	052E-03	1	642E-04	-6	488E-03	-1	680E-05
1917	1	1	081E-02	-2	522E-03	1	059E-02	-3	612E-04	5	612E-05	-5	605E-05
1918	1	4	028E-03	1	264E-03	2	540E-03	3	089E-05	-2	119E-03	2	245E-05
1919	1	4	768E-03	1	030E-03	4	463E-03	3	939E-04	-5	904E-03	4	933E-05
1920	1	8	570E-03	-6	953E-04	5	493E-03	1	016E-04	-5	114E-03	3	046E-05
1921	1	1	060E-02	-2	704E-03	1	063E-02	-7	146E-05	-1	089E-04	2	010E-06
1922	1	4	688E-03	-1	176E-03	4	454E-03	-1	194E-04	-5	727E-03	-6	438E-07
1924	1	9	864E-03	-2	516E-03	1	358E-02	-3	896E-04	7	940E-03	-3	830E-04
1926	1	6	652E-03	-1	073E-03	1	049E-02	5	178E-04	-5	740E-03	-2	155E-05
1927	1	9	455E-03	-2	303E-03	1	369E-02	-5	863E-04	8	000E-03	5	817E-05
1929	1	6	888E-03	-1	091E-03	1	049E-02	1	132E-04	-5	549E-03	-1	758E-05
1934	1	-2	273E-03	-7	039E-04	1	759E-03	2	079E-03	-1	360E-04	4	302E-04
1936	1	1	897E-03	1	496E-04	1	389E-03	1	105E-04	-3	840E-04	-1	420E-03
1938	1	-9	145E-04	4	784E-04	1	871E-03	7	156E-04	-3	015E-04	5	957E-05
1941	1	3	934E-04	-1	417E-03	1	465E-03	1	574E-03	-1	038E-03	-6	997E-04
1942	1	-1	671E-03	-1	067E-03	1	859E-03	9	458E-04	-2	803E-04	-5	337E-05
1943	1	-2	425E-03	-7	101E-04	2	182E-03	3	773E-03	-3	600E-05	3	357E-04
1944	1	2	102E-03	-2	053E-03	6	214E-04	3	462E-04	-1	054E-03	-6	294E-04
1945	1	2	394E-03	-8	587E-04	1	059E-03	8	302E-04	-1	467E-03	-5	183E-04
1946	1	-8	598E-04	2	420E-04	1	849E-03	2	382E-05	-2	196E-04	1	356E-06
1948	1	8	873E-04	-2	043E-03	3	110E-03	1	058E-05	-9	184E-04	7	098E-05
1949	1	-1	804E-03	-1	320E-03	2	269E-03	1	424E-04	-4	061E-04	-7	521E-05
1950	1	2	324E-03	-2	686E-03	7	863E-04	1	192E-04	-1	118E-03	1	543E-04
1955	1	-3	402E-03	5	299E-04	2	617E-03	-2	466E-03	-2	283E-04	-1	312E-03
1957	1	2	237E-03	2	225E-03	1	395E-03	-1	207E-03	-8	171E-04	-1	906E-03
1959	1	-4	975E-04	4	554E-04	2	420E-03	7	560E-04	1	938E-04	1	437E-04
1962	1	3	881E-04	-6	460E-04	2	004E-03	2	606E-03	-1	536E-03	8	775E-04
1963	1	-2	554E-03	-1	013E-03	2	763E-03	1	067E-03	-3	303E-04	2	696E-04
1964	1	-3	593E-03	-8	694E-04	3	543E-03	2	230E-03	-4	447E-04	5	691E-04

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1965	1	2	575E-03	-1	782E-03	1	529E-03	3	946E-04	-1	503E-03	5	317E-04
1966	1	2	527E-03	-6	926E-04	2	845E-03	1	127E-03	-1	619E-03	1	314E-04
1967	1	-5	512E-04	2	110E-04	2	492E-03	4	631E-05	2	598E-04	-6	434E-05
1969	1	1	071E-03	-2	697E-03	2	293E-03	-6	156E-06	-1	613E-03	1	167E-04
1970	1	-2	832E-03	-1	520E-03	3	291E-03	2	905E-04	-6	064E-04	3	090E-05
1971	1	2	717E-03	-3	715E-03	2	767E-03	3	457E-04	-1	347E-03	3	088E-04
1988	1	1	382E-03	2	780E-03	2	754E-04	1	633E-04	-1	667E-03	-3	095E-03
1990	1	2	675E-03	4	361E-04	-3	171E-04	2	565E-03	-4	947E-04	-2	885E-04
1992	1	2	067E-03	-6	305E-04	8	568E-05	1	293E-05	-8	944E-04	-1	481E-03
1995	1	1	577E-03	-6	335E-04	-6	191E-04	9	735E-04	-7	050E-04	-4	561E-04
1996	1	1	667E-03	-1	214E-03	-1	483E-04	3	986E-04	-6	031E-04	-9	773E-05
1997	1	1	979E-03	-7	566E-03	-1	671E-05	1	299E-03	-1	120E-03	1	313E-03
1998	1	9	280E-04	-1	383E-03	-2	913E-05	-4	162E-04	-9	889E-06	2	851E-04
1999	1	1	726E-03	-1	667E-03	1	071E-04	-2	332E-04	4	941E-04	1	581E-03
2000	1	1	736E-03	-2	049E-03	1	896E-04	8	608E-05	-6	178E-04	1	885E-04
2002	1	1	062E-03	-1	702E-03	2	089E-04	-2	596E-04	7	918E-06	2	614E-04
2003	1	1	776E-03	-2	506E-03	5	354E-04	-1	724E-04	4	196E-05	3	230E-04
2004	1	4	328E-04	-1	770E-03	5	195E-04	-2	021E-04	3	592E-04	1	795E-04
2009	1	2	727E-03	2	502E-03	7	731E-04	3	491E-03	-1	333E-04	1	533E-03
2011	1	2	128E-03	1	225E-03	7	289E-04	3	962E-04	-3	607E-04	-1	646E-04
2013	1	2	345E-03	-3	083E-04	1	227E-03	1	508E-03	-1	680E-03	2	241E-03
2016	1	2	203E-03	-1	560E-03	1	134E-03	3	036E-04	2	438E-04	3	329E-03
2017	1	2	053E-03	-2	209E-03	1	316E-03	6	326E-04	-2	484E-04	1	218E-03
2018	1	2	545E-03	-2	154E-03	2	783E-03	1	541E-03	-1	000E-03	1	232E-03
2019	1	1	017E-03	-2	270E-03	9	734E-04	-6	015E-04	6	639E-04	1	259E-03
2020	1	1	928E-03	-2	658E-03	1	953E-03	-9	604E-04	-5	131E-03	1	664E-03
2021	1	2	120E-03	-3	205E-03	1	544E-03	-1	159E-04	-5	334E-04	1	831E-04
2024	1	2	149E-03	-3	984E-03	2	014E-03	-2	758E-04	-2	873E-04	2	700E-04
2025	1	3	327E-04	-2	819E-03	1	514E-03	-3	339E-04	3	826E-04	5	311E-04
2042	1	4	404E-04	2	359E-03	-5	391E-04	1	790E-03	-4	707E-04	7	073E-06
2044	1	9	511E-04	1	020E-03	-3	599E-04	1	573E-03	-4	110E-04	3	522E-04
2046	1	1	015E-03	-1	512E-03	-5	566E-04	-1	466E-03	9	448E-06	4	198E-04
2049	1	-4	855E-04	-2	882E-04	-4	899E-04	-1	683E-03	2	676E-04	5	044E-04
2050	1	1	424E-05	-9	003E-04	1	377E-04	-5	512E-04	9	652E-05	2	640E-04
2051	1	2	620E-04	-1	245E-03	-5	034E-05	-2	313E-03	8	424E-04	1	597E-03
2052	1	-9	193E-04	-1	864E-04	1	404E-04	-1	058E-03	1	675E-05	2	811E-04
2053	1	-1	255E-03	-2	589E-04	9	847E-05	-2	359E-03	1	124E-03	9	757E-04
2054	1	-1	097E-05	-1	128E-03	4	267E-04	6	390E-05	1	249E-04	-8	401E-07
2056	1	-5	540E-04	-7	907E-04	5	122E-04	1	260E-04	-5	553E-05	-2	600E-05
2057	1	-5	887E-04	-9	321E-04	5	121E-04	2	392E-04	7	658E-05	-1	046E-05
2058	1	-7	014E-04	-9	749E-04	4	295E-04	-3	779E-05	-3	887E-04	1	302E-04
2063	1	1	378E-03	1	309E-03	3	012E-04	3	171E-04	-3	444E-04	1	111E-03
2065	1	7	881E-04	1	148E-03	1	604E-04	-7	790E-04	7	773E-04	1	350E-03
2067	1	9	709E-04	-1	489E-03	8	167E-04	-1	883E-03	1	381E-03	3	291E-03
2070	1	-6	865E-04	-8	471E-04	6	926E-04	-2	933E-03	1	716E-03	2	334E-03

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2071	1	-3	137E-04	-1	142E-03	7	534E-04	-1	343E-03	3	453E-04	8	736E-04
2072	1	-1	388E-05	-2	057E-03	1	444E-03	-3	966E-03	5	887E-04	2	203E-03
2073	1	-1	055E-03	-5	159E-04	6	149E-04	-9	555E-04	1	160E-04	6	148E-04
2074	1	-1	819E-03	-7	641E-04	9	698E-04	-3	645E-03	8	783E-04	1	409E-03
2075	1	-1	497E-04	-1	546E-03	8	829E-04	-1	359E-05	9	304E-05	2	143E-04
2077	1	-7	249E-04	-8	307E-04	5	971E-04	2	465E-04	-3	089E-04	1	202E-04
2078	1	-9	163E-04	-1	106E-03	1	032E-03	3	699E-05	3	957E-05	2	429E-04
2079	1	-5	793E-04	-7	049E-04	6	197E-04	3	559E-04	-5	669E-04	5	451E-05
2095	1	-1	459E-03	9	275E-05	6	811E-05	-1	838E-03	1	354E-04	4	084E-04
2097	1	-7	630E-04	-3	538E-04	4	216E-05	-1	320E-03	9	176E-05	5	341E-04
2100	1	-9	657E-04	-1	434E-04	2	056E-04	4	655E-04	-3	093E-04	1	275E-04
2101	1	-1	034E-03	-9	294E-05	3	018E-04	-1	230E-03	-4	523E-04	3	152E-04
2102	1	-9	102E-04	-3	291E-04	3	444E-04	-1	708E-04	-2	147E-04	4	052E-06
2104	1	-1	100E-03	-2	047E-04	2	790E-04	-1	520E-05	-3	442E-04	-5	075E-05
2108	1	-1	953E-03	1	059E-04	3	860E-04	-2	322E-03	3	090E-04	5	425E-04
2110	1	-1	241E-03	-4	573E-04	5	683E-04	-2	169E-03	4	140E-04	1	164E-03
2113	1	-1	030E-03	-1	894E-04	3	381E-04	-5	692E-04	-5	415E-04	1	261E-04
2114	1	-1	068E-03	-1	235E-04	4	274E-04	-1	402E-03	-6	351E-04	2	464E-04
2115	1	-9	265E-04	-4	220E-04	3	790E-04	7	868E-05	-4	884E-04	1	676E-05
2117	1	-1	350E-03	-2	132E-04	3	938E-04	-8	771E-07	-5	344E-04	-5	127E-05
2129	1	-8	555E-04	-1	195E-04	-3	264E-04	-1	400E-04	-3	347E-04	-3	186E-05
2131	1	-5	122E-04	-2	142E-05	-5	858E-04	-6	498E-07	1	686E-05	-2	049E-05
2133	1	-1	003E-03	8	598E-05	-6	811E-05	-5	094E-04	-3	308E-04	7	331E-05
2136	1	-6	347E-04	2	831E-05	-4	854E-04	-6	740E-05	-1	506E-04	-6	300E-06
2137	1	-7	945E-04	1	018E-04	-3	647E-04	-3	863E-05	-3	570E-04	-1	652E-05
2138	1	-8	055E-04	9	704E-05	-3	669E-04	-7	298E-05	-4	185E-04	-3	630E-05
2139	1	-5	002E-04	-2	157E-05	-5	901E-04	1	640E-05	2	135E-05	-8	454E-06
2140	1	-5	204E-04	-1	504E-05	-5	871E-04	3	047E-05	1	526E-05	-2	754E-05
2141	1	-9	075E-04	-9	884E-06	-8	334E-05	1	922E-05	-3	893E-04	3	620E-06
2143	1	-6	085E-04	1	379E-05	-4	907E-04	-1	582E-05	-1	530E-04	2	533E-07
2144	1	-7	968E-04	9	608E-05	-3	937E-04	-1	228E-05	-4	066E-04	8	939E-06
2145	1	-5	107E-04	-2	259E-05	-5	955E-04	5	785E-06	4	061E-05	-1	035E-05
2150	1	-8	416E-04	1	225E-04	-3	727E-04	-8	496E-05	-4	703E-04	-6	098E-05
2152	1	-5	369E-04	-1	665E-05	-5	850E-04	3	358E-05	6	251E-06	-2	534E-05
2154	1	-1	063E-03	6	852E-05	-3	132E-05	-5	147E-04	-5	140E-04	1	090E-05
2157	1	-6	590E-04	3	492E-05	-4	871E-04	-8	355E-05	-1	853E-04	-5	781E-06
2158	1	-8	087E-04	1	177E-04	-3	904E-04	-1	641E-05	-4	679E-04	-2	986E-05
2159	1	-7	997E-04	1	076E-04	4	108E-04	-6	322E-05	-5	143E-04	-4	852E-05
2160	1	-5	298E-04	-1	718E-05	-5	986E-04	1	555E-05	1	494E-05	-1	617E-05
2161	1	-5	384E-04	-1	306E-05	-6	007E-04	4	996E-05	-3	888E-05	-3	195E-05
2162	1	-9	624E-04	6	614E-06	-3	798E-05	-1	860E-05	-5	491E-04	-1	916E-05
2164	1	-6	331E-04	1	399E-05	-4	983E-04	-1	005E-05	-1	896E-04	5	624E-06
2165	1	-7	991E-04	1	013E-04	-4	201E-04	-2	331E-09	-4	835E-04	8	388E-06
2166	1	-5	391E-04	-1	193E-05	-6	027E-04	7	657E-06	1	265E-05	-1	128E-05
2179	1	6	897E-03	7	474E-04	2	186E-03	7	995E-05	5	356E-04	-1	829E-05
2180	1	1	416E-02	-5	422E-04	2	216E-03	8	059E-05	9	112E-04	4	696E-06

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2181	1	1	417E-02	-4	273E-04	2	084E-03	-2	350E-05	8	365E-04	9	169E-06
2182	1	-5	365E-05	1	821E-03	2	148E-03	1	100E-05	1	982E-04	-2	848E-05
2183	1	4	852E-05	1	807E-03	2	089E-03	4	240E-05	1	385E-04	-2	403E-06
2184	1	6	937E-03	7	577E-04	2	189E-03	2	028E-04	5	056E-04	-2	229E-05
2185	1	1	424E-02	-6	388E-04	2	212E-03	4	486E-05	9	226E-04	-1	706E-05
2186	1	1	425E-02	-5	152E-04	2	079E-03	6	974E-05	8	460E-04	-2	046E-05
2187	1	-2	141E-04	1	175E-03	2	165E-03	1	344E-04	1	701E-04	-8	758E-05
2188	1	-7	799E-05	1	863E-03	2	093E-03	-5	033E-05	1	425E-04	-1	327E-05
2189	1	7	035E-03	6	493E-04	2	200E-03	3	595E-04	4	974E-04	-3	092E-05
2190	1	1	424E-02	-6	029E-04	2	084E-03	6	031E-05	8	607E-04	-2	269E-05
2191	1	-2	421E-04	1	859E-03	2	090E-03	3	448E-05	1	003E-04	-6	480E-06
2192	1	6	945E-03	9	883E-04	2	196E-03	-3	870E-05	4	335E-04	-5	555E-07
2193	1	1	418E-02	-3	793E-04	1	964E-03	-4	407E-06	7	146E-04	-9	385E-06
2194	1	1	428E-02	-2	973E-04	1	794E-03	4	519E-05	7	090E-04	1	241E-06
2195	1	-2	248E-05	1	939E-03	1	980E-03	-5	952E-05	1	334E-04	-1	290E-06
2196	1	1	530E-06	2	004E-03	1	914E-03	-4	805E-05	1	450E-04	-1	137E-06
2197	1	6	958E-03	9	316E-04	1	967E-03	2	427E-04	4	334E-04	-3	674E-06
2198	1	1	416E-02	-3	988E-04	1	972E-03	4	394E-05	7	168E-04	8	192E-06
2199	1	1	429E-02	-3	097E-04	1	792E-03	2	848E-05	6	683E-04	1	005E-05
2200	1	-1	498E-04	1	949E-03	1	967E-03	-9	017E-05	1	161E-04	-1	191E-05
2201	1	-8	508E-05	2	010E-03	1	923E-03	-1	045E-04	1	428E-04	-1	841E-05
2202	1	7	053E-03	8	294E-04	1	962E-03	2	352E-04	4	128E-04	3	219E-06
2203	1	1	430E-02	-3	483E-04	1	790E-03	1	366E-04	6	652E-04	5	274E-06
2204	1	-2	740E-04	1	984E-03	1	927E-03	-8	439E-05	1	414E-04	-2	313E-05
2205	1	6	937E-03	1	161E-03	1	633E-03	-2	622E-06	5	967E-04	1	995E-06
2206	1	1	430E-02	-1	443E-04	1	425E-03	5	583E-05	9	184E-04	-5	725E-06
2207	1	1	425E-02	-6	308E-04	2	204E-03	3	293E-05	4	688E-04	-3	608E-06
2208	1	-1	167E-04	2	074E-03	1	807E-03	-8	387E-05	1	557E-04	9	371E-06
2209	1	5	169E-04	1	969E-03	1	905E-03	-4	341E-05	-9	465E-04	7	976E-07
2210	1	6	954E-03	1	134E-03	1	631E-03	1	892E-04	5	994E-04	3	937E-06
2211	1	1	433E-02	-1	888E-04	1	418E-03	7	184E-05	9	001E-04	-1	565E-05
2212	1	1	423E-02	-6	271E-04	2	206E-03	-3	738E-05	5	234E-04	-1	211E-05
2213	1	-2	823E-04	2	061E-03	1	823E-03	-1	470E-04	1	559E-04	2	534E-05
2214	1	4	301E-04	1	964E-03	1	904E-03	-5	792E-05	-9	331E-04	3	653E-05
2215	1	7	038E-03	1	028E-03	1	645E-03	2	321E-04	6	043E-04	6	278E-06
2216	1	1	421E-02	-6	841E-04	2	210E-03	-1	180E-04	5	164E-04	-1	637E-05
2217	1	2	929E-04	1	931E-03	1	891E-03	-4	305E-05	8	529E-04	7	849E-05
2225	1	-2	232E-03	1	526E-03	2	141E-03	-1	940E-04	3	726E-04	4	247E-05
2228	1	-2	625E-03	1	060E-03	2	082E-03	1	387E-03	9	756E-04	-3	960E-04
2229	1	-4	615E-03	1	030E-03	2	153E-03	1	527E-03	5	760E-04	-2	176E-04
2230	1	-4	921E-03	1	534E-03	2	072E-03	-5	152E-05	4	707E-04	1	875E-05
2231	1	5	561E-04	9	914E-04	1	980E-03	-1	617E-03	-4	516E-04	1	765E-04
2232	1	3	572E-04	1	572E-03	1	601E-03	9	096E-04	8	300E-04	-4	911E-04
2233	1	-2	088E-03	1	092E-03	2	154E-03	1	051E-03	2	823E-04	-1	713E-04
2236	1	-1	286E-03	7	309E-04	2	032E-03	6	874E-04	-3	178E-04	2	618E-04
2237	1	-3	366E-03	-2	375E-04	2	139E-03	2	702E-03	2	572E-05	-2	853E-04

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2238	1	-4	156E-03	5	305E-04	2	044E-03	2	817E-03	2	484E-04	3	086E-04
2239	1	6	303E-04	2	155E-03	1	862E-03	5	276E-04	-5	230E-05	2	174E-03
2240	1	5	549E-04	1	514E-03	2	256E-03	1	313E-04	-5	485E-04	6	915E-04
2241	1	-1	839E-03	5	093E-04	2	137E-03	1	264E-03	1	133E-04	-1	642E-04
2243	1	-5	865E-04	5	883E-04	1	955E-03	9	960E-04	2	676E-04	1	092E-03
2244	1	-2	852E-03	-6	361E-04	2	103E-03	2	904E-03	-7	155E-05	-9	379E-05
2245	1	1	262E-03	1	003E-03	2	078E-03	1	193E-03	8	918E-04	1	124E-03
2246	1	-2	131E-03	1	383E-03	1	957E-03	1	179E-04	1	970E-04	-5	843E-06
2249	1	-2	369E-03	1	791E-03	1	841E-03	-2	323E-04	1	097E-04	-8	730E-06
2250	1	-4	450E-03	1	089E-03	1	931E-03	1	234E-03	2	237E-04	-6	381E-05
2251	1	-4	594E-03	1	341E-03	1	854E-03	1	148E-04	1	351E-04	8	593E-07
2252	1	-1	176E-03	1	956E-03	1	870E-03	7	557E-04	2	705E-04	-7	214E-05
2253	1	-3	344E-04	2	366E-03	1	805E-03	2	589E-03	-3	304E-05	2	531E-05
2254	1	-2	072E-03	1	209E-03	1	969E-03	7	454E-04	1	701E-04	-5	891E-05
2257	1	-1	802E-03	9	884E-04	1	968E-03	2	096E-03	2	072E-04	-1	428E-04
2258	1	-3	594E-03	1	026E-04	2	010E-03	2	915E-03	1	418E-04	-1	496E-04
2259	1	-4	123E-03	7	966E-04	1	840E-03	2	343E-03	1	316E-04	-3	546E-05
2260	1	1	094E-03	8	457E-04	1	978E-03	1	485E-03	5	510E-04	2	038E-06
2261	1	4	578E-04	1	553E-03	1	769E-03	1	586E-03	1	084E-04	-6	055E-06
2262	1	-1	947E-03	7	591E-04	2	012E-03	1	244E-03	1	354E-04	-8	854E-05
2264	1	-3	085E-04	-3	124E-04	2	011E-03	2	275E-03	3	132E-04	7	615E-05
2265	1	-2	898E-03	-4	671E-04	1	895E-03	3	244E-03	1	023E-04	-4	914E-05
2266	1	1	864E-03	5	303E-04	1	677E-03	1	382E-03	3	249E-04	1	370E-04
2267	1	-2	087E-03	1	478E-03	1	771E-03	3	411E-05	2	159E-05	-4	106E-06
2270	1	-2	436E-03	1	832E-03	1	659E-03	7	865E-05	1	544E-04	1	994E-05
2271	1	-4	323E-03	1	083E-03	1	773E-03	1	209E-03	8	545E-05	-1	147E-06
2272	1	-4	230E-03	1	338E-03	1	498E-03	7	768E-05	-2	623E-04	1	216E-05
2273	1	8	581E-05	2	085E-03	1	632E-03	8	184E-04	-5	119E-05	6	797E-05
2274	1	5	899E-04	1	972E-03	1	678E-03	7	319E-06	1	275E-03	-3	403E-05
2275	1	-2	025E-03	1	279E-03	1	795E-03	6	699E-04	2	829E-05	1	107E-05
2278	1	-1	684E-03	1	078E-03	1	686E-03	2	022E-03	8	528E-05	8	749E-06
2279	1	-3	453E-03	2	020E-04	1	774E-03	2	854E-03	1	055E-04	-7	711E-05
2280	1	-3	779E-03	8	507E-04	1	506E-03	2	222E-03	-1	163E-04	1	871E-04
2281	1	1	340E-03	9	894E-04	1	579E-03	1	968E-03	-6	166E-05	3	087E-04
2282	1	1	877E-03	8	857E-04	1	801E-03	6	244E-04	8	532E-04	-6	143E-04
2283	1	-1	877E-03	8	857E-04	1	771E-03	1	125E-03	2	368E-05	-1	178E-05
2285	1	-2	136E-04	-4	672E-05	1	623E-03	2	569E-03	1	793E-04	6	145E-05
2286	1	-2	691E-03	-3	656E-04	1	655E-03	2	970E-03	2	935E-05	1	748E-04
2287	1	1	700E-03	1	367E-03	1	590E-03	1	007E-03	-1	295E-04	-1	417E-03
2300	1	2	372E-03	6	291E-03	1	764E-03	-6	409E-03	1	131E-03	2	242E-03
2301	1	3	397E-03	7	861E-03	1	923E-03	-1	302E-02	1	079E-03	4	037E-03
2302	1	3	890E-03	9	948E-03	1	734E-03	1	437E-02	9	165E-04	1	657E-03
2305	1	3	370E-03	3	781E-03	2	099E-03	-7	164E-03	-9	834E-04	4	162E-03
2306	1	1	172E-02	4	666E-03	2	224E-03	-5	796E-03	4	153E-04	7	456E-03
2307	1	1	058E-02	2	047E-03	2	927E-03	-1	419E-02	-4	725E-05	2	714E-03
2310	1	6	430E-03	2	396E-03	2	055E-03	-1	382E-03	1	287E-03	3	595E-03

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2311	1	1	482E-02	-1	358E-03	1	613E-03	1	858E-03	7	752E-04	-2	622E-03
2313	1	2	797E-03	5	244E-03	1	846E-03	-5	933E-03	4	613E-04	5	636E-04
2314	1	7	558E-03	6	283E-03	1	388E-03	-1	436E-02	-3	781E-04	-2	379E-04
2315	1	4	021E-03	1	046E-02	1	322E-03	-1	433E-02	-2	042E-05	8	187E-04
2318	1	5	735E-03	2	293E-03	1	540E-03	-5	714E-03	3	697E-05	-1	024E-03
2319	1	1	342E-02	1	408E-03	1	289E-03	7	435E-03	8	501E-04	-8	958E-06
2320	1	1	120E-02	3	273E-03	1	541E-03	-1	340E-02	-7	398E-04	8	184E-04
2323	1	7	263E-03	1	191E-03	1	586E-03	-1	410E-03	-6	196E-04	1	066E-03
2324	1	7	509E-02	-1	267E-03	1	617E-03	-1	144E-03	-3	320E-04	5	477E-04
2326	1	2	989E-03	5	394E-03	1	284E-03	-6	483E-03	-4	830E-04	6	042E-04
2327	1	7	163E-03	7	044E-03	1	080E-03	-1	389E-02	-8	015E-04	5	262E-05
2328	1	4	419E-03	9	012E-03	2	149E-03	-1	293E-02	-4	855E-04	4	691E-04
2331	1	3	616E-03	2	721E-03	1	375E-03	-5	573E-03	-6	248E-04	4	089E-06
2332	1	1	311E-02	1	188E-03	1	235E-03	-6	749E-03	-1	104E-03	-3	615E-04
2333	1	1	120E-02	1	886E-03	2	351E-03	-1	372E-02	-3	546E-04	5	531E-04
2336	1	7	414E-03	6	795E-04	1	564E-03	-6	102E-05	-6	205E-04	-2	945E-04
2337	1	1	445E-02	-2	238E-04	2	155E-03	-1	829E-04	-3	692E-04	-1	641E-04
2346	1	9	447E-04	6	949E-03	1	458E-03	4	239E-03	1	666E-03	9	104E-05
2347	1	-7	191E-04	1	447E-02	1	588E-03	2	009E-03	1	706E-03	9	281E-04
2348	1	-1	397E-04	1	410E-02	1	202E-03	7	647E-03	1	783E-03	5	147E-04
2349	1	2	099E-03	3	439E-04	1	515E-03	1	481E-03	1	759E-03	1	908E-04
2350	1	2	282E-03	3	624E-04	1	263E-03	6	050E-04	1	400E-03	-2	529E-04
2351	1	7	037E-04	7	683E-03	1	606E-03	-5	208E-04	1	784E-03	1	013E-03
2352	1	1	609E-03	1	307E-02	1	690E-03	-9	565E-03	1	110E-03	1	848E-03
2353	1	-3	607E-04	1	452E-02	1	443E-03	-4	340E-03	1	411E-03	1	132E-03
2354	1	1	351E-03	1	385E-03	1	673E-03	1	649E-03	1	618E-03	1	320E-03
2355	1	2	097E-03	3	807E-04	1	664E-03	1	660E-03	1	550E-03	2	437E-04
2359	1	1	445E-03	6	996E-03	1	003E-03	4	100E-03	1	302E-03	1	894E-04
2360	1	1	176E-04	1	429E-02	1	098E-03	1	925E-03	1	347E-03	4	469E-04
2361	1	4	003E-04	1	422E-02	7	943E-04	7	183E-03	9	177E-04	5	593E-04
2362	1	2	293E-03	2	918E-04	1	288E-03	8	572E-04	1	147E-03	2	139E-04
2363	1	2	414E-03	4	002E-04	9	444E-04	-3	466E-05	6	036E-04	-1	456E-04
2364	1	1	141E-03	7	236E-03	1	390E-03	-1	515E-03	1	171E-03	4	505E-04
2365	1	1	742E-03	1	216E-02	1	541E-03	-9	356E-03	6	788E-04	6	887E-04
2366	1	2	600E-05	1	451E-02	1	159E-03	-4	047E-03	9	730E-04	1	329E-03
2367	1	1	991E-03	4	046E-04	1	682E-03	1	440E-03	6	174E-04	3	254E-04
2368	1	2	477E-03	2	280E-04	1	364E-03	1	514E-03	4	699E-04	-2	091E-04
2372	1	1	747E-03	7	183E-03	5	138E-04	3	043E-03	4	939E-04	7	780E-04
2373	1	5	299E-04	1	459E-02	1	043E-04	1	398E-03	-1	321E-04	5	763E-04
2374	1	2	849E-04	1	360E-02	1	627E-03	7	422E-03	2	984E-04	1	205E-04
2375	1	2	597E-03	2	257E-04	1	069E-03	7	258E-04	4	437E-04	3	909E-04
2376	1	2	872E-03	9	481E-04	8	002E-04	1	738E-03	-8	119E-04	-2	244E-03
2377	1	1	544E-03	7	691E-03	6	860E-04	-1	164E-04	-1	051E-04	5	314E-04
2378	1	2	216E-03	1	315E-02	6	549E-04	-8	852E-03	-8	547E-04	5	855E-04
2379	1	3	209E-04	1	352E-02	1	788E-03	-6	377E-03	-3	756E-04	4	154E-04
2380	1	2	197E-03	5	261E-04	1	290E-03	1	269E-03	2	945E-04	6	932E-04

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2381	1	2	191E-03	1	109E-03	1	235E-03	-1	337E-04	-4	949E-04	-1	759E-03
2392	1	4	625E-03	3	337E-03	1	330E-03	8	142E-03	1	660E-03	7	108E-04
2393	1	6	273E-03	7	106E-03	1	339E-03	1	668E-02	2	101E-03	6	896E-04
2394	1	9	029E-03	5	143E-03	8	457E-04	1	590E-02	1	620E-03	5	586E-04
2395	1	1	070E-03	1	360E-03	1	422E-03	-2	890E-04	1	258E-03	3	971E-04
2396	1	3	856E-04	1	670E-03	8	539E-04	-1	207E-03	1	334E-03	4	284E-04
2397	1	2	496E-03	5	643E-03	1	443E-03	7	944E-03	1	632E-03	2	316E-04
2398	1	1	293E-03	1	218E-02	1	489E-03	1	247E-02	1	979E-03	2	368E-04
2399	1	3	828E-03	1	024E-02	9	201E-04	1	567E-02	1	975E-03	8	215E-05
2400	1	1	736E-03	8	545E-04	1	397E-03	3	306E-04	1	465E-03	2	761E-04
2401	1	1	569E-03	1	528E-03	1	077E-03	-4	101E-04	1	146E-03	4	005E-C4
2405	1	3	415E-03	3	615E-03	2	529E-04	7	053E-03	1	471E-03	2	690E-C4
2406	1	6	731E-03	7	699E-03	4	588E-04	1	511E-02	1	859E-03	4	951E-C4
2407	1	9	620E-03	5	316E-03	1	514E-03	-1	225E-03	1	076E-03	1	111E-C4
2408	1	1	741E-03	1	569E-03	4	156E-04	-1	225E-03	1	187E-03	5	483E-C5
2409	1	5	854E-04	1	900E-03	3	940E-03	-2	344E-03	4	301E-04	2	597E-04
2410	1	3	107E-03	5	874E-03	6	051E-04	6	873E-03	1	517E-03	2	788E-04
2411	1	2	056E-03	1	239E-02	7	489E-04	1	129E-02	1	542E-03	3	193E-05
2412	1	4	539E-03	1	020E-02	3	987E-04	1	463E-02	1	257E-03	3	203E-04
2413	1	2	143E-03	8	959E-04	8	726E-04	-6	882E-05	1	180E-03	1	510E-04
2414	1	2	033E-03	1	187E-03	6	111E-04	-6	918E-04	4	742E-04	3	519E-04
2418	1	5	113E-03	4	322E-03	8	500E-05	6	250E-03	7	449E-04	9	450E-05
2419	1	7	287E-03	7	909E-03	-4	555E-04	1	493E-02	8	682E-04	3	917E-04
2420	1	9	493E-03	4	932E-03	1	148E-03	1	443E-02	2	931E-04	4	508E-04
2421	1	1	466E-03	1	461E-03	6	080E-04	-1	963E-03	8	426E-05	7	501E-05
2422	1	1	684E-03	1	374E-03	1	609E-04	1	681E-05	-1	263E-03	1	743E-03
2423	1	3	488E-03	5	571E-03	2	939E-04	6	542E-03	4	448E-04	6	012E-04
2424	1	2	828E-03	1	216E-02	-1	673E-04	1	032E-02	6	608E-04	8	706E-04
2425	1	3	671E-03	1	046E-02	1	316E-03	1	453E-02	-4	151E-05	5	493E-04
2426	1	2	153E-03	6	859E-04	9	160E-04	-7	533E-04	3	758E-04	4	971E-04
2427	1	1	617E-03	2	587E-03	4	297E-04	-1	802E-03	-1	026E-03	2	061E-03
2438	1	1	096E-02	9	080E-04	1	268E-03	9	142E-04	7	818E-04	1	998E-03
2439	1	1	447E-02	4	405E-04	1	151E-03	4	631E-03	1	175E-03	3	867E-04
2440	1	1	535E-02	-4	861E-04	7	108E-04	-3	575E-04	9	797E-04	3	636E-04
2441	1	5	246E-03	2	164E-03	1	321E-03	2	059E-03	1	301E-03	7	562E-05
2442	1	5	660E-03	1	977E-03	6	205E-04	8	693E-04	1	487E-03	9	046E-04
2443	1	9	007E-03	1	626E-03	1	109E-03	6	821E-03	1	563E-03	-1	981E-03
2444	1	1	155E-02	2	744E-03	1	108E-03	1	341E-02	1	614E-03	-1	523E-03
2445	1	1	371E-02	1	085E-03	7	387E-04	9	908E-03	1	356E-03	4	400E-04
2446	1	1	492E-03	2	209E-03	1	281E-03	1	108E-03	6	293E-04	6	739E-04
2447	1	3	527E-03	2	536E-03	6	643E-04	1	749E-03	1	670E-03	-4	144E-04
2451	1	1	066E-02	1	268E-03	-3	539E-04	4	146E-05	1	337E-03	5	149E-04
2452	1	1	492E-02	8	981E-04	-2	955E-04	4	643E-03	1	404E-03	4	065E-04
2453	1	1	560E-02	-9	930E-06	-2	731E-04	-1	314E-04	6	868E-04	3	621E-05
2454	1	4	023E-03	2	566E-03	-2	628E-04	4	566E-04	1	450E-03	3	301E-04
2455	1	3	383E-03	2	688E-03	4	810E-05	1	982E-04	6	087E-04	-2	461E-04

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2456	1	8	808E-03	2	289E-03	-1	818E-04	5	343E-03	1	297E-03	-5	580E-04
2457	1	1	175E-02	3	247E-03	7	066E-05	1	264E-02	1	848E-03	-6	632E-04
2458	1	1	383E-02	1	792E-03	-2	357E-04	9	353E-03	8	054E-04	-1	617E-04
2459	1	1	761E-03	2	472E-03	7	203E-05	-6	220E-04	1	407E-03	-3	239E-04
2460	1	2	355E-03	2	657E-03	1	706E-04	7	532E-06	5	782E-04	2	324E-05
2464	1	8	867E-03	1	624E-03	-1	627E-04	1	436E-04	8	950E-04	4	779E-05
2465	1	1	463E-02	1	052E-03	4	236E-04	4	569E-03	1	234E-03	-1	345E-04
2466	1	1	511E-02	-5	812E-04	8	332E-04	1	330E-04	7	455E-04	-1	717E-05
2467	1	1	988E-03	2	726E-03	6	443E-05	-2	822E-04	3	128E-04	-4	314E-05
2468	1	2	014E-03	2	577E-03	2	276E-04	3	495E-05	-1	264E-03	4	224E-05
2469	1	7	710E-03	2	395E-03	-1	477E-04	4	302E-03	9	711E-04	-1	332E-04
2470	1	1	169E-02	3	837E-03	-5	349E-04	1	209E-02	1	272E-03	-1	380E-04
2471	1	1	340E-02	9	948E-04	9	351E-04	9	589E-03	8	260E-04	-2	877E-04
2472	1	9	659E-04	2	547E-03	2	175E-04	-1	768E-03	1	870E-04	8	719E-05
2473	1	1	869E-03	2	436E-03	1	819E-04	-3	825E-04	-1	165E-03	-4	218E-04
2484	1	-1	760E-04	1	886E-03	8	652E-04	7	318E-04	2	631E-03	1	116E-03
2487	1	-3	812E-03	1	164E-03	1	337E-04	-6	955E-04	4	130E-03	-3	738E-04
2488	1	-2	822E-03	1	360E-03	-2	974E-04	-1	199E-04	2	681E-03	-3	619E-05
2489	1	-1	361E-03	1	502E-03	1	108E-03	3	541E-05	2	105E-03	-1	387E-03
2492	1	-2	890E-03	1	600E-04	5	295E-04	-1	667E-03	3	999E-03	-5	234E-04
2493	1	-2	547E-03	8	459E-04	-2	624E-04	-1	543E-03	2	596E-03	-9	075E-05
2494	1	-2	151E-03	4	447E-04	1	457E-03	-1	611E-03	2	078E-03	-4	286E-04
2496	1	-1	341E-03	-4	038E-06	-2	063E-04	-1	872E-03	2	403E-03	-1	152E-04
2497	1	1	977E-04	2	031E-03	-5	634E-05	-1	338E-04	8	624E-04	-2	516E-04
2500	1	-2	900E-03	1	234E-03	1	559E-04	-8	821E-04	1	555E-04	2	893E-05
2501	1	-3	087E-03	1	413E-03	-1	891E-06	-7	482E-05	2	598E-04	2	858E-05
2502	1	-2	976E-04	1	776E-03	4	893E-05	-1	088E-03	8	968E-04	-1	497E-04
2503	1	-2	084E-03	5	490E-04	1	233E-04	-1	909E-03	2	120E-04	2	103E-05
2505	1	-2	769E-03	1	066E-03	-6	284E-06	-1	649E-03	2	235E-04	-4	246E-06
2507	1	-7	774E-04	8	612E-04	2	298E-04	-2	497E-03	8	713E-04	-5	807E-05
2509	1	-1	594E-03	2	428E-04	1	456E-05	-1	960E-03	1	857E-04	2	338E-05
2510	1	-8	775E-04	2	144E-03	-8	845E-05	3	695E-05	-7	569E-05	4	072E-05
2513	1	-2	914E-03	1	310E-03	-8	868E-05	-8	010E-04	-1	383E-04	2	854E-06
2514	1	-2	854E-03	1	541E-03	-2	207E-04	-2	714E-05	1	251E-04	-1	127E-05
2515	1	-9	171E-04	1	787E-03	-6	190E-05	-1	410E-03	-1	607E-04	-1	158E-04
2518	1	-2	149E-03	6	552E-04	-5	234E-05	-1	727E-03	-1	726E-04	-1	406E-05
2519	1	-2	719E-03	1	193E-03	1	721E-04	-1	510E-03	1	277E-04	1	584E-04
2520	1	-9	087E-04	9	012E-04	7	865E-05	-2	507E-03	-2	217E-04	1	123E-04
2522	1	-1	725E-03	3	301E-04	-6	909E-05	-2	338E-03	1	032E-04	3	621E-04
2530	1	-3	579E-04	5	403E-04	-9	079E-04	-1	514E-05	-3	202E-04	4	524E-06
2533	1	-4	803E-04	9	748E-05	-7	418E-04	2	541E-05	-8	588E-04	3	818E-05
2534	1	-4	408E-04	5	746E-05	-6	178E-04	5	788E-06	-7	128E-05	5	115E-06
2535	1	-3	282E-04	1	125E-06	-6	440E-04	3	482E-05	-1	407E-05	-1	082E-05
2537	1	-3	280E-04	2	610E-05	-6	777E-04	1	159E-05	2	577E-05	-1	020E-06
2538	1	1	745E-04	3	244E-04	-8	468E-04	-4	261E-04	1	758E-03	-6	373E-05

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2541	1	-3	525E-04	7	025E-05	-6	677E-04	-4	570E-05	-2	775E-04	5	960E-06
2542	1	-5	012E-04	1	046E-04	-7	173E-04	4	080E-05	-7	302E-04	6	574E-05
2543	1	-4	595E-04	8	491E-05	-6	099E-04	2	835E-05	-7	744E-05	4	194E-05
2544	1	-3	246E-04	6	285E-06	-6	397E-04	4	530E-05	-1	254E-05	-1	264E-05
2545	1	-3	349E-04	1	534E-05	-6	726E-04	3	668E-05	2	274E-05	4	420E-06
2546	1	2	041E-04	1	044E-05	-7	462E-04	5	102E-04	1	431E-03	-6	630E-05
2548	1	-3	460E-04	5	069E-05	-6	542E-04	-5	846E-05	-2	214E-04	4	602E-06
2549	1	-4	901E-04	1	316E-04	-5	826E-04	5	250E-08	-7	622E-05	4	785E-05
2550	1	-3	233E-04	-2	194E-05	-6	652E-04	4	194E-06	1	271E-05	1	065E-05
2551	1	-1	329E-03	5	856E-04	-2	253E-04	1	617E-05	5	192E-04	1	766E-05
2554	1	-4	853E-04	9	481E-05	-5	841E-04	-1	461E-05	2	244E-04	-4	060E-06
2555	1	-3	859E-04	9	429E-05	-5	488E-04	-2	270E-06	5	030E-04	1	089E-05
2556	1	-3	763E-04	1	238E-04	-4	727E-04	1	042E-05	2	488E-04	-6	245E-06
2557	1	-3	645E-04	6	744E-06	-6	308E-04	1	346E-05	7	039E-05	7	805E-06
2558	1	-4	291E-04	1	323E-05	-5	800E-04	9	950E-06	-7	870E-06	6	179E-06
2559	1	-1	206E-03	4	865E-04	-2	379E-04	-5	045E-04	4	903E-04	5	926E-05
2562	1	-4	719E-04	7	458E-05	-5	802E-04	3	604E-05	2	037E-04	6	211E-06
2563	1	-4	157E-04	1	023E-04	-5	331E-04	-2	680E-05	4	141E-04	3	175E-05
2564	1	-5	823E-04	1	055E-04	-4	662E-04	-1	830E-05	2	343E-04	4	093E-05
2565	1	-3	579E-04	3	184E-06	-6	327E-04	2	105E-06	5	464E-05	1	624E-05
2566	1	-4	344E-04	1	806E-05	-5	871E-04	3	193E-05	-2	178E-06	-4	522E-06
2567	1	-9	438E-04	1	784E-04	-2	473E-04	-6	438E-04	4	153E-04	7	864E-05
2569	1	-4	502E-04	5	211E-05	-5	750E-04	-4	721E-05	1	611E-04	7	405E-06
2570	1	-5	981E-04	1	366E-04	-4	664E-04	-7	439E-05	1	489E-04	3	906E-05
2571	1	-4	063E-04	-2	126E-05	-5	942E-04	4	957E-06	4	392E-06	1	779E-06
2572	1	-1	524E-03	7	058E-04	-1	639E-04	-9	021E-06	9	290E-05	-2	380E-06
2575	1	-6	447E-04	1	134E-04	-4	853E-04	-5	327E-06	5	120E-05	-9	115E-08
2576	1	-8	055E-04	1	506E-04	-3	479E-04	-2	153E-05	2	006E-04	2	309E-05
2577	1	-9	117E-04	1	720E-04	-2	790E-04	-1	703E-05	-4	773E-05	4	799E-06
2578	1	-4	755E-04	1	598E-06	-5	808E-04	2	508E-05	-9	331E-05	-5	153E-06
2579	1	-5	060E-04	4	241E-06	-5	615E-04	1	338E-05	-4	228E-05	-1	990E-06
2580	1	-1	380E-03	5	745E-04	-1	573E-04	-5	847E-04	6	369E-05	4	006E-05
2583	1	-6	214E-04	9	310E-05	-4	897E-04	-5	774E-05	4	007E-05	1	234E-05
2584	1	-7	853E-04	1	423E-04	-3	616E-04	-7	434E-05	1	356E-04	6	199E-05
2585	1	-8	901E-04	1	538E-04	-2	982E-04	-5	125E-05	-8	407E-05	1	065E-05
2586	1	-4	628E-04	1	527E-06	-5	870E-04	3	372E-05	-7	064E-05	-1	255E-05
2587	1	-5	178E-04	1	097E-05	-5	627E-04	4	297E-05	-3	945E-05	-9	458E-06
2588	1	-1	093E-03	2	377E-04	-1	513E-04	-7	289E-04	-1	535E-05	-3	240E-07
2590	1	-5	797E-04	6	480E-05	-4	958E-04	-7	454E-05	1	707E-05	2	369E-05
2591	1	-8	379E-04	1	614E-04	-3	346E-04	-1	299E-04	-1	379E-04	1	161E-05
2592	1	-4	862E-04	-2	165E-05	-5	755E-04	-8	911E-06	-3	144E-05	-5	526E-06
2606	1	1	421E-02	-6	800E-04	2	212E-03	5	332E-05	9	369E-04	-1	092E-05
2605	1	-2	454E-04	1	638E-03	2	177E-03	2	275E-04	6	378E-05	-9	438E-05
2610	1	7	062E-03	5	094E-04	2	202E-03	2	210E-04	4	661E-04	-3	345E-05
2611	1	1	423E-02	-7	281E-04	2	214E-03	1	770E-05	9	441E-04	-1	936E-05
2612	1	1	426E-02	-5	957E-04	2	084E-03	6	328E-07	8	569E-04	1	014E-06

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2613	1	-2.036E-04	1.524E-03	2.179E-03	9.622E-05	-1.553E-05	-3.167E-05
2614	1	-2.071E-04	1.673E-03	2.088E-03	1.272E-04	5.906E-05	-4.554E-05
2615	1	7.140E-03	4.595E-04	2.066E-03	4.663E-05	4.706E-04	8.811E-06
2616	1	1.422E-02	-6.520E-04	2.087E-03	-8.466E-05	8.560E-04	-6.491E-06
2617	1	-2.342E-04	1.661E-03	2.084E-03	2.820E-05	3.435E-05	8.104E-06
2619	1	1.421E-02	-4.706E-04	1.974E-03	6.376E-05	7.202E-04	-3.072E-06
2621	1	-2.449E-04	1.862E-03	1.963E-03	3.375E-05	1.014E-04	-9.589E-06
2623	1	7.091E-03	7.319E-04	1.962E-03	2.331E-04	4.204E-04	5.431E-06
2624	1	1.420E-02	-4.783E-04	1.971E-03	-4.874E-05	7.170E-04	-4.088E-07
2625	1	1.439E-02	-4.015E-04	1.792E-03	-2.930E-05	6.794E-04	-1.980E-07
2626	1	-2.754E-04	1.804E-03	1.971E-03	3.400E-05	8.639E-05	-6.883E-06
2627	1	-3.154E-04	1.878E-03	1.929E-03	4.856E-05	1.271E-04	-1.629E-05
2628	1	7.142E-03	7.096E-04	1.964E-03	6.731E-05	4.208E-04	-1.353E-06
2629	1	1.430E-02	-4.705E-04	1.792E-03	-8.070E-05	6.589E-04	7.525E-07
2630	1	-3.634E-04	1.911E-03	1.931E-03	4.433E-05	1.247E-04	-2.472E-06
2632	1	1.437E-02	-2.581E-04	1.410E-03	5.963E-05	9.149E-04	-3.656E-06
2634	1	-4.157E-04	2.044E-03	1.850E-03	-4.261E-05	1.444E-04	-2.085E-05
2636	1	7.057E-03	9.386E-04	1.652E-03	2.024E-04	5.845E-04	6.481E-06
2637	1	1.434E-02	-2.637E-04	1.407E-03	-3.063E-05	9.092E-04	-1.304E-05
2638	1	1.428E-02	-6.962E-04	2.205E-03	-5.510E-05	4.747E-04	-6.702E-06
2639	1	-4.712E-04	1.994E-03	1.865E-03	3.025E-07	1.452E-04	2.125E-05
2640	1	2.789E-04	1.776E-03	1.893E-03	7.625E-05	-7.718E-04	5.899E-05
2641	1	7.113E-03	9.182E-04	1.655E-03	6.565E-05	5.907E-04	3.673E-06
2642	1	1.419E-02	-7.831E-04	2.214E-03	-7.516E-05	5.514E-04	1.108E-05
2643	1	2.324E-04	1.849E-03	1.887E-03	1.983E-05	-7.467E-04	-7.879E-06
2655	1	-2.482E-03	-7.891E-04	2.130E-03	1.808E-03	-6.059E-05	5.598E-05
2657	1	1.012E-03	5.580E-05	1.740E-03	1.097E-03	1.317E-03	1.259E-03
2659	1	-1.531E-03	2.684E-04	2.148E-03	7.649E-04	2.794E-05	-4.619E-05
2662	1	-3.470E-04	1.529E-03	1.930E-03	1.451E-03	7.829E-04	4.437E-04
2663	1	-2.030E-03	1.034E-03	2.139E-03	6.876E-04	1.533E-04	6.929E-05
2664	1	-2.103E-03	1.107E-03	2.126E-03	1.681E-03	4.321E-05	9.423E-05
2665	1	1.268E-03	-2.748E-03	1.687E-03	8.143E-04	1.551E-03	2.679E-04
2666	1	1.334E-03	-2.694E-03	1.875E-03	1.727E-03	1.209E-03	3.693E-04
2667	1	-1.448E-03	8.130E-05	2.147E-03	-1.042E-05	2.383E-05	-2.593E-06
2669	1	9.151E-05	-2.289E-03	1.907E-03	2.567E-05	9.858E-04	1.260E-05
2670	1	-1.623E-03	-1.490E-03	2.121E-03	6.330E-05	1.804E-04	2.191E-05
2671	1	1.597E-03	-3.814E-03	1.772E-03	-1.215E-05	1.296E-03	1.725E-05
2676	1	-2.489E-03	9.049E-04	2.086E-03	2.623E-03	1.13E-04	-7.825E-05
2678	1	1.676E-03	-1.270E-03	1.870E-03	1.392E-03	7.693E-04	1.786E-04
2680	1	-1.599E-04	3.580E-04	2.033E-03	8.236E-04	9.167E-05	-5.113E-05
2683	1	1.353E-04	-2.397E-03	1.991E-03	1.930E-03	4.870E-04	3.277E-05
2684	1	-1.712E-03	-1.495E-03	2.099E-03	1.028E-03	1.359E-04	-8.773E-06
2685	1	-1.886E-03	-1.149E-03	1.921E-03	1.966E-03	9.473E-05	-4.848E-07
2686	1	1.691E-03	-3.653E-03	1.803E-03	7.644E-04	9.519E-04	1.033E-05
2687	1	1.712E-03	-3.067E-03	1.619E-03	1.731E-03	4.861E-04	2.144E-06
2688	1	-1.466E-03	9.744E-05	2.041E-03	7.029E-06	8.456E-05	-5.574E-06

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2690	1	5	794E-04	-3	045E-03	1	941E-03	-1	048E-06	6	233E-04	-3	604E-06
2691	1	-1	279E-03	-1	677E-03	1	930E-03	7	043E-05	1	385E-04	7	580E-06
2692	1	1	851E-03	-3	909E-03	1	526E-03	-3	790E-03	5	414E-04	-1	084E-05
2697	1	-2	290E-03	-7	521E-04	1	758E-03	2	571E-03	7	900E-05	-6	746E-05
2699	1	1	848E-03	-1	178E-03	1	454E-03	1	618E-03	1	519E-04	1	139E-04
2701	1	-1	533E-03	5	126E-04	1	780E-03	7	668E-04	2	485E-05	-3	125E-06
2704	1	3	427E-04	-2	325E-03	1	625E-03	1	949E-03	1	581E-04	-6	495E-05
2705	1	-1	457E-03	-1	357E-03	1	752E-03	1	025E-03	7	016E-05	-2	984E-05
2706	1	-1	884E-03	-9	288E-04	1	777E-03	1	856E-03	-4	774E-05	4	722E-05
2707	1	1	861E-03	-3	456E-03	1	399E-03	7	795E-04	1	834E-04	-5	239E-05
2708	1	1	951E-03	-2	368E-03	1	153E-03	1	454E-03	-2	748E-04	-5	813E-04
2709	1	-1	387E-03	2	410E-04	1	782E-03	6	322E-07	2	139E-05	3	740E-06
2711	1	7	761E-04	-2	860E-03	1	568E-03	-8	655E-08	1	307E-04	-1	687E-05
2712	1	-1	270E-03	-1	478E-03	1	789E-03	9	434E-05	-1	208E-04	-6	425E-06
2713	1	1	974E-03	-3	202E-03	9	393E-04	-8	291E-05	-4	526E-04	3	357E-07
2730	1	1	784E-03	-1	228E-03	1	572E-03	1	130E-03	1	766E-03	3	451E-04
2732	1	1	260E-03	-1	471E-03	1	474E-03	-4	423E-04	1	443E-03	-2	080E-04
2734	1	1	449E-03	-2	656E-03	1	643E-03	1	080E-03	1	590E-03	2	332E-04
2737	1	1	149E-03	-3	274E-03	1	534E-03	-4	938E-04	1	485E-03	-1	638E-04
2738	1	1	439E-03	-3	288E-03	1	540E-03	4	334E-05	1	538E-03	-4	479E-05
2739	1	1	770E-03	-3	453E-03	1	547E-03	2	183E-04	1	398E-03	-1	596E-05
2740	1	1	857E-04	-2	503E-03	1	476E-03	-6	755E-04	1	460E-03	-9	596E-05
2741	1	7	299E-04	-3	043E-03	1	250E-03	-1	524E-04	1	303E-03	-1	224E-04
2742	1	1	312E-03	-3	452E-03	1	590E-03	-6	352E-05	1	569E-03	-4	195E-05
2744	1	4	448E-04	-2	841E-03	1	482E-03	-8	745E-05	1	502E-03	4	942E-07
2745	1	1	204E-03	-3	457E-03	1	466E-03	-1	600E-04	1	333E-03	1	260E-05
2746	1	-2	807E-05	-2	169E-03	1	153E-03	-6	531E-05	1	255E-03	3	137E-05
2751	1	1	948E-03	-1	599E-03	1	475E-03	5	441E-04	1	092E-03	1	542E-04
2753	1	1	495E-03	-1	451E-03	1	138E-03	-6	066E-04	1	024E-03	-1	841E-04
2755	1	1	774E-03	-3	288E-03	1	655E-03	7	627E-04	9	652E-04	-7	037E-05
2758	1	1	319E-03	-3	313E-03	1	325E-03	-7	392E-04	9	502E-04	-2	179E-04
2759	1	1	493E-03	-3	435E-03	1	429E-03	-8	010E-05	1	001E-03	-6	589E-05
2760	1	1	912E-03	-3	486E-03	1	275E-03	-1	133E-04	5	873E-04	-5	008E-05
2761	1	4	133E-04	-2	360E-03	1	090E-03	-7	608E-04	9	299E-04	-1	474E-04
2762	1	9	009E-04	-2	861E-03	9	104E-04	-1	639E-03	4	627E-04	-2	121E-04
2763	1	1	493E-03	-3	752E-03	1	552E-03	-1	028E-04	9	907E-04	1	256E-05
2765	1	6	363E-04	-2	779E-03	1	174E-03	-1	202E-04	9	534E-04	2	358E-05
2766	1	1	254E-03	-3	145E-03	1	174E-03	-1	240E-04	4	641E-04	-4	821E-05
2772	1	2	030E-04	-1	891E-03	8	069E-04	-5	262E-05	4	120E-04	3	838E-05
2777	1	2	324E-03	-1	764E-03	1	179E-03	6	614E-04	4	208E-04	2	369E-04
2774	1	1	446E-03	-1	207E-03	9	135E-04	-1	367E-03	-1	534E-04	-1	947E-04
2776	1	1	901E-03	-3	331E-03	1	343E-03	9	244E-04	1	334E-04	-1	166E-04
2779	1	1	456E-03	-3	229E-03	1	046E-03	-1	073E-03	-1	886E-04	-4	057E-04
2780	1	1	575E-03	-3	170E-03	1	104E-03	-2	802E-04	-5	513E-05	-1	883E-04
2781	1	1	832E-03	-2	270E-03	7	055E-04	-9	354E-05	-4	713E-04	-1	112E-04
2782	1	5	482E-04	-1	988E-03	7	144E-04	-7	787E-04	-3	677E-04	-2	454E-04

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2783	1	1	196E-03	-2	154E-03	2	574E-04	-1	033E-03	-5	165E-04	-2	677E-04
2784	1	1	562E-03	-3	364E-03	1	156E-03	-1	719E-04	3	862E-05	-4	543E-05
2786	1	7	187E-04	-2	232E-03	7	681E-04	-5	617E-05	-2	458E-04	-5	370E-05
2787	1	1	357E-03	-2	413E-03	4	736E-04	-2	044E-05	-3	636E-04	7	565E-05
2788	1	3	646E-04	-1	471E-03	3	209E-04	-1	816E-04	-1	336E-04	-3	614E-05
2805	1	3	488E-04	-6	684E-04	1	333E-03	-1	265E-03	1	451E-03	-1	716E-04
2807	1	-7	368E-04	-3	287E-04	1	497E-03	-1	907E-03	8	713E-04	-3	173E-04
2809	1	-9	227E-05	-2	749E-03	1	403E-03	-2	075E-03	1	499E-03	-1	990E-04
2812	1	-9	106E-04	-1	825E-03	1	377E-03	-3	520E-03	1	350E-03	-1	221E-04
2813	1	-5	780E-04	-1	763E-03	1	250E-03	-9	041E-04	1	599E-03	-4	305E-05
2814	1	-3	256E-04	-2	296E-03	1	128E-03	-2	611E-03	1	150E-03	-1	690E-04
2815	1	-1	170E-03	-1	224E-03	1	413E-03	-9	224E-04	1	080E-03	-3	872E-05
2816	1	-1	223E-03	-1	129E-03	1	011E-03	-2	611E-03	1	475E-03	-1	156E-04
2817	1	-4	147E-04	-1	938E-03	1	321E-03	1	775E-05	1	654E-03	2	078E-05
2819	1	-8	272E-04	-1	511E-03	1	295E-03	1	098E-04	1	441E-03	2	863E-05
2820	1	-6	733E-04	-1	473E-03	1	057E-03	1	871E-04	1	269E-03	2	628E-05
2821	1	-6	607E-04	-1	071E-03	8	243E-04	2	608E-05	1	681E-03	4	169E-05
2826	1	7	190E-04	-5	241E-04	7	567E-04	-1	915E-03	1	238E-03	-2	550E-04
2828	1	-1	589E-04	1	647E-05	3	461E-04	-2	398E-03	1	243E-03	-1	549E-04
2830	1	2	997E-04	-2	640E-03	1	002E-03	-2	223E-03	1	040E-03	-2	991E-04
2833	1	-4	846E-04	-1	553E-03	6	264E-04	-2	744E-03	1	016E-03	-2	618E-04
2834	1	-2	010E-04	-1	488E-03	7	309E-04	-9	969E-04	1	246E-03	-1	746E-04
2835	1	-7	157E-05	-1	906E-03	6	114E-04	-2	655E-03	3	400E-04	-2	124E-04
2836	1	-6	574E-04	-8	252E-04	3	001E-04	-1	038E-03	1	184E-03	-1	082E-04
2837	1	-9	900E-04	-8	328E-04	4	512E-04	-2	547E-03	4	016E-04	-1	870E-04
2838	1	-2	071E-04	-1	709E-03	8	250E-04	7	861E-05	1	157E-03	-1	131E-05
2840	1	-3	068E-04	-1	125E-03	4	047E-04	3	341E-05	1	151E-03	6	162E-05
2841	1	-3	919E-04	-1	109E-03	5	499E-04	1	357E-04	3	124E-04	1	422E-05
2842	1	-5	258E-04	-7	044E-04	3	210E-04	5	721E-05	4	042E-04	1	857E-05
2847	1	9	173E-04	-6	945E-04	6	390E-04	-1	710E-03	-6	568E-05	-2	458E-04
2849	1	-3	047E-04	2	151E-04	2	882E-04	-3	159E-03	-2	907E-04	-2	703E-04
2851	1	3	608E-04	-2	169E-03	7	053E-04	-2	114E-03	4	082E-04	-5	977E-04
2854	1	-4	848E-04	-1	211E-03	4	238E-04	-2	559E-03	-2	846E-04	-5	557E-04
2855	1	-2	081E-04	-1	048E-03	4	356E-04	-1	029E-03	-2	128E-04	-2	453E-04
2856	1	1	085E-04	-1	563E-03	1	407E-04	-2	266E-03	1	015E-04	-2	360E-06
2857	1	-5	977E-04	-5	587E-04	2	034E-04	-8	205E-04	-2	146E-04	-2	103E-04
2858	1	-9	336E-04	-4	087E-04	3	723E-05	-2	208E-03	-1	716E-04	1	764E-04
2859	1	-6	488E-05	-1	248E-03	4	322E-04	5	709E-05	1	913E-04	2	645E-05
2861	1	-4	415E-04	-6	962E-04	1	958E-04	1	442E-04	-6	096E-05	-1	606E-05
2862	1	-3	658E-04	-7	933E-04	2	441E-04	2	580E-04	-1	222E-04	-4	082E-05
2863	1	-5	775E-04	-4	515E-04	1	962E-04	-8	105E-05	-1	307E-04	-3	841E-05
2879	1	-1	668E-03	-4	055E-04	6	091E-04	1	214E-03	3	736E-03	-2	550E-04
2881	1	-1	814E-03	-1	050E-03	1	349E-03	-1	430E-03	2	233E-03	-1	031E-04
2884	1	-9	871E-04	-7	022E-04	5	337E-04	1	957E-04	3	547E-03	-9	440E-05
2885	1	-5	265E-04	-3	108E-04	-2	230E-04	-8	228E-04	2	180E-03	-7	964E-05
2886	1	-1	567E-03	-1	042E-03	1	266E-03	8	811E-05	2	427E-03	2	753E-05

2888	1	-4	819E-04	-4	591E-04	-2	570E-04	2	282E-05	2	060E-03	-1	822E-05
2892	1	-1	176E-03	5	748E-05	9	778E-05	-1	557E-03	2	454E-04	6	086E-06
2894	1	-6	375E-04	-6	611E-04	2	901E-04	1	789E-03	7	634E-04	-1	516E-04
2897	1	-6	240E-04	-2	494E-04	1	143E-04	-4	400E-04	2	292E-04	4	951E-06
2898	1	-7	921E-04	-1	267E-04	4	999E-05	-8	979E-04	1	793E-04	1	733E-05
2899	1	-4	757E-04	-5	685E-04	1	924E-04	3	110E-05	7	345E-04	-1	608E-05
2901	1	-8	016E-04	-2	545E-04	6	738E-05	-3	078E-06	1	615E-04	9	547E-07
2905	1	-1	313E-03	1	602E-04	1	931E-04	-1	464E-03	1	285E-04	4	584E-06
2907	1	-7	997E-04	-3	985E-04	1	577E-04	-1	710E-03	-2	692E-04	-2	401E-04
2910	1	-8	342E-04	-1	493E-04	4	809E-05	-4	022E-04	-5	252E-05	9	527E-06
2911	1	-9	166E-04	-5	146E-05	9	849E-05	-9	349E-04	-1	208E-04	1	263E-04
2912	1	-6	660E-04	-3	466E-04	6	104E-05	5	959E-05	9	062E-05	3	883E-05
2914	1	-9	452E-04	-1	922E-04	1	276E-04	2	583E-05	-1	783E-04	4	309E-05
2926	1	-5	058E-04	8	882E-05	-6	709E-04	2	831E-05	-5	878E-04	4	650E-05
2928	1	-3	268E-04	-7	241E-06	-6	377E-04	3	351E-05	-1	434E-05	-3	878E-06
2930	1	2	179E-04	-1	111E-04	-6	960E-04	-3	416E-04	-1	169E-03	-9	246E-06
2933	1	-3	316E-04	8	640E-07	-6	339E-04	-4	609E-05	-1	810E-04	-3	350E-06
2934	1	-5	084E-04	9	173E-05	-6	233E-04	2	072E-05	-5	134E-04	1	439E-05
2935	1	-4	731E-04	6	600E-05	-5	591E-04	8	893E-06	-7	674E-05	2	905E-05
2936	1	-3	282E-04	-1	234E-05	-6	432E-04	1	948E-05	-1	439E-05	4	818E-07
2937	1	-3	319E-04	-1	380E-05	-6	567E-04	2	467E-05	2	808E-06	8	726E-06
2938	1	-2	204E-04	-1	728E-04	-6	985E-04	1	604E-05	-1	074E-03	-1	704E-06
2940	1	-3	249E-04	-1	658E-05	-6	221E-04	-1	220E-05	-1	683E-04	1	437E-06
2941	1	-4	894E-04	6	521E-05	-5	509E-04	-9	566E-06	-7	811E-05	5	485E-06
2942	1	-3	295E-04	-2	172E-05	-6	531E-04	4	196E-06	8	570E-07	-1	400E-06
2947	1	-1	283E-04	6	804E-05	-5	198E-04	-4	346E-05	3	086E-04	3	672E-05
2949	1	-3	513E-04	-1	300E-05	-6	325E-04	-3	730E-06	3	667E-05	1	244E-05
2951	1	-7	353E-04	-7	488E-06	-2	389E-04	-3	900E-04	3	559E-04	3	904E-05
2954	1	-4	239E-04	1	123E-05	-5	718E-04	-4	972E-05	1	219E-04	6	228E-06
2955	1	-4	325E-04	6	388E-05	-5	213E-04	-4	771E-06	2	383E-04	1	690E-05
2956	1	-5	586E-04	7	430E-05	-4	727E-04	-5	982E-05	8	480E-05	2	935E-05
2957	1	-3	502E-04	-2	184E-05	-6	279E-04	6	773E-06	2	412E-05	3	752E-06
2958	1	-3	991E-04	-2	045E-05	-6	005E-04	1	904E-05	-5	880E-06	6	072E-07
2959	1	-6	448E-04	-9	563E-05	-2	196E-04	-4	375E-06	3	122E-04	4	261E-07
2961	1	-4	100E-04	-4	387E-06	-5	737E-04	-1	151E-05	1	133E-04	-8	073E-07
2962	1	-5	561E-04	6	046E-05	-4	690E-04	-4	708E-06	5	113E-05	1	807E-06
2963	1	-3	955E-04	-2	437E-05	-6	054E-04	4	033E-06	-4	839E-06	1	306E-06
2968	1	-7	367E-04	9	830E-05	-3	748E-04	-8	666E-05	4	758E-05	5	052E-05
2970	1	-4	418E-04	-1	402E-05	-5	991E-04	-2	454E-05	-5	631E-05	-1	015E-05
2972	1	-8	650E-04	4	301E-05	-1	544E-04	-4	181E-04	-5	667E-05	3	683E-05
2975	1	-5	370E-04	2	028E-05	-5	015E-04	-6	667E-05	-1	406E-05	8	037E-06
2976	1	-6	999E-04	7	937E-05	-3	838E-04	-2	778E-05	-9	061E-06	1	371E-05
2977	1	-7	502E-04	8	053E-05	-3	642E-04	-8	206E-05	-1	851E-04	5	854E-06
2978	1	-4	272E-04	-2	244E-05	-6	081E-04	1	328E-05	-4	476E-05	-8	164E-07
2979	1	-4	724E-04	-1	617E-05	-5	895E-04	2	764E-05	-1	344E-05	-9	175E-06
2980	1	-7	873E-04	-2	621E-05	-1	483E-04	-1	192E-05	-6	174E-05	-2	471E-06

ARAGUS VERSION 4-4-75

MACH 14 FLOW RESTRICTOR

2982	1	-5	186E-04	1	523E-06	-5	050E-04	-5	942E-06	-2	733E-05	-4	246E-07
2983	1	-7	397E-04	7	903E-05	-3	815E-04	-1	309E-05	-1	944E-04	-5	347E-06
2984	1	-4	618E-04	-2	597E-05	-5	944E-04	4	772E-06	-1	794E-05	2	014E-06
2997	1	6	437E-03	-9	435E-04	1	018E-02	1	551E-04	2	427E-03	8	002E-06
2998	1	1	103E-02	-2	284E-03	1	112E-02	1	369E-04	9	709E-04	-2	405E-05
2999	1	1	241E-02	-1	669E-03	7	105E-03	-2	245E-04	1	520E-03	2	232E-05
3000	1	1	840E-03	4	097E-04	9	082E-03	2	700E-04	3	551E-03	4	236E-06
3001	1	1	212E-03	4	395E-04	5	239E-03	3	162E-04	3	854E-03	5	139E-06
3002	1	6	483E-03	-8	337E-04	1	017E-02	2	016E-04	2	446E-03	-6	187E-06
3003	1	1	117E-02	-2	453E-03	1	112E-02	9	518E-05	9	896E-04	-4	516E-05
3004	1	1	275E-02	-2	178E-03	7	104E-03	3	242E-04	1	550E-03	2	364E-05
3005	1	1	870E-03	3	929E-04	9	085E-03	9	079E-04	3	544E-03	-4	097E-05
3006	1	9	138E-04	8	542E-04	5	223E-03	2	781E-04	3	857E-03	-7	843E-06
3007	1	6	579E-03	-9	819E-04	1	021E-02	5	517E-04	2	484E-03	5	584E-05
3008	1	1	267E-02	-2	268E-03	7	113E-03	-1	182E-04	1	567E-03	-6	198E-05
3009	1	1	034E-03	7	173E-04	5	167E-03	6	889E-04	3	869E-03	5	117E-05
3010	1	6	874E-03	-6	431E-05	2	625E-03	1	839E-04	1	825E-03	-1	948E-05
3011	1	1	412E-02	-1	401E-03	2	904E-03	9	100E-05	1	123E-03	5	258E-06
3012	1	1	397E-02	-5	374E-04	2	467E-03	-1	725E-04	4	297E-04	3	409E-05
3013	1	2	310E-05	1	259E-03	2	261E-03	7	601E-05	2	574E-03	3	537E-05
3014	1	-4	322E-05	1	412E-03	2	635E-03	2	266E-04	4	168E-04	-4	254E-05
3015	1	6	941E-03	2	608E-05	2	620E-03	1	696E-04	1	825E-03	3	674E-05
3016	1	1	425E-02	-1	526E-03	2	907E-03	-2	667E-05	1	121E-03	1	548E-05
3017	1	1	422E-02	-9	023E-04	2	469E-03	2	719E-04	4	425E-04	-2	562E-06
3018	1	-9	481E-05	1	136E-03	2	213E-03	4	312E-04	2	623E-03	7	496E-05
3019	1	-2	650E-04	1	710E-03	2	628E-03	7	362E-05	6	417E-04	-2	015E-05
3020	1	7	049E-03	-7	842E-05	2	592E-03	4	572E-04	1	846E-03	6	477E-05
3021	1	1	417E-02	-9	990E-04	2	466E-03	-5	086E-05	4	218E-04	-1	140E-05
3022	1	-2	972E-04	1	658E-03	2	618E-03	4	249E-04	4	166E-04	-2	462E-05
3030	1	1	116E-04	1	229E-03	8	856E-03	-4	948E-04	1	643E-03	-1	539E-04
3033	1	-4	106E-04	-6	341E-04	9	610E-03	3	176E-03	-1	873E-03	7	484E-04
3034	1	-1	085E-03	7	969E-04	8	860E-03	1	190E-03	-3	654E-04	2	045E-04
3035	1	-3	443E-03	1	988E-03	4	242E-03	-5	594E-04	2	627E-04	-8	055E-05
3036	1	1	648E-03	-4	525E-04	9	395E-03	-3	310E-03	-2	483E-03	1	923E-03
3037	1	7	676E-04	-2	728E-03	5	574E-03	-2	304E-03	-2	772E-03	5	343E-04
3038	1	5	146E-04	3	298E-04	8	851E-03	1	373E-03	1	486E-03	2	887E-04
3041	1	1	137E-03	5	968E-04	8	572E-03	-2	592E-03	-1	442E-03	1	349E-03
3042	1	-1	630E-04	-2	287E-04	8	685E-03	2	396E-04	-4	980E-04	8	637E-04
3043	1	-1	307E-03	-6	454E-04	4	113E-03	-2	876E-03	5	469E-05	7	135E-04
3044	1	-2	174E-04	4	092E-03	8	454E-03	-3	847E-03	-2	502E-03	2	840E-03
3045	1	9	499E-04	2	554E-03	4	715E-03	-6	475E-03	-2	216E-03	2	343E-03
3046	1	6	997E-04	-8	964E-05	8	668E-03	6	752E-04	1	215E-03	3	210E-04
3048	1	-3	993E-04	2	508E-03	8	471E-03	-1	900E-03	-1	261E-03	2	053E-03
3049	1	-9	035E-04	-2	698E-04	3	733E-03	-1	072E-04	-3	526E-04	1	067E-03
3050	1	-5	761E-04	3	636E-03	4	765E-03	3	360E-04	-1	268E-03	3	269E-03
3051	1	-1	957E-03	1	302E-03	1	647E-03	-5	131E-04	1	861E-03	8	113E-05

3054	1	-2	662E-03	7	082E-06	1	346E-03	3	191E-03	1	485E-04	-2	683E-04
3055	1	-3	945E-03	6	729E-04	1	009E-03	1	835E-03	8	730E-04	1	736E-04
3056	1	-5	316E-03	2	072E-03	2	319E-03	3	898E-04	9	460E-04	3	860E-05
3057	1	7	483E-04	-1	408E-04	1	640E-03	3	733E-03	-6	518E-04	4	956E-04
3058	1	-6	792E-05	-1	101E-03	2	422E-03	-2	403E-03	1	083E-03	-3	172E-04
3059	1	-1	579E-03	5	501E-04	1	509E-03	1	423E-03	1	836E-03	1	598E-04
3062	1	-4	626E-04	2	653E-04	1	259E-03	-6	727E-04	-1	796E-04	7	828E-04
3063	1	-2	300E-03	-6	825E-04	6	910E-04	2	021E-03	4	726E-04	4	847E-04
3064	1	-3	524E-03	-1	323E-04	2	270E-03	3	418E-03	6	515E-04	-3	118E-04
3065	1	-2	253E-04	3	303E-03	1	583E-03	1	980E-03	-8	411E-05	1	360E-03
3066	1	7	858E-04	2	541E-03	1	936E-03	4	402E-03	-2	447E-04	7	483E-04
3067	1	-1	157E-03	1	393E-05	1	271E-03	1	116E-03	1	657E-03	2	859E-04
3069	1	-7	733E-04	1	467E-03	1	020E-03	-2	124E-04	1	844E-06	1	303E-03
3070	1	-2	385E-03	-7	520E-04	2	100E-03	1	698E-03	2	215E-04	3	757E-05
3071	1	2	947E-04	2	874E-03	1	798E-03	8	897E-04	1	189E-03	1	073E-03
3084	1	3	585E-04	6	029E-03	1	003E-02	-5	084E-03	-1	644E-03	2	239E-03
3085	1	4	627E-03	7	939E-03	7	986E-03	8	754E-03	-2	124E-03	1	064E-03
3086	1	2	730E-03	8	945E-03	6	493E-03	-1	252E-02	-5	626E-04	1	539E-03
3089	1	4	314E-03	5	826E-03	6	290E-03	-7	775E-03	-1	638E-03	1	697E-03
3090	1	6	535E-03	8	733E-03	8	937E-03	-2	293E-03	-1	221E-03	-8	497E-03
3091	1	8	105E-03	7	28E-03	4	017E-03	-3	331E-03	-3	423E-03	-9	167E-04
3094	1	2	971E-03	3	254E-03	1	245E-02	-3	067E-03	-3	252E-03	-7	913E-04
3095	1	7	054E-03	1	165E-02	6	816E-03	3	768E-03	4	212E-05	6	589E-03
3097	1	1	648E-03	7	054E-03	1	638E-03	-5	685E-03	7	171E-04	1	299E-03
3098	1	6	550E-03	8	637E-03	2	853E-03	-1	094E-02	5	832E-04	1	122E-03
3099	1	4	224E-03	1	137E-02	2	001E-03	-1	425E-02	1	241E-03	1	543E-03
3102	1	4	427E-03	5	090E-03	2	734E-03	-7	711E-03	-2	907E-04	1	282E-03
3103	1	9	272E-03	9	178E-03	2	416E-03	-3	721E-03	-2	988E-04	2	948E-04
3104	1	1	013E-02	7	789E-03	1	342E-03	-1	063E-02	7	192E-04	3	394E-03
3107	1	4	930E-03	4	482E-03	1	499E-03	-2	300E-03	-2	906E-04	-5	618E-04
3108	1	1	094E-02	1	028E-02	2	489E-03	1	521E-03	-1	094E-03	-4	494E-03
3117	1	-1	608E-03	6	605E-03	1	048E-02	4	392E-03	1	669E-03	2	277E-03
3118	1	-3	118E-03	1	119E-02	1	144E-02	2	283E-03	4	941E-04	9	059E-04
3119	1	-2	306E-03	1	246E-02	6	729E-03	8	119E-03	2	849E-03	8	753E-04
3120	1	1	042E-04	2	555E-03	9	065E-03	1	138E-03	1	020E-03	3	703E-03
3121	1	6	208E-04	1	595E-03	4	855E-03	1	004E-03	2	999E-03	3	779E-03
3122	1	-1	222E-03	6	744E-03	1	012E-02	-1	126E-03	-2	053E-04	2	817E-03
3123	1	-8	941E-04	9	527E-03	1	123E-02	-7	395E-03	-4	568E-04	5	732E-04
3124	1	-2	623E-03	1	314E-02	6	733E-03	-3	997E-03	1	189E-03	1	896E-03
3125	1	5	214E-05	3	179E-03	8	795E-03	6	687E-04	-8	472E-04	3	817E-03
3126	1	6	621E-04	1	726E-03	4	979E-03	1	584E-03	8	458E-04	3	626E-03
3130	1	4	329E-04	7	085E-03	1	408E-03	4	354E-03	3	273E-03	1	460E-03
3131	1	-1	543E-03	1	455E-02	1	854E-03	2	269E-03	3	111E-03	9	360E-04
3132	1	-7	270E-04	1	407E-02	1	508E-03	8	254E-03	2	124E-03	2	061E-05
3133	1	1	531E-03	6	195E-04	1	342E-03	1	293E-03	2	447E-03	2	133E-03
3134	1	2	017E-03	2	609E-04	1	590E-03	5	266E-04	1	720E-03	3	170E-04

3135	1	-1	412E-04	7	799E-03	1	827E-03	-6	514E-04	2	171E-03	1	538E-03
3136	1	9	736E-04	1	326E-02	1	836E-03	-9	289E-03	1	807E-03	1	346E-03
3137	1	-1	237E-03	1	532E-02	1	788E-03	-3	721E-03	2	249E-03	8	507E-04
3138	1	5	298E-04	1	974E-03	1	599E-03	1	878E-03	1	033E-03	1	612E-03
3139	1	1	802E-03	8	227E-04	1	772E-03	2	332E-03	1	844E-03	3	979E-04
3150	1	3	015E-03	8	549E-03	8	549E-03	9	605E-03	7	825E-03	3	790E-04
3151	1	2	891E-03	5	508E-03	1	112E-02	1	315E-02	2	176E-03	1	508E-03
3152	1	7	994E-03	4	762E-03	4	573E-03	1	315E-02	2	377E-03	1	773E-04
3153	1	-1	192E-04	3	518E-03	7	972E-03	4	287E-03	8	291E-03	2	854E-03
3154	1	1	576E-03	2	513E-03	2	470E-03	2	338E-03	4	838E-03	2	880E-03
3155	1	-4	512E-04	5	784E-03	1	064E-02	8	534E-03	3	525E-03	1	345E-03
3156	1	-1	344E-03	9	158E-03	1	134E-02	1	117E-02	2	185E-03	-3	452E-04
3157	1	2	296E-03	8	620E-03	6	046E-03	1	559E-02	3	278E-03	-4	658E-04
3158	1	-7	091E-04	3	348E-03	9	711E-03	2	139E-03	2	811E-03	3	446E-03
3159	1	5	038E-04	2	929E-03	4	585E-03	1	730E-03	4	710E-03	3	570E-03
3163	1	4	815E-03	4	157E-03	4	419E-04	7	154E-03	1	271E-03	2	293E-03
3164	1	6	766E-03	7	592E-03	4	472E-04	1	552E-02	1	215E-03	1	103E-03
3165	1	8	661E-03	4	707E-03	1	780E-03	1	648E-02	2	621E-04	7	024E-04
3166	1	1	423E-03	1	994E-03	5	745E-04	8	809E-05	1	495E-03	2	598E-03
3167	1	-1	697E-04	1	600E-03	1	655E-03	-5	747E-04	9	963E-04	7	763E-04
3168	1	2	987E-03	5	934E-03	6	542E-04	8	126E-03	2	563E-03	1	244E-03
3169	1	1	244E-03	1	233E-02	1	246E-03	1	641E-02	2	835E-03	1	362E-04
3170	1	3	448E-03	1	011E-02	1	295E-03	1	641E-02	1	170E-03	-2	021E-04
3171	1	1	774E-03	1	241E-03	7	689E-04	4	139E-04	3	101E-03	2	491E-03
3172	1	1	411E-03	1	659E-03	1	594E-03	4	610E-05	1	157E-03	4	717E-04
3183	1	8	149E-03	5	082E-03	7	384E-03	-2	634E-04	1	625E-03	-1	464E-02
3184	1	9	239E-03	8	643E-03	4	405E-03	-5	570E-03	1	290E-03	-1	085E-03
3185	1	8	759E-03	1	697E-03	6	682E-03	4	810E-03	2	944E-03	-9	436E-03
3186	1	8	076E-03	6	933E-03	4	468E-03	1	953E-03	-6	657E-04	2	291E-04
3187	1	9	355E-03	3	182E-02	4	310E-03	9	102E-03	5	978E-03	-4	646E-03
3188	1	4	898E-03	3	800E-03	8	312E-03	1	021E-02	3	515E-03	-4	610E-03
3189	1	1	078E-02	5	123E-03	1	736E-03	5	660E-03	5	469E-04	6	621E-04
3190	1	5	885E-03	2	312E-03	5	876E-03	6	481E-03	6	785E-03	-1	662E-03
3191	1	6	585E-03	4	865E-03	1	664E-03	7	573E-03	3	065E-03	5	728E-04
3192	1	1	242E-02	2	307E-03	1	010E-03	-1	124E-03	3	704E-04	7	334E-04
3196	1	1	230E-02	2	883E-03	1	004E-03	2	417E-03	-5	251E-04	7	645E-03
3197	1	1	504E-02	-2	499E-03	1	516E-03	-1	081E-03	1	023E-03	-3	011E-03
3198	1	7	459E-03	3	477E-03	1	559E-03	3	508E-03	-3	154E-04	6	872E-03
3199	1	8	780E-03	8	705E-04	1	024E-03	5	710E-05	6	640E-04	-3	361E-03
3200	1	8	781E-03	3	696E-03	1	611E-03	7	391E-03	-1	434E-03	6	581E-03
3201	1	1	114E-02	4	277E-03	6	431E-04	1	203E-02	-1	207E-03	4	808E-03
3202	1	1	311E-02	2	551E-04	2	414E-03	1	105E-02	2	811E-04	1	685E-03
3203	1	1	844E-03	3	291E-03	1	357E-03	2	325E-03	9	496E-04	3	481E-03
3204	1	4	382E-03	1	645E-03	2	249E-03	4	967E-03	7	599E-04	1	657E-03
3215	1	3	979E-03	-4	522E-04	7	982E-03	8	809E-05	2	526E-03	-1	936E-03
3218	1	-7	652E-04	-1	057E-03	7	975E-03	1	154E-03	-1	687E-04	1	137E-03

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3219	1	-5	120E-03	-1	481E-03	4	541E-03	7	255E-03	7	738E-04	3	170E-04
3220	1	3	900E-03	4	140E-04	7	325E-03	3	816E-03	4	068E-04	-3	312E-03
3223	1	-1	072E-03	1	812E-04	7	913E-03	-5	182E-04	-1	479E-03	5	040E-04
3224	1	-2	042E-03	-1	801E-04	3	000E-03	-8	029E-04	6	127E-05	1	382E-03
3225	1	1	673E-03	1	107E-03	7	029E-03	1	442E-03	2	334E-03	5	378E-04
3227	1	-2	094E-03	3	026E-04	2	780E-03	-4	750E-04	-9	110E-04	1	254E-03
3228	1	4	029E-04	2	148E-03	1	512E-03	1	417E-03	-1	216E-03	2	724E-03
3231	1	-5	201E-03	-1	416E-05	9	726E-04	9	357E-04	2	194E-04	3	303E-04
3232	1	-6	181E-03	1	433E-03	1	554E-03	-4	160E-04	1	131E-04	-7	147E-04
3233	1	8	758E-03	1	723E-03	1	081E-03	2	234E-03	1	389E-03	3	928E-03
3236	1	-3	018E-03	6	568E-05	-5	922E-05	-1	281E-03	2	435E-05	2	385E-03
3237	1	-3	043E-03	5	944E-04	2	148E-03	-1	796E-03	8	097E-04	3	238E-04
3238	1	-1	304E-03	9	151E-04	3	018E-05	-8	137E-04	8	202E-04	2	565E-03
3240	1	-2	929E-03	-4	143E-04	1	792E-03	-1	339E-03	7	820E-04	1	005E-03
3249	1	1	113E-02	-2	505E-03	1	114E-02	1	328E-04	9	817E-04	-4	693E-05
3251	1	2	115E-03	8	949E-05	9	089E-03	8	313E-04	2	484E-03	-4	999E-05
3253	1	6	681E-03	-1	192E-03	1	023E-02	2	783E-04	2	504E-03	1	977E-05
3254	1	1	263E-02	-2	198E-03	7	121E-03	2	143E-04	1	527E-03	-2	224E-06
3255	1	1	296E-03	-9	850E-05	9	110E-03	2	857E-04	3	456E-03	-1	680E-05
3256	1	1	281E-03	2	622E-04	5	149E-03	4	435E-04	3	875E-03	1	195E-05
3258	1	6	765E-03	-1	248E-03	1	023E-02	3	362E-05	2	510E-03	2	147E-05
3259	1	1	275E-02	-2	287E-03	7	120E-03	-4	096E-05	1	558E-03	-3	536E-05
3260	1	1	311E-03	1	870E-04	5	128E-03	2	795E-06	3	869E-03	3	733E-05
3262	1	1	416E-02	-1	526E-03	2	908E-03	2	598E-05	1	105E-03	1	542E-05
3264	1	1	916E-05	9	619E-04	2	152E-03	4	495E-04	2	685E-03	4	647E-05
3266	1	7	108E-03	-2	482E-04	2	574E-03	2	131E-04	1	880E-03	3	978E-05
3267	1	1	421E-02	-1	610E-03	2	909E-03	7	639E-05	1	097E-03	4	428E-06
3268	1	1	418E-02	-9	251E-04	2	464E-03	1	484E-04	4	278E-04	5	485E-06
3269	1	1	496E-04	7	989E-04	2	117E-03	1	597E-04	2	720E-03	2	493E-05
3270	1	-1	218E-04	1	229E-03	2	615E-03	3	289E-04	5	729E-04	-4	796E-05
3271	1	7	205E-03	-3	139E-04	2	565E-03	3	403E-05	1	900E-03	1	027E-05
3272	1	-1	424E-02	-1	013E-03	2	460E-03	-4	718E-05	4	115E-04	-8	017E-06
3273	1	-1	151E-04	1	168E-03	2	614E-03	3	958E-05	5	551E-04	9	216E-07
3285	1	-5	896E-04	4	204E-04	8	435E-03	-8	666E-04	-4	183E-04	7	394E-04
3287	1	-3	826E-04	2	930E-03	8	508E-03	-1	755E-04	-1	155E-03	2	573E-03
3289	1	-6	309E-04	2	239E-05	8	568E-03	2	609E-04	1	387E-03	2	340E-04
3292	1	-5	986E-04	1	435E-03	8	496E-03	-2	197E-04	-5	930E-04	1	233E-03
3293	1	-1	009E-03	7	013E-04	8	330E-03	3	025E-04	-2	494E-04	2	686E-04
3294	1	-1	233E-03	3	191E-04	3	511E-03	-2	030E-04	-1	981E-05	6	987E-04
3295	1	-2	580E-05	1	185E-03	8	507E-03	2	896E-04	-4	108E-04	1	036E-03
3296	1	-1	032E-04	8	418E-04	4	051E-03	9	521E-04	-1	111E-04	2	146E-03
3297	1	5	062E-04	4	374E-05	8	507E-03	2	813E-05	1	334E-03	-1	173E-05
3299	1	-4	556E-04	9	663E-04	8	453E-03	4	954E-05	-3	149E-04	-2	213E-05
3300	1	-1	311E-03	4	977E-04	3	417E-03	1	120E-05	-2	579E-05	1	931E-05
3301	1	2	525E-04	-3	261E-04	3	802E-03	7	592E-05	5	762E-04	6	011E-05

3306	1	-1.789E-03	-4.338E-04	3.736E-04	6.378E-04	3.214E-04	6.608E-04
3308	1	2.247E-05	1.509E-03	1.200E-03	9.240E-04	1.182E-04	1.457E-03
3310	1	-9.418E-04	1.148E-04	1.104E-03	5.356E-04	1.709E-03	2.218E-04
3313	1	-7.442E-04	-1.278E-04	5.472E-04	8.565E-04	4.353E-04	9.760E-04
3314	1	-1.700E-03	-1.085E-04	1.733E-04	2.062E-04	3.998E-04	2.828E-04
3315	1	-2.093E-03	-6.203E-04	1.985E-03	8.527E-04	3.458E-04	1.562E-04
3316	1	3.297E-04	-1.124E-03	6.824E-04	7.669E-04	1.109E-03	6.358E-04
3317	1	6.649E-04	-1.185E-03	1.839E-03	1.736E-03	4.116E-04	1.16E-04
3318	1	-9.223E-04	1.209E-04	1.004E-03	8.593E-06	1.688E-03	-9.158E-06
3320	1	-4.362E-04	-7.353E-04	3.568E-04	4.384E-05	7.130E-04	7.860E-05
3321	1	-1.831E-03	-6.958E-04	1.924E-03	3.029E-03	4.268E-04	6.062E-06
3322	1	1.058E-03	-2.722E-03	1.778E-03	6.581E-05	1.541E-03	-5.313E-05
3329	1	2.417E-04	1.634E-03	8.833E-03	7.940E-04	3.194E-04	2.484E-03
3341	1	-5.389E-04	1.537E-03	9.065E-03	8.810E-04	1.710E-03	2.251E-03
3343	1	1.958E-04	1.001E-03	8.696E-03	6.788E-04	4.099E-03	1.840E-03
3346	1	-7.812E-05	3.364E-04	8.909E-03	3.532E-04	1.109E-03	1.529E-03
3347	1	2.408E-04	1.222E-04	8.738E-03	2.866E-04	6.263E-04	7.485E-04
3348	1	5.799E-04	-5.810E-04	4.022E-03	4.768E-04	1.693E-03	1.988E-03
3349	1	-9.171E-04	4.487E-05	9.108E-03	9.416E-05	1.854E-03	5.293E-04
3350	1	4.777E-03	-7.136E-04	3.571E-03	-4.930E-04	2.941E-03	1.785E-03
3351	1	3.038E-04	1.723E-04	8.606E-03	-1.488E-07	4.745E-04	-1.218E-04
3353	1	-4.681E-04	-2.249E-04	8.940E-03	-5.710E-05	1.292E-03	-9.842E-05
3354	1	3.814E-04	-9.802E-04	3.653E-03	-9.787E-05	2.077E-03	2.643E-05
3355	1	-1.341E-04	-4.758E-04	3.012E-03	-2.925E-05	2.901E-03	-3.482E-05
3360	1	1.051E-03	-3.157E-04	1.081E-03	1.074E-03	1.24E-03	1.657E-03
3362	1	1.110E-03	-7.158E-04	2.619E-04	-3.847E-04	3.333E-03	2.017E-03
3364	1	7.154E-04	-1.188E-03	7.4C2E-04	9.319E-04	1.641E-03	1.279E-03
3367	1	8.752E-04	-2.037E-03	3.938E-05	-4.746E-04	2.917E-03	1.434E-03
3368	1	8.888E-04	-2.090E-03	3.026E-04	2.969E-05	2.688E-03	6.587E-04
3369	1	1.524E-03	-2.814E-03	1.651E-03	4.896E-04	1.832E-03	1.693E-04
3370	1	6.162E-04	-1.364E-03	-9.802E-04	-5.869E-04	3.072E-03	7.493E-04
3371	1	6.182E-04	-2.719E-03	1.267E-03	-1.462E-03	1.676E-03	2.836E-04
3372	1	6.977E-04	-2.078E-03	2.885E-04	-7.199E-05	2.145E-03	5.615E-05
3374	1	6.097E-04	-1.649E-03	-7.063E-04	-7.864E-05	2.968E-03	1.303E-05
3375	1	1.064E-03	-3.087E-03	1.475E-03	-1.394E-04	1.880E-03	-3.253E-05
3376	1	-2.509E-05	-1.897E-03	1.050E-03	-4.684E-05	1.549E-03	-5.659E-05
3393	1	-1.443E-03	2.169E-03	1.005E-02	1.647E-03	3.595E-03	2.014E-03
3395	1	3.408E-03	1.354E-03	6.124E-03	1.632E-03	7.788E-03	1.146E-03
3397	1	-1.051E-03	4.017E-04	9.541E-03	1.540E-04	2.249E-03	1.272E-03
3400	1	-3.830E-04	7.011E-04	7.609E-03	-1.581E-04	6.608E-03	1.183E-03
3401	1	-1.359E-03	1.708E-04	9.757E-03	1.848E-04	3.435E-03	2.352E-04
3402	1	-7.005E-05	-4.062E-04	3.012E-03	-8.520E-04	3.707E-03	1.880E-03
3403	1	3.013E-03	3.527E-04	6.430E-03	-1.661E-04	6.429E-03	5.531E-04
3404	1	8.503E-04	1.762E-04	1.639E-03	-9.005E-04	2.022E-03	1.656E-03
3405	1	-1.192E-03	-1.965E-04	9.351E-03	-4.021E-05	2.669E-03	-3.343E-04
3407	1	4.881E-05	-2.528E-05	7.055E-03	-1.823E-04	5.927E-03	-2.114E-04

3408	1	1	184E-04	-2	705E-04	2	314E-03	2	992E-05	2	923E-03	-1	119E-04
3409	1	1	144E-03	4	284E-05	1	518E-03	5	048E-05	7	589E-04	6	415E-05
3414	1	1	148E-03	5	804E-05	5	007E-04	8	226E-04	2	638E-03	2	334E-03
3416	1	-3	982E-04	3	507E-04	1	420E-05	-1	265E-03	6	298E-04	2	382E-03
3418	1	7	009E-04	-1	723E-03	9	504E-04	-1	729E-03	2	803E-03	1	755E-03
3421	1	-8	480E-05	-1	038E-03	9	403E-04	-1	915E-03	8	849E-04	1	912E-03
3422	1	5	812E-04	-8	497E-04	-1	634E-03	7	515E-04	1	604E-03	9	216E-04
3423	1	-2	590E-04	-2	064E-03	1	248E-03	2	464E-03	1	350E-03	4	855E-04
3424	1	-6	888E-04	-4	418E-04	7	035E-04	-6	400E-04	-5	362E-05	9	208E-04
3425	1	-1	399E-03	-1	070E-03	1	027E-03	-2	252E-03	1	425E-03	7	623E-04
3426	1	5	761E-04	-8	388E-04	-1	662E-03	4	329E-05	1	916E-03	8	973E-05
3428	1	7	995E-05	-6	289E-04	-1	335E-03	1	376E-04	2	434E-05	5	429E-05
3429	1	-5	887E-04	-1	322E-03	1	057E-03	1	163E-04	1	281E-03	-8	095E-06
3430	1	-8	888E-04	-1	049E-03	7	534E-04	1	911E-05	1	471E-03	-7	123E-06
3446	1	-1	889E-03	5	831E-04	8	130E-03	-1	815E-04	-1	959E-03	2	757E-04
3448	1	9	346E-04	5	746E-04	7	594E-03	-7	817E-05	1	999E-03	6	522E-04
3451	1	-2	009E-03	5	451E-04	8	132E-03	9	971E-06	-1	573E-03	7	456E-05
3452	1	-1	909E-03	3	343E-04	2	993E-03	1	156E-04	-9	037E-04	7	543E-04
3453	1	8	975E-04	3	185E-04	7	694E-03	-1	125E-04	1	808E-03	-3	151E-07
3455	1	-2	051E-03	2	318E-04	3	058E-03	5	188E-05	-4	438E-04	1	880E-05
3459	1	-1	504E-03	5	119E-05	-5	793E-04	-8	784E-04	-3	502E-04	1	794E-03
3461	1	-9	995E-04	3	691E-04	-6	643E-04	-8	410E-04	2	319E-04	1	542E-03
3464	1	-7	814E-04	-2	412E-04	-7	659E-04	2	336E-04	-5	387E-04	6	359E-04
3465	1	-1	454E-03	-5	143E-04	1	429E-03	-1	708E-04	7	764E-04	5	423E-04
3466	1	-7	695E-04	-3	420E-04	-8	601E-04	5	673E-05	-1	038E-04	-2	713E-06
3468	1	-1	348E-03	-6	251E-04	1	337E-03	5	340E-05	7	667E-04	-1	718E-05
3476	1	4	481E-03	2	592E-04	8	170E-03	3	646E-04	1	406E-03	4	528E-04
3477	1	7	062E-03	-1	982E-05	8	347E-03	4	253E-05	1	462E-03	5	288E-04
3478	1	8	942E-03	-4	359E-04	6	762E-03	3	793E-04	1	992E-03	-5	839E-04
3479	1	1	963E-03	5	120E-04	4	797E-03	-3	731E-04	1	172E-03	1	494E-05
3480	1	1	142E-03	4	829E-04	4	529E-03	2	053E-05	1	338E-03	2	120E-04
3481	1	4	521E-03	3	363E-05	8	265E-03	-1	539E-04	1	196E-03	3	573E-04
3482	1	7	058E-03	-8	451E-04	8	882E-03	-2	543E-06	1	646E-03	5	263E-04
3483	1	9	029E-03	-7	557E-04	6	910E-03	-3	821E-04	1	947E-03	9	417E-04
3484	1	2	112E-03	6	019E-05	7	958E-03	-5	313E-04	6	500E-04	-7	406E-05
3485	1	1	031E-03	-1	363E-05	5	011E-03	2	527E-04	1	638E-03	2	880E-04
3486	1	4	661E-03	-5	308E-04	8	485E-03	-1	685E-04	1	121E-03	-1	356E-04
3487	1	9	152E-03	-7	799E-04	6	716E-03	-1	403E-04	1	876E-03	3	513E-04
3488	1	7	988E-04	1	398E-04	5	016E-03	3	807E-05	2	061E-03	-2	332E-04
3489	1	5	715E-03	-1	623E-06	3	060E-03	8	556E-04	7	679E-04	-8	875E-04
3490	1	1	092E-02	-6	412E-04	5	792E-03	-2	006E-04	9	951E-04	8	649E-04
3491	1	1	071E-02	-1	540E-03	6	562E-03	-2	122E-03	9	414E-04	4	597E-03
3492	1	2	164E-04	-1	167E-04	1	540E-03	4	882E-04	1	268E-03	4	088E-04
3493	1	-2	400E-04	-7	472E-04	4	764E-03	-1	338E-04	8	110E-04	5	762E-04
3494	1	5	468E-03	-8	144E-04	4	081E-03	-3	160E-04	1	502E-03	1	469E-03
3495	1	1	118E-02	-1	088E-03	5	813E-03	-7	867E-04	4	758E-04	9	180E-04

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TIME: 12 34 02

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STEP 2 INCREMENT 1

NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT	NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
3496	1	9 512E-03	-1 438E-03	8 522E-03	3 071E-03	9 254E-04	-3 583E-03
3497	1	-2 565E-04	9 447E-05	1 881E-03	6 465E-04	2 163E-03	-2 774E-04
3498	1	-3 835E-05	-1 934E-04	5 367E-03	-3 618E-04	-4 198E-04	4 193E-04
3499	1	5 429E-03	-2 217E-04	3 828E-03	-1 046E-04	1 135E-03	-7 088E-05
3500	1	8 537E-03	7 010E-05	7 008E-03	9 526E-04	3 487E-03	-5 900E-05
3501	1	-8 138E-04	4 547E-04	5 288E-03	-1 147E-04	-4 832E-04	-1 249E-04
3510	1	7 066E-03	-9 856E-04	8 963E-03	-8 509E-05	1 744E-03	2 215E-05
3512	1	2 303E-03	-9 614E-05	8 009E-03	-2 216E-04	5 228E-04	-3 523E-05
3514	1	4 721E-03	-6 178E-04	8 460E-03	-1 108E-04	1 161E-03	6 428E-05
3515	1	7 046E-03	-1 064E-03	8 969E-03	-4 402E-05	1 692E-03	6 160E-05
3516	1	9 218E-03	-8 470E-04	6 739E-03	-5 816E-05	1 658E-03	1 587E-04
3517	1	2 410E-03	-1 445E-04	7 968E-03	-3 395E-05	6 340E-04	-1 953E-05
3518	1	7 615E-04	1 172E-04	5 017E-03	-6 110E-05	2 054E-03	-8 456E-05
3519	1	4 734E-03	-6 128E-04	8 484E-03	-1 809E-05	1 162E-03	3 498E-07
3520	1	9 190E-03	-8 733E-04	6 775E-03	1 981E-05	1 689E-03	1 679E-05
3521	1	8 167E-04	5 829E-05	5 015E-03	3 294E-06	1 947E-03	9 283E-06
3523	1	1 148E-02	-8 087E-04	5 843E-03	-2 361E-04	-3 971E-04	3 040E-04
3525	1	-5 952E-04	3 878E-04	1 633E-03	1 458E-04	2 562E-03	-2 989E-04
3527	1	5 450E-03	-1 261E-04	3 633E-03	-2 688E-05	1 016E-03	3 500E-05
3528	1	1 156E-02	-6 934E-04	5 697E-03	-1 960E-05	-4 050E-04	1 339E-04
3529	1	8 150E-03	-1 834E-04	7 594E-03	-1 792E-04	3 321E-03	6 482E-04
3530	1	-6 323E-04	3 305E-04	1 642E-03	-4 130E-05	2 343E-03	-4 810E-05
3531	1	-9 024E-04	4 884E-04	5 064E-03	-7 240E-05	-3 507E-04	-3 130E-05
3532	1	5 473E-03	-2 093E-04	3 697E-03	3 544E-05	9 324E-04	2 738E-05
3533	1	8 154E-03	-4 207E-04	7 954E-03	-1 332E-04	2 973E-03	2 288E-05
3534	1	-8 434E-04	4 027E-04	4 983E-03	-2 138E-07	-3 544E-04	-1 313E-06

NODE POINT OUTPUT SET ALL

TOTAL DISPLACEMENTS

NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT	NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
1	1 1017E-04	-3 7342E-25	1 3118E-03	2	2 5991E-04	-4 6836E-25	1 1884E-03
3	2 9975E-04	-1 3471E-24	1 1098E-03	4	9 7759E-05	-1 6588E-05	1 3272E-03
5	2 1794E-04	2 0587E-04	1 2710E-03	6	2 5502E-04	-6 0517E-05	1 2471E-03
7	1 2932E-04	1 3492E-04	1 2941E-03	8	4 5648E-05	8 4454E-05	1 2422E-03
9	2 9661E-04	1 6290E-04	1 1082E-03	10	-2 9828E-04	-3 5163E-25	2 9837E-03
11	6 6646E-03	6 1807E-25	2 9147E-03	12	1 2961E-03	-1 8010E-24	2 6857E-03

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13	-3	9695E-04	-3	0619E-04	2	9815E-03	14	4	0337E-04	-1	1821E-04	2	8850E-03
15	6	4139E-04	-6	5864E-04	2	6054E-03	16	-4	4582E-04	6	5603E-05	2	9653E-03
17	2	3324E-04	-1	1338E-04	2	8415E-03	18	7	9434E-04	3	3262E-03	2	3262E-03
19	-3	6753E-04	-7	0693E-25	5	6657E-03	20	7	1719E-04	-7	6290E-25	5	1662E-03
21	1	8550E-03	-1	4591E-24	5	2226E-03	22	-3	8833E-04	-1	5511E-04	5	6700E-03
23	7	9283E-04	3	0995E-04	4	9020E-03	24	1	7368E-03	-2	5692E-04	5	0071E-03
25	-2	8267E-04	1	4371E-05	5	7376E-03	26	8	3454E-04	1	8143E-04	4	7235E-03
27	1	6718E-03	-2	1297E-04	4	7438E-03	28	1	4364E-03	-1	1981E-26	-8	2950E-05
29	4	1722E-04	6	0139E-26	-3	9343E-04	30	-1	4694E-25	2	6214E-26	-5	4592E-04
31	1	2846E-03	3	9922E-04	-6	4653E-05	32	3	9325E-04	8	8167E-05	-4	0342E-04
33	0	0000E+00	9	4316E-06	-5	5188E-04	34	9	9540E-04	4	9383E-04	-3	7778E-06
35	3	5653E-04	1	2636E-04	-4	0548E-04	36	0	0000E+00	4	0811E-06	-5	5907E-04
37	1	1060E-03	1	4116E-24	3	4015E-04	38	4	2508E-04	4	8193E-25	-5	4979E-04
39	2	8432E-25	-7	5143E-25	-7	6923E-04	40	1	0689E-03	2	8858E-04	3	3128E-04
41	4	1398E-04	7	847E-05	-5	4789E-04	42	1	3235E-23	4	5921E-06	-7	7155E-04
43	9	3357E-04	3	8628E-04	2	9687E-04	44	4	0188E-04	1	1973E-04	-5	6324E-04
45	-9	9282E-24	8	7316E-07	-7	7790E-04	46	1	1064E-03	3	4367E-26	1	9068E-03
47	6	3630E-04	1	1553E-25	6	1059E-04	48	6	1417E-26	-2	1486E-25	3	7705E-04
49	1	2130E-03	2	1598E-04	1	8201E-03	50	6	3342E-04	6	6091E-05	6	0702E-04
51	0	0000E+00	5	5405E-06	3	7117E-04	52	1	3613E-03	4	5547E-04	1	6284E-03
53	6	3049E-04	1	7022E-04	5	8072E-04	54	-2	6470E-23	6	8225E-06	3	6447E-04
58	1	1298E-04	1	2180E-04	1	2917E-03	59	3	2251E-05	2	0278E-04	1	2433E-03
60	2	3006E-04	4	0844E-04	8	8724E-04	61	2	0479E-04	1	6941E-21	1	2819E-03
62	9	6228E-05	0	0000E+00	1	2323E-03	63	5	3949E-04	0	0000E+00	7	9611E-04
67	-3	3767E-04	-1	6958E-06	2	9481E-03	68	1	5716E-04	1	7041E-04	2	8406E-03
69	1	7763E-04	1	8538E-04	2	384E-03	70	-2	3723E-04	0	0000E+00	2	9501E-03
71	1	2666E-03	1	6941E-21	2	2002E-03	72	6	4110E-04	6	7763E-21	2	1488E-03
76	-2	2510E-04	-4	8873E-05	5	7086E-03	77	7	6002E-04	3	7774E-04	4	6205E-03
78	1	2666E-03	2	4165E-04	4	3905E-03	79	-1	7899E-04	1	6941E-21	5	7226E-03
80	8	5758E-04	0	0000E+00	4	4799E-03	81	1	3026E-03	0	0000E+00	4	1559E-03
83	4	9766E-04	3	9353E-04	8	9691E-04	84	7	8221E-04	6	3163E-04	5	9988E-04
86	5	4004E-04	5	9460E-04	6	4210E-04	87	7	8818E-04	7	8794E-04	4	2109E-04
89	8	9647E-04	0	0000E+00	5	5967E-04	90	1	0772E-03	0	0000E+00	4	0821E-04
92	8	3841E-04	-1	1916E-04	1	9842E-03	93	8	4165E-04	-2	9343E-05	1	4255E-03
95	7	1642E-04	3	7526E-04	1	8344E-03	96	8	5341E-04	6	1458E-04	1	4290E-03
98	9	5695E-04	0	0000E+00	1	7385E-03	99	1	1393E-03	0	0000E+00	1	3141E-03
101	1	5331E-03	-1	2514E-04	4	4853E-03	102	1	4124E-03	-1	6473E-04	3	0274E-03
104	1	4040E-03	3	7130E-04	3	9135E-03	105	1	4693E-03	5	8227E-04	3	3042E-03
107	1	5731E-03	1	3553E-20	3	6143E-03	108	1	7775E-03	0	0000E+00	2	8776E-03
110	9	2260E-04	5	6876E-04	4	2951E-04	111	1	0078E-03	1	0078E-03	2	4317E-04
113	9	0308E-04	8	3381E-04	2	7647E-04	114	9	7596E-04	7	6802E-04	1	4862E-04
116	1	0416E-03	0	0000E+00	2	6332E-04	117	9	4244E-04	0	0000E+00	1	1145E-04
119	6	3775E-04	-3	7264E-05	9	0420E-04	120	4	4171E-04	-3	5647E-05	5	6976E-04
122	9	1484E-04	7	0817E-04	1	0486E-03	123	9	8430E-04	6	7614E-04	7	6156E-04
125	1	0695E-03	0	0000E+00	8	2453E-04	126	9	6699E-04	0	0000E+00	3	8581E-04
128	1	0492E-03	-2	3946E-04	3	5049E-03	129	6	7427E-04	-2	1822E-04	3	1790E-03

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131	1 4807E-03	6 9206E-04	2 6901E-03	132	1 4821E-03	7 1713E-04	2 2350E-03
134	1 7498E-03	1 3530E-20	2 1430E-03	135	3 0833E-04	1 3533E-20	1 5783E-03
139	7 8307E-04	5 2881E-04	2 7020E-05	140	3 0833E-04	1 6017E-04	-4 1212E-04
141	0 0000E+00	1 1200E-05	-5 6299E-04	142	8 4098E-04	6 7763E-21	4 4919E-05
143	3 3231E-04	0 0000E+00	-4 1569E-04	144	-1 4236E-25	-6 0286E-26	-5 6560E-04
148	8 1053E-04	4 6998E-04	2 4573E-04	149	3 7503E-04	1 7327E-04	-5 8018E-04
150	-5 2940E-23	6 4743E-06	-7 8662E-04	151	8 7099E-04	-6 7763E-21	2 0877E-04
152	4 1086E-04	0 0000E+00	-5 8682E-04	153	2 8007E-25	7 0550E-25	-7 9018E-04
157	1 3120E-03	6 4501E-04	1 4596E-03	158	6 0897E-04	2 6267E-04	5 6126E-04
159	-5 2940E-23	7 5830E-06	3 5958E-04	160	1 4414E-03	1 3553E-20	1 3773E-03
161	6 6799E-04	0 0000E+00	5 5113E-04	162	4 8513E-26	1 9587E-25	3 5594E-04
163	4 3106E-04	2 9269E-25	7 6110E-04	164	2 2289E-04	1 3901E-25	6 6162E-04
165	5 4704E-05	4 6147E-25	6 5852E-04	166	3 7690E-05	7 8724E-05	7 0250E-04
167	1 9902E-04	1 2721E-04	6 7853E-04	168	3 7690E-05	1 6064E-04	7 0250E-04
169	4 4118E-04	1 4176E-04	7 5812E-04	170	1 2577E-04	1 5960E-04	6 8394E-04
171	1 4019E-04	2 2696E-04	6 2469E-04	172	3 1139E-04	1 0143E-25	1 0127E-03
173	2 2858E-04	7 5291E-26	8 8618E-04	174	1 1632E-04	8 2894E-29	8 7990E-04
175	3 0224E-04	2 4222E-06	1 0152E-03	176	1 7566E-04	-2 3094E-05	9 1950E-04
177	1 5854E-04	6 4227E-06	9 9334E-04	178	3 0647E-04	1 3803E-04	1 0020E-03
179	8 2551E-05	5 3734E-05	9 0636E-04	180	1 8587E-04	1 3438E-04	8 7207E-04
190	1 2354E-03	1 3109E-25	-1 3862E-04	191	3 8534E-04	1 2544E-25	-3 4220E-04
192	-1 4312E-25	8 0845E-26	4 4643E-04	193	1 1232E-03	3 2762E-04	-1 2340E-04
194	3 6127E-04	7 6900E-05	-3 4639E-04	195	0 0000E+00	1 0584E-03	-4 4986E-04
196	8 9104E-04	4 5386E-04	-7 4785E-05	197	3 2530E-04	1 0948E-04	-3 4443E-04
198	0 0000E+00	1 0058E-05	-4 5258E-04	199	1 3686E-03	4 3334E-26	-1 4229E-04
200	4 0363E-04	5 0040E-26	-3 7403E-04	201	-7 1331E-26	2 7790E-26	-5 0112E-04
202	1 2294E-03	3 6818E-04	-1 0866E-04	203	3 7965E-04	8 1123E-03	-3 6950E-04
204	0 0000E+00	9 0613E-06	-4 9536E-04	205	9 6508E-04	4 9986E-04	-5 8036E-03
206	3 3923E-04	1 2466E-04	-3 6851E-04	207	-5 2940E-23	1 1504E-05	-5 0160E-04
220	4 2901E-04	1 9478E-04	7 6195E-04	221	1 5732E-04	1 8481E-04	7 1611E-04
222	2 1179E-04	3 7048E-04	5 1529E-04	223	4 8854E-04	-3 3881E-21	7 5298E-04
224	2 1610E-04	1 6941E-21	7 1442E-04	225	4 8633E-04	0 0000E+00	4 5759E-04
229	3 2374E-04	1 2980E-04	9 9453E-04	230	1 6006E-04	1 5886E-04	9 1792E-04
231	2 2059E-04	3 4411E-04	6 2719E-04	232	3 6856E-04	0 0000E+00	9 9461E-04
233	1 8769E-04	0 0000E+00	9 3859E-04	234	5 1789E-04	3 3881E-21	5 3669E-04
245	4 9533E-04	9 0421E-05	5 1885E-04	246	6 3639E-04	6 1735E-04	3 5830E-04
248	4 9533E-04	4 2532E-04	3 6768E-04	249	6 7404E-04	6 1735E-04	2 2517E-04
251	7 4963E-04	6 7763E-21	3 1742E-04	252	8 9840E-04	0 0000E+00	2 1180E-04
254	3 9994E-04	4 5901E-05	6 9663E-04	255	6 9996E-04	4 6238E-04	5 1156E-04
257	4 8976E-04	5 3574E-04	4 1639E-04	258	7 3554E-04	7 5701E-04	2 7101E-04
260	8 1882E-04	0 0000E+00	3 6348E-04	261	9 9365E-04	0 0000E+00	2 6032E-04
272	8 8986E-04	2 7863E-04	2 3179E-04	273	1 087E-03	2 4409E-04	1 2785E-04
275	8 2072E-04	6 5609E-04	1 2843E-04	276	6 3549E-04	6 0741E-04	4 8491E-05
278	9 1820E-04	0 0000E+00	1 1865E-04	279	5 1122E-04	0 0000E+00	2 3288E-05
281	8 5666E-04	4 6666E-04	3 6409E-04	282	1 0480E-03	3 9755E-04	2 1632E-04
284	8 8019E-04	7 8769E-04	1 7962E-04	285	9 2767E-04	7 0918E-04	7 8902E-03

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287	9	7882E-04	-6	7763E-21	1	6665E-04	288	8	8082E-04	6	7763E-21	6	5875E-05
301	7	0755E-04	4	5072E-04	-3	8175E-05	302	2	8259E-04	1	4485E-04	-3	4301E-04
303	0	0000E+00	9	6902E-04	-4	5343E-04	304	7	6680E+00	0	0000E+00	-2	4024E-05
305	3	0338E-04	3	3881E-21	3	4455E-04	306	-1	3762E-25	-1	1002E-25	-4	5640E-04
310	7	4215E-04	4	8694E-04	-2	7220E-05	311	2	9303E-04	1	5132E-04	-3	7866E-04
312	0	0000E+00	8	8188E-06	-5	1044E-04	313	8	0391E-04	0	0000E+00	5	6670E-06
314	3	1691E-04	3	3881E-21	-3	7398E-04	315	-6	4755E-26	-4	2833E-26	-5	0416E-04
325	1	3826E-04	-2	7579E-25	-3	4026E-03	326	2	9569E-05	-6	8738E-26	-3	0083E-03
327	-2	5421E-04	-6	1471E-25	-3	3372E-03	328	1	4408E-04	3	0798E-03	-3	4000E-03
329	1	0341E-04	9	5264E-05	-2	9518E-03	330	2	9655E-04	-3	0427E-04	-3	0070E-03
331	1	6149E-04	8	5613E-05	-3	3928E-03	332	1	5504E-04	1	2063E-04	-2	8198E-03
333	1	2235E-04	-1	8807E-04	-2	9362E-03	334	3	3388E-04	4	9451E-25	-1	6277E-03
335	-2	5323E-05	7	2707E-25	-1	5303E-03	336	-6	1715E-04	-3	1897E-25	-1	4506E-03
337	3	3660E-04	5	3199E-05	-1	6274E-03	338	-1	8114E-06	6	8992E-09	-1	5113E-03
339	-8	4098E-05	-2	1243E-04	-1	4404E-03	340	3	4830E-04	1	2936E-04	-1	6265E-03
341	-1	2698E-05	1	1279E-04	-1	4716E-03	342	-1	4938E-04	-6	7122E-05	-1	3362E-03
343	4	9109E-04	2	5564E-25	-7	4577E-04	344	1	2294E-04	1	9018E-25	-7	4168E-04
345	-3	7510E-04	1	0505E-25	-6	4143E-04	346	4	9203E-04	7	3168E-05	-7	5039E-04
347	9	5744E-05	9	6734E-05	-7	4657E-04	348	-1	2645E-04	1	5922E-05	-7	6945E-04
349	4	9271E-04	1	5916E-04	-7	4855E-04	350	3	0815E-05	1	5538E-04	-7	5174E-04
351	-1	0752E-04	1	8408E-04	-7	0908E-04	355	1	8540E-05	5	0990E-05	-3	3844E-03
356	1	7692E-04	9	8438E-05	-2	7022E-03	357	6	0240E-05	7	5169E-06	-2	6744E-03
358	2	1726E-04	0	0000E+00	-3	3841E-03	359	1	8534E-04	0	0000E+00	-2	6512E-03
360	8	9070E-05	8	4703E-22	-2	5390E-03	364	3	5263E-04	1	5589E-04	-1	6249E-03
365	4	1531E-05	6	7473E-05	-1	4437E-03	366	-1	5045E-04	6	2999E-05	-1	2918E-03
367	3	9610E-04	3	3881E-21	-1	6245E-03	368	5	4634E-05	0	0000E+00	-1	4212E-03
369	-5	2027E-05	0	0000E+00	-1	2279E-03	373	4	8134E-04	2	1194E-04	-7	5026E-04
374	7	6723E-05	1	3152E-04	-7	6456E-04	375	-5	6571E-05	2	4118E-04	-6	6137E-04
376	9	3721E-04	3	3881E-21	-7	4776E-04	377	1	1669E-04	-8	4703E-22	-7	6507E-04
378	1	4497E-04	0	0000E+00	-6	1937E-04	380	1	0509E-04	1	2929E-05	-2	8069E-03
381	1	4168E-04	3	1184E-05	-2	5198E-03	383	1	1897E-04	1	3706E-04	-2	4538E-03
384	1	3759E-04	1	4035E-01	-2	0389E-03	386	2	0409E-04	0	0000E+00	-2	2404E-03
387	1	4132E-04	1	6941E-2	-1	7621E-03	389	-1	1657E-04	1	8421E-04	-1	1606E-03
390	3	0341E-05	3	6520E-04	-9	3090E-04	392	-4	9847E-05	2	0287E-04	-1	0944E-03
393	8	2741E-05	2	5695E-04	-8	3693E-04	395	8	7048E-05	0	0000E+00	-9	9530E-04
396	1	9730E-04	1	6941E-21	-7	3668E-04	398	1	6387E-05	4	0255E-04	-5	6265E-04
399	1	7967E-04	6	3336E-04	-4	0260E-04	401	1	1784E-04	3	9313E-04	-5	3585E-04
402	2	4464E-04	4	7257E-04	-4	0218E-04	404	3	3977E-04	0	0000E+00	-4	8911E-04
405	4	0682E-04	-3	3881E-21	-3	6841E-04	407	7	7774E-05	-2	3142E-04	-2	3476E-03
408	-3	3708E-04	-4	1100E-04	-1	5898E-03	410	9	4785E-05	1	0091E-04	-1	8557E-03
411	-2	1310E-04	-1	4349E-04	-1	2687E-03	413	7	1937E-05	8	4703E-22	-1	5977E-03
414	-2	4524E-04	5	0822E-21	-1	1269E-03	416	2	5879E-04	3	3360E-04	-8	4193E-04
417	2	2791E-04	-2	1155E-04	-8	2143E-04	419	2	3445E-04	0	1896E-04	-7	9153E-04
420	7	4927E-05	1	8443E-04	-7	1026E-04	422	2	8409E-04	0	0000E+00	-7	3063E-04
423	5	2644E-05	4	2352E-22	-6	0826E-04	425	3	7168E-04	6	5633E-04	-2	9989E-04
426	4	4309E-04	6	3565E-04	-2	0928E-04	428	3	5205E-04	5	1865E-04	-3	4850E-04

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429	2. 6795E-04	4 5973E-04	-2 9796E-04	431	4 4552E-04	-3 3881E-21	-3 3724E-04
432	2 7844E-04	0 0000E+00	-2 7819E-04	433	1 2068E-03	-2 8564E-25	1 4442E-04
435	1 1236E-03	2 3418E-04	1 8227E-04	439	3 3413E-04	-3 4762E-25	3 2616E-04
441	3 3566E-04	-3 0902E-05	3 7599E-04	445	2 4688E-04	-6 7677E-25	2 7802E-03
447	3 5649E-04	-1 6229E-04	2 8798E-03	469	-5 5433E-04	1 1970E-25	7 7720E-04
471	-5. 4740E-04	-6 0813E-05	7 7463E-04	473	-5 2811E-04	-1 4209E-04	7 7480E-04
475	-6. 6300E-04	-5 1226E-26	1 3890E-03	477	-6 7506E-04	-1 0386E-04	1 4033E-03
479	-6. 5327E-04	-1 6269E-04	1 3946E-03	481	-6 1867E-04	-1 4912E-25	2 1586E-03
483	-6. 2307E-04	-8 5193E-05	2 1587E-03	485	-6 1005E-04	-1 3426E-04	2 1568E-03
487	1 0207E-03	-1 9833E-04	6 7159E-04	489	1 0163E-03	-1 4538E-04	7 3507E-04
491	1 0299E-03	2 2807E-25	6 7628E-04	493	9 6118E-04	-3 1591E-04	1 3915E-03
495	1 0418E-03	-2 6846E-04	1 4392E-03	497	1 2020E-03	-2 6830E-25	1 1533E-03
499	9. 2658E-04	1 4573E-04	2 2035E-03	501	8 7334E-04	-2 2394E-04	2 1733E-03
503	1 4925E-03	-3 7615E-25	1 4672E-03	505	6 7949E-04	-7 1677E-04	4 9281E-04
507	7 8321E-04	-3 6600E-04	6 0469E-04	511	7 1937E-04	-3 5131E-04	1 2984E-03
513	8. 4307E-04	-4 4852E-04	1 3065E-03	517	8 0677E-04	1 1381E-04	1 9589E-03
519	9 3106E-04	-2 8827E-05	2 1499E-03	523	2 5801E-04	-4 8893E-04	3 3003E-04
525	4. 2523E-04	-4 9412E-04	4 0533E-04	529	3 3832E-04	-3 5164E-04	9 7207E-04
531	4 8611E-04	-4 0069E-04	1 0985E-03	535	5 8550E-04	-1 5200E-04	1 6719E-03
537	6. 7702E-04	-1 1962E-04	1 7717E-03	541	1 9294E-04	8 6207E-26	2 1426E-03
542	1. 2640E-03	3 6606E-25	6 3613E-05	547	2 2297E-04	-2 2231E-04	2 6231E-04
544	1. 2124E-03	2 6282E-04	8 1923E-05	553	2 0591E-04	-1 0242E-25	8 5702E-04
548	1. 2179E-03	1 5155E-25	1 4631E-04	549	2 4156E-04	-2 0161E-04	8 9564E-04
550	1 1651E-03	2 2383E-04	1 7679E-04	553	4 5618E-04	-1 9888E-25	1 5184E-03
555	4. 8460E-04	-1 0214E-04	1 5467E-03	579	-5 0507E-04	-1 9704E-04	7 7817E-04
581	-5 3846E-04	3 3881E-21	7 7527E-04	585	-6 0800E-04	-2 5191E-04	1 3938E-03
587	-6. 6229E-04	0 0000E+00	1 3980E-03	591	-5 6317E-04	-1 9690E-04	2 1764E-03
593	-5. 7887E-04	-8 3234E-05	2 1763E-03	613	-6 9751E-04	-4 2532E-25	-3 9614E-03
615	-6 9338E-04	-1 0772E-26	-3 9626E-03	617	-6 6614E-04	-1 5800E-04	-3 9639E-03
619	-5 5537E-04	-1 2637E-04	-1 5695E-03	621	-5 5462E-04	-6 8922E-05	-1 5675E-03
623	-5 3378E-04	-1 2637E-04	-1 5682E-03	625	-3 9372E-04	-4 2402E-26	-7 4856E-04
627	-3 9201E-04	-4 6418E-05	-3 4294E-03	629	-3 7568E-04	-9 0281E-05	-7 4922E-04
631	7 5039E-04	-8 2771E-04	-3 4294E-03	633	1 0818E-03	-1 6303E-03	-2 8329E-03
635	1 1292E-04	-8 5368E-25	-4 0128E-03	637	5 1309E-04	-7 9131E-04	-1 3039E-03
639	6 1780E-04	-1 3436E-03	-1 4070E-03	641	-6 8578E-05	-7 8161E-25	-1 4348E-03
643	5 8101E-04	-4 5797E-04	-6 0445E-04	645	6 5917E-04	-8 0114E-04	-9 0183E-04
647	3 0661E-04	-2 6568E-25	-5 9574E-04	649	1 1445E-04	-8 8316E-04	-3 1201E-03
651	4 6373E-04	-8 0339E-04	-3 3454E-04	655	7 2140E-05	-6 2746E-04	-8 7365E-04
657	3 4513E-04	-6 8641E-04	-1 1079E-03	661	2 3152E-04	-3 3219E-04	-3 7888E-04
663	4 5761E-04	-4 1510E-04	-5 0236E-04	667	-6 5316E-04	-1 2689E-03	-2 2232E-03
669	-3 9263E-04	-1 1159E-03	-2 6731E-03	673	-1 8208E-04	-5 9076E-04	-7 6297E-04
675	-1. 6650E-04	-6 0690E-04	-6 6332E-04	679	-1 5505E-04	-1 0381E-04	-1 3244E-04
681	-3 0827E-05	-2 3237E-04	-2 2968E-04	685	-8 8115E-04	-6 0413E-26	-2 1349E-03
687	-1 1282E-03	-1 2411E-03	-1 5296E-03	688	-8 2221E-04	-9 6311E-04	-1 5911E-03
691	-3 3889E-04	-5 4148E-25	-4 9526E-04	692	-2 0812E-05	-1 3719E-25	-3 1425E-04
693	-4 5484E-04	-7 3363E-04	-8 7430E-04	694	7 6350E-04	-4 4331E-04	-8 2736E-04

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697	-4	0188E-04	-1	3822E-25	-7	2174E-05	698	1	6329E-04	5	7919E-25	-1	6720E-04
699	-3	2898E-04	-1	3347E-04	-8	3748E-05	700	2	9357E-04	1	8886E-04	-1	6679E-04
704	1	9407E-24	-7	1506E-25	-2	0194E-03	705	0	0000E+00	-2	9561E-04	-1	8037E-03
708	8	4703E-22	-2	0245E-04	-1	6723E-03	710	1	4665E-24	-2	5671E-25	-5	6856E-04
712	0	0000E+00	-9	4839E-05	-7	5476E-04	714	0	0000E+00	1	9369E-05	-6	7684E-04
716	1	0728E-24	3	7245E-25	-2	6199E-04	718	4	2352E-22	1	9658E-04	-1	4280E-25
720	1	6941E-21	2	4443E-04	-1	0322E-25	723	-6	2336E-04	-2	5189E-04	-3	9628E-03
725	-6	7223E-04	0	0000E+00	-3	6419E-03	729	-4	9911E-04	-2	0427E-04	-1	5663E-03
731	-5	4099E-04	0	0000E+00	-1	5641E-03	735	-3	5220E-04	-1	3999E-04	-7	5048E-04
737	-3	7810E-04	3	3881E-21	-7	4990E-04	742	4	2352E-22	-8	1401E-05	-1	5440E-03
744	2	5034E-25	-2	3425E-25	-1	4962E-03	748	-4	2352E-22	6	8958E-05	-5	6716E-04
750	-4	6780E-25	-3	8248E-25	-5	1294E-04	754	1	6941E-21	4	7391E-04	-2	0462E-26
756	9	9434E-26	-2	4373E-25	-1	6866E-26	757	-1	0503E-03	-4	2828E-25	-4	4745E-03
758	9	3370E-25	-4	0034E-25	-3	8351E-03	759	-1	0569E-03	-4	1982E-05	-4	3761E-03
760	0	0000E+00	7	4894E-05	-3	7542E-03	761	-1	0813E-03	-1	5364E-04	-4	1417E-03
762	4	2352E-22	7	2835E-05	-3	5822E-03	763	-1	3900E-03	-2	2326E-26	-3	1179E-03
764	1	1281E-24	-3	1269E-26	-2	9742E-03	765	-1	3293E-03	-1	6359E-04	-2	9614E-03
766	-1	3235E-23	3	5371E-06	-2	7224E-03	767	-1	2184E-03	-2	8722E-04	-2	7489E-03
768	0	0000E+00	-4	5970E-05	-2	4860E-03	777	-1	0550E-03	-3	6243E-04	-3	9433E-03
778	0	0000E+00	4	8124E-05	-3	4593E-03	779	-1	1189E-03	0	0000E+00	-3	8865E-03
780	9	5253E-25	3	9349E-25	-3	4173E-03	783	-1	1511E-03	-4	8318E-04	-2	5593E-03
784	0	0000E+00	-2	9747E-05	-2	3813E-03	785	-1	2518E-03	-1	3553E-20	-2	5067E-03
786	1	1006E-24	4	4191E-26	-2	3543E-03	799	-3	2574E-04	-5	4771E-26	-2	1179E-04
800	5	9731E-04	7	6016E-26	-2	0801E-04	801	-3	2125E-04	-3	4066E-05	-2	1037E-04
802	5	5253E-04	8	7516E-05	-2	0721E-04	803	-3	0752E-04	-8	1984E-05	-2	1188E-04
804	5	5262E-04	1	6772E-04	2	1005E-04	805	-2	9669E-04	-6	1895E-26	2	4878E-04
806	5	9573E-04	7	0703E-26	2	8228E-04	807	-2	9479E-04	-3	3739E-05	2	4906E-04
808	5	9297E-04	8	6107E-05	2	8343E-04	809	-2	8396E-04	-7	3030E-05	2	4915E-04
810	5	8990E-04	1	7718E-04	2	8446E-04	823	5	7501E-04	-1	5486E-04	-1	6898E-04
824	-9	3504E-05	4	1810E-04	-1	9353E-04	825	6	4590E-04	-2	5973E-04	-2	3025E-04
826	-2	0529E-04	2	4769E-04	-2	0434E-04	827	6	2108E-04	-1	5021E-26	-2	7212E-04
828	-2	1248E-04	6	8437E-25	-2	1281E-04	829	6	1275E-04	-1	5743E-04	1	6729E-04
830	-3	0336E-05	4	4445E-04	2	382E-04	831	6	6774E-04	-1	0096E-04	1	8027E-04
832	-1	6279E-04	2	5010E-04	2	4788E-04	833	6	8517E-04	-8	0141E-26	1	6894E-04
834	-1	9567E-04	6	4008E-25	2	506E-04	847	3	7830E-04	-1	9548E-04	-6	4277E-05
848	3	6355E-04	7	5482E-04	-7	4553E-05	849	4	8031E-04	-2	1296E-04	-1	3174E-04
850	1	2899E-04	5	5584E-04	-1	3574E-04	853	5	1238E-04	-1	7412E-04	1	3343E-04
854	5	1211E-04	7	4244E-04	1	6274E-04	855	5	8928E-04	-4	2539E-05	1	5531E-04
856	2	3209E-04	5	1309E-04	2	1020E-04	871	1	4714E-04	-4	3751E-05	7	9840E-05
872	8	1802E-04	6	9146E-04	-2	4873E-05	873	2	4014E-04	-1	1027E-04	1	3191E-05
874	5	9567E-04	-2	2287E-05	-2	2287E-05	877	3	6705E-04	-1	6785E-05	7	9328E-05
878	1	0176E-03	6	5558E-04	7	9182E-05	879	4	3913E-04	-4	2518E-05	1	0719E-04
880	7	6651E-04	7	2035E-04	1	2895E-04	895	4	3391E-05	-1	4973E-25	1	3131E-04
896	8	7832E-04	3	0035E-25	3	0650E-05	897	7	2552E-05	-3	3054E-05	1	1667E-04
898	8	8110E-04	3	2637E-04	1	4270E-05	901	2	8981E-04	-1	2575E-25	6	5092E-05
902	1	2078E-03	2	7231E-25	3	0423E-05	903	3	0713E-04	-2	8611E-05	5	9781E-05

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STEP 2 INCREMENT 1

904	1 1577E-03	3 5762E-04	5 2593E-05	8 3783E-04	2 0675E-25	-7 9841E-05
922	7 5385E-04	2 6171E-04	-7 7404E-05	5 8785E-04	3 5854E-04	-7 9229E-05
926	1 0695E-03	1 3236E-25	-8 3074E-05	9 6153E-04	2 8828E-04	-8 0450E-05
930	7 5920E-04	4 1225E-04	-2 2078E-05	-2 9416E-04	-1 1267E-04	-2 1106E-04
946	5 3442E-04	2 3927E-04	-2 0948E-04	947	0 0000E+00	-2 1153E-04
948	5 9802E-04	0 0000E+00	-2 1093E-04	-3 1138E-04	-1 0334E-04	2 4874E-04
952	5 7058E-04	2 4926E-04	2 8140E-04	-2 6905E-04	-3 3881E-21	2 5037E-04
954	6 3563E-04	6 7763E-21	2 8243E-04	5 6103E-04	5 6822E-04	-7 3020E-03
970	4 5685E-04	3 4208E-04	-8 0237E-05	5 9506E-04	0 0000E+00	-7 6569E-05
972	5 0190E-04	-3 3881E-21	-7 9318E-05	7 1895E-04	6 1037E-04	4 4266E-05
976	5 9670E-04	3 9288E-04	-5 5837E-05	7 2310E-04	0 0000E+00	2 9399E-06
978	6 5294E-04	0 0000E+00	-5 6094E-05	1 7308E-04	5 1933E-26	-2 0935E-04
998	1 3445E-04	1 2704E-04	-2 1040E-04	4 8933E-05	1 7147E-04	-2 2009E-04
1004	2 1325E-04	3 4967E-26	2 6465E-04	1 7764E-04	1 1587E-04	2 5992E-04
1010	9 3810E-05	1 8662E-04	2 5957E-04	2 1230E-04	5 7612E-05	2 0750E-25
1023	-4 8677E-26	-2 5978E-26	-6 2379E-26	2 0072E-04	-9 9189E-27	6 1893E-25
1026	2 6470E-23	1 0744E-05	1 4791E-25	1 8234E-04	8 5728E-05	6 1722E-25
1029	0 0000E+00	1 2771E-05	1 4926E-25	2 6176E-04	1 2761E-25	-1 3293E-04
1032	-1 6982E-25	6 1932E-26	-1 6280E-04	2 4718E-04	5 5350E-05	-1 3473E-04
1033	0 0000E+00	9 3958E-06	1 6257E-04	2 2244E-04	8 5321E-05	-1 3381E-04
1038	-5 2940E-23	1 0205E-05	-1 6187E-04	3 2096E-04	1 3989E-25	-2 7096E-04
1041	-1 5689E-25	6 7035E-26	-3 2296E-04	3 0238E-04	6 8781E-05	-2 6644E-04
1044	2 6470E-23	1 0398E-05	-3 2110E-04	2 6933E-05	1 0437E-04	-2 6133E-04
1047	-5 2940E-23	1 4060E-05	-3 1880E-04	9 0343E-05	1 6894E-04	-2 2341E-04
1071	3 3441E-05	3 9753E-04	-1 8125E-04	1 5486E-04	0 0000E+00	-2 2577E-04
1074	3 1812E-04	0 0000E+00	-1 6294E-04	1 3693E-04	1 9051E-04	2 5917E-04
1080	1 2513E-04	4 4514E-04	2 2925E-04	2 1095E-04	0 0000E+00	2 5916E-04
1083	4 3530E-04	-3 3881E-21	2 2034E-04	2 7014E-04	5 3247E-04	-1 3420E-04
1107	4 3712E-04	5 9755E-04	-8 3222E-05	5 4565E-04	0 0000E+00	-1 1168E-04
1110	6 3373E-04	0 0000E+00	-7 6443E-05	3 8666E-04	6 0020E-04	1 8892E-04
1116	5 8452E-04	6 6043E-04	1 4656E-04	6 7844E-04	0 0000E+00	1 8587E-04
1119	7 8557E-04	6 7763E-21	1 3102E-04	5 3939E-04	6 1102E-04	-6 0376E-05
1145	6 5148E-04	6 7763E-21	-6 2698E-05	6 8423E-04	6 6281E-04	8 9621E-05
1154	7 8488E-04	-6 7763E-21	7 0915E-05	1 6043E-04	9 8234E-05	6 0878E-25
1170	-5 2940E-23	1 0699E-05	1 5162E-25	1 8054E-04	0 0000E+00	2 0187E-25
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1179	5 2940E-23	9 0811E-06	-1 6103E-04	2 1450E-04	0 0000E+00	-1 3281E-04
1182	-1 5188E-25	-9 9069E-26	-1 6081E-04	2 3805E-04	1 2658E-04	-2 5705E-04
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1191	-1 5009E-25	-1 0418E-25	-3 1583E-04	4 9634E-04	2 2314E-24	1 2648E-03
1202	9 8953E-05	-4 5653E-07	3 3151E-03	-3 4149E-04	3 4138E-24	2 0995E-03
1204	-9 4433E-05	2 9815E-24	1 1440E-03	2 2616E-04	8 4450E-05	1 2361E-03
1206	1 0450E-04	1 7886E-24	2 0901E-03	3 5011E-04	-2 0673E-05	1 2589E-03
1208	1 2065E-03	4 6882E-24	1 8642E-03	5 4281E-04	1 3255E-04	1 2689E-03
1210	1 0785E-04	5 3455E-05	1 3100E-03	-5 7330E-04	-8 3007E-05	2 1071E-03
1212	-1 0032E-04	1 9741E-04	1 2254E-03	1 4608E-04	1 5815E-04	1 2626E-03

STEP	INCREMENT	1	2	INCREMENT	1								
1214	2	5020E-04	-2	4395E-04	2	1230E-03	2	3673E-04	4	4217E-05	1	2027E-03	
1216	8	4535E-04	-4	2082E-04	1	9398E-03	5	5928E-04	1	5188E-04	1	2820E-03	
1218	-5	5558E-04	-3	7892E-05	2	1014E-03	-7	0371E-05	2	4522E-04	1	1966E-03	
1220	1	4663E-04	9	0349E-05	2	0778E-03	8	2588E-04	-4	4880E-04	1	6869E-03	
1222	2	3233E-04	7	2071E-25	4	9790E-03	4	3920E-04	-1	6769E-04	2	9822E-03	
1224	-5	2140E-04	4	0239E-24	4	0099E-03	1	6873E-04	-1	5024E-03	2	8108E-03	
1226	4	2590E-04	-1	0268E-24	2	9023E-03	3	6135E-04	2	1639E-24	3	7325E-03	
1228	6	0514E-04	-3	9095E-04	2	6693E-03	1	6829E-03	5	3152E-24	3	6328E-03	
1230	3	3858E-04	1	9902E-04	2	9746E-03	-4	5376E-04	-1	2548E-04	2	9702E-03	
1232	-5	7736E-04	-1	0402E-04	3	9929E-03	1	6314E-04	-2	4418E-04	2	7883E-03	
1234	3	3306E-04	-1	1894E-04	2	8723E-03	5	2495E-04	-3	3633E-04	3	6262E-03	
1236	4	8601E-04	-4	3497E-04	2	4632E-03	1	3706E-03	-4	5230E-04	3	3443E-03	
1238	2	6022E-04	4	2334E-05	2	9719E-03	-6	0820E-04	-7	9862E-05	4	0170E-03	
1240	7	3456E-04	-4	8661E-05	2	6473E-03	5	2971E-04	3	2758E-05	3	4833E-03	
1242	1	3337E-03	-4	6509E-04	3	1681E-03	3	2045E-04	3	8415E-24	5	3813E-03	
1244	-3	8314E-04	-6	5250E-05	5	6721E-03	4	6614E-24	4	6614E-24	5	2444E-03	
1246	7	3456E-04	1	2616E-04	5	0592E-03	1	0776E-03	-1	2307E-04	5	0591E-03	
1248	4	2716E-04	1	6233E-04	5	2997E-03	-3	4279E-04	-7	8147E-05	5	7178E-03	
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1252	1	2097E-03	-2	4143E-04	4	8646E-03	5	5150E-04	1	4855E-04	5	1206E-03	
1254	1	2298E-03	1	1232E-04	1	6058E-03	1	6288E-03	1	5067E-24	5	2179E-07	
1256	1	1641E-03	1	2656E-04	1	5642E-04	3	8476E-04	3	2157E-24	1	0350E-04	
1258	1	3944E-03	2	1124E-04	-7	8458E-05	1	3514E-03	1	1073E-24	1	1490E-04	
1260	1	5924E-03	4	5409E-04	9	5948E-06	1	0826E-03	3	2628E-04	2	1030E-04	
1262	3	7150E-04	-3	2289E-05	1	6024E-04	1	1364E-03	4	9074E-04	-3	4677E-05	
1264	1	2605E-03	3	9428E-04	1	3190E-04	1	3308E-03	7	9272E-04	5	0418E-05	
1266	5	5457E-04	1	0941E-04	3	4341E-04	1	0239E-03	5	0810E-04	1	5650E-04	
1268	1	0378E-03	1	3710E-25	4	1943E-04	3	0618E-04	-1	8980E-05	3	3016E-04	
1270	-1	2640E-04	3	7750E-24	1	1401E-03	1	1090E-03	1	4561E-04	3	3883E-04	
1272	8	5634E-04	-1	0021E-24	6	0349E-04	1	1090E-03	2	5852E-04	4	7471E-04	
1274	3	9179E-04	-6	8341E-05	4	5275E-04	-7	7019E-05	-1	9883E-04	1	2033E-03	
1276	9	9632E-04	3	6589E-04	3	1865E-04	9	0890E-04	1	7220E-04	5	5901E-04	
1278	1	0908E-03	5	5682E-04	5	8188E-04	2	3464E-04	-3	3007E-04	1	4641E-03	
1280	9	6349E-04	2	9828E-04	4	2804E-04	8	6394E-04	2	8884E-24	2	3822E-03	
1282	2	4722E-04	-9	0627E-05	2	8075E-03	1	1495E-03	9	5445E-04	1	8845E-03	
1284	1	0402E-03	7	3769E-05	2	3974E-03	5	0560E-04	-2	2294E-04	3	0286E-03	
1286	1	2948E-03	3	3265E-04	1	7318E-03	1	2707E-03	3	3534E-04	2	3543E-03	
1288	7	6777E-04	6	0223E-25	-2	2484E-04	1	7154E-04	-1	7482E-25	-5	1330E-04	
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1300	3	871E-04	1	0215E-04	-4	0408E-04	3	8763E-04	7	4280E-05	-4	6185E-04	
1302	5	2940E-23	1	1939E-05	-5	5521E-04	-2	6470E-23	9	2599E-06	-6	6408E-04	
1304	6	1179E-04	2	5336E-04	-2	1752E-04	1	5109E-04	5	7245E-05	-5	1696E-04	
1307	3	6110E-04	1	1070E-04	-4	7275E-04	1308	2	6470E-23	5	2150E-06	-6	7065E-04
1309	6	8305E-04	1	1335E-24	-1	3717E-04	1312	2	0007E-04	9	8394E-26	-7	1340E-04

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4 2006E-04	1 654E-24	6 5691E-04	4 1122E-04	0 0000E+00	6 3272E-04	5 0071E-04	1 0650E-03	6 3684E-04	1 0556E-03	6 3291E-04	1 0282E-03	1 1829E-04	1 7979E-04	1 5034E-04	1 2134E-05	1 1743E-04	3 7291E-04	-3 4875E-04	1 5034E-04	-3 9134E-04	5 7759E-04	-2 6183E-04	2 4668E-04	4 9028E-04	8 3215E-04	-4 9560E-04	5 2922E-04	-2 5674E-04	1 4149E-03	-1 8791E-04	7 5520E-04	6 9689E-04	3 9451E-04	4 3164E-04	7 2228E-04	3 8425E-04	6 4149E-04	8 4704E-04	7 2598E-04	9 2686E-04	8 3587E-04	6 8199E-04	7 9916E-04	6 0808E-04	7 5504E-04
4 0183E-05	8 6175E-07	1 1662E-04	9 0478E-04	7 4603E-05	2 1828E-04	1 4432E-04	4 3552E-24	4 6926E-05	1 8159E-04	1 2971E-04	3 4350E-04	3 4048E-04	1 1014E-04	2 3524E-04	1 2875E-04	1 7287E-04	0 0000E+00	-1 6941E-21	2 4791E-05	-2 5089E-05	-6 2853E-05	1 2505E-04	1 9294E-04	1 9676E-04	0 0000E+00	3 3881E-21	-1 6908E-05	2 1373E-05	-6 8751E-05	3 9911E-04	0 0000E+00	2 7250E-04	6 2720E-04	9 4117E-04	4 8108E-04	5 6011E-04	6 8937E-04	6 7763E-21	0 0000E+00	-2 4978E-04	2 6026E-04	3 4503E-04	2 6483E-04	4 8095E-04	
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1448	1	4389E-03	0	0000E+00	3	9337E-03	1	6877E-03	0	0000E+00	3	2605E-03
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1456	1	1785E-03	8	8971E-04	1	4960E-04	8	3569E-04	8	3570E-04	3	4361E-04
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1463	9	8464E-04	8	8665E-04	6	6147E-04	8	2546E-04	8	8648E-04	1	6252E-04
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1476	5	2432E-04	-5	0540E-04	1	7671E-03	9	9003E-04	5	8336E-04	7	9343E-04
1478	8	8783E-04	6	8510E-04	1	2350E-03	9	6489E-04	7	1247E-04	9	0039E-04
1483	9	2723E-04	6	1371E-04	9	6076E-03	1	0370E-03	5	4544E-04	1	4247E-03
1485	8	5194E-04	5	5012E-04	5	8012E-04	1	0536E-03	4	9022E-04	9	8982E-04
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1490	1	1270E-03	0	0000E+00	9	4720E-04	1	0985E-03	6	7763E-21	4	1949E-04
1492	1	2444E-03	-1	9255E-04	3	7587E-03	8	4505E-04	-2	4559E-04	3	3171E-03
1495	1	4107E-03	4	2052E-04	2	1854E-03	1	3048E-03	3	5084E-04	2	7595E-03
1497	1	4770E-03	6	4852E-04	2	9896E-03	1	4921E-03	7	1590E-04	2	4503E-03
1500	1	5225E-03	8	2644E-04	2	3548E-03	1	4347E-03	7	9430E-04	1	8252E-03
1502	1	7818E-03	0	0000E+00	2	4896E-03	1	6555E-03	-1	3553E-20	1	8334E-03
1507	8	4763E-04	5	0421E-04	2	1099E-05	8	3577E-04	6	0331E-04	1	0522E-04
1512	7	4045E-04	4	6821E-04	3	7270E-05	8	0261E-04	5	2012E-04	1	5700E-04
1514	9	1575E-04	6	7763E-21	7	2621E-05	8	5442E-04	0	0000E+00	1	5505E-04
1520	8	4252E-04	4	1290E-04	2	6011E-04	8	4221E-04	5	3444E-04	4	8358E-04
1525	7	8261E-04	4	4870E-04	2	2116E-04	9	3812E-04	4	6014E-04	2	9313E-04
1527	9	4552E-04	0	0000E+00	2	9974E-04	1	0516E-03	6	9292E-04	2	2738E-04
1532	1	3296E-03	5	3178E-04	1	3266E-03	1	3955E-03	6	9292E-04	1	7768E-03
1535	1	2868E-03	6	8500E-04	1	4039E-03	1	5001E-03	-1	3553E-20	1	4865E-03
1541	3	3709E-04	1	5059E-04	-4	1165E-04	0	0000E+00	6	2118E-06	-5	5992E-04
1545	5	2486E-04	2	6626E-04	-2	1297E-04	1	3878E-04	6	6528E-04	-5	2375E-04
1549	2	9653E-04	1	6514E-04	-4	1492E-04	3	2797E-04	1	6019E-04	-4	8729E-04
1551	0	0000E+00	4	8791E-06	-5	6463E-04	0	0000E+00	8	7501E-06	-6	7705E-04
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1562	3	9437E-04	1	3280E-04	-5	7009E-04	0	0000E+00	2	0819E-06	-7	8372E-04
1566	5	9613E-04	2	6667E-04	-2	6807E-04	1	8385E-04	8	0558E-03	-7	4327E-04
1570	3	6635E-04	1	9218E-04	-5	8554E-04	1	7971E-04	4	1518E-04	-6	0430E-04
1572	0	0000E+00	2	4180E-06	-7	8901E-04	2	6470E-23	4	3390E-06	-8	0346E-04

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1574	6.4882E-04	-6.7763E-21	-2.8916E-04	2.0215E-04	1.6941E-21	-7.4747E-04
1577	5.2252E-04	0.0000E+00	-6.1206E-04	-1.1093E-24	-2.1696E-24	-8.0807E-04
1582	6.2454E-04	2.1843E-04	5.7311E-04	0.0000E+00	7.8286E-06	3.6087E-04
1584	9.8255E-04	4.4561E-04	8.6115E-04	2.8985E-04	1.2544E-04	4.1003E-04
1587	5.9501E-04	3.0031E-04	5.5707E-04	2.6470E-23	3.4978E-06	3.5621E-04
1589	1.0694E-03	1.3553E-20	8.5244E-04	3.2015E-04	-3.3881E-21	4.0654E-04
1591	1.4960E-04	-7.8613E-25	8.1541E-04	-5.5149E-04	-3.0660E-05	7.7587E-04
1593	-6.2655E-04	5.8941E-25	1.0219E-03	4.3112E-04	4.0023E-05	7.6060E-04
1595	3.7365E-04	2.3670E-25	8.7954E-04	1.5074E-04	2.2593E-05	8.1748E-04
1597	-5.3742E-04	-1.0104E-04	7.7480E-04	-6.2720E-04	-8.6076E-05	1.0247E-03
1599	4.3706E-04	1.1030E-04	7.5914E-04	3.6810E-04	4.0506E-05	8.8726E-04
1601	1.5268E-04	5.1179E-05	8.1654E-04	-6.0700E-04	-1.4329E-04	1.0247E-03
1603	3.7352E-04	1.1625E-04	8.7130E-04	-9.1526E-05	5.8072E-24	1.1772E-03
1605	-6.6919E-04	-4.8021E-05	1.3946E-03	-7.4323E-04	6.7773E-25	1.7115E-03
1607	3.0577E-04	-5.4091E-06	1.0176E-03	2.2529E-04	1.2790E-25	1.1054E-03
1609	-7.9964E-05	7.9584E-04	1.1698E-03	-6.7141E-04	-1.3750E-04	1.3987E-03
1611	-7.5062E-04	-1.2104E-04	1.7153E-03	3.0770E-04	7.7910E-05	1.0102E-03
1613	2.1396E-04	1.9539E-05	1.1200E-03	-6.8557E-05	-1.2962E-05	1.1715E-03
1615	-7.3293E-04	-1.5833E-04	1.7041E-03	2.3139E-04	9.0975E-05	1.1103E-03
1617	-1.5515E-04	6.5071E-25	2.0465E-03	-6.1907E-04	-4.5676E-05	2.1612E-03
1620	-1.5657E-04	-4.4150E-06	2.0445E-03	-6.1862E-04	-1.1687E-04	2.1573E-03
1623	-1.3535E-04	-2.0456E-05	2.0431E-03	4.5317E-04	7.2025E-26	7.1081E-04
1627	1.1619E-06	6.2581E-26	6.4431E-04	2.1938E-04	6.4403E-05	6.5907E-04
1629	2.2449E-04	3.9890E-26	7.4002E-04	3.5617E-05	8.0765E-05	6.8688E-04
1631	8.9516E-05	1.3454E-04	6.6066E-04	4.4492E-04	7.9612E-05	7.1027E-04
1635	-1.2493E-05	1.8764E-04	5.792E-04	1.6718E-04	1.4970E-04	6.7044E-04
1637	1.8764E-04	5.7804E-05	7.5792E-04	7.5813E-05	2.0850E-04	6.7632E-04
1639	9.8141E-05	7.1066E-05	8.3221E-04	4.2096E-04	1.5237E-04	7.1969E-04
1642	-1.2212E-05	2.2892E-04	6.6481E-04	1.0364E-04	1.5490E-04	7.8728E-04
1644	1.6844E-04	2.5986E-04	7.4649E-04	4.5260E-04	2.6075E-25	8.9693E-04
1648	-2.8922E-05	2.1191E-25	8.0017E-04	2.0411E-04	1.4785E-05	8.9056E-04
1650	2.5140E-04	1.9921E-25	1.0454E-03	1.7885E-04	1.5283E-25	9.7362E-04
1652	1.6618E-04	2.8062E-25	9.4608E-04	4.5695E-04	1.2463E-04	8.9980E-04
1656	-3.9431E-06	1.1040E-04	8.3348E-04	1.2329E-04	4.0776E-25	9.0936E-04
1658	1.9599E-04	4.9099E-05	1.0882E-03	1.7430E-04	6.9536E-05	9.3728E-04
1660	2.1712E-04	-1.1734E-24	1.0876E-03	4.6277E-04	1.4811E-04	9.1291E-04
1663	-5.4188E-05	-5.6468E-25	8.3464E-04	3.3681E-05	1.7958E-04	1.0460E-03
1665	2.4079E-04	1.6492E-04	9.5900E-04	3.5517E-04	-7.5485E-25	7.0200E-04
1679	1.0251E-03	-2.0677E-04	7.0979E-04	1.0035E-03	-3.9597E-04	9.6060E-04
1683	3.4093E-04	8.6088E-05	7.7067E-04	1.0025E-03	-1.3948E-25	7.0852E-04
1685	1.0601E-03	-2.3431E-04	1.0233E-03	3.4974E-04	-8.1248E-25	7.2534E-04
1689	1.1339E-03	7.2359E-25	8.5718E-04	4.9876E-04	-6.3380E-05	1.0510E-03
1692	1.0632E-03	-3.6471E-04	1.4988E-03	1.0330E-03	-8.3004E-25	1.7334E-03
1696	5.4188E-04	-1.3088E-24	1.1769E-03	1.145E-03	-1.7884E-04	1.3440E-03
1698	1.0427E-03	-4.2728E-04	1.7698E-03	5.2992E-04	2.0604E-25	1.0087E-03
1702	1.4881E-03	1.1474E-24	1.4225E-03	4.8339E-04	3.8610E-05	2.0035E-03

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STEP	INCREMENT
1	9782E-03
2	1213E-03
3	1401E-25
4	1934E-04
5	1934E-04
6	1934E-04
7	1934E-04
8	1934E-04
9	1934E-04
10	1934E-04
11	1934E-04
12	1934E-04
13	1934E-04
14	1934E-04
15	1934E-04
16	1934E-04
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89	1934E-04
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91	1934E-04
92	1934E-04
93	1934E-04
94	1934E-04
95	1934E-04
96	1934E-04
97	1934E-04
98	1934E-04
99	1934E-04
100	1934E-04

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STEP	2	INCREMENT	1				
1843	7	2544E-04	-1	4206E-26	-2	3828E-04	1846
1847	3	7447E-04	4	0042E-05	-3	4413E-04	1848
1849	0	0000E+00	5	2522E-04	-4	4798E-04	1850
1851	6	8052E-04	1	5050E-04	-2	2771E-04	1854
1855	3	430E-04	9	4759E-05	-3	4533E-04	1856
1857	0	0000E+00	1	1714E-05	-4	5116E-04	1858
1859	5	788E-04	2	5413E-04	-2	1637E-04	1861
1862	3	3268E-04	1	1931E-04	-3	5355E-04	1863
1864	7	5132E-04	8	4538E-26	-2	3384E-04	1867
1868	3	9422E-04	4	2171E-05	-3	7060E-04	1869
1870	0	0000E+00	4	4230E-04	-4	9836E-04	1871
1872	7	0134E-04	1	5486E-04	-2	2834E-04	1875
1876	3	6250E-04	1	0199E-04	-3	6982E-04	1877
1878	0	0000E+00	1	3160E-05	-4	9773E-04	1879
1880	5	9949E-04	2	5211E-04	-3	2280E-04	1882
1883	3	4756E-04	1	2539E-04	-3	8617E-04	1884
1898	-5	1728E-04	-1	6995E-04	7	7666E-04	1900
1902	1	5509E-04	6	6942E-05	8	1495E-04	1903
1904	-5	7141E-04	-2	3464E-04	1	0263E-03	1905
1906	3	7498E-04	1	6911E-04	8	6860E-04	1907
1908	-6	1488E-04	0	0000E+00	1	0256E-03	1909
1911	-6	2908E-04	-2	0406E-04	1	3951E-03	1913
1915	-5	5030E-05	-1	1877E-05	1	1687E-03	1916
1917	-6	8586E-04	-2	6755E-04	1	7138E-03	1918
1919	2	3290E-04	1	3624E-04	1	0980E-03	1920
1921	-7	2516E-04	-6	7763E-21	1	7132E-03	1922
1924	-5	8639E-04	-1	7649E-04	2	1667E-03	1926
1927	-5	3352E-04	-2	4129E-04	2	1765E-03	1929
1934	4	4669E-04	1	7725E-04	7	0390E-04	1936
1938	4	2917E-04	2	0678E-04	7	3017E-04	1941
1942	1	7473E-04	1	5567E-04	7	1750E-04	1943
1944	3	1663E-04	3	1332E-04	4	8623E-04	1945
1946	4	6782E-04	3	3881E-21	7	3813E-04	1948
1949	2	0378E-04	1	6941E-21	8	1392E-04	1950
1955	1	3546E-04	1	2863E-04	9	2063E-04	1957
1959	4	6615E-04	2	3777E-04	9	3118E-04	1962
1963	1	6645E-04	1	3729E-04	9	3553E-04	1964
1965	3	2143E-04	3	3352E-04	5	7802E-04	1966
1967	3	2288E-04	3	3881E-21	9	3543E-04	1969
1970	1	4413E-04	0	0000E+00	0	0000E+00	1971
1988	4	5103E-04	3	1376E-04	4	6698E-04	1990
1992	3	6470E-04	4	0186E-04	4	5278E-04	1995
1996	5	6599E-04	4	1500E-04	3	3411E-04	1997
1998	7	3330E-04	5	3701E-04	2	2239E-04	1999
2000	6	2670E-04	0	0000E+00	3	8259E-04	2003
2003	7	8365E-04	0	0000E+00	3	3009E-04	2004

ABAGUS VERSION 4-4-75 MACH 14 FLOW RESTRICTOR DATE20-AUG-84 TIME12 34 02 PAGE 100 STEP 2 INCREMENT 1

Table with 5 columns: ID (2199-2337), X (e.g., -3 3414E-05), Y (e.g., 3 1438E-05), Z (e.g., 5 5448E-04), and W (e.g., -2 0861E-04). The table lists 139 data points for a Mach 14 flow through a restrictor.

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STEP 2 INCREMENT 1

DATE: 20-AUG-84

ABAQUS VERSION 4.4-75

MACH 14 FLOW RESTRICTOR

2347	3 3776E-04	-3 5126E-04	-4 3778E-04	2348	2 9423E-04	-2 4724E-04	-2 0665E-04
2349	9 3371E-05	5 3598E-04	-4 7862E-04	2350	2 8739E-04	7 0208E-04	-2 2894E-04
2351	1 0931E-04	1 9622E-04	-5 3670E-04	2352	5 2876E-04	-4 6040E-04	-5 5383E-04
2353	4 3921E-04	-3 0932E-04	-3 1448E-04	2354	-6 0074E-05	2 8346E-04	-6 4171E-04
2355	6 0292E-05	5 2768E-04	-3 4191E-04	2359	3 5764E-04	5 0493E-04	-6 8251E-05
2360	4 3150E-04	-2 0803E-04	-9 8404E-05	2361	4 5077E-04	-1 5749E-04	3 9010E-05
2362	2 4502E-04	6 5039E-04	-1 0443E-04	2363	4 4984E-04	7 7724E-04	5 3855E-05
2364	2 1384E-04	3 8425E-04	-1 3051E-04	2365	5 2202E-04	-1 7053E-04	-1 5568E-04
2366	5 3716E-04	-2 1518E-04	1 3343E-05	2367	9 9522E-06	4 8484E-04	-1 6806E-04
2368	1 7809E-04	6 4369E-04	3 9720E-05	2372	4 9267E-04	5 1715E-04	1 5430E-04
2373	5 4956E-04	-1 2171E-04	1 4298E-04	2374	5 8551E-04	-3 0224E-04	1 5457E-04
2375	3 6874E-04	6 9435E-04	1 9009E-04	2376	5 7504E-04	6 9043E-04	2 8768E-04
2377	3 0396E-04	4 4001E-04	1 9446E-04	2378	6 2653E-04	-1 7895E-04	1 6151E-04
2379	6 2030E-04	-4 6939E-04	2 2372E-04	2380	9 6581E-05	4 7094E-04	2 2305E-04
2381	2 9373E-04	6 3463E-04	3 4070E-04	2392	3 2797E-04	4 0004E-04	-1 8205E-04
2393	-8 9901E-05	-1 6843E-04	-1 8387E-04	2394	-7 1392E-05	-9 8834E-05	-1 8497E-05
2395	4 1176E-04	6 5115E-04	-2 6144E-04	2396	6 0937E-04	6 3614E-04	-5 9321E-05
2397	2 5937E-04	3 9795E-04	-2 5972E-04	2398	1 0865E-04	-2 8191E-04	-3 0406E-04
2399	1 2572E-04	-1 7200E-04	-1 0210E-04	2400	2 8431E-04	6 6536E-04	-3 5104E-04
2401	4 5034E-04	7 2592E-04	-1 4184E-04	2405	6 5190E-04	4 6594E-04	2 5262E-05
2406	1 9564E-04	-6 1842E-05	5 0717E-05	2407	2 8822E-04	-2 5070E-05	7 9532E-05
2408	7 0346E-04	7 1472E-04	-1 5198E-05	2409	9 3809E-04	6 9931E-04	3 3173E-05
2410	4 9159E-04	5 1781E-04	-8 8107E-06	2411	3 0932E-04	-1 5187E-04	-2 6097E-05
2412	3 6455E-04	-1 1193E-04	5 6412E-05	2413	4 7981E-04	7 7588E-04	-4 5112E-05
2414	6 9690E-04	8 0087E-04	4 6897E-05	2418	8 7386E-04	4 7424E-04	8 3488E-05
2419	4 0844E-04	-4 2393E-05	8 8924E-05	2420	3 8637E-04	-2 2791E-04	5 0085E-05
2421	8 9449E-04	7 6194E-04	1 0135E-04	2422	1 0710E-03	5 7222E-04	1 1781E-04
2423	6 9811E-04	5 3179E-04	1 2821E-04	2424	4 7514E-04	-1 1603E-04	1 2482E-04
2425	4 6749E-04	-3 0572E-04	1 0567E-04	2426	6 4095E-04	7 3643E-04	1 4544E-04
2427	8 3236E-04	7 1172E-04	2 1047E-04	2438	-7 1790E-05	-9 8907E-26	-1 2689E-04
2439	-4 0467E-04	-8 0156E-05	-5 1443E-05	2440	-2 2390E-04	1 2272E-24	9 2274E-05
2441	2 5093E-04	8 0972E-05	-6 8834E-05	2442	4 7411E-04	-4 5237E-25	3 0902E-05
2443	7 9013E-05	1 6560E-05	-1 3149E-04	2444	-2 6305E-04	-1 5845E-04	-1 0903E-04
2445	-2 0724E-04	-1 8779E-05	7 2304E-05	2446	4 0522E-04	4 1167E-04	-1 9144E-04
2447	5 4711E-04	3 0129E-04	-4 3471E-06	2451	5 5900E-04	3 3266E-26	7 8789E-05
2452	3 4830E-05	-2 7990E-05	1 2483E-04	2453	2 2471E-04	1 4726E-24	8 9156E-05
2454	8 8003E-04	1 6331E-04	6 2198E-06	2455	1 0704E-03	1 1085E-25	4 1743E-05
2456	5 9966E-04	1 8447E-04	6 2744E-05	2457	1 0431E-04	-3 6290E-05	1 0123E-04
2458	2 3063E-04	4 9195E-06	8 4985E-05	2459	8 7018E-04	5 1692E-04	-7 7693E-06
2460	1 0438E-03	3 4206E-04	3 4511E-05	2464	9 1256E-04	2 1131E-26	4 7314E-05
2465	2 8882E-04	-1 8362E-05	6 3065E-05	2466	3 3953E-04	1 6321E-24	5 4393E-05
2467	1 2042E-03	1 8312E-04	4 0846E-05	2468	1 2730E-03	3 8556E-25	4 8994E-05
2469	9 0432E-04	2 2740E-04	5 7554E-05	2470	3 3112E-04	-2 6547E-05	6 7310E-05
2471	3 5243E-04	-9 4879E-05	5 4826E-05	2472	1 1054E-03	5 0773E-04	6 4296E-05
2473	1 2083E-03	2 9256E-04	5 8138E-05	2484	3 9888E-04	-3 9141E-25	-1 3353E-04
2487	0 0000E+00	1 2116E-04	-2 1630E-25	2488	5 7374E-04	4 1812E-25	-7 6120E-05

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STEP 2 INCREMENT 1

2489	4 0809E-04	2 6314E-04	-1 4221E-04	2492	0 0000E+00	2 5217E-04	-4 5511E-25
2493	4 9792E-04	3 3729E-04	-6 9945E-05	2494	2 7943E-04	4 9061E-04	-1 8676E-04
2496	3 6734E-04	3 1481E-04	-6 3103E-05	2497	1 0466E-03	1 8345E-25	-6 2342E-06
2500	8 1448E-04	1 3832E-04	-7 7674E-05	2501	9 8272E-04	3 7147E-25	-7 6753E-05
2502	9 7395E-04	3 5544E-04	-1 0798E-05	2505	6 5938E-04	3 3203E-04	-7 9495E-05
2506	8 8368E-04	2 8030E-04	-7 5342E-05	2507	7 3751E-04	5 7076E-04	-2 1724E-05
2509	6 9358E-04	3 8797E-04	-7 3305E-05	2510	1 2716E-03	2 7382E-25	-2 6957E-05
2513	1 0359E-03	1 5561E-04	-8 3400E-05	2514	1 1419E-03	3 2906E-25	-1 0463E-04
2515	1 1951E-03	3 6142E-04	-1 1945E-05	2518	8 5832E-04	3 7626E-04	-7 6660E-05
2519	1 0270E-03	3 0320E-04	-9 6576E-05	2520	9 4304E-04	5 5860E-04	8 0300E-06
2522	8 1908E-04	4 0333E-04	-7 4049E-05	2523	1 9163E-04	3 6356E-25	7 2572E-26
2533	1 0197E-04	7 0973E-26	-2 4545E-25	2534	2 0883E-04	2 3984E-05	-7 5137E-25
2535	1 8600E-04	-1 6819E-25	-7 4678E-05	2536	-1 3235E-23	3 6356E-25	7 2572E-26
2537	1 4639E-25	5 5344E-26	-7 9369E-05	2538	1 9298E-04	8 4327E-06	-2 3992E-25
2541	9 8097E-05	2 2339E-05	-6 4719E-25	2542	1 9268E-04	6 6293E-05	-6 8279E-25
2543	1 7857E-04	5 2319E-05	-7 5475E-05	2544	-5 2940E-23	1 6118E-05	-7 3292E-25
2545	2 6470E-23	8 9404E-06	-7 9372E-05	2546	1 8350E-04	1 1363E-04	-6 4997E-25
2548	8 8966E-05	3 9531E-05	-6 5125E-25	2549	1 6611E-04	7 7973E-05	-7 4472E-05
2550	5 2940E-23	1 0236E-05	-7 9027E-05	2551	4 0010E-04	1 6092E-25	-1 6326E-04
2554	1 1531E-04	-3 4044E-25	-1 6543E-04	2553	2 5430E-04	2 8179E-05	-1 3539E-04
2556	2 8772E-04	-1 9309E-25	-2 1414E-04	2557	-6 6174E-24	5 2020E-06	-1 6217E-04
2558	1 2997E-25	4 4109E-26	-2 4096E-04	2559	3 8153E-04	1 0322E-04	-1 5497E-04
2562	1 1093E-04	2 5091E-05	-1 6425E-04	2563	2 3683E-04	6 8970E-05	-1 3422E-04
2564	2 7151E-04	6 1149E-05	-2 0921E-04	2565	0 0000E+00	1 2633E-05	-1 6243E-04
2566	0 0000E+00	1 0079E-05	-2 4020E-04	2567	3 3887E-04	1 7074E-04	-1 4123E-04
2569	9 7845E-05	4 3104E-05	-1 6132E-04	2570	2 4355E-04	9 5016E-05	-2 0502E-04
2571	0 0000E+00	1 1707E-05	-2 3892E-04	2572	6 0347E-04	1 6626E-25	-2 0303E-04
2575	1 3875E-04	-3 6695E-25	-2 9750E-04	2576	3 1364E-04	3 4552E-05	-2 6940E-04
2577	3 6015E-04	-2 0387E-25	-3 1187E-04	2578	6 6174E-24	6 0057E-06	-3 2188E-04
2579	1 6050E-25	3 0157E-26	-3 8392E-04	2580	5 8865E-04	1 2800E-04	-1 9882E-04
2583	1 3383E-04	2 8540E-05	-2 9783E-04	2584	2 8866E-04	8 5315E-05	-2 6410E-04
2585	3 3867E-04	7 4431E-05	-3 1135E-04	2586	0 0000E+00	1 5265E-05	-3 1994E-04
2587	0 0000E+00	1 0413E-05	-3 8470E-04	2588	4 9290E-04	2 1449E-04	-1 8499E-04
2590	1 1832E-04	4 7835E-05	-2 9721E-04	2591	3 0196E-04	1 1522E-04	-3 0632E-04
2592	0 0000E+00	9 3189E-06	-3 8299E-04	2606	-3 6289E-04	-1 1532E-04	-7 5006E-04
2608	4 8677E-04	1 8759E-04	-7 4892E-04	2610	2 7481E-04	1 2064E-04	-7 4045E-04
2611	-3 3960E-04	-1 6426E-04	-7 5018E-04	2612	-3 1344E-04	-1 2390E-04	-4 7248E-04
2613	4 7450E-04	2 4132E-04	-7 4918E-04	2614	5 0912E-04	2 2985E-04	-4 7273E-04
2615	3 0380E-04	0 0000E+00	-7 0462E-04	2616	-3 3359E-04	0 0000E+00	-4 7250E-04
2617	5 6729E-04	-6 7763E-21	-4 7075E-04	2619	-3 0117E-04	-9 7326E-05	-2 1154E-04
2621	5 4409E-04	2 0425E-04	-2 0949E-04	2623	3 1973E-04	1 4157E-04	-2 0833E-04
2624	-2 8141E-04	-1 3351E-04	-2 1125E-04	2625	-2 6568E-04	-1 0292E-04	3 1808E-05
2626	5 2731E-04	2 6910E-04	-2 1028E-04	2627	5 5446E-04	2 4781E-04	3 7994E-05
2628	3 6441E-04	0 0000E+00	-2 0817E-04	2629	-2 7963E-04	-1 6941E-21	3 1950E-05
2630	6 1958E-04	0 0000E+00	3 8809E-05	2632	-2 7629E-04	-8 7963E-05	2 4894E-05
2634	5 8092E-04	2 1396E-04	-2 8307E-04	2636	3 6609E-04	1 5557E-04	2 6683E-04

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2637	-2	5792E-04	-1	2246E-04	2	4949E-04	2638	-3	0537E-04	-1	1998E-04	4	5142E-04
2639	5	6168E-04	2	8342E-04	2	8214E-04	2640	5	2121E-04	2	3568E-04	5	1583E-04
2641	4	0138E-04	-3	3881E-21	2	6606E-04	2642	-3	2265E-04	0	0000E+00	4	4967E-04
2643	5	8261E-04	6	7763E-21	5	1460E-04	2655	6	0187E-03	1	4682E-04	-7	6041E-04
2652	-1	0718E-04	2	4894E-04	-6	8381E-04	2659	3	6154E-04	1	8934E-04	-7	6055E-04
2657	-6	0304E-03	1	2872E-04	-7	4162E-04	2663	9	3684E-05	1	0089E-04	-7	6595E-04
2664	7	9305E-05	1	5348E-04	-4	9367E-04	2665	2	6994E-05	1	7284E-04	-6	4106E-04
2666	-1	6271E-05	3	3320E-04	-4	2178E-04	2667	3	9833E-04	3	3881E-21	-7	6538E-04
2669	3	2604E-05	0	0000E+00	-7	1678E-04	2670	1	3521E-04	-8	4703E-22	-4	9621E-04
2671	2	3455E-04	0	0000E+00	-3	9388E-04	2676	7	2797E-05	1	7678E-04	-2	2221E-04
2678	-5	2058E-05	4	4055E-04	-1	8721E-04	2680	4	0068E-04	1	9831E-04	-2	2063E-04
2683	-2	5374E-05	2	4403E-04	-2	1803E-04	2684	1	1544E-04	1	3211E-04	-2	2491E-04
2685	1	1297E-04	1	7785E-04	2	7762E-05	2686	1	5097E-04	2	8914E-04	-1	7315E-04
2687	8	2720E-05	4	2573E-04	3	6736E-05	2688	4	3289E-04	0	0000E+00	-2	2206E-04
2690	1	4536E-04	1	6941E-21	-2	1021E-04	2691	1	8344E-04	0	0000E+00	2	5483E-05
2692	3	8901E-04	0	0000E+00	3	9649E-05	2697	1	1830E-04	1	9471E-04	2	5927E-04
2699	2	9011E-05	4	8846E-04	2	3081E-04	2701	4	2957E-04	2	0783E-04	2	7998E-04
2704	4	0745E-05	2	7637E-04	2	4730E-04	2705	1	6262E-04	1	5713E-04	2	5916E-04
2706	1	5271E-04	1	8052E-04	4	8642E-04	2707	2	4904E-04	3	4240E-04	2	2552E-04
2708	1	7626E-04	4	2933E-04	3	9329E-04	2709	4	6194E-04	3	3881E-21	2	7876E-04
2711	2	3179E-04	1	6941E-21	2	4475E-04	2712	2	1906E-04	0	0000E+00	4	8062E-04
2713	4	7532E-04	3	3881E-21	3	6507E-04	2730	4	3001E-05	4	4870E-04	-5	4769E-04
2732	2	0152E-04	6	2155E-04	-4	0995E-04	2734	2	2391E-05	3	1560E-04	-5	9892E-04
2737	1	9542E-04	4	4790E-04	-4	6534E-04	2738	2	0351E-04	2	8532E-04	-5	1441E-04
2739	1	9107E-04	4	5222E-04	-3	2056E-04	2740	2	9620E-04	3	2417E-04	-3	9054E-04
2741	3	6305E-04	5	4678E-04	-2	3943E-04	2742	2	4692E-04	-1	6941E-21	-5	5245E-04
2744	4	0314E-04	0	0000E+00	-4	2831E-04	2745	1	8322E-04	-3	3881E-21	-2	9944E-04
2746	5	4624E-04	0	0000E+00	-2	2599E-04	2751	4	4810E-04	5	9208E-04	-1	3462E-04
2753	3	8799E-04	7	4602E-04	-8	0669E-05	2755	1	5083E-04	4	6379E-04	-1	5774E-04
2758	3	6496E-04	5	7647E-04	-1	0868E-04	2759	3	7046E-04	4	0098E-04	-1	2601E-04
2760	3	3250E-04	5	4363E-04	5	1804E-05	2761	4	9134E-04	4	4170E-04	-8	1705E-05
2762	5	3072E-04	6	2522E-04	4	4513E-05	2763	4	4056E-04	0	0000E+00	-1	3624E-04
2765	6	0995E-04	0	0000E+00	-9	0055E-05	2766	6	2553E-04	0	0000E+00	4	3788E-05
2767	7	4304E-04	0	0000E+00	3	0253E-05	2772	2	7748E-04	6	0357E-04	1	9923E-04
2774	5	4580E-04	7	6638E-04	1	6481E-04	2776	4	5486E-04	5	2259E-04	2	0744E-04
2779	4	9964E-04	6	3251E-04	1	7538E-04	2780	4	8927E-04	4	6041E-04	1	9119E-04
2781	4	2942E-04	4	9330E-04	3	3461E-04	2782	6	2858E-04	5	0542E-04	1	3772E-04
2783	6	2199E-04	5	8330E-04	2	3606E-04	2784	6	6659E-04	0	0000E+00	2	0805E-04
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2788	8	3554E-04	6	7763E-21	1	7167E-04	2805	3	6614E-04	7	0207E-04	-3	3158E-04
2807	3	7781E-04	6	3277E-04	-2	7400E-04	2809	3	0533E-04	5	0570E-04	-3	7703E-04
2812	3	1727E-04	4	9835E-04	-3	2682E-04	2813	3	4982E-04	3	4979E-04	-3	5019E-04
2814	4	0122E-04	5	5675E-04	-1	8783E-04	2815	2	2532E-04	2	8737E-04	-2	9748E-04
2816	4	0335E-04	5	1970E-04	-1	2777E-04	2817	4	3563E-04	-3	3881E-21	-3	5467E-04
2819	3	6314E-04	0	0000E+00	-3	1111E-04	2820	4	9671E-04	3	3881E-21	-1	7849E-04
2821	4	3058E-04	3	3881E-21	-1	1975E-04	2826	5	6789E-04	7	9797E-04	-4	7897E-05

2828	7. 0392E-04	7. 2430E-04	-5. 5439E-05	4. 9325E-04	6. 1277E-04	-6. 9079E-05
2833	5. 5625E-04	6. 0112E-04	-6. 2742E-05	5. 3124E-04	4. 4388E-04	-6. 7052E-05
2835	6. 1950E-04	6. 2799E-04	2. 9219E-05	5. 1209E-04	4. 1429E-04	-8. 0497E-05
2837	6. 4462E-04	5. 9052E-04	3. 3198E-06	6. 5085E-04	6. 7763E-21	-6. 9412E-05
2840	6. 2302E-04	6. 7763E-21	-6. 6480E-05	-1. 3553E-20	1. 9249E-06	1. 2207E-04
2842	6. 7367E-04	-6. 7763E-21	-2. 7799E-05	7. 7460E-04	1. 1618E-04	8. 2171E-05
2849	8. 8997E-04	7. 0893E-04	7. 7920E-05	6. 6899E-04	2. 4407E-05	2. 4407E-05
2854	7. 0872E-04	6. 3017E-04	6. 7012E-05	5. 0113E-04	8. 1723E-05	8. 1723E-05
2856	7. 4161E-04	5. 8437E-04	1. 4373E-04	6. 4435E-04	4. 6366E-04	4. 6366E-04
2858	7. 6266E-04	5. 4697E-04	7. 1799E-05	7. 9611E-04	0. 0000E+00	0. 0000E+00
2861	7. 5873E-04	0. 0000E+00	3. 5306E-05	8. 5209E-04	-6. 7763E-21	8. 1723E-05
2863	7. 8333E-04	-6. 7763E-21	-4. 4191E-06	0. 0000E+00	2. 1551E-04	-6. 7225E-25
2881	1. 1932E-04	2. 9261E-04	-2. 1053E-04	-8. 4703E-22	8. 8407E-05	-7. 9871E-25
2885	2. 7453E-04	2. 8279E-04	-6. 3887E-05	1. 6357E-04	1. 6941E-21	-1. 7766E-04
2888	3. 2941E-04	-3. 3881E-21	-6. 7707E-05	5. 0215E-04	3. 5436E-04	-7. 9015E-05
2894	4. 9299E-04	4. 2295E-04	-4. 7588E-05	4. 3285E-04	2. 9510E-04	-7. 8300E-05
2898	5. 4530E-04	3. 7652E-04	-6. 9491E-05	5. 4919E-04	0. 0000E+00	-5. 8997E-05
2901	5. 9263E-04	0. 0000E+00	-6. 7740E-05	6. 5704E-04	4. 0824E-04	-6. 5039E-05
2907	6. 5629E-04	4. 8145E-04	-1. 6019E-05	5. 6925E-04	3. 5760E-04	-5. 5084E-05
2911	6. 5518E-04	4. 2295E-04	-5. 3621E-05	7. 0009E-04	0. 0000E+00	-2. 8945E-05
2914	7. 1154E-04	0. 0000E+00	-4. 3521E-05	1. 7018E-04	9. 3922E-05	-7. 0716E-25
2928	5. 2940E-23	1. 2265E-05	2. 3811E-25	1. 7480E-04	1. 1274E-04	-6. 0040E-25
2933	8. 2043E-05	4. 5191E-05	-6. 5597E-25	1. 5873E-04	9. 5211E-05	-6. 9188E-25
2935	1. 5037E-04	8. 9797E-05	-7. 1678E-05	-5. 2940E-23	5. 8831E-06	2. 3845E-25
2937	5. 2940E-23	9. 7097E-06	-7. 9413E-05	2. 0855E-04	1. 6941E-21	1. 2697E-25
2940	9. 0439E-05	8. 4703E-22	2. 3861E-25	1. 6916E-04	0. 0000E+00	-6. 9877E-05
2942	1. 2019E-25	-1. 3290E-26	-8. 0012E-05	2. 1205E-04	9. 8206E-05	-1. 3287E-04
2949	-5. 2940E-23	1. 0136E-05	-1. 6155E-04	2. 9574E-04	1. 7427E-04	-1. 2860E-04
2954	8. 9735E-05	4. 9218E-05	-1. 5852E-04	1. 9145E-04	1. 0698E-04	-1. 3230E-04
2956	2. 1466E-04	1. 1424E-04	-2. 0032E-04	5. 2940E-23	4. 8287E-06	-1. 6080E-04
2958	5. 2940E-23	9. 7637E-04	-2. 3804E-04	3. 2936E-04	0. 0000E+00	-1. 2267E-04
2961	1. 0008E-04	0. 0000E+00	-1. 5748E-04	1. 6941E-21	1. 6941E-21	-1. 9865E-04
2963	1. 1771E-25	-3. 9317E-27	-3. 3735E-04	2. 5530E-04	1. 1843E-04	-2. 5832E-04
2966	2. 1466E-04	1. 1424E-04	-2. 0032E-04	4. 1971E-04	2. 2533E-04	-1. 7294E-04
2970	0. 0000E+00	1. 2766E-05	-3. 1802E-04	2. 2998E-04	1. 2874E-04	-2. 5459E-04
2975	1. 0768E-04	5. 6660E-05	-2. 9635E-04	0. 0000E+00	5. 2960E-06	-3. 1641E-04
2977	2. 6237E-04	1. 3645E-04	-3. 8565E-04	4. 5452E-04	0. 0000E+00	-1. 7072E-04
2979	-5. 2940E-23	1. 0288E-05	-3. 0044E-04	2. 8385E-04	0. 0000E+00	-2. 9983E-04
2982	1. 1814E-04	0. 0000E+00	-2. 9591E-04	2. 8385E-04	0. 0000E+00	-2. 9983E-04
2984	1. 4150E-25	1. 0232E-26	-3. 8642E-04	2. 1004E-24	2. 1004E-24	-3. 7373E-03
2998	-7. 0012E-04	-3. 8256E-05	-3. 9618E-03	-8. 4360E-04	2. 1841E-24	-2. 4289E-03
3000	1. 4552E-04	9. 1581E-06	-3. 4024E-03	-1. 0884E-05	6. 4035E-25	-2. 1945E-03
3002	-1. 2627E-04	-3. 8541E-06	-3. 7343E-03	-6. 8242E-04	-1. 1974E-04	-3. 9611E-03
3004	-8. 3939E-04	-1. 6637E-04	-2. 4297E-03	1. 5117E-04	5. 6410E-05	-3. 4010E-03
3006	-3. 8896E-06	7. 4650E-06	-2. 1917E-03	-1. 0697E-04	-1. 5453E-05	-3. 7333E-03
3008	-8. 1130E-04	-1. 9673E-04	-2. 4293E-03	1. 4288E-05	3. 3236E-05	-2. 1835E-03
3010	1. 1420E-04	-1. 3392E-25	-1. 6265E-03	-5. 5895E-04	-3. 1360E-05	-1. 5682E-03

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3012	-4 3183E-04	1 9958E-24	-1 1352E-03	3013	3 4227E-04	2 1117E-05	-1 6285E-03
3014	4 1959E-04	9 6908E-25	-1 1441E-03	3015	1 2275E-04	2 5316E-05	-1 6266E-03
3016	-5 4658E-04	-9 6732E-05	-1 5678E-03	3017	-4 2951E-04	-5 2975E-05	-1 1357E-03
3018	3 4366E-04	8 9529E-05	-1 6272E-03	3019	4 2015E-04	6 8389E-05	-1 1455E-03
3020	1 3172E-04	4 1079E-05	-1 6258E-03	3021	-4 1363E-04	-9 4058E-05	-1 1345E-03
3022	4 2884E-04	1 4944E-04	-1 1492E-03	3030	-1 4943E-04	7 3886E-05	-3 1103E-03
3033	-1 9212E-04	1 4151E-24	-3 1189E-03	3034	2 2145E-05	3 0062E-03	-3 0062E-03
3035	-1 6108E-05	3 0745E-25	-1 8781E-03	3036	1 3503E-04	-1 7374E-04	-3 1731E-03
3037	-2 8971E-04	-2 2110E-25	-1 9851E-03	3038	1 6260E-04	1 0384E-04	-3 0691E-03
3041	1 4786E-04	3 7104E-05	-2 9402E-03	3042	1 3680E-04	1 2156E-04	-2 8836E-03
3043	4 3742E-05	2 0062E-05	-1 8277E-03	3044	2 3790E-04	-2 7634E-03	-2 9634E-03
3045	1 7864E-04	-3 6552E-04	-1 9171E-03	3046	2 2078E-04	1 4342E-04	-2 9504E-03
3048	1 8415E-04	-9 0470E-05	-2 8195E-03	3049	8 9476E-05	5 0107E-05	-1 7368E-03
3050	1 0366E-04	-2 9936E-04	-1 8215E-03	3051	2 5610E-04	6 3044E-26	-1 5846E-03
3054	-4 3972E-04	-1 1258E-25	-1 4823E-03	3055	-4 5760E-05	5 8411E-05	-1 5216E-03
3056	4 3791E-05	4 2537E-25	-1 1126E-03	3057	-2 4628E-04	-1 1471E-04	-1 4613E-03
3058	-4 4948E-04	-3 8678E-25	-1 0367E-03	3059	2 3929E-04	8 3426E-05	-1 5738E-03
3062	-1 3396E-04	7 6639E-05	-1 4690E-03	3063	1 3069E-06	1 0654E-04	-1 4940E-03
3064	5 3284E-05	8 9508E-05	-1 1185E-03	3065	-9 5743E-05	-1 8123E-04	-1 3947E-03
3066	-6 9499E-05	-1 7807E-04	-1 0803E-03	3067	2 3392E-04	1 1780E-04	-1 5478E-03
3069	-9 8205E-05	-3 9963E-05	-1 4235E-03	3070	1 3789E-05	1 3795E-04	-1 1120E-03
3071	-1 0878E-04	-1 2014E-05	-9 9212E-04	3084	2 9780E-04	-4 6772E-04	-3 2558E-03
3085	9 6964E-04	-1 1669E-03	-3 1902E-03	3086	7 6018E-04	-9 1194E-04	-1 9581E-03
3089	5 9105E-04	-9 7366E-04	-3 0247E-03	3090	9 0129E-04	-7 4602E-04	-3 0679E-03
3091	7 1035E-04	-9 4606E-04	-2 1076E-03	3094	-9 9539E-05	3 3049E-24	-3 7299E-03
3095	-2 0788E-04	-3 1242E-03	-2 0868E-03	3097	-1 0028E-05	-3 1433E-04	-1 3124E-03
3098	6 0416E-04	-1 0302E-03	-1 3581E-03	3099	7 0698E-04	-7 8059E-04	-9 8723E-04
3102	1 2861E-04	-7 6869E-04	-1 4071E-03	3103	5 8331E-04	-5 7079E-04	-1 5162E-03
3104	6 9011E-04	-8 8487E-04	-9 6186E-04	3107	-4 7386E-04	2 0742E-24	-1 4374E-03
3108	-5 8570E-05	-2 6298E-03	-9 4369E-04	3117	1 4770E-04	-2 8036E-04	-2 8881E-03
3118	3 0236E-04	-8 4025E-04	-3 2579E-03	3119	-5 6827E-05	-1 0015E-03	-1 5805E-03
3120	1 3224E-04	4 8774E-05	-2 6853E-03	3121	-2 2662E-05	8 4253E-05	-1 3638E-03
3122	2 2643E-04	-2 5701E-04	-3 1336E-03	3123	5 9626E-04	-7 7578E-04	-3 4127E-03
3124	3 7791E-04	-9 4908E-04	-1 8516E-03	3125	1 0061E-04	-7 9740E-05	-2 8870E-03
3126	1 0316E-05	-1 2397E-04	-1 6521E-03	3130	4 3569E-05	1 0078E-04	-9 3924E-04
3131	1 9487E-04	-6 3002E-04	-9 9014E-04	3132	1 5125E-04	-4 2824E-04	-6 2052E-04
3133	-5 5279E-05	2 9297E-04	-1 0441E-03	3134	1 1893E-04	5 1911E-04	-6 5983E-04
3137	-1 2315E-05	-4 6938E-05	-1 1450E-03	3136	4 4035E-04	-7 3297E-04	-1 2136E-03
3139	-5 9536E-05	2 7313E-04	-8 2819E-04	3138	-1 5223E-04	5 9679E-05	-1 2571E-03
3151	-5 5968E-04	-1 2090E-03	-2 4517E-03	3152	4 0131E-04	-8 1793E-04	-2 0596E-03
3153	-1 5945E-04	-3 7233E-04	-2 0087E-03	3154	6 8331E-05	-1 0303E-03	-9 3092E-04
3155	-4 1468E-05	-5 9637E-04	-2 5980E-03	3156	-1 2614E-04	-9 9594E-04	-2 9135E-03
3157	-4 9308E-04	-1 0058E-03	-1 2536E-03	3158	1 2779E-04	-9 9669E-05	-2 4800E-03
3159	-1 0010E-04	-2 1732E-04	-1 1201E-03	3163	2 0237E-04	-7 0699E-05	-8 0304E-04
3164	-1 8868E-04	-5 8534E-04	-6 8576E-04	3165	-3 9947E-04	-2 5571E-04	-4 0948E-04

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3166	2	5048E-04	2	7806E-04	-8	0425E-04	3167	3	5409E-04	4	5322E-04	-4	8667E-04
3168	1	2801E-04	3	5021E-05	-7	9569E-04	3169	-3	1875E-05	-6	2245E-04	-7	5357E-04
3170	-7	8987E-04	-3	3899E-04	-5	0750E-04	3171	1	4155E-04	3	6252E-04	-8	7120E-04
3172	2	2334E-04	5	2534E-04	5	4835E-04	3183	-1	1766E-03	-4	7632E-04	-1	7695E-03
3184	-2	7481E-05	-2	9038E-03	-8	5604E-04	3185	-1	1132E-03	-4	5755E-04	-1	5258E-03
3186	-4	5476E-05	-2	7292E-03	-9	7564E-04	3187	-1	0029E-03	-1	1146E-03	-1	5608E-03
3188	-9	4186E-04	-1	2071E-03	-1	8618E-03	3189	-6	8821E-04	-1	3320E-03	-9	1087E-04
3190	-5	6280E-04	-6	7363E-04	-1	6467E-03	3191	-2	7993E-04	-8	8638E-04	-1	0418E-03
3195	-1	8745E-04	6	0427E-25	-3	9970E-04	3196	-5	2194E-04	-4	2402E-04	-8	0003E-04
3197	-6	2924E-04	1	2136E-24	-2	0237E-04	3198	-1	5729E-04	-1	5729E-04	-8	3694E-04
3199	-1	4267E-04	-1	7359E-24	-2	0265E-04	3200	-1	9009E-04	-5	9607E-04	-8	5191E-04
3201	-3	3643E-04	-6	7922E-04	-7	9886E-04	3202	-5	9299E-04	-2	2462E-05	-3	2929E-04
3203	1	7417E-04	-9	0976E-05	-8	2255E-04	3204	1	4353E-04	1	7266E-04	-3	4947E-04
3205	-7	6688E-05	1	8900E-24	-2	2100E-03	3218	0	0000E+00	-1	9954E-04	-1	9177E-03
3219	-2	3471E-24	2	2464E-24	-1	0236E-03	3220	-1	4919E-04	-4	4104E-04	-1	6874E-03
3223	0	0000E+00	-2	6613E-04	-1	7112E-03	3224	8	4703E-22	-3	1710E-04	-9	4977E-04
3225	6	1599E-05	-2	1165E-04	-1	5521E-03	3227	0	0000E+00	-1	5143E-04	-8	2007E-04
3228	4	1993E-04	5	9695E-25	-4	1520E-04	3231	0	0000E+00	-3	6809E-03	-6	7815E-04
3232	-8	7458E-25	9	9923E-25	-2	6818E-04	3233	2	3232E-04	-1	0979E-04	-7	9804E-04
3236	5	2940E-23	-1	7219E-05	-7	3919E-04	3237	4	2392E-22	2	1320E-04	-4	2432E-04
3238	1	5998E-04	1	5419E-04	-7	1879E-04	3240	0	0000E+00	0	0000E+00	-4	3029E-04
3249	-6	4419E-04	-2	0535E-04	-3	9627E-03	3251	1	7259E-04	9	0931E-03	-3	3894E-03
3253	-8	8858E-05	-2	1540E-05	-3	7325E-03	3254	-6	0401E-04	-2	9461E-04	-3	9619E-03
3255	-7	6320E-04	3	1796E-04	-2	4276E-03	3256	1	8790E-04	1	0156E-04	-3	3846E-03
3259	3	0694E-05	2	1019E-05	-2	1749E-03	3258	-8	3700E-05	8	4703E-22	-3	7314E-03
3262	-8	2569E-04	6	7763E-21	-2	4287E-03	3260	4	5586E-05	0	0000E+00	-2	1717E-03
3266	-5	1511E-04	-1	6588E-04	-1	5672E-03	3264	3	4958E-04	1	4543E-04	-1	6257E-03
3268	1	3239E-04	6	4959E-05	-1	6256E-03	3267	-4	8448E-04	-2	3769E-04	-1	5661E-03
3270	-3	8651E-04	-1	5664E-04	-1	1350E-03	3269	3	4896E-04	1	7862E-04	-1	6248E-03
3272	-4	1567E-04	1	9461E-04	-1	1492E-03	3271	1	5143E-04	0	0000E+00	-1	6249E-03
3285	1	7408E-04	3	3881E-21	-1	1346E-03	3273	4	8280E-04	0	0000E+00	-1	1494E-03
3289	2	6380E-04	1	0586E-04	-2	7564E-03	3287	7	5718E-05	-7	4749E-03	-2	7963E-03
3293	1	7319E-04	1	7039E-04	-2	8907E-03	3292	1	2526E-04	1	8822E-05	-2	6791E-03
3295	6	3157E-05	9	3718E-05	-2	6680E-03	3294	1	2163E-04	3	3760E-05	-1	6597E-03
3297	3	2903E-04	3	5677E-05	-2	5814E-03	3296	-1	9274E-06	-6	7956E-05	-1	6033E-03
3300	1	1516E-04	0	0000E+00	-2	8444E-03	3299	1	1046E-04	8	4703E-22	-2	6110E-03
3306	2	3836E-05	8	7830E-05	-1	4578E-03	3301	-2	3973E-05	-2	1176E-22	-1	4861E-03
3310	2	6165E-04	1	5104E-04	-1	5360E-03	3308	-1	6821E-04	2	5191E-05	-1	3147E-03
3314	5	0824E-05	4	8426E-05	-1	4313E-03	3313	-7	4889E-05	7	9316E-06	-1	3864E-03
3316	-1	0317E-04	3	4795E-05	-1	2591E-03	3315	6	0113E-05	9	5337E-05	-1	1187E-03
3318	3	0165E-04	3	3881E-21	-1	5246E-03	3317	-1	1591E-04	1	2960E-04	-9	5228E-04
3321	8	1303E-05	0	0000E+00	-1	5246E-03	3320	-5	7864E-05	8	4703E-22	-1	3923E-03
3329	1	0008E-04	9	7600E-05	-2	6137E-03	3322	2	1766E-05	2	1176E-22	-9	0888E-04
3343	8	0205E-05	7	6468E-05	-2	6046E-03	3341	1	4153E-04	1	6399E-04	-2	2505E-03
3347	1	4771E-04	1	2885E-04	-2	3244E-03	3346	1	3965E-04	1	5246E-04	-2	2723E-03
							3348	-1	8424E-05	-6	0160E-08	-1	3704E-03

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3349	1	3405E-04	1	1549E-04	-1	8734E-03	3350	-7	6728E-04	2	6701E-05	-9	7463E-04
3351	1	4800E-04	0	0000E+00	-2	4337E-03	3353	1	4228E-04	-1	6941E-21	-2	0274E-03
3354	-1	7161E-06	-3	9705E-23	1	1883E-03	3355	1	7655E-07	4	1359E-23	-7	2772E-04
3364	-9	9599E-05	2	2998E-04	-1	1315E-03	3362	4	8770E-05	3	6442E-04	-8	9156E-04
3368	-1	1386E-04	1	3386E-04	1	2022E-03	3367	1	4337E-05	2	4108E-04	-9	6301E-04
3370	1	0155E-05	1	2626E-04	-1	0456E-03	3369	2	4324E-05	2	9063E-04	-7	9015E-04
3372	1	2371E-04	1	6314E-04	-7	8341E-04	3371	1	7846E-04	4	0209E-04	-6	5668E-04
3375	2	1803E-04	0	0000E+00	1	1202E-03	3374	1	4816E-04	1	6941E-21	-8	5747E-04
3393	1	1773E-04	1	6155E-05	-2	0762E-03	3376	3	0548E-04	0	0000E+00	-6	1833E-04
3397	1	1807E-04	1	2496E-04	-1	9647E-03	3395	-2	2544E-04	-2	3222E-04	-1	4231E-03
3401	8	3821E-05	8	6060E-05	1	6791E-03	3402	-9	0896E-05	-2	1348E-05	-1	5624E-03
3403	-2	0274E-04	-1	1596E-04	-1	1675E-03	3404	1	6546E-05	9	0279E-06	-7	2330E-04
3405	1	0502E-04	0	0000E+00	-1	6844E-03	3407	-1	0655E-04	0	0000E+00	-6	6139E-04
3408	8	7016E-06	3	7058E-22	-5	3956E-04	3409	2	1321E-04	-3	3881E-21	-5	5471E-04
3414	2	5366E-04	4	2121E-04	-8	3679E-04	3416	1	6782E-04	2	7687E-04	-7	7236E-04
3418	1	5518E-04	2	9194E-04	-8	0213E-04	3421	1	6764E-04	2	6014E-04	-7	3643E-04
3422	4	2567E-04	2	1082E-04	-7	5388E-04	3423	1	7575E-04	4	0133E-04	-5	6890E-04
3424	4	2962E-05	1	0600E-04	-6	4374E-04	3425	2	1225E-04	3	8953E-04	-5	0286E-04
3426	2	4180E-04	0	0000E+00	-7	2604E-04	3428	1	7292E-04	0	0000E+00	-6	6384E-04
3429	2	3354E-04	0	0000E+00	-5	2900E-04	3430	2	3137E-04	1	6941E-21	-4	7115E-04
3446	0	0000E+00	-1	4436E-04	-1	6015E-03	3448	8	2657E-05	-4	6580E-05	-1	4122E-03
3451	0	0000E+00	-4	0597E-05	-1	5137E-03	3452	0	0000E+00	-3	6066E-05	-6	8431E-04
3453	6	2248E-05	4	2352E-22	-1	3552E-03	3455	-8	9078E-25	-1	0577E-24	-6	2286E-04
3459	0	0000E+00	4	2202E-05	-6	1316E-04	3461	2	6654E-05	8	3810E-05	-5	8911E-04
3464	0	0000E+00	3	4064E-05	-5	2782E-04	3465	0	0000E+00	1	6563E-04	-4	1059E-04
3466	2	7362E-05	4	2352E-22	-5	2544E-04	3468	3	1113E-25	-6	0566E-26	-3	9377E-04
3476	-3	5894E-04	2	0710E-24	-4	0479E-03	3477	-1	0785E-03	-2	4927E-05	-4	4160E-03
3478	-1	3137E-03	2	2159E-24	-3	7243E-03	3479	0	0000E+00	4	1921E-05	-3	8261E-03
3480	-2	2982E-24	1	6072E-24	-3	2493E-03	3481	-3	8113E-04	6	8168E-05	-3	9143E-03
3482	-1	0753E-03	-8	7566E-05	-4	2472E-03	3483	1	3101E-03	-1	0410E-04	-3	5932E-03
3484	-4	2352E-22	8	4861E-05	-3	6508E-03	3485	1	0588E-22	2	1141E-05	-3	1065E-03
3486	-4	0329E-04	3	7652E-06	-3	6763E-03	3487	-1	2705E-03	-2	7735E-04	-3	3455E-03
3488	-1	0588E-22	2	1395E-05	-2	8981E-03	3489	-3	6859E-04	4	5435E-25	-3	0118E-03
3490	-1	3122E-03	-6	8756E-05	-3	1667E-03	3491	-1	3078E-03	2	1162E-24	-2	6873E-03
3492	0	0000E+00	2	4811E-05	-2	8756E-03	3493	-2	1786E-24	1	3974E-24	-2	6756E-03
3494	-3	1076E-04	-1	1382E-04	-2	8798E-03	3495	-1	2679E-03	-2	4356E-04	-2	8421E-03
3496	-1	1709E-03	-3	2544E-04	-2	3523E-03	3497	0	0000E+00	-3	9568E-05	-2	6025E-03
3498	4	2352E-22	-1	6679E-04	-2	4044E-03	3499	-2	2864E-04	-1	0753E-04	-2	7331E-03
3500	-1	0145E-03	-4	0291E-04	-2	1452E-03	3501	0	0000E+00	-1	5135E-04	-2	2397E-03
3510	-1	0723E-03	-2	4835E-04	-4	0327E-03	3512	0	0000E+00	6	0563E-05	-3	3120E-03
3514	-3	9888E-04	-1	0596E-04	-3	5586E-03	3515	-1	0160E-03	4	6220E-04	-3	9014E-03
3516	-1	2122E-03	-4	6678E-04	-3	1313E-03	3517	-2	1176E-22	2	4640E-05	-3	4290E-03
3518	5	2940E-23	9	9636E-06	-2	7880E-03	3519	-4	1401E-04	-3	3881E-21	-3	5161E-03
3520	-1	3010E-03	0	0000E+00	-3	0967E-03	3521	-2	2765E-24	-1	5214E-24	-2	7526E-03
3523	-1	1835E-03	-3	9723E-04	-2	6350E-03	3525	2	1176E-22	-3	7585E-05	-2	4270E-03

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3527 -2 1129E-04 -1 1029E-04 -2 5887E-03 3528 -1 1237E-03 -5 5689E-04 -2 5197E-03

3529 -9 2365E-04 -4 1628E-04 -1 9528E-03 3530 C 0000E+00 -1 2417E-05 -2 3587E-03

3531 0 0000E+00 -6 1971E-05 -2 1362E-03 3532 -2 4173E-04 0 0000E+00 -2 5350E-03

3533 -1 0165E-03 1 3553E-20 -1 8623E-03 3534 -2 0165E-24 -1 4808E-24 -2 0941E-03

REACTION FORCES

NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT	NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
1	0.0000E+00	-760.3	0.0000E+00	2	0.0000E+00	-1629.	0.0000E+00
3	0.0000E+00	-78.57	0.0000E+00	10	0.0000E+00	-1.239	0.0000E+00
11	0.0000E+00	-3649	0.0000E+00	12	0.0000E+00	-210.3	0.0000E+00
19	0.0000E+00	-693.8	0.0000E+00	20	0.0000E+00	-1.245	0.0000E+00
21	0.0000E+00	-273.3	0.0000E+00	28	0.0000E+00	-1026	0.0000E+00
29	0.0000E+00	-325.1	0.0000E+00	30	302.2	-201.6	0.0000E+00
33	605.8	0.0000E+00	0.0000E+00	36	597.5	0.0000E+00	0.0000E+00
37	0.0000E+00	-3139	0.0000E+00	38	0.0000E+00	-2986	0.0000E+00
39	1342	-1501	0.0000E+00	42	2685.	0.0000E+00	0.0000E+00
45	2680	0.0000E+00	0.0000E+00	46	0.0000E+00	-1046	0.0000E+00
47	0.0000E+00	-989.5	0.0000E+00	48	501.3	-464.7	0.0000E+00
51	1001	0.0000E+00	0.0000E+00	54	993.8	0.0000E+00	0.0000E+00
61	0.0000E+00	552.7	0.0000E+00	62	0.0000E+00	2164	0.0000E+00
63	0.0000E+00	1204	0.0000E+00	70	0.0000E+00	950.1	0.0000E+00
71	0.0000E+00	4587	0.0000E+00	72	0.0000E+00	2494	0.0000E+00
79	0.0000E+00	566.8	0.0000E+00	80	0.0000E+00	1436	0.0000E+00
81	0.0000E+00	888.1	0.0000E+00	88	0.0000E+00	821.6	0.0000E+00
90	0.0000E+00	561.3	0.0000E+00	98	0.0000E+00	1685	0.0000E+00
99	0.0000E+00	1408	0.0000E+00	107	0.0000E+00	585.5	0.0000E+00
108	0.0000E+00	409.4	0.0000E+00	116	0.0000E+00	295.0	0.0000E+00
117	0.0000E+00	148.6	0.0000E+00	125	0.0000E+00	1072	0.0000E+00
126	0.0000E+00	683.7	0.0000E+00	134	0.0000E+00	297.2	0.0000E+00
135	0.0000E+00	194.4	0.0000E+00	141	587.2	0.0000E+00	0.0000E+00
142	0.0000E+00	263.8	0.0000E+00	143	0.0000E+00	521.4	0.0000E+00
144	296.1	238.6	0.0000E+00	150	2673.	0.0000E+00	0.0000E+00
151	0.0000E+00	1813	0.0000E+00	152	0.0000E+00	3231	0.0000E+00
153	1340	1547	0.0000E+00	159	997.6	0.0000E+00	0.0000E+00
160	0.0000E+00	355.0	0.0000E+00	161	0.0000E+00	1051	0.0000E+00
162	499.9	481.7	0.0000E+00	163	0.0000E+00	-743.7	0.0000E+00
164	0.0000E+00	-375.5	0.0000E+00	165	0.0000E+00	-646.4	0.0000E+00
172	0.0000E+00	-569.8	0.0000E+00	173	0.0000E+00	-414.9	0.0000E+00
174	0.0000E+00	-350.8	0.0000E+00	190	0.0000E+00	-255.2	0.0000E+00

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191	0.0000E+00	-168.5	0.0000E+00	177.1	-121.7	0.0000E+00
195	351.7	0.0000E+00	0.0000E+00	347.5	0.0000E+00	0.0000E+00
199	0.0000E+00	-218.0	0.0000E+00	0.0000E+00	-97.65	0.0000E+00
201	105.9	-66.80	0.0000E+00	208.9	0.0000E+00	0.0000E+00
207	204.0	0.0000E+00	0.0000E+00	0.0000E+00	829.8	0.0000E+00
224	0.0000E+00	6.38.6	0.0000E+00	0.0000E+00	486.6	0.0000E+00
232	0.0000E+00	5.68.3	0.0000E+00	0.0000E+00	539.1	0.0000E+00
234	0.0000E+00	351.7	0.0000E+00	0.0000E+00	298.7	0.0000E+00
252	0.0000E+00	215.1	0.0000E+00	0.0000E+00	227.9	0.0000E+00
261	0.0000E+00	151.9	0.0000E+00	0.0000E+00	140.2	0.0000E+00
279	0.0000E+00	97.15	0.0000E+00	0.0000E+00	107.8	0.0000E+00
288	0.0000E+00	63.82	0.0000E+00	345.8	0.0000E+00	0.0000E+00
304	0.0000E+00	194.8	0.0000E+00	0.0000E+00	342.3	0.0000E+00
306	171.7	151.5	0.0000E+00	201.3	0.0000E+00	0.0000E+00
313	0.0000E+00	101.0	0.0000E+00	0.0000E+00	192.6	0.0000E+00
315	99.61	84.49	0.0000E+00	0.0000E+00	-806.9	0.0000E+00
326	0.0000E+00	-429.8	0.0000E+00	0.0000E+00	-106.5	0.0000E+00
334	0.0000E+00	-1823	0.0000E+00	0.0000E+00	-1259	0.0000E+00
336	0.0000E+00	-349.6	0.0000E+00	0.0000E+00	-1231.	0.0000E+00
344	0.0000E+00	-545.5	0.0000E+00	0.0000E+00	-477.8	0.0000E+00
358	0.0000E+00	890.3	0.0000E+00	0.0000E+00	528.3	0.0000E+00
360	0.0000E+00	398.6	0.0000E+00	0.0000E+00	214.1	0.0000E+00
368	0.0000E+00	192.1	0.0000E+00	0.0000E+00	1397.	0.0000E+00
376	0.0000E+00	1394	0.0000E+00	0.0000E+00	897.2	0.0000E+00
378	0.0000E+00	717.2	0.0000E+00	0.0000E+00	384.6	0.0000E+00
387	0.0000E+00	255.6	0.0000E+00	0.0000E+00	1198	0.0000E+00
396	0.0000E+00	846.5	0.0000E+00	0.0000E+00	620.0	0.0000E+00
405	0.0000E+00	418.5	0.0000E+00	0.0000E+00	139.9	0.0000E+00
414	0.0000E+00	490.0	0.0000E+00	0.0000E+00	460.3	0.0000E+00
423	0.0000E+00	871.2	0.0000E+00	0.0000E+00	226.4	0.0000E+00
432	0.0000E+00	267.0	0.0000E+00	0.0000E+00	-580.3	0.0000E+00
439	0.0000E+00	-989.4	0.0000E+00	0.0000E+00	-605.9	0.0000E+00
469	0.0000E+00	-449.9	0.0000E+00	0.0000E+00	-332.7	0.0000E+00
481	0.0000E+00	-211.5	0.0000E+00	0.0000E+00	-535.7	0.0000E+00
497	0.0000E+00	-214.4	0.0000E+00	0.0000E+00	-85.24	0.0000E+00
541	0.0000E+00	-425.7	0.0000E+00	0.0000E+00	-631.8	0.0000E+00
547	0.0000E+00	-329.8	0.0000E+00	0.0000E+00	-469.5	0.0000E+00
553	0.0000E+00	-216.9	0.0000E+00	0.0000E+00	460.8	0.0000E+00
587	0.0000E+00	336.2	0.0000E+00	0.0000E+00	216.0	0.0000E+00
613	0.0000E+00	-510.4	0.0000E+00	0.0000E+00	-899.4	0.0000E+00
625	0.0000E+00	-720.2	0.0000E+00	0.0000E+00	-236.2	0.0000E+00
641	0.0000E+00	-297.3	0.0000E+00	0.0000E+00	-477.6	0.0000E+00
685	0.0000E+00	-48.83	0.0000E+00	0.0000E+00	-302.2	0.0000E+00
692	0.0000E+00	-97.95	0.0000E+00	0.0000E+00	-528.2	0.0000E+00
698	0.0000E+00	-750.5	0.0000E+00	464.0	-478.7	0.0000E+00
706	2056	0.0000E+00	0.0000E+00	1709	0.0000E+00	0.0000E+00

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710	1254	-702 1	0 0000E+00	0 0000E+00	2568	0 0000E+00	0 0000E+00
714	1672	0 0000E+00	0 0000E+00	0 0000E+00	535 1	-832 6	-118 3
718	700 3	0 0000E+00	-200 1	0 0000E+00	110 9	0 0000E+00	-154 0
725	0 0000E+00	519 3	0 0000E+00	0 0000E+00	0 0000E+00	922 8	0 0000E+00
737	0 0000E+00	739 7	0 0000E+00	0 0000E+00	1575	0 0000E+00	0 0000E+00
744	773 7	735 2	0 0000E+00	0 0000E+00	1284	0 0000E+00	0 0000E+00
750	633 1	546 6	0 0000E+00	0 0000E+00	-69 05	0 0000E+00	-170 8
756	-7 108	277 3	-95 15	0 0000E+00	0 0000E+00	-401 4	0 0000E+00
758	301 4	-408 2	0 0000E+00	0 0000E+00	613 5	0 0000E+00	0 0000E+00
762	640 3	0 0000E+00	0 0000E+00	0 0000E+00	-840 7	0 0000E+00	0 0000E+00
764	1048	-1208	0 0000E+00	0 0000E+00	2107	0 0000E+00	0 0000E+00
768	2217	0 0000E+00	0 0000E+00	0 0000E+00	655 2	0 0000E+00	0 0000E+00
779	0 0000E+00	388 0	0 0000E+00	0 0000E+00	326 6	0 0000E+00	0 0000E+00
784	2303	0 0000E+00	0 0000E+00	0 0000E+00	0 0000E+00	396 1	0 0000E+00
786	1155	1164	0 0000E+00	0 0000E+00	0 0000E+00	769 8	0 0000E+00
800	0 0000E+00	-1020	0 0000E+00	0 0000E+00	0 0000E+00	-607 2	0 0000E+00
806	0 0000E+00	-1039	0 0000E+00	0 0000E+00	0 0000E+00	-615 7	0 0000E+00
828	0 0000E+00	-912 6	0 0000E+00	0 0000E+00	0 0000E+00	-671 1	0 0000E+00
834	0 0000E+00	-914 6	0 0000E+00	0 0000E+00	0 0000E+00	-615 5	0 0000E+00
896	0 0000E+00	-655 0	0 0000E+00	0 0000E+00	0 0000E+00	-541 6	0 0000E+00
902	0 0000E+00	-786 3	0 0000E+00	0 0000E+00	0 0000E+00	-595 8	0 0000E+00
926	0 0000E+00	-397 0	0 0000E+00	0 0000E+00	0 0000E+00	-536 9	0 0000E+00
948	0 0000E+00	1209	0 0000E+00	0 0000E+00	0 0000E+00	622 2	0 0000E+00
954	0 0000E+00	1226	0 0000E+00	0 0000E+00	0 0000E+00	631 2	0 0000E+00
972	0 0000E+00	339 4	0 0000E+00	0 0000E+00	0 0000E+00	216 6	0 0000E+00
978	0 0000E+00	304 4	0 0000E+00	0 0000E+00	0 0000E+00	184 4	0 0000E+00
1004	0 0000E+00	-430 3	0 0000E+00	0 0000E+00	0 0000E+00	-405 9	0 0000E+00
1023	137 5	-82 27	-208 4	0 0000E+00	0 0000E+00	-86 52	-413 3
1026	271 4	0 0000E+00	-418 9	0 0000E+00	0 0000E+00	-824 2	-819 9
1029	262 8	0 0000E+00	-420 2	0 0000E+00	0 0000E+00	-235 4	0 0000E+00
1032	259 9	-172 5	0 0000E+00	0 0000E+00	512 4	0 0000E+00	0 0000E+00
1038	496 6	0 0000E+00	0 0000E+00	0 0000E+00	0 0000E+00	-246 8	0 0000E+00
1041	249 8	-177 1	0 0000E+00	0 0000E+00	495 9	0 0000E+00	0 0000E+00
1047	488 7	0 0000E+00	0 0000E+00	0 0000E+00	0 0000E+00	875 6	0 0000E+00
1074	0 0000E+00	734 3	0 0000E+00	0 0000E+00	0 0000E+00	872 8	0 0000E+00
1083	0 0000E+00	689 8	0 0000E+00	0 0000E+00	0 0000E+00	553 6	0 0000E+00
1110	0 0000E+00	390 8	0 0000E+00	0 0000E+00	0 0000E+00	462 3	0 0000E+00
1119	0 0000E+00	341 6	0 0000E+00	0 0000E+00	0 0000E+00	245 3	0 0000E+00
1134	0 0000E+00	237 4	0 0000E+00	0 0000E+00	0 0000E+00	-811 0	0 0000E+00
1170	253 4	0 0000E+00	-423 2	0 0000E+00	0 0000E+00	233 0	-404 0
1173	124 8	104 2	-211 8	0 0000E+00	485 3	0 0000E+00	0 0000E+00
1181	0 0000E+00	494 6	0 0000E+00	0 0000E+00	240 9	211 2	0 0000E+00
1188	486 4	0 0000E+00	0 0000E+00	0 0000E+00	0 0000E+00	495 7	0 0000E+00
1191	242 1	216 3	0 0000E+00	0 0000E+00	0 0000E+00	3358	0 0000E+00
1203	0 0000E+00	3713	0 0000E+00	0 0000E+00	0 0000E+00	2385	0 0000E+00
1206	0 0000E+00	3061	0 0000E+00	0 0000E+00	0 0000E+00	3119	0 0000E+00

1222	0.0000E+00	6078	0.0000E+00	1224	0.0000E+00	4132	0.0000E+00
1226	0.0000E+00	775 B	0.0000E+00	1227	0.0000E+00	4523	0.0000E+00
1229	0.0000E+00	3601	0.0000E+00	1243	0.0000E+00	3777	0.0000E+00
1245	0.0000E+00	2866	0.0000E+00	1255	0.0000E+00	2768	0.0000E+00
1257	0.0000E+00	3451	0.0000E+00	1259	0.0000E+00	1881	0.0000E+00
1268	0.0000E+00	5088	0.0000E+00	1270	0.0000E+00	3890	0.0000E+00
1272	0.0000E+00	5803	0.0000E+00	1281	0.0000E+00	3290	0.0000E+00
1288	0.0000E+00	385 2	0.0000E+00	1291	0.0000E+00	924. 7	0.0000E+00
1293	0.0000E+00	1212	0.0000E+00	1294	-1149	0.0000E+00	0.0000E+00
1295	-967 0	784 7	0.0000E+00	1302	-1136.	0.0000E+00	0.0000E+00
1303	-1933	0.0000E+00	0.0000E+00	1308	-1926	0.0000E+00	0.0000E+00
1309	0.0000E+00	2103	0.0000E+00	1312	0.0000E+00	2976	0.0000E+00
1314	0.0000E+00	7495	0.0000E+00	1315	-2985	0.0000E+00	0.0000E+00
1316	-3217	3841	0.0000E+00	1323	-2988	0.0000E+00	0.0000E+00
1324	-6429	0.0000E+00	0.0000E+00	1329	-6442.	0.0000E+00	0.0000E+00
1330	0.0000E+00	5367	0.0000E+00	1332	0.0000E+00	5709	0.0000E+00
1334	-4432	0.0000E+00	0.0000E+00	1339	-4441	0.0000E+00	0.0000E+00
1358	0.0000E+00	-3560	0.0000E+00	1359	0.0000E+00	-4711	0.0000E+00
1740	0.0000E+00	-2993	0.0000E+00	1361	0.0000E+00	-3592	0.0000E+00
1362	0.0000E+00	-4042	0.0000E+00	1379	0.0000E+00	-5999	0.0000E+00
1380	0.0000E+00	-5377	0.0000E+00	1381	0.0000E+00	-4017	0.0000E+00
1382	0.0000E+00	-4892	0.0000E+00	1383	0.0000E+00	-4197.	0.0000E+00
1394	0.0000E+00	-4686	0.0000E+00	1395	0.0000E+00	-3412.	0.0000E+00
1412	0.0000E+00	-1734	0.0000E+00	1414	0.0000E+00	-1302	0.0000E+00
1415	0.0000E+00	-2544	0.0000E+00	1416	0.0000E+00	-1635	0.0000E+00
1433	0.0000E+00	-2462	0.0000E+00	1435	0.0000E+00	-1888	0.0000E+00
1436	0.0000E+00	-2723	0.0000E+00	1437	0.0000E+00	-2286	0.0000E+00
1448	0.0000E+00	-1777	0.0000E+00	1449	0.0000E+00	-1703.	0.0000E+00
1466	0.0000E+00	-710 9	0.0000E+00	1468	0.0000E+00	-471 2	0.0000E+00
1469	0.0000E+00	-967 8	0.0000E+00	1470	0.0000E+00	-455 3	0.0000E+00
1487	0.0000E+00	-1103	0.0000E+00	1489	0.0000E+00	-876. 6	0.0000E+00
1490	0.0000E+00	-2093	0.0000E+00	1491	0.0000E+00	-1521	0.0000E+00
1502	0.0000E+00	-1577	0.0000E+00	1503	0.0000E+00	-1577	0.0000E+00
1514	0.0000E+00	-133 1	0.0000E+00	1516	0.0000E+00	-796. 6	0.0000E+00
1527	0.0000E+00	-292 1	0.0000E+00	1529	0.0000E+00	-4133	0.0000E+00
1536	0.0000E+00	-680 7	0.0000E+00	1543	-1126	0.0000E+00	0.0000E+00
1551	-1124	0.0000E+00	0.0000E+00	1552	-1918	0.0000E+00	0.0000E+00
1553	0.0000E+00	-934 8	0.0000E+00	1555	0.0000E+00	-1036	0.0000E+00
1556	0.0000E+00	-1550	0.0000E+00	1557	-954 4	-839 1	0.0000E+00
1564	-2990	0.0000E+00	0.0000E+00	1572	-2998	0.0000E+00	0.0000E+00
1573	-6438	0.0000E+00	0.0000E+00	1574	0.0000E+00	-2701	0.0000E+00
1576	0.0000E+00	-3116	0.0000E+00	1577	0.0000E+00	-7743.	0.0000E+00
1578	-3234	-3883	0.0000E+00	1583	-4449	0.0000E+00	0.0000E+00
1588	-4437	0.0000E+00	0.0000E+00	1589	0.0000E+00	-5528.	0.0000E+00
1590	0.0000E+00	-5760	0.0000E+00	1591	0.0000E+00	2289	0.0000E+00
1593	0.0000E+00	796 1	0.0000E+00	1595	0.0000E+00	852 5	0.0000E+00

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1604	0.0000E+00	1492	0.0000E+00	1606	0.0000E+00	892.5	0.0000E+00
1608	0.0000E+00	1377	0.0000E+00	1617	0.0000E+00	891.5	0.0000E+00
1624	0.0000E+00	506.8	0.0000E+00	1627	0.0000E+00	475.6	0.0000E+00
1629	0.0000E+00	269.7	0.0000E+00	1631	0.0000E+00	823.9	0.0000E+00
1645	0.0000E+00	643.9	0.0000E+00	1648	0.0000E+00	643.2	0.0000E+00
1650	0.0000E+00	553.3	0.0000E+00	1651	0.0000E+00	-122.9	0.0000E+00
1652	0.0000E+00	121.4	0.0000E+00	1657	0.0000E+00	-437.4	0.0000E+00
1660	0.0000E+00	-71.03	0.0000E+00	1663	0.0000E+00	-757.9	0.0000E+00
1678	0.0000E+00	-1073	0.0000E+00	1684	0.0000E+00	293.7	0.0000E+00
1688	0.0000E+00	2223	0.0000E+00	1689	0.0000E+00	795.4	0.0000E+00
1693	0.0000E+00	643.7	0.0000E+00	1696	0.0000E+00	-149.9	0.0000E+00
1701	0.0000E+00	1349	0.0000E+00	1702	0.0000E+00	680.7	0.0000E+00
1705	0.0000E+00	273.2	0.0000E+00	1708	0.0000E+00	65.12	0.0000E+00
1711	0.0000E+00	-1363	0.0000E+00	1714	0.0000E+00	-1730	0.0000E+00
1717	0.0000E+00	976.0	0.0000E+00	1720	0.0000E+00	-995.9	0.0000E+00
1726	0.0000E+00	772.9	0.0000E+00	1729	0.0000E+00	-479.9	0.0000E+00
1732	0.0000E+00	-795.2	0.0000E+00	1738	0.0000E+00	330.7	0.0000E+00
1741	0.0000E+00	254.6	0.0000E+00	1744	0.0000E+00	-935.8	0.0000E+00
1747	0.0000E+00	-1992	0.0000E+00	1777	0.0000E+00	2186	0.0000E+00
1779	0.0000E+00	811.3	0.0000E+00	1781	0.0000E+00	768.4	0.0000E+00
1790	0.0000E+00	1423	0.0000E+00	1792	0.0000E+00	894.4	0.0000E+00
1794	0.0000E+00	1250	0.0000E+00	1803	0.0000E+00	849.9	0.0000E+00
1810	0.0000E+00	439.1	0.0000E+00	1814	0.0000E+00	111.8	0.0000E+00
1823	0.0000E+00	519.1	0.0000E+00	1827	0.0000E+00	263.2	0.0000E+00
1843	0.0000E+00	192.2	0.0000E+00	1846	0.0000E+00	595.5	0.0000E+00
1848	0.0000E+00	244.9	0.0000E+00	1849	-746.9	0.0000E+00	0.0000E+00
1850	-201.3	166.0	0.0000E+00	1857	-737.1	0.0000E+00	0.0000E+00
1858	-405.5	0.0000E+00	0.0000E+00	1863	-400.7	0.0000E+00	0.0000E+00
1864	0.0000E+00	108.1	0.0000E+00	1867	0.0000E+00	333.1	0.0000E+00
1869	0.0000E+00	252.3	0.0000E+00	1870	-415.1	0.0000E+00	0.0000E+00
1871	-220.1	170.3	0.0000E+00	1878	-407.4	0.0000E+00	0.0000E+00
1879	-426.2	0.0000E+00	0.0000E+00	1884	-414.7	0.0000E+00	0.0000E+00
1907	0.0000E+00	-2328	0.0000E+00	1908	0.0000E+00	-805.1	0.0000E+00
1909	0.0000E+00	-971.4	0.0000E+00	1920	0.0000E+00	-1508	0.0000E+00
1921	0.0000E+00	-906.6	0.0000E+00	1922	0.0000E+00	-1359	0.0000E+00
1929	0.0000E+00	-909.1	0.0000E+00	1946	0.0000E+00	-834.2	0.0000E+00
1948	0.0000E+00	-1216	0.0000E+00	1949	0.0000E+00	-496.0	0.0000E+00
1950	0.0000E+00	-566.3	0.0000E+00	1967	0.0000E+00	-756.4	0.0000E+00
1969	0.0000E+00	-864.2	0.0000E+00	1970	0.0000E+00	-739.2	0.0000E+00
1971	0.0000E+00	-886.7	0.0000E+00	2000	0.0000E+00	-561.0	0.0000E+00
2002	0.0000E+00	-475.4	0.0000E+00	2003	0.0000E+00	-323.6	0.0000E+00
2004	0.0000E+00	-259.9	0.0000E+00	2021	0.0000E+00	-468.8	0.0000E+00
2023	0.0000E+00	-358.1	0.0000E+00	2024	0.0000E+00	-504.6	0.0000E+00
2025	0.0000E+00	-332.2	0.0000E+00	2034	0.0000E+00	-333.4	0.0000E+00
2056	0.0000E+00	-228.2	0.0000E+00	2057	0.0000E+00	-204.8	0.0000E+00
2058	0.0000E+00	-115.8	0.0000E+00	2075	0.0000E+00	-233.2	0.0000E+00

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2077	0.0000E+00	-175 1	0.0000E+00	2078	0.0000E+00	-215 B	0.0000E+00
2079	0.0000E+00	-108 3	0.0000E+00	2102	0.0000E+00	-120 B	0.0000E+00
2104	0.0000E+00	-203 0	0.0000E+00	2115	0.0000E+00	-49 73	0.0000E+00
2117	0.0000E+00	-204 4	0.0000E+00	2131	-724 4	0.0000E+00	0.0000E+00
2139	-711 B	0.0000E+00	0.0000E+00	2140	-395 1	0.0000E+00	0.0000E+00
2141	0.0000E+00	-647 9	0.0000E+00	2143	-684 B	0.0000E+00	0.0000E+00
2144	0.0000E+00	-351 B	0.0000E+00	2145	-182 4	0.0000E+00	0.0000E+00
2152	-400 2	0.0000E+00	0.0000E+00	2160	-396 3	0.0000E+00	0.0000E+00
2161	-409 B	0.0000E+00	0.0000E+00	2162	0.0000E+00	-360 B	0.0000E+00
2164	0.0000E+00	-379 5	0.0000E+00	2165	0.0000E+00	-356 7	0.0000E+00
2166	-201 6	-186 B	0.0000E+00	2179	0.0000E+00	372B.	0.0000E+00
2181	0.0000E+00	1982	0.0000E+00	2183	0.0000E+00	1657.	0.0000E+00
2192	0.0000E+00	3170	0.0000E+00	2194	0.0000E+00	1965.	0.0000E+00
2196	0.0000E+00	163B.	0.0000E+00	2305	0.0000E+00	3169.	0.0000E+00
2207	0.0000E+00	2001.	0.0000E+00	2209	0.0000E+00	171B.	0.0000E+00
2225	0.0000E+00	687 B	0.0000E+00	2228	0.0000E+00	665 0	0.0000E+00
2230	0.0000E+00	190 5	0.0000E+00	2232	0.0000E+00	1616.	0.0000E+00
2246	0.0000E+00	536 4	0.0000E+00	2249	0.0000E+00	445 2	0.0000E+00
2251	0.0000E+00	129 5	0.0000E+00	2253	0.0000E+00	155B.	0.0000E+00
2267	0.0000E+00	526 B	0.0000E+00	2270	0.0000E+00	423 9	0.0000E+00
2272	0.0000E+00	167 7	0.0000E+00	2274	0.0000E+00	1621	0.0000E+00
2310	0.0000E+00	2727.	0.0000E+00	2311	0.0000E+00	2179.	0.0000E+00
2323	0.0000E+00	3089	0.0000E+00	2324	0.0000E+00	2020.	0.0000E+00
2336	0.0000E+00	3072.	0.0000E+00	2337	0.0000E+00	203B	0.0000E+00
2438	0.0000E+00	2101	0.0000E+00	2440	0.0000E+00	1367	0.0000E+00
2442	0.0000E+00	2030.	0.0000E+00	2451	0.0000E+00	2382.	0.0000E+00
2453	0.0000E+00	1633	0.0000E+00	2455	0.0000E+00	1731.	0.0000E+00
2464	0.0000E+00	2771.	0.0000E+00	2466	0.0000E+00	1943	0.0000E+00
2468	0.0000E+00	1667	0.0000E+00	2484	0.0000E+00	2105.	0.0000E+00
2487	-2816.	0.0000E+00	847 9	2488	0.0000E+00	336 0	0.0000E+00
2492	-2232	0.0000E+00	981 B	2497	0.0000E+00	103B	0.0000E+00
2501	0.0000E+00	195 9	0.0000E+00	2510	0.0000E+00	670 5	0.0000E+00
2514	0.0000E+00	147 9	0.0000E+00	2530	0.0000E+00	56 51	783 5
2533	0.0000E+00	395 1	887 3	2534	0.0000E+00	0.0000E+00	1677.
2535	0.0000E+00	601 0	0.0000E+00	2536	-426 0	0.0000E+00	941 5
2537	-494 5	398 9	0.0000E+00	2538	0.0000E+00	0.0000E+00	1536.
2541	0.0000E+00	0.0000E+00	1779	2542	0.0000E+00	0.0000E+00	1653.
2544	-427 7	0.0000E+00	942 9	2545	-972 0	0.0000E+00	0.0000E+00
2546	0.0000E+00	0.0000E+00	1496	2548	0.0000E+00	0.0000E+00	1785.
2550	-949 2	0.0000E+00	0.0000E+00	2551	0.0000E+00	286 9	0.0000E+00
2554	0.0000E+00	B12 5	0.0000E+00	2556	0.0000E+00	627 0	0.0000E+00
2557	-899 5	0.0000E+00	0.0000E+00	2558	-478 9	414 3	0.0000E+00
2565	-893 4	0.0000E+00	0.0000E+00	2566	-951 7	0.0000E+00	0.0000E+00
2571	-940 B	0.0000E+00	0.0000E+00	2572	0.0000E+00	291 2	0.0000E+00
2575	0.0000E+00	B41 1	0.0000E+00	2577	0.0000E+00	647 7	0.0000E+00
2578	-1004	0.0000E+00	0.0000E+00	2579	-528 0	432 7	0.0000E+00

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2586	-990.3	0.0000E+00	0.0000E+00	2587	-1042	0.0000E+00	0.0000E+00
2592	-1026	0.0000E+00	0.0000E+00	2615	0.0000E+00	-3799	0.0000E+00
2616	0.0000E+00	-2007	0.0000E+00	2617	0.0000E+00	-1961	0.0000E+00
2628	0.0000E+00	-3222	0.0000E+00	2639	0.0000E+00	-1988	0.0000E+00
2630	0.0000E+00	-1924	0.0000E+00	2641	0.0000E+00	-3220	0.0000E+00
2642	0.0000E+00	-2025	0.0000E+00	2643	0.0000E+00	-1986	0.0000E+00
2667	0.0000E+00	-1307	0.0000E+00	2669	0.0000E+00	-1744	0.0000E+00
2670	0.0000E+00	-1298	0.0000E+00	2671	0.0000E+00	-1704	0.0000E+00
2688	0.0000E+00	-1163	0.0000E+00	2690	0.0000E+00	-2050	0.0000E+00
2691	0.0000E+00	-1409	0.0000E+00	2692	0.0000E+00	-1786	0.0000E+00
2709	0.0000E+00	-1112	0.0000E+00	2711	0.0000E+00	-1991	0.0000E+00
2712	0.0000E+00	-1255	0.0000E+00	2713	0.0000E+00	-1470	0.0000E+00
2742	0.0000E+00	-1406	0.0000E+00	2744	0.0000E+00	-1214	0.0000E+00
2745	0.0000E+00	-1201	0.0000E+00	2746	0.0000E+00	-793.7	0.0000E+00
2763	0.0000E+00	-1281	0.0000E+00	2765	0.0000E+00	-1031	0.0000E+00
2766	0.0000E+00	-1129	0.0000E+00	2767	0.0000E+00	-761.5	0.0000E+00
2784	0.0000E+00	-1096	0.0000E+00	2786	0.0000E+00	-845.4	0.0000E+00
2787	0.0000E+00	-806.5	0.0000E+00	2788	0.0000E+00	-590.1	0.0000E+00
2817	0.0000E+00	-561.7	0.0000E+00	2819	0.0000E+00	-467.6	0.0000E+00
2820	0.0000E+00	-508.6	0.0000E+00	2821	0.0000E+00	-473.3	0.0000E+00
2838	0.0000E+00	-554.4	0.0000E+00	2840	0.0000E+00	-434.5	0.0000E+00
2841	0.0000E+00	-495.8	0.0000E+00	2842	0.0000E+00	-368.8	0.0000E+00
2859	0.0000E+00	-507.8	0.0000E+00	2861	0.0000E+00	-395.2	0.0000E+00
2862	0.0000E+00	-440.0	0.0000E+00	2863	0.0000E+00	-282.0	0.0000E+00
2879	-1610	0.0000E+00	1032	2884	-1394	0.0000E+00	1046
2886	0.0000E+00	-748.8	0.0000E+00	2888	0.0000E+00	-758.4	0.0000E+00
2899	0.0000E+00	-400.8	0.0000E+00	2901	0.0000E+00	-638.5	0.0000E+00
2912	0.0000E+00	-251.9	0.0000E+00	2914	0.0000E+00	-571.4	0.0000E+00
2926	0.0000E+00	0.0000E+00	1624	2928	-427.6	0.0000E+00	943.7
2930	0.0000E+00	0.0000E+00	1443	2933	0.0000E+00	0.0000E+00	1790
2934	0.0000E+00	0.0000E+00	1604	2936	-424.0	0.0000E+00	943.7
2937	-934.7	0.0000E+00	0.0000E+00	2938	0.0000E+00	-435.1	714.9
2940	0.0000E+00	-460.5	895.9	2941	0.0000E+00	-884.1	0.0000E+00
2942	-463.9	-445.9	0.0000E+00	2949	-887.6	0.0000E+00	0.0000E+00
2957	-884.9	0.0000E+00	0.0000E+00	2958	-934.0	0.0000E+00	0.0000E+00
2959	0.0000E+00	-958.1	0.0000E+00	2961	0.0000E+00	-933.1	0.0000E+00
2962	0.0000E+00	-907.1	0.0000E+00	2963	-454.3	-459.2	0.0000E+00
2970	-976.0	0.0000E+00	0.0000E+00	2978	-966.4	0.0000E+00	0.0000E+00
2979	-1020	0.0000E+00	0.0000E+00	2980	0.0000E+00	-948.7	0.0000E+00
2982	0.0000E+00	-962.1	0.0000E+00	2983	0.0000E+00	-933.2	0.0000E+00
2984	-505.4	-478.4	0.0000E+00	2997	0.0000E+00	3285	0.0000E+00
2999	0.0000E+00	2827	0.0000E+00	3001	0.0000E+00	3285	0.0000E+00
3010	0.0000E+00	4431	0.0000E+00	3012	0.0000E+00	2656	0.0000E+00
3014	0.0000E+00	2250	0.0000E+00	3030	0.0000E+00	1596	0.0000E+00
3033	0.0000E+00	1609	0.0000E+00	3035	0.0000E+00	2041	0.0000E+00
3037	0.0000E+00	3495	0.0000E+00	3051	0.0000E+00	1198	0.0000E+00

ABAGUS VERSION 4-4-75

MACH 14 FLOW RESTRICTOR

3054	0.0000E+00	1262	0.0000E+00	3056	0.0000E+00	363.4	0.0000E+00
3056	0.0000E+00	2333	0.0000E+00	3094	0.0000E+00	1415	0.0000E+00
3107	0.0000E+00	2427	0.0000E+00	3195	0.0000E+00	1152	0.0000E+00
3197	0.0000E+00	1295	0.0000E+00	3199	0.0000E+00	3262	0.0000E+00
3215	0.0000E+00	4584	0.0000E+00	3218	0.0000E+00	0.0000E+00	0.0000E+00
3219	-2284	1533	0.0000E+00	3223	0.0000E+00	0.0000E+00	0.0000E+00
3224	-2925	0.0000E+00	0.0000E+00	3227	0.0000E+00	0.0000E+00	0.0000E+00
3228	0.0000E+00	3029	0.0000E+00	3231	0.0000E+00	0.0000E+00	0.0000E+00
3232	-1750	735 9	0.0000E+00	3236	0.0000E+00	0.0000E+00	0.0000E+00
3237	-2853	0.0000E+00	0.0000E+00	3240	0.0000E+00	0.0000E+00	0.0000E+00
3258	0.0000E+00	-2563	0.0000E+00	3259	0.0000E+00	-2872	0.0000E+00
3260	0.0000E+00	-4261	0.0000E+00	3271	0.0000E+00	-4516	0.0000E+00
3272	0.0000E+00	-2701	0.0000E+00	3273	0.0000E+00	-2673	0.0000E+00
3297	0.0000E+00	-2776	0.0000E+00	3299	0.0000E+00	-2387	0.0000E+00
3300	0.0000E+00	-3220	0.0000E+00	3301	0.0000E+00	-2803	0.0000E+00
3318	0.0000E+00	-1878	0.0000E+00	3320	0.0000E+00	-1448	0.0000E+00
3331	0.0000E+00	-1112	0.0000E+00	3322	0.0000E+00	-1660	0.0000E+00
3351	0.0000E+00	-1640	0.0000E+00	3353	0.0000E+00	-1706	0.0000E+00
3372	0.0000E+00	-2413	0.0000E+00	3355	0.0000E+00	-1661	0.0000E+00
3375	0.0000E+00	-1444	0.0000E+00	3374	0.0000E+00	-1345	0.0000E+00
3405	0.0000E+00	-1454	0.0000E+00	3376	0.0000E+00	-898.3	0.0000E+00
3408	0.0000E+00	-624.5	0.0000E+00	3407	0.0000E+00	-698.2	0.0000E+00
3426	0.0000E+00	-913.4	0.0000E+00	3409	0.0000E+00	-1952	0.0000E+00
3429	0.0000E+00	-488.9	0.0000E+00	3428	0.0000E+00	-429.2	0.0000E+00
3444	-3061	-491.4	0.0000E+00	3430	0.0000E+00	-662.6	0.0000E+00
3452	-2636	0.0000E+00	0.0000E+00	3451	0.0000E+00	0.0000E+00	0.0000E+00
3455	-1305	0.0000E+00	0.0000E+00	3453	0.0000E+00	-3958	0.0000E+00
3464	-1488	-1186	0.0000E+00	3459	0.0000E+00	0.0000E+00	0.0000E+00
3466	0.0000E+00	-1125	0.0000E+00	3465	0.0000E+00	0.0000E+00	0.0000E+00
3476	0.0000E+00	1920	0.0000E+00	3468	0.0000E+00	-326.2	0.0000E+00
3479	-1241	0.0000E+00	0.0000E+00	3478	0.0000E+00	2083	0.0000E+00
3484	-1266	0.0000E+00	0.0000E+00	3480	0.0000E+00	1491	0.0000E+00
3488	-2069	0.0000E+00	0.0000E+00	3485	0.0000E+00	0.0000E+00	0.0000E+00
3491	0.0000E+00	2521	0.0000E+00	3489	0.0000E+00	3401	0.0000E+00
3493	-1101	1514	0.0000E+00	3492	0.0000E+00	0.0000E+00	0.0000E+00
3498	-2075	0.0000E+00	0.0000E+00	3497	0.0000E+00	0.0000E+00	0.0000E+00
3512	-1290	0.0000E+00	0.0000E+00	3501	0.0000E+00	0.0000E+00	0.0000E+00
3518	-2082	0.0000E+00	0.0000E+00	3517	0.0000E+00	0.0000E+00	0.0000E+00
3520	0.0000E+00	-2086	0.0000E+00	3519	0.0000E+00	-1997	0.0000E+00
3525	-1645	0.0000E+00	0.0000E+00	3521	0.0000E+00	-1515	0.0000E+00
3531	-2414	0.0000E+00	0.0000E+00	3530	0.0000E+00	0.0000E+00	0.0000E+00
3533	0.0000E+00	-2356	0.0000E+00	3532	0.0000E+00	-3292	0.0000E+00
				3534	0.0000E+00	-1326	0.0000E+00

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