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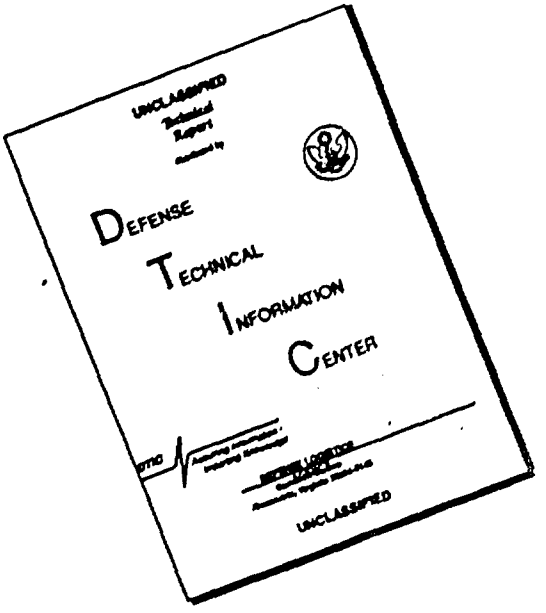

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FEBRUARY 1956

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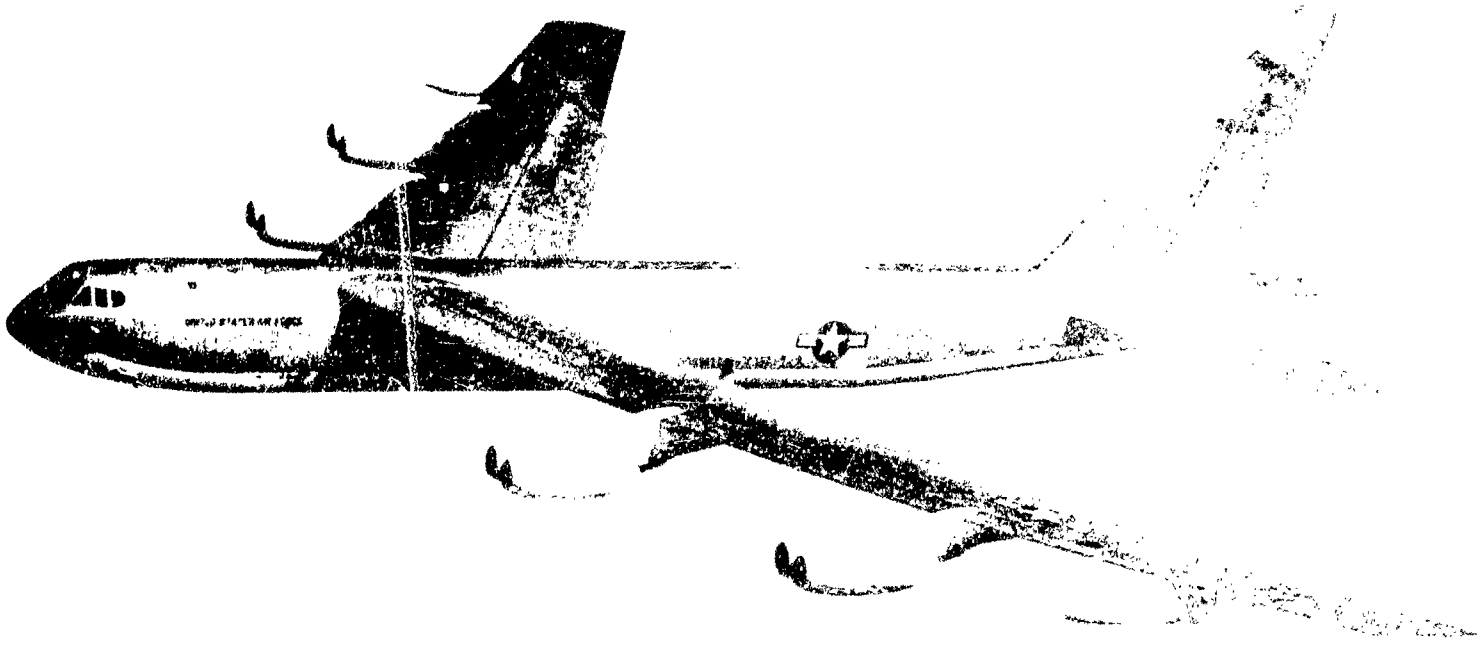
PROJECT PILOT | G. M. TOWNSEND, LT. COL., USAF



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February 1956

PHASE IV FLIGHT TEST OF THE BOEING B-52A AIRPLANE

USAF NO. 52-003

ADDENDUM 1

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PROJECT PILOT

ALFRED D. PHILLIPS

PROJECT ENGINEER

UNITED STATES AIR FORCE
AIR RESEARCH AND DEVELOPMENT COMMAND
AIR FORCE FLIGHT TEST CENTER
EDWARDS AIR FORCE BASE, CALIFORNIA

MAR 27 1956

56AA 11465

AFFTC-TR-55-27

February 1956

PUBLICATION REVIEW

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ABSTRACT

The B-52 aircraft equipped with J57-P-29W engines is identical in external configuration to the B-52 with J57-P-1W engines installed. The no water injection takeoff roll of the aircraft is decreased 8% while the water injection takeoff performance is virtually the same as with the P-1W engines because of restricted water flow on the P-29W engines. Climb performance is considerably increased; the time to climb to cruise altitude being lessened by 30%. Range of the aircraft is virtually unchanged except at altitudes of 50,000 feet and above where the range is increased by approximately 3%. The operation of the J57-P-29W engine above 54,000 feet is unsatisfactory because of engine failures; however, engine operation below 54,000 feet was considered excellent.

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A. INTRODUCTION

1. Project Objective

Additional Phase IV Flight Tests of the B-52A, USAF No. 52-003 were conducted to obtain comparative performance of the B-52 type aircraft equipped with J57-P-29W engines. These data will be used to revise estimated data to flight-checked data for the Flight Handbook and Standard Aircraft Characteristics Handbook.

2. Project History

The comparative flight tests flown on the B-52A, USAF No. 52-003 equipped with J57-P-29W engines (one-half water injection flow rate of 5,000 pounds per hour) were accomplished at the contractor's facilities at Boeing Field, Seattle, Washington, from 20 September to 28 November 1955. Seventeen flights were made during this period. The total flight time accumulated during the program was 75 hours and 41 minutes, including two 12-hour range missions.

3. Description of the Aircraft

a. The B-52A, USAF No. 52-003 as flown during the comparative tests was in the same external configuration as when tested with J57-P-1W engines. The only changes made in the aircraft were the installation of J57-P-29W engines and the installation of revised air conditioning packs so that the higher air pressure of the P-29W engines could be utilized.

b. The airplane was tested in the clean and external tank configuration. There were no external changes made to the aircraft during the program. The aircraft was weighed with all instrumentation installed, with the ECM equipment, bombing-navigation ("K") system removed, the A-3A fire control system removed, and all fuel tanks empty. The basic weight was found to be 167,640 pounds. Control of center of gravity during flight was accomplished by the transfer and use of fuel. Tests were conducted at gross weights ranging from 190,000 to 408,700 pounds. Detailed weight and balance data appear in Appendix II.

B. TEST RESULTS

1. Crew Compartment Description

a. The crew compartment was not changed from the configuration with J57-P-1W engines installed except that the flap handle was modified to make it spring loaded to the center position. The detents at "flaps up" and "flaps down" were retained so that it was not necessary to hold the handle in the desired position. This modification reduced the possibility of inadvertently raising or lowering the flaps.

2. Takeoff and Initial Climb

a. During dry (no water injection) operation, the J57-P-29W engines have a thrust overshoot of approximately 500 pounds per engine. This makes it advantageous to start the takeoff roll as soon after power application as possible. This overshoot is about double that of the J57-P-1W engines. The takeoff procedures are the same with either set of engines installed; however, the dry takeoff distance with the present engines is shortened by approximately 8 percent. The wet takeoff distance with one-half water flow is virtually the same as with P-1W engines with full water flow.

b. The inital climb after takeoff is slightly steeper to avoid exceeding the flap placard speed. The nose up trim change during acceleration after lift off is a little more pronounced but the rate of longitudinal trim is adequate at all gross weights.

3. Climb

a. Climb performance of the airplane is greatly increased. One contributing factor is the changing of the definitions of military rated power by the engine manufacturer. Military rated power (30 minute time limit) on J57-P-1W engines is defined as approximately 95% maximum thrust and is obtained by using approximately 1% RPM less than that obtained at full power level position. On the P-29W engines however, military rated power is defined as 100% thrust and is obtained at full power lever position. Time to climb to cruising altitude at a takeoff gross weight of 360,000 pounds is decreased by approximately 30 percent. The tailpipe temperature limit on all engines is reached above 35,000 feet and the power has to be reduced gradually as altitude is increased.

4. Cruise

a. The cruise characteristics of the J57-P-29W engines are the same as those of the P-1W engines except that there is a 3 percent increase in range at 50,000 feet and above. Since such a small portion of the mission would be flown at these altitudes, it is felt that this small increase does not warrant a cruise climb above 50,000 feet. A more thorough discussion of the actual loss in range experienced by flying at constant altitude rather than at a cruise climb is presented on Page 7 of Appendix I.

5. Longitudinal Stability

a. Stalls were accomplished at 60%, 37% and 20% flap settings to determine the magnitude of stall warning available during flap retraction. The stalling characteristics at these flap settings with external tanks installed are such that as the flaps are raised the stall warning is increased from a value of 5 to 7 knots with flaps full down to 15 to 20 knots with flaps full up.

6. Lateral Control

a. Lateral control with wing flaps and landing gear extended and spoilers operating is adequate at all approach airspeeds; however, with all spoilers inoperative the rate of roll is reduced to 20 to 25% of roll rates with spoilers operating. This is considered to be a dangerous condition and landings should not be attempted in this configuration. This situation is aggravated by the low airplane response rate when lateral control is initiated without spoilers. It is recommended that in the event all spoilers are inoperative, a flaps up landing be made at the highest permissible approach airspeed. A landing with the spoilers inoperative should not be attempted in any sort of gusty conditions or other than absolutely ideal conditions.

b. In the event that spoilers on one side only are lost, lateral control can be balanced to a certain degree by applying full aileron and rudder trim in the direction of the inoperative spoilers and then retrimming the airplane by raising the operative spoilers by use of the speed brakes until the control wheel is centered. It was found that Position 2 on the speed brake lever was nominal for flaps extended and Position 3 for flaps retracted. This increases the rate of roll

into the inoperative spoilers about 1 or 2 degrees per second and decreases the rate of roll into the operative spoilers approximately 3 to 4 degrees per second and thereby brings the roll in either direction to a lesser degree of unbalance.

7. General Aircraft and Systems Functioning

a. The operation of the J57-P-29W engines was excellent below 54,000 feet. There were no surge problems in either straight and level flight or turns at high altitudes, or during engine accelerations. A turbine wheel failure was experienced on one engine after fifteen minutes operation at 57,800 feet. The aircraft was operated in unaccelerated flight at .763 Mach number prior to the failure. The first indication of any trouble was a loud explosion (much more severe than any compressor surges previously experienced on J-57 engines) accompanied instantaneously by a severe vibration in the airplane. All engines had been throttled back considerably in order to keep them within tail pipe temperature limits (640° C.). At the time of the failure, all engines were operating either at or under 640° C. Though only one engine failure occurred during this P-29W program, there have been considerable problems with other B-52 aircraft operating at high altitude. As of 1 November 1955, B-52 airplanes at Seattle have operated above 54,000 feet for a total of 13 hours 48 minutes using P-1W engines and 6 hours 30 minutes using P-29W engines. One P-1W and one P-29W engine failed because of turbine rupture, three P-1W engines were rejected because of over temperature damage and seven P-1W's and five P-29W's were locally inspected, repaired and reinstalled after over temperature conditions. This condition is unsatisfactory and must be remedied before consistent high altitude operation above 54,000 feet can be considered practical.

b. The catalytic filters in the air conditioning system were removed for one flight to see if air contamination still existed with the P-29W engines installed. No improvement in air contamination could be discerned over operation with J57-P-1W engines installed with no catalytic filters in the system. It is felt there is still a definite need for an air filter device in the air conditioning system of the B-52 with P-29W engines.

C. CONCLUSIONS

1. The dry takeoff distance with J57-P-29W engines installed is lessened by approximately 8 percent.

2. The time to climb to cruise altitude at a takeoff weight of 360,000 pounds is decreased by 30 percent.

3. Cruise performance is virtually the same as with the J57-P-1W engines except above 50,000 feet where approximately a 3 percent increase in range is experienced.

4. An emergency landing with all spoilers inoperative is not recommended except under absolutely ideal conditions.

5. Operation of the P-29W engine above 54,000 feet is not satisfactory at the present time.

D. RECOMMENDATIONS

It is recommended that:

1. The cause of engine failures above 54,000 feet be determined and rectified.

2. The pilot's handbook be changed to reflect that landings with all spoilers inoperative not be attempted except during the most ideal conditions and that this landing be made flaps up.

3. The pilot's handbook be changed to reflect that, in the event all spoilers are inoperative on one side, full aileron and rudder trim should be applied in the direction of the inoperative spoilers and Speed Brake Positions No. 2 be used to balance this assymetric trim and the landing be made flaps down.

4. The pilot's handbook be changed to reflect the higher than predicted takeoff speeds that are required at heavy gross weights.

5. The pilot's handbook be changed to reflect the longer stopping distances that are required at heavy gross weights in case of an aborted takeoff.

APPENDIX I

DISCUSSION OF TEST RESULTS

APPENDIX I

A. DISCUSSION OF TEST RESULTS - PERFORMANCE PAGE

1. TAKEOFFS 1
2. SIMULATED REFUSED TAKEOFF 2
3. CLIMBS 2
4. LEVEL FLIGHT 6
5. RANGE MISSIONS 10
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A. DISCUSSION OF TEST RESULTS - PERFORMANCE

1. Takeoffs

Performance takeoffs were made to determine the minimum total distance required to takeoff and climb to 50 feet. Tests were conducted at gross weights varying from 220,000 pounds to 405,000 pounds without water injection and at 320,000 and 405,000 pounds with water injection. Takeoffs were made utilizing what the pilot considered maximum performance technique in the same manner that performance takeoffs were made with J57-P-1W engines installed in order to obtain comparative data on the B-52 type aircraft equipped with J57-P-29W engines. Normal takeoff technique was also used in several takeoffs to obtain the effect of takeoff speed on distance during ground roll and climbout. The standard day thrust values that were used were 10,500 pounds per engine dry and 11,000 pounds per engine with water injection (½ water flow rate of 5,000 pounds per hour) at brake release as compared to 9,500 pounds dry and 10,850 pounds wet for the P-1W engines. These values were taken at an average brake release time of 12 to 15 seconds after full throttle was reached. The thrust overshoot on the P-29W engines at brake release was found to be approximately 500 pounds for standard day conditions as compared to 250 pounds per engine on the P-1W engines. On colder days (35° to 40° F.) the thrust overshoot dropped to as low as 300 pounds. As shown on Figure 51, the engine pressure ratio instruments in the pilot's panel will normally be approximately .05 Pt_7/Pt_2 higher than predicted at brake release because of the overshoot characteristics mentioned above. Since the handbook takeoff roll distances are based on a stabilized thrust at brake release, the overshoot encountered can be used as an extra "cushion" in computing the takeoff performance. The takeoff distances will be slightly greater than those listed in the following takeoff table if the pilot holds either full power or near full pwer for any appreciable time over 1 minute due to the thrust overshoot. The dry takeoff roll with P-29W engines is reduced an average of 7 to 9 percent over P-1W engine operation. The takeoff performance with ½ water flow (5,000 pounds per hour) was virtually the same as the performance with P-1W engines wet (±200 feet difference). The brake release wet thrust of the P-29W engine with 5,000 pounds per hour water flow is only 150 pounds greater than the P-1W engine with full water flow (8,600 pounds per hour), consequently the wet takeoff performance of the aircraft equipped with either type engine is virtually the same. During the takeoff tests with both the P-1W engines and P-29W engines, it was noted that the indicated takeoff speeds at gross weights of 400,000 pounds was about 7 knots higher than predicted while at weights of 260,000 pounds, the takeoff speeds were within 1 to 2 knots of the predicted takeoff speeds. It is recommended that the takeoff speed charts be changed to account for this discrepancy.

The following table is a summary of the maximum takeoff test results corrected to standard day conditions. Curves of these data are also presented in Figures 1 and 2 and include comparisons to maximum takeoff performance of the B-52 equipped with J57-P-1W engines.

MAXIMUM TAKEOFF PERFORMANCE

FLAPS DOWN

NO WATER INJECTION

Gross Weight (Lbs.)	Ground Run (Feet)	Total Dist. to 50 Ft. (Feet)	IAS T.O. (Knots)	IAS 50 Ft. (Knots)	V_t (S.L.) T.O. (Knots)	V_t (S.L.) 50 Ft. (Knots)
220,000	2,100	- - -	116.	- - -	121.5	- - -
290,000	3,400	4,350	126.5	132.5	125	133
* 290,000	4,350	5,500	128.	135	131	144
** 405,000 (1)	7,450	9,150	150.	155	150	155.5

MAXIMUM TAKEOFF PERFORMANCE

FLAPS DOWN

5,000 POUNDS PER HOUR WATER INJECTION

** 320,000	4,250	5,400	133.5	150.5	138	152
** 405,000	6,800	8,900	148.5	153.5	150	154

* 7 engines
** Two 1,000-gallon external tanks installed
(1) Estimated minimum conditions; actual takeoffs were not at the shortest distance possible

2. Simulated Refused Takeoff

A single 405,000- pound simulated refused takeoff was made at Edwards Air Force Base to determine the adequacy of the predicted stopping distances. The test stopping distance from the point of brakes applied was found to be 65 per cent greater than predicted. The contractor has recognized this deficiency and has increased the predicted critical field length by 3 per cent and decreased the refusal speed by 8 per cent for heavyweight takeoffs. Plots of the accelerate-stop test appear in Figures 3 and 4 as a time history and as a comparison of the actual stopping distance to the predicted stopping distance.

3. Climbs

Check climbs were flown at gross weights varying from 190,000 to 406,000 pounds. All climbs were flown with 8 engines at military rated thrust (full throttle) except one which was flown at normal rated power (approximately 2 per cent RPM less than full throttle). All climbs

were flown using the climb schedules determined by level accelerations on earlier tests with J57-P-1W engines installed. The climb performance of the aircraft equipped with J57-P-29W engines is considerably better than those equipped with the lower thrust engines. The time to climb to cruise altitude at military rated power at an engine start weight of 360,000 pounds is approximately 30 percent better than with the P-1W engines. However, at both military rated and normal rated power above 35,000 feet, the exhaust gas temperature goes over limits and the power has to be pulled back somewhat. This was one of the main differences found between the J57-P-1W engine and the J57-P-29W engine as no trouble was experienced on the P-1W engine with over-temperature at altitude. Even though the tailpipe temperature limits have been raised 20°C. on the P-29W engines and the rate of climb at lower altitudes has been increased considerably, the service ceiling has been increased only approximately 1,000 feet at 405,000 pounds takeoff weight. All climb data have been corrected to standard day atmospheric condition and limit exhaust gas temperature. The climb data are presented in Figures 5 through 10 and time allowance from brake release to best climb speed is shown in Figure 11. The plot of fuel used from brake release to best climb speed for P-1W engines may be used for P-29W engines. A summary of the climb performance data is presented in the following tables.

EIGHT ENGINE CLIMB PERFORMANCE

MILITARY RATED THRUST

CLIMB SPEED SCHEDULE DETERMINED FROM LEVEL ACCELERATIONS

(1) Gross Weight at Engine Start Approximately 200,000 Pounds, No External Tanks

Altitude (Feet)	R/C Ft/Min	T/C Min	N_2 % RPM	EPR	Fuel Used (Pounds)	Naut. Miles Traveled	Gross Weight (Pounds)	TAS (Knots)
35,000	4,520	0	96.6	2.99	0	0	190,000	420
40,000	3,480	1.1	96.3	3.04	0.5	10.0	189,500	450
45,000	2,450	2.8	96.0	3.07	1.2	21.0	188,900	468
50,000	1,460	3.0	95.5	3.06	2.0	40.0	187,800	463
55,000	470	10.9	94.7	2.96	3.6	80.0	186,200	450
* 56,800	100	15.8	93.6	2.90	5.1	117.0	185,000	442

* Service Ceiling

(2) Gross Weight at Engine Start Approximately 225,000 Pounds, No External Tanks

Altitude (Feet)	R/C Ft/Min	T/C Min	N_2 % RPM	EPR	Fuel Used (Pounds)	Naut. Miles Traveled	Gross Weight (Pounds)	TAS (Knots)
S.L.	7,880	0	100.2	2.35	0	0	218,000	340
10,000	6,700	1.4	99.9	2.55	1,500	11.0	216,700	374
20,000	5,710	3.0	99.6	2.75	3,000	22.0	215,000	437
30,000	5,050	5.0	98.8	2.94	4,300	36.0	213,700	453
40,000	3,390	7.3	98.2	3.06	5,800	51.0	211,900	452
50,000	1,230	11.8	96.7	3.06	7,200	88.0	210,200	450
*55,250	100	19.5	95.4	3.04	9.100	144.0	209,300	450

* Service Ceiling

(3) Gross Weight at Engine Start Approximately 320,000 Pounds, Two 1,000 Gallon External Tanks

Altitude (Feet)	R/C Ft/Min	T/C Min	N_2 % RPM	EPR	Fuel Used (Pounds)	Naut. Miles Traveled	Gross Weight (Pounds)	TAS (Knots)
S.L.	5,310	0	100.3	2.45	0	0	311,800	322
10,000	4,680	1.8	99.8	2.64	2,300	9.0	309,500	351
20,000	3,550	4.3	99.4	2.80	4,500	24.0	307,300	407
30,000	2,740	7.6	98.7	2.94	6,700	48.0	305,200	456
40,000	1,460	12.3	96.9	3.04	8,900	83.0	303,000	460
*49,500	100	22.5	96.5	3.08	15,600	220.0	298,000	460

* Service Ceiling

EIGHT ENGINE CLIMB PERFORMANCE

MILITARY RATED THRUST

CLIMB SPEED SCHEDULE DETERMINED FROM LEVEL ACCELERATIONS

(4) Gross Weight at Engine Start Approximately 360,000 Pounds, No External Tanks

Altitude (Feet)	R/C Ft/Min	T/C Min	N_2 % RPM	EPR	Fuel Used (Pounds)	Naut. Miles Traveled	Gross Weight (Pounds)	TAS (Knots)
S.L.	4,560	0	100.3	2.30	0	0	352,300	340
10,000	3,910	2.4	100.0	2.51	2,600	10.0	349,000	376
20,000	3,120	5.1	99.5	2.73	5,200	30.0	346,700	412
30,000	2,410	8.8	98.8	2.92	7,900	52.0	343,900	442
40,000	1,250	14.0	97.8	3.10	10,900	98.0	341,100	450
* 45,250	100	21.5	96.8	3.10	13,300	151.0	338,300	450

* Service Ceiling

(5) Gross Weight at Engine Start Approximately 405,000 Pounds, Two 1,000 Gallon External Tanks

Altitude (Feet)	R/C Ft/Min	T/C Min	N_2 % RPM	EPR	Fuel Used (Pounds)	Naut. Miles Traveled	Gross Weight (Pounds)	TAS (Knots)
S.L.	3,940	0	100.3	2.35	0	0	394,000	350
10,000	3,350	2.7	100.0	2.55	3,100	12.0	390,800	386
20,000	2,680	6.1	99.5	2.76	6,200	37.0	387,500	420
30,000	2,000	10.6	98.8	2.96	9,200	70.0	384,500	453
40,000	890	16.8	97.2	3.21	12,800	125.0	382,000	445
* 43,100	100	22.5	96.6	3.05	15,700	163.0	378,700	430

* Service Ceiling

EIGHT ENGINE CLIMB PERFORMANCE

NORMAL RATED THRUST

CLIMB SPEED SCHEDULE DETERMINED FROM LEVEL ACCELERATIONS

(6) Gross Weight at Engine Start Approximately 290,000 Pounds, No External Tanks

Altitude (Feet)	R/C Ft/Min	T/C Min	N_2 % RPM	EPR	Fuel Used (Pounds)	Naut. Miles Traveled	Gross Weight (Pounds)	TAS (Knots)
S.L.	4,800	0	97.6	2.23	0	0	253,000	314
10,000	4,020	2.0	97.4	2.37	2.3	12.0	251,300	360
20,000	3,300	4.7	97.0	2.54	4.4	31.0	249,500	418
30,000	2,950	7.9	96.4	2.77	6.2	57.0	247,600	459
40,000	2,130	11.8	95.4	2.95	7.8	86.0	246,000	450
* 48,700	100	23.5	94.0	2.97	9.3	175.0	244,100	455

* Service Ceiling

4. Level Flight

a. Performance data were obtained in level flight without external tanks at altitudes ranging from 40,000 feet to 55,000 feet and with external tanks at altitudes varying from 37,000 feet to 50,000 feet. Gross weights varied from 200,000 pounds to 370,000 pounds. All data were obtained with 8 engines operating and the weight-over-pressure ratios ranged from 1,600,000 pounds to 2,200,000 pounds. Speed power data were also obtained with the slipway doors (in flight refueling doors) open at 1,800,000 W/δ at 45,000 feet to obtain the effect on range. The oil coolers were operated at a fixed gap of 0.2 inches during all speed power tests. Maximum speed data are presented in Figure 12 and indicate that the maximum speed of the aircraft at bombing weight and altitude would be increased approximately .01 Mach number with J57-P-29W engines. As experienced with the J57-P-1W engines, no measurable difference could be determined at maximum speed with tanks on and tanks off. Maximum speed data are presented in graphical form in Figure 12 for weights ranging from 200,000 - 363,000 pounds and a comparison table of the maximum speeds at 240,000 pounds with P-1W and P-29W engines installed is presented as follows:

MAXIMUM STANDARD DAY SPEED

Gross Weight Pounds	Altitude Feet	True Airspeed Knots J57-P-29W Engines	True Airspeed Knots J57-P-1W Engines	Mach Number J57-P-29W Engines	Mach Number J57-P-1W Engines
240,000	25,000	540	538	.898	.896
240,000	30,000	533	531	.905	.906
240,000	35,000	524	522	.910	.909
240,000	40,000	518	514	.901	.894
240,000	45,000	507	502	.882	.873
240,000	50,000	488	476	.849	.828

b. Though there is approximately 2 percent scatter in three out of five of the speed power polars, two range missions and the other six speed power tests agree within 1 percent of the range data of the B-52A equipped with J57-P-1W engines at 45,000 feet and below. One speed power test was conducted at 50,000 feet with tanks installed at 1,800,000 pounds W/δ and another at 55,000 feet without tanks at 2,200,000 W/δ. Both of these tests indicate that at 50,000 feet and above the range is increased 3 percent over that of the J57-P-1W engines. By flying at a constant W/δ of 1,700,000 for a whole mission, the last half (roughly 3,000 miles) would be flown between 45,000 and 50,000 feet. This would be an increase in range of 1½ percent on the last half of the mission or approximately 45 miles. It was shown on Pages 21 and 22 of Appexdix I of AFFTC-TR-55-27 that when operating with J57-P-1W engines and cruising at a W/δ of 1,700,000 until 45,000 feet was reached and then holding approximately 45,000 feet for the remainder of the flight, a total range loss of 20 miles would be incurred. By adding the 45 miles gained by using J57-P-29W engines to the 20 miles lost by cruising at 45,000 feet rather than 1,700,000 W/δ, a total loss in range of 65 miles would be realized or 32.5 miles in radius of action. This is but slightly over 1 percent overall loss and the advantages gained in crew comfort by flying at 45,000 feet described on Page 22 of Appendix I of AFFTC-TR-55-27 are felt to more than outweigh this small decrease in range. The tests conducted with the slipway doors open indicate that a 1.8 percent loss in range is incurred if the doors are left open. No measurable difference was found in the range of the aircraft at the forward, mid, and aft C.G. (18%, 25% and 35% MAC) on the tests conducted at 45,000 feet at 1,800,000 pounds W/δ. All data were obtained using an oil cooler gap of 0.2 inches open and JP-4 fuel was used on all tests. All speed power tests were flown with the four pneumatic-driven alternators and six hydraulic packs operating. The range data are presented in Figures 13 through 22 and are summarized in the following tables:

EIGHT-ENGINE CRUISE PERFORMANCE

No External Tanks

			Optimum Cruise					Recommended Cruise				
$W/\delta \times 10^{-6}$ Lbs.	Alt. 1,000 Ft.	Gross Weight Lbs.	Mach No.	TAS Kts.	EPR	Range Factor Wt x Mi Lb.	NAM Lb.	Mach No.	TAS Kts.	EPR	Range Factor Wt x Mi Lb.	NAM Lb.
1.6	40	296,320	.777	447	2.26	8,890	.0300	.795	457	2.28	8,780	.0299
1.8	40	333,360	.775	446	2.40	9,040	.0272	.800	460	2.43	8,950	.0269
1.8	45	262,440	.775	446	2.40	8,780	.0335	.800	460	2.44	8,650	.0329
2.0	45	291,600	.790	454	2.58	8,680	.0296	.803	462	2.60	8,530	.0293
2.2	55	199,078	.775	446	2.76	7,870	.0395	.785	451	2.77	7,830	.0394

EIGHT-ENGINE CRUISE PERFORMANCE

Two 1,000-Gallon External Wing Tanks

			Optimum Cruise					Recommended Cruise				
W/δx 10-⁶ Lbs.	Alt. 1,000 Ft.	Gross Weight Lbs.	Mach No.	TAS Kts.	EPR	Range Factor Wt x Mi Lb.	NAM Lb.	Mach No.	TAS Kts.	EPR	Range Factor Wt x Mi Lb.	NAM Lb.
1.6	37	341,920	.780	449	2.26	9,200	.0268	.800	460	2.30	9,090	.0264
1.6	40	296,320	.780	449	2.26	8,880	.0300	.800	460	2.30	8,670	.0297
1.7	37	363,290	.780	449	2.34	8,980	.0248	.800	460	2.38	8,930	.0246
1.8	40	333,360	.785	451	2.43	8,640	.0260	.805	463	2.47	8,530	.0257
1.8	50	206,820	.785	451	2.35	8,590	.0416	.805	463	2.38	8,500	.0411
2.0	45	291,600	.785	451	2.56	8,520	.0292	.805	463	2.63	8,380	.0286

EIGHT-ENGINE CRUISE PERFORMANCE

Slipway Doors Open

			Optimum Cruise					Recommended Cruise				
W/δx 10-⁶ Lbs.	Alt. 1,000 Ft.	Gross Weight Lbs.	Mach No.	TAS Kts.	EPR	Range Factor Wt x Mi Lb.	NAM Lb.	Mach No.	TAS Kts.	EPR	Range Factor Wt x Mi Lb.	NAM Lb.
1.8	45	262,440	.775	446	2.40	8,640	.0329	.800	460	2.42	8,570	.0326
* 1.8	45	262,440	.775	446	2.38	8,780	.0335	.800	460	2.42	8,650	.0329

* Clean

c. Power required data were obtained simultaneously with the range data during all speed-power tests that were conducted. The data are presented in Figures 25 through 38 and are summarized in summary plots of engine pressure ratio required for any weight, altitude and speed in Figures 29 and 30. The engine pressure ratio (EPR) required for cruise conditions is .05 higher when J57-P-29W engines are used as compared to the EPR necessary when J57-P-1W engines are installed in the aircraft. All power required data are summarized in tabular form and are presented in the following tables:

EIGHT-ENGINES – SLIPWAY DOORS OPEN

					Mach Number						
W/δx 10-⁶ Lbs.	Alt. 1,000 Feet	Gross Weight Lbs.	Max. RPM % N_2	Max. EPR	Max. EPR	EPR 3.1	EPR 2.9	EPR 2.7	EPR 2.6	EPR 2.5	EPR 2.4
1.8	45	262,440	98.8	3.10	.886	.886	.872	.852	.838	.821	.775
* 1.8	45	262,440	98.8	3.01	.881	- - -	.872	.855	.842	.824	.791

* Clean

8 ENGINES – NO EXTERNAL TANKS

W/δx 10^{-6} Lbs.	Alt. 1,000 Feet	Gross Weight Lbs.	Max. RPM % N_2	Max. EPR	Mach Number: Max. EPR	EPR 3.0	EPR 2.8	EPR 2.6	EPR 2.55	EPR 2.45	EPR 2.25
1.6	40	296,320	98.8	3.00	.888	.888	.878	.861	.856	.844	.765
1.8	40	333,360	98.8	3.06	.882	.879	.865	.842	.834	.805	---
1.8	45	262,440	98.8	3.06	.882	.879	.865	.842	.834	.805	---

					Mach Number: Max. EPR	EPR 3.1	EPR 3.0	EPR 2.9	EPR 2.8	EPR 2.7	EPR 2.6
2.0	45	291,900	98.7	3.11	.875	.871	.865	.857	.847	.832	.803
2.2	55	199,078	98.7	3.10	.846	.846	.837	.824	.799	---	---

8 ENGINES – WITH TANKS

W/δx 10^{-6} Lbs.	Alt. 1,000 Feet	Gross Weight Lbs.	Max. RPM % N_2	Max. EPR	Mach Number: Max. EPR	EPR 2.5	EPR 2.45	EPR 2.4	EPR 2.35	EPR 2.3	EPR 2.25
1.6	37	341,920	98.8	3.02	.892	.850	.843	.835	.821	.803	.775
1.6	40	296,320	98.8	3.02	.892	.850	.843	.835	.821	.803	.775

					Mach Number: Max. EPR	EPR 2.9	EPR 2.7	EPR 2.6	EPR 2.5	EPR 2.45	EPR 2.4
1.7	37	363,290	98.8	3.09	.885	.874	.861	.852	.838	.827	.811
1.8	40	333,360	98.8	3.06	.882	.873	.852	.836	.815	.796	---
1.8	50	206,820			---	.873	.855	.842	.828	.815	.800

					Mach Number: Max. EPR	EPR 3.0	EPR 2.9	EPR 2.8	EPR 2.7	EPR 2.6	EPR
2.0	45	291,600	98.7	3.07	.866	.860	.853	.832	.825	.795	---

d. Since no external changes were made in the aircraft, the drag remained the same. The same engine airflow curves that were used in computing thrust on the J57-P-1W engines were recommended by Pratt and Whitney Aircraft Co. to be used on J57-P-29W engines. It can be seen on several of the lift coefficient and drag coefficient curves presented on Figures 39 through 50 that there are some slight differences in drag as compared to the C_L and C_D curves presented in Figures 139 through 177 in AFFTC-TR-55-27. It is believed this difference was the result of different airflow characteristics of the engine which was not accounted for. The same engine inlet duct efficiency that was used for the J57-P-1W engines was also used for these tests. The airflow and duct efficiency curves are shown on Figures 66 and 67.

5. RANGE MISSIONS

Two range missions were flown during the J57-P-29W engine comparison tests. The first was flown at a constant W/δ of 1,700,000 pounds to 45,000 feet and then an altitude of 45,000 feet was held for the remainder of the mission. The second was flown at a constant W/δ of 1,700,000 pounds throughout. Both missions were aborted after 12 hours of flight due to adverse weather conditions, consequently over 2 more hours of cruise plus reserves were available on both missions at landing. (42,450 pounds of fuel on Flight 59 and 45,450 pounds of fuel on Flight 60). The range mission data verifies the Phase IV speed power data obtained with J57-P-29W and also check with the data obtained with J57-P-1W engines presented in AFFTC-TR-55-27.

6. ENGINE THRUST CALIBRATION

a. The eight engines used during the test program were operated on the AFFTC Universal Thrust Stand in order to calibrate the exhaust gas pressure probes and to determine the installed static performance of the J57-P-29W engine under both normal conditions and 5000 pounds per hour water injection. The specific fuel consumption for 90% thrust was the same as on the J57-P-1W engines, being .780 pounds of fuel per pound of thrust. At military rated thrust the specific fuel consumption is .790 for P-1W engines and .840 for P-29W engines. When water injection was used, a specific fuel consumption of .866 was obtained for takeoff rated power. The data are presented in Figures 53 through 60 and are summarized in the following tables:

STATIC ENGINE PERFORMANCE

No Water Injection

N_2 RPM	N_1 RPM	Gross Thrust Lbs.	Exhaust Gas Temp. °C.	Specific Fuel Consumption Lbs/Hr-Lb	Surge Bleed Valve Position
*9378	6090	9,920	586	.840	Closed
9100	5760	8,240	493	.800	Closed
8900	5530	6,975	437	.780	Closed
8600	5205	5,275	370	.801	Closed
8200	4500	3,300	303	.919	One valve open
7800	3885	2,175	265	.990	Open
7400	3365	1,520	240	1.080	Open
7000	2945	1,120	224	1.175	Open
6600	2600	865	219	1.290	Open
6200	2335	705	224	1.430	Open

* Rated Installed Thrust after Five Minutes Operation

STATIC ENGINE PERFORMANCE

5,000 Pounds Per Hour Water Injection

N_2 RPM	N_1 RPM	Gross Thrust Lbs.	Exhaust Gas Temp. °C.	Specific Fuel Consumption Lbs/Hr-Lb	Surge Bleed Valve Position
*9313	6205	10,550	606	.866	Closed
9200	6075	9,780	570	.850	Closed
9100	5970	9,140	539	.839	Closed
9000	5860	8,475	507	.830	Closed
8900	5750	7,875	479	.825	Closed

* Rated Installed Thrust after Five Minutes Operation

b. It will be noted from the above table that 100% thrust is 9,920 as compared to the engine rating of 10,500 pounds. This difference is attributable to the duct loss incurred under static conditions when the engine is installed. A 3.7% duct loss was used to compute the 100% installed rating. The value of 3.7% was determined from recent duct survey tests conducted by the Boeing Airplane Company.

7. DATA REDUCTION

a. The same formulae, derivations and methods of data reduction procedures that were explained in AFFTC-TR-55-27 were used in reducing the test data obtained.

B. DISCUSSION OF TEST RESULTS – STABILITY AND CONTROL

1. Stability and control tests consisted of an investigation of the rolling characteristics in the power approach configuration and the stalling characteristics at various flap settings.

2. ROLLING CHARACTERISTICS

a. Aileron rolls with wing flaps and landing gear extended were conducted at airspeeds of 190 knots, 160 knots, 130 knots, and 118 knots. These same tests were repeated with all spoilers inoperative. As can be seen in Figure 70 through 74 in Appendix 1A the roll rates with spoilers operating are satisfactory throughout the allowable flaps down speed range. However, with spoilers inoperative the roll rates are unsatisfactory and at 118 knots vary from 0.5° per second with rudder pedals held fixed to 2.3° per second with full rudder used. Roll rates of this magnitude make a safe approach and landing highly improbable. By reference to Figure 390 in Appendix 1A of AFFTC-TR-55-27 and Figure 73 in Appendix 1A of this report it can be seen that with the spoilers inoperative roll rates are increased 1° to 2° per second from the flaps down to the flaps up configuration. This, coupled with the higher roll rates at the higher approach speeds make a flaps up landing highly recommended when all spoilers are inoperative. These data are presented in Figures 68 through 73 and Figures 75 through 95 in Appendix 1A and are summarized as follows:

SUMMARY OF ROLL RATES

No External Tanks Installed

Gross Weight 235,000 Lbs.

Configuration and Altitude	CAS Knots	Test Roll Rate Deg./Sec. Left	Test Roll Rate Deg./Sec. Right	MIL-F-8785 Roll Rate Deg./Sec.	Notes
Power Approach 11,000 Feet	190	14.1	15.9	16.35	
	160	14.1	14.9	13.77	Spoilers Operative
	130	10.5	10.5	11.19	Rudder Pedals Fixed
	118	9.4	8.7	10.16	
	118	8.8	8.8	10.16	
Power Approach 11,000 Feet	190	18.0	17.6	16.35	
	160	15.6	15.9	13.77	Spoilers Operative
	130	13.0	11.8	11.19	Rudder Used
	118	11.0	10.4	10.16	
Power Approach 11,000 Feet	190	1.73	1.45	16.35	
	160	1.06	1.23	13.77	Spoilers Inoperative
	130	0.59	0.98	11.19	Rudder Pedals Fixed
	118	0.28	0.65	10.16	No Asymmetric Trim
Power Approach 11,000 Feet	190	4.20	3.38	16.35	
	160	3.82	3.14	13.77	Spoilers Inoperative
	130	2.76	2.50	11.19	Rudder Used
	118	3.28	1.96	10.16	No Asymmetric Trim
Power Approach 17,000 Feet	190	4.93	11.38	18.03	
	160	4.83	11.38	15.18	
	160	4.62*	- - - -	15.18	
	130	2.48	9.72	12.34	L. H. Spoilers Inoperative
	130	3.56*	- - - -	12.34	Full left Aileron and Rudder
	**130	2.88	9.79	12.34	Trim Used.
	**130	3.76*	- - - -	12.34	
	116	2.84	8.27	11.01	
	116	3.08*	- - - -	11.01	

* Rudder Used
** Speed Brakes No. 2 Position

SUMMARY OF ROLL RATES

Left-Hand Spoilers Inoperative. No External Tanks Installed.

Power Approach Configuration. Altitude 17,000 Feet.

Roll Initiated By:	Aileron Trim Tab-Degrees Left	Aileron Trim Tab-Degrees Right	Rud. Trim Tab Degrees	R. H. Spoiler Pos. at Trim Degrees Inbd.	R. H. Spoiler Pos. at Trim Degrees Outbd.	S. B. Lever Position	IAS Knots	Roll Rate Deg./Sec.
S. B. Lever Zeroed	1.3 Up	3.8 Up	0.7 L	0	0	No. 2	189	2.24
S. B. Lever Zeroed	1.3 Up	3.8 Up	0.7 L	0	0	No. 2	184.5	2.48
S. B. Lever Zeroed	1.3 Up	3.8 Up	13.0 R	13	18	No. 2	165	2.63
S. B. Lever Zeroed	1.3 Up	3.8 Up	13.0 R	13	18	No. 2	160.5	2.73
Control Wheel	1.3 Up	3.8 Up	13.0 R	13	18	No. 2	159	4.97
Control Wheel	12.9 Dn	17.4 Up	10.7 R	19	24.5	No. 2	129.5	3.06
S. B. Lever Zeroed	12.9 Dn	17.4 Up	10.7 R	19	24.5	No. 2	129.5	1.27
S. B. Lever Zeroed	12.9 Dn	17.4 Up	10.7 R	19	24.5	No. 2	129.5**	5.10
S. B. Lever Zeroed	2.3 Up	2.1 Up	14.3 R	14.5	19	No. 2	187	2.27
Control Wheel	2.3 Up	2.1 Up	14.3 R	14.5	19	No. 2	190	5.10
S. B. Lever Zeroed	3.6 Up	1.1 Up	12.3 R	16.5	22	No. 2	161.5*	3.33
Control Wheel	3.6 Up	1.1 Up	12.3 R	16.5	22	No. 3	157.5*	3.97
Control Wheel	3.6 Up	1.1 Up	12.3 R	16.5	22	No. 3	166.5*	4.16
Control Wheel	12.9 Dn	17.4 Up	11.1 R	14.5	20	No. 2	124	3.02
S. B. Lever Zeroed	2.3 Up	2.1 Up	12.7 R	19	25	No. 2	128.5	2.24
Control Wheel	2.3 Up	2.1 Up	12.7 R	19	25	No. 2	130.5	3.19

* Flaps Retracted

** Engines No. 1 and 2 Idle

TIME LAPSE BETWEEN CONTROL INITIATION AND PEAK ROLL RATE

Power Approach Configuration
Gross Weight 240,000 Pounds
No External Tanks Installed

Rudder Pedals	C.A.S. Knots	Altitude Feet	Test Time to Reach Peak Roll Rate Seconds	MIL-F-8785 Time to Reach Peak Roll Rate Seconds
Fixed	183	12,900	1.57	2.35
Fixed	187.5	13,000	1.29	2.35
Fixed	193.5	12,800	1.29	2.35
Fixed	192.5	12,900	.66	2.35
Used	186.5	12,900	1.54	2.35
Used	187.5	13,000	1.71	2.35
Fixed*	194.5	13,800	1.73	2.35
Fixed*	183	14,200	1.53	2.35
Used*	181.5	14,500	1.93	2.35
Used*	192	14,600	1.62	2.35
Fixed	157	13,100	1.57	2.35
Fixed	160.5	13,100	1.35	2.35
Used	159.5	13,000	1.38	2.35
Used	160	13,000	.84	2.35
Fixed*	159.5	13,300	1.99	2.35
Fixed*	158.5	13,500	1.04	2.35
Used*	154.5	13,700	2.61	2.35
Used*	158.5	13,900	1.38	2.35
Fixed	128.5	11,500	1.98	2.35
Fixed	130.5	11,400	.65	2.35
Used	126.5	11,400	2.09	2.35
Used	126.5	11,100	.95	2.35
Fixed*	133.5	14,100	1.13	2.35
Fixed*	125.5	14,200	2.48	2.35
Used*	125	14,200	2.57	2.35
Used*	128.5	14,200	.72	2.35
Fixed	118.5	10,400	1.31	2.35
Fixed	117.5	10,300	.51	2.35
Fixed	117.5	10,300	2.35	2.35
Fixed	115.5	10,300	.86	2.35
Used	116.5	10,200	1.87	2.35
Used	119.5	10,100	.51	2.35
Fixed*	114.5	10,100	1.91	2.35
Fixed*	117	10,100	1.36	2.35
Used*	117.5	10,100	2.39	2.35
Used*	117.5	10,100	3.00	2.35

* Spoilers Inoperative

TIME LAPSE BETWEEN CONTROL INITIATION AND PEAK ROLL RATE

Power Approach Configuration
Altitude 17,000 Feet
Gross Weight 235,000 Pounds
L.H. Spoilers Inoperative
No External Tanks Installed

Rudder Pedals	C.A.S. Knots	Aileron Trim Tab Pos. - Deg. Left	Aileron Trim Tab Pos. - Deg. Right	R.H. Spoiler Position at Trim-Deg. Inbd.	R.H. Spoiler Position at Trim-Deg. Outbd.	Rudder Control Tab Pos. at Trim Degrees	Test Time to Reach Peak Roll Rate-Sec.
Fixed*	192	12.2 Dn.	17.0 Up	30.0	14.0	12.0 RT.	.58
Fixed*	185.5	12.2 Dn	17.0 Up	30.0	14.0	12.0 RT.	.50
Fixed*	157	12.2 Dn	17.0 Up	30.0	13.5	12.0 RT.	1.86
Fixed*	158.5	12.2 Dn	17.0 Up	30.0	13.5	12.0 RT.	.90
Used*	157	12.2 Dn	17.0 Up	30.0	13.5	12.0 RT.	1.45
Fixed*	128	12.2 Dn	17.3 Up	26.5	10.0	9.8 RT.	1.52
Fixed*	125	12.2 Dn	17.3 Up	26.5	10.0	9.8 RT.	2.04
Used*	126.5	12.2 Dn	17.3 Up	26.5	10.0	9.8 RT.	1.09
Fixed**	130.5	12.2 Dn	17.3 Up	29.5	32.0	11.3 RT.	.49
Fixed**	123.5	12.2 Dn	17.3 Up	29.5	32.0	11.3 RT.	1.19
Used**	128.5	12.2 Dn	17.3 Up	29.5	32.0	11.3 RT.	1.62
Fixed**	116	12.2 Dn	17.3 Up	19.5	21.5	12.3 RT.	.85
Fixed**	116	12.2 Dn	17.3 Up	19.5	21.5	12.3 RT.	.96
Used**	116.5	12.2 Dn	17.3 Up	19.5	21.5	12.3 RT.	1.58

* Speed Brakes No. 3 Setting
** Speed Brakes No. 2 Setting

b. Aileron rolls with spoilers inoperative on one side only were accomplished at speeds throughout the allowable flaps down range. An attempt to balance out roll in either direction was made by applying full aileron and rudder trim toward the inoperative spoilers and then centering the wheel by raising the operating spoilers on the opposite wing. It was found that Position 2 on the speed brake lever was nominal with flaps extended and Position 3 for flaps retracted. With the airplane trimmed in this condition, roll was initiated by moving the control wheel in the direction of the desired roll. By reference to Figure 74 of Appendix 1A it can be seen that at 158 knots with flaps down, roll rate into the inoperative spoilers is 4.6° per second, whereas, roll rate into the operating spoilers is 11.3° per second. The roll into the inoperative spoiler represents only a 1° per second increase over the all spoilers inoperative configuration. However, the time to reach peak roll rate was more nearly equal to that with all spoilers operating. Time histories of these tests appear in Figures 96 through 103.

3. STALLS

a. Qualitative stall tests were accomplished at 235,000 pounds gross weight with the landing gear extended and the wing flaps at settings of full down, 60%, 37%, 20% and full up. The results of this test indicate that stall warning is increased very noticeably for each increment the flaps are raised.

APPENDIX IA

TEST DATA

APPENDIX IA

TEST DATA

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TAKEOFF PERFORMANCE

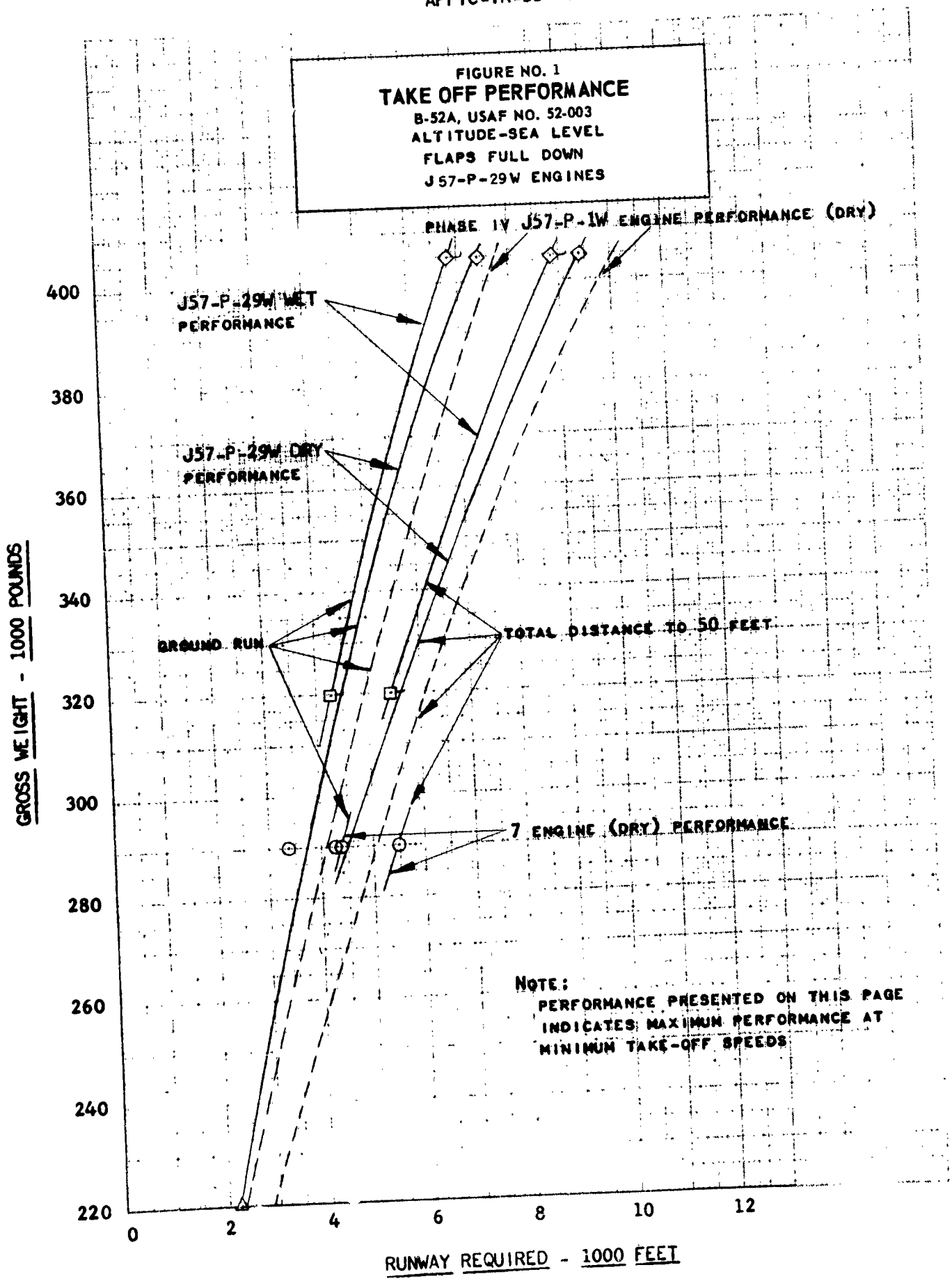
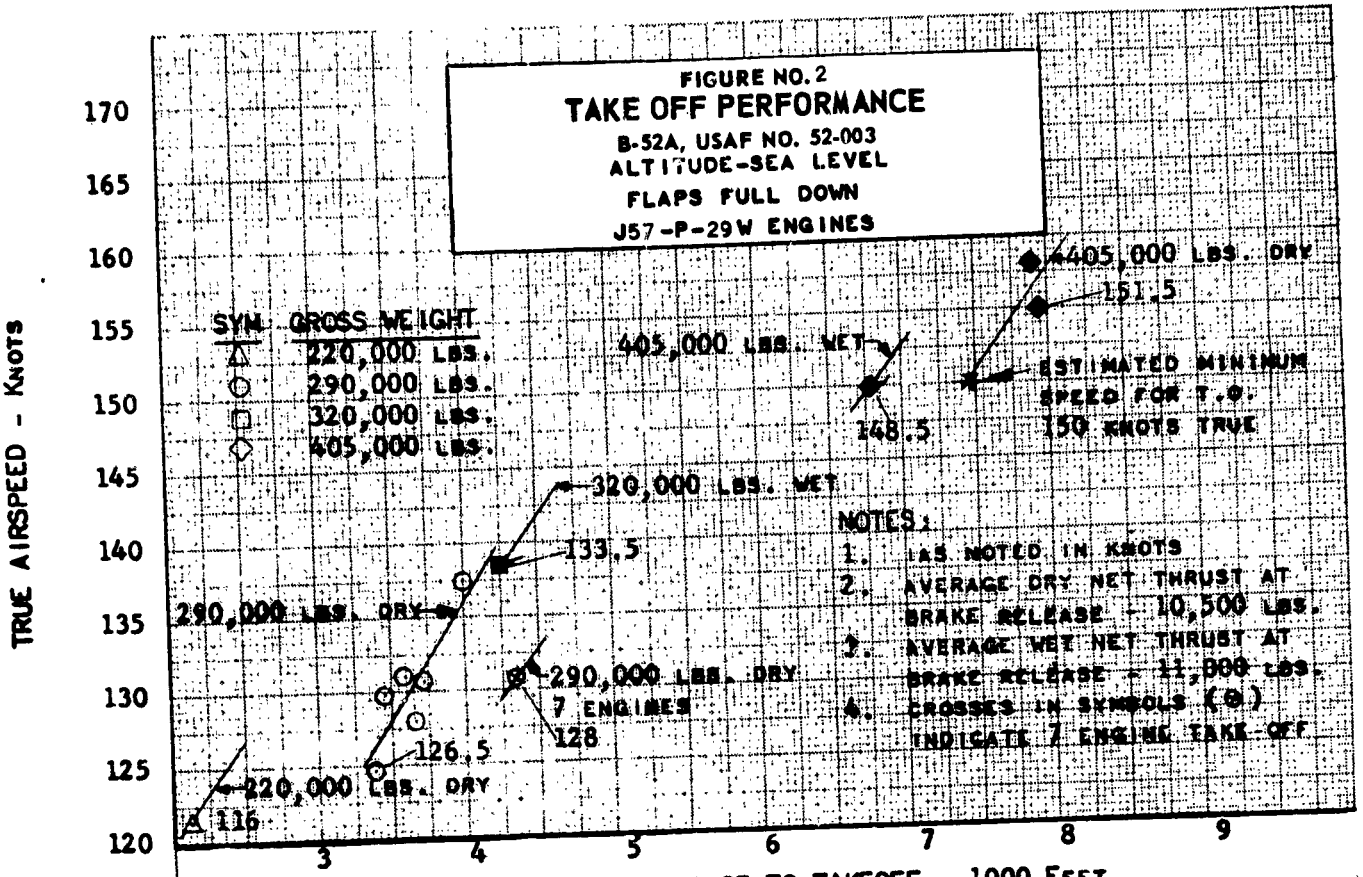
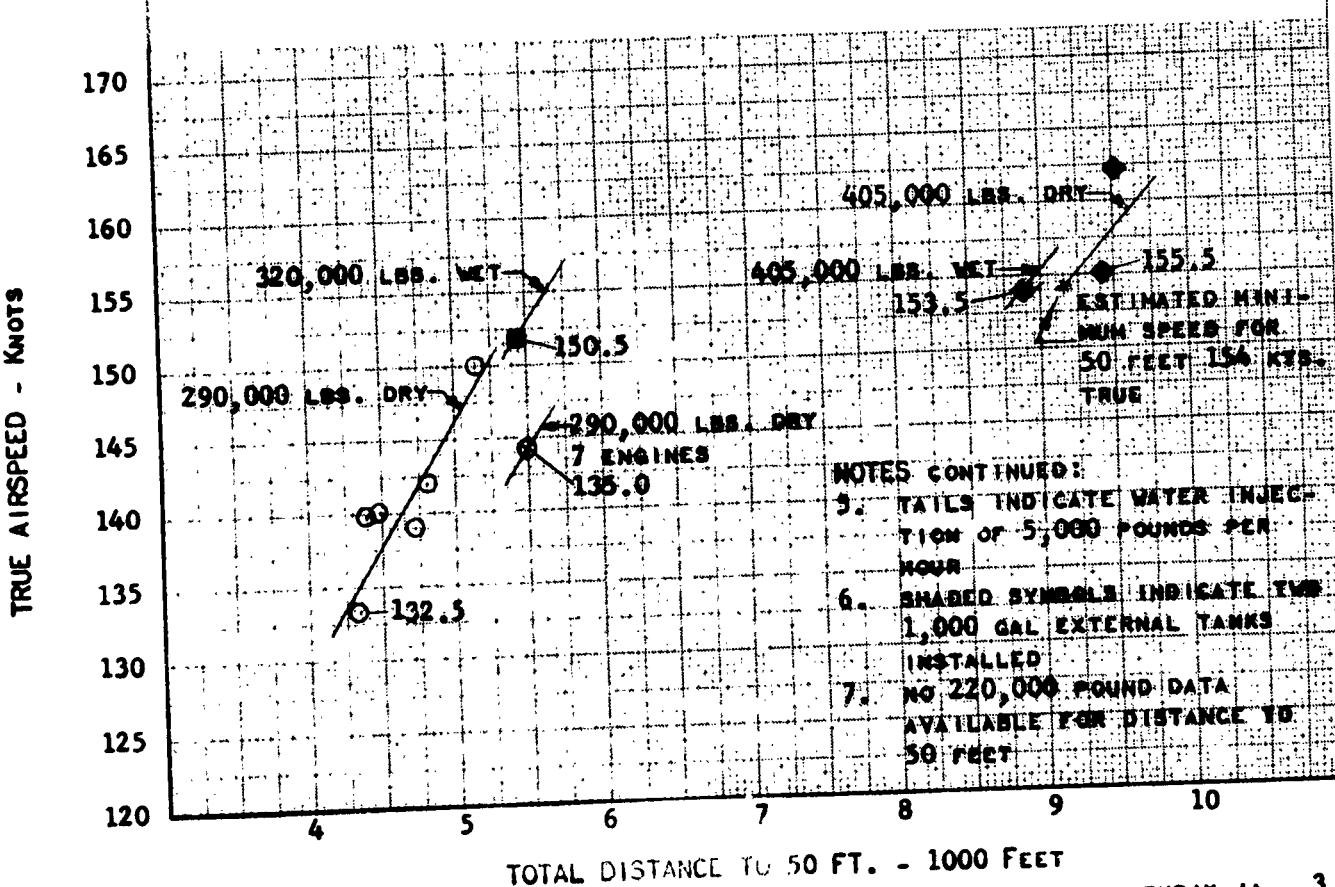


FIGURE NO. 1
TAKE OFF PERFORMANCE
B-52A, USAF NO. 52-003
ALTITUDE-SEA LEVEL
FLAPS FULL DOWN
J57-P-29W ENGINES
PHASE IV J57-P-1W ENGINE PERFORMANCE (DRY)
J57-P-29W WET PERFORMANCE
J57-P-29W DRY PERFORMANCE
GROUND RUN
TOTAL DISTANCE TO 50 FEET
7 ENGINE (DRY) PERFORMANCE
NOTE:
PERFORMANCE PRESENTED ON THIS PAGE INDICATES MAXIMUM PERFORMANCE AT MINIMUM TAKE-OFF SPEEDS
GROSS WEIGHT - 1000 POUNDS
400
380
360
340
320
300
280
260
240
220
0
2
4
6
8
10
12
RUNWAY REQUIRED - 1000 FEET

FIGURE NO. 2
TAKE OFF PERFORMANCE
B-52A, USAF NO. 52-003
ALTITUDE-SEA LEVEL
FLAPS FULL DOWN
J57-P-29W ENGINES



NOTES:
1. LBS NOTED IN KNOTS
2. AVERAGE DRY NET THRUST AT BRAKE RELEASE - 10,500 LBS.
3. AVERAGE WET NET THRUST AT BRAKE RELEASE - 11,000 LBS.
4. CROSSES IN SYMBOLS (⊗) INDICATE 7 ENGINE TAKE-OFF



NOTES CONTINUED:
5. TAILS INDICATE WATER INJECTION OF 5,000 POUNDS PER HOUR
6. SHADED SYMBOLS INDICATE TWO 1,000 GAL EXTERNAL TANKS INSTALLED
7. NO 220,000 POUND DATA AVAILABLE FOR DISTANCE TO 50 FEET

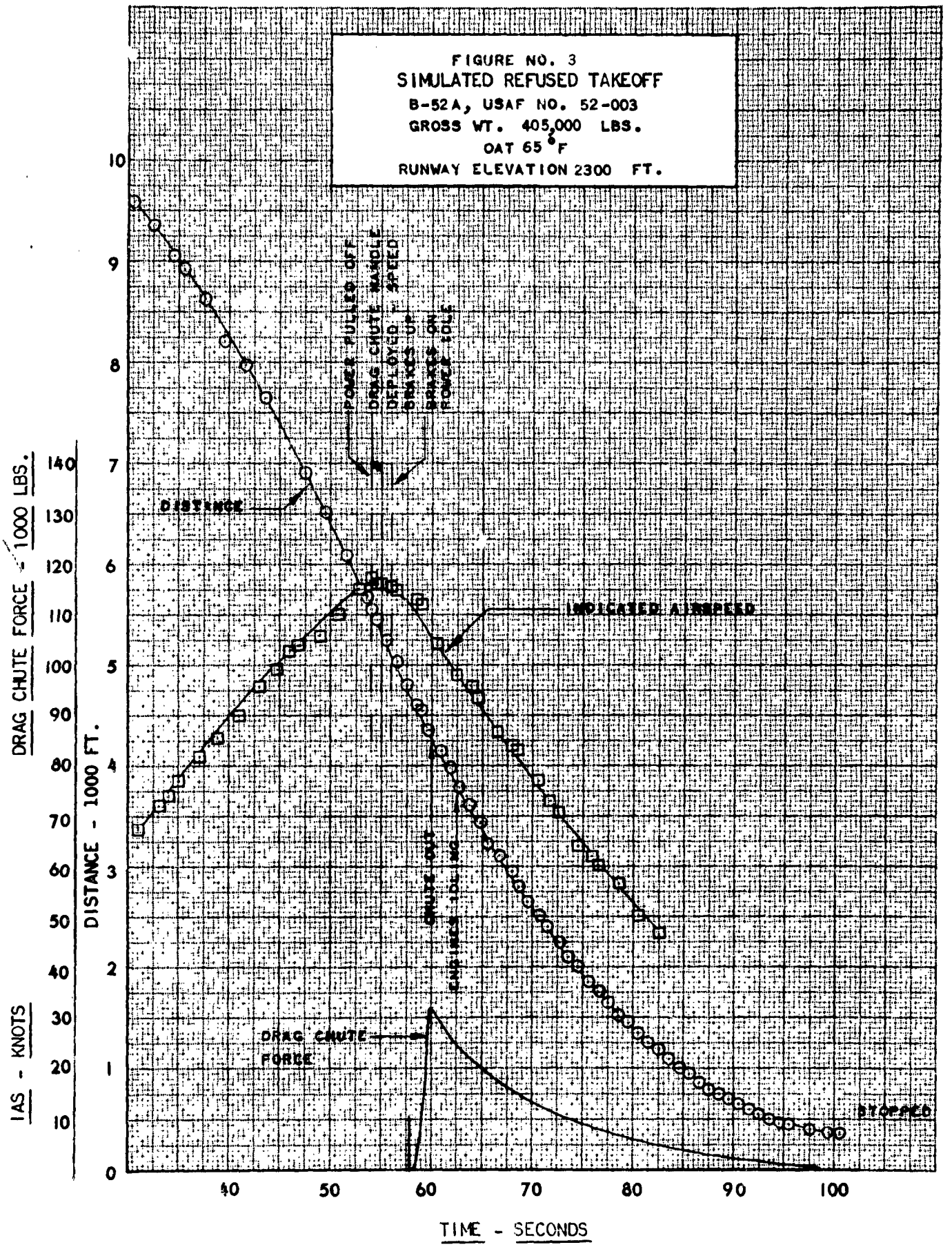


FIGURE NO. 3
SIMULATED REFUSED TAKEOFF
B-52A, USAF NO. 52-003
GROSS WT. 405,000 LBS.
OAT 65 °F
RUNWAY ELEVATION 2300 FT.
POWER PULLED OFF
DRAG CHUTE HANDLE DEPLOYED - SPEED
BRAKES UP
BRAKES ON
POWER IDLE
DISTANCE
INDICATED AIRSPEED
CHUTE OUT
ENGINES IDLING
DRAG CHUTE FORCE
STOPPED
IAS - KNOTS
DISTANCE - 1000 FT.
DRAG CHUTE FORCE - 1000 LBS.
TIME - SECONDS
0
1
2
3
4
5
6
7
8
9
10
40
50
60
70
80
90
100
10
20
30
40
50
60
70
80
90
100
110
120
130
140

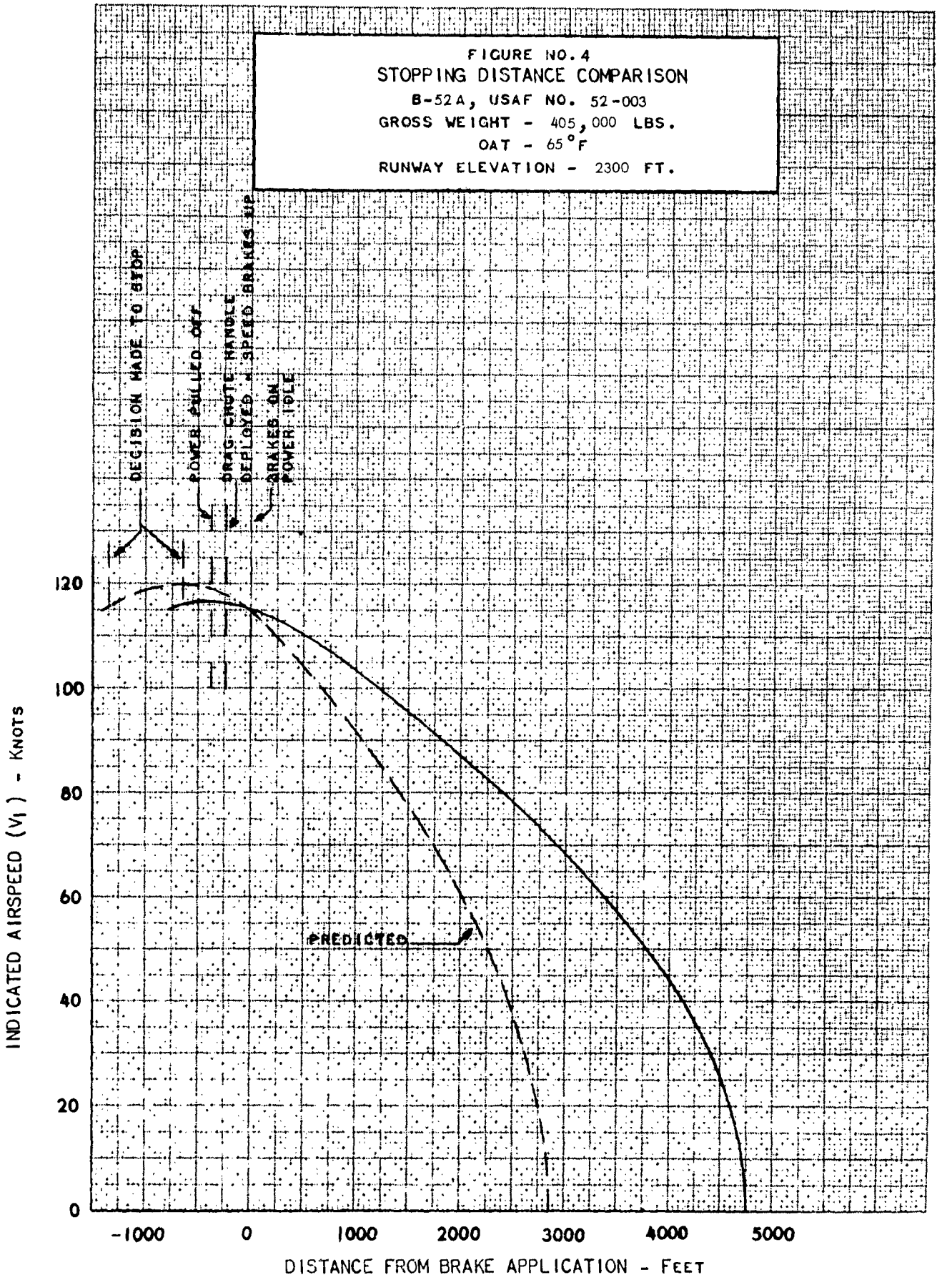


FIGURE NO. 4
STOPPING DISTANCE COMPARISON
B-52A, USAF NO. 52-003
GROSS WEIGHT - 405,000 LBS.
OAT - 65°F
RUNWAY ELEVATION - 2300 FT.

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FOR CONVENIENCE OF

PRESENTING PLOTS

CLIMB PERFORMANCE

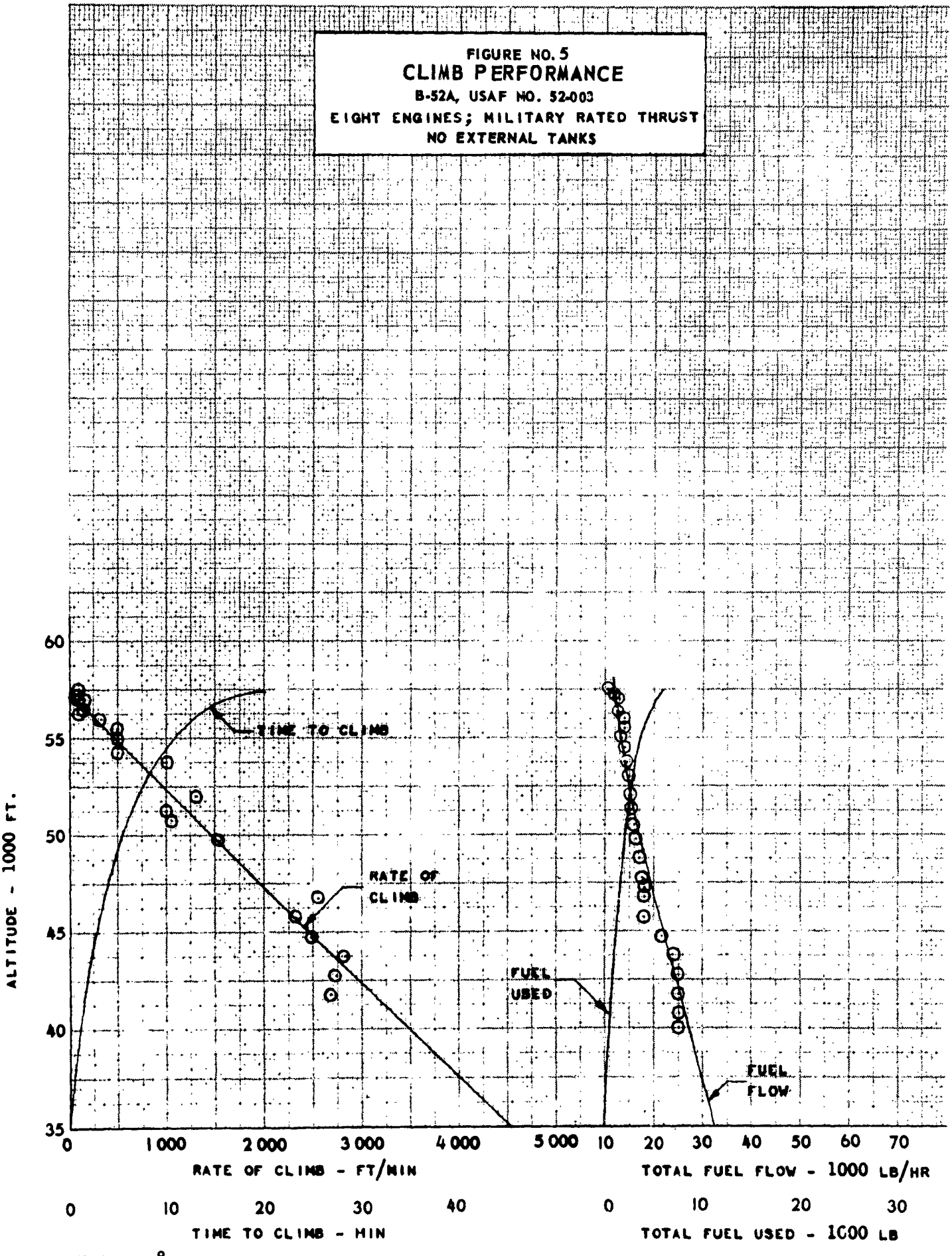
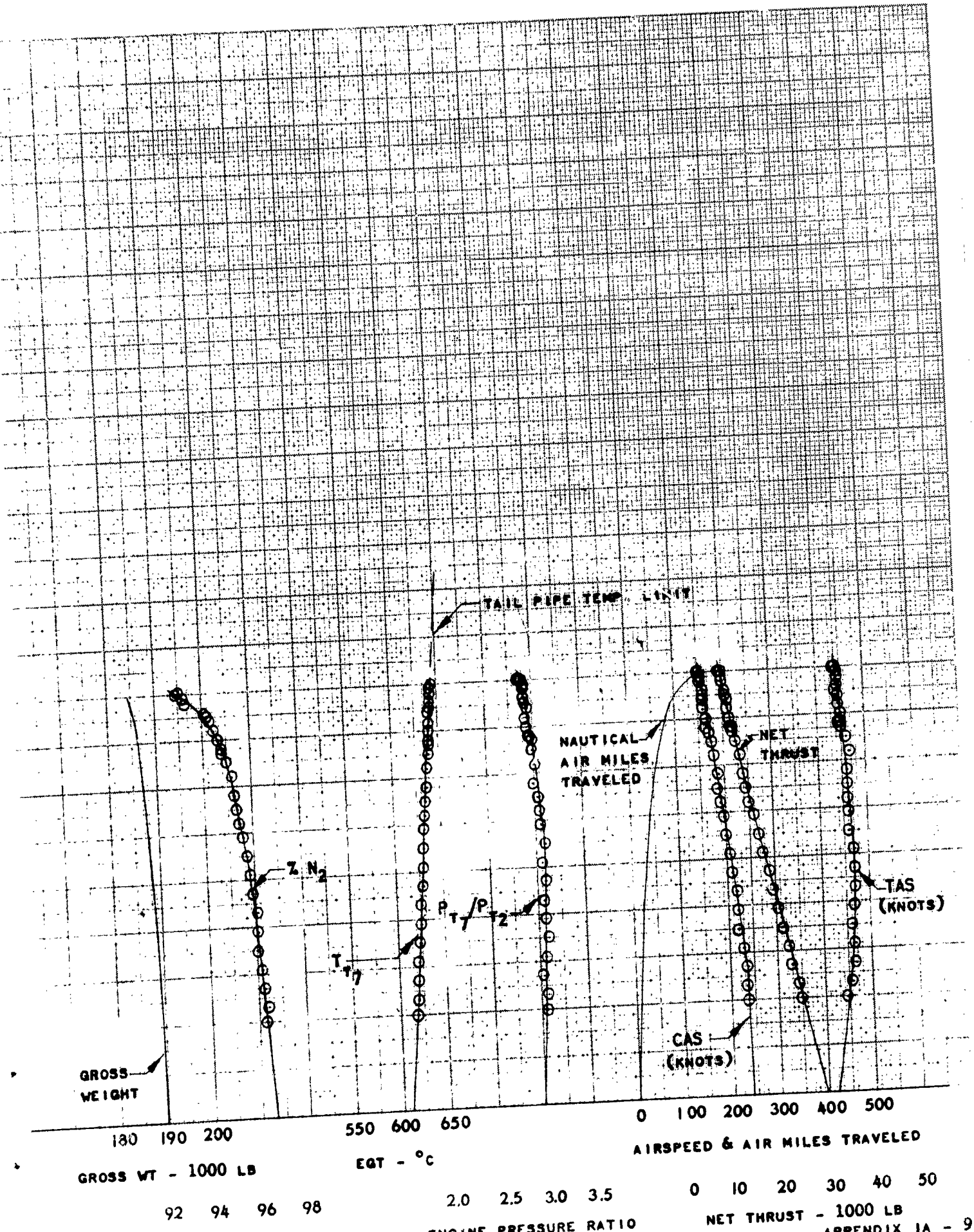


FIGURE NO. 5
CLIMB PERFORMANCE
B-52A, USAF NO. 52-003
EIGHT ENGINES; MILITARY RATED THRUST
NO EXTERNAL TANKS
TIME TO CLIMB
RATE OF CLIMB
FUEL USED
FUEL FLOW
ALTITUDE - 1000 FT.
60
55
50
45
40
35
0
1000
2000
3000
4000
5000
10
20
30
40
50
60
70
RATE OF CLIMB - FT/MIN
TOTAL FUEL FLOW - 1000 LB/HR
0
10
20
30
40
0
10
20
30
TIME TO CLIMB - MIN
TOTAL FUEL USED - 1000 LB


TAIL PIPE TEMP. LIMIT
NAUTICAL AIR MILES TRAVELED
NET THRUST
% N2
PT7/PT2
TT7
TAS (KNOTS)
CAS (KNOTS)
GROSS WEIGHT
180 190 200
GROSS WT - 1000 LB
550 600 650
EGT - °C
0 100 200 300 400 500
AIRSPEED & AIR MILES TRAVELED
92 94 96 98
PERCENT N2 - RPM
2.0 2.5 3.0 3.5
ENGINE PRESSURE RATIO
0 10 20 30 40 50
NET THRUST - 1000 LB

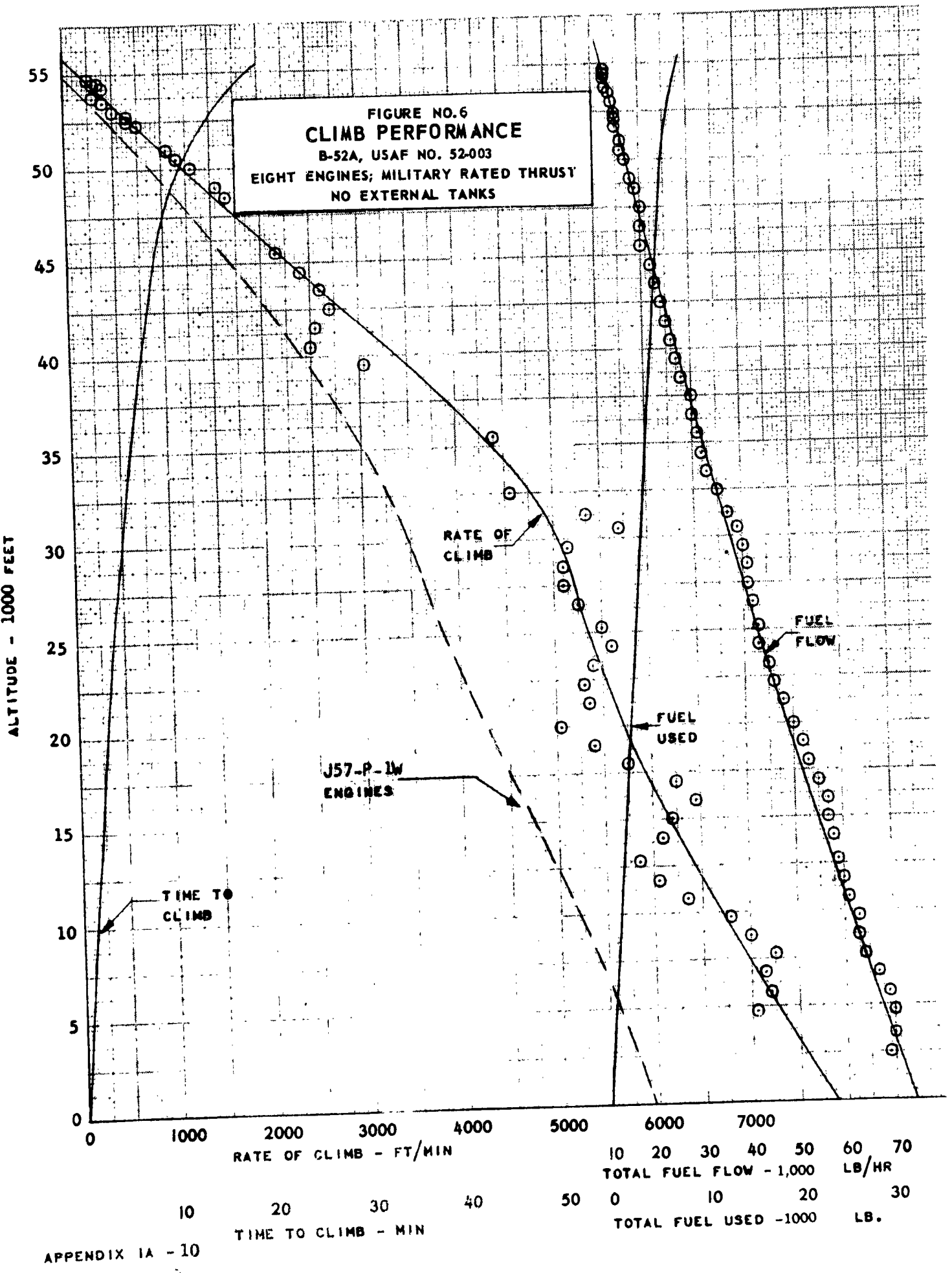
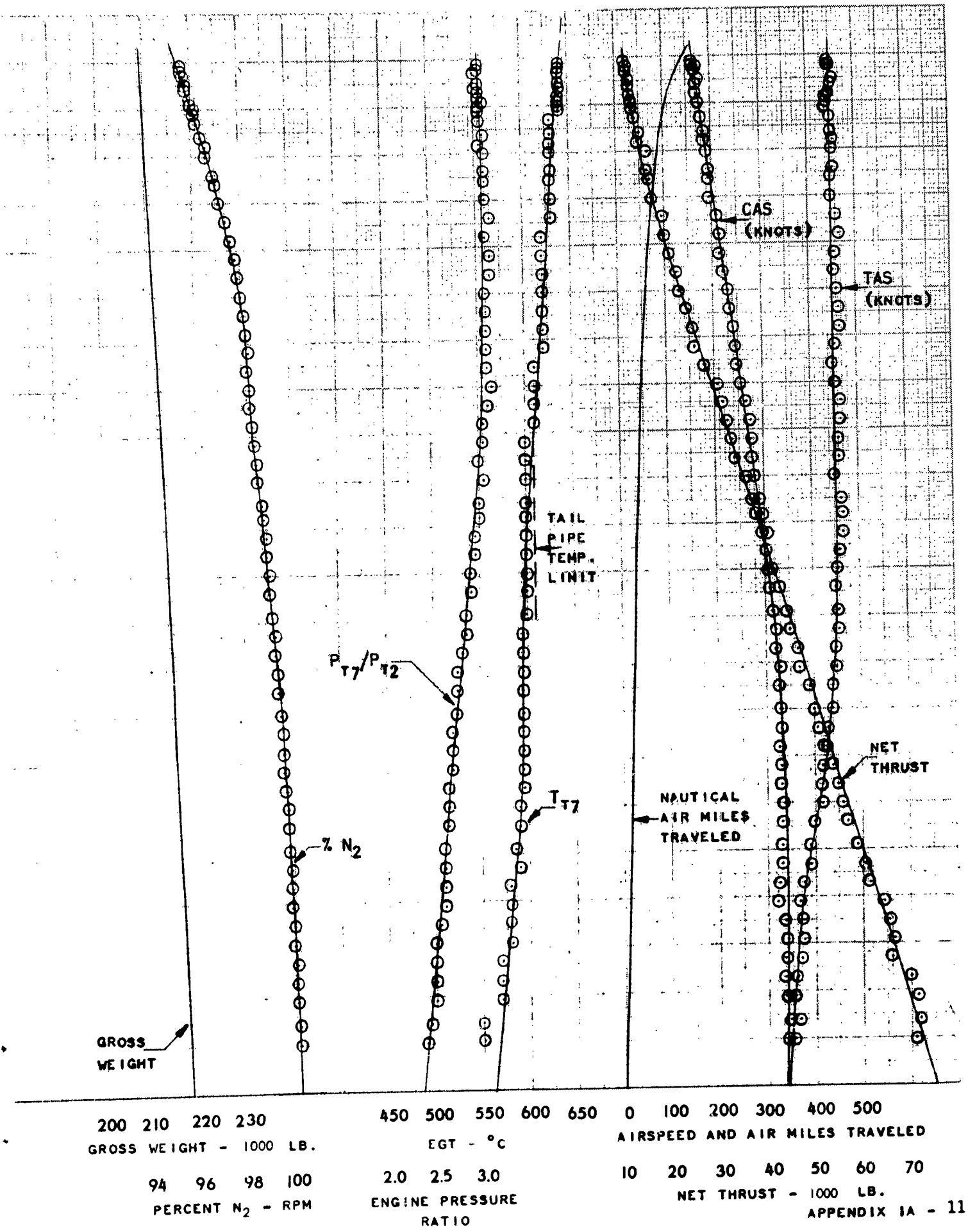


FIGURE NO. 6
CLIMB PERFORMANCE
B-52A, USAF NO. 52-003
EIGHT ENGINES; MILITARY RATED THRUST
NO EXTERNAL TANKS
ALTITUDE - 1000 FEET
RATE OF CLIMB
FUEL FLOW
FUEL USED
J57-P-1W ENGINES
TIME TO CLIMB
RATE OF CLIMB - FT/MIN
TOTAL FUEL FLOW - 1,000 LB/HR
TIME TO CLIMB - MIN
TOTAL FUEL USED -1000 LB.


CAS (KNOTS)
TAS (KNOTS)
TAIL PIPE TEMP. LIMIT
P_{T7}/P_{T2}
NET THRUST
T_{T7}
NAUTICAL AIR MILES TRAVELED
% N_2
GROSS WEIGHT
200 210 220 230
GROSS WEIGHT - 1000 LB.
94 96 98 100
PERCENT N_2 - RPM
450 500 550 600 650
EGT - °C
2.0 2.5 3.0
ENGINE PRESSURE RATIO
0 100 200 300 400 500
AIRSPEED AND AIR MILES TRAVELED
10 20 30 40 50 60 70
NET THRUST - 1000 LB.

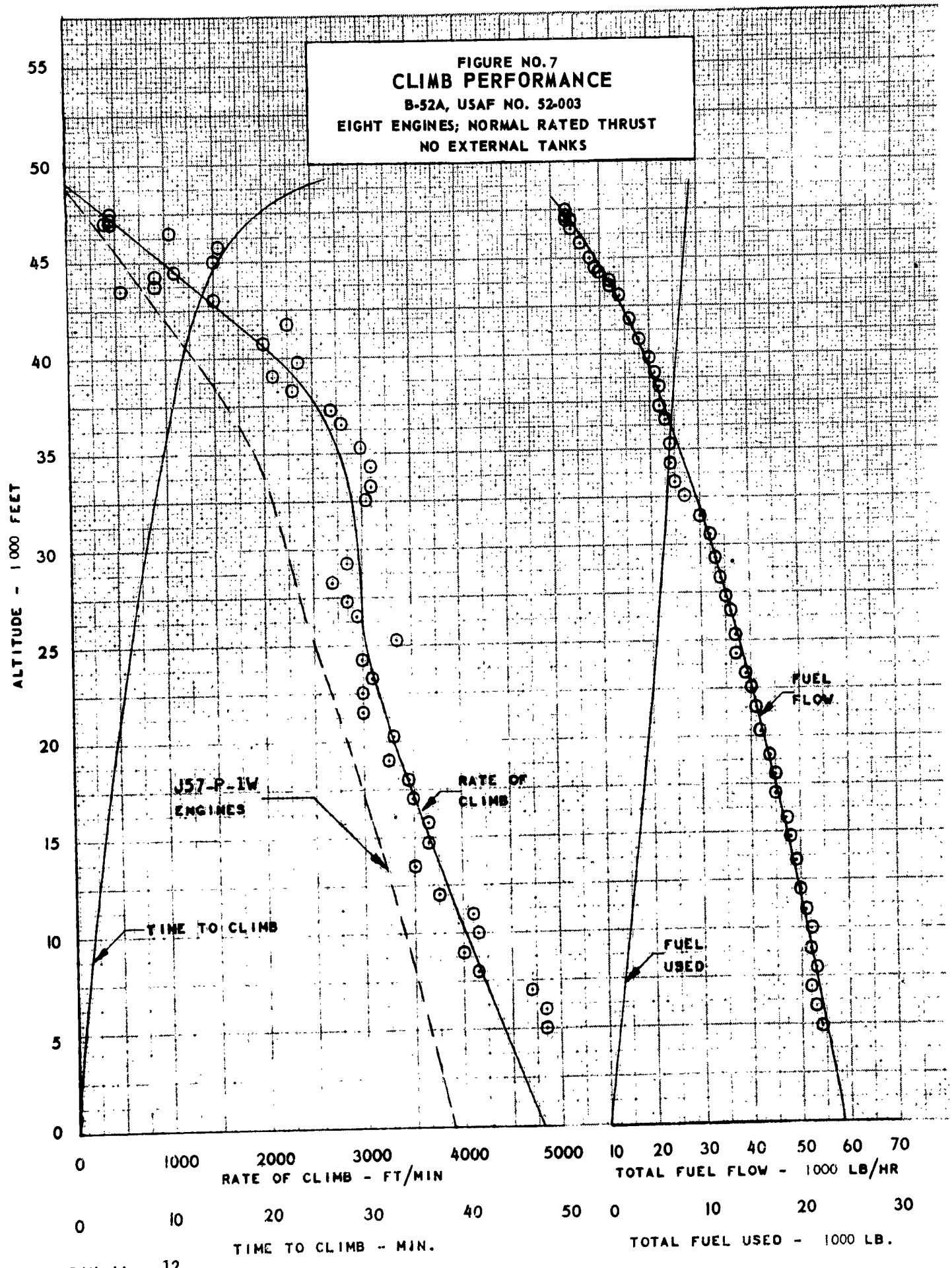
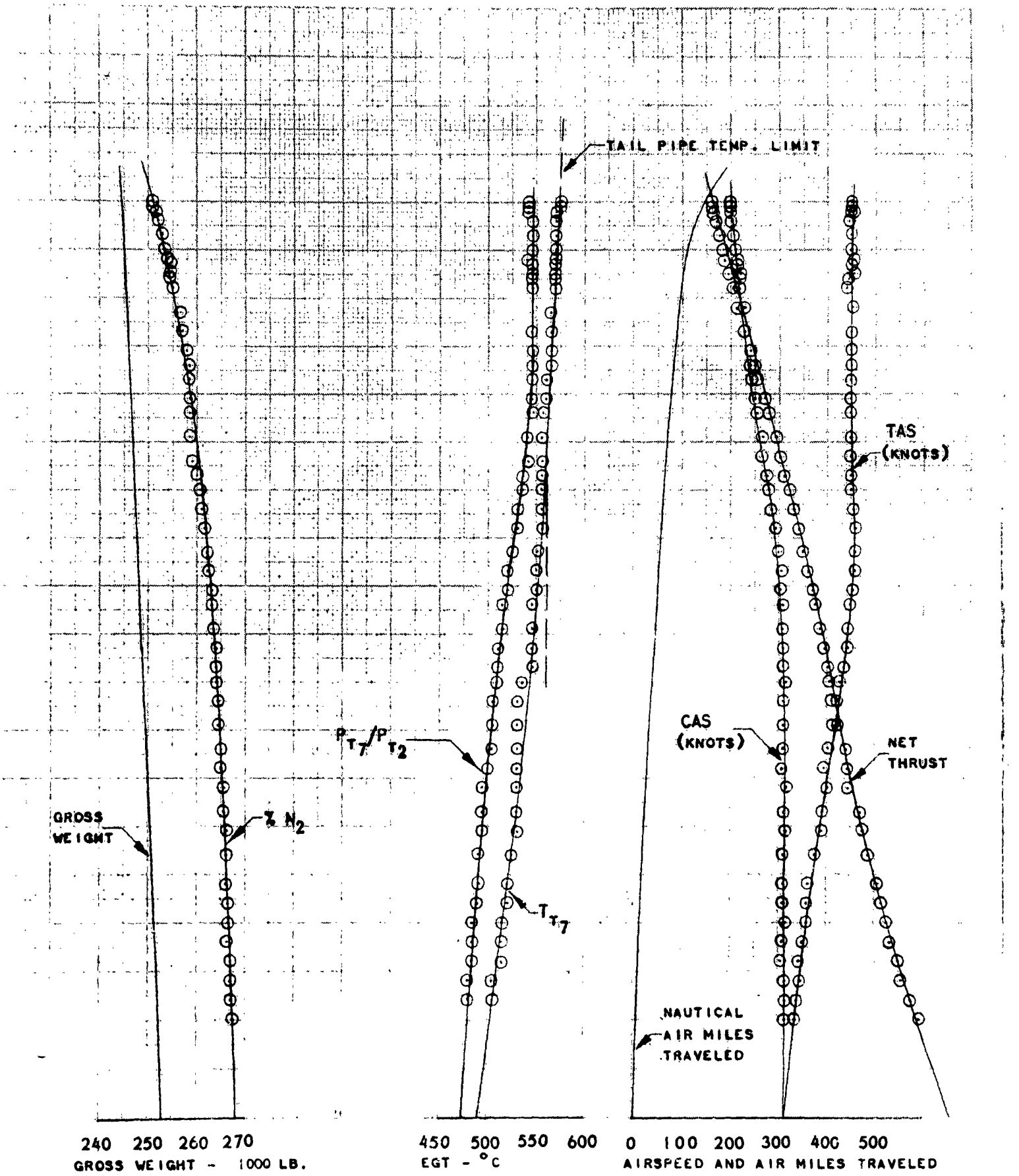


FIGURE NO. 7
CLIMB PERFORMANCE
B-52A, USAF NO. 52-003
EIGHT ENGINES; NORMAL RATED THRUST
NO EXTERNAL TANKS
ALTITUDE - 1000 FEET
0
5
10
15
20
25
30
35
40
45
50
55
J57-P-1W
ENGINES
RATE OF
CLIMB
TIME TO CLIMB
FUEL
FLOW
FUEL
USED
0
1000
2000
3000
4000
5000
RATE OF CLIMB - FT/MIN
10
20
30
40
50
60
70
TOTAL FUEL FLOW - 1000 LB/HR
0
10
20
30
40
50
TIME TO CLIMB - MIN.
0
10
20
30
TOTAL FUEL USED - 1000 LB.


TAIL PIPE TEMP. LIMIT
TAS (KNOTS)
CAS (KNOTS)
NET THRUST
P_{T_7}/P_{T_2}
GROSS WEIGHT
% N_2
T_{T_7}
NAUTICAL AIR MILES TRAVELED
240 250 260 270
GROSS WEIGHT - 1000 LB.
450 500 550 600
EGT - °C
0 100 200 300 400 500
AIRSPEED AND AIR MILES TRAVELED
94 96 98 100
PERCENT N_2 - RPM
2.0 2.5 .0
ENGINE PRESSURE RATIO
10 20 30 40 50 60
NET THRUST - 1000 LB.

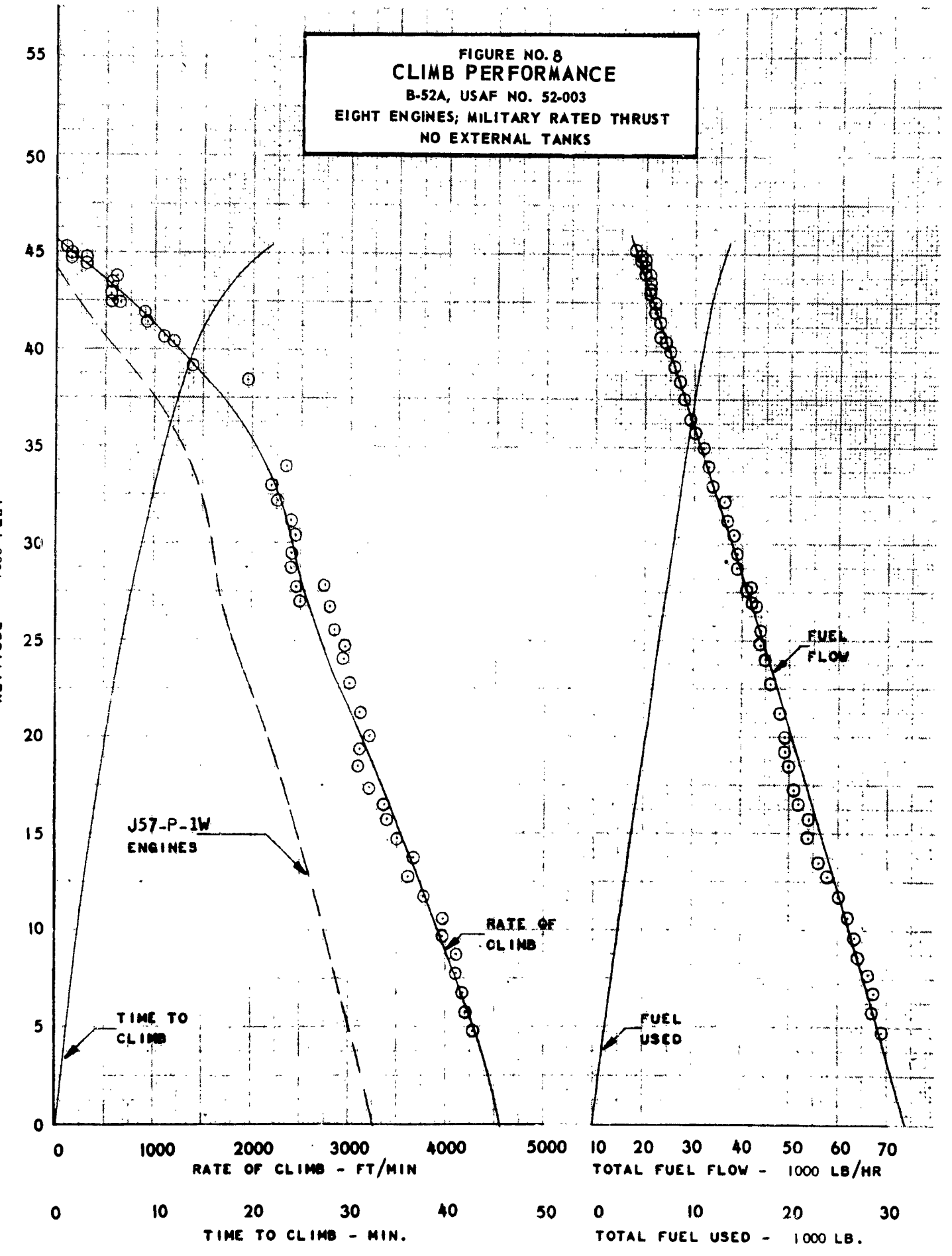
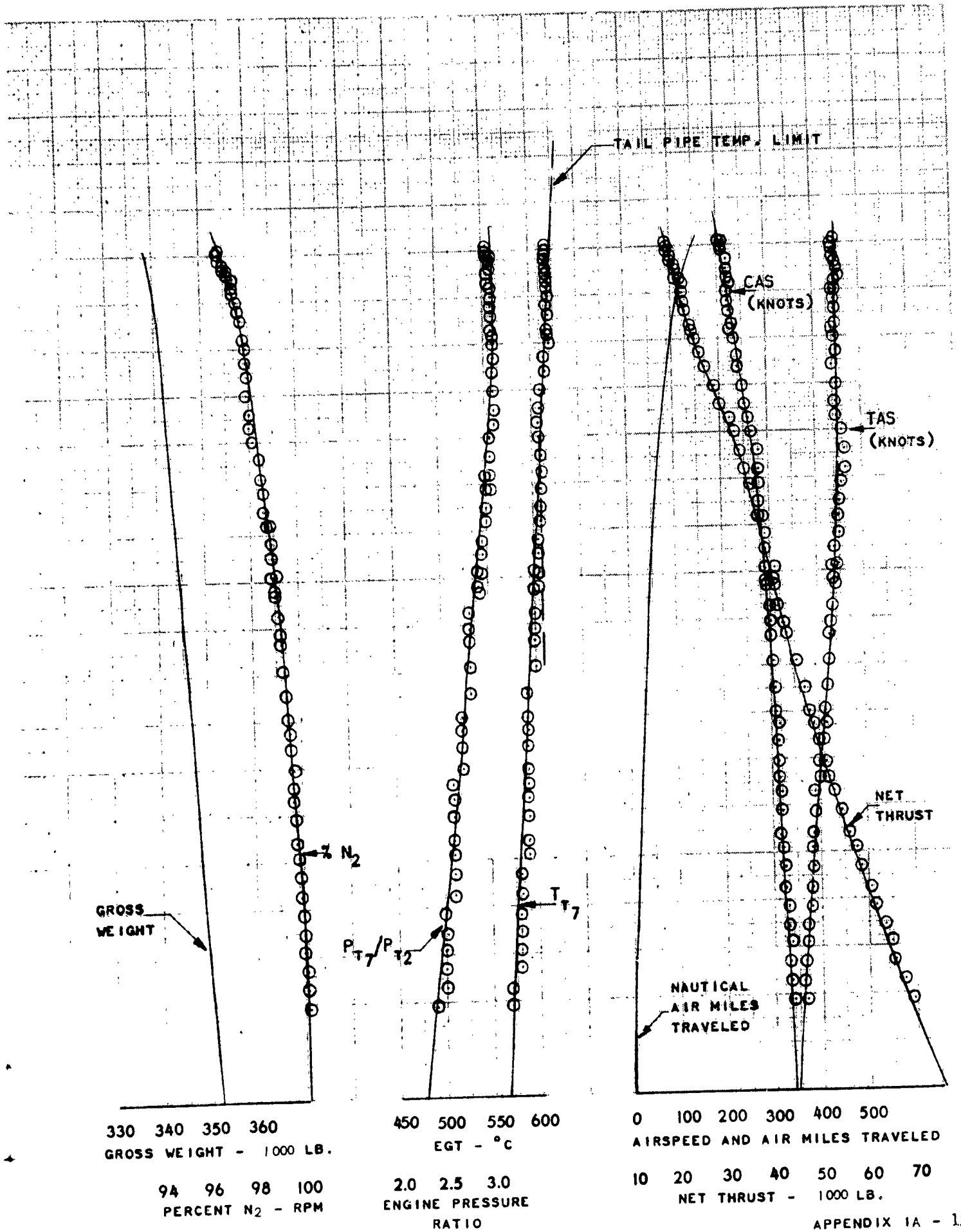


FIGURE NO. 8
CLIMB PERFORMANCE
B-52A, USAF NO. 52-003
EIGHT ENGINES; MILITARY RATED THRUST
NO EXTERNAL TANKS
J57-P-1W ENGINES
RATE OF CLIMB
TIME TO CLIMB
FUEL FLOW
FUEL USED
RATE OF CLIMB - FT/MIN
TOTAL FUEL FLOW - 1000 LB/HR
TIME TO CLIMB - MIN.
TOTAL FUEL USED - 1000 LB.


TAIL PIPE TEMP. LIMIT
CAS (KNOTS)
TAS (KNOTS)
NET THRUST
% N_2
GROSS WEIGHT
T_{T_7}
P_{T_7}/P_{T_2}
NAUTICAL AIR MILES TRAVELED
330 340 350 360
GROSS WEIGHT - 1000 LB.
94 96 98 100
PERCENT N_2 - RPM
450 500 550 600
EGT - °C
2.0 2.5 3.0
ENGINE PRESSURE RATIO
0 100 200 300 400 500
AIRSPEED AND AIR MILES TRAVELED
10 20 30 40 50 60 70
NET THRUST - 1000 LB.

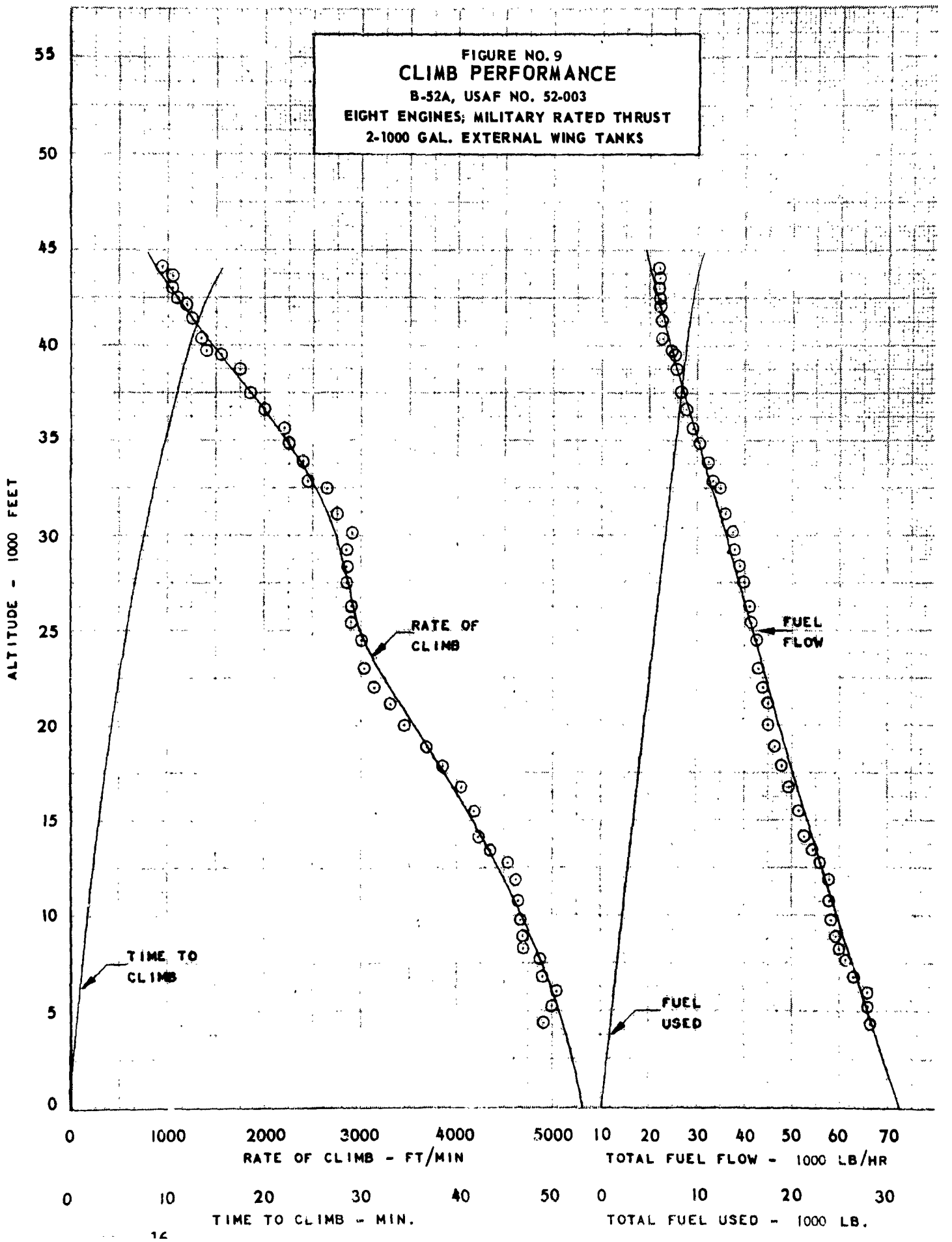
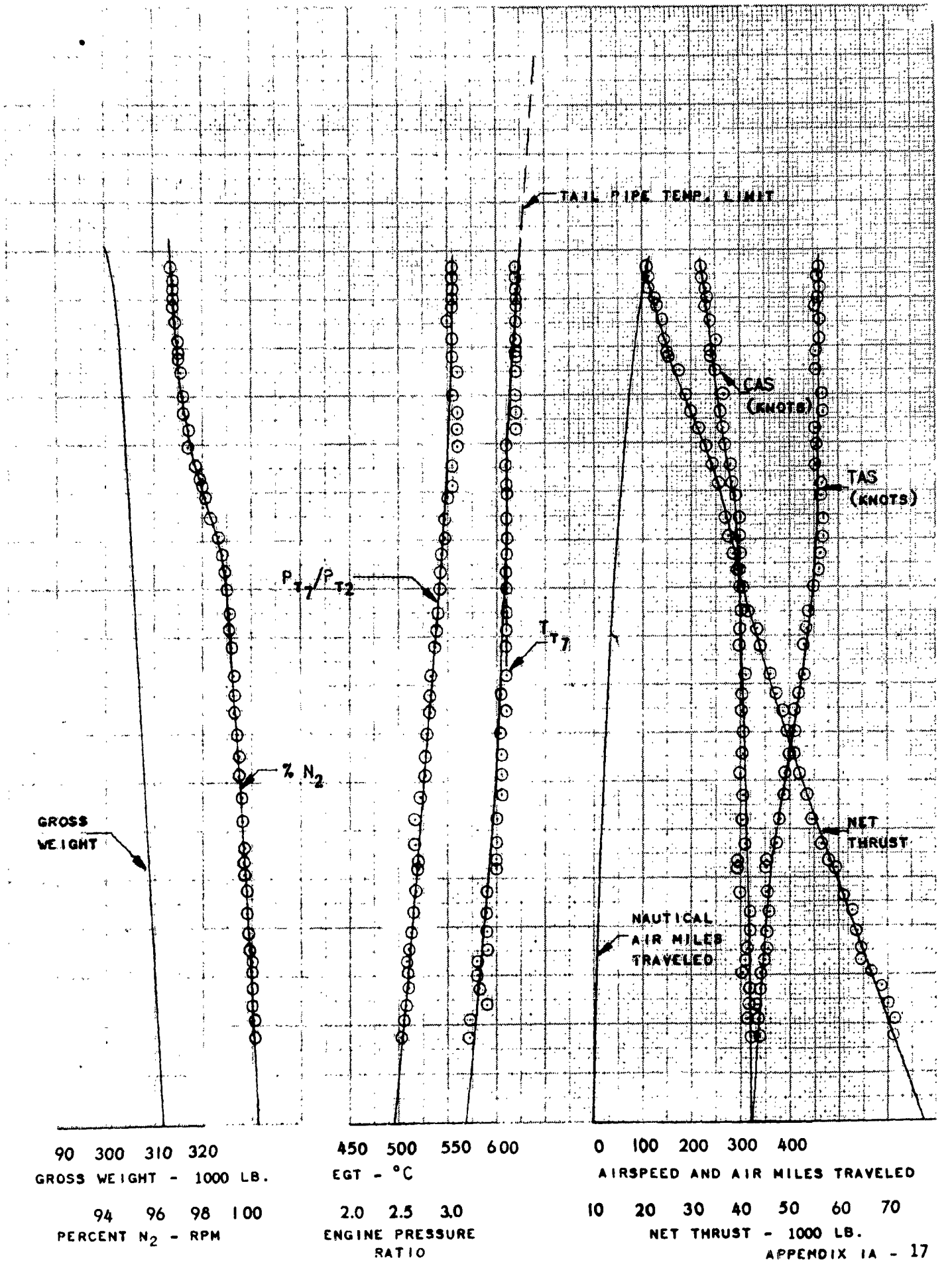


FIGURE NO. 9
CLIMB PERFORMANCE
B-52A, USAF NO. 52-003
EIGHT ENGINES; MILITARY RATED THRUST
2-1000 GAL. EXTERNAL WING TANKS
ALTITUDE - 1000 FEET
55
50
45
40
35
30
25
20
15
10
5
0
RATE OF CLIMB
TIME TO CLIMB
FUEL FLOW
FUEL USED
0
1000
2000
3000
4000
5000
RATE OF CLIMB - FT/MIN
10
20
30
40
50
60
70
TOTAL FUEL FLOW - 1000 LB/HR
0
10
20
30
40
50
TIME TO CLIMB - MIN.
0
10
20
30
TOTAL FUEL USED - 1000 LB.


TAIL PIPE TEMP. LIMIT
CAS (KNOTS)
TAS (KNOTS)
P_{T7}/P_{T2}
T_{T7}
% N_2
GROSS WEIGHT
NET THRUST
NAUTICAL AIR MILES TRAVELED
90 300 310 320
GROSS WEIGHT - 1000 LB.
450 500 550 600
EGT - °C
0 100 200 300 400
AIRSPEED AND AIR MILES TRAVELED
94 96 98 100
PERCENT N_2 - RPM
2.0 2.5 3.0
ENGINE PRESSURE RATIO
10 20 30 40 50 60 70
NET THRUST - 1000 LB.

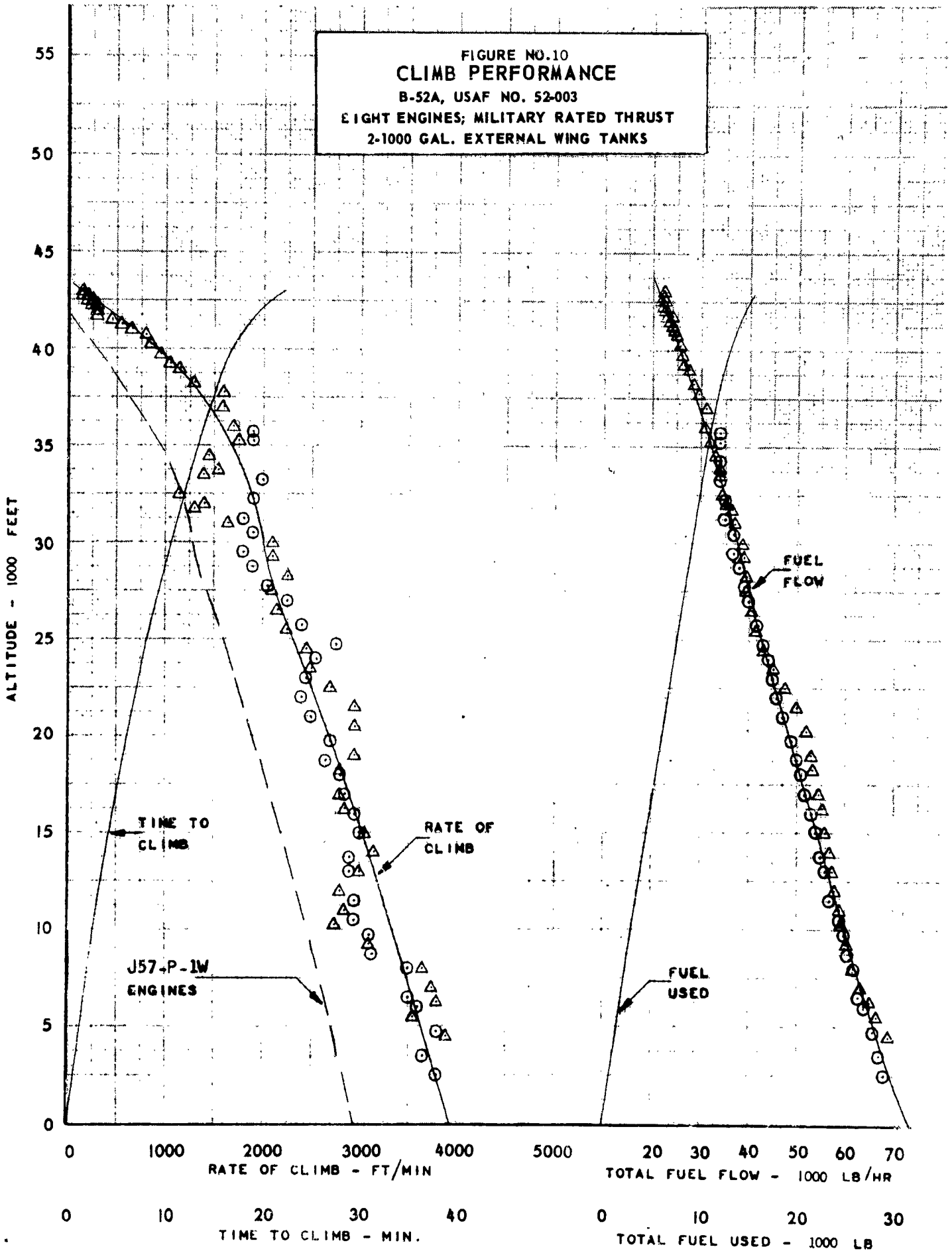


FIGURE NO.10
CLIMB PERFORMANCE
B-52A, USAF NO. 52-003
EIGHT ENGINES; MILITARY RATED THRUST
2-1000 GAL. EXTERNAL WING TANKS
ALTITUDE - 1000 FEET
55
50
45
40
35
30
25
20
15
10
5
0
TIME TO CLIMB
RATE OF CLIMB
J57-P-1W ENGINES
FUEL FLOW
FUEL USED
0
1000
2000
3000
4000
5000
RATE OF CLIMB - FT/MIN
20
30
40
50
60
70
TOTAL FUEL FLOW - 1000 LB/HR
0
10
20
30
40
TIME TO CLIMB - MIN.
0
10
20
30
TOTAL FUEL USED - 1000 LB

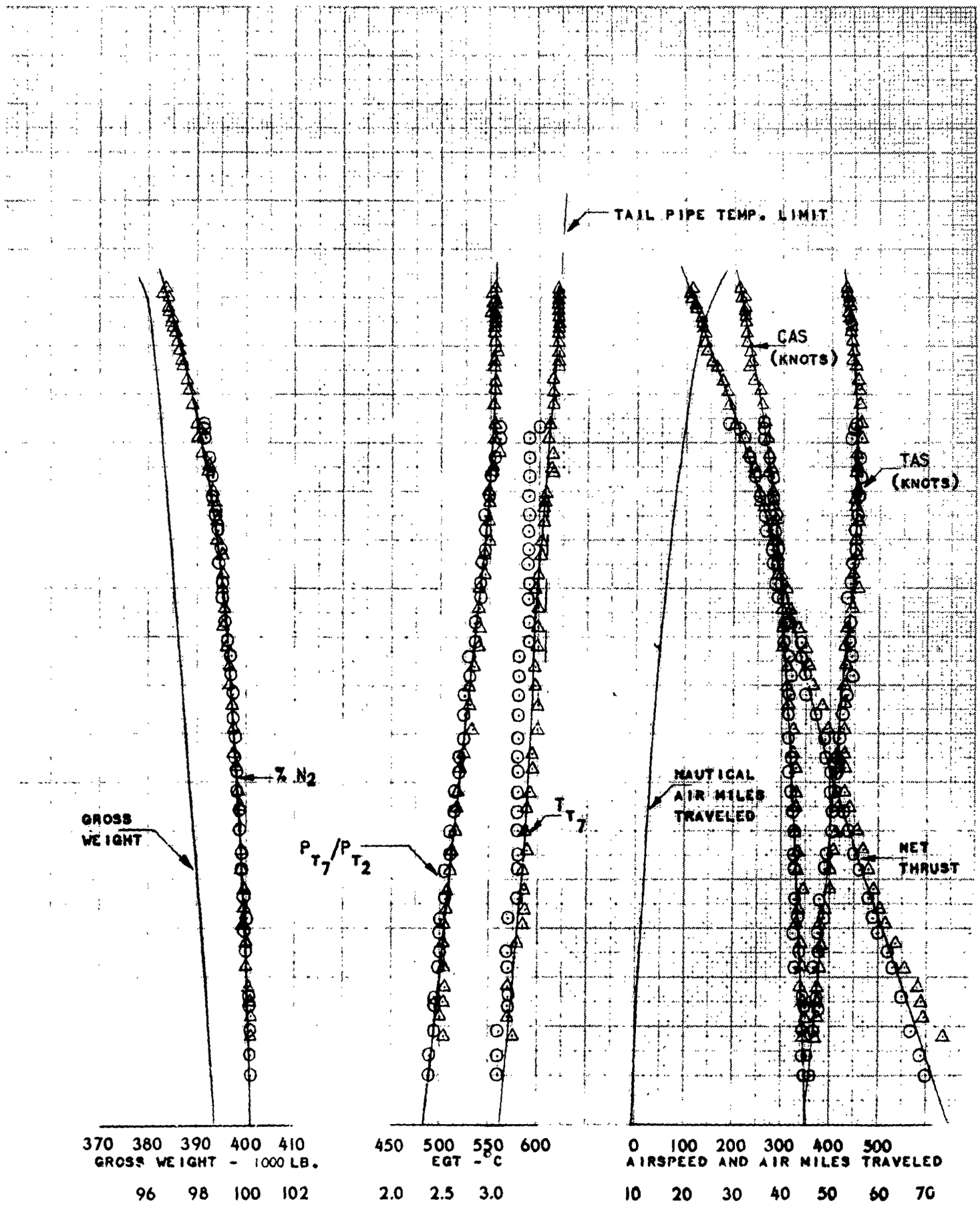
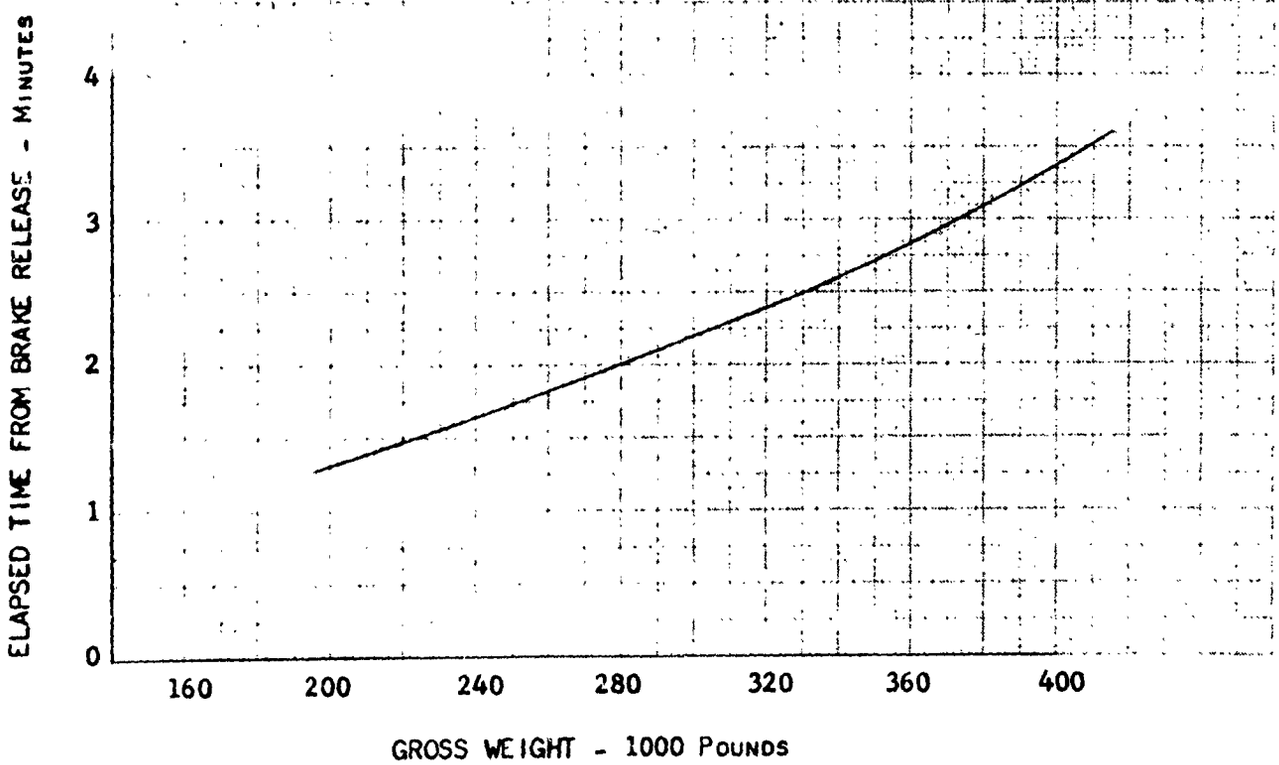

TAIL PIPE TEMP. LIMIT
CAS (KNOTS)
TAS (KNOTS)
% N2
GROSS WEIGHT
PT7/PT2
TT7
NAUTICAL AIR MILES TRAVELED
NET THRUST
370 380 390 400 410
GROSS WEIGHT - 1000 LB.
96 98 100 102
PERCENT N2 - RPM
450 500 550 600
EGT - °C
2.0 2.5 3.0
ENGINE PRESSURE RATIO
0 100 200 300 400 500
AIRSPEED AND AIR MILES TRAVELED
10 20 30 40 50 60 70
NET THRUST - 1000 LB.

FIGURE NO. 11
ELAPSED TIME FROM BRAKE RELEASE
TO BEST CLIMB SPEED
B-52A, USAF NO. 52 -003
NO WATER INJECTION

NOTE: CURVE TO BE USED FOR 8-ENGINE OPERATION AT TAKEOFF RATED POWER.
CURVE IS REPRESENTATIVE WHEN ALTITUDE IS KEPT TO APPROXIMATELY 1,000 FEET OR LOWER AND FOR SEA LEVEL STANDARD DAY CONDITIONS.



RANGE DATA

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FOR CONVENIENCE OF

PRESENTING PLOTS

FIGURE NO.12

MAXIMUM TRUE AIRSPEED IN LEVEL FLIGHT

B-52A, USAF 52-003

AVE. OIL COOLER GAP 0.2 INCHES

MILITARY RATED POWER

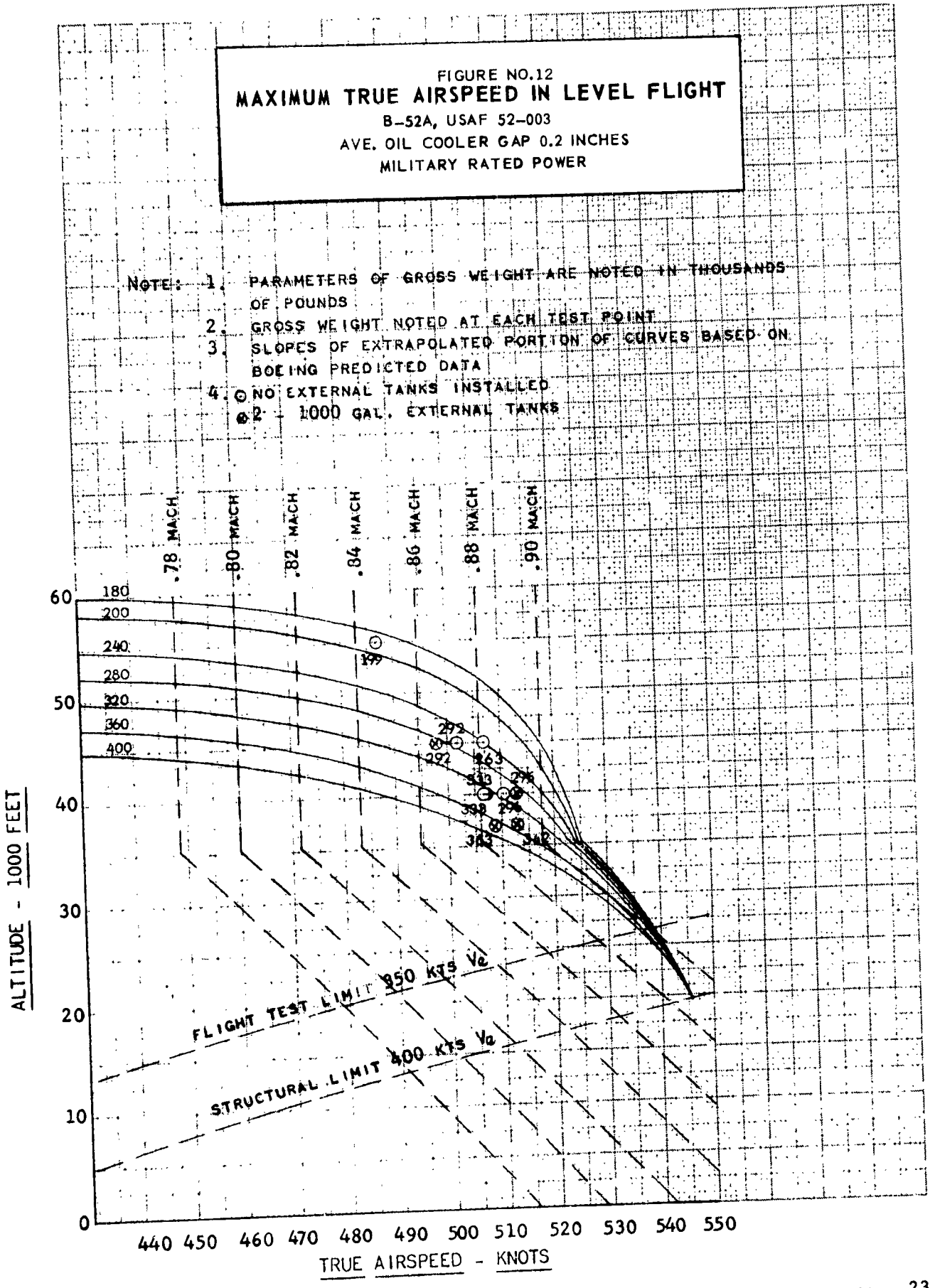


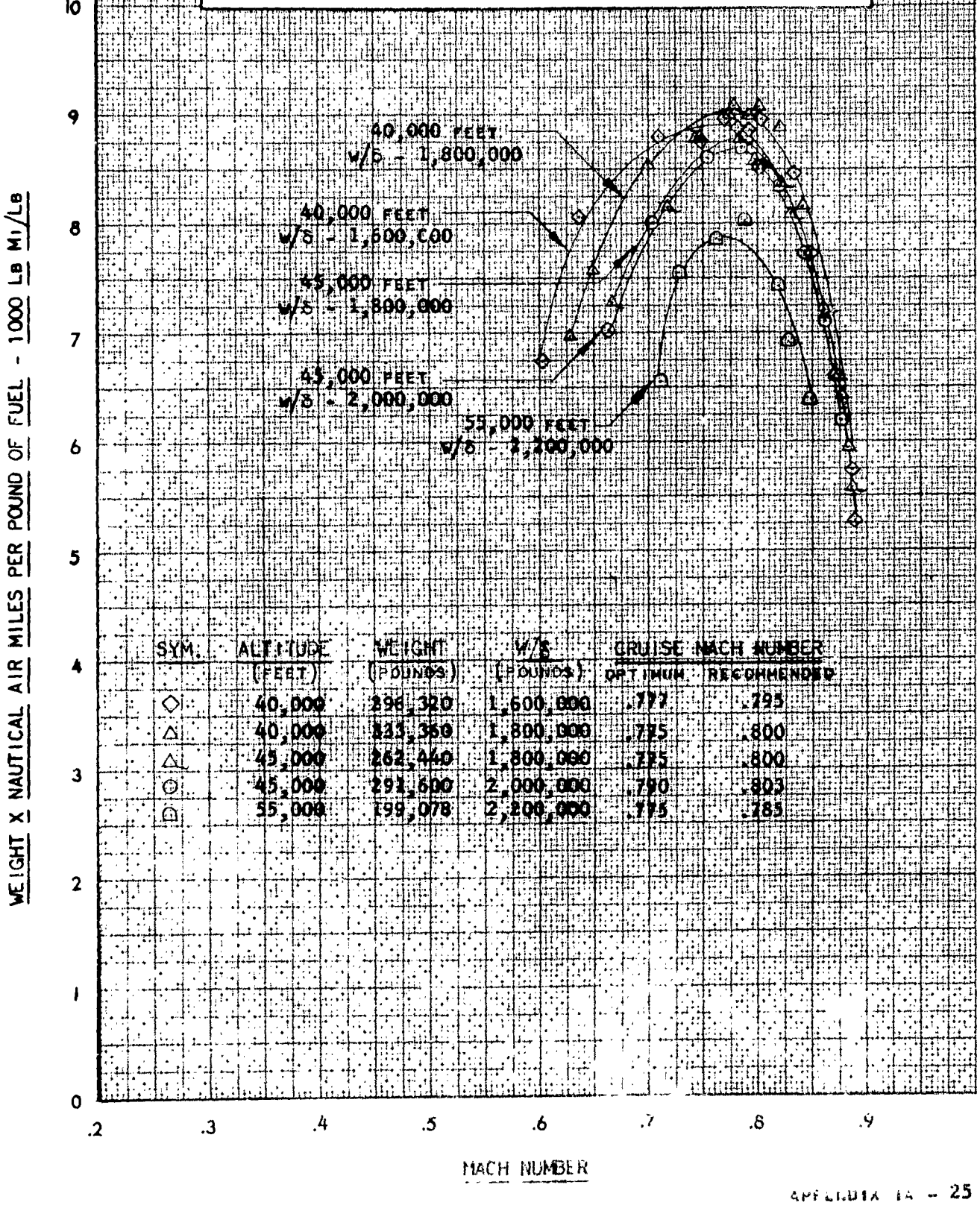
FIGURE NO. 14

WEIGHT X NAUTICAL AIR MILES PER POUND OF FUEL

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.



SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE MACH NUMBER OPTIMUM	CRUISE MACH NUMBER RECOMMENDED
◇	40,000	296,320	1,600,000	.777	.795
△	40,000	333,360	1,800,000	.775	.800
△	45,000	262,440	1,800,000	.775	.800
⊙	45,000	291,600	2,000,000	.790	.803
⌂	55,000	199,078	2,200,000	.775	.785

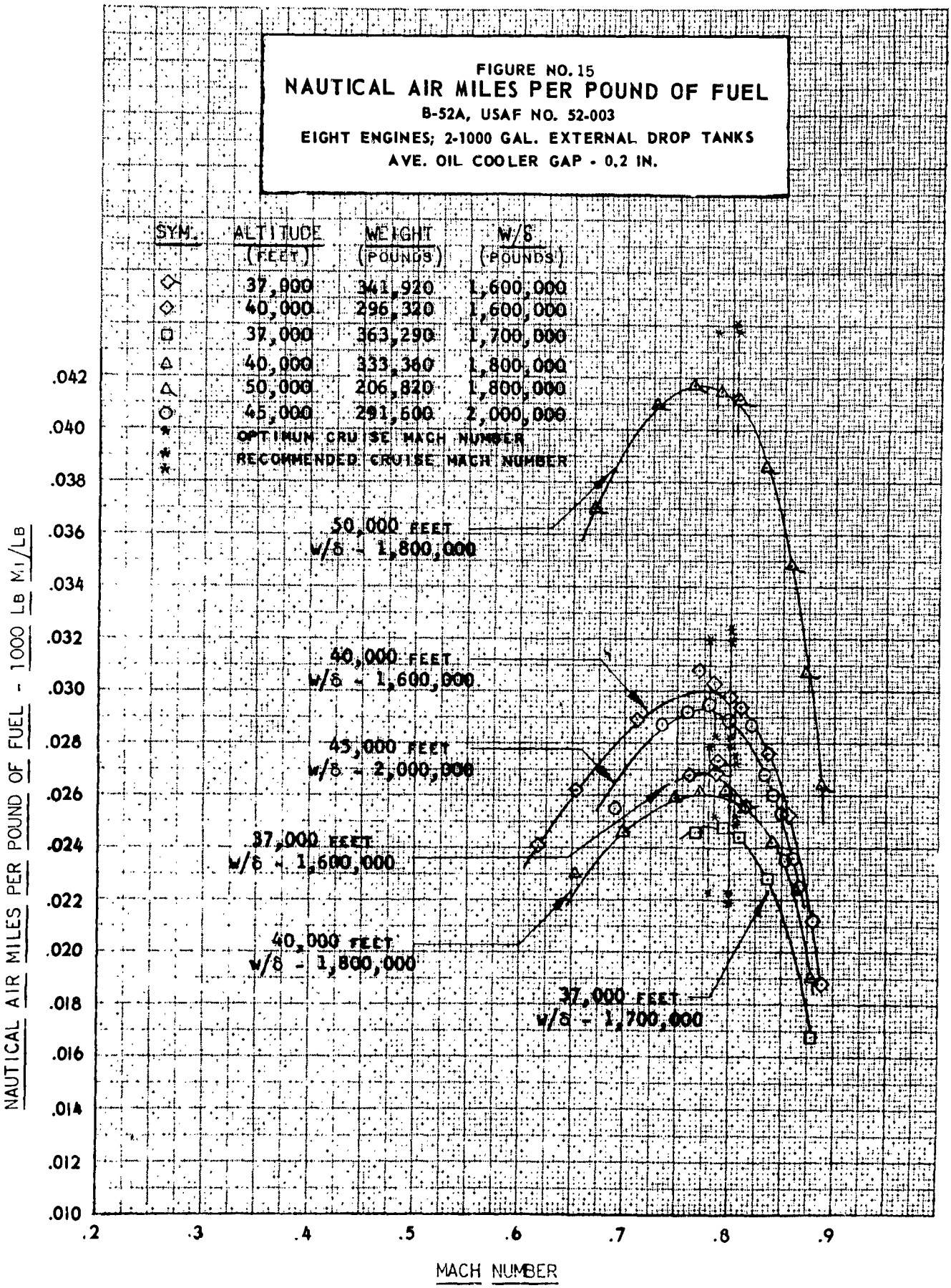


FIGURE NO. 15
NAUTICAL AIR MILES PER POUND OF FUEL
B-52A, USAF NO. 52-003
EIGHT ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
37,000 341,920 1,600,000
40,000 296,320 1,600,000
37,000 363,290 1,700,000
40,000 333,360 1,800,000
50,000 206,820 1,800,000
45,000 291,600 2,000,000
OPTIMUM CRUISE MACH NUMBER
RECOMMENDED CRUISE MACH NUMBER
50,000 FEET
W/δ - 1,800,000
40,000 FEET
W/δ - 1,600,000
45,000 FEET
W/δ - 2,000,000
37,000 FEET
W/δ - 1,600,000
40,000 FEET
W/δ - 1,800,000
37,000 FEET
W/δ - 1,700,000
NAUTICAL AIR MILES PER POUND OF FUEL - 1000 LB MI/LB
.042
.040
.038
.036
.034
.032
.030
.028
.026
.024
.022
.020
.018
.016
.014
.012
.010
.2
.3
.4
.5
.6
.7
.8
.9
MACH NUMBER

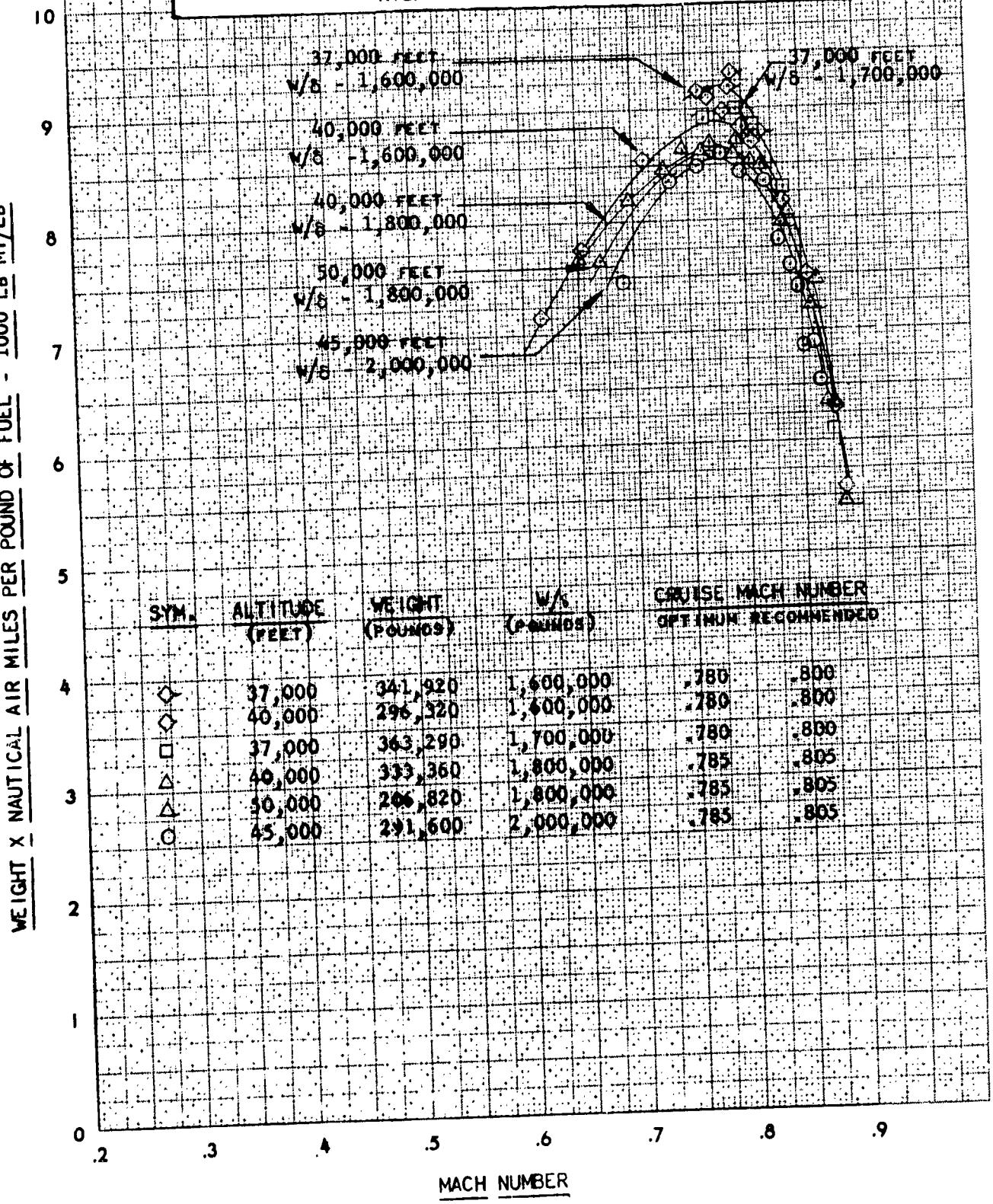
FIGURE NO.16

WEIGHT X NAUTICAL AIR MILES PER POUND OF FUEL

B-52A, USAF NO. 52-003

8 ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS

AVE. OIL COOLER GAP - 0.2 IN.



SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE MACH NUMBER OPTIMUM	CRUISE MACH NUMBER RECOMMENDED
◇	37,000	341,920	1,600,000	.780	.800
◇	40,000	296,320	1,600,000	.780	.800
□	37,000	363,290	1,700,000	.780	.800
△	40,000	333,360	1,800,000	.785	.805
△	50,000	206,820	1,800,000	.785	.805
○	45,000	291,600	2,000,000	.785	.805

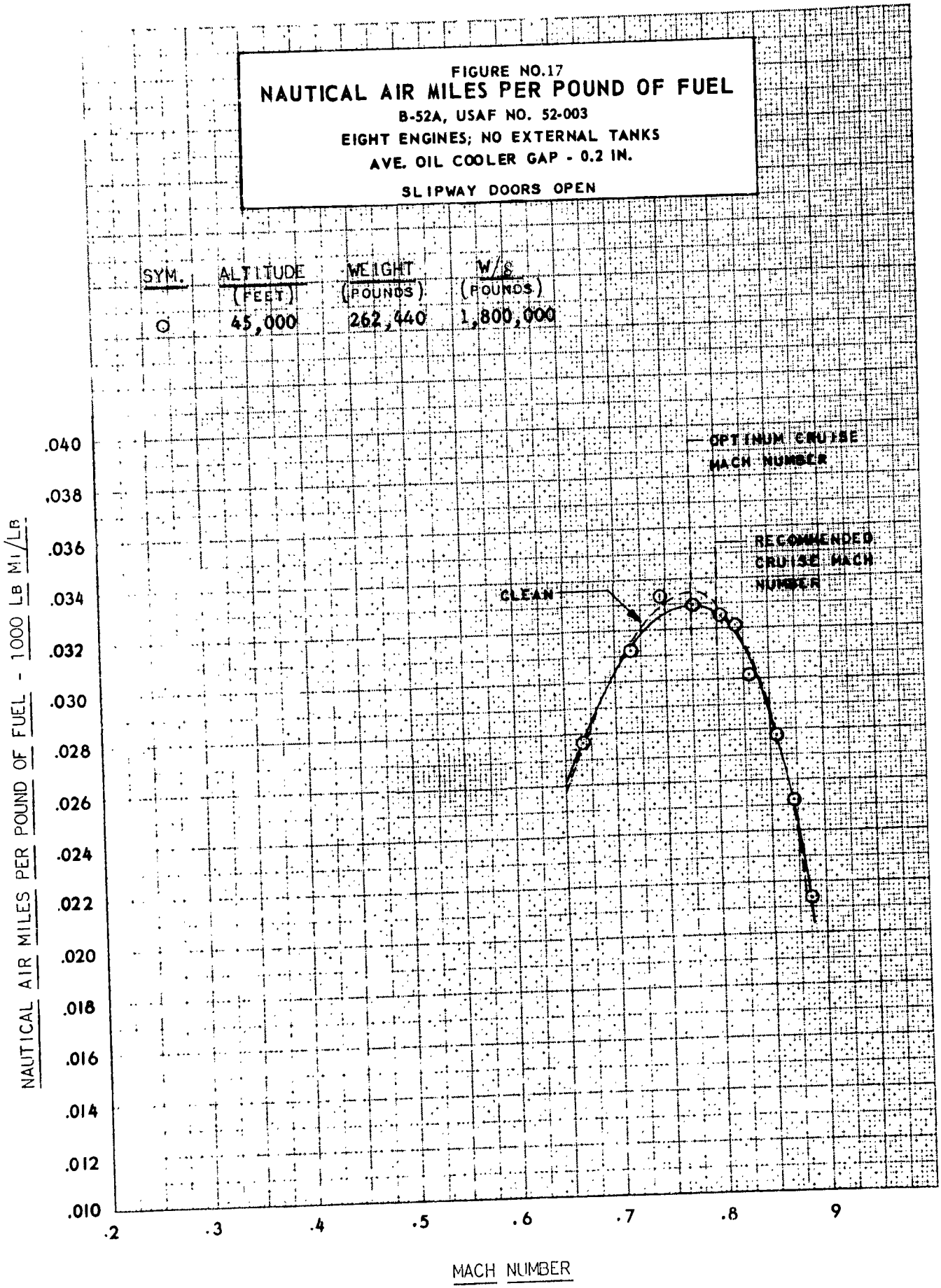


FIGURE NO.17
NAUTICAL AIR MILES PER POUND OF FUEL
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SLIPWAY DOORS OPEN
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
45,000 262,440 1,800,000
OPTIMUM CRUISE MACH NUMBER
RECOMMENDED CRUISE MACH NUMBER
CLEAN
NAUTICAL AIR MILES PER POUND OF FUEL - 1000 LB MI/LB
.040
.038
.036
.034
.032
.030
.028
.026
.024
.022
.020
.018
.016
.014
.012
.010
.2
.3
.4
.5
.6
.7
.8
.9
MACH NUMBER

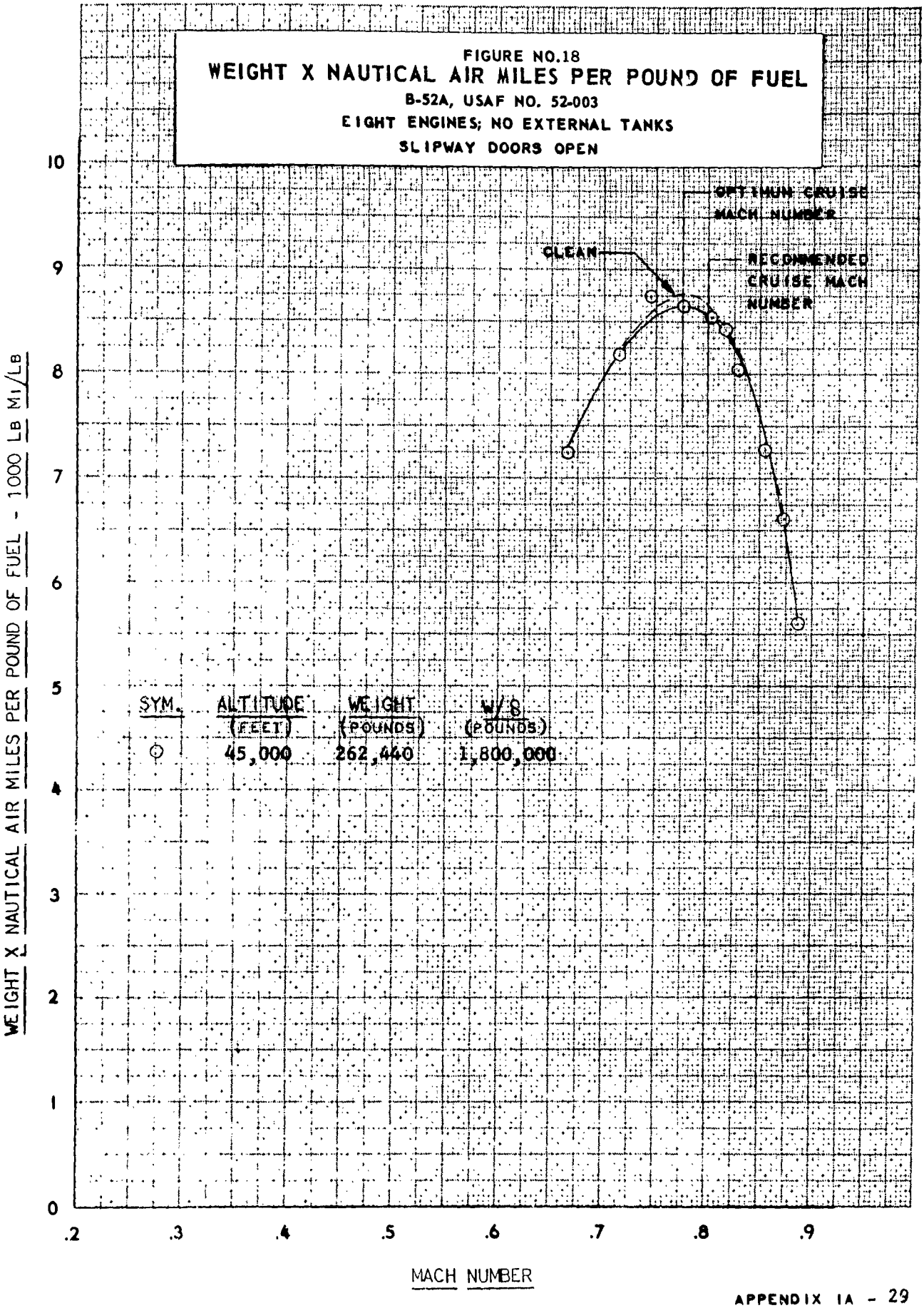


FIGURE NO.18
WEIGHT X NAUTICAL AIR MILES PER POUND OF FUEL
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
SLIPWAY DOORS OPEN
OPTIMUM CRUISE MACH NUMBER
CLEAN
RECOMMENDED CRUISE MACH NUMBER
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/S (POUNDS)
45,000 262,440 1,800,000
WEIGHT X NAUTICAL AIR MILES PER POUND OF FUEL - 1000 LB MI/LB
MACH NUMBER
0
1
2
3
4
5
6
7
8
9
10
.2
.3
.4
.5
.6
.7
.8
.9

FIGURE NO. 19

NAUTICAL AIR MILES PER POUND OF FUEL

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.

C.G. POSITION NOTED

SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	C.G. POSITION (% MAC)
○	45,000	262,440	1,800,000	33.2
□	45,000	262,440	1,800,000	21.5
△	45,000	262,440	1,800,000	23.4
⊡	45,000	262,440	1,800,000	17.0

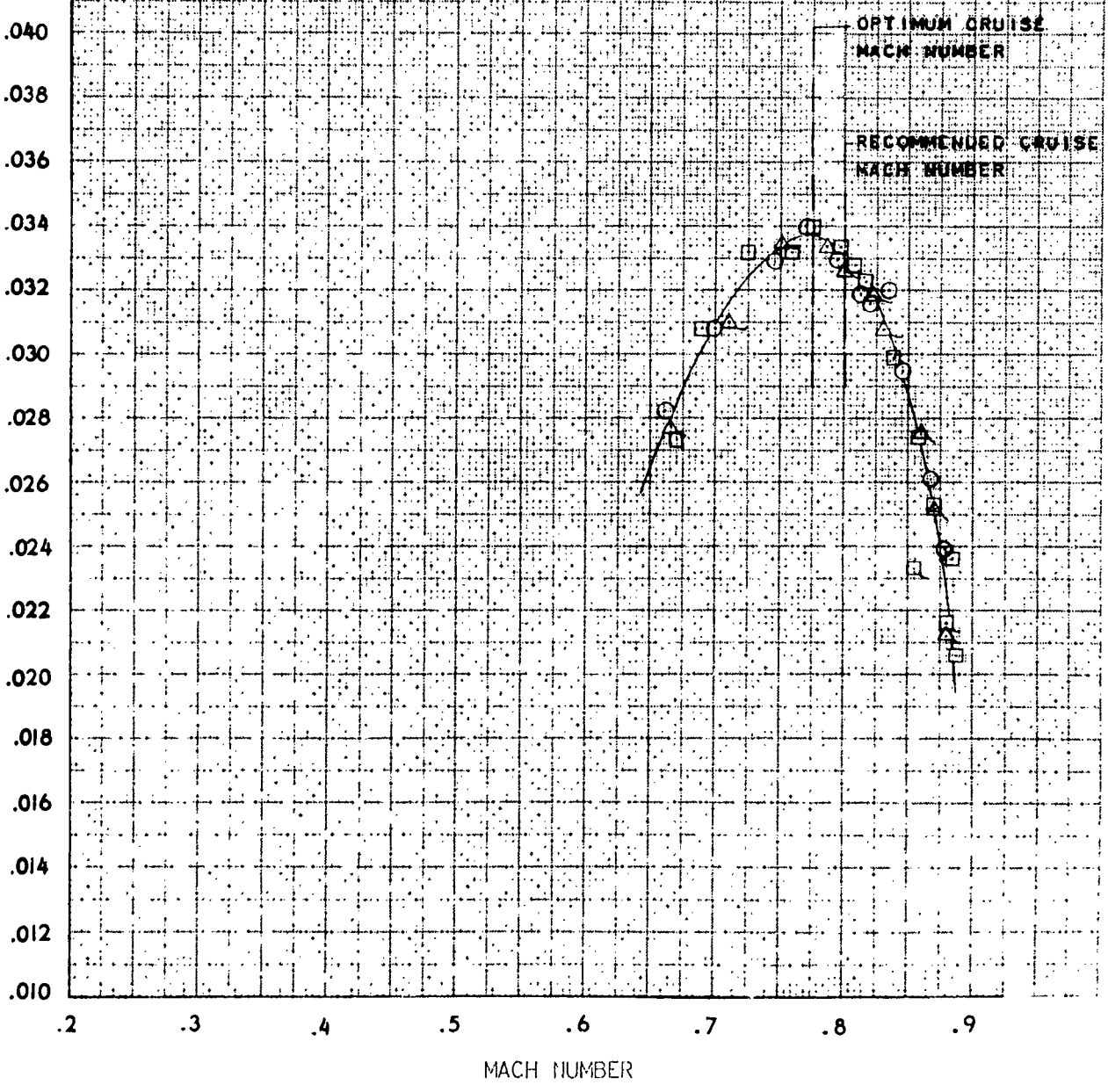


FIGURE NO. 20

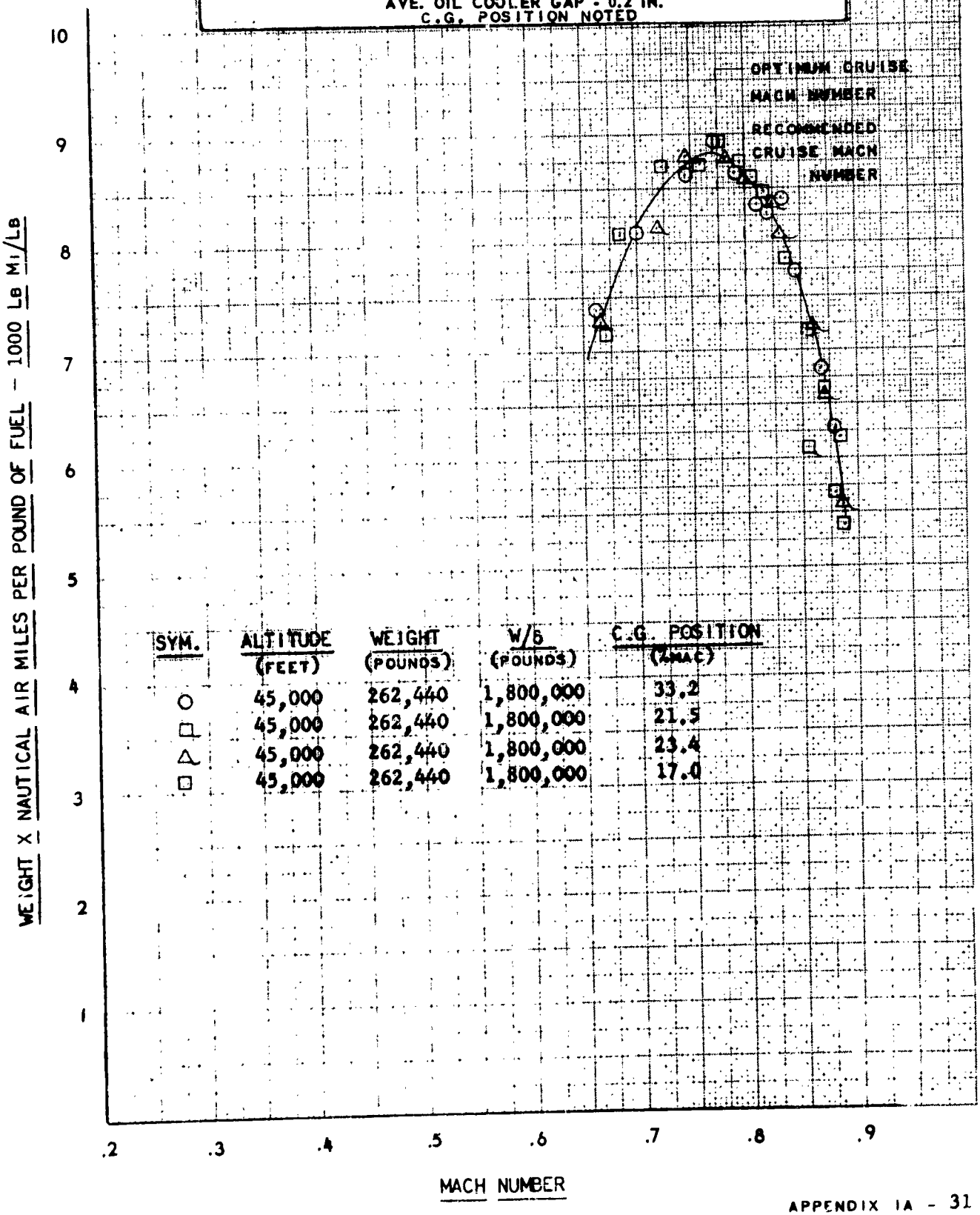
WEIGHT X NAUTICAL AIR MILES PER POUND OF FUEL

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.

C.G. POSITION NOTED



SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	C.G. POSITION (%MAC)
○	45,000	262,440	1,800,000	33.2
□	45,000	262,440	1,800,000	21.5
△	45,000	262,440	1,800,000	23.4
□	45,000	262,440	1,800,000	17.0

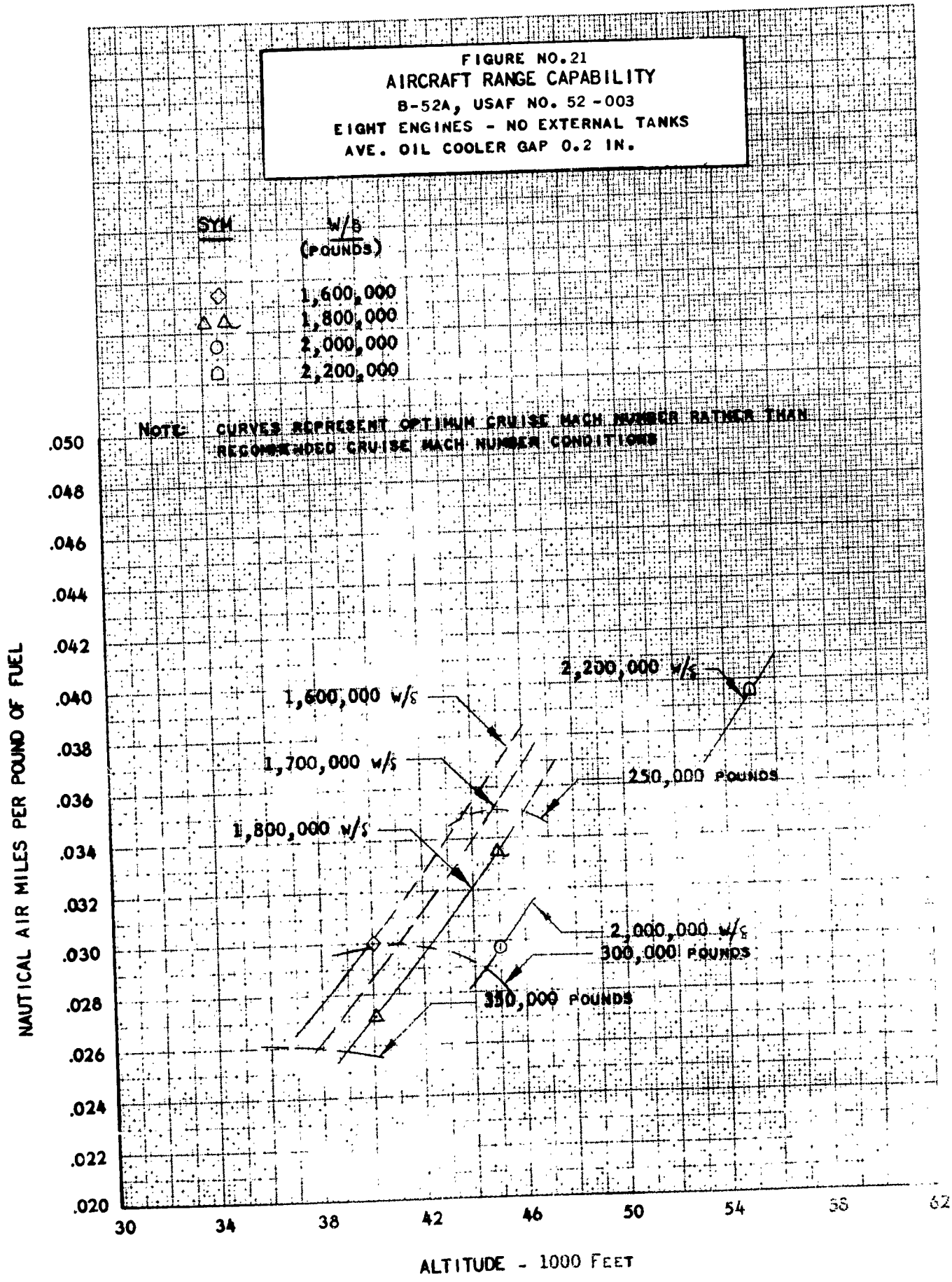


FIGURE NO. 21
AIRCRAFT RANGE CAPABILITY
B-52A, USAF NO. 52-003
EIGHT ENGINES - NO EXTERNAL TANKS
AVE. OIL COOLER GAP 0.2 IN.
SYM
W/δ (POUNDS)
1,600,000
1,800,000
2,000,000
2,200,000
NOTE: CURVES REPRESENT OPTIMUM CRUISE MACH NUMBER RATHER THAN RECOMMENDED CRUISE MACH NUMBER CONDITIONS
2,200,000 W/δ
1,600,000 W/δ
1,700,000 W/δ
1,800,000 W/δ
250,000 POUNDS
2,000,000 W/δ
300,000 POUNDS
350,000 POUNDS
NAUTICAL AIR MILES PER POUND OF FUEL
.050
.048
.046
.044
.042
.040
.038
.036
.034
.032
.030
.028
.026
.024
.022
.020
30
34
38
42
46
50
54
58
62
ALTITUDE - 1000 FEET

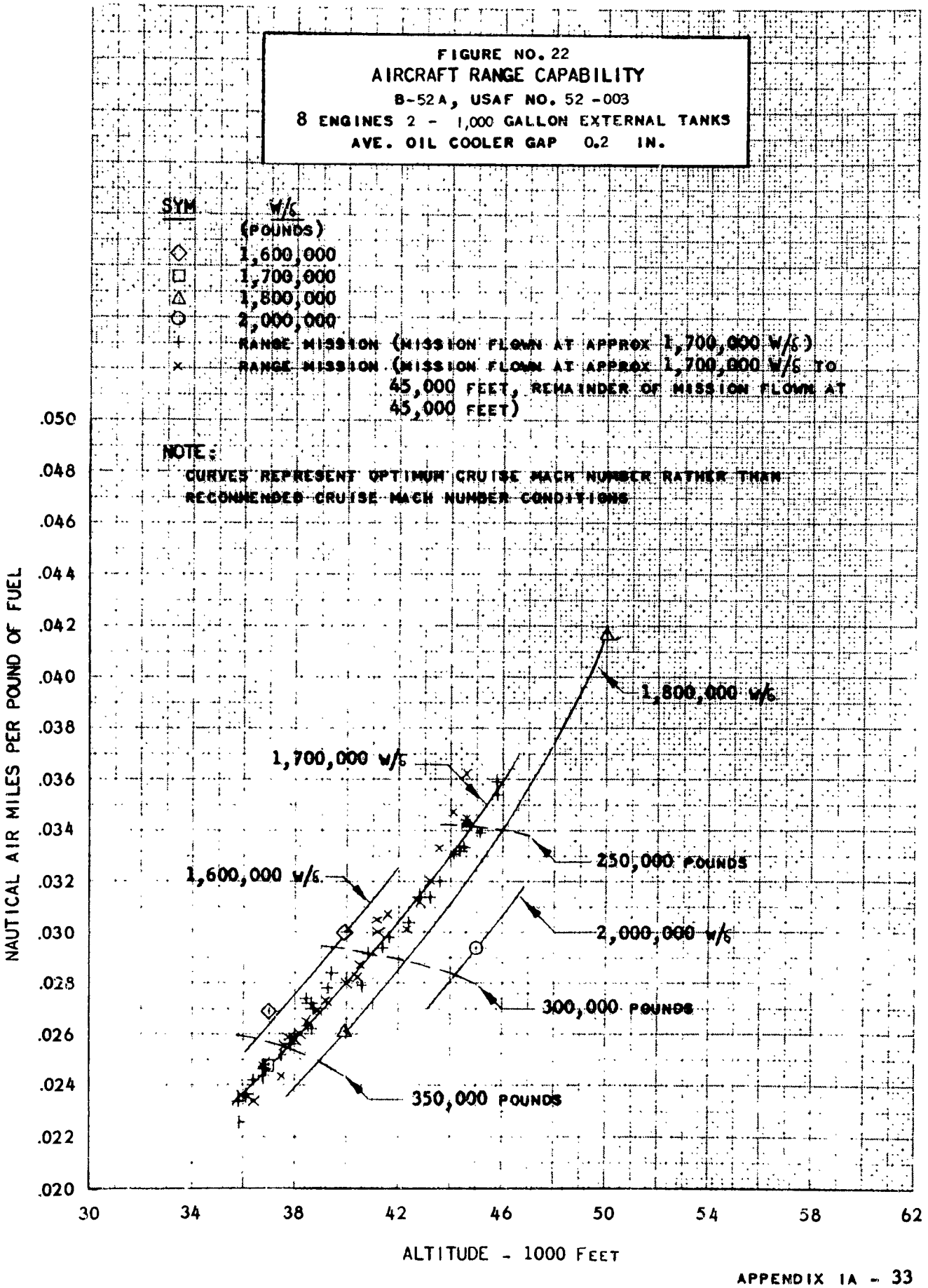


FIGURE NO. 22
AIRCRAFT RANGE CAPABILITY
B-52A, USAF NO. 52-003
8 ENGINES 2 - 1,000 GALLON EXTERNAL TANKS
AVE. OIL COOLER GAP 0.2 IN.
SYM W/δ (POUNDS)
1,600,000
1,700,000
1,800,000
2,000,000
RANGE MISSION (MISSION FLOWN AT APPROX 1,700,000 W/δ)
RANGE MISSION (MISSION FLOWN AT APPROX 1,700,000 W/δ TO 45,000 FEET, REMAINDER OF MISSION FLOWN AT 45,000 FEET)
NOTE:
CURVES REPRESENT OPTIMUM CRUISE MACH NUMBER RATHER THAN RECOMMENDED CRUISE MACH NUMBER CONDITIONS
1,800,000 W/δ
1,700,000 W/δ
1,600,000 W/δ
250,000 POUNDS
2,000,000 W/δ
300,000 POUNDS
350,000 POUNDS
NAUTICAL AIR MILES PER POUND OF FUEL
.050
.048
.046
.044
.042
.040
.038
.036
.034
.032
.030
.028
.026
.024
.022
.020
30
34
38
42
46
50
54
58
62
ALTITUDE - 1000 FEET

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PRESENTING PLOTS

RANGE MISSIONS

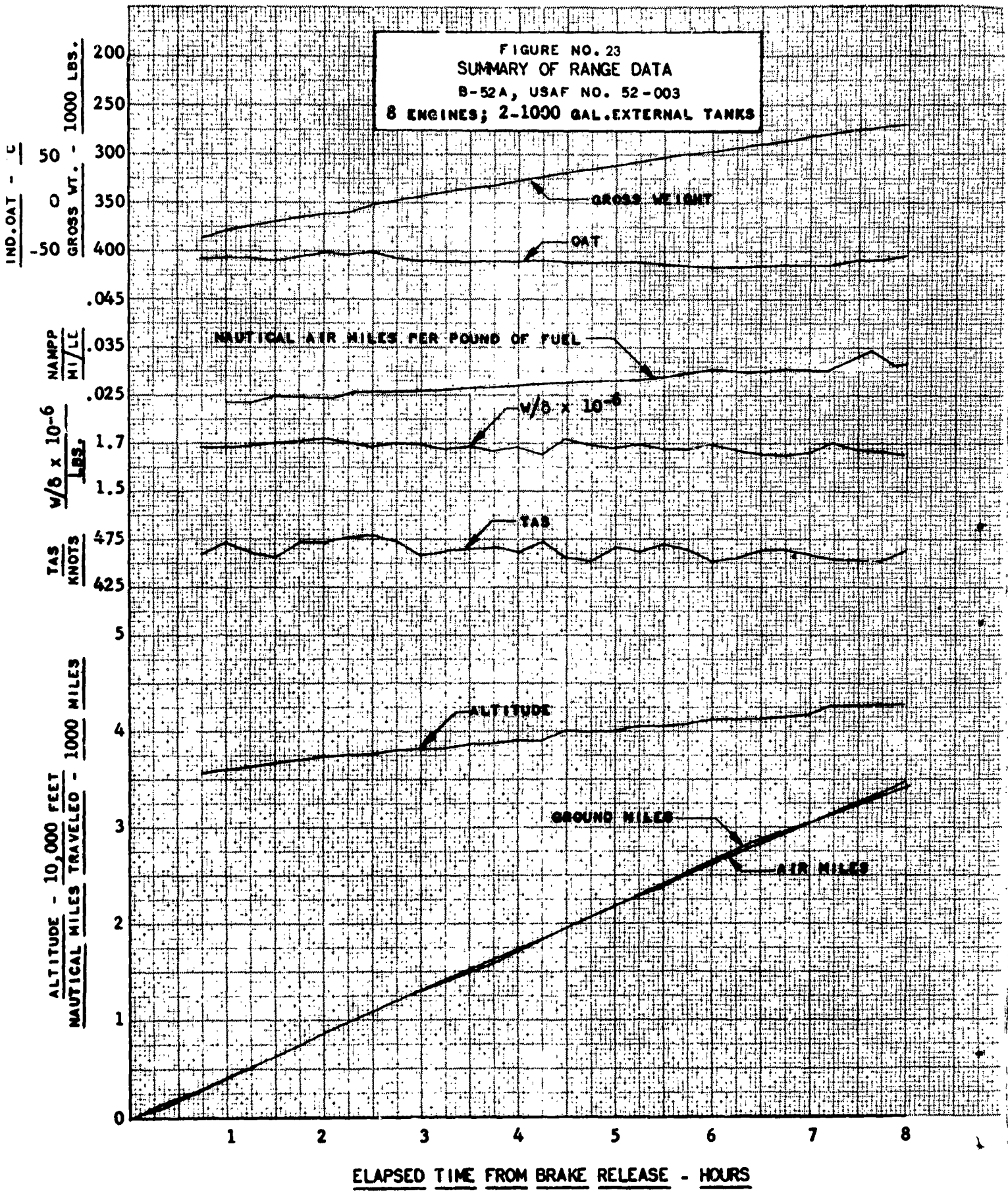
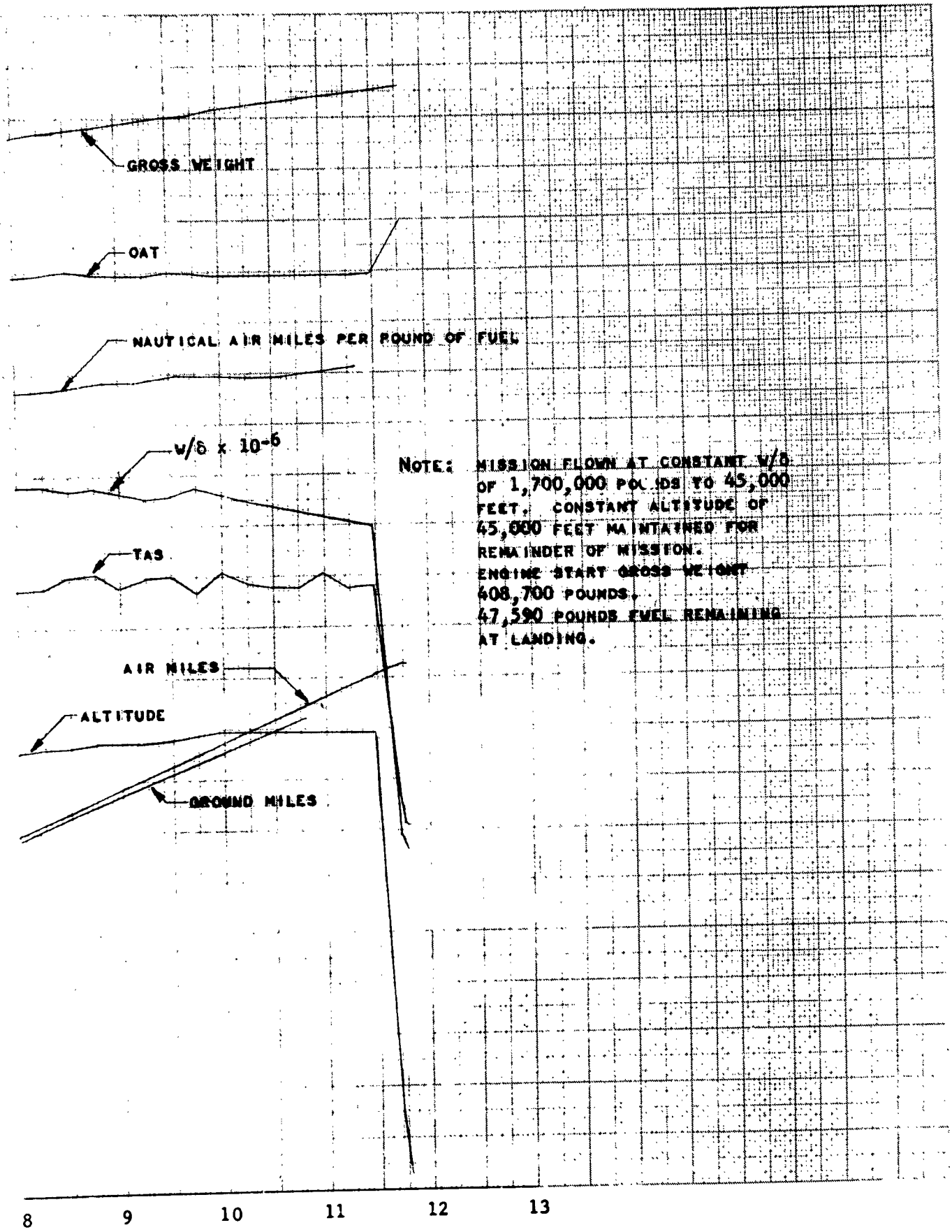


FIGURE NO. 23
SUMMARY OF RANGE DATA
B-52A, USAF NO. 52-003
8 ENGINES; 2-1000 GAL. EXTERNAL TANKS
IND. OAT - °C
GROSS WT. - 1000 LBS.
200
250
300
350
400
50
0
-50
GROSS WEIGHT
OAT
NAMPP MI/LC
.045
.035
.025
NAUTICAL AIR MILES PER POUND OF FUEL
W/δ x 10^-6 LBS.
1.7
1.5
W/δ x 10^-6
TAS KNOTS
475
425
TAS
ALTITUDE - 10,000 FEET
NAUTICAL MILES TRAVELED - 1000 MILES
5
4
3
2
1
0
ALTITUDE
GROUND MILES
AIR MILES
1
2
3
4
5
6
7
8
ELAPSED TIME FROM BRAKE RELEASE - HOURS


GROSS WEIGHT
OAT
NAUTICAL AIR MILES PER POUND OF FUEL
W/δ x 10-6
TAS
AIR MILES
ALTITUDE
GROUND MILES
NOTE: MISSION FLOWN AT CONSTANT W/δ OF 1,700,000 POUNDS TO 45,000 FEET. CONSTANT ALTITUDE OF 45,000 FEET MAINTAINED FOR REMAINDER OF MISSION.
ENGINE START GROSS WEIGHT 408,700 POUNDS.
47,590 POUNDS FUEL REMAINING AT LANDING.
8
9
10
11
12
13
ELAPSED TIME FROM BRAKE RELEASE - HOURS

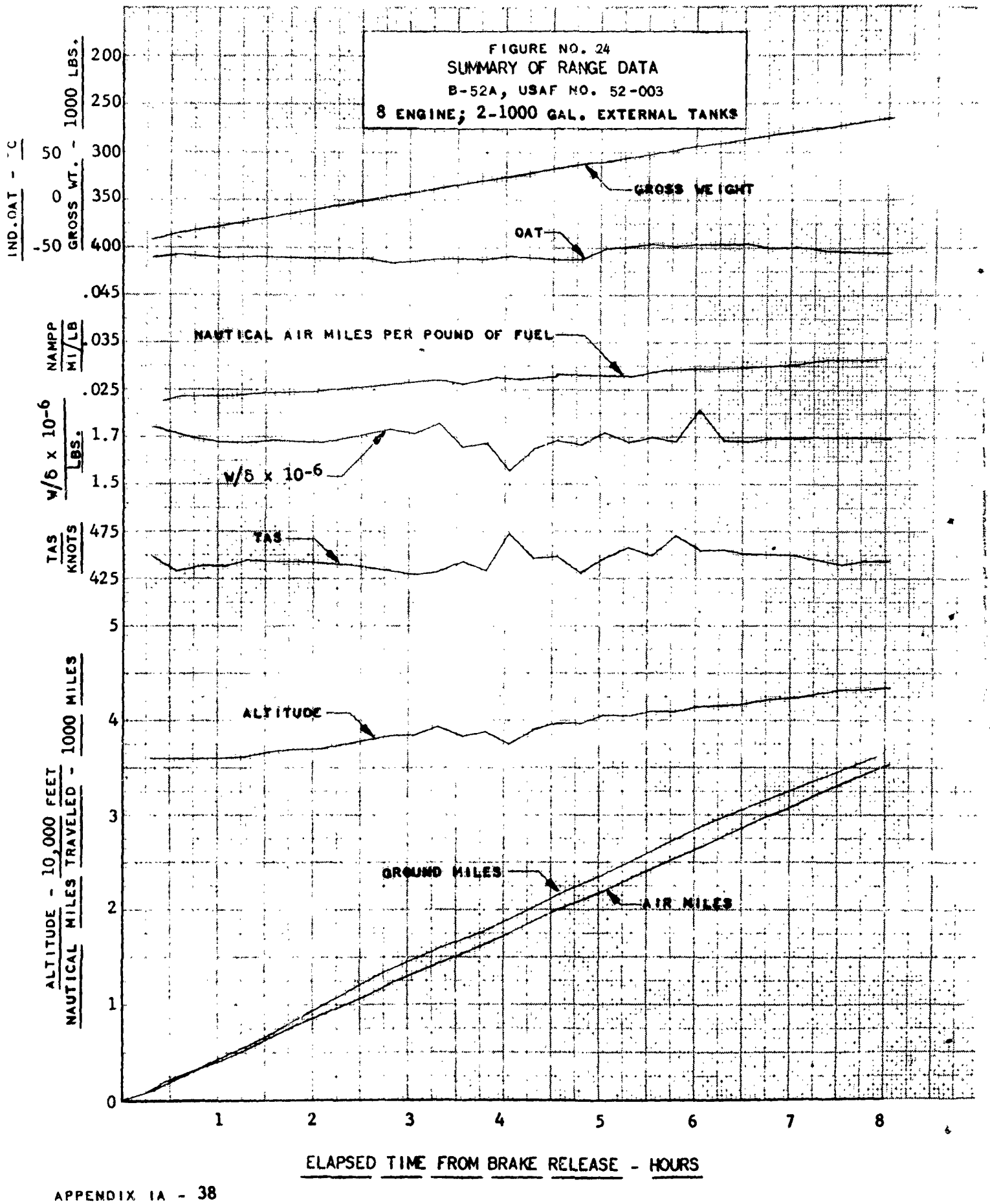
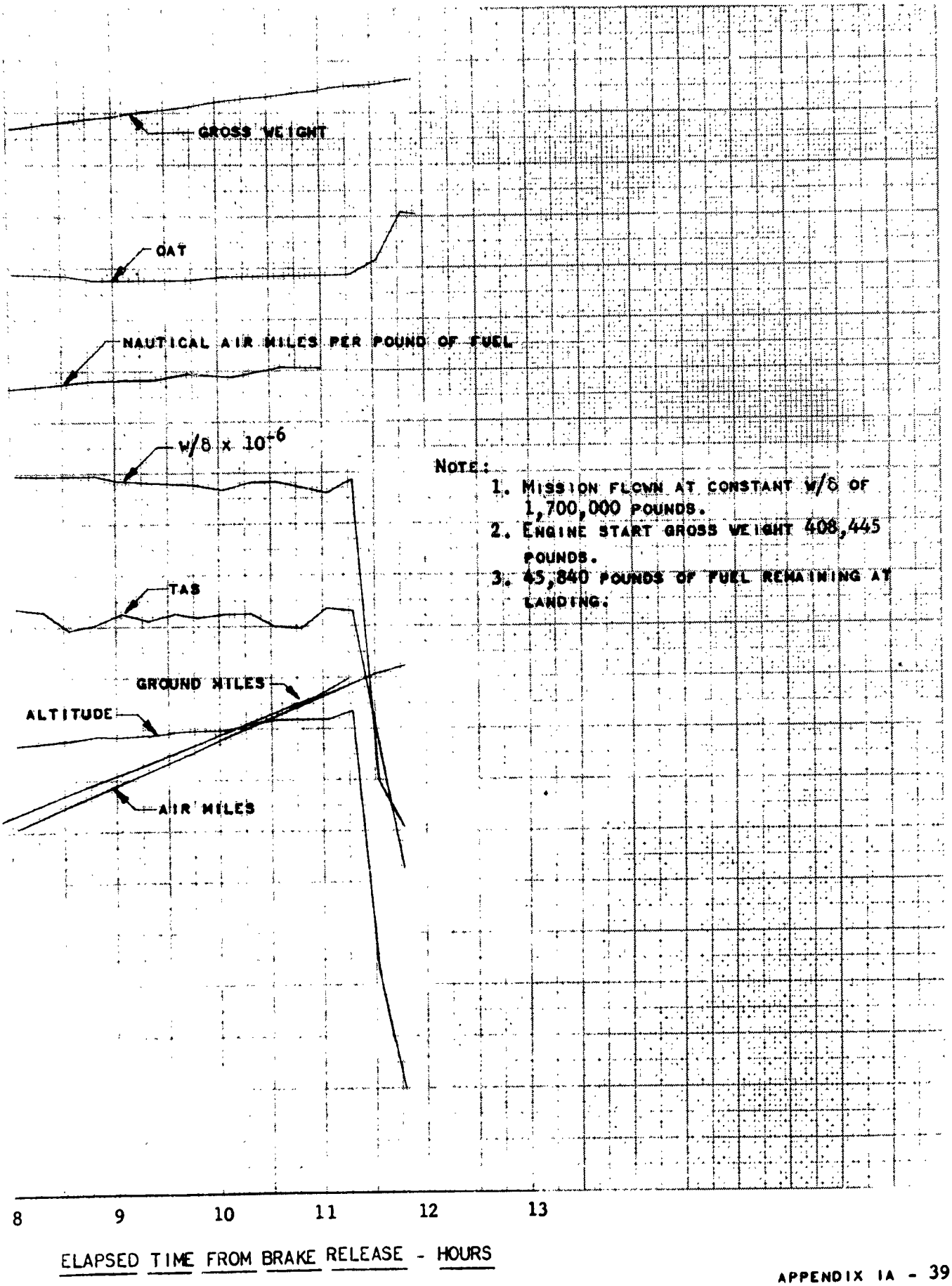


FIGURE NO. 24
SUMMARY OF RANGE DATA
B-52A, USAF NO. 52-003
8 ENGINE; 2-1000 GAL. EXTERNAL TANKS
IND. OAT - °C
GROSS WT. - 1000 LBS.
50
0
-50
200
250
300
350
400
GROSS WEIGHT
OAT
NAMPP MI/LB
.045
.035
.025
NAUTICAL AIR MILES PER POUND OF FUEL
W/δ x 10-6 LBS.
1.7
1.5
W/δ x 10-6
TAS KNOTS
475
425
TAS
ALTITUDE - 10,000 FEET
NAUTICAL MILES TRAVELED - 1000 MILES
5
4
3
2
1
0
ALTITUDE
GROUND MILES
AIR MILES
1
2
3
4
5
6
7
8
ELAPSED TIME FROM BRAKE RELEASE - HOURS



NOTE:

1. MISSION FLOWN AT CONSTANT W/δ OF 1,700,000 POUNDS.
2. ENGINE START GROSS WEIGHT 408,445 POUNDS.
3. 45,840 POUNDS OF FUEL REMAINING AT LANDING.

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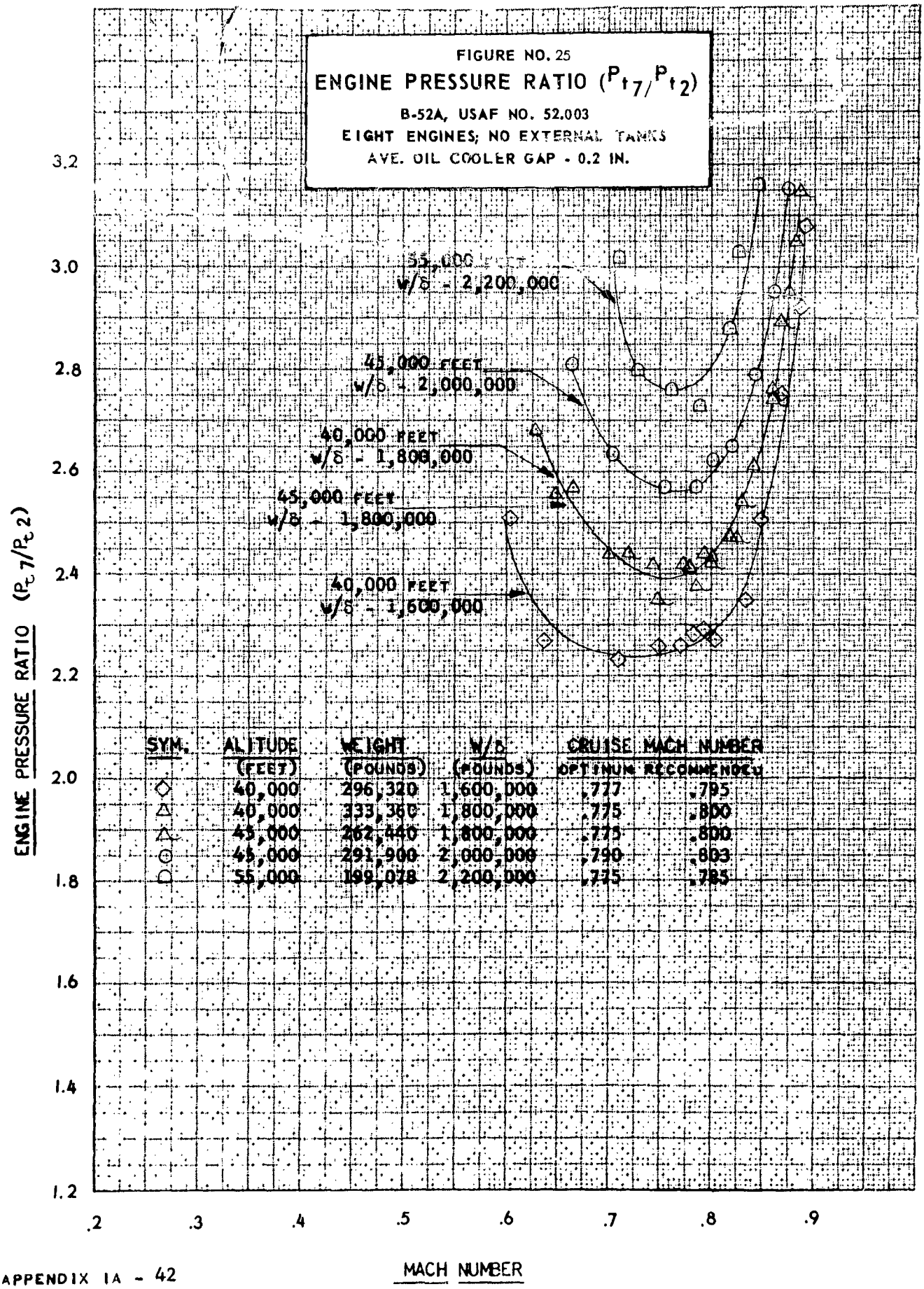
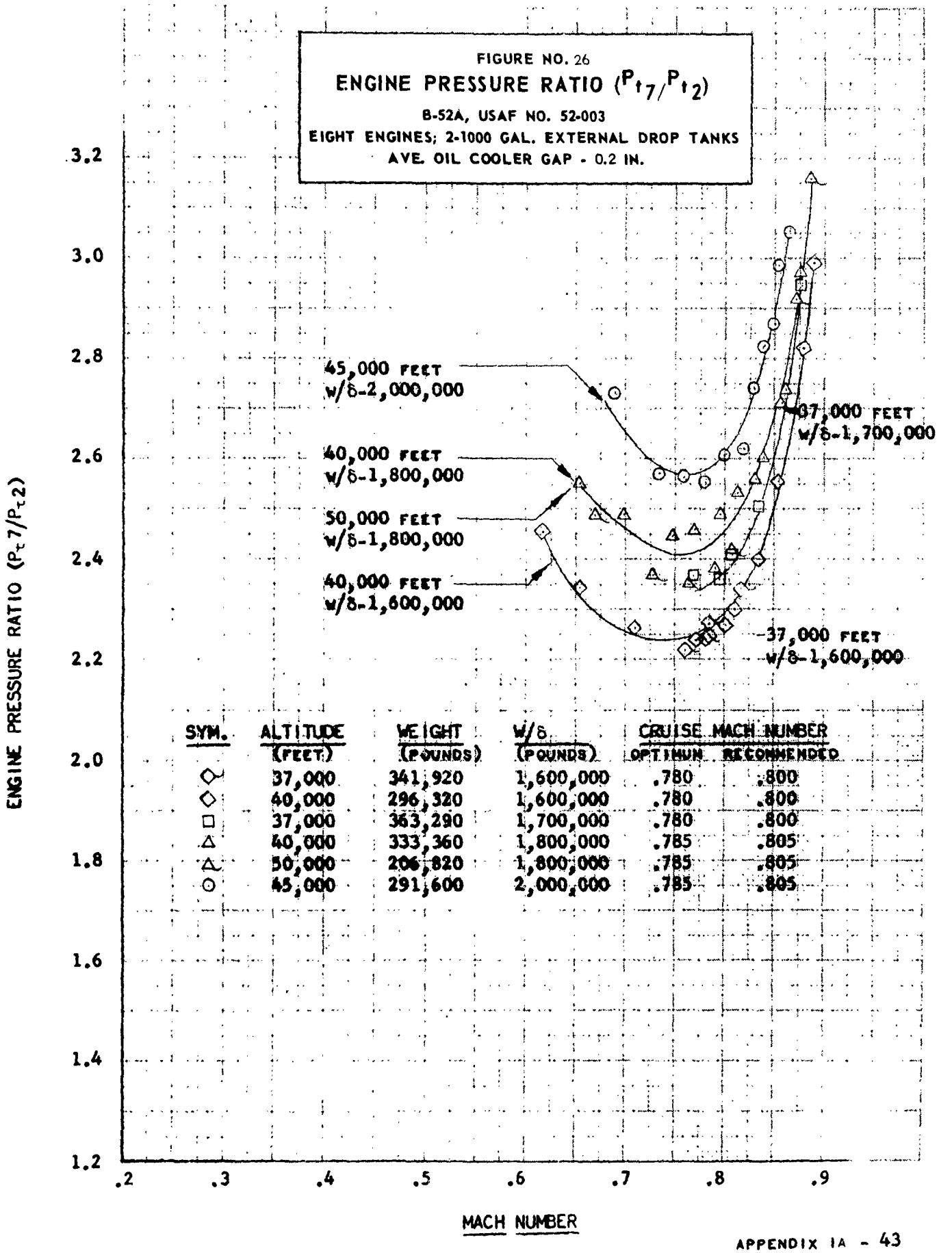
PRESENTING PLOTS

POWER REQUIRED



SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE MACH NUMBER OPTIMUM	CRUISE MACH NUMBER RECOMMENDED
◇	40,000	296,320	1,600,000	.777	.795
△	40,000	333,360	1,800,000	.775	.800
△	45,000	262,440	1,800,000	.775	.800
⊙	45,000	291,900	2,000,000	.790	.803
⬡	55,000	199,078	2,200,000	.775	.785



SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE MACH NUMBER OPTIMUM	CRUISE MACH NUMBER RECOMMENDED
◇	37,000	341,920	1,600,000	.780	.800
◇	40,000	296,320	1,600,000	.780	.800
□	37,000	363,290	1,700,000	.780	.800
△	40,000	333,360	1,800,000	.785	.805
△	50,000	206,820	1,800,000	.785	.805
⊙	45,000	291,600	2,000,000	.785	.805

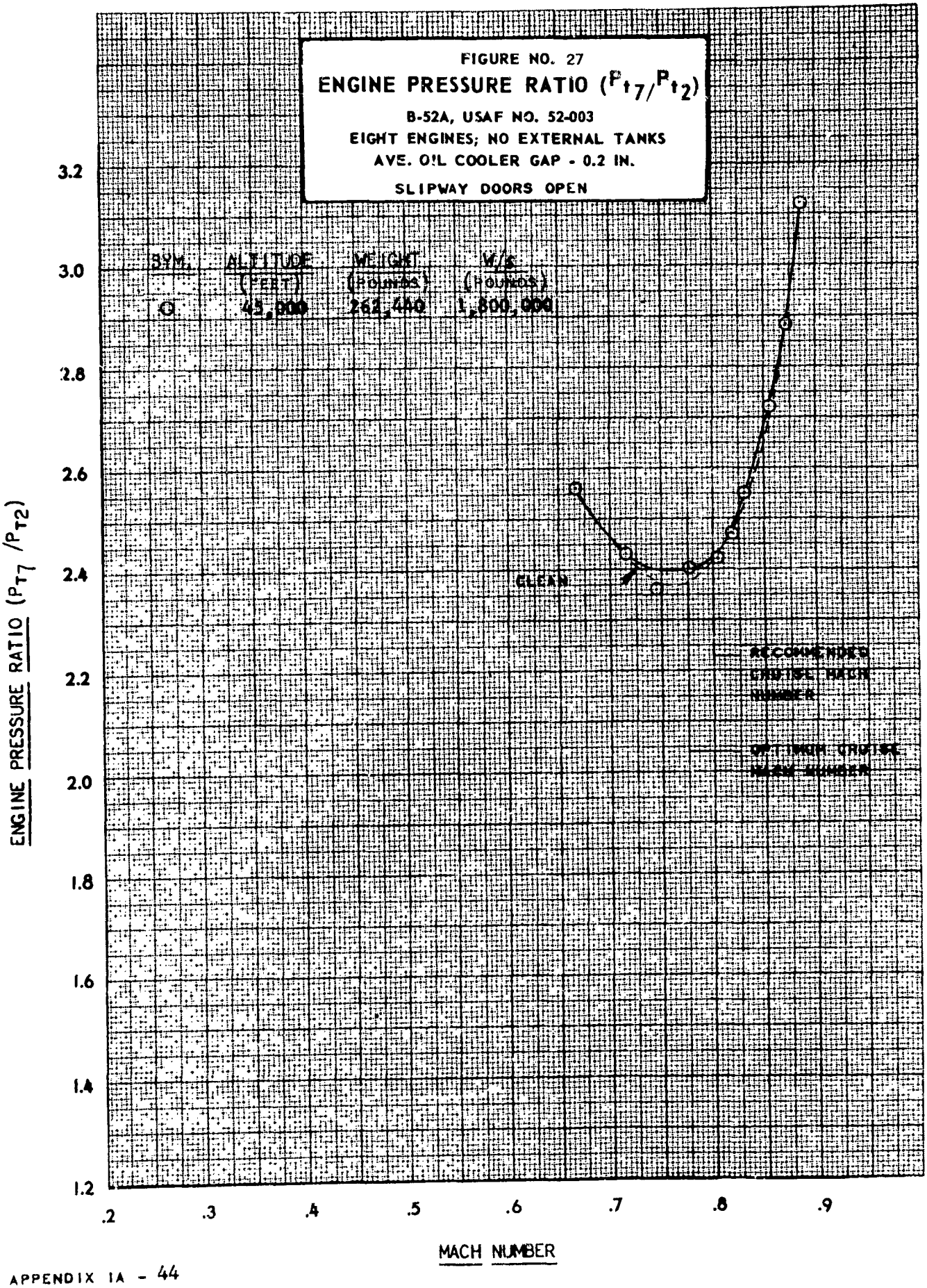


FIGURE NO. 27
ENGINE PRESSURE RATIO (P_{t7}/P_{t2})
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SLIPWAY DOORS OPEN
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
45,000 262,440 1,800,000
CLEAN
RECOMMENDED CRUISE MACH NUMBER
OPTIMUM CRUISE MACH NUMBER
ENGINE PRESSURE RATIO (P_{T7}/P_{T2})
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
.2
.3
.4
.5
.6
.7
.8
.9
MACH NUMBER

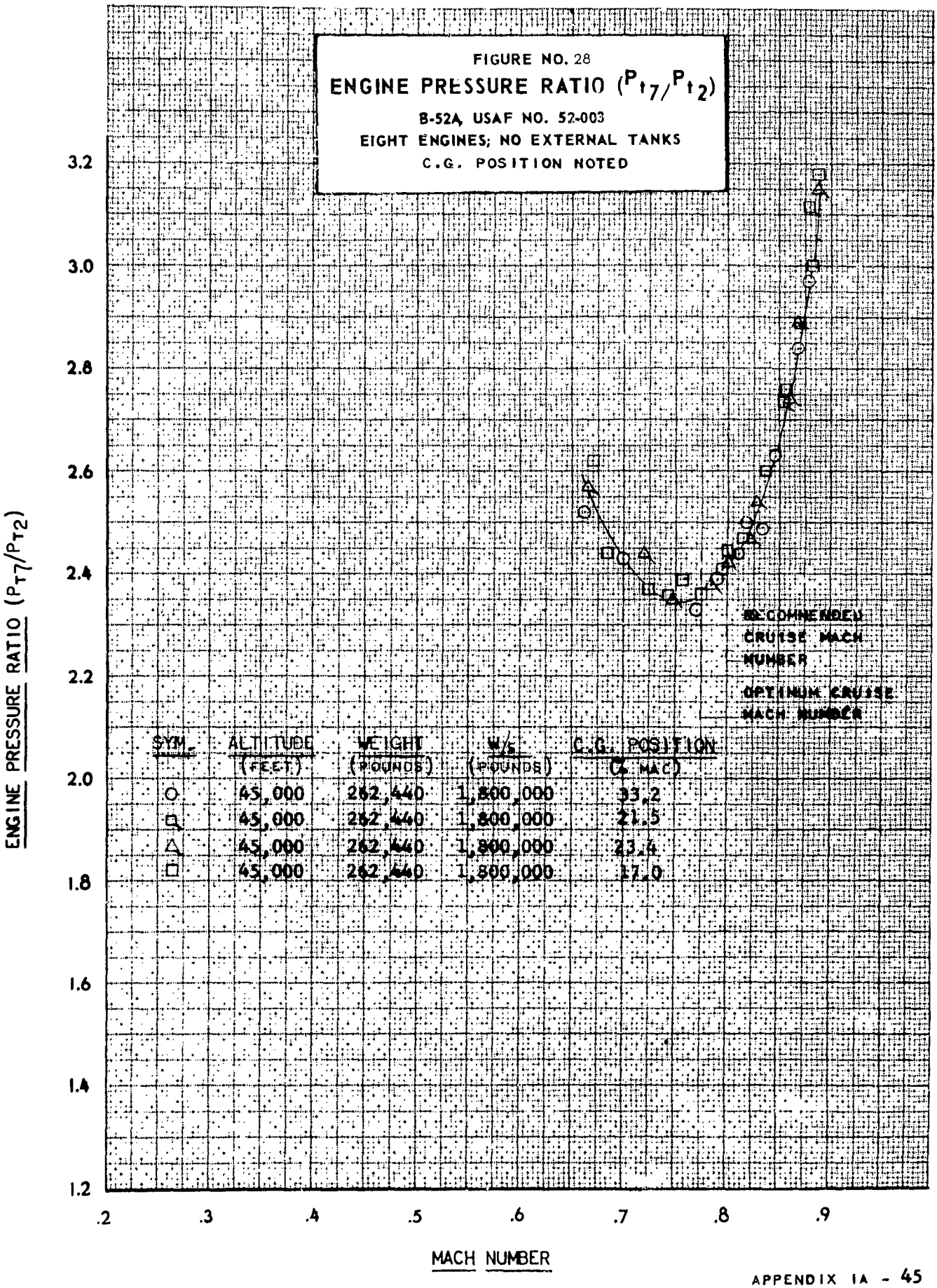


FIGURE NO. 28
ENGINE PRESSURE RATIO (P_{t7}/P_{t2})
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
C.G. POSITION NOTED
ENGINE PRESSURE RATIO (P_{T7}/P_{T2})
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
.2
.3
.4
.5
.6
.7
.8
.9
MACH NUMBER
RECOMMENDED CRUISE MACH NUMBER
OPTIMUM CRUISE MACH NUMBER
SYM. | ALTITUDE (FEET) | WEIGHT (POUNDS) | W/δ (POUNDS) | C.G. POSITION (% MAC)
○ | 45,000 | 262,440 | 1,800,000 | 33.2
□ | 45,000 | 262,440 | 1,800,000 | 21.5
△ | 45,000 | 262,440 | 1,800,000 | 23.4
□ | 45,000 | 262,440 | 1,800,000 | 17.0

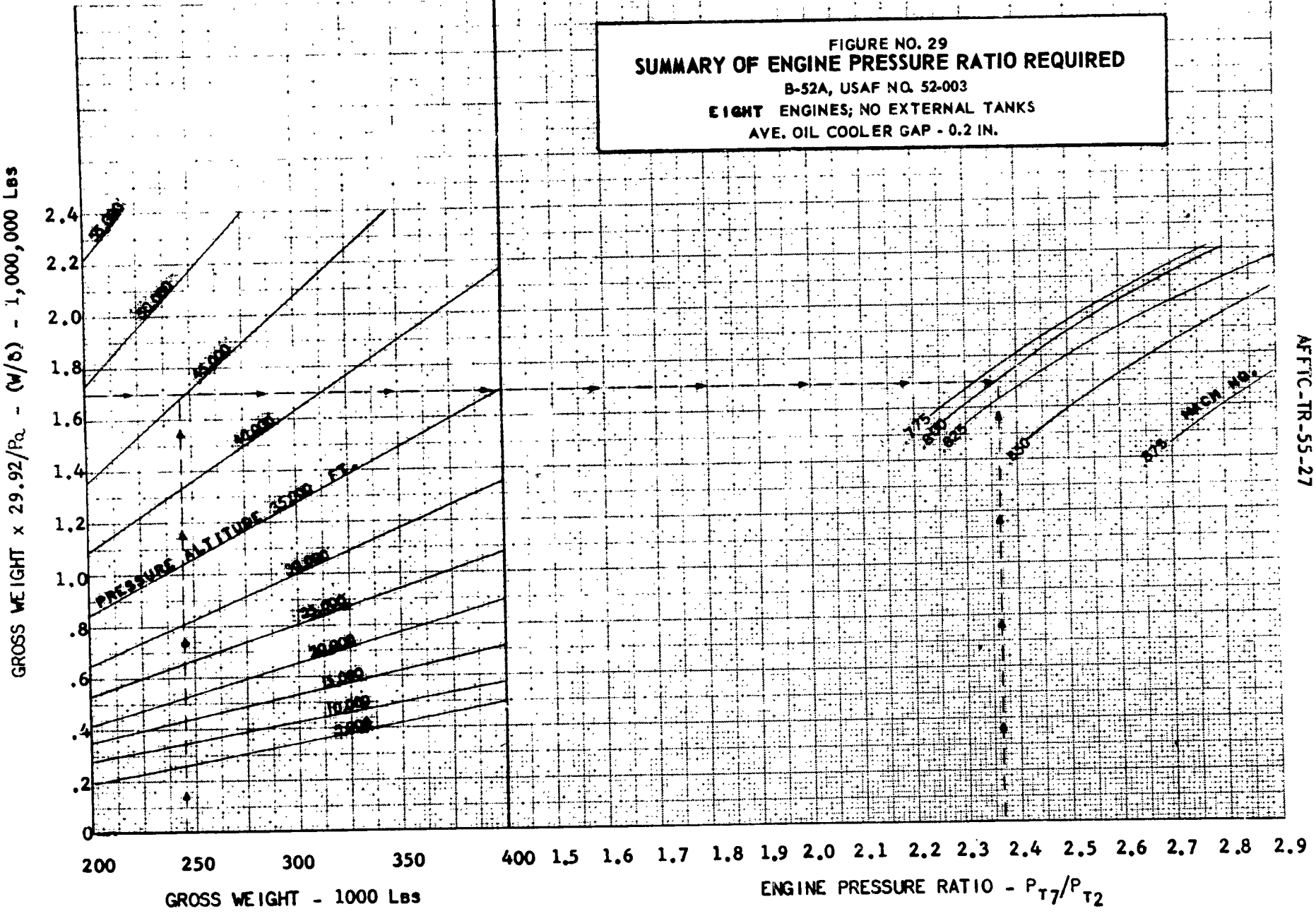
FIGURE NO. 29

SUMMARY OF ENGINE PRESSURE RATIO REQUIRED

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.



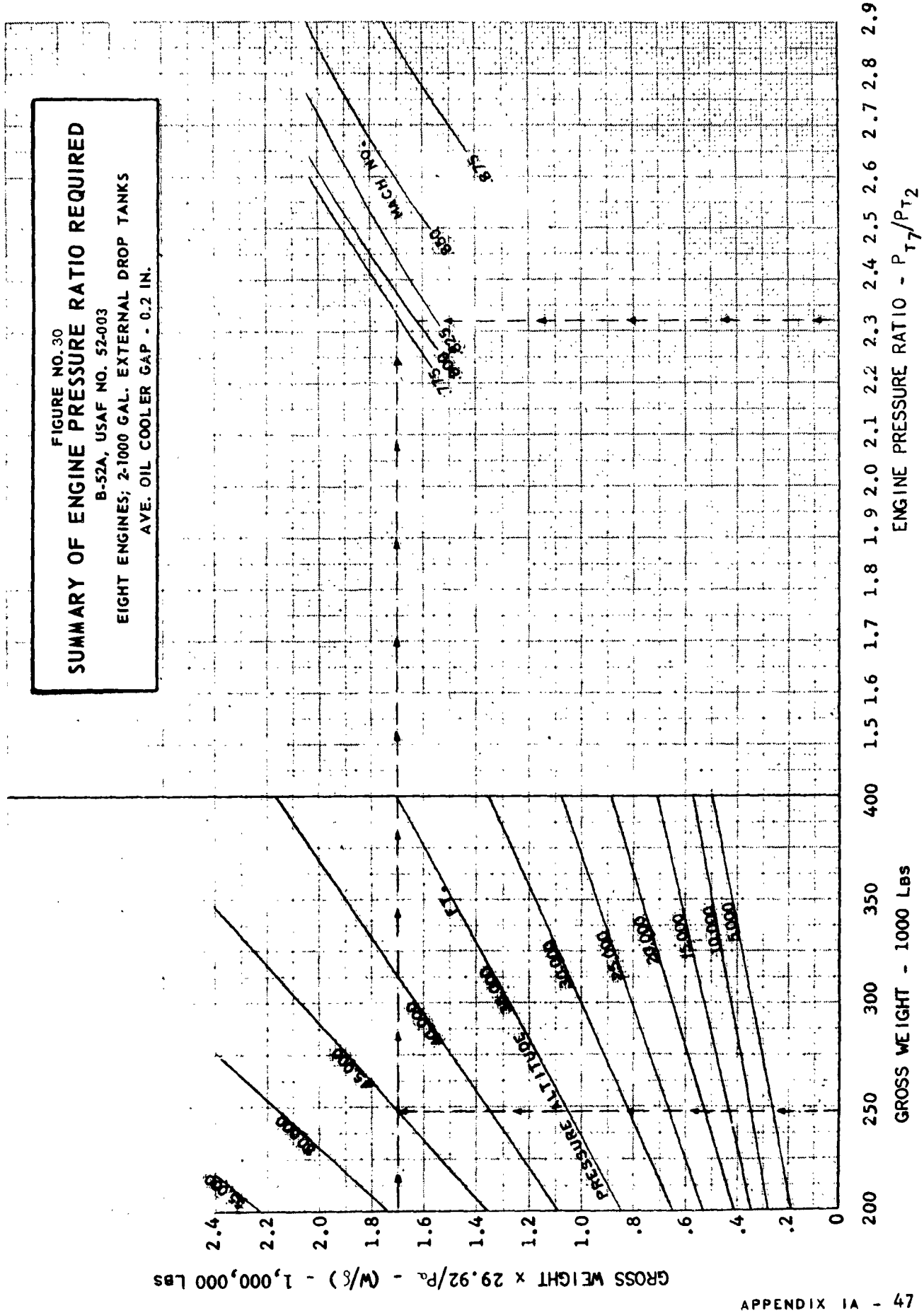


FIGURE NO. 30
SUMMARY OF ENGINE PRESSURE RATIO REQUIRED
B-52A, USAF NO. 52-003
EIGHT ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS
AVE. OIL COOLER GAP - 0.2 IN.
MACH NO.
.875
.850
.825
.800
.775
PRESSURE ALTITUDE FT.
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
GROSS WEIGHT - 1000 LBS
200
250
300
350
400
ENGINE PRESSURE RATIO - P_{T_7}/P_{T_2}
1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9
GROSS WEIGHT x 29.92/P_a - (W/δ) - 1,000,000 LBS
0 .2 .4 .6 .8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4

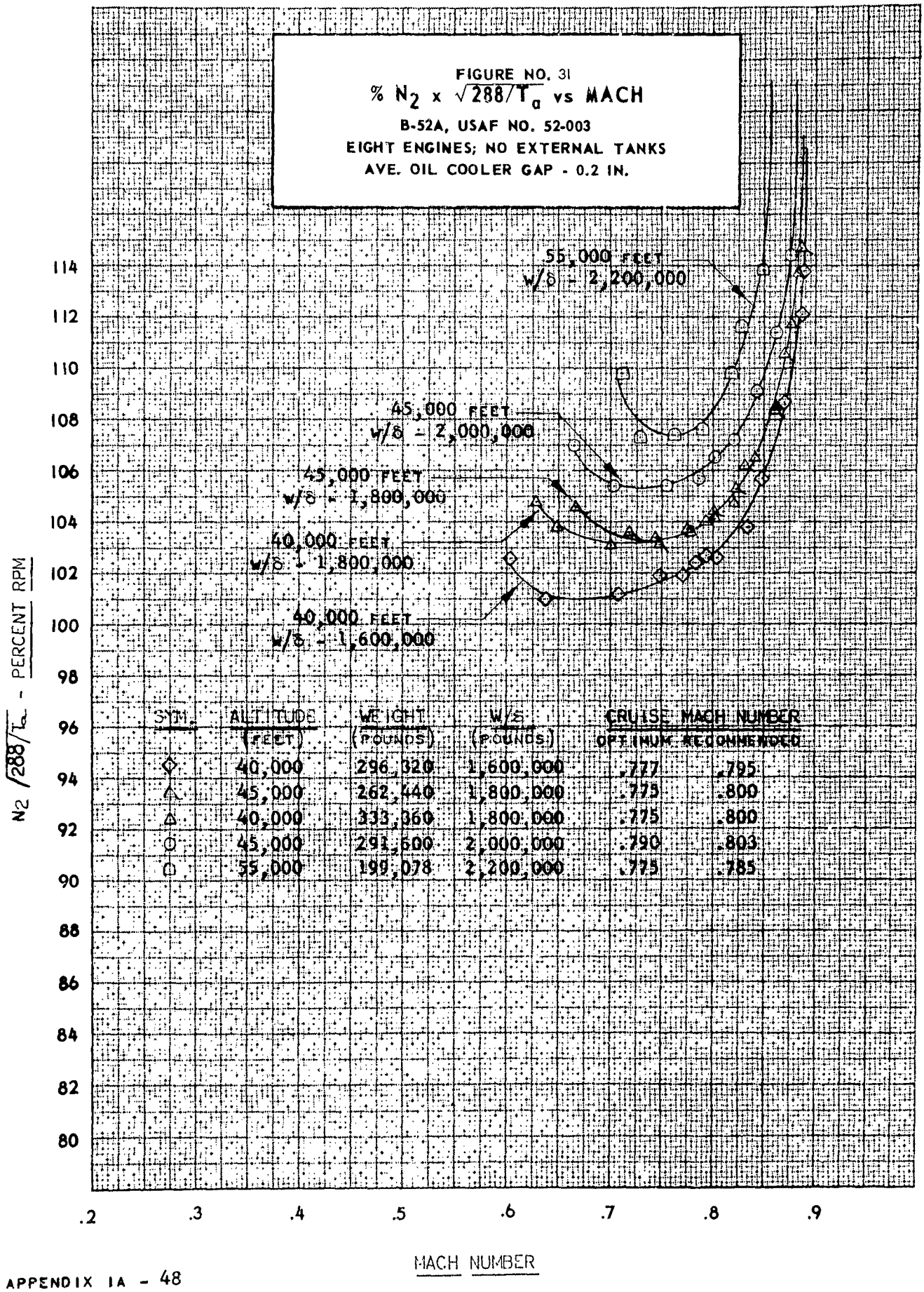


FIGURE NO. 31

% $N_2 \times \sqrt{288/T_a}$ vs MACH

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.

SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE MACH NUMBER OPTIMUM	CRUISE MACH NUMBER RECOMMENDED
◇	40,000	296,320	1,600,000	.777	.795
△	45,000	262,440	1,800,000	.775	.800
△	40,000	333,360	1,800,000	.775	.800
○	45,000	291,600	2,000,000	.790	.803
○	55,000	199,078	2,200,000	.775	.785

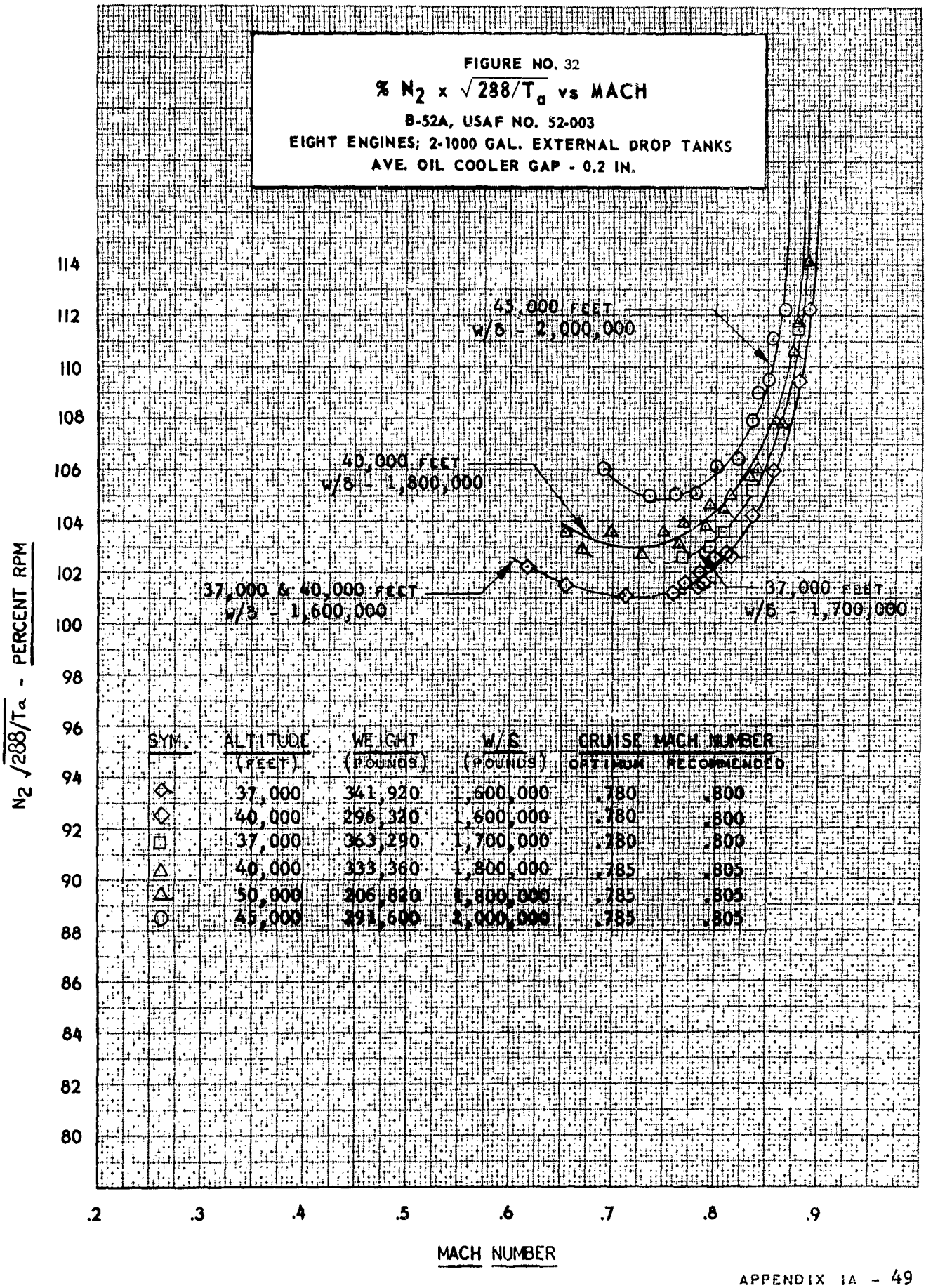
FIGURE NO. 32

$\% N_2 \times \sqrt{288/T_a}$ vs MACH

B-52A, USAF NO. 52-003

EIGHT ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS

AVE. OIL COOLER GAP - 0.2 IN.



SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE MACH NUMBER OPTIMUM	CRUISE MACH NUMBER RECOMMENDED
◇	37,000	341,920	1,600,000	.780	.800
◇	40,000	296,320	1,600,000	.780	.800
□	37,000	363,290	1,700,000	.780	.800
△	40,000	333,360	1,800,000	.785	.805
△	50,000	206,820	1,800,000	.785	.805
○	45,000	391,600	2,000,000	.785	.805

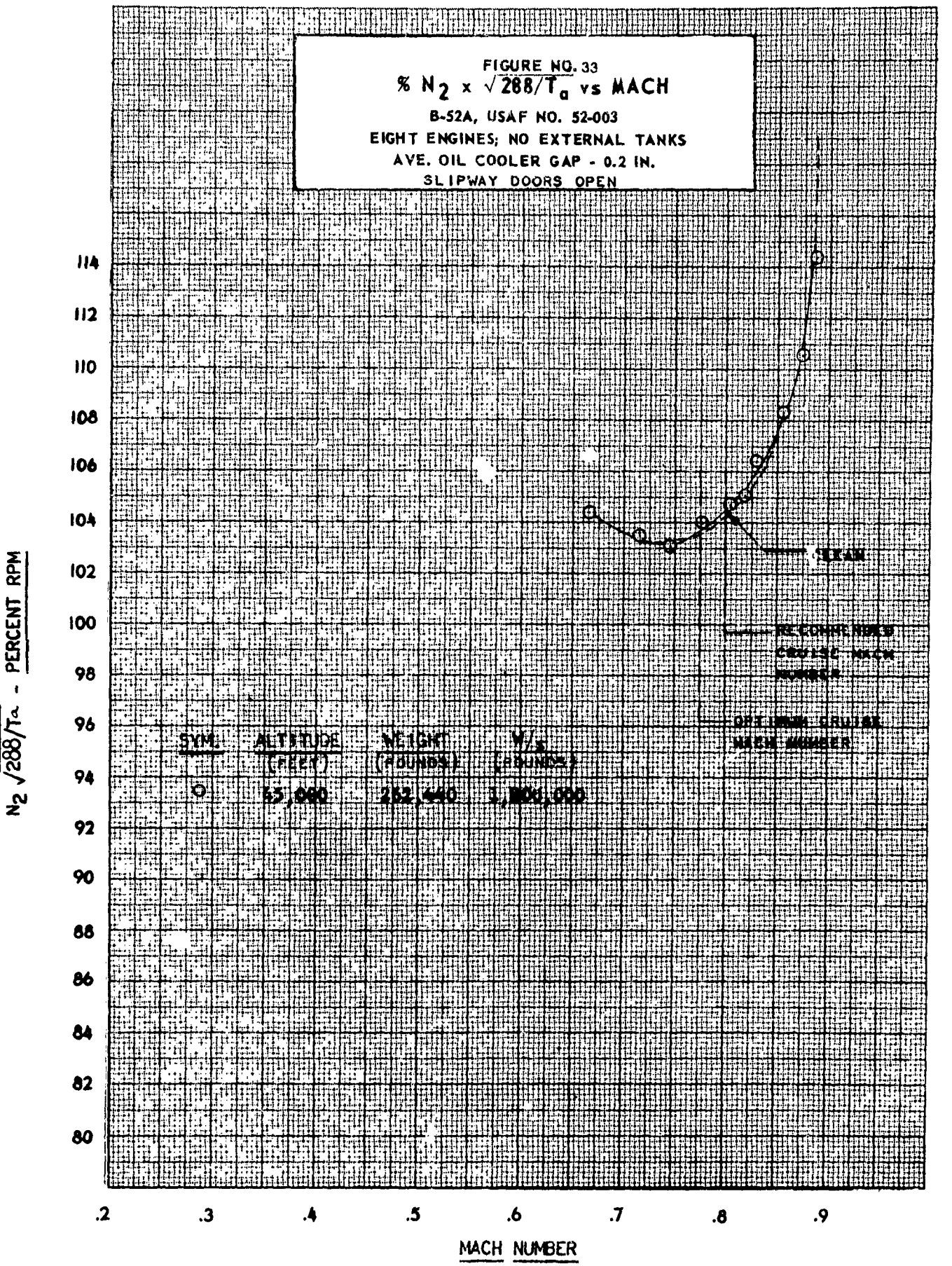


FIGURE NO. 33
% $N_2 \times \sqrt{288/T_a}$ vs MACH
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SLIPWAY DOORS OPEN
$N_2 \sqrt{288/T_a}$ - PERCENT RPM
114
112
110
108
106
104
102
100
98
96
94
92
90
88
86
84
82
80
.2
.3
.4
.5
.6
.7
.8
.9
MACH NUMBER
SYM.
ALTITUDE (FEET)
WEIGHT (POUNDS)
W/S (POUNDS)
RECOMMENDED CRUISE MACH NUMBER
OPTIMUM CRUISE MACH NUMBER

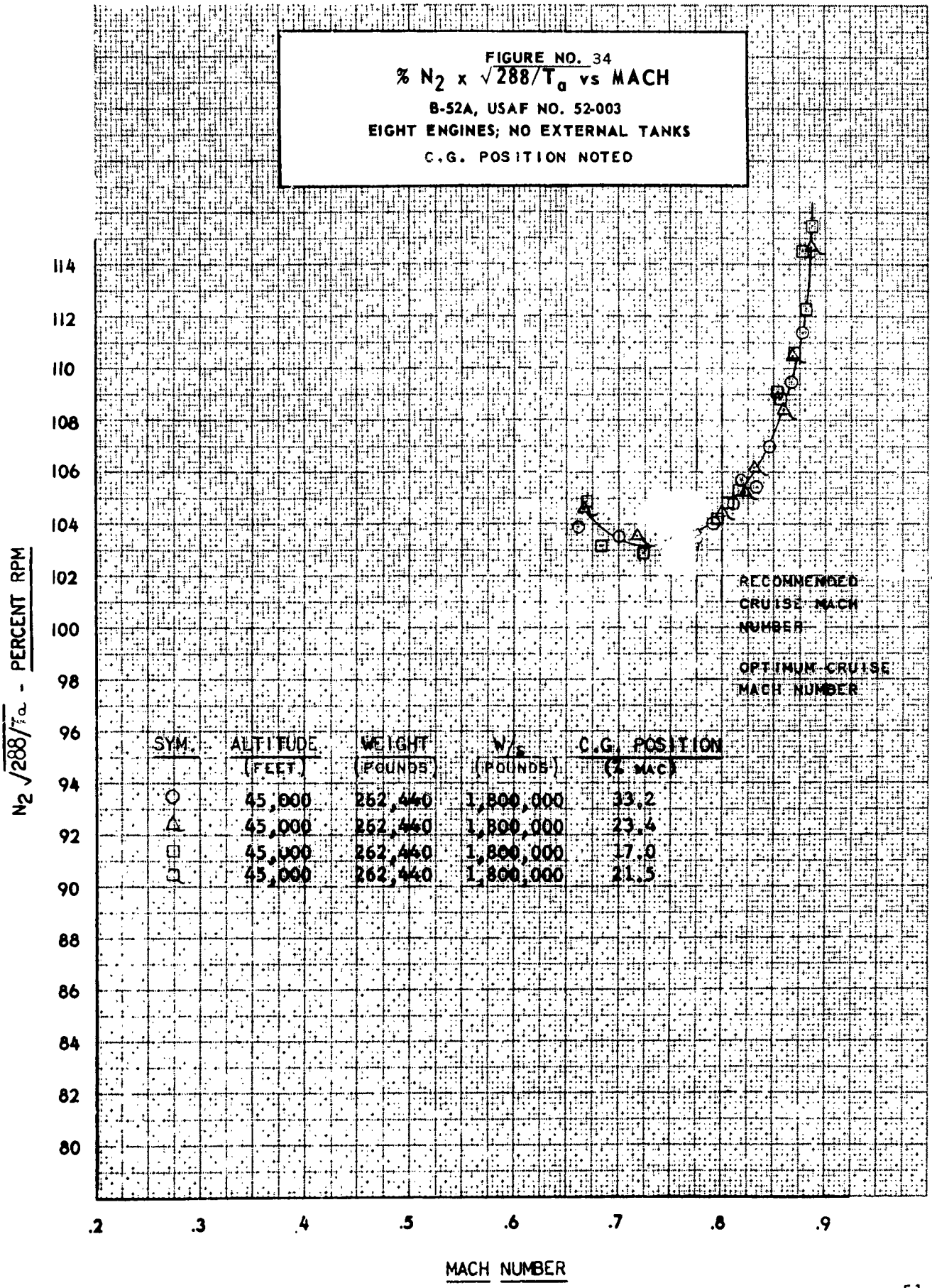


FIGURE NO. 34
% $N_2 \times \sqrt{288/T_a}$ vs MACH
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
C.G. POSITION NOTED
$N_2 \sqrt{288/T_a}$ - PERCENT RPM
114
112
110
108
106
104
102
100
98
96
94
92
90
88
86
84
82
80
.2
.3
.4
.5
.6
.7
.8
.9
MACH NUMBER
RECOMMENDED CRUISE MACH NUMBER
OPTIMUM CRUISE MACH NUMBER
SYM. | ALTITUDE (FEET) | WEIGHT (POUNDS) | W/δ (POUNDS) | C.G. POSITION (% MAC)
○ | 45,000 | 262,440 | 1,800,000 | 33.2
△ | 45,000 | 262,440 | 1,800,000 | 23.4
□ | 45,000 | 262,440 | 1,800,000 | 17.0
◻ | 45,000 | 262,440 | 1,800,000 | 21.5

FIGURE NO. 35

% $N_{2_w} \times \sqrt{T_{a_s}/T_{a_t}}$ vs CALIBRATED AIRSPEED

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.

SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE AIRSPEED OPTIMUM	CRUISE AIRSPEED RECOMMENDED
◇	40,000	296,320	1,600,000	236	241
△	40,000	333,360	1,800,000	235	243
△	45,000	262,440	1,800,000	209	219
○	45,000	291,600	2,000,000	213	217.5
⌂	55,000	199,078	2,200,000	165	167

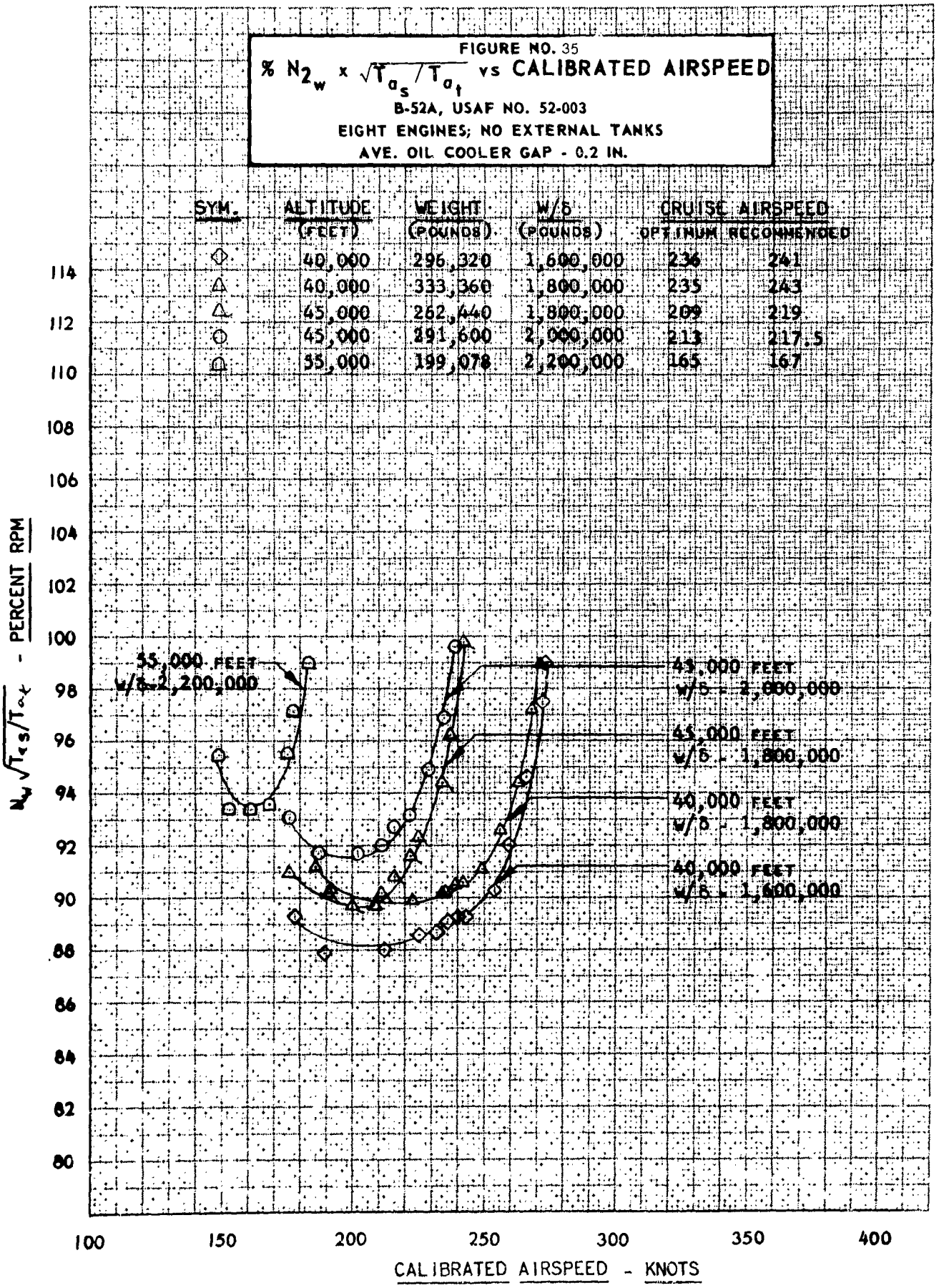


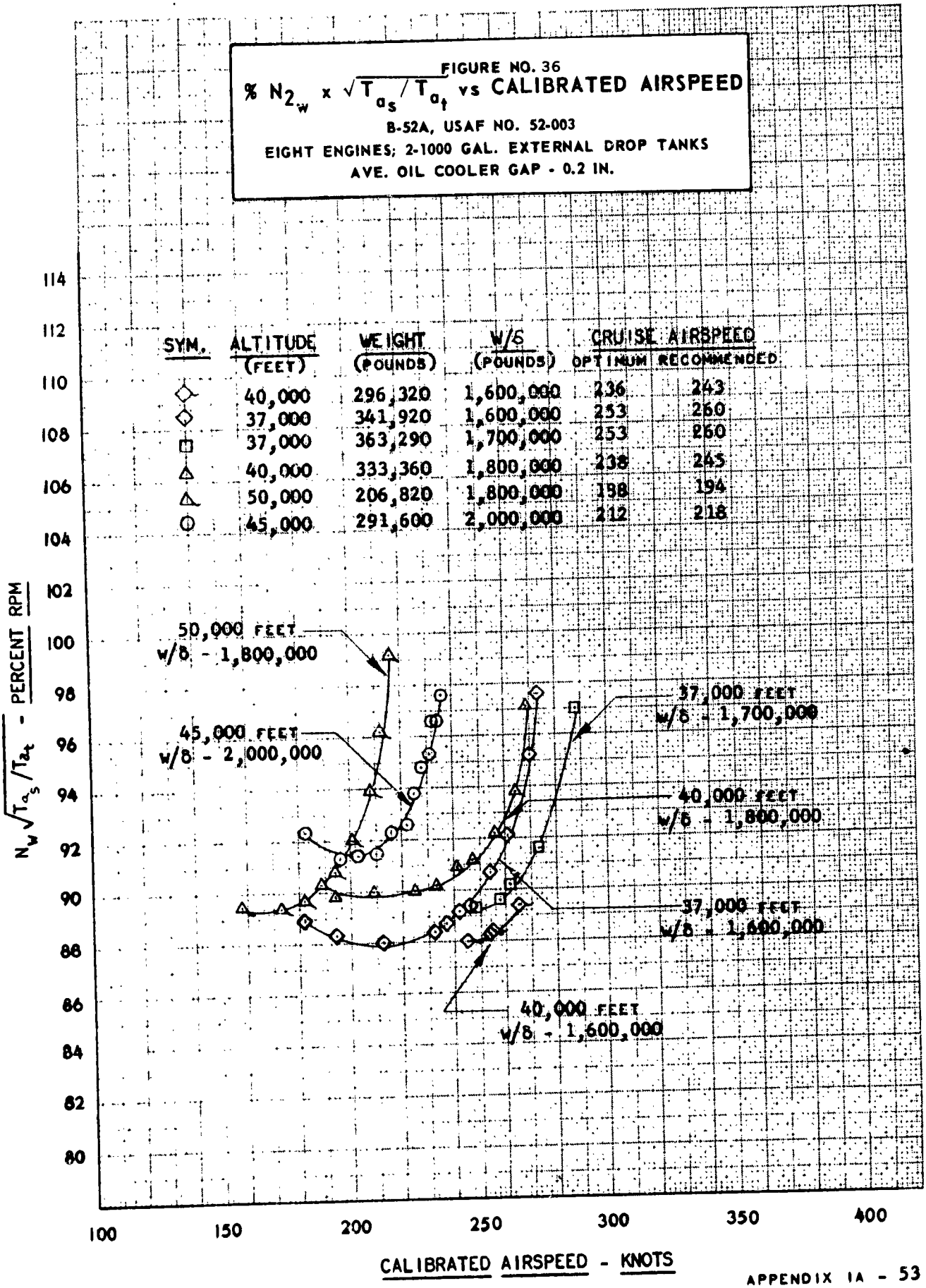
FIGURE NO. 36

$\% N_{2_w} \times \sqrt{T_{a_s}/T_{a_t}}$ vs CALIBRATED AIRSPEED

B-52A, USAF NO. 52-003

EIGHT ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS

AVE. OIL COOLER GAP - 0.2 IN.



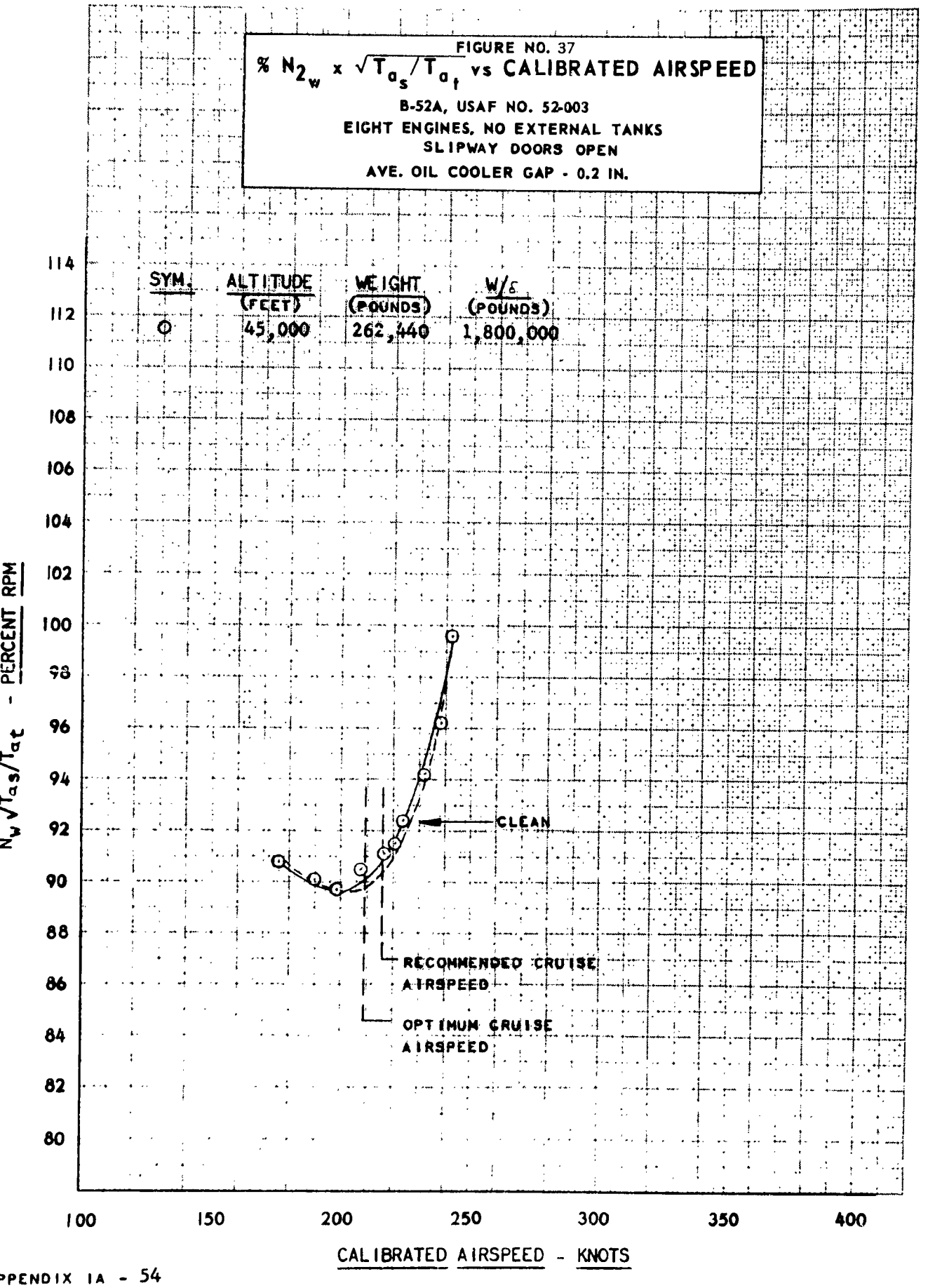


FIGURE NO. 37
% N_{2_w} x $\sqrt{T_{a_s}/T_{a_t}}$ vs CALIBRATED AIRSPEED
B-52A, USAF NO. 52-003
EIGHT ENGINES, NO EXTERNAL TANKS
SLIPWAY DOORS OPEN
AVE. OIL COOLER GAP - 0.2 IN.
SYM.
ALTITUDE (FEET)
WEIGHT (POUNDS)
W/δ (POUNDS)
45,000
262,440
1,800,000
CLEAN
RECOMMENDED CRUISE AIRSPEED
OPTIMUM CRUISE AIRSPEED
$N_w\sqrt{T_{as}/T_{at}}$ - PERCENT RPM
114
112
110
108
106
104
102
100
98
96
94
92
90
88
86
84
82
80
100
150
200
250
300
350
400
CALIBRATED AIRSPEED - KNOTS

FIGURE NO. 38

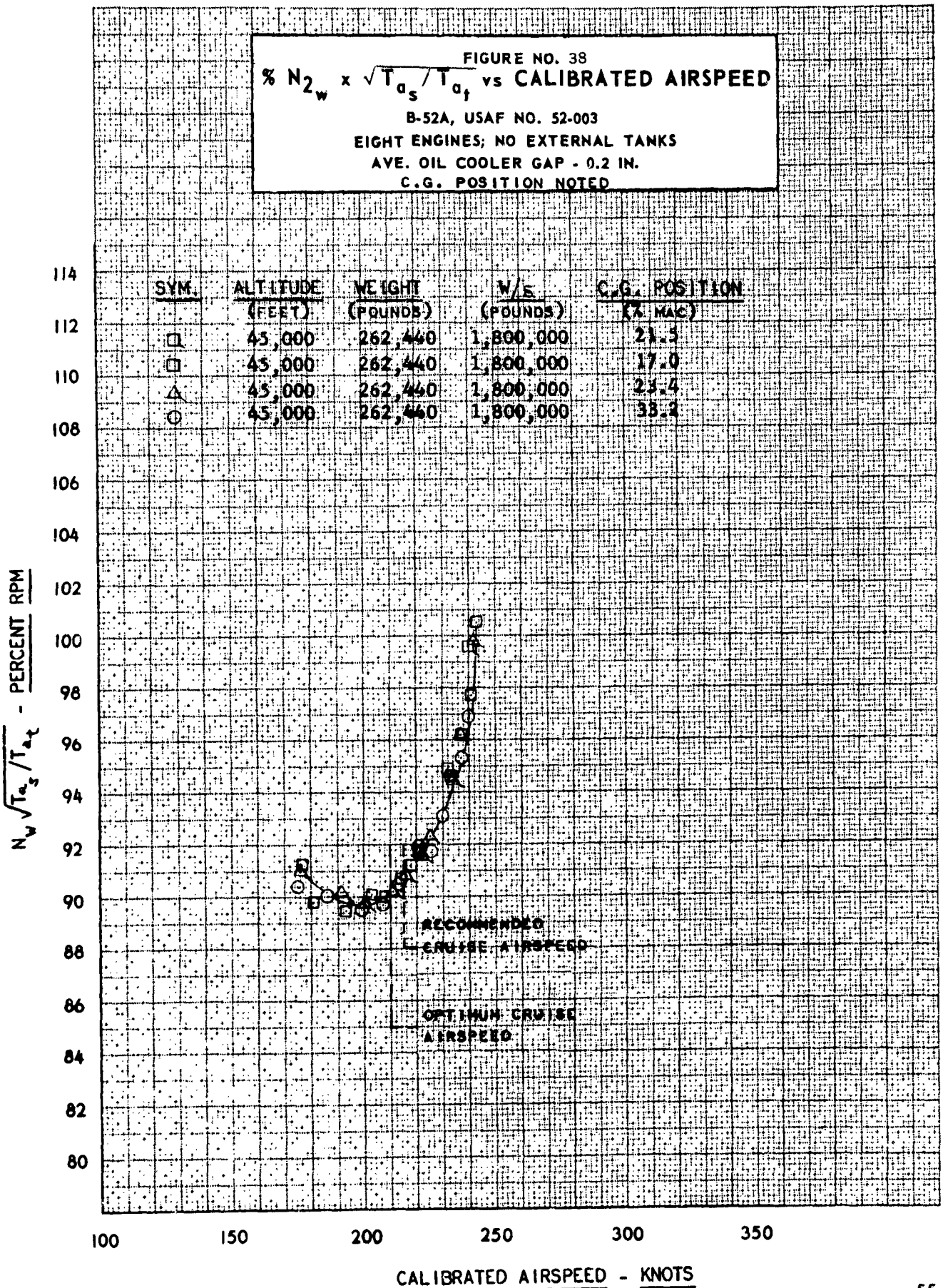
$\% N_{2_w} \times \sqrt{T_{a_s}/T_{a_t}}$ vs CALIBRATED AIRSPEED

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.

C.G. POSITION NOTED



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DRAG POLARS

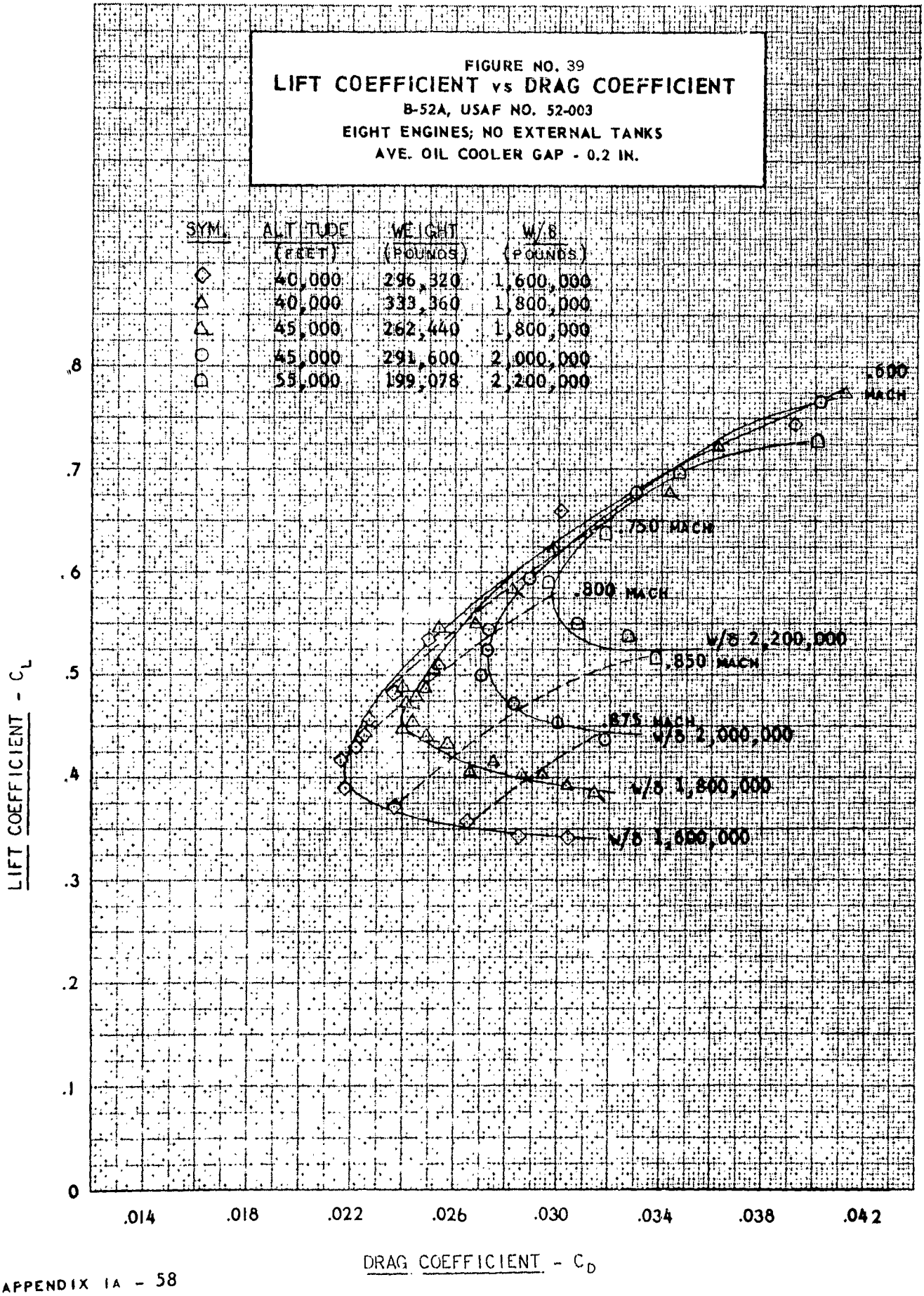


FIGURE NO. 39
LIFT COEFFICIENT vs DRAG COEFFICIENT
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
40,000 296,320 1,600,000
40,000 333,360 1,800,000
45,000 262,440 1,800,000
45,000 291,600 2,000,000
55,000 199,078 2,200,000
.600 MACH
.750 MACH
.800 MACH
.850 MACH
.875 MACH
W/δ 2,200,000
W/δ 2,000,000
W/δ 1,800,000
W/δ 1,600,000
LIFT COEFFICIENT - C_L
DRAG COEFFICIENT - C_D
0
.1
.2
.3
.4
.5
.6
.7
.8
.014
.018
.022
.026
.030
.034
.038
.042

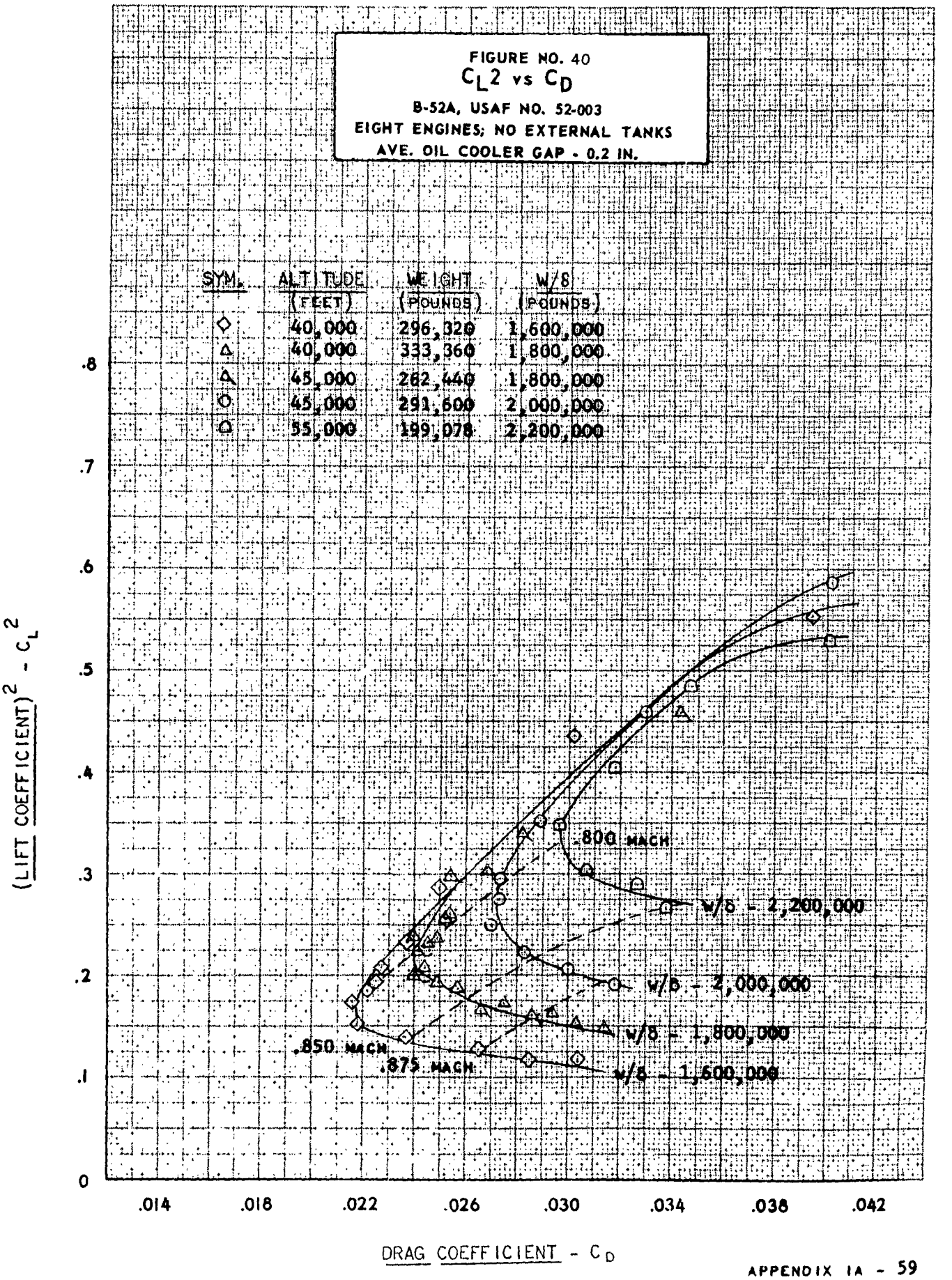


FIGURE NO. 40
C_L2 vs C_D
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
◇ 40,000 296,320 1,600,000
△ 40,000 333,360 1,800,000
45,000 262,440 1,800,000
○ 45,000 291,600 2,000,000
55,000 199,078 2,200,000
.800 MACH
.850 MACH
.875 MACH
W/δ - 2,200,000
W/δ - 2,000,000
W/δ - 1,800,000
W/δ - 1,600,000
(LIFT COEFFICIENT)^2 - C_L^2
0
.1
.2
.3
.4
.5
.6
.7
.8
.014
.018
.022
.026
.030
.034
.038
.042
DRAG COEFFICIENT - C_D

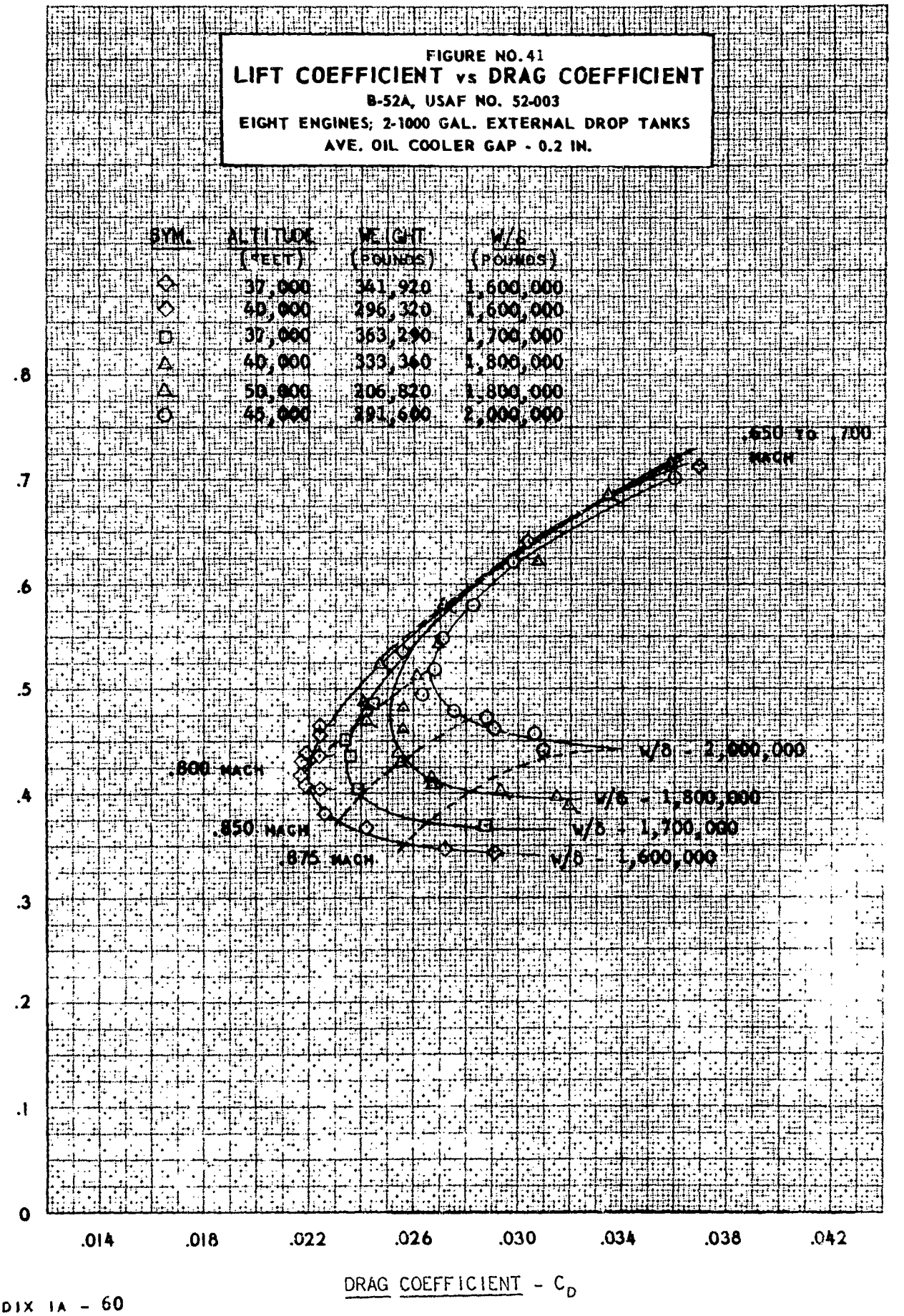


FIGURE NO. 41
LIFT COEFFICIENT vs DRAG COEFFICIENT
B-52A, USAF NO. 52-003
EIGHT ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
37,000 341,920 1,600,000
40,000 296,320 1,600,000
37,000 363,290 1,700,000
40,000 333,360 1,800,000
50,000 206,820 1,800,000
45,000 291,600 2,000,000
.650 TO .700 MACH
.800 MACH
.850 MACH
.875 MACH
W/δ - 2,000,000
W/δ - 1,800,000
W/δ - 1,700,000
W/δ - 1,600,000
LIFT COEFFICIENT - C_L
DRAG COEFFICIENT - C_D
0
.1
.2
.3
.4
.5
.6
.7
.8
.014
.018
.022
.026
.030
.034
.038
.042

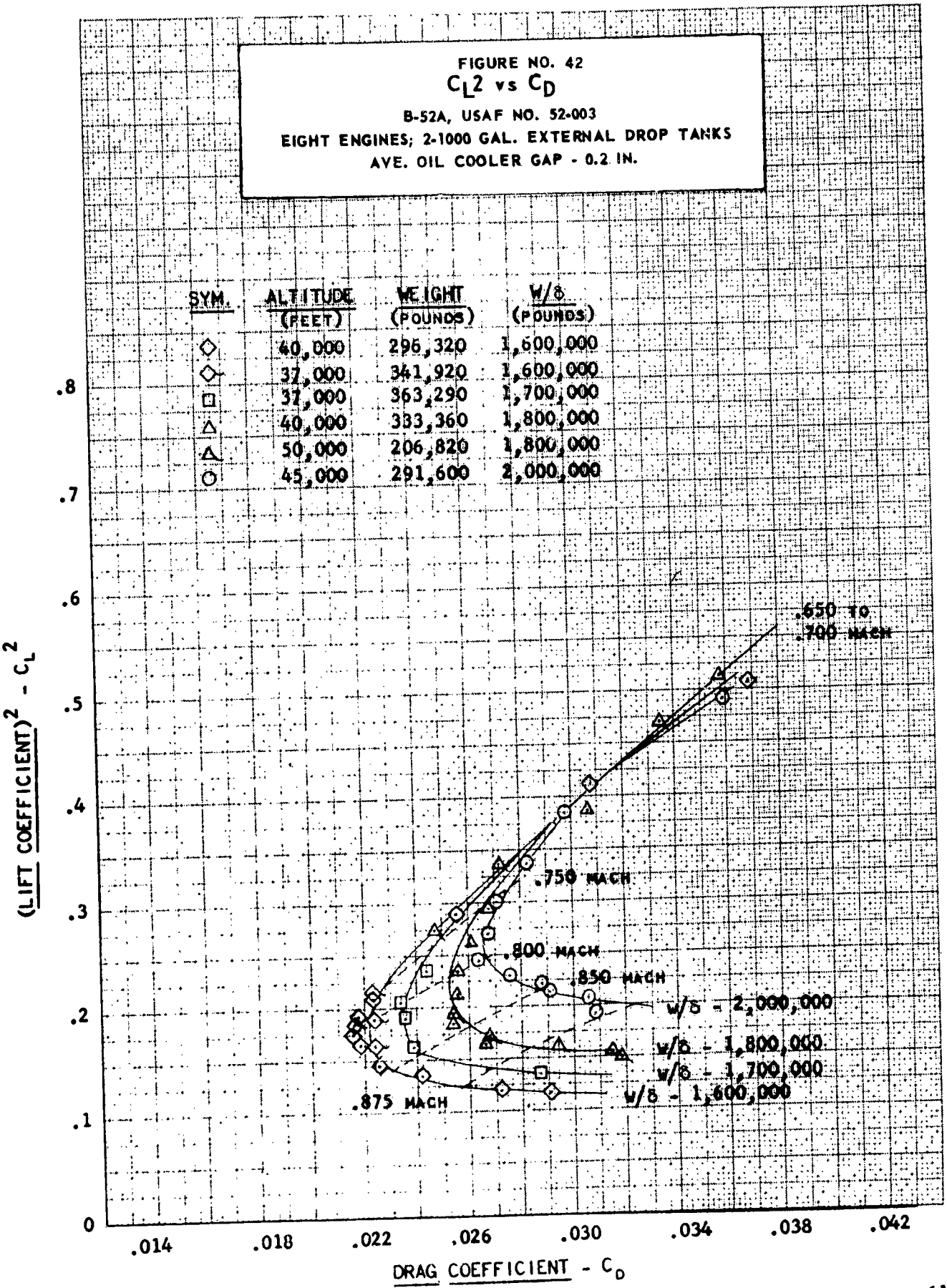


FIGURE NO. 42
C_L2 vs C_D
B-52A, USAF NO. 52-003
EIGHT ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
40,000 296,320 1,600,000
37,000 341,920 1,600,000
37,000 363,290 1,700,000
40,000 333,360 1,800,000
50,000 206,820 1,800,000
45,000 291,600 2,000,000
.650 TO .700 MACH
.750 MACH
.800 MACH
.850 MACH
.875 MACH
W/δ - 2,000,000
W/δ - 1,800,000
W/δ - 1,700,000
W/δ - 1,600,000
(LIFT COEFFICIENT)^2 - C_L^2
DRAG COEFFICIENT - C_D
0
.1
.2
.3
.4
.5
.6
.7
.8
.014
.018
.022
.026
.030
.034
.038
.042

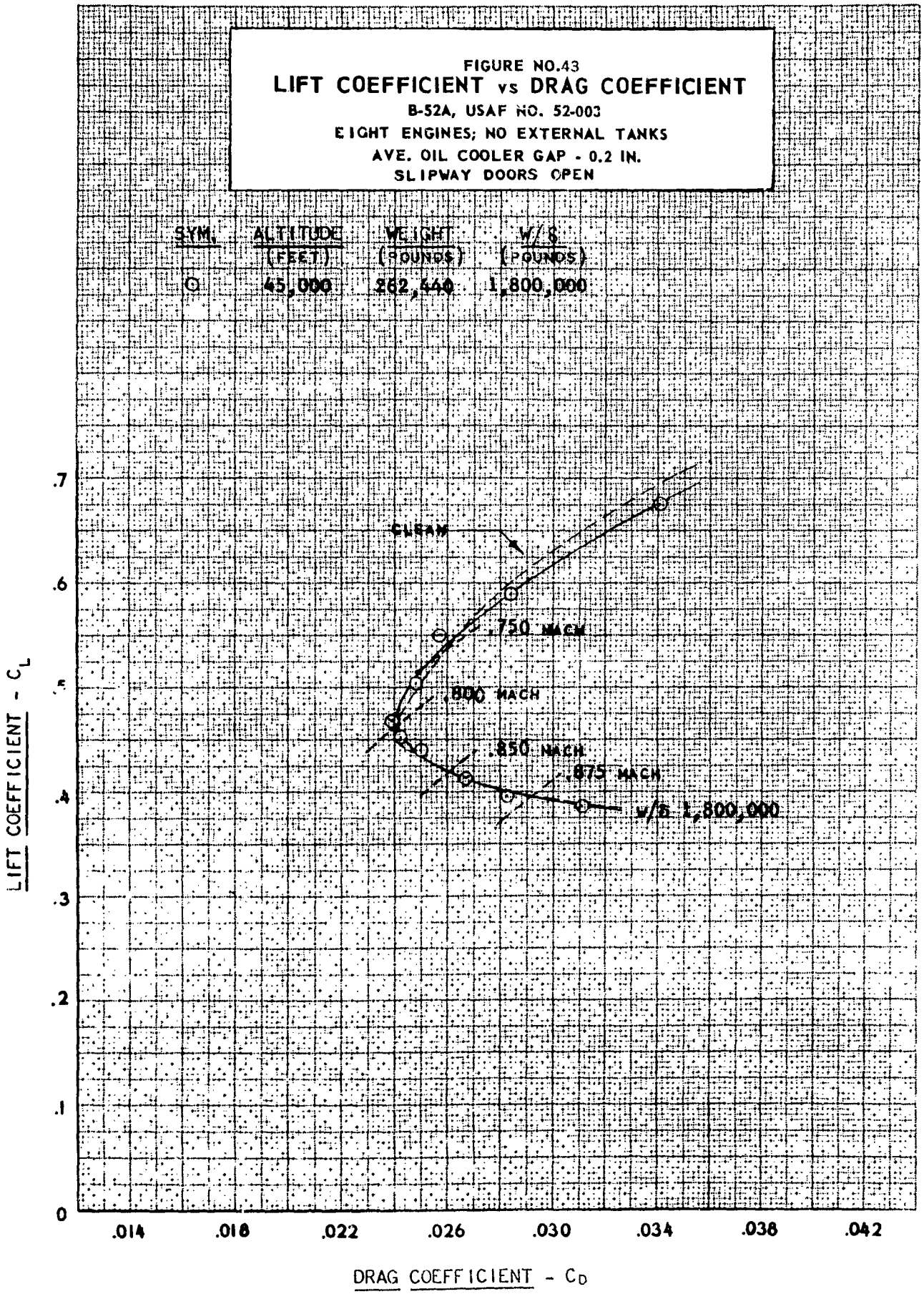


FIGURE NO.43
LIFT COEFFICIENT vs DRAG COEFFICIENT
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SLIPWAY DOORS OPEN
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/S (POUNDS)
45,000 262,440 1,800,000
CLEAN
.750 MACH
.800 MACH
.850 MACH
.875 MACH
W/S 1,800,000
LIFT COEFFICIENT - C_L
DRAG COEFFICIENT - C_D
0
.1
.2
.3
.4
.6
.7
.014
.018
.022
.026
.030
.034
.038
.042

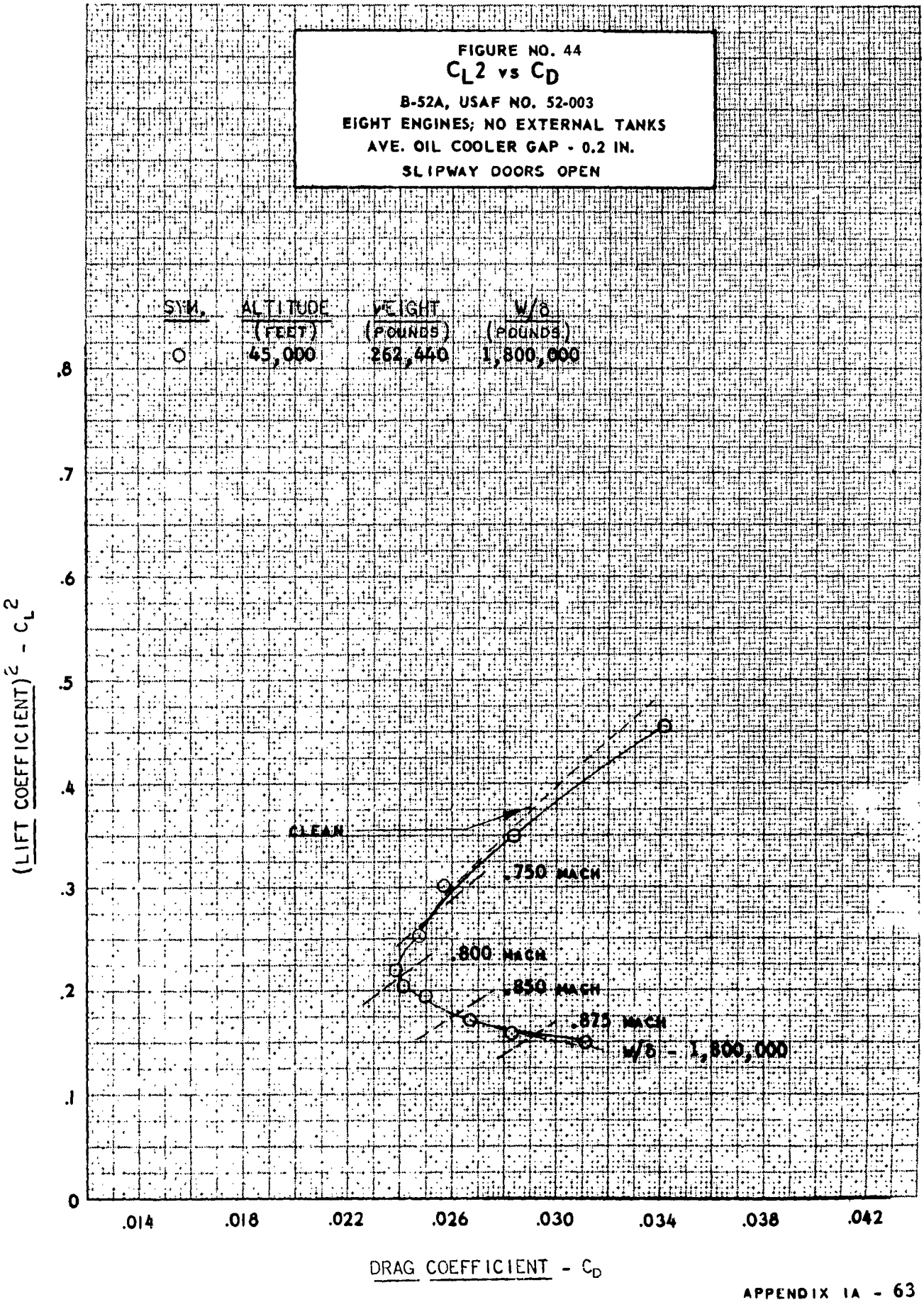


FIGURE NO. 44
C_L2 vs C_D
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SLIPWAY DOORS OPEN
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS)
○ 45,000 262,440 1,800,000
CLEAN
.750 MACH
.800 MACH
.850 MACH
.875 MACH
W/δ - 1,800,000
(LIFT COEFFICIENT)^2 - C_L^2
DRAG COEFFICIENT - C_D
0
.1
.2
.3
.4
.5
.6
.7
.8
.014
.018
.022
.026
.030
.034
.038
.042

FIGURE NO. 45

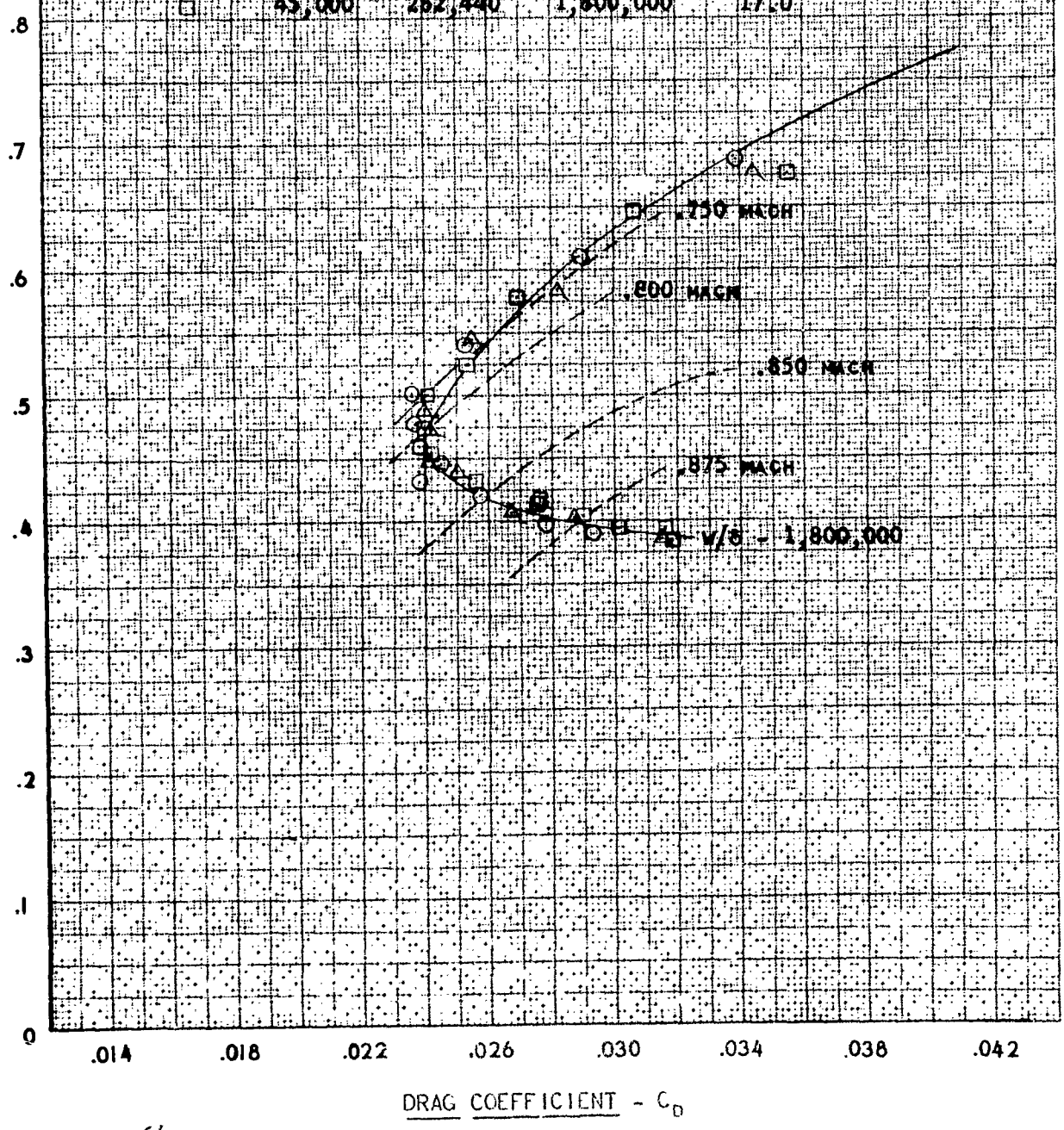
LIFT COEFFICIENT vs DRAG COEFFICIENT

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

C.G. POSITION NOTED

SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	C.G. POSITION (% MAC)
○	45,000	262,440	1,800,000	33.2
□	45,000	262,440	1,800,000	21.5
△	45,000	262,440	1,800,000	23.4
◻	45,000	262,440	1,800,000	17.0



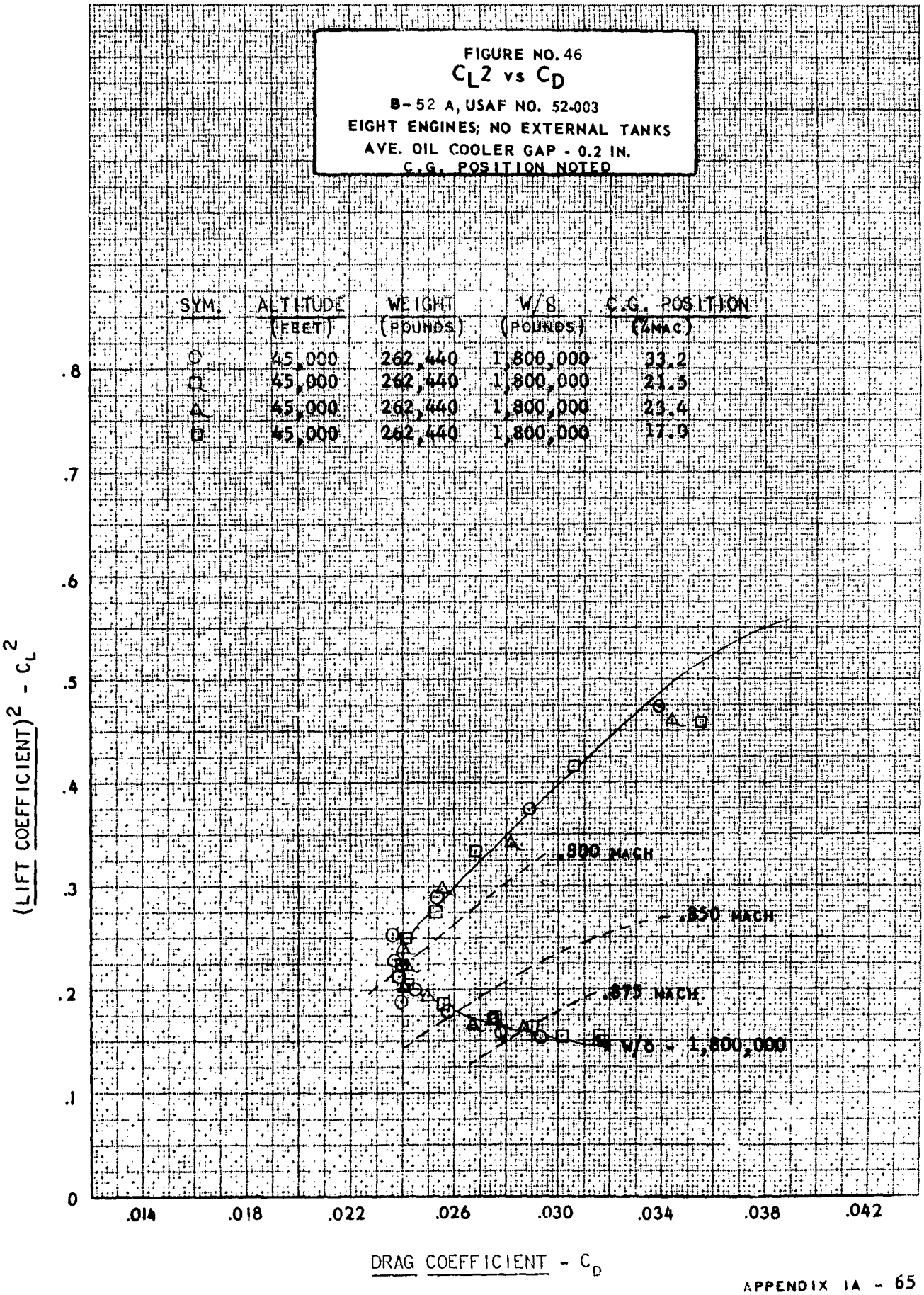


FIGURE NO. 46
C_L2 vs C_D
B-52 A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
C.G. POSITION NOTED
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/δ (POUNDS) C.G. POSITION (%MAC)
45,000 262,440 1,800,000 33.2
45,000 262,440 1,800,000 21.5
45,000 262,440 1,800,000 23.4
45,000 262,440 1,800,000 17.9
.800 MACH
.850 MACH
.875 MACH
W/δ - 1,800,000
(LIFT COEFFICIENT)^2 - C_L^2
DRAG COEFFICIENT - C_D
0
.1
.2
.3
.4
.5
.6
.7
.8
.014
.018
.022
.026
.030
.034
.038
.042

FIGURE NO. 47

AIRCRAFT DRAG COEFFICIENT

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.

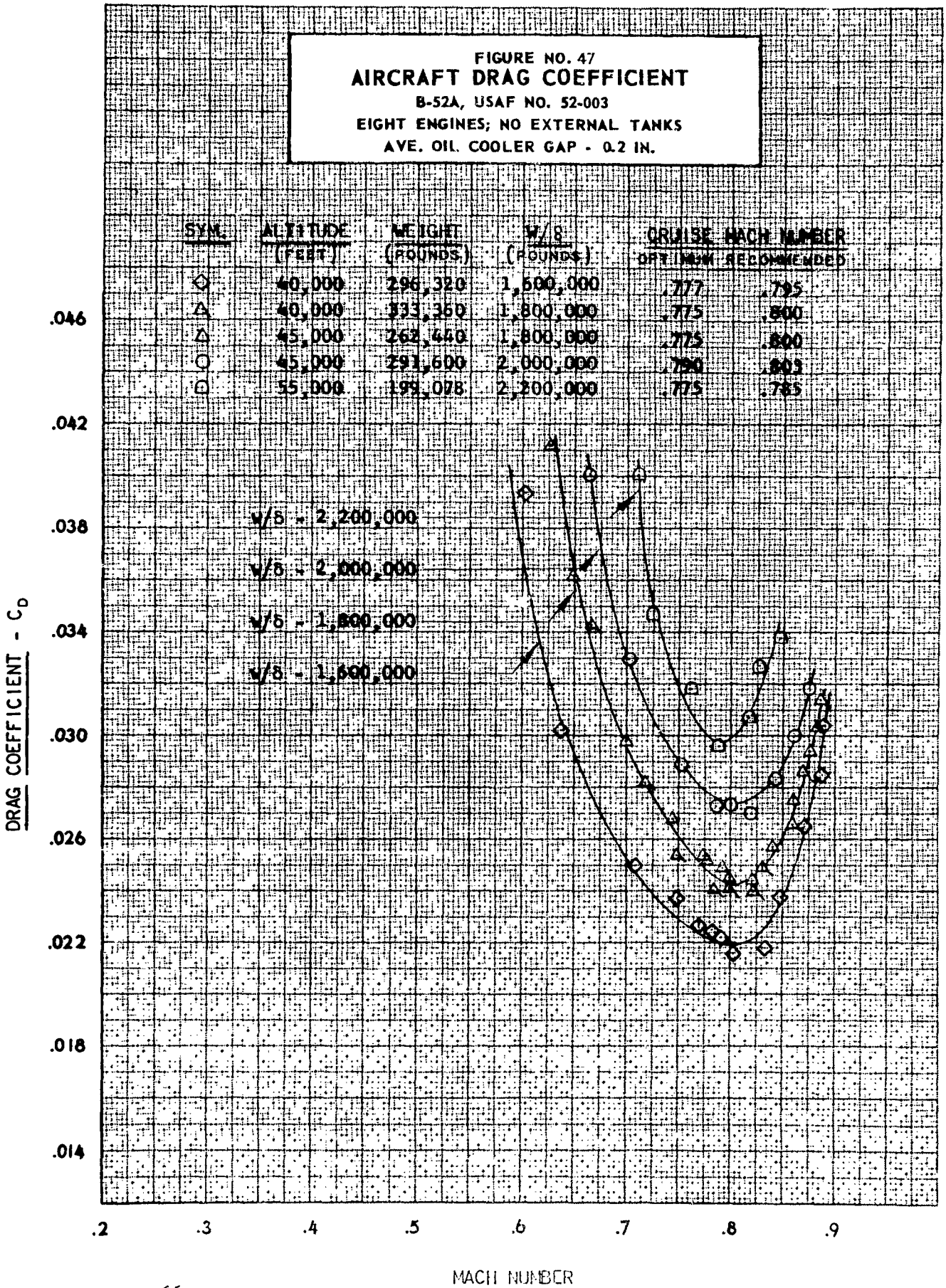


FIGURE NO. 48

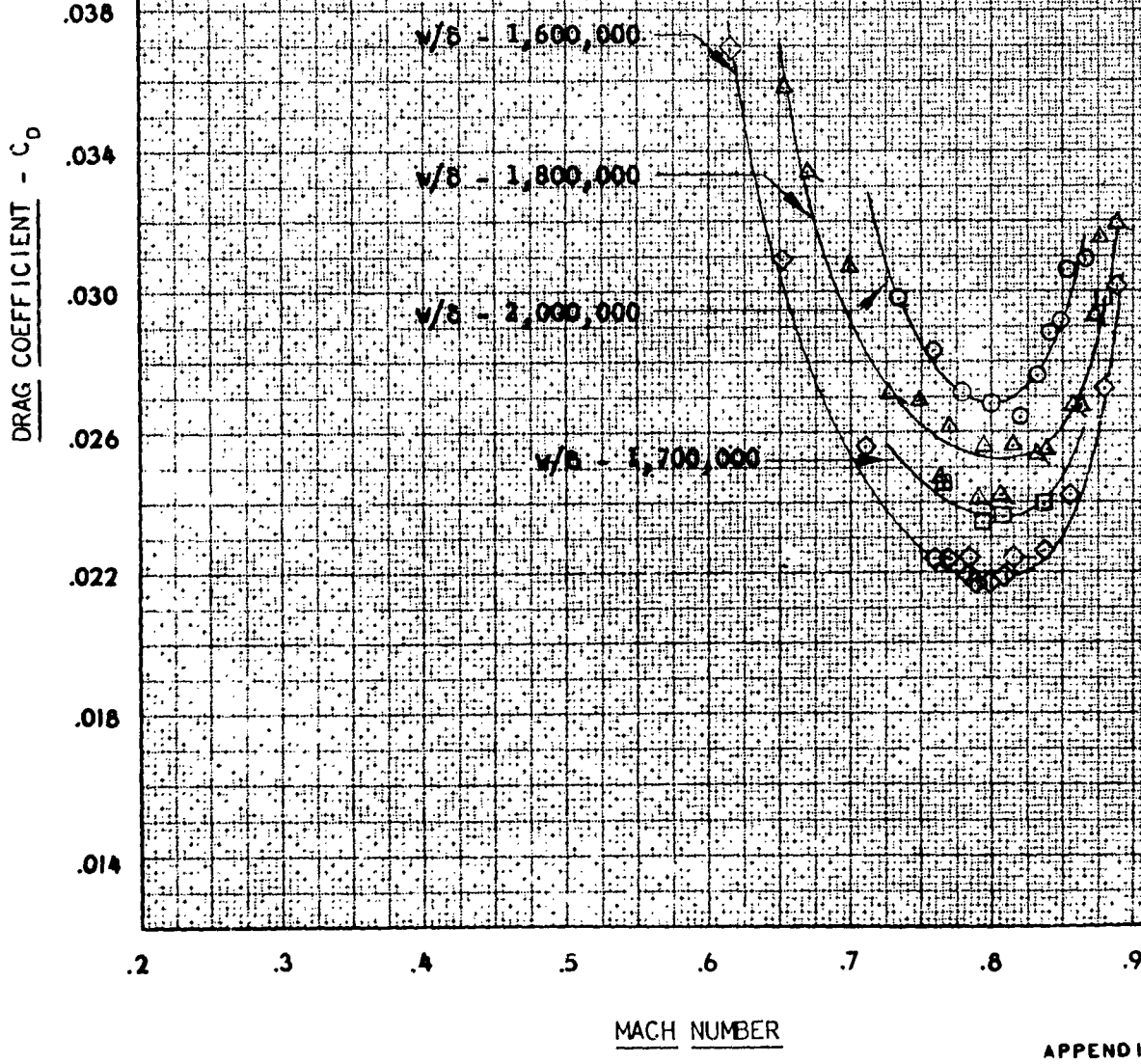
AIRCRAFT DRAG COEFFICIENT

B-52A, USAF NO. 52-003

EIGHT ENGINES; 2-1000 GAL. EXTERNAL DROP TANKS

AVE. OIL COOLER GAP - 0.2 IN.

SYM.	ALTITUDE (FEET)	WEIGHT (POUNDS)	W/δ (POUNDS)	CRUISE MACH NUMBER OPTIMUM	CRUISE MACH NUMBER RECOMMENDED
◇	37,000	341,920	1,600,000	.780	.800
◇	40,000	296,320	1,600,000	.780	.800
□	37,000	363,290	1,700,000	.780	.800
△	40,000	333,360	1,800,000	.785	.805
△	50,000	206,820	1,800,000	.785	.805
○	45,000	291,600	2,000,000	.785	.805



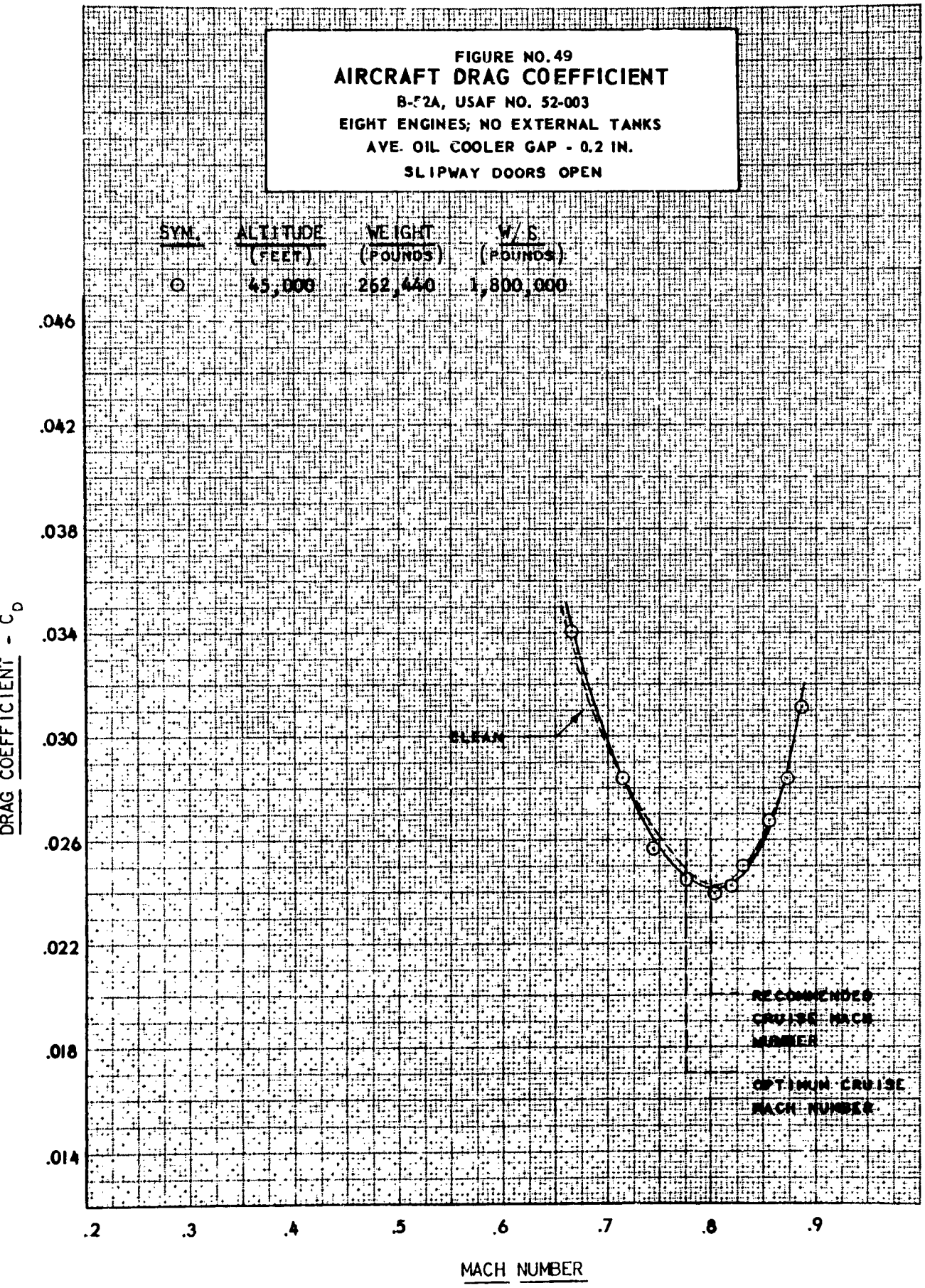


FIGURE NO. 49
AIRCRAFT DRAG COEFFICIENT
B-52A, USAF NO. 52-003
EIGHT ENGINES; NO EXTERNAL TANKS
AVE. OIL COOLER GAP - 0.2 IN.
SLIPWAY DOORS OPEN
SYM. ALTITUDE (FEET) WEIGHT (POUNDS) W/S (POUNDS)
45,000 262,440 1,800,000
CLEAN
RECOMMENDED CRUISE MACH NUMBER
OPTIMUM CRUISE MACH NUMBER
DRAG COEFFICIENT - C_D
.046
.042
.038
.034
.030
.026
.022
.018
.014
.2
.3
.4
.5
.6
.7
.8
.9
MACH NUMBER

FIGURE NO. 50

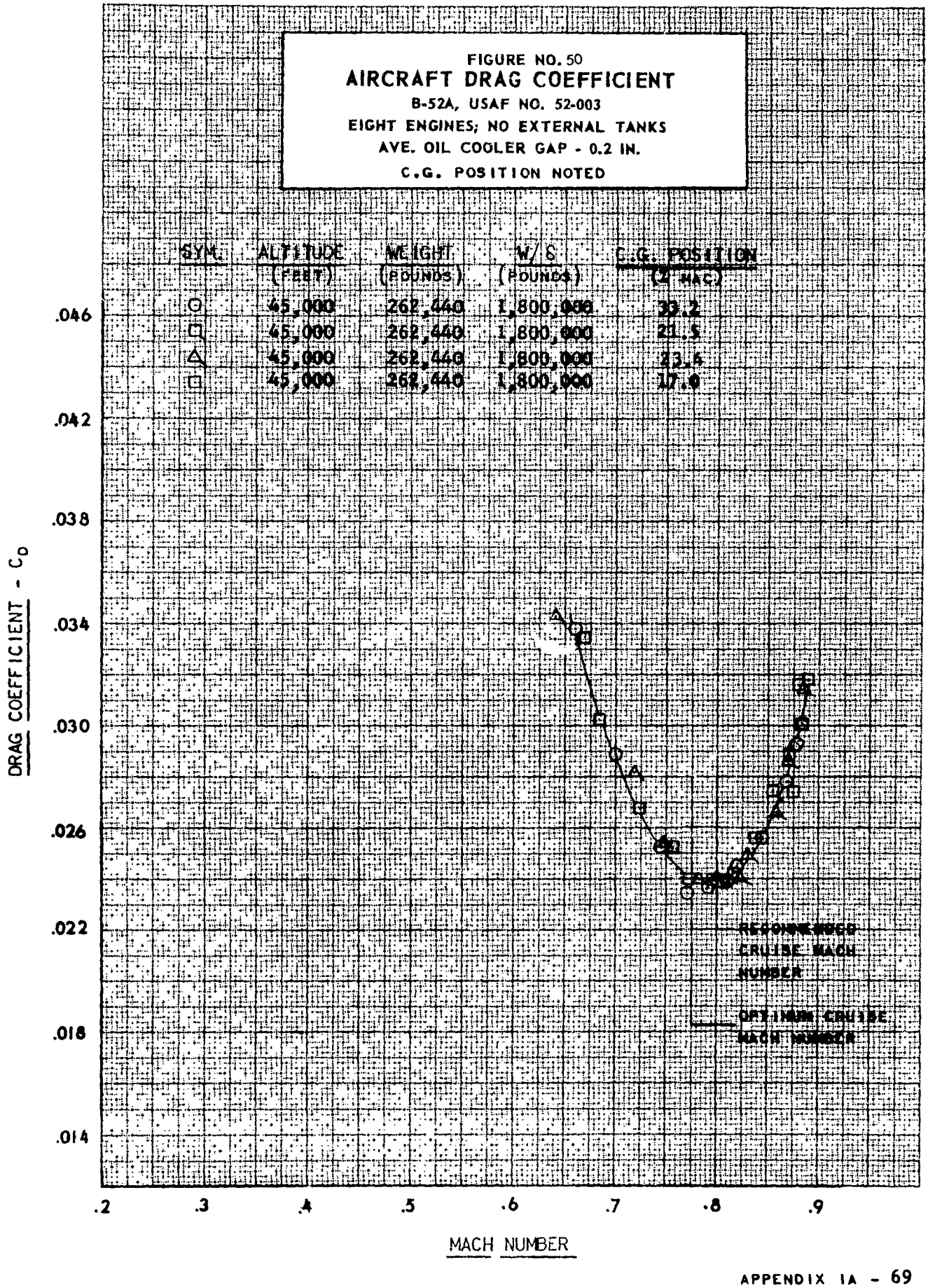
AIRCRAFT DRAG COEFFICIENT

B-52A, USAF NO. 52-003

EIGHT ENGINES; NO EXTERNAL TANKS

AVE. OIL COOLER GAP - 0.2 IN.

C.G. POSITION NOTED



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FOR CONVENIENCE OF

PRESENTING PLOTS

POWER PLANT

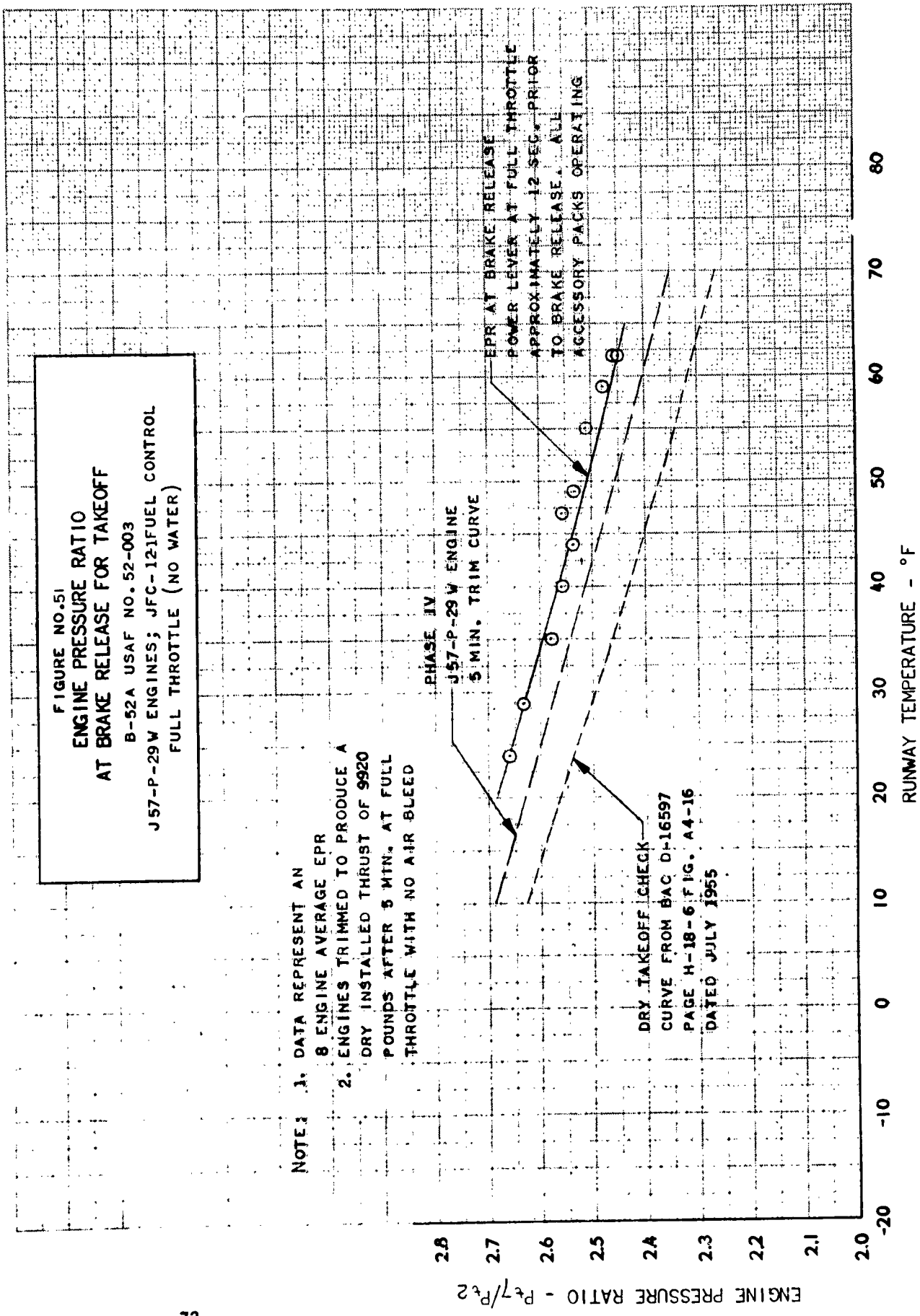


FIGURE NO.51
ENGINE PRESSURE RATIO
AT BRAKE RELEASE FOR TAKEOFF
B-52A USAF NO. 52-003
J57-P-29W ENGINES; JFC-121FUEL CONTROL
FULL THROTTLE (NO WATER)
NOTE: 1. DATA REPRESENT AN 8 ENGINE AVERAGE EPR
2. ENGINES TRIMMED TO PRODUCE A DRY INSTALLED THRUST OF 9920 POUNDS AFTER 5 MIN. AT FULL THROTTLE WITH NO AIR BLEED
PHASE IV
J57-P-29W ENGINE
5 MIN. TRIM CURVE
EPR AT BRAKE RELEASE
POWER LEVER AT FULL THROTTLE
APPROXIMATELY 12 SEC. PRIOR
TO BRAKE RELEASE. ALL
ACCESSORY PACKS OPERATING
DRY TAKEOFF CHECK
CURVE FROM BAC D-16597
PAGE H-18-6 FIG. A4-16
DATED JULY 1955
ENGINE PRESSURE RATIO - P_{t7}/P_{t2}
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
-20
-10
0
10
20
30
40
50
60
70
80
RUNWAY TEMPERATURE - °F

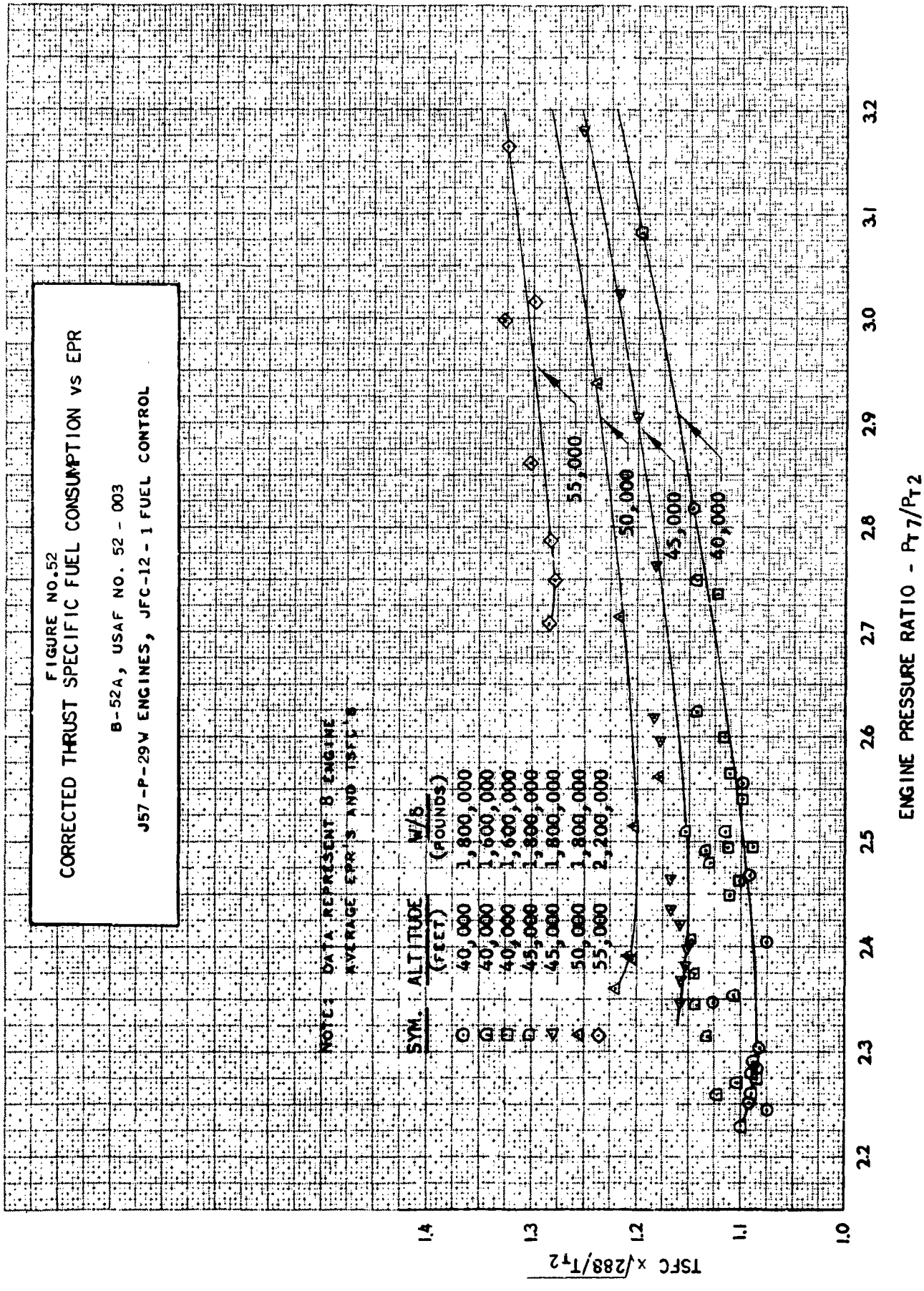


FIGURE NO.52
CORRECTED THRUST SPECIFIC FUEL CONSUMPTION vs EPR
B-52A, USAF NO. 52 - 003
J57-P-29W ENGINES, JFC-12 - 1 FUEL CONTROL
NOTE: DATA REPRESENT 8 ENGINE AVERAGE EPR'S AND TSFC'S
SYM. ALTITUDE (FEET) W/δ (POUNDS)
40,000 1,800,000
40,000 1,600,000
40,000 1,600,000
45,000 1,800,000
45,000 1,800,000
50,000 1,800,000
55,000 2,200,000
55,000
50,000
45,000
40,000
TSFC x √288/T_T2
1.0
1.1
1.2
1.3
1.4
ENGINE PRESSURE RATIO - P_T7/P_T2
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2

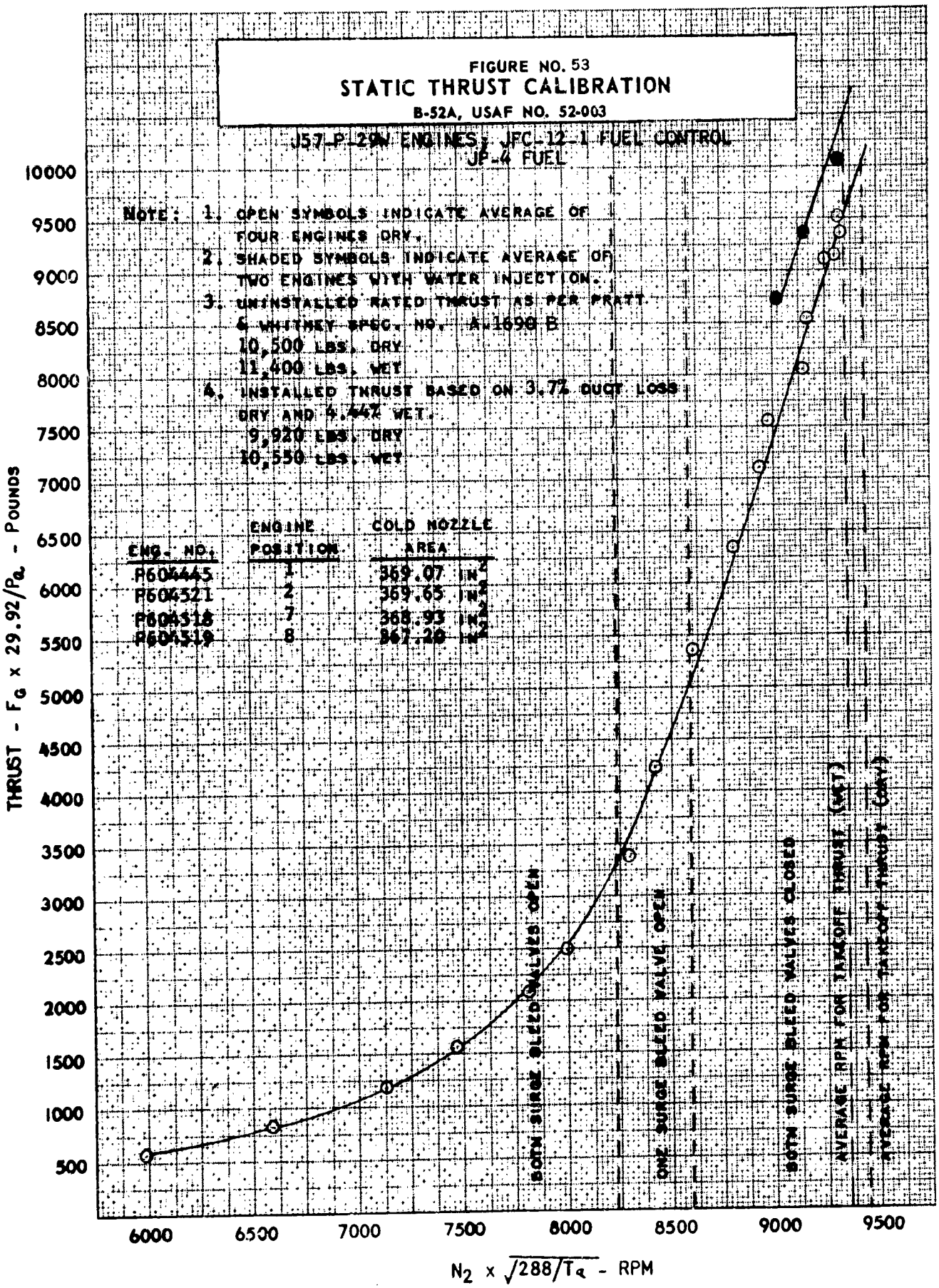


FIGURE NO. 53
STATIC THRUST CALIBRATION
B-52A, USAF NO. 52-003
J57-P-29W ENGINES, JFC-12-1 FUEL CONTROL
JP-4 FUEL
NOTE: 1. OPEN SYMBOLS INDICATE AVERAGE OF FOUR ENGINES DRY.
2. SHADED SYMBOLS INDICATE AVERAGE OF TWO ENGINES WITH WATER INJECTION.
3. UNINSTALLED RATED THRUST AS PER PRATT & WHITNEY SPEC. NO. A-1690 B
10,500 LBS. DRY
11,400 LBS. WET
4. INSTALLED THRUST BASED ON 3.7% DUCT LOSS DRY AND 4.44% WET.
9,920 LBS. DRY
10,550 LBS. WET
ENG. NO. | ENGINE POSITION | COLD NOZZLE AREA
P604445 | 1 | 369.07 IN²
P604521 | 2 | 369.65 IN²
P604518 | 7 | 368.93 IN²
P604519 | 8 | 367.20 IN²
BOTH SURGE BLEED VALVES OPEN
ONE SURGE BLEED VALVE OPEN
BOTH SURGE BLEED VALVES CLOSED
AVERAGE RPM FOR TAKEOFF THRUST (WET)
AVERAGE RPM FOR TAKEOFF THRUST (DRY)
THRUST - $F_G \times 29.92/P_a$ - POUNDS
10000
9500
9000
8500
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
6000
6500
7000
7500
8000
8500
9000
9500
$N_2 \times \sqrt{288/T_a}$ - RPM

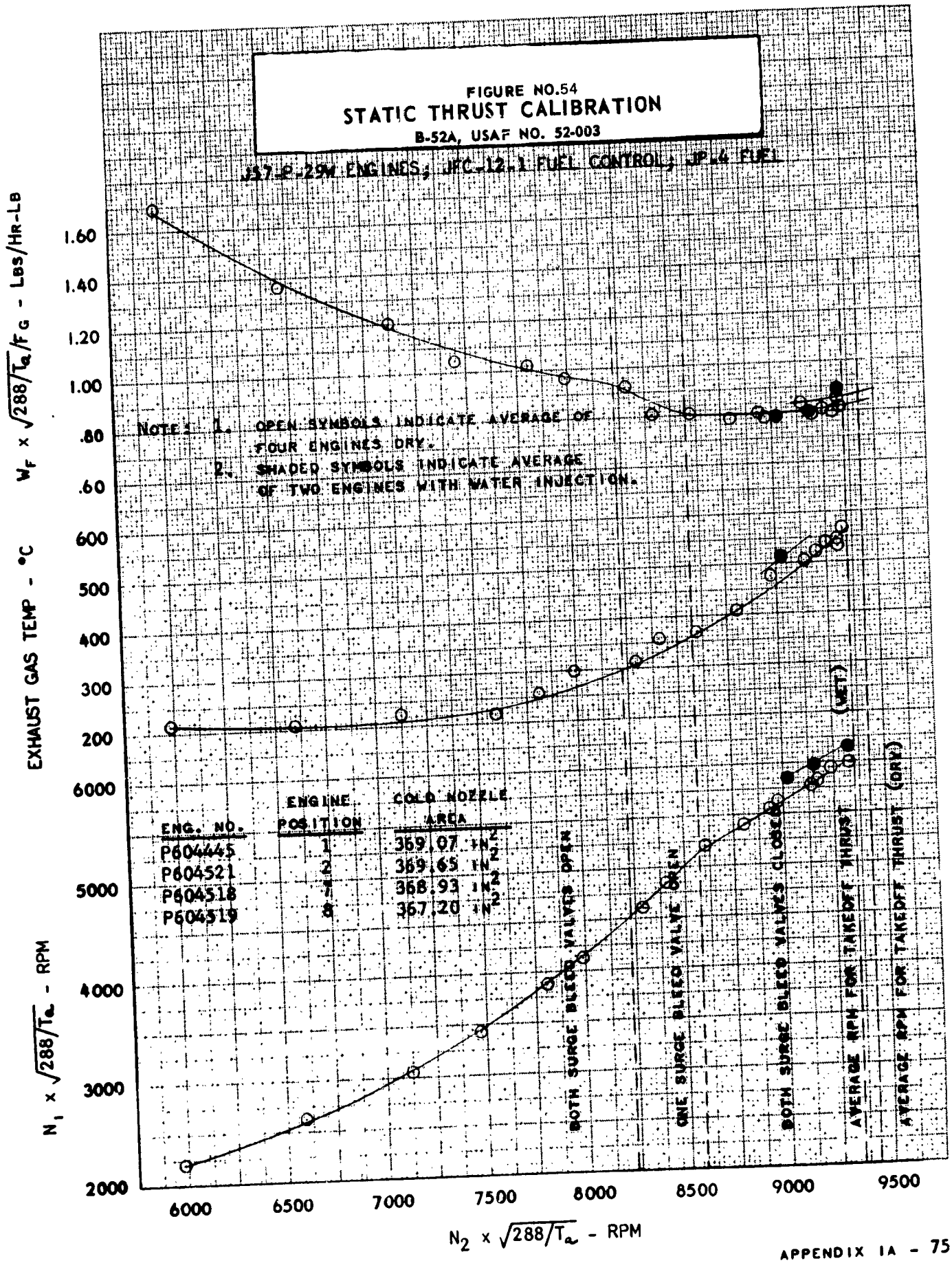


FIGURE NO.54
STATIC THRUST CALIBRATION
B-52A, USAF NO. 52-003
J57-P-29W ENGINES; JFC-12-1 FUEL CONTROL; JP-4 FUEL
NOTE: 1. OPEN SYMBOLS INDICATE AVERAGE OF FOUR ENGINES DRY.
2. SHADED SYMBOLS INDICATE AVERAGE OF TWO ENGINES WITH WATER INJECTION.
ENG. NO. | ENGINE POSITION | COLD NOZZLE AREA
P604445 | 1 | 369.07 IN²
P604521 | 2 | 369.65 IN²
P604518 | 4 | 368.93 IN²
P604519 | 8 | 367.20 IN²
BOTH SURGE BLEED VALVES OPEN
ONE SURGE BLEED VALVE OPEN
BOTH SURGE BLEED VALVES CLOSED
AVERAGE RPM FOR TAKEOFF THRUST (WET)
AVERAGE RPM FOR TAKEOFF THRUST (DRY)
$W_F \times \sqrt{288/T_a}/F_G$ - LBS/HR-LB
EXHAUST GAS TEMP - °C
$N_1 \times \sqrt{288/T_a}$ - RPM
$N_2 \times \sqrt{288/T_a}$ - RPM
1.60
1.40
1.20
1.00
.80
.60
600
500
400
300
200
6000
5000
4000
3000
2000
6000
6500
7000
7500
8000
8500
9000
9500

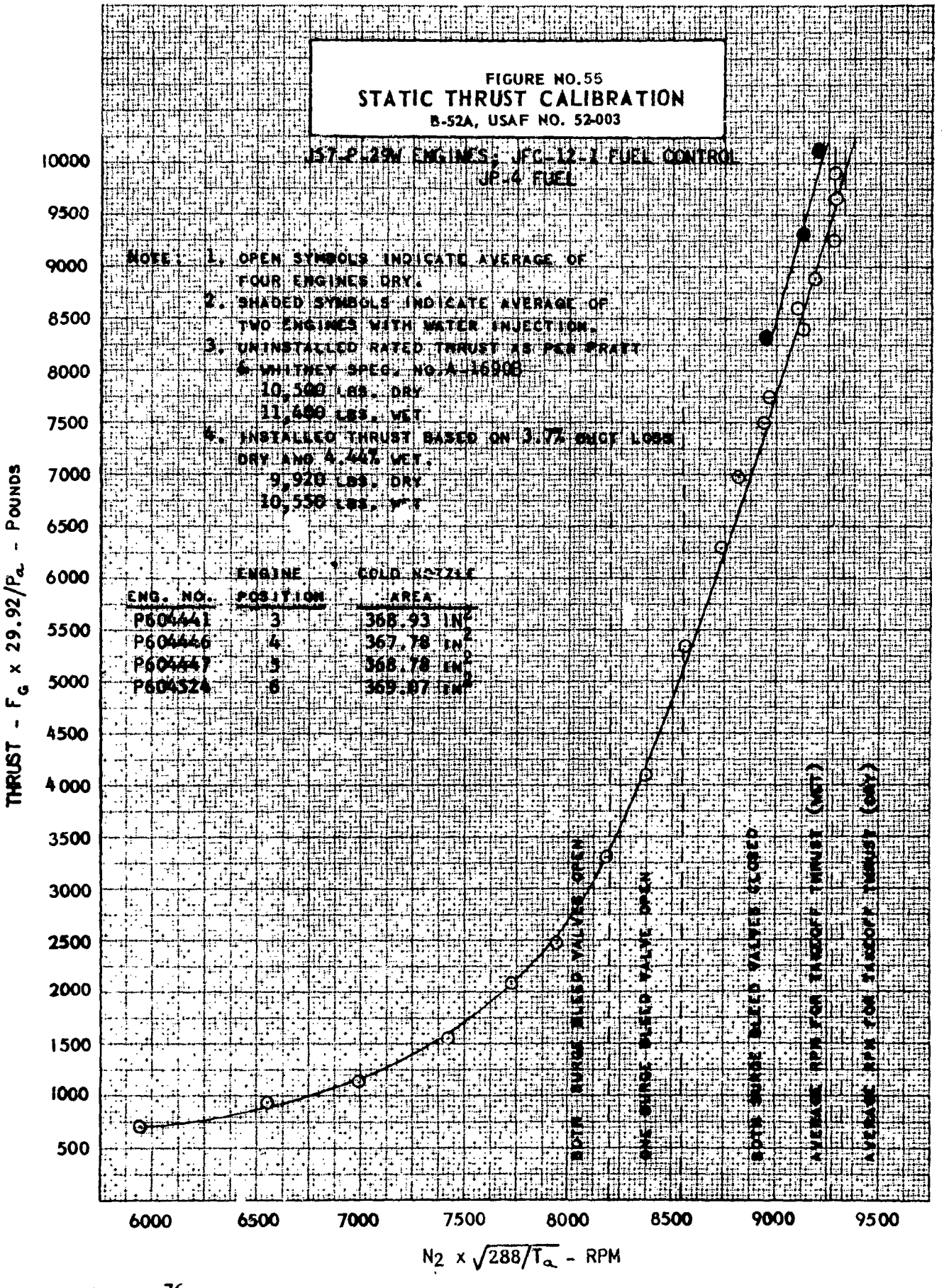


FIGURE NO.55
STATIC THRUST CALIBRATION
B-52A, USAF NO. 52-003
J57-P-29W ENGINES; JFC-12-1 FUEL CONTROL
JP-4 FUEL
NOTE: 1. OPEN SYMBOLS INDICATE AVERAGE OF FOUR ENGINES DRY.
2. SHADED SYMBOLS INDICATE AVERAGE OF TWO ENGINES WITH WATER INJECTION.
3. UNINSTALLED RATED THRUST AS PER PRATT & WHITNEY SPEC. NO.A-16908
10,500 LBS. DRY
11,400 LBS. WET
4. INSTALLED THRUST BASED ON 3.7% DUCT LOSS DRY AND 4.44% WET.
9,920 LBS. DRY
10,550 LBS. WET
ENG. NO. | ENGINE POSITION | COLD NOZZLE AREA
P604441 | 3 | 368.93 IN²
P604446 | 4 | 367.78 IN²
P604447 | 5 | 368.78 IN²
P604524 | 6 | 369.07 IN²
BOTH BURSE BLEED VALVES OPEN
ONE BURSE BLEED VALVE OPEN
BOTH BURSE BLEED VALVES CLOSED
AVERAGE RPM FOR TAKEOFF THRUST (WET)
AVERAGE RPM FOR TAKEOFF THRUST (DRY)
THRUST - $F_G \times 29.92/P_a$ - POUNDS
$N_2 \times \sqrt{288/T_a}$ - RPM
10000
9500
9000
8500
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
6000
6500
7000
7500
8000
8500
9000
9500

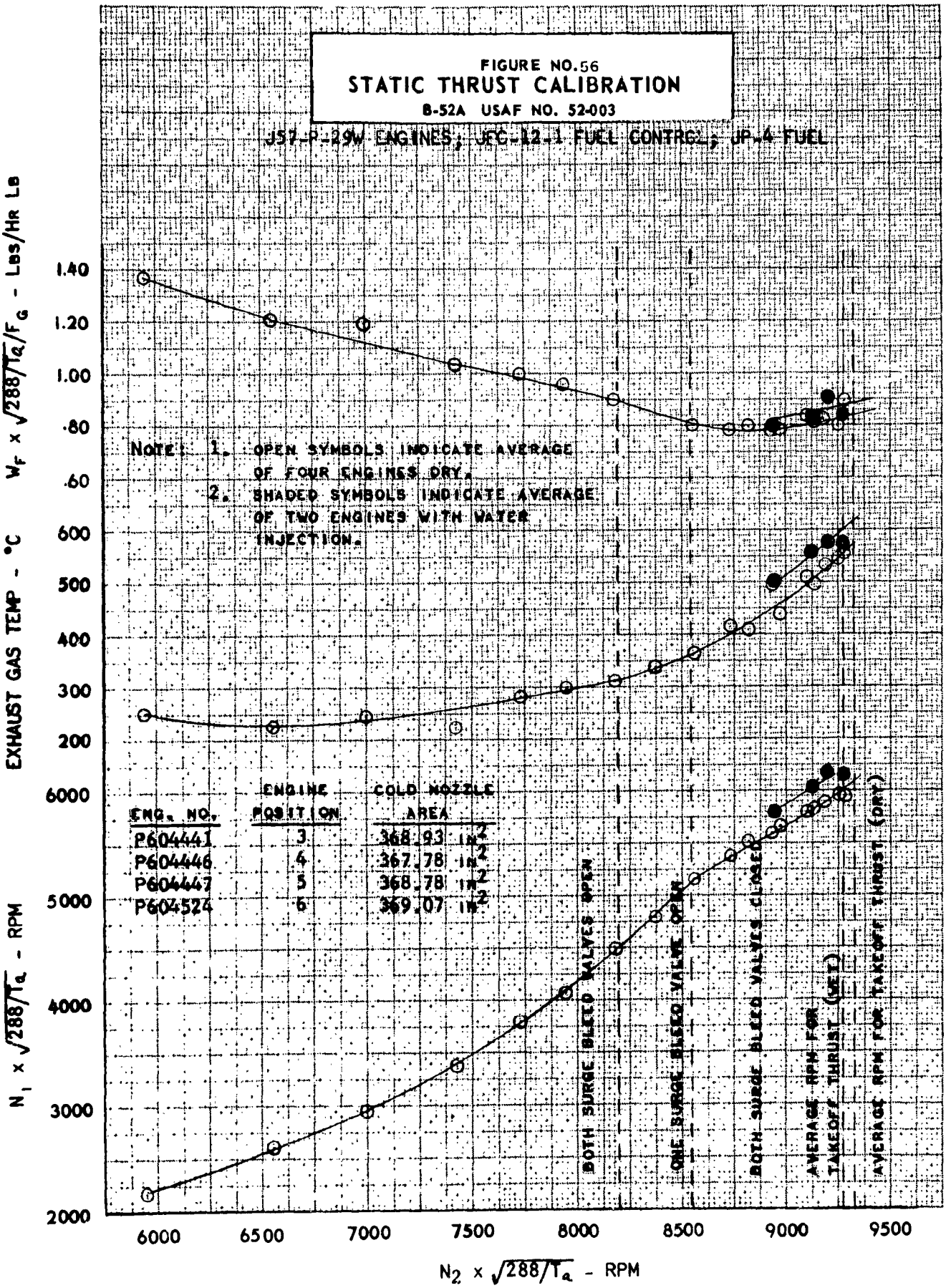


FIGURE NO. 56
STATIC THRUST CALIBRATION
B-52A USAF NO. 52-003
J57-P-29W ENGINES; JFC-12-1 FUEL CONTROL; JP-4 FUEL
NOTE: 1. OPEN SYMBOLS INDICATE AVERAGE OF FOUR ENGINES DRY.
2. SHADED SYMBOLS INDICATE AVERAGE OF TWO ENGINES WITH WATER INJECTION.
ENG. NO. | ENGINE POSITION | COLD NOZZLE AREA
P604441 | 3 | 368.93 IN²
P604446 | 4 | 367.78 IN²
P604447 | 5 | 368.78 IN²
P604524 | 6 | 369.07 IN²
BOTH SURGE BLEED VALVES OPEN
ONE SURGE BLEED VALVE OPEN
BOTH SURGE BLEED VALVES CLOSED
AVERAGE RPM FOR TAKEOFF THRUST (WET)
AVERAGE RPM FOR TAKEOFF THRUST (DRY)
EXHAUST GAS TEMP - °C
$W_F \times \sqrt{288/T_a}/F_G$ - LBS/HR LB
$N_1 \times \sqrt{288/T_a}$ - RPM
$N_2 \times \sqrt{288/T_a}$ - RPM
1.40
1.20
1.00
.80
.60
600
500
400
300
200
6000
5000
4000
3000
2000
6000
6500
7000
7500
8000
8500
9000
9500

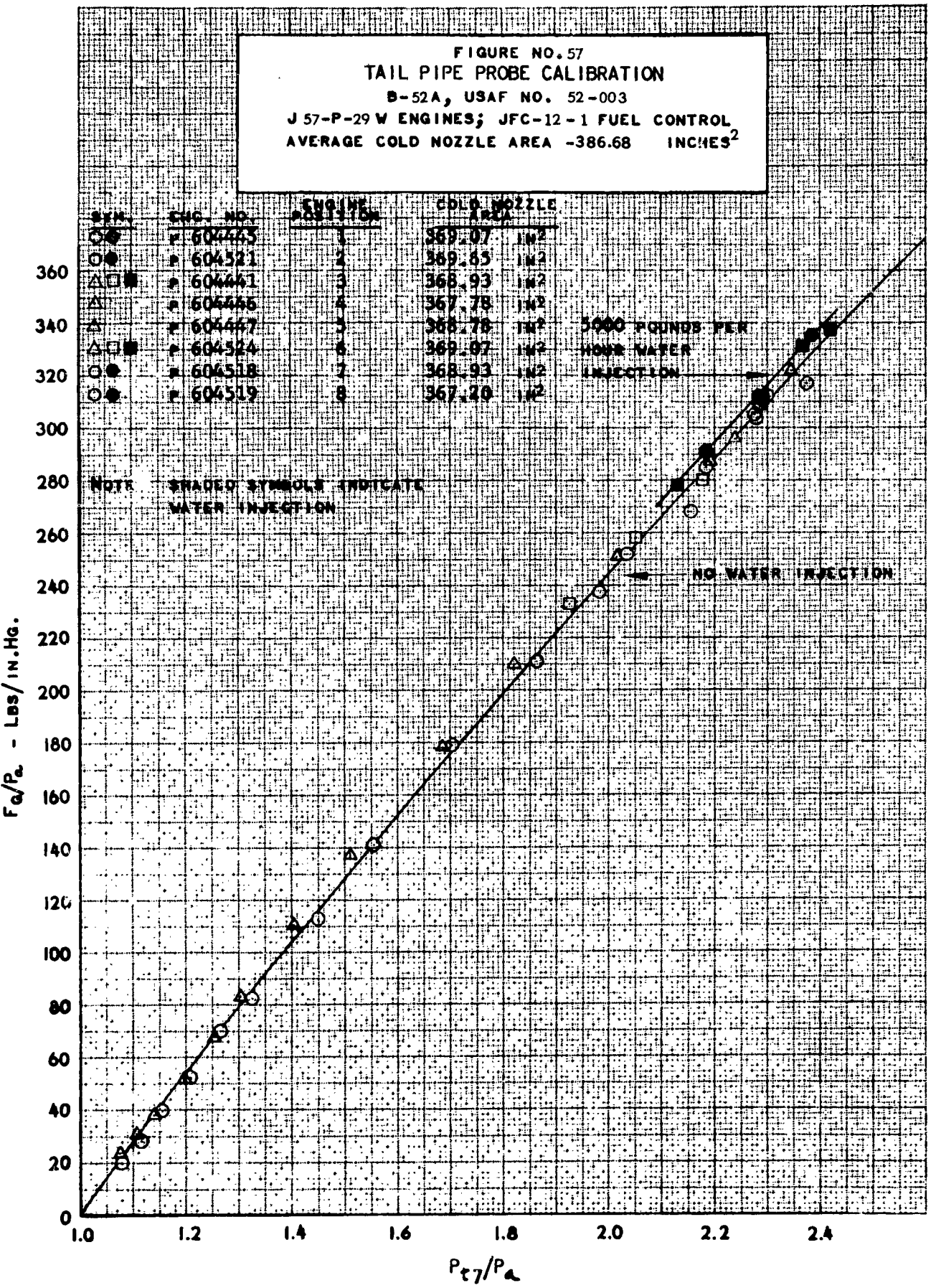


FIGURE NO. 57
TAIL PIPE PROBE CALIBRATION
B-52A, USAF NO. 52-003
J 57-P-29 W ENGINES; JFC-12-1 FUEL CONTROL
AVERAGE COLD NOZZLE AREA -386.68 INCHES²
SYM. ENG. NO. ENGINE POSITION COLD NOZZLE AREA
604445 1 369.07 IN²
604521 2 369.65 IN²
604441 3 368.93 IN²
604446 4 367.78 IN²
604447 5 368.78 IN²
604524 6 369.07 IN²
604518 7 368.93 IN²
604519 8 367.20 IN²
5000 POUNDS PER HOUR WATER INJECTION
NO WATER INJECTION
NOTE SHADED SYMBOLS INDICATE WATER INJECTION
F_a/P_a - LBS/IN.HG.
P_{t7}/P_a
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4

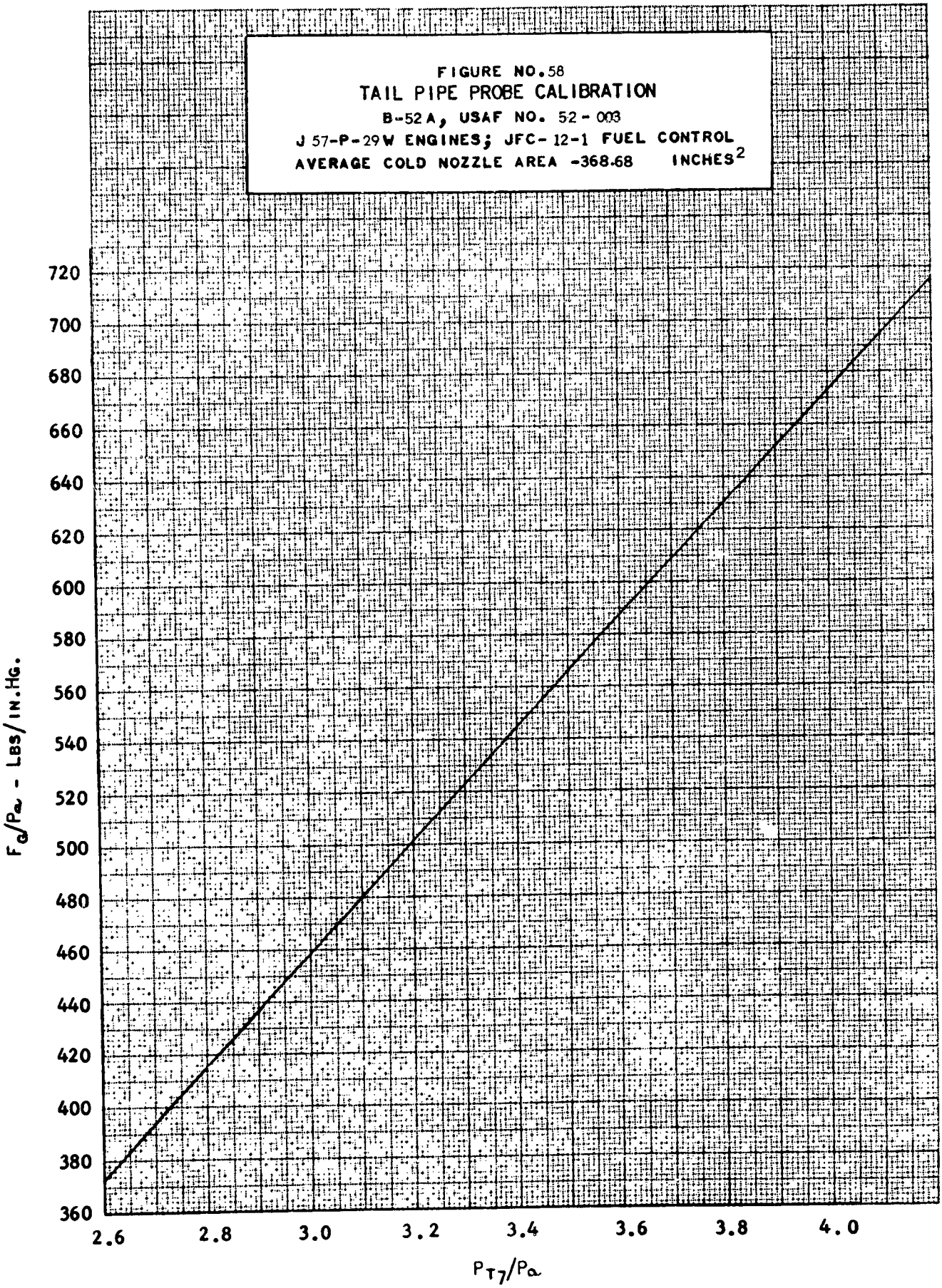


FIGURE NO. 58
TAIL PIPE PROBE CALIBRATION
B-52A, USAF NO. 52-003
J 57-P-29W ENGINES; JFC-12-1 FUEL CONTROL
AVERAGE COLD NOZZLE AREA -368.68 INCHES²
720
700
680
660
640
620
600
580
560
540
520
500
480
460
440
420
400
380
360
Fa/Pa - LBS/IN.HG.
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
PT7/Pa

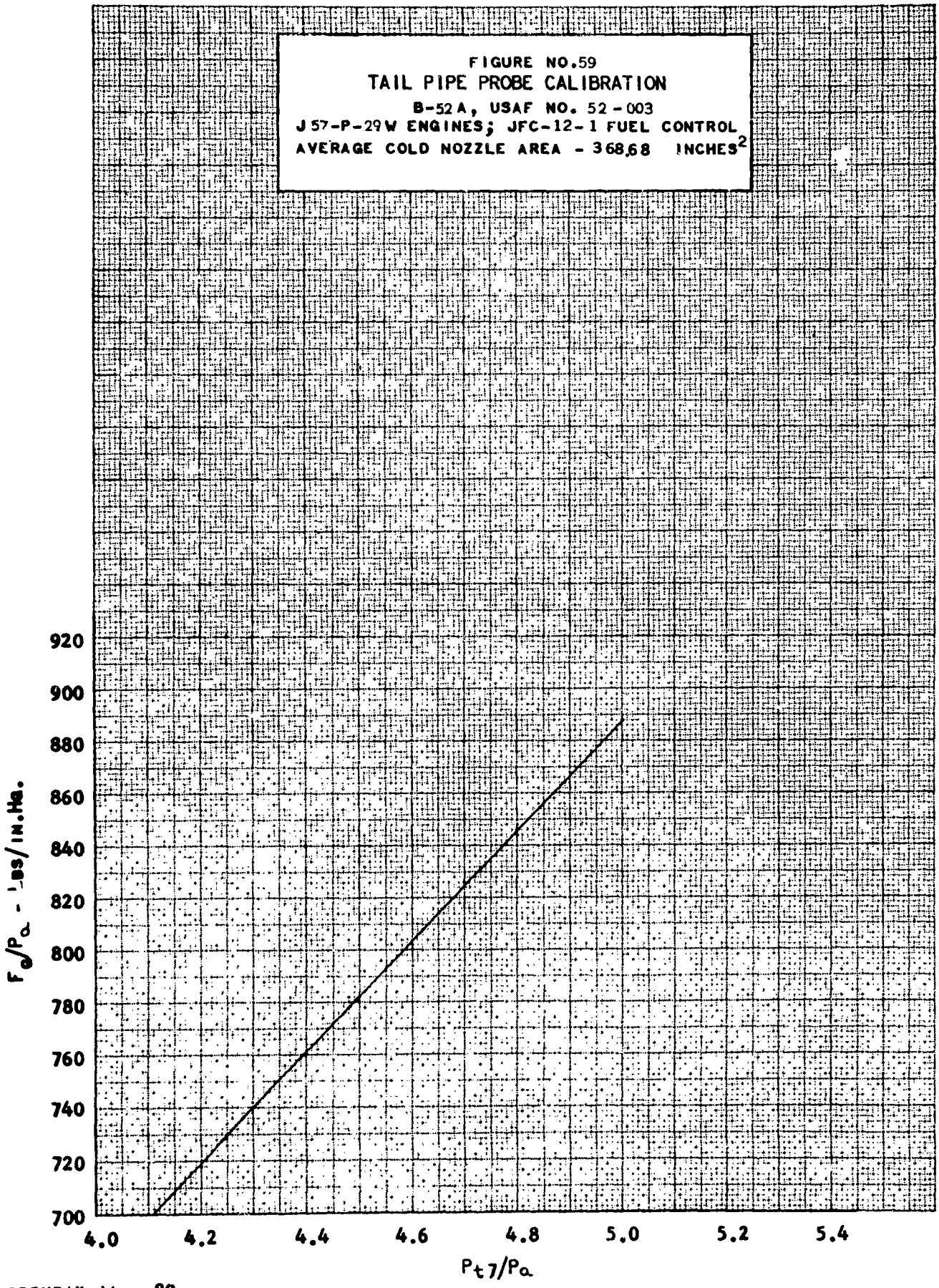


FIGURE NO.59
TAIL PIPE PROBE CALIBRATION
B-52A, USAF NO. 52-003
J57-P-29W ENGINES; JFC-12-1 FUEL CONTROL
AVERAGE COLD NOZZLE AREA - 368.68 INCHES2
920
900
880
860
840
820
800
780
760
740
720
700
Fg/Pa - LBS/IN.Hg.
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
Pt7/Pa

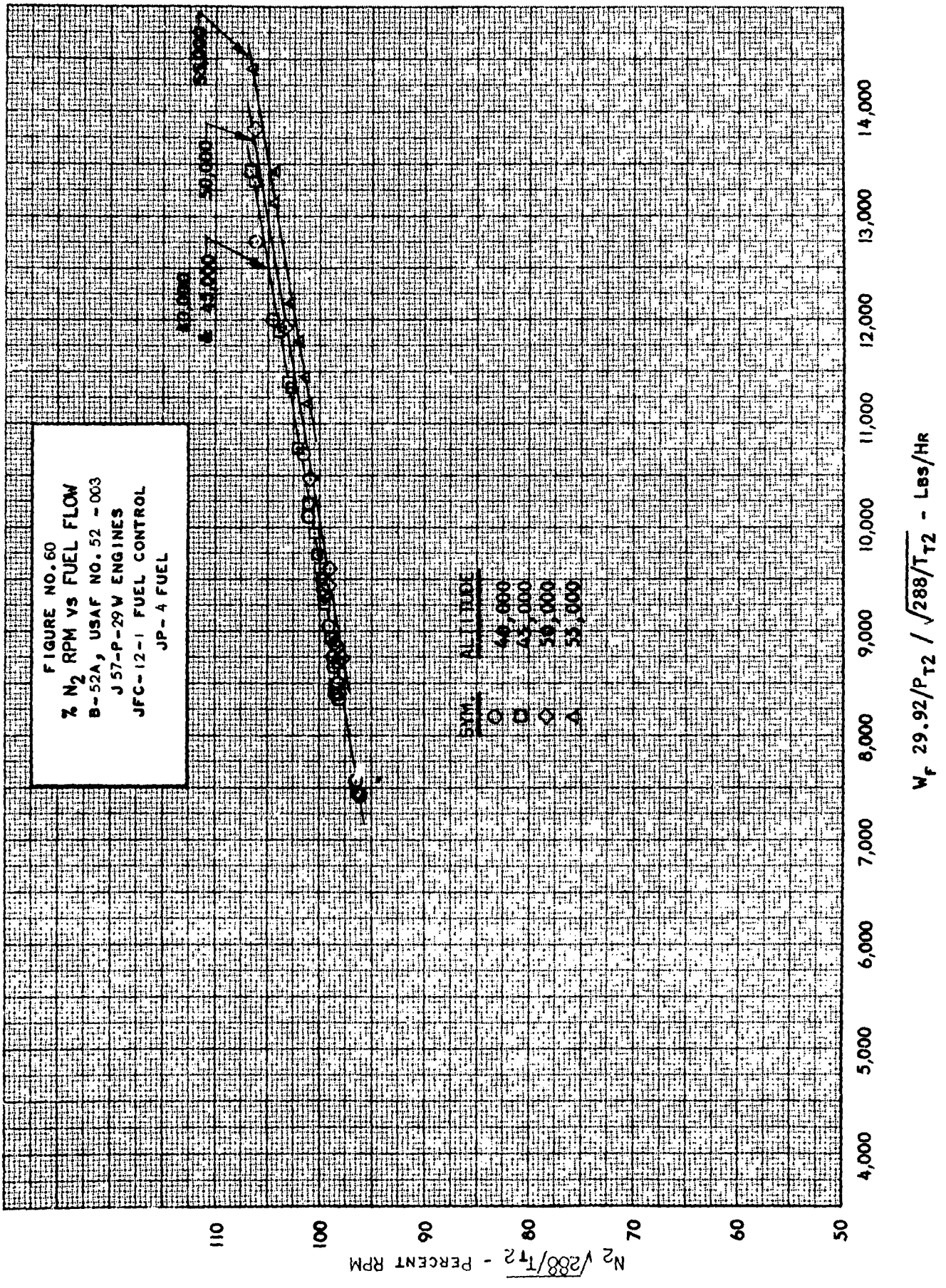


FIGURE NO. 60
% N_2 RPM vs FUEL FLOW
B-52A, USAF NO. 52-003
J57-P-29W ENGINES
JFC-12-1 FUEL CONTROL
JP-4 FUEL
SYM. ALTITUDE
40,000
43,000
50,000
53,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
11,000
12,000
13,000
14,000
W_F 29.92/P_{T2} / $\sqrt{288/T_{T2}}$ - LBS/HR
110
100
90
80
70
60
50
N_2 $\sqrt{288/T_{T2}}$ - PERCENT RPM

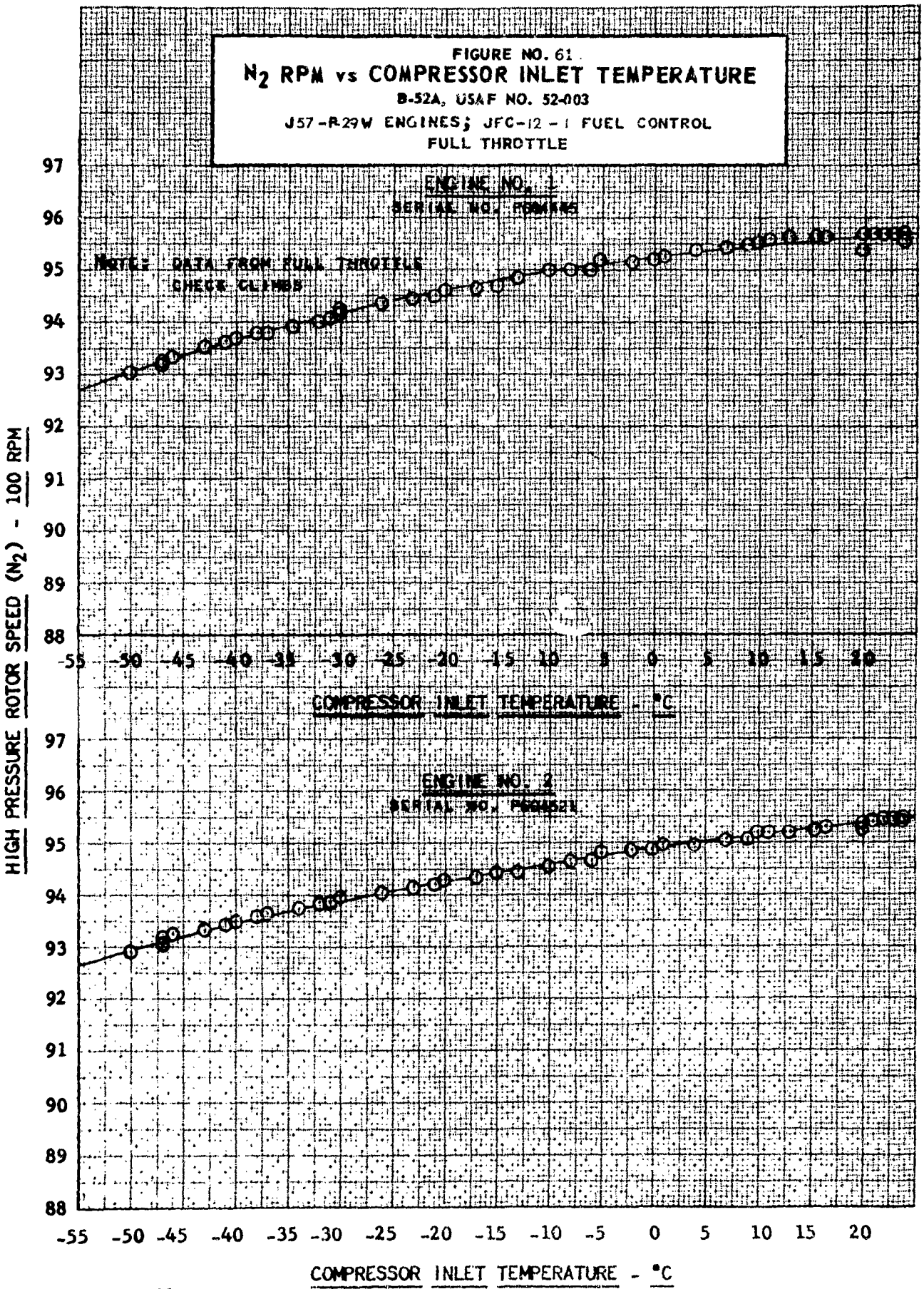


FIGURE NO. 61
N_2 RPM vs COMPRESSOR INLET TEMPERATURE
B-52A, USAF NO. 52-003
J57-P29W ENGINES; JFC-12-1 FUEL CONTROL
FULL THROTTLE
ENGINE NO. 1
NOTE: DATA FROM FULL THROTTLE CHECK CLIMBS
ENGINE NO. 2
HIGH PRESSURE ROTOR SPEED (N_2) - 100 RPM
COMPRESSOR INLET TEMPERATURE - °C
97
96
95
94
93
92
91
90
89
88
-55 -50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20

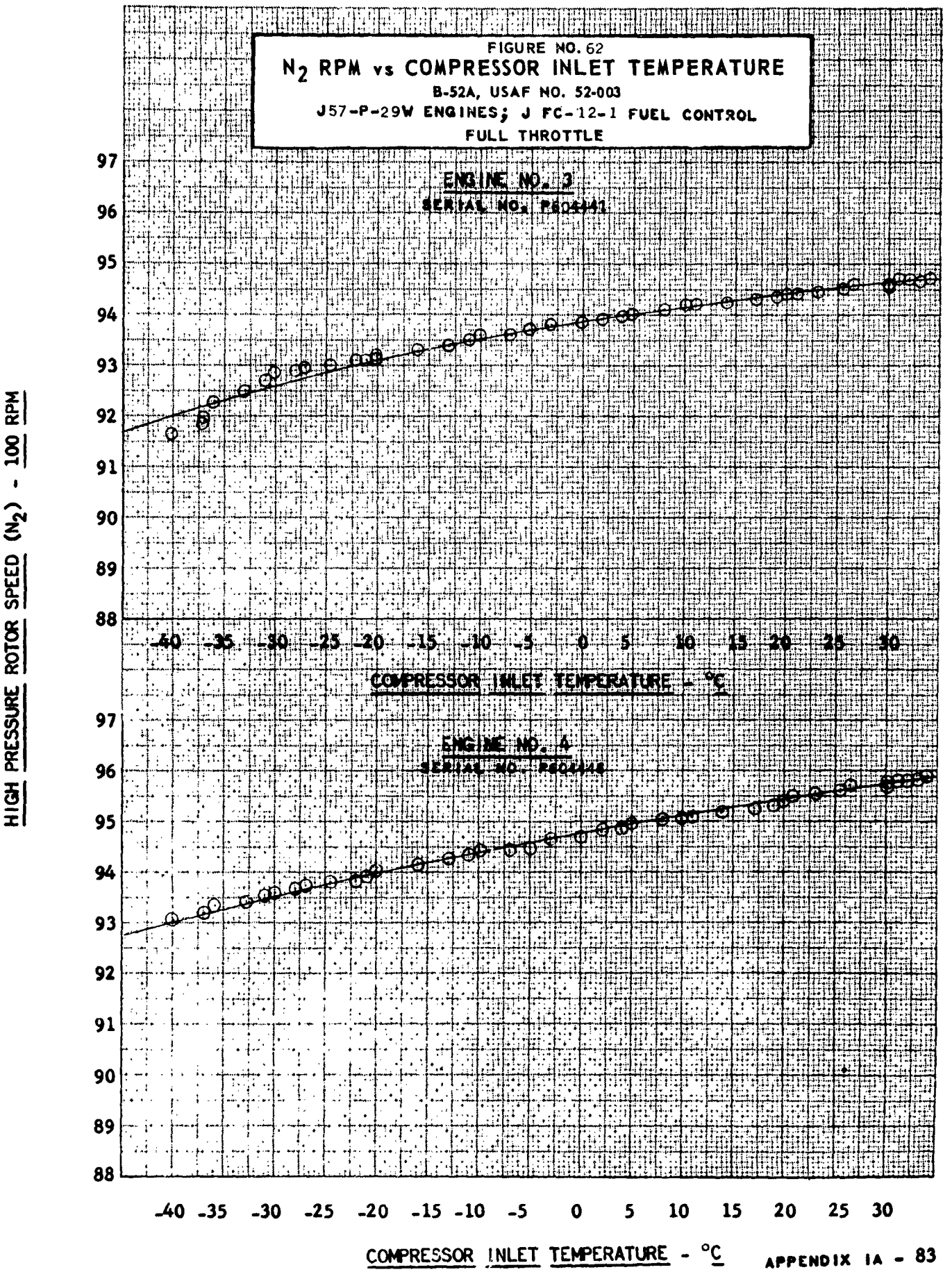
FIGURE NO. 62

N_2 RPM vs COMPRESSOR INLET TEMPERATURE

B-52A, USAF NO. 52-003

J57-P-29W ENGINES; J FC-12-1 FUEL CONTROL

FULL THROTTLE



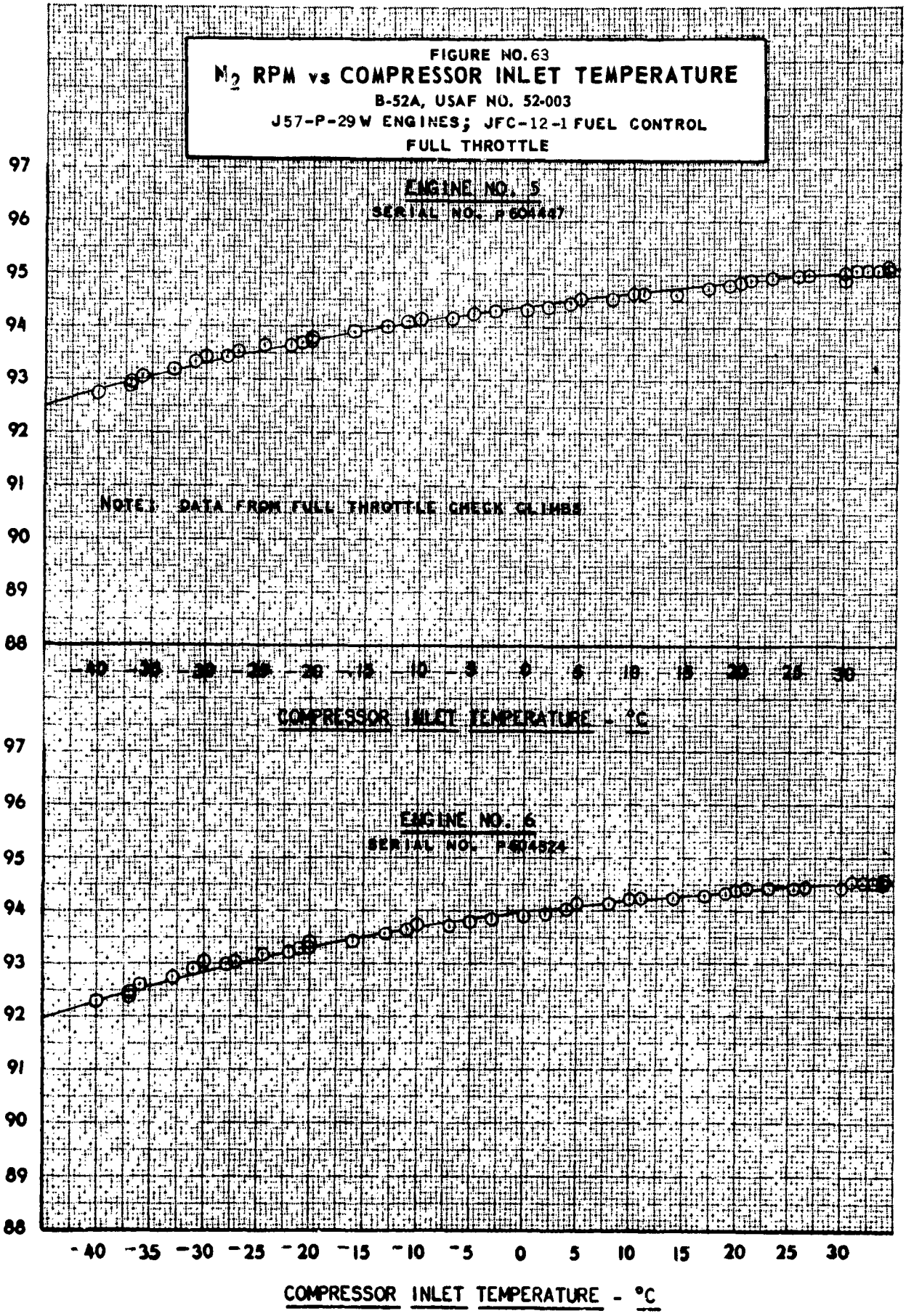


FIGURE NO. 63
N_2 RPM vs COMPRESSOR INLET TEMPERATURE
B-52A, USAF NO. 52-003
J57-P-29W ENGINES; JFC-12-1 FUEL CONTROL
FULL THROTTLE
ENGINE NO. 5
SERIAL NO. P604447
NOTE: DATA FROM FULL THROTTLE CHECK CLIMBS
COMPRESSOR INLET TEMPERATURE - °C
ENGINE NO. 6
SERIAL NO. P604524
97
96
95
94
93
92
91
90
89
88
-40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30
COMPRESSOR INLET TEMPERATURE - °C

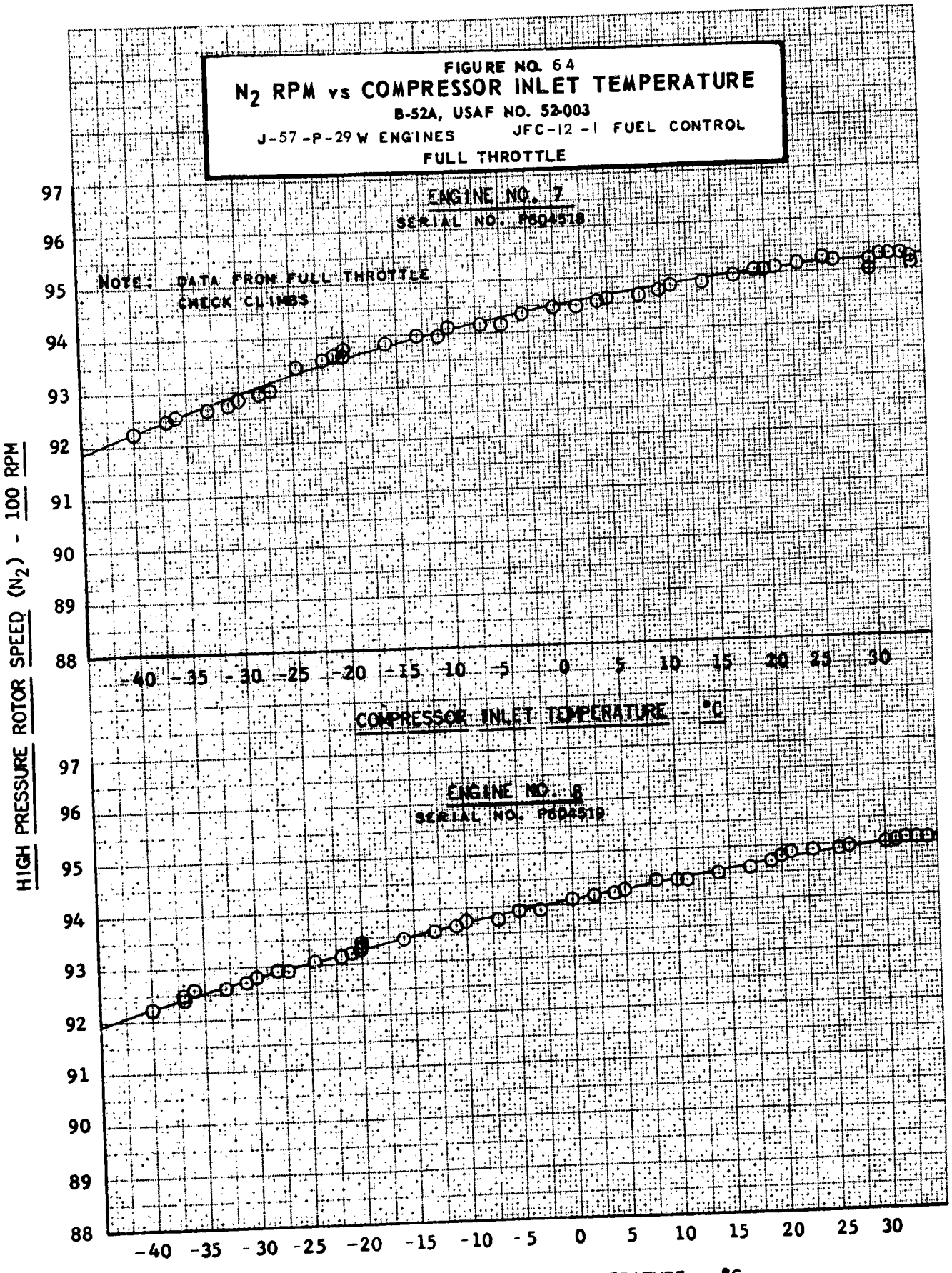


FIGURE NO. 64
N2 RPM vs COMPRESSOR INLET TEMPERATURE
B-52A, USAF NO. 52-003
J-57-P-29W ENGINES
JFC-12-1 FUEL CONTROL
FULL THROTTLE
ENGINE NO. 7
SERIAL NO. P604518
NOTE: DATA FROM FULL THROTTLE CHECK CLIMBS
ENGINE NO. 8
SERIAL NO. P604519
HIGH PRESSURE ROTOR SPEED (N2) - 100 RPM
COMPRESSOR INLET TEMPERATURE - °C
97
96
95
94
93
92
91
90
89
88
-40
-35
-30
-25
-20
-15
-10
-5
0
5
10
15
20
25
30

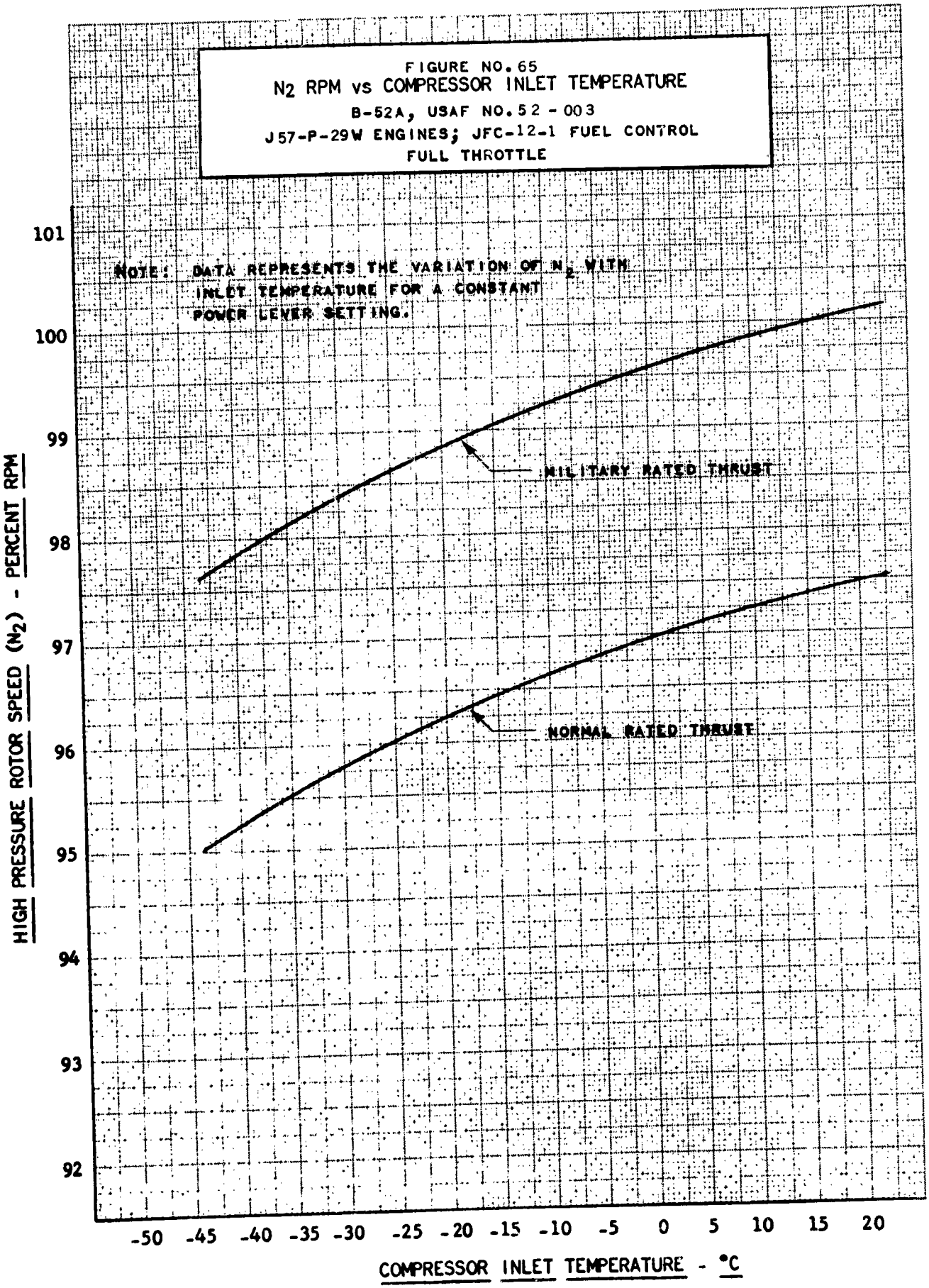


FIGURE NO. 65
N2 RPM vs COMPRESSOR INLET TEMPERATURE
B-52A, USAF NO. 52-003
J57-P-29W ENGINES; JFC-12-1 FUEL CONTROL
FULL THROTTLE
NOTE: DATA REPRESENTS THE VARIATION OF N2 WITH INLET TEMPERATURE FOR A CONSTANT POWER LEVER SETTING.
MILITARY RATED THRUST
NORMAL RATED THRUST
HIGH PRESSURE ROTOR SPEED (N2) - PERCENT RPM
101
100
99
98
97
96
95
94
93
92
-50 -45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20
COMPRESSOR INLET TEMPERATURE - °C

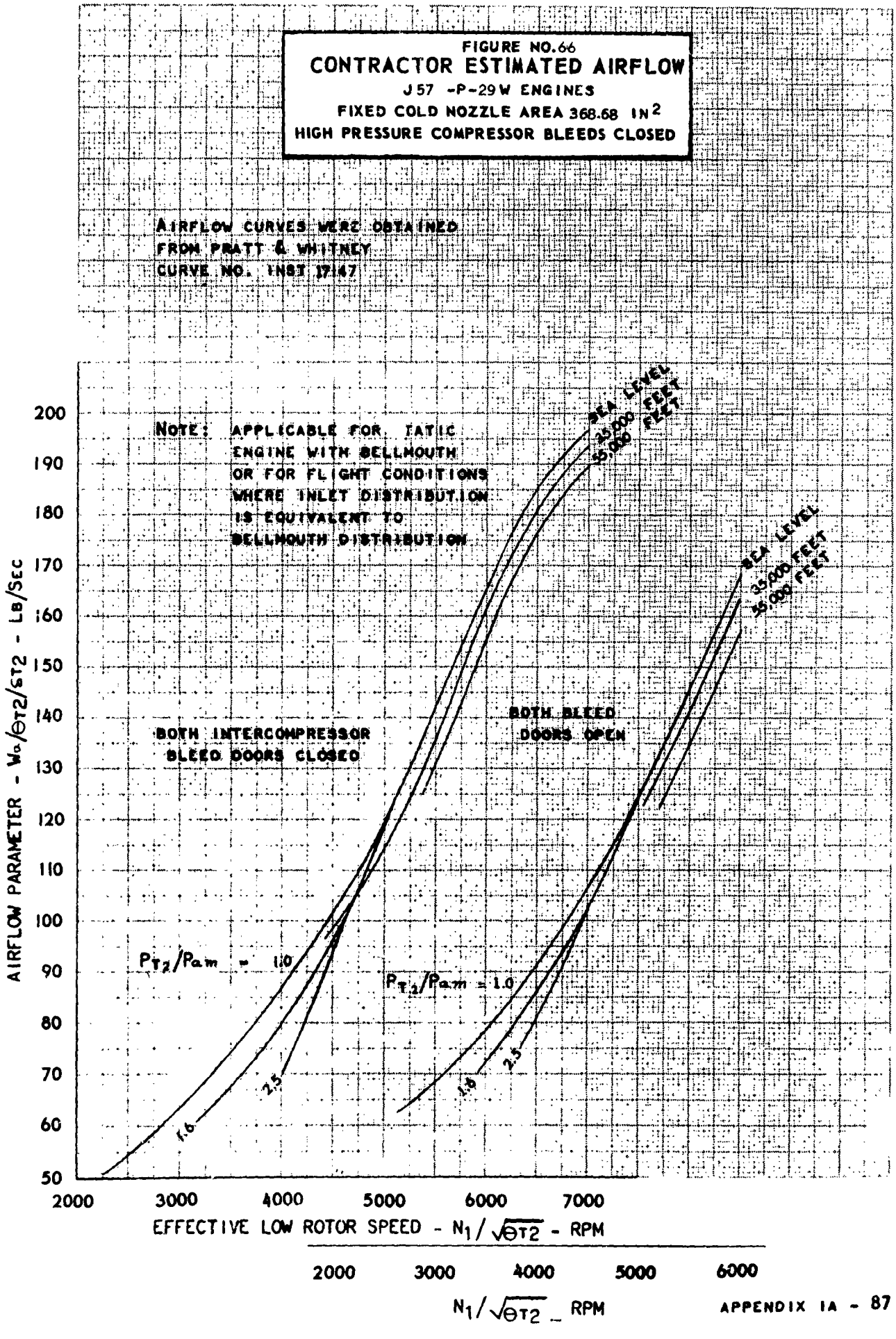
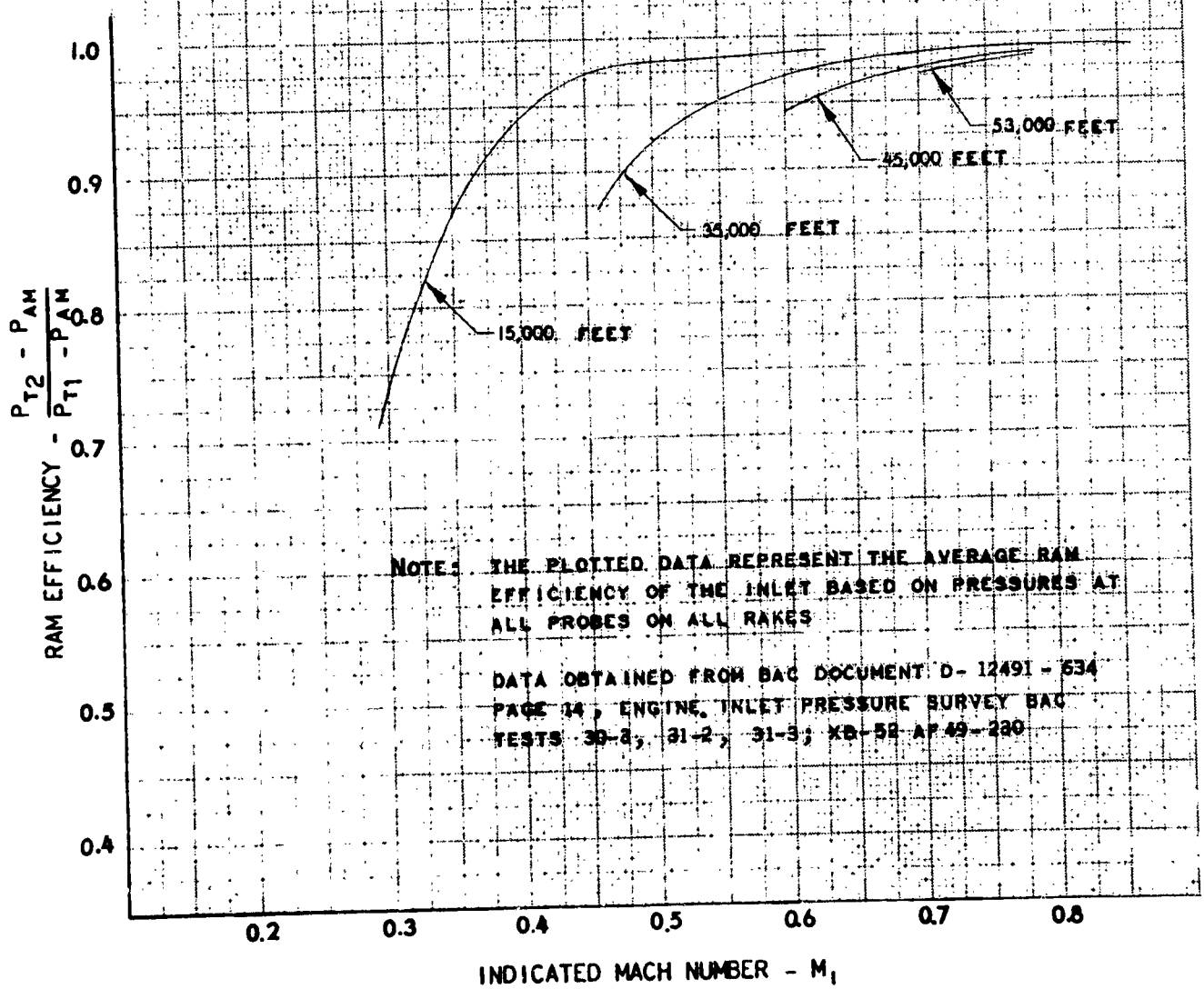


FIGURE NO.66
CONTRACTOR ESTIMATED AIRFLOW
J57 -P-29W ENGINES
FIXED COLD NOZZLE AREA 368.68 IN2
HIGH PRESSURE COMPRESSOR BLEEDS CLOSED
AIRFLOW CURVES WERE OBTAINED FROM PRATT & WHITNEY CURVE NO. INST 17147
NOTE: APPLICABLE FOR TATIC ENGINE WITH BELLMOUTH OR FOR FLIGHT CONDITIONS WHERE INLET DISTRIBUTION IS EQUIVALENT TO BELLMOUTH DISTRIBUTION
SEA LEVEL
35,000 FEET
55,000 FEET
BOTH INTERCOMPRESSOR BLEED DOORS CLOSED
BOTH BLEED DOORS OPEN
PT2/Pam = 1.0
1.6
2.5
AIRFLOW PARAMETER - Wa/θT2/δT2 - LB/SEC
EFFECTIVE LOW ROTOR SPEED - N1/√θT2 - RPM
N1/√θT2 - RPM

FIGURE NO. 67
ENGINE INLET DUCT EFFICIENCY
B-52A, USAF NO. 52-003
J57-P-29W ENGINES



STABILITY

AND

CONTROL

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FOR CONVENIENCE OF

PRESENTING PLOTS

AILERON CHARACTERISTICS

FIGURE NO. 68
AILERON CHARACTERISTICS
B-52A, USAF NO. 52-003
POWER APPROACH CONFIGURATION
POWER FOR LEVEL FLIGHT

SPOILERS USED; RUDDER PEDALS FIXED
NO EXTERNAL TANKS INSTALLED

TRIM CONDITIONS

SYM.	AVG. N_2 RPM	C.A.S. KNOTS	ALT. FEET	GR. WT. POUNDS	C.G. % MAC	RUD. TAB. DEGREES	L. AIL. TAB. DEGREES	R. AIL. TAB. DEGREES
⊙	8640	190	11100	248500	30.6	0.7 T. E. LT.	0.5 T. E. UP	0.3 T. E. UP
△	8180	118	11000	237000	28.8	1.3 T. E. LT.	0.5 T. E. UP	0.3 T. E. UP

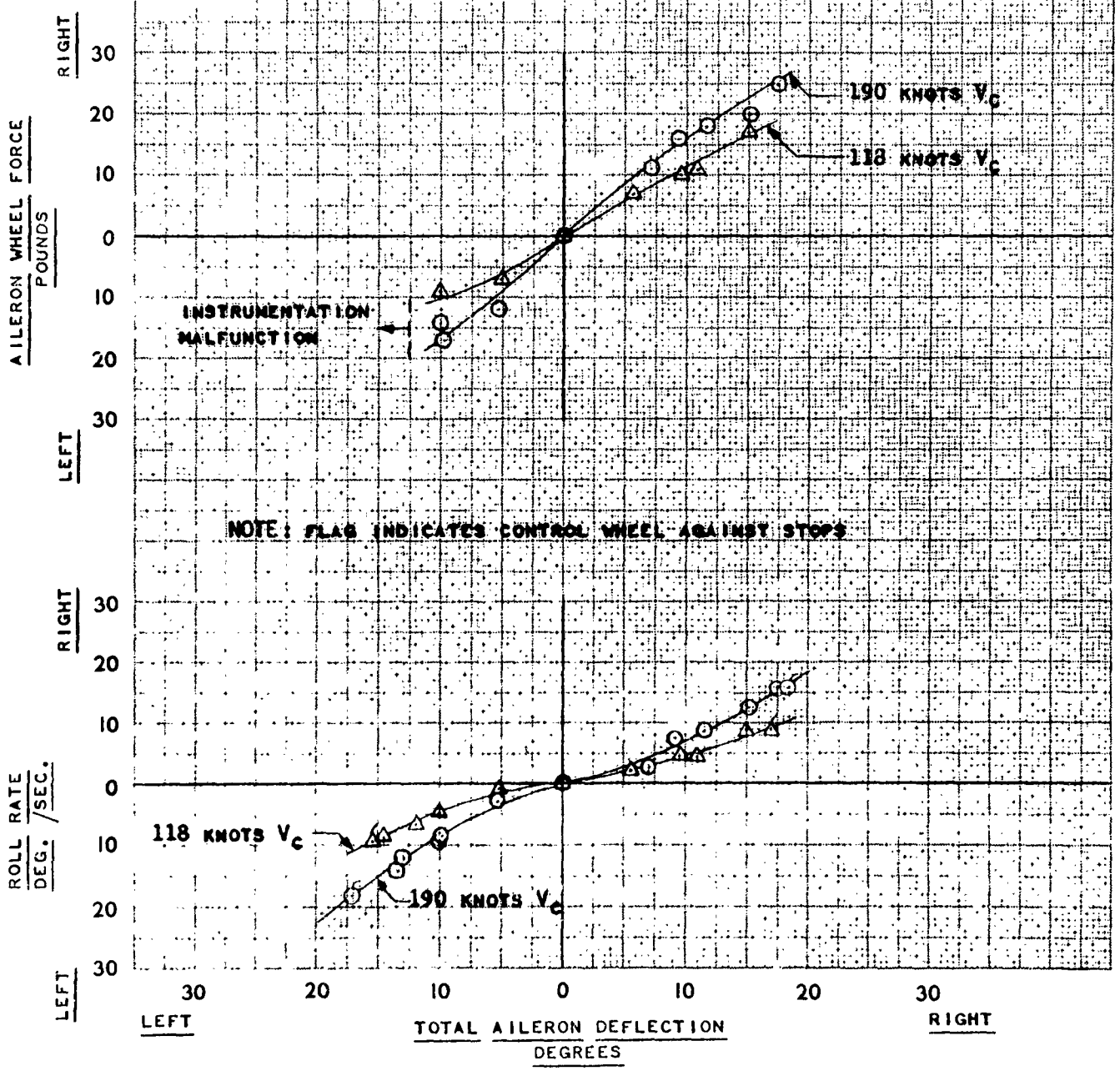


FIGURE NO. 69

HELIX ANGLE (Pb/2V) vs. AILERON DEFLECTION

B-52 A, USAF NO. 52 - 003

POWER APPROACH CONFIGURATION

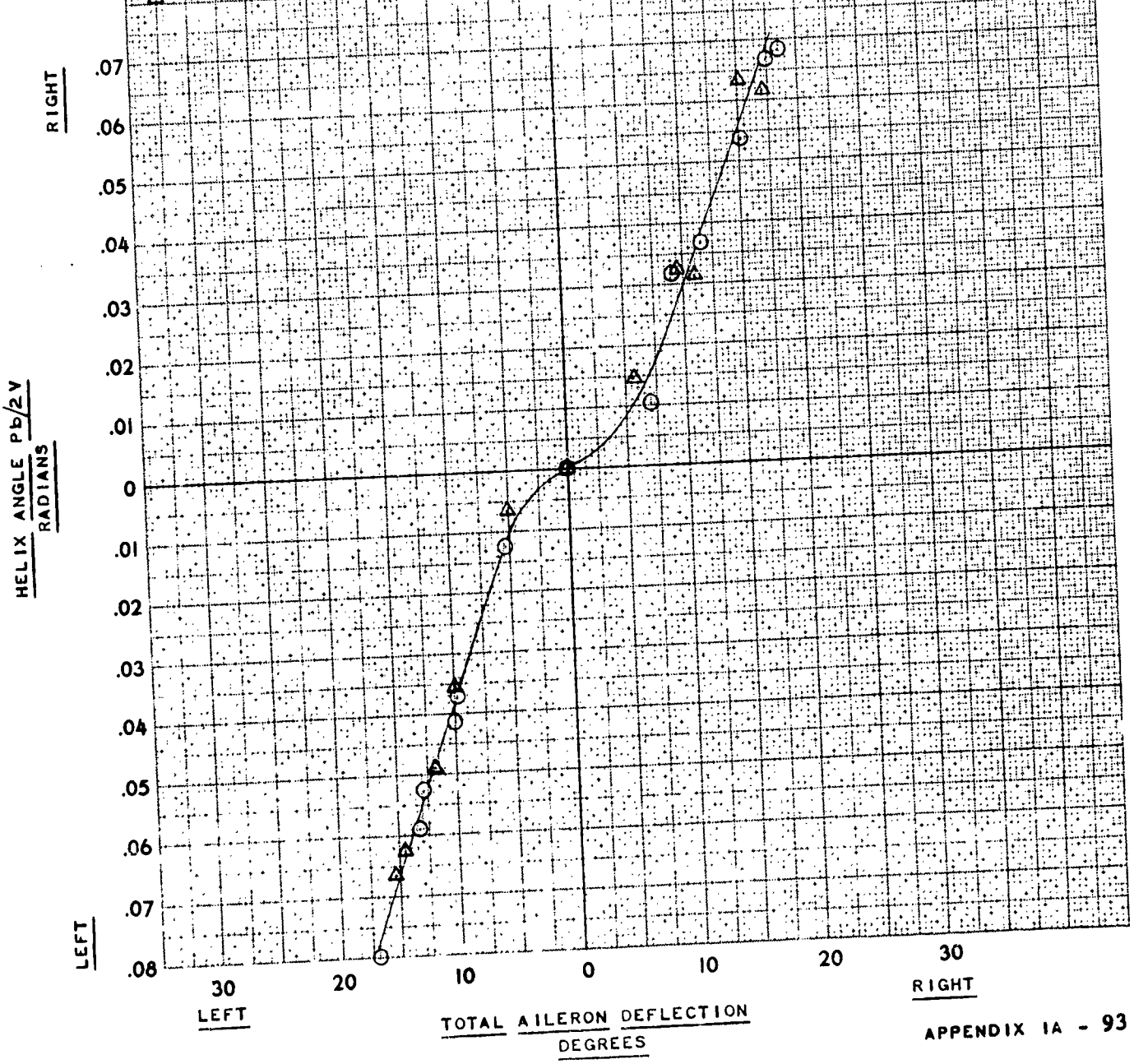
POWER FOR LEVEL FLIGHT

SPOILERS USED; RUDDER PEDALS FIXED

NO EXTERNAL TANKS INSTALLED

TRIM CONDITIONS

SYM.	AVG. N_2 RPM	C.A.S. KNOTS	ALT. FEET	GR. WT. POUNDS	C.G. % MAC	RUD. TAB. DEGREES	L. AIL. TAB. DEGREES	R. AIL. TAB. DEGREES
⊙	8840	190	1100	248,500	30.6	0.7 T.E. LT.	0.6 T.E. UP	0.8 T.E. UP
△	8160	118	1100	237,000	28.8	1.3 T.E. LT.	0.6 T.E. UP	0.8 T.E. UP



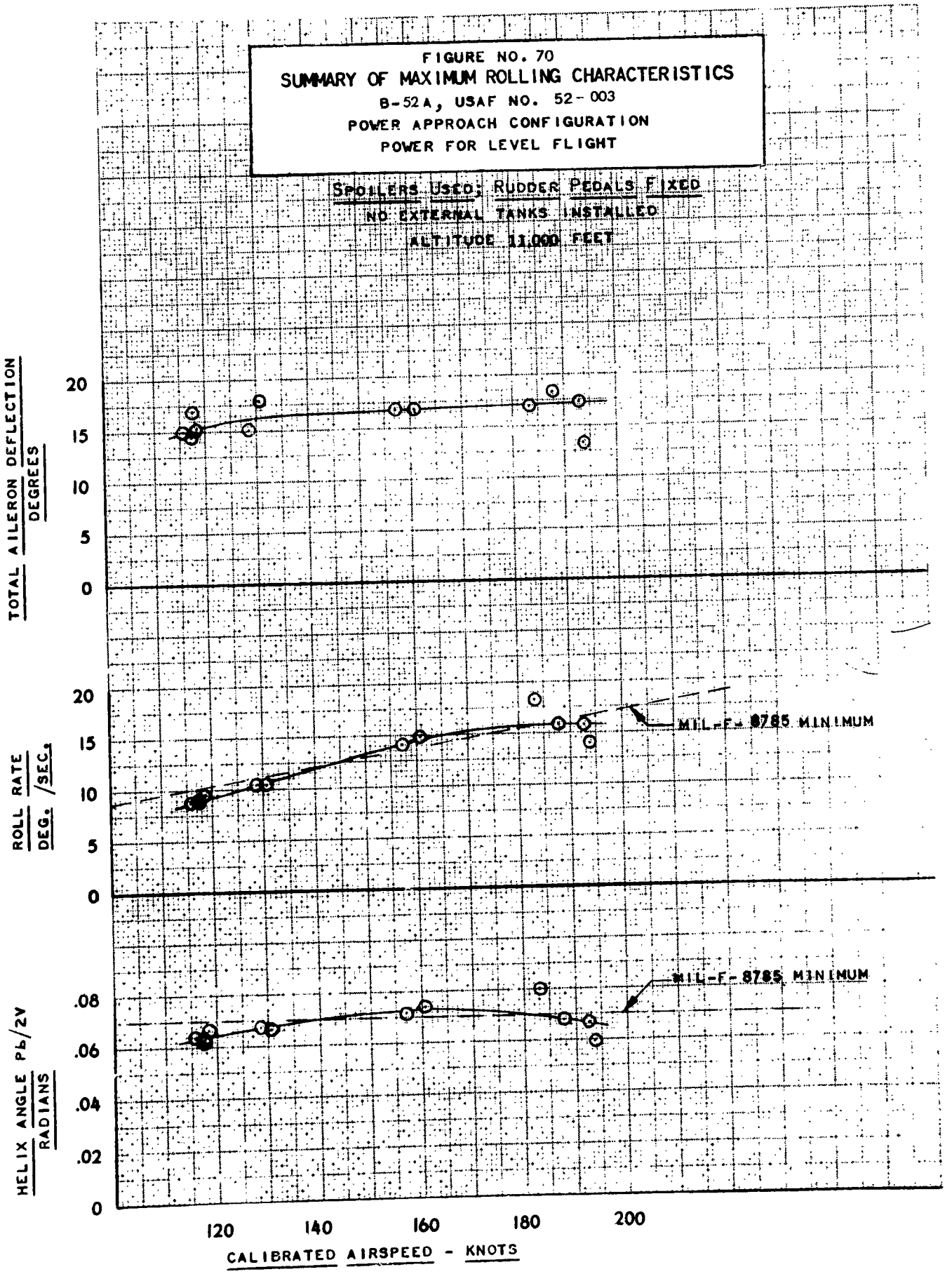


FIGURE NO. 70
SUMMARY OF MAXIMUM ROLLING CHARACTERISTICS
B-52A, USAF NO. 52-003
POWER APPROACH CONFIGURATION
POWER FOR LEVEL FLIGHT
SPOILERS USED; RUDDER PEDALS FIXED
NO EXTERNAL TANKS INSTALLED
ALTITUDE 11,000 FEET
TOTAL AILERON DEFLECTION DEGREES
20
15
10
5
0
ROLL RATE DEG./SEC.
20
15
10
5
0
MIL-F-8785 MINIMUM
HELIX ANGLE Pb/2V RADIANS
.08
.06
.04
.02
0
MIL-F-8785 MINIMUM
120
140
160
180
200
CALIBRATED AIRSPEED - KNOTS

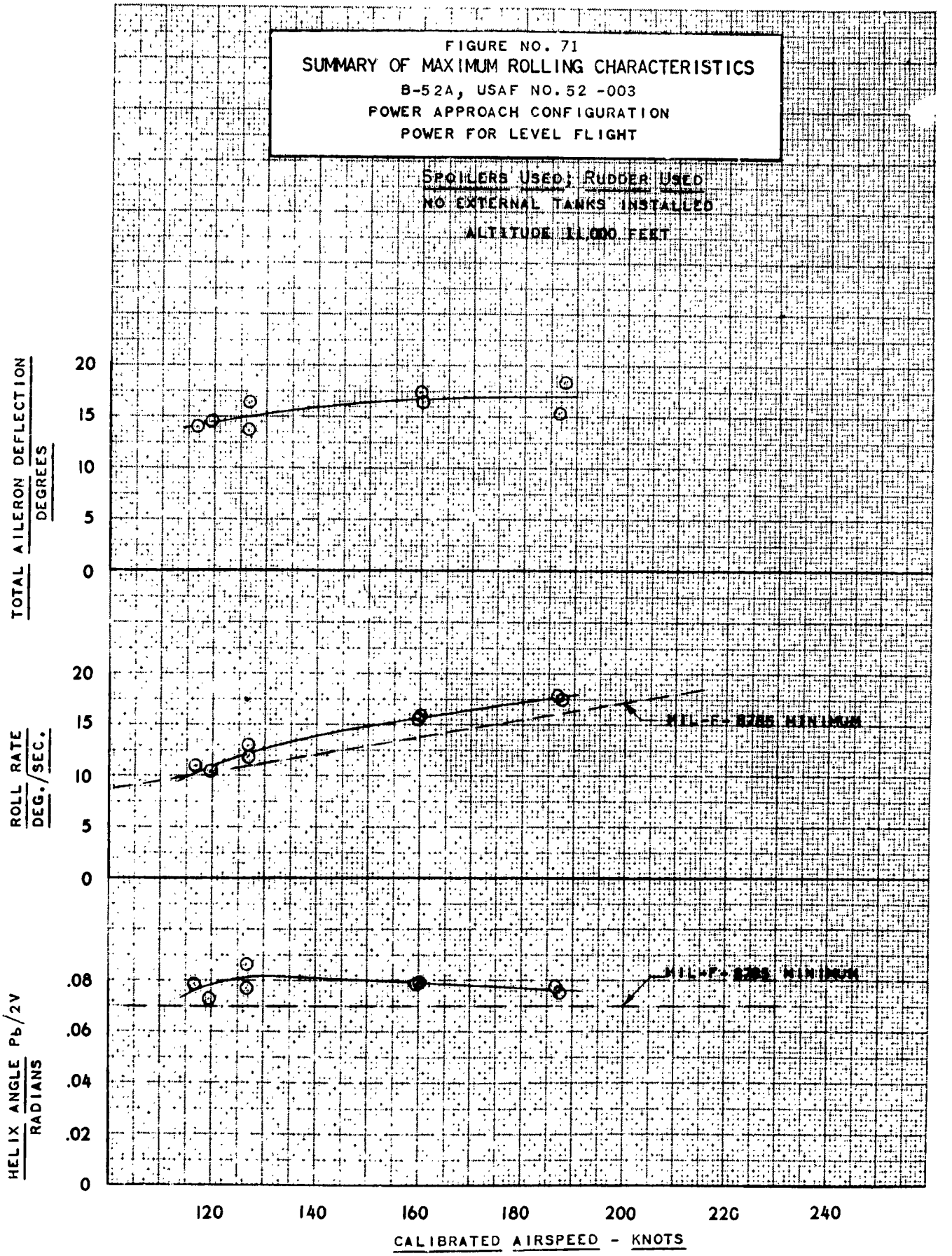


FIGURE NO. 71
SUMMARY OF MAXIMUM ROLLING CHARACTERISTICS
B-52A, USAF NO. 52 -003
POWER APPROACH CONFIGURATION
POWER FOR LEVEL FLIGHT
SPOILERS USED; RUDDER USED
NO EXTERNAL TANKS INSTALLED
ALTITUDE 11,000 FEET
TOTAL AILERON DEFLECTION / DEGREES
20
15
10
5
0
ROLL RATE / DEG./SEC.
20
15
10
5
0
MIL-F-8785 MINIMUM
HELIX ANGLE Pb/2V / RADIANS
.08
.06
.04
.02
0
MIL-F-8785 MINIMUM
120
140
160
180
200
220
240
CALIBRATED AIRSPEED - KNOTS

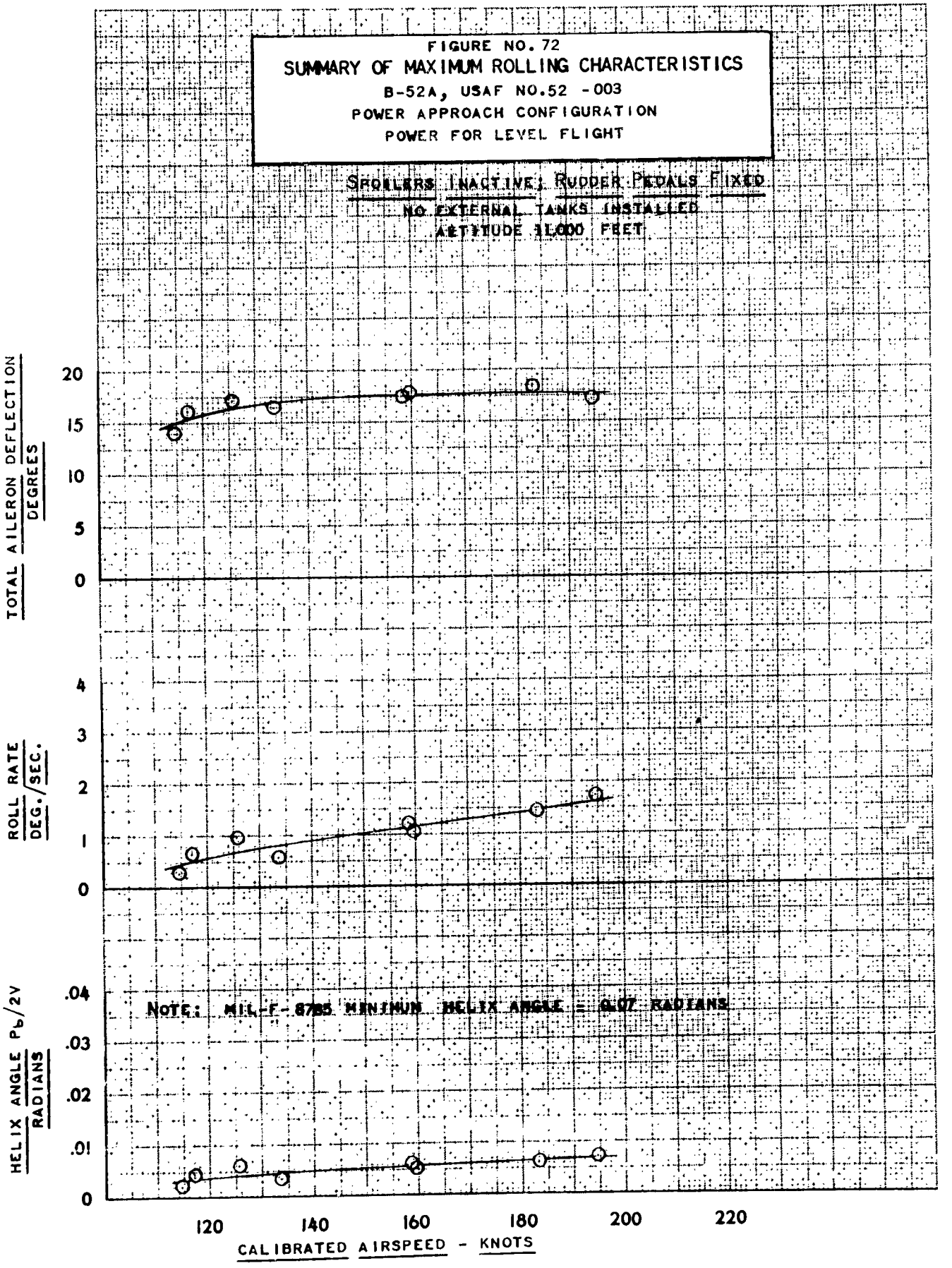


FIGURE NO. 72
SUMMARY OF MAXIMUM ROLLING CHARACTERISTICS
B-52A, USAF NO.52 -003
POWER APPROACH CONFIGURATION
POWER FOR LEVEL FLIGHT
SPOILERS INACTIVE; RUDDER PEDALS FIXED
NO EXTERNAL TANKS INSTALLED
ALTITUDE 10,000 FEET
TOTAL AILERON DEFLECTION DEGREES
20
15
10
5
0
ROLL RATE DEG./SEC.
4
3
2
1
0
HELIX ANGLE $P_b/2V$ RADIANS
.04
.03
.02
.01
0
NOTE: MIL-F-8785 MINIMUM HELIX ANGLE = 0.07 RADIANS
120
140
160
180
200
220
CALIBRATED AIRSPEED - KNOTS

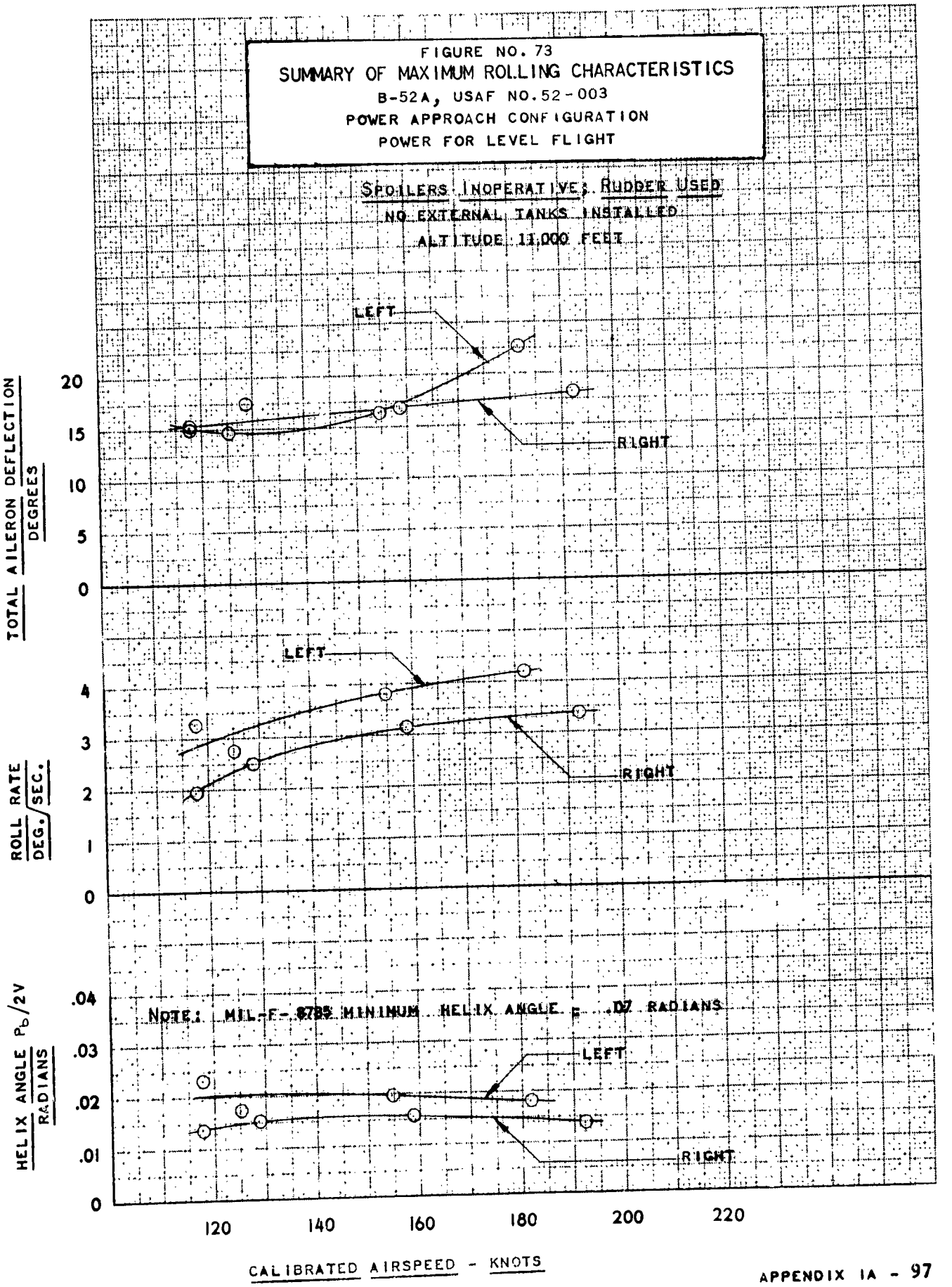
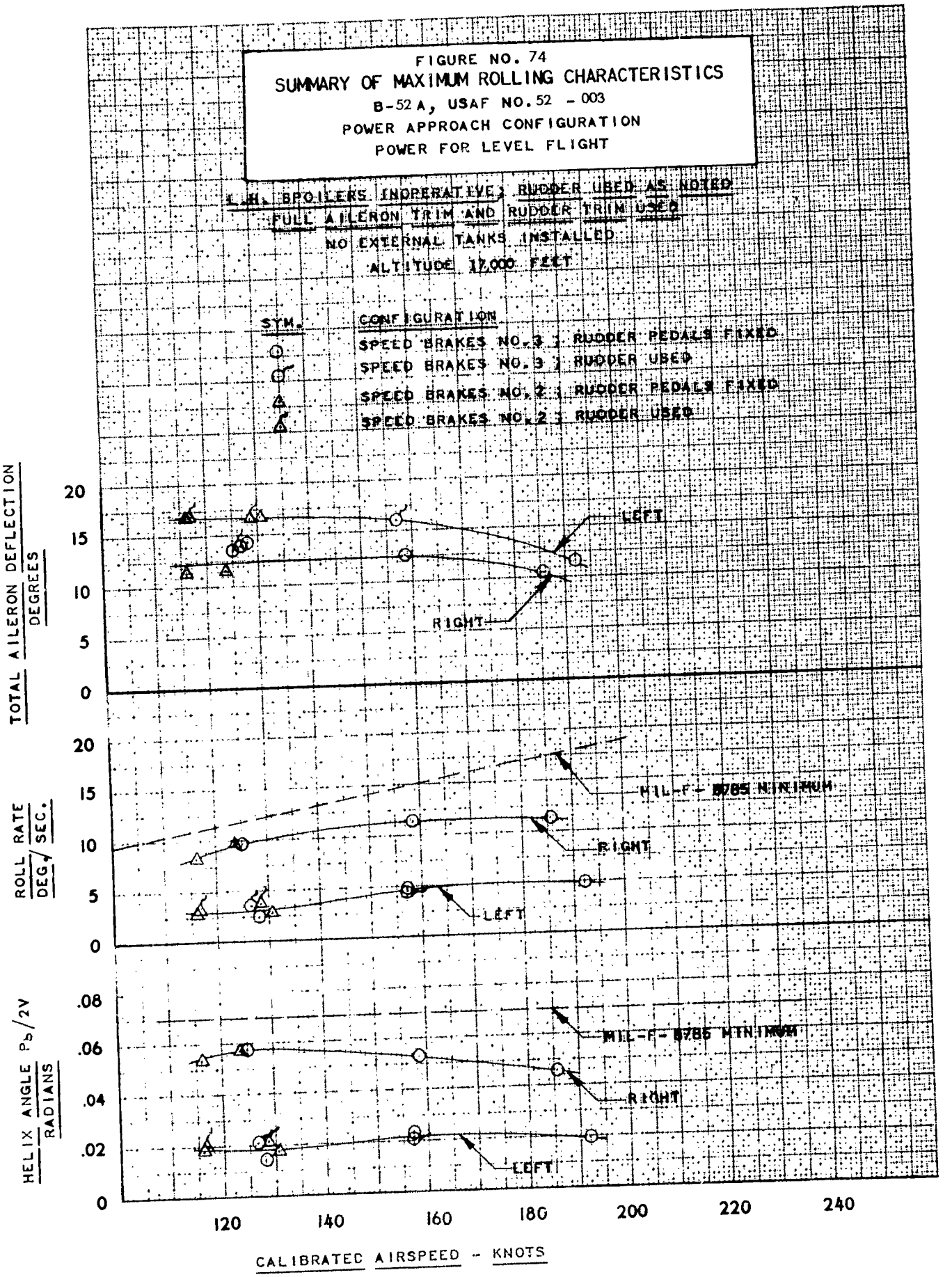


FIGURE NO. 73
SUMMARY OF MAXIMUM ROLLING CHARACTERISTICS
B-52A, USAF NO. 52-003
POWER APPROACH CONFIGURATION
POWER FOR LEVEL FLIGHT
SPOILERS INOPERATIVE; RUDDER USED
NO EXTERNAL TANKS INSTALLED
ALTITUDE 11,000 FEET
TOTAL AILERON DEFLECTION DEGREES
20
15
10
5
0
LEFT
RIGHT
ROLL RATE DEG./SEC.
4
3
2
1
0
LEFT
RIGHT
HELIX ANGLE $P_b/2V$ RADIANS
.04
.03
.02
.01
0
NOTE: MIL-F-8785 MINIMUM HELIX ANGLE = .07 RADIANS
LEFT
RIGHT
120
140
160
180
200
220
CALIBRATED AIRSPEED - KNOTS

FIGURE NO. 74
SUMMARY OF MAXIMUM ROLLING CHARACTERISTICS
B-52 A, USAF NO. 52 - 003
POWER APPROACH CONFIGURATION
POWER FOR LEVEL FLIGHT



TIME HISTORY

OF MAXIMUM

DEFLECTION AILERON ROLLS

FIGURE NO. 75

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 188.5 KNOTS; ALTITUDE 11,100 FEET
C.G. 30.6 % MAC; WEIGHT 248,500 LBS.
AVG. N_2 8840 RPM; RUDDER TAB 0.7 DEG.T.E.LT.
L. AIL. TAB 4.1 DEG.T.E.UP; R. AIL. TAB. 0.2 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER PEDALS FIXED

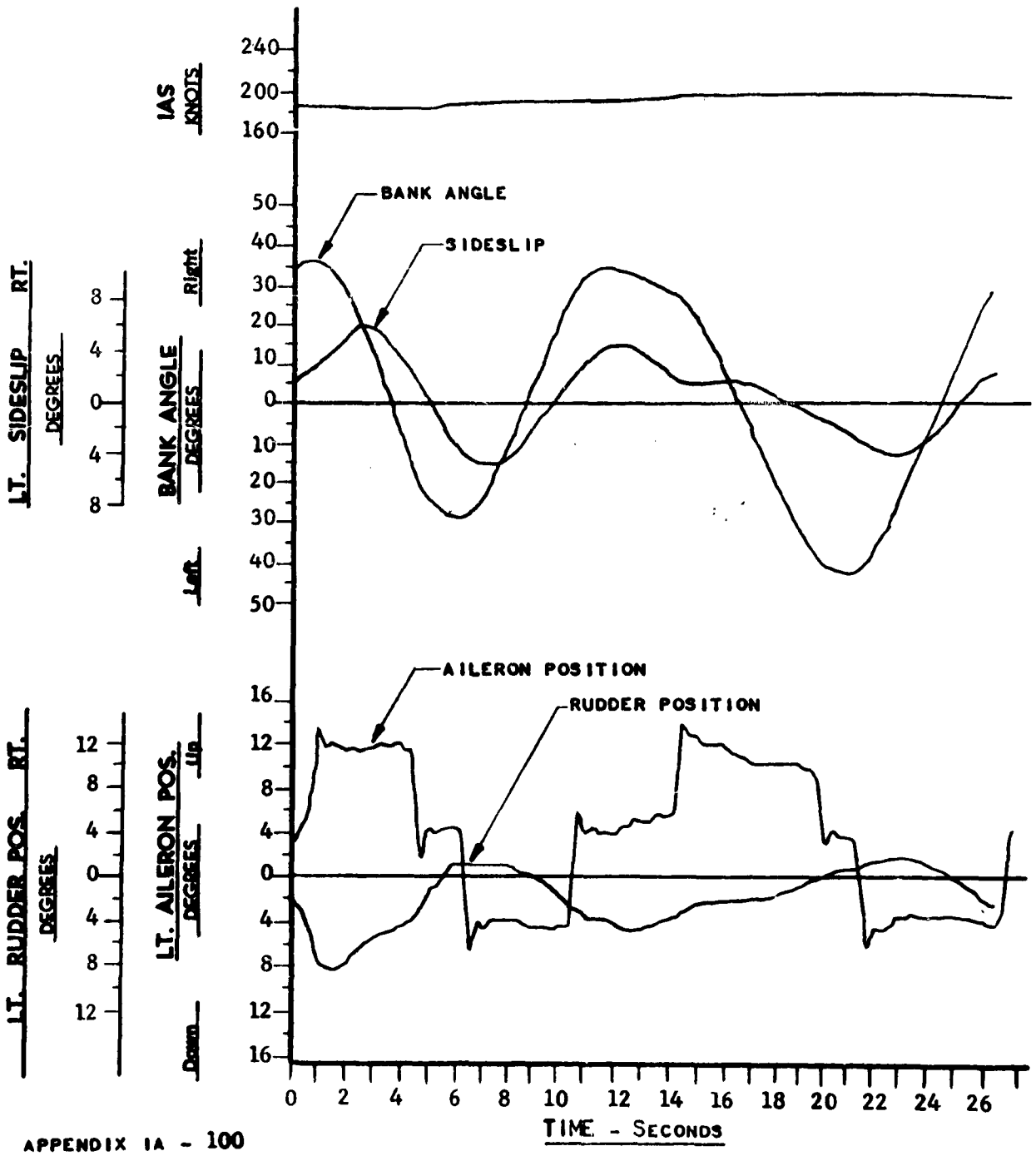


FIGURE NO. 76

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 188.5 KNOTS; ALTITUDE 11,100 FEET
C.G. 30.6 % MAC; WEIGHT 248,500 LBS.
AVG. N_2 8840 RPM; RUDDER TAB 0.7 DEG.T.E.LT.
L. AIL. TAB 4.1 DEG.T.E.UP; R. AIL. TAB. 0.2 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER USED

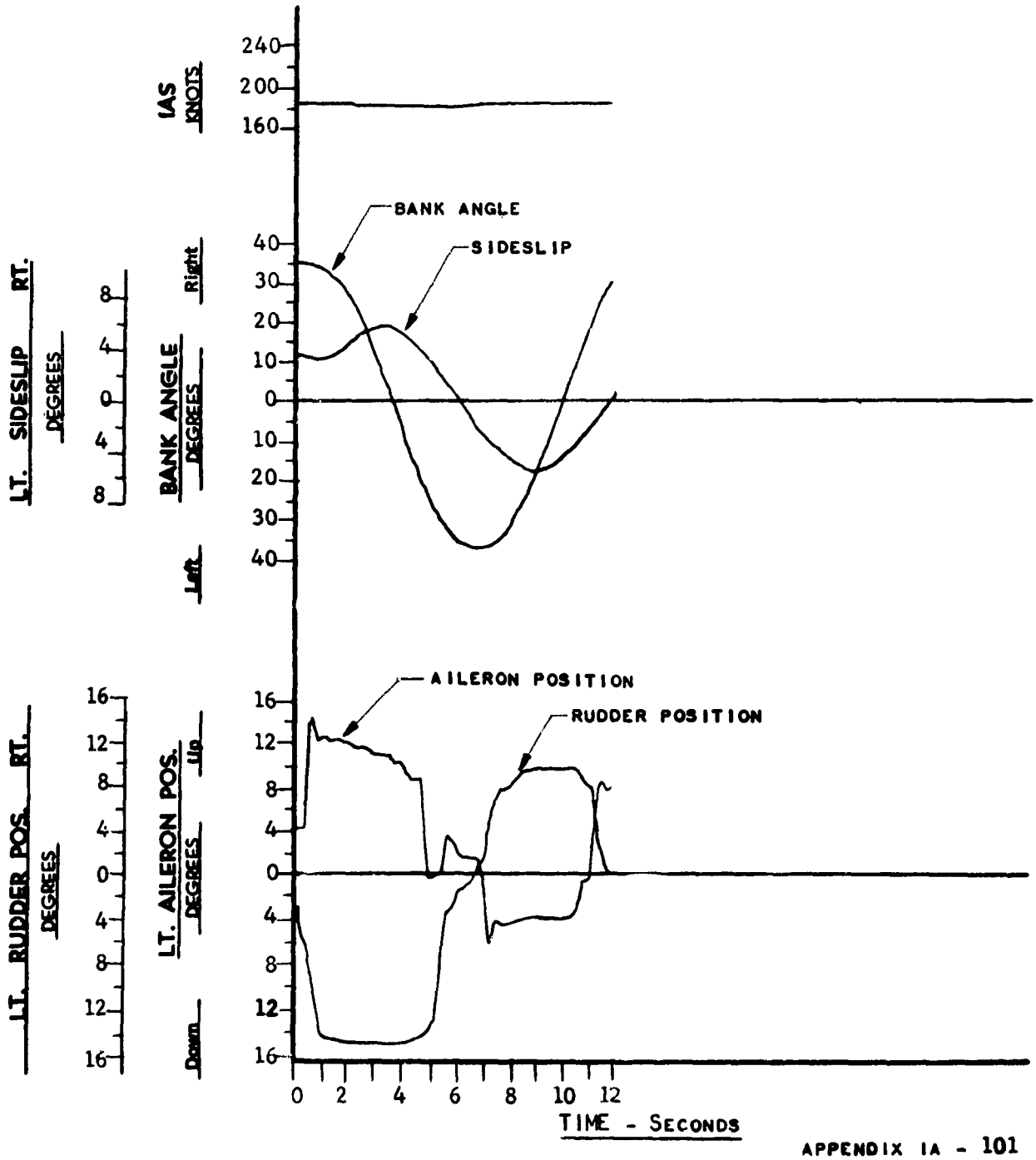


FIGURE NO. 77

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 188.5 KNOTS; ALTITUDE 11,100 FEET
C.G. 30.6 % MAC; WEIGHT 248,500 LBS.
AVG. N_2 8840 RPM; RUDDER TAB 0.7 DEG.T.E.LT.
L. AIL. TAB 4.1 DEG.T.E.UP; R. AIL. TAB. 0.2 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

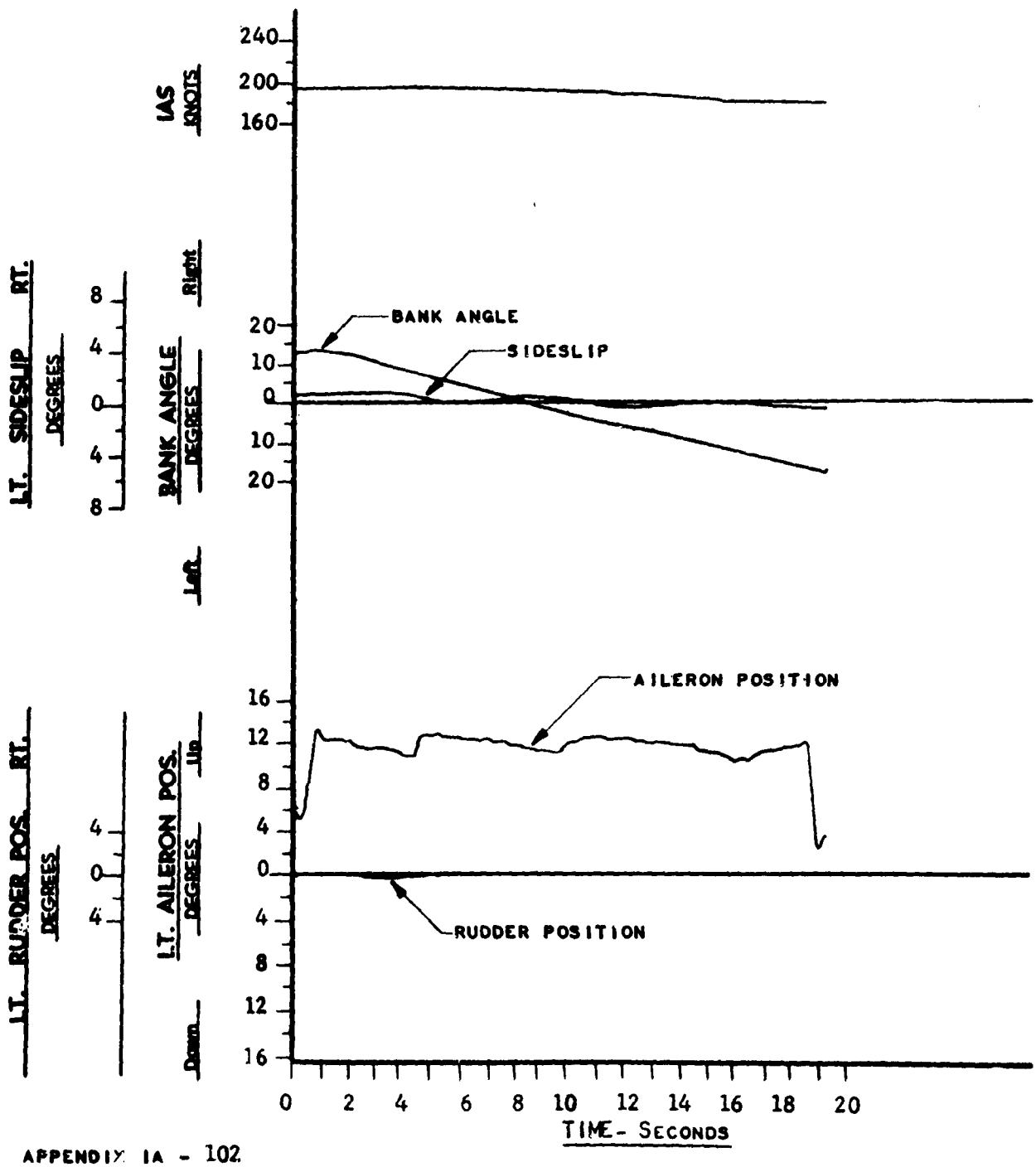


FIGURE NO. 78

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 188.5 KNOTS; ALTITUDE 11,100 FEET
C.G. 30.6 % MAC; WEIGHT 248,500 LBS.
AVG. N_2 8840 RPM; RUDDER TAB 0.7 DEG.T.E.LT.
L. AIL. TAB 4.1 DEG.T.E.UP; R. AIL. TAB. 0.2 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

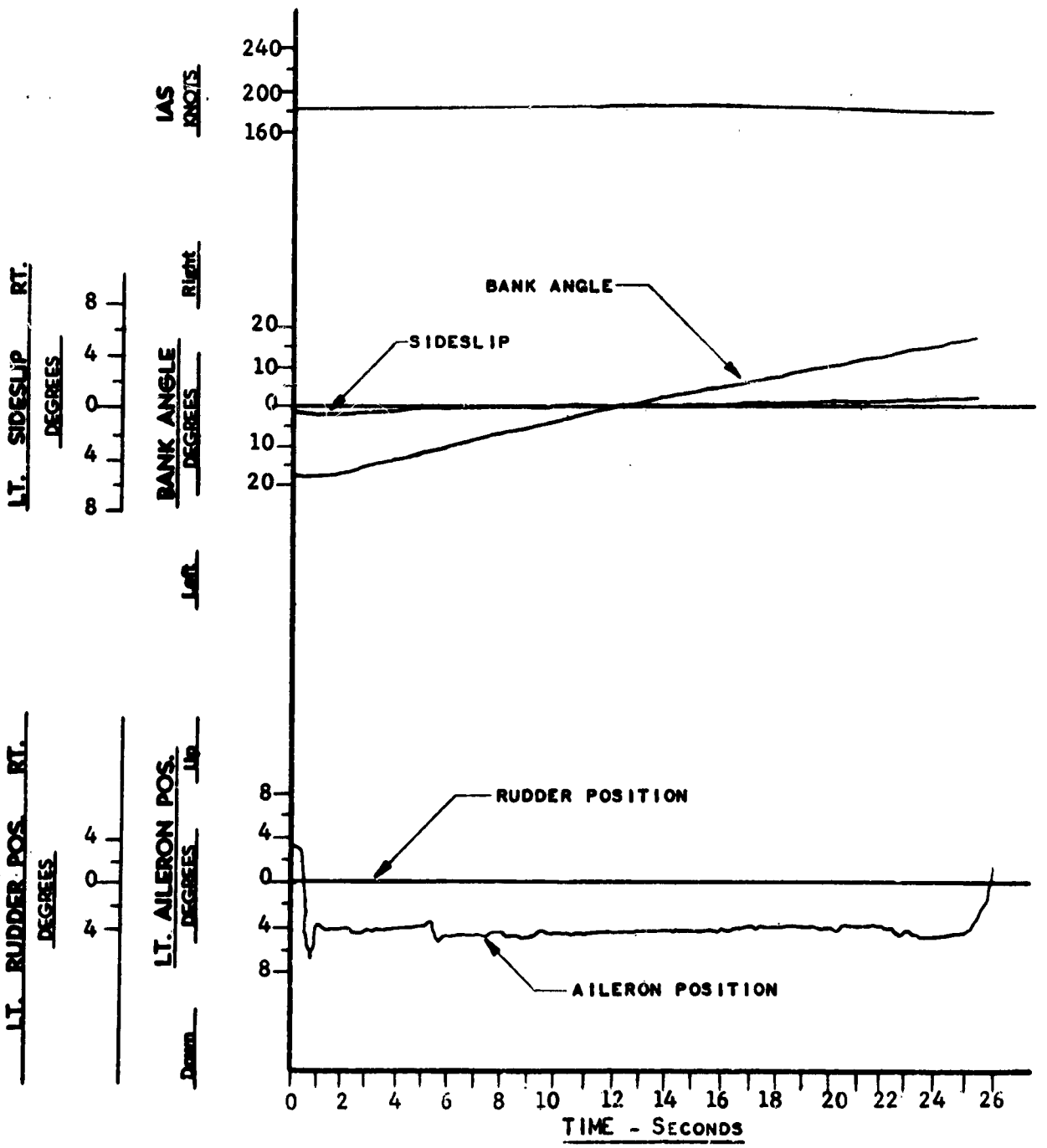


FIGURE NO. 79

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 188.5 KNOTS; ALTITUDE 11,100 FEET
C.G. 30.6 % MAC; WEIGHT 248,500 LBS.
AVG. N_2 8840 RPM; RUDDER TAB 0.7 DEG.T.E.LT.
L. AIL. TAB 4.1 DEG.T.E.UP; R. AIL. TAB. 0.2 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER USED

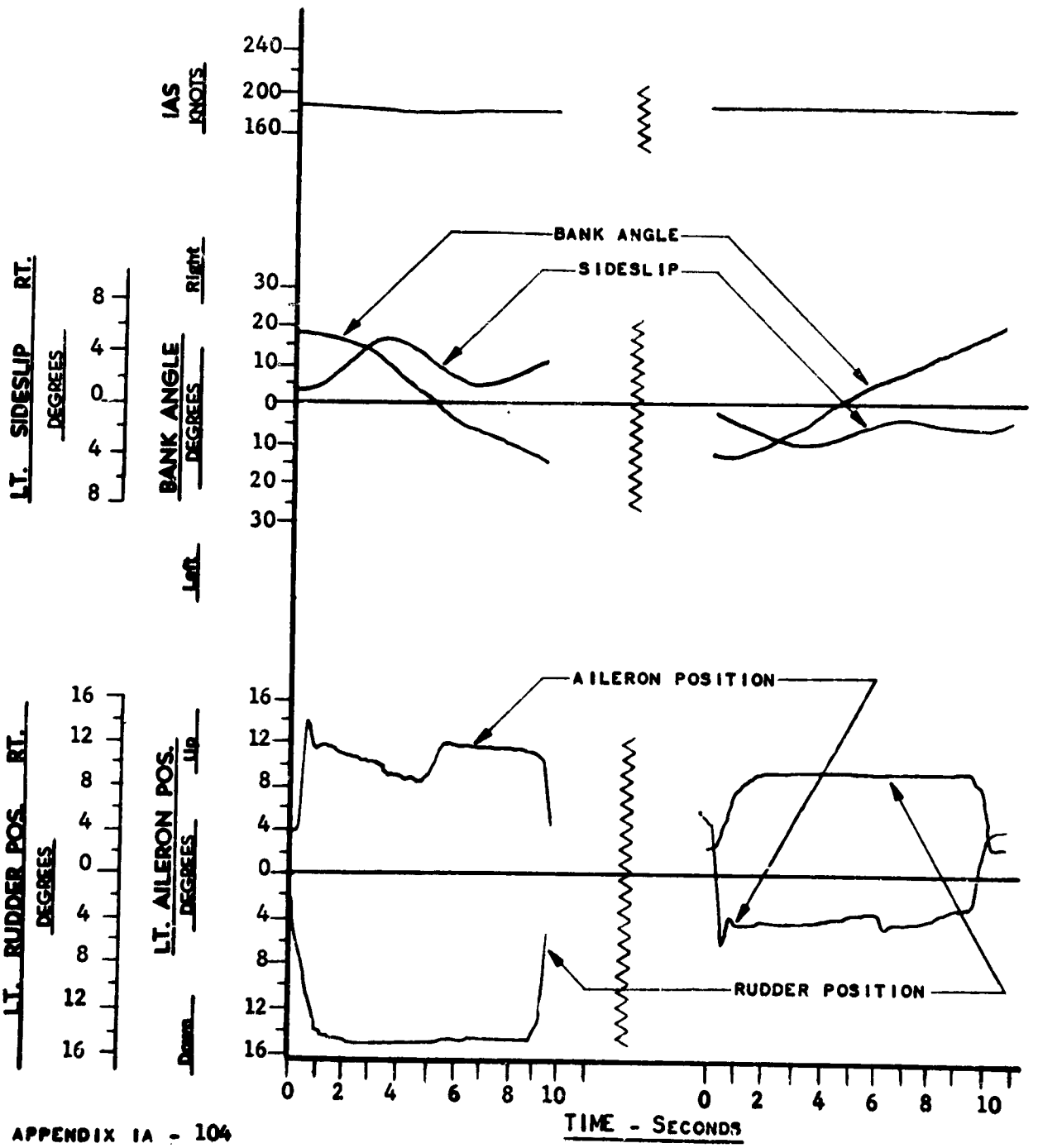


FIGURE NO. 80

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 159.5 KNOTS; ALTITUDE 13,100 FEET
C.G. 29.9 % MAC; WEIGHT 243,500 LBS.
AVG. N_2 8470 RPM; RUDDER TAB 0.9 DEG.T.E.LT.
L. AIL. TAB 3.1 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER PEDALS FIXED

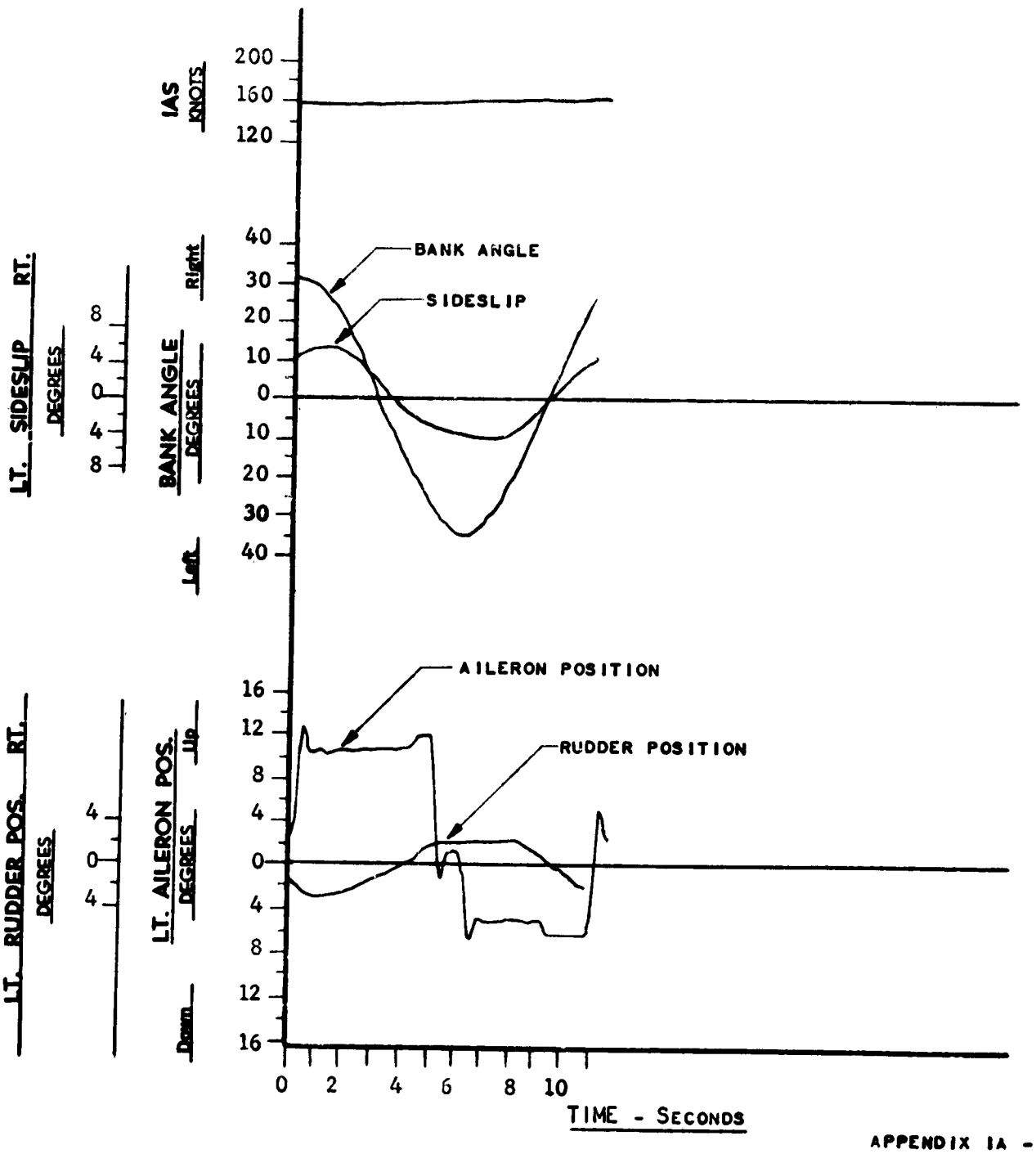


FIGURE NO. 81

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 159.5 KNOTS; ALTITUDE 13,100 FEET
C.G. 29.9 % MAC; WEIGHT 243,500 LBS.
AVG. N_2 8470 RPM; RUDDER TAB 0.9 DEG.T.E.LT.
L. AIL. TAB 3.1 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER USED

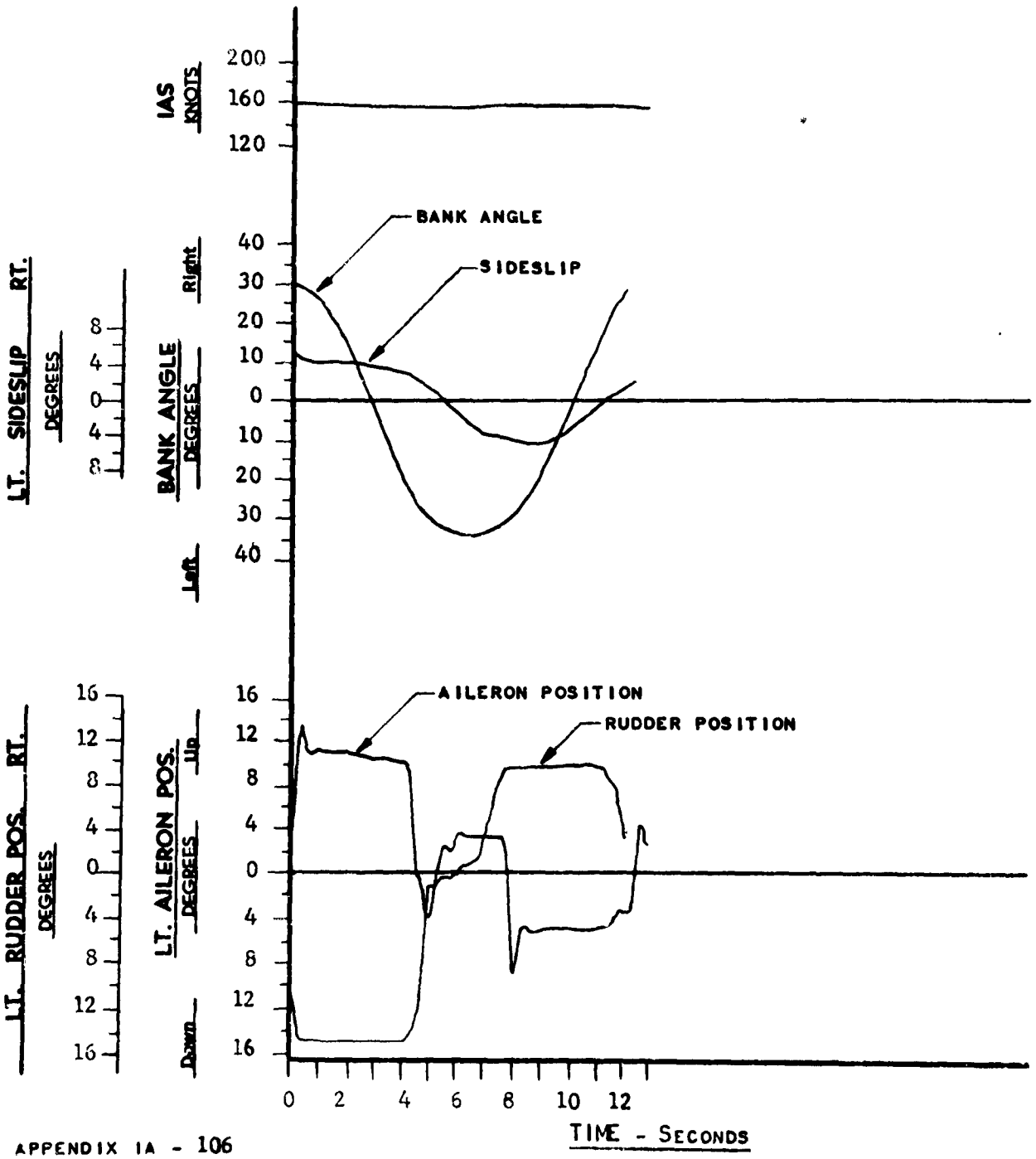


FIGURE NO. 82

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 159.5 KNOTS; ALTITUDE 13,100 FEET
C.G. 29.9 % MAC; WEIGHT 243,500 LBS.
AVG. N_2 8470 RPM; RUDDER TAB 0.9 DEG.T.E.LT.
L. AIL. TAB 3.1 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

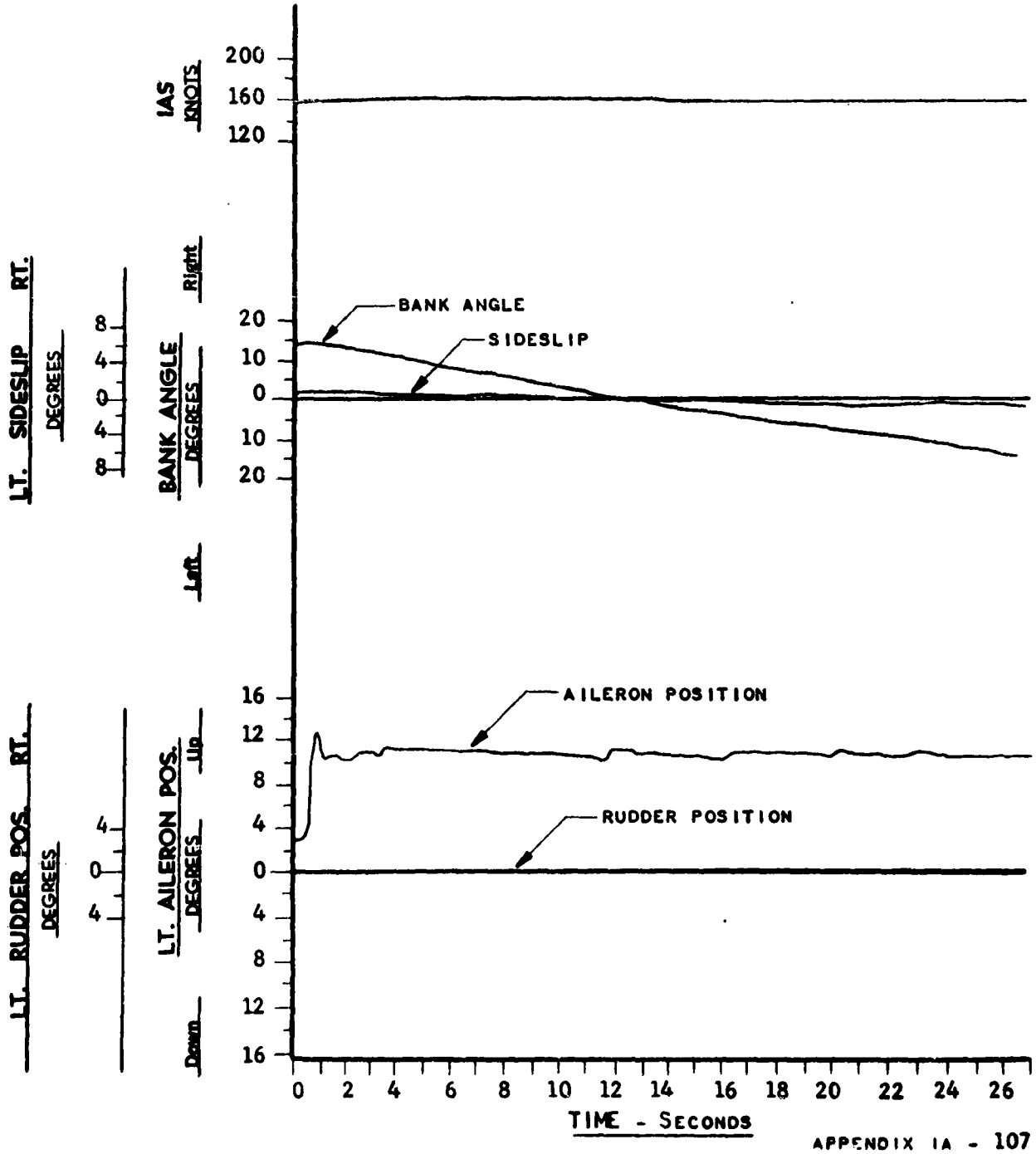


FIGURE NO. 83

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 159.5 KNOTS; ALTITUDE 13,100 FEET
C.G. 29.9 % MAC; WEIGHT 243,500 LBS.
AVG. N_2 8470 RPM; RUDDER TAB 0.9 DEG.T.E.LT.
L. AIL. TAB 3.1 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

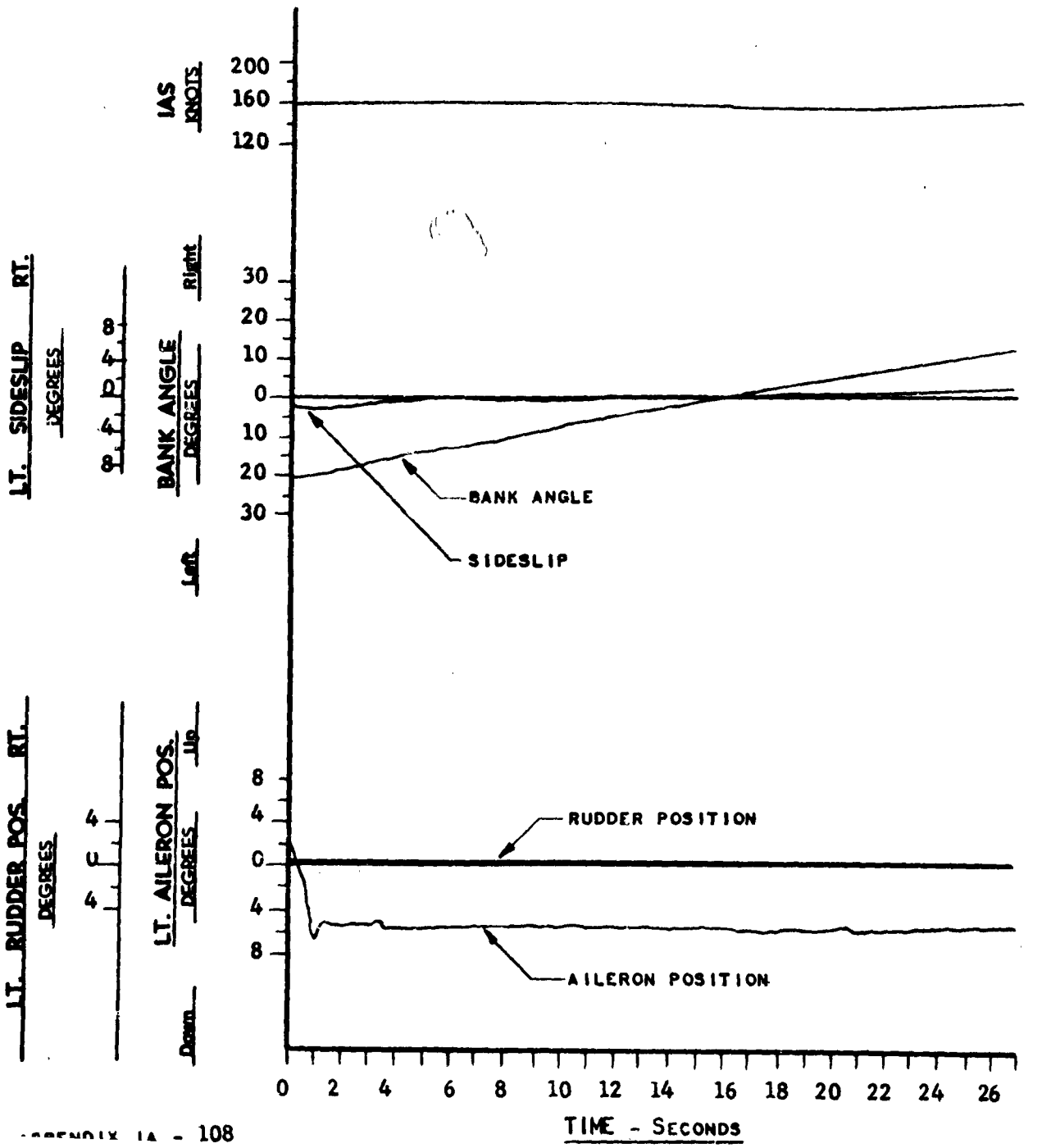


FIGURE NO. 84

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 159.5 KNOTS; ALTITUDE 13,100 FEET
C.G. 29.9 % MAC; WEIGHT 243,500 LBS.
AVG. N_2 8470 RPM; RUDDER TAB 0.9 DEG.T.E.LT.
L. AIL. TAB 3.1 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER USED

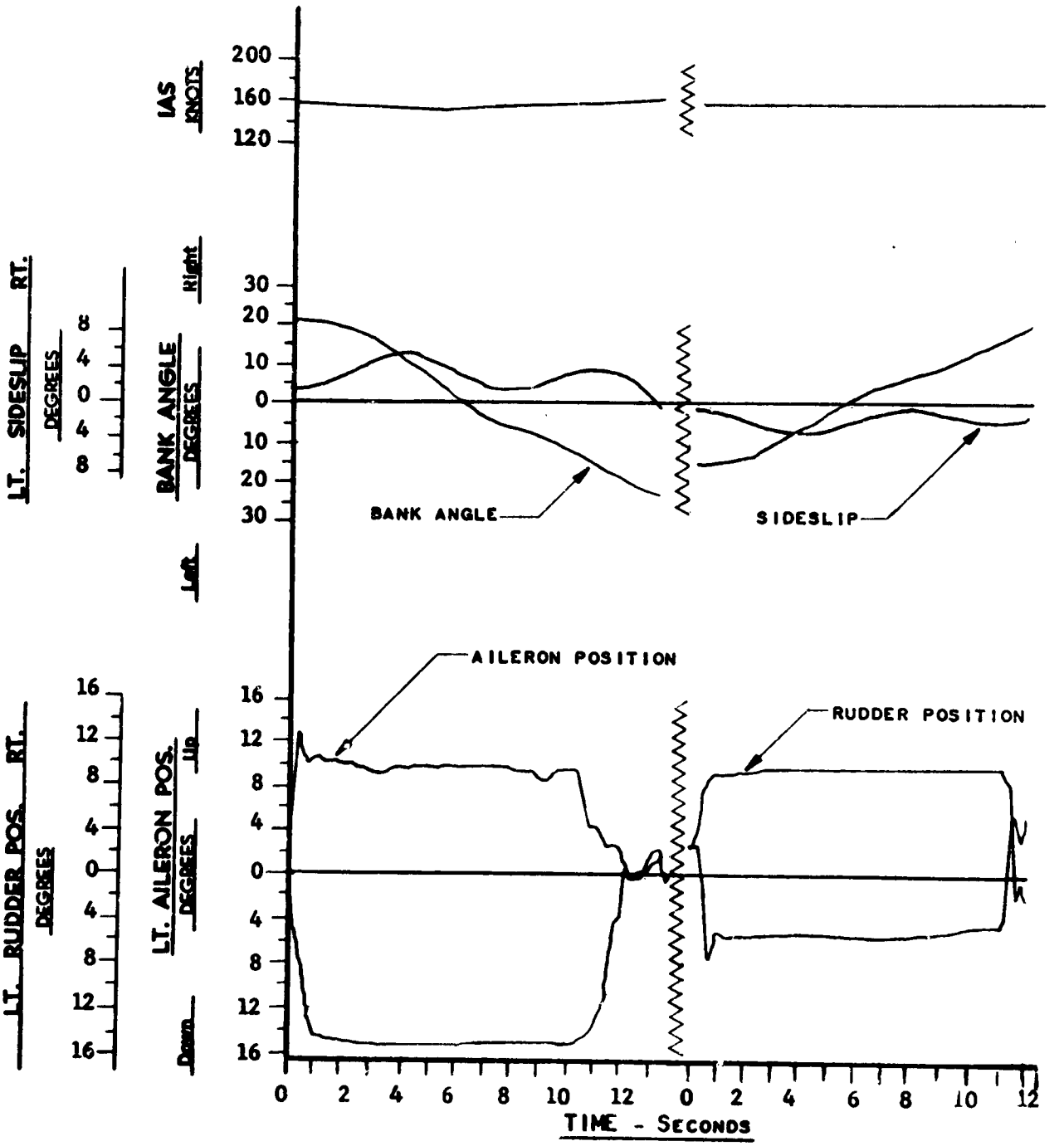


FIGURE NO. 85

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127 KNOTS; ALTITUDE 11,700 FEET
C.G. 28.9 % MAC; WEIGHT 238,000 LBS.
AVG. N_2 8050 RPM; RUDDER TAB 0.7 DEG.T.E.LT.
L. AIL. TAB 3.1 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER PEDALS FIXED

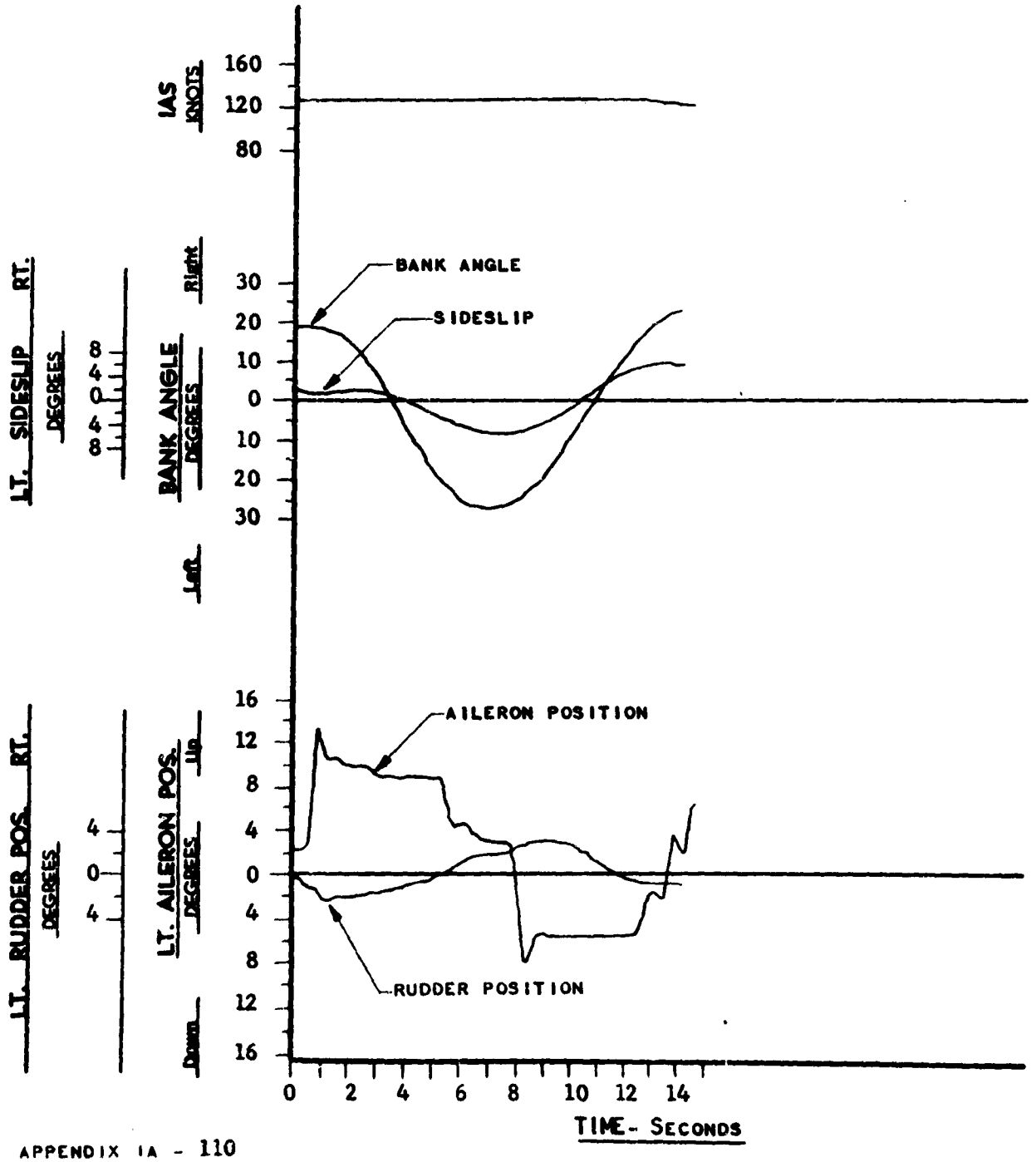


FIGURE NO. 86

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127 KNOTS; ALTITUDE 11,700 FEET
C.G. 28.9 % MAC; WEIGHT 238,000 LBS.
AVG. N_2 8050 RPM; RUDDER TAB 0.7 DEG.T.E.LT.
L. AIL. TAB 3.1 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER USED

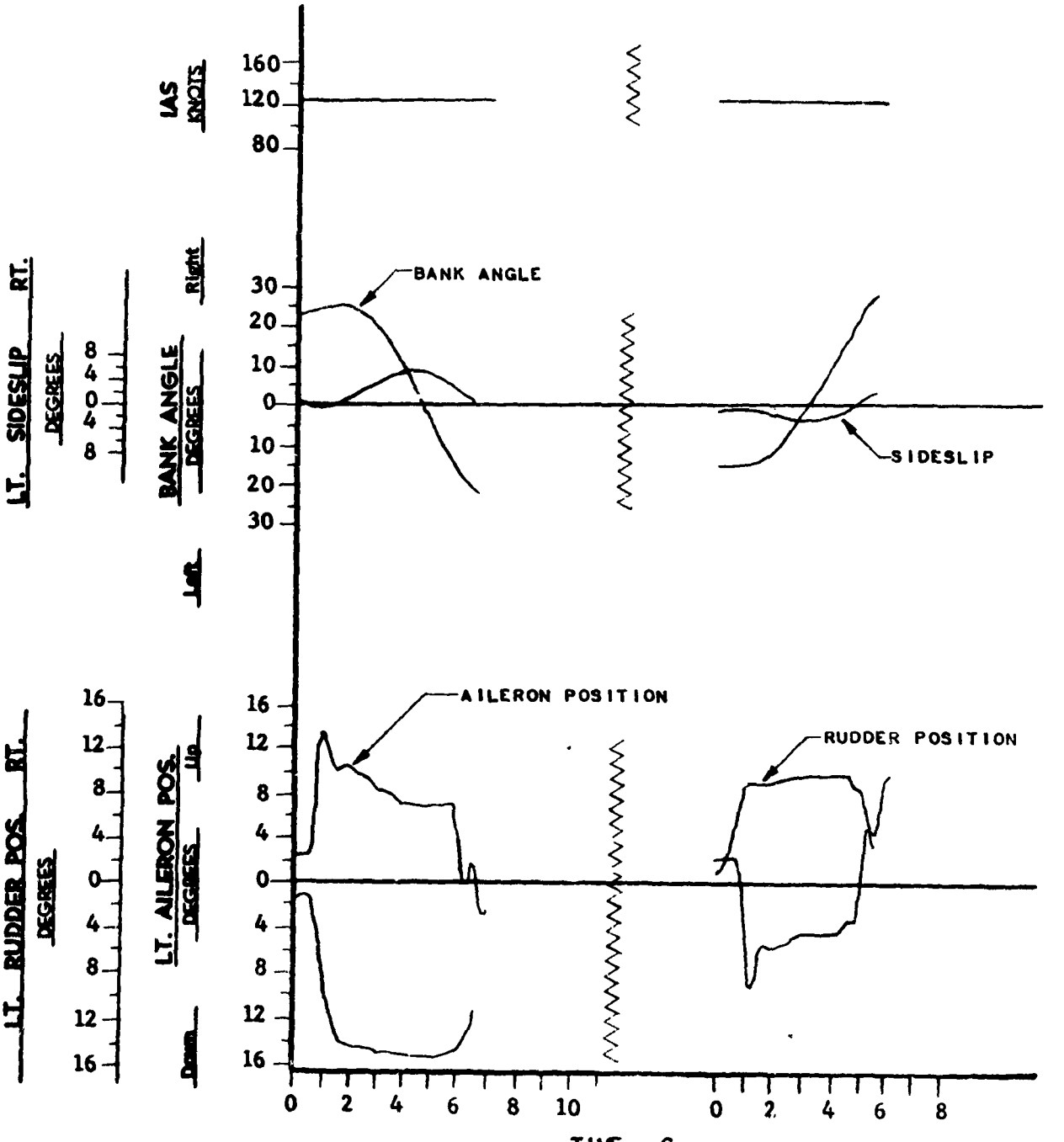


FIGURE NO. 87

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127.5 KNOTS; ALTITUDE 14,200 FEET
C.G. 29.4 % MAC; WEIGHT 240,500 LBS.
AVG. N_2 8230 RPM; RUDDER TAB 0.2 DEG.T.E.RT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

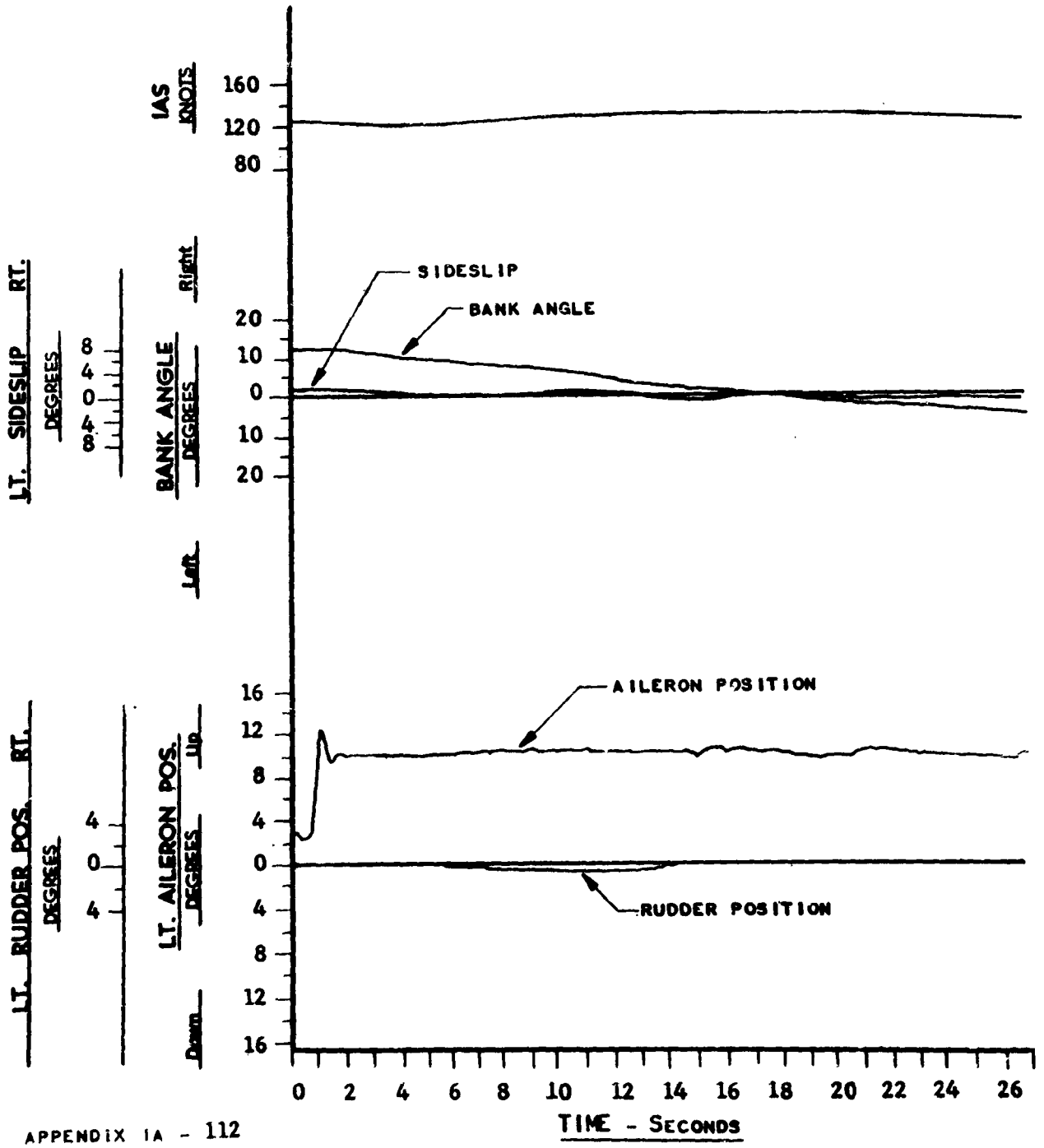


FIGURE NO. 88

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127.5 KNOTS; ALTITUDE 14,200 FEET
C.G. 29.4 % MAC; WEIGHT 240,500 LBS.
AVG. N_2 8230 RPM; RUDDER TAB 0.2 DEG.T.E.RT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

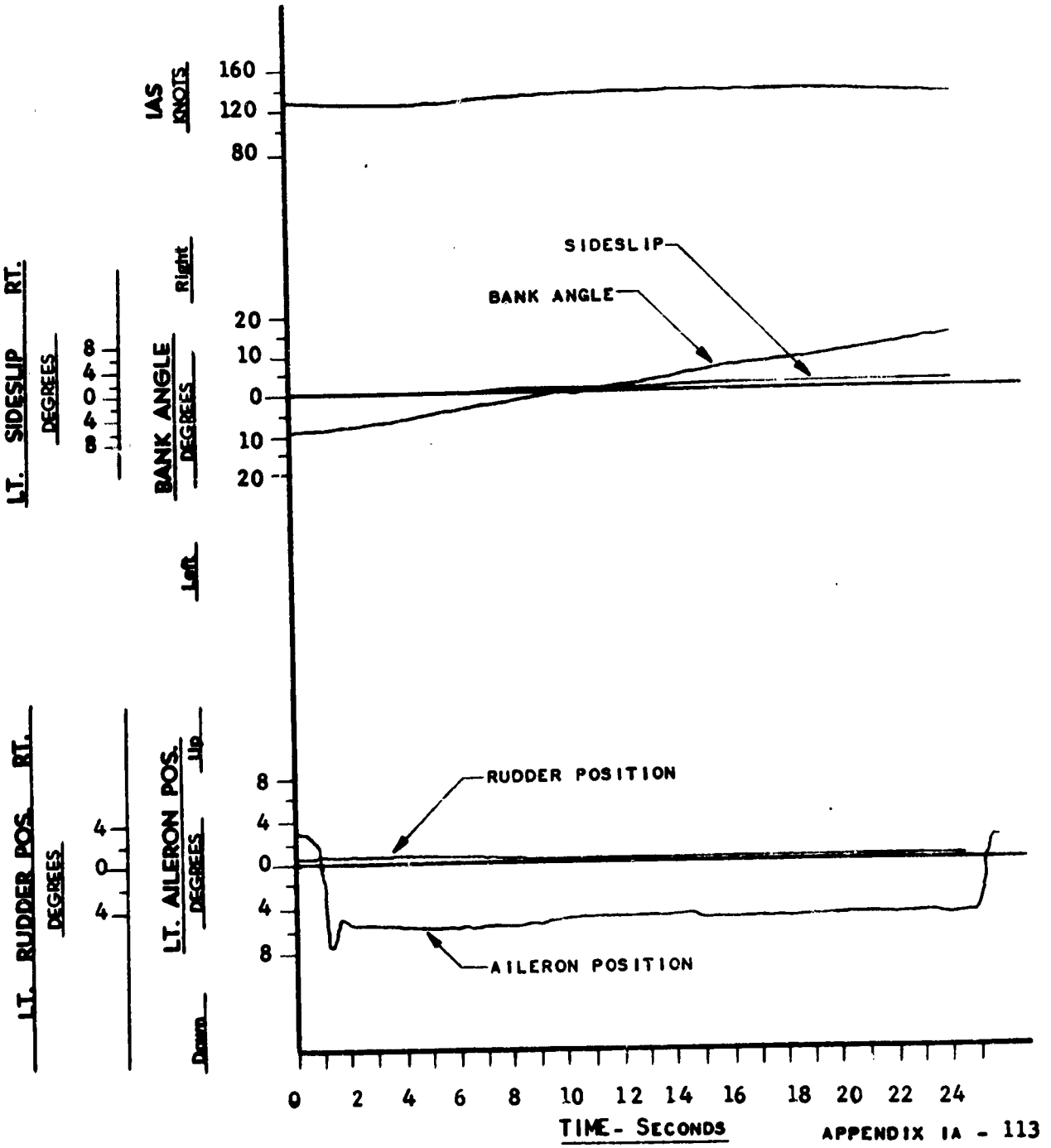


FIGURE NO. 89

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S 127.5 KNOTS; ALTITUDE 14,200 FEET
C.G 29.4 % MAC; WEIGHT 240,500 LBS.
AVG. N_2 8230 RPM; RUDDER TAB 0.2 DEG.T.E.RT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER USED

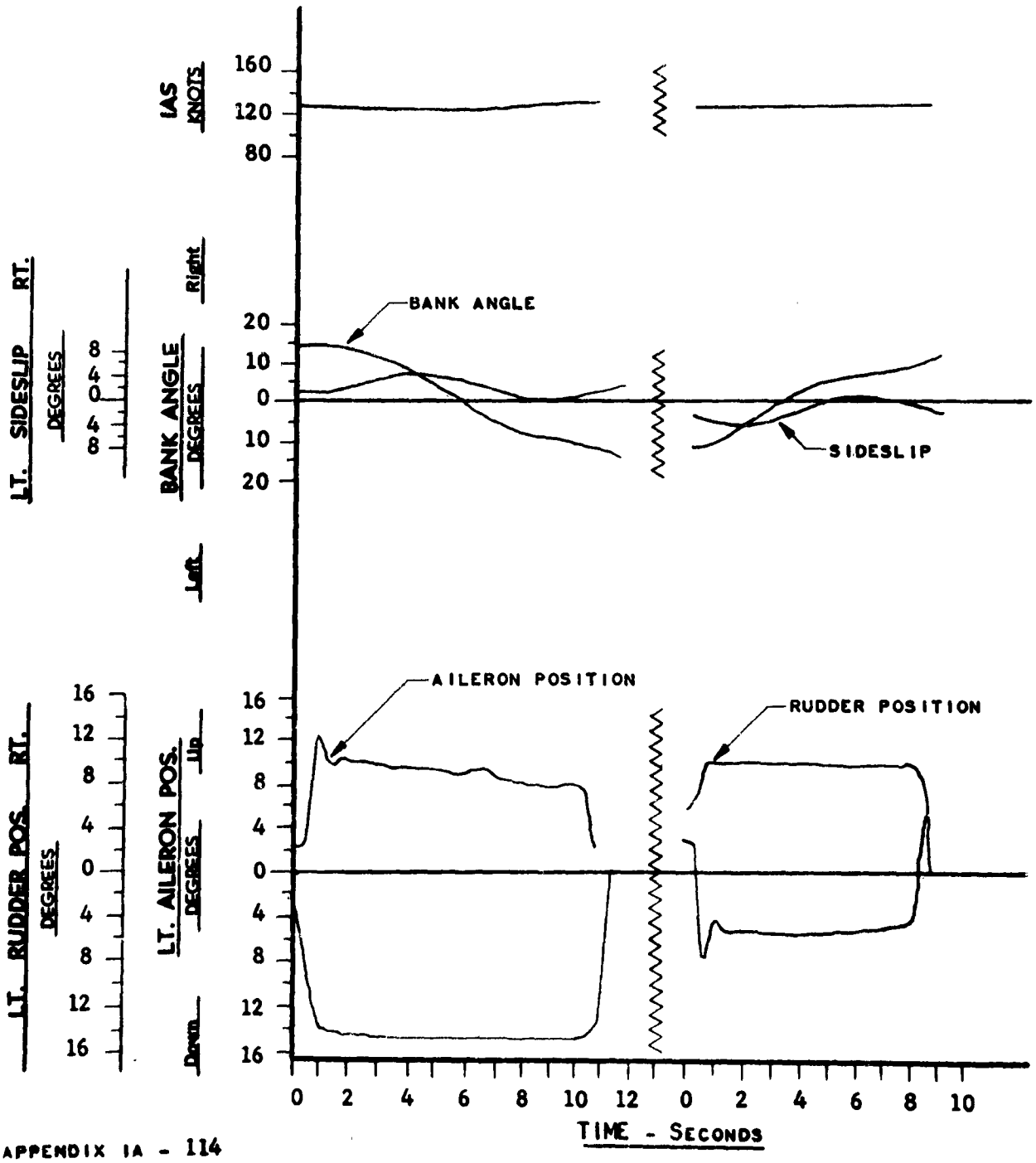


FIGURE NO. 90

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 114.5 KNOTS; ALTITUDE 11,000 FEET
C.G. 28.8 % MAC; WEIGHT 237,000 LBS.
AVG. N_2 8180 RPM; RUDDER TAB 1.3 DEG.T.E.LT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER PEDALS FIXED

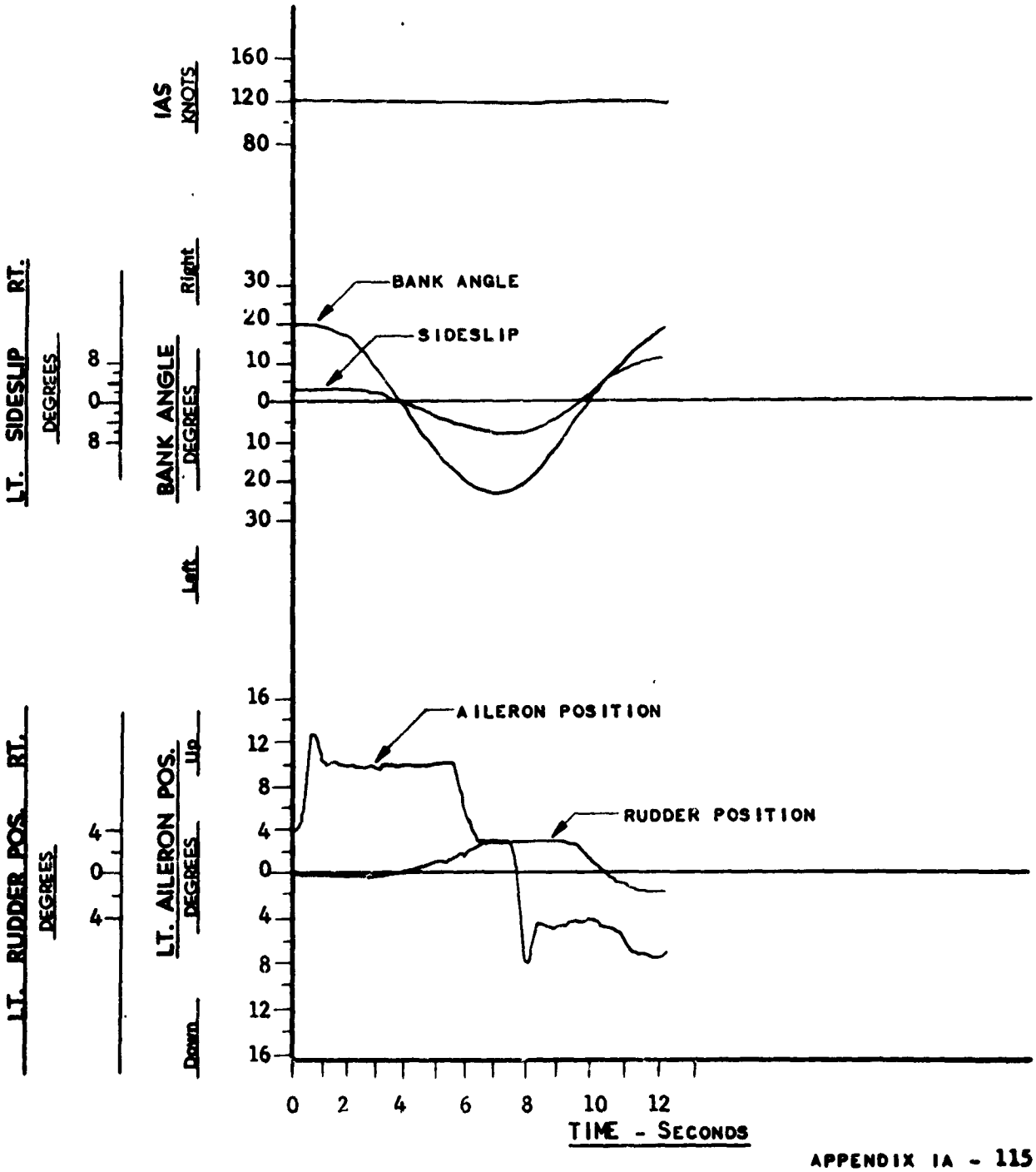


FIGURE NO. 91

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 114.5 KNOTS; ALTITUDE 11,000 FEET
C.G. 28.8 % MAC; WEIGHT 237,000 LBS.
AVG. N_2 8180 RPM; RUDDER TAB 1.3 DEG.T.E.LT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER PEDALS FIXED

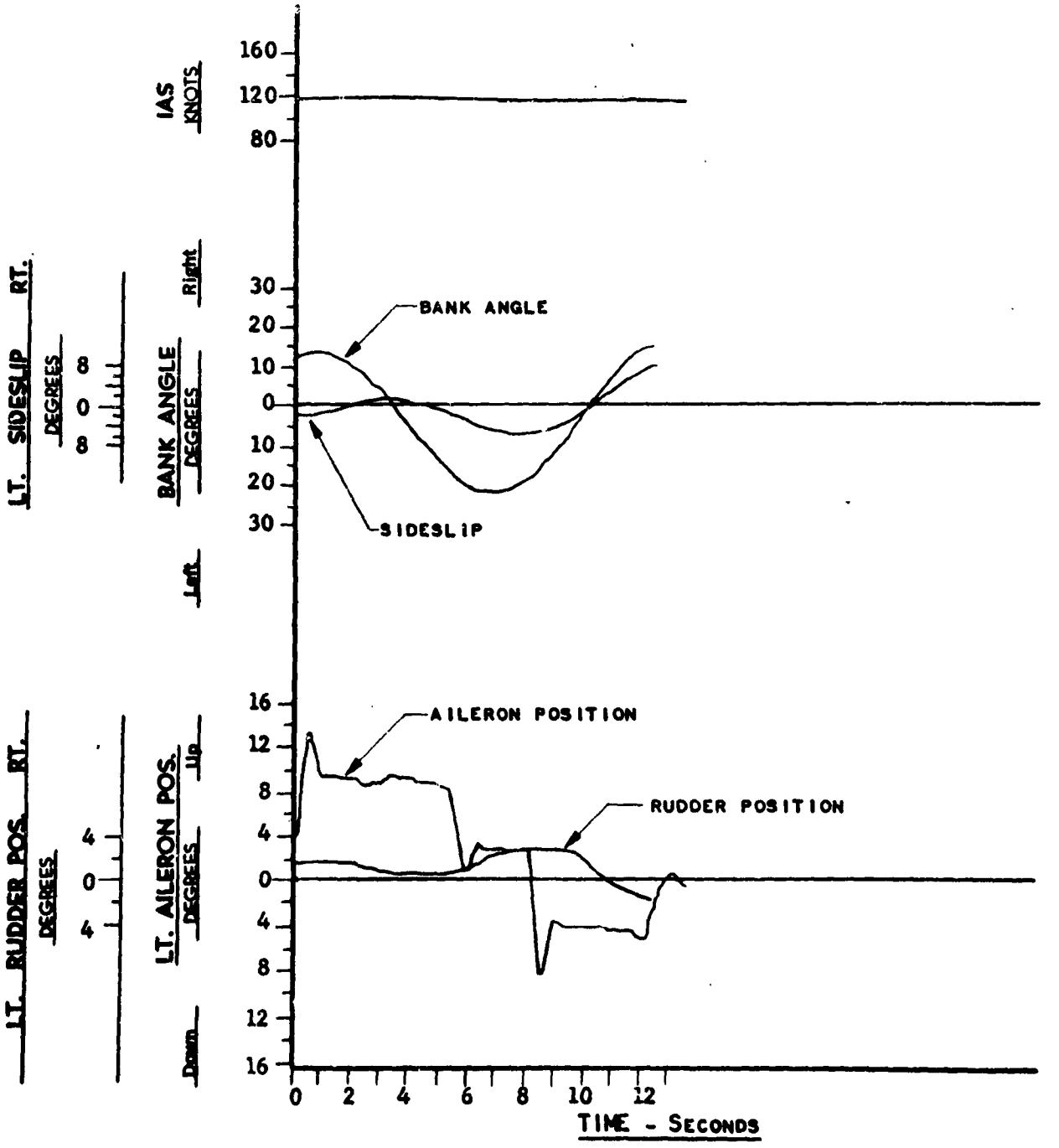


FIGURE NO. 92

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 114.5 KNOTS ; ALTITUDE 11,000 FEET
C.G. 28.8 % MAC; WEIGHT 237,000 LBS.
AVG. N_2 8180 RPM; RUDDER TAB 1.3 DEG.T.E.LT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: RUDDER USED

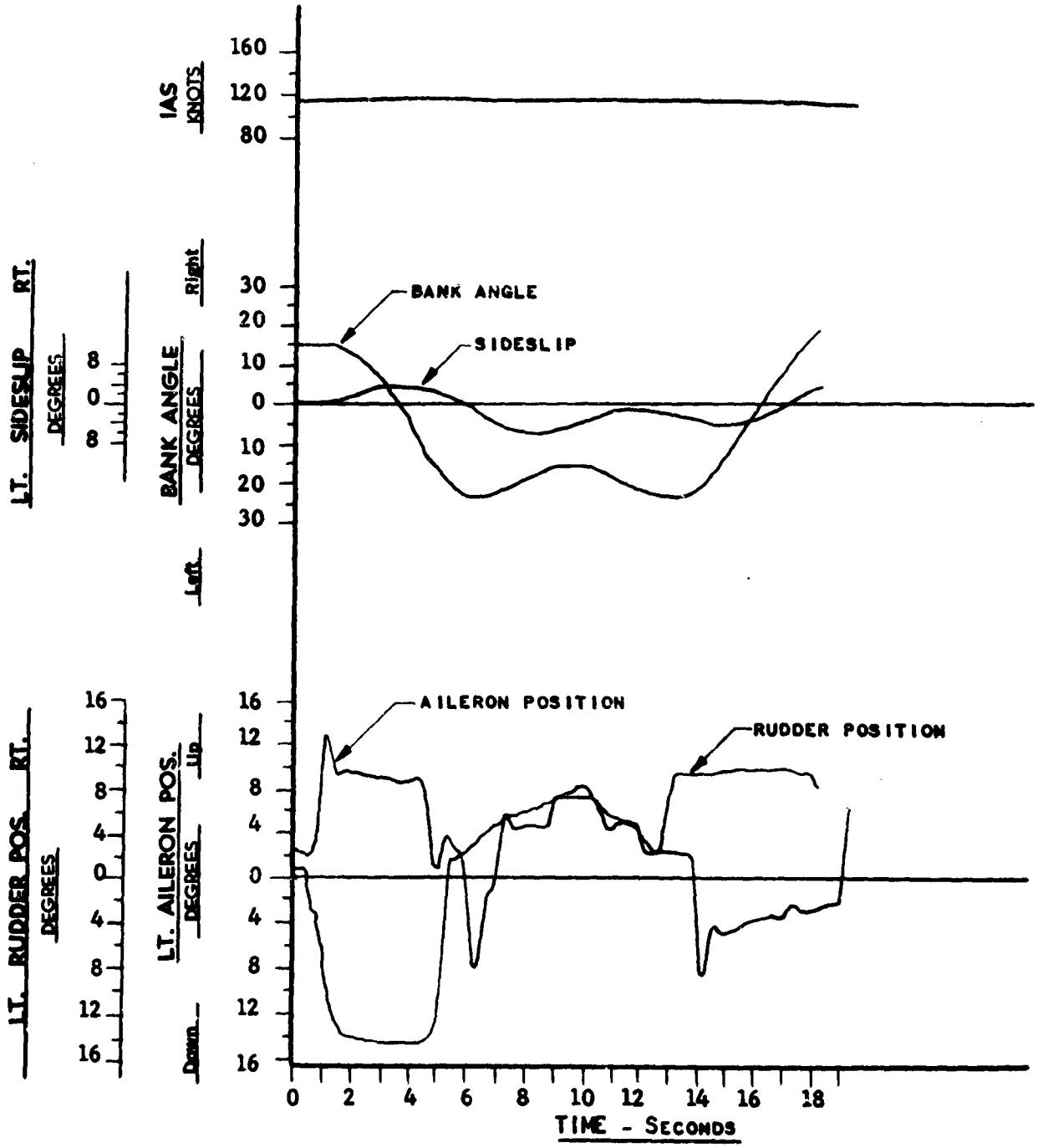


FIGURE NO. 93

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 114.5 KNOTS; ALTITUDE 11,000 FEET
C.G. 28.8 % MAC; WEIGHT 237,000 LBS.
AVG. N_2 8180 RPM; RUDDER TAB 1.3 DEG.T.E.LT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

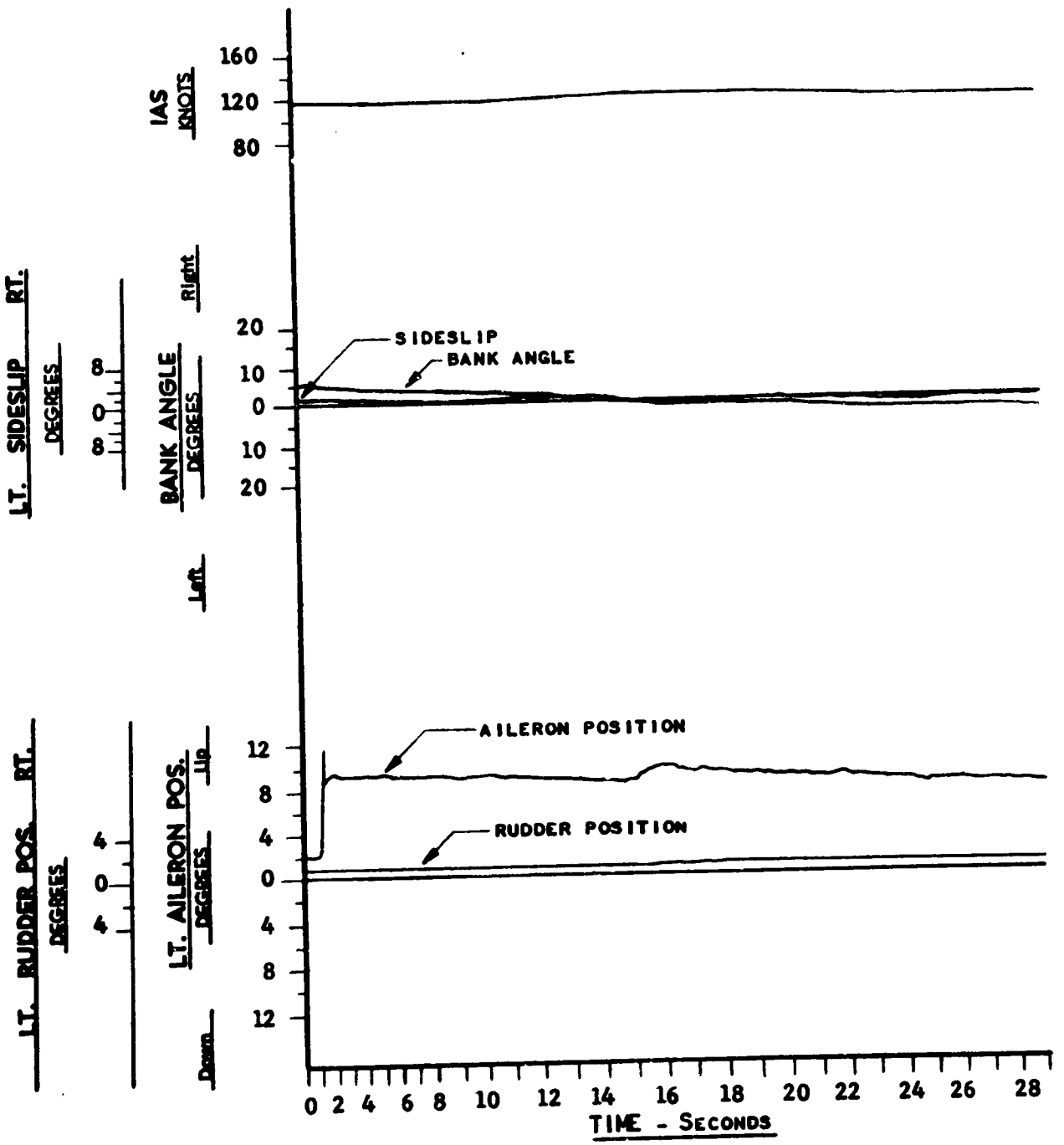


FIGURE NO. 94

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 114.5 KNOTS; ALTITUDE 11,000 FEET
C.G. 28.8 % MAC; WEIGHT 237,000 LBS.
AVG. N_2 8180 RPM; RUDDER TAB 1.3 DEG.T.E.LT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER PEDALS FIXED

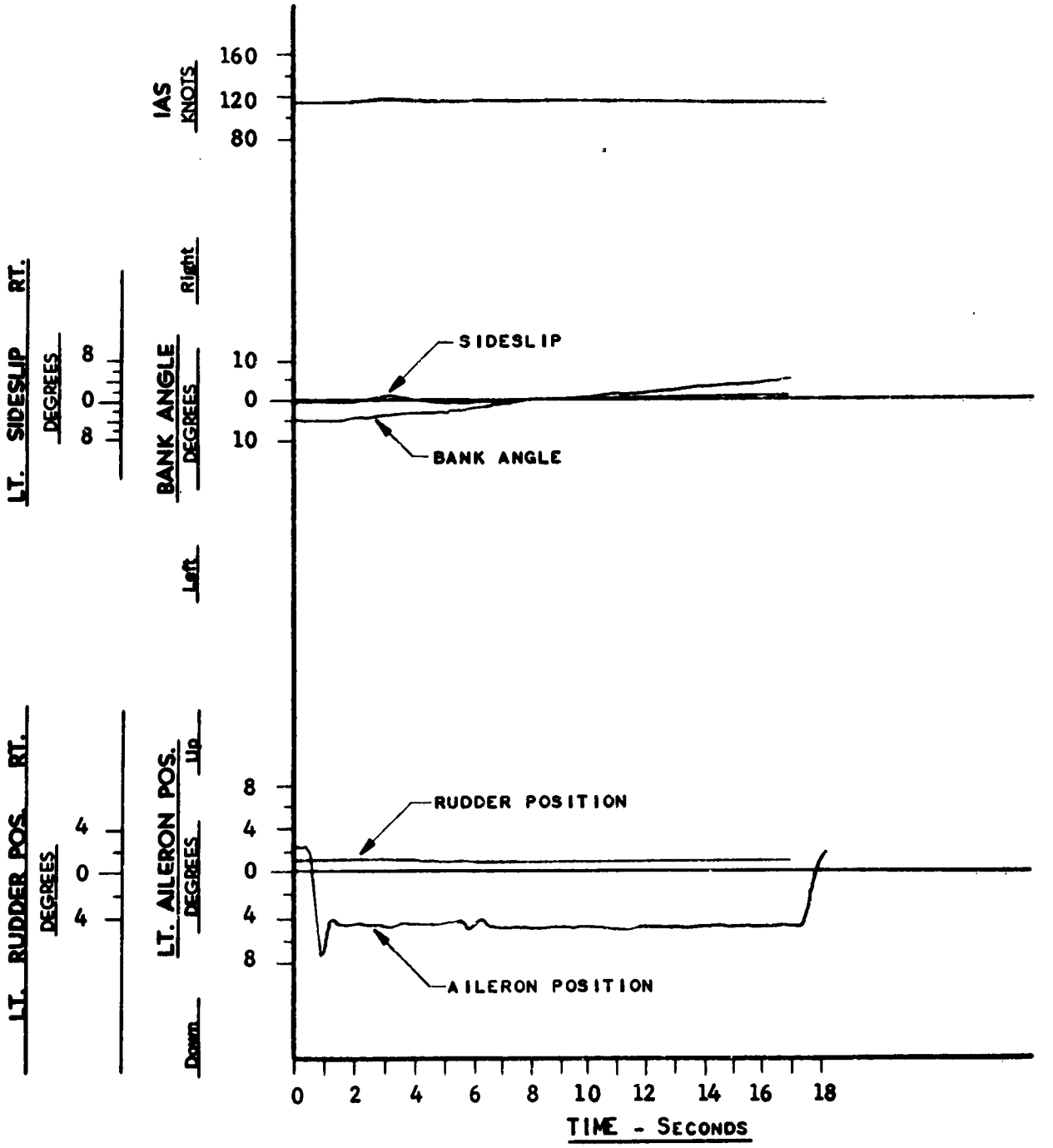


FIGURE NO. 95

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 114.5 KNOTS; ALTITUDE 11,000 FEET
C.G. 28.8 % MAC; WEIGHT 237,000 LBS.
AVG. Na 8180 RPM; RUDDER TAB 1.3 DEG.T.E.LT.
L. AIL. TAB 2.8 DEG.T.E.UP; R. AIL. TAB. 0.9 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED

NOTE: SPOILERS INOPERATIVE
RUDDER USED

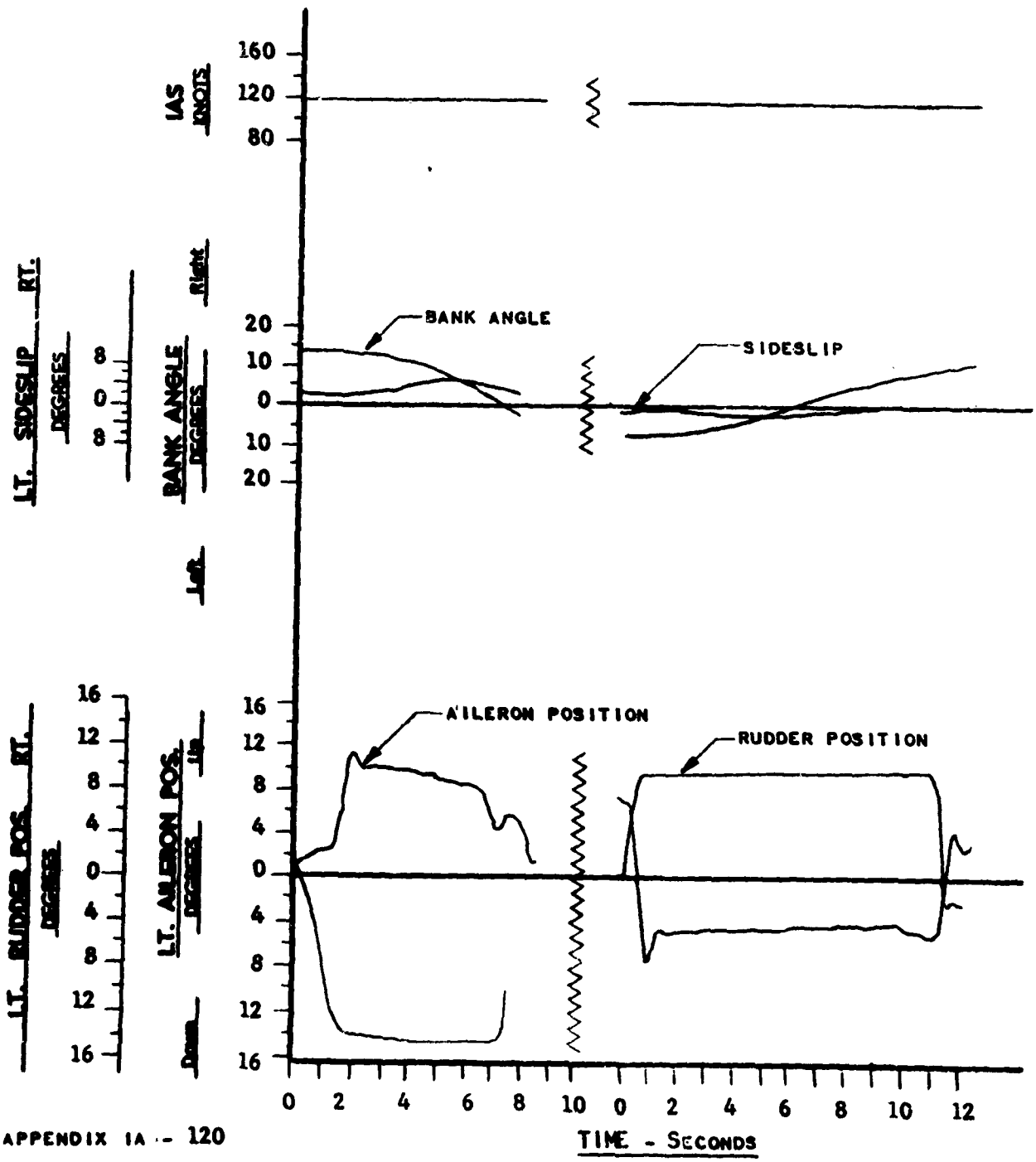


FIGURE NO. 96

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 188 KNOTS; ALTITUDE 16,700 FEET
C.G. 25.9 % MAC; WEIGHT 235,500 LBS.
AVG. N_2 9000 RPM; RUDDER TAB 12.0 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E.DN; R. AIL. TAB. 17.0 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L.H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 3

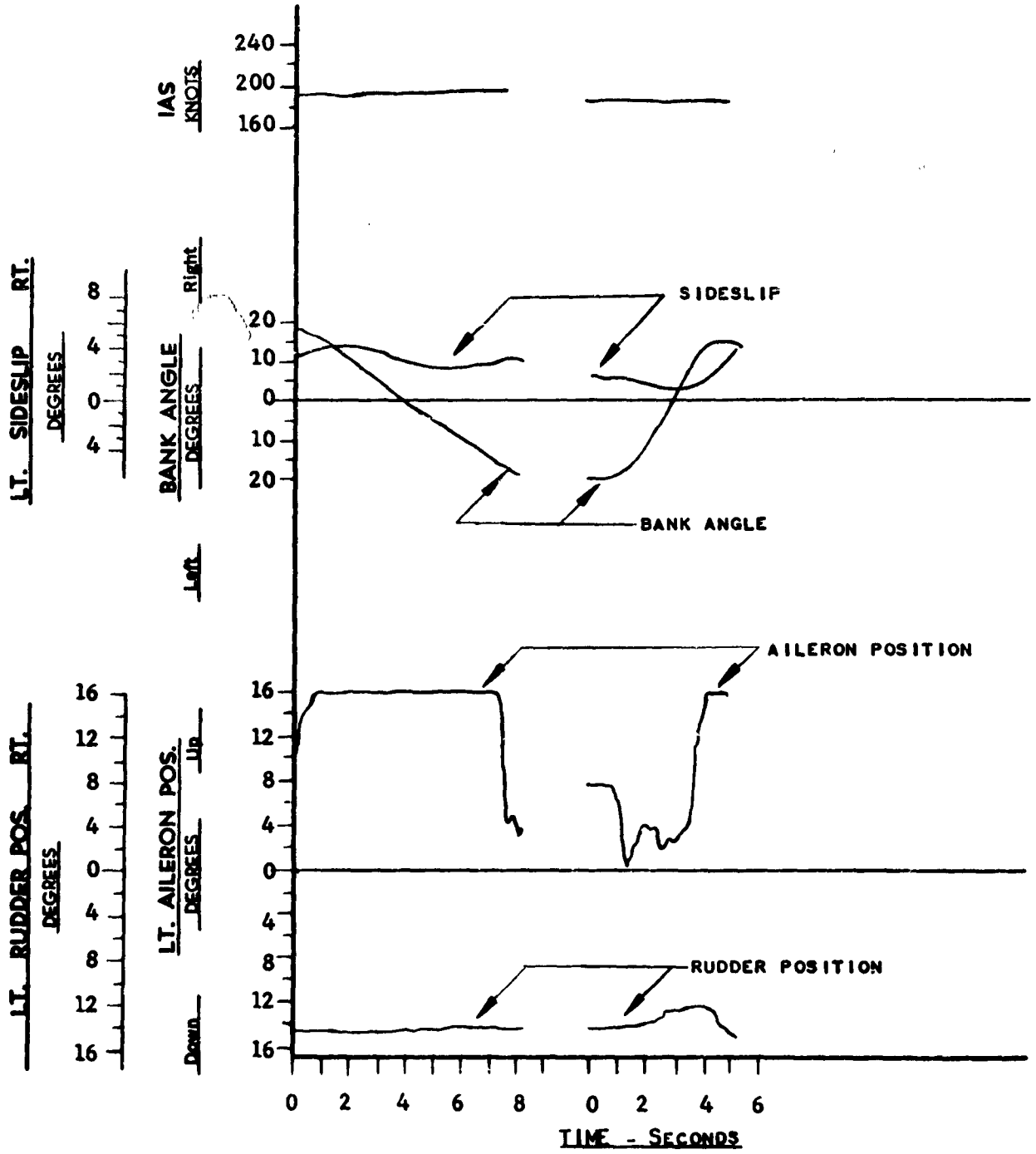


FIGURE NO. 97

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 157.5 KNOTS; ALTITUDE 17,900 FEET
C.G. 25.8 % MAC; WEIGHT 234,000 LBS.
AVG. N_2 8510 RPM; RUDDER TAB 12.0 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E. DN; R. AIL. TAB. 17.0 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L. H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 3

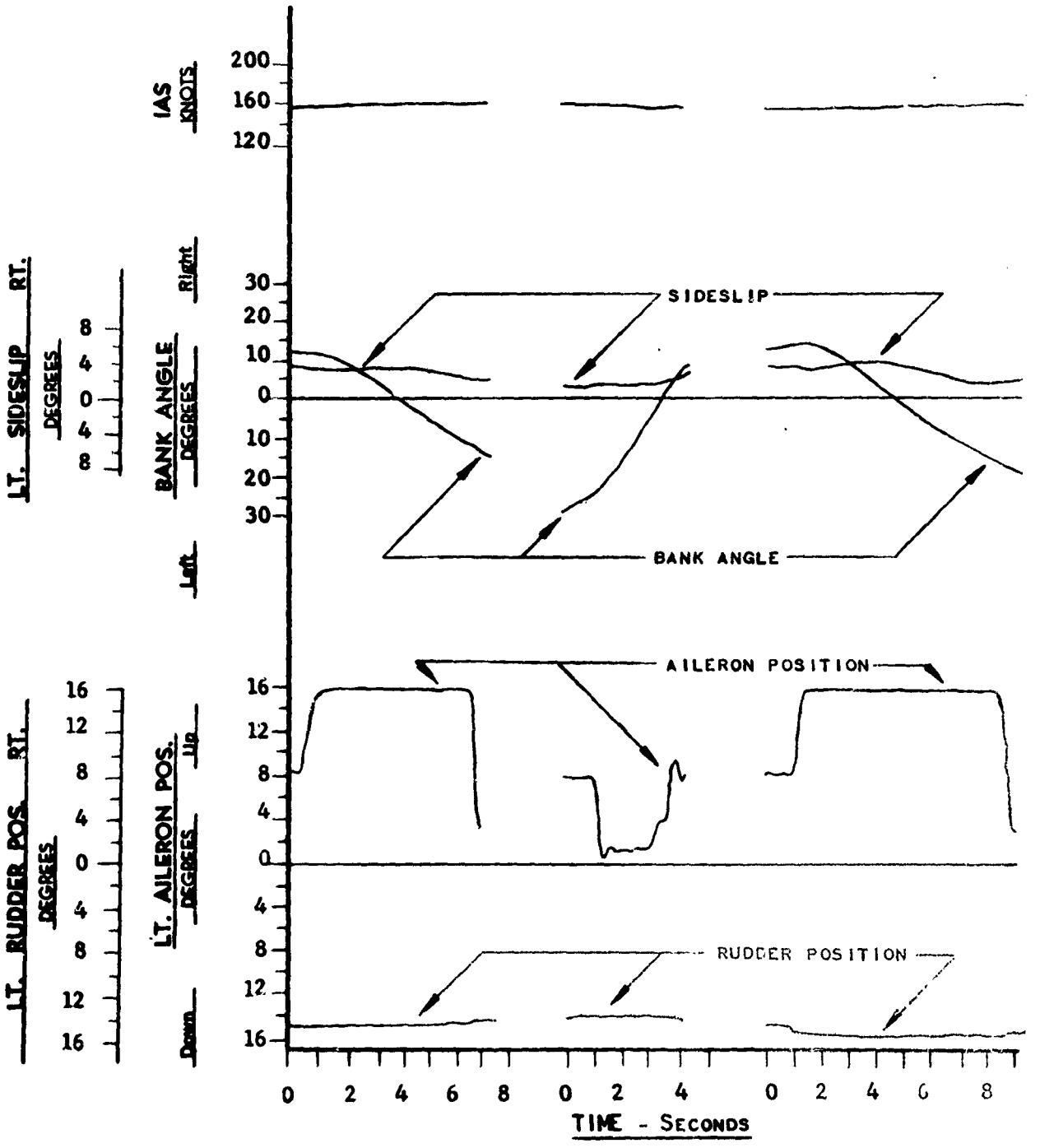


FIGURE NO. 98

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127.5 KNOTS; ALTITUDE 17,600 FEET
C.G. 25.7 % MAC; WEIGHT 233,000 LBS.
AVG. N_2 8410 RPM; RUDDER TAB 9.8 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E.DN; R. AIL. TAB. 17.3 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L.H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 3

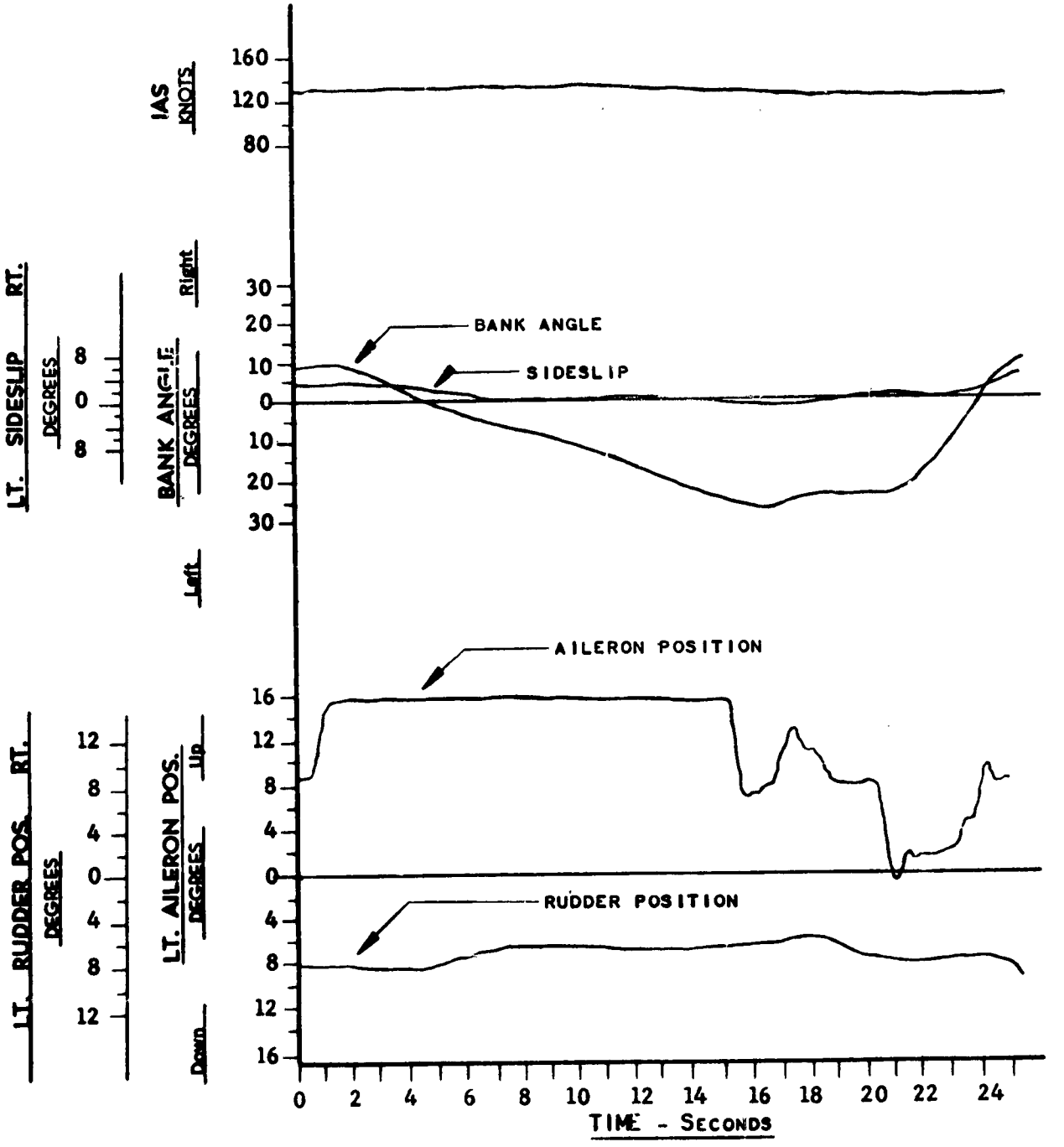


FIGURE NO. 99

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127.5 KNOTS; ALTITUDE 17,600 FEET
C.G. 25.7 % MAC; WEIGHT 233,000 LBS.
AVG. N_2 8410 RPM; RUDDER TAB 9.8 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E.DN; R. AIL. TAB. 17.3 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L.H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 3

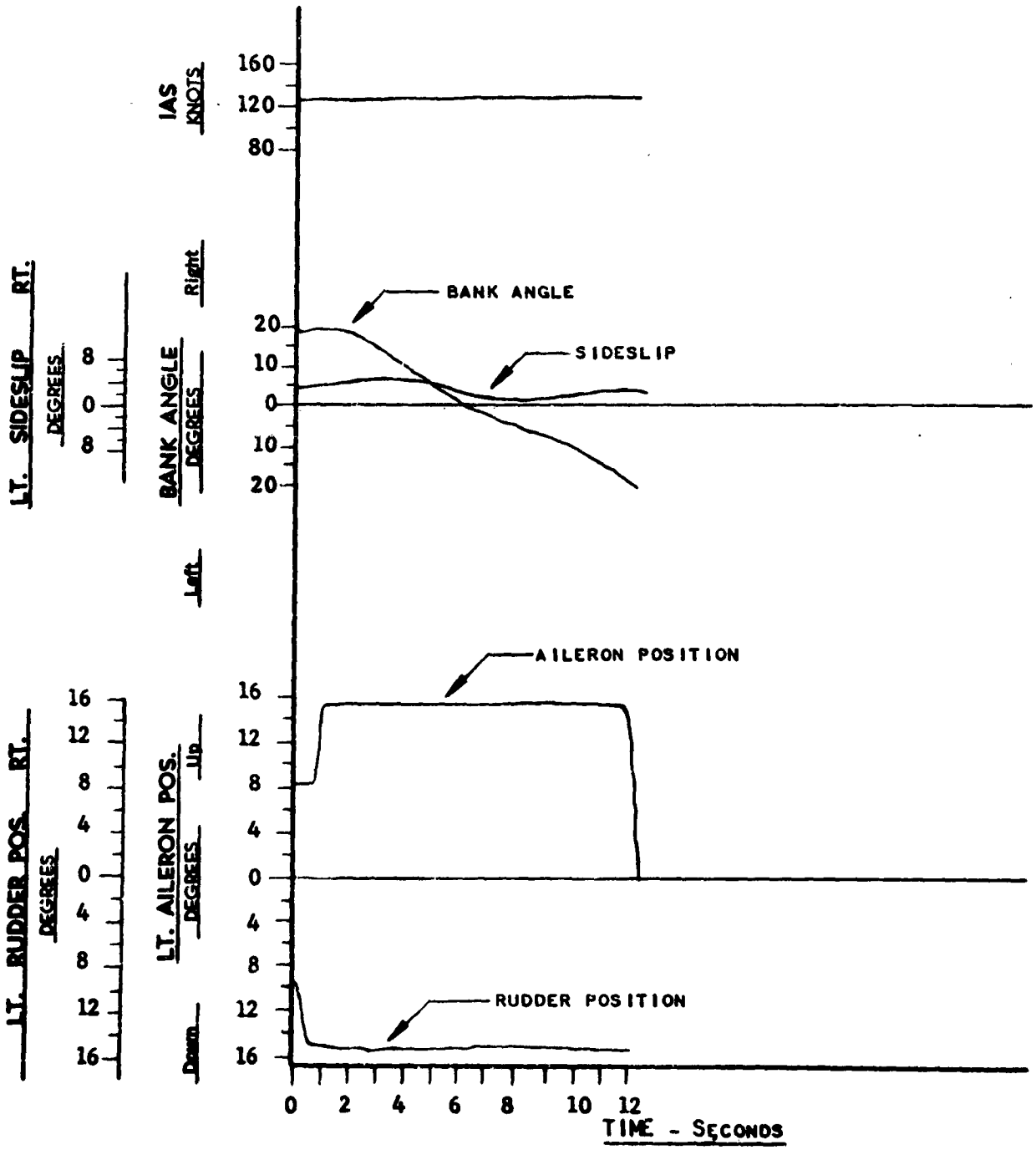


FIGURE NO. 100

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127 KNOTS; ALTITUDE 17,900 FEET
C.G. 25.65 % MAC; WEIGHT 232,000 LBS.
AVG. N2 8410 RPM; RUDDER TAB 11.3 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E.DN; R. AIL. TAB. 17.3 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L.H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 2

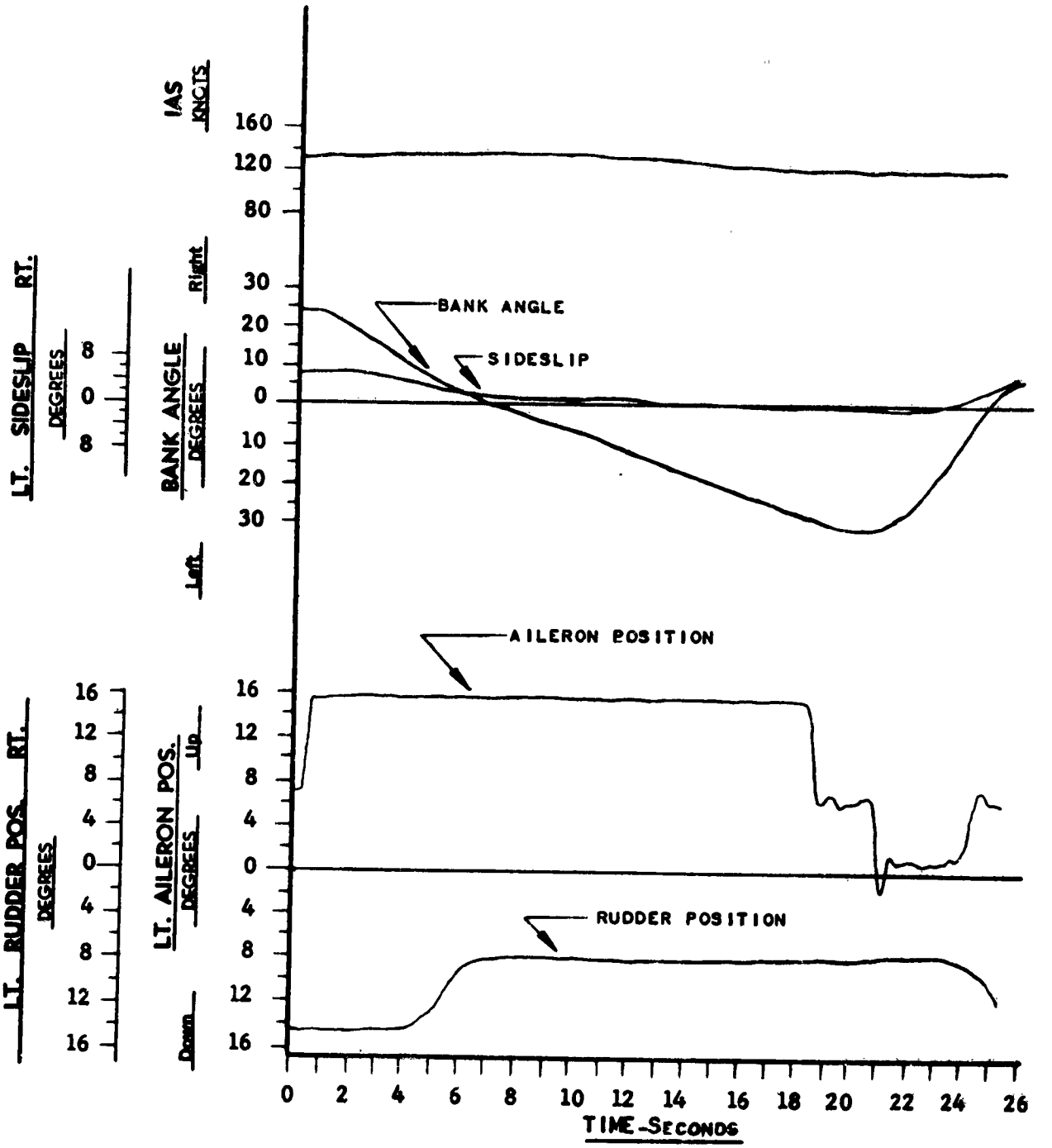


FIGURE NO. 101

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 127 KNOTS; ALTITUDE 17,900 FEET
C.G. 25.65 % MAC; WEIGHT 232,000 LBS.
AVG. N_2 8410 RPM; RUDDER TAB 11.3 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E.DN; R. AIL. TAB. 17.3 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L.H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 2

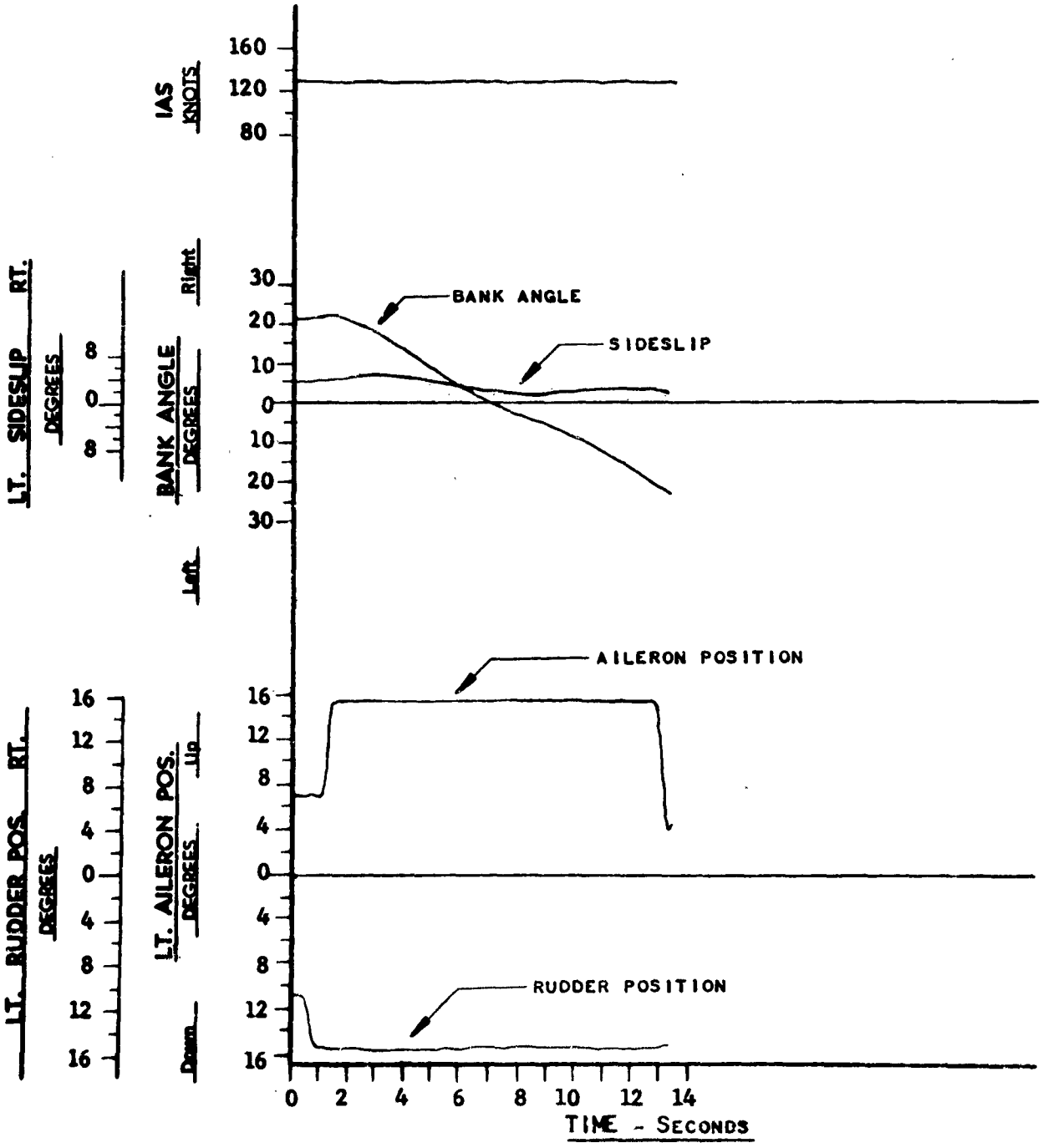


FIGURE NO. 102

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 116.5 KNOTS; ALTITUDE 17,100 FEET
C.G. 25.55 % MAC; WEIGHT 231,000 LBS.
AVG. N_2 7940 RPM; RUDDER TAB 12.3 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E.DN; R. AIL. TAB 17.3 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L.H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 2

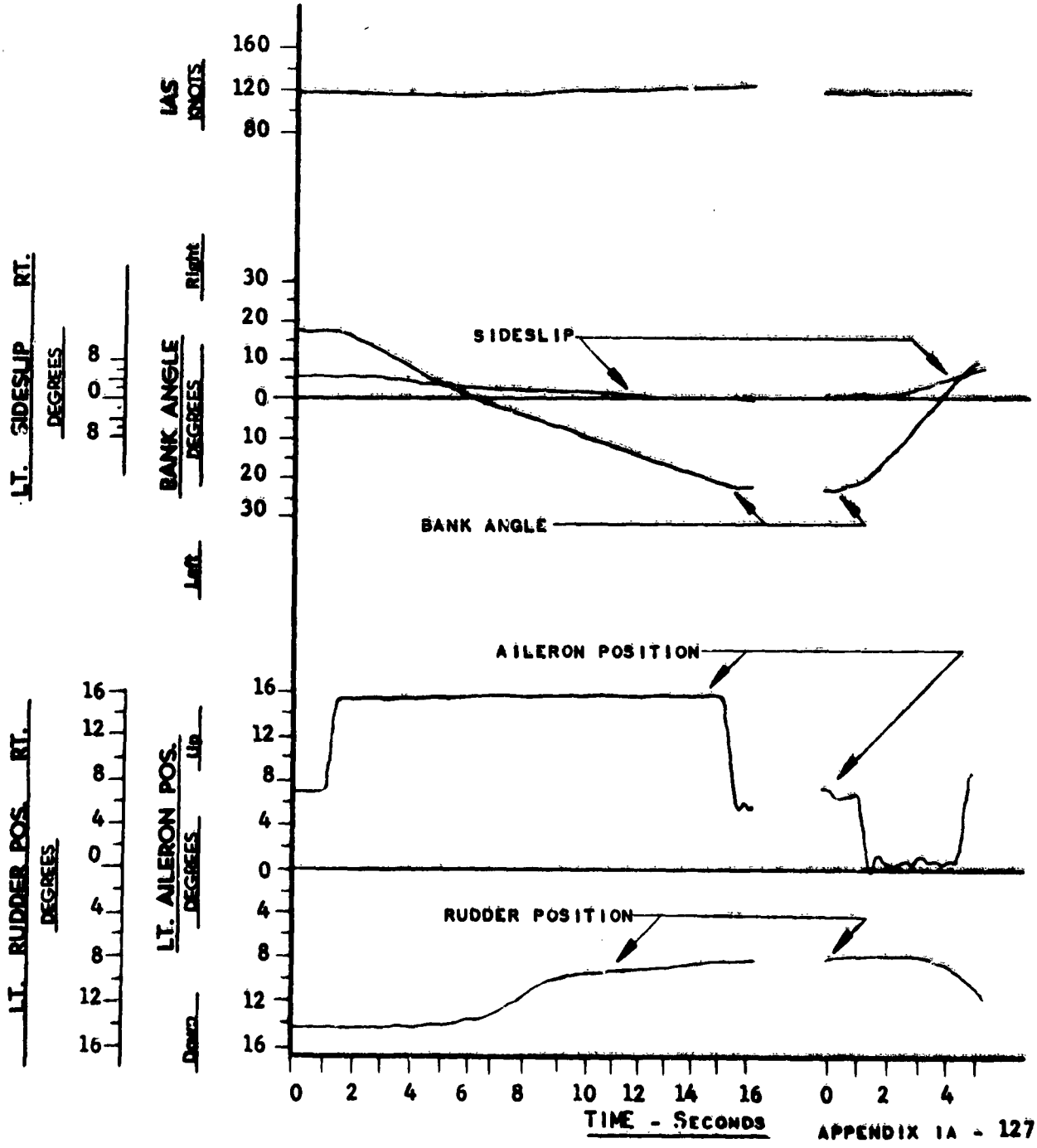


FIGURE NO. 103

TIME HISTORY OF MAXIMUM DEFLECTION AILERON ROLLS

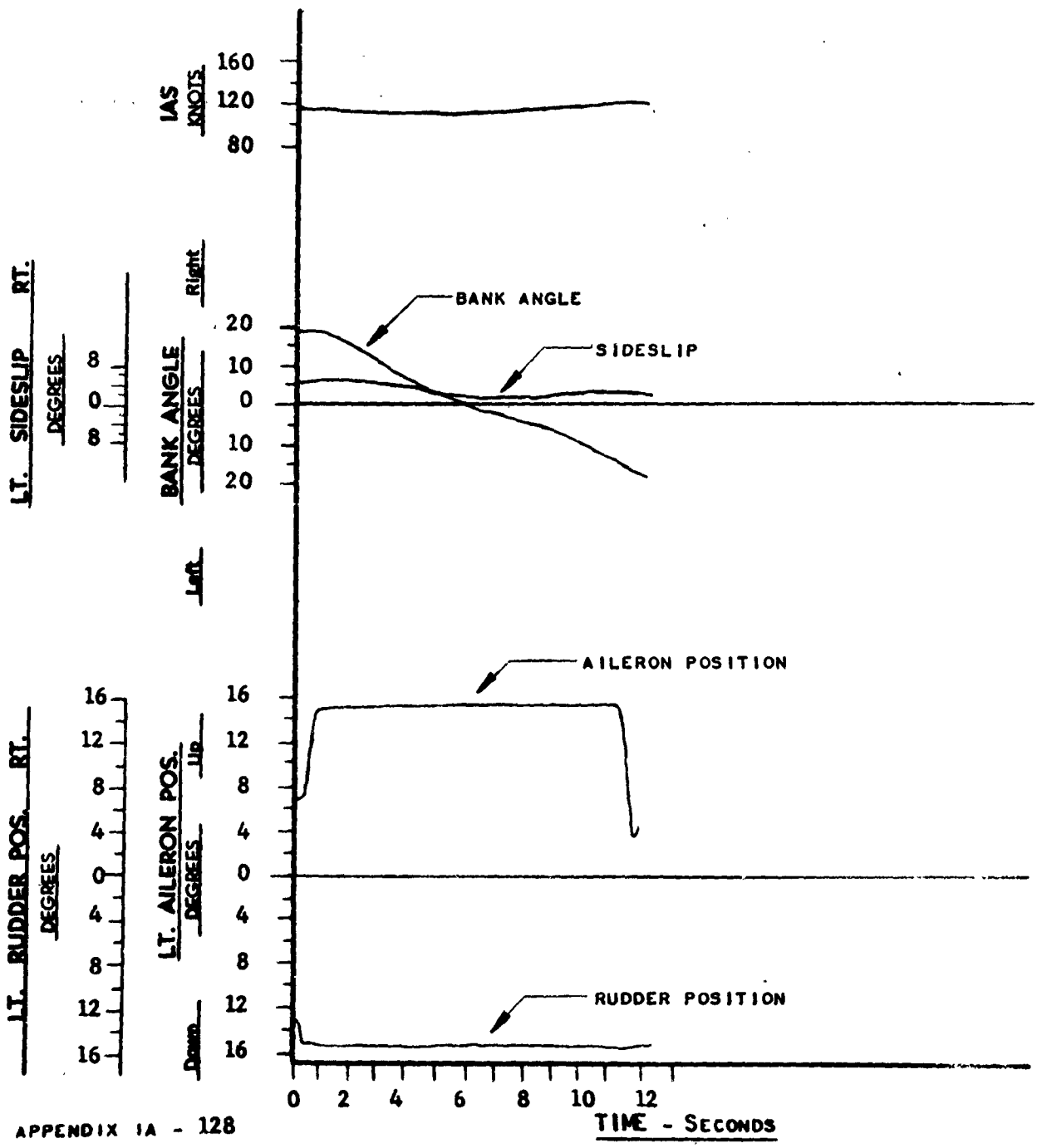
B-52A, USAF NO. 52-003

POWER APPROACH CONFIGURATION

TRIM CONDITIONS

C.A.S. 116.5 KNOTS; ALTITUDE 17,100 FEET
C.G. 25.55 % MAC; WEIGHT 231,000 LBS.
AVG. N_2 7940 RPM; RUDDER TAB 12.3 DEG.T.E.RT.
L. AIL. TAB 12.2 DEG.T.E.DN; R. AIL. TAB. 17.3 DEG.T.E.UP

NO EXTERNAL TANKS INSTALLED
L.H. SPOILERS INOPERATIVE
FULL RIGHT AILERON AND RUDDER TRIM
SPEED BRAKES NO. 2



APPENDIX II

GENERAL INFORMATION

APPENDIX II

TABLE OF CONTENTS

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POWER PLANT	1
WEIGHT AND BALANCE	2
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POWER PLANT:

Pratt & Whitney J57-P-29W:

Uninstalled Static Rating at Maximum Power	10,500 Pounds Dry
	11,400 Pounds With Water Injection
Installed Static Rating at Maximum Power	9,920 Pounds Dry
	10,550 Pounds With Water Injection

POWER PLANT LIMITATIONS:

Operating Condition	Operating Limits					
	ROTOR SPEED %N_2*	MAXIMUM OBSERVED EXHAUST GAS TEMP. °C SL to 35,000'	55,000'***	TIME LIMIT (MINUTES)	OIL PRESSURE PSIG NORMAL	OIL TEMPERATURE °C RANGE
Take-Off** (Water Injection)		620		5	45 ±5	70-120
Military		610	640	30	45 ±5	70-120
Normal Rated		560	580	Continuous		
Cruise						
90% Normal Rated		530	550	Continuous	45 ±5	70-120
80% Normal Rated		490	510	Continuous	45 ±5	70-120
70% Normal Rated		460	480	Continuous	45 ±5	70-120
Idle	58-65	340			30 to 50	70-120
Starting		610	610			
Acceleration		650	650	2	45 ±5	70-120

* High rotor speed (N_2) varies with inlet temperature. Values may be determined by consulting speed bias schedule, in Figures 61 through 65 of Appendix IA.

** To be used for take-off only. Restricted to above 5°C and below 8,000 feet.

*** Between 35,000 and 55,000 Feet, temperature limits vary linearly with altitude.

WEIGHT AND BALANCE

Flight No.	Basic* Weight-Lbs.	Crew-Lbs.	Fuel-Lbs.	Oil-Lbs.	Gross Weight-Lbs.	C.G. % MAC	Water Injection Fluid-Lbs.
44	167,640	1250	148,838	867	324,032	25.41	3041
45	167,640	1250	228,140	867	403,334	26.12	3041
46	167,640	1250	75,933	867	248,086	23.89	0
Taxi Test at E.A.F.B.	167,640	750	236,261	867	410,955	27.51	3041
47	167,640	1500	126,400	867	298,803	25.26	0
48	167,640	1250	105,050	867	277,203	25.30	0
49	167,640	1250	200,111	867	371,040	26.46	0
50	167,640	1000	54,667	867	225,346	19.21	0
51	167,647	1000	125,154	866	295,840	31.28	0
52	167,647	1250	125,749	867	296,435	22.22	0
53	167,647	1250	125,490	867	296,426	22.72	0
54	167,647	1250	121,851	867	292,787	25.39	0
55	167,647	1250	120,905	867	291,841	25.44	0
56	167,647	1250	121,572	867	292,508	25.65	0
57	167,647	1250	120,295	867	291,231	25.40	0
58	167,647	1250	121,767	867	293,927	25.18	0
59	167,647	1250	236,540	867	408,700	25.13	0
60	167,647	1250	136,285	867	408,443	24.48	0

* Includes text instrumentation and 2, 1000 gallon external wing tanks.

FLIGHT LOG

Flight No.	Date 1955	Flight Time	Total Flight Time	Test
44	9-20	2:57	2:57	(1) Max. Performance Takeoff, Dry (2) Military Power Check Climb to 44,500 feet (3) 8 Engine Speed Power 2,000,000 W/δ, 45,000 feet (4) 8 Engine Speed Power 1,800,000 W/δ, 45,000 feet (1 point only)
45	9-23	6:39	9:36	(1) Max. Performance Takeoff (2) Military Power Check Climb (3) 8 Engine Speed Power 1,700,000 W/δ, 37,000 feet (4) 8 Engine Speed Power 1,600,000 W/δ, 37,000 feet (5) 8 Engine Speed Power 1,800,000 W/δ, 40,000 feet (6) 8 Engine Speed Power 1,600,000 W/δ, 40,000 feet
46	9-26	3:10	12:46	(1) Normal Performance Takeoff (2) Military Power Check Climb (3) 8 Engine Speed Power 1,800,000 W/δ, 50,000 feet Thrust Run at E.A.F.B. Accelerate-Stop Test at E.A.F.B. Thrust Run at E.A.F.B.
47	10-4	1:10	13:56	(1) Demonstration Flight for Undersecretary of the Air Force
48	10-6	2:06	16:02	(1) Ferry Flight to Seattle from E.A.F.B.
49	10-13	6:42	22:44	(1) Maximum Performance Takeoff (2) Military Rated Power Check Climb - 8 Engines (3) 8 Engine Speed Power 1,800,000 W/δ, 40,000 feet (4) 8 Engine Speed Power 1,600,000 W/δ, 40,000 feet (5) 8 Engine Speed Power 2,000,000 W/δ, 45,000 feet (6) 8 Engine Speed Power 1,800,000 W/δ, 45,000 feet (7) 8 Engine Speed Power 1,800,000 W/δ, 45,000 feet Slipway Doors Open
50	10-17	2:19	25:03	(1) Maximum Performance Takeoff (2) Military Rated Power Climb (3) 8 Engine Speed Power 2,200,000 W/δ, 55,000 feet (4) High Altitude Climb
51	10-31	3:54	28:57	(1) Maximum Performance Takeoff (2) Military Rated Power Climb (3) 8 Engine Speed Power 1,800,000 W/δ, 45,000 feet 35% MAC (4) Aileron Rolls, 10,000 feet, Power Approach Configuration 190, 160, 130 & 118 knots IAS

Flight No.	Date 1955	Flight Time	Total Flight Time	Test
52	11-3	3:49	32:46	(1) Maximum Performance Takeoff (2) 8 Engine Speed Power 1,800,000 W/δ, 45,000 feet, 18% MAC, 2 points only (3) Dry I.F.R. Contacts, 707 Aircraft (4) Dry I.F.R. Contacts, KC-97 Aircraft
53	11-7	2:19	35:05	(1) Maximum Performance Takeoff (2) Normal Rated Power Check Climb (3) 8 Engine Speed Power 1,800,000 W/δ, 45,000 feet, 18% MAC
54	11-9	1:47	36:52	(1) Maximum Performance Takeoff (2) Dry I.F.R. Contacts, KC-97 Aircraft
55	11-10	3:04	39:56	(1) 7 Engine Max. Performance Takeoff (2) Spoiler Buffet Investigation at 48,000 feet to 40,000 feet (3) Dry I.F.R. Contacts with KC-97 Aircraft (4) Aileron Rolls at 10,000 feet, power approach configuration, all spoilers deactivated on left side
56	11-14	3:48	43:44	(1) Maximum Performance Takeoff (2) 2 Automatic I.L.S. Approaches; one manual I.L.S. Approach (3) Dry I.F.R. Contacts with KC-97 Tanker Aircraft
57	11-15	3:49	47:33	(1) Maximum Performance Takeoff (2) Dry I.F.R. Contacts with KC-97 Tanker Aircraft
58	11-21	4:27	52:00	(1) Maximum Performance Takeoff (2) Dry I.F.R. Contacts with KC-97 Tanker Aircraft (3) Aileron Rolls in Power Approach Configuration with Spoilers Inoperative on one side (4) Stalls, Flaps Down, Flaps 60%, 37%, 20% and full up
59	11-22	11:52	63:52	(1) Maximum Performance Takeoff (2) Range Mission, 1,700,000 W/δ to 45,000 feet, constant altitude thereafter
60	11-28	11:49	75:41	(1) Maximum Performance Takeoff (2) Range Mission, 1,700,000 W/δ

APPENDIX III

ORIGINAL DATA

APPENDIX III

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TAKEOFF

B-52A AF52-003

Flight No. AF-56

Pressure 30.18 "Hg

Temperature -4.4 °C

Avg RPM 9311

Avg EGT 551 °C

Ground Roll 2660 ft

Air Distance 870 ft

Wind 5.0 mph at 0 deg from HEAD

Gross Wt. 287 245 lbs

Avg Thrust at B.R. 11738 lbs/eng

H_2O used NO

Crosswind Trim —— degrees

IAS at TO 125.0 knots

IAS at 50' 135.0 knots

V_{gr} at TO 118.0 knots

V_{gr} at 50' 131.5 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0						
1	20							
2	50							
3	90							
4	140							
5	200							
6	270							
7	350							
8	430							
9	530							
10	820							
11	730							
12	850							
13	970							
14	1110							
15	1250							
16	1400							
17	1560							
18	1730							
19	1900							
20	2080							
21	2270							
22	2460	0						
23	2660	T.O.						
24	2860	4						
25	3070	16						
26	3270	32						
27	3490	48						
28	3720	66						

TAKEOFF

B-52A AF52-003

Flight No. AF-57 | Gross Wt. 289151 lbs

Pressure 30.27 "Hg | Avg Thrust at B.R. 11648 lbs/eng

Temperature -1.7 °C | H_2O used NO

Avg RPM 9320 | Crosswind Trim — degrees

Avg EGT 511 °C | IAS at TO 123.0 knots

Ground Roll 2870 ft | IAS at 50' 136.0 knots

Air Distance 870 ft | V_{gr} at TO 124.0 knots

Wind 10.0 mph at 15° deg from R-HEAD | V_{gr} at 50' 136.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0						
1	10							
2	20							
3	30							
4	60							
5	100							
6	150							
7	210							
8	270							
9	350							
10	430							
11	530							
12	630							
13	740							
14	860							
15	980							
16	1120							
17	1260							
18	1410							
19	1570							
20	1710							
21	1900							
22	2080							
23	2270							
24	2460							
25	2660	0						
26	2870	T.O.						
27	3080	5						
28	3300	20						
29	3520	36						
30	3750	50						

TAKEOFF

B-52A AF52-003

Flight No. AF-54 | Gross Wt. 288380 lbs

Pressure 30.13 "Hg | Avg Thrust at B.R. 10508 lbs/eng

Temperature 16.7 °C | H_2O used NO

Avg RPM 9401 | Crosswind Trim — degrees

Avg EGT 477 °C | IAS at TO 123.5 knots

Ground Roll 3180 ft | IAS at 50' 136.5 knots

Air Distance 880 ft | V_{gr} at TO 124.0 knots

Wind 11.0 mph at 55 deg from R-HEAD | V_{gr} at 50' 134.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0						
1	30	↑						
2	70							
3	110							
4	160							
5	230							
6	300							
7	370							
8	460							
9	550							
10	650							
11	760							
12	880							
13	1000							
14	1130							
15	1260							
16	1410							
17	1560							
18	1710							
19	1880							
20	2050							
21	2230							
22	2410							
23	2600	↓						
24	2800	0						
25	3000	T.O.						
26	3210	1						
27	3420	9						
28	3640	23						
29	3860	37						
30	4080	52						

TAKEOFF

B-52A AF52-003

Flight No. AF-55 | Gross Wt. 289 784 lbs

Pressure 29.88 "Hg | Avg Thrust at B.R. 9509 lbs/eng

Temperature 9.4 °C | H_2O used NO

Avg RPM 9367 | Crosswind Trim ——— degrees

Avg EGT 448 °C | IAS at TO 128.0 knots

Ground Roll 4070 ft | IAS at 50' 135.5 knots

Air Distance 1070 ft | V_{gr} at TO 130.0 knots

Wind 5.8 mph at 25 deg from R-HEAD | V_{gr} at 50' 143.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0	35	4340	5			
1	10		36	4570	17			
2	30		37	4810	29			
3	50		38	4950	46			
4	80		39	5290	61			
5	130							
6	170							
7	230							
8	290							
9	360							
10	440							
11	520							
12	610							
13	700							
14	800							
15	910							
16	1030							
17	1140							
18	1270							
19	1410							
20	1550							
21	1690							
22	1740							
23	2000							
24	2160							
25	2330							
26	2510							
27	2690							
28	2880							
29	3070							
30	3270							
31	3470							
32	3680							
33	3900	0						
34	4120	T.O.						

TAKEOFF

B-52A AF52-003

Flight No. AF 58

Pressure 29.86 "Hg

Temperature 6.7 °C

Avg RPM 9374

Avg EGT 494 °C

Ground Roll 3280 ft

Air Distance 960 ft

Wind 11.0 mph at 75 deg from R. HEAD

Gross Wt. 291 650 lbs

Avg Thrust at B.R. 10895 lbs/eng

H_2O used NO

Crosswind Trim ——— degrees

IAS at TO 120.0 knots

IAS at 50' 133.0 knots

V_{gr} at TO 136.0 knots

V_{gr} at 50' 127.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0						
1	10	↑						
2	20							
3	40							
4	80							
5	130							
6	170							
7	230							
8	290							
9	360							
10	450							
11	540							
12	640							
13	750							
14	860							
15	980							
16	1110							
17	1240							
18	1380							
19	1530							
20	1690							
21	1850							
22	2020							
23	2200							
24	2380							
25	2570							
26	2760							
27	2970	↓						
28	3170	0						
29	3390	T.O.						
30	3600	4						
31	3830	16						
32	4050	33						
33	4280	42						
34.	4510	72						

TAKEOFF

B-52A AF52-003

Flight No AF-51

Pressure 29.77 "Hg

Temperature 10.0 °C

Avg RPM 9386

Avg EGT 496 °C

Ground Roll 3200 ft

Air Distance 870 ft

Wind 6.8 mph at 85 deg from L-HEAD

Gross Wt. 292523 lbs

Avg Thrust at B.R. 10970 lbs/eng

H_2O used NO

Crosswind Trim —— degrees

IAS at TO 127.5 knots

IAS at 50' 132.5 knots

V_{gr} at TO 124.0 knots

V_{gr} at 50' 132.5 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0						
1	10							
2	40							
3	60							
4	100							
5	150							
6	200							
7	260							
8	330							
9	410							
10	500							
11	600							
12	700							
13	810							
14	930							
15	1060							
16	1190							
17	1330							
18	1480							
19	1630							
20	1790							
21	1960							
22	2130							
23	2310							
24	2500							
25	2690							
26	2890	0						
27	3100	T.O.						
28	3310							
29	3530	8						
30	3740	26						
31	3960	45						
32	4190	59						

TAKEOFF

B-52A AF52-003

Flight No. AF-52

Pressure 29.68 "Hg

Temperature 15.0 °C

Avg RPM 9421

Avg EGT 498 °C

Ground Roll 3410 ft

Air Distance 980 ft

Wind 33.0 mph at 40 deg from R-HEAD

Gross Wt. 293646 lbs

Avg Thrust at B.R. —— lbs/eng

H_2O used NO

Crosswind Trim —— degrees

IAS at TO 126.5 knots

IAS at 50' 135.5 knots

V_{gr} at TO 124.0 knots

V_{gr} at 50' 132.5 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0	35	4390	52			
1	10							
2	20							
3	30							
4	60							
5	90							
6	140							
7	190							
8	240							
9	310							
10	380							
11	460							
12	550							
13	650							
14	750							
15	860							
16	980							
17	1100							
18	1230							
19	1370							
20	1510							
21	1670							
22	1820							
23	1990							
24	2160							
25	2330							
26	2520							
27	2700							
28	2900							
29	3100	0						
30	3300	T.O.						
31	3510	1						
32	3730	13						
33	3940	28						
34	4160	40						

TAKEOFF

B-52A AF52-003

Flight No. AF-53

Pressure 30.33 "Hg

Temperature 12.8 °C

Avg RPM 9392

Avg EGT 478 °C

Ground Roll 3460 ft

Air Distance 940 ft

Wind 3.4 mph at 35 deg from L-HEAD

Gross Wt. 294085 lbs

Avg Thrust at B.R. 10893 lbs/eng

H_2O used NO

Crosswind Trim —— degrees

IAS at TO 129.0 knots

IAS at 50' 139.0 knots

V_{gr} at TO 128.0 knots

V_{gr} at 50' 136.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0						
1	10	↑						
2	30							
3	50							
4	80							
5	120							
6	180							
7	230							
8	300							
9	380							
10	470							
11	560							
12	660							
13	760							
14	880							
15	1000							
16	1130							
17	1270							
18	1410							
19	1550							
20	1710							
21	1870							
22	2040							
23	2220							
24	2400							
25	2590							
26	2790							
27	2990	↓						
28	3200	0						
29	3460	T.O.						
30	3630	2						
31	3860	13						
32	4080	29						
33	4310	45						
34	4540	58						

TAKEOFF

B-52A AF52-003

Flight No. AF-60

Pressure 30.15 "Hg

Temperature 4.4 °C

Avg RPM 9374

Avg EGT 551 °C

Ground Roll 6490 ft

Air Distance 1080 ft

Wind 8.4 mph at 20 deg from L. HEAD

Gross Wt. 406 000 lbs

Avg Thrust at B.R. 11095 lbs/eng

H_2O used NO

Crosswind Trim ——— degrees

IAS at TO 154 knots

IAS at 50' 155.5 knots

V_{gr} at TO 145.0 knots

V_{gr} at 50' 145.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0	35	3800	0			
1	20		36	4000				
2	30		37	4200				
3	60		38	4410				
4	90		39	4620				
5	130		40	4840				
6	170		41	5060				
7	220		42	5290				
8	280		43	5520				
9	340		44	5750				
10	410		45	5990				
11	480		46	6240	0			
12	560		47	6480	T.O.			
13	640		48	6730	1			
14	730		49	6970	16			
15	820		50	7210	28			
16	920		51	7460	41			
17	1030		52	7700	56			
18	1140							
19	1260							
20	1380							
21	1510							
22	1640							
23	1780							
24	1920							
25	2060							
26	2220							
27	2370							
28	2540							
29	2700							
30	2870							
31	3050							
32	3230							
33	3420							
34	3610	0						

TAKEOFF

B-52A AF52-003

Flight No. AF59

Pressure 30.10 "Hg

Temperature 1.7 °C

Avg RPM 9366

Avg EGT 525 °C

Ground Roll 6570 ft

Air Distance 1280 ft

Wind 5.2 mph at 20 deg from L HEAD

Gross Wt 406 272 lbs

Avg Thrust at B.R. 11212 lbs/eng

H_2O used NO

Crosswind Trim —— degrees

IAS at TO 155.0 knots

IAS at 50' 157.5 knots

V_{gr} at TO 150.0 knots

V_{gr} at 50' 154.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0	35	3840	0			
1	10	↑	36	4040	↑			
2	30		37	4250				
3	50		38	4460				
4	80		39	4680				
5	120		40	4900				
6	160		41	5130				
7	210		42	5360				
8	260		43	5590				
9	320		44	5830				
10	390		45	6070	↓			
11	460		46	6320	0			
12	540		47	6570	T.O.			
13	630		48	6820	3			
14	720		49	7080	11			
15	810		50	7330	25			
16	910		51	7590	39			
17	1020		52	7850	52			
18	1130							
19	1250							
20	1370							
21	1500							
22	1630							
23	1770							
24	1920							
25	2070							
26	2220							
27	2380							
28	2550							
29	2710							
30	2890							
31	3070							
32	3250							
33	3440	↓						
34	3640	0						

TAKEOFF

B-52A AF52-003

Flight No. AF-44 | Gross Wt. 318376 lbs

Pressure 30.06 "Hg | Avg Thrust at B.R. 10508 lbs/eng

Temperature 14.4 °C | H_2O used YES

Avg RPM 9404 | Crosswind Trim —— degrees

Avg EGT 514 °C | IAS at TO 133.5 knots

Ground Roll 4380 ft | IAS at 50' 150.5 knots

Air Distance 1220 ft | V_{gr} at TO 137.0 knots

Wind 11.0 mph at 85 deg from R-HEAD | V_{gr} at 50' 150.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0	35	4400	T.O.			
1	10	↑	36	4630	5			
2	20		37	4870	14			
3	40		38	5110	23			
4	70		39	5360	34			
5	100		40	5610	46			
6	150		41	5860	60			
7	200							
8	260							
9	320							
10	390							
11	480							
12	570							
13	660							
14	770							
15	880							
16	990							
17	1120							
18	1250							
19	1380							
20	1530							
21	1670							
22	1830							
23	1990							
24	2160							
25	2330							
26	2530							
27	2700							
28	2890							
29	3090							
30	3290							
31	3500							
32	3720							
33	3940	↓						
34	4160	0						

TAKEOFF

B-52A AF52-003

Flight No. AF-45

Pressure 30.17 "Hg

Temperature 15.0 °C

Avg RPM 9359

Avg EGT 557 °C

Ground Roll 6900 ft

Air Distance 1420 ft

Wind 5.8 mph at 25 deg from L-TAIL

Gross Wt. 400574 lbs

Avg Thrust at B.R. 11088 lbs/eng

H_2O used YES

Crosswind Trim ——— degrees

IAS at TO 148.5 knots

IAS at 50' 153.5 knots

V_{gr} at TO 153.0 knots

V_{gr} at 50' 157.0 knots

TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT	TIME	DISTANCE	HEIGHT
0	0	0	35	3910	0			
1	10		36	4070				
2	30		37	4290				
3	50		38	4500				
4	80		39	4720				
5	110		40	4950				
6	150		41	5180				
7	200		42	5420				
8	260		43	5660				
9	310		44	5900				
10	380		45	6150				
11	450		46	6400				
12	530		47	6650	0			
13	620		48	6910	T.O.			
14	710		49	7170	2			
15	800		50	7430	8			
16	900		51	7690	23			
17	1010		52	7960	35			
18	1130		53	8220	45			
19	1240		54	8480	57			
20	1370							
21	1500							
22	1640							
23	1780							
24	1920							
25	2070							
26	2230							
27	2390							
28	2550							
29	2730							
30	2900							
31	3090							
32	3280							
33	3470							
34	3660	0						

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CLEAN CONFIG 8 ENGINES MRP									
FLIGHT NO.		50	50	50	50	50	50	50	50	50	50
RUN NO.											
ALTITUDE	Ft.	2625	4655	6705	8695	10760	12815	14935	17015	19060	21130
IAS	Knots	341.0	335.0	337.0	334.0	325.0	328.0	335.0	328.0	328.0	326.0
OAT	°C	30.0	34.0	33.0	31.0	26.5	23.0	20.0	17.0	11.0	8.0
GROSS WEIGHT	Lbs.	218681									
HIGH PRESSURE COMPRESSOR RPM N_2	1	9540	9570	9570	9570	9565	9565	9555	9545	9525	9515
	2	9525	9545	9545	9540	9530	9520	9520	9505	9495	9485
	3	9455	9470	9465	9470	9460	9445	9440	9430	9420	9410
	4	9565	9585	9580	9575	9570	9555	9540	9525	9510	9505
	5	9490	9510	9510	9510	9500	9495	9485	9475	9465	9455
	6	9445	9455	9455	9455	9445	9445	9440	9430	9425	9415
	7	9500	9515	9530	9530	9520	9518	9505	9495	9480	9465
	8	9500	9510	9510	9505	9495	9490	9480	9460	9440	9440
LOW PRESSURE COMPRESSOR, RPM N_1	1	6095	6095	6095	6100	6115	6125	6130	6140	6155	6175
	2	6095	6095	6100	6110	6125	6130	6140	6145	6165	6170
	3	6025	6040	6015	5980	6140	6100	6105	6120	6140	6155
	4	6050	6060	6060	6065	6080	6085	6090	6100	6110	6125
	5	6095	6090	6100	6105	6120	6130	6135	6150	6170	6175
	6	6105	6090	6095	6100	6125	6125	6135	6150	6170	6185
	7	6135	6130	6140	6145	6160	6170	6170	6180	6195	6200
	8	6040	6030	6035	6035	6050	6065	6060	6070	6085	6090
EXHAUST GAS TEMP °C	1	522	534	534	546	546	560	569	579	579	582
	2	595	607	607	609	609	606	605	606	606	605
	3	496	505	505	527	527	559	561	565	565	569
	4	585	590	590	598	598	600	601	603	603	605
	5	560	573	573	583	583	588	588	593	593	596
	6	515	519	519	529	529	530	570	580	580	582
	7	521	575	575	592	592	610	613	613	613	612
	8	547	579	579	582	582	582	581	582	582	581
TAIL PIPE TOTAL PRESSURE "Hg"	1	78.2	73.6	69.2	66.0	62.1	59.5	56.9	53.7	51.3	49.0
	2	77.1	72.8	68.5	65.4	61.6	59.0	56.7	53.6	51.1	48.8
	3	77.9	73.3	69.0	65.9	61.5	59.0	56.7	53.6	51.3	49.1
	4	77.1	72.6	68.7	65.4	61.7	59.1	56.6	53.4	51.1	48.8
	5	77.1	72.8	68.5	65.3	61.5	59.0	56.3	53.3	51.0	48.7
	6	77.7	73.2	62.1	65.7	62.0	59.6	56.4	53.3	51.1	48.8
	7	79.4	75.0	70.1	66.7	62.7	59.8	57.1	54.0	51.7	49.3
	8	77.5	73.3	68.5	65.4	61.5	59.0	56.5	53.4	51.0	48.7
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1 .2			.1 .2						
	3/4	.1 .2			.1 .2						
	5/6	.2 .3			.2 .3						
	7/8	.4 .1			.4 .1						
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R				CLOSED						
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		54:22	54:39	55:00	55:20	55:43	56:08	56:35	56:56	57:24	57:50

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CLEAN CONFIG 8 ENGINES MRP									
FLIGHT NO.		50	50	50	50	50	50	50	50	50	50
RUN NO.											
ALTITUDE	Ft.	23255	25345	27430	29395	31375	33425	35490	37445	39455	41490
IAS	Knots	322.5	315.0	306.5	303.0	288.0	277.5	273.5	255.0	243.0	237.5
OAT	°C	4.0	0	-5.0	-10.0	-13.0	-20.0	-20.0	-22.0	-27.0	-30.0
GROSS WEIGHT	Lbs.					214052					
HIGH PRESSURE COMPRESSOR RPM N_2	1	9500	9500	9470	9460	9445	9425	9415	9400	9380	9370
	2	9465	9455	9445	9430	9415	9395	9395	9385	9365	9350
	3	9395	9385	9370	9360	9340	9320	9315	9310	9295	9285
	4	9485	9470	9450	9445	9430	9405	9400	9385	9375	9360
	5	9445	9435	9425	9415	9400	9380	9375	9365	9355	9345
	6	9405	9390	9380	9375	9360	9345	9335	9325	9305	9305
	7	9455	9445	9415	9410	9395	9375	9365	9355	9300	9285
	8	9420	9410	9390	9375	9355	9340	9330	9315	9290	9280
LOW PRESSURE COMPRESSOR, RPM N_1	1	6180	6195	6205	6210	6225	6230	6230	6245	6250	6260
	2	6180	6190	6210	6220	6230	6240	6245	6260	6265	6270
	3	6160	6175	6190	6195	6215	6225	6220	6240	6245	6255
	4	6130	6140	6150	6160	6170	6175	6180	6190	6200	6210
	5	6200	6205	6225	6230	6250	6255	6250	6270	6275	6290
	6	6195	6210	6225	6235	6255	6260	6260	6275	6275	6295
	7	6210	6220	6230	6235	6250	6260	6260	6270	6260	6260
	8	6110	6120	6125	6130	6145	6155	6150	6160	6165	6170
EXHAUST GAS TEMP °C	1	584	590	590	594	594	599	603	609	609	613
	2	607	608	608	610	614	616	621	632	636	640
	3	569	574	574	575	579	581	581	587	589	592
	4	606	610	610	615	617	618	618	626	631	646
	5	600	604	604	607	614	620	620	624	625	629
	6	582	589	589	593	599	607	607	614	620	626
	7	611	615	615	613	612	624	624	622	621	640
	8	583	586	586	586	591	597	597	599	601	614
TAIL PIPE TOTAL PRESSURE "Hg"	1	46.5	44.1	41.4	39.4	36.8	33.8	31.7	29.1	26.5	24.9
	2	46.3	43.9	41.1	39.1	36.5	33.5	31.4	28.9	26.2	24.8
	3	46.5	44.1	41.5	39.4	36.7	33.7	31.7	28.9	26.2	24.6
	4	46.1	43.6	40.9	38.9	36.2	33.3	31.3	28.7	26.0	24.5
	5	46.1	43.6	41.0	39.0	36.3	33.5	31.4	28.9	26.1	24.7
	6	46.1	43.7	41.0	38.9	36.2	33.3	31.1	28.6	25.8	24.3
	7	46.7	44.3	41.4	39.3	36.6	33.6	31.5	29.0	26.0	24.6
	8	46.2	43.7	40.9	38.9	36.2	33.4	31.3	28.8	26.1	24.5
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2									.1	.1
	3/4									.1	.1
	5/6									.1	.2
	7/8									.4	0
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R					CLOSED					
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		58:18	58:43	59:09	59:36	59:58	00:28	01:03	01:28	02:12	02:57

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CONFIG 8 ENGINES MRP									
FLIGHT NO.		50	50	50	50	50	50	50	50	50	50
RUN NO.											
ALTITUDE	Ft.	43540	45585	47615	49090	51020	53110	54755	39835	41750	43730
IAS	Knots	222.0	215.5	197.5	194.0	183.0	172.0	165.5	235.0	236.0	222.0
OAT	°C	-33.0	-37.0	-40.0	-41.0	-42.0	-42.0	-41.0	-31.0	-31.0	-32.0
GROSS WEIGHT	Lbs.							209626	195885		
HIGH PRESSURE COMPRESSOR RPM N_2	1	9355	9325	9305	9275	9260	9210	9235	9280	9310	9300
	2	9335	9320	9290	9150	9130	9110	9190	9270	9285	9280
	3	9250	9195	9165	9135	9115	9065	9090	9170	9200	9190
	4	9345	9320	9305	9210	9160	9075	9125	9270	9295	9280
	5	9320	9295	9275	9185	9160	9130	9145	9250	9245	9235
	6	9275	9250	9230	9215	9160	9075	9115	9225	9240	9230
	7	9265	9245	9225	9160	9140	9090	9075	9245	9265	9250
	8	9260	9245	9220	9205	9185	9150	9140	9210	9235	9215
LOW PRESSURE COMPRESSOR, RPM N_1	1	6270	6275	6280	6255	6260	6240	6280	6320	6325	6330
	2	6285	6295	6295	6180	6185	6185	6260	6310	6315	6320
	3	6255	6240	6240	6205	6215	6160	6190	6265	6245	6270
	4	6220	6215	6235	6155	6140	6080	6135	6240	6235	6245
	5	6300	6305	6310	6235	6230	6205	6225	6330	6310	6315
	6	6295	6300	6310	6300	6265	6205	6230	6310	6315	6325
	7	6265	6270	6275	6235	6225	6195	6195	6315	6330	6335
	8	6190	6200	6205	6190	6190	6170	6175	6235	6235	6230
EXHAUST GAS TEMP °C	1	623	629	632	631	636	637	644	549	615	624
	2	647	657	671	644	641	642	676	614	660	664
	3	599	606	607	605	614	610	626	570	605	613
	4	655	656	656	638	637	634	650	616	645	656
	5	643	647	653	637	637	641	652	609	630	644
	6	629	631	645	656	654	641	661	601	635	643
	7	649	652	645	628	618	621	645	615	660	691
	8	620	624	623	625	626	634	644	600	625	637
TAIL PIPE TOTAL PRESSURE "Hg"	1	22.7	21.1	18.7	18.0	15.8	14.1	13.1	25.9	24.5	22.4
	2	22.6	21.0	18.7	17.5	15.7	13.9	13.1	25.7	24.4	22.5
	3	22.4	20.7	18.4	17.2	15.6	13.8	12.8	26.0	24.5	22.5
	4	22.4	20.7	18.5	17.2	15.6	13.7	12.7	25.5	24.2	22.3
	5	22.6	21.0	18.6	17.4	15.8	13.9	13.0	25.7	24.3	22.5
	6	22.1	20.5	18.3	17.2	15.5	13.7	12.7	25.6	24.2	22.3
	7	22.5	20.8	18.4	17.2	15.6	13.9	12.8	26.0	24.6	22.8
	8	22.6	20.9	18.5	17.4	15.8	14.1	13.0	25.6	24.3	22.5
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2							.1	.1	.1	.1
	3/4							.1	.2	.1	.1
	5/6							0	.3	.1	.2
	7/8							.4	0	.4	0
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R				CLOSED						
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		03:39	04:29	05:08	06:08	07:37	10:06	12:51	21:58	22:46	23:17

CLIMB STOPPED AT 54755 FEET
HEADING REVERSED AND RESTARTED AT 39835 FEET

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CLEAN CONFIG 8 ENGINES MRP									
FLIGHT NO.		50	50	50	50	50	50	50			
RUN NO.											
ALTITUDE	Ft.	45775	47670	49675	51985	53750	55540	57550			
IAS	Knots	218.5	207.0	194.0	184.5	174.5	166.0	152.0			
OAT	°C	-34.0	-37.0	-41.0	-41.0	-42.0	-42.0	-42.0			
GROSS WEIGHT	Lbs.					193906		192594			
HIGH PRESSURE COMPRESSOR RPM N_2	1	9290	9270	9245	9235	9190	9140	8950			
	2	9255	9160	9185	9115	9150	9070	8975			
	3	9160	9140	9113	9100	9080	9065	9015			
	4	9260	9245	9190	9125	9075	9095	8960			
	5	9225	9205	9205	9130	9105	9040	8995			
	6	9225	9195	9185	9105	9090	9025	8925			
	7	9245	9100	9160	9100	9015	8990	8950			
	8	9200	9185	9180	9160	9135	9120	9040			
LOW PRESSURE COMPRESSOR, RPM N_1	1	6320	6310	6320	6300	6240	6225	6060			
	2	6305	6245	6280	6220	6260	6175	6075			
	3	6240	6220	6235	6220	6175	6190	6115			
	4	6220	6230	6200	6140	6110	6120	6005			
	5	6310	6300	6320	6240	6225	6150	6105			
	6	6325	6305	6320	6235	6230	6155	6075			
	7	6335	6235	6290	6240	6195	6155	6120			
	8	6225	6220	6240	6215	6200	6180	6110			
EXHAUST GAS TEMP °C	1	636	636	636	648	651	647	631			
	2	650	650	649	651	652	665	658			
	3	625	625	623	631	631	645	645			
	4	656	656	659	645	642	652	645			
	5	653	653	658	645	646	646	652			
	6	660	660	662	652	656	660	652			
	7	657	657	675	638	632	642	647			
	8	636	636	636	638	647	663	653			
TAIL PIPE TOTAL PRESSURE "Hg"	1	20.9	19.1	17.4	15.3	14.0	12.4	10.7			
	2	20.9	18.9	17.3	15.3	13.9	12.4	10.9			
	3	20.8	18.9	17.2	15.1	13.8	12.3	10.8			
	4	20.6	18.8	17.0	15.0	13.6	12.1	10.5			
	5	21.0	19.2	17.5	15.4	14.0	12.3	11.0			
	6	20.6	18.9	17.3	15.1	13.8	12.1	10.6			
	7	21.0	18.7	17.2	15.2	13.8	12.2	10.9			
	8	20.9	18.8	17.3	15.3	14.0	12.5	11.0			
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2							.1 .1			
	3/4							.1 .1			
	5/6							0 .3			
	7/8							.3 0			
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R				CLOSED						
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		24:09	24:42	25:21	26:51	27:42	29:32	34:00			

CLIMB STOPPED AT 54755 FEET
HEADING REVERSED AND RESTARTED AT 39835 FEET

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CLEAN CONFIG 8 ENGINES MRP									
FLIGHT NO.		51	51	51	51	51	51	51	51	51	51
RUN NO.											
ALTITUDE	Ft.	24780	26740	28760	30735	32710	34640	36550	38550	40310	42370
IAS	Knots	319.0	311.5	303.5	289.5	275.5	269.0	256.5	244.5	231.0	221.5
OAT	°C	-27.5	-28.0	-29.0	-25.5	-22.0	-21.0	-21.0	-21.0	-21.0	-22.0
GROSS WEIGHT	Lbs.	284851						282410			
HIGH PRESSURE COMPRESSOR RPM N_2	1	9365	9355	9350	9360	9360	9360	9360	9360	9345	9335
	2	9350	9345	9335	9345	9355	9350	9355	9345	9240	9230
	3	9325	9320	9320	9330	9340	9350	9345	9340	9330	9320
	4	9370	9365	9345	9355	9365	9370	9345	9345	9275	9265
	5	9285	9275	9275	9280	9280	9275	9270	9245	9230	9175
	6	9285	9280	9275	9285	9290	9295	9290	9290	9275	9275
	7	9310	9310	9305	9310	9315	9310	9280	9235	9245	9220
	8	9280	9310	9305	9315	9315	9310	9310	9305	9300	9290
LOW PRESSURE COMPRESSOR, RPM N_1	1	6235	6240	6230	6225	6225	6225	6225	6215	6215	6215
	2	6265	6270	6250	6245	6245	6240	6245	6160	6165	6165
	3	6240	6245	6225	6215	6225	6225	6225	6220	6220	6220
	4	6245	6250	6225	6220	6225	6225	6210	6205	6165	6170
	5	6225	6240	6230	6215	6205	6205	6205	6175	6195	6195
	6	6275	6285	6270	6260	6250	6250	6255	6245	6260	6250
	7	6250	6265	6260	6250	6250	6240	6215	6195	6200	6195
	8	6200	6205	6190	6175	6170	6165	6165	6165	6175	6170
EXHAUST GAS TEMP °C	1	579	581	583	588	588	594	596	602	609	—
	2	603	607	606	613	617	623	625	600	606	624
	3	577	582	584	589	595	602	608	613	619	639
	4	607	606	612	617	624	608	625	635	631	630
	5	619	625	626	628	633	638	636	638	637	644
	6	572	576	581	586	589	597	603	609	615	621
	7	601	606	606	618	620	615	622	627	635	639
	8	583	587	588	589	590	594	598	601	615	623
TAIL PIPE TOTAL PRESSURE "Hg"	1	49.6	46.9	42.9	38.6	34.9	32.2	29.4	26.4	24.3	22.1
	2	48.8	46.2	42.3	38.2	34.5	31.9	29.1	26.0	24.2	22.0
	3	49.6	46.9	42.8	38.7	35.0	32.6	29.5	26.6	24.4	22.2
	4	48.8	46.1	42.1	38.0	34.2	31.8	28.9	26.0	23.9	21.7
	5	49.4	46.9	43.0	38.7	34.8	32.3	29.4	26.4	24.5	22.1
	6	48.3	45.8	42.1	37.8	34.0	31.4	28.6	25.9	24.0	21.7
	7	49.0	46.4	42.6	38.0	34.4	31.9	28.9	25.9	24.2	21.9
	8	48.8	46.5	42.5	38.1	34.4	31.9	29.0	26.3	24.6	22.3
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1 .2							.2 .2		
	3/4	.1 .2							.3 .2		
	5/6	.2 .3							.3 .2		
	7/8	.5 .2							.5 .2		
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R					CLOSED					
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		13:14	13:41	14:15	14:52	15:30	16:19	17:10	18:05	18:54	20:24

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB	CLEAN CONFIG 8 ENGINES MRP
FLIGHT NO.		51	51
RUN NO.			
ALTITUDE	Ft.	44275	45420
IAS	Knots	212.5	205.5
OAT	°C	-23.5	-23.5
GROSS WEIGHT	Lbs.		279993
HIGH PRESSURE COMPRESSOR RPM N_2	1	9330	9325
	2	9250	9215
	3	9205	9280
	4	9240	9245
	5	9185	9175
	6	9260	9260
	7	9215	9215
	8	9290	9285
LOW PRESSURE COMPRESSOR, RPM N_1	1	6215	6215
	2	6190	6165
	3	6200	6190
	4	6165	6155
	5	6170	6170
	6	6260	6255
	7	6195	6195
	8	6180	6175
EXHAUST GAS TEMP °C	1	626	625
	2	697	644
	3	638	644
	4	632	628
	5	657	658
	6	634	644
	7	689	645
	8	650	630
TAIL PIPE TOTAL PRESSURE "Hg"	1	20.3	19.0
	2	20.3	18.9
	3	20.3	19.1
	4	19.9	18.6
	5	20.4	19.1
	6	20.1	18.9
	7	20.0	18.8
	8	20.5	19.2
FUEL FLOW GALS TIMED/SECONDS	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
FUEL WT.	LB/GAL		
OIL COOLER GAP INCHES	1/2	.2	.2
	3/4	.2	.1
	5/6	.2	.2
	7/8	.1	.1
SURGE BLEED VALVE POSITION	1 L/R		
	2 L/R		
	3 L/R		
	4 L/R	CLOSED	
	5 L/R		
	6 L/R		
	7 L/R		
	8 L/R		
TIME - SECONDS		22:23	23:23

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB EXTERNAL TANKS 8 ENG MRP									
FLIGHT NO.		44	←							→	44
RUN NO.											
ALTITUDE	Ft.	2450	4410	6035	8225	9805	11850	13345	15475	17910	19950
IAS	Knots	279.5	318.5	309.0	312.0	311.0	302.5	294.0	306.5	301.5	307.0
OAT	°C	15.0	16.0	15.0	11.0	10.0	9.0	7.0	7.0	6.0	3.0
GROSS WEIGHT	Lbs.	308536							305338		
HIGH PRESSURE COMPRESSOR RPM N_2	1	9395	9425	9425	9435	9435	9430	9425	9430	9425	9420
	2	9380	9390	9385	9435	9435	9430	9425	9435	9430	9430
	3	9325	9350	9350	9370	9365	9360	9355	9355	9350	9340
	4	9445	9450	9455	9490	9485	9485	9480	9475	9470	9460
	5	9450	9480	9480	9495	9500	9500	9500	9500	9495	9485
	6	9335	9355	9355	9395	9400	9395	9395	9395	9390	9385
	7	9295	9325	9325	9320	9320	9315	9315	9310	9310	9310
	8	9380	9390	9380	9450	9445	9440	9435	9440	9435	9430
LOW PRESSURE COMPRESSOR, RPM N_1	1	6120	6095	6105	6125	6135	6135	6135	6135	6145	6145
	2	6100	6080	6090	6135	6145	6145	6145	6150	6160	6170
	3	6085	6055	6065	6090	6100	6100	6105	6095	6110	6115
	4	6075	6050	6065	6100	6110	6110	6120	6110	6120	6125
	5	6155	6150	6170	6195	6200	6210	6215	6215	6225	6230
	6	6130	6105	6125	6160	6165	6170	6180	6170	6180	6185
	7	6080	6075	6075	6075	6080	6075	6085	6075	6085	6100
	8	6040	6020	6015	6110	6110	6120	6120	6115	6130	6140
EXHAUST GAS TEMP °C	1	483	496	525	525	529	529	551	560	570	574
	2	566	599	608	608	608	608	611	611	613	613
	3	482	506	528	528	557	557	564	563	565	567
	4	580	592	597	597	604	604	611	609	612	613
	5	574	585	603	603	605	605	617	615	617	618
	6	499	515	537	537	581	581	592	592	593	591
	7	478	567	568	568	585	585	591	588	586	586
	8	560	569	591	591	593	593	595	594	594	591
TAIL PIPE TOTAL PRESSURE "Hg"	1	78.5	77.2	73.6	69.5	67.0	62.8	59.1	55.7	51.7	49.5
	2	77.1	75.5	72.0	68.7	66.2	62.0	58.7	55.5	51.6	49.6
	3	77.9	76.4	73.4	69.2	66.7	62.6	59.0	55.7	52.0	49.8
	4	76.9	75.6	72.4	69.0	66.4	62.3	59.0	55.5	51.7	49.5
	5	77.0	76.1	72.9	69.1	66.7	62.5	59.1	55.8	52.0	49.9
	6	77.2	76.2	72.8	69.5	66.5	62.2	58.8	55.3	51.7	49.5
	7	77.4	76.9	73.2	68.0	65.6	61.5	57.8	54.6	51.0	48.8
	8	76.2	75.0	71.6	69.2	66.9	62.7	59.2	55.8	52.1	49.9
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1	.1								
	3/4	.1	.1								
	5/6	.1	.2								
	7/8	.4	0								
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R					CLOSED					
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		00:00	00:40	01:00	01:30	01:50	02:10	02:30	03:10	03:50	04:30
		CLIMB STOPPED AT 33290 FEET									
		HEADING REVERSED AND CLIMB RESTARTED AT 32905 FEET									

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB EXTERNAL TANKS & ENG MRP									
FLIGHT NO.		44	←							→	44
RUN NO.											
ALTITUDE	Ft.	22015	24500	26290	28370	30125	33290	32905	34895	36680	38705
IAS	Knots	306.0	302.0	301.0	302.5	301.5	279.5	284.5	270.0	259.5	250.5
OAT	°C	-1.0	-4.0	-6.0	-8.0	-11.0	-20.0	-20.0	-24.5	-29.0	-28.0
GROSS WEIGHT	Lbs.						301210	300211			298998
HIGH PRESSURE COMPRESSOR RPM N_2	1	9410	9400	9390	9380	9365	8210	9305	9295	9285	9285
	2	9415	9400	9390	9375	9370	8170	9305	9295	9280	9280
	3	9330	9320	9315	9305	9295	8140	9250	9230	9205	9195
	4	9450	9435	9430	9415	9400	8210	9355	9340	9315	9315
	5	9475	9460	9455	9450	9440	8180	9395	9380	9365	9365
	6	9380	9370	9360	9355	9340	8175	9295	9275	9255	9265
	7	9300	9275	9270	9260	9250	8065	9210	9200	9180	9175
	8	9420	9410	9390	9390	9375	8120	9315	9300	9280	9285
LOW PRESSURE COMPRESSOR, RPM N_1	1	6160	6160	6165	6170	6175	5965	6215	6225	6230	6225
	2	6175	6175	6185	6185	6200	5925	6235	6250	6250	6250
	3	6125	6135	6140	6145	6155	5905	6195	6210	6210	6195
	4	6135	6140	6145	6145	6150	5930	6190	6200	6200	6195
	5	6240	6245	6250	6265	6275	5975	6320	6330	6325	6330
	6	6205	6215	6216	6225	6235	5975	6275	6280	6280	6285
	7	6110	6110	6115	6120	6130	5890	6170	6175	6185	6180
	8	6140	6150	6150	6155	6160	5870	6195	6205	6205	6205
EXHAUST GAS TEMP °C	1	578	583	583	584	583	586	583	596	598	600
	2	612	613	612	612	615	619	604	616	626	632
	3	572	577	577	580	579	583	574	585	587	592
	4	616	619	621	620	622	627	624	633	635	640
	5	622	625	627	636	638	641	637	653	649	655
	6	592	599	600	602	605	604	608	616	618	625
	7	585	585	583	580	581	586	582	586	596	599
	8	596	595	595	600	604	607	607	609	616	617
TAIL PIPE TOTAL PRESSURE "Hg"	1	47.0	43.8	41.8	39.8	38.3	28.9	35.2	32.6	30.4	27.9
	2	47.0	43.8	41.8	39.8	38.1	29.5	35.0	32.4	30.3	27.9
	3	47.3	44.0	42.1	40.1	38.4	28.4	35.5	32.9	30.4	27.9
	4	47.0	43.7	41.7	39.6	38.0	28.1	34.9	32.3	30.1	27.6
	5	47.4	44.1	42.0	40.0	38.5	28.3	35.3	32.6	30.5	27.9
	6	47.0	43.8	41.7	39.7	38.1	28.3	35.0	32.5	30.2	27.8
	7	46.5	43.3	41.2	39.2	37.5	28.9	34.9	32.3	30.1	27.6
	8	47.3	44.0	42.0	40.0	38.4	29.5	35.3	32.7	30.5	28.0
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R					CLOSED					
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		05:10	06:00	06:40	07:30	08:10	09:10	02:30	03:16	04:00	05:23
		CLIMB STOPPED AT 33290 FEET									
		HEADING REVERSED AND CLIMB RESTARTED AT 32905 FEET									

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK	CLIMB	EXTERNAL TANKS 8 ENG MRP							
FLIGHT NO.		44	44	44							
RUN NO.											
ALTITUDE	Ft.	40390	42160	44165							
IAS	Knots	243.5	228.0	222.5							
OAT	°C	-27.0	-25.5	-28.0							
GROSS WEIGHT	Lbs.			297293							
HIGH PRESSURE COMPRESSOR RPM N_2	1	9285	9280	9270							
	2	9280	9270	9265							
	3	9200	9205	9195							
	4	9315	9320	9310							
	5	9365	9365	9350							
	6	9265	9260	9250							
	7	9175	9165	9155							
	8	9280	9275	9270							
LOW PRESSURE COMPRESSOR, RPM N_1	1	6215	6215	6225							
	2	6235	6245	6240							
	3	6185	6200	6200							
	4	6180	6190	6200							
	5	6320	6325	6330							
	6	6275	6275	6280							
	7	6175	6170	6175							
	8	6190	6195	6190							
EXHAUST GAS TEMP °C	1	608	612	620							
	2	636	640	655							
	3	596	606	612							
	4	653	658	659							
	5	657	668	684							
	6	629	633	639							
	7	623	631	633							
	8	624	636	644							
TAIL PIPE TOTAL PRESSURE "Hg	1	25.2	22.9	21.2							
	2	25.3	23.0	21.4							
	3	25.2	22.9	21.2							
	4	25.0	22.8	21.1							
	5	25.4	23.1	21.6							
	6	25.1	22.8	21.2							
	7	25.1	22.8	21.1							
	8	25.3	23.1	21.4							
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2			.1	.1						
	3/4			.1	.1						
	5/6			.1	.2						
	7/8			.4	0						
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R	CLOSED									
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		05:50	07:16	09:00							

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CLEAN CONFIG 8 ENG MRP									
FLIGHT NO.		49	—	—	—	—	—	—	—	—	49
RUN NO.											
ALTITUDE	Ft.	1760	3715	5690	7705	9670	11715	13740	15730	17425	19360
IAS	Knots	352.0	346.0	335.0	333.0	332.5	326.0	316.0	318.0	314.5	315.0
OAT	°C	27.5	34.0	32.0	31.0	27.0	22.0	19.0	16.0	13.5	11.0
GROSS WEIGHT	Lbs.	367685						360861			
HIGH PRESSURE COMPRESSOR RPM N_2	1	9560	9600	9600	9660	9585	9580	9560	9565	9550	9535
	2	9500	9530	9525	9525	9520	9510	9490	9485	9475	9475
	3	9490	9525	9520	9520	9510	9495	9485	9480	9470	9470
	4	9520	9545	9540	9540	9525	9510	9490	9485	9475	9470
	5	9500	9525	9525	9525	9520	9500	9495	9490	9485	9475
	6	9470	9495	9490	9490	9490	9480	9475	9470	9460	9455
	7	9510	9545	9550	9550	9545	9535	9520	9515	9500	9495
	8	9515	9535	9530	9530	9520	9510	9495	9485	9475	9470
LOW PRESSURE COMPRESSOR, RPM N_1	1	6085	6075	6095	6100	6110	6135	6140	6140	6155	6160
	2	6060	6050	6070	6085	6095	6110	6120	6120	6135	6135
	3	6070	6075	6090	6085	6100	6120	6130	6135	6150	6150
	4	6010	6005	6025	6035	6040	6060	6060	6065	6080	6080
	5	6090	6080	6105	6110	6125	6135	6150	6155	6175	6170
	6	6095	6085	6105	6110	6130	6145	6160	6165	6175	6180
	7	6130	6120	6135	6145	6150	6165	6175	6180	6190	6195
	8	6030	6015	6035	6040	6055	6075	6075	6080	6090	6095
EXHAUST GAS TEMP °C	1	530	530	531	540	562	572	579	581	582	586
	2	598	594	594	593	589	589	588	588	589	590
	3	537	538	563	568	570	570	573	577	577	581
	4	578	579	583	585	585	585	584	584	586	588
	5	569	573	578	580	584	584	586	588	590	593
	6	521	523	528	528	566	568	577	578	579	585
	7	577	584	600	605	604	607	607	605	604	605
	8	577	575	575	578	577	578	579	578	578	583
TAIL PIPE TOTAL PRESSURE "Hg"	1	79.6	75.3	70.4	67.1	64.0	60.8	56.9	54.2	51.9	49.3
	2	78.3	74.0	70.1	66.3	63.2	60.1	53.3	53.8	51.4	48.9
	3	78.8	74.7	70.6	66.7	63.8	60.6	57.0	54.3	52.1	49.4
	4	78.1	73.8	70.0	66.0	63.1	60.0	56.2	53.5	51.3	48.6
	5	79.1	74.8	70.8	66.7	63.7	60.5	56.8	54.1	51.9	49.1
	6	—	75.6	71.5	67.4	63.9	60.7	56.8	54.2	51.9	49.2
	7	—	76.1	71.9	67.5	64.5	61.4	57.3	54.6	52.4	49.7
	8	79.3	74.9	70.7	66.7	63.8	60.7	56.8	54.2	51.9	49.2
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1	.2								
	3/4	0	.1								
	5/6	.1	.3								
	7/8	.4	.1								
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R										
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		00:12	00:58	01:31	02:07	02:43	03:22	04:02	04:43	05:20	06:10

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK	CLIMB		CLEAN	CONFIG	8	ENG	MRP		
FLIGHT NO.		49	←							→	49
RUN NO.											
ALTITUDE	Ft.	21425	22805	25670	27930	27020	29635	31285	33070	35755	37650
IAS	Knots	309.0	307.5	298.5	294.5	292.0	291.0	284.5	283.5	262.0	249.0
OAT	°C	7.0	4.0	-3.0	-7.5	-7.0	-12.0	-15.0	-19.0	-25.5	-30.0
GROSS WEIGHT	Lbs.				356707	355872					
HIGH PRESSURE COMPRESSOR RPM N_2	1	9530	9515	9495	9485	9445	9430	9435	9425	9405	9390
	2	9460	9445	9425	9410	9385	9375	9360	9355	9335	9325
	3	9455	9440	9420	9400	9380	9370	9355	9350	9330	9310
	4	9455	9445	9420	9400	9385	9375	9355	9350	9330	9320
	5	9465	9460	9435	9420	9405	9390	9380	9365	9355	9345
	6	9445	9435	9410	9405	9380	9375	9360	9350	9335	9315
	7	9485	9475	9455	9435	9405	9410	9395	9380	9360	9340
	8	9460	9450	9425	9410	9380	9380	9365	9345	9320	9305
LOW PRESSURE COMPRESSOR, RPM N_1	1	6175	6185	6205	6210	6225	6235	6240	6245	6265	6280
	2	6155	6160	6175	6185	6210	6215	6220	6225	6250	6265
	3	6165	6180	6190	6210	6225	6225	6240	6245	6265	6275
	4	6100	6110	6115	6125	6145	6150	6150	6160	6180	6190
	5	6195	6205	6215	6230	6250	6250	6250	6255	6290	6295
	6	6205	6215	6230	6245	6265	6270	6270	6275	6300	6310
	7	6205	6215	6230	6235	6250	6260	6265	6270	6290	6295
	8	6115	6125	6140	6150	6170	6175	6180	6180	6190	6200
EXHAUST GAS TEMP °C	1	589	595	598	597	607	606	611	609	614	616
	2	593	592	593	602	607	614	615	613	619	623
	3	580	582	584	588	586	590	595	597	605	605
	4	594	595	599	602	613	610	615	617	623	622
	5	599	604	611	611	616	620	624	624	628	632
	6	586	589	596	598	606	611	614	616	621	624
	7	602	603	605	607	611	618	622	625	626	631
	8	586	589	593	591	599	600	602	601	604	607
TAIL PIPE TOTAL PRESSURE "Hg	1	46.8	45.4	42.1	39.8	40.8	38.3	36.4	34.8	31.3	28.9
	2	46.4	45.1	41.6	39.4	40.2	37.9	36.1	34.5	31.1	28.7
	3	47.0	45.6	42.2	39.8	41.1	38.5	36.5	34.8	31.2	28.8
	4	46.2	44.8	41.4	39.1	39.9	37.7	35.7	34.1	30.7	28.5
	5	46.8	45.3	41.9	39.6	40.3	37.9	36.0	34.4	31.1	28.7
	6	46.6	45.2	41.7	39.5	40.3	38.1	36.1	34.5	30.9	28.6
	7	47.1	45.6	42.2	39.8	40.9	38.5	36.5	34.8	31.4	28.9
	8	46.7	45.3	41.9	39.7	40.6	38.1	36.5	34.6	31.1	28.7
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2				.1	.2	.1	.2			
	3/4				.1	.2	.1	.2			
	5/6				.2	.3	.2	.3			
	7/8				.4	.1	.4	.1			
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R				CLOSED						
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		07:00	07:30	08:39	09:39	13:17	14:37	15:17	16:17	17:26	18:06

CLIMB STOPPED AT 27930 FEET
HEADING REVERSED AND RESTARTED AT 27020 FEET

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB		CLEAN CONFIG		8 ENG MRP
FLIGHT NO.		49	←	→		49
RUN NO.						
ALTITUDE	Ft.	39205	41580	43315	45050	45320
IAS	Knots	240.5	225.5	221.0	207.5	206.5
OAT	°C	-34.0	-36.0	-37.0	-41.0	-42.0
GROSS WEIGHT	Lbs.		351707			348632
HIGH PRESSURE COMPRESSOR RPM N_2	1	9370	9345	9335	9290	9275
	2	9310	9295	9275	9225	9220
	3	9280	9245	9205	9140	9120
	4	9300	9275	9255	9215	9205
	5	9325	9285	9265	9220	9205
	6	9305	9285	9275	9255	9245
	7	9325	9265	9250	9200	9190
	8	9295	9275	9255	9215	9205
LOW PRESSURE COMPRESSOR, RPM N_1	1	6280	6280	6275	6270	6270
	2	6260	6265	6265	6250	6250
	3	6260	6255	6240	6210	6205
	4	6185	6185	6170	6165	6160
	5	6295	6285	6280	6265	6255
	6	6315	6310	6310	6315	6320
	7	6305	6275	6270	6260	6260
	8	6205	6210	6210	6200	6200
EXHAUST GAS TEMP °C	1	620	619	626	622	622
	2	632	640	648	658	658
	3	604	601	607	600	596
	4	626	644	645	637	634
	5	631	627	647	640	635
	6	625	628	635	641	645
	7	626	631	649	640	633
	8	607	612	628	622	625
TAIL PIPE TOTAL PRESSURE "Hg"	1	2[illegible]	24.2	22.6	20.8	20.6
	2	26.8	24.1	22.5	20.8	20.6
	3	26.8	23.8	22.2	20.3	20.1
	4	26.5	23.7	22.2	20.3	20.1
	5	26.8	24.0	22.6	20.8	20.5
	6	26.6	23.7	22.3	20.4	20.3
	7	26.9	24.1	22.5	20.6	20.3
	8	26.8	24.1	22.7	20.9	20.6
FUEL FLOW GALS TIMED/SECONDS	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
FUEL WT.	LB/GAL					
OIL COOLER GAP INCHES	1/2					.2 .1
	3/4					.2 .1
	5/6					.2 .2
	7/8					.4 .3
SURGE BLEED VALVE POSITION	1 L/R					
	2 L/R					
	3 L/R					
	4 L/R					
	5 L/R					
	6 L/R					
	7 L/R					
	8 L/R					
TIME - SECONDS		19:06	21:05	23:34	27:33	29:08

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB EXTERNAL TANKS 8 ENG MRP									
FLIGHT NO.		45	←							→	45
RUN NO.											
ALTITUDE	Ft.	4570	6240	8125	10205	12055	14035	16240	18130	20300	22560
IAS	Knots	347.5	345.5	339.0	332.0	338.0	332.5	328.5	326.5	323.5	310.5
OAT	°C	25.5	22.0	18.0	15.0	15.0	14.0	11.0	8.0	4.0	-3.0
GROSS WEIGHT	Lbs.	392773									
HIGH PRESSURE COMPRESSOR RPM N_2	1	9475	9480	9470	9470	9466	9455	9435	9435	9425	9400
	2	9480	9485	9475	9470	9465	9465	9455	9445	9435	9415
	3	9390	9395	9390	9380	9390	9380	9370	9360	9345	9330
	4	9525	9525	9515	9510	9510	9505	9490	9485	9465	9455
	5	9530	9536	9530	9530	9530	9530	9525	9520	9505	9485
	6	9415	9425	9425	9410	9415	9415	9405	9395	9395	9380
	7	9350	9355	9350	9340	9345	9335	9320	9315	9305	9285
	8	9495	9500	9490	9485	9485	9480	9460	9450	9440	9425
LOW PRESSURE COMPRESSOR, RPM N_1	1	6110	6100	6105	6115	6095	6105	6125	6145	6145	6155
	2	6125	6125	6125	6125	6125	6135	6150	6160	6175	6175
	3	6040	6035	6045	6055	6050	6060	6085	6090	6100	6120
	4	6090	6080	6090	6095	6090	6095	6110	6125	6125	6135
	5	6175	6185	6190	6195	6195	6205	6225	6235	6245	6255
	6	6140	6140	6140	6160	6140	6155	6175	6190	6205	6225
	7	6065	6050	6055	6055	6060	6060	6070	6085	6095	6110
	8	6110	6100	6105	6110	6110	6115	6120	6130	6140	6155
EXHAUST GAS TEMP °C	1	527	519	523	533	545	554	565	567	572	570
	2	601	602	600	598	595	598	600	601	601	600
	3	513	519	546	562	552	556	562	562	562	564
	4	596	595	595	595	599	600	603	605	606	608
	5	590	594	601	602	603	605	613	615	620	620
	6	528	523	566	571	574	578	581	581	584	587
	7	559	556	572	574	572	569	569	570	570	565
	8	580	584	584	583	580	584	585	585	589	592
TAIL PIPE TOTAL PRESSURE "Hg"	1	77.5	73.8	70.1	65.5	62.0	58.6	54.2	51.8	50.0	46.9
	2	77.1	73.5	69.6	65.3	61.9	58.6	54.2	51.8	50.0	46.8
	3	76.9	73.0	69.3	65.1	61.9	58.5	54.4	51.9	50.3	47.1
	4	77.1	73.6	70.0	65.5	62.2	58.7	54.3	51.9	50.1	46.8
	5	78.1	74.6	70.8	66.2	62.7	59.3	55.0	52.7	50.8	47.6
	6	78.3	74.9	70.3	65.8	62.4	58.9	54.5	52.1	50.4	47.2
	7	76.2	72.6	68.7	64.4	61.0	57.5	53.4	51.2	49.6	46.3
	8	78.4	74.9	70.8	66.4	63.0	59.3	54.6	52.1	50.4	47.1
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1 .2								.1 .2	
	3/4	.2 .2								.2 .2	
	5/6	.2 .3								.2 .3	
	7/8	.5 .1								.5 .1	
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R					CLOSED					
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		24:56.	25:25	25:55	26:34	27:24	28:03	29:13	30:02	30:32	31:21

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB EXTERNAL TANKS 8 ENG MRP									
FLIGHT NO.		45	→							→	45
RUN NO.											
ALTITUDE	Ft.	24365	26435	28265	30060	32450	34545	36995	38305	40205	42135
IAS	Knots	303.5	302.5	294.0	289.0	280.0	267.5	256.0	249.5	232.0	217.0
OAT	°C	-7.0	-13.0	-17.0	-20.0	-24.5	-23.5	-23.5	-23.5	-25.5	-28.0
GROSS WEIGHT	Lbs.					383576					
HIGH PRESSURE COMPRESSOR RPM N_2	1	9375	9365	9350	9335	9315	9315	9310	9305	9295	9275
	2	9400	9385	9365	9350	9340	9330	9325	9325	9305	9285
	3	9310	9300	9290	9270	9255	9245	9250	9250	9220	9190
	4	9435	9415	9395	9375	9360	9355	9350	9345	9280	9260
	5	9475	9455	9445	9430	9415	9415	9415	9405	9330	9310
	6	9360	9355	9345	9325	9305	9295	9295	9290	9275	9255
	7	9265	9250	9240	9225	9205	9205	9200	9200	9175	9165
	8	9405	9380	9365	9350	9340	9330	9320	9315	9290	9275
LOW PRESSURE COMPRESSOR RPM N_1	1	6165	6175	6185	6195	6205	6200	6205	6205	6205	6215
	2	6185	6200	6210	6220	6230	6225	6230	6235	6235	6260
	3	6130	6140	6150	6165	6175	6180	6185	6185	6185	6185
	4	6145	6105	6165	6170	6180	6180	6180	6190	6145	6155
	5	6270	6285	6300	6300	6305	6310	6320	6310	6275	6280
	6	6230	6245	6255	6255	6250	6260	6260	6265	6265	6270
	7	6110	6125	6130	6140	6145	6150	6155	6160	6170	6175
	8	6155	6160	6165	6175	6190	6190	6190	6190	6180	6190
EXHAUST GAS TEMP °C	1	571	573	577	578	579	581	591	591	591	610
	2	600	602	605	604	606	613	623	624	631	643
	3	566	567	568	571	578	582	592	596	600	613
	4	610	610	614	616	622	627	636	641	645	650
	5	625	626	629	630	638	639	645	646	635	651
	6	589	591	597	598	601	604	613	620	625	629
	7	568	570	570	572	581	590	591	592	619	626
	8	591	592	590	594	597	603	609	613	621	631
TAIL PIPE TOTAL PRESSURE "Hg"	1	45.7	42.8	40.5	38.5	35.1	32.0	28.6	27.1	24.5	22.1
	2	44.6	42.5	40.3	38.3	35.1	31.9	28.7	27.1	24.5	22.2
	3	44.9	42.9	40.6	38.5	35.1	32.0	28.6	27.0	24.1	21.9
	4	44.5	42.6	40.1	38.2	34.9	31.8	28.5	27.0	24.0	21.9
	5	45.3	43.3	40.9	38.9	35.4	32.3	29.1	27.4	24.5	22.4
	6	44.9	42.8	40.4	38.3	34.7	31.8	28.5	26.9	24.1	22.0
	7	44.2	42.3	39.8	37.8	34.1	31.6	28.4	26.9	24.4	22.2
	8	44.9	42.8	40.6	38.5	35.3	32.2	28.8	27.2	24.4	22.4
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2						.1 .2				
	3/4						.2 .1				
	5/6						.1 .3				
	7/8						.4 .1				
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R					CLOSED					
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		32:08	33:00	33:49	34:38	36:28	37:57	39:26	40:26	42:25	46:52

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB EXTERNAL TANKS 8 ENG MRP										
FLIGHT NO.		45										
RUN NO.												
ALTITUDE	Ft.	42820										
IAS	Knots	213.5										
OAT	°C	-29.0										
GROSS WEIGHT	Lbs.	377271										
HIGH PRESSURE COMPRESSOR RPM N_2	1	9265										
	2	9195										
	3	9175										
	4	9255										
	5	9310										
	6	9255										
	7	9160										
	8	9270										
LOW PRESSURE COMPRESSOR, RPM N_1	1	6215										
	2	6180										
	3	6165										
	4	6145										
	5	6280										
	6	6275										
	7	6175										
	8	6190										
EXHAUST GAS TEMP °C	1	614										
	2	636										
	3	613										
	4	646										
	5	655										
	6	633										
	7	628										
	8	628										
TAIL PIPE TOTAL PRESSURE "Hg"	1	21.3										
	2	21.3										
	3	21.1										
	4	21.1										
	5	21.6										
	6	21.2										
	7	21.3										
	8	21.4										
FUEL FLOW GALS TIMED/SECONDS	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											
FUEL WT.	LB/GAL											
OIL COOLER GAP INCHES	1/2	.1	.1									
	3/4	.1	.1									
	5/6	0	.3									
	7/8	.4	0									
SURGE BLEED VALVE POSITION	1 L/R											
	2 L/R											
	3 L/R											
	4 L/R											
	5 L/R											
	6 L/R											
	7 L/R											
	8 L/R											
TIME - SECONDS		51:11										

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK	CLIMB	CLEAN	CONFIG	8 ENG			NRP		
FLIGHT NO.		53	53	53	53	53	53	53	53	53	53
RUN NO.											
ALTITUDE	Ft.	5025	7035	9035	11040	13380	15765	17910	20280	22525	24335
IAS	Knots	315.0	315.5	312.5	309.5	312.0	308.5	307.0	311.5	313.0	312.5
OAT	°C	25.5	23.0	20.5	19.0	15.0	14.0	10.5	7.0	4.0	0
GROSS WEIGHT	Lbs.	28991									
HIGH PRESSURE COMPRESSOR RPM N_2	1	9370	9370	9360	9355	9335	9325	9320	9310	9295	9280
	2	9305	9305	9290	9280	9270	9265	9245	9240	9225	9215
	3	9335	9335	9320	9315	9305	9300	9290	9280	9260	9250
	4	9350	9340	9325	9315	9305	9300	9295	9280	9265	9255
	5	9320	9310	9295	9285	9270	9260	9255	9245	9230	9205
	6	9270	9275	9260	9255	9250	9250	9245	9230	9215	9210
	7	9335	9340	9330	9330	9310	9300	9295	9280	9270	9260
	8	9270	9270	9260	9245	9230	9220	9215	9190	9190	9180
LOW PRESSURE COMPRESSOR, RPM N_1	1	5880	5890	5890	5910	5910	5920	5920	5940	5955	5970
	2	5870	5875	5875	5890	5895	5900	5905	5920	5940	5950
	3	5745	5735	5750	5740	5740	5795	5770	5805	5795	5870
	4	5850	5825	5825	5865	5870	5880	5895	5905	5950	5960
	5	5895	5905	5905	5925	5915	5925	5940	5955	5970	5975
	6	5915	5930	5930	5940	5940	5955	5965	5980	5990	6005
	7	5955	5960	5960	5965	5965	5970	5985	5990	6010	6015
	8	5790	5795	5800	5815	5810	5815	5830	5825	5855	5870
EXHAUST GAS TEMP °C	1	491	485	501	506	515	515	523	530	533	537
	2	553	546	543	543	540	540	540	541	543	542
	3	506	512	525	532	533	536	540	543	545	549
	4	538	532	536	539	540	541	544	551	551	549
	5	538	539	543	548	548	554	557	565	564	570
	6	479	481	489	486	486	500	536	540	530	540
	7	531	535	537	542	559	562	565	569	571	576
	8	499	517	517	520	521	522	525	526	525	531
TAIL PIPE TOTAL PRESSURE "Hg"	1	67.5	63.6	60.1	56.4	53.5	50.4	47.4	45.0	43.1	41.3
	2	66.9	62.9	59.2	56.3	52.9	49.7	46.7	44.7	42.5	40.8
	3	67.8	63.9	60.4	57.3	53.9	50.7	47.8	45.4	43.5	41.8
	4	66.7	62.9	59.4	56.2	53.0	49.8	46.9	44.6	42.5	40.8
	5	67.5	63.7	60.2	57.2	53.8	50.7	47.9	45.6	43.5	41.8
	6	68.7	64.5	60.8	57.8	54.3	50.7	47.6	45.2	43.0	41.3
	7	69.6	65.0	61.2	57.9	54.2	51.0	47.8	45.6	43.4	41.7
	8	65.8	61.8	58.2	55.3	51.8	48.8	46.1	44.0	42.0	40.4
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1 .2									.1 .2
	3/4	0 .2									.1 .2
	5/6	.1 .2									.1 .3
	7/8	.4 .1									.5 .1
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R				CLOSED						
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		9:57	10:26	11:02	11:37	12:25	13:15	14:04	15:03	16:04	16:53

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CLEAN CONFIG 8 ENGINES NRP									
FLIGHT NO.		53	53	53	53	53	53	53	53	53	53
RUN NO.											
ALTITUDE	Ft.	26405	28240	30495	32430	34145	36420	38335	39825	41800	43640
IAS	Knots	308.5	303.5	293.5	278.0	267.5	255.5	245.5	238.0	228.5	219.0
OAT	°C	-3.5	-7.0	-11.0	-17.0	-21.0	-28.0	-34.0	-39.0	-42.0	-42.0
GROSS WEIGHT	Lbs.			284236							
HIGH PRESSURE COMPRESSOR RPM N_2	1	9265	9245	9235	9215	9200	9160	9140	9120	9075	9050
	2	9205	9190	9175	9155	9145	9110	9090	9065	9020	8990
	3	9245	9225	9205	9185	9175	9150	9110	9070	9000	8960
	4	9240	9225	9210	9190	9170	9145	9115	9085	9045	9025
	5	9195	9185	9170	9150	9135	9110	9085	9050	9000	8980
	6	9195	9185	9170	9160	9140	9120	9095	9070	9045	9030
	7	9245	9230	9215	9195	9175	9150	9125	9100	9065	9045
	8	9160	9135	9120	9100	9080	9035	9020	8995	8960	8935
LOW PRESSURE COMPRESSOR, RPM N_1	1	5975	5990	6005	6020	6035	6050	6065	6075	6055	6045
	2	5960	5970	5990	6005	6015	6030	6045	6050	6030	6010
	3	5860	5840	5875	5895	5845	5990	5980	5930	5860	5840
	4	5970	5980	5995	6015	6020	6040	6045	6035	6020	6010
	5	5985	5995	6010	6025	6035	6050	6065	6065	6050	6040
	6	6010	6030	6045	6075	6080	6095	6110	6115	6115	6110
	7	6025	6035	6045	6070	6075	6085	6095	6095	6095	6095
	8	5880	5885	5905	5925	5935	5940	5960	5965	5955	5945
EXHAUST GAS TEMP °C	1	541	543	550	550	552	549	554	557	563	566
	2	543	550	554	556	557	559	564	567	568	572
	3	548	551	557	557	560	560	558	554	553	551
	4	551	554	565	567	570	574	588	590	590	586
	5	570	574	588	592	596	600	602	600	601	604
	6	543	549	560	561	565	568	571	574	577	587
	7	576	578	585	587	586	585	587	598	600	605
	8	532	532	538	542	545	542	549	550	552	552
TAIL PIPE TOTAL PRESSURE "Hg"	1	39.1	37.3	35.0	32.8	31.0	28.8	27.0	25.6	23.5	21.4
	2	38.9	37.0	34.7	32.3	30.5	28.4	26.7	25.5	23.4	21.4
	3	39.7	37.9	35.5	33.2	31.2	28.9	27.1	25.6	23.4	21.3
	4	39.0	36.9	34.5	32.3	30.3	28.3	26.5	25.2	23.1	21.1
	5	39.7	37.8	35.5	33.0	31.2	29.0	27.2	25.8	23.7	21.7
	6	39.1	37.2	34.8	32.5	30.5	28.5	26.5	25.2	23.2	21.2
	7	39.5	37.6	35.2	32.9	30.8	28.6	26.7	25.5	23.5	21.6
	8	38.4	36.5	34.3	32.0	30.2	28.0	26.3	25.2	23.2	21.2
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R										
	4 L/R					CLOSED					
	5 L/R										
	6 L/R										
	7 L/R										
	8 L/R										
TIME - SECONDS		17:42	18:32	19:32	20:12	20:52	21:52	22:42	23:30	24:31	26:00

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		CHECK CLIMB CLEAN CONFIG 8 ENG NRP	
FLIGHT NO.		53	53
RUN NO.			
ALTITUDE	Ft.	45865	47470
IAS	Knots	206.5	199.5
OAT	°C	-43.0	-44.0
GROSS WEIGHT	Lbs.		278239
HIGH PRESSURE COMPRESSOR RPM N_2	1	9045	9010
	2	8995	8965
	3	8960	8910
	4	9020	8980
	5	8965	8940
	6	9015	9005
	7	9040	9000
	8	8940	8910
LOW PRESSURE COMPRESSOR, RPM N_1	1	6055	6045
	2	6035	6010
	3	5935	5870
	4	6025	6000
	5	6045	6025
	6	6115	6110
	7	6095	6080
	8	5970	5953
EXHAUST GAS TEMP °C	1	564	567
	2	578	576
	3	556	553
	4	590	588
	5	605	608
	6	600	605
	7	614	604
	8	561	559
TAIL PIPE TOTAL PRESSURE "Hg"	1	19.4	17.7
	2	19.4	17.7
	3	19.3	17.7
	4	19.1	17.5
	5	19.6	18.0
	6	19.2	17.8
	7	19.3	17.7
	8	19.1	17.5
FUEL FLOW GALS TIMED/SECONDS	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
FUEL WT.	LB/GAL		
OIL COOLER GAP INCHES	1/2	.1	.1
	3/4	.1	.2
	5/6	0	.2
	7/8	.4	0
SURGE BLEED VALVE POSITION	1 L/R		
	2 L/R		
	3 L/R		
	4 L/R	CLOSED	
	5 L/R		
	6 L/R		
	7 L/R		
	8 L/R		
TIME - SECONDS		27:58	30:58

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 8 ENGINES									
FLIGHT NO.		49	←							→	49
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.	39245	39630	39680	39670	39840	40005	40025	40145	40310	40320
IAS	Knots	273.5	269.0	264.0	258.0	250.0	242.5	240.0	234.5	232.5	222.5
OAT	°C	-27.0	-27.0	-28.0	-30.0	-31.5	-33.0	-34.0	-34.0	-35.0	-37.0
GROSS WEIGHT	Lbs.	345750	344250	342500	341500	339750	338750	336000	334250	331500	330250
HIGH PRESSURE COMPRESSOR RPM N_2	1	9365	9250	8955	8770	8605	8600	8595	8540	8570	8500
	2	9320	9160	8885	8705	8575	8505	8490	8485	8510	8425
	3	9290	9170	8880	8690	8545	8505	8495	8520	8465	8425
	4	9305	9160	8870	8685	8570	8510	8510	8510	8490	8440
	5	9330	9180	8875	8655	8540	8515	8435	8425	8420	8390
	6	9315	9195	8955	8750	8600	8560	8530	8510	8510	8500
	7	9280	9285	8970	8770	8560	8540	8515	8470	8445	8435
	8	9280	9120	8870	8720	8615	8535	8475	8450	8435	8450
LOW PRESSURE COMPRESSOR, RPM N_1	1	6270	6160	5885	5700	5550	5545	5550	5510	5540	5480
	2	6250	6100	5830	5655	5540	5495	5485	5475	5505	5430
	3	6230	6100	5820	5635	5490	5455	5460	5475	5450	5415
	4	6170	6035	5770	5595	5485	5435	5440	5445	5435	5390
	5	6280	6150	5865	5640	5525	5500	5440	5425	5435	5420
	6	6280	6170	5925	5730	5590	5565	5535	5515	5525	5525
	7	6250	6230	5945	5730	5560	5540	5515	5475	5465	5475
	8	6170	6030	5795	5655	5550	5485	5435	5410	5405	5440
EXHAUST GAS TEMP °C	1	615	594	544	508	464	470	470	452	459	444
	2	625	589	545	503	485	468	463	464	476	452
	3	606	583	525	485	450	447	444	454	446	441
	4	618	594	530	490	468	454	451	454	456	449
	5	627	590	540	487	461	460	437	438	445	438
	6	627	589	551	522	494	489	481	479	482	478
	7	618	626	584	538	485	483	481	464	464	466
	8	604	573	528	501	486	458	447	448	448	454
TAIL PIPE TOTAL PRESSURE "Hg"	1	28.6	27.0	24.9	22.9	21.2	20.5	20.5	19.8	19.9	19.0
	2	28.5	26.9	24.7	22.9	21.2	20.2	20.1	19.7	19.7	18.8
	3	28.6	27.0	24.8	23.0	21.2	20.3	20.3	20.0	19.6	18.9
	4	28.2	26.7	24.3	22.4	20.8	19.8	19.9	19.5	19.2	18.5
	5	28.5	27.1	25.0	22.7	21.1	20.3	19.9	19.3	19.0	18.6
	6	28.6	27.3	25.1	23.1	21.3	20.5	20.2	19.6	19.6	19.2
	7	28.5	27.5	25.4	23.4	21.2	20.5	20.3	19.6	19.4	19.1
	8	28.3	26.6	24.7	23.3	21.7	20.6	20.1	19.3	19.1	19.0
FUEL FLOW GALS TIMED/SECONDS	1	10/62.8	10/68.4	10/60.9	10/91.9	10/—	10/102.5	10/103.3	10/120.5	10/109.8	10/118.4
	2	10/64.0	10/71.0	10/83.0	10/53.7	10/103.1	10/110.7	10/111.4	10/113.5	10/111.3	10/120.2
	3	10/63.0	10/68.2	10/81.1	10/91.9	10/104.5	10/109.1	10/109.1	10/107.7	10/113.4	10/115.7
	4	10/63.9	10/70.7	10/84.2	10/55.8	10/106.1	10/111.3	10/110.9	10/111.5	10/114.4	10/118.6
	5	10/62.6	10/69.1	10/83.1	10/96.4	10/106.1	10/109.5	10/115.5	10/117.8	10/118.3	10/120.6
	6	10/61.7	10/67.4	10/77.3	10/88.0	10/99.0	10/103.2	10/104.5	10/107.2	10/107.9	10/108.7
	7	10/64.2	10/65.0	10/68.2	10/89.3	10/104.8	10/107.7	10/108.9	10/113.2	10/116.9	10/116.6
	8	10/66.1	10/73.2	10/75.6	10/94.3	10/102.0	10/110.9	10/115.3	10/118.7	10/122.3	10/118.3
FUEL WT.	LB/GAL	6.46	←							→	6.46
OIL COOLER GAP INCHES	1/2	.2 .2	←							→	.2 .2 .2 .1
	3/4	.2 .2	←							→	.2 .2 .2 .1
	5/6	.2 .3	←			→	.2 .3 .2 .2	←		→	.2 .2
	7/8	.4 .2	←							→	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	←							→	C C
	2 L/R	C C	←							→	C C
	3 L/R	C C	←							→	C C
	4 L/R	C C	←							→	C C
	5 L/R	C C	←							→	C C
	6 L/R	C C	←							→	C C
	7 L/R	C C	←							→	C C
	8 L/R	C C	←							→	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 8 ENGINES									
FLIGHT NO.		49	49	49	49	49	49	49	49	49	49
RUN NO.		11	12	13	1	2	3	4	5	6	7
ALTITUDE	Ft.	40460	40470	40650	38245	38365	38560	38590	38805	38870	39125
IAS	Knots	207.5	191.0	183.5	284.0	281.0	275.0	268.5	260.5	250.5	245.5
OAT	°C	-40.0	-42.0	-44.0	-26.5	-28.0	-28.0	-30.5	-31.5	-33.0	-34.0
GROSS WEIGHT	Lbs.	329250	327000	324500	321000	319250	318000	316250	314750	313500	310750
HIGH PRESSURE COMPRESSOR RPM N_2	1	8450	8545	8615	9365	9220	8955	8700	8525	8470	8470
	2	8395	8470	8555	9305	9135	8905	8605	8445	8410	8405
	3	8395	8420	8495	9275	9120	8880	8590	8440	8375	8340
	4	8445	8470	8520	9295	9120	8870	8585	8440	8355	8370
	5	8390	8405	8495	9310	9095	8835	8550	8395	8325	8345
	6	8460	8585	8655	9300	9125	8910	8630	8525	8385	8380
	7	8420	8510	8610	9325	9170	8903	8655	8495	8345	8350
	8	8440	8435	8520	9275	9085	8820	8605	8495	8350	8385
LOW PRESSURE COMPRESSOR, RPM N_1	1	5455	5580	5660	6270	6135	5895	5625	5455	5415	5410
	2	5420	5520	5610	6235	6075	5845	5555	5405	5380	5375
	3	5410	5470	5555	6235	6080	5855	5570	5420	5355	5345
	4	5405	5450	5520	6150	6000	5770	5490	5345	5280	5295
	5	5435	5490	5585	6270	6060	5825	5520	5375	5305	5330
	6	5510	5645	5735	6265	6085	5875	5605	5495	5370	5375
	7	5475	5595	5700	6290	6135	5880	5610	5470	5345	5355
	8	5445	5465	5575	6175	6000	5740	5640	5435	5275	5325
EXHAUST GAS TEMP °C	1	435	473	492	616	579	525	478	442	446	423
	2	454	479	501	620	582	539	482	452	450	445
	3	441	448	466	600	566	514	459	427	424	415
	4	461	463	478	616	575	530	475	441	425	429
	5	446	450	471	633	582	530	462	425	413	420
	6	474	507	529	617	579	539	491	474	441	440
	7	475	493	523	632	602	580	511	473	420	395
	8	458	458	480	604	561	513	473	450	410	424
TAIL PIPE TOTAL PRESSURE "Hg	1	18.2	18.3	18.7	30.3	28.8	26.3	23.8	21.5	20.7	20.4
	2	18.1	18.2	18.7	30.1	28.7	26.1	23.3	21.1	20.3	19.9
	3	18.2	18.0	18.4	30.3	29.0	26.5	23.6	21.3	20.3	19.7
	4	18.0	17.8	18.1	29.9	28.4	25.9	22.9	20.6	19.7	19.3
	5	18.0	18.1	18.6	30.3	28.6	26.1	23.0	21.0	19.8	19.5
	6	18.5	18.8	19.1	30.3	28.8	26.3	23.4	21.7	20.0	19.6
	7	18.4	18.7	19.2	30.5	28.9	26.5	23.8	21.8	20.1	20.0
	8	18.4	18.1	18.6	30.1	28.4	25.8	23.5	21.8	19.5	19.6
FUEL FLOW GALS TIMED/SECONDS	1	10/122.3	10/114.8	10/109.8	10/59.6	10/64.9	10/78.6	10/91.2	10/105.4	10/110.5	10/112.6
	2	10/123.5	10/116.7	10/112.3	10/61.3	10/67.3	10/78.9	10/93.3	10/109.4	10/112.0	10/119.1
	3	10/120.5	10/120.1	10/114.4	10/59.6	10/65.1	10/76.2	10/93.5	10/107.3	10/113.8	10/116.4
	4	10/119.8	10/119.4	10/115.7	10/60.7	10/67.4	10/79.3	10/97.5	10/111.0	10/113.5	10/119.7
	5	10/122.6	10/122.8	10/115.7	10/59.4	10/67.0	10/79.2	10/96.4	10/112.6	10/119.9	10/119.3
	6	10/114.1	10/103.1	10/101.5	10/59.8	10/65.1	10/74.6	10/90.6	10/99.2	10/113.6	10/114.4
	7	10/119.4	10/112.5	10/106.5	10/55.2	10/64.6	10/76.5	10/91.5	10/99.9	10/117.8	10/119.2
	8	10/121.2	10/122.1	10/115.3	10/62.5	10/70.0	10/83.7	10/97.3	10/107.5	10/124.8	10/121.8
FUEL WT.	LB/GAL	6.46	6.46	6.46	6.46	6.46	6.46	6.46	6.46	6.46	6.46
OIL COOLER GAP INCHES	1/2	.2 .1	.2 .1	.2 .1	.2 .2	←				→	.2 .2
	3/4	.2 .1	.2 .1	.2 .1	.2 .2	←				→	.2 .2
	5/6	.2 .2	.2 .2	.2 .1	.2 .3	←			→	.2 .3	.2 .2
	7/8	.4 .2	.4 .1	.4 .1	.4 .2	←				→	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	C C	C C	C C	←				→	C C
	2 L/R	C C	C C	C C	C C	←				→	C C
	3 L/R	C C	C C	C C	C C	←				→	C C
	4 L/R	C C	C C	C C	C C	←				→	C C
	5 L/R	C C	C C	C C	C C	←				→	C C
	6 L/R	C C	C C	C C	C C	←				→	C C
	7 L/R	C C	C C	C C	C C	←				→	C C
	8 L/R	C C	C C	C C	C C	←				→	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 8 ENGINES									
FLIGHT NO.		49	←			→	49	49	49	49	49
RUN NO.		8	9	10	11	12	13	1	2	3	4
ALTITUDE	Ft.	39195	39320	39410	39410	39410	39630	44310	44640	44740	44840
IAS	Knots	241.5	236.5	229.0	215.5	192.0	180.0	240.5	235.0	229.5	222.0
OAT	°C	-35.0	-35.0	-36.5	-39.0	-43.5	-45.5	-32.5	-34.5	-36.5	-38.0
GROSS WEIGHT	Lbs.	309250	308000	306750	305250	304000	303250	298500	296500	294500	292750
HIGH PRESSURE COMPRESSOR RPM N_2	1	8405	8300	8410	8330	8260	8450	9315	9060	8845	8695
	2	8390	8275	8305	8225	8190	8390	9215	8980	8785	8640
	3	8325	8260	8310	8255	8215	8355	9205	8950	8745	8600
	4	8355	8350	8325	8295	8245	8360	9250	8975	8750	8610
	5	8300	8340	8225	8205	8120	8300	9250	8950	8725	8570
	6	8330	8385	8370	8315	8295	8315	9215	9025	8835	8690
	7	8335	8375	8290	8290	8230	8410	9205	9070	8850	8665
	8	8360	8360	8345	8140	8215	8340	9250	8945	8740	8570
LOW PRESSURE COMPRESSOR, RPM N_1	1	5355	5270	5380	5295	5270	5505	6270	6045	5840	5710
	2	5360	5260	5315	5255	5245	5450	6210	5975	5790	5655
	3	5335	5275	5325	5285	5290	5460	6220	5975	5790	5665
	4	5280	5255	5270	5240	5225	5370	6160	5910	5710	5590
	5	5295	5335	5245	5230	5190	5395	6250	6000	5775	5625
	6	5335	5395	5350	5330	5350	5595	6230	6050	5865	5725
	7	5340	5375	5320	5250	5295	5490	6225	6085	5885	5705
	8	5315	5380	5315	5085	5225	5390	6195	5930	5740	5575
EXHAUST GAS TEMP °C	1	425	376	412	397	402	440	635	574	529	501
	2	446	425	428	413	415	462	627	582	540	505
	3	411	385	416	409	413	435	604	550	506	483
	4	428	434	424	426	424	449	643	572	522	499
	5	410	418	395	402	387	427	653	575	518	484
	6	415	442	442	442	432	500	620	597	555	528
	7	392	404	390	381	433	469	658	618	565	513
	8	418	420	425	375	402	436	632	564	515	485
TAIL PIPE TOTAL PRESSURE "Hg"	1	19.8	18.6	19.1	18.0	16.8	18.1	22.7	20.8	19.2	17.8
	2	19.7	18.3	18.5	17.6	16.6	18.0	22.6	20.8	19.3	17.8
	3	19.5	18.5	18.6	17.9	17.0	17.9	22.6	20.8	19.3	17.9
	4	19.0	18.4	18.2	17.6	16.6	17.4	22.5	20.4	18.8	17.5
	5	19.0	19.2	18.0	17.5	16.3	17.6	22.8	20.9	19.2	17.8
	6	19.1	19.3	18.5	18.0	17.3	18.5	22.5	20.9	19.5	18.1
	7	19.7	19.6	18.7	17.6	17.0	18.4	22.9	21.2	19.6	18.0
	8	19.4	19.2	18.6	16.2	16.5	17.6	22.9	20.7	19.0	17.4
FUEL FLOW GALS TIMED/SECONDS	1	10 / 119.4	10 / 130.5	10 / 118.1	10 / 129.1	10 / 139.1	10 / 118.9	8 / —	8 / 76.0	8 / 81.8	8 / 90.6
	2	10 / 117.7	10 / 129.0	10 / 126.5	10 / 136.7	10 / 141.7	10 / 122.2	8 / 64.5	8 / 74.0	8 / 83.0	8 / 92.0
	3	10 / 118.5	10 / 128.3	10 / 133.5	10 / 127.8	10 / 132.7	10 / 121.7	8 / 62.7	8 / 73.2	8 / 83.0	8 / 91.7
	4	10 / 119.8	10 / 122.2	10 / 126.3	10 / 128.1	10 / 135.4	10 / 125.2	8 / 62.5	8 / 74.5	8 / 85.6	8 / 94.0
	5	10 / 123.1	10 / 121.0	10 / 133.9	10 / 135.0	10 / 147.6	10 / 128.9	8 / 62.0	8 / 73.9	8 / 85.3	8 / 95.3
	6	10 / 120.2	10 / 115.9	10 / 119.2	10 / 122.0	10 / 124.9	10 / 107.0	8 / 62.0	8 / 69.6	8 / 77.3	8 / 85.8
	7	10 / 120.0	10 / 118.3	10 / 126.5	10 / 138.1	10 / 135.1	10 / 118.8	8 / 63.4	8 / 69.3	8 / 79.4	8 / 90.6
	8	10 / 121.7	10 / 129.9	10 / 125.0	10 / 135.0	10 / 143.8	10 / 128.3	8 / 63.9	8 / 76.7	8 / 87.0	8 / 98.6
FUEL WT.	LB/GAL	6.46	←			→	6.46	6.46	6.46	6.46	6.46
OIL COOLER GAP INCHES	1/2	.2 .1	←			→	.2 .1	.2 .2	.2 .2	.2 .1	.2 .1
	3/4	.2 .2	.2 .2	.2 .1	←	→	.2 .1	.2 .2	.2 .2	.2 .1	.2 .1
	5/6	.2 .2	←		→	.2 .2	.1 .1	.2 .2	.2 .2	.2 .2	.2 .2
	7/8	.4 .2	.4 .2	.4 .2	.4 .1	.4 .1	.4 .1	.4 .2	.4 .2	.4 .2	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	←			→	C C	C C	C C	C C	C C
	2 L/R	C C	←			→	C C	C C	C C	C C	C C
	3 L/R	C C	←			→	C C	C C	C C	C C	C C
	4 L/R	C C	←			→	C C	C C	C C	C C	C C
	5 L/R	C C	←			→	C C	C C	C C	C C	C C
	6 L/R	C C	←			→	C C	C C	C C	C C	C C
	7 L/R	C C	←			→	C C	C C	C C	C C	C C
	8 L/R	C C	←			→	C C	C C	C C	C C	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 8 ENGINES									
FLIGHT NO.		49	←								49
RUN NO.		5	6	7	8	9	1	2	3	4	5
ALTITUDE	Ft.	44980	45070	45240	45380	45740	43615	44020	44320	44700	44880
IAS	Knots	215.5	210.5	200.0	184.5	172.5	248.5	241.5	237.0	226.5	223.0
OAT	°C	-40.0	-40.5	-43.0	-44.5	-46.0	-33.0	-33.0	-33.0	-36.0	-36.0
GROSS WEIGHT	Lbs.	291000	289500	288250	284250	281750	278500	274000	268000	266250	263500
HIGH PRESSURE COMPRESSOR RPM N_2	1	8560	8530	8565	8555	8710	9335	9030	8860	8665	8610
	2	8535	8505	8475	8495	8650	9270	8950	8785	8580	8520
	3	8535	8470	8435	8450	8575	9205	8905	8745	8555	8505
	4	8625	8545	8460	8490	8605	9255	8935	8730	8555	8495
	5	8575	8490	8405	8430	8570	9255	8895	8715	8510	8410
	6	8605	8545	8550	8540	8780	9255	8980	8805	8630	8570
	7	8590	8500	8500	8515	8720	9175	9020	8805	8610	8550
	8	8525	8510	8505	8470	8645	9250	8900	8705	8520	8445
LOW PRESSURE COMPRESSOR, RPM N_1	1	5600	5565	5600	5610	5795	6290	5985	5835	5650	5595
	2	5570	5545	5535	5570	5730	6255	5930	5775	5580	5535
	3	5610	5560	5530	5575	5730	6225	5935	5775	5590	5540
	4	5590	5525	5470	5510	5645	6170	5860	5680	5520	5460
	5	5635	5545	5490	5530	5685	6255	5925	5740	5540	5445
	6	5665	5610	5625	5635	5875	6260	5990	5815	5650	5595
	7	5650	5570	5585	5620	5840	6215	6035	5825	5630	5580
	8	5535	5530	5535	5520	5735	6190	5870	5685	5495	5415
EXHAUST GAS TEMP °C	1	474	471	485	487	518	624	568	540	498	491
	2	490	489	484	497	535	635	574	539	491	485
	3	468	465	462	468	493	595	537	507	469	461
	4	512	496	478	490	518	640	562	518	487	474
	5	498	479	460	472	505	640	562	515	473	454
	6	510	500	507	508	563	627	580	546	511	500
	7	507	491	492	500	541	645	615	559	504	499
	8	480	476	479	477	521	628	554	507	470	454
TAIL PIPE TOTAL PRESSURE "H_2O	1	16.9	16.4	16.0	15.3	15.7	24.0	21.1	19.7	17.7	17.0
	2	16.9	16.5	16.0	15.5	15.7	23.9	21.2	19.6	17.4	16.8
	3	17.2	16.5	15.8	15.4	15.5	23.8	21.2	19.7	17.5	16.8
	4	17.1	16.5	15.6	15.2	15.3	23.7	20.8	19.1	17.1	16.3
	5	17.4	16.6	15.7	15.3	15.6	23.9	21.1	19.5	17.3	16.2
	6	17.3	16.7	16.1	15.4	16.1	23.7	21.2	19.6	17.6	16.9
	7	17.4	16.5	16.1	15.7	16.1	23.8	21.5	19.7	17.7	16.9
	8	16.8	16.5	16.1	15.4	15.8	24.0	21.0	19.1	16.9	15.9
FUEL FLOW GALS TIMED/SECONDS	1	8 / 100.5	8 / 103.1	8 / —	8 / 103.5	8 / 97.6	8 / 58.6	8 / 72.1	8 / 50.5	8 / 82.6	8 / 57.3
	2	8 / 101.6	8 / 102.8	8 / 105.3	8 / 106.0	8 / 99.2	8 / 60.4	8 / 73.3	8 / 68.6	8 / 86.5	8 / 108.2
	3	8 / 97.1	8 / 102.0	8 / 105.5	8 / 107.4	8 / 102.3	8 / 59.7	8 / 73.3	8 / 82.4	8 / —	8 / 100.5
	4	8 / 93.0	8 / 99.2	8 / 107.4	8 / 107.8	8 / 103.0	8 / 59.6	8 / 74.6	8 / 85.9	8 / 98.5	8 / 104.7
	5	8 / 54.7	8 / 106.0	8 / 110.6	8 / 111.0	8 / 104.4	8 / 59.0	8 / 74.8	8 / 85.8	8 / 100.9	8 / 102.8
	6	8 / 51.9	8 / 93.9	8 / 96.9	8 / 100.2	8 / 89.5	8 / 58.0	8 / 69.7	8 / 78.4	8 / 91.0	8 / 95.0
	7	8 / 99.2	8 / 101.7	8 / 102.6	8 / 103.8	8 / 94.7	8 / 61.7	8 / 69.9	8 / 81.2	8 / 93.9	8 / 98.4
	8	8 / 101.8	8 / 102.8	8 / 105.3	8 / 111.1	8 / 101.2	8 / 61.3	8 / 77.1	8 / 88.8	8 / 102.8	8 / 111.4
FUEL WT.	LB/GAL	6.46	←								→ 6.46
OIL COOLER GAP INCHES	1/2	.2 .1	.2 .1	.2 .1	.2 .1	.2 .1	.2 .2	.2 .2	.2 .2	.1 .2	.1 .1
	3/4	.2 .1	.2 .1	.2 .1	.2 .1	.2 .1	.2 .2	.2 .2	.2 .1	.2 .1	.2 .1
	5/6	.2 .2	.2 .2	.2 .2	.2 .1	.1 .1	.2 .2	←		→	.2 .2
	7/8	.4 .2	.4 .2	.4 .1	.4 .1	.4 .1	.4 .2	←		→	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	←		→	C C	C C	←		→	C C
	2 L/R	C C	←		→	C C	C C	←		→	C C
	3 L/R	C C	←		→	C C	C C	←		→	C C
	4 L/R	C C	←		→	C C	C C	←		→	C C
	5 L/R	C C	←		→	C C	C C	←		→	C C
	6 L/R	C C	←		→	C C	C C	←		→	C C
	7 L/R	C C	←		→	C C	C C	←		→	C C
	8 L/R	C C	←		→	C C	C C	←		→	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 8 ENGINES				
FLIGHT NO.		49	←		→	49
RUN NO.		6	7	8	9	10
ALTITUDE	Ft.	45050	45190	45580	45540	45680
IAS	Knots	215.5	210.5	198.0	189.5	173.5
OAT	°C	-37.0	-37.0	-40.0	-43.0	-45.0
GROSS WEIGHT	Lbs.	261750	258250	257250	254250	252000
HIGH PRESSURE COMPRESSOR RPM N_2	1	8550	8460	8500	8460	8565
	2	8445	8380	8380	8340	8465
	3	8445	8400	8375	8320	8410
	4	8455	8410	8345	8335	8435
	5	8380	8340	8245	8250	8350
	6	8505	8490	8465	8480	8555
	7	8425	8350	8365	8395	8470
	8	8405	8355	8275	8300	8380
LOW PRESSURE COMPRESSOR RPM N_1	1	5530	5460	5500	5475	5615
	2	5475	5420	5430	5420	5545
	3	5495	5450	5435	5415	5530
	4	5430	5375	5345	5350	5465
	5	5425	5375	5305	5335	5445
	6	5535	5510	5475	5555	5650
	7	5480	5415	5425	5485	5580
	8	5375	5330	5260	5310	5400
EXHAUST GAS TEMP °C	1	477	450	477	471	500
	2	472	462	468	461	494
	3	454	450	451	443	462
	4	473	467	457	462	483
	5	452	447	432	435	459
	6	493	493	489	500	521
	7	475	462	475	480	500
	8	450	440	430	438	460
TAIL PIPE TOTAL PRESSURE "Hg"	1	16.0	15.3	14.8	14.5	14.6
	2	15.9	15.2	14.6	14.4	14.6
	3	16.1	15.4	14.6	14.3	14.4
	4	15.7	15.1	14.3	14.1	14.1
	5	15.7	15.0	13.8	14.0	14.0
	6	15.9	15.4	14.5	14.9	14.7
	7	15.9	15.1	14.5	14.8	14.7
	8	15.3	14.7	13.6	13.9	13.8
FUEL FLOW GALS TIMED/SECONDS	1	8 / 104.3	8 / 112.3	8 / 111.9	8 / 114.2	8 / 108.4
	2	8 / 109.8	8 / 116.4	8 / 118.5	8 / 120.6	8 / 112.4
	3	8 / 105.7	8 / 111.5	8 / 116.1	8 / 119.3	8 / 115.4
	4	8 / 108.2	8 / 114.3	8 / 122.9	8 / 121.8	8 / 117.0
	5	8 / 113.0	8 / 118.9	8 / 121.3	8 / 127.7	8 / 122.7
	6	8 / 109.1	8 / 102.7	8 / 109.4	8 / 104.2	8 / 102.6
	7	8 / 109.0	8 / 117.3	8 / 118.4	8 / 113.6	8 / 111.1
	8	8 / 116.9	8 / 125.0	8 / 135.6	8 / 130.3	8 / 126.0
FUEL WT.	LB/GAL	6.46	←		→	6.46
OIL COOLER GAP INCHES	1/2	.1 .1	←		→	.1 .1
	3/4	.2 .1	.2 .1	.2 .1	.2 .1	.1 .1
	5/6	.2 .2	.2 .2	.2 .2	.1 .2	.1 .1
	7/8	.4 .2	.4 .2	.4 .1	.4 .1	.4 .1
SURGE BLEED VALVE POSITION	1 L/R	C C	←		→	C C
	2 L/R	C C	←		→	C C
	3 L/R	C C	←		→	C C
	4 L/R	C C	←		→	C C
	5 L/R	C C	←		→	C C
	6 L/R	C C	←		→	C C
	7 L/R	C C	←		→	C C
	8 L/R	C C	←		→	C C
TIME - SECONDS						

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 8 ENGINES						
FLIGHT NO.		50	←				→	50
RUN NO.		1	2	3	4	5	6	7
ALTITUDE	Ft.	54090	54065	54330	54455	54685	54790	54790
IAS	Knots	185.0	180.5	177.0	169.5	162.0	153.5	149.5
OAT	°C	−37.0	−38.0	−40.0	−40.0	−42.0	−44.0	−46.0
GROSS WEIGHT	Lbs.	206750	205500	202500	201500	200250	199250	198500
HIGH PRESSURE COMPRESSOR RPM N_2	1	9245	9015	8770	8655	8625	8670	8805
	2	9180	8980	8750	8650	8600	8640	8800
	3	9140	8965	8765	8630	8580	8590	8725
	4	9125	8985	8940	8655	8745	8760	8820
	5	9185	8980	8730	8615	8695	8685	8785
	6	9120	8925	8745	8655	8615	8545	8810
	7	9105	8960	8835	8635	8585	8500	8805
	8	9190	8890	8785	8640	8615	8615	8810
LOW PRESSURE COMPRESSOR, RPM N_1	1	6265	6065	5840	5710	5700	5785	5940
	2	6235	6030	5820	5720	5695	5755	5925
	3	6215	6055	5880	5805	5730	5710	5935
	4	6120	5980	5920	5670	5760	5800	5880
	5	6245	6045	5825	5700	5785	5785	5935
	6	6225	6025	5855	5750	5740	5695	5980
	7	6195	6040	5910	5735	5720	5660	5970
	8	6190	5920	5835	5695	5695	5695	5925
EXHAUST GAS TEMP °C	1	643	599	552	539	532	550	571
	2	656	614	567	560	550	564	607
	3	629	595	560	539	532	539	572
	4	636	611	616	554	582	592	602
	5	651	610	560	544	572	579	590
	6	652	616	581	575	571	559	629
	7	644	625	604	561	552	538	609
	8	641	582	570	545	544	555	589
TAIL PIPE TOTAL PRESSURE "Hg	1	14.1	13.2	12.1	11.0	10.7	10.8	11.3
	2	14.1	13.2	12.1	11.2	10.9	10.9	11.4
	3	13.9	13.1	12.2	11.1	10.7	10.6	11.1
	4	13.8	13.0	12.4	11.1	11.0	10.8	11.1
	5	14.1	13.2	12.0	11.2	11.2	10.9	11.4
	6	13.8	12.9	11.8	11.0	10.8	10.3	11.2
	7	13.9	13.2	12.4	11.2	10.9	10.3	11.4
	8	14.1	12.9	12.2	11.2	10.9	10.6	11.4
FUEL FLOW GALS TIMED/SECONDS	1	6 70.0	6 78.8	6 83.3	6 102.8	6 104.8	6 102.4	6 —
	2	6 70.8	6 80.2	6 81.9	6 99.1	6 104.3	6 102.9	6 92.0
	3	6 73.0	6 78.4	6 89.3	6 89.8	6 104.5	6 104.6	6 85.6
	4	6 73.7	6 80.3	6 81.3	6 85.5	6 84.7	6 94.6	6 81.9
	5	6 70.7	6 79.6	6 93.2	6 101.8	6 97.2	6 90.5	6 93.4
	6	6 71.3	6 79.9	6 89.5	6 96.5	6 100.9	6 107.4	6 88.8
	7	6 74.0	6 80.4	6 86.5	6 100.5	6 105.5	6 112.8	6 81.4
	8	6 72.7	6 86.6	6 82.0	6 103.0	6 105.7	6 106.1	6 84.5
FUEL WT.	LB/GAL	6.44	←				→	6.44

OIL COOLER GAP INCHES	1/2	.2	.2	.2	.2	.1	.2	.1	.2	.1	.2	.1	.2	.1	.2
	3/4	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.2	.1	.2
	5/6	.2	.3	.2	.3	.2	.2	.1	.2	.1	.2	.1	.2	.1	.2
	7/8	.4	.2	.4	.2	.4	.1	.4	.1	.4	.1	.4	.1	.4	.1
SURGE BLEED VALVE POSITION	1 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	2 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	3 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	4 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	5 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	6 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	7 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C
	8 L/R	C	C	C	C	C	C	C	C	C	C	C	C	C	C

TIME – SECONDS

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER EXTERNAL TANKS 8 ENG									
FLIGHT NO.		45	←							→	45
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.	39175	39245	39465	39525	39820	39930	40340	40525	40660	40865
IAS	Knots	276.5	273.5	264.5	258.0	247.5	243.5	236.0	230.0	210.0	190.5
OAT	°C	-21.0	-23.5	-25.5	-27.0	-28.0	-28.0	-29.0	-30.0	-33.0	-36.0
GROSS WEIGHT	Lbs.	309000	306500	304000	300250	298250	296000	294000	291500	289750	288500
HIGH PRESSURE COMPRESSOR RPM N_2	1	9285	9050	8730	8625	8455	8480	8470	8390	8415	8445
	2	9315	9040	8735	8600	8430	8445	8450	8365	8380	8420
	3	9215	8955	8650	8525	8415	8430	8400	8360	8355	8395
	4	9320	9035	8720	8525	8475	8480	8390	8450	8405	8460
	5	9365	9090	8775	8530	8495	8440	8365	8415	8385	8440
	6	9275	8955	8785	8545	8530	8485	8465	8405	8450	8465
	7	9180	8955	8635	8505	8430	8400	8370	8340	8240	8305
	8	9305	8985	8700	8580	8475	8475	8470	8430	8350	8425
LOW PRESSURE COMPRESSOR, RPM N_1	1	6210	5980	5660	5565	5405	5420	5410	5345	5395	5450
	2	6220	5970	5665	5540	5385	5405	5405	5340	5380	5435
	3	6160	5925	5605	5475	5380	5390	5365	5340	5365	5425
	4	6155	5905	5595	5435	5355	5370	5305	5350	5335	5410
	5	6280	6030	5740	5495	5445	5395	5345	5375	5385	5420
	6	6225	6010	5745	5510	5500	5420	5405	5375	5430	5485
	7	6145	5935	5600	5485	5410	5390	5360	5360	5270	5365
	8	6185	5905	5625	5490	5495	5375	5370	5350	5300	5405
EXHAUST GAS TEMP °C	1	595	548	493	465	435	415	415	415	431	440
	2	626	570	526	496	455	452	465	447	457	470
	3	590	540	475	448	418	424	434	426	433	447
	4	630	577	504	460	452	452	439	462	456	474
	5	649	586	528	468	460	450	430	449	444	450
	6	612	566	535	470	479	458	458	435	459	478
	7	604	584	499	453	441	405	410	410	394	419
	8	607	556	495	466	444	448	451	441	426	453
TAIL PIPE TOTAL PRESSURE "Hg	1	28.1	26.2	22.8	21.6	19.4	19.3	18.5	17.6	17.0	16.6
	2	28.1	26.1	23.0	21.5	19.1	18.8	18.3	17.4	17.0	16.6
	3	28.3	26.4	22.9	21.3	19.5	19.2	18.2	17.8	17.0	16.7
	4	28.0	26.0	22.6	20.6	19.0	18.8	17.7	17.7	16.8	16.5
	5	28.5	26.5	23.6	21.0	19.9	18.9	17.9	17.9	17.2	16.6
	6	28.1	26.4	23.5	21.0	20.1	18.9	18.3	17.7	17.2	16.8
	7	27.7	26.0	22.6	21.2	19.7	19.1	18.3	17.9	16.3	16.3
	8	28.1	26.1	23.0	21.4	19.6	18.8	18.2	17.7	16.3	15.5
FUEL FLOW GALS TIMED/SECONDS	1	12/79.1	12/90.2	12/113.0	12/122.0	12/143.0	12/143.0	12/147.5	12/161.5	12/158.5	12/157.8
	2	12/76.0	12/88.7	12/108.4	12/120.9	12/141.7	12/143.7	12/143.7	12/155.6	12/155.1	12/154.6
	3	12/78.3	12/90.2	12/113.7	12/125.1	12/139.7	12/140.4	12/146.5	12/153.7	12/155.5	12/154.3
	4	12/75.5	12/89.3	12/110.2	12/128.4	12/130.1	12/138.9	12/152.0	12/155.8	12/154.1	12/150.0
	5	12/72.4	12/84.3	12/103.2	12/124.8	12/132.2	12/140.7	12/151.5	12/146.6	12/152.0	12/155.8
	6	12/75.0	12/84.7	12/101.1	12/121.4	12/124.3	12/136.3	12/140.1	12/149.1	12/143.7	12/144.7
	7	12/81.5	12/92.9	12/118.3	12/130.1	12/121.8	12/148.8	12/155.2	12/159.0	12/176.6	12/169.9
	8	12/73.2	12/93.2	12/113.6	12/124.7	12/140.1	12/143.5	12/146.3	12/153.1	12/166.9	12/157.9
FUEL WT.	LB/GAL	6.33	←							→	6.33
OIL COOLER GAP INCHES	1/2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .1	.2 .1
	3/4	.2 .2	.3 .2	.3 .2	.3 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .1
	5/6	.3 .3	.3 .3	.3 .3	.3 .3	.3 .3	.3 .3	.3 .3	.3 .3	.3 .3	.3 .2
	7/8	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	←							→	C C
	2 L/R	C C	←							→	C C
	3 L/R	C C	←							→	C C
	4 L/R	C C	←							→	C C
	5 L/R	C C	←							→	C C
	6 L/R	C C	←							→	C C
	7 L/R	C C	←							→	C C
	8 L/R	C C	←							→	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER EXTERNAL TANKS 8 ENG									
FLIGHT NO.		45	46	←							46
RUN NO.		11	1	2	3	4	5	6	7	8	9
ALTITUDE	Ft.	40835	49050	49205	49350	49380	49650	49640	49870	50050	50180
IAS	Knots	179.5	219.0	214.5	210.0	203.5	195.5	191.0	183.0	172.5	157.0
OAT	°C	-39.0	-36.5	-38.0	-40.0	-41.5	-44.0	-44.5	-46.5	-48.0	-50.0
GROSS WEIGHT	Lbs.	287250	216500	215750	214500	213750	212500	211250	210000	209250	208250
HIGH PRESSURE COMPRESSOR RPM N_2	1	8510	9195	8890	8630	8480	8355	8305	8240	8205	8330
	2	8500	9175	8915	8650	8485	8350	8290	8250	8210	8250
	3	8400	9060	8770	8545	8390	8225	8170	8115	8090	8230
	4	8475	9195	8855	8640	8475	8355	8290	8285	8300	8280
	5	8465	9160	8925	8695	8505	8375	8325	8280	8270	8275
	6	8550	9145	8915	8720	8550	8455	8410	8300	8330	8400
	7	8285	9090	8775	8510	8305	8270	8205	8180	8160	8210
	8	8405	9210	8875	8655	8415	8310	8325	8260	8285	8200
LOW PRESSURE COMPRESSOR, RPM N_1	1	5530	6235	5945	5680	5535	5425	5375	5330	5305	5465
	2	5530	6230	5955	5695	5540	5420	5370	5345	5320	5515
	3	5460	5995	5710	5510	5325	5210	5150	5120	5110	5285
	4	5440	6165	5970	5640	5480	5375	5320	5320	5295	5370
	5	5505	6235	5995	5760	5575	5465	5415	5375	5395	5430
	6	5595	6225	5980	5785	5620	5530	5495	5395	5450	5555
	7	5355	6195	5865	5605	5400	5290	5340	5330	5330	5400
	8	5390	6210	5910	5695	5450	5370	5385	5320	5370	5300
EXHAUST GAS TEMP °C	1	463	622	553	508	478	459	452	443	438	472
	2	493	652	588	537	504	480	470	469	470	480
	3	444	602	532	491	462	434	426	422	421	457
	4	474	653	568	528	496	477	471	474	476	481
	5	471	652	593	537	499	476	466	469	468	472
	6	501	652	599	557	527	511	507	487	500	529
	7	488	638	547	507	467	441	456	456	456	475
	8	446	638	559	517	471	451	461	452	466	447
TAIL PIPE TOTAL PRESSURE "Hg"	1	17.1	18.6	16.7	15.0	13.9	12.8	12.3	11.7	11.2	11.6
	2	17.2	18.7	17.0	15.3	14.1	12.9	12.4	11.9	11.4	11.5
	3	16.8	18.4	16.5	15.1	13.8	12.5	11.8	11.3	10.8	11.4
	4	16.7	18.3	16.5	15.0	14.8	12.7	12.1	11.8	11.3	11.2
	5	17.1	18.7	17.2	15.6	14.2	13.3	12.7	12.1	11.9	11.6
	6	17.4	18.6	17.2	15.7	14.4	13.5	13.1	12.1	12.0	11.9
	7	16.1	18.6	16.6	14.7	13.2	12.2	12.2	11.9	11.5	11.4
	8	16.2	18.7	16.9	15.4	13.7	12.8	12.7	11.9	11.9	10.9
FUEL FLOW GALS TIMED/SECONDS	1	12 151.0	8 72.8	8 [illegible]	8 106.7	8 118.9	8 131.0	8 138.1	10 1830	8 154.7	8 [illegible]
	2	12 145.6	8 72.7	8 85.7	8 100.6	8 113.7	8 127.0	8 134.3	11 1820	8 149.9	8 [illegible]
	3	12 154.8	8 76.4	8 [illegible]	8 107.6	8 120.9	8 128.0	8 146.3	10 1840	8 152.8	8 147.5
	4	12 151.3	8 72.3	8 [illegible]	8 101.4	8 114.5	8 126.4	8 138.7	11 1840	8 149.1	8 [illegible]
	5	12 140.1	8 73.4	8 [illegible]	8 97.6	8 111.8	8 124.1	8 130.1	11 1840	8 157.0	8 [illegible]
	6	12 138.8	8 71.9	8 82.8	8 93.3	8 105.3	8 118.7	8 117.9	10 1600	8 123.0	8 123.9
	7	12 138.1	8 76.1	8 93.0	8 111.4	8 131.0	8 146.7	8 142.6	10 1830	8 151.0	8 [illegible]
	8	12 162.7	8 72.4	8 [illegible]	8 108.7	8 123.5	8 134.8	8 134.3	11 1820	8 140.1	8 136.5
FUEL WT.	LB/GAL	6.33	6.30	←							6.30
OIL COOLER GAP INCHES	1/2	.2 .1	.1 .1	.1 .1	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2
	3/4	.2 .1	.1 .1	.1 .1	.2 .2	.3 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2
	5/6	.3 .2	0 .2	0 .3	.2 .3	.2 .3	.2 .3	.2 .3	.2 .3	.2 .2	.2 .2
	7/8	.4 .1	.4 0	.4 0	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	←								C C
	2 L/R	C C	←								C C
	3 L/R	C C	←								C C
	4 L/R	C C	←								C C
	5 L/R	C C	←								C C
	6 L/R	C C	←								C C
	7 L/R	C C	←								C C
	8 L/R	C C	←								C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER EXTERNAL TANKS 8 ENGINES									
FLIGHT NO.		44 ◄								►	44
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.	44220	44620	44870	45070	45120	45390	45640	45730	45990	46170
IAS	Knots	238.0	232.5	230.5	227.0	224.0	219.0	206.0	211.5	198.0	190.0
OAT	°C	-20.0	-24.5	-24.5	-29.0	-31.0	-30.0	-32.0	-32.0	-36.0	-38.5
GROSS WEIGHT	Lbs.	294750	291750	289000	287000	284500	281750	279750	276750	275750	273750
HIGH PRESSURE COMPRESSOR RPM N_2	1	9275	9165	9115	8900	8755	8695	8620	8645	8585	8590
	2	9230	9125	9000	8925	8790	8705	8600	8685	8560	8575
	3	9225	9075	8965	8845	8735	8640	8575	8605	8450	8495
	4	9295	9165	8980	8940	8760	8700	8630	8660	8580	8545
	5	9305	9175	9010	8935	8800	8725	8625	8690	8570	8595
	6	9275	9125	9015	8915	8805	8740	8610	8690	8590	8585
	7	9175	9100	8975	8830	8735	8630	8580	8570	8540	8420
	8	9290	9100	9020	8885	8740	8695	8605	8635	8590	8480
LOW PRESSURE COMPRESSOR, RPM N_1	1	6195	6105	5980	5900	5765	5695	5620	5650	5610	5620
	2	6175	6090	5970	5900	5785	5685	5605	5675	5590	5615
	3	6180	6060	5950	5870	5750	5645	5595	5620	5515	5560
	4	6150	6045	5890	5860	5710	5630	5570	5610	5545	5540
	5	6255	6145	6005	5945	5825	5735	5640	5700	5620	5640
	6	6255	6135	6025	5940	5845	5760	5645	5710	5650	5655
	7	6165	6105	5980	5835	5775	5645	5615	5605	5615	5500
	8	6180	6030	5955	5845	5715	5665	5585	5615	5605	5500
EXHAUST GAS TEMP °C	1	622	596	569	555	519	506	498	493	490	496
	2	642	627	596	587	559	539	522	537	514	529
	3	616	581	565	546	527	495	494	492	467	484
	4	650	613	569	568	529	520	512	516	511	507
	5	659	629	590	582	545	526	519	524	509	521
	6	640	622	605	582	563	542	519	539	518	522
	7	630	612	586	542	518	506	508	495	509	486
	8	647	608	584	550	522	512	504	504	507	487
TAIL PIPE TOTAL PRESSURE "Hg"	1	21.7	20.7	19.5	18.9	17.9	16.9	15.7	16.0	15.1	14.9
	2	21.7	20.8	19.7	19.2	18.3	17.0	15.9	16.5	15.3	15.2
	3	21.8	20.7	19.7	19.1	18.3	16.9	15.8	16.2	14.9	14.9
	4	21.6	20.5	19.2	18.9	17.9	16.8	15.7	16.1	15.1	14.7
	5	21.8	20.8	19.8	19.2	18.4	17.4	16.0	16.6	15.5	15.2
	6	21.7	20.7	19.8	19.2	18.5	17.4	15.8	16.6	15.5	15.1
	7	21.7	20.7	19.7	19.7	18.1	16.7	15.8	16.0	15.5	14.4
	8	22.0	20.7	19.7	19.0	17.9	16.9	15.8	16.2	15.5	14.6
FUEL FLOW GALS TIMED/SECONDS	1	8 64.8	8 70.7	8 77.4	8 81.8	8 80.1	8 91.9	8 108.9	8 101.5	8 107.0	8 106.9
	2	8 66.8	8 70.9	8 76.7	8 79.6	8 84.8	8 91.5	8 100.3	8 95.1	8 104.1	8 103.8
	3	8 65.5	8 71.4	8 77.3	8 84.9	8 87.0	8 96.0	8 101.5	8 100.3	8 112.0	8 109.8
	4	8 61.8	8 68.8	8 78.6	8 78.1	8 87.9	8 98.5	8 100.1	8 98.8	8 104.0	8 107.8
	5	8 63.9	8 67.8	8 75.4	8 77.5	8 83.5	8 90.0	8 98.0	8 94.1	8 103.2	8 108.8
	6	8 62.7	8 67.7	8 72.2	8 76.9	8 81.2	8 87.1	8 98.1	8 91.8	8 99.8	8 100.6
	7	8 68.7	8 71.0	8 78.0	8 85.0	8 89.5	8 98.1	8 103.5	8 104.5	8 105.5	8 118.3
	8	8 65.8	8 73.8	8 77.4	8 82.0	8 90.7	8 94.6	8 103.0	8 101.1	8 103.8	8 114.1
FUEL WT.	LB/GAL	6.32 ◄								►	6.32
OIL COOLER GAP INCHES	1/2	.1 .1	.1 .1	.2 .2	◄					►	.2 .2 .2 .2
	3/4	.1 .1	.1 .1	.2 .2	◄					►	.2 .2 .2 .2
	5/6	.1 .3	.1 .3	.2 .3	◄					►	.2 .3 .2 .2
	7/8	.4 0	.4 0	.4 .2	◄					►	.4 .2 .4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	◄							►	C C
	2 L/R	C C	◄							►	C C
	3 L/R	C C	◄							►	C C
	4 L/R	C C	◄							►	C C
	5 L/R	C C	◄							►	C C
	6 L/R	C C	◄							►	C C
	7 L/R	C C	◄							►	C C
	8 L/R	C C	◄							►	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER EXTERNAL TANKS 8 ENGINES									
FLIGHT NO.		44	44	45	←		→	45	45	45	45
RUN NO.		11	1	1	2	3	4	5	1	2	3
ALTITUDE	Ft.	46350	44370	36230	36945	36970	37140	37260	36395	36600	36600
IAS	Knots	176.0	236.0	292.5	277.5	263.5	257.5	247.0	269.5	257.5	258.5
OAT	°C	-40.0	-27.0	-15.5	-22.0	-30.0	-24.5	-27.0	-25.5	-27.0	-28.0
GROSS WEIGHT	Lbs.	271000	266500	374000	370000	365500	360000	357500	352500	348500	348000
HIGH PRESSURE COMPRESSOR RPM N_2	1	8675	8830	9310	8725	8570	8580	8520	8585	8445	8420
	2	8685	8845	9330	8740	8545	8560	8495	8555	8435	8400
	3	8525	8805	9250	8670	8435	8525	8460	8475	8355	8335
	4	8650	8815	9355	8750	8495	8545	8545	8455	8435	8410
	5	8695	8795	9415	8760	8500	8560	8550	8465	8435	8390
	6	8725	8813	9320	8680	8520	8535	8550	8515	8425	8395
	7	8535	8810	9215	8650	8430	8550	8475	8445	8340	8345
	8	8615	8870	9335	8780	8520	8610	8530	8500	8380	8415
LOW PRESSURE COMPRESSOR, RPM N_1	1	5745	5825	6200	5640	5525	5505	5470	5515	5385	5355
	2	5740	5825	6215	5635	5485	5490	5445	5480	5375	5340
	3	5620	5805	6165	5600	5415	5460	5425	5415	5335	5310
	4	5655	5745	6165	5600	5395	5420	5480	5350	5320	5295
	5	5775	5815	6310	5680	5470	5500	5505	5410	5385	5345
	6	5810	5885	6255	5645	5510	5510	5530	5465	5400	5365
	7	5655	5820	6155	5590	5425	5505	5455	5420	5330	5330
	8	5660	5820	6190	5645	5445	5495	5455	5405	5310	5315
EXHAUST GAS TEMP °C	1	538	528	586	473	451	452	440	450	398	388
	2	571	571	630	513	476	477	468	477	450	444
	3	510	536	590	469	403	420	409	395	381	380
	4	544	536	629	509	460	460	470	437	441	427
	5	552	546	651	515	459	468	477	446	441	439
	6	579	559	621	494	470	466	475	456	492	425
	7	517	555	589	495	450	469	453	406	382	394
	8	529	551	607	510	464	476	456	455	428	432
TAIL PIPE TOTAL PRESSURE "Hg	1	15.1	19.2	31.3	25.7	23.9	22.4	21.6	24.2	22.1	21.8
	2	15.4	19.4	31.3	25.5	23.6	22.2	21.8	23.8	21.8	21.5
	3	14.7	19.4	31.7	25.6	23.1	22.4	21.6	23.6	22.0	21.8
	4	14.9	18.9	31.4	25.2	22.6	21.8	21.3	22.7	21.7	21.4
	5	15.5	19.4	31.7	25.8	23.2	22.3	21.9	23.1	22.0	21.6
	6	15.4	19.4	31.6	25.4	23.5	22.4	22.0	23.7	22.3	21.9
	7	14.8	19.4	31.2	25.2	23.3	22.8	21.9	23.6	21.9	21.9
	8	14.9	19.5	31.7	26.0	23.5	22.8	21.9	23.4	21.6	21.8
FUEL FLOW GALS TIMED/SECONDS	1	8 / 103.0	8 / 81.8	12 / 71.4	12 / 108.1	12 / 112.2	12 / 120.3	12 / 126.6	12 / 111.8	12 / 127.3	12 / 120.7
	2	8 / 98.9	8 / 78.6	12 / 68.6	12 / 99.4	12 / 111.6	12 / 118.8	12 / 124.5	12 / 111.1	12 / 126.2	12 / 120.7
	3	8 / 100.9	8 / 79.6	12 / 70.9	12 / 103.1	12 / 118.6	12 / 120.2	12 / 126.3	12 / 114.9	12 / 128.8	12 / 121.3
	4	8 / 102.5	8 / 82.8	12 / 70.3	12 / —	12 / 117.3	12 / 121.1	12 / 130.8	12 / 121.7	12 / 124.9	12 / 126.8
	5	8 / 94.8	8 / 81.1	12 / 65.0	12 / 96.8	12 / 115.1	12 / 118.1	12 / 119.4	12 / 117.8	12 / 122.5	12 / 126.9
	6	8 / 84.3	8 / 77.8	12 / 67.4	12 / 100.8	12 / 102.7	12 / 117.2	12 / 115.5	12 / 111.0	12 / 120.6	12 / 124.4
	7	8 / 119.2	8 / 81.5	12 / 78.5	12 / 107.1	12 / 128.4	12 / 120.3	12 / 129.5	12 / 121.2	12 / 134.4	12 / 134.3
	8	8 / 108.5	8 / 78.4	12 / 70.6	12 / —	12 / 116.3	12 / 116.6	12 / 125.8	12 / 118.3	12 / 134.1	12 / 131.3
FUEL WT.	LB/GAL	6.32	6.32	6.33	←		→	6.33	6.33	6.33	6.33
OIL COOLER GAP INCHES	1/2	.2 .2	.2 .2	.1 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2
	3/4	.2 .2	.2 .2	.1 .2	.2 .2	.2 .2	.2 .2	.2 .2	.3 .2	.3 .2	.3 .2
	5/6	.2 .2	.2 .3	.2 .3	.3 .3	.2 .3	.2 .3	.3 .3	.3 .3	.3 .3	.3 .3
	7/8	.4 .2	.4 .2	.4 .1	.5 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
	2 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
	3 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
	4 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
	5 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
	6 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
	7 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
	8 L/R	C C	C C	C C	←		→	C C	C C	C C	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER EXTERNAL TANKS 8 ENGINES									
FLIGHT NO.		45	45	←						→	45
RUN NO.		4	1	2	3	4	5	6	7	8	9
ALTITUDE	Ft.	36780	39515	39600	39780	40120	40340	40475	40580	40710	40895
IAS	Knots	247.5	270.0	265.5	257.0	246.5	239.5	230.5	222.5	206.0	190.5
OAT	°C	-28.0	-20.0	-21.0	-24.5	-27.0	-28.5	-30.5	-31.0	-35.0	-36.0
GROSS WEIGHT	Lbs.	346000	340750	339000	336750	334500	330000	327500	325750	324000	322750
HIGH PRESSURE COMPRESSOR RPM N_2	1	8440	9280	8950	8785	8695	8645	8610	8615	8610	8605
	2	8415	9300	8980	8785	8705	8685	8585	8580	8570	8600
	3	8315	9205	8880	8695	8610	8560	8530	8480	8445	8495
	4	8430	9315	8970	8765	8650	8640	8570	8560	8560	8600
	5	8440	9300	8990	8805	8665	8625	8585	8570	8565	8605
	6	8450	9280	8990	8760	8655	8635	8570	8595	8610	8620
	7	8275	9170	8850	8690	8625	8675	8525	8540	8405	8425
	8	8380	9290	8925	8770	8695	8605	8615	8520	8485	8515
LOW PRESSURE COMPRESSOR, RPM N_1	1	5380	6215	5865	5740	5660	5610	5585	5600	5605	5630
	2	5350	6220	5885	5725	5655	5600	5560	5560	5575	5625
	3	5285	6160	5835	5670	5585	5550	5520	5485	5485	5555
	4	5305	6150	5830	5655	5555	5545	5500	5480	5515	5560
	5	5390	6240	5945	5770	5640	5600	5525	5570	5590	5645
	6	5415	6225	5940	5735	5640	5625	5570	5595	5635	5665
	7	5260	6150	5820	5660	5615	5575	5545	5555	5455	5485
	8	5275	6185	5880	5695	5630	5540	5555	5465	5470	5525
EXHAUST GAS TEMP °C	1	395	598	527	507	483	476	473	479	486	489
	2	447	633	571	537	518	510	497	499	501	515
	3	387	596	525	479	473	464	464	458	456	467
	4	430	634	563	519	495	497	485	485	492	506
	5	439	645	589	546	508	499	469	488	491	505
	6	440	626	565	531	500	507	489	499	512	520
	7	355	600	544	511	492	481	471	487	462	465
	8	410	621	544	513	509	480	494	465	466	478
TAIL PIPE TOTAL PRESSURE "Hg"	1	21.2	27.0	24.5	22.6	21.4	20.4	19.7	19.2	18.5	18.0
	2	20.8	27.2	24.6	22.8	21.5	20.4	19.5	19.0	18.6	18.2
	3	20.4	27.3	24.6	22.6	21.1	20.3	19.5	18.5	18.0	17.9
	4	20.6	27.1	24.3	22.3	20.8	20.0	19.1	18.5	18.1	17.9
	5	21.1	27.3	25.1	23.0	21.4	20.4	19.3	19.1	18.8	18.4
	6	21.5	27.4	24.9	22.8	21.2	20.5	19.5	19.2	18.8	18.3
	7	20.3	26.8	24.1	22.4	21.2	20.2	19.5	19.0	17.6	17.9
	8	20.3	27.2	24.8	22.9	21.6	20.4	19.7	18.4	17.9	17.5
FUEL FLOW GALS TIMED/SECONDS	1	12 / 132.1	12 / 80.0	12 / 100.7	12 / 110.7	12 / 118.8	12 / 125.7	12 / 130.7	12 / 131.9	12 / 135.7	12 / 137.7
	2	12 / 132.3	12 / 78.8	12 / 95.5	12 / 107.0	12 / 114.9	12 / 123.2	12 / 129.9	12 / 131.8	12 / 131.5	12 / 132.2
	3	12 / 129.9	12 / 86.4	12 / 99.1	12 / 118.0	12 / 121.0	12 / 127.6	12 / 132.5	12 / 130.3	12 / 142.7	12 / 141.7
	4	12 / 130.7	17 / 109.8	12 / 95.8	12 / 100.8	12 / 120.1	12 / 123.2	12 / 130.6	12 / 134.9	12 / 134.1	12 / 135.5
	5	12 / 127.1	12 / 76.8	12 / 82.0	12 / 103.7	12 / 116.8	12 / 122.1	12 / 128.1	12 / 130.4	12 / 131.4	12 / 130.6
	6	12 / 128.0	12 / 76.0	12 / 90.8	12 / 105.9	12 / 115.0	12 / 128.2	12 / 126.2	12 / 126.4	12 / 126.5	12 / 127.7
	7	12 / 148.1	12 / 83.8	12 / 102.3	12 / 106.3	12 / 122.5	12 / 130.8	12 / 134.9	12 / 137.0	12 / 132.7	12 / 132.8
	8	12 / —	12 / —	12 / —	12 / 111.4	12 / 117.6	12 / 128.8	12 / 129.0	12 / 143.8	12 / 146.2	12 / 145.2
FUEL WT.	LB/GAL	6.33	6.33	←						→	6.33
OIL COOLER GAP INCHES	1/2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .1	.2 .1
	3/4	.3 .2	.2 .2	.2 .2	.3 .2	.3 .2	.3 .2	.2 .2	.2 .2	.2 .1	.2 .1
	5/6	.3 .3	.3 .3	.1 .3	.1 .3	.1 .3	.1 .3	.3 .3	.3 .3	.3 .2	.2 .2
	7/8	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	C C	←						→	C C
	2 L/R	C C	C C	←						→	C C
	3 L/R	C C	C C	←						→	C C
	4 L/R	C C	C C	←						→	C C
	5 L/R	C C	C C	←						→	C C
	6 L/R	C C	C C	←						→	C C
	7 L/R	C C	C C	←						→	C C
	8 L/R	C C	C C	←						→	C C
TIME – SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER SLIPWAY DOORS OPEN 8 ENGINES									
FLIGHT NO.		49	←							→	49
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.	43440	43700	43950	44700	44850	45050	45190	45580	45540	45680
IAS	Knots	247.0	242.0	235.5	226.0	222.0	216.5	208.0	197.0	188.5	173.5
OAT	°C	-32.0	-32.0	-33.0	-36.0	-36.0	-38.0	-40.0	-40.0	-43.0	-43.0
GROSS WEIGHT	Lbs.	276750	273250	269500	265250	264000	261000	259250	256500	254750	251250
HIGH PRESSURE COMPRESSOR RPM N_2	1	9345	9030	8860	8670	8610	8545	8460	8495	8460	8570
	2	9270	8955	8790	8575	8510	8445	8375	8380	8345	8465
	3	9205	8910	8745	8550	8505	8445	8395	8375	8330	8415
	4	9260	8940	8735	8555	8490	8455	8405	8345	8335	8435
	5	9260	8900	8710	8510	8410	8380	8335	8235	8250	8360
	6	9255	8985	8805	8630	8565	8505	8480	8460	8480	8560
	7	9150	9020	8800	8610	8550	8425	8340	8350	8390	8490
	8	9240	8900	8700	8515	8445	8405	8340	8275	8305	8405
LOW PRESSURE COMPRESSOR RPM N_1	1	6280	5985	5835	5655	5595	5525	5460	5490	5485	5610
	2	6245	5925	5780	5580	5535	5470	5420	5420	5420	5540
	3	6220	5935	5775	5590	5540	5490	5450	5430	5430	5530
	4	6160	5860	5680	5515	5460	5420	5380	5340	5350	5460
	5	6255	5940	5735	5540	5440	5425	5385	5295	5345	5455
	6	6255	5990	5815	5650	5600	5535	5520	5475	5555	5645
	7	6190	6040	5825	5635	5585	5480	5420	5420	5485	5585
	8	6180	5870	5675	5500	5415	5380	5330	5260	5310	5450
EXHAUST GAS TEMP °C	1	623	568	538	498	489	480	457	476	473	500
	2	633	572	539	492	486	473	461	465	462	492
	3	595	538	507	470	462	455	449	450	446	463
	4	643	564	518	487	473	475	466	456	461	484
	5	646	563	514	474	456	452	446	430	436	461
	6	623	583	545	513	502	497	493	490	500	520
	7	639	615	555	504	501	476	462	474	483	501
	8	625	554	505	471	455	450	440	428	439	460
TAIL PIPE TOTAL PRESSURE "Hg	1	23.5	21.1	19.6	17.7	16.9	16.0	15.3	14.8	14.5	14.5
	2	23.5	21.2	19.5	17.4	16.7	15.9	15.2	14.6	14.4	14.4
	3	23.4	21.2	19.5	17.5	16.8	16.1	15.4	14.6	14.3	14.3
	4	23.4	20.7	18.9	17.0	16.3	15.7	15.1	14.2	14.1	14.0
	5	23.5	21.1	19.3	17.2	16.1	15.7	15.2	13.8	13.9	13.9
	6	23.3	21.2	19.5	17.6	16.9	16.0	15.6	14.5	14.8	14.6
	7	23.4	21.5	19.6	17.7	16.9	15.9	15.2	14.5	14.8	14.6
	8	23.6	21.0	18.9	16.9	15.9	15.4	14.7	13.6	13.8	14.0
FUEL FLOW GALS TIMED/SECONDS	1	8 66.0	8 —	8 80.7	8 93.0	8 98.3	8 104.3	8 112.2	8 112.3	8 114.5	8 108.9
	2	8 60.4	8 73.3	8 83.3	8 98.1	8 102.2	8 102.0	8 113.3	8 119.1	8 121.1	8 114.8
	3	8 60.4	8 73.1	8 82.5	8 96.0	8 101.2	8 105.4	8 111.8	8 116.6	8 119.5	8 115.7
	4	8 60.1	8 74.6	8 86.1	8 98.6	8 109.5	8 108.1	8 113.5	8 123.1	8 122.3	8 117.7
	5	8 59.3	8 74.8	8 86.4	8 101.4	8 110.3	8 113.1	8 118.3	8 131.7	8 128.4	8 123.0
	6	8 58.6	8 69.6	8 78.5	8 90.6	8 95.6	8 99.8	8 102.3	8 109.5	8 105.8	8 103.0
	7	8 63.5	8 69.9	8 81.5	8 93.7	8 98.9	8 108.4	8 116.9	8 118.7	8 113.9	8 111.0
	8	8 62.0	8 77.1	8 88.8	8 103.7	8 112.0	8 116.2	8 123.8	8 135.6	8 130.4	8 123.1
FUEL WT.	LB/GAL	6.46	←							→	6.46
OIL COOLER GAP INCHES	1/2	.2 .2	.2 .2	.2 .2	.1 .2	.1 .2	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1
	3/4	.2 .2	.2 .2	.2 .2	.2 .1	.2 .1	.2 .1	.2 .1	.2 .1	.2 .1	.1 .1
	5/6	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .2	.2 .1	.1 .1
	7/8	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .2	.4 .1	.4 .1	.4 .1	.4 .1
SURGE BLEED VALVE POSITION	1 L/R	C C	←							→	C C
	2 L/R	C C	←							→	C C
	3 L/R	C C	←							→	C C
	4 L/R	C C	←							→	C C
	5 L/R	C C	←							→	C C
	6 L/R	C C	←							→	C C
	7 L/R	C C	←							→	C C
	8 L/R	C C	←							→	C C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER			CLEAN CONFIG			18% MAC		8 ENGINES	
FLIGHT NO.		52	52	53	←					→	53
RUN NO.		1	2	1	2	3	4	5	6	7	8
ALTITUDE	Ft.	44530	43875	43675	44000	44050	44040	44330	44360	44450	44590
IAS	Knots	246.0	237.0	248.0	244.5	241.0	237.5	230.5	224.0	220.5	216.5
OAT	°C	-32.0	-36.0	-37.0	-37.5	-37.0	-38.5	-41.5	-43.0	-42.0	-43.0
GROSS WEIGHT	Lbs.	282000	276500	276750	276250	275250	273750	270250	268000	266000	265000
HIGH PRESSURE COMPRESSOR RPM N_2	1	9325	8865	9285	9050	8910	8750	8580	8430	8400	8385
	2	9320	8765	9270	9000	8895	8725	8505	8395	8345	8325
	3	9275	8785	9205	8980	8860	8700	8445	8375	8330	8255
	4	9305	8785	9255	9010	8880	8710	8505	8380	8340	8325
	5	9255	8775	9175	8975	8860	8680	8490	8370	8370	8325
	6	9240	8815	9220	9010	8900	8740	8530	8435	8425	8345
	7	9270	8770	9225	9025	8885	8700	8500	8355	8310	8245
	8	9265	8745	9215	9040	8905	8698	8550	8410	8435	8355
LOW PRESSURE COMPRESSOR RPM N_1	1	6235	5820	6255	6020	5895	5745	5580	5440	5400	5390
	2	6255	5765	6260	6000	5885	5730	5540	5430	5375	5370
	3	6235	5790	6180	5830	5705	5540	5340	5420	5370	5320
	4	6235	5765	6230	5990	5860	5715	5520	5400	5355	5340
	5	6235	5785	6225	6015	5890	5710	5520	5415	5410	5365
	6	6265	5855	6275	6070	5945	5790	5595	5500	5430	5420
	7	6250	5800	6250	6065	5920	5735	5575	5430	5390	5335
	8	6175	5705	6190	6015	5890	5695	5555	5410	5430	5360
EXHAUST GAS TEMP °C	1	612	535	608	569	529	500	470	434	434	431
	2	632	516	625	573	544	509	469	452	444	445
	3	610	517	594	559	537	500	459	440	431	416
	4	649	528	640	577	548	509	475	453	443	443
	5	658	558	645	608	575	532	475	454	453	449
	6	616	536	619	574	560	525	492	473	475	457
	7	647	550	644	604	568	527	488	461	451	441
	8	617	511	610	575	550	505	481	444	464	445
TAIL PIPE TOTAL PRESSURE "Hg"	1	23.8	20.1	24.2	22.3	21.0	19.9	18.2	16.8	16.3	16.0
	2	23.6	20.0	24.1	22.3	21.2	20.0	18.2	16.9	16.1	16.0
	3	23.7	20.3	24.1	22.4	21.3	20.1	17.9	17.0	16.2	15.8
	4	23.6	19.9	23.9	22.0	20.8	19.7	17.7	16.5	15.9	15.7
	5	23.7	20.5	24.1	22.6	21.5	20.2	18.4	17.1	16.8	16.3
	6	23.3	20.2	23.8	22.2	21.2	20.0	18.3	17.2	16.8	16.1
	7	23.6	20.0	24.0	22.4	21.2	18.8	18.2	16.7	16.2	15.7
	8	23.7	19.9	24.1	22.8	21.5	19.9	18.4	16.9	16.7	16.0
FUEL FLOW GALS TIMED/SECONDS	1	8 60.2	8 66.0	8 57.5	8 66.7	8 73.7	8 80.8	8 90.1	8 102.6	8 106.8	8 107.5
	2	8 58.6	8 68.9	8 56.6	8 66.3	8 72.0	8 78.3	8 81.6	8 101.4	8 107.8	8 108.3
	3	8 59.3	8 66.2	8 58.0	8 66.8	8 72.0	8 79.6	8 84.5	8 101.2	8 106.8	8 108.7
	4	8 58.9	8 68.3	8 57.3	8 67.2	8 73.5	8 81.3	8 —	8 103.3	8 109.8	8 108.8
	5	8 59.5	8 67.7	8 57.9	8 66.2	8 72.1	8 80.5	8 93.6	8 101.9	8 104.0	8 107.2
	6	8 59.6	8 64.0	8 56.5	8 65.1	8 69.6	8 76.5	8 88.3	8 98.3	8 108.0	8 106.7
	7	8 60.0	8 68.7	8 57.8	8 65.7	8 73.1	8 81.7	8 92.9	8 104.8	8 110.8	8 116.3
	8	8 62.3	8 72.5	8 59.7	8 66.9	8 73.1	8 82.8	8 91.0	8 104.8	8 108.7	8 109.6
FUEL WT.	LB/GAL	6.37	6.37	6.35	←					→	6.35
OIL COOLER GAP INCHES	1/2	.1 .1	.2 .2	.2 .2	←					→	.2 .2
	3/4	.1 .2	.3 .2	.2 .2	←					→	.2 .2
	5/6	.1 .2	.1 .2	.2 .3	←					→	.2 .3
	7/8	.4 0	.4 0	.4 .2	←					→	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	C C	C C	←					→	C C
	2 L/R	C C	C C	O C	←					→	O C
	3 L/R	O C	O C	C C	←					→	C C
	4 L/R	C C	C C	C C	←					→	C C
	5 L/R	O C	O C	C C	←					→	C C
	6 L/R	C C	C C	C C	←					→	C C
	7 L/R	C C	C C	C C	←					→	C C
	8 L/R	C C	C C	C C	←					→	C C
TIME – SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 18% MAC 8 ENGINES.				
FLIGHT NO.		53	←	—	→	53
RUN NO.		9	10	11	12	13
ALTITUDE	Ft.	44670	44910	45120	45110	45410
IAS	Knots	210.0	204.0	193.0	181.0	175.5
OAT	°C	-43.5	-44.0	-45.0	-48.0	-50.0
GROSS WEIGHT	Lbs.	264000	262000	260750	260000	257250
HIGH PRESSURE COMPRESSOR RPM N_2	1	8360	8355	8305	8325	8470
	2	8305	8295	8255	8245	8385
	3	8265	8290	8280	8220	8365
	4	8255	8300	8315	8245	8375
	5	8260	8285	8195	8250	8380
	6	8285	8375	8325	8355	8440
	7	8155	8240	8215	8225	8375
	8	8310	8245	8255	8310	8370
LOW PRESSURE COMPRESSOR, RPM N_1	1	5365	5370	5345	5380	5555
	2	5340	5350	5320	5340	5495
	3	5310	5255	5420	5370	5560
	4	5285	5320	5355	5305	5470
	5	5295	5335	5265	5345	5485
	6	5350	5430	5390	5460	5580
	7	5235	5340	5310	5365	5525
	8	5310	5270	5290	5370	5460
EXHAUST GAS TEMP °C	1	437	440	435	445	474
	2	443	444	436	444	474
	3	422	430	434	429	458
	4	433	447	458	445	471
	5	437	448	429	445	480
	6	450	472	470	481	500
	7	421	445	450	450	485
	8	439	419	427	450	462
TAIL PIPE TOTAL PRESSURE "Hg	1	15.5	15.1	14.4	14.2	15.0
	2	15.4	15.1	14.4	14.2	15.0
	3	15.3	15.1	14.6	14.1	14.9
	4	15.0	14.8	14.4	13.9	14.7
	5	15.5	15.4	14.3	14.5	15.2
	6	15.2	15.5	14.6	14.7	15.1
	7	14.6	14.9	14.1	14.3	14.9
	8	15.3	14.6	14.2	14.4	14.9
FUEL FLOW GALS TIMED/SECONDS	1	8 / 111.4	8 / 114.6	8 / 127.1	8 / 118.8	8 / 106.5
	2	8 / 111.6	8 / 114.9	8 / 122.2	8 / 120.9	8 / 103.6
	3	8 / 113.5	8 / 114.6	8 / 117.8	8 / 121.7	8 / 103.5
	4	8 / 116.8	8 / 115.4	8 / 115.8	8 / 123.7	8 / 111.0
	5	8 / 114.3	8 / 113.8	8 / 126.2	8 / 119.9	8 / 105.2
	6	8 / 111.3	8 / 105.3	8 / 112.1	8 / 108.4	8 / 103.4
	7	8 / 127.3	8 / 120.8	8 / 125.8	8 / 123.0	8 / 110.1
	8	8 / 114.6	8 / 124.3	8 / 126.8	8 / 118.1	8 / 112.0
FUEL WT.	LB/GAL	6.35	←	—	→	6.35
OIL COOLER GAP INCHES	1/2	.2 .2	.2 .2	.2 .1	.2 .1	.1 .1
	3/4	.2 .2	←	— →	.2 .2	.1 .1
	5/6	.2 .3	.2 .3	.2 .2	.1 .2	0 0
	7/8	.4 .2	←	— →	.4 .2	.4 0
SURGE BLEED VALVE POSITION	1 L/R	C C	←	—	→	C C
	2 L/R	O C	←	—	→	O C
	3 L/R	C C	←	—	→	C C
	4 L/R	C C	←	—	→	C C
	5 L/R	C C	←	—	→	C C
	6 L/R	C C	←	—	→	C C
	7 L/R	C C	←	—	→	C C
	8 L/R	C C	←	—	→	C C
TIME - SECONDS						

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 35 % MAC 8 ENG									
FLIGHT NO.		51	←							→	51
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.	43555	43605	43990	43945	44190	44400	44380	44500	44770	44910
IAS	Knots	246.5	244.0	235.0	227.0	230.0	222.0	216.5	210.0	201.0	186.5
OAT	°C	-17.0	-20.0	-23.5	-28.0	-25.5	-27.0	-24.5	-24.5	-25.5	-30.0
GROSS WEIGHT	Lbs.	277750	275750	274750	272500	269750	268500	267500	265000	263000	260500
HIGH PRESSURE COMPRESSOR RPM N_2	1	9345	9115	8890	8720	8730	8655	8635	8650	8595	8620
	2	9245	9095	8850	8670	8690	8615	8605	8620	8590	8590
	3	9290	9075	8875	8655	8655	8640	8655	8605	8590	8610
	4	9255	9060	8845	8710	8720	8660	8625	8575	8565	8600
	5	9205	9015	8825	8665	8695	8625	8630	8540	8585	8600
	6	9295	9030	8855	8660	8660	8670	8650	8560	8625	8605
	7	9250	9060	8820	8660	8655	8645	8595	8465	8540	8510
	8	9310	9085	8855	8675	8685	8660	8640	8570	8505	8570
LOW PRESSURE COMPRESSOR, RPM N_1	1	6190	5990	5780	5640	5645	5585	5560	5565	5530	5580
	2	6140	5960	5755	5620	5620	5555	5540	5545	5530	5555
	3	6165	5975	5770	5605	5600	5570	5575	5540	5540	5585
	4	6135	5950	5750	5630	5625	5575	5545	5505	5500	5555
	5	6140	5970	5775	5620	5630	5590	5560	5470	5540	5565
	6	6235	6010	5830	5660	5660	5655	5600	5530	5605	5610
	7	6195	6000	5770	5625	5630	5610	5560	5435	5525	5520
	8	6160	5965	5745	5600	5605	5585	5540	5465	5410	5495
EXHAUST GAS TEMP °C	1	624	568	526	500	502	495	480	481	484	496
	2	617	579	540	505	515	495	497	503	498	500
	3	624	577	539	489	488	493	502	493	499	506
	4	623	573	523	510	514	504	497	487	491	505
	5	647	604	566	527	523	505	510	491	507	518
	6	618	567	544	499	502	512	509	500	517	512
	7	647	603	539	502	502	502	495	475	495	491
	8	627	576	527	495	497	491	491	477	463	488
TAIL PIPE TOTAL PRESSURE "Hg"	1	22.4	20.9	18.7	17.5	17.5	16.4	15.8	15.4	14.6	14.4
	2	22.2	21.1	18.8	17.5	17.5	16.3	15.8	15.4	14.8	14.5
	3	22.5	21.2	19.1	17.4	17.3	16.6	16.2	15.5	15.0	14.7
	4	21.9	20.6	18.4	17.4	17.3	16.3	15.6	15.0	14.5	14.4
	5	22.4	21.2	19.1	17.8	17.8	16.9	16.2	15.2	15.3	14.9
	6	22.1	20.9	18.9	17.4	17.3	16.8	15.8	14.9	15.1	14.5
	7	22.3	21.0	18.7	17.3	17.2	16.5	15.8	14.5	14.6	14.0
	8	22.6	21.2	18.8	17.4	17.3	16.6	15.9	14.9	14.1	14.2
FUEL FLOW GALS TIMED/SECONDS	1	8 66.1	8 73.5	8 85.4	8 95.5	8 94.5	8 102.0	8 106.2	8 107.2	8 112.4	8 113.4
	2	8 66.1	8 73.5	8 85.4	8 95.5	8 94.5	8 102.0	8 106.2	8 107.2	8 112.4	8 113.4
	3	8 62.3	8 71.1	8 82.0	8 95.0	8 96.3	8 96.2	8 96.8	8 105.2	8 100.0	8 107.3
	4	8 66.3	8 74.3	8 87.2	8 93.9	8 —	8 99.0	8 104.8	8 —	8 115.2	8 112.9
	5	8 65.9	8 73.0	8 84.4	8 93.8	8 92.5	8 96.7	8 102.1	8 113.6	8 110.5	8 110.0
	6	8 63.8	8 72.3	8 82.2	8 94.7	8 95.6	8 95.0	8 101.4	8 110.5	8 107.2	8 110.5
	7	8 65.7	8 73.1	8 87.5	8 97.5	8 97.9	8 100.1	8 107.1	8 122.5	8 106.5	8 121.2
	8	8 65.7	8 74.3	8 87.8	8 98.2	8 98.5	8 91.2	8 106.5	8 116.0	8 126.0	8 119.5
FUEL WT.	LB/GAL	6.39	←							→	6.39
OIL COOLER GAP INCHES	1/2	.2 .2	.2 .2	.2 .2	.1 .1	.1 .1	.2 .2	←		→	.2 .2
	3/4	— .1	— .1	— .1	— .1	— .1	— .2	— .2	— .2	— .2	— .2
	5/6	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —
	7/8	.4 .2	.4 .2	.4 .2	.4 0	.4 0	.4 .2	←		→	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C	←							→	C C
	2 L/R	C C	←							→	C C
	3 L/R	C C	←							→	C C
	4 L/R	C C	←							→	C C
	5 L/R	— —	←							→	— —
	6 L/R	— —	←							→	— —
	7 L/R	— —	←							→	— —
	8 L/R	— —	←							→	— —
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		SPEED POWER CLEAN CONFIG 35% MAC 8 ENG
FLIGHT NO.		51
RUN NO.		11
ALTITUDE	Ft.	45090
IAS	Knots	174.5
OAT	°C	-31.0
GROSS WEIGHT	Lbs.	259500
HIGH PRESSURE COMPRESSOR RPM N_2	1	8710
	2	8675
	3	8670
	4	8665
	5	8645
	6	8680
	7	8620
	8	8555
LOW PRESSURE COMPRESSOR, RPM N_1	1	5690
	2	5660
	3	5670
	4	5635
	5	5640
	6	5695
	7	5655
	8	5510
EXHAUST GAS TEMP °C	1	520
	2	524
	3	522
	4	522
	5	530
	6	534
	7	519
	8	491
TAIL PIPE TOTAL PRESSURE "Hg"	1	14.5
	2	14.6
	3	14.7
	4	14.4
	5	14.8
	6	14.5
	7	14.4
	8	13.8
FUEL FLOW GALS TIMED/SECONDS	1	8 / 100.0
	2	8 / 100.0
	3	8 / 104.6
	4	8 / 100.6
	5	8 / 100.3
	6	8 / 106.3
	7	8 / 112.5
	8	8 / 122.0
FUEL WT.	LB/GAL	6.39
OIL COOLER GAP INCHES	1/2	.2 .2
	3/4	— .2
	5/6	— —
	7/8	.4 .2
SURGE BLEED VALVE POSITION	1 L/R	C C
	2 L/R	C C
	3 L/R	C C
	4 L/R	C C
	5 L/R	— —
	6 L/R	— —
	7 L/R	— —
	8 L/R	— —
TIME - SECONDS		

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		59	59	59	59	59	59	59	59	59	59
RUN NO.											
ALTITUDE	Ft.	-140	-170	-120	35665	36005	36370	36780	37065	37495	37570
IAS	Knots	46.0	155.0	157.5	256.0	259.5	251.5	247.5	252.5	247.5	251.5
OAT	°C	2.0	3.0	3.0	-34.0	-31.0	-33.0	-36.0	-30.0	-25.5	-27.0
GROSS WEIGHT	Lbs.	406272	406250	406250	385250	378500	374000	369250	364750	360250	356000
HIGH PRESSURE COMPRESSOR RPM N_2	1	9370	9395	9400	8395	8435	8420	8390	8565	8560	8515
	2	9375	9395	9395	8395	8445	8445	8395	8575	8580	8540
	3	9380	9410	9405	8445	8480	8505	8445	8600	8620	8575
	4	9405	9435	9435	8530	8580	8535	8490	8600	8580	8550
	5	9330	9350	9350	8420	8475	8465	8405	8595	8585	8540
	6	9280	9320	9315	8445	8490	8505	8470	8605	8615	8570
	7	9310	9345	9345	8410	8450	8470	8425	8565	8565	8510
	8	9385	9400	9400	8440	8475	8485	8460	8590	8605	8555
LOW PRESSURE COMPRESSOR, RPM N_1	1	6175	6105	6105	5330	5360	5360	5335	5485	5450	5415
	2	6155	6085	6090	5320	5355	5365	5330	5465	5440	5415
	3	6200	6125	6125	5390	5420	5435	5400	5525	5510	5475
	4	6175	6125	6120	5435	5465	5440	5405	5495	5450	5430
	5	6130	6080	6070	5365	5395	5405	5370	5515	5480	5440
	6	6195	6130	6130	5440	5460	5485	5465	5575	5555	5515
	7	6195	6135	6135	5380	5410	5440	5415	5520	5500	5460
	8	6140	6070	6070	5360	5380	5410	5395	5500	5475	5430
EXHAUST GAS TEMP °C	1	495	520	524							
	2	583	605	619							
	3	485	612	543							
	4	568	585	589							
	5	543	563	573							
	6	481	490	512							
	7	498	522	546							
	8	545	577	571							
TAIL PIPE TOTAL PRESSURE "Hg"	1	76.9	81.5	81.5	22.9	22.7	22.3	21.8	22.7	21.1	21.2
	2	77.1	80.5	80.4	22.8	22.7	22.2	21.6	22.6	209	21.2
	3	76.9	81.7	81.6	23.4	23.2	22.9	22.2	22.0	21.4	21.8
	4	77.2	80.0	80.1	23.5	23.4	22.6	22.0	22.5	20.6	21.1
	5	76.4	79.4	79.3	23.3	23.2	23.0	22.4	23.2	21.6	21.8
	6	78.1	81.8	82.0	23.3	23.3	23.0	22.5	23.2	21.6	21.9
	7	79.1	81.9	81.9	23.3	23.1	22.9	22.3	23.0	21.3	21.5
	8	78.2	81.2	81.2	23.5	23.3	23.1	22.6	23.3	21.5	21.8
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2				.1 .2	.1 .2	.1 .2	.1 .1	.1 .2	.1 .1	.1 .2
	3/4				.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1
	5/6				0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2
	7/8				.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0
SURGE BLEED VALVE POSITION	1 L/R				C C	←				→	C C
	2 L/R				C C	←				→	C C
	3 L/R				C C	←				→	C C
	4 L/R				C C	←				→	C C
	5 L/R				C C	←				→	C C
	6 L/R				C C	←				→	C C
	7 L/R				C C	←				→	C C
	8 L/R				C C	←				→	C C
TIME - SECONDS		7:19:50	7:20:41	7:20:43	8:03:01	8:17:53	8:32:57	8:47:56	9:02:54	9:17:52	9:32:49

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		59	59	59	59	59	59	59	59	59	59
RUN NO.											
ALTITUDE	Ft.	37590	38010	38255	38250	38630	38645	39075	39010	40050	39095
IAS	Knots	250.6	248.5	240.4	244.0	243.0	243.5	239.0	244.5	230.0	229.0
OAT	°C	-24.5	-31.0	-35.0	-36.0	-36.0	-35.0	-37.0	-34.0	-37.0	-37.0
GROSS WEIGHT	Lbs.	351500	347000	342750	338750	334750	330500	326500	322500	318500	314500
HIGH PRESSURE COMPRESSOR RPM N_2	1	8565	8470	8410	8395	8365	8365	8365	8370	8355	8330
	2	8595	8470	8405	8395	8345	8365	8360	8380	8365	8355
	3	8645	8525	8470	8455	8405	8415	8410	8445	8440	8425
	4	8655	8595	8530	8515	8455	8505	8495	8505	8485	8475
	5	8585	8495	8440	8430	8385	8390	8380	8440	8395	8385
	6	8630	8535	8450	8440	8430	8435	8430	8465	8430	8430
	7	8615	8470	8415	8415	8305	8315	8300	8315	8325	8350
	8	8615	8500	8455	8440	8405	8410	8405	8405	8405	8390
LOW PRESSURE COMPRESSOR, RPM N_1	1	5460	5385	5350	5335	5315	5310	5315	5310	5305	5290
	2	5470	5380	5350	5350	5300	5315	5320	5320	5330	5320
	3	5545	5455	5430	5425	5370	5385	5385	5410	5420	5410
	4	5515	5475	5445	5440	5375	5415	5415	5420	5415	5410
	5	5490	5420	5395	5395	5350	5345	5345	5395	5370	5365
	6	5565	5495	5450	5450	5430	5425	5430	5450	5440	5440
	7	5530	5440	5420	5420	5330	5330	5330	5330	5360	5380
	8	5500	5420	5390	5390	5360	5355	5360	5340	5365	5355
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	21.3	20.8	20.2	20.5	20.1	20.0	19.6	19.6	18.4	18.2
	2	21.4	20.8	20.3	20.7	19.7	19.8	19.5	19.6	18.6	18.4
	3	22.0	21.3	20.9	21.2	20.5	20.7	20.0	20.3	19.2	19.0
	4	21.6	21.3	20.8	21.1	20.2	20.5	20.1	20.2	18.9	18.8
	5	21.9	21.4	21.0	21.4	20.7	20.5	20.1	20.6	19.2	19.1
	6	22.1	21.5	20.9	21.3	20.8	20.7	20.3	20.6	19.2	19.2
	7	21.9	21.1	20.6	21.1	19.9	19.8	19.5	19.5	18.6	18.8
	8	22.1	21.5	21.0	21.4	20.7	20.5	20.2	19.9	19.0	18.8
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1
	3/4	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	0 .1	
	5/6	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	
	7/8	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	
SURGE BLEED VALVE POSITION	1 L/R	C C	←							→	C C
	2 L/R	C C	←							→	C C
	3 L/R	C C	←							→	C C
	4 L/R	C C	←							→	C C
	5 L/R	C C	←							→	C C
	6 L/R	C C	←							→	C C
	7 L/R	C C	←							→	C C
	8 L/R	C C	←							→	C C
TIME - SECONDS		9:47:47	10:02:45	10:17:43	10:32:42	10:47:40	11:02:38	11:17:36	11:32:34	11:47:33	12:02:32

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		59	59	59	59	59	59	59	59	59	59
RUN NO.											
ALTITUDE	Ft.	40105	40530	40545	40810	41310	41290	41295	41545	41865	42680
IAS	Knots	236.0	231.5	236.0	236.0	224.0	225.5	229.5	228.0	224.5	217.0
OAT	°C	-36.0	-37.0	-38.0	-40.0	-43.0	-42.0	-40.0	-39.0	-40.0	-41.0
GROSS WEIGHT	Lbs.	310750	307000	303250	299500	296000	292500	289000	285250	281750	278250
HIGH PRESSURE COMPRESSOR RPM N_2	1	8340	8345	8330	8290	8230	8245	8255	8290	8290	8280
	2	8370	8355	8325	8295	8220	8250	8275	8295	8305	8275
	3	8435	8430	8405	8355	8320	8340	8360	8390	8400	8395
	4	8480	8490	8475	8375	8315	8315	8330	8345	8345	8345
	5	8400	8380	8375	8355	8260	8290	8295	8330	8345	8330
	6	8435	8445	8405	8395	8325	8350	8355	8390	8405	8385
	7	8355	8335	8285	8265	8235	8195	8180	8210	8230	8290
	8	8450	8395	8410	8400	8300	8330	8320	8360	8370	8370
LOW PRESSURE COMPRESSOR, RPM N_1	1	5295	5305	5285	5260	5230	5240	5245	5280	5275	5270
	2	5325	5320	5300	5270	5230	5250	5255	5270	5285	5270
	3	5415	5415	5385	5355	5330	5350	5350	5375	5390	5385
	4	5410	5425	5405	5330	5295	5295	5290	5310	5310	5315
	5	5375	5360	5355	5355	5290	5305	5295	5325	5350	5340
	6	5445	5440	5420	5425	5370	5390	5380	5410	5430	5420
	7	5385	5375	5325	5320	5310	5265	5285	5260	5280	5350
	8	5395	5355	5365	5370	5300	5325	5300	5340	5355	5355
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	18.5	18.2	18.4	18.2	17.2	17.2	17.3	17.3	16.9	16.0
	2	18.7	18.3	18.4	18.1	17.2	17.2	17.3	17.1	16.9	16.0
	3	19.3	18.9	19.0	18.7	17.9	18.0	18.0	17.9	17.6	16.8
	4	19.1	18.9	19.0	18.4	17.5	17.4	17.4	17.2	16.9	16.2
	5	19.5	19.0	19.2	19.2	18.0	18.2	18.0	18.0	17.7	17.0
	6	19.5	19.0	19.1	19.2	18.0	18.1	18.0	18.0	17.8	17.0
	7	19.1	18.6	18.4	18.3	17.7	17.2	16.9	16.8	16.7	16.5
	8	19.4	18.7	19.1	19.1	17.8	18.0	17.8	17.8	17.6	16.8
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1
	3/4	0 .1	0 .1	.1 .1	.1 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1
	5/6	0 .2	0 .2	0 .2	0 .2	0 .1	0 .2	0 .2	0 .1	0 .1	0 .1
	7/8	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0
SURGE BLEED VALVE POSITION	1 L/R	C C	←							→	C C
	2 L/R	C C	←							→	C C
	3 L/R	C C	←							→	C C
	4 L/R	C C	←							→	C C
	5 L/R	C C	←							→	C C
	6 L/R	C C	←							→	C C
	7 L/R	C C	←							→	C C
	8 L/R	C C	←							→	C C
TIME - SECONDS		12:17:31	12:32:29	12:47:28	13:02:27	13:17:26	13:32:25	13:47:23	14:02:22	14:17:22	14:32:21

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		59	59	59	59	59	59	59	59	59	59
RUN NO.											
ALTITUDE	Ft.	42580	42820	42840	43180	43250	43605	43610	43620	43990	44460
IAS	Knots	214.5	212.5	215.5	213.0	217.5	218.5	212.5	219.0	215.0	204.0
OAT	°C	-36.0	-35.0	-30.0	-28.0	-23.5	-25.5	-28.0	-27.0	-24.5	-27.0
GROSS WEIGHT	Lbs.	273750	271500	268000	264500	260750	257750	254500	251000	247750	244500
HIGH PRESSURE COMPRESSOR RPM N_2	1	8370	8395	8465	8520	8515	8475	8460	8460	8460	8455
	2	8385	8395	8495	8540	8550	8475	8465	8465	8465	8445
	3	8485	8480	8580	8630	8610	8545	8545	8545	8545	8535
	4	8390	8405	8470	8510	8520	8550	8550	8555	8555	8570
	5	8425	8405	8500	8550	8655	8575	8570	8570	8545	8550
	6	8465	8480	8580	8595	8680	8610	8615	8620	8610	8610
	7	8390	8405	8510	8520	8630	8560	8500	8470	8525	8525
	8	8450	8480	8555	8580	8670	8610	8610	8625	8590	8605
LOW PRESSURE COMPRESSOR, RPM N_1	1	5335	5335	5410	5460	5420	5390	5380	5380	5370	5370
	2	5340	5340	5410	5445	5425	5380	5380	5375	5370	5370
	3	5450	5440	5515	5550	5520	5470	5475	5465	5465	5470
	4	5355	5360	5400	5440	5425	5445	5460	5450	5445	5470
	5	5410	5395	5460	5485	5570	5505	5505	5500	5470	5490
	6	5475	5475	5550	5555	5620	5565	5575	5570	5555	5570
	7	5420	5425	5490	5500	5575	5525	5470	5435	5495	5510
	8	5405	5415	5475	5490	5570	5505	5520	5510	5480	5510
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	16.0	15.7	15.9	15.8	15.4	15.0	14.8	15.1	14.6	14.1
	2	16.2	15.8	16.0	15.8	15.4	15.1	15.0	15.2	14.7	14.1
	3	16.9	16.5	16.6	16.5	16.0	15.6	15.6	15.8	15.3	14.7
	4	16.0	15.7	15.8	15.6	15.2	15.4	15.3	15.5	15.0	14.6
	5	17.0	16.5	16.7	16.4	16.8	16.3	16.2	16.4	15.7	15.2
	6	16.9	16.6	16.8	16.5	16.8	16.2	16.2	16.5	15.8	15.3
	7	16.6	16.3	16.4	16.1	16.4	16.0	15.5	15.5	15.5	14.9
	8	16.7	16.5	16.6	16.2	16.6	16.1	16.1	16.3	15.6	15.2
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1
	3/4	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1
	5/6	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1
	7/8	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0
SURGE BLEED VALVE POSITION	1 L/R	C C	←							→	C C
	2 L/R	C C	←							→	C C
	3 L/R	C C	←							→	C C
	4 L/R	C C	←							→	C C
	5 L/R	C C	←							→	C C
	6 L/R	C C	←							→	C C
	7 L/R	C C	←							→	C C
	8 L/R	C C	←							→	C C
TIME - SECONDS		14:47:20	15:02:19	15:17:18	15:32:17	15:47:17	16:02:16	16:17:15	16:32:14	16:47:13	17:02:12

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED								
FLIGHT NO.		59	59	59	59	59	59	59	59	59
RUN NO.										
ALTITUDE	Ft.	44635	44595	44605	44605	44610	44645	44610	7160	1750
IAS	Knots	214.0	209.5	207.0	209.5	214.0	207.0	207.5	234.0	230.5
OAT	°C	-27.0	-28.0	-28.0	-28.0	-27.0	-29.0	-28.0	0	6.0
GROSS WEIGHT	Lbs.	241250	238000	235000	231750	228750	225750	223000	220000	219750
HIGH PRESSURE COMPRESSOR RPM N_2	1	8455	8425	8430	8440	8430	8415	8415	7710	8755
	2	8445	8410	8435	8460	8415	8415	8415	7725	8705
	3	8540	8520	8535	8545	8520	8505	8505	7795	8740
	4	8570	8525	8460	8465	8465	8390	8395	7705	8650
	5	8560	8535	8470	8505	8520	8455	8455	7705	8645
	6	8610	8580	8515	8550	8550	8490	8490	7760	8650
	7	8540	8460	8375	8470	8415	8395	8400	7510	8610
	8	8605	8585	8485	8550	8540	8475	8475	7500	8580
LOW PRESSURE COMPRESSOR, RPM N_1	1	5355	5335	5350	5370	5330	5325	5315	3915	5390
	2	5370	5340	5355	5370	5330	5320	5320	3895	5340
	3	5470	5450	5465	5475	5440	5430	5425	4015	5410
	4	5465	5435	5385	5390	5375	5320	5315	3860	5285
	5	5495	5480	5395	5435	5460	5385	5375	3900	5275
	6	5565	5545	5470	5510	5515	5450	5440	4025	5356
	7	5515	5440	5370	5455	5400	5395	5380	3690	5305
	8	5510	5490	5390	5450	5440	5370	5360	3675	5205
EXHAUST GAS TEMP °C	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
TAIL PIPE TOTAL PRESSURE "Hg"	1	14.3	14.1	14.1	14.2	14.3	14.0	13.9	31.1	58.0
	2	14.4	14.1	14.1	14.3	14.2	13.9	13.8	31.3	57.3
	3	15.0	14.7	14.8	14.9	14.9	14.5	14.4	31.8	58.1
	4	14.9	14.5	14.1	14.2	14.4	13.8	13.6	31.4	56.2
	5	15.6	15.3	14.7	15.0	15.3	14.6	14.4	32.3	55.8
	6	15.6	15.3	14.7	15.0	15.2	14.5	14.4	31.4	57.5
	7	15.2	14.7	14.1	14.7	14.7	14.2	14.1	30.1	56.3
	8	15.5	15.3	14.5	14.9	15.2	14.4	14.3	30.1	54.5
FUEL FLOW GALS TIMED/SECONDS	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
FUEL WT.	LB/GAL									
OIL COOLER GAP INCHES	1/2	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1
	3/4	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1
	5/6	0 .1	0 .1	0 .1	0 .1	0 .1	0 .1	0 0	0 0	0 0
	7/8	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0
SURGE BLEED VALVE POSITION	1 L/R	C C	←				→	C C	O O	C C
	2 L/R	C C	←				→	C C	O O	C C
	3 L/R	C C	←				→	C C	O O	C C
	4 L/R	C C	←				→	C C	O O	C O
	5 L/R	C C	←				→	C C	O O	C O
	6 L/R	C C	←				→	C C	O O	C C
	7 L/R	C C	←				→	C C	O O	C O
	8 L/R	C C	←				→	C C	O O	C O
TIME – SECONDS		17:17:11	17:32:11	17:47:10	18:02:08	18:17:08	18:32:07	18:47:06	19:02:04	19:05:34

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE	MISSION		EXTERNAL	TANKS	INSTALLED			8 ENGINES	
FLIGHT NO.		59	←							→	59
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.	36010	36330	36760	37090	37460	37560	37760	38030	38210	38510
IAS	Knots	252.0	246.0	245.0	245.0	245.0	246.0	244.0	242.0	238.0	237.0
OAT	°C	-31.0	-33.5	-32.0	-29.5	-26.5	-27.0	-29.0	-31.0	-35.0	-35.0
GROSS WEIGHT	Lbs.	378250	373750	369000	364000	358750	354750	349750	346250	341250	335750
HIGH PRESSURE COMPRESSOR RPM N_2	1	8430	8420	8395	8530	8560	8540	8530	8460	8405	8385
	2	8445	8425	8415	8540	8580	8560	8515	8465	8405	8395
	3	8480	8465	8465	8600	8630	8600	8580	8515	8455	8435
	4	8575	8520	8495	8600	8580	8560	8620	8590	8520	8520
	5	8475	8455	8410	8575	8585	8565	8545	8485	8440	8440
	6	8480	8500	8470	8580	8610	8590	8580	8530	8450	8460
	7	8450	8480	8395	8540	8555	8500	8510	8470	8405	8405
	8	8470	8485	8425	8560	8615	8530	8540	8500	8445	8425
LOW PRESSURE COMPRESSOR, RPM N_1	1	5355	5355	5335	5450	5450	5450	5430	5390	5345	5325
	2	5360	5350	5340	5440	5445	5445	5410	5390	5350	5330
	3	5440	5420	5410	5525	5515	5525	5485	5455	5425	5400
	4	5465	5435	5410	5495	5465	5455	5485	5475	5445	5435
	5	5395	5415	5355	5500	5490	5490	5445	5425	5395	5395
	6	5455	5490	5450	5555	5555	5545	5525	5500	5440	5450
	7	5410	5440	5390	5500	5500	5450	5460	5450	5420	5410
	8	5385	5420	5360	5470	5480	5430	5440	5420	5390	5370
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	22.8	21.9	21.6	21.1	21.3	21.4	20.7	20.9	20.2	20.3
	2	22.9	21.7	21.6	21.1	21.2	21.4	20.4	21.0	20.1	20.2
	3	23.3	22.3	22.2	21.7	22.8	22.0	21.1	21.5	20.8	20.9
	4	23.5	22.2	21.8	21.2	20.9	21.2	21.0	21.4	20.7	20.9
	5	23.3	22.7	22.1	21.8	21.8	22.2	21.3	21.6	20.9	21.2
	6	23.3	22.8	22.2	21.7	21.9	22.0	21.3	21.6	20.9	21.2
	7	23.3	22.6	21.9	21.5	21.6	21.2	21.5	21.3	20.6	20.9
	8	23.4	22.7	22.0	21.8	21.9	21.6	21.3	21.6	20.9	21.0
FUEL FLOW GALS TIMED/SECONDS	1	16 / 169.1	16 / 173.5	16 / 178.3	16 / 176.3	16 / 176.2	16 / 176.9	16 / 181.4	16 / 183.8	16 / 183.3	16 / 182.8
	2	16 / 162.1	16 / 167.4	16 / 170.7	16 / 168.4	16 / 166.3	16 / 166.9	16 / 176.8	16 / 177.3	16 / 181.8	16 / 182.0
	3	16 / 156.7	16 / 159.5	16 / 161.2	16 / 156.8	16 / 156.7	16 / 155.8	16 / 168.7	16 / 165.1	16 / 163.3	16 / 170.7
	4	16 / 166.8	16 / 155.4	16 / 160.6	16 / 162.3	16 / 168.0	16 / 168.6	16 / 164.9	16 / 165.5	16 / 165.2	16 / 163.8
	5	16 / 158.1	16 / 161.0	16 / 162.5	16 / 161.5	16 / 162.5	16 / 163.2	16 / 169.8	16 / 169.4	16 / 172.3	16 / 171.1
	6	16 / 151.8	16 / 151.2	16 / 156.3	16 / 155.9	16 / 155.0	16 / 158.4	16 / 160.5	16 / 160.0	16 / 163.3	16 / 163.6
	7	16 / 161.8	16 / 161.2	16 / 173.5	16 / 168.5	16 / 163.5	16 / 176.5	16 / 178.0	16 / 174.2	16 / 179.3	16 / 178.6
	8	16 / —	16 / 162.5	16 / 172.9	16 / 168.5	16 / —	16 / 179.0	16 / 176.4	16 / 174.1	16 / 178.7	16 / —
FUEL WT.	LB/GAL	6.36	←							→	6.36
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	C	←							→	C
	2 L/R	C	←							→	C
	3 L/R	C	←							→	C
	4 L/R	C	←							→	C
	5 L/R	C	←							→	C
	6 L/R	C	←							→	C
	7 L/R	C	←							→	C
	8 L/R	C	←							→	C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED 8 ENGINES									
FLIGHT NO.		59	←							→	59
RUN NO.		11	12	13	14	15	16	17	18	19	20
ALTITUDE	Ft.	38 860	39 160	40 000	40 410	40 510	41 160	41 260	41 560	42 360	42 660
IAS	Knots	237.0	236.0	226.0	227.0	230.0	225.0	222.0	222.0	213.0	213.0
OAT	°C	-35.0	-35.0	-35.5	-37.5	-38.0	-42.0	-41.0	-39.0	-41.0	-34.0
GROSS WEIGHT	Lbs.	328000	323000	313250	308000	304500	295750	290750	285000	279000	272750
HIGH PRESSURE COMPRESSOR RPM N_2	1	8365	8375	8335	8355	8335	8235	8245	8290	8315	8375
	2	8365	8375	8365	8365	8335	8225	8245	8295	8355	8395
	3	8415	8435	8435	8435	8415	8330	8360	8390	8425	8505
	4	8505	8510	8485	8505	8475	8325	8315	8350	8360	8395
	5	8390	8440	8400	8390	8380	8285	8290	8335	8380	8455
	6	8450	8460	8430	8430	8405	8335	8355	8390	8430	8470
	7	8310	8310	8365	8330	8290	8240	8180	8210	8270	8405
	8	8415	8405	8435	8405	8415	8320	8330	8370	8405	8455
LOW PRESSURE COMPRESSOR, RPM N_1	1	5315	5315	5295	5305	5295	5230	5235	5275	5305	5335
	2	5320	5320	5320	5320	5300	5230	5270	5275	5330	5340
	3	5390	5410	5410	5420	5390	5330	5340	5380	5420	5445
	4	5415	5425	5405	5435	5415	5300	5280	5315	5345	5365
	5	5355	5395	5375	5365	5355	5305	5295	5325	5375	5395
	6	5430	5460	5440	5440	5420	5380	5390	5420	5460	5460
	7	5330	5330	5380	5370	5330	5310	5320	5270	5330	5430
	8	5370	5340	5380	5370	5370	5320	5330	5360	5380	5400
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	20.0	19.6	18.2	18.1	18.3	17.1	17.4	16.9	16.4	15.6
	2	20.0	19.5	18.0	18.1	18.3	17.0	17.4	16.8	16.2	15.6
	3	20.6	20.3	19.0	18.8	19.0	17.7	18.1	17.6	17.0	16.4
	4	20.6	20.1	18.8	18.7	19.0	17.3	17.6	18.9	16.2	15.6
	5	20.6	20.6	19.2	18.8	19.2	17.3	18.3	17.7	17.2	16.5
	6	20.8	20.6	19.2	18.8	19.1	18.0	18.3	17.7	17.2	16.5
	7	19.9	19.5	18.4	18.3	18.4	17.4	17.3	16.5	16.4	16.1
	8	20.6	19.9	19.0	18.6	19.0	17.8	18.2	17.6	16.9	16.2
FUEL FLOW GALS TIMED/SECONDS	1	16 194.5	16 198.7	16 212.0	16 208.6	16 210.8	16 226.3	16 222.1	16 224.9	16 228.1	16 235.1
	2	16 184.0	16 189.8	16 199.4	16 198.7	16 201.8	16 218.6	16 214.2	16 215.1	16 212.5	16 222.6
	3	16 175.3	16 175.0	16 183.2	16 182.9	16 185.6	16 197.7	16 192.8	16 194.9	16 197.0	16 230.8
	4	15 166.2	16 170.0	16 181.0	16 177.5	16 178.3	16 —	16 201.8	16 207.7	16 213.4	16 223.5
	5	16 172.7	16 176.0	16 183.4	16 189.6	16 182.9	16 206.0	16 203.6	16 206.3	16 204.5	16 240.9
	6	16 168.5	16 169.2	16 179.6	16 178.9	16 181.3	16 191.7	16 189.2	16 191.2	16 192.7	16 233.4
	7	16 193.3	16 197.8	16 198.8	16 200.5	16 206.0	16 214.7	16 223.6	16 229.5	16 236.4	16 240.5
	8	16 183.7	16 183.0	16 190.6	16 194.8	16 192.4	16 207.4	16 203.1	16 206.5	16 210.5	16 243.5
FUEL WT.	LB/GAL	6.36	←							→	6.36
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	C ←								→	C
	2 L/R	C ←								→	C
	3 L/R	C ←								→	C
	4 L/R	C ←								→	C
	5 L/R	C ←								→	C
	6 L/R	C ←								→	C
	7 L/R	C ←								→	C
	8 L/R	C ←								→	C
TIME – SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED 8 ENGINES								
FLIGHT NO.		59	←						→	59
RUN NO.		21	22	23	24	25	26	27	28	29
ALTITUDE	Ft.	42 810	43 200	43 560	43 560	44 060	44 560	44 560	44 560	44 610
IAS	Knots	209.0	210.1	211.0	211.0	210.0	205.0	204.0	203.0	203.0
OAT	°C	-31.0	-24.5	-25.5	-27.0	-25.5	-25.5	-28.0	-28.0	-29.0
GROSS WEIGHT	Lbs.	269750	262750	256500	254000	247000	241500	237750	233500	225000
HIGH PRESSURE COMPRESSOR RPM N_2	1	8430	8520	8450	8460	8460	8450	8420	8440	8415
	2	8465	8550	8455	8465	8445	8445	8415	8455	8415
	3	8535	8640	8525	8545	8535	8535	8515	8545	8505
	4	8435	8520	8560	8550	8570	8570	8520	8465	8325
	5	8485	8595	8565	8565	8565	8555	8525	8505	8440
	6	8520	8630	8620	8620	8620	8610	8580	8540	8490
	7	8460	8605	8530	8470	8520	8530	8460	8470	8395
	8	8510	8635	8605	8615	8625	8605	8580	8540	8475
LOW PRESSURE COMPRESSOR, RPM N_1	1	5380	5440	5370	5380	5355	5370	5345	5370	5325
	2	5380	5440	5360	5580	5360	5370	5340	5370	5320
	3	5475	5545	5455	5475	5465	5465	5445	5485	5425
	4	5365	5425	5445	5445	5455	5475	5435	5395	5320
	5	5435	5520	5490	5490	5500	5500	5470	5445	5385
	6	5500	5575	5565	5565	5565	5565	5545	5515	5440
	7	5450	5565	5500	5440	5490	5520	5440	5450	5390
	8	5430	5530	5500	5510	5520	5510	5440	5450	5380
EXHAUST GAS TEMP °C	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
TAIL PIPE TOTAL PRESSURE "Hg"	1	15.9	15.7	14.5	15.1	14.1	14.4	14.1	14.2	14.0
	2	15.9	15.8	14.6	15.1	14.1	14.5	14.1	14.2	14.0
	3	16.6	15.5	15.1	15.7	13.9	15.0	14.7	14.8	14.5
	4	15.7	16.6	14.9	15.3	15.2	14.9	14.5	14.2	13.7
	5	16.7	16.8	15.8	16.3	14.5	15.5	15.2	15.0	14.6
	6	16.7	16.8	15.8	16.4	15.1	15.6	15.3	14.9	14.4
	7	16.3	16.6	15.8	16.5	15.0	15.2	14.6	14.8	14.2
	8	16.4	16.6	15.7	16.2	15.5	15.5	15.2	14.9	14.3
FUEL FLOW GALS TIMED/SECONDS	1	16 231.2	16 239.1	16 240.0	16 242.1	16 258.6	16 256.6	16 261.1	16 —	16 264.5
	2	16 217.8	16 218.0	16 238.0	16 231.7	16 243.2	16 252.2	16 252.1	16 —	16 250.8
	3	16 198.8	16 196.8	16 219.7	16 211.7	16 226.4	16 223.1	16 226.5	16 —	16 228.9
	4	16 225.3	16 —	16 —	16 —	16 225.2	16 219.7	17 227.8	17 257.1	16 —
	5	16 210.0	16 219.5	16 214.3	16 210.4	16 221.1	16 220.3	16 225.2	16 230.0	16 241.5
	6	16 192.1	16 198.4	16 201.5	16 196.6	16 207.4	16 206.1	16 210.5	16 216.5	16 228.1
	7	16 218.1	16 222.3	16 224.9	16 230.4	16 239.4	16 226.5	16 241.4	16 238.3	16 254.4
	8	16 216.4	16 —	16 216.3	16 233.9	16 213.1	16 220.8	16 223.7	16 231.3	16 243.6
FUEL WT.	LB/GAL	6.36	←						→	6.36
OIL COOLER GAP INCHES	1/2									
	3/4									
	5/6									
	7/8									
SURGE BLEED VALVE POSITION	1 L/R	C	←						→	C
	2 L/R	C	←						→	C
	3 L/R	C	←						→	C
	4 L/R	C	←						→	C
	5 L/R	C	←						→	C
	6 L/R	C	←						→	C
	7 L/R	C	←						→	C
	8 L/R	C	←						→	C
TIME – SECONDS										

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		60									60
RUN NO.											
ALTITUDE	Ft.	-150	-195	-150	2560	4785	6605	8765	10530	12840	14965
IAS	Knots	46.0	151.5	155.5	350.5	345.0	344.0	334.5	336.0	327.0	327.0
OAT	°C	3.0	5.0	6.0	24.5	22.0	20.0	18.0	16.0	13.0	11.0
GROSS WEIGHT	Lbs.	406000	405250	405250	402500	401750	401000	400500	400000	398750	397750
HIGH PRESSURE COMPRESSOR RPM N_2	1	9395	9425	9425	9530	9530	9530	9525	9520	9510	9505
	2	9400	9415	9410	9505	9505	9505	9505	9500	9485	9485
	3	9400	9420	9420	9500	9500	9500	9500	9500	9495	9485
	4	9420	9445	9445	9535	9530	9525	9525	9520	9505	9500
	5	9345	9365	9365	9455	9450	9445	9445	9440	9435	9425
	6	9315	9345	9345	9435	9435	9435	9440	9425	9425	9415
	7	9335	9360	9365	9445	9455	9455	9455	9445	9440	9435
	8	9380	9410	9410	9495	9490	9480	9475	9475	9460	9450
LOW PRESSURE COMPRESSOR, RPM N_1	1	6175	6105	6105	6035	6050	6055	6065	6075	6075	6085
	2	6165	6090	6090	6030	6050	6050	6065	6070	6070	6085
	3	6200	6125	6125	6050	6080	6085	6100	6105	6115	6130
	4	6175	6115	6115	6040	6060	6070	6085	6090	6105	6115
	5	6130	6070	6070	6010	6040	6040	6050	6050	6065	6075
	6	6180	6125	6115	6060	6085	6085	6100	6100	6115	6130
	7	6195	6130	6130	6065	6075	6075	6095	6095	6105	6120
	8	6135	6065	6070	6015	6030	6030	6040	6050	6055	6060
EXHAUST GAS TEMP °C	1	532	524	524	520	537	541	546	548	547	551
	2	603	628	628	596	590	588	588	588	589	590
	3	506	520	520	562	560	563	566	567	570	572
	4	592	587	587	579	576	578	583	578	585	585
	5	558	573	573	566	567	571	577	577	580	583
	6	516	520	520	510	510	540	555	553	559	560
	7	543	519	519	555	585	588	588	587	589	592
	8	556	578	578	566	565	570	570	568	567	568
TAIL PIPE TOTAL PRESSURE "Hg"	1	76.7	80.9	80.6	80.0	75.5	72.1	67.2	64.1	59.9	57.0
	2	77.5	80.0	79.7	79.2	75.0	71.4	66.7	63.5	59.3	56.6
	3	77.1	80.8	79.9	79.3	75.1	71.7	67.0	64.0	60.0	57.2
	4	76.5	79.5	79.1	79.0	74.7	71.3	66.5	63.6	59.3	56.2
	5	75.6	78.8	78.6	77.6	738	70.8	66.2	63.2	59.2	56.2
	6	76.7	81.4	80.9	80.5	76.2	72.8	67.1	63.9	59.7	56.5
	7	78.4	81.2	81.0	80.6	75.4	72.0	67.0	63.8	59.6	56.4
	8	77.2	80.4	80.1	79.8	75.4	72.0	66.9	63.9	59.6	56.6
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL	6.38									6.38
OIL COOLER GAP INCHES	1/2				.1	.2					
	3/4				.1	.2					
	5/6				.1	.3					
	7/8				.5	.1					
SURGE BLEED VALVE POSITION	1 L/R				C	C				C	C
	2 L/R				C	C				C	C
	3 L/R				C	C				C	C
	4 L/R				C	C				C	C
	5 L/R				C	C				C	C
	6 L/R				C	C				C	C
	7 L/R				C	C				C	C
	8 L/R				C	C				C	C
TIME - SECONDS		8:15:49	16:37	16:40	19:22	19:57	20:27	21:07	21:47	22:37	23:27

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		60	←								60
RUN NO.											
ALTITUDE	Ft.	16900	18770	20920	22945	24770	26860	28680	30570	32315	34230
IAS	Knots	318.5	320.0	317.5	319.0	308.5	293.5	291.0	285.5	281.5	270.5
OAT	°C	7.0	4.0	0	-4.0	-8.0	-14.0	-18.0	-21.0	-24.5	-29.0
GROSS WEIGHT	Lbs.	397250	396500	396000	395500	395250	394750	394500	394000	393500	392750
HIGH PRESSURE COMPRESSOR RPM N_2	1	9500	9490	9475	9460	9435	9420	9405	9390	9380	9365
	2	9480	9475	9460	9445	9430	9415	9405	9395	9385	9375
	3	9480	9470	9450	9440	9425	9405	9395	9380	9375	9350
	4	9490	9480	9460	9450	9435	9415	9400	9385	9375	9365
	5	9415	9410	9395	9375	9365	9345	9330	9310	9310	9290
	6	9400	9395	9385	9375	9365	9345	9340	9325	9315	9300
	7	9430	9420	9405	9390	9375	9355	9345	9325	9315	9305
	8	9440	9425	9410	9400	9380	9370	9355	9340	9335	9320
LOW PRESSURE COMPRESSOR, RPM N_1	1	6110	6120	6135	6145	6155	6175	6175	6185	6190	6210
	2	6110	6120	6130	6140	6150	6160	6170	6186	6195	6210
	3	6155	6160	6170	6185	6205	6210	6220	6230	6240	6250
	4	6135	6145	6155	6160	6175	6185	6185	6195	6200	6220
	5	6095	6105	6120	6125	6140	6150	6160	6165	6185	6200
	6	6145	6150	6170	6180	6195	6215	6225	6235	6240	6255
	7	6135	6145	6160	6165	6175	6185	6190	6195	6195	6220
	8	6075	6085	6090	6120	6125	6140	6150	6156	6170	6185
EXHAUST GAS TEMP °C	1	556	560	558	558	563	567	568	570	568	572
	2	593	595	596	598	595	598	600	602	606	606
	3	572	573	574	573	578	581	585	585	589	586
	4	586	588	587	588	591	593	595	597	600	603
	5	589	590	595	598	602	598	600	600	508	612
	6	562	565	565	571	575	584	586	588	590	591
	7	593	593	595	596	595	600	600	603	605	605
	8	570	571	573	576	575	579	582	585	591	596
TAIL PIPE TOTAL PRESSURE "Hg"	1	54.0	51.7	49.2	47.2	44.8	41.7	39.8	37.7	35.8	33.7
	2	53.6	51.9	48.9	46.9	44.6	41.3	39.3	37.3	36.4	33.2
	3	54.3	52.1	49.4	47.6	45.1	41.8	39.7	35.7	35.8	33.5
	4	53.5	51.4	48.7	46.8	44.5	41.3	39.3	37.3	35.3	33.2
	5	53.4	51.4	48.9	47.0	44.7	41.6	39.5	37.5	35.6	33.5
	6	53.4	51.2	48.7	46.7	44.2	41.1	39.1	37.1	35.1	33.1
	7	53.6	51.5	48.8	46.7	44.4	41.2	39.2	36.9	35.2	33.2
	8	53.8	51.5	49.0	47.1	44.7	41.6	39.6	37.5	35.6	33.5
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL	6.38	←								6.38
OIL COOLER GAP INCHES	1/2				.1	.2					
	3/4				.1	.2					
	5/6				.1	.3					
	7/8				.5	.1					
SURGE BLEED VALVE POSITION	1 L/R	C C	←								C C
	2 L/R	C C	←								C C
	3 L/R	C C	←								C C
	4 L/R	C C	←								C C
	5 L/R	C C	←								C C
	6 L/R	C C	←								C C
	7 L/R	C C	←								C C
	8 L/R	C C	←								C C
TIME - SECONDS		24:07	24:57	25:47	26:46	27:26	28:16	29:16	30:16	31:17	32:17

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		60	←								60
RUN NO.											
ALTITUDE	Ft.	35645	35945	35935	35910	35920	35995	36125	36595	36805	36965
IAS	Knots	259.5	260.0	263.5	252.0	256.0	257.0	259.0	255.0	254.5	253.5
OAT	°C	-34.0	-35.0	-35.0	-36.0	-35.0	-36.0	-35.0	-36.0	-36.0	-37.0
GROSS WEIGHT	Lbs.	392500	392250	392000	386000	381500	376750	372000	367500	363000	358750
HIGH PRESSURE COMPRESSOR RPM N_2	1	9350	8560	8490	8395	8395	8390	8485	8365	8365	8365
	2	9345	8455	8465	8395	8415	8420	8415	8390	8280	8375
	3	9310	8525	8505	8425	8430	8450	8445	8430	8430	8425
	4	9340	8505	8555	8445	8450	8450	8450	8435	8435	8425
	5	9265	8525	8435	8390	8430	8440	8435	8395	8400	8390
	6	9280	8615	8490	8430	8430	8440	8445	8410	8410	8410
	7	9280	8490	8460	8385	8385	8385	8390	8385	8375	8375
	8	9310	8455	8495	8415	8420	8425	8425	8400	8395	8390
LOW PRESSURE COMPRESSOR, RPM N_1	1	6225	5350	5375	5320	5325	5315	5325	5300	5315	5305
	2	6220	5315	5350	5325	5335	5340	5340	5320	5315	5320
	3	6245	5390	5420	5385	5390	5405	5400	5400	5400	5395
	4	6225	5365	5435	5455	5380	5380	5375	5370	5365	5365
	5	6205	5425	5365	5355	5380	5380	5385	5350	5350	5345
	6	6270	5560	5465	5440	5435	5440	5430	5415	5410	5400
	7	6230	5430	5400	5375	5380	5380	5380	5380	5370	5370
	8	6190	5335	5380	5355	5360	5365	5360	5345	5350	5350
EXHAUST GAS TEMP °C	1	573	463								
	2	610	474								
	3	586	461								
	4	603	467								
	5	615	476								
	6	594	490								
	7	603	465								
	8	597	448								
TAIL PIPE TOTAL PRESSURE "Hg"	1	31.7	23.9	23.6	22.8	23.0	23.0	22.9	22.2	22.1	21.8
	2	31.3	23.8	23.5	22.7	22.9	23.0	22.8	22.3	22.0	21.9
	3	31.5	23.9	23.9	23.1	23.3	23.5	23.3	22.9	22.6	22.5
	4	31.3	23.5	23.9	22.9	23.0	23.0	22.8	22.9	22.1	22.0
	5	31.5	24.7	23.9	23.2	23.5	23.6	23.5	22.8	22.6	22.9
	6	31.1	24.9	23.7	23.1	23.3	23.4	23.4	22.8	22.6	22.5
	7	31.2	24.3	23.8	23.1	23.3	23.3	23.2	22.7	22.4	22.3
	8	31.6	24.0	23.1	23.4	23.5	23.6	23.4	22.9	22.6	22.5
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL	6.38	←								6.38

OIL COOLER GAP INCHES	1/2			.1	.2	.1	.2	.1	.1	.1	.1	.1	.2	.1	.2	.1	.1	.1	.1	.1	.1
	3/4			.1	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
	5/6			0	.2	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2
	7/8			.4	.1	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0
SURGE BLEED VALVE POSITION	1 L/R	C	C	C	C	C	C	←											←	C	C
	2 L/R	C	C	C	C	C	C	←											←	C	C
	3 L/R	C	C	C	C	C	C	←											←	C	C
	4 L/R	C	C	C	C	C	C	←											←	C	C
	5 L/R	C	C	C	C	C	C	←											←	C	C
	6 L/R	C	C	C	C	C	C	←											←	C	C
	7 L/R	C	C	C	C	C	C	←											←	C	C
	8 L/R	C	C	C	C	C	C	←											←	C	C
TIME - SECONDS		33:06		33:36		34:26		47:24		9:04:23		19:22		34:21		49:20		10:04:19		19:17	

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		60									60
RUN NO.											
ALTITUDE	Ft.	37470	37925	38435	38945	39285	38260	38700	37465	38865	39600
IAS	Knots	249.5	246.0	242.5	239.0	236.0	247.5	240.0	262.0	245.5	243.5
OAT	°C	−37.0	−39.0	−42.0	−41.0	−40.0	−38.0	−40.0	−31.0	−36.0	−38.0
GROSS WEIGHT	Lbs.	354500	350000	346000	342000	338000	333750	331000	326000	322000	318000
HIGH PRESSURE COMPRESSOR RPM N_2	1	8325	8295	8270	8265	8265	8315	8305	8405	8335	8300
	2	8355	8315	8265	8275	8285	8325	8295	8445	8370	8320
	3	8385	8370	8335	8330	8380	8395	8370	8505	8415	8380
	4	8410	8395	8380	8375	8295	8305	8290	8430	8435	8395
	5	8380	8360	8310	8315	8340	8360	8340	8515	8395	8365
	6	8395	8385	8285	8345	8370	8375	8365	8510	8420	8415
	7	8330	8310	8250	8280	8320	8320	8310	8435	8365	8330
	8	8360	8355	8320	8320	8340	8350	8320	8465	8405	8370
LOW PRESSURE COMPRESSOR, RPM N_1	1	5285	5260	5255	5260	5255	5290	5285	5335	5295	5270
	2	5300	5380	5250	5250	5255	5270	5270	5350	5315	5280
	3	5370	5360	5340	5335	5365	5360	5345	5435	5390	5370
	4	5355	5350	5330	5330	5270	5260	5260	5350	5365	5345
	5	5340	5335	5295	5305	5330	5320	5315	5425	5345	5335
	6	5395	5400	5380	5370	5390	5380	5385	5470	5410	5420
	7	5350	5350	5310	5320	5360	5340	5345	5410	5370	5360
	8	5325	5340	5305	5310	5340	5320	5315	5390	5360	5340
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	21.2	20.6	20.2	20.0	19.2	20.6	20.0	22.1	19.7	19.2
	2	21.3	20.7	20.1	19.8	19.1	20.3	19.7	22.1	19.9	19.2
	3	18.8	21.3	20.8	20.4	19.9	21.0	20.3	23.0	20.4	19.9
	4	21.4	21.0	20.6	20.3	18.9	20.0	19.4	22.0	20.0	19.5
	5	21.9	21.5	21.0	20.7	20.1	21.1	20.6	23.2	20.5	20.1
	6	21.8	21.5	20.9	20.6	20.0	21.0	20.5	23.2	20.4	20.1
	7	21.7	21.2	20.5	20.3	19.8	20.8	20.2	23.0	20.2	19.8
	8	21.8	21.6	21.0	20.6	20.1	21.1	20.5	23.0	20.5	19.9
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL	6.38									6.38
OIL COOLER GAP INCHES	1/2	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .2	.1 .1	.1 .1
	3/4	0 .1	0 .1	0 .1	.1 .1	.1 .1	.1 .1	0 .1	.1 .1	.1 .1	.1 .1
	5/6	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2	0 .2
	7/8	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0	.4 0
SURGE BLEED VALVE POSITION	1 L/R	C C									C C
	2 L/R	C C									C C
	3 L/R	C C									C C
	4 L/R	C C									C C
	5 L/R	C C									C C
	6 L/R	C C									C C
	7 L/R	C C									C C
	8 L/R	C C									C C
TIME – SECONDS		34:15	47:14	11:04:12	19:10	34:08	49:07	12:04:05	19:04	34:02	49:08

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		60	→							→	60
RUN NO.											
ALTITUDE	Ft.	39640	40515	40320	40855	40845	41480	41500	41730	42220	42405
IAS	Knots	232.5	232.0	237.0	228.0	241.0	228.0	228.0	224.5	223.5	221.5
OAT	°C	-39.0	-27.0	-23.5	-22.0	-21.0	-21.0	-20.0	-22.0	-24.5	-24.5
GROSS WEIGHT	Lbs.	314000	310250	306250	302250	298500	294500	290500	287000	283250	279750
HIGH PRESSURE COMPRESSOR RPM N_2	1	8280	8445	8560	8570	8585	8595	8615	8585	8565	8550
	2	8315	8530	8595	8600	8610	8620	8640	8600	8570	8570
	3	8375	8565	8670	8675	8690	8695	8710	8675	8675	8660
	4	8325	8505	8580	8610	8620	8650	8670	8650	8610	8600
	5	8350	8540	8635	8645	8655	8655	8675	8625	8605	8605
	6	8365	8540	8630	8650	8675	8685	8690	8655	8625	8625
	7	8290	8490	8570	8590	8615	8620	8660	8605	8575	8565
	8	8370	8540	8630	8645	8645	8645	8685	8650	8615	8625
LOW PRESSURE COMPRESSOR, RPM N_1	1	5265	5380	5465	5460	5480	5480	5505	5470	5470	5460
	2	5280	5420	5470	5470	5580	5495	5515	5480	5465	5460
	3	5360	5485	5565	5565	5575	5585	5595	5570	5580	5560
	4	5300	5415	5465	5480	5490	5515	5525	5505	5490	5485
	5	5335	5445	5530	5540	5540	5550	5560	5530	5505	5510
	6	5385	5490	5555	5575	5585	5595	5600	5580	5555	5560
	7	5330	5450	5510	5530	5540	5555	5575	5545	5525	5520
	8	5340	5450	5510	5520	5520	5535	5560	5530	5505	5510
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	18.7	17.9	18.6	17.7	17.8	17.3	17.4	17.0	16.8	16.5
	2	18.7	18.2	18.6	17.8	17.7	17.9	17.4	17.0	16.8	16.5
	3	19.2	18.6	19.2	18.3	18.4	18.0	17.9	17.6	17.5	17.1
	4	18.6	17.8	18.3	17.6	17.6	17.9	17.3	17.1	16.7	16.5
	5	19.5	18.7	19.3	18.5	18.5	18.1	18.0	17.7	17.4	17.2
	6	19.3	18.6	19.2	18.4	18.4	18.1	17.9	17.6	17.3	17.1
	7	19.1	18.3	18.8	18.0	18.1	17.7	17.7	17.3	17.0	16.8
	8	19.3	18.6	19.1	18.3	18.3	17.9	17.9	17.5	17.2	17.0
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL	6.38	→							→	6.38

OIL COOLER GAP INCHES																					
	1/2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
	3/4	.1	.1	0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
	5/6	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2	0	.2
	7/8	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0
SURGE BLEED VALVE POSITION	1 L/R	C	C	←														→		C	C
	2 L/R	C	C	←														→		C	C
	3 L/R	C	C	←														→		C	C
	4 L/R	C	C	←														→		C	C
	5 L/R	C	C	←														→		C	C
	6 L/R	C	C	←														→		C	C
	7 L/R	C	C	←														→		C	C
	8 L/R	C	C	←														→		C	C
TIME – SECONDS		13:04:00		18:59		33:58		48:57		14:03:56		18:55		33:59		48:52		15:03:51		18:49	

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		60	←	←	←	←	←	←	←	←	60
RUN NO.											
ALTITUDE	Ft.	42760	43060	43255	43465	43680	43940	44265	44215	44470	44675
IAS	Knots	218.5	215.5	216.5	216.0	213.5	203.0	206.5	213.0	207.5	210.5
OAT	°C	-28.0	-30.0	-30.0	-31.0	-32.0	-35.0	-39.0	-37.0	-38.0	-38.0
GROSS WEIGHT	Lbs.	276000	272500	269000	265500	262250	259000	255500	252500	249250	246000
HIGH PRESSURE COMPRESSOR RPM N_2	1	8505	8485	8460	8440	8420	8470	8295	8345	8295	8315
	2	8510	8480	8460	8445	8410	8365	8285	8335	8280	8295
	3	8600	8575	8565	8545	8520	8470	8400	8430	8410	8420
	4	8570	8560	8546	8520	8510	8460	8415	8425	8410	8430
	5	8565	8535	8540	8505	8475	8430	8355	8420	8370	8375
	6	8580	8575	8560	8520	8495	8450	8395	8450	8420	8420
	7	8535	8500	8480	8450	8415	8365	8300	8375	8310	8340
	8	8580	8555	8545	8510	8485	8440	8475	8435	8370	8400
LOW PRESSURE COMPRESSOR, RPM N_1	1	5420	5410	5385	5390	5365	5320	5275	5325	5270	5285
	2	5430	5415	5395	5380	5365	5335	5285	5320	5275	5285
	3	5540	5520	5515	5490	5475	5445	5405	5430	5410	5420
	4	5480	5465	5465	5445	5435	5410	5475	5385	5380	5390
	5	5500	5475	5480	5445	5425	5395	5350	5405	5360	5365
	6	5540	5535	5525	5495	5470	5450	5400	5460	5430	5435
	7	5495	5480	5465	5445	5415	5400	5360	5410	5360	5380
	8	5480	5470	5465	5435	5420	5390	5345	5400	5340	5365
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg	1	16.3	15.8	15.6	15.6	15.3	14.8	14.6	15.2	14.5	14.5
	2	16.2	15.9	15.7	15.6	15.4	15.1	14.8	14.2	14.6	14.6
	3	16.9	16.6	16.4	16.3	16.0	15.7	15.4	15.8	15.3	15.3
	4	16.4	16.1	16.0	15.9	15.7	15.3	15.2	15.5	15.1	15.1
	5	17.0	16.6	16.6	16.4	16.0	15.7	15.4	16.0	15.3	15.3
	6	16.8	16.6	16.5	16.2	15.9	15.5	15.2	15.8	15.2	15.2
	7	16.6	16.3	16.2	15.9	15.6	15.2	15.0	15.7	15.0	15.0
	8	16.7	16.4	16.3	16.1	15.8	15.5	15.2	15.9	15.1	15.2
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL	6.38	←								6.38

OIL COOLER GAP INCHES																					
	1/2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
	3/4	.1	.1	0	.1	0	.1	.1	.1	0	.1	0	.1	0	.1	0	.1	0	.1	0	.1
	5/6	0	.1	0	.1	0	.1	0	.1	0	.1	0	0	0	.1	0	.1	0	.1	0	0
	7/8	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0
SURGE BLEED VALVE POSITION	1 L/R	C	C	←														←		C	C
	2 L/R	C	C	←														←		C	C
	3 L/R	C	C	←														←		C	C
	4 L/R	C	C	←														←		C	C
	5 L/R	C	C	←														←		C	C
	6 L/R	C	C	←														←		C	C
	7 L/R	C	C	←														←		C	C
	8 L/R	C	C	←														←		C	C
TIME - SECONDS		33:47		48:46		16:03:45		18:44		33:43		48:42		17:03:40		18:38		33:37		48:36	

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED									
FLIGHT NO.		60	←							→	60
RUN NO.											
ALTITUDE	Ft.	44850	44840	45505	45815	45835	45835	46730	20655	9885	-110
IAS	Knots	206.5	208.0	204.5	196.5	195.0	204.5	199.0	237.0	162.5	46.0
OAT	°C	-37.0	-35.0	-34.0	-35.0	-35.0	-31.0	-32.0	-32.0	9.0	5.0
GROSS WEIGHT	Lbs.	243000	239750	236500	233500	230500	227500	224750	222750	219500	218000
HIGH PRESSURE COMPRESSOR RPM N_2	1	8315	8340	8405	8375	8395	8435	8445	6940	7100	6015
	2	8305	8345	8380	8345	8360	8435	8440	6880	6925	5720
	3	8435	8495	8500	8475	8475	8545	8560	6905	7095	5835
	4	8430	8450	8510	8505	8495	8525	8535	6905	6830	5650
	5	8405	8455	8480	8490	8455	8545	8535	6805	6955	5905
	6	8430	8480	8530	8465	8475	8540	8540	6855	7180	5790
	7	8325	8395	8435	8390	8405	8590	8490	6840	6600	5940
	8	8445	8475	8505	8465	8465	8445	8540	6845	6885	6075
LOW PRESSURE COMPRESSOR, RPM N_1	1	5290	5295	5350	5330	5355	5380	5400	3430	3020	2225
	2	5295	5320	5355	5330	5345	5390	5410	3380	2910	2060
	3	5425	5465	5470	5465	5465	5515	5530	3395	3040	2135
	4	5400	5400	5445	5445	5440	5465	5485	3370	2825	2010
	5	5395	5425	5445	5405	5425	5480	5490	3260	2910	2180
	6	5445	5480	5515	5470	5485	5525	5540	3365	3130	2145
	7	5355	5415	5450	5420	5425	5475	5490	3365	2700	2230
	8	5395	5425	5440	5420	5420	5465	5480	3340	2865	2280
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	14.2	14.2	14.0	13.4	13.5	13.8	13.4	12.1	33.6	32.4
	2	14.3	14.4	14.0	13.5	13.4	13.7	13.5	12.3	33.5	32.1
	3	15.1	15.2	14.7	14.1	14.1	14.4	14.1	12.3	33.8	32.3
	4	14.7	14.8	14.5	14.1	13.8	14.1	13.7	12.3	33.3	32.0
	5	15.1	15.3	14.8	14.2	14.1	14.6	14.2	12.4	33.9	32.6
	6	14.9	15.1	14.7	14.1	14.0	14.3	14.0	12.0	34.0	32.3
	7	14.5	14.9	14.5	13.9	13.8	14.2	13.9	12.2	33.0	32.5
	8	15.1	15.2	14.8	14.1	14.0	14.4	14.1	12.1	33.3	32.6
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
FUEL WT.	LB/GAL	6.38	←							→	6.38

OIL COOLER GAP INCHES	1/2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
	3/4	0	.1	0	.1	0	.1	0	.1	0	.1	0	.1	0	.1	.1	.1	0	0	0	0
	5/6	0	.1	0	.1	0	0	0	0	0	0	0	0	0	0	0	.1	0	0	0	0
	7/8	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.4	0	.3	0	0	0
SURGE BLEED VALVE POSITION	1 L/R	C	C	←									→	C	C	0	0	0	0	0	0
	2 L/R	C	C	←									→	C	C	0	0	0	0	0	0
	3 L/R	C	C	←									→	C	C	0	0	0	0	0	0
	4 L/R	C	C	←									→	C	C	0	0	0	0	0	0
	5 L/R	C	C	←									→	C	C	0	0	0	0	0	0
	6 L/R	C	C	←									→	C	C	0	0	0	0	0	0
	7 L/R	C	C	←									→	C	C	0	0	0	0	0	0
	8 L/R	C	C	←									→	C	C	0	0	0	0	0	0
TIME - SECONDS		18:03.34		18:33		33:33		48:32		19:03:30		18:29		33:27		48:26		20:03:29		11:09	

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION				EXTERNAL TANKS		INSTALLED		8 ENG	
FLIGHT NO.		60	←							→	60
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.	35860	35860	35910	36060	36420	36750	36890	37460	37940	38520
IAS	Knots	249.0	250.0	251.0	253.0	252.0	249.0	249.0	244.0	241.0	235.0
OAT	°C	-35.5	-36.5	-35.0	-35.5	-37.0	-36.5	-37.0	-37.5	-39.0	-41.0
GROSS WEIGHT	Lbs.	388500	385000	380000	374000	368750	363000	359250	354250	350000	343500
HIGH PRESSURE COMPRESSOR RPM N_2	1	8460	8395	8385	8385	8365	8365	8365	8325	8295	8245
	2	8435	8405	8415	8415	8395	8375	8375	8355	8315	8255
	3	8495	8435	8435	8445	8435	8435	8425	8385	8375	8320
	4	8505	8445	8455	8445	8435	8435	8425	8415	8405	8375
	5	8420	8390	8430	8440	8400	8400	8390	8380	8360	8310
	6	8480	8430	8440	8440	8410	8410	8405	8395	8395	8345
	7	8435	8375	8395	8385	8355	8375	8365	8330	8310	8280
	8	8465	8415	8435	8425	8405	8395	8395	8360	8360	8320
LOW PRESSURE COMPRESSOR, RPM N_1	1	5355	5315	5315	5315	5305	5315	5305	5290	5265	5235
	2	5350	5330	5330	5340	5320	5320	5320	5295	5280	5240
	3	5420	5390	5390	5400	5400	5400	5400	5360	5360	5330
	4	5415	5385	5375	5375	5375	5375	5365	5355	5355	5330
	5	5365	5355	5375	5375	5355	5355	5345	5345	5335	5305
	6	5470	5440	5430	5440	5420	5410	5410	5400	5400	5370
	7	5400	5370	5380	5380	5380	5370	5370	5350	5350	5320
	8	5380	5350	5360	5370	5350	5350	5340	5330	5340	5310
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	23.5	22.8	23.0	22.9	22.3	22.1	21.8	21.2	20.6	19.8
	2	23.5	22.7	22.9	23.0	22.3	22.0	21.8	21.3	20.7	19.7
	3	23.9	23.1	23.3	23.4	22.9	22.6	22.3	21.7	21.4	20.4
	4	23.7	22.9	23.0	22.9	22.4	22.1	21.9	21.4	21.8	20.2
	5	23.9	23.2	23.6	23.5	22.9	22.6	22.4	21.8	20.9	20.7
	6	23.8	23.2	23.4	23.5	22.9	22.6	22.4	21.8	21.5	20.6
	7	23.8	23.1	23.4	23.3	22.7	22.4	22.2	21.6	21.3	20.3
	8	24.2	23.3	23.6	23.5	22.9	22.7	22.4	21.8	21.6	20.6
FUEL FLOW GALS TIMED/SECONDS	1	16 163.1	16 170.2	16 169.8	16 170.7	16 175.9	16 176.8	16 174.8	16 185.2	16 191.5	16 199.9
	2	16 156.5	16 160.0	16 169.3	16 163.5	16 165.1	16 167.6	16 169.2	16 173.9	16 178.6	16 191.3
	3	16 150.8	16 156.6	16 155.8	16 154.3	16 156.8	16 158.2	16 159.1	16 165.9	16 169.5	16 177.3
	4	16 149.1	16 156.4	16 156.3	16 167.1	16 159.7	28 282.5	16 162.6	16 166.6	16 —	21 287.4
	5	16 158.8	16 161.8	16 156.6	16 155.6	16 162.1	16 163.3	16 164.5	16 168.2	16 171.6	16 179.9
	6	16 146.8	16 152.1	16 151.9	16 151.6	16 156.5	16 158.0	16 158.4	16 163.1	16 164.5	16 171.9
	7	16 156.7	16 163.1	16 162.6	16 163.4	16 168.2	16 167.9	16 168.9	16 176.1	16 178.6	16 186.3
	8	16 156.8	16 162.0	16 160.8	16 162.3	16 167.0	16 168.5	16 169.8	16 176.6	16 176.7	16 —
FUEL WT.	LB/GAL	6.39	←							→	6.39
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	C	←							→	C
	2 L/R	C	←							→	C
	3 L/R	C	←							→	C
	4 L/R	C	←							→	C
	5 L/R	C	←							→	C
	6 L/R	C	←							→	C
	7 L/R	C	←							→	C
	8 L/R	C	←							→	C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED 8 ENG									
FLIGHT NO.		60	◄							►	60
RUN NO.		11	12	13	14	15	16	17	18	19	20
ALTITUDE	Ft.	38140	38660	38450	38560	39340	39360	40560	40910	41360	41710
IAS	Knots	235.0	238.0	242.0	242.0	239.0	238.0	229.0	229.0	225.0	220.0
OAT	°C	-41.0	-38.5	-37.0	-37.0	-39.0	-27.5	-23.5	-21.0	-21.0	-22.0
GROSS WEIGHT	Lbs.	337500	334000	328500	324250	318250	318000	305750	301000	294250	287250
HIGH PRESSURE COMPRESSOR RPM N_2	1	8275	8315	8315	8335	8355	8440	8560	8580	8600	8590
	2	8285	8325	8305	8355	8325	8515	8590	8600	8620	8610
	3	8385	8395	8375	8415	8385	8560	8670	8775	8690	8690
	4	8295	8305	8265	8425	8395	8505	8580	8610	8670	8650
	5	8350	8360	8350	8380	8360	8545	8635	8655	8665	8645
	6	8375	8375	8375	8410	8410	8540	8630	8660	8690	8660
	7	8320	8320	8320	8350	8330	8490	8575	8615	8615	8630
	8	8340	8350	8350	8405	8370	8550	8625	8635	8665	8655
LOW PRESSURE COMPRESSOR, RPM N_1	1	5265	5290	5285	5295	5275	5370	5470	5470	5490	5490
	2	5260	5270	5260	5310	5300	5410	5470	5470	5390	5490
	3	5370	5360	5400	5390	5370	5485	5565	5565	5580	5580
	4	5270	5270	5260	5375	5355	5405	5465	5495	5515	5525
	5	5325	5325	5325	5345	5345	5445	5520	5530	5500	5540
	6	5400	5380	5380	5410	5430	5480	5555	5575	5595	5585
	7	5360	5350	5350	5370	5370	5450	5510	5545	5545	5565
	8	5340	5330	5330	5360	5360	5450	5510	5565	5520	5530
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1	19.2	20.6	19.8	20.0	19.2	18.1	18.6	17.8	17.1	17.1
	2	19.0	20.3	19.2	20.0	19.2	18.4	18.6	17.8	16.9	17.1
	3	19.9	21.2	19.9	20.7	19.9	18.8	19.3	18.3	17.5	17.3
	4	19.0	20.0	19.0	20.2	19.4	18.1	18.4	17.6	17.0	17.1
	5	20.1	21.1	20.1	20.7	20.1	19.0	19.3	18.5	17.6	17.8
	6	20.0	21.0	20.1	20.6	20.1	19.0	19.2	18.4	17.6	17.7
	7	20.3	20.8	19.9	20.4	19.7	18.8	18.9	18.1	17.3	17.5
	8	20.1	21.1	20.3	20.8	20.1	19.1	19.2	18.3	17.4	17.6
FUEL FLOW GALS TIMED/SECONDS	1	16 204.3	16 189.9	16 191.5	16 [illegible]	16 205.1	16 211.3	16 197.3	16 203.7	16 210.4	16 213.0
	2	16 154.6	16 162.5	16 189.4	16 184.1	16 192.7	16 191.9	16 186.4	16 193.6	16 200.2	16 201.9
	3	16 175.6	16 169.0	16 176.1	16 172.3	16 180.2	16 181.0	16 170.7	16 178.5	16 183.4	16 —
	4	16 —	16 —	16 —	16 173.9	17 192.7	16 196.4	16 189.0	16 194.5	19 231.8	16 185.5
	5	16 183.2	16 176.0	16 182.0	16 176.0	16 184.5	16 186.4	16 175.6	16 182.5	16 189.6	16 192.7
	6	16 173.2	16 169.3	16 174.2	16 170.1	16 172.5	16 183.7	16 176.0	16 181.0	16 183.3	16 188.3
	7	16 187.3	16 181.6	16 186.7	16 183.1	16 189.9	16 198.3	16 191.2	16 184.1	16 189.6	16 201.8
	8	16 —	16 186.7	16 185.1	16 180.7	16 188.2	16 191.6	16 184.9	16 193.5	16 198.5	16 199.1
FUEL WT.	LB/GAL	6.39	◄							►	6.39
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	C	◄							►	C
	2 L/R	C	◄							►	C
	3 L/R	C	◄							►	C
	4 L/R	C	◄							►	C
	5 L/R	C	◄							►	C
	6 L/R	C	◄							►	C
	7 L/R	C	◄							►	C
	8 L/R	C	◄							►	C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED 8 ENG									
FLIGHT NO.		60		←						→	60
RUN NO.		21	22	23	24	25	26	27	28	29	30
ALTITUDE	Ft.	42380	42790	43240	43610	44080	44360	44530	44740	45110	45810
IAS	Knots	216.0	213.0	211.0	209.0	203.0	204.0	205.0	204.0	202.0	195.0
OAT	°C	-24.0	-28.0	-31.0	-33.0	-39.0	-39.0	-38.0	-38.0	-34.0	-35
GROSS WEIGHT	Lbs.	279500	275000	269000	262500	256000	251750	248000	244500	239000	233000
HIGH PRESSURE COMPRESSOR RPM N_2	1	8550	8500	8460	8420	8295	8295	8315	8305	8335	8375
	2	8570	8540	8455	8405	8285	8275	8305	8295	8355	8335
	3	8660	8600	8560	8515	8405	8405	8425	8415	8495	8475
	4	8600	8570	8540	8510	8415	8415	8415	8425	8455	8475
	5	8605	8545	8535	8475	8350	8370	8410	8380	8465	8440
	6	8630	8580	8550	8490	8395	8395	8430	8420	8480	8460
	7	8565	8510	8470	8405	8300	8310	8350	8340	8405	8385
	8	8625	8560	8540	8475	8370	8380	8425	8415	8485	8465
LOW PRESSURE COMPRESSOR, RPM N_1	1	5450	5430	5380	5370	5275	5275	5285	5285	5295	5325
	2	5460	5420	5390	5370	5290	5260	5290	5285	5320	5320
	3	5565	5535	5505	5475	5400	5410	5425	5410	5455	5360
	4	5495	5465	5455	5445	5385	5375	5385	5385	5395	5425
	5	5520	5460	5470	5425	5355	5365	5395	5365	5415	5415
	6	5565	5525	5525	5470	5400	5410	5430	5430	5460	5460
	7	5510	5480	5460	5410	5360	5370	5390	5380	5420	5410
	8	5510	5460	5460	5410	5350	5350	5390	5370	5410	5410
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg	1	16.6	16.3	15.7	15.3	14.6	14.7	14.7	14.2	14.3	13.5
	2	16.6	16.3	15.9	15.3	14.7	14.8	14.8	14.3	14.5	13.4
	3	17.2	16.9	16.6	16.0	15.4	15.5	15.5	14.9	15.3	14.1
	4	16.6	16.5	16.2	15.7	15.1	15.2	15.2	14.6	14.8	13.8
	5	17.3	16.9	16.7	16.0	15.4	15.6	15.6	15.0	15.3	14.2
	6	17.3	16.9	16.6	15.8	15.1	15.2	15.4	14.8	15.1	14.0
	7	17.0	16.6	16.2	15.6	14.9	15.1	15.4	14.7	14.9	13.9
	8	17.3	16.7	16.5	15.8	15.2	15.3	15.5	15.0	15.3	14.1
FUEL FLOW GALS TIMED/SECONDS	1	16/219.3	16/224.3	16/233.9	16/238.8	16/254.4	16/253.5	16/253.5	16/260.7	16/260.6	16/271.6
	2	16/207.4	16/215.2	16/222.1	16/229.4	16/243.8	16/244.5	16/244.2	16/251.7	16/246.3	16/265.7
	3	16/189.1	16/194.5	16/199.3	16/206.4	16/218.4	16/216.4	16/219.6	16/223.7	16/215.9	16/232.5
	4	16/202.4	16/209.4	16/208.1	16/211.0	16/222.8	16/212.7	16/221.0	16/227.4	16/227.7	16/236.3
	5	16/197.3	16/200.5	16/204.8	16/219.4	16/226.6	16/222.5	16/222.2	16/230.5	16/223.7	16/241.9
	6	16/192.6	16/198.2	16/200.2	16/209.1	16/220.9	16/218.4	16/216.3	16/221.5	16/217.1	16/234.8
	7	16/205.2	16/215.2	16/218.4	16/216.3	16/240.6	16/237.3	16/236.8	16/236.7	16/236.3	16/271.8
	8	16/203.3	16/211.2	16/213.1	16/222.8	16/233.1	16/231.9	16/227.3	16/233.7	16/227.7	16/296
FUEL WT.	LB/GAL	6.39	←							→	6.39
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	C	←							→	C
	2 L/R	C	←							→	C
	3 L/R	C	←							→	C
	4 L/R	C	←							→	C
	5 L/R	C	←							→	C
	6 L/R	C	←							→	C
	7 L/R	C	←							→	C
	8 L/R	C	←							→	C
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		RANGE MISSION EXTERNAL TANKS INSTALLED 8 ENG									
FLIGHT NO.		60									
RUN NO.		31									
ALTITUDE	Ft.	45810									
IAS	Knots	195.0									
OAT	°C	-32.0									
GROSS WEIGHT	Lbs.	288500									
HIGH PRESSURE COMPRESSOR RPM N_2	1	8395									
	2	8375									
	3	8515									
	4	8515									
	5	8475									
	6	8500									
	7	8450									
	8	8520									
LOW PRESSURE COMPRESSOR, RPM N_1	1	5345									
	2	5350									
	3	5485									
	4	5465									
	5	5435									
	6	5500									
	7	5450									
	8	5440									
EXHAUST GAS TEMP °C	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
TAIL PIPE TOTAL PRESSURE "HG"	1	13.6									
	2	13.6									
	3	14.4									
	4	14.0									
	5	14.3									
	6	14.2									
	7	14.0									
	8	14.2									
FUEL FLOW GALS TIMED/SECONDS	1	16/269.2									
	2	16/279.5									
	3	16/276.3									
	4	16/—									
	5	16/287.6									
	6	16/287.5									
	7	16/286.7									
	8	16/286.8									
FUEL WT.	LB/GAL	6.39									
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	C	C								
	2 L/R	C	C								
	3 L/R	C	C								
	4 L/R	C	C								
	5 L/R	C	C								
	6 L/R	C	C								
	7 L/R	C	C								
	8 L/R	C	C								
TIME - SECONDS											

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		STATIC THRUST CALIBRATION									
FLIGHT NO.											
RUN NO.		1	2	3	4	5	6	7	8	9	10
ALTITUDE	Ft.										
IAS	Knots										
OAT	°C	32.0	←					→	32.0	32.1	32.1
GROSS WEIGHT	Lbs.										
HIGH PRESSURE COMPRESSOR RPM N_2	1										
	2										
	3	9540	9430	9360	9155	8930	8555	8145	7640	6650	6175
	4	9570	9485	9400	9225	9035	8650	8165	7720	6745	6140
	5	9555	9505	9445	9230	9020	8650	8170	7635	6760	6125
	6	9580	9395	9305	9180	8990	8640	8235	7605	6855	6030
	7										
	8										
LOW PRESSURE COMPRESSOR, RPM N_1	1										
	2										
	3	5995	6005	5955	5725	5450	4775	4130	3465	2615	2305
	4	6110	6100	5920	5715	5495	4980	4085	3485	2645	2220
	5	6185	6100	5970	5795	5560	4910	4190	3480	2690	2260
	6	6190	6065	6050	5805	5600	5120	4365	3450	2805	2225
	7										
	8										
EXHAUST GAS TEMP °C	1										
	2										
	3	529	500	480	410	380	324	295	225	215	225
	4	569	546	525	490	430	330	300	216	227	280
	5	590	570	550	500	433	367	310	220	220	230
	6	531	514	490	571	425	331	290	240	240	270
	7										
	8										
TAIL PIPE TOTAL PRESSURE "Hg"	1										
	2										
	3	64.9	60.7	61.1	55.0	48.5	39.8	35.6	32.9	30.3	29.6
	4	63.9	61.4	59.5	55.1	50.6	43.4	35.8	33.4	30.5	29.6
	5	64.2	62.1	60.9	55.6	50.1	39.1	35.4	32.7	30.4	29.5
	6	64.6	61.7	59.2	55.7	50.9	43.7	36.4	32.6	30.6	29.3
	7										
	8										
FUEL FLOW GALS TIMED/SECONDS	1										
	2										
	3	16 / 49.3	16 / 57.0	16 / 58.5	12 / 32.5	12 / 64.1	—	8 / 88.5	4 / 61.6	4 / 90.6	4 / 101.2
	4	16 / 39.1	16 / 65.5	16 / —	12 / 50.8	12 / 53.8	—	8 / 87.9	4 / 59.3	4 / 87.0	4 / 93.3
	5	16 / 44.8	16 / 47.2	16 / 48.5	12 / 49.7	12 / 58.5	—	8 / 85.9	4 / 61.0	4 / 86.4	4 / 99.2
	6	16 / 50.0	16 / 55.7	16 / 58.0	12 / 43.4	12 / 58.8	—	8 / 60.7	4 / 62.2	4 / 82.6	4 / 101.8
	7										
	8										
FUEL WT.	LB/GAL										
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R	C C	C C	C C	C C	— —	O O	— —	O O	O O	O O
	4 L/R	C C	C C	C C	C C	— —	C O	— —	O O	O O	O O
	5 L/R	C C	C C	C C	C C	— —	O O	— —	O O	O O	O O
	6 L/R	C C	C C	C C	C C	— —	C O	— —	O O	O O	O O
	7 L/R										
	8 L/R										
TIME – SECONDS											
TOTAL THRUST		35430	32590	31560	27530	23090	15040	9110	5720	3450	2630
BAROMETRIC PRESS~HG		27.485	←							→	27.485
WIND DIRECTION~DEG		330	←							→	330
WIND VELOCITY~KNOTS		2	←							→	2
AIRPLANE DIRECTION~DEG		240	←							→	240

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		STATIC THRUST CALIBRATION									
FLIGHT NO.											
RUN NO.		11	12	13	14	15	16	17	18	19	20
ALTITUDE Ft.											
IAS Knots											
OAT °C		32.1	32.1	32.1	31.7	←				→	31.7
GROSS WEIGHT Lbs.											
HIGH PRESSURE COMPRESSOR RPM N_2	1									9630	9575
	2									9555	9475
	3	7165	7935	8395	8780	9080	9240	9440	9545		
	4	7250	7970	8445	8825						
	5	7195	7990	8475	8835						
	6	7180	7955	8400	8785	9065	9210	9345	9495		
	7									9585	9445
	8									9560	9555
LOW PRESSURE COMPRESSOR, RPM N_1	1									6205	6130
	2									6200	6080
	3	3020	3870	4575	5290	5665	5815	6000	6130		
	4	3015	3855	4590	5245						
	5	3060	3970	4665	5345						
	6	3060	3995	4680	5355	5705	5825	5970	6135		
	7									6235	6095
	8									6110	6115
EXHAUST GAS TEMP °C	1									510	520
	2									535	580
	3	235	275	305	352	400	450	500	557		
	4	248	280	320	380						
	5	230	250	319	395						
	6	270	290	300	331	415	425	490	531		
	7									550	530
	8									531	542
TAIL PIPE TOTAL PRESSURE "Hg"	1									66.2	63.7
	2									64.3	61.8
	3	31.4	34.3	38.8	46.8	52.5	56.6	60.4	62.9		
	4	31.6	34.6	38.8	46.7						
	5	31.2	34.2	38.6	45.4						
	6	31.2	34.6	38.2	46.5	53.3	56.1	59.2	62.6		
	7									66.2	62.5
	8									64.5	63.6
FUEL FLOW GALS TIMED/SECONDS	1									16 47.6	16 52.2
	2									16 49.4	16 54.1
	3	4 74.1	8 58.2	12 102.7	12 69.8	16 72.4	16 65.0	16 56.9	16 52.9		
	4	4 72.1	8 57.1	12 99.2	12 70.0						
	5	4 71.7	8 54.2	12 97.1	12 67.3						
	6	4 72.9	8 53.2	12 98.5	12 68.1	16 70.0	16 64.5	16 59.1	16 53.2		
	7									16 47.7	16 54.6
	8									16 51.2	16 53.0
FUEL WT. LB/GAL											
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R										
	2 L/R										
	3 L/R	O O	O O	O O	C O	C C	C C	— —	— —	C C	C C
	4 L/R	O O	O O	O O	C O	C C	C C	— —	— —	C C	C C
	5 L/R	O O	O O	O O	C O	C C	C C	— —	— —	C C	C C
	6 L/R	O O	O O	O O	C O	C C	C C	— —	— —	C C	C C
	7 L/R										
	8 L/R										
TIME - SECONDS											
TOTAL THRUST		4160	7610	12140	19600	12810	14200	15410	17000	34880	33410
BAROMETRIC PRESS ~ HG		27.485 ←								→	27.485
WIND DIRECTION ~ DEG		330 ←								→	330
WIND VELOCITY ~ KNOTS		2 ←								→	2
AIRPLANE DIRECTION ~ DEG		240 ←								→	240

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		STATIC THRUST CALIBRATION									
FLIGHT NO.											
RUN NO.		21	22	23	24	25	26	27	28	29	30
ALTITUDE Ft.											
IAS Knots											
OAT °C		31.7	←			→	31.7	30.6	←		→ 30.6
GROSS WEIGHT Lbs.											
HIGH PRESSURE COMPRESSOR RPM N_2	1	9470	9265	9060	8665	8240	7685	6705	6165	7270	7995
	2	9395	9235	9015	8600	8150	7635	6575	5945	7170	7980
	3										
	4										
	5										
	6										
	7	9390	9220	9000	8650	8220	7735	6805	6300	7365	8015
	8	9475	9310	9105	8695	8235	7690	6970	6135	7405	8050
LOW PRESSURE COMPRESSOR, RPM N_1	1	5985	5785	5565	4875	4225	3475	2635	2280	3080	3915
	2	5970	5785	5550	5005	4185	3500	2565	2140	3050	3990
	3										
	4										
	5										
	6										
	7	6010	5810	5530	5055	4290	3605	2740	2390	3225	4025
	8	5970	5785	5555	5035	4220	3500	2825	2245	3220	3975
EXHAUST GAS TEMP °C	1	500	440	400	350	300	228	219	219	228	263
	2	560	505	415	335	295	205	195	205	205	235
	3										
	4										
	5										
	6										
	7	520	480	410	352	305	235	215	225	235	285
	8	510	481	414	335	295	205	205	215	215	225
TAIL PIPE TOTAL PRESSURE "Hg"	1	60.2	55.8	51.2	40.4	36.1	32.7	30.4	29.6	31.4	34.2
	2	59.5	55.5	51.0	42.9	36.2	33.1	30.4	29.5	31.6	35.0
	3										
	4										
	5										
	6										
	7	60.0	55.3	51.0	43.2	36.8	33.5	30.8	29.9	32.1	34.9
	8	60.4	55.2	51.6	43.2	36.2	33.2	30.9	29.6	32.1	35.0
FUEL FLOW GALS TIMED/SECONDS	1	16 / 57.9	16 / 67.2	12 / 59.7	12 / 82.7	8 / 84.2	4 / 60.8	4 / 88.1	4 / 939	4 / 712	— / —
	2	16 / 58.8	16 / 67.2	12 / 59.3	12 / 87.5	8 / 86.9	4 / 61.0	4 / 91.0	4 / 1023	4 / 72.9	— / —
	3										
	4										
	5										
	6										
	7	16 / 58.1	16 / 66.5	12 / 61.1	12 / 832	8 / 81.9	4 / 57.6	4 / 85.2	4 / 96.7	4 / 66.9	8 / 51.2
	8	16 / 58.1	16 / 66.1	12 / 58.8	12 / 842	8 / 84.5	4 / 59.5	4 / 81.3	4 / 93.8	4 / 67.0	8 / 43.5
FUEL WT. LB/GAL											
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/8										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	C	C	C	C	—	—	O	O	—	—	O	O	O	O	O	O	O	O	O	O
	2 L/R	C	C	C	C	—	—	C	O	—	—	O	O	O	O	O	O	O	O	O	O
	3 L/R																				
	4 L/R																				
	5 L/R																				
	6 L/R																				
	7 L/R	C	C	C	C	—	—	C	O	—	—	O	O	O	O	O	O	O	O	O	O
	8 L/R	C	C	C	C	—	—	C	O	—	—	O	O	O	O	O	O	O	O	O	O
TIME - SECONDS																					
TOTAL THRUST		31320	27690	23220	15520	9120	5770	3090	2150	4340	7690
BAROMETRIC PRESS ~ HG		27.485	←								→ 27.485
WIND DIRECTION ~ DEG		330	←		→	330	CALM	←			→ CALM
WIND VELOCITY ~ KNOTS		2	←		→	2	CALM	←			→ CALM
AIRPLANE DIRECTION ~ DEG		240	←								→ 240

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		STATIC THRUST CALIBRATION									
FLIGHT NO.											
RUN NO.		31	32	33	34	35	36	37	38	39	40
ALTITUDE Ft.											
IAS Knots											
OAT °C		30.6	←			→	30.6	29.5	←	→	29.5
GROSS WEIGHT Lbs.											
HIGH PRESSURE COMPRESSOR RPM N_2	1	8535	8900	9200	9325	9560	9620	9605	9405	9265	
	2	8395	8740	9050	9305	9530	9560	9525	9345	9235	
	3										9510
	4										
	5										
	6										9345
	7	8565	8830	9170	9440	9550	9595	9560	9405	9230	
	8	8510	8860	9220	9440	9525	9555	9530	9430	9270	
LOW PRESSURE COMPRESSOR, RPM N_1	1	4700	5350	5680	5865	6110	6165	6315	6135	5995	
	2	4670	5320	5690	5885	6135	6165	6300	6125	5995	
	3										6320
	4										
	5										
	6										6345
	7	4880	5390	5760	6045	6160	6195	6310	6170	6010	
	8	4700	5310	5710	5955	6050	6080	6235	6120	5970	
EXHAUST GAS TEMP °C	1	310	320	—	490	530	540	—	—	520	
	2	295	375	—	505	570	580	—	—	515	
	3										580
	4										
	5										
	6										565
	7	324	390	—	520	560	580	—	—	530	
	8	315	385	—	510	531	552	—	—	500	
TAIL PIPE TOTAL PRESSURE "Hg"	1	39.2	46.4	53.7	57.8	62.7	63.6	66.0	62.8	60.1	
	2	39.7	47.1	54.1	58.0	62.4	62.9	65.7	62.9	60.4	
	3										67.0
	4										
	5										
	6										66.1
	7	40.7	47.0	55.8	61.3	63.0	63.6	65.4	62.5	59.4	
	8	39.6	46.8	54.7	60.0	61.9	62.7	65.1	63.1	60.4	
FUEL FLOW GALS TIMED/SECONDS	1	8 / 69.6	12 / 67.8	— / —	— / —	16 / 53.8	16 / 51.9	16 / 47.2	— / —	12 / 42.9	
	2	8 / 65.7	12 / 68.2	12 / 53.1	16 / 62.5	16 / 53.6	16 / 52.3	16 / 48.2	12 / 40.0	12 / 42.5	
	3										16 / 42.5
	4										
	5										
	6										16 / 43.6
	7	8 / 69.2	12 / 67.8	12 / 50.8	16 / 55.9	16 / 52.7	16 / 51.1	16 / 47.6	12 / 38.0	12 / 43.6	
	8	8 / 64.5	12 / 69.3	12 / 52.3	16 / 58.5	16 / 55.4	16 / 54.1	— / —	— / —	12 / 43.3	
FUEL WT. LB/GAL											
OIL COOLER GAP INCHES	1/2										
	3/4										
	5/6										
	7/8										
SURGE BLEED VALVE POSITION	1 L/R	O O	C O	C C	←				→	C C	
	2 L/R	O O	C O	C C	←				→	C C	
	3 L/R										C C
	4 L/R										
	5 L/R										
	6 L/R										C C
	7 L/R	O O	C O	C C	←				→	C C	
	8 L/R	O O	C O	C C	←				→	C C	
TOTAL THRUST		12430	19670	26110	29470	33540	34320	36890	34370	32030	18560
BAROMETRIC PRESS ~ HG		27.485	←							→	27.485
WIND DIRECTION ~ DEG		CALM	←							→	CALM
WIND VELOCITY ~ KNOTS		CALM	←							→	CALM
AIRPLANE DIRECTION ~ DEG		240	←							→	240

DATA CORRECTED FOR INSTRUMENT ERROR
B-52A USAF No. 52-003

TEST		STATIC THRUST CALIBRATION		
FLIGHT NO.				
RUN NO.		41	42	43
ALTITUDE Ft.				
IAS Knots				
OAT °C		29.5	28.6	28.6
GROSS WEIGHT Lbs.				
HIGH PRESSURE COMPRESSOR RPM N_2	1			
	2			
	3	9345	9135	9505
	4			
	5			
	6	9355	9145	9455
	7			
	8			
LOW PRESSURE COMPRESSOR, RPM N_1	1			
	2			
	3	6125	5890	6270
	4			
	5			
	6	6210	5980	6305
	7			
	8			
EXHAUST GAS TEMP °C	1			
	2			
	3	549	490	571
	4			
	5			
	6	565	514	580
	7			
	8			
TAIL PIPE TOTAL PRESSURE "Hg"	1			
	2			
	3	63.3	58.7	65.5
	4			
	5			
	6	62.8	58.5	64.6
	7			
	8			
FUEL FLOW GALS TIMED/SECONDS	1			
	2			
	3	16 52.3	16 60.7	16 47.8
	4			
	5			
	6	16 50.0	16 57.5	16 48.0
	7			
	8			
FUEL WT. LB/GAL				
OIL COOLER GAP INCHES	1/2			
	3/4			
	5/6			
	7/8			
SURGE BLEED VALVE POSITION	1 L/R			
	2 L/R			
	3 L/R	— —	— —	— —
	4 L/R			
	5 L/R			
	6 L/R	— —	— —	— —
	7 L/R			
	8 L/R			
TIME - SECONDS				
TOTAL THRUST		17090	15230	16190
BAROMETRIC PRESS ~ HG		27.485	27.485	27.485
WIND DIRECTION ~ DEG		CALM	CALM	CALM
WIND VELOCITY ~ KNOTS		CALM	CALM	CALM
AIRPLANE DIRECTION ~ DEG		240	240	240

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