



CALS TEST NETWORK

CTN Test Report

93-008

AFTB-ID
92-060



Technical Publication Transfer Using



Xerox Corporation



MIL-M-28001A (SGML)
MIL-R-28002A (Raster)



Quick Short Test Report

1 October 1992



Prepared for
Air Force Materiel Command

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Contents

1.	Introduction.....	1
1.1.	Background.....	1
1.2.	Purpose.....	1
2.	Test Parameters.....	2
3.	1840A Analysis.....	4
3.1.	External Packaging.....	4
3.2.	Transmission Envelope.....	4
3.2.1.	Tape Formats.....	4
3.2.2.	Declaration and Header Fields.....	4
4.	IGES Analysis.....	5
5.	SGML Analysis.....	5
6.	Raster Analysis.....	5
7.	CGM Analysis.....	6
8.	Conclusions and Recommendations.....	7
9.	Appendix A - Tape Tool Report Logs.....	8
9.1.	Tape Catalog.....	8
9.2.	Tape Evaluation Log.....	9
9.3.	Tape File Set Validation Log.....	14
9.4.	Agfa read1840A.....	15
10.	Appendix B - SGML Detail Analysis.....	16
10.1.	ArbortText Parser Log.....	16
10.2.	DataLogics Parser Log.....	16
10.3.	Exoterica Parser.....	16
11.	Appendix C - Detail Raster Analysis.....	17

11.1.	File D001R001.....	17
11.1.1.	Output Harvard Graphics 3.0.....	18
11.1.2.	Output IslandPaint.....	19
11.1.3.	Output Preview.....	20
11.1.4.	Output Ventura Publisher.....	21

1. Introduction

1.1 Background

The DoD Computer-aided Acquisition and Logistics Support (CALS) Test Network (CTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The CTN is a DoD-sponsored confederation of voluntary participants from industry and government managed by the Air Force Materiel Command.

The primary objective of the CTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards, formal and informal. Formal tests are large, comprehensive tests that follow a written test plan, require specific authorization from DoD, and may take months to prepare, execute, and report.

Informal tests are used by the CTN technical staff to broaden the testing base by including representative samples of the many systems and applications used by CTN participants. They also allow the CTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and to respond, in a timely manner, to the many requests for help that come from participants. Participants take part voluntarily and are benefited by receiving an evaluation of their latest implementation (interpretation) of the standards, interacting with the CTN technical staff, gaining experience in use of the standards, and developing increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test reported in this QSTR was to analyze XEROX Corporation's interpretation and use of the CALS Standards in transferring technical publications data. XEROX used its CALS Technical Data Interchange System to produce data in accordance with the standards and delivered it to the CTN technical staff on a 9-track magnetic tape.

2. Test Parameters

Test Plan: AFTB 92-60

**Date of
Evaluation:** 1 October 1992

Evaluator: George Elwood
Air Force CALS Test Bed
HQ AFMC/ENCT
4027 Colonel Glenn Hwy
Suite 200
Dayton, OH 45431-1601

**Data
Originator:** Beth Epperson
XEROX Corporation
10200 Willow Creek Road
San Diego, CA 92131

**Data
Description:** Technical Manual Test
1 document declaration file
1 DTD
1 TEXT file
1 Raster file

**Data
Source System:**

Text/SGML

HARDWARE

Unknown

SOFTWARE

Unknown

Raster

HARDWARE

Unknown

SOFTWARE

Unknown

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

CTN Tapetools (v1.2.8) UNIX

Agfa Compugraphics CAPS/CALS v40.4

MIL-M-28001 (SGML)

SUN SparcStation 2

Agfa CAPS v6.0x

ArborText ADEPT v4.2.1

SoftQuad Author/Editor V2.1

SUN 3/60

AGFA CAPS CALS 4.0

Cheetah Gold 486

Datalogics ParserStation v3.36

Exoterica XGMLNormalizer V1.2e3.2

SoftQuad Author/Editor V2.1

MIL-R-28002 (Raster)

SUN SparcStation 2

ArborText g42tiff

CTN validg4

CTN calstb.475

Island Graphics IslandPaint 3.0

Cheetah

Inset Systems HiJaak V2.02

SPC Harvard Graphics V3.0

Xerox Ventura Publisher

Standards

Tested:

MIL-STD-1840A

MIL-M-28001A

MIL-R-28002

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force Test Bed enclosed in a box IAW ASTM D 3951. The exterior of the box was not marked with the required magnetic tape warning label, MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag as required by MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel showed the required label indicating the recording density as required by MIL-STD-1840A, para. 5.3.1. Enclosed in the box was a packing list showing all files that were recorded on the tape.

3.2 Transmission Envelope

The 9-track tape received by the Air Force Test Bed contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

The 1840A Tape was run through the AFTB *Tapetool* utility version 1.2.8. One note was encountered while evaluating the contents of the tape labels. A note was reported on the tape label version. MIL-STD-1840A permits the use of both versions three and four. The use of the most current standard should be used and noted.

3.2.2 Declaration and Header Fields

No errors were reported in the Document Declaration File header.

One error and three notes were reported in the header records for the raster file. All related to an invalid entry for the txtfilid record. MIL-STD-1840A, para. 5.1.4.4 requires the value "W" be placed in this record for graphical data if only one text file is included.

txtfilid: CH4

*** ERROR (MIL-STD-1840A; 5.1.4.4) TABLE II - Invalid value for 'txtfilid:'.
*** NOTE (MIL-STD-1840A; 5.1.4.4) TABLE II - The value for 'txtfilid:' should be 'W' when there is only one text file.
*** NOTE - The header record will be given the value W.
*** NOTE - Correction made in new %s Header File.

4. IGES Analysis

No IGES files were included on the tape.

5. SGML Analysis

The tape did not include a DTD. No indication as to what DTD was used was included with the text file or documentation accompanying the tape. A call to Xerox revealed that the generic 38784B was used. Xerox provided this DTD on a floppy disk. The DTD was compiled without error. The resulting file was parsed against the text file using the Exoterica *XGMLNormalizer* with no reported errors.

The text file was parsed using Datalogics *ParseStation* without reported error. The files were also parsed using the ArborText *Adept* software without reported errors.

6. Raster Analysis

One raster file was include on this tape. The CTN utility *validg4* reported the file as meeting the current standards.

The file was read and displayed using the CTN *calstb.475* without problem. The image appears straight and no orphan pixels were noted.

The file was converted, displayed, and printed using Rosetta Technologies *Prepare* and *Preview*.

The file was converted using ArborText's *g42tiff* utility without reported problems. The resulting file was read into *IslandPaint* without problem. A hard copy of the file is included in the appendix to this report.

The file was converted using Inset Systems *HiJaak* to a PCX format without problem. The resulting file was imported into *Harvard Graphics 3.0* and *Ventura Publisher* without problem. Hard copies from these software packages are included in the appendix to this report.

The raster file meets current CALS MIL-R-28002A standards.

7. CGM Analysis

No CGM files were included on the tape.

8. Conclusions and Recommendations

In summary, the MIL-STD-1840A tape from Xerox Corporation was basically correct. The tape could be read properly using the CTN *Tapetool* and Agfa *CAPS* software with a few minor errors. The error in the MIL-STD-1840A raster header was minor and should be corrected easily.

The DTD and TXT file parsed without reported errors using different parsers available within the AFCTB. The files meet the current CALS standards.

The included raster file meets current CALS standards.

The tape, with the exception on the minor error in the header of the raster file, meets current CALS standards.

9. Appendix A - Tape Tool Report Logs

9.1 Tape Catalog

CALS Test Network Catalog Evaluation - Version 1.2; Release Number 8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information
ANSI X3.27 (1987) - File Structure and Labelling of Magnetic Tapes
for Information Interchange
ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Thu Oct 1 12:49:01 1992

MIL-STD-1840A File Catalog

File Set Directory: /cals/tapetool8/Set095

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D001R001	Raster	F/00128	02048/000005	Extracted
D001T002	Text	D/00260	02048/000042	Extracted

Catalog Process terminated normally.

9.2 Tape Evaluation Log

CALS Test Network Tape Evaluation - Version 1.2; Release Number 8

Standards referenced:

ANSI X3.27 (1987) - File Structure and Labelling of Magnetic Tapes
for Information Interchange

ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Thu Oct 1 12:48:54 1992

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1XSOF01

3

Label Identifier: VOL1
Volume Identifier: XSOF01
Volume Accessibility:
Owner Identifier:
Label Standard Version: 3

*** NOTE (ANSI X3.27; 8.3.1.8) - The Label Standard Version
should be 4 to represent the current level of ANSI X3.27.

HDR1D001 XSOF0100010001000100 92266 92266 000000DECFE11A

Label Identifier: HDR1
File Identifier: D001
File Set Identifier: XSOF01
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92266
Expiration Date: 92266
File Accessibility:
Block Count: 000000
Implementation Identifier: DECFE11A

HDR2D0204800260

M

00

Label Identifier: HDR2
Recording Format: D
Block Length: 02048
Record Length: 00260

Label Identifier: EOF2
Recording Format: F
Block Length: 02048

CTN Test Report
93-008

AFTB Test Report
92-60

Record Length: 00128
Offset Length: 00

EOF30080000100000000000100000000000000000800000000000000000000000000000000000

EOF4 00

***** Tape Mark *****

HDR1D001T002 XSOF0100010003000100 92266 92266 000000DECFE11A

Label Identifier: HDR1
File Identifier: D001T002
File Set Identifier: XSOF01
File Section Number: 0001
File Sequence Number: 0003
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92266
Expiration Date: 92266
File Accessibility:
Block Count: 000000
Implementation Identifier: DECFE11A

HDR2D0204800260 M 00

Label Identifier: HDR2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00

HDR30000000200000000000100000000000000000100000000000000000000000000000000000

HDR4 00

***** Tape Mark *****

Actual Block Size Found = 2048 Bytes.

Number of data blocks read = 42.

***** Tape Mark *****

EOF1D001T002 XSOF0100010003000100 92266 92266 000042DECFE11A

Label Identifier: EOF1
File Identifier: D001T002
File Set Identifier: XSOF01

File Section Number: 0001
File Sequence Number: 0003
Generation Number: 0001
Generation Version Number: 00
Creation Date: 92266
Expiration Date: 92266
File Accessibility:
Block Count: 000042
Implementation Identifier: DECFILE11A

EOF2D0204800260 M 00

Label Identifier: EOF2
Recording Format: D
Block Length: 02048
Record Length: 00260
Offset Length: 00

EOF3000000002000000000000100000000000000000100000000000000000000000000000

EOF4 00

***** Tape Mark *****

***** Tape Mark *****

End of Volume XSOF01

End Of Tape File Set

Deallocating /dev/rmt0...

Tape Import Process terminated with 0 error(s), 0 warning(s),
and 1 note(s).

9.3 Tape File Set Validation Log

CALS Test Network File Set Evaluation - Version 1.2; Release Number 8

Standards referenced:

MIL-STD-1840A (1987) - Automated Interchange of Technical Information
MIL-R-28002 (1989) - Raster Graphics Representation In Binary
Format, Requirements For

Thu Oct 1 12:49:02 1992

MIL-STD-1840A File Set Evaluation Log

File Set: Set095

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: XSOFT, 10200 WILLOW CREEK ROAD, SAND DIEGO, CA 92131
srcdocid: ONEIL
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19920922
dstsys: NONE
dstdocid: ONEIL
dstrelid: NONE
dtetrm: 19920922
dlvacc: NONE
filcnt: R1, T1
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: TECHNICAL MANUAL
docttl: NONE

Found file: D001R001

Extracting Raster Header Records...

Evaluating Raster Header Records...

srcdocid: ONEIL

dstdocid: ONEIL

txtfilid: CH4

*** ERROR (MIL-STD-1840A; 5.1.4.4) TABLE II - Invalid value for 'txtfilid:'.

*** NOTE (MIL-STD-1840A; 5.1.4.4) TABLE II - The value for 'txtfilid:' should
be 'W' when there is only one text file.

*** NOTE - The header record will be given the value W.

*** NOTE - Correction made in new %s Header File.

figid: A16016

srcgph: A16016

doccls: UNCLASSIFIED
rtype: 1
rorient: 000,270
rpelcnt: 000996,000750
rdensty: 0300
notes: NONE

1 error(s), 0 warning(s), and 3 note(s) were encountered
in Raster File D001R001.

Saving Raster Header File: D001R001_HDR
Saving Raster Data File: D001R001_GR4

Found file: D001T002
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: ONEIL
dstdocid: ONEIL
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

Saving Text Header File: D001T002_HDR
Saving Text Data File: D001T002_TXT

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

A total of 1 error(s), 0 warning(s), and 3 note(s) were
encountered in Document D001.

A grand total of 1 error(s), 0 warning(s), and 3 note(s) were
encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

9.4 Agfa read1840A

No errors were reported while reading the tape.

10. Appendix B - SGML Detail Analysis

10.1 ArbortText Parser Log

No reported errors.

10.2 DataLogics Parser Log

No reported errors.

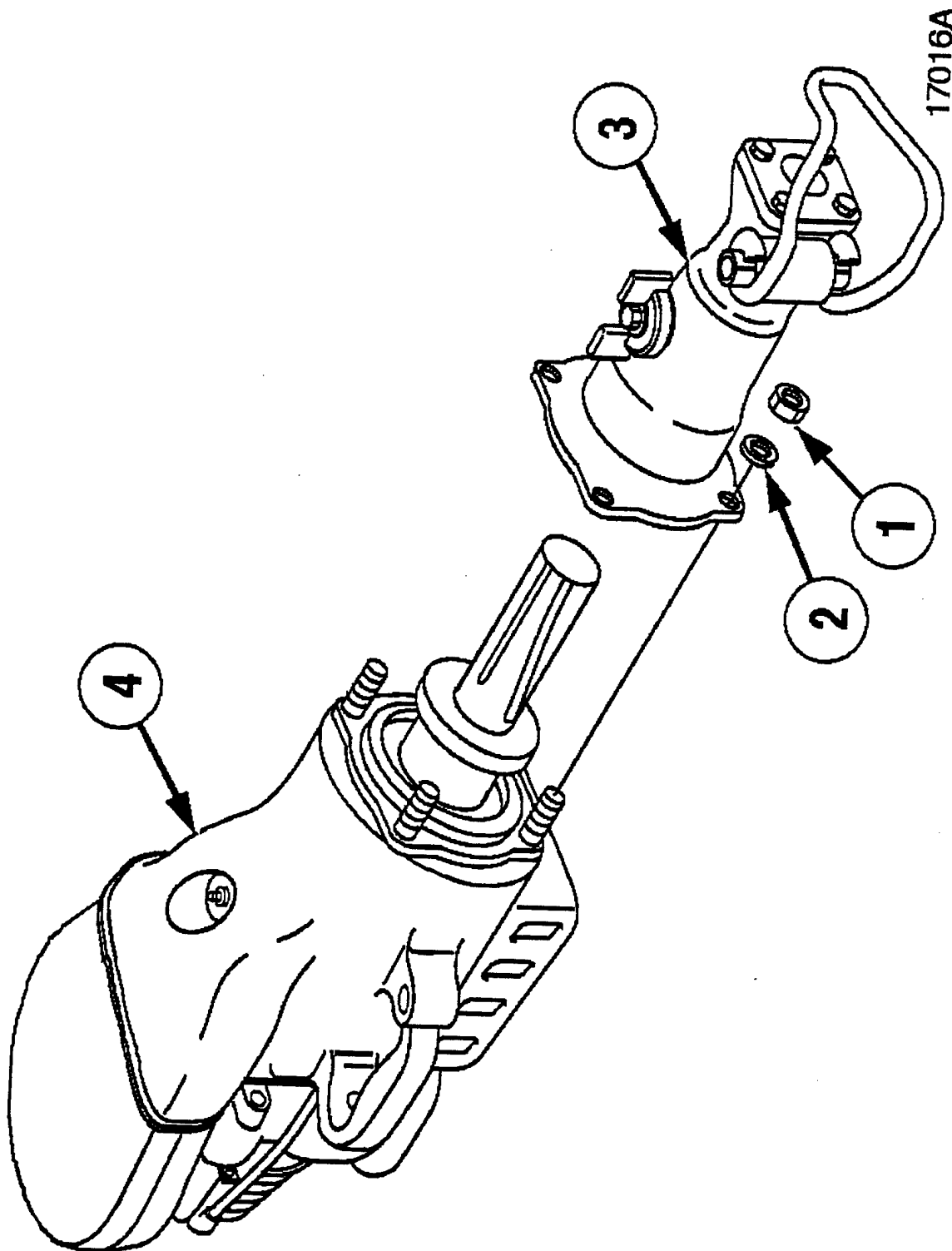
10.3 Exoterica Parser

No reported errors.

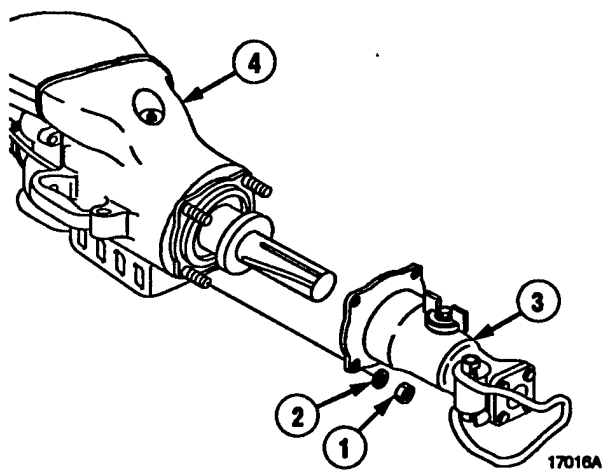
11. Appendix C - Detail Raster Analysis

11.1 File D001R001

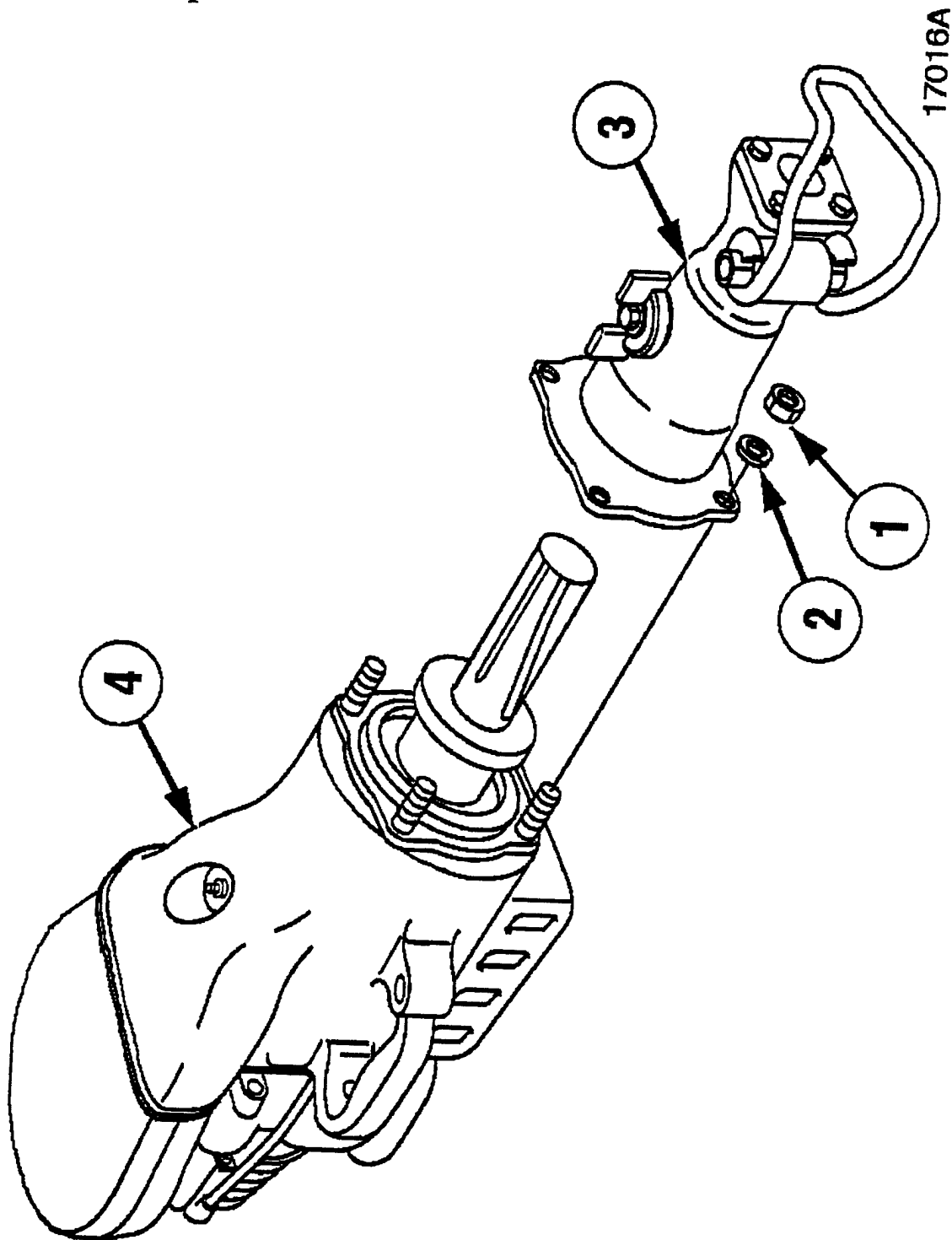
11.1.1 Output Harvard Graphics 3.0



11.1.2 Output IslandPaint



11.1.3 Output Preview



11.1.4 Output Ventura Publisher

