

# AFCTN Test Report 94-097

AFCTB-ID  
94-055



## Technical Engineering Drawing Transfer Using:

Loral Defense Systems' Data



## Supporting:

Naval Undersea Warfare Center  
Vertical Launch ASROC Program  
(Code 416)

Contract #N00024-89-C-3204

MIL-D-28000A (IGES)

Quick Short Test Report

19 May 1994



19960822 047



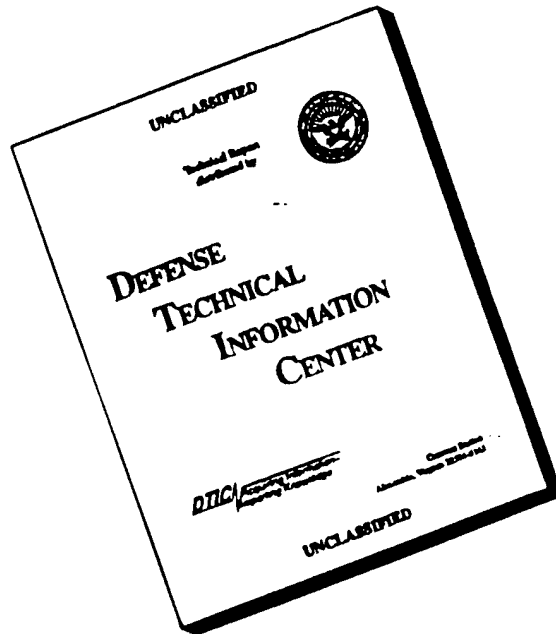
Prepared for  
Electronic Systems Center  
Air Force CALS Program Office  
HQ ESC/AV-2  
4027 Colonel Glenn Hwy Suite 300  
Dayton OH 45431-1672

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**Technical Engineering Drawing Transfer**  
**Using:**  
**Loral Defense Systems' Data:**  
**Supporting:**  
**Naval Undersea Warfare Center**  
**Vertical Launch ASROC Program (Code 416)**  
**(Contract #N00024-89-C-3204)**

**MIL-STD-1840A**  
**MIL-D-28000A (IGES)**

**Quick Short Test Report**

**19 May 1994**

---

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# Air Force CALS Test Bed

## *Notification of Test Results*

19 May 1994

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick Short Test Report (QSTR) evaluation of data submitted by:

### **Loral Defense Systems**

Identified as follows:

Title:	<b>Technical Engineering Drawing Transfer</b>
Program:	<b>Naval Undersea Warfare Center</b>
Program Office:	<b>Vertical Launch ASROC (Code 416)</b>
Contract No.:	<b>N00024-89-C-3204</b>
QSTR No.:	<b>AFCTB-ID 94-055</b>

Received on the following media:    Electronic ftp Transfer

The results of the QSTR evaluation are as follows:

MIL-STD-1840A Standard	N/A
MIL-STD-1840A Media Format:	N/A
MIL-D-28000A IGES:	<b>Fail</b>
MIL-M-28001B SGML:	N/A
MIL-R-28002A Raster:	N/A
MIL-D-28003 CGM:	N/A

Formal results with associated disclaimer are documented and available from the AFCTB.

**Air Force CALS Test Bed  
HQ ESC/AV-2P  
4027 Colonel Glenn Highway, Suite 300  
Dayton, OH 45431-1672  
Phone: 513-257-3085      FAX: 513-257-5881**

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## 1. Introduction

### 1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALs) Test Network (AFCTN) 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 AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN 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 and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALs initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop 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.

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## 1.2 Purpose

The purpose of the informal test, reported in this QSTR, was to analyze Loral Defense System's interpretation and use of the CALS standards in transferring technical engineering data. Loral used its CALS Technical Data Interchange System to produce data, in accordance with the standards, and delivered it to the AFCTN technical staff using an electronic ftp transfer. The stated purpose of this test was to evaluate the data and not the CALS format.

## 2. Test Parameters

Test Plan: AFCTB 94-055

Date of  
Evaluation: 19 May 1994

Evaluator: George Elwood  
Air Force CALS Test Bed  
DET 2 HQ ESC/AV-2P  
4027 Colonel Glenn Hwy  
Suite 300  
Dayton OH 45431-1672

Data  
Originator: Bob Medvitz  
Loral Defense Systems  
1210 Massillon Road  
Dept. 404 Plant G-3  
Akron OH, 44315  
(216) 796-5740  
(216) 796-3274 (fax)

Data  
Description: Technical Engineering Drawing Test  
1 Initial Graphics Exchange Specification  
(IGES) file

Data  
Source System:

IGES

**HARDWARE**

Sun Sparc II

**SOFTWARE**

Computervision CADD5 5

Evaluation Tools Used:

MIL-D-28000 (IGES)  
HP 735

InterCAP X-Change v7.82  
Island Software IslandDraw v3.0  
Carberry CADLeaf v3.1.2  
International TechneGroup Incorporated  
(ITI) IGES/Works v2.0

---

SGI Indigo2

AUTODESK AutoCAD R12  
Cadkey Cadkey v6.0  
IGES Data Analysis (IDA) CALSView  
ITI IGES/Works v2.0.0

Sun SparcStation 2

Carberry CADLeaf Plus v3.1  
IDA Parser/Verifier v92  
IDA IGESView v3.05  
Intergraph I/EMS 02.00.01.11  
Intergraph I/CIGES 02.00.01.03  
ITI IGES/Works v1.3  
Rosetta Technologies Prepare  
Rosetta Technologies Preview v3.2

PC 486/50

AUTODESK AutoCAD 386 R12  
AUTODESK AutoCAD 386 R11  
IDA IGESView Windows

**Standards  
Tested:**

MIL-D-28000A

### **3. 1840A Analysis**

#### **3.1 External Packaging**

The files arrived at the Air Force CALS Test Bed (AFCTB) via an electronic transfer to the internet server. No physical media was exchanged or evaluated.

#### **3.2 Transmission Envelope**

The files received by the AFCTB were not MIL-STD-1840A. The files were not named per the standard conventions, as the stated purpose of the evaluation was the basic data structure.

##### **3.2.1 Tape Formats**

No tape was submitted for evaluation.

##### **3.2.2 Declaration and Header Fields**

The files were submitted for evaluation without the CALS headers or Document Declaration file. The purpose of the evaluation was the basic data files.

## 4. IGES Analysis

The transfer contained one IGES file. The Start Section of the file was checked for the required conformance statement, as required by MIL-D-28000A, para. 3.2.2.4.1. This was not found. The file contained three drawings and eleven views.

The file was evaluated using IDA's *parser/verifier* set for CALS Class II. This utility reported several CALS IGES errors along with basic IGES errors. The log file is included in Appendix A, Section 9 of this report.

The first error was reported in the global section. The start section indicated the IGES specification can only address version 4.0 and ASME Y14.26M- 1989 (Index 23 values of 6 or 7). MIL-D-28000A para. 3.2.1.3.2 defines this requirement. The next release of MIL-D-28000 will permit more current releases of the IGES specification.

Specification version = 8 (IGES 5.0)  
ERROR 4048: Illegal specification version for CALS Class II specified.

The next reported error was the use of illegal text fonts. MIL-D-28000A, Table II, Note three defines the permitted fonts as 1, 1001, 1002, or 1003.

\*\*\* Entity type: 212

ERROR 4050: Illegal text font for CALS Class II specified for string 1 at D 421.

212	429	1	1	243	0	0	0	10101D	421
212	1	-11	2	7			MIPTR	208D	422

This must be 1, 1001, 1002 or 1003

vv

212,1,1,0.1666666666666667,0.25,12,1.570796,0.0,0,0,	421P	429
30.420521418254,18.888216018677,0.0,1HA;	421P	430

The next CALS error was reported against entity types 312 320 and 420. These are not permitted in CALS Class II files. They are only permitted in Class III electrical files.

\*\*\* Entity type: 312

WARNING 4038: Entity type is not allowed in CALS Class II.

\*\*\* Entity type: 320

WARNING 4038: Entity type is not allowed in CALS Class II.

\*\*\* Entity type: 420

WARNING 4038: Entity type is not allowed in CALS Class II.

MIL-D-28000A, Table II, permits the use of only forms 3, 4 or 7 for entity types 402.

\*\*\* Entity type: 402

ERROR 4042: Illegal form for CALS Class II specified at D 545.

402	557	1	1	0	0	0	0	201D	545
402	0	0	3	19				D	546

This must be 3, 4, or 7.

The AFCTB has several tools for viewing IGES files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The file was converted using a utility, available within the AFCTB, with no reported errors. The resulting file was read into Island Software's *IslandDraw*, displayed and printed without a reported error. The only image displayed was the first drawing.

The file was read using AUTODESK's *AutoCAD R12* with translator version 5.1. This utility reported several errors and warnings during the translation. When displayed, the three drawings were found. Some entities were noted as missing. Font errors were inserted at the AFCTB and were not an error in the software.

The file was converted using Cadkey's *ig2c* utility. The resulting file was read into Cadkey's *Cadkey*, displayed and printed. Only one image was displayed. All of the entities on this image were noted; however, the file was not usable.

According to Ken Erman of Cadkey, "...the CADKEY output would resembled the desired output more closely by manipulating the levels. To explain: In version 6 of CADKEY's IGES we organize IGES drawings and Views by level starting on level 241 in ascending order, we also turn on all levels that contain information. Therefore by simply turning levels on or off the desired image may be achieved...."

The files were read into Carberry's *CADLeaf* software without a reported error. This utility reported three drawings. Only part of drawing 1 and 2 were displayed. The layout image appeared to be complete.

According to R. Bryan DiAntonio of Carberry Technology, "Using the Bound "Data" option, the complete image displayed and printed."

The file was read using IDA's *CALSVIEW*. No problems were noted during this procedure. All three drawings and eleven views could be called up and viewed without a problem.

The file was read using IDA's *IGESVIEW* and *IGESVIEW for Windows* with no reported errors. All three drawings and eleven views displayed.

The file was read using InterCAPS' *X-Change*. Only one image displayed. All of the entities displayed around the screen. The results looked like the Cadkey output.

The IGES file was converted using Intergraph's *I/CIGES* utility without a reported error. The resulting file was read into Intergraph's *I/EMS* and displayed. Not all of the entities could be found. Those that did display were disjointed.

The file was read using ITI's *IGESWORKS* without a reported error. The three drawings displayed. In one of the drawings some of the entities were missing.

The IGES file was converted using Rosetta Technologies' *Prepare* with reported errors. See Appendix A, Section 9.1.4 for these errors. The resulting file was read into Rosetta Technologies' *Preview*, displayed and printed. Only the three drawings were converted and displayed.

Because of the multiple errors in the IGES file, it does not meet the CALS MIL-D-28000A, Class II specification.

## **5. SGML Analysis**

No Standard Generalized Markup Language (SGML) files were included in this evaluation.

## **6. Raster Analysis**

No Raster files were included in this evaluation.

## **7. CGM Analysis**

No Computer Graphics Metafile (CGM) files were included in this evaluation.

## **8. Conclusions and Recommendations**

The evaluation was a first look at an IGES output for CALS standards by Loral Defense Systems - Akron. No CALS data set was submitted with this file.

The IGES file had several CALS MIL-D-28000A Class II errors and does not meet the specification.

## 9. Appendix A - Detailed IGES Analysis

### 9.1 File VLA

#### 9.1.1 Parser/Verifier Log

```
*****  
***** IGES PARSER/VERIFIER *****  
***** MARCH 1993 *****  
***** IGES Data Analysis *****  
***** (708) 344-1815 *****  
*****
```

Input file is vla.igs

Checking conformance to CALS Class II (MIL-D-28000A 2/10/92)

Today is May 18, 1994 3:56 PM

```
*****  
***** CHECK FILE SYNTAX *****  
*****
```

Section	Records
Start	1
Global	4
Directory	3346 ( 1673 Entities)
Parameter	3734
Terminate	1

NITPICK 2489: Excess precision in real constant (0.49987318625999) for Mat[0][0]  
of D 35.

NITPICK 2489: Excess precision in real constant (0.68794929981232) for Mat[0][1]  
of D 35.

NITPICK 2489: Messages regarding excess precision suppressed.

```
*****  
***** SUMMARY AND STATISTICS ****  
*****
```

---

\*\*\* File and Product Name Information \*\*\*

File name from sender = 'vlaiges'  
File creation Date.Time = '940516.110119'  
Model change Date.Time = '691231.190003'

SEVERE 2072: Macro Entity type number (652368) is out of defined range at D  
654040.

Author = 'hofacre'  
Department = 'loral-vla'  
Product name from sender = 'e.3322.620.6207386'  
Destination product name = 'e.3322.620.6207386'

\*\*\* Parameter Delimiters \*\*\*

Delimiter = ','  
Terminator = ';'

\*\*\* Originating System Data \*\*\*

System ID = 'COMPUTERVISION CADD55 Fourth Edition'  
Preprocessor version = 'CADD5-IGES REVISION 7.0 (1-Apr-93)'  
Specification version = 8 (IGES 5.0)

ERROR 4048: Illegal specification version for CALS Class II specified.

\*\*\* Precision levels \*\*\*

Integer bits = 32  
Floating point - Exponent = 38 Mantissa = 6  
Double precision - Exponent = 308 Mantissa = 14

\*\*\* Global Model Data \*\*\*

Model scale = 1.0000E+00  
Unit flag = 1  
Units = 'IN'  
Line weights = 32767  
Maximum line thickness = 3.276700E+01  
Minimum line thickness = 1.000000E-03  
Granularity = 1.000000E-04  
Maximum coordinate = 4.000000E+01

Drafting standard applicable to original data is ANSI.

\*\*\* Status Flag Summary \*\*\*

Blank status: Visible	1656
Blanked	17

Independence:	Independent	598
	Physically Subordinate	947
	Logically Subordinate	39
	Totally Subordinate	89
Entity use:	Geometry	554
	Annotation	975
	Definition	141
	Other	3
	Logical/Positional	0
	2D parametric	0
	Construction geometry	0
	Not Specified	0
Hierarchy:	Structure DE applies	11
	Subordinate DE applies	1662
	Hierarchy property applies	0
	Not Specified	0

\*\*\* Entity Occurrence Counts \*\*\*

Entity	Form	Level	Count	Type
-----	----	-----	-----	-----
100	0	7	1	Circular arc
100	0	27	81	
100	0	36	3	
100	0	37	67	
100	0	38	3	
100	0	240	1	
100	0	243	8	
102	0	0	8	Composite curve
106	11	243	17	Copious data - Piecewise planar, linear string (2D linear path)
106	12	244	21	Copious data - Piecewise linear string (3D linear path)
106	20	242	24	Centerline
106	31	242	4	Section lines - General use, iron, brick, stone masonry
106	40	243	27	Witness line
108	0	0	44	Plane, Unbounded
110	0	0	1	Line
110	0	26	60	
110	0	27	34	
110	0	28	51	
110	0	36	21	
110	0	37	122	
110	0	38	20	

110	0	240	17	
110	0	241	228	
110	0	242	45	
110	0	243	70	
116	0	0	1	Point
116	0	243	14	
116	0	244	6	
124	0	0	41	Transformation matrix
126	0	240	5	Rational B-spline curve
126	0	241	6	
126	0	243	2	
202	0	243	12	Angular dimension
206	0	243	1	Diameter dimension
210	0	243	20	General label
212	0	241	90	General note
212	0	243	58	
212	2	243	5	General note - imbedded font change dimension
212	4	243	2	General note - subscripted dimension
212	7	241	125	General note - multiple stack/center justified
212	7	243	21	
212	8	241	1	General note - multiple stack/right justified
214	3	243	58	Leader arrow - Filled triangle
216	0	243	6	Linear dimension
228	3	243	6	Feature control frame
230	0	241	8	Sectioned area (Standard Crosshatching)
304	2	0	3	Line font definition - repeating pattern
312	0	241	57	Text template - absolute coordinates
314	0	0	9	Color definition
320	0	0	4	Network subfigure definition
402	1	0	5	Group instance
402	3	0	19	Views visible instance
402	19	0	42	Segmented views visible
404	0	0	3	Drawing
406	5	0	28	Property - Line widening
406	15	0	14	Property - Name
406	16	0	3	Property - Drawing size
406	17	0	3	Property - Drawing units
410	0	0	11	View - Orthographic parallel
420	0	0	6	Network subfigure instance

\*\*\* Entity Count by Level \*\*\*

Level	Count
0	245
7	1
26	60
27	115
28	51
36	24
37	189
38	23
240	23
241	515
242	73
243	327
244	27

\*\*\* Labeling Information \*\*\*

77% of the entities are labeled.

Unlabeled 373

Label	Count
-------	-------

MIPTR	1300
-------	------

\*\*\* Line Fonts Used in Data \*\*\*

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
161	8	-	93	44	659	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
3	-	-	-	-	10	-	-	User defined
116	118	120	122	124	125	126	128	
-	-	-	-	-	-	-	-	Undefined
21	-	-	-	41	-	13	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

---

130	132	134	136	138	140	142	144	
-	-	-	-	-	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined

\*\*\* Line Widths Used in Data \*\*\*

Weight	Count	Width
Defaulted	237	(0.0010)
1	1435	(0.0010)
14	1	(0.0140)

\*\*\* Colors Used in Data \*\*\*

Defaulted	251
Yellow	75
Magenta	77
Cyan	305
White	4
User	961

\*\*\*\*\*  
\*\*\*\*\* ENTITY ANALYSIS \*\*\*\*\*  
\*\*\*\*\*

\*\*\* Entity type: 100

\*\*\* Entity type: 102

\*\*\* Entity type: 106

CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 1499.  
CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 1819.  
CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 1833.  
CAUTION 2331: Use of section lines (Form 31-38) is not recommended at D 2289.

\*\*\* Entity type: 108

\*\*\* Entity type: 110

-- 669 lines averaging 1.263212E+00 units --

---

\*\*\* Entity type: 116

\*\*\* Entity type: 124

41 transformation matrices, 3 non-zero translations.

NOTE 2341: 3 matrices contain translation information.

\*\*\* Entity type: 126

\*\*\* Entity type: 202

NOTE 2342: Zero witness line pointer at D 367.  
NOTE 2342: Zero witness line pointer at D 385.  
NOTE 2342: Zero witness line pointer at D 385.  
NOTE 2342: Zero witness line pointer at D 395.  
NOTE 2342: Zero witness line pointer at D 395.  
NOTE 2342: Zero witness line pointer at D 407.  
NOTE 2342: Zero witness line pointer at D 2053.  
NOTE 2342: Zero witness line pointer at D 2065.  
NOTE 2342: Zero witness line pointer at D 2065.

\*\*\* Entity type: 206

\*\*\* Entity type: 210

\*\*\* Entity type: 212

ERROR 4050: Illegal text font for CALS Class II specified for string 1 at D 421.  
ERROR 4050: Illegal text font for CALS Class II specified for string 1 at D 423.  
ERROR 4050: Messages regarding illegal text fonts suppressed.  
400 text strings in data file.  
Average text aspect ratio in file is 0.7997866.  
Minimum text aspect ratio in file is 0.1333333.  
Maximum text aspect ratio in file is 1.5000000.

FONTS USED IN FILE

FONT	COUNT	NAME
1	5	Default ASCII Style
2	220	LeRoy
12	102	News Gothic
13	3	Lightline Gothic
1003	70	Drafting Font

\*\*\* Entity type: 214

Average arrow aspect ratio in file is 2.9310345.  
Minimum arrow aspect ratio in file is 2.0000000.  
Maximum arrow aspect ratio in file is 3.0000000.

\*\*\* Entity type: 216

\*\*\* Entity type: 228

\*\*\* Entity type: 230

\*\*\* Entity type: 304

Default line font substitute at D 415 is Solid.  
Default line font substitute at D 877 is Phantom.  
Default line font substitute at D 2113 is Center-line.

\*\*\* Entity type: 312

WARNING 4038: Entity type is not allowed in CALS Class II.  
WARNING 4038: Entity type is not allowed in CALS Class II.

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

57 text templates in data file.  
Average text template aspect ratio in file is 5.3280929.  
Minimum text template aspect ratio in file is 0.5777778.  
Maximum text template aspect ratio in file is 25.2858667.

\*\*\* Entity type: 314

Color specified at D 1 is named 'MAGENTA'.  
Default color substitute is magenta.  
Color specified at D 3 is named 'MAGENTA'.  
Default color substitute is magenta.  
Color specified at D 5 is named 'MAGENTA'.  
Default color substitute is magenta.  
Color specified at D 7 is named 'YELLOW'.  
Default color substitute is yellow.  
Color specified at D 9 is named 'YELLOW'.  
Default color substitute is yellow.  
Color specified at D 11 is named 'WHITE'.  
Default color substitute is white.  
Color specified at D 13 is named 'WHITE'.  
Default color substitute is white.  
Color specified at D 15 is named 'WHITE'.  
Default color substitute is white.

---

Color specified at D 17 is named 'WHITE'.  
Default color substitute is white.

\*\*\* Entity type: 320

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NS2F1'.  
Number of included entities = 219.  
Reference designator: DEFAULTTED.  
Number of connect points = 0.

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NS2PL'.  
Number of included entities = 19.  
Reference designator: DEFAULTTED.  
Number of connect points = 0.

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NS2PLE'.  
Number of included entities = 8.  
Reference designator: DEFAULTTED.  
Number of connect points = 0.

WARNING 4038: Entity type is not allowed in CALS Class II.

Subfigure name: 'LM.FORM.NSF2'.  
Number of included entities = 131.  
Reference designator: DEFAULTTED.  
Number of connect points = 0.

\*\*\* Entity type: 402

ERROR 4042: Illegal form for CALS Class II specified at D 545.  
ERROR 4042: Illegal form for CALS Class II specified at D 549.  
ERROR 4042: Messages regarding form numbers suppressed.

\*\*\* Entity type: 404

NITPICK 2074: Entity use flag must be 1 for Drawing entity at D 2499.  
Drawing at D 2499 contains 4 views.  
Drawing at D 2499 contains 152 annotation entities.  
NITPICK 2074: Entity use flag must be 1 for Drawing entity at D 2507.  
Drawing at D 2507 contains 3 views.  
Drawing at D 2507 contains 292 annotation entities.  
NITPICK 2074: Entity use flag must be 1 for Drawing entity at D 2515.  
Drawing at D 2515 contains 4 views.  
Drawing at D 2515 contains 0 annotation entities.

\*\*\* Entity type: 406

\*\*\* Entity type: 410

Scale of view at D 31 is 1.000000E+00.  
Orthographic View entity at D 31 has 4 clipping planes specified.  
XMIN = -0.750 XMAX = 8.500  
YMIN = 2.250 YMAX = 8.500  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 45 is 1.000000E+00.  
CAUTION 2315: Matrix associated with view contains translation information at D  
45.  
Orthographic View entity at D 45 has 4 clipping planes specified.  
XMIN = -3.310 XMAX = 2.940  
YMIN = -2.170 YMAX = 3.830  
ZMIN = Not Set ZMAX = Not Set

WARNING 2389: Blank status of view at D 59 is set. This flag should be  
ignored.

Scale of view at D 59 is 1.250000E-01.  
Orthographic View entity at D 59 has 4 clipping planes specified.  
XMIN = -16.564 XMAX = 13.745  
YMIN = -11.278 YMAX = 13.392  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 71 is 2.000000E+00.  
Orthographic View entity at D 71 has 4 clipping planes specified.  
XMIN = 0.750 XMAX = 2.375  
YMIN = 6.750 YMAX = 8.375  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 85 is 1.000000E+00.  
CAUTION 2315: Matrix associated with view contains translation information at D  
85.  
Orthographic View entity at D 85 has 4 clipping planes specified.  
XMIN = -8.711 XMAX = 9.042  
YMIN = -8.736 YMAX = 9.282  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 99 is 1.000000E+00.  
CAUTION 2315: Matrix associated with view contains translation information at D  
99.  
Orthographic View entity at D 99 has 4 clipping planes specified.  
XMIN = -1.875 XMAX = 2.125  
YMIN = -8.125 YMAX = 8.875  
ZMIN = Not Set ZMAX = Not Set

WARNING 2389: Blank status of view at D 111 is set. This flag should be  
ignored.

---

---

Scale of view at D 111 is 1.250000E-01.  
Orthographic View entity at D 111 has 4 clipping planes specified.  
XMIN = -11.982 XMAX = 16.916  
YMIN = -14.802 YMAX = 16.211  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 123 is 2.500000E-01.  
Orthographic View entity at D 123 has 4 clipping planes specified.  
XMIN = -23.841 XMAX = 23.454  
YMIN = -14.344 YMAX = 21.903  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 137 is 2.500000E-01.  
Orthographic View entity at D 137 has 4 clipping planes specified.  
XMIN = -24.229 XMAX = 22.872  
YMIN = -9.595 YMAX = 15.700  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 149 is 2.500000E-01.  
Orthographic View entity at D 149 has 4 clipping planes specified.  
XMIN = -18.026 XMAX = 20.062  
YMIN = -13.181 YMAX = 15.991  
ZMIN = Not Set ZMAX = Not Set

Scale of view at D 163 is 2.500000E-01.  
Orthographic View entity at D 163 has 4 clipping planes specified.  
XMIN = -17.833 XMAX = 20.643  
YMIN = -14.828 YMAX = 21.903  
ZMIN = Not Set ZMAX = Not Set

\*\*\* Entity type: 420

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 285 references network subfigure at D 2997.  
ERROR 2162: Network subfigure definition (D 2997) follows instance entity at  
D 285.

Reference Designator at D 285 is DEFAULTED.

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 287 references network subfigure at D 3037.  
ERROR 2162: Network subfigure definition (D 3037) follows instance entity at  
D 287.

Reference Designator at D 287 is DEFAULTED.

WARNING 4038: Entity type is not allowed in CALS Class II.

Network subfigure instance at D 289 references network subfigure at D 3055.  
ERROR 2162: Network subfigure definition (D 3055) follows instance entity at  
D 289.

Reference Designator at D 289 is DEFAULTED.

WARNING 4038: Entity type is not allowed in CALS Class II.  
Network subfigure instance at D 291 references network subfigure at D 3055.  
ERROR 2162: Network subfigure definition (D 3055) follows instance entity at  
D 291.  
Reference Designator at D 291 is DEFAULTTED.  
WARNING 4038: Entity type is not allowed in CALS Class II.  
Network subfigure instance at D 1103 references network subfigure at D 3345.  
ERROR 2162: Network subfigure definition (D 3345) follows instance entity at  
D 1103.  
Reference Designator at D 1103 is DEFAULTTED.  
WARNING 4038: Entity type is not allowed in CALS Class II.  
Network subfigure instance at D 2119 references network subfigure at D 3055.  
ERROR 2162: Network subfigure definition (D 3055) follows instance entity at  
D 2119.  
Reference Designator at D 2119 is DEFAULTTED.

\*\*\* Message Summary \*\*\*

2016: 3 Invalid entity use flag.  
4000: 325 Miscellaneous CALS messages  
4011: 1 Problems in the Global section  
4018: 67 Illegal entity types  
4019: 47 Entities with illegal form

\*\*\* Error Summary \*\*\*

0 fatal errors  
1 severe errors  
379 errors  
69 warnings  
7 cautions  
7688 nitpicks  
10 notes

\*\*\* End of Analysis of vla.igs \*\*\*

---

## 9.1.2 Parser Log - AutoCAD R12

Title: IGESIN Journal (v5.1 Nov 05 1992)

=====  
File: C:/TMP/VLA.xli  
Date: Thu, May 19, 1994  
Time: 10:59:44  
=====

EVALUATION VERSION -- NOT FOR RESALE

Translator S/N: 117-10075750  
Translating from IGES file: C:/TMP/VLA.IGS  
to AutoCAD Drawing: C:\VLA.dwg

=====  
Options obtained from: default settings  
Curves Approximated to Tolerance of 0.01  
Surfaces Approximated to Tolerance of 0.01

Text Font/Style mapping:

IGES Text font	Style Name	ACAD Font
0	SYMBOL0	iges0
1	STANDARD	txt
2	LEROY	txt
3	FUTURA	txt
6	COMP80	txt
12	GOTHICE	gothice
13	GOTHICI	gothici
14	ROMANS	romans
17	ROMANT	romant
18	ROMAND	romand
19	OCR	txt
1001	SYMBOL1	iges1001
1002	SYMBOL2	iges1002
1003	SYMBOL3	iges1003
2001	KANJI	bigfont

IGES Linefont/AutoCAD Linetype mapping

IGES Line Font	AutoCAD linetype	Shape file
0	BYLAYER	
1	CONTINUOUS	
2	DASHED	acad.lin
3	PHANTOM	acad.lin
4	CENTER	acad.lin
5	DOT	acad.lin

=====

Parse phase

\*\*\* Warning (IEVM\_BAD\_VECTOR\_124) \*\*\*  
(DE 35, TF 124:0) Entity has a column which is not a unit vector.

Action taken: Unitized all vectors.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_ZERO\_LENGTH\_ARC\_100) \*\*\*  
(DE 205, TF 100:0) Entity has zero length. Start point: 1.5625002e-001,  
8.4221879e+000. Terminate point: 1.5625002e-001, 8.4221878e+000.

Action taken: Arc assumed to be full, Terminate point set equal to the Start point.

<<<< PART OF LOG FILE REMOVED HERE >>>>

\*\*\* Warning (IEVM\_FIRST\_NOT\_COLINEAR\_106) \*\*\*  
(DE 819, TF 106:40) Entity's points are not directionally colinear. All vectors formed by consecutive points must be in the same direction.

Action taken: First point moved to a valid location.

<<<< PART OF LOG FILE REMOVED HERE >>>>

=====  
Start Section:  
vla iges trial  
Global Section:

Parameter Delimiter: ,  
Record Delimiter: ;  
Sending Product ID: e.3322.620.6207386  
File Name: vlaiges  
System ID: COMPUTERVISION CADD55 Fourth Edition  
Preprocessor Version: CADD5-IGES REVISION 7.0 (1-Apr-93)  
Size of Integer: 32  
Sgl. Precision Mag: 38  
Sgl. Precision Sig: 6  
Dbl. Precision Mag: 308  
Dbl. Precision Sig: 14  
Receiving Product ID: e.3322.620.6207386  
Model Space Scale: 1.000000  
Unit Flag: 1  
Unit String: IN  
# of Line Weights: 32767  
Maximum Line Width: 32.767000

---

Creation Date: 05/16/94 11:01:19  
 Minimum Resolution: 0.000100  
 Maximum Coordinate: 40.000000  
 Author: hofacre  
 Organization: loral-vla  
 IGES Version Number: 8  
 Drafting Standard: 3  
 Model Create/Modify Date: 12/31/69 19:00:03

Entity Summary:

Type	Form	Description	Count
100	0	Circular Arc	164
102	0	Composite Curve	8
106	11	Planar Piecewise Linear Curve	17
106	12	Piecewise Linear Curve	21
106	20	Centerline Through Points	24
106	31	Section Entity	4
106	40	Witness Line	27
108	0	Plane (Unbounded)	44
110	0	Line	669
116	0	Point	21
124	0	Transformation Matrix	41
126	0	Rational B-Spline Curve (General)	13
202	0	Angular Dimension	12
206	0	Diameter Dimension	1
210	0	General Label	20
212	0	General Note (Simple)	148
212	2	General Note (Font change)	5
212	4	General Note (Subscript)	2
212	7	General Note (Center justified)	146
212	8	General Note (Right justified)	1
214	3	Leader (Filled triangle)	58
216	0	Linear dim - undetermined form	6
228	3	General Symbol (Feature Ctrl Fr.)	6
230	0	Section Area (Standard Fill)	8
304	2	Line Font Definition (Pattern)	3
312	0	Text Display Template (Absolute)	57
314	0	Color Definition	9
320	0	Network Subfigure Definition	4
402	1	Group (Unordered, w/back ptrs)	5
402	3	Views Visible	19
402	19	Segmented Views Visible	42
404	0	Drawing (form 0)	3
406	5	Property (Line Widening)	28
406	15	Property (Name)	14
406	16	Property (Drawing Size)	3

---

406	17	Property (Drawing Units)	3
410	0	View	11
420	0	Network Subfigure Instance	6
			-----
			Total 1673
=====			

Translation phase

\*\*\* Warning (ACAD\_SUBFIGURE\_NAME\_CHANGED) \*\*\*

( DE: 3345 TF: 320:0 )

Subfigure name "LM.FORM.NSF2" changed to "LM\_FORM\_NSF2" to make it a valid AutoCAD name.

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 3291, TYPE: 230, FORM: 0

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 3301, TYPE: 230, FORM: 0

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 3311, TYPE: 230, FORM: 0

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 3321, TYPE: 230, FORM: 0

Drawing Entity (404 Form 0) at DE 2499, with

name = 2,  
size = 40.000000, 28.000000,  
units = IN,

was processed in the AutoCAD drawing file: C:\VLA.dwg

Drawing Entity (404 Form 0) at DE 2507, with

name = 1,  
size = 40.000000, 28.000000,  
units = IN,

was processed in the AutoCAD drawing file: C:\VLA1

\*\*\* Warning (ACAD\_SUBFIGURE\_NAME\_CHANGED) \*\*\*

( DE: 3055 TF: 320:0 )

Subfigure name "LM.FORM.NS2PLE" changed to "LM\_FORM\_NS2PLE" to make it a valid AutoCAD name.

\*\*\* Warning (ACAD\_ZEROLENGTHCURVE) \*\*\*

Curve length less than tolerance for DE: 321, TYPE: 106, FORM: 20

\*\*\* Warning (ACAD\_SUBFIGURE\_NAME\_CHANGED) \*\*\*

( DE: 3037 TF: 320:0 )

Subfigure name "LM.FORM.NS2PL" changed to "LM\_FORM\_NS2PL" to make it a valid AutoCAD name.

\*\*\* Warning (ACAD\_SUBFIGURE\_NAME\_CHANGED) \*\*\*

( DE: 2997 TF: 320:0 )

Subfigure name "LM.FORM.NS2F1" changed to "LM\_FORM\_NS2F1" to make it a valid AutoCAD name.

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 2661, TYPE: 230, FORM: 0

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 2671, TYPE: 230, FORM: 0

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 2691, TYPE: 230, FORM: 0

\*\*\* Error (ACAD\_APPROXCURVEERROR) \*\*\*

Internal error 2302 approximating curve at DE: 2719, TYPE: 230, FORM: 0

Drawing Entity (404 Form 0) at DE 2515, with

name = LAYOUT,

size = 22.000000, 17.000000,

units = IN,

was processed in the AutoCAD drawing file: C:\VLA2

#### IGES Entity Summary

Type	Form	Description	Count	Processed	Errors
100	0	Circular Arc	164	164	0
102	0	Composite Curve	8	8	0
106	11	Planar Piecewise Linear Curve	17	17	0
106	12	Piecewise Linear Curve	21	21	0
106	20	Centerline Through Points	24	24	0
106	31	Section Entity	4	4	0
106	40	Witness Line	27	27	0
108	0	Plane (Unbounded)	44	44	0
110	0	Line	669	669	0
116	0	Point	21	21	0
126	0	Rational B-Spline Curve (General)	19	19	0
202	0	Angular Dimension	12	12	0
206	0	Diameter Dimension	1	1	0
210	0	General Label	20	20	0
212	0	General Note (Simple)	148	148	0
212	2	General Note (Font change)	5	5	0

212	4 General Note (Subscript)	2	2	0
212	7 General Note (Center justified)	146	146	0
212	8 General Note (Right justified)	1	1	0
214	3 Leader (Filled triangle)	58	58	0
216	0 Linear dim - undetermined form	6	6	0
228	3 General Symbol (Feature Ctrl Fr.)	6	6	0
230	0 Section Area (Standard Fill)	8	8	0
304	2 Line Font Definition (Pattern)	3	3	0
312	0 Text Display Template (Absolute)	57	57	0
314	0 Color Definition	4	4	0
320	0 Network Subfigure Definition	4	4	0
402	1 Group (Unordered, w/back ptrs)	5	5	0
402	3 Views Visible	19	19	0
402	19 Segmented Views Visible	42	42	0
404	0 Drawing (form 0)	3	3	0
406	15 Property (Name)	14	14	0
406	16 Property (Drawing Size)	3	3	0
406	17 Property (Drawing Units)	3	3	0
410	0 View	11	11	0
420	0 Network Subfigure Instance	6	6	0
		=====	=====	=====
Totals		1605	1605	0

AutoCAD Entity Summary

Entity	Created	Errors
=====	=====	=====
LINE	968	0
POINT	21	0
CIRCLE	65	0
TEXT	353	0
ARC	99	0
SOLID	20	0
INSERT	90	0
POLYLINE	79	0
DIMENSION	19	0
BLOCK	88	0
Totals	=====	=====
	1802	0

Error Summary:

The following message was issued 65 time(s)  
Entity has zero length. Start point: %.7e, %.7e. Terminate point: %.7e, %.7e.

The following message was issued 4 time(s)  
Entity's points are not directionally colinear. All vectors formed by  
consecutive points must be in the same direction.

The following message was issued 35 time(s)  
Entity has a column which is not a unit vector.

The following message was issued 1 time(s)  
Curve length less than tolerance for DE: %d, TYPE: %d, FORM: %d

The following message was issued 8 time(s)  
Internal error %d approximating curve at DE: %d, TYPE: %d, FORM: %d

The following message was issued 4 time(s)  
Subfigure name "%s" changed to "%s" to make it a valid AutoCAD name.

Status: 0  
Warning: 109  
Error: 8  
Fatal: 0

Elapsed Time:

Processor: 00:01:24  
Clock: 00:01:24

=====

### 9.1.3 Parser Log - IGESWorks

International TechneGroup Incorporated  
Validation Logfile

Date: Thursday May 19, 1994, 10:33 AM  
Model: vla.igs

\*\*\*\*\* Validation Parameters \*\*\*\*\*

TOLERANCE CONFIGURATION VALUES  
-----

ZERO\_TOL = 1.000000e-13  
MODEL\_SPACE\_PNT\_COIN\_TOL = 1.000000e-03  
EPSILON\_TOL = 1.000000e-08  
PARM\_SPACE\_PNT\_COIN\_TOL = 1.000000e-08  
ISO\_PARM\_CURVE\_TOL = 1.000000e-08  
NON\_CONV\_TOL = 1.000000e-12  
KNOT\_COIN\_TOL = 1.000000e-10  
SAME\_INTER\_TOL = 1.000000e-12  
PARALLEL\_LINES\_TOL = 1.000000e-07  
ANGLE\_COIN\_TOL = 1.000000e-05  
PNT\_PROJ\_TOL = 1.000000e-07  
COLIN\_TOL = 1.000000e-07  
COPLANAR\_TOL = 1.000000e-08  
ZERO\_NORMAL\_TOL = 1.000000e-06  
SAME\_TANGENT\_TOL = 1.000000e-04  
SAME\_CURVATURE\_TOL = 1.000000e-04  
SAME\_DERIVATIVE\_TOL = 1.000000e-03  
SINGULAR\_TOL = 1.000000e-10  
MODEL\_LINEAR\_APPROX\_TOL = 1.000000e-03

\*\*\*\*\* Entity Listing Before Validation \*\*\*\*\*

Count	Type	Form	Description
----	----	----	-----
164	100	0	Circular Arc
8	102	0	Composite Curve
17	106	11	Planar Piecewise Linear Curve
21	106	12	Piecewise Linear Curve
24	106	20	Centerline Through Points
4	106	31	Section Entity
27	106	40	Witness Line
44	108	0	Plane (Unbounded)
669	110	0	Line
21	116	0	Point

41	124	0	Transformation Matrix
13	126	0	Rational B-Spline Curve (General)
12	202	0	Angular Dimension
1	206	0	Diameter Dimension
20	210	0	General Label
148	212	0	General Note (Simple)
5	212	2	General Note (Font change)
2	212	4	General Note (Subscript)
146	212	7	General Note (Center justified)
1	212	8	General Note (Right justified)
58	214	3	Leader (Filled triangle)
6	216	0	Linear dim - undetermined form
6	228	3	General Symbol (Feature Ctrl Fr.)
8	230	0	Section Area (Standard Fill)
3	304	2	Line Font Definition (Pattern)
57	312	0	Text Display Template (Absolute)
9	314	0	Color Definition
4	320	0	Network Subfigure Definition
5	402	1	Group (Unordered, w/back ptrs)
19	402	3	Views Visible
42	402	19	Segmented Views Visible
3	404	0	Drawing (form 0)
28	406	5	Property (Line Widening)
14	406	15	Property (Name)
3	406	16	Property (Drawing Size)
3	406	17	Property (Drawing Units)
11	410	0	View
6	420	0	Network Subfigure Instance

1673 - Number of entities in selection list

\*\*\*\*\* Key to Validation Level Descriptions \*\*\*\*\*

Severity 4 - Explicit Error  
Severity 3 - Implicit Error  
Severity 2 - Explicit Warning  
Severity 1 - Implicit Warning

\*\*\*\*\* Entity Validation \*\*\*\*\*

===== Entities Which Were Corrected =====

===== Entities Which Were Not Corrected =====

\*\*\* Severity 4 (IEVM\_BAD\_DE\_MATRIX\_PTR) \*\*\*

This entity references a Transformation Matrix entity (124) in its DE section. The Transformation Matrix entity (whose DE number is %ld) being referenced does not conform to IGES. Refer to other validation messages based on the Transformation Matrix Entity's DE number to determine the exact cause of the problem.

Type:Form	DE #
-----	----
100:0	205, 229, 231, 233, 235, ...
210:0	1321, 1327
410:0	45, 59, 111, 123

This occurred on 136 entities

\*\*\* Severity 4 (IEVM\_ZERO\_LENGTH\_ARC\_100) \*\*\*

This Circular Arc Entity (Type 100) has an effective zero length within the stated tolerance. Start point: %.7e, %.7e. Terminate point: %.7e, %.7e.

Type:Form	DE #
-----	----
100:0	205, 445, 451, 455, 459, ...

This occurred on 65 entities

\*\*\* Severity 4 (IEVM\_FIRST\_NOT\_COLINEAR\_106) \*\*\*

The first 3 data points in this Witness Line Entity (106:40) are not directionally colinear within the stated tolerance. All vectors formed by consecutive points must be in the same direction.

Type:Form	DE #
-----	----
106:40	819, 821, 2213, 2215

This occurred on 4 entities

\*\*\* Severity 4 (IEVM\_BAD\_VECTOR\_124) \*\*\*

This Transformation Matrix entity (124) has a a column that is not a unit vector within the stated tolerance.

Type:Form	DE #
-----	----
124:0	35, 49, 203, 227, 249, ...

This occurred on 35 entities

\*\*\* Severity 4 (IEVM\_BAD\_SUBENT\_216) \*\*\*

This Linear Dimension entity (216) references an entity (DE %ld) that failed validation.

Type:Form	DE #
-----	----
216:0	823, 823, 2217, 2217

This occurred on 4 entities

---

\*\*\* Severity 4 (IEVM\_BAD\_VIEW\_SUBENT\_402\_19) \*\*\*

This Associativity Instance Segmented Views Visible entity (402:19) references a View entity (Index 2, 8, etc. of Parameter Data) (DE %ld in block %ld) that failed validation.

Type:Form	DE #
-----	----
402:19	545, 545, 545, 549, 549, ...

This occurred on 144 entities

\*\*\* Severity 2 (IEVM\_BAD\_DE\_VIEW\_PTR) \*\*\*

This entity references a View entity (410) in its DE section. The View entity (whose DE number is %ld) being referenced does not conform to IGES. Refer to other validation messages based on the View Entity's DE number to determine the exact cause of the problem.

Type:Form	DE #
-----	----
100:0	593, 721, 831, 1175, 1203, ...
110:0	547, 551, 555, 589, 685, ...

This occurred on 42 entities

\*\*\* Severity 2 (IEVM\_BAD\_PLANAR\_FLAG\_126) \*\*\*

This Rational B-Spline Curve entity's (126) Planar/Nonplanar property flag (Index 3 of Parameter Data) incorrectly specifies the entity as nonplanar. The entity is planar within the specified tolerance.

Type:Form	DE #
-----	----
126:0	1337, 1339, 1391, 1393, 1751, ...

This occurred on 7 entities

\*\*\* Severity 2 (IEVM\_BAD\_NONPLANAR\_FLAG\_126) \*\*\*

This Rational B-Spline Curve entity's (126) Planar/Nonplanar property flag (Index 3 of Parameter Data) incorrectly specifies the entity as planar. The entity is nonplanar within the specified tolerance.

Type:Form	DE #
-----	----
126:0	2653, 2655, 2657, 2663, 2665, ...

This occurred on 6 entities

\*\*\* Severity 2 (IEVM\_BAD\_VIEW\_SUBENT\_402\_3) \*\*\*

This Associativity Instance Views Visible entity (402:3) has a View Entity pointer (Index 3 through 2+N1 of Parameter Data) that references an entity (DE %ld) that failed validation.

Type:Form	DE #
-----	----
402:3	183, 183, 183, 447, 447, ...

This occurred on 62 entities

\*\*\* Severity 1 (IEVM\_BAD\_ENT\_PTR\_404) \*\*\*

This Drawing entity (404) has an Annotation Entity pointer that references DE %ld%. This pointer must reference a an Annotation Entity as defined in the DDF.

```

Type:Form      DE #
-----
404:0          2499, 2499, 2499, 2499, 2499, ...
This occurred on 57 entities
    
```

\*\*\* Severity 1 (IEVM\_BAD\_SUBENT\_404) \*\*\*

This Drawing entity (404) references an entity (DE %ld) that failed validation.

```

Type:Form      DE #
-----
404:0          2499, 2499, 2499, 2499, 2499, ...
This occurred on 9 entities
    
```

\*\*\*\*\*

Entity Validation Summary:

Type	Form	Entity Count	Number Valid	Number of Corrected		Number of Uncorrected	
				Warnings	Errors	Warnings	Errors
Global Section		1	1	0	0	0	0
100	0	164	28	0	0	13	195
102	0	8	8	0	0	0	0
106	11	17	17	0	0	0	0
106	12	21	21	0	0	0	0
106	20	24	24	0	0	0	0
106	31	4	4	0	0	0	0
106	40	27	23	0	0	0	4
108	0	44	44	0	0	0	0
110	0	669	640	0	0	29	0
116	0	21	21	0	0	0	0
124	0	41	6	0	0	0	35
126	0	13	0	0	0	13	0
202	0	12	12	0	0	0	0
206	0	1	1	0	0	0	0
210	0	20	18	0	0	0	2
212	0	148	148	0	0	0	0
212	2	5	5	0	0	0	0
212	4	2	2	0	0	0	0
212	7	146	146	0	0	0	0
212	8	1	1	0	0	0	0
214	3	58	58	0	0	0	0
216	0	6	4	0	0	0	4
228	3	6	6	0	0	0	0

---

230	0	8	8	0	0	0	0
304	2	3	3	0	0	0	0
312	0	57	57	0	0	0	0
314	0	9	9	0	0	0	0
320	0	4	4	0	0	0	0
402	1	5	5	0	0	0	0
402	3	19	0	0	0	62	0
402	19	42	0	0	0	0	144
404	0	3	0	0	0	66	0
406	5	28	28	0	0	0	0
406	15	14	14	0	0	0	0
406	16	3	3	0	0	0	0
406	17	3	3	0	0	0	0
410	0	11	7	0	0	0	4
420	0	6	6	0	0	0	0
<hr style="border-top: 1px dashed black;"/>							
Totals:	1674	1385	0	0	183	388	

## 9.1.4 Error Log - Preview

ERROR REPORT FOR FILE /novell/94055/vla.igs

>> File record length is 81 (1 record terminator used)

Terminate section report :

File Section	#lines
START	1
GLOBAL	4
DIRECTORY ENTRY	3346
PARAMETER DATA	3734
TERMINATE	1
TOTAL	7086

(Expect 81 X 7086 = 573966 bytes)

----- preliminary format scan complete -----

>> WARNING: Cannot use maximum power of 10 requested.  
: Requested maximum power of 308 using 307.  
: Field 11 line 2 of GLOBAL section. (Max. Exp. for Double)  
n,34HCADDS-IGES REVISION 7.0 (1-Apr-93),32,38,6,308,14,18He.3322.620.620G 2  
^^^

-----  
>> ERROR: Unsupported ASSOCIATIVITY INST entity form 19. (entity DELETED)  
: Entity #273, DE entry #545.  
-----

>> WARNING: Premature end of record.  
: Reading entity #273, DE entry #545 type ASSOCIATIVITY INST.  
: Field 28, line 559 of PARAMETER DATA section.  
1.0,0,,,123,1.0,0,,,137,1.0,0,,,149,1.0,0,,,163,1.0,0,,,; 545P 559  
-----

>> WARNING: Error in pointer to DE Section (replaced with 0).  
: Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.  
: Field 3, line 610 of PARAMETER DATA section.  
402,12,31,6.2831854820251,0,,,45,6.2831854820251,0,,,59, 591P 610  
^^^^^^^^^^^^^^^^^^

-----  
>> WARNING: Error in pointer to DE Section (replaced with 0).  
: Reading entity #296, DE entry #591 type ASSOCIATIVITY INST.  
: Field 9, line 610 of PARAMETER DATA section.  
402,12,31,6.2831854820251,0,,,45,6.2831854820251,0,,,59, 591P 610  
^^^^^^^^^^^^^^^^^^



---

>> WARNING: Error in pointer to DE Section (replaced with 0). : Reading entity #1211, DE entry #2421 type ASSOCIATIVITY INST. : Field 9, line 2880 of PARAMETER DATA section.

402,10,31,6.2831854820251,0,,,,45,4.8046808  
242798,1,,,,45, 2421P 2880  
^^^^^^^^^^^^^^^^^^^^

-----  
>> WARNING: 42 dangling entities inactivated in consistency check :

Entity # 274, type LINE.  
Entity # 276, type LINE.  
Entity # 278, type LINE.  
Entity # 295, type LINE.  
Entity # 297, type CIRCULAR ARC.  
Entity # 343, type LINE.  
Entity # 345, type LINE.  
Entity # 347, type LINE.  
Entity # 349, type LINE.  
Entity # 351, type LINE.  
Entity # 354, type LINE.  
Entity # 361, type CIRCULAR ARC.  
Entity # 368, type LINE.  
Entity # 416, type CIRCULAR ARC.  
Entity # 588, type CIRCULAR ARC.  
Entity # 602, type CIRCULAR ARC.  
Entity # 622, type CIRCULAR ARC.  
Entity # 642, type LINE.  
Entity # 644, type LINE.  
Entity # 648, type CIRCULAR ARC.  
Entity # 709, type CIRCULAR ARC.  
Entity # 712, type LINE.  
Entity # 719, type LINE.  
Entity # 795, type LINE.  
Entity # 815, type LINE.  
Entity # 828, type LINE.  
Entity # 837, type CIRCULAR ARC.  
Entity # 839, type LINE.  
Entity # 843, type LINE.  
Entity # 880, type LINE.  
Entity # 885, type LINE.  
Entity # 890, type LINE.  
Entity # 892, type LINE.  
Entity # 901, type LINE.  
Entity # 1006, type LINE.  
Entity # 1008, type LINE.  
Entity # 1011, type CIRCULAR ARC.  
Entity # 1013, type LINE.

Entity # 1015, type LINE.  
Entity # 1020, type CIRCULAR ARC.  
Entity # 1210, type CIRCULAR ARC.  
Entity # 1212, type CIRCULAR ARC.

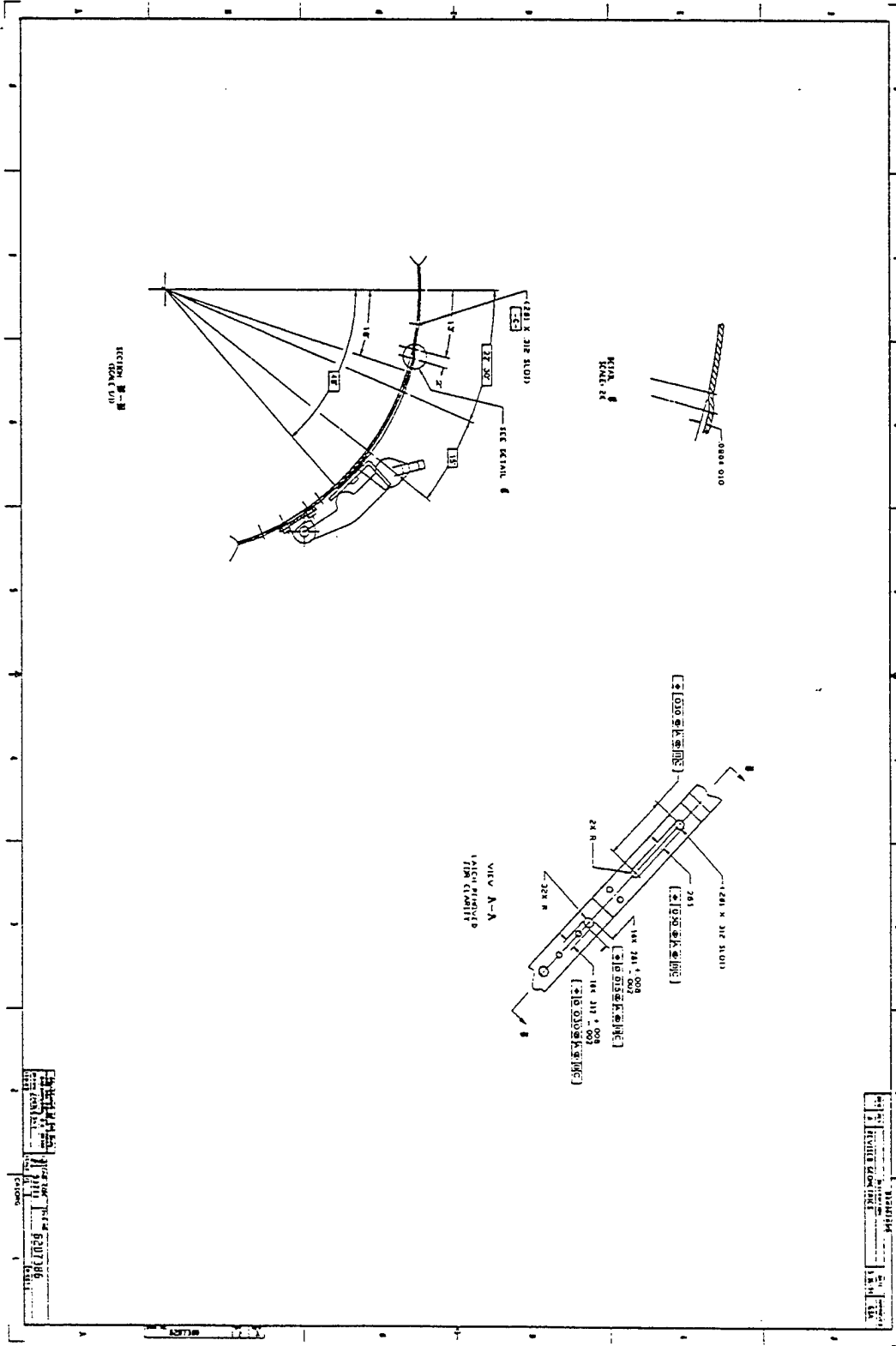
---

42 entities were deleted due to read errors

Found 87 errors and 44 warnings



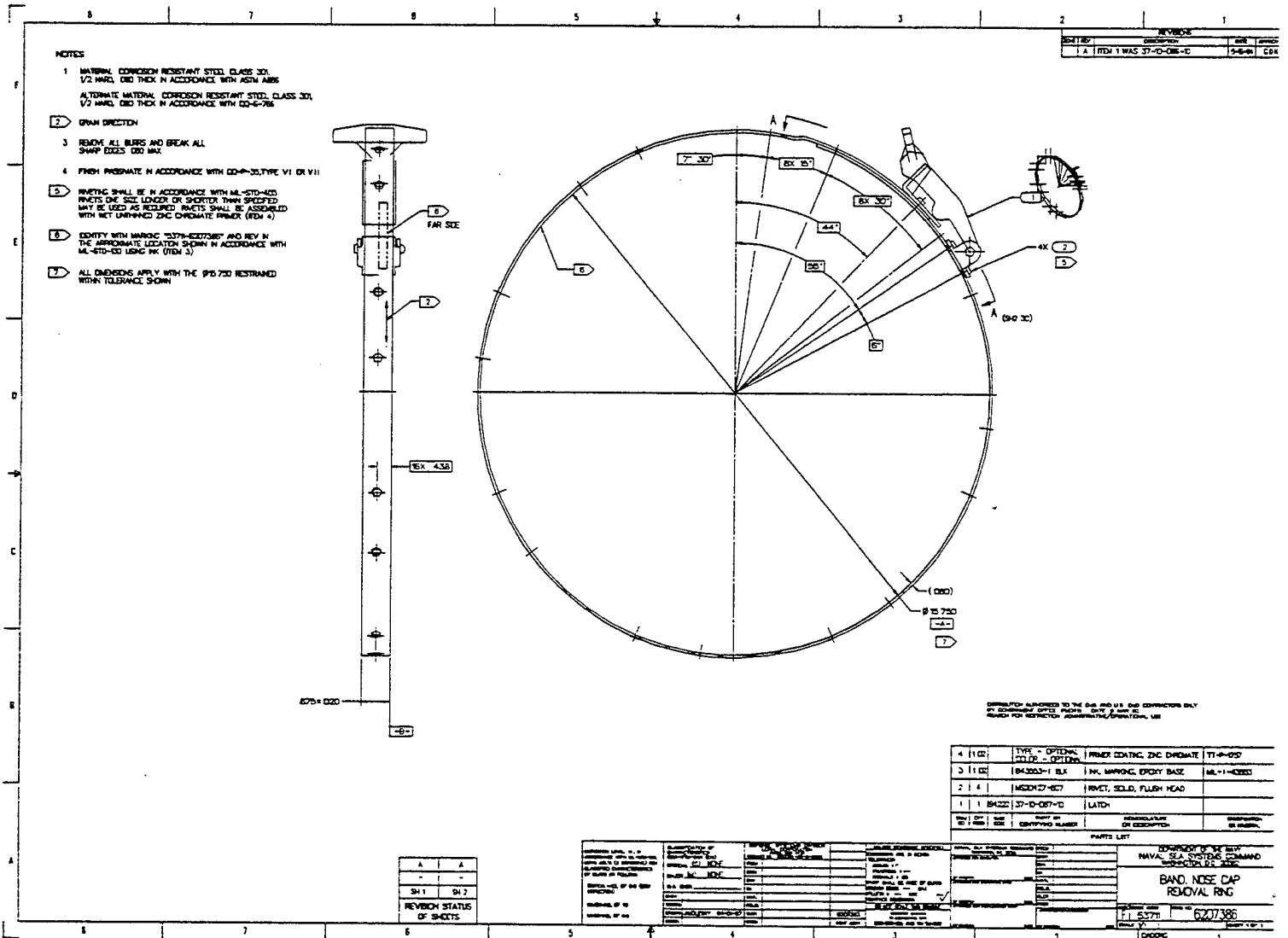
### 9.1.6 Output AutoCAD R12 - Drawing 2



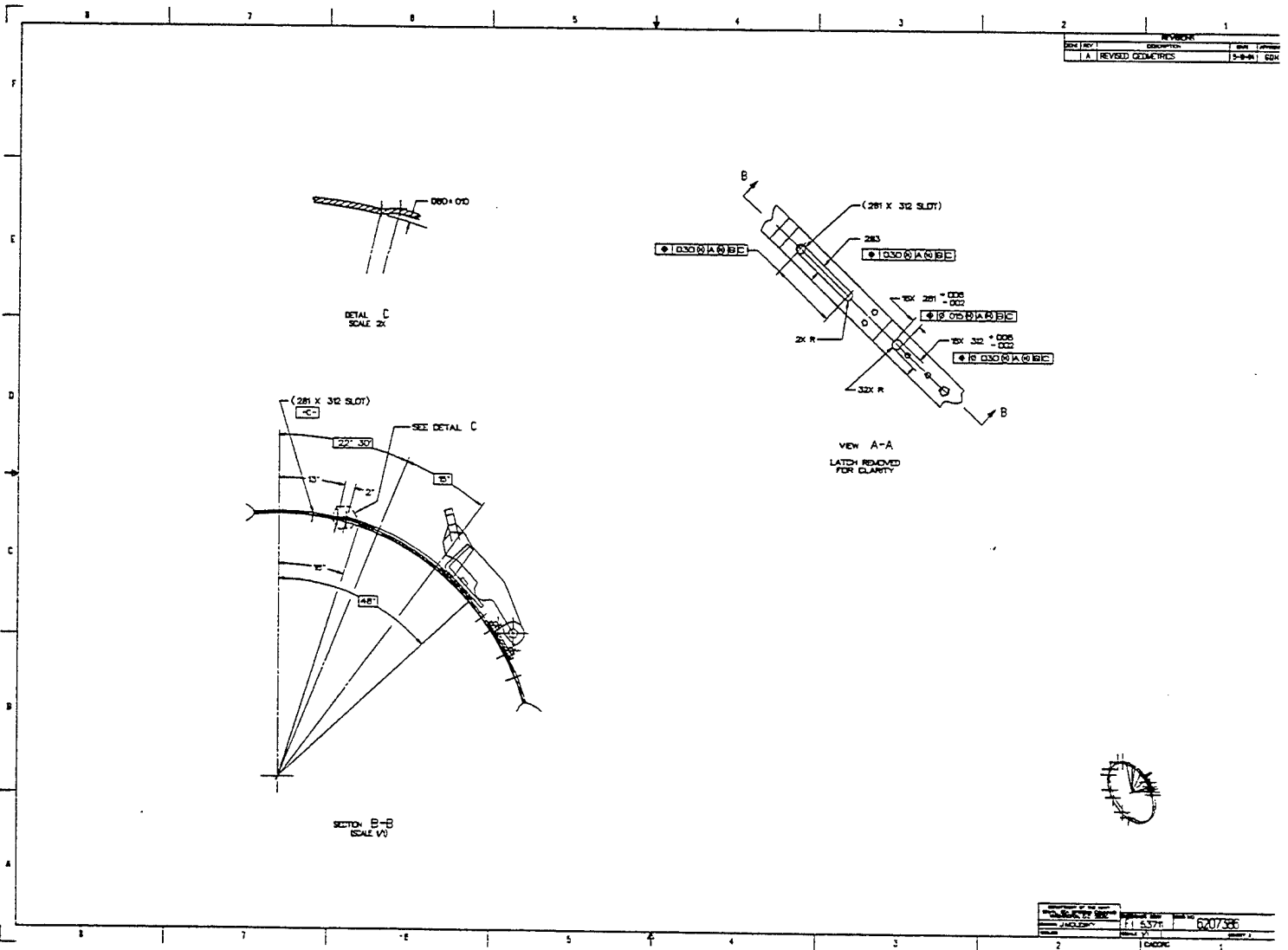




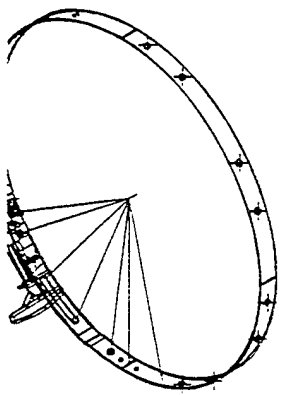
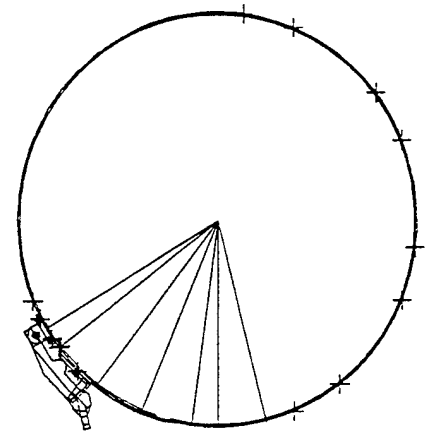
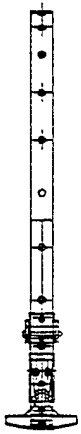
### 9.1.9 Output IGESView - Drawing 1



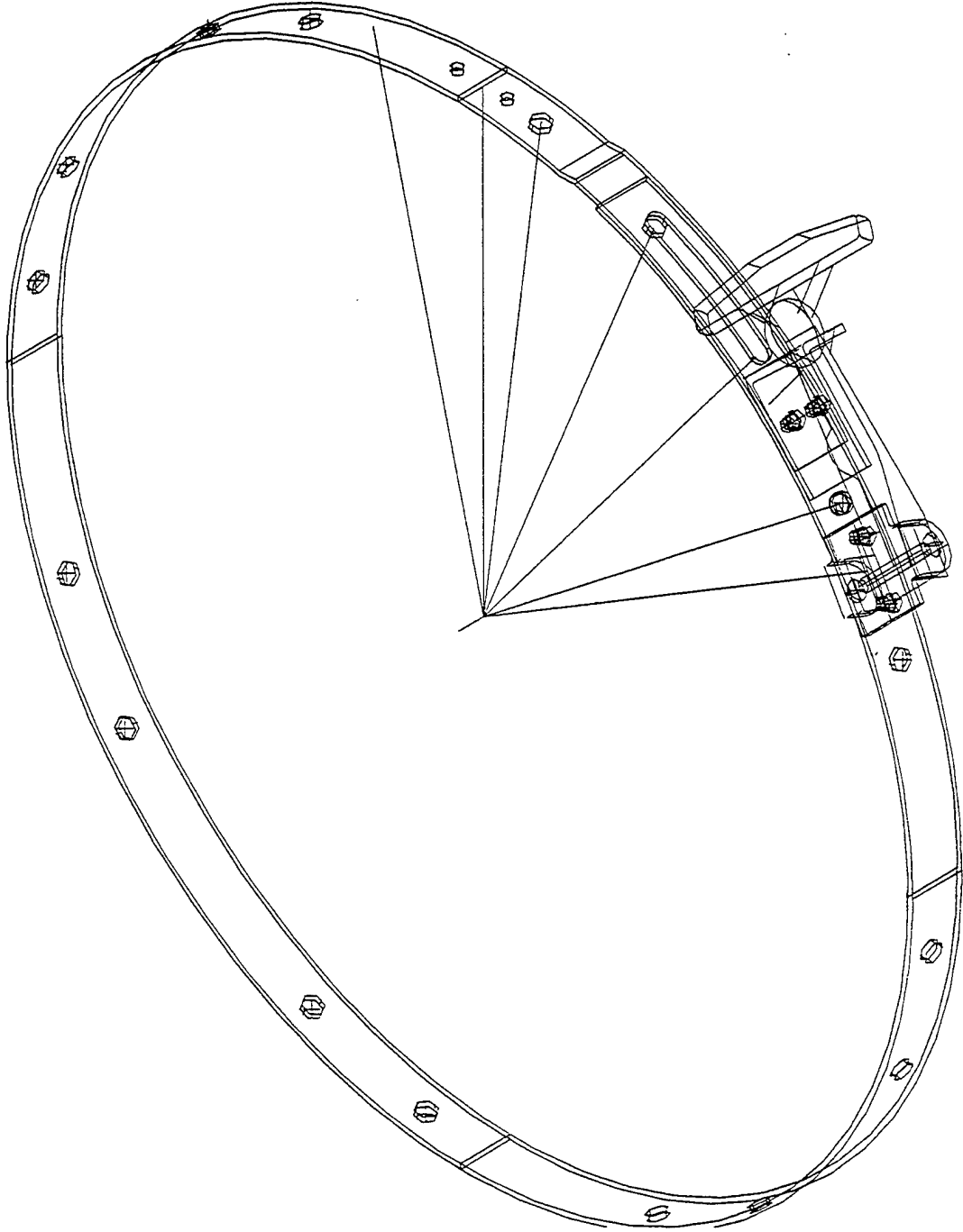
### 9.1.10 Output IGESView - Drawing 2



### 9.1.11 Output IGESView - Layout



9.1.12 Output IGESView - ISO



### 9.1.13 Output IGESWorks

