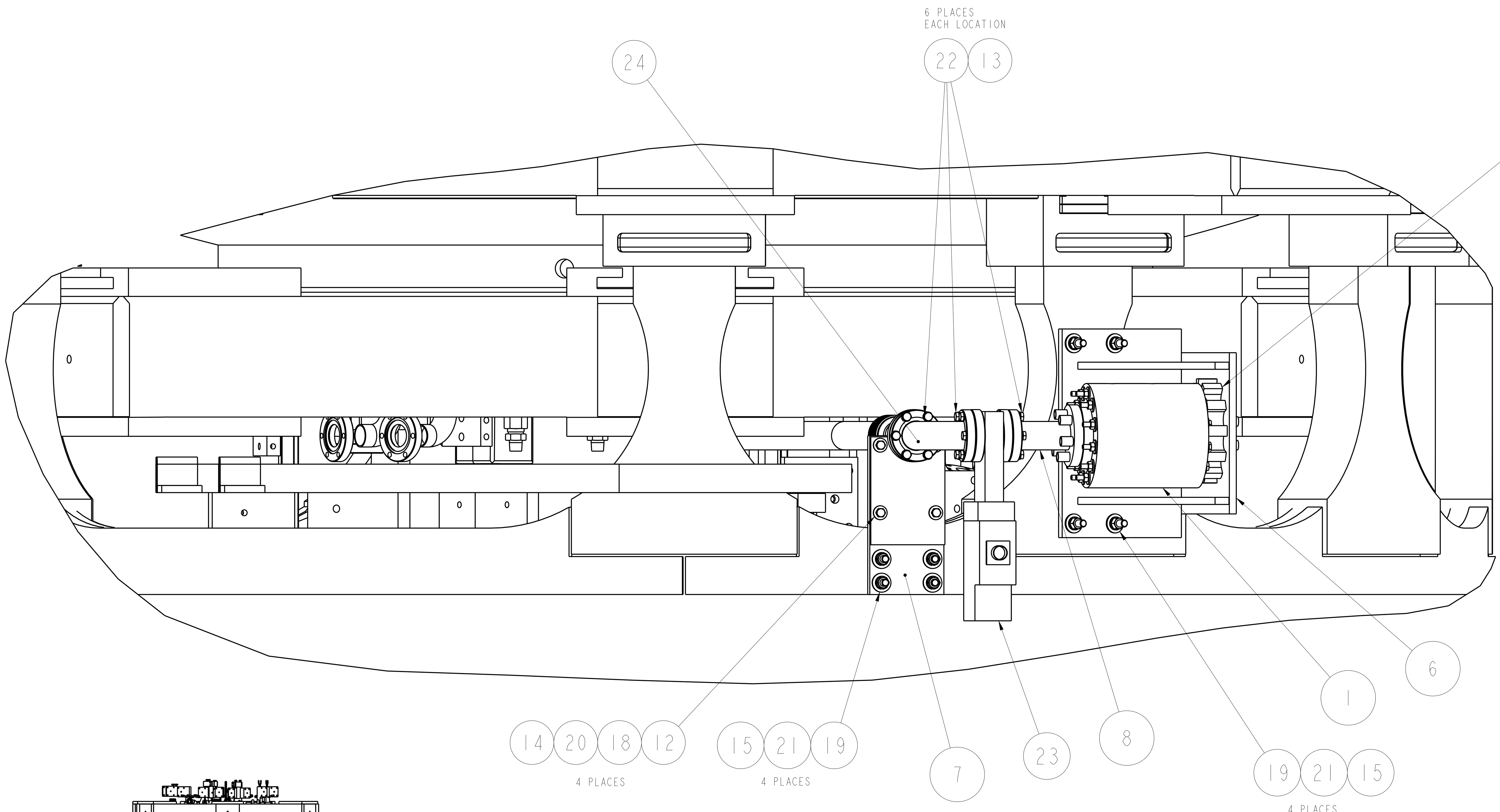
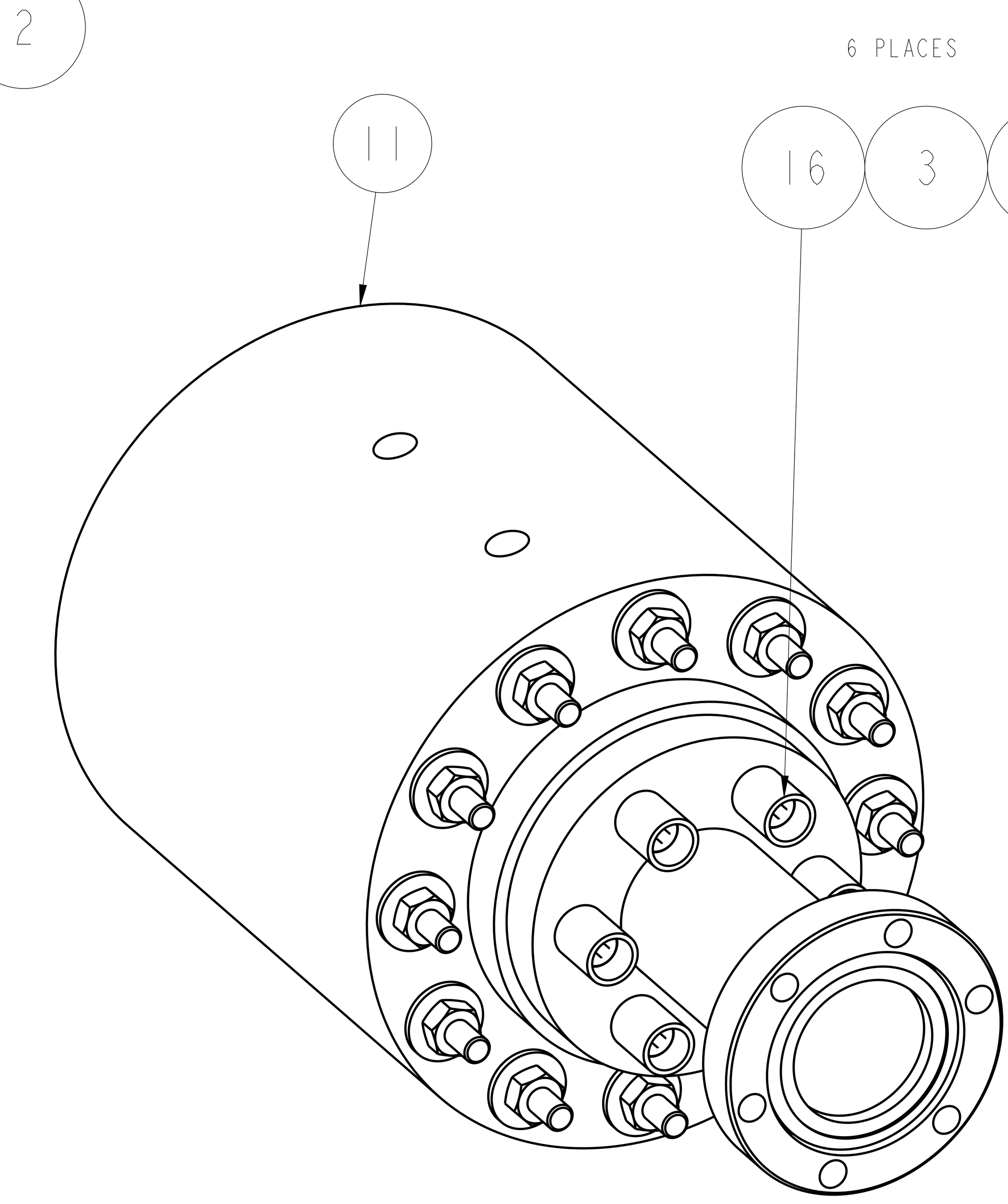
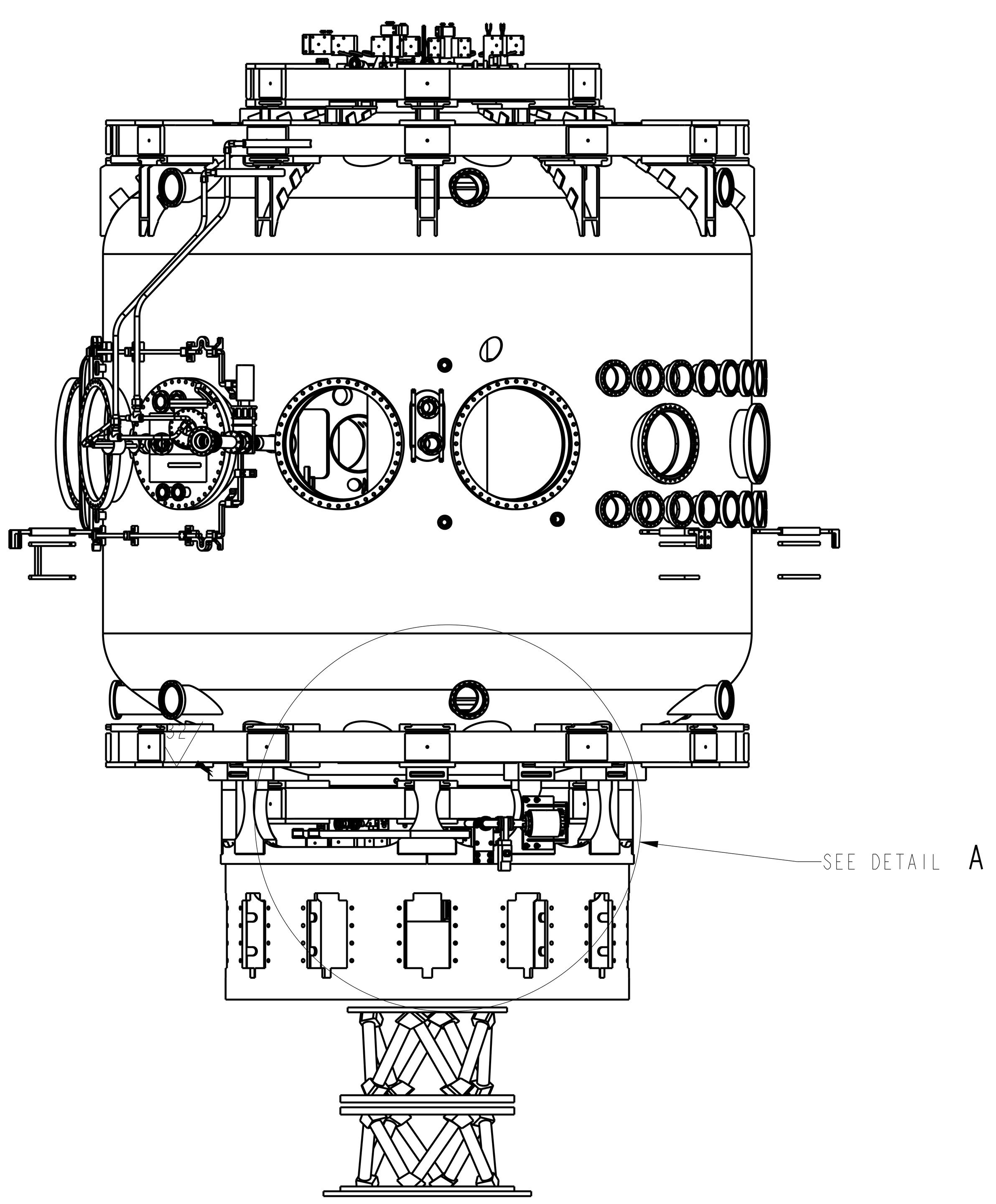


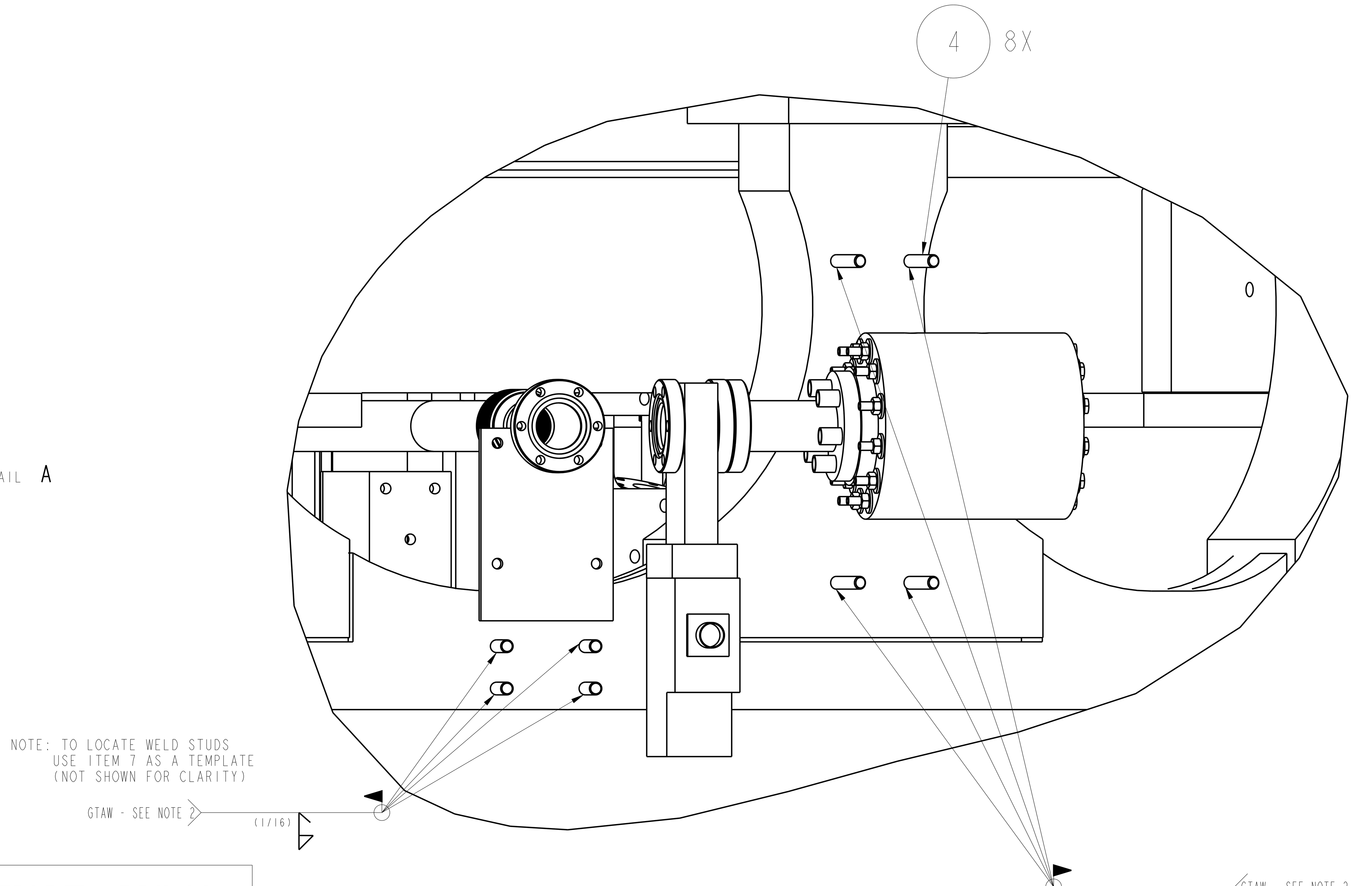
DETAIL A
SCALE 0.375



1 LOWER MGI VALVE ASSEMBLY
SCALE 1.000



SCALE 0.050



WELD STUD VIEW
(SOME PARTS OMITTED FOR CLARITY)
SCALE 0.500

NOTES:

1. FOR ASSEMBLY AND INSTALLATION REFER TO PROCEDURE D-NSTX-IP-3637.
2. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF AWS D1.6 AND PPPL PROCEDURE ENG-037 . VISUAL WELD INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ACCEPTANCE CRITERIA OF AWS D1.6.
3. MAGNETIC PERMEABILITY, FOR S/S PARTS, AS DETERMINED WITH A SEVERN GAUGE SHALL NOT EXCEED THE FOLLOWING:
   BASE MATERIAL: 1.04mu
   MACHINED: 1.2mu
   WELDED: 2.0mu

RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting: Lewis Morris
Digitally signed by Lewis Morris DN: cn=Lewis Morris, o, ou, email=lmorris@pppl.gov, c=US Date: 2014.10.21 09:29:05 -04'00'

NO.	REVISION	BY	CH	SUP	APPROVED	DATE

01 ASSY	PART NO.	DRAWING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY REQD
1	24	NS151621	ELBOW, 90°, 2.75 OD CONFLAT	STN STL	
1	23	NS156150	PNEUMATIC VALVE, 1 1/2" PORT, 2 3/4 CF FLG, MDC 301001 OR EQ	———	
24	22	NS151317	1/4 FLAT WASHER, REDUCED OD	316 SS	
8	21	151339	3/8 SPLIT LOCK WASHER	316 SS	
4	20	151333	1/4 SPLIT LOCK WASHER	316 SS	
8	19	151319	3/8 FLAT WASHER	316 SS	
4	18	151317	1/4 FLAT WASHER	316 SS	
4	17	150812	1/4-28 UNF-2A x 2 LG HEX SOC HD CAP SCREW	316 SS	
6	16	150811	1/4-28 UNF-2A x 1 1/2 LG HEX SOC HD CAP SCREW	316 SS	
8	15	150260	3/8-16 UNC-2B HEX NUT	316 SS	
4	14	150258	1/4-20 UNC-2B HEX NUT	316 SS	
24	13	150070	1/4-28 UNF-2A x 1" LG HEX HEAD BOLT	316 SS	
4	12	150032	1/4-20 UNC-2A x 1 1/2 LG HEX HEAD BOLT	316 SS	
1	11	E-EA3511-1	MGI VALVE BODY ASSEMBLY (UNIV OF WASH)	———	
4	10	A-EA3508-2	BOLT INSULATOR - TYPE "B"	SEE DWG	
6	9	A-EA3508-1	BOLT INSULATOR - TYPE "A"	SEE DWG	
1	8	E-EA3506-01	MGI VALVE ADAPTER SPOOL PIECE WELDMENT	SEE DWG	
1	7	E-EA3504-8	LOWER MGI VALVE SPLIT CLAMP - TYPE "A"	G-10	
1	6	E-EA3504-02	LOWER MGI VALVE SUPPORT BRACKET WELDMENT	SEE DWG	
1	5	E-EA3504-01	LOWER MGI VALVE FEED TUBE WELDMENT	SEE DWG	
8	4	E-EA3502-10	3/8-16UNC-2A x 1 1/2" LG THREADED WELD STUD	316 SS	
10	3	E-EA3502-9	#6 SAE FLAT WASHER - MODIFIED	SEE DWG	
1	2	E-EA3502-8	MGI VALVE INSULATING SPACER	SEE DWG	
1	1	THIS DWG	LOWER MGI VALVE ASSEMBLY	———	
X	———	THIS DWG	LOWER MGI ASSEMBLY	———	1

PARTS LIST

PRELIMINARY ISSUE - FOR REFERENCE ONLY

GENERAL NOTES

1. PPPL APPROVED DRAWINGS TAKE PRECEDENCE OVER MODEL DIMENSIONS.
2. WHEN MODELS ARE PROVIDED, VENDOR MUST VERIFY THAT MODEL DIMENSIONS CONFORM WITH PPPL APPROVED DRAWINGS PRIOR TO FABRICATION.

MAGNETIC PERMEABILITY REQUIREMENT (SEE NOTES)
YES X NO

RELEASE LEVEL: WIP
DWG VERSION NO: 0.1

WELDING ENGINEER
APPVD: Morgan C. Styer DATE:

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED
Pro E
DO NOT VERIFY INFORMATION BY SCALING DRAWING
SCALE:
NEXT ASSEMBLY

CENTRAL FILES:
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
MACHINE SURFACES 125
BREAK SHARP EDGES .005/.020
TOLERANCES NON-CUMULATIVE

DECIMAL-INCH		FRACTIONS	
.X	±.100	0"-12"	±1/16
.XX	±.030	12"-72"	±1/8
.XXX	±.010	72"-120"	±1/4
ANGULAR	±0°-15'	OVER 120"	±1/2

PRINCETON PLASMA PHYSICS LABORATORY
PRINCETON UNIVERSITY
NATIONAL SPHERICAL TORUS EXPERIMENT

GAS INJECTION SYSTEM
MASSIVE GAS INJECTION SYSTEM
LOWER MGI ASSEMBLY AND INSTALLATION

DIV: MECH. ENG. | DATE: 10/20/2014
ENG: W. BLANCHARD | APPROVED
DSN: J.MITCHELL | W. BLANCHARD
CHK: W. BLANCHARD | CHK WB | SUPV LM

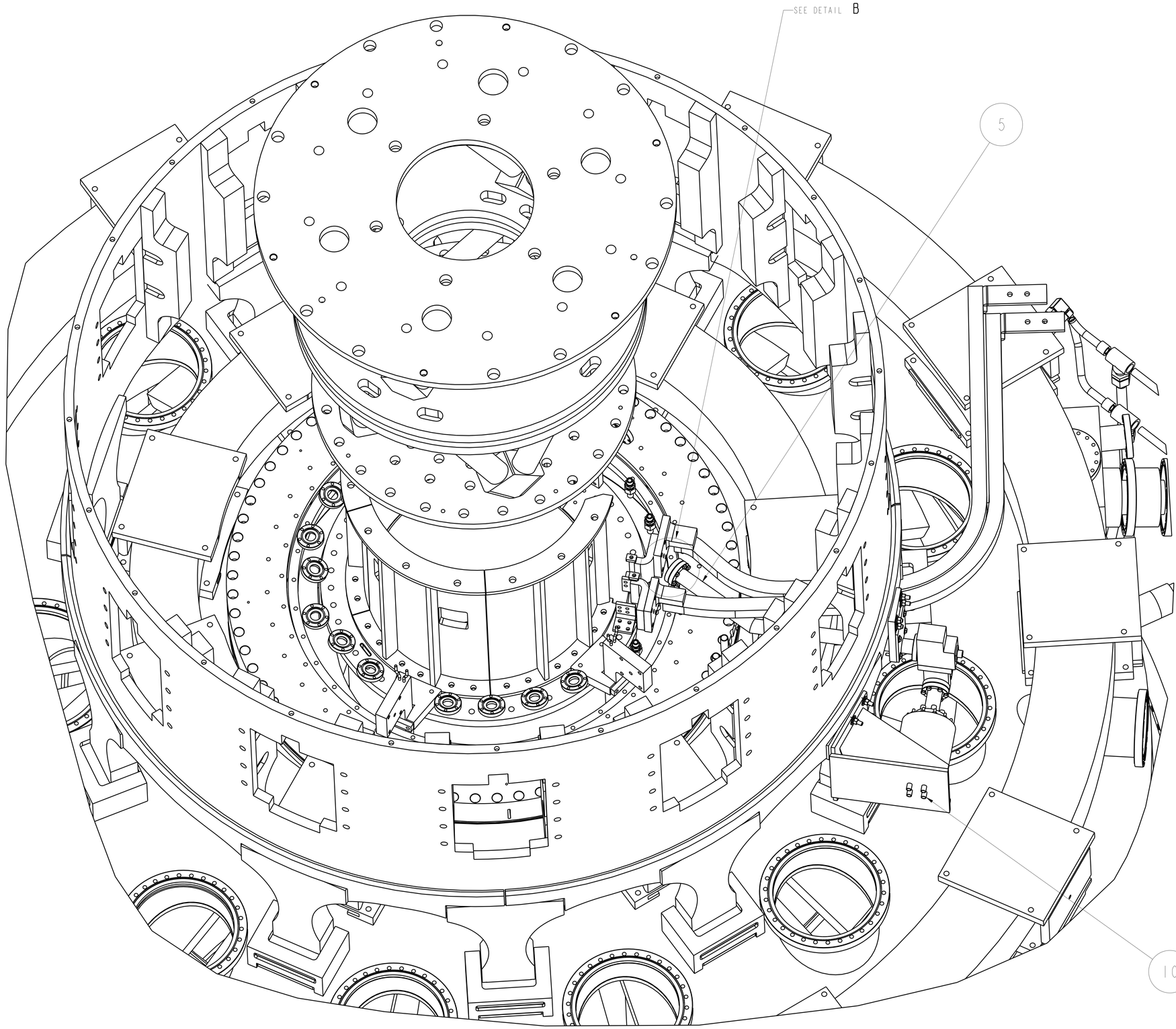
E-EA3511

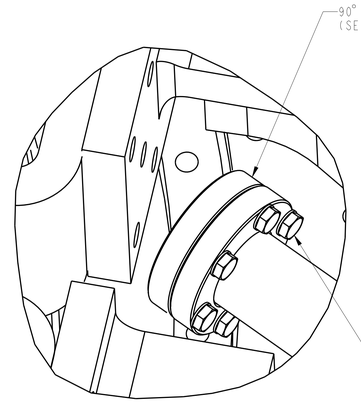
SHEET 1 OF 2 | REV 0

EMI

NSTX-E-EA3511

NO.	REVISION	BY	CH	SUP	APPROVED	DATE





DETAIL B
SCALE 1.000

ISO VIEW LOOKING FROM THE BOTTOM
SCALE 0.250

PRELIMINARY ISSUE - FOR REFERENCE ONLY

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2. WHEN MODELS ARE PROVIDED, VENDOR MUST VERIFY THAT MODEL DIMENSIONS CONFORM WITH PPPL APPROVED DRAWINGS PRIOR TO FABRICATION.

MAGNETIC PERMEABILITY REQUIREMENT (SEE NOTES)

YES [ ] NO [ ]

RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting: Lewis Morris

RELEASE LEVEL: WIP
DWG VERSION NO: 0.1

WELDING ENGINEER
APPVD: DATE:

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED
Pro E
DO NOT VERIFY INFORMATION BY SCALING DRAWING
SCALE:
NEXT ASSEMBLY

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UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
MACHINE SURFACES 125
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DECIMAL-INCH		FRACTIONS	
.X	±.100	0°-12°	±1/16
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.XXX	±.010	72°-120°	±1/4
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LOWER MGI ASSEMBLY AND INSTALLATION

DIV: MECH. ENG. DATE: 10/20/2014
ENG: W. BLANCHARD APPROVED
DSN: J. MITCHELL W. BLANCHARD
CHK: W. BLANCHARD CHK WM SUPV LM

E-EA3511

SHEET 2 OF 2 REV 0

NSTX E-EA3511