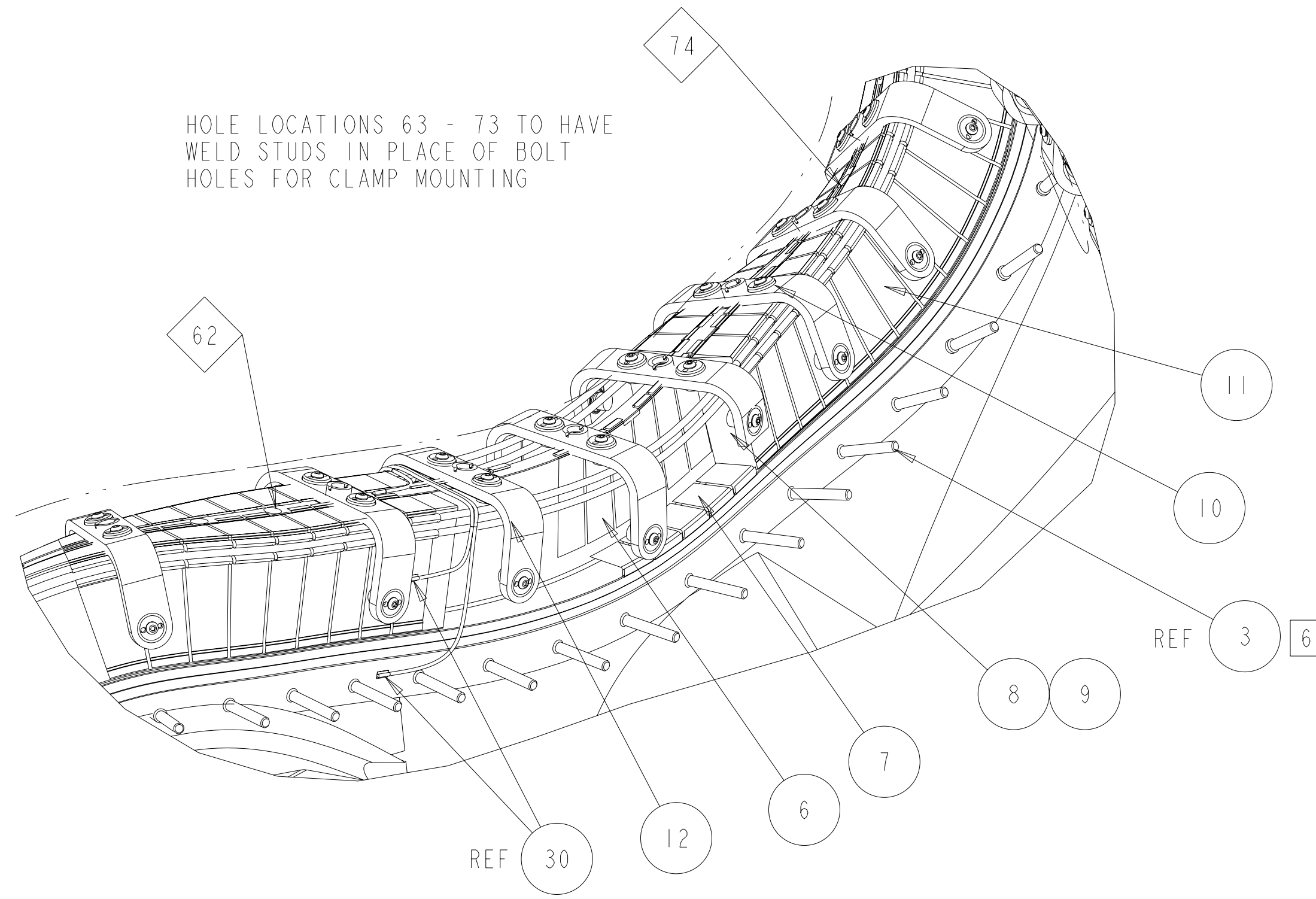
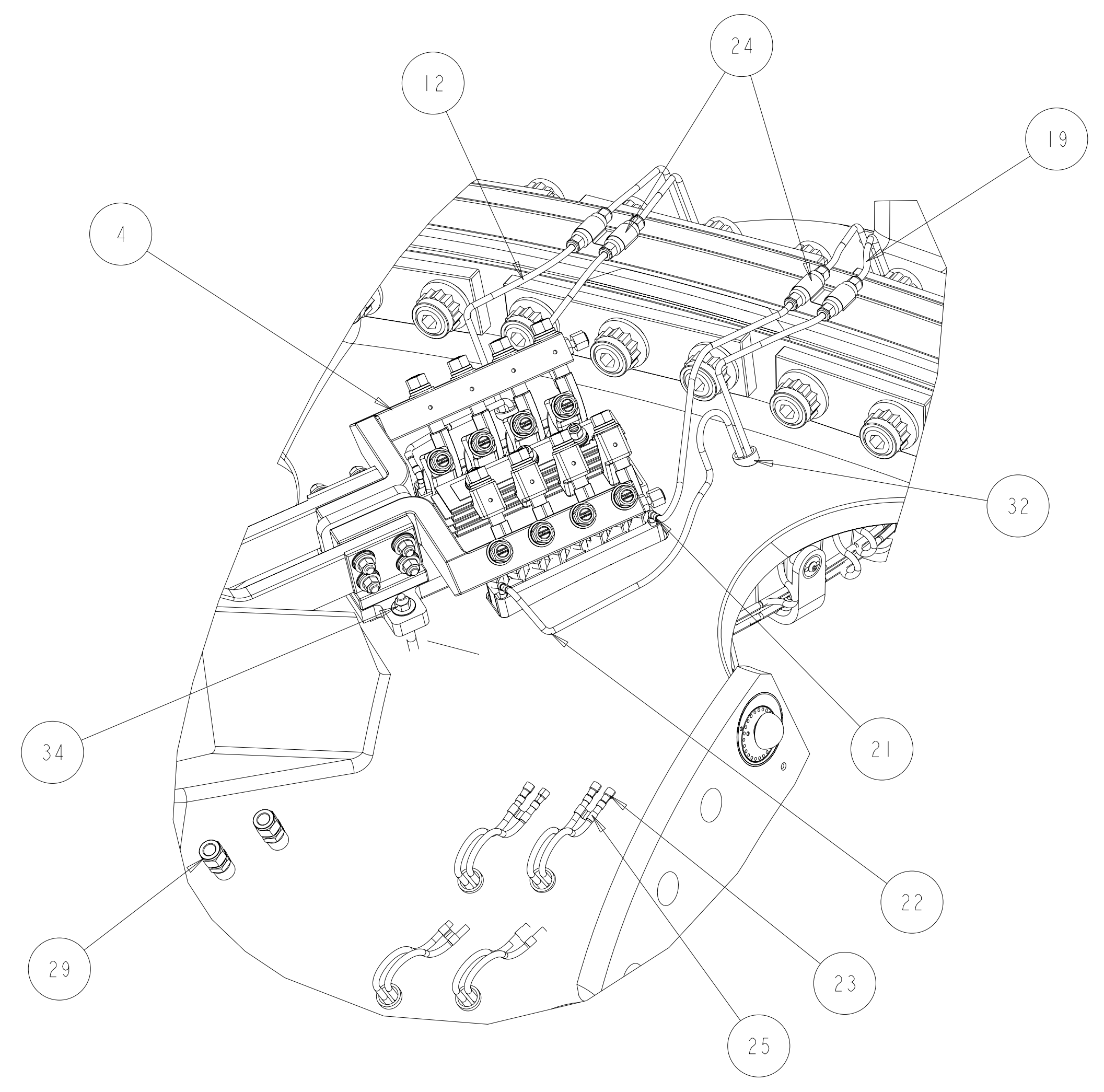


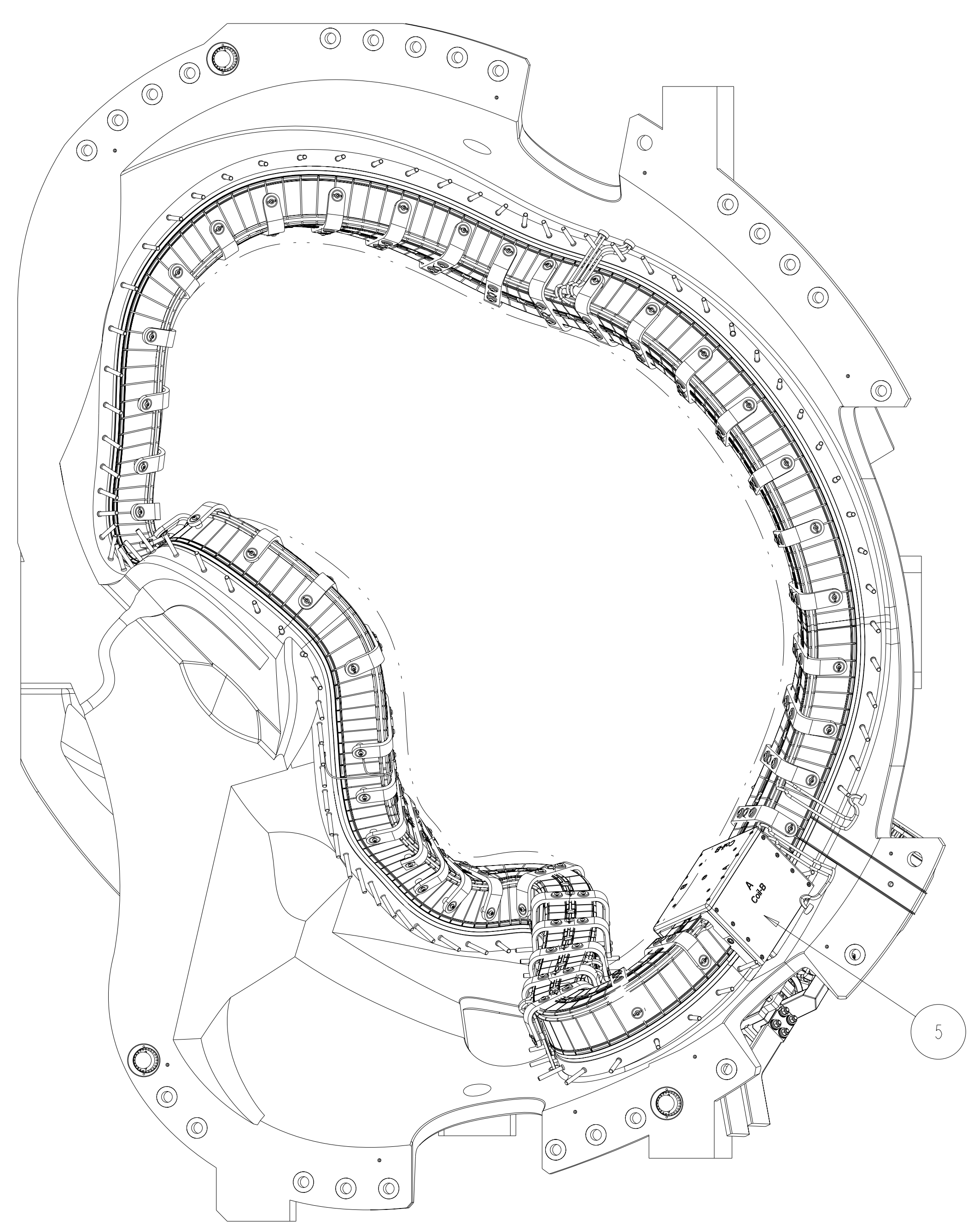
- NOTES:
- DRAWING PREPARED IN ACCORDANCE WITH ASME Y14.100-2000.
  - INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M
  - DIMENSIONS ARE IN INCHES
  - DIMENSIONS APPLY AT ROOM TEMPERATURE. OPERATING TEMP 80 K.
  - LEADS AREA SHALL BE COVERED OR SPRAYED WITH AN INSULATING MATERIAL TO PREVENT DEBRIS FROM CAUSING AN ELECTRICAL SHORT DURING OPERATION.
  - OPTIONAL BLANKET INSULATION ASSEMBLY, F/N 18, NOT SHOWN. SEE DRAWING SE122-009 FOR INSTALLATION.
  - SEE LATEST REVISION OF PROCEDURE D-NCSX-MCF-001 FOR ADDITIONAL REQUIREMENTS.
  - WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF PPPL PROCEDURE NO. ENG-037. VISUAL WELD INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ACCEPTANCE CRITERIA OF AWS D1.6.
  - VENDOR INFORMATION: TRULY TUBULAR FITTING CORP  
PO BOX 1160  
MT VERNON, NY 10550  
914-664-8686 OR WWW.TRULYTUBULAR.COM
  - VENDOR INFORMATION: FISO FIBER OPTICS  
500 ST. JEAN BAPTISTE AVE SUITE 195  
QUEBEC QC, G2E 5R CANADA  
418-688-8065 OR WWW.FISO.COM
  - VENDOR INFORMATION: OMEGA ENGINEERING CORP  
ONE OMEGA DRIVE  
STAMFORD, CT 06907  
800-848-4286 OR WWW.OMEGA.COM
  - SOME PARTS IN THIS ASSEMBLY ARE GRAPHIC REPRESENTATIONS OF ACTUAL PARTS/ASSEMBLIES. PART IDENTIFICATION NUMBERS REFER TO ACTUAL PARTS. FOR FULL MODELED ASSEMBLY SEE SE140-102-
  - TYPE "B" COIL: REMOVE NOTED STUDS AFTER CLAMP AND INSULATION BLANKETS ARE ASSEMBLED (POST VPI).



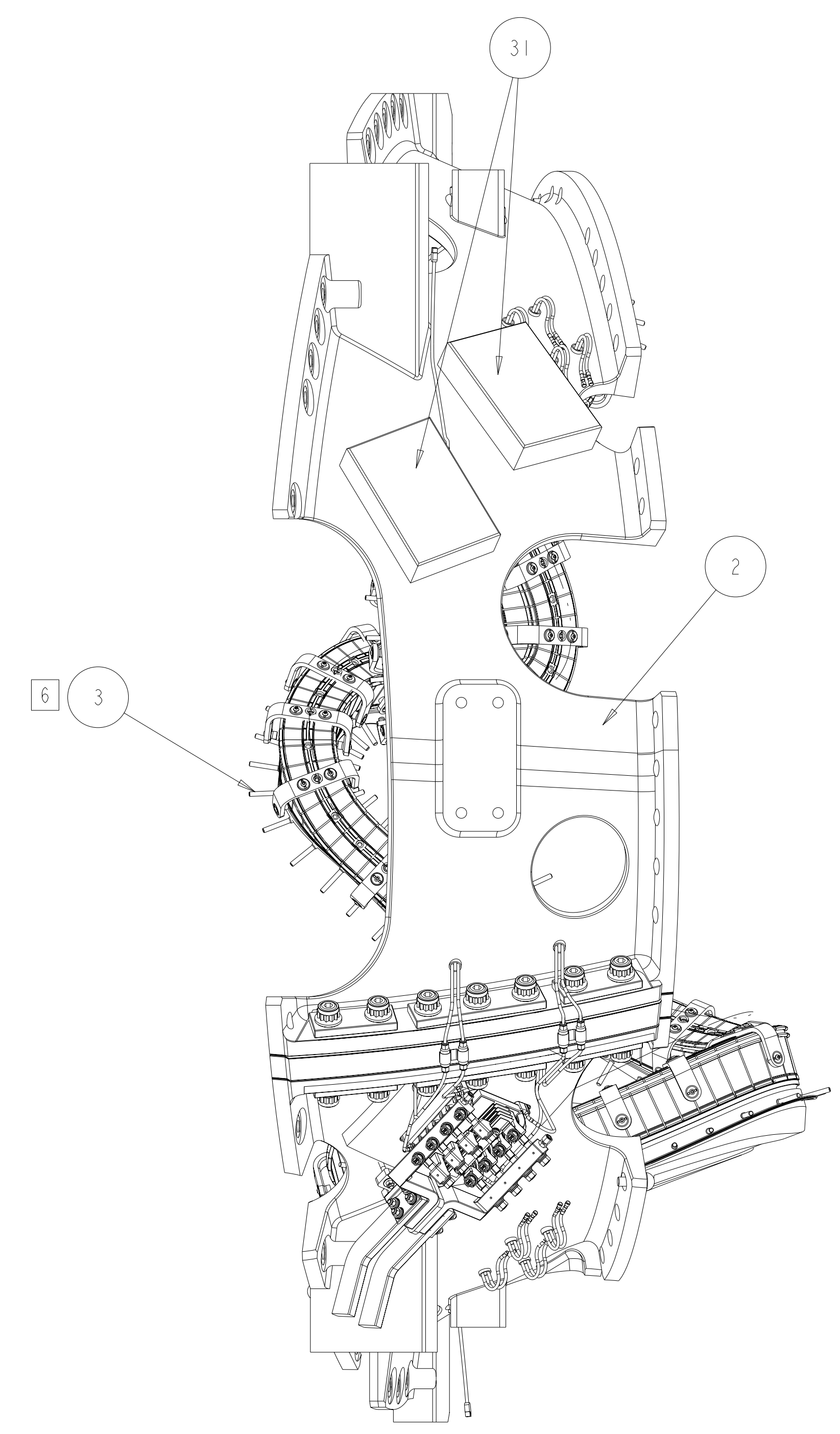
**CUT-AWAY VIEW SHOWING WINDING INSTALLATION SEQUENCE (SIDE A)**  
SCALE 0.250



**TUBING AT POLOIDAL BREAK**  
SCALE 0.250



**-1 MCWF TYPE-B ASM**  
SCALE 0.125



QTY	CALLOUT	DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO
4		3/8 -16 UNC HEX NUT	316 SST	ASTM B18.2.2	34
AR		SE142B-030 WIRE CLAMP			33
12		SE142C-014 INSULATING SLEEVE			32
2		SE142C-015 3" X 8" X 12" FLUX LOOP BOX			31
5		FOS-N-BA-CI-FI-M2-R3-ST STRAIN SENSOR			30
2		SS-810-1-8 BLEED VALVE			29
2		NCSX-PRL-003 THERMOCOUPLE	INCONEL 718		28
6		SE1851-170 BALL ALIGNMENT ASSEMBLY			27
13		SE141-204 FLANGE BUSHINGS			26
AR		SE142C-011 TUBE CLAMP			25
2		SE142B-020 POL BR CONNECTOR ASSEMBLY			24
16		5FF-5-4 1/4" X 5/16" REDUCER UNION	BRAZETYTE		23
2		90FF-4 1/4" ELBOW	BRAZETYTE		22
2		10FF-4 1/4" UNION	BRAZETYTE		21
AR		SE142B-010 CLAMP ASSEMBLY			20
		SE142B-248 SIDE "B" COOLING TUBES			19
1		SE142A-246-4 SIDE "B" CHILL PLATES (SIDE)			18
1		SE142A-246-3 SIDE "B" UPPER CHILL PLATES (TOP)			17
AR		SE142A-243 SIDE "B" GROUNDWRAP			16
1		SE142A-241 SIDE "B" WINDING ASSEMBLY			15
1		SE142A-244-4 SIDE "B" LOWER CLADDING (BASE)			14
1		SE142B-244-3 SIDE "B" UPPER CLADDING (SEPTUM)			13
AR		SE142B-258 SIDE A COOLING TUBES			12
1		SE142B-256-4 SIDE A LOWER CHILL PLATES (SIDE)			11
1		SE142B-256-3 SIDE A UPPER CHILL PLATES (TOP)			10
AR		SE142B-253 SIDE-A WP GROUNDWRAP			9
1		SE142B-251 SIDE "A" WINDINGS ASSEMBLY			8
1		SE142B-254-4 SIDE "A" LOWER CLADDING (BASE)			7
1		SE142B-254-3 SIDE "A" UPPER CLADDING (SEPTUM)			6
1		SE142B-080 TYPE "B" LEADS ASSEMBLY			5
1		SE142B-050 TYPE "B" TERMINAL ASSEMBLY			4
1		SE142B-STUDS STUDS			3
1		SE141-102 MOD COIL WINDING FORM ASSEMBLY TYPE-B			2
AR		-1 MCWF-TYPE "B" ASM			1

CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO
SE140-003					

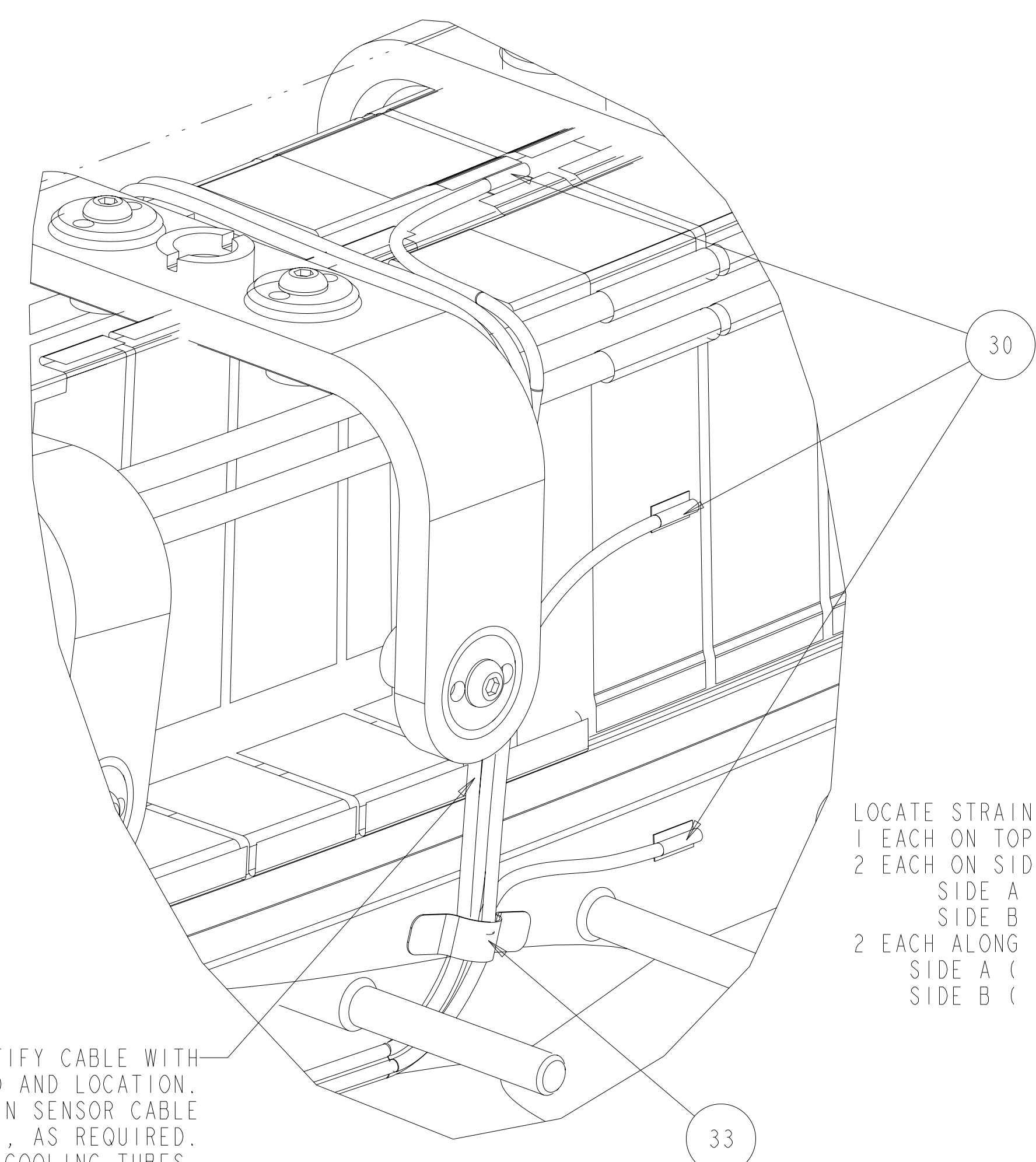
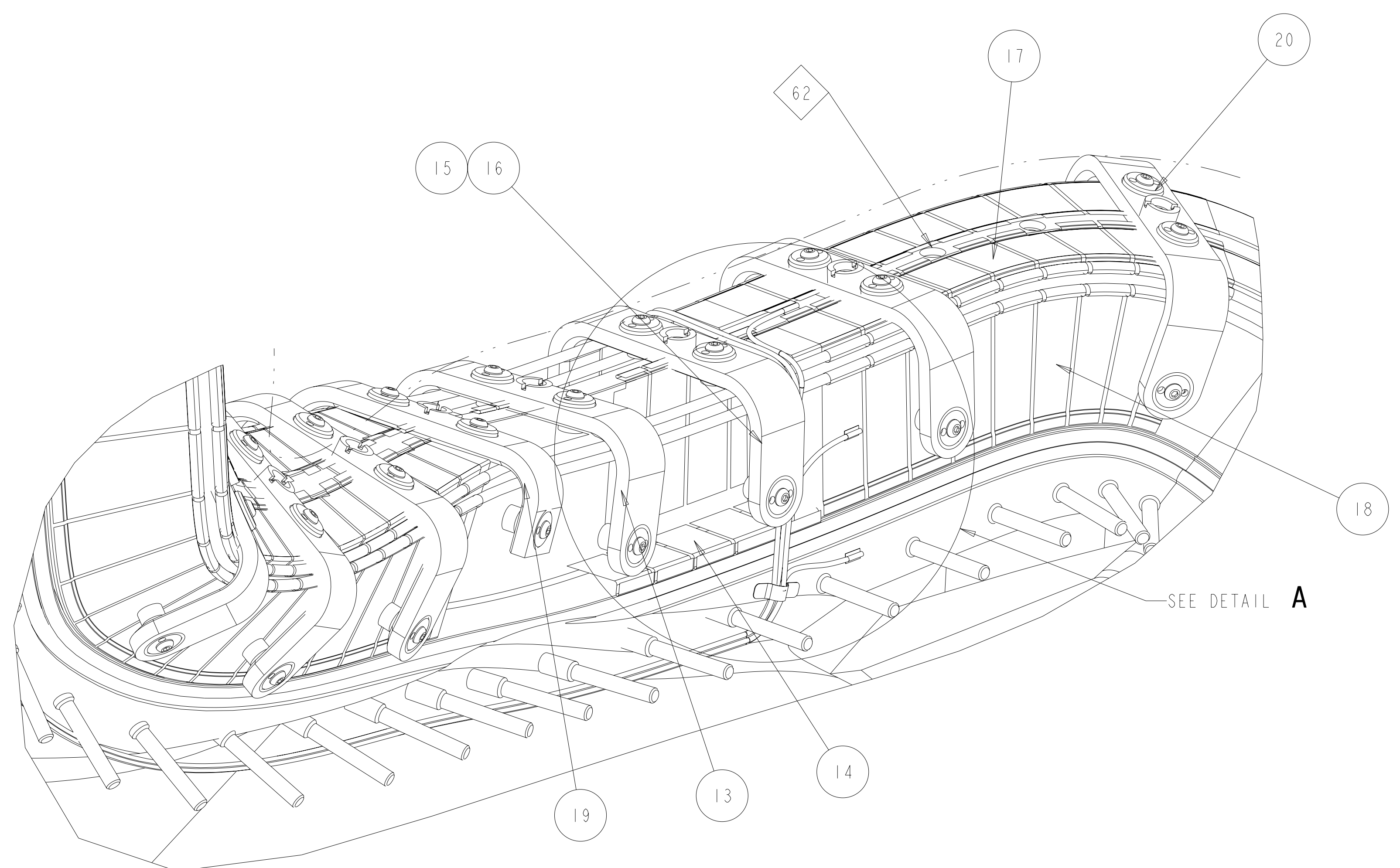
← PARTS LIST

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**P** THIS DRAWING PRODUCED ON PRO-ENGINEER

DES: D WILLIAMSON 11/06	UT-BATTELLE	Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC., Oak Ridge, Tennessee
DRW: G LOVETT 11/06	<b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>	
CHK: M COLE 11/06	MCWF TYPE "B" FULL COIL ASSEMBLY	
SECT: :	VERSION NO. 16	PLANT X-10
DEPT: :	BLDG 5700	FL 3
FR: D WILLIAMSON 11/06	SHT 1	OF 2
PE: :	TYPE S	CLASS U
CR: ±.005	RELEASE LEVEL WIP	REV 0
PJ: ±0.15	SE140-102	
RD: :		
BREAK SHARP EDGES 04 MAX		
FINISH .125 UNLESS OTHERWISE SPECIFIED		
PPPL DRFT J SIEGLE 11/06		
DATE		

REV	DESCRIPTION	BY	DATE	CHK	DEPT	DATE	PE	REQ	DATE	ORNL	DOE	DATE
0	ORIGINAL ISSUE	GM	11/06									

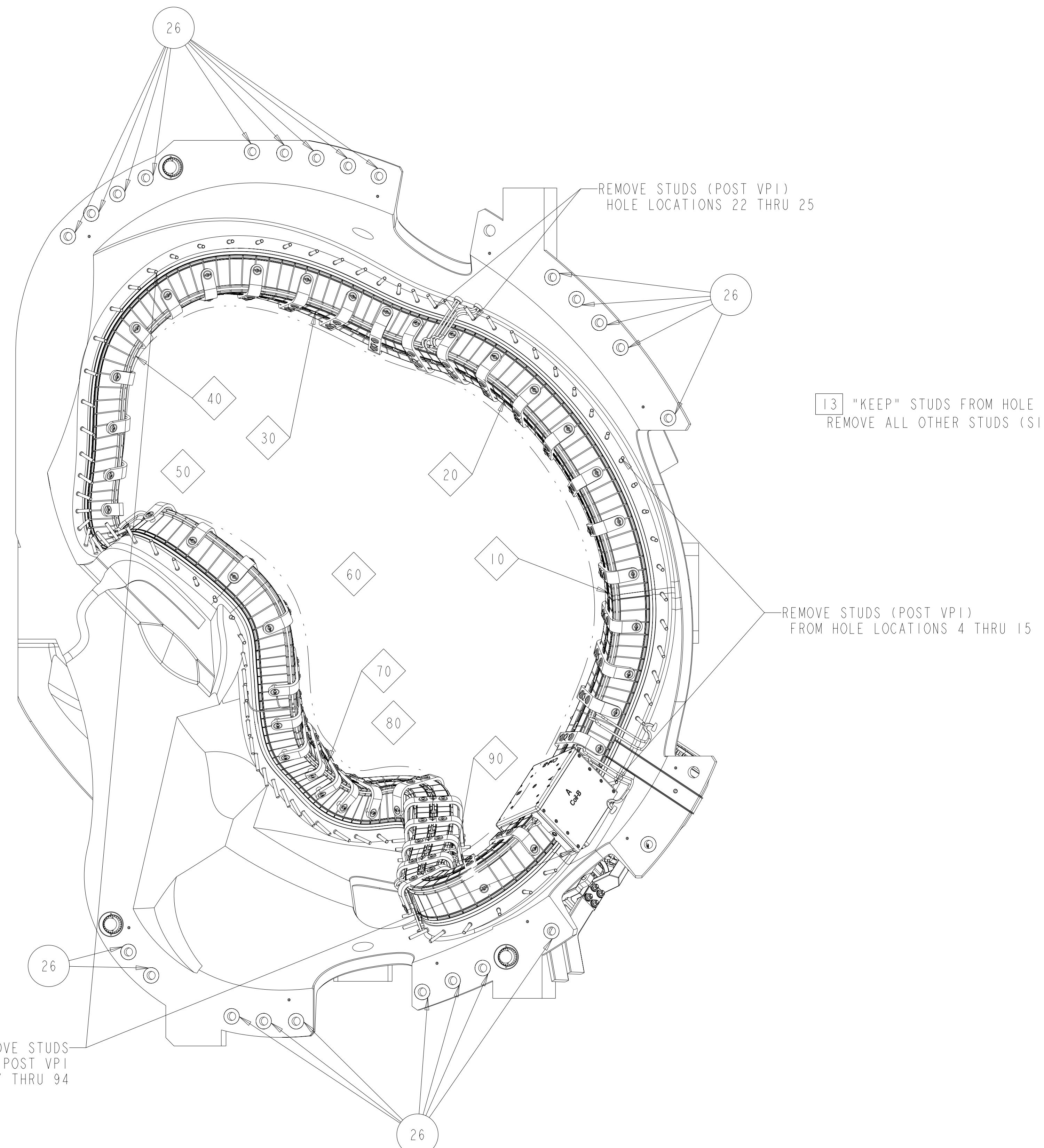


COLOR CODE OR IDENTIFY CABLE WITH HOLE NUMBER ASSOCIATED AND LOCATION. BUNDLE FIBER OPTIC STRAIN SENSOR CABLE AND SECURE WITH CLAMP, F/N ??, AS REQUIRED. EXIT COIL WITH COOLING TUBES.

LOCATE STRAIN SENSORS AND LABEL AS SHOWN  
 1 EACH ON TOP OF TEE ( 64 T-TOP)  
 2 EACH ON SIDE OF CHILL PLATES  
 SIDE A ( 64-B-A)  
 SIDE B ( 64-B-B)  
 2 EACH ALONG FORM BELOW VP1 GROOVE  
 SIDE A ( 64-V-A)  
 SIDE B ( 64-V-B)

**DETAIL A**  
SCALE 1.000

**CUT-AWAY VIEW SHOWING WINDING INSTALLATION SEQUENCE (SIDE B)**  
SCALE 0.500



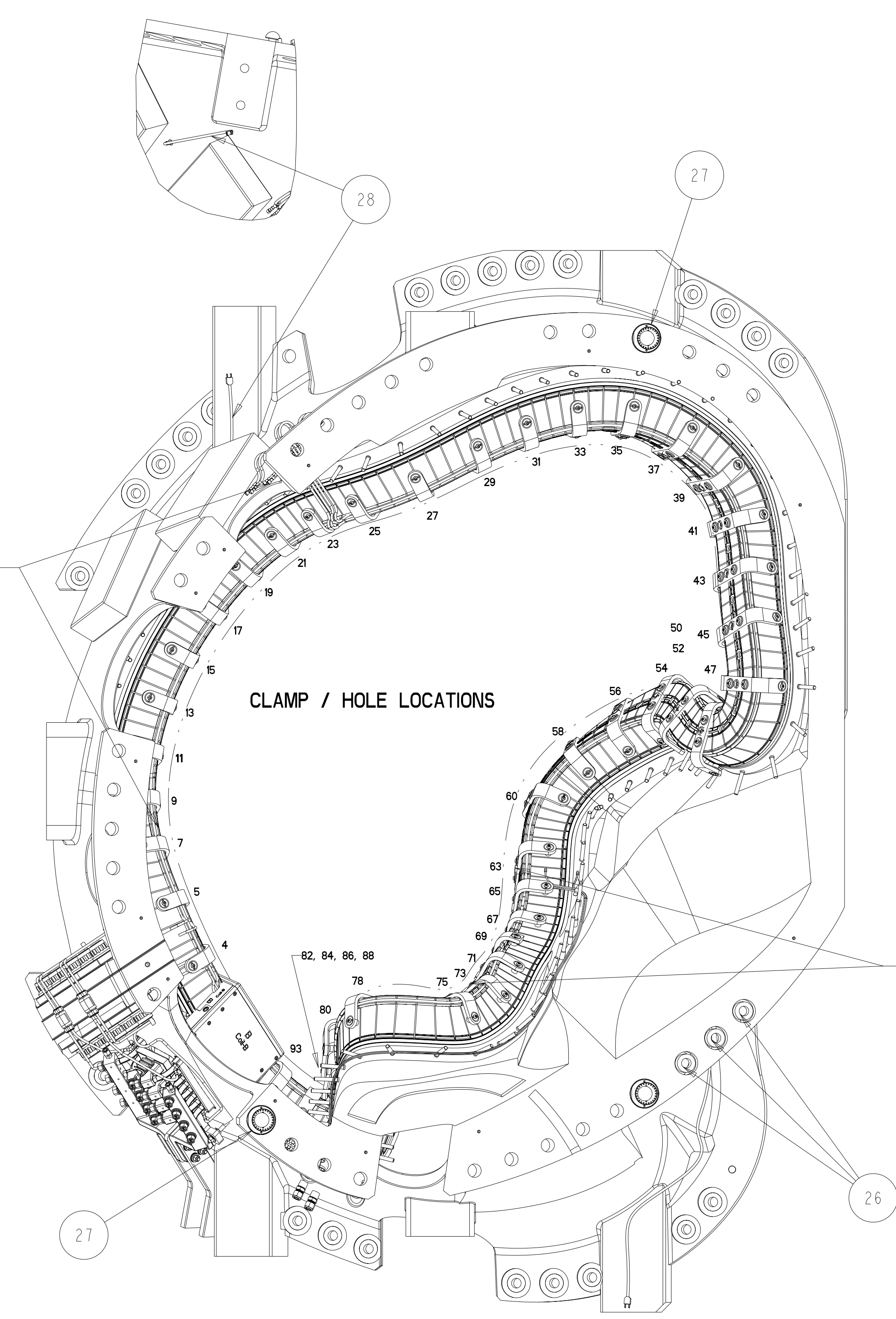
REMOVE STUDS (POST VP1)  
HOLE LOCATIONS 22 THRU 25

13 "KEEP" STUDS FROM HOLE LOCATIONS 8-22  
REMOVE ALL OTHER STUDS (SIDE B) POST VP1

REMOVE STUDS (POST VP1)  
FROM HOLE LOCATIONS 4 THRU 15

REMOVE STUDS  
POST VP1  
HOLE LOCATIONS 37 THRU 94

**SIDE "A" VIEW**



CLAMP / HOLE LOCATIONS

SUGGESTED STRESS SENSOR LOCATION  
HIGH STRESS REGION ON PLANE  
NORMAL TO THE WINDING LAW  
BETWEEN HOLE LOCATIONS 63 - 73  
SEE DETAIL "A"

**SIDE "B" VIEW**

UT-BATTELLE		Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC. Oak Ridge, Tennessee	
PROJECT NAME <b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>			
MCWF TYPE "B" FULL COIL ASSEMBLY			
VERSION NO. 16	PLANT X-10	BLDG 5700	FL SHT OF TYPE CLASS 3 2 2 S U
RELEASE LEVEL WIP		SE140-102	
		REV 0	

201-10135-B