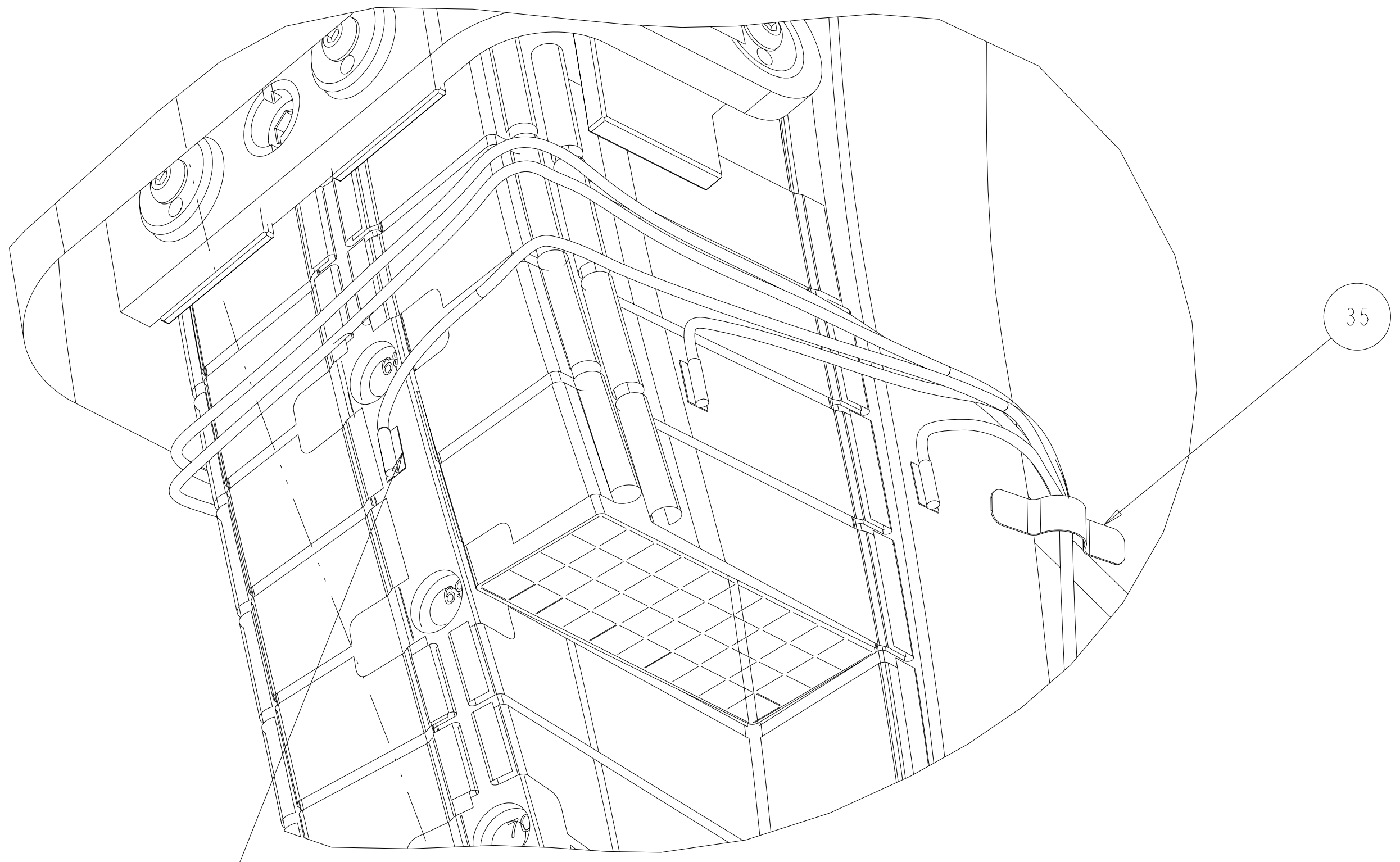


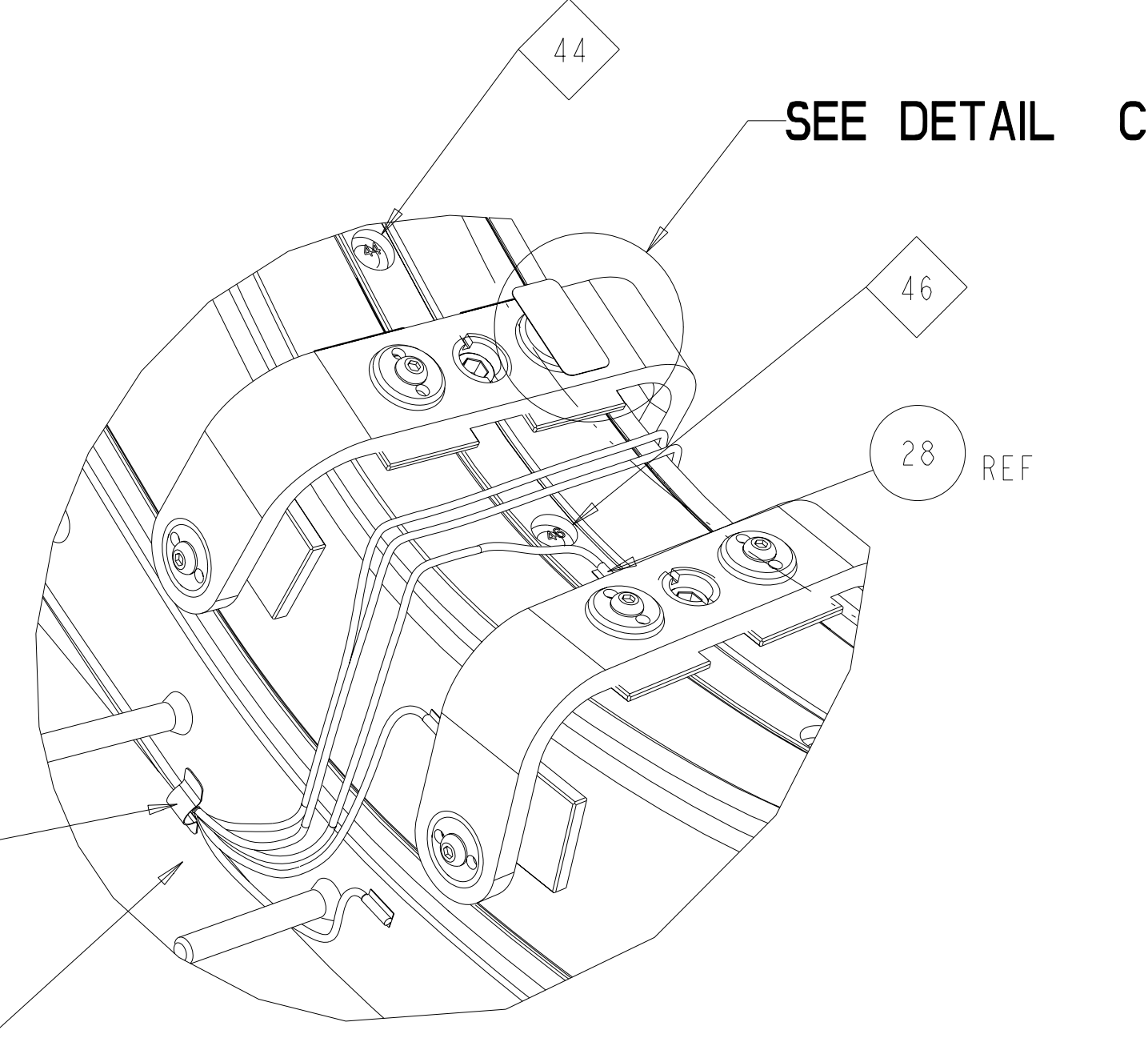
CUT-AWAY VIEW SHOWING WINDING ASSEMBLY SEQUENCE (SIDE "B")
 SCALE 0.50



DETAIL B
 SCALE 1.00

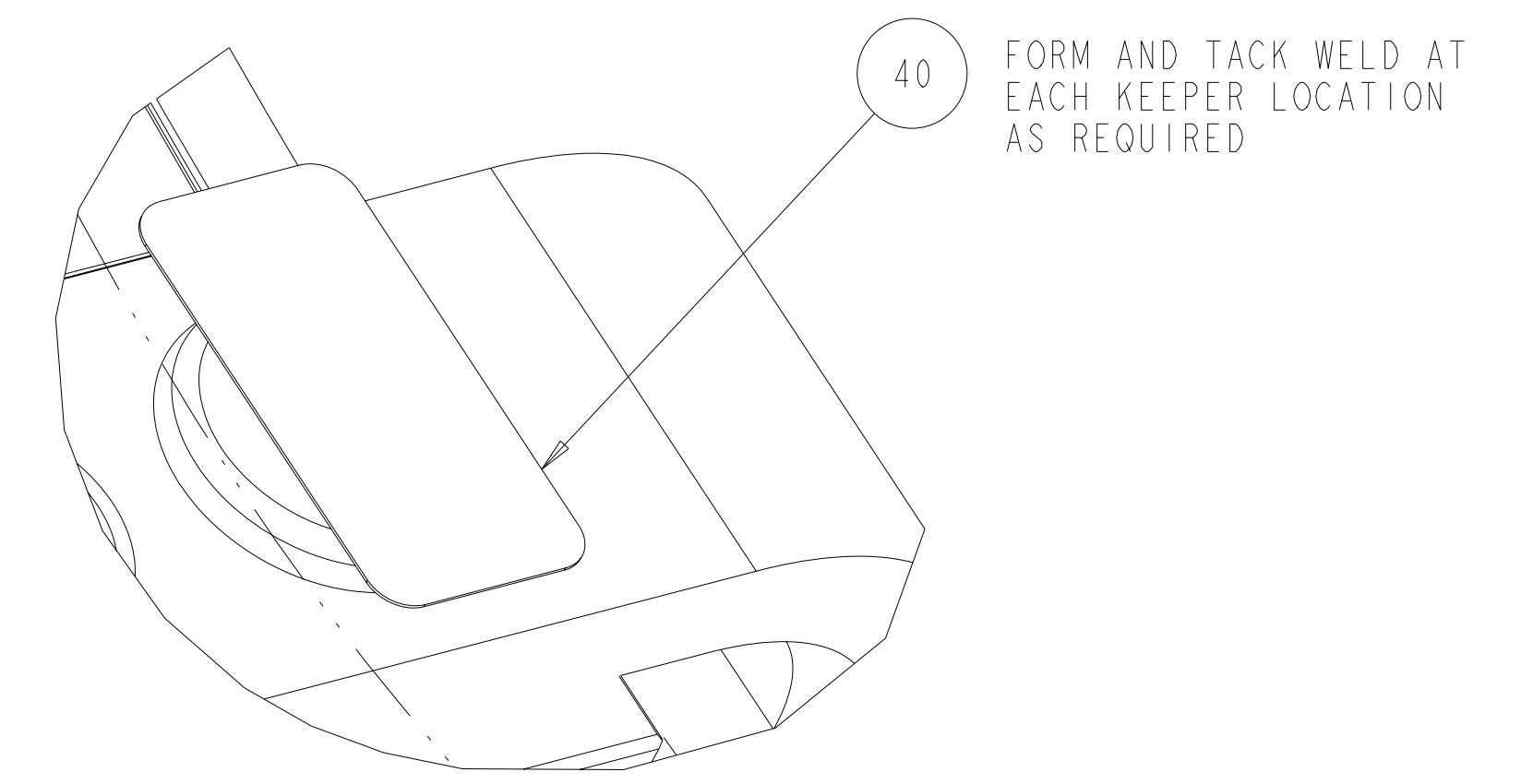
ON LAST FIELD PERIOD ASSEMBLY:
 LOCATE STRAIN SENSORS AND LABEL AS SHOWN
 1 EACH ON TOP OF TEE (OPTIONAL) (ie 68-T-TOP)
 2 EACH ON SIDE CHILL PLATE (OPTIONAL)
 ie (SIDE A) 68-C-A AND (SIDE B) 68-C-B
 2 EACH ALONG FORM BELOW VPI GROOVE
 ie (SIDE A) 68-V-A AND (SIDE B) 68-V-B

ON LAST FIELD PERIOD ASSEMBLY:
 COLOR CODE OR IDENTIFY EACH CABLE WITH
 HOLE NUMBER ASSOCIATED AND LOCATION
 BUNDLE FIBER OPTIC STRAIN SENSOR CABLE
 EXIT COIL WITH COOLING TUBES.



VIEW OF WINDING FORM AT HOLE 46
 SCALE .50

LOCATE STRAIN SENSORS AND LABEL AS SHOWN
 ON LAST FIELD PERIOD ASSEMBLY
 1 EACH ON TOP OF TEE (ie 46-T-TOP)
 2 EACH ON SIDE CHILL PLATE
 ie (SIDE A) 46-C-A AND (SIDE B) 46-C-B
 2 EACH ALONG FORM BELOW VPI GROOVE
 ie (SIDE A) 46-V-A AND (SIDE B) 46-V-B

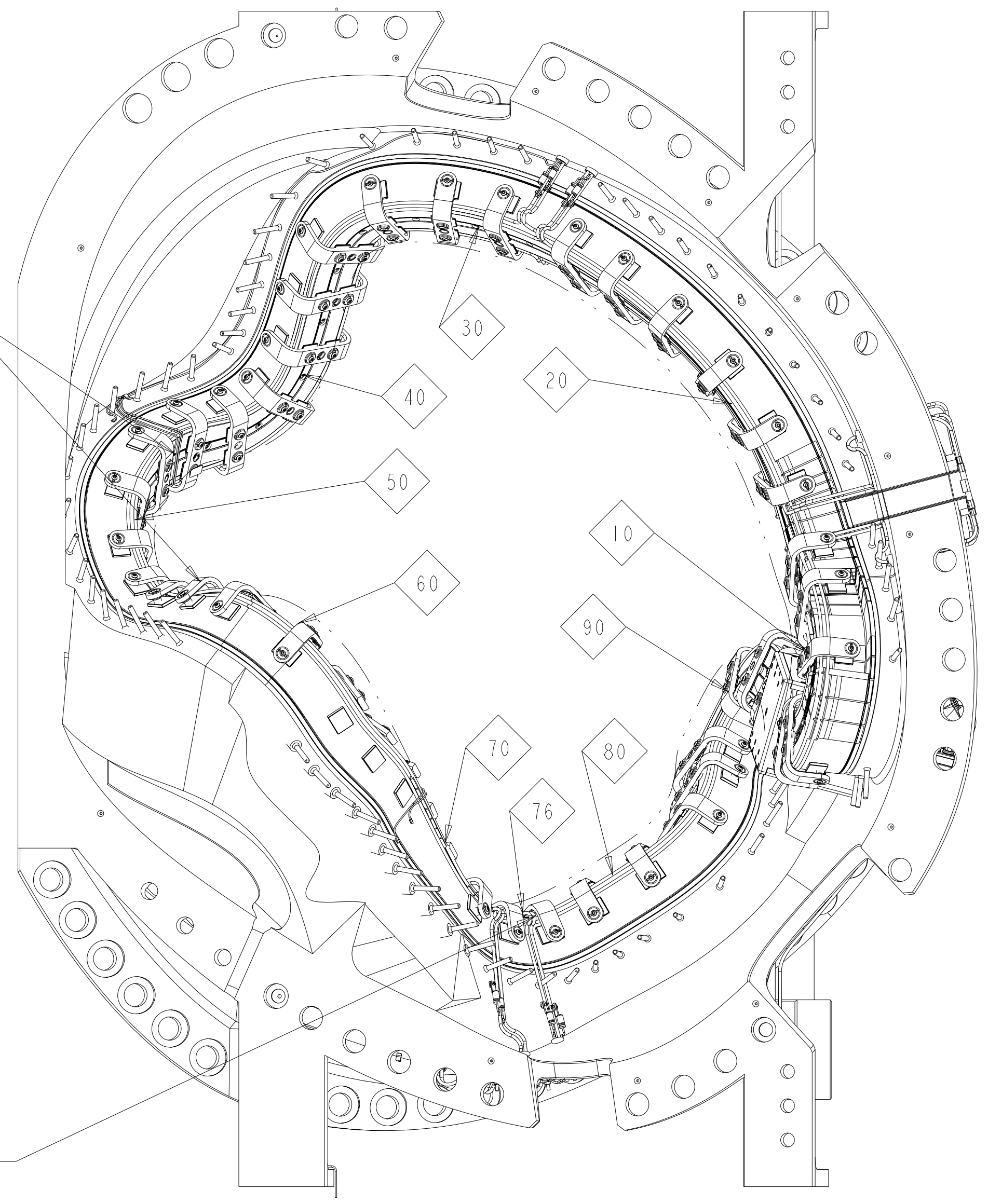


DETAIL C
 SCALE 2.00

CLAMP CHART		
NO.	HOLE NO.	CLAMP ASSEMBLY
1	04	SE142C-270
2	06	SE142C-270
3	09	SE142C-270
4	11	SE142C-270
5	13	SE142C-270
6	16	SE142C-270
7	18	SE142C-270
8	20	SE142C-270
9	22	SE142C-270
10	24	SE142C-270
11	26	SE142C-270
12	29	SE142C-270
13	31	SE142C-270
14	33	SE142C-270
15	35	SE142C-270
16	37	SE142C-270
17	39	SE142C-270
18	41	SE142C-270
19	43	SE142C-270
20	45	SE142C-270
21	47	SE142C-270
22	49	SE142C-270
23	51	SE142C-270
24	53	SE142C-270
25	55	SE142C-270
26	57	SE142C-270
27	59	SE142C-270
28	61	SE142C-270
29	63	SE142C-303
30	65	SE142C-303
31	67	SE142C-270
32	69	SE142C-303
33	71	SE142C-308
34	73	SE142C-270
35	75	SE142C-270
36	77	SE142C-270
37	79	SE142C-270
38	81	SE142C-270
39	83	SE142C-270
40	85	SE142C-270
41	87	SE142C-270
42	90	SE142C-270
43	92	SE142C-270
44	94	SE142C-270

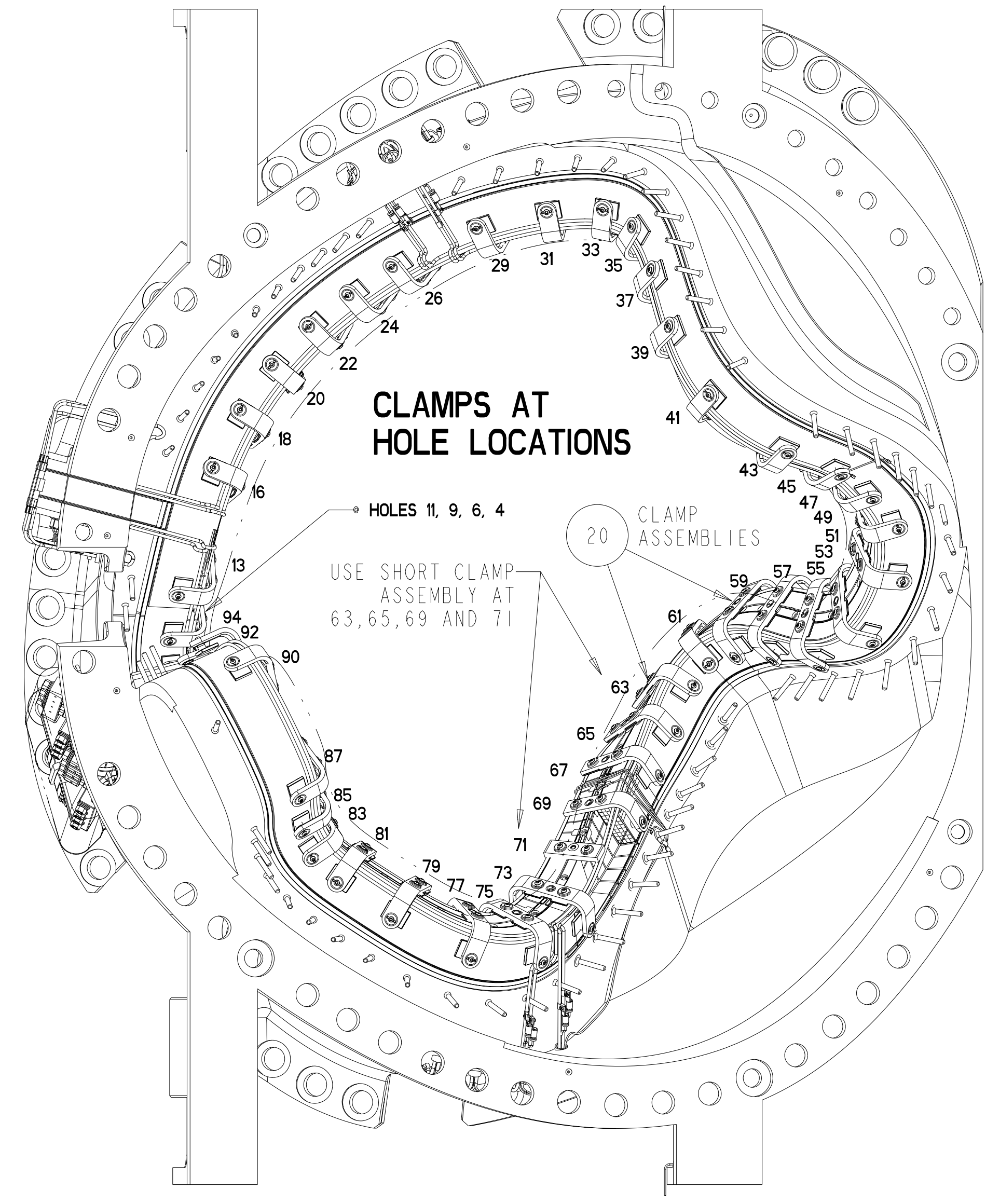
STRAIN GAGE CHART			
NO.	LABEL	LOCATION	LEAD LENGTH'S
1	46-T-TOP	HOLE 46 TOP OF TEE (OPTIONAL)	32'
2	46-C-A	HOLE 46 SIDE "A" CHILL PLATE (OPTIONAL)	32'
3	46-C-B	HOLE 46 SIDE "B" CHILL PLATE (OPTIONAL)	32'
4	46-V-A	HOLE 46 SIDE "A" UNDER VPI GROOVE	32'
5	46-V-B	HOLE 46 SIDE "B" UNDER VPI GROOVE	32'
6	64-T-TOP	HOLE 64 TOP OF TEE (OPTIONAL)	28'
7	64-C-A	HOLE 64 SIDE "A" CHILL PLATE (OPTIONAL)	28'
8	64-C-B	HOLE 64 SIDE "B" CHILL PLATE (OPTIONAL)	28'
9	64-V-A	HOLE 64 SIDE "B" UNDER VPI GROOVE	28'
10	64-V-B	HOLE 64 SIDE "B" UNDER VPI GROOVE	28'

SUGGESTED STRESS SENSOR LOCATION
 ON LAST FIELD PERIOD ASSEMBLY
 HIGH STRESS REGION ON PLANE
 NORMAL TO THE WINDING LAW
 BETWEEN HOLE NUMBER 45-54
 SEE DETAIL "B"



SIDE "A" VIEW
 SCALE .125

SUGGESTED STRESS SENSOR LOCATION
 ON LAST FIELD PERIOD ASSEMBLY
 HIGH STRESS REGION ON PLANE
 NORMAL TO THE WINDING LAW
 BETWEEN HOLE NUMBER 67-76
 SEE DETAIL "B"



SIDE "B" VIEW
 SCALE .125

**RELEASED FOR
 FABRICATION / INSTALLATION**
 PPPL Drafting:

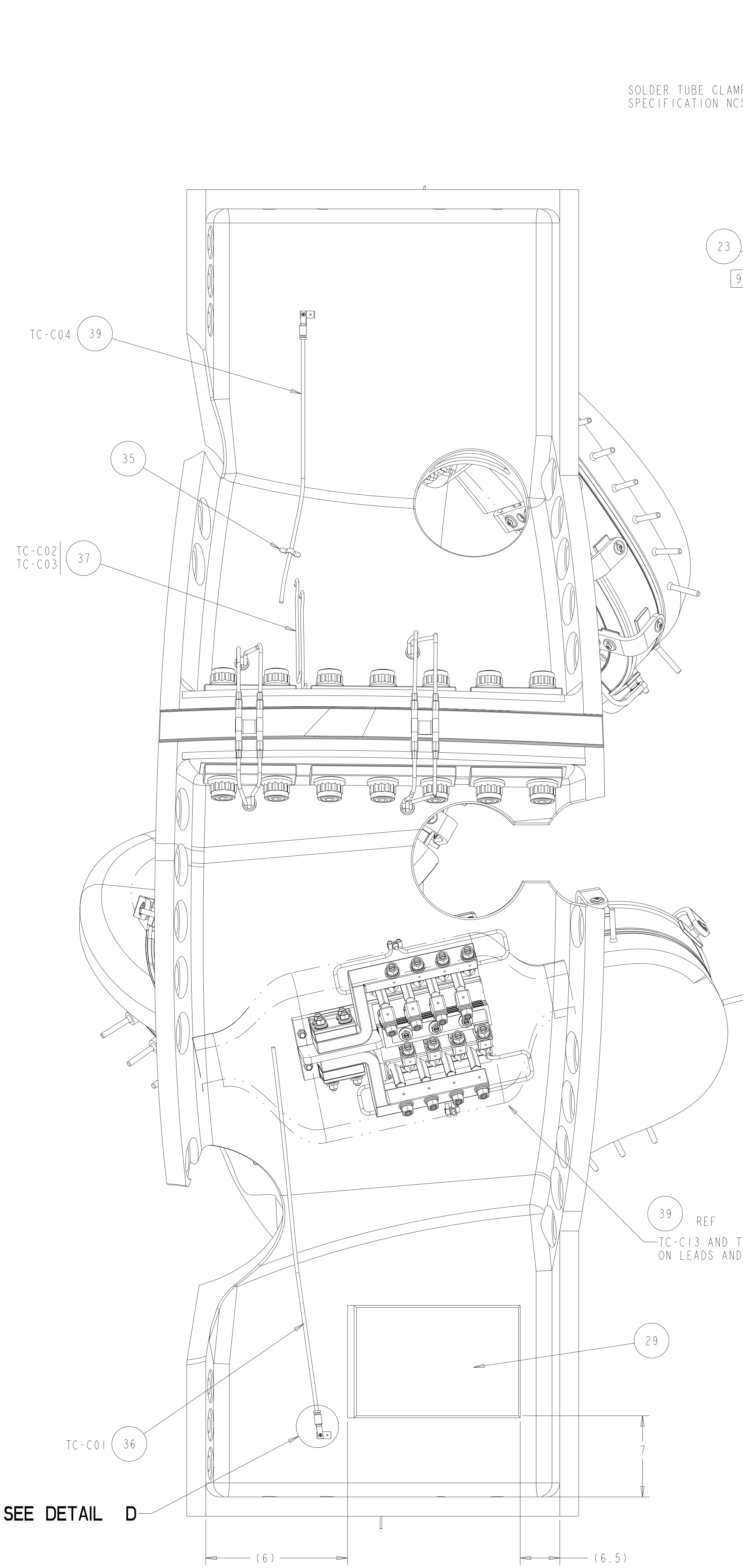
Oak Ridge National Laboratory
 managed for the DEPARTMENT OF ENERGY under
 U.S. GOVERNMENT contract DE-AC05-00OR22725
 UT-BATTELLE, LLC, Oak Ridge, Tennessee
 PROJECT NAME

NATIONAL COMPACT STELLARATOR EXPERIMENT

TYPE C MCWF
 FINAL COIL ASSEMBLY

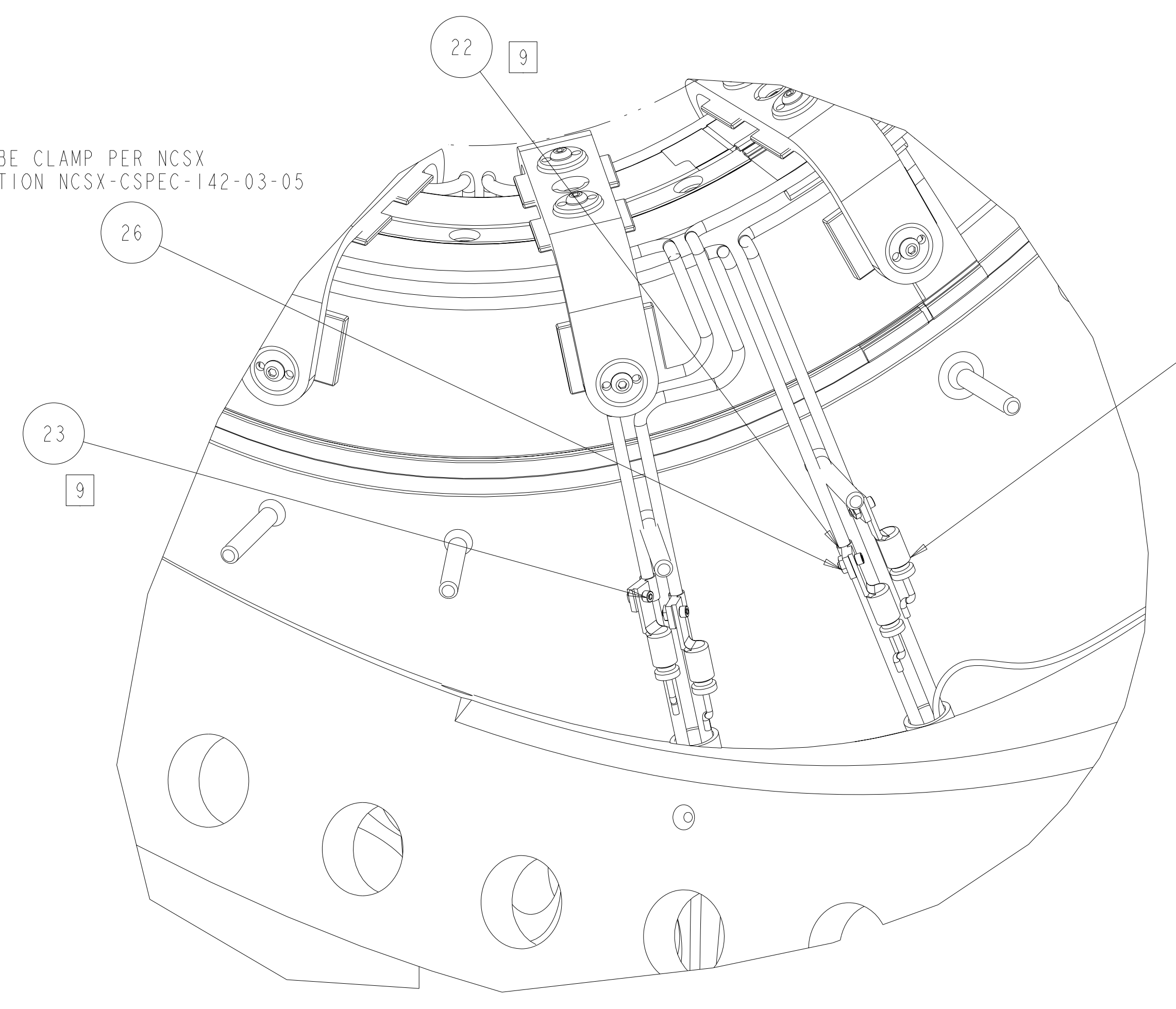
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
61	ORNL	5700	3	2 3	S	U
RELEASE LEVEL	SE140-103					
Fabrication	0					

H
G
F
E
D
C
B
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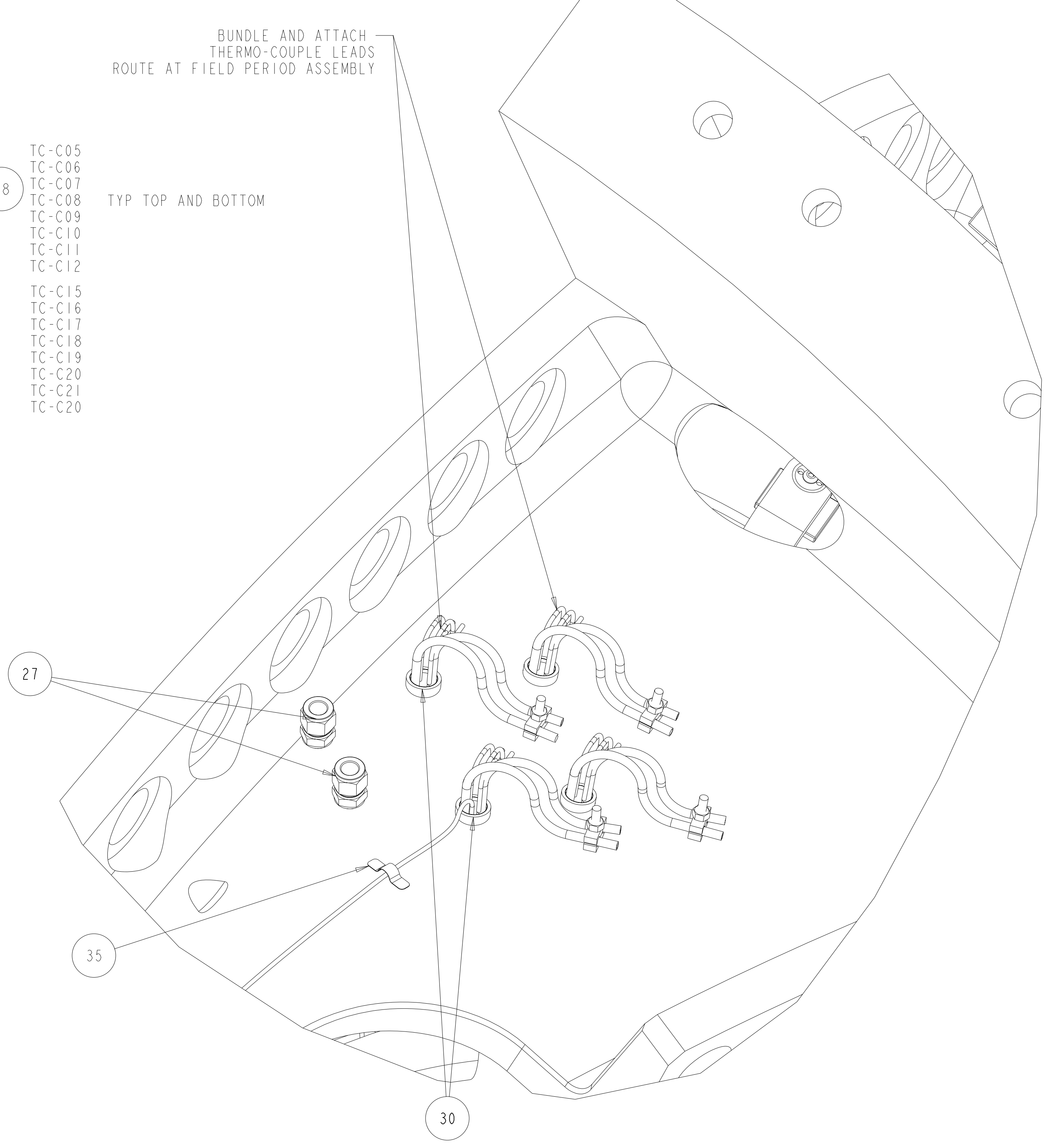


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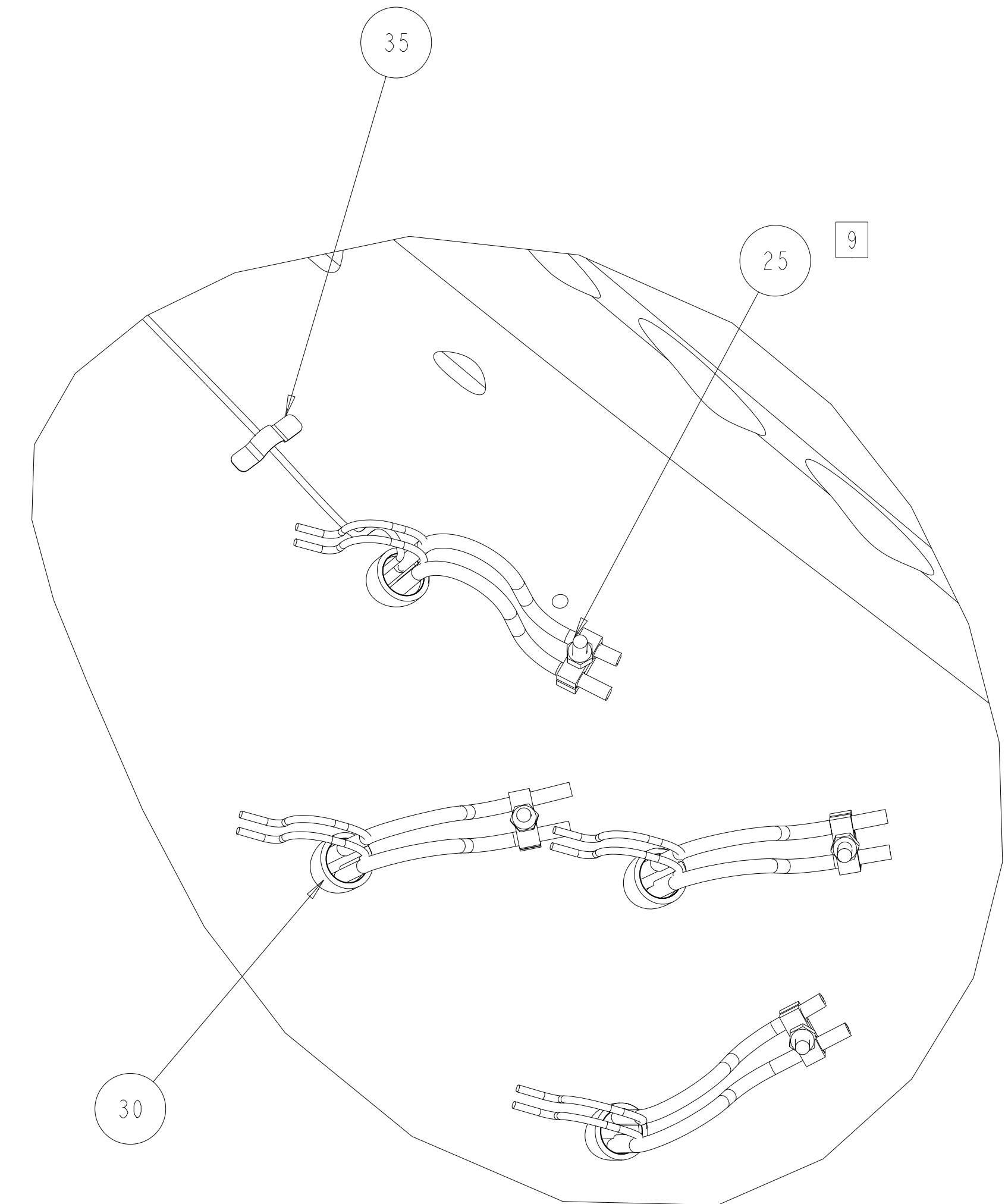
SOLDER TUBE CLAMP PER NCSX SPECIFICATION NCSX-CSPEC-142-03-05



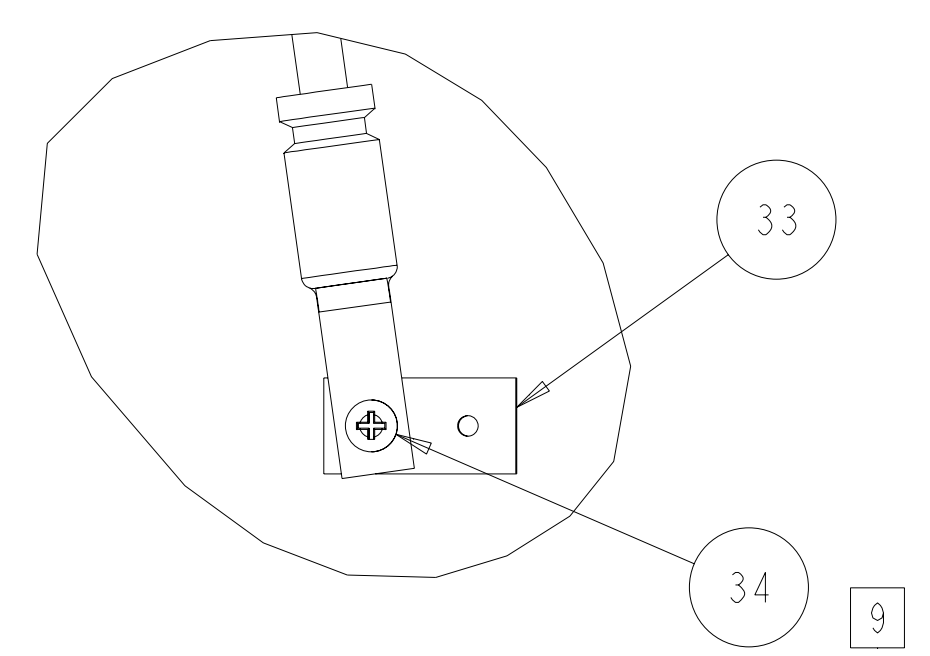
PARTIAL LEFT VIEW
 SCALE 0.500



PARTIAL TOP VIEW
 SCALE 0.50



PARTIAL BOTTOM VIEW
 SCALE 0.50



DETAIL D TYP 2 PLACES
 SCALE 1.00

THERMOCOUPLE CHART			
NO.	LABEL	LOCATION	LEAD LENGTH (FT)* BUNDLE
1	TC-C01	OUTBOARD LOWER SUPPORT	30'
2	TC-C02	OUTBOARD T/C HOLE	27'
3	TC-C03	OUTBOARD T/C HOLE (DUPLICATE)	27'
4	TC-C04	OUTBOARD UPPER SUPPORT	28'
5	TC-C05	COOLING LINE OUTLET 1	29'
6	TC-C06	COOLING LINE OUTLET 2	29'
7	TC-C07	COOLING LINE OUTLET 3	29'
8	TC-C08	COOLING LINE OUTLET 4	29'
9	TC-C09	COOLING LINE OUTLET 5	29'
10	TC-C10	COOLING LINE OUTLET 6	29'
11	TC-C11	COOLING LINE OUTLET 7	29'
12	TC-C12	COOLING LINE OUTLET 8	29'
13	TC-C13	LEADS	28'
14	TC-C14	LEADS	28'
15	TC-C15	COOLING LINE OUTLET 9	29'
16	TC-C16	COOLING LINE OUTLET 10	29'
17	TC-C17	COOLING LINE OUTLET 11	29'
18	TC-C18	COOLING LINE OUTLET 12	29'
19	TC-C19	COOLING LINE OUTLET 13	29'
20	TC-C20	COOLING LINE OUTLET 14	29'
21	TC-C21	COOLING LINE OUTLET 15	29'
22	TC-C22	COOLING LINE OUTLET 16	29'

* FIELD FIT AND IDENTIFY.

RELEASED FOR
 FABRICATION / INSTALLATION
 PPL Drafting

Oak Ridge National Laboratory
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 UT-BATTELLE, LLC, Oak Ridge, Tennessee
 PROJECT NAME
NATIONAL COMPACT STELLARATOR EXPERIMENT
 TYPE C MCWF
 FINAL COIL ASSEMBLY

VERSION NO. 61	PLANT ORNL	BLDG 5700	FL 3	SHT OF 3	TYPE S	CLASS U
RELEASE LEVEL Fabrication		SEI40-103		REV 0		

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SEI40-103