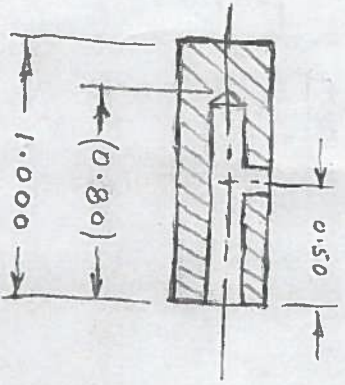


MAR 4-7, 2019 M20Q2 WATER LEAK REPAIR.

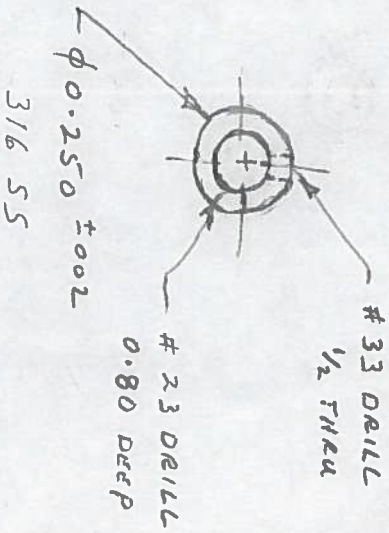
MAGNET COIL COOLING BLANK-OFF PARTS  
SUPPLY / RETURN WATER HEADERS  
REF QWS T821157D, T821180D

ECO TO  
INCLUDE:  
DRUG  
SERIAL  
MATIC

PLUG DETAIL 2 REQ'D.



BREAK ALL  
SHARP EDGES



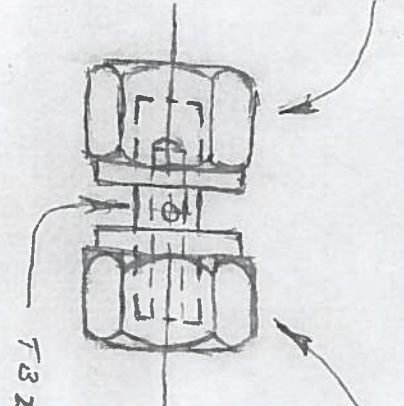
316 SS

UNITS: INCHES  
TOL: XX ± .005  
XX ± .010  
✓ 125

\* NEW DWG REQ'D → T82 ???

1/4 SWAGelok

S.S. NUT & FERRULES  
ON SOLID END OF PLUG  
CONNECTS TO  
HEADER SIDE



BRASS NUT & FERRULES  
CONNECTS TO  
INSULATOR / COIL SIDE

T82 ???

NOTES

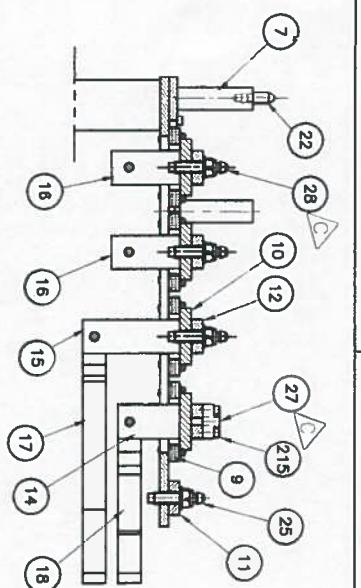
- 1) SEE DWG T821157D FOR MAR 2019 WATER LEAK NOTES.
- 2) THIS COOLING PLUG BLANK-OFF LIMITS THE Q2 POWER SUPPLY CURRENT TO 40A.

\* NEW DWG REQ'D → T82 ???

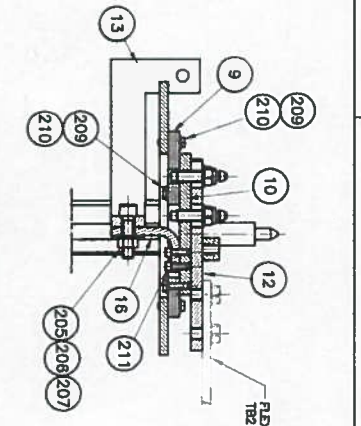
COIL COOLING PLUG SUB-ASSY  
M20Q2 WATER SERVICES

Rev K 18 APR 2019

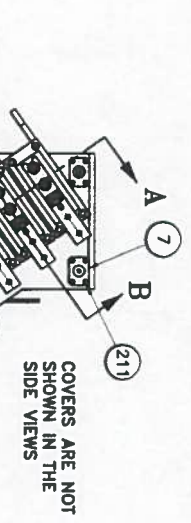




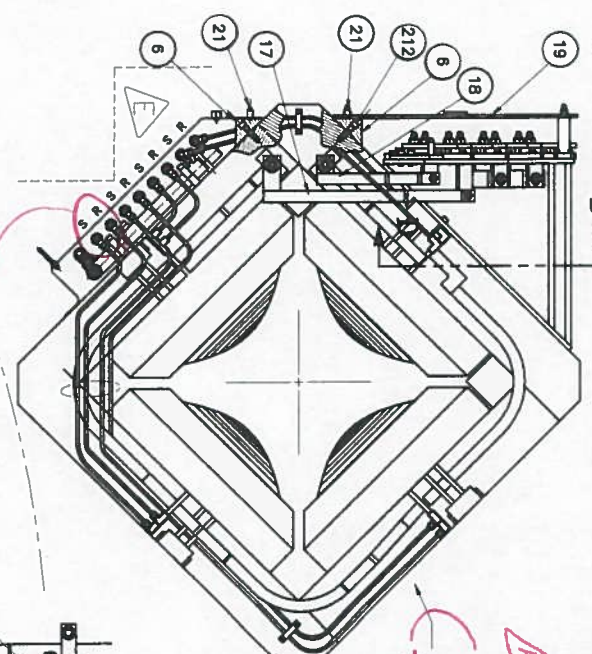
SECTION A-A  
1/4 FULL SCALE



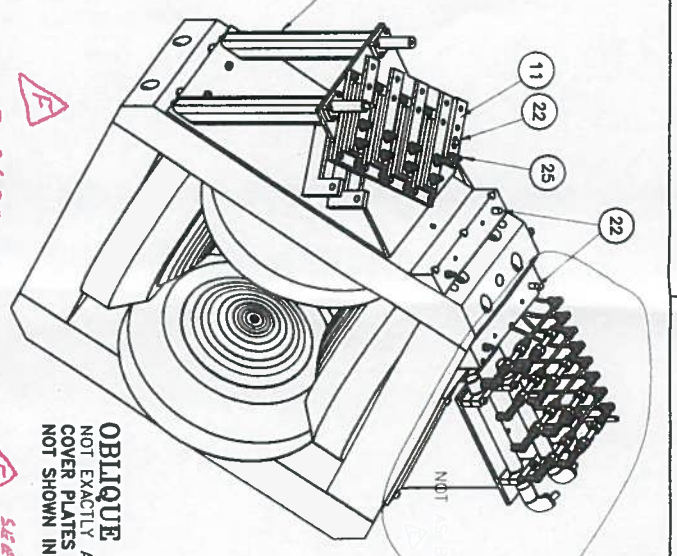
SECTION B-B  
1/4 FULL SCALE



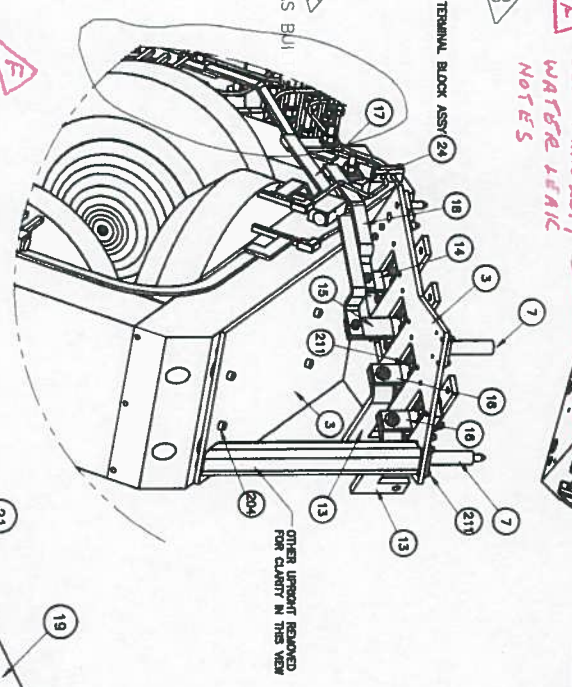
PLAN VIEW



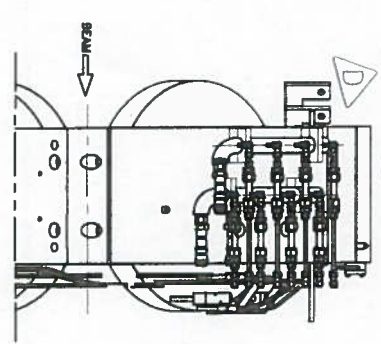
ENLARGED HEADER DETAIL



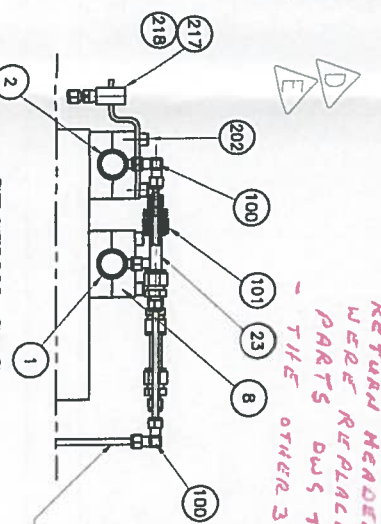
OBlique VIEWS  
NOT EXACTLY AS ILLUSTRATED  
COVER PLATES AND ITEMS 27  
NOT SHOWN IN THESE VIEWS



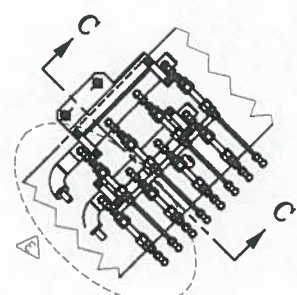
VIEW WITH  
COVER PLATES



SECTION D-D  
1/4 FULL SCALE  
LOOKING FROM UNDERNEATH



SECTION C-C  
1/4 FULL SCALE



MAR 2019  
Q2 Max CURRENT  
SET @ 40A

SEE MAR 2019  
WATER LEAK  
NOTES

MAR 2019  
WATER LEAK NOTES:  
- WATER LEAK AT THIS BEARER  
FITTINGS TB2118DD ITEM 2  
SUPPLY SIDE, WAS NOT REPAIRED.  
- ITEM 200 ON THE SUPPLY AND  
RETURN HEADERS FOR THIS COIL  
WERE REPLACED WITH BLANK-OFF  
PARTS DWS TB2 ???  
- THE OTHER 3 COILS REMAIN WATER COOLED.

Q2 QUADRAPOLE - REF DWG.  
B-3358. RESPONSIBILITY OF OTHERS  
SEE DWG TB2115BD FOR NEW  
TAPPED HOLE LOCATIONS

SEE MAR 2019  
WATER LEAK  
NOTES

SEE DWG TB2118DD FOR  
CONNECTIONS FROM COILS  
TO HEADERS

ITEM	REF No./DESCRIPTION	MATERIAL	QUANTITY
1	DWG TB21092D WELDED SUB ASSEMBLY Header		1
2	DWG TB21093D WELDED SUB ASSEMBLY Header		1
3	DWG TB21097D WELDED SUB ASSEMBLY		1
4			1
5			1
6	DWG TB21096C		2
7	DWG TB21100C WELDED SUB ASSEMBLY		2
8	DWG TB21147C Header Champ		4
9	DWG TB21148C Handing Plate		4
10	DWG TB21149D ITEM 1	WASHER	4
11	DWG TB21149D ITEM 3		4
12	DWG TB21149D ITEM 2		4
13	DWG TB21151C ITEM 1		2
14	DWG TB21151C ITEM 4		1
15	DWG TB21152C ITEM 1		1
16	DWG TB21152C ITEM 2		2
17	DWG TB21152D ITEM 1 SOLDERED SUB ASSEMBLY		1
18	DWG TB21152D ITEM 2 SOLDERED SUB ASSEMBLY		1
19	DWG TB21153C ITEM 2 COVER		1
20			1
21	DWG TB21045B RH BOLT		4
22	DWG TB21022B ITEM 1 GUIDE PIN		5
23	0.5 OD X 0.062 WALL X 3 + 0.030 LONG TUBE	G10	8
24	DWG TB21028B TERMINAL BLOCK		2
25	DWG RBH1018 RH BOLT		1
26			1
27	TB21189A RH PICKUP POINT		4
28	TB21200B RH BOLT 1/2-13 UNC X 2	SS	8
100	SWAGelok SS-400-9 ELBOW	SS	18
101	PARKER B-4-HBZ-SSC REDUCING UNION	SS	12
200	1/4 DIA X 0.025 WT X 1.5 LG TUBE	Cu	4
201	1/4 OD X 0.025 WT X 3.87 LG TUBE	Cu	4
202	3/8-16 UNC X 2.5 LG SOC HD BOLT	SS	8
203	3/8-16 X 3/4 LG FLAREHD SOCKET CAPSCREW	SS	2
204	3/8-16 X 1 LG SOC HD BOLT	SS	10
205	3/8-16 X 1 1/2 LG HEX HD BOLT	BRASS	4
206	3/8 NOM D STD WASHER	BRASS	4
207	3/8-16 UNC HEX NUT	BRASS	6
209	1/4-20 X 1 LG BUSH	SS	32
210	1/4-20 X 1 LG STD WASHER	SS	32
211	1/4-20 X 3/4 LG SOC HD BOLT	SS	24
212	3/8-16 X 1 1/2 LG SOC HD BOLT	SS	9
213	3/8-16 X 8 LG HEAD-ROD	SS	1
214	1/4-20 UNC X 7/8 LG SOCKET HD CAPSCREW	SS	1
215	TB21200D HELICAL LINE SUPPORT	SS	16
217	SWAGelok B-400-1-4 MALE CONNECTOR or equivalent	STL	1
218		BRASS	1

ROW K  
RED LINES  
23 APR 2019

Q2 MAX CURRENT 350A.

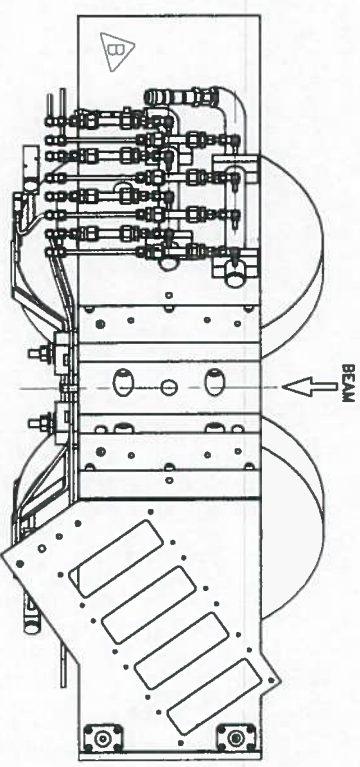
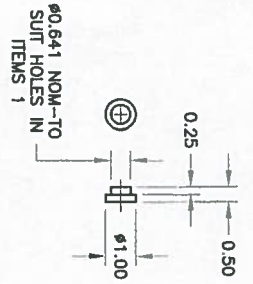
REV	DATE	LOC	REVISION DESCRIPTION	BY	APP'D
E	2005		ECO 104G, UPDATE Water Header description		GSC
D	2005		Add Items 216, 217 & 218, ECO 0830		GSC
C	2005		Add Items 27, 28, & 215, ECO 0830		GSC
B	05/05		Item 23 was TB21091A, ECO 0781		GSC
REV	DATE	LOC	REVISION DESCRIPTION	BY	APP'D

TRUMF  
400A WASHBURN MILL  
CANADA'S NATIONAL MASON FACILITY

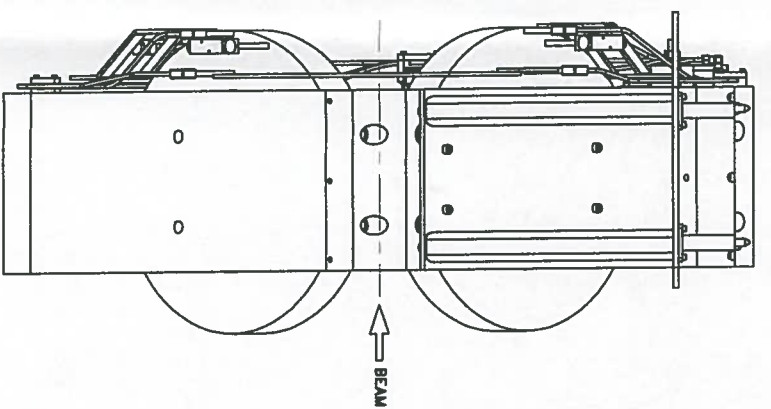
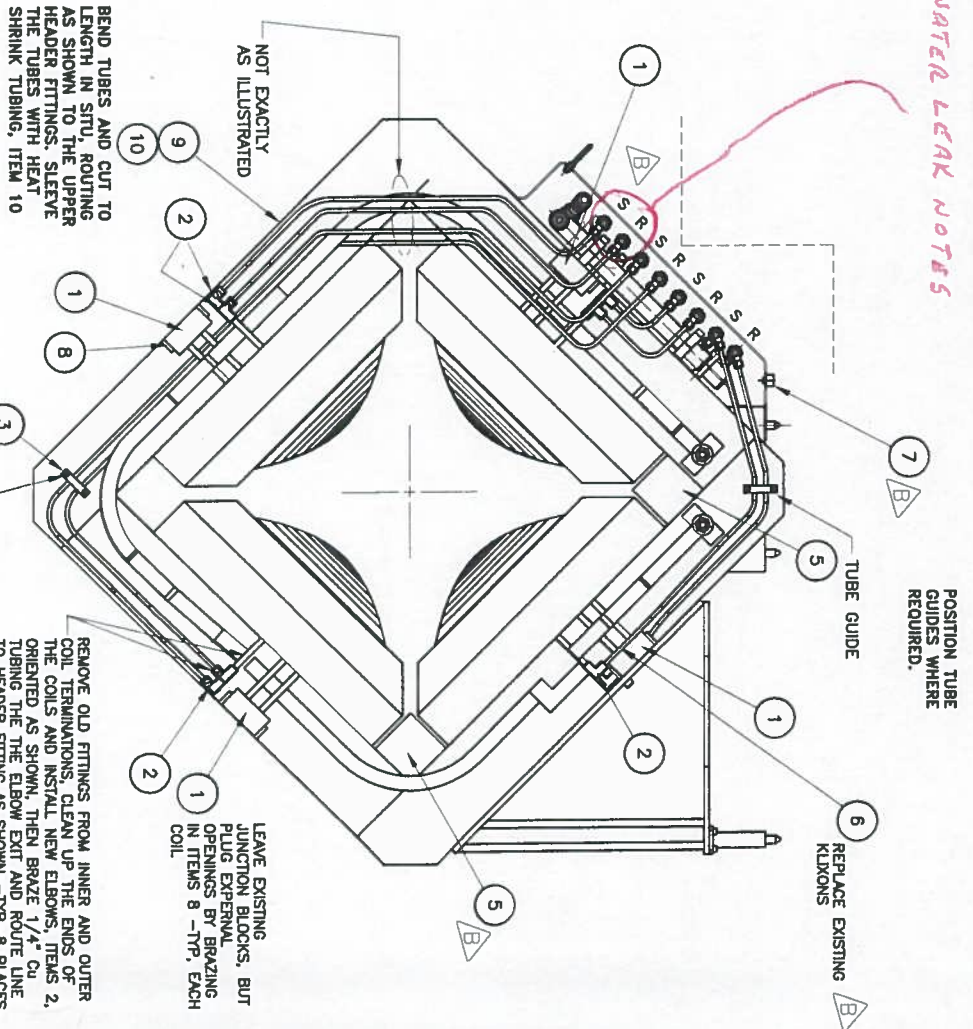
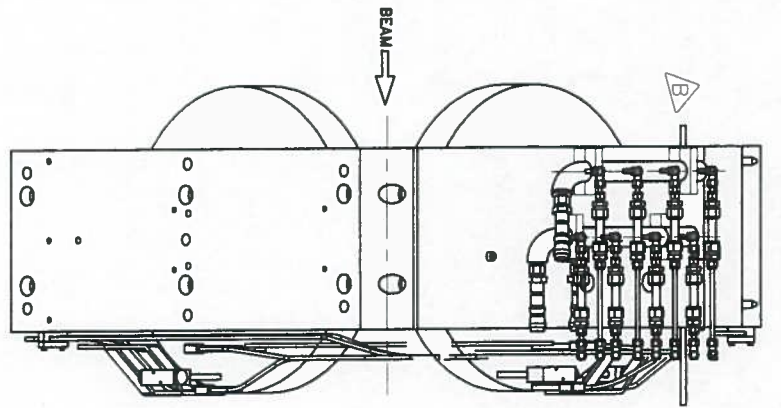
SERVICES SUB ASSEMBLY  
Q2 MAGNET  
M20 FRONT END REFURBISHMENT

SCALE 1/8" FULL  
DWG NO. TB21157D





SEE DWG TB21157D FOR PREVIOUS Q2 ASSEMBLY  
 AND MAR 2019 WATER LEAK NOTES



VIEW LOOKING UPSTREAM

MAX CURRENT 350A

MAR 2019  
 Q2 MAX CURRENT  
 SGT @ 40A

RON K  
 RED LINES  
 23 APR 2019

ITEM	QTY	REF No./DESCRIPTION	MATERIAL	QTY
1	4	DWG D-30418/3 (EXISTING)		
2	8	DWG TB21181B		
3	7	DWG TB21182C ITEM 1		
4	7	DWG TB21182C ITEM 3		
5	2	B-351B	LEAD	
6	4	KLIXON TEMP SWITCH 4344-13-223 100F/140F		
7	1	TB21251C Cover		
8	1	1 DN x 1/2 TYP PL	ETP CU	8
9	1	1/4 OD TUBING, LITHS AS REQUIRED	CU	8
10	14	HEAT SHRINK TUBING	A/R	
100	14	#10-24 x 1 1/2 LG SOC HD BOLT	SS	
101			SS	
102		#10-24 HEX NUT	SS	
103			SS	
104			SS	
105			SS	
106			SS	

TRUHF COIL TO HEADER COOLING SERVICES Q2 SUB ASSEMBLY M20 FRONT END REFURBISHMENT		DATE: 24/03 SCALE: 1/8" = 1" DWG NO.: TB21180D
DESIGNED BY: JJC CHECKED BY: GJK DATE: 18/06	DRAWN BY: JJC DATE: 18/06	ALL DIMS IN INCHES DIMENSIONS UNLESS OTHERWISE SPECIFIED FINISHES: XX, XX, XX, XX SURFACE FINISH: #16
ECD 10359- Revise View Looking Upstream REVISION DESCRIPTION	DATE: 18/06	GSC BY: JJC DATE: 18/06