| REV. | DESCRIPTION | DRAWN / APPD. | DATE |
|---|---|---|---|
| | E.R #6858 | | |
| A | ADDED ITEMS #7 AND 8, WITH DIMENSIONS AND, ALSO ADDED DETAIL VIEW (MODIFIED CONN. PLATE) AND VIEW B-B AND, NOTES #3 AND 4. ECO # 5093 | H.BROWN / MAKAROV | 10/04/00 / 10/09/00 |
| B | (15.000), WAS (13.000) ECO # 5182 | MAKAROV | 3/15/01 3/16/01 |

RETURN END

LEAD END

26.00

1/2-13 TAP X .75 DP. 12- HOLES

12.00

6.00

3Q120 I QQBXXX-X
WEIGHT 7400 LBS
(SEE NOTE#5)

STAMP (SEE NOTE#5) IN APPRO. LOC. SHOWN BOTH SIDES

WHITE STENCIL WITH 1" HIGH CHARACTERS (BOTH SIDES)

SEE NOTE #3

( 2.00 )

24.00

QQM XXX-1
3Q120M
FRD XXXXX
WEIGHT XXXX LBS

PAINT WITH KRYLON SPRAY (ITEM #8) THE SURFACE BENEATH THE CAPLUG

PAINT INSIDE THE HOLES (64) WITH ORANGE PAINT (ITEM #4).

7.000

( 120.00 ) +0 -.06

5.000

8 SEE NOTE #4.

A

B

( 17.000 )

( 8.500 )

( 6.500 )

( 15.000 )

( 3.25 )

( .25 )

( .50 )

( .75 )

( 12.00 )

TYP .25

.25 TYP

TYP .25 1 - 3.5

QQM XXX-1 FRD XXXXX

WHITE STENCIL WITH 1/2" HIGH CHARACTERS (BOTH ENDS)

7

3

1

2

VIEW "A-A"
SCALE: FULL

4.00 REF

1.78 REF

2.750±.030

MODIFIED EXISTING PLATE
SCALE: HALF

NOTE:

AFTER SURFACE CLEANING, FLAG LEADS TO BE SILVER PLATED.

VIEW B-B

## NOTES:

1. ALL MAGNETS TO HAVE 3/4 NPT MALE WATER CONNECTORS. IF EXISTING MAGNET HAS ANOTHER TYPE OF CONNECTOR THEY MUST BE REPLACED.
2. THE MAGNET CORES AND SUPPORT PLATES (EXCEPT FOR HOLES) TO BE PAINTED WITH ORANGE PAINT ITEM #4. COIL ENDS TO BE PAINTED WHITE WITH ITEM #5. ALL HOLES IN SUPPORT PLATES ITEM #2 TO BE SPRAYED WITH A THIN LAYER OF KRYLON ITEM #6.
3. ALL MAGNET(S) TO HAVE 4" VACUUM COUPLING FLANGE, AND 4" BELLOWS AS SHOWN AT BOTH THE LEAD AND RETURN ENDS. IF EXISTING MAGNET(S) HAVE ANOTHER TYPE OTHER THAN (MC-388059 AND MC-388058) IT MUST BE REMOVED AND REPLACED.
4. ITEM #8 SHOULD BE ADDED TO ALL SIDES OF MAGNET(BOTH ENDS ONLY) AS SHOWN, FOR A TOTAL OF (16) CAPLUGS.

SEE NOTE #4

| ITEM | PART NO. | DESCRIPTION OR SIZE | QTY. |
|---|---|---|---|
| 8 | MB-388061 | CAPLUG, FLUSH HD. 2" DIA. | 16 |
| 7 | MALE HEX NIPPLE, PARKER #12-8 MHN | | 2 |
| 6 | 1825-0500 | KRYLON SPRAY | A/R |
| 5 | MA-331911 | WHITE ENAMEL | A/R |
| 4 | MA-351017 | ORANGE ENAMEL | A/R |
| 3 | MA-331978 | PAD CONSTRUCTION BALL | 4 |
| 2 | MB-388122 | BRACKET WELDMENT | 4 |
| 1 | ME-116645 | MAGNET ASSEMBLY | 1 |

PARTS LIST

| UNLESS OTHERWISE SPECIFIED | | | ORIGINATOR | CARSON | 6/8/00 |
|---|---|---|---|---|---|
| .XX | .XXX | ANGLES | DRAWN | DEVITTO | 6/8/00 |
| ± | ± | ± | CHECKED | MAKAROV | 6/21/00 |
| | | | APPROVED | CARSON | 6/21/00 |

1. BREAK ALL SHARP EDGES .02 MAX.
2. DO NOT SCALE DRAWING.
3. DIMENSIONS BASED UPON ANSI Y14.5M-1982
4. MAX. ALL MACH. SURFACES

USED ON

MATERIAL

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

TECHNICAL DIVISION- CONVENTIONAL MAGNET
3Q120M QUADRUPOLE REWORK
FINAL MAGNET ASSEMBLY

| SCALE | FILMED | DRAWING NUMBER | REV. |
|---|---|---|---|
| QUARTER & FULL | | 5520-ME-388120 | B |

CREATED WITH I-DEAS MS 6 | USER NAME: DEVITTO

INCHES 0 1 2 3 4 5 6

METRIC 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150