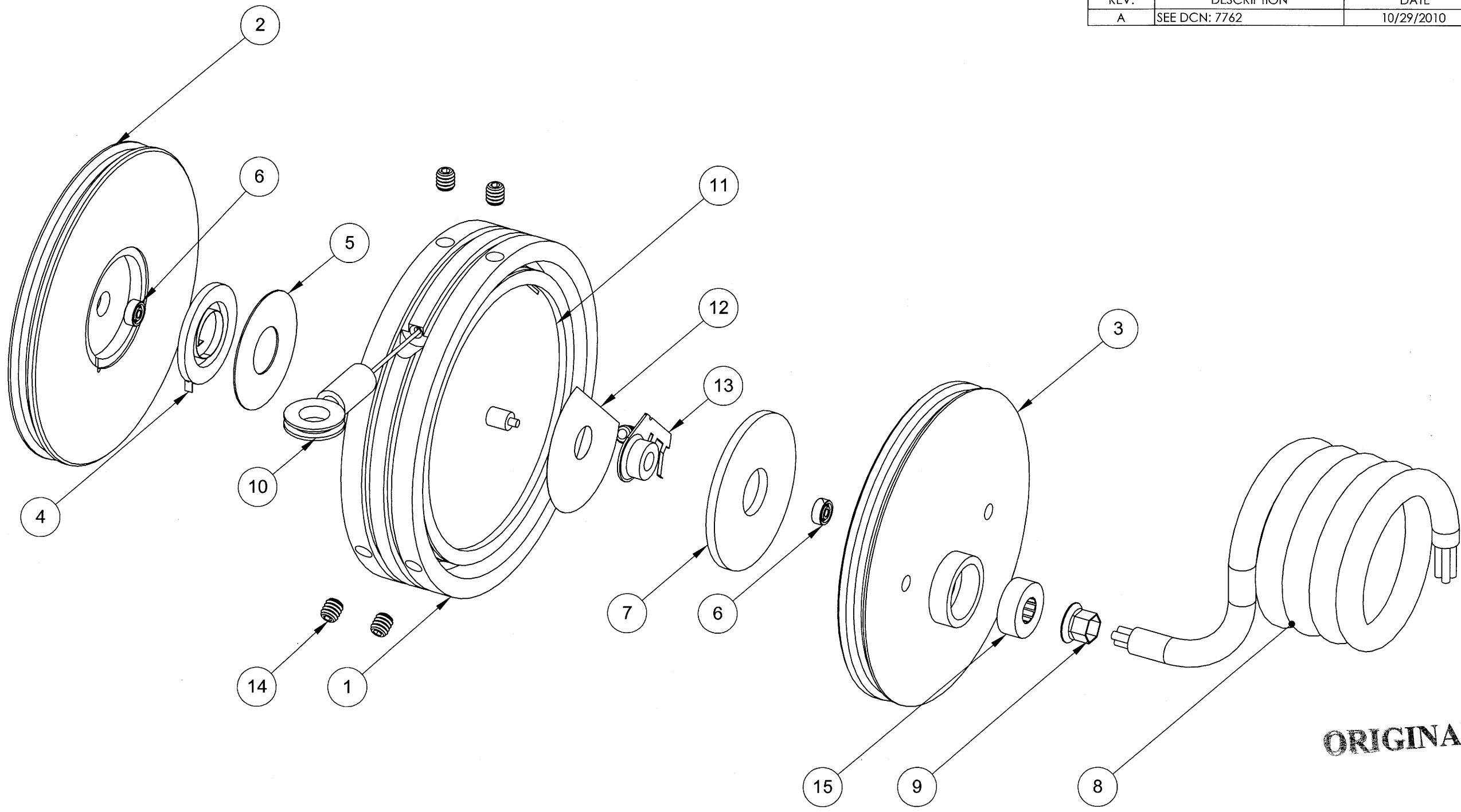


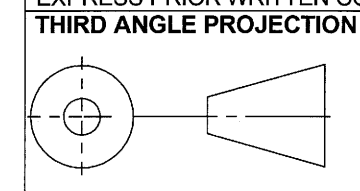
REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	SEE DCN: 7762	10/29/2010	N.O.



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TITLE
**ASSEMBLY DRAWING
MTA - 5"**

APPROVALS		DATE	SIZE	CODE IDENT. NO	DWG. NO.	REV
DRAWN E.GARCIA		10/29/2010	B	52158	PS-172	A
CHKD <i>MSL</i>		3/31/11	DO NOT SCALE DRAWING		SCALE: 3:2	SHEET 1 OF 10

A
B
C
D
E
F
G

TABLE 1

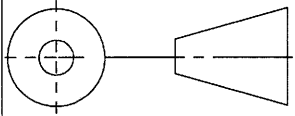
ITEM NO	OPTIONS						QTY
	5	5A	E	L	W	C	
②	9678380-0000	9679327-0000	-	-	-	-	1
④	9678125-0000	9679036-0000	-	-	-	-	1
⑪	9678381-000	9679328-0000	-	-	-	-	1
③	-	-	-	-	9678752-0000	9670106-0000	1
⑨	-	-	-	-	-	9000400-0170	1
⑧	-	-	-	-	-	9000141-0030	3.5 FT
⑩	-	-	9603874-0005	9603935-0005	-	-	1

15	9000010-0052	ADHESIVE,EPOXY, ECCOBOND 286	1
14	9650444-0038	SSCR,CRES,0.112-40 X .12 SKT HD	6
13	9085000-0020	WIPER,1 TURN,5K OHM,MTA	1
12	9678122-0000	DISK,INSULATING,TAPE,MTA	1
11	SEE TABLE 1	SPOOL,ALUM,5 INCH,MTA	1
10	SEE TABLE 1	KIT,CABLE,Ø0.024	1
9	SEE TABLE 1	EYELET FOR "C" OPTION ONLY	1
8	SEE TABLE 1	ELECTRICAL CONNECTION	1
7	9085000-0027	ELEMENT,1 TURN,5K OHM,MTA	1
6	9000410-0020	BEARING,BALL,.047 X .156	2
5	9678127-0001	DISK,SPRING,.01THK,MTA	1
4	SEE TABLE 1	POWER SPRING, MTA	1
3	SEE TABLE 1	PLATE,POT SIDE,MTA - 5	1
2	SEE TABLE 1	PLATE,SPRING SIDE	1
1	9678384-0000	HOUSING,SPOOL,ALUM,MTA-5	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.

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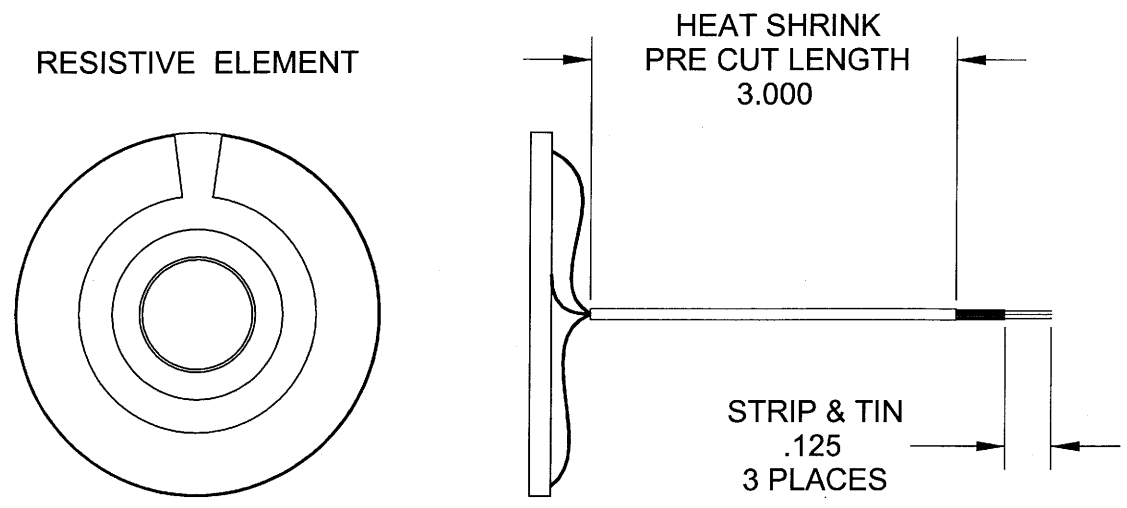
**ASSEMBLY DRAWING
MTA - 5"**

APPROVALS		DATE	SIZE	CODE IDENT. NO	DWG. NO.	REV
DRAWN	E.GARCIA	10/29/2010	B	52158	PS-172	A
CHKD	MSK	7/31/11	DO NOT SCALE DRAWING		SCALE: 3:2	SHEET 2 OF 10

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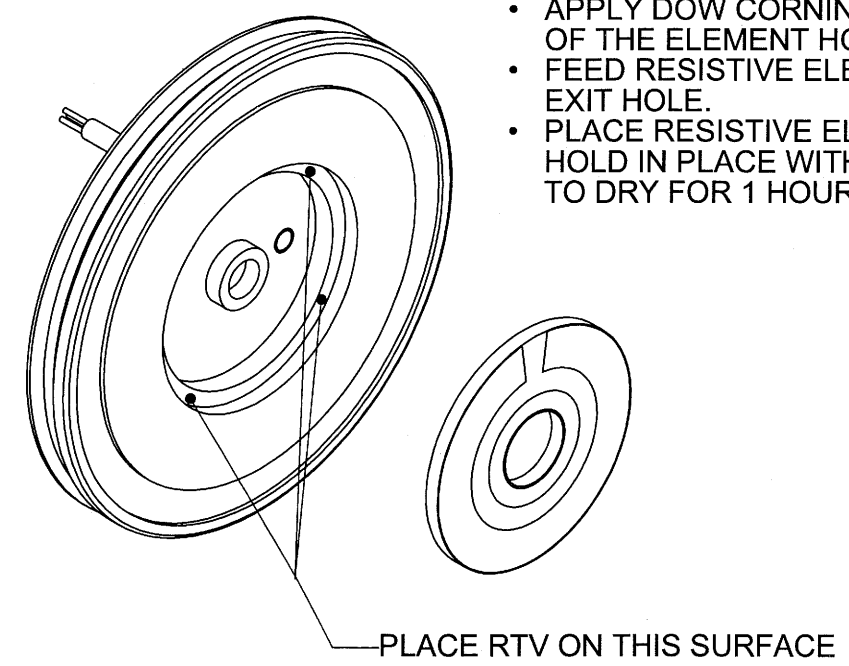
STEP 1: RESISTIVE ELEMENT PREPARATION

- OPTION W:**
- SLIDE SHRINK TUBING, P/N 9000320-0012, OVER ELEMENT WIRES. PLACE TUBING AS CLOSE TO THE ELEMENT AS POSSIBLE.
 - SHRINK TUBING WITH HEAT GUN.
 - STRIP CONDUCTORS TO THE DIMENSION SHOWN.

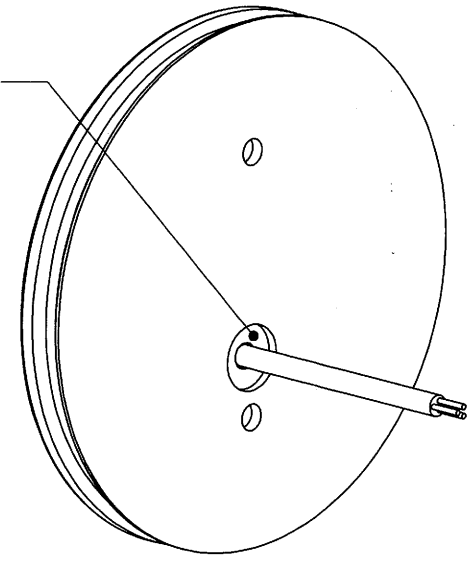


STEP 2: ELECTRICAL CONNECTION

- OPTION W:**
- APPLY DOW CORNING RTV 732 TO THE INSIDE OF THE ELEMENT HOUSING AS NOTED.
 - FEED RESISTIVE ELEMENT WIRES THRU THE EXIT HOLE.
 - PLACE RESISTIVE ELEMENT ON THE RTV AND HOLD IN PLACE WITH A CLAMP AND ALLOW TO DRY FOR 1 HOUR MINIMUM.

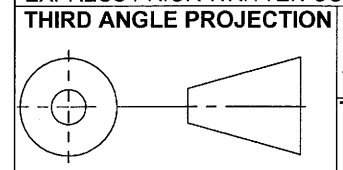


STEP 3: STRAIN RELIEF APPLICATION
FILL CAVITY WITH ECCOBOND 286, SEE MIXING INSTRUCTIONS ON SHEET 5.



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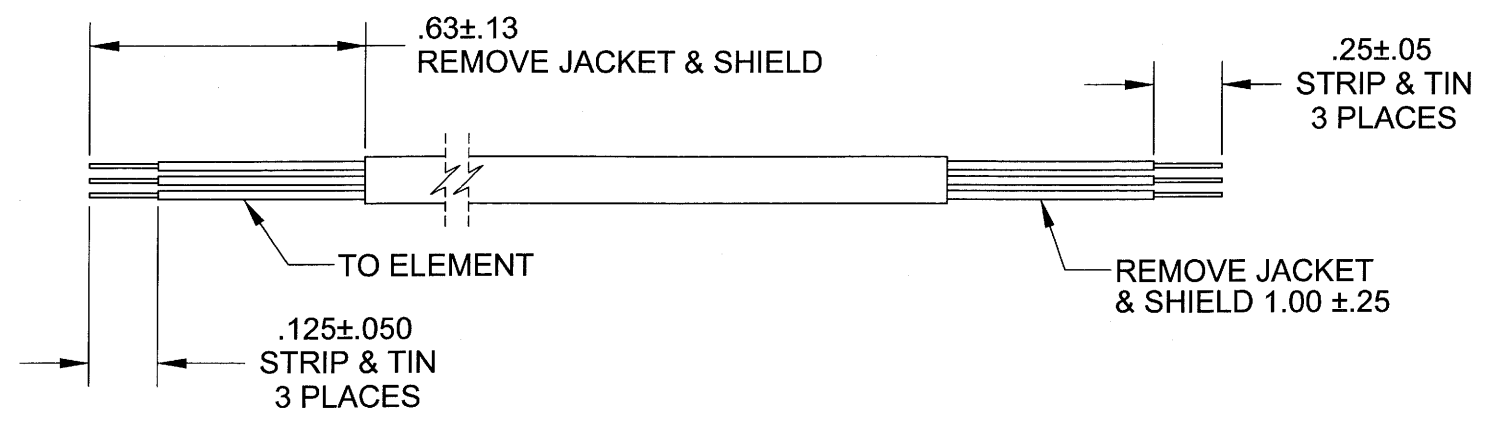
APPROVALS		DATE	TITLE	
DRAWN	E.GARCIA	10/29/2010	ASSEMBLY DRAWING MTA - 5"	
CHKD	WISK	7/31/11	SIZE	REV
DO NOT SCALE DRAWING		SCALE: 3:2	CODE IDENT. NO B 52158	DWG. NO. PS-172
			SHEET 3 OF 10	

ELECTRICAL CONNECTION

OPTION C - STEP 1:

- TRIM ELECTRICAL CABLE & ELEMENT LEADS AS SHOWN.

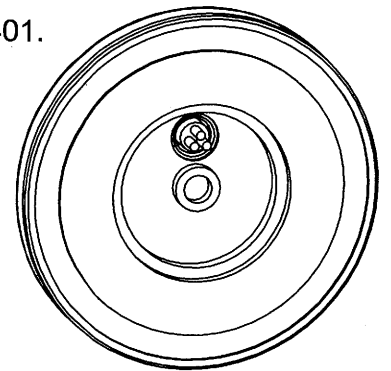
A



ELECTRICAL CONNECTION

OPTION C: - STEP 3

- SECURE THE EYELET TO THE HOUSING USING LOCTITE 401.



B

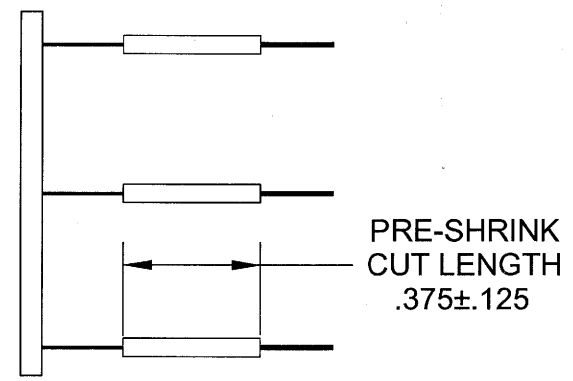
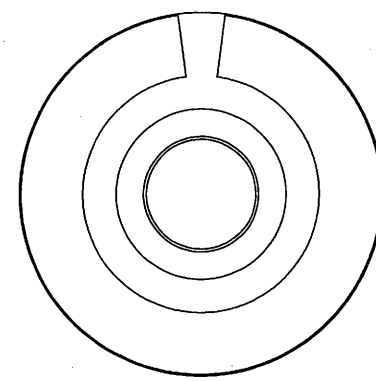
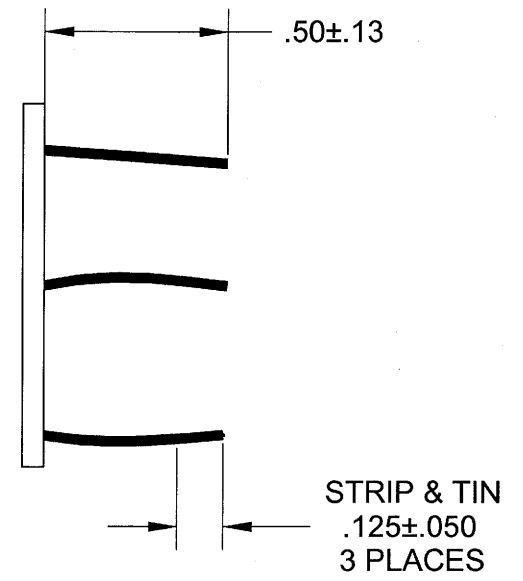
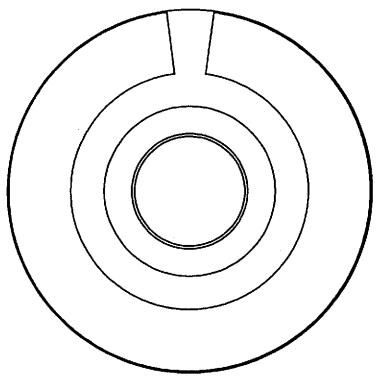
ELECTRICAL CONNECTION

OPTION C - STEP 4:

- SOLDER ELECTRICAL CABLE TO THE ELEMENT LEADS PER TABLE 2.
- USE .375 LONG PIECE OF HEAT SHRINK, 9000200-0023 TO SEAL CONNECTION.

RESISTIVE ELEMENT

RESISTIVE ELEMENT



C

D

ELECTRICAL CONNECTION

OPTION C: - STEP 5

- APPLY DOW CORNING RTV TO THE INSIDE OF THE ELEMENT HOUSING AS NOTED.
- PLACE RESISTIVE ELEMENT ON THE RTV (ENSURE THE HEAT SHRINK PORTION REMAINS IN THE HOUSING)
- HOLD ELEMENT IN PLACE WITH A CLAMP AND ALLOW TO DRY FOR 1 HOUR MINIMUM.
- FILL CAVITY WITH ECCOBOND 286, SEE MIXING INSTRUCTIONS ON SHEET 5.

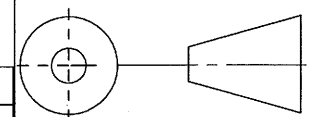
APPLY RTV ON THIS SURFACE

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TITLE

ASSEMBLY DRAWING
MTA - 5"

APPROVALS		DATE
DRAWN	E.GARCIA	10/29/2010
CHKD	NSX	7/31/11
DO NOT SCALE DRAWING		

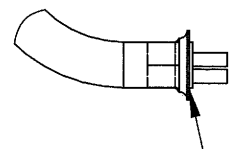
SIZE	CODE IDENT. NO	DWG. NO.	REV
B	52158	PS-172	A
SCALE: 3:2		SHEET 4 OF 10	

ELECTRICAL CONNECTION

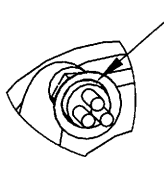
OPTION C - STEP 2:

- SLIDE THE ELEMENT HOUSING OVER THE CABLE BEFORE THE EYELET AND ALIGN JACKET WITH FLANGE, SEE VIEW BELOW.
- SECURE THE CABLE TO THE EYELET USING LOCTITE 401, ALLOW TO DRY.
- USING SAVA CRIMPING PLIERS, T-185 POSITION "C", SECURE THE EYELET TO THE ELECTRICAL CABLE.

F



ALIGN JACKET TO EDGE OF FLANGE



APPLY LOCTITE 401 BETWEEN CABLE AND EYELET, THEN CRIMP AS DESCRIBED

G

ELEMENT WIRE COLOR	ELECTRICAL CABLE COLOR
ORANGE	BLACK
BROWN	RED
RED	GREEN

A

MIXING INSTRUCTIONS:

- USE CONNECTOR COVER 9640087-0004 AS A MIXING BOWL, OR EQUIVALENT.
- MIX INTO THE CONNECTOR COVER, EQUAL PARTS OF ECCOBOND 286, CELESCO P/N: 9000010-0052.
- USE A TAPERED SYRINGE, CELESCO P/N: 9650732-0000, TO DISPENSE INTO THE CAVITY AS SHOWN.
- KEEP LEVEL AT LEAST FOR THE FIRST 30 MIN TO KEEP EPOXY FROM RUNNING OUT
- ALLOW TO CURE AT LEAST 24 HOURS BEFORE HANDLING.

B

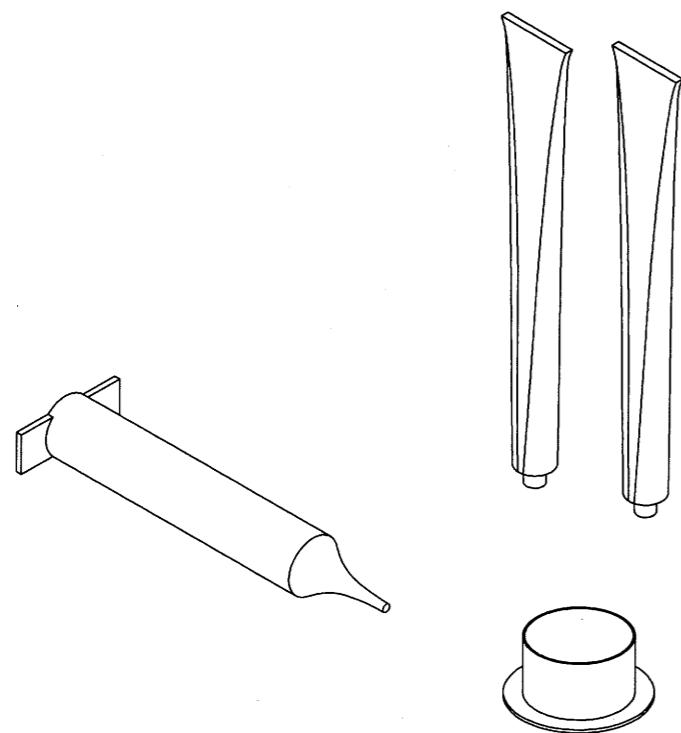
C

D

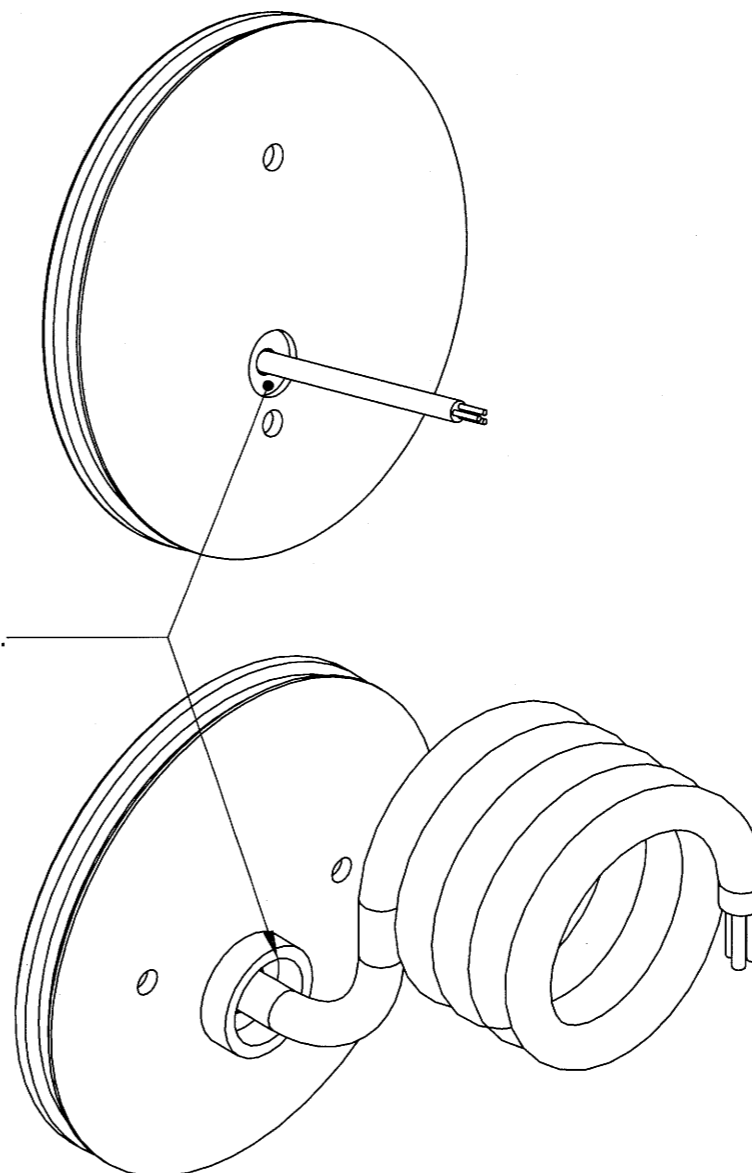
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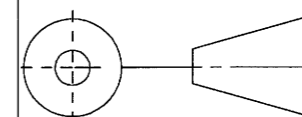
FILL CAVITY WITH ECCOBOND 286.



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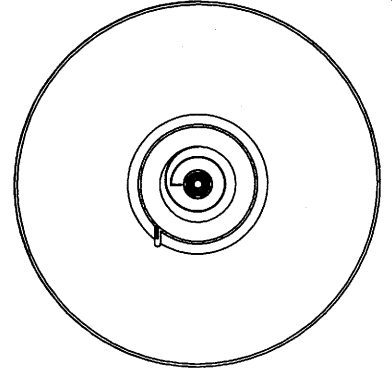
TITLE
**ASSEMBLY DRAWING
MTA - 5"**

APPROVALS		DATE	SIZE	CODE IDENT. NO	DWG. NO.	REV
DRAWN	E.GARCIA	10/29/2010	B	52158	PS-172	A
CHKD	<i>MSK</i>	3/31/11	DO NOT SCALE DRAWING		SCALE: 3:2	SHEET 5 OF 10

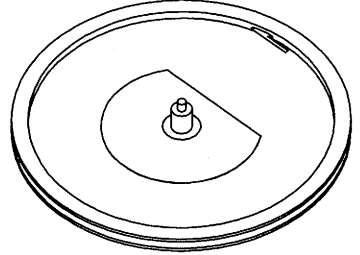
ASSEMBLY

A
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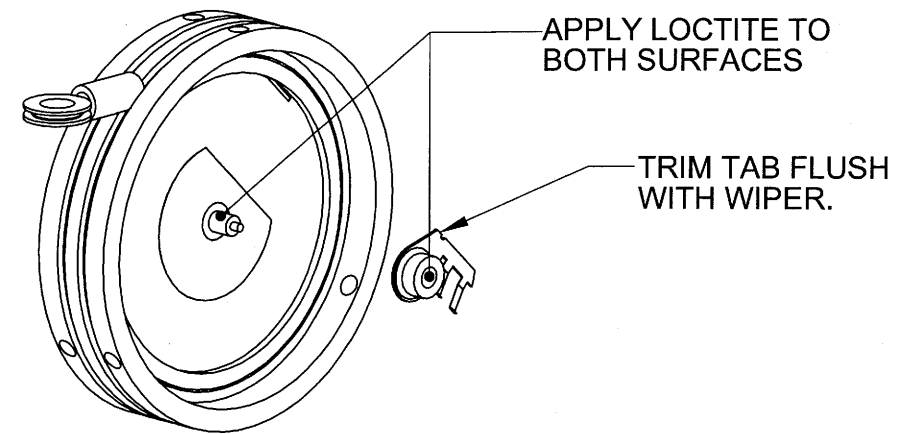
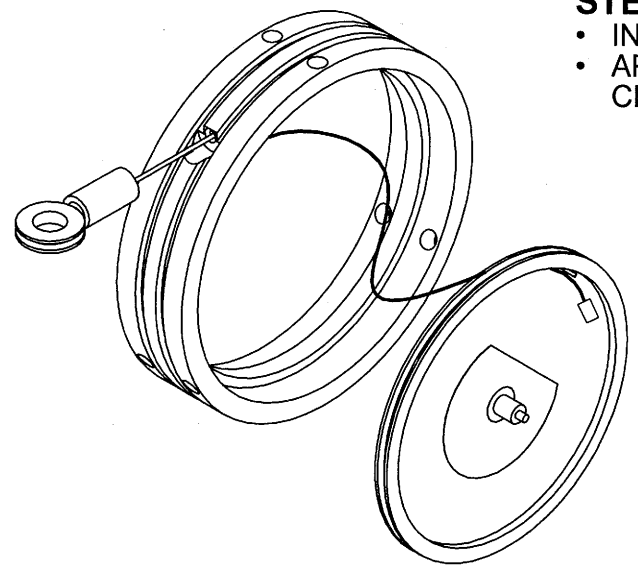
- STEP 1 SPRING INSTALLATION**
- INSERT BEARING INTO SPRING HOUSING.
 - INSERT SPRING INTO HOUSING AS SHOWN.
 - APPLY 2 DROPS OF SILICONE OIL, 9000000-00001, USING DISPENSER 9650601-0000.



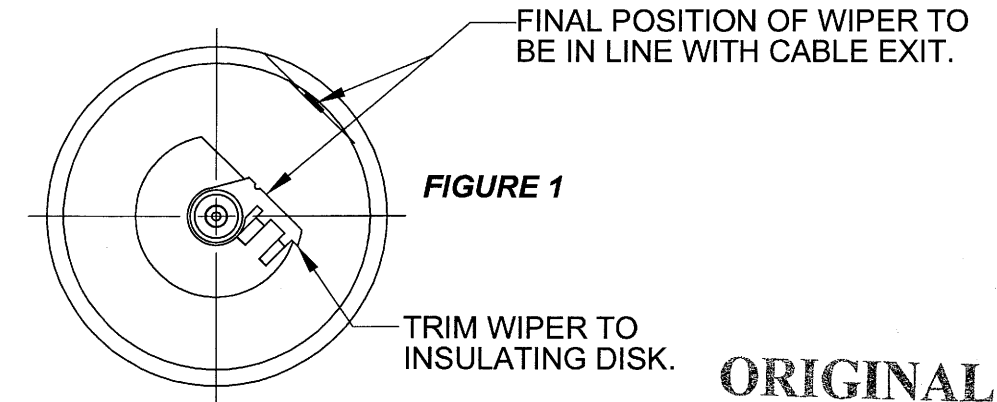
- STEP 2 INSULATING DISK INSTALLATION**
- INSTALL INSULATING DISK TAPE ON SPOOL AS SHOWN.
 - ALIGN FLAT OF DISK, PARALLEL, WITH CABLE EXIT HOLE.



- STEP 3 CABLE SUB ASSEMBLY INSTALLATION**
- INSTALL CRIMP PER CABLE ASSEMBLY DRAWING.
 - APPLY A SMALL DROP OF LOCTITE 401 BETWEEN THE CRIMP AND THE SPOOL, ENSURING IT LAYS FLAT.



- STEP 4 WIPER INSTALLATION**
- PLACE WIPER ON SPOOL HUB AND TRIM WIPER TO INSULATING DISK, SEE FIGURE 1.
 - AFTER TRIMMING, CLEAN SPOOL HUB AND WIPER BORE WITH ISOPROPYL ALCOHOL, ALLOW TO DRY.
 - USING A PINK LOCTITE DISPENSER, P/N: 9650602-0001, APPLY 2 DROPS OF LOCTITE AROUND THE SPOOL HUB AND INSIDE THE ELEMENT BORE.
 - ****FINAL POSITION OF WIPER TO BE IN LINE WITH CABLE EXIT HOLE, SEE FIGURE 1**.**



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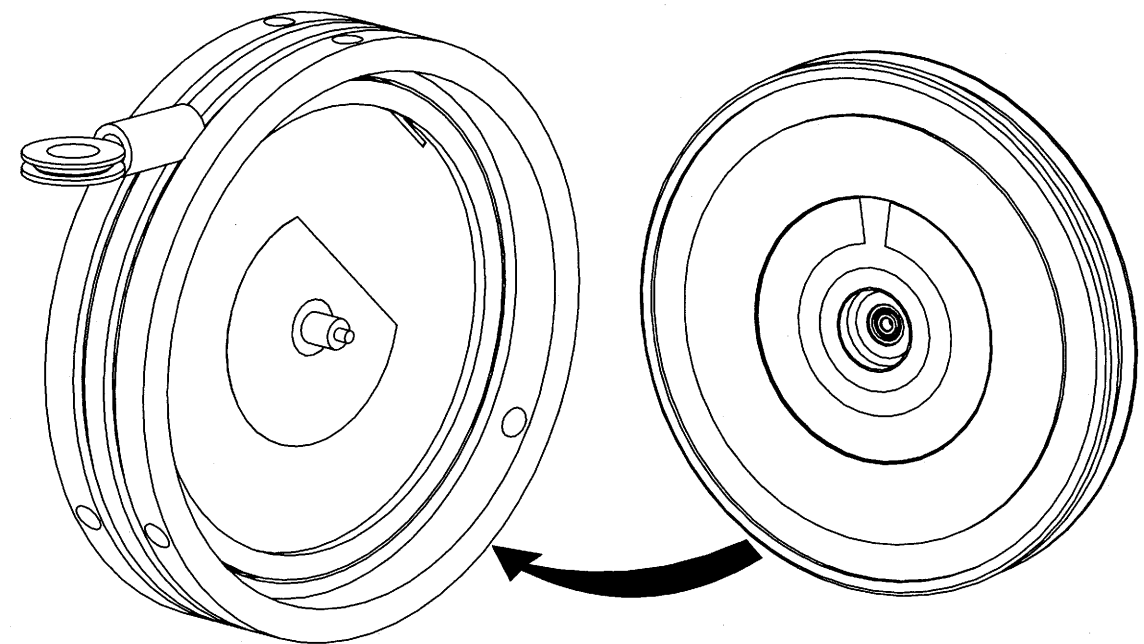
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TITLE
ASSEMBLY DRAWING
MTA - 5"

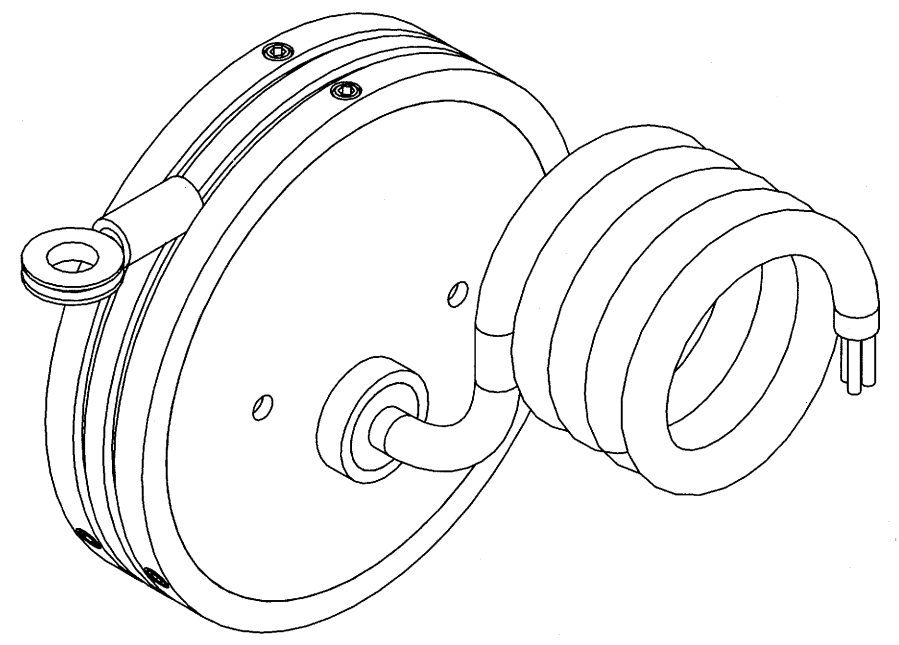
APPROVALS		DATE	SIZE	CODE IDENT. NO	DWG. NO.	REV
DRAWN	E.GARCIA	10/29/2010	B	52158	PS-172	A
CHKD	MSK	3/31/11	DO NOT SCALE DRAWING		SCALE: 1:1	SHEET 6 OF 10

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B
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STEP 5 ELEMENT ASSEMBLY INSTALLATION

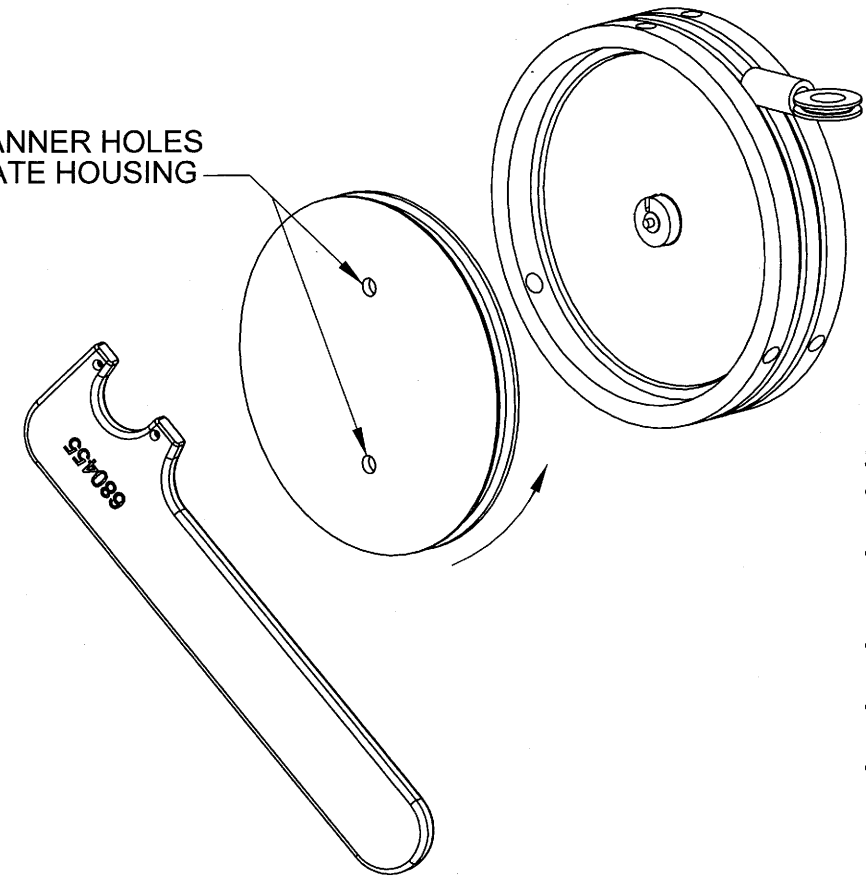
- PREPARE 3 SET SCREWS FOR INSTALLATION USING LOCTITE PRIMER 7649, ALLOW TO DRY.
- INSERT THE BEARING INTO THE ELEMENT HOUSING, CHECK THAT THE BEARING ROTATES FREELY.
- SLIGHTLY SECURE THE ELEMENT TO THE SPOOL HOUSING WITH THE SET SCREWS.



STEP 7 OUTPUT ADJUSTMENT

- USING A DVM, POWER SUPPLY SET TO 10.000 ±.001 VDC AND WIRED PER TABLE 3, ROTATE THE ELEMENT HOUSING TO ACHIEVE AN OUTPUT OF .04 - .06 VDC.
- SECURE ELEMENT HOUSING TO THE SPRING HOUSING, USE LOCTITE 222 ON THE THREE SCREWS.

USE SPANNER HOLES TO ROTATE HOUSING



STEP 6 SPRING ASSEMBLY INSTALLATION

- PREPARE 3 SET SCREWS FOR INSTALLATION USING LOCTITE PRIMER 7649, ALLOW TO DRY.
- WITH THE CABLE FULLY RETRACTED, INSERT THE SPRING ASSEMBLY INTO THE SPOOL HOUSING AND ENGAGE THE SPOOL ARBOR WITH THE SPRING HOOK.
- SLIGHTLY TIGHTEN THE SCREWS TO HOLD THE SPRING HOUSING IN PLACE.
- USING SPANNER WRENCH PN: 680455 ROTATE THE SPRING HOUSING 2.5 ± .5 TURNS IN THE DIRECTION INDICATED.
- SECURE THE SPRING HOUSING TO THE SPOOL HOUSING USING LOCTITE 222 ON ALL 3 SCREWS.

ORIGINAL

TABLE 3		
FUNCTION	ELEMENT WIRE OPTION	ELECTRICAL CABLE OPTION
+ INPUT	BROWN	RED
COMMON	ORANGE	BLACK
+ SIGNAL	RED	GREEN

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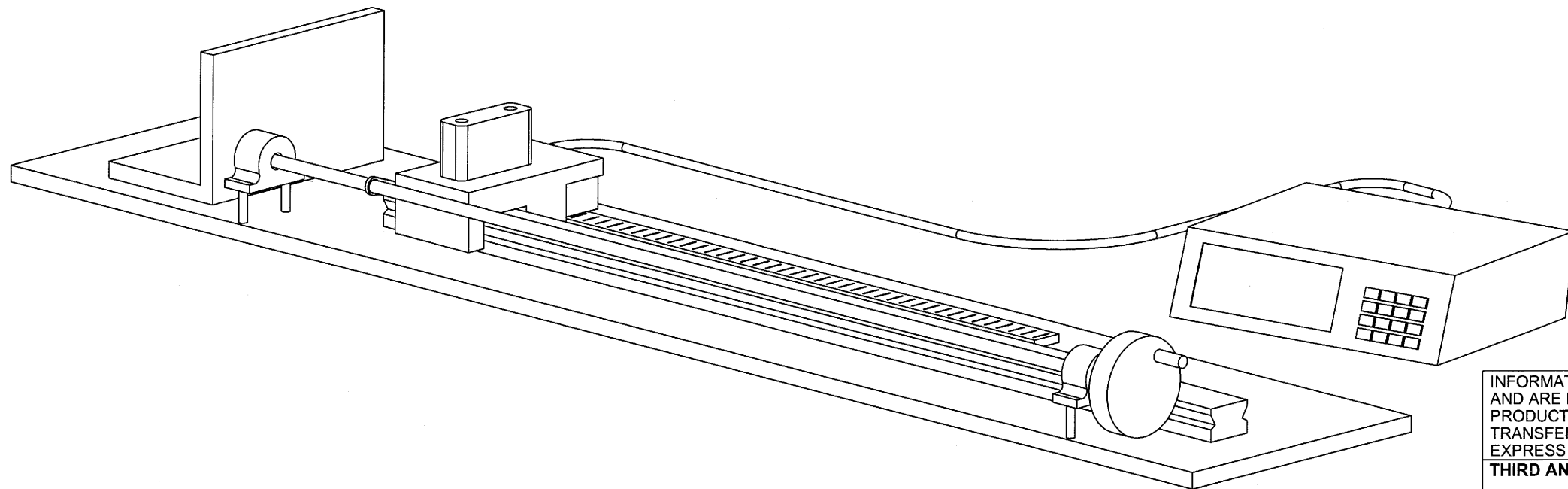
TITLE
**ASSEMBLY DRAWING
MTA - 5"**

APPROVALS	DATE	SIZE	CODE IDENT. NO	DWG. NO.	REV
DRAWN E.GARCIA	10/29/2010	B	52158	PS-172	A
CHKD <i>MSK</i>	3/31/11	DO NOT SCALE DRAWING		SCALE: 3:2	SHEET 7 OF 10

ACCEPTANCE TEST PROCEDURE

- USING THE TEST FIXTURE CI3034 AND THE HARNESS LABELED "PT101", ENTER THE DATA PER THE SEQUENCE NUMBER IN TABLE 4 INTO THE TEST DATA COMPUTER. REFER TO TABLE 5 FOR LIMITS.

TABLE 4		
CABLE POSITION % F.S.	OUTPUT DURING EXTENSION	OUTPUT DURING RETRACTION
0%	#1	#22
10%	#2	#21
20%	#3	#20
30%	#4	#19
40%	#5	#18
50%	#6	#17
60%	#7	#16
70%	#8	#15
80%	#9	#14
90%	#10	#13
100%	#11	#12

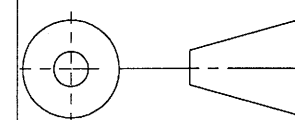


ORIGINAL

TABLE 5	
ACCEPTANCE TEST LIMITS	
0% F.S.	0.03-0.08 VDC
100% F.S.	9.30-10.00 VDC
%F.S. ACCURACY	±.4%

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TITLE
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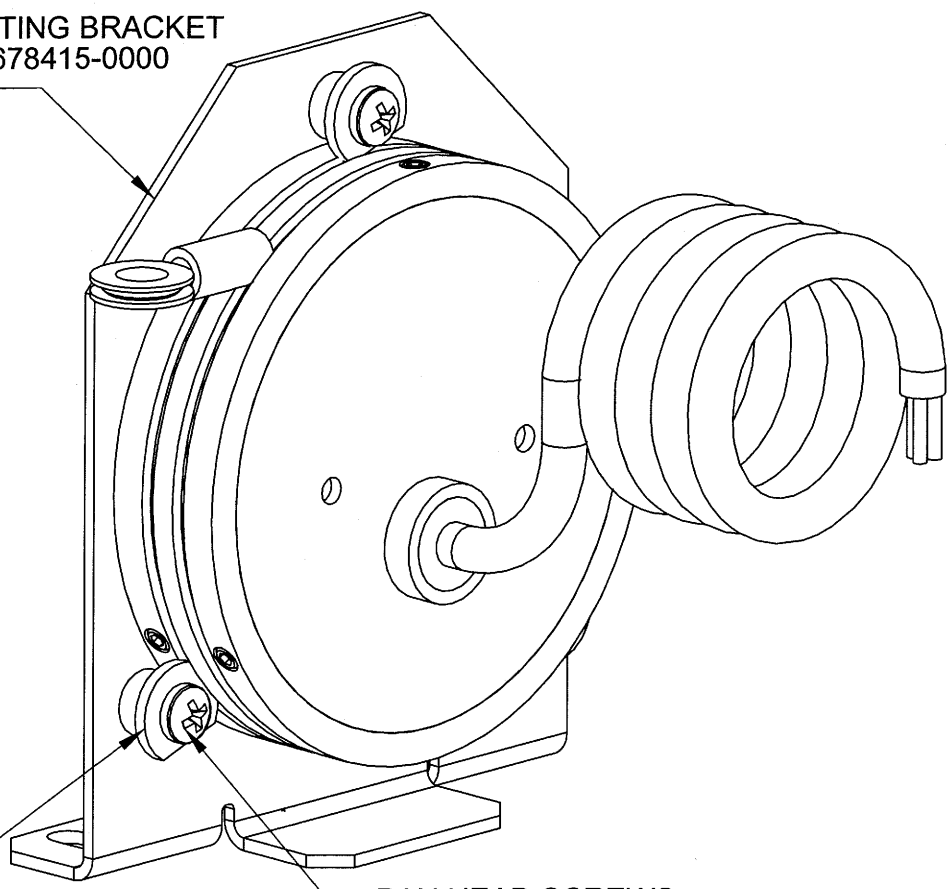
APPROVALS		DATE	SIZE	CODE IDENT. NO	DWG. NO.	REV
DRAWN	E.GARCIA	10/29/2010	B	52158	PS-172	A
CHKD	MSK	3/31/11	DO NOT SCALE DRAWING		SCALE: 1:4	SHEET 8 OF 10

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MOUNTING BRACKET OPTION

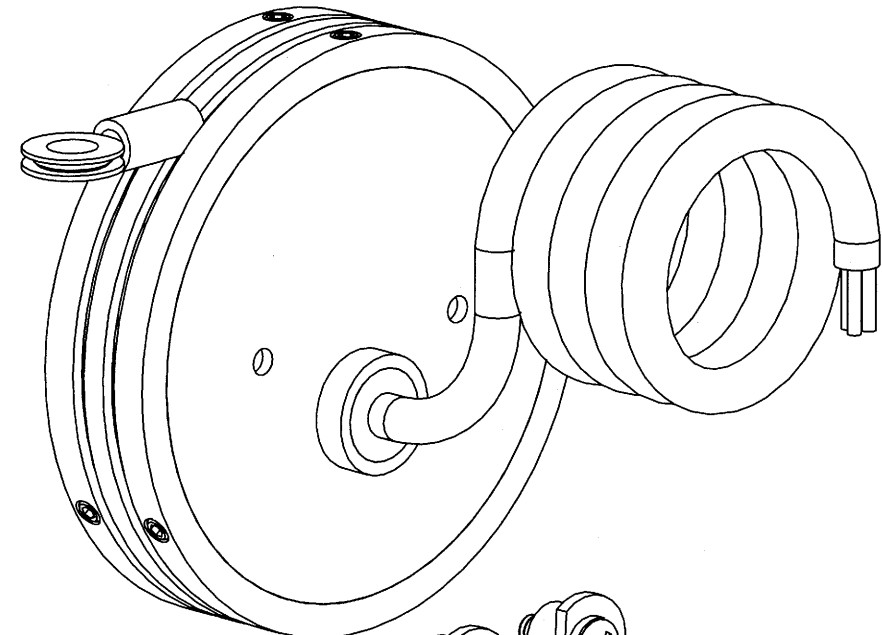
SERVO CLAMP OPTION

MOUNTING BRACKET
P/N: 9678415-0000
QTY 1



SERVO CLAMP
P/N: 9000400-0133
QTY 3

PAN HEAD SCREWS
P/N: 9650444-0092
QTY 3



SERVO CLAMP
P/N: 9000400-0133
QTY 3

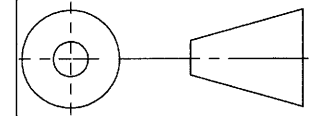
PLACE CLAMPS AND SCREWS IN A
PLASTIC BAG PRIOR TO SHIPPING;
ATTACH TO UNIT.

PAN HEAD SCREWS
P/N: 9650444-0092
QTY 3

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MTA - 5"**

APPROVALS		DATE	SIZE	CODE IDENT. NO	DWG. NO.	REV
DRAWN	E.GARCIA	10/29/2010	B	52158	PS-172	A
CHKD	<i>MSK</i>	7/31/11				
DO NOT SCALE DRAWING			SCALE: 3:2		SHEET 9 OF 10	



DRAWING CHANGE NOTICE

DRAWING NO. **PS-172** REV. **A****SHEET 10 OF 10**

DISPOSITION OF PARTS	USE AS IS	MUST CONFORM	PART NAME ASSEMBLY DRAWING			DCN NO. 7762			
IN FABRICATION		X	ENGINEERING APPROVAL			COPIES TO	YES	NO	
IN STOCK		X		SIGNATURE	DATE	ENGINEERING	X		
BOXED PARTS		X	PREPARED BY	E.GARCIA	10/29/2010	INSPECTION	X		
IN ASSEMBLIES		X	CHECKED BY	<i>MSK</i>	<i>3/31/11</i>	PLANNING	X		
IN BOND		X	APPROVED	<i>N.O.</i>	<i>3/31/11 10/29/2010</i>	PRODUCTION	X		
CUSTOMER REWORK		X	GEN MGR	X	X	PURCHASING	X		
			DCR NO. (IF APPLICABLE)	0000			QMR	X	
						SALES	X		

CHANGE NO	REVISED OR CHANGED FROM	SHEET / ZONE	ADDED OR CHANGED TO
1	NEW DRAWING		

NOTES **REPLACES PS-68**REMARKS: **BASED OFF OF PS-152**