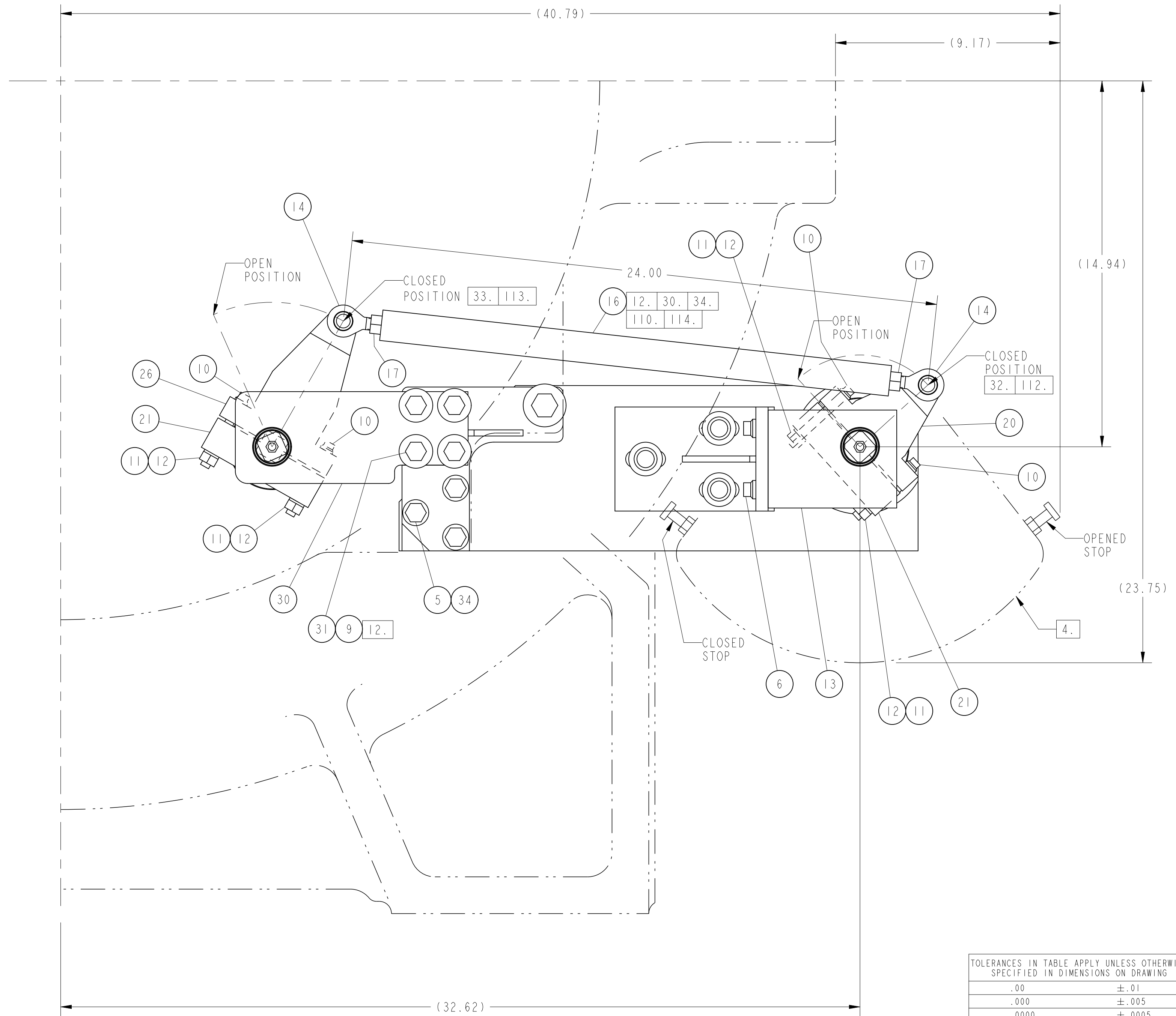
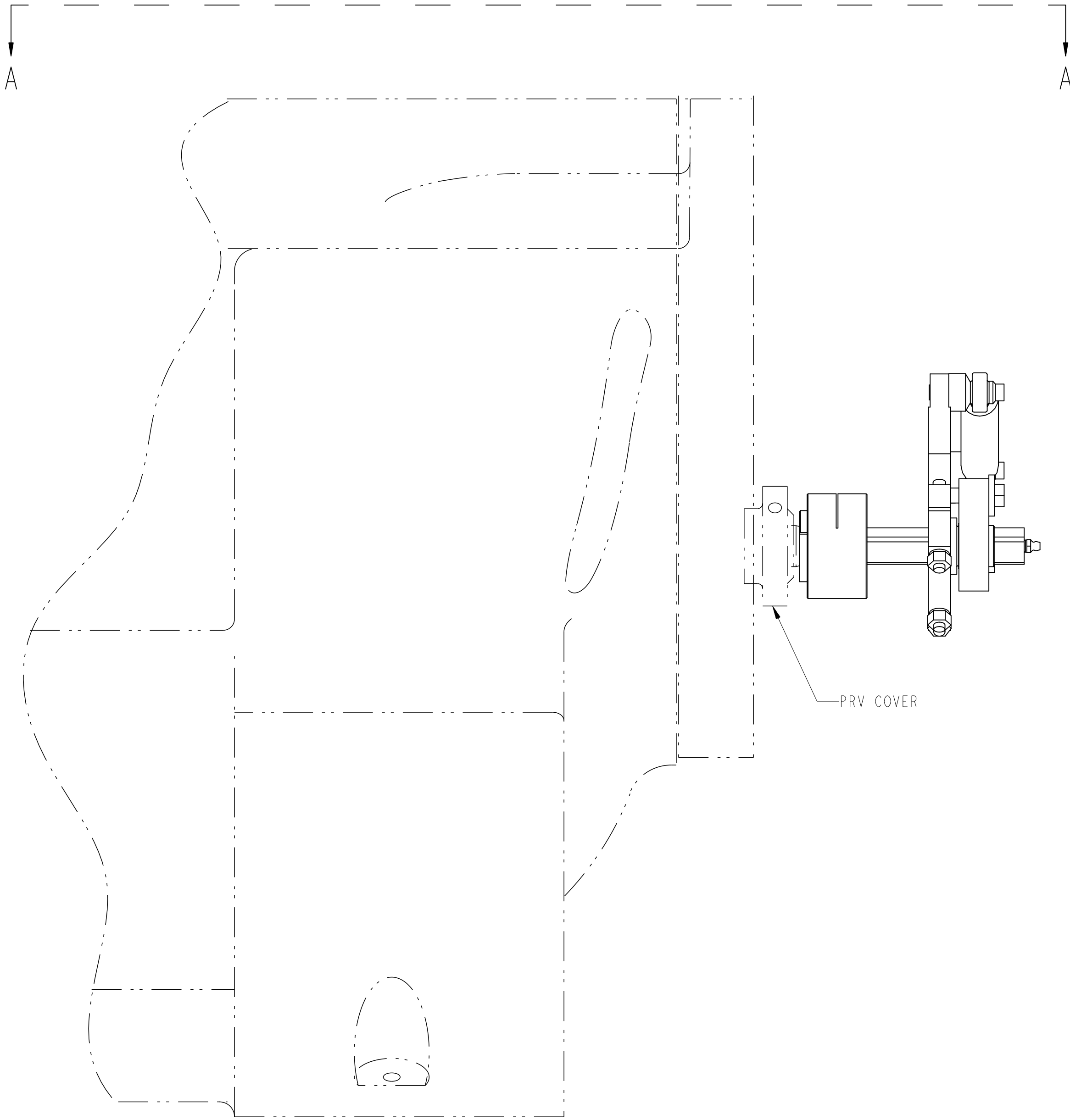


SEE SHEET 2 ZONE A7



TOLERANCES IN TABLE APPLY UNLESS OTHERWISE SPECIFIED IN DIMENSIONS ON DRAWING	
.00	±.01
.000	±.005
.0000	±.0005
ANGLES	±.5°
INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994	

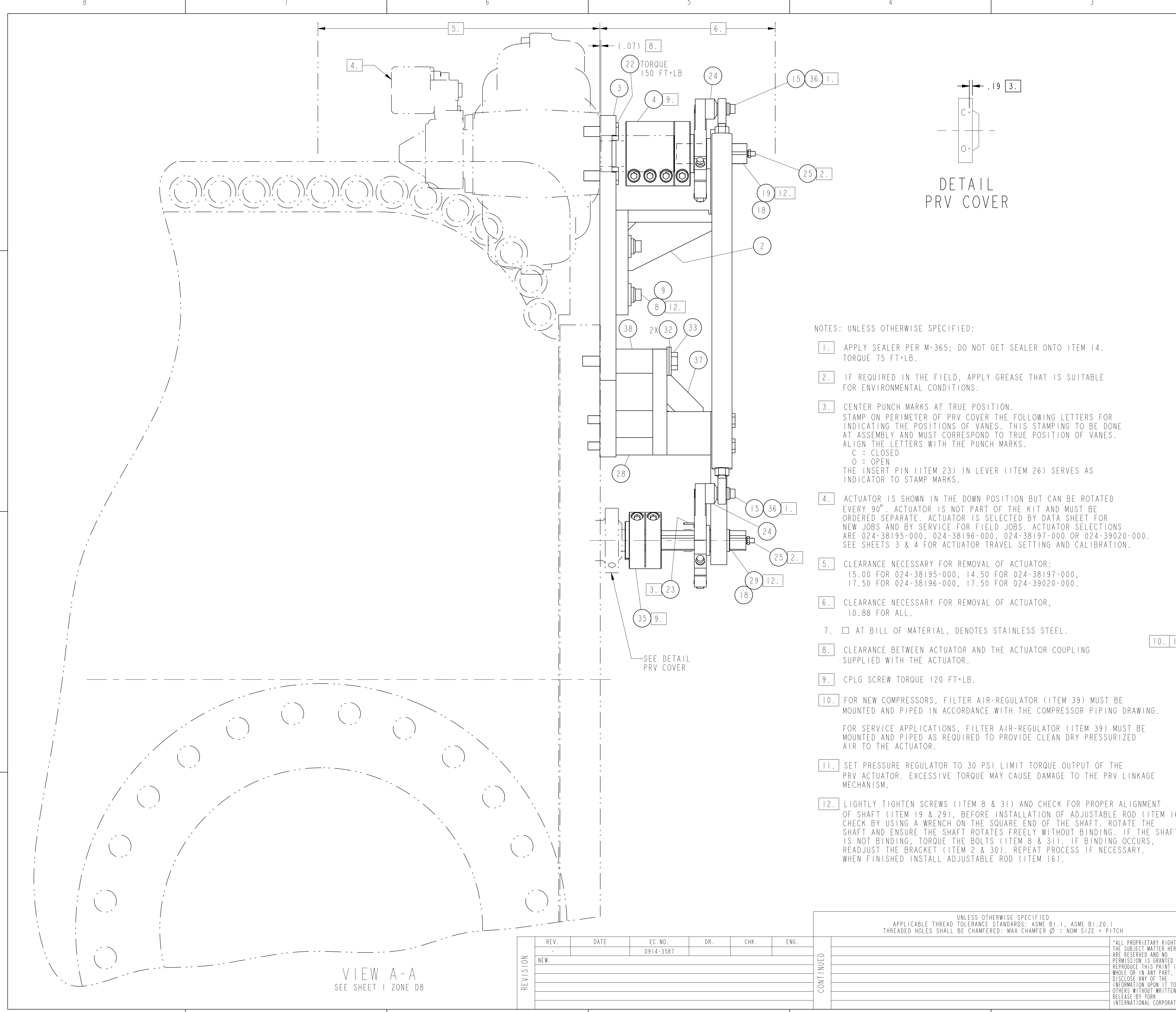
UNLESS OTHERWISE SPECIFIED  
 APPLICABLE THREAD TOLERANCE STANDARDS: ASME B1.1, ASME B1.20.1  
 THREADED HOLES SHALL BE CHAMFERED: MAX CHAMFER Ø = NOM SIZE + PITCH

REV.	DATE	EC NO.	DR.	CHK.	ENG.
NEW.		0914-3587			

CONTINUED

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		<b>YORK INTERNATIONAL CORPORATION</b> YORK, PA 17405	
THIRD ANGLE DIMENSIONS ARE IN INCHES DO NOT SCALE		KIT PRV ACTR W/HDWHL 55	
DRAWN E.M.MOHAR 20-APR-2015 MODELER E.M.MOHAR 20-APR-2015 CHKD B.L.KNAUB 15-JUN-2015 ENG		MATERIAL ENG. STD. PART NO. CUT SIZE	
SCALE: .340 WEIGHT: 117.038		CAGE NUMBER <b>D 66935</b>	
ORIG. NO.: 381-17889-000		DRAWING NUMBER <b>381-19659-000</b>	
SHEET 1 OF 4		REVISION 0 Released	



BILL OF MATERIAL  
FOR  
381-18951-000

ITEM	PART NUMBER	QTY	DESCRIPTION
2	381-19655-000	1	BRACKET EXTENSION
3	081-19652-000	1	PLATE MOUNTING
4	029-25631-000	1	CPLG PRV SHAFT
5	021-08898-000	3	SCREW CAP HEX HD .500-13UNC X 5
6	021-13334-000	2	SCREW CAP 12 PT HD .500-13UNC-3A X 1.25
8	021-11138-000	3	SCREW CAP 12 PT HD .625-11UNC-3A X 1.62
9	021-33131-000	7	WASHER PLAIN HARDENED
10	021-11972-000	4	SCREW CAP 12 PT HD .375-16UNC-3A X 3.00
11	021-05269-000	4	LKWASH HEL SPG 3/8 REG
12	021-00471-000	4	NUT HEX HVY 3/8-16UNC
13	081-17857-000	1	PLATE BEARING
14	029-07015-000	2	BRG ROD END WITH SST INSERT
15	021-11597-000	2	SCREW CAP 12 PT HD .500-13UNC-3A X 2.00
16	081-18764-000	1	ROD ADJUSTABLE
17	021-10171-000	2	NUT HEX .500-20UNF-2B
18	029-25853-000	2	BEARING SLEEVE
19	081-17859-000	1	SHAFT PRV
20	081-18765-000	1	LEVER EXTERNAL
21	081-17861-000	2	LEVER EXTERNAL
22	021-01628-000	4	SCREW CAP HEX HD .625-11UNC X 1.75
23	029-05900-000	1	SPRING PIN 3/32 DIA X 1-1/8 LONG
24	081-17891-000	2	FILLPIECE
25	023-26465-000	2	FITTING GREASE 1/8-27NPTF
26	081-18956-000	1	LEVER EXTERNAL
28	081-19738-000	1	SPACER 55
29	081-19744-000	1	SHAFT PRV
30	081-19743-000	1	BRACKET 55
31	021-02751-000	4	SCREW CAP HEX HD .500-20UNC X 1.75
32	021-01288-000	2	WASHER, PLAIN 5/8
33	021-10839-000	1	SCREW, CAP HEX HD. 5/8-11UNC X 5-1/2
34	021-01276-000	3	WASHER, PLAIN 1/2
35	029-26958-000	1	COUPLING PRV SHAFT
36	013-03056-000	.001	SEALER REFRIGERANT PIPE SEALANT
37	381-19739-000	1	BRACKET ASSY 55
38	081-19737-000	1	BAR SPACER
39	026-48411-000	1	FILTER AIR-REGULATOR

- NOTES: UNLESS OTHERWISE SPECIFIED:
- APPLY SEALER PER M-365; DO NOT GET SEALER ONTO ITEM 14. TORQUE 75 FT\*LB.
  - IF REQUIRED IN THE FIELD, APPLY GREASE THAT IS SUITABLE FOR ENVIRONMENTAL CONDITIONS.
  - CENTER PUNCH MARKS AT TRUE POSITION. STAMP ON PERIMETER OF PRV COVER THE FOLLOWING LETTERS FOR INDICATING THE POSITIONS OF VANES. THIS STAMPING TO BE DONE AT ASSEMBLY AND MUST CORRESPOND TO TRUE POSITION OF VANES. ALIGN THE LETTERS WITH THE PUNCH MARKS.  
C = CLOSED  
O = OPEN  
THE INSERT PIN (ITEM 23) IN LEVER (ITEM 26) SERVES AS INDICATOR TO STAMP MARKS.
  - ACTUATOR IS SHOWN IN THE DOWN POSITION BUT CAN BE ROTATED EVERY 90°. ACTUATOR IS NOT PART OF THE KIT AND MUST BE ORDERED SEPARATE. ACTUATOR IS SELECTED BY DATA SHEET FOR NEW JOBS AND BY SERVICE FOR FIELD JOBS. ACTUATOR SELECTIONS ARE 024-38195-000, 024-38196-000, 024-38197-000 OR 024-39020-000. SEE SHEETS 3 & 4 FOR ACTUATOR TRAVEL SETTING AND CALIBRATION.
  - CLEARANCE NECESSARY FOR REMOVAL OF ACTUATOR:  
15.00 FOR 024-38195-000, 14.50 FOR 024-38197-000,  
17.50 FOR 024-38196-000, 17.50 FOR 024-39020-000.
  - CLEARANCE NECESSARY FOR REMOVAL OF ACTUATOR,  
10.88 FOR ALL.
  - AT BILL OF MATERIAL, DENOTES STAINLESS STEEL.
  - CLEARANCE BETWEEN ACTUATOR AND THE ACTUATOR COUPLING SUPPLIED WITH THE ACTUATOR.
  - CPLG SCREW TORQUE 120 FT\*LB.
  - FOR NEW COMPRESSORS, FILTER AIR-REGULATOR (ITEM 39) MUST BE MOUNTED AND PIPED IN ACCORDANCE WITH THE COMPRESSOR PIPING DRAWING.  
FOR SERVICE APPLICATIONS, FILTER AIR-REGULATOR (ITEM 39) MUST BE MOUNTED AND PIPED AS REQUIRED TO PROVIDE CLEAN DRY PRESSURIZED AIR TO THE ACTUATOR.
  - SET PRESSURE REGULATOR TO 30 PSI LIMIT TORQUE OUTPUT OF THE PRV ACTUATOR. EXCESSIVE TORQUE MAY CAUSE DAMAGE TO THE PRV LINKAGE MECHANISM.
  - LIGHTLY TIGHTEN SCREWS (ITEM 8 & 31) AND CHECK FOR PROPER ALIGNMENT OF SHAFT (ITEM 19 & 29), BEFORE INSTALLATION OF ADJUSTABLE ROD (ITEM 16). CHECK BY USING A WRENCH ON THE SQUARE END OF THE SHAFT. ROTATE THE SHAFT AND ENSURE THE SHAFT ROTATES FREELY WITHOUT BINDING. IF THE SHAFT IS NOT BINDING, TORQUE THE BOLTS (ITEM 8 & 31). IF BINDING OCCURS, READJUST THE BRACKET (ITEM 2 & 30). REPEAT PROCESS IF NECESSARY. WHEN FINISHED INSTALL ADJUSTABLE ROD (ITEM 16).

10, 11

TOLERANCES IN TABLE APPLY UNLESS OTHERWISE SPECIFIED IN DIMENSIONS ON DRAWING

.00	±.01
.000	±.005
.0000	±.0005
ANGLES	±.5°

INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED  
APPLICABLE THREAD TOLERANCE STANDARDS: ASME B1.1, ASME B1.20.1  
THREADED HOLES SHALL BE CHAMFERED: MAX CHAMFER  $\phi$  = NOM SIZE + PITCH

**YORK INTERNATIONAL** YORK, PA 17405

THIRD ANGLE

DIMENSIONS ARE IN INCHES  
DO NOT SCALE

SCALE: .340 WEIGHT: 117.038 ORIG. NO.: 381-17889-000 SHEET 2 OF 4

Kit PRV ACTR W/HDWHL 55

MATERIAL ENG. STD. PART NO. CUT SIZE

DRAWN E.M.MOHAR 20-APR-2015  
MODELER E.M.MOHAR 20-APR-2015  
CHKD B.L.KNAUB 15-JUN-2015  
ENG

CAGE NUMBER 66935 DRAWING NUMBER 381-19659-000 REVISION 0

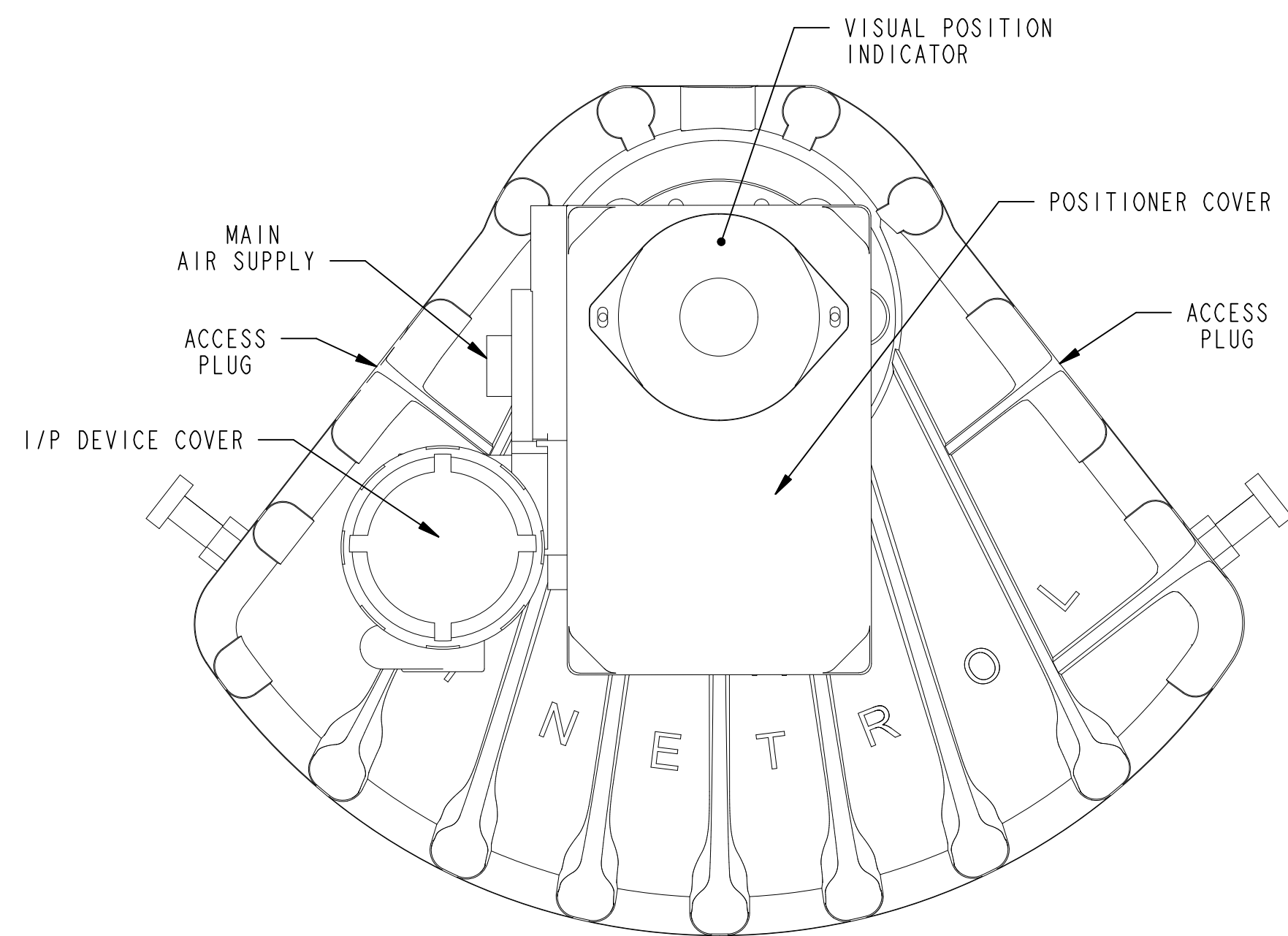
Released

REV.	DATE	EC NO.	DR.	CHK.	ENG.
NEW		0914-3587			

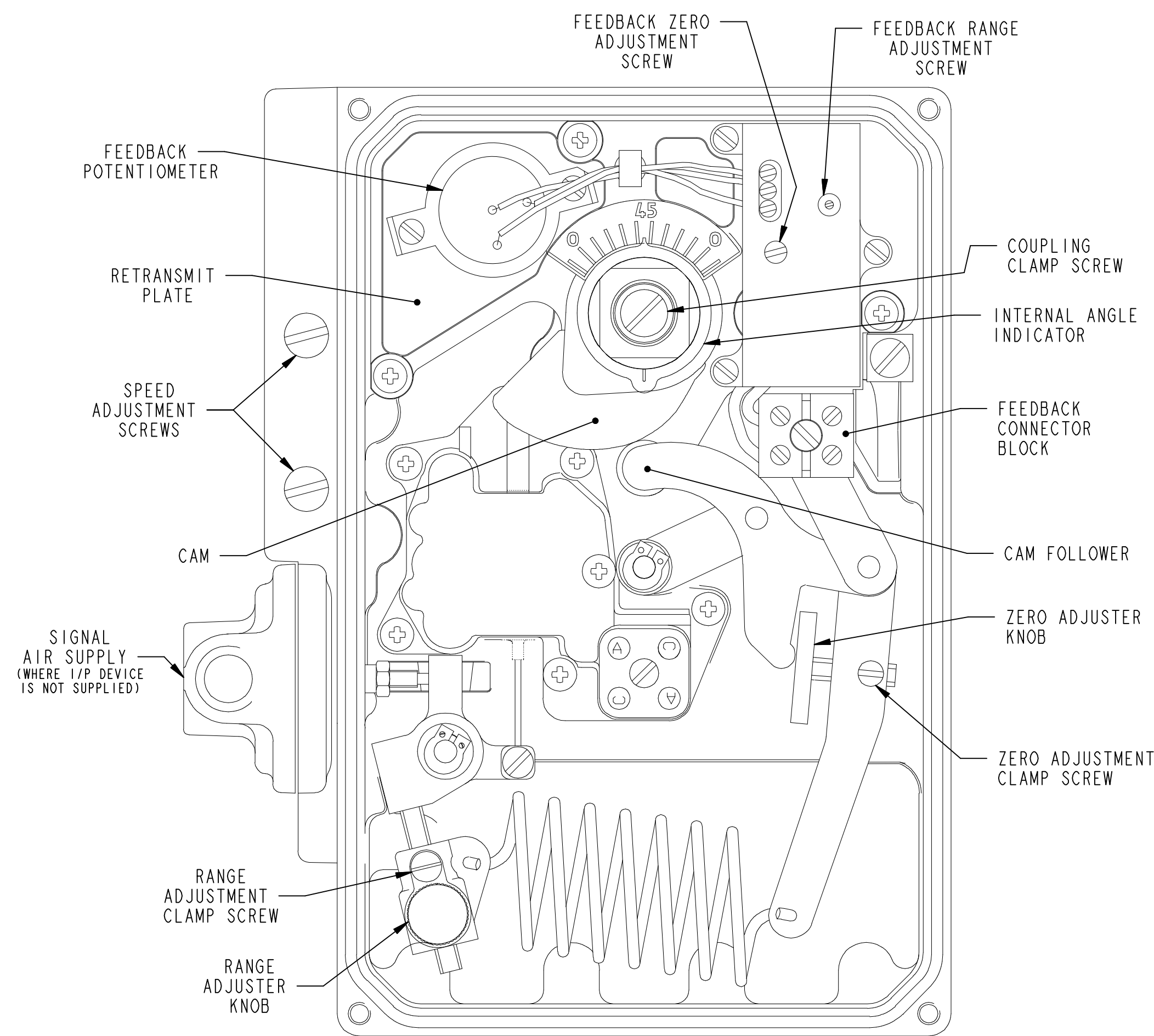
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VIEW A-A  
SEE SHEET 1 ZONE D8



ACTUATOR



POSITIONER INTERNAL VIEW

**ACTUATOR TRAVEL SETTING (OPERATION 1):**

30. ADJUSTABLE ROD (ITEM 16) SHOULD NOT BE INSTALLED. ALL OTHER COMPONENTS SHOULD BE INSTALLED AND FULLY TIGHTENED.
31. ASSURE ACTUATOR IS NOT CONNECTED TO AIR SUPPLY AND INTERNAL PRESSURE IS EXHAUSTED. REMOVE ACCESS PLUGS ON EACH SIDE OF THE ACTUATOR.
32. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE ACTUATOR LEVER INTO CLOSED POSITION AND ENSURE ACTUATOR IS AGAINST THE CLOSED STOP.
33. USING HAND PRESSURE, ROTATE PRV VANE LEVER TO CLOSED POSITION. DO NOT RELY ON PUNCH MARK INDICATORS. ENSURE LEVER IS MECHANICALLY IN CLOSED POSITION.
34. LOOSEN COUPLING (ITEM 4) AND INSTALL ADJUSTABLE ROD (ITEM 16) BETWEEN LEVERS. ADJUSTABLE ROD (ITEM 16) SHOULD HAVE LENGTH SET AND LOCK NUTS (ITEM 17) TIGHTENED.
35. TIGHTEN COUPLING (ITEM 4) WHILE MAINTAINING PRV VANE LEVER AND ACTUATOR LEVER POSITION. TORQUE SCREWS AS INDICATED.
36. ADJUST CLOSED STOP CLOCKWISE 1/2 TURN AND TIGHTEN LOCK NUT.
37. USING A CRESCENT WRENCH ON SQUARE END, ROTATE PRV VANE LEVER TO OPEN POSITION. IT IS PERMISSABLE TO RELY ON PUNCH MARK INDICATORS FOR SETTING OPEN POSITION.
38. ADJUST OPENED STOP ON ACTUATOR TO STOP ACTUATOR ROTATION WHEN PRV VANES ARE IN OPEN POSITION. TIGHTEN LOCK NUT. IF ADJUSTMENT OF OPENED STOP DOES NOT ALLOW FULL RANGE BETWEEN OPENED AND CLOSED VANE POSITION, TURN CLOSED STOP 2-3 TURNS COUNTERCLOCKWISE AND RESTART INSTRUCTIONS. IF ADJUSTMENT OF OPENED STOP DOES NOT LIMIT LINKAGE TRAVEL AT OPENED VANE POSITION, TURN CLOSED STOP 2-3 TURNS CLOCKWISE AND RESTART INSTRUCTIONS.
39. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY CYCLE ASSEMBLY BETWEEN STOPS. CHECK FOR INTERFERENCE BETWEEN MOVING PARTS. ENSURE ACTUATOR WILL NOT EXERT EXCESSIVE FORCE ON THE LINKAGE WHEN THE PRV VANES ARE IN CLOSED POSITION.
40. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
41. ADJUST THE VISUAL POSITION INDICATOR ON THE TOP OF THE POSITIONER COVER. REMOVE THE TWO SCREWS HOLDING THE CLEAR CONE TO THE COVER AND THEN REMOVE THE CLEAR PLASTIC CONE. THE O-RING AND THE BLACK PIECE IN THE CONE SHOULD REMAIN ATTACHED TO THE CLEAR PIECE. ROTATE THE CONICAL SCALE UNTIL "0" MARKER LINES UP WITH THE POINTER ON THE CLEAR CONE. REPLACE SCREWS.
42. REPLACE ACCESS PLUGS.

**CALIBRATION FOR ACTUATOR POSITIONER WITH I/P DEVICE (OPERATION 2A):**

50. A SIGNAL GENERATOR AND CLEAN DRY PRESSURIZED AIR IS REQUIRED. TYPICALLY, THE SHAFT ROTATION TO RISE IN SIGNAL WILL BE PROPERLY SET; IF DIRECTION MUST BE CHANGED, REFER TO KINETROL INSTRUCTION TD106 FOR THE AP PNEUMATIC POSITIONER.
51. ASSURE ACTUATOR IS NOT CONNECTED TO AIR SUPPLY, INTERNAL PRESSURE IS EXHAUSTED AND ACCESS PLUGS ARE REMOVED. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
52. REMOVE POSITIONER COVER BY LOOSENING THE FOUR SCREWS AT EACH CORNER OF THE COVER.
53. ASSURE THE CAM FOLLOWER IS AT THE BEGINNING OF ITS RISE ON THE CAM ON THE SHAFT OF THE POSITIONER.
54. IF THE CAM FOLLOWER MUST BE ADJUSTED, LOOSEN THE COUPLING CLAMP SCREW UNTIL THE TOP OF THE COUPLING ASSEMBLY CAN BE ROTATED BY HAND. ROTATE IT TO POSITION THE CAM FOLLOWER SO THAT IT IS AT THE BEGINNING OF THE RISE ON THE CAM. TIGHTEN THE COUPLING CLAMP SCREW.
55. REMOVE THE I/P DEVICE COVER AND TERMINATE THE (+) AND (-) WIRES FROM THE SIGNAL GENERATOR TO THE (+) AND (-) TERMINALS IN THE I/P DEVICE.
56. SET THE SIGNAL GENERATOR TO 4 mA.
57. REPLACE ACCESS PLUGS AND SUPPLY 30 PSI CLEAN, DRY, COMPRESSED AIR TO THE MAIN AIR SUPPLY PORT ON THE POSITIONER. THE ACTUATOR SHOULD REMAIN AGAINST THE CLOSED STOP.
58. IF THE ACTUATOR MOVES WHEN AIR IS INTRODUCED TO THE POSITIONER, LOOSEN THE ZERO ADJUSTMENT CLAMP SCREW AND ROTATE THE ZERO ADJUSTER KNOB USING THUMB PRESSURE UNTIL THE PRV VANE LEVER IS IN THE CLOSED POSITION. MAKE SURE THE ACTUATOR IS AGAINST THE CLOSED STOP SCREW. TIGHTEN THE ZERO ADJUSTMENT CLAMP SCREW.
59. SLOWLY INCREASE THE SIGNAL TO 20 mA. THIS WILL ROTATE THE PRV VANE LEVER TO THE OPEN POSITION. IF IT DOES NOT ACHIEVE THE FULL OPEN POSITION, LOOSEN THE RANGE ADJUSTMENT CLAMP SCREW AND ROTATE THE RANGE ADJUSTER KNOB BETWEEN THE THUMB AND FOREFINGER UNTIL THE ACTUATOR MOVES TO THE FULL OPEN POSITION. TIGHTEN THE RANGE ADJUSTMENT CLAMP SCREW.
60. SLOWLY DECREASE THE SIGNAL TO 12 mA. THIS WILL ROTATE THE PRV VANE LEVER TO THE MID POSITION.
61. SLOWLY DECREASE THE SIGNAL TO 4 mA AND VERIFY THE CLOSED POSITION.
62. DISCONNECT SIGNAL GENERATOR AND REPLACE I/P DEVICE COVER.
63. REPLACE POSITIONER COVER OR CONTINUE TO OPERATION 3.

**CALIBRATION FOR ACTUATOR POSITIONER WITHOUT I/P DEVICE (OPERATION 2B):**

70. REGULATED CLEAN DRY PRESSURIZED AIR IS REQUIRED. TYPICALLY, THE SHAFT ROTATION TO RISE IN SIGNAL WILL BE PROPERLY SET; IF DIRECTION MUST BE CHANGED, REFER TO KINETROL INSTRUCTION TD106 FOR THE AP PNEUMATIC POSITIONER.
71. ASSURE ACTUATOR IS NOT CONNECTED TO AIR SUPPLY, INTERNAL PRESSURE IS EXHAUSTED AND ACCESS PLUGS ARE REMOVED. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
72. REMOVE POSITIONER COVER BY LOOSENING THE FOUR SCREWS AT EACH CORNER OF THE COVER.
73. ASSURE THE CAM FOLLOWER IS AT THE BEGINNING OF ITS RISE ON THE CAM ON THE SHAFT OF THE POSITIONER.
74. IF THE CAM FOLLOWER MUST BE ADJUSTED, LOOSEN THE COUPLING CLAMP SCREW UNTIL THE TOP OF THE COUPLING ASSEMBLY CAN BE ROTATED BY HAND. ROTATE IT TO POSITION THE CAM FOLLOWER SO THAT IT IS AT THE BEGINNING OF THE RISE ON THE CAM. TIGHTEN THE COUPLING CLAMP SCREW.
75. REPLACE ACCESS PLUGS AND SUPPLY REGULATED CLEAN, DRY, COMPRESSED AIR TO SIGNAL AIR SUPPLY PORT ON THE POSITIONER.
76. SET THE SIGNAL AIR SUPPLY AT 3 PSIG.
77. SUPPLY 30 PSI CLEAN, DRY, COMPRESSED AIR TO THE MAIN AIR SUPPLY PORT ON THE POSITIONER. THE ACTUATOR SHOULD REMAIN AGAINST THE CLOSED STOP.
78. IF THE ACTUATOR MOVES WHEN AIR IS INTRODUCED TO THE POSITIONER, LOOSEN THE ZERO ADJUSTMENT CLAMP SCREW AND ROTATE THE ZERO ADJUSTER KNOB USING THUMB PRESSURE UNTIL THE PRV VANE LEVER IS IN THE CLOSED POSITION. MAKE SURE THE ACTUATOR IS AGAINST THE CLOSED STOP SCREW. TIGHTEN THE ZERO ADJUSTMENT CLAMP SCREW.
79. SLOWLY INCREASE THE SIGNAL AIR SUPPLY TO 15 PSIG. THIS WILL ROTATE THE PRV VANE LEVER TO THE OPEN POSITION. IF IT DOES NOT ACHIEVE THE FULL OPEN POSITION, LOOSEN THE RANGE ADJUSTMENT CLAMP SCREW AND ROTATE THE RANGE ADJUSTER KNOB BETWEEN THE THUMB AND FOREFINGER UNTIL THE ACTUATOR MOVES TO THE FULL OPEN POSITION. TIGHTEN THE RANGE ADJUSTMENT CLAMP SCREW.
80. SLOWLY DECREASE THE SIGNAL AIR SUPPLY TO 9 PSIG. THIS WILL ROTATE THE PRV VANE LEVER TO THE MID POSITION.
81. SLOWLY DECREASE THE SIGNAL AIR SUPPLY TO 3 PSIG AND VERIFY THE CLOSED POSITION.
82. REPLACE POSITIONER COVER OR CONTINUE TO OPERATION 3.

**CALIBRATION OF FEEDBACK POTENTIOMETER (OPERATION 3):**

90. DISCONNECT AIR SUPPLY, ALLOW ACTUATOR TO EXHAUST AND REMOVE ACCESS PLUGS ON EACH SIDE OF THE ACTUATOR. REMOVE POSITIONER COVER BY LOOSENING THE FOUR SCREWS AT EACH CORNER OF THE COVER.
91. TERMINATE THE (+) WIRE FROM THE SIGNAL GENERATOR TO THE (+) TERMINAL OF THE FEEDBACK CONNECTOR BLOCK. CONNECT AN AMMETER BETWEEN THE (-) TERMINAL OF THE FEEDBACK CONNECTOR BLOCK AND (-) WIRE OF THE SIGNAL GENERATOR.
92. SET THE SIGNAL GENERATOR TO 20 mA.
93. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
94. LOOSEN THE TWO SCREWS THAT SECURE THE FEEDBACK POTENTIOMETER TO THE RETRANSMIT PLATE BUT DO NOT REMOVE. USING FINGER PRESSURE, ROTATE THE POTENTIOMETER UNTIL AMMETER READS 4 mA. TIGHTEN THE TWO POTENTIOMETER CLAMP SCREWS.
95. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO OPENED POSITION.
96. ADJUST THE FEEDBACK RANGE ADJUSTMENT SCREW UNTIL AMMETER READS 20 mA.
97. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
98. ADJUST THE FEEDBACK ZERO ADJUSTMENT SCREW UNTIL AMMETER READS 4 mA.
99. REPEAT STEPS 95 - 98 AS NECESSARY UNTIL DESIRED AMMETER READINGS ARE OBTAINED AT OPENED AND CLOSED VANE POSITIONS.
100. DISCONNECT SIGNAL GENERATOR, REPLACE POSITIONER COVER AND ACCESS PLUGS.

**ACTUATOR SETTING AND CALIBRATION - NON EXPLOSION PROOF**

REV.	DATE	EC NO.	DR.	CHK.	ENG.
NEW.		0914-3587			

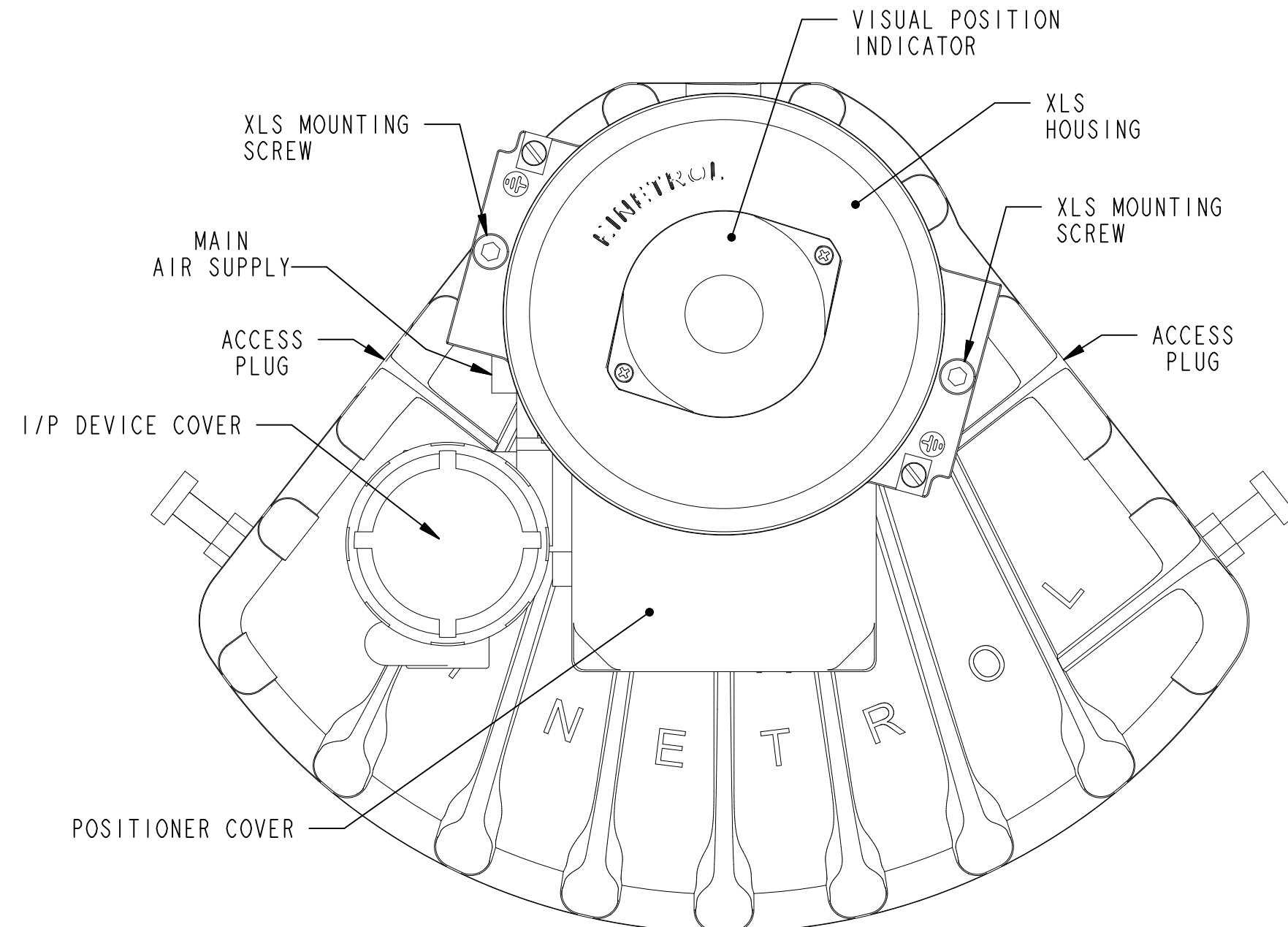
REV.	DATE	EC NO.	DR.	CHK.	ENG.

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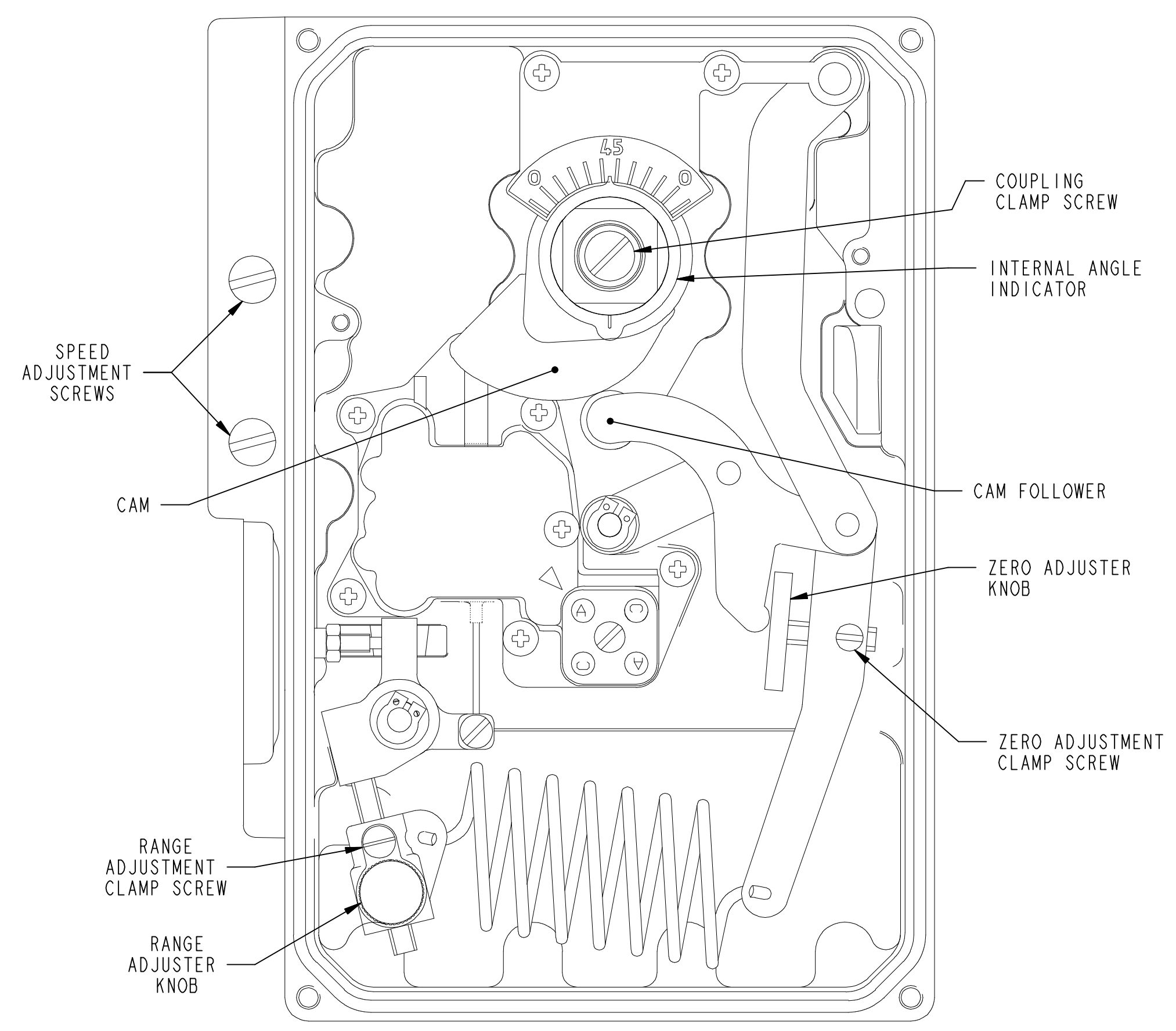
		YORK INTERNATIONAL CORPORATION YORK, PA 17405	
THIRD ANGLE 	DIMENSIONS ARE IN INCHES DO NOT SCALE	KIT PRV ACTR W/HDWHL 55	MATERIAL ENG. STD. PART NO. CUT SIZE
DRAWN E.M.MOHAR 20-APR-2015	MODELER E.M.MOHAR 20-APR-2015	CAGE NUMBER 66935	DRAWING NUMBER 381-19659-000
CHKD B.L.KNAUB 15-JUN-2015	ENG	SCALE: .340	WEIGHT: 117.038 ORIG. NO.: 381-17889-000 SHEET 3 OF 4
REVISION		CONTINUED	
REVISION		CONTINUED	

INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994

REVISION 0  
Released



ACTUATOR



POSITIONER INTERNAL VIEW

**ACTUATOR TRAVEL SETTING (OPERATION 1):**

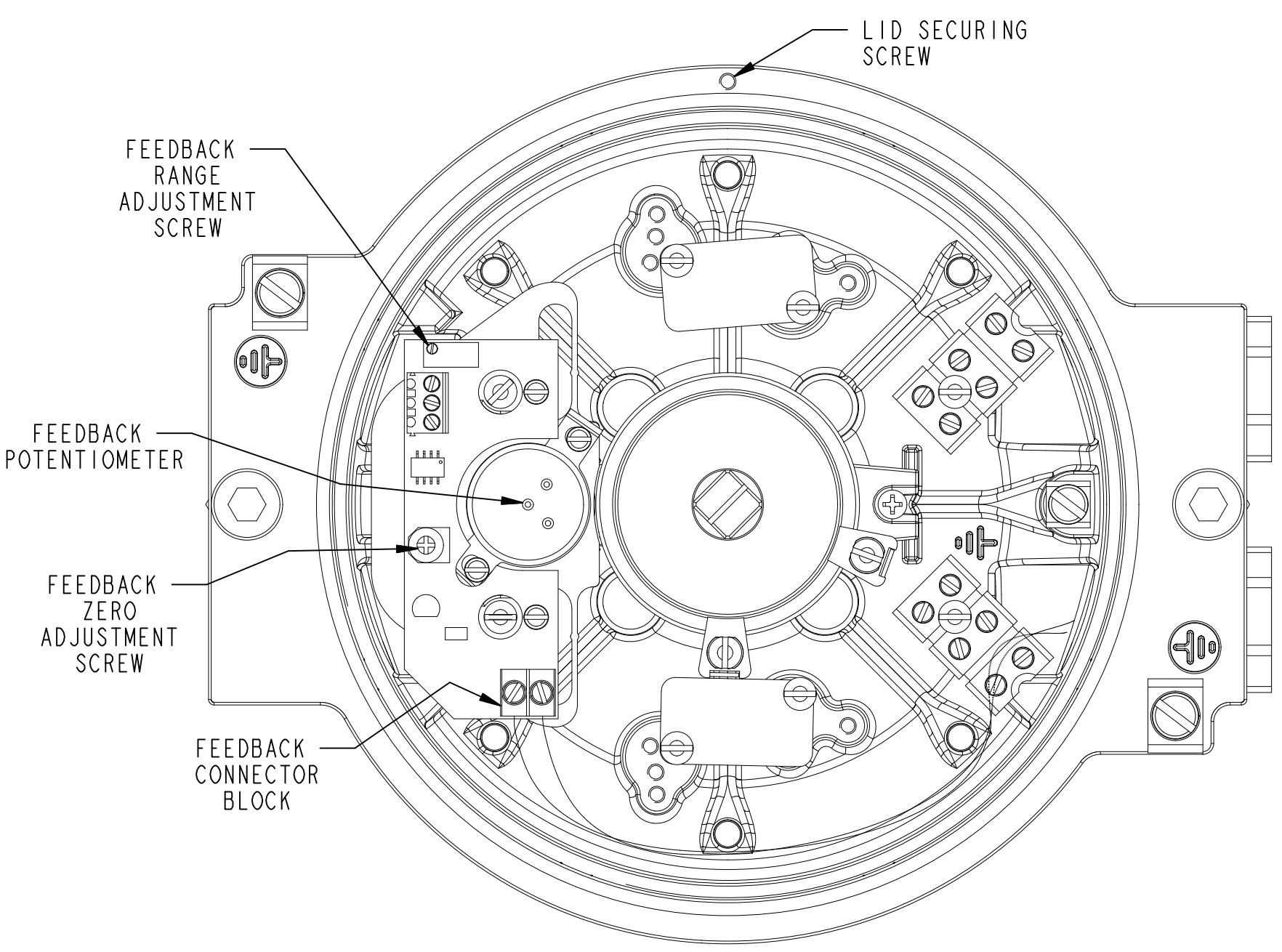
- 110. ADJUSTABLE ROD (ITEM 16) SHOULD NOT BE INSTALLED. ALL OTHER COMPONENTS SHOULD BE INSTALLED AND FULLY TIGHTENED.
- 111. ASSURE ACTUATOR IS NOT CONNECTED TO AIR SUPPLY AND INTERNAL PRESSURE IS EXHAUSTED. REMOVE ACCESS PLUGS ON EACH SIDE OF THE ACTUATOR.
- 112. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE ACTUATOR LEVER INTO CLOSED POSITION AND ENSURE ACTUATOR IS AGAINST THE CLOSED STOP.
- 113. USING HAND PRESSURE, ROTATE PRV VANE LEVER TO CLOSED POSITION. DO NOT RELY ON PUNCH MARK INDICATORS. ENSURE LEVER IS MECHANICALLY IN CLOSED POSITION.
- 114. LOOSEN COUPLING (ITEM 4) AND INSTALL ADJUSTABLE ROD (ITEM 16) BETWEEN LEVERS. ADJUSTABLE ROD (ITEM 16) SHOULD HAVE LENGTH SET AND LOCK NUTS (ITEM 17) TIGHTENED.
- 115. TIGHTEN COUPLING (ITEM 4) WHILE MAINTAINING PRV VANE LEVER AND ACTUATOR LEVER POSITION. TORQUE SCREWS AS INDICATED.
- 116. ADJUST CLOSED STOP CLOCKWISE 1/2 TURN AND TIGHTEN LOCK NUT.
- 117. USING A CRESCENT WRENCH ON SQUARE END, ROTATE PRV VANE LEVER TO OPEN POSITION. IT IS PERMISSABLE TO RELY ON PUNCH MARK INDICATORS FOR SETTING OPEN POSITION.
- 118. ADJUST OPENED STOP ON ACTUATOR TO STOP ACTUATOR ROTATION WHEN PRV VANES ARE IN OPEN POSITION. TIGHTEN LOCK NUT. IF ADJUSTMENT OF OPENED STOP DOES NOT ALLOW FULL RANGE BETWEEN OPENED AND CLOSED VANE POSITION, TURN CLOSED STOP 2-3 TURNS COUNTERCLOCKWISE AND RESTART INSTRUCTIONS. IF ADJUSTMENT OF OPENED STOP DOES NOT LIMIT LINKAGE TRAVEL AT OPENED VANE POSITION, TURN CLOSED STOP 2-3 TURNS CLOCKWISE AND RESTART INSTRUCTIONS.
- 119. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY CYCLE ASSEMBLY BETWEEN STOPS. CHECK FOR INTERFERENCE BETWEEN MOVING PARTS. ENSURE ACTUATOR WILL NOT EXERT EXCESSIVE FORCE ON THE LINKAGE WHEN THE PRV VANES ARE IN CLOSED POSITION.
- 120. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
- 121. ADJUST THE VISUAL POSITION INDICATOR ON THE TOP OF THE XLS HOUSING. REMOVE THE TWO SCREWS HOLDING THE CLEAR CONE TO THE HOUSING AND THEN REMOVE THE CLEAR PLASTIC CONE. THE O-RING AND THE BLACK PIECE IN THE CONE SHOULD REMAIN ATTACHED TO THE CLEAR PIECE. ROTATE THE CONICAL SCALE UNTIL "0" MARKER LINES UP WITH THE POINTER ON THE CLEAR CONE. REPLACE SCREWS.
- 122. REPLACE ACCESS PLUGS.

**CALIBRATION FOR ACTUATOR POSITIONER WITH I/P DEVICE (OPERATION 2):**

- 130. ASSURE EXPLOSIVE ATMOSPHERE IS NOT PRESENT PRIOR TO PERFORMING THIS OPERATION. ENSURE COMPLIANCE WITH LOCAL ELECTRICAL CODES AND ORDINANCES. A SIGNAL GENERATOR AND CLEAN DRY PRESSURIZED AIR IS REQUIRED. TYPICALLY, THE SHAFT ROTATION TO RISE IN SIGNAL WILL BE PROPERLY SET; IF DIRECTION MUST BE CHANGED, REFER TO KINETROL INSTRUCTION TD106 FOR THE AP PNEUMATIC POSITIONER.
- 131. ASSURE ACTUATOR IS NOT CONNECTED TO AIR SUPPLY, INTERNAL PRESSURE IS EXHAUSTED AND ACCESS PLUGS ARE REMOVED. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
- 132. REMOVE TWO SCREWS THAT SECURE XLS HOUSING ONTO THE MOUNTING BRACKET. DO NOT REMOVE THE BRACKET FROM THE POSITIONER COVER. REMOVE XLS HOUSING.
- 133. REMOVE POSITIONER COVER BY LOOSENING THE FOUR SCREWS AT EACH CORNER OF THE COVER.
- 134. ASSURE THE CAM FOLLOWER IS AT THE BEGINNING OF ITS RISE ON THE CAM ON THE SHAFT OF THE POSITIONER.
- 135. IF THE CAM FOLLOWER MUST BE ADJUSTED, LOOSEN THE COUPLING CLAMP SCREW UNTIL THE TOP OF THE COUPLING ASSEMBLY CAN BE ROTATED BY HAND. ROTATE IT TO POSITION THE CAM FOLLOWER SO THAT IT IS AT THE BEGINNING OF THE RISE ON THE CAM. TIGHTEN THE COUPLING CLAMP SCREW.
- 136. REMOVE THE I/P DEVICE COVER AND TERMINATE THE (+) AND (-) WIRES FROM THE SIGNAL GENERATOR TO THE (+) AND (-) TERMINALS IN THE I/P DEVICE.
- 137. SET THE SIGNAL GENERATOR TO 4 mA.
- 138. REPLACE ACCESS PLUGS AND SUPPLY 30 PSI CLEAN, DRY, COMPRESSED AIR TO THE MAIN AIR SUPPLY PORT ON THE POSITIONER. THE ACTUATOR SHOULD REMAIN AGAINST THE CLOSED STOP.
- 139. IF THE ACTUATOR MOVES WHEN AIR IS INTRODUCED TO THE POSITIONER, LOOSEN THE ZERO ADJUSTMENT CLAMP SCREW AND ROTATE THE ZERO ADJUSTER KNOB USING THUMB PRESSURE UNTIL THE PRV VANE LEVER IS IN THE CLOSED POSITION. MAKE SURE THE ACTUATOR IS AGAINST THE CLOSED STOP SCREW. TIGHTEN THE ZERO ADJUSTMENT CLAMP SCREW.
- 140. SLOWLY INCREASE THE SIGNAL TO 20 mA. THIS WILL ROTATE THE PRV VANE LEVER TO THE OPEN POSITION. IF IT DOES NOT ACHIEVE THE FULL OPEN POSITION, LOOSEN THE RANGE ADJUSTMENT CLAMP SCREW AND ROTATE THE RANGE ADJUSTER KNOB BETWEEN THE THUMB AND FOREFINGER UNTIL THE ACTUATOR MOVES TO THE FULL OPEN POSITION. TIGHTEN THE RANGE ADJUSTMENT CLAMP SCREW.
- 141. SLOWLY DECREASE THE SIGNAL TO 12 mA. THIS WILL ROTATE THE PRV VANE LEVER TO THE MID POSITION.
- 142. SLOWLY DECREASE THE SIGNAL TO 4 mA AND VERIFY THE CLOSED POSITION.
- 143. DISCONNECT SIGNAL GENERATOR AND REPLACE I/P DEVICE COVER.
- 144. REPLACE POSITIONER COVER AND XLS HOUSING.

**CALIBRATION OF FEEDBACK POTENTIOMETER (OPERATION 3):**

- 150. THE EXPLOSION PROOF KINETROL POSITIONER WILL HAVE THE ANGLE RETRANSMIT OPTION INSTALLED IN THE XLS HOUSING MOUNTED ON TOP OF THE POSITIONER HOUSING. TYPICALLY, THE SHAFT ROTATION TO RISE IN SIGNAL WILL BE PROPERLY SET; IF DIRECTION MUST BE CHANGED, REFER TO KINETROL IOM KF550 FOR THE XLS LIMIT SWITCH.
- 151. ASSURE EXPLOSIVE ATMOSPHERE IS NOT PRESENT PRIOR TO PERFORMING THIS OPERATION. ENSURE COMPLIANCE WITH LOCAL ELECTRICAL CODES AND ORDINANCES.
- 152. DISCONNECT AIR SUPPLY, ALLOW ACTUATOR TO EXHAUST AND REMOVE ACCESS PLUGS ON EACH SIDE OF THE ACTUATOR.
- 153. REMOVE XLS HOUSING LID BY LOOSENING THE LID SECURING SCREW AND UNSCREW LID USING A STRAP WRENCH WHILE PROTECTING PAINT. USE A STRAP WRENCH THAT CAN ACCOMMODATE Ø6.5 (165 mm) OR KINETROL P/N SP1600.
- 154. TERMINATE THE (+) WIRE FROM THE SIGNAL GENERATOR TO THE (+) TERMINAL OF THE FEEDBACK CONNECTOR BLOCK. CONNECT AN AMMETER BETWEEN THE (-) TERMINAL OF THE FEEDBACK CONNECTOR BLOCK AND (-) WIRE OF THE SIGNAL GENERATOR. SEE THE WIRING DIAGRAM ON THE INSIDE OF THE LID TO LOCATE THE TERMINALS.
- 155. SET THE SIGNAL GENERATOR TO 20 mA.
- 156. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY TO APPROX HALFWAY BETWEEN OPENED AND CLOSED POSITIONS.
- 157. LOOSEN THE TWO SCREWS THAT SECURE THE FEEDBACK POTENTIOMETER BUT DO NOT REMOVE. USING FINGER PRESSURE, ROTATE THE POTENTIOMETER UNTIL AMMETER READS 12 mA. TIGHTEN THE TWO POTENTIOMETER CLAMP SCREWS.
- 158. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO OPENED POSITION.
- 159. ADJUST THE FEEDBACK RANGE ADJUSTMENT SCREW UNTIL AMMETER READS 20 mA.
- 160. USING A CRESCENT WRENCH ON SQUARE END, MANUALLY ROTATE LINKAGE ASSEMBLY INTO CLOSED POSITION.
- 161. ADJUST THE FEEDBACK ZERO ADJUSTMENT SCREW UNTIL AMMETER READS 4 mA.
- 162. REPEAT STEPS 158 - 161 AS NECESSARY UNTIL DESIRED AMMETER READINGS ARE OBTAINED AT OPENED AND CLOSED VANE POSITIONS.
- 163. DISCONNECT SIGNAL GENERATOR AND REPLACE ACCESS PLUGS.
- 164. REPLACE XLS HOUSING LID. ENSURE THREADS ARE FREE OF DEBRIS AND IF DRY, APPLY A SMALL AMOUNT OF LIGHT GREASE THAT IS SUITABLE FOR THE ENVIRONMENTAL CONDITIONS AND IS COMPATIBLE WITH NBR O-RINGS. ENSURE O-RINGS ARE IN PLACE AND SCREW ON LID WITH HAND PRESSURE. TIGHTEN LID SECURING SCREW.



XLS HOUSING INTERNAL VIEW

**ACTUATOR SETTING AND CALIBRATION - EXPLOSION PROOF**

REV.	DATE	EC NO.	DR.	CHK.	ENG.
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REVISION	CONTINUED
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INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994

**YORK INTERNATIONAL** YORK, PA 17405

DIMENSIONS ARE IN INCHES DO NOT SCALE

SCALE: .340 WEIGHT: 117.038 ORIG. NO.: 381-17889-000 SHEET 4 OF 4

KIT PRV ACTR W/HDWHL 55 MATERIAL ENG. STD. PART NO. CUT SIZE

DRAWN E.M.MOHAR 20-APR-2015  
 MODELER E.M.MOHAR 20-APR-2015  
 CHKD B.L.KNAUB 15-JUN-2015  
 ENG

CAGE NUMBER 66935 DRAWING NUMBER 381-19659-000 REVISION 0

Version 0 Released