



MEGGITT

API/EI 1584 3RD EDITION COUPLER UPGRADE INSTALLATION INSTRUCTION

FOR

AVERY HARDOLL PRESSURE CONTROL ELBOW

**Meggitt Controls Part Number:
CCMY7300M2, CCMY7309M2, F251A, AND 80324**

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1.0 Introduction

The purpose of this manual is to instruct the users on the installation of the 80324 WKR/AH Hybrid Coupler Adapter Kit. This 80324 hybrid kit upgrades the existing Avery Hardoll (AH) P/N CCMY8500 4" API coupler to the Meggitt P/N F251A API/EI 1584 3rd edition approved 4 inch coupler. The purpose of this upgrade kit is to allow existing customers to utilize their AH CCMZ7300M2 or CCMZ7309M2 4inch pressure control elbow. Installing the F251A and 80324 hybrid kit will upgrade the CCMZ7300M2 or CCMZ7309M2 to be API/EI 1584 3rd edition compliant. The 80324 is designed to mate with the AH CCMZ7300/7309M2 pressure control elbow and the F251A only.

Note: The F251A is sold separately. The 80324 hybrid kit requires the F251A coupler for complete conversion of the CCMY8500 to a 3rd edition compliant pressure control coupler. Please contact Meggitt sales for information on the F251A coupler.

2.0 Relevant Documents

09-2528	F251A Qualification Test Report
80324	WKR/AH Hybrid Coupler Adapter Kit Drawing
F251	4" Hydrant Coupler Sales Drawing
TOMF251	Table of Modifications F251 4" Coupler
CCMY8500M2	AH 4" API Coupler Assembly

3.0 Tools Required

The following list of tools are required to aid in the installation of the 80324 hybrid adapter kit.

- 5/32" Allen Key
- 1/4" Allen Key
- 9/16" Wrench
- Torque Wrench (Rated from 10 to 150 lb-in)

4.0 Parts List

The 80324 Hybrid Adapter Kit comes with the following components, see figure 1 and table 1 for part number identification.

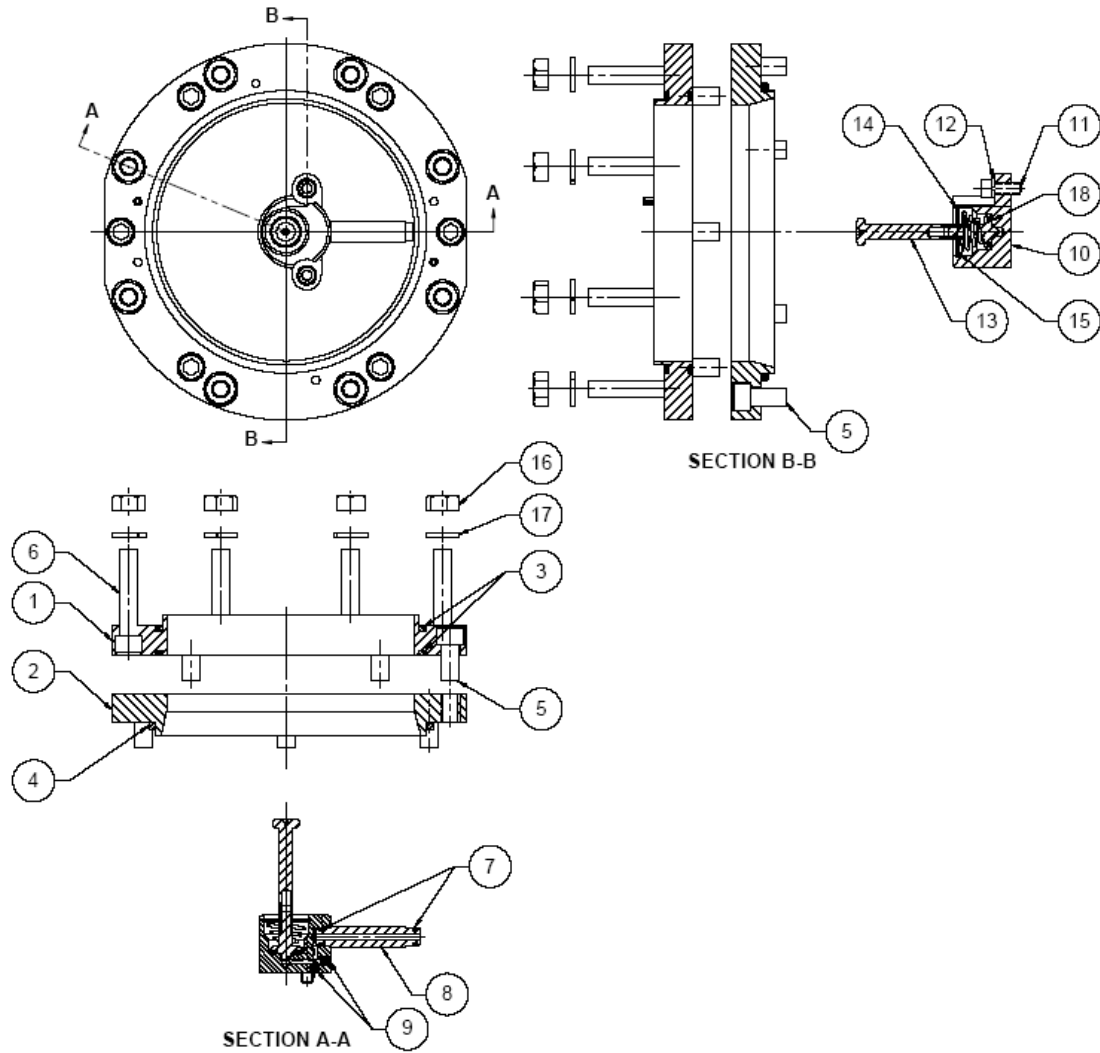


FIGURE 1

Item Number	Quantity	See Notes	Part Number	Description
1	1	1	430071	Adapter Plate, Lower Half
2	1	1	430070	Adapter Plate, Upper Half
3	2	1	2661058BD157	O Ring
4	1	1	ZO32E249139A	O Ring
5	12	1	CMS16995-63S316	Screw, Cap, Socket Head
6	8	1	CMS16995-68S316	Screw, Cap, Socket Head
7	2	2	ZO22M005116A	O Ring
8	1	2	430020	Shaft
9	2	2	204000-156	Plug, Koenig
10	1	2	430019	MFP PEV Body 2
11	2	2	ZS4025D0608A	Screw, Socket Head, Cap
12	2	2	ZW8207G06A	Washer
13	1	1	2880002-104	Poppet Valve Assy
14	1	2	RRN-81	Retainer
15	1	2	100168-606	Washer
16	8	1	CMS51971-2	Nut Plain, Hexagon, 5/16"
17	8	1	CMS35338-140	Washer, Lock
18	AR	3	Petroleum Jelly	Lubricant

TABLE 1: PARTS LIST

Notes:

1. Items are packaged individually for ease of identification.
2. Items come preassembled from the factory and will be regarded in the installation procedure as the Tilt Pressure Relief Valve (TPRV).
3. Item not provided, may be purchased commercially. AR = As Required.

5.0 Installation Procedure

The following list of procedures will instruct the user to disassemble the existing CCMY8500 coupler and install the F251A coupler and 80324 third edition hybrid kit on to the CCMZ7300M2/7309M2 pressure control elbow.

1. Remove the 6 each of screw P/N ZS3225D1014A and lock washer P/N ZW8207G10A (see Figure 2). These items may be discarded as new screws and lock washers are provided in the 80324 kit.
2. Separate the CCMY8500 coupler from the CCMZ7300M2/CCMZ7309M2 pressure control elbow. Discard O-Ring P/N ZO32E249139A, a new O-Ring is provided in kit 80324.

3. Remove the existing pressure relieve valve (PRV) P/N CCMZ7328 on the CCMZ7300M2/CCMZ7309M2 pressure control elbow by removing 2 each Screw P/N ZS402SD0608A and 2 each lock washer P/N ZW8207G06A. The PRV, screw, and washer may be discarded as these items will be replaced with the 80324 kit. (See Figure 3)
4. Clean the pressure relief port on the CCMZ7300M2/CCMZ7309M2 pressure control elbow with alcohol.
5. Apply a light coat of petroleum jelly to the O Ring (7) on the TPRV.
6. Install the TPRV provided in the 80324 kit and install it in the same location as the pressure relief valve that was removed in step 3. (See Figure 4)
7. Install 2 each of washer (12) and screw (11) to secure the TPRV on to the CCMZ7300M2/CCMZ7309M2 pressure control elbow. Torque screws to 12 ± 1 lb-in. (See Figure 4)
8. Lightly apply petroleum jelly (18) to O Ring (4) and install onto upper half adapter plate (2). Be careful not to roll the O Ring during installation. (See Figure 5)
9. Align the upper half adapter plate (2) with the flat edges perpendicular to the 4" outlet of the CCMZ7300M2/CCMZ7309M2 pressure control elbow. (See Figure 6)
10. Install 6 each screw (5) through the upper half adapter plate to attach plate to CCMZ7300M2/CCMZ7309M2. Torque screws to 78 ± 2 lb-in. (See Figure 6)
11. Install 8 each screw (6) through the lower half adapter plate (1) through the 8 counter bore threaded holes. Torque screws to 12 ± 2 lb-in. (See Figure 7).
12. Lightly apply petroleum jelly (18) to 1 each O Ring (3) and install on the flat face side of the lower half adapter plate (1). Take care not to roll the O Ring.
13. Align lower half adapter plate (1) with flat face facing toward the upper half adapter plate (2) and the flat edges of the lower half adapter plate (1) parallel to the flat edges of the upper half adapter plate (2). Take care not to damage O Ring. (See Figure 8)
14. Secure lower half adapter plate (1) to upper half adapter plate (2) with 6 each screws (5). Torque screws to 78 ± 2 lb-in. (See Figure 8)
15. Lightly apply petroleum jelly (18) to 1 each O Ring (3) and install on the raised face side of the lower half adapter plate (1). Take care not to roll the O Ring. (See Figure 8)

16. Prepare the F251A coupler for final assembly by noting the handle directions on the F251A coupler. The 80324 hybrid kit allows for 3 distinctive directions of installation. It is up to the user's preference to choose which side the lever should face in regards to the CCMZ7300M2/CCMZ7309M2 outlet. (See Figure 9A, 9B, and 9C for F251 handle direction)
17. There are 2 alignment pins on the 80324 hybrid adapter kit and 2 alignment pins on the F251A. Make sure the alignment pins line up to their respective holes when installing the pressure elbow/hybrid assembly on to the F251A coupler. The 8 each screws (6) shall pass through the mating flange of the F251A. Use screw driver to tilt the poppet on the TPRV to have elbow assembly sit flush with F251A. Take care not to roll the O Ring (3) on the lower half adapter plate (1) during the installation. (See Figure 10)
18. There is a dust cover provided on the F251A. Secure dust cover by installing eyelid on the dust cover cable to one of the screws (6). (See Figure 11)
19. Install the 8 each lock washer (17) and nut (16) on to the 8 each screws (6). Torque nut (16) to 130 ± 2 lb-in. Do not over torque nuts. (See Figure 11)
20. The hybrid conversion installation is now complete. (See Figure 12)

6.0 Installation Figures



Remove
ZS3225D1014A &
ZW8207G10A (6 pls)

Figure 2

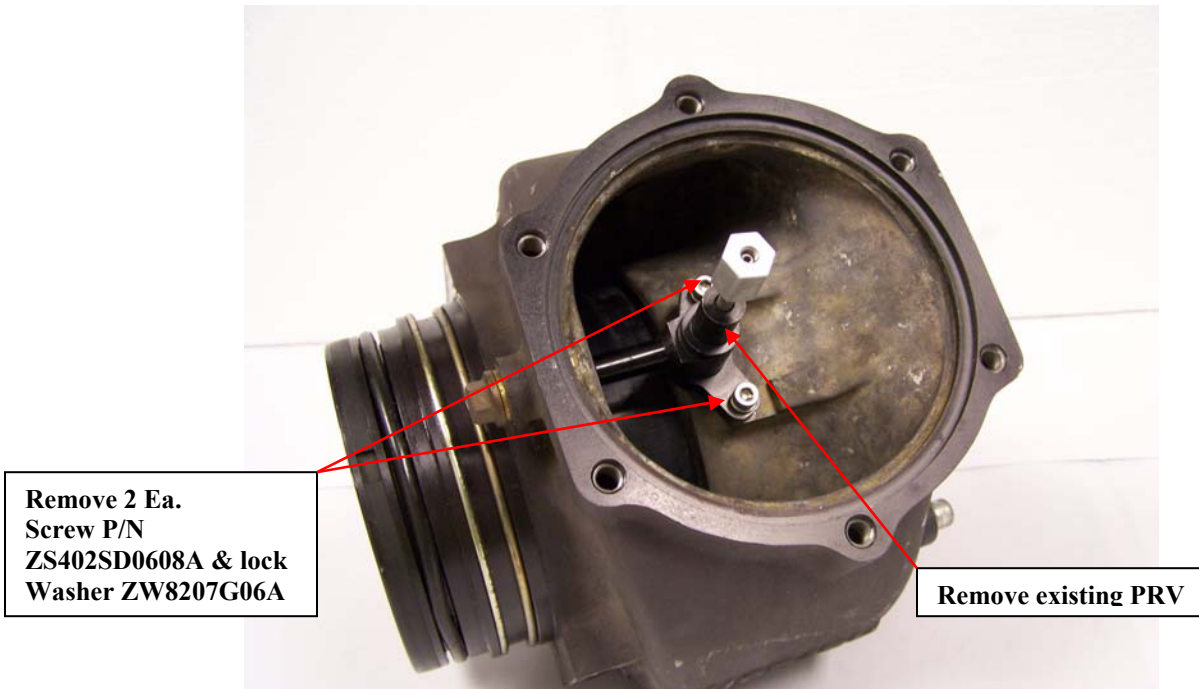


Figure 3

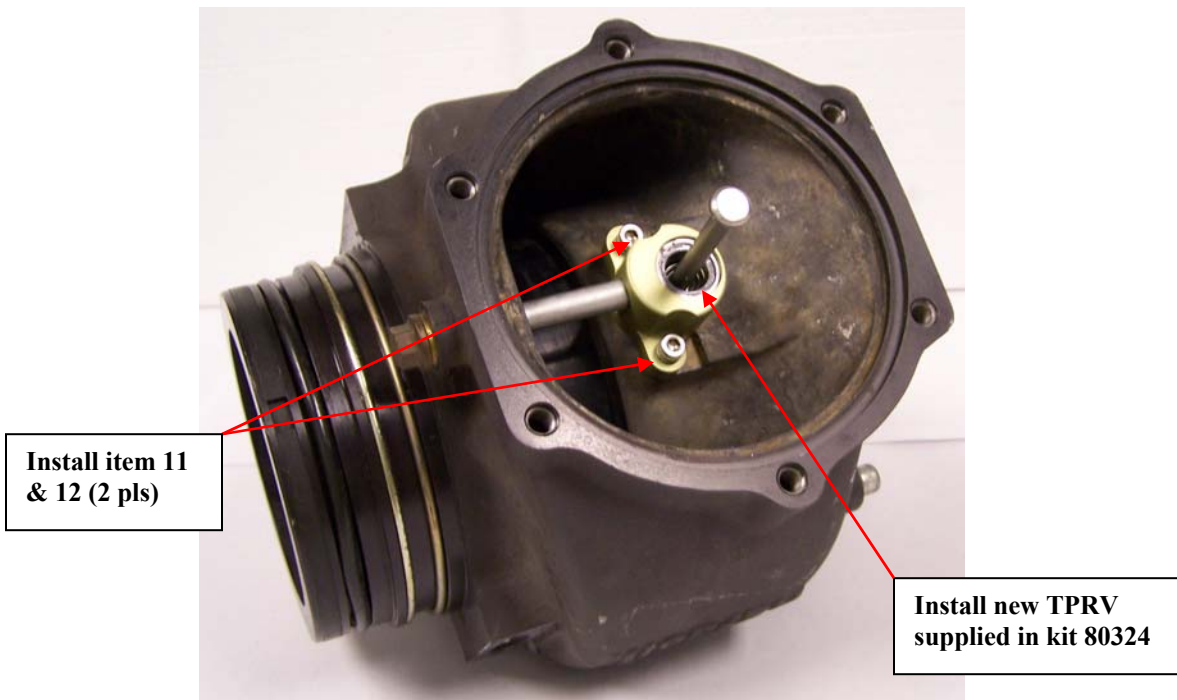


Figure 4



Figure 5

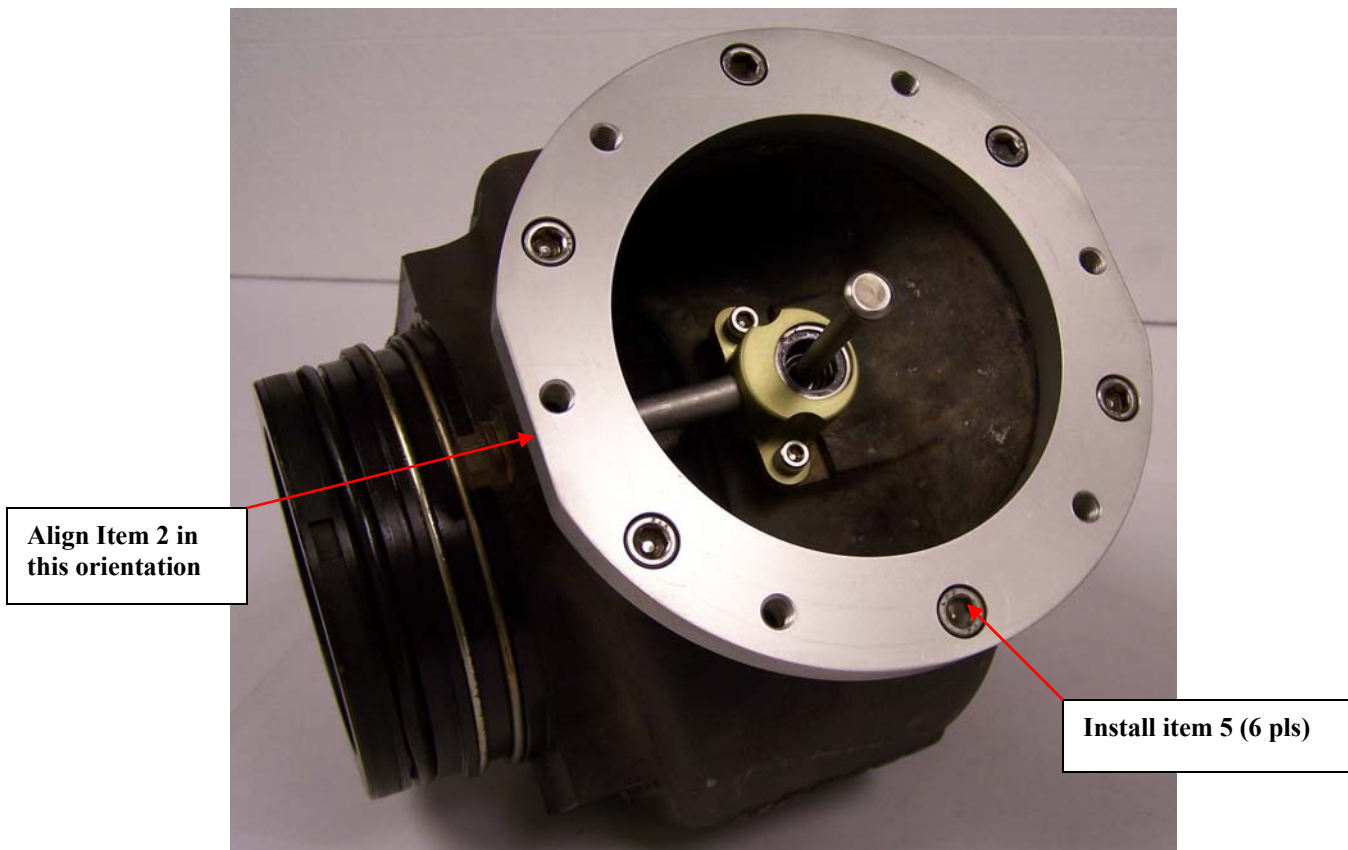


Figure 6

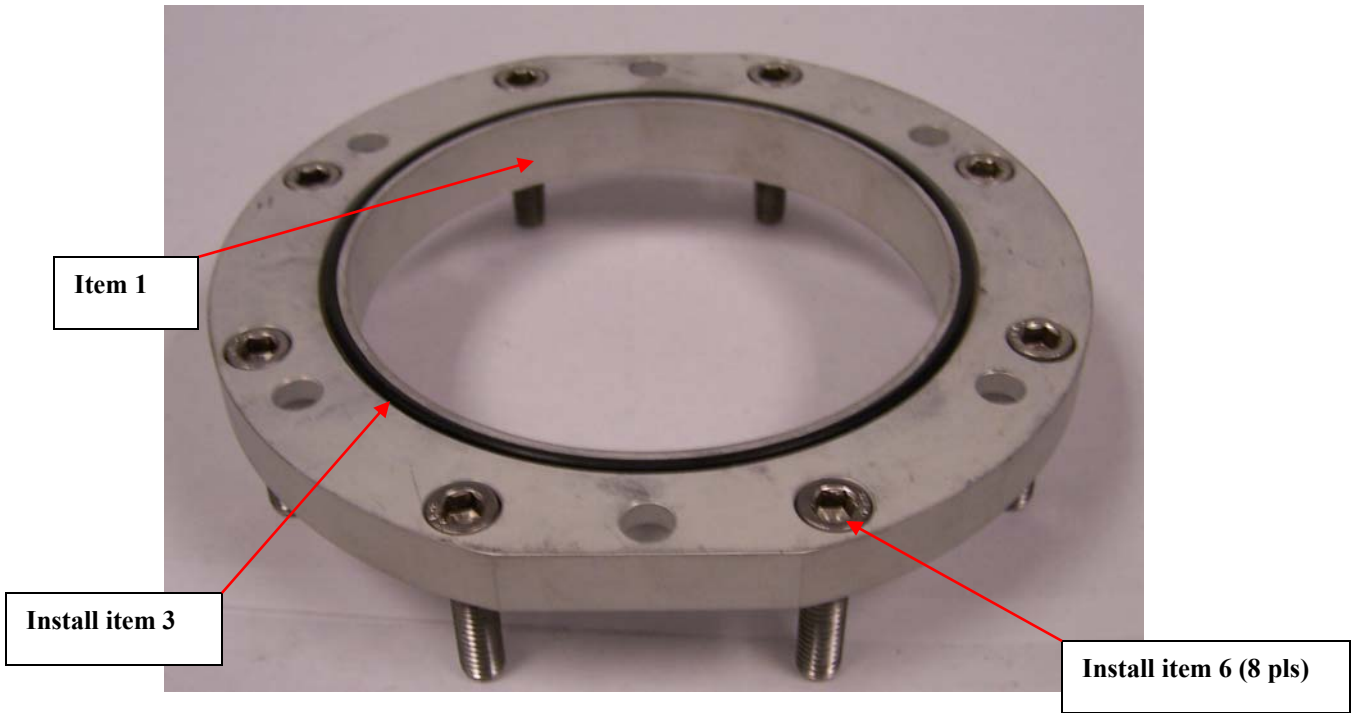


Figure 7

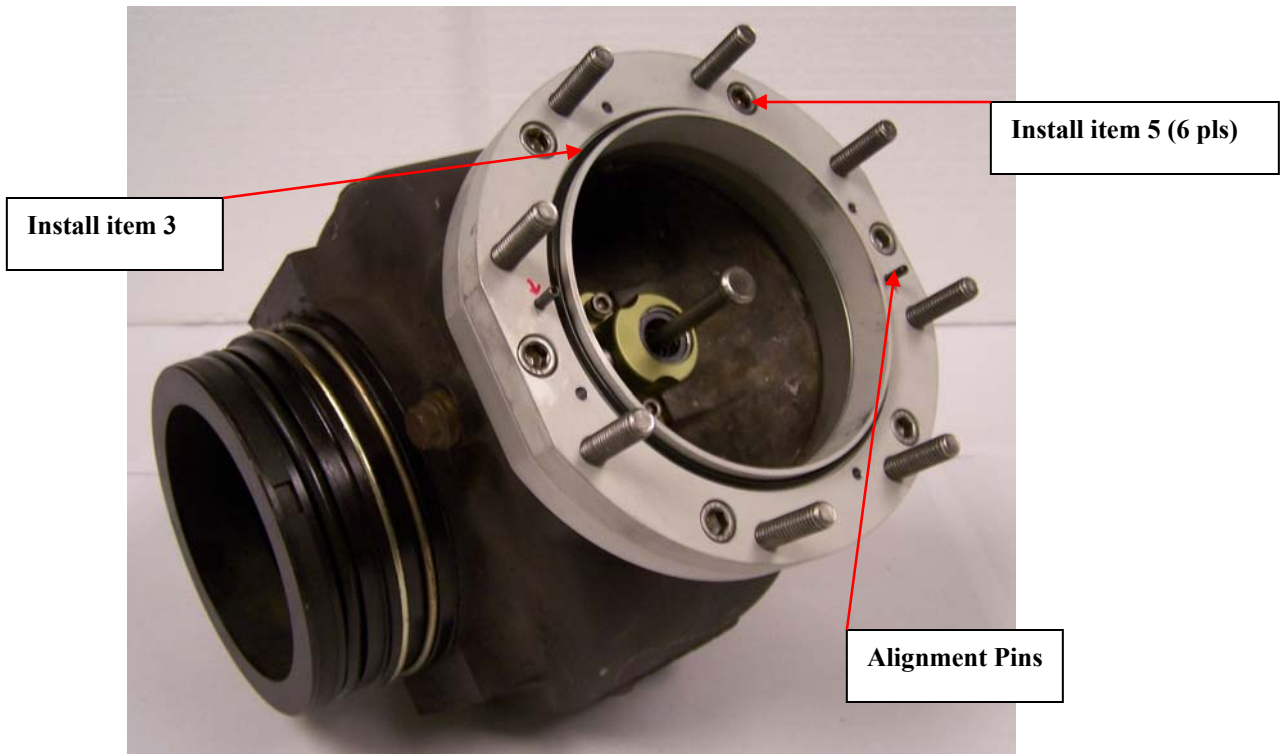


Figure 8



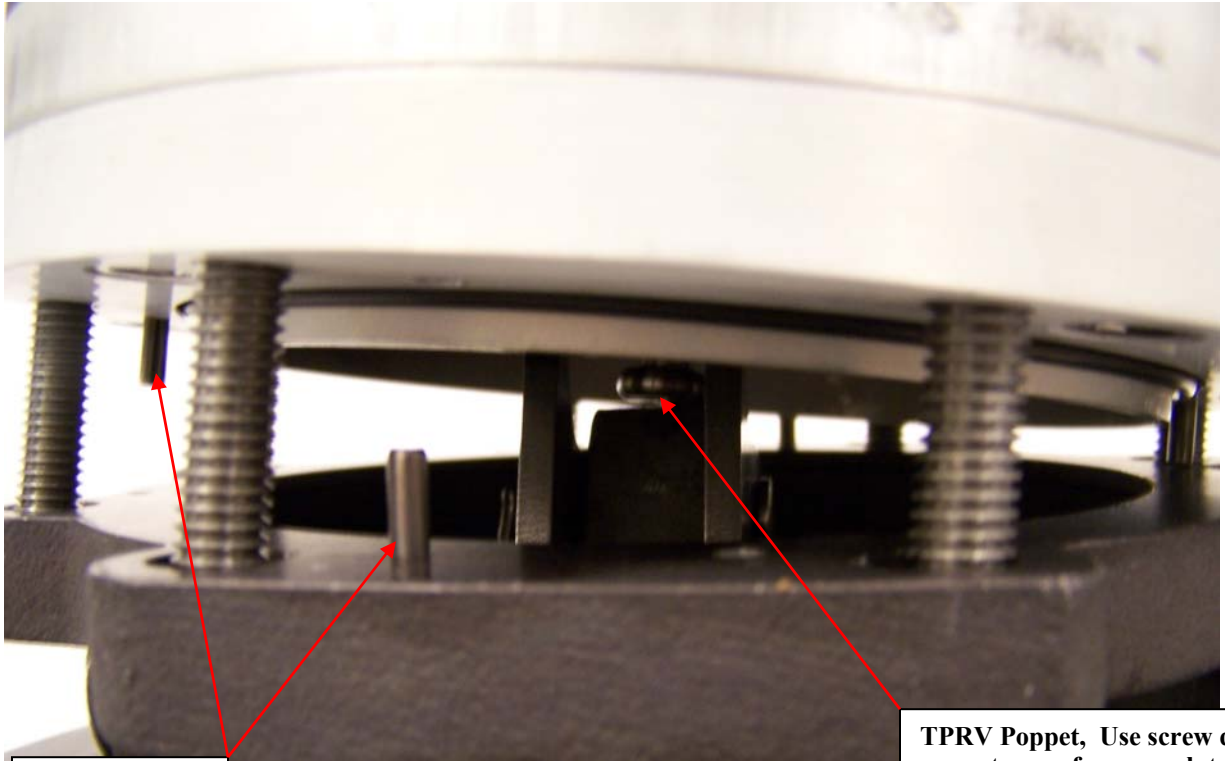
Figure 9A



Figure 9B



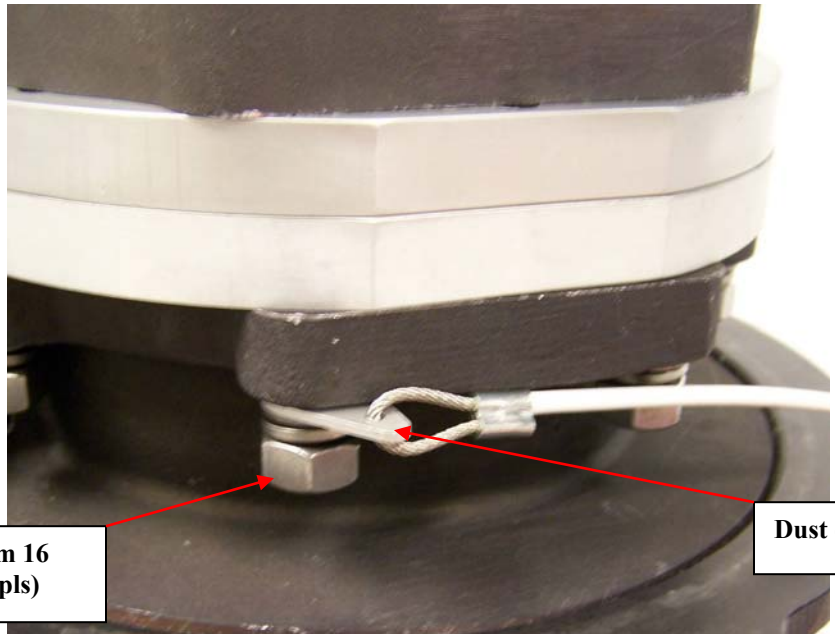
Figure 9C



Alignment Pins

TPRV Poppet, Use screw driver to tilt poppet away from crank to have elbow assembly sit flush with F251A

Figure 10



Install item 16 and 17 (8 pls)

Dust cover cable

Figure 11



Figure 12
(Swivel and Handle on CCMZ7300M2/CCMZ7309M2 not shown)