

BIV Seal Replacement Maintenance and Service Procedure

WARNING

It is the responsibility of service technicians to ensure the use of appropriate protective clothing and equipment. The chosen protective clothing and equipment must provide protection from potential hazards users may encounter while servicing equipment. Requirements for protective clothing and equipment are determined by the Authority Having Jurisdiction (AHJ).

NOTICE

This publication is intended for those who prefer to perform service on their own equipment. Factory service is available. Factory serviced products are repaired by experienced technicians, fully tested, and promptly returned functioning to original specifications. Task Force Tips assumes no liability for damage to equipment or injury to personnel that is a result of user service.

1.0 GENERAL INFORMATION

1.1 REQUIRED TOOLS

Tools for VALVE SEAL Replacement
Retaining Ring Removal Tool THA406-KIT or THA081-ST Fig. 1.1
Valve Seat Repair Kit - A1520-CRK or A1520-KIT for BIV or A1082-CRK or A1082-KIT for Jumbo BIV
Seal Pick
1/2" Drive Ratchet Wrench

Tools for CUP SEAL Replacement
Standard Hex Key Set
Cup Seal (A1545)
Molykote #112 High Performance Silicone Grease
Blue Loctite® threadlocker or equivalent

1.2 ORDERING PARTS

Always specify the serial number of the valve when ordering parts. Pricing information will be given at time of order.

2.0 VALVE SEAL REPLACEMENT PROCEDURE

WARNING

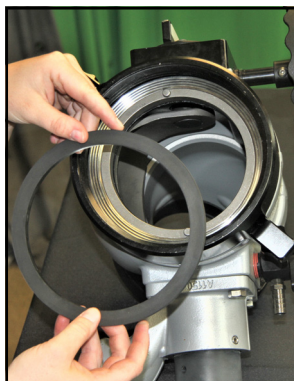
After any maintenance or service, equipment must be inspected and tested for proper operation and function per:

- NFPA 1962 test procedures.
- FLOW CHARACTERISTICS and OPERATION and INSPECTION CHECKLIST in the equipment's original operator manual.

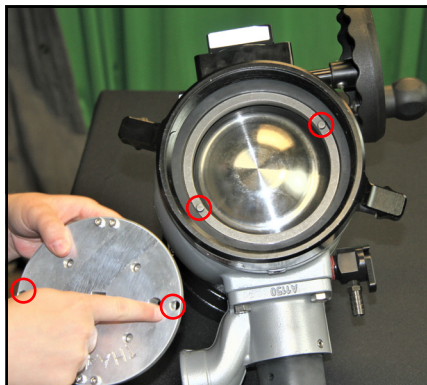
Product operating and safety information is available in the original operator manual or at tft.com.

NOTICE

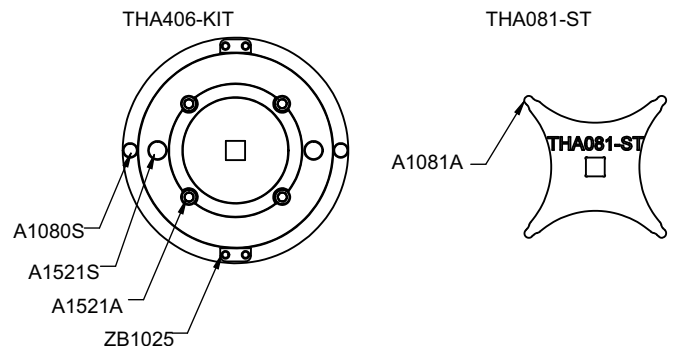
The valve may be mounted in a vise for better leverage when removing and installing the SEAL RETAINER.

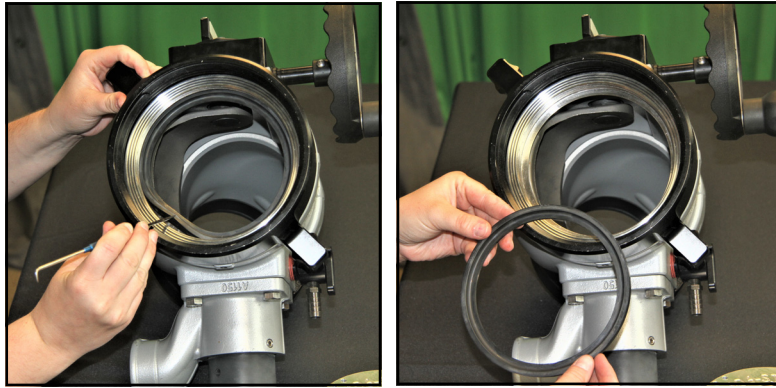


1. Remove the GASKET from the inlet coupling.



2. Position the THA406-KIT so the correct wrenching features align with the corresponding features on the SEAL RETAINER for your particular model. Use a 1/2" drive ratchet to unscrew and remove the SEAL RETAINER.





3. Using a seal pick, remove the VALVE SEAT.



This side facing out

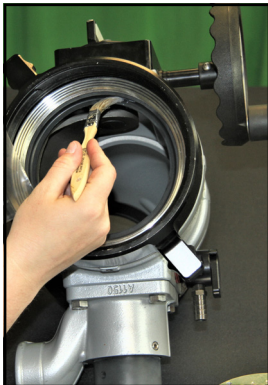


This side toward the valve ball

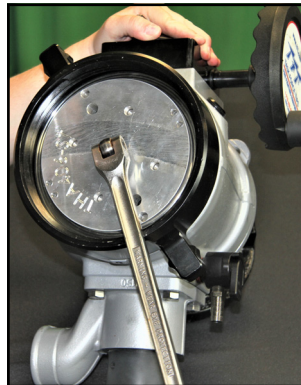
4. Install a new VALVE SEAT into the BACK RING with the lip on the seat toward the VALVE BALL.



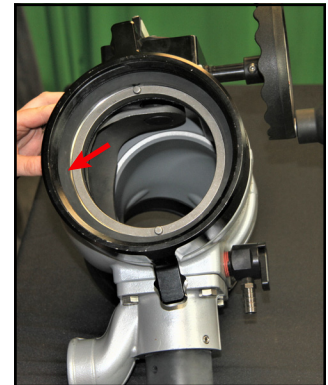
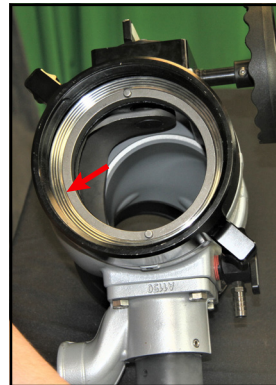
5. Run the pointed end of the seal pick around the outer edge of the seat to ensure that the seat is not hung up on the edge of the threads.



6. Apply Molykote #112 High Performance Silicone Grease to the back side of the seat.



7. Use THA406-KIT to screw the SEAL RETAINER into the BACK RING to the appropriate depth for your model (see Table 2.0).



8. Replace the HOSE GASKET.

Type	Model Number Begins With	Side A	Seat Retainer Part Number	Distance Retainer is Below Flush (inch)	Service Tool Number
JBIV-LP	AXE- AXD- AZE- AZD-	*-NX-*	ZB125A	1/8	THA406-KIT
		-NY-			
		-SX-	A1081A	FLUSH	THA081-ST
		-NT-			
-NP-	A2117	N/A	NO TOOL		
-NR-					
-ST-					
JBIV	AX- AP- AZ- AQ- (Aluminum)	*-NX-*	ZB125A	1/8	THA406-KIT
		-NY-			
		-SX-	A1081A	FLUSH	THA081-ST
		-NT-			
	-NP-	A2117	N/A	NO TOOL	
-NR-					
-ST-					
	(Stainless)	ANY	A1080S	1/8	THA406-KIT
BIV	AB- ABS-	ANY	A1521A	1/16	THA406-KIT
	AC- ACS-	ANY	A1521S	FLUSH	THA406-KIT
BIV-LP	ABD-	ANY	A1521A	1/16	THA406-KIT

Table 2.0

3.0 ELBOW TO BODY CUP SEAL REPLACEMENT



After any maintenance or service, equipment must be inspected and tested for proper operation and function per:

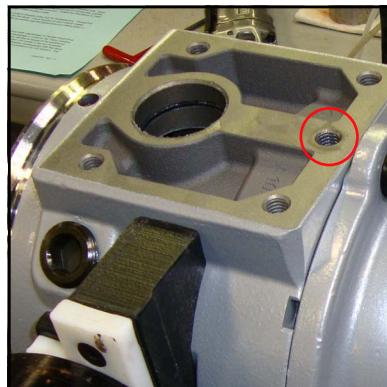
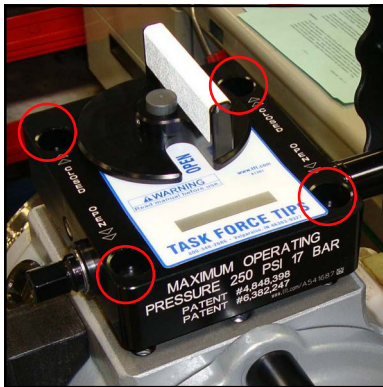
- NFPA 1962 test procedures.
- FLOW CHARACTERISTICS and OPERATION and INSPECTION CHECKLIST in the equipment's original operator manual.

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- The BIV may be mounted to the truck or in a vise with the gearbox facing down to remove balls.
- Dirt or debris in the ball race can cause difficulty in removing the balls. Spraying orange cleaner or Break Free into the ball race can help clear the debris and release the balls.

AB and AC Models

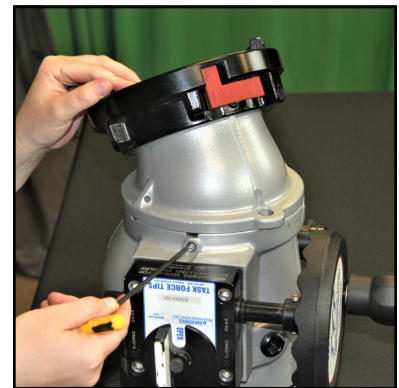


1. Removing the SET SCREW

Use a hex key to remove the 4 SOCKET HEAD CAP SCREWS from the GEARBOX and lift the GEARBOX straight up to remove. Retain all screws for reassembly.

Then, use a hex key to remove the SET SCREW. Retain the set screw for reassembly.

All Other Models



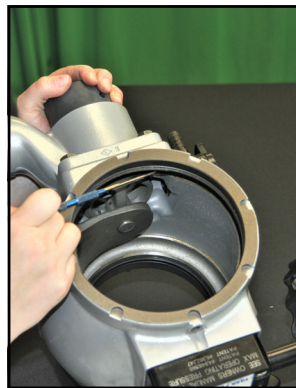
Use a hex key to remove the SET SCREW above the GEARBOX. Retain the set screw for reassembly.



2. Turn the valve so the set screw hole is facing down over a container. Rotate the outlet back and forth to allow the 72 BALLS to drop out. Retain the balls for reassembly.



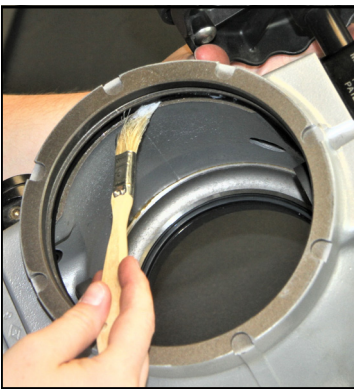
3. Pull the outlet to separate it from the BODY.



4. Use a seal pick, to remove the CUP SEAL from the BODY. Discard the seal.



5. Install the new CUP SEAL with the O-ring side toward the VALVE BALL.



6. Apply Molykote #112 High Performance Silicone Grease to the back side of the seal.



7. Apply Molykote #112 High Performance Silicone Grease to the sealing face on the outlet.

Swivel Elbow Models

Straight/Lockout Models



8. Install the outlet on the BODY ensuring that there is no gap between the pieces. FOR STRAIGHT/LOCKOUT OUTLET, align the lockout feature with the set screw hole.



9. Position the valve so the set screw hole is facing up. Install 72 BALLS into the ball race.



10. Installing the SET SCREW

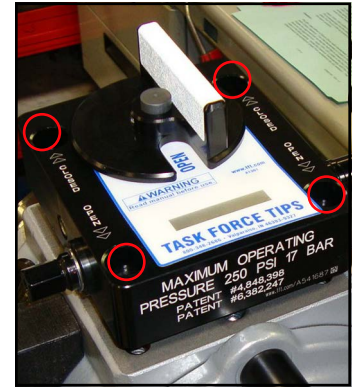
Apply blue Loctite to the threads of the SET SCREW. Install until just above flush. Rotate the ELBOW. If the ELBOW is difficult to turn, or feels rough when turned, back the SET SCREW off and try again. If the feel is still rough, recheck the number of balls.

Straight/Lockout Models

FOR AC and AB Models



Apply blue Loctite to the SET SCREW threads. Install the SET SCREW until it bottoms out.



11. Installing the GEARBOX

Apply blue Loctite to the threads of the screws removed in Step 1. Install GEARBOX with engraving facing the outlet. Secure with screws.

For questions regarding troubleshooting, parts, or repair, contact your local dealer or TFT's service department.

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