



**ME990-4F-SRK
SEAL REPAIR KIT
FOR: ME990-4F 4" SINGLE FLANGE
INTERNAL VALVE**

!!!WARNING!!!

READ AND UNDERSTAND ALL INSTRUCTIONS INCLUDED WITH THIS REPAIR KIT
RELIEVE ALL PRESSURE FROM SYSTEM BEFORE REMOVING VALVE FOR SERVICE

NOTE: Numbers in brackets [] refer to the number in the valve component list.

A. Disassembly

1. **EVACUATE ALL PRESSURE FROM SYSTEM BEFORE ANY DISASSEMBLY OR REPAIR.**
2. Remove (10) Bushings [2] from Valve Body [1] and discard
3. Remove (4) Screws [3] and (4) Washers [4] (if applicable) from Screen [5] and retain.
4. Remove Screen [5] and retain.
5. Remove (8) Cap Screws [6] from Valve Cage [7] and retain.
6. Remove Valve Cage [7] and Closing Spring [9] and retain.
7. Remove Cage Bushing [8] from Valve Cage [7] and discard.
8. Remove Valve Holder Assembly [14] from Valve Body [1].
9. Remove Spring Pin [10] and Retainer [11] from Valve Holder Assembly [14] and retain.
10. Remove Excess Flow Spring [12] from Valve Holder Assembly [14] and either:
 - a. Discard if you have purchased a new Excess Flow Spring [12]; or
 - b. Retain if you did not purchase a new Excess Flow Spring [12].
11. Remove Stem [13] from Valve Holder Assembly [14] and retain.
12. Remove (4) Bolts [14E] and Seal Retainer [14D] from Valve Holder [14A] and retain.
13. Remove (4) Spacers [14C] and Valve Seal [14B] from Valve Holder [14A] and discard. Retain Valve Holder [14A]. Discard (4) Spacers [14C] and Valve Seal [14B].
14. Remove Seat Ring [15] and O-Ring [16] from Valve Body [1].
15. Remove Guide Bushing [17] from Seat Ring [15] and discard Guide Bushing [17] and O-Ring [16].
16. Remove Cotter Pin [18] from Cam Pin [19] and retain.
17. Remove Cam Pin [19] and Cam Assembly [20] and retain.
18. Remove Stub Washer [21] and discard.
19. Remove Cotter Pin [18] and Roller Pin [20B] from Cam [20A] and retain.
20. Remove Roller [20C] from Cam [20A] and retain.
21. Remove Roller Bushing [20D] from Roller [20C] and discard.
22. Remove Rod Wiper [22], Bonnet [23], Female Adapter [24], (3) V-Packs [25], Male Adapter [26], Packing Washer [27], Packing Spring [29], Ejection Spring [28], Stub [30], Stem Bushing [31], and (2) Gland Bushings [32] from Valve Body [1].
23. Discard Rod Wiper [22], Female Adapter [24], (3) V-Packs [25], Male Adapter [26], and (2) Gland Bushings [32].
24. Inspect Valve Body [1] and clean if necessary, be sure interior is free of dirt, residue and foreign particles.

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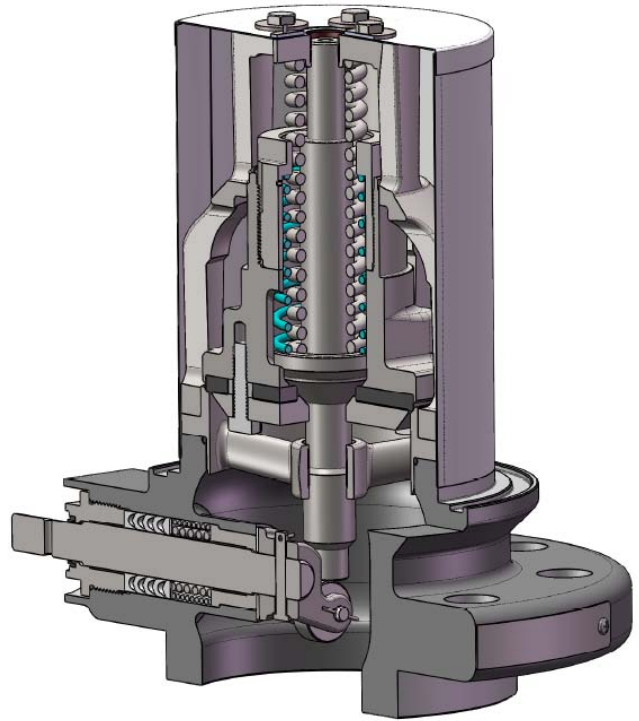
B. Reassembly

1. Install Roller Bushing [20D] into Roller [20C].
2. Install Roller [20C] into Cam [20A], Install Roller Pin [20B] through Cam [20A] and Roller [20C], Install Cotter Pin [18] and bend around Roller Pin [20B].
3. Install (1) Gland Bushing [32] into Stem Bushing [31].
4. Install shorter side of Stub [30] into Stem Bushing [31].
5. Install Packing Spring [29] and Ejection Spring [28] onto Stub [30].
6. Install Rod Wiper [22] and Gland Bushing [32] into Bonnet [23].
7. Apply lubriplate to Stub Shaft [30] and packing bore on Valve Body [1].
8. Apply lubriplate to Packing Washer [27], Male Adapter [26], inside "V" of (3) V-Packs [25], and Female Adapter [24] and install over Stub [30] oriented as shown.
9. Install Stub [30] into Valve Body [1].
10. Apply Loctite #242 to threads of Bonnet [23] install Bonnet [23] into Valve Body [1].
11. Install Stub Washer [21] onto Stub [30].
12. Install Cam Assembly [20] on end of Stub [30] in Valve Body [1].
13. Install Cam Pin [19] and Cotter Pin [18] and bend Cotter Pin [18] around Cam Pin [19].
14. Apply Loctite #242 to (4) bolt holes in Valve Holder [14A] and wipe excess off seal surface.
15. Install Valve Seal [14B] into Valve Holder [14A].
16. Install (4) Spacers [14C] into Valve Seal [14B].
17. Install Seal Retainer [14D] onto Valve Seal [14B].
18. Install (4) Bolts [14E] into Valve Holder [14A], tighten in a "star" pattern and confirm that all Bolts [14E] are tightened securely.
19. Install Stem [13] and Excess Flow Spring [12] into Valve Holder Assembly [14].
20. Apply anti-seize to threads of Retainer [11] and install into Valve Holder Assembly [14] and tighten securely.
21. Drill $\phi 3/32$ hole through one wall of Retainer [11] using hole in Valve Holder Assembly [14] as a guide. Install Spring Pin [10] into hole in Valve Holder Assembly [14] until flush.
22. Install guide Bushing [17] into Seat Ring [15]. Apply lubriplate to O-Ring [16] and install on Seat Ring [15].
23. Align holes in Seat Ring [15] with holes in Valve Body [1] and install Seat Ring [15] into Valve Body [1].
24. Install Valve Holder Assembly [14] into Valve Body [1] with Stem [13] through Seat Ring [15].
25. Install Closing Spring [9] into Stem [13].
26. Install Cage Bushing [8] into Valve Cage [7].
27. Install Valve Cage [7] over Stem [13]. Align holes in Valve Cage [7] with holes in Valve Body [1].
28. Apply Loctite #242 to threads in Valve Body [1] and install (8) Cap Screws [6] and tighten securely.
29. Install Screen [5] onto Valve Body [1].
30. Apply Loctite #242 to threads of (4) Screws [3] and install (4) Washers [4] (if applicable) and (4) Screws [3] through Screen [5] into Valve cage [7].
31. Install (10) Bushings [2] into Valve Body [1].
32. Connect the valve assembly outlet to a pressure source of at least 150 PSI. Check for leaks at all joints and stem seals using a suitable leak detector solution such as "Marshall Excelsior" leak detector.

CAUTION: DO NOT USE THE VALVE IF ANY JOINT CONTINUES TO LEAK UNDER PRESSURE

C. Component List

1. Valve Body
2. Bushing, 10 required
3. Screw, 4 required
4. Washer, 4 required (if applicable)
5. Screen
6. Cap Screw, 8 required
7. Valve Cage
8. Cage Bushing
9. Closing Spring
10. Spring Pin
11. Retainer
12. Excess Flow Spring
13. Stem
14. Valve Holder Assembly
- 14A. Valve Holder
- 14B. Valve Seal
- 14C. Spacer, 4 required
- 14D. Seal Retainer
- 14E. Bolt, 4 required
15. Seat Ring
16. O-Ring
17. Guide Bushing
18. Cotter Pin, 2 required
19. Cam Pin
20. Cam Assembly
- 20A. Cam
- 20B. Roller Pin
- 20C. Roller
- 20D. Roller Bushing
21. Stub Washer
22. Rod Wiper
23. Bonnet
24. Female Adapter
25. V-Pack, 3 required
26. Male Adapter
27. Packing Washer
28. Ejection Spring
29. Packing Spring
30. Stub
31. Stem Bushing
32. Gland Bushing, 2 required



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