



WHITE-RODGERS

The "TOTAL CONCEPT" People

INSTRUCTIONS

FIELD-REPLACEABLE PARTS for SERIES 13A00

Two-Way and Three-Way Zone Valves

This sheet provides information for replacing all of the various field-replaceable parts for Series 13A00 two-way and three-way zone valves. It is recommended that the Body Seal Ring always be replaced whenever the Valve Head is removed from the Body for servicing.

Parts that can be replaced on these valves are the Motor, Valve Head, Operator Assembly, Body Seal Ring, Valve Disc, Body, and the Auxiliary Switch (only on certain models).

REPLACING VALVE HEAD

Be sure that new valve head has same voltage as old one being replaced (see inside of cover).

1. Shut off power supply to valve. (Note: On valves with push-in connectors, wait until new valve head has been installed. Then transfer wires from old to new valve head.)
2. Drain the system, or that portion thereof containing the valve being serviced. **CAUTION:** Failure to drain system could result in scalding injuries and/or water damage when spanner nut is loosened. Remove valve head by loosening spanner nut in counterclockwise direction (when viewing valve head).
3. Remove covers from both old and new valve heads. The new valve head has the Adjustable Flow Dial "B" set for maximum flow (see Fig. 4). If dial "B" of old valve head is at a different setting, loosen screw "A" and change Dial "B" setting of new valve head to match it. Then retighten screw "A".
4. Inspect valve body mounted in the line. Remove the old rubber seal ring if it adheres to the body because the new valve head is supplied with a new seal ring. Brush out any dirt particles from the body with your finger. Then wipe the inside clean with a soft cloth.
5. On three-way models, manual operator must be in the **MANUAL** position when assembling valve head to body.

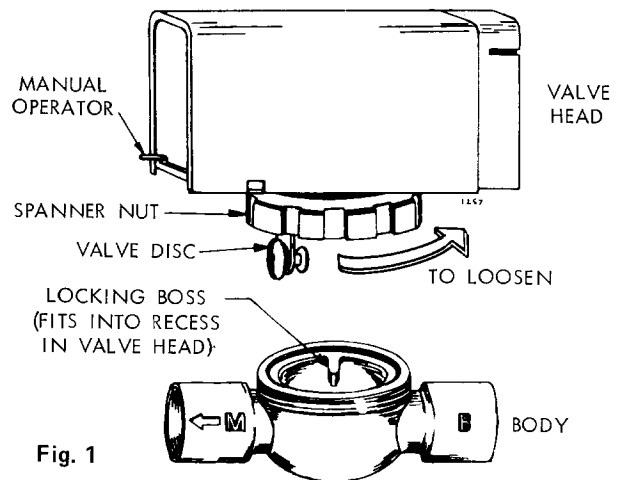


Fig. 1

6. Install new valve head, making sure that recess in valve head engages locking boss in body. (NOTE: on three-way models only, rotate valve head about 30° as valve discs are inserted into body; then rotate valve head back to align with body.)
7. Tighten spanner nut securely. (On three-way models, place manual operator in the **AUTO** position.)

REPLACING VALVE DISCS

These valve discs are highly durable from a wear standpoint, but they can be damaged if scraped or jammed abruptly against sharp metal surfaces. With valve head removed (see above), replace valve disc as follows:

1. Using a small screwdriver, pry off E-Ring. See Fig. 2. Discard old valve disc, E-Ring, and coil spring.
2. Position new coil spring over the stud of the valve disc, being sure that small end of coil spring fits against the carbon disc as shown in Fig. 2. Insert stud of valve disc through hole in the shaft arm and secure with new E-Ring.

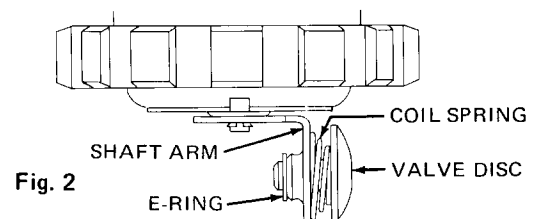


Fig. 2

3. Replace rubber seal ring as explained in step 4 above.
4. Replace valve head as in step 6 above.

REPLACING VALVE BODY

If valve body requires replacement, proceed as follows:

1. Remove valve head as explained above.
2. Remove old body from the line.
3. Note direction of flow indicated by arrow on body ("M" is outlet). Then sweat the new body into the line, using a torch with a sharp flame and only apply flame to ends of

the body to prevent possible warpage.

4. Inspect the bottomside of the valve head. Remove the old rubber seal ring if it adheres to valve head. Then position the new seal ring provided snugly in place where the old ring was located.
5. Replace valve head as explained in item 6 above.

REPLACING BODY SEAL RING

The rubber Body Seal Ring should be replaced whenever the valve head is removed from the body during servicing.

To clean mating surfaces around the Seal Ring, simply wipe them clean with a cloth. If necessary, fine steel wool may be used, and surfaces then wiped clean with a cloth.

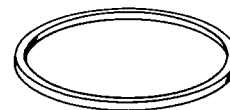


Fig. 3 – Body Seal Ring

REPLACING MOTOR

Be sure that new motor has same voltage as the motor being replaced. (Voltage is shown on each motor and also inside of control cover.)

1. Shut off power supply to valve and remove control cover.
2. Be sure that manual operator is in **AUTO** position.
3. Remove the two screws holding the motor to the valve.
4. Cut off leads of old motor close to motor and strip ends 3/16". **NOTE:** On valves with conduit hub or junction box, splices may be made close to the motor if desired. If splices are made elsewhere, tie strain relief knot in leads.
5. Install new motor and tighten screws securely.
6. Cut leads of new motor to desired length and strip ends 3/16". Then connect motor leads to other leads with the wire nuts provided.
7. After connecting motor leads, move manual operator to

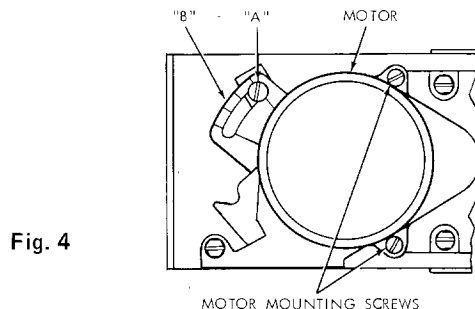


Fig. 4

MANUAL position and back to **AUTO** position to be sure that leads and wire nuts do not interfere with any moving parts.

8. Restore power supply and test for proper operation.

REPLACING AUXILIARY SWITCH

1. Shut off power supply to valve and remove control cover.
2. Remove screw "A".

NOTE: If auxiliary switch has tab terminals, disregard steps 3 and 5 and substitute the following:

3. Disconnect leads from old switch.
5. Connect leads to new switch.
3. Cut off leads of old switch close to switch and strip ends 3/16".
4. Install new switch with screw "A". **NOTE:** Before tightening screw "A", be sure that **Locating Tab** on switch fits into **slotted hole in case**.
5. Cut leads of new switch to desired length and strip ends 3/16". Then connect switch leads to the other leads with the wire nuts provided.
6. Move manual operator to **MANUAL** position and back to

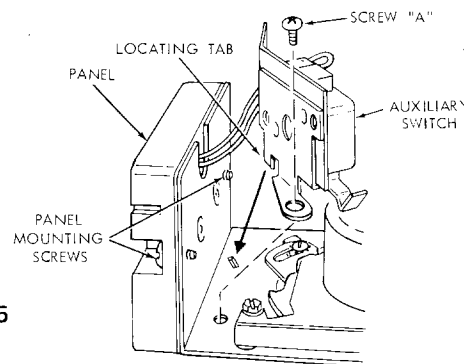


Fig. 5

AUTO position to be sure that gear properly engages switch arm to open and close switch contacts.

7. Restore power supply and test for proper operation.

REPLACING OPERATOR ASSEMBLY

CONDUIT HUB TYPE

1. Remove valve head as explained in steps 1 thru 4 under "Replacing Valve Head".
2. Disconnect leads from power source and remove the two screws holding the motor to the valve. (See Fig. 4)
3. Remove motor and discard old case assembly.
4. Feed leads through conduit hub of new assembly and position insulator and strain relief knot as shown in Fig. 6.
5. Secure motor to case with the two mounting screws.
6. Connect leads to power source. Move manual operator to manual position and back to auto position to be sure that leads do not interfere with any moving parts.
7. Place cover on valve head and assemble valve head to body as explained in steps 6 and 7 under "Replacing Valve Head".
8. Turn on power and test for proper operation.

PANEL AND AUXILIARY SWITCH TYPE

1. Remove valve head as explained in steps 1 thru 4 under "Replacing Valve Head."
2. Remove motor mounting screws (Fig. 4), remove auxiliary switch, screw "A" (Fig. 5) and remove panel mounting screws (Fig. 5).

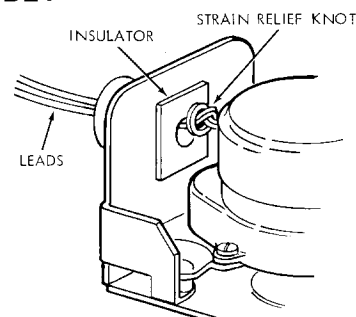


Fig. 6

3. Replace case. **NOTE:** New case has panel mounting screws installed. Remove screws and use for assembly.
4. Mount panel to case with mounting screws.
5. Assemble auxiliary switch as shown in Fig. 5.
6. Secure motor to case with mounting screws.
7. Move manual operator to manual position and back to auto position to be sure that gear properly engages switch arm to open and close switch contacts.
8. Place cover on valve head and assemble valve head to body as explained in steps 6 and 7 under "Replacing Valve Head".
9. Turn on power and test for proper operation.