



## Style 8903

### Field Service Kit with Composite Ball for:

8910 1" Swing-Out™ Valve and  
7610 and 7810 1" Swing-Out Valves



ISO 9001 REGISTERED COMPANY

PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or  
800.531.7335 | [www.akronbrass.com](http://www.akronbrass.com) REVISED: 7/12

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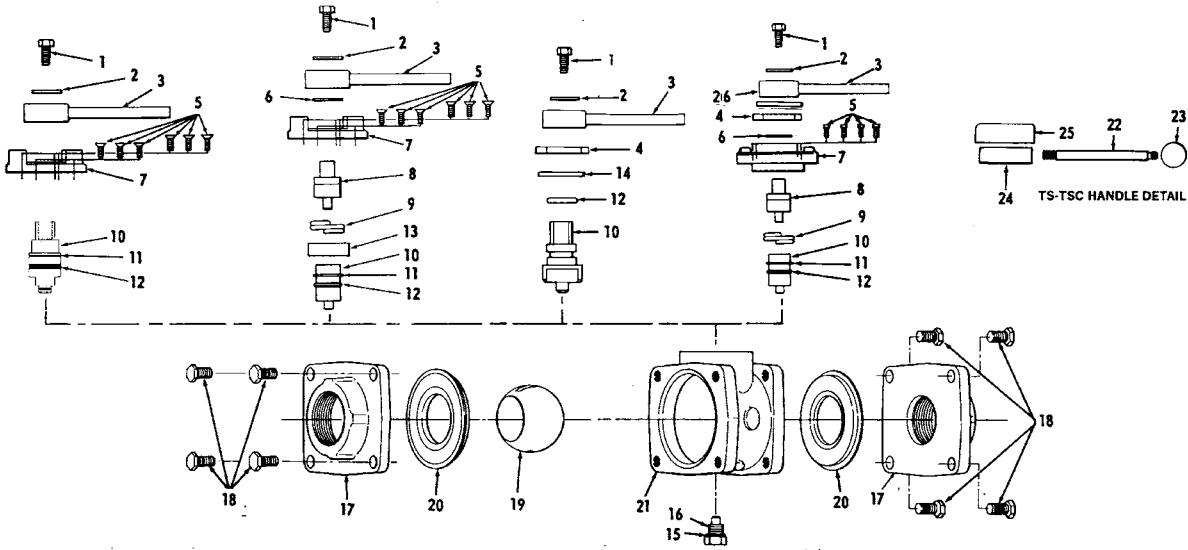
# PARTS LIST

**Style 7600**  
Non Tork-Lok®  
with Trunnion Retaining  
Plate (#7)

**Style 7800**  
Tork-Lok® with  
large stops built into  
Trunnion Retaining  
Plate (#7)

**Style 7600**  
Non Tork-Lok® with stops  
in Valve Body and  
separate Stop  
Plate (#4)

**Style 7800 & 8900**  
with separate Stop  
Plate (#4)



ITEM No.	DESCRIPTION	7610 with Trunnion Plate	7810 with Stops in Trunnion Plate	7610 with Separate Stop Plate	7810 with Separate Stop Plate	8910 with Separate Stop Plate
1	Handle Bolt	761067	761067	761067	761067	761067
2	Handle Washer	784017	784017	784008	784008	784008
3	Handle*					
4	Stop Plate	N/A	N/A	742074	742074	742074
5	Trunnion Plate Screws	767089 (6)	767089 (6)	N/A	765028 (4)	765028 (4)
6	Handle O-Ring	N/A	757002	N/A	757009	757009
7	Trunnion Retaining Plate	105705	††	N/A	742075	742075
8	Handle Trunnion	N/A	772091	N/A	772091	772091
9	Tork-Lok Spring	N/A	768120	N/A	768116	768116
10	Ball Trunnion	772086	772060	772113	773147	773147
11	Retaining Ring	758063	758063	N/A	758153	758153
12	Trunnion O-Ring	775175	775175	775175	757042	757042
13	Tork-Lok Sleeve	N/A	769178	N/A	N/A	N/A
14	7600 Handle Spacer	N/A	N/A	769313	N/A	N/A
15	Threaded Trunnion O-Ring	757174	757174	757174	757175	757175
16	Threaded Trunnion	773122	773122	773122	773122	773122
17	Complete Adapters*					
18	Adapter Bolts (8)	761074	761074	761074	761074	761074
19	Ball	703977	703977	703977	703977	703977
20	Seats (2)	769563	769563	769563	769563	769563
21	Valve Body	†	††	106307	106311	106311
22	TS Handle Rod—5"	109148	109148	109148	109148	109148
23	TS Handle Ball	703080	703080	703080	703080	703080
24	TS Handle Hub	104978	104978	104978	104978	104978
25	TS Handle Cover	N/A	N/A	N/A	N/A	N/A
26	Spacer Handle				769411	769411

\* See current catalog for complete handles and adapters.

† Items not available. Must replace body sub-assembly - P/N 7610-0004

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## REPAIR INSTRUCTIONS

### DISASSEMBLY—BALL AND SEATS

**Note:** This kit includes extra O-rings for the different variations of valve. Identify the correct replacement O-rings when removing the old ones.

1. Turn the valve to the open position.
2. If the valve can be rotated out of line, remove three pairs of adapter bolts (18) and loosen the fourth pair. Swing the valve out of the line. If the valve cannot be rotated out of line, remove all eight adapter bolts and take the valve out completely.

**Note:** If it is necessary to remove the handle, mark the position of the handle in relation to the ball position, and the orientation of the stop plate (4) if so equipped.

3. Remove the two seats (20) from the valve body (21). It may be necessary to partially close the ball and grasp the inside lip of the seat.
4. Remove the threaded trunnion (16). If necessary, use fine emery paper to clean up the smooth portion that fits into the ball. The ball should fit loosely on the trunnion.

5. Rotate the handle so that the slot in the top of the ball is parallel to the waterway. Remove the ball (19).

### **DISASSEMBLY—HANDLE AND TOP TRUNNION(S)**

**Note: It is not normally necessary to replace the O-Ring under the handle or on the ball trunnion. do not disassemble this portion of the valve unless there is a leak.**

1. Remove the handle bolt (1) and washer (2).
2. Note the position of the handle relative to the groove in the top of the trunnion for reassembly purposes. Remove the handle (3) and the stop plate (4), handle O-ring (6) and handle spacer (14) if so equipped.
3. If the valve includes a trunnion retaining plate (7), note the position for reassembly purposes. Remove the trunnion plate screws (5).

**Note: With flat head screws, one screw may be tighter than the others. Try to loosen all remaining screws before using excessive force on one. If the valve does not have a retaining plate, remove the trunnion (10) by pushing it into the valve body.**

4. Remove the trunnion retaining plate (7). If this plate was secured with socket head screws, the handle trunnion (8) should remain in the plate.
  5. Remove the handle trunnion (8), if separate.
  6. Remove the Tork-Lok® sleeve (13) and spring (9) subassembly if applicable.
- Caution: Do not remove the spring from inside the sleeve.**
7. Remove the ball trunnion (10) by pushing it from the inside of the valve.

### **REASSEMBLY—HANDLE AND TOP TRUNNION(S)**

**Note: Lubricate all O-rings with Parker O-Ring Lube or equivalent petroleum-based lubricant.**

1. Replace the O-ring (12) on the ball trunnion (10) and reinstall the trunnion in the valve body.
2. Replace the Tork-Lok sleeve (13) and spring (14) subassembly and handle trunnion (8) if so equipped.

**Note: The ears of the Tork-Lok spring must be aligned with the corresponding recess of the ball trunnion. The pilot shaft of the handle trunnion must fit into the hole in the center of the ball trunnion.**

3. Reposition the trunnion retaining plate (7), if so equipped, and install the screws (5).

**Note: For Tork-Lok valves with flat head screws, tighten all six screws until they just touch the plate before fully tightening any one screw. Tighten them in a criss-cross pattern. There should be a small gap between the plate and the valve body.**

4. Install the handle O-ring (6), style 7600 handle spacer (14), and stop plate (4) as required.
  5. Position the handle in the proper position, apply a small amount of Loctite 222 or equivalent to the handle bolt (1) and install the bolt with the handle washer (2).
- Immediately test the operation of the handle. If it appears to be hard to turn, loosen the handle bolt approximately 1/4 turn.

### **REASSEMBLY—BALL AND SEATS**

1. Install the new O-ring (15) on the threaded trunnion (16).
2. Use a 10" or larger flat file to clean up the flat surface of the adapters and mating surfaces of the valve body. Remove any paint, corrosion or raised lip around the bolt holes.

**Caution: Always file diagonally and keep the file touching both sides of the valve body. The surfaces must remain flat.**

3. Rotate the handle so that the flats on the sides of the ball trunnion (10) are parallel to the waterway.
4. Install the new ball (19) over the ball trunnion and hold it in position.

**Note: The metal ball included with this kit is a direct replacement when repairing a valve with a plastic ball.**

5. Install the threaded trunnion so that it fits into the hole in the ball. Tighten the trunnion.
6. Place the new seats into the recesses on either side of the valve body (21).
7. Swing the valve body back into line or install the assembly. Loosely install the adapter bolts.
8. Turn the ball to the closed position.

**Caution: The ball must be in the closed position before the adapter bolts are tightened.**

9. Tighten the adapter bolts evenly in an X pattern using 100-120 inch pounds of torque:

### **DO NOT OVERTIGHTEN.**

10. Operate the valve and test for leakage.

### **MAINTENANCE INSTRUCTIONS**

Do not lubricate the ball or seats. Lubricants can collect dirt and grit which may cause excessive wear. Occasionally, flow water through all valves to clear dirt and debris.

### **OPERATING INSTRUCTIONS**

Always open and close valves slowly.

Do not exceed 1000 psi with 1" valves.

With SZ handles, always make sure that the handle has been tightened whenever the valve handle is released.