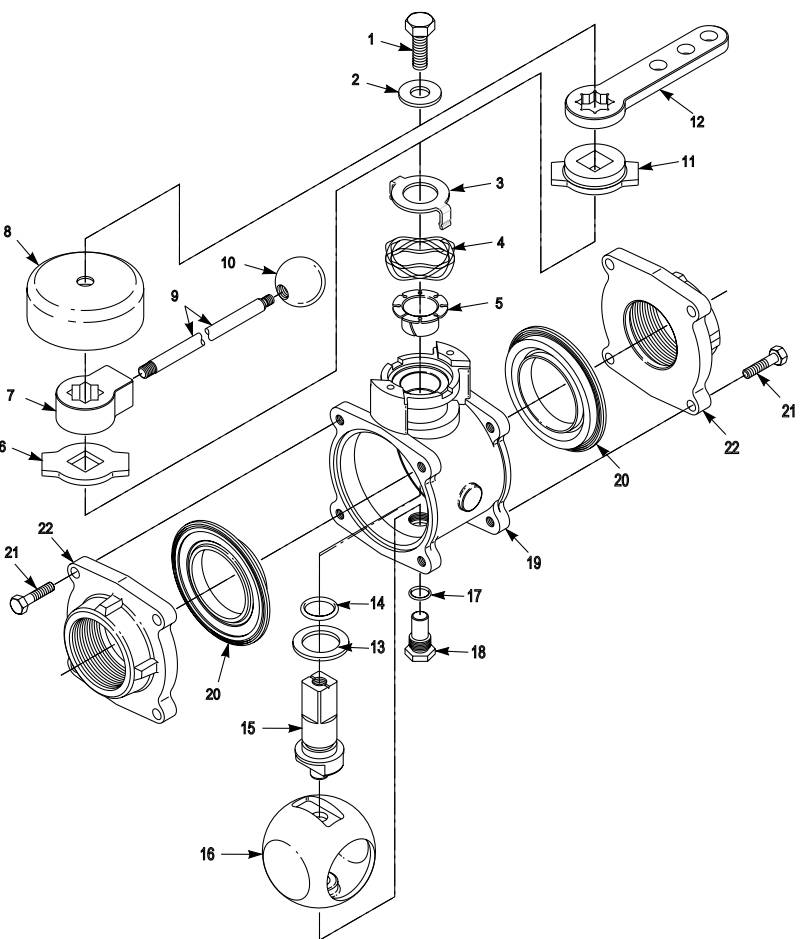




# Style 8807

**Field Service Kit with  
Metal Ball for:  
8630/8635 and 8830/8835 Heavy Duty  
Swing-Out™ Valves**

**Conversion Kit  
for:  
7630/7635 and 7830/7835  
Swing-Out Valves**



# HEAVY DUTY SWING-OUT VALVE



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)  
Available in Canada through AKKRON MANUFACTURING COMPANY  
PHONE: 519.773.8431 | FAX: 519.773.3794

REVISED 8/05

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# PARTS LIST AND REPAIR INSTRUCTIONS FOR HEAVY DUTY SWING-OUT™ VALVES

## DISASSEMBLY

1. Turn the valve ball to the open position.  
Note: If the Valve Handle needs to be removed, the position of the Handle and Stop Plate should first be noted before disassembly.
2. This Valve is designed to “Swing Out” for easy repair.  
In order to swing the Valve, loosen the 4 sets of Adapter Bolts (21). Then remove 3 Bolt sets and rotate the Valve for easy repair. If the Valve cannot be rotated, remove the 4th set of Adapter Bolts.
3. Remove the 2 Seats (20) from the Valve Body (19). It may be necessary to partially close the Ball to grasp the lip of the Seat to remove.
4. Remove the Threaded Trunnion (18).
5. With the Valve in the open position, remove the Metal Ball (16).
6. Remove the Ball Trunnion only if leakage has been detected in this area. To remove the Ball Trunnion (15), first remove the Handle Bolt (1), Washer (2), Bearing Brake (3) and Compression Spring (4). Then push the Ball Trunnion into the Valve cavity and remove the Thrust Washer (13) from the top of the Ball Trunnion. Next, remove the Nylon Bushing (5) from the upper Trunnion hole.

## REASSEMBLY

1. Lubricate the O-Rings (14 & 17) with Parker O-Ring Lubricant or equivalent petroleum based lubricant. Be sure not to place any excess lubricant on the Seats or Ball, as this will collect dirt that may cause excess wear.
2. If the Ball and Ball Trunnion were removed proceed as follows, if not skip to Step 8.
3. Place Thrust Washer (13) on the Ball Trunnion (15).
4. Place O-Ring (14) in the recess of Ball Trunnion (15).
5. Insert the Ball Trunnion into the upper trunnion hole from inside the Valve.
6. Place Nylon Bushing (5), Compression Spring (4) and Bearing Brake (3) into the recess. Align the tabs on the Bearing Brake with the slots in the Body.
7. Replace the Stop Plate (6 or 11), Handle and any connection hardware. Be sure the tabs on the Bearing Brake are fitted into the slots of the Body.
8. Rotate the Ball Trunnion to accept the Ball. Insert the Ball into the Valve.
9. Place a new O-Ring (17) in the recess of Threaded Trunnion (18) and thread the trunnion into the Valve body.
10. With the Ball in the open position, place a new Seat (20) into the recess on each side of the Valve Body.
11. Return the Valve to its original position between the flanged adapters and loosely replace the 8 Bolts.
12. Close the Valve Ball and then tighten the flange bolts. Tighten the bolts in an “X” pattern using 38-40 foot pounds of torque.

### DO NOT OVER TIGHTEN

13. Operate the Valve and inspect for leaks.

ITEM NO.	DESCRIPTION	QUANTITY	8830/8835†
1	Bolt	1	7-61-065
2	Washer	1	7-84-120
3	Bearing Brake w/ Clip	1	7-04-788
4	Compression Spring	1	7-68-291
5	Nylon Bushing	1	7-35-058
6	Stop Plate (TS/TSC Handle)	1	7-42-073
7	Handle Hub (TS/TSC Handle)	1	7-21-278
8	Cover (TSC Handle)	1	109177
9	Rod* (TS/TSC Handle) Std.	1	109146
10	Ball (TS/TSC Handle)	1	7-03-080
11	Stop Plate (R-1 Handle)	1	7-42-095
12	R-1 Handle Std. Length	1	115613
13	Thrust Washer	1	7-84-104
14	O-Ring**	1	7-57-226
15	Ball Trunnion	1	7-73-300
16	Valve Ball	1	119658
17	O-Ring**	1	7-57-217
18	Threaded Trunnion	1	7-73-095
19	Body	1	116314
20	Seat**	2	7-69-181
21	Bolt	8	7-61-058
22	Valve Adapters*	2	

## OPERATING AND MAINTENANCE INSTRUCTIONS

Always open and close valves slowly to minimize the effects of water hammer. Occasionally, flow water through all valves to clear dirt and debris.

Do not exceed 500 psi operating pressure.

See Drawing on opposite page.

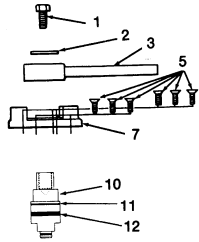
\*See current catalog for complete list.

\*\*Parts in Service Kits

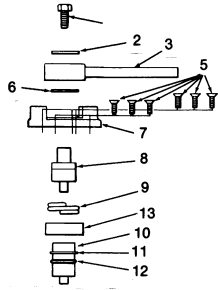
† For the repair of Style 8630/8635 valves using various controllers on SZ handles, contact Akron Brass Customer Service for details.

# PARTS LIST AND INSTRUCTIONS FOR CONVERTING A VALVE TO A METAL BALL

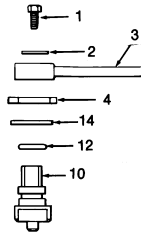
Style 7630/7635  
Non Tork-Lok®  
with Trunnion Retaining  
Plate (#7)



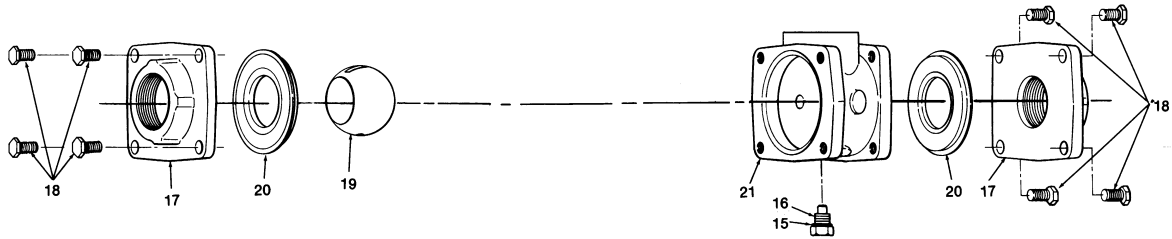
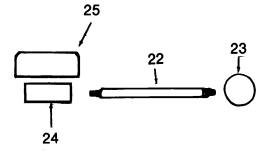
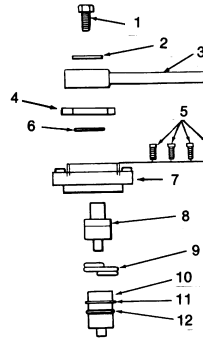
Style 7830/7835  
Tork-Lok with  
large stops built into  
Trunnion Retaining  
Plate (#7)



Style 7630/7635  
Non Tork-Lok with stops  
in valve body and  
separate stop  
Plate (#4)



Style 7830/7835  
Tork-Lok  
with separate stop  
Plate (#4)



ITEM NO.	DESCRIPTION	7630/7635 with Trunnion Plate	7830/7835 with Stops in Trunnion Plate	7630/7635 with Separate Stop Plate	7830/7835 with Separate Stop Plate
1	Handle Bolt	7-61-065	7-61-065	7-61-065	7-61-065
2	Handle Washer	7-84-034	7-84-034	7-84-034	7-84-034
3	Handle*				
4	Stop Plate N/A	N/A	7-42-095	7-42-095	
5	Trunnion Plate Screws	7-67-090 (6)	7-67-090 (6)	N/A	7-65-028 (4)
6	Handle O-Ring	N/A	7-57-054	N/A	7-57-284
7	Trunnion Retaining Plate	105707	40031821	N/A	7-42-089
8	Handle Trunnion	N/A	7-72-092	N/A	7-72-142
9	Tork-Lok Spring	N/A	7-68-210	N/A	7-68-210
10	Ball Trunnion	7-72-089	7-73-155	7-72-116	7-73-155
11	Retaining Ring	7-58-058	7-58-058	N/A	7-58-154
12	Trunnion O-Ring	7-57-010	7-57-010	7-57-226	7-57-010
13	Tork-Lok Sleeve	N/A	7-69-172	N/A	N/A
14	7600 Handle Spacer	N/A	N/A	7-69-310	N/A
15	Threaded Trunnion O-Ring	7-57-217	7-57-217	7-57-217	7-57-217
16	Threaded Trunnion	7-73-095	7-73-095	7-73-095	7-73-095
17	Complete Adapters*				
18	Adapter Bolts (8)	7-61-058	7-61-058	7-61-058	7-61-058
19	Ball	119658	119658	119658	119658
20	Seats (2)	7-69-181	7-69-181	7-69-181	7-69-181
21	Valve Body	105288	105288	106660	105288
22	TS Handle Rod—9-1/4"	N/A	109146	N/A	109146
23	TS Handle Ball	N/A	7-03-080	N/A	7-03-080
24	TS Handle Hub	N/A	7-21-278	N/A	7-21-278
25	TSC Cover	N/A	109177	N/A	109177

\*See current catalog for complete handles and adapters.

## 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:** If the valve is equipped with an electric actuator, do not disassemble this portion of the valve. The water tight seal will be broken and water may leak into the electronic controls chamber. If the valve is equipped with a standard type handle, 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 (9) sub-assembly 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 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 38-40 Foot 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 500 psi.

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