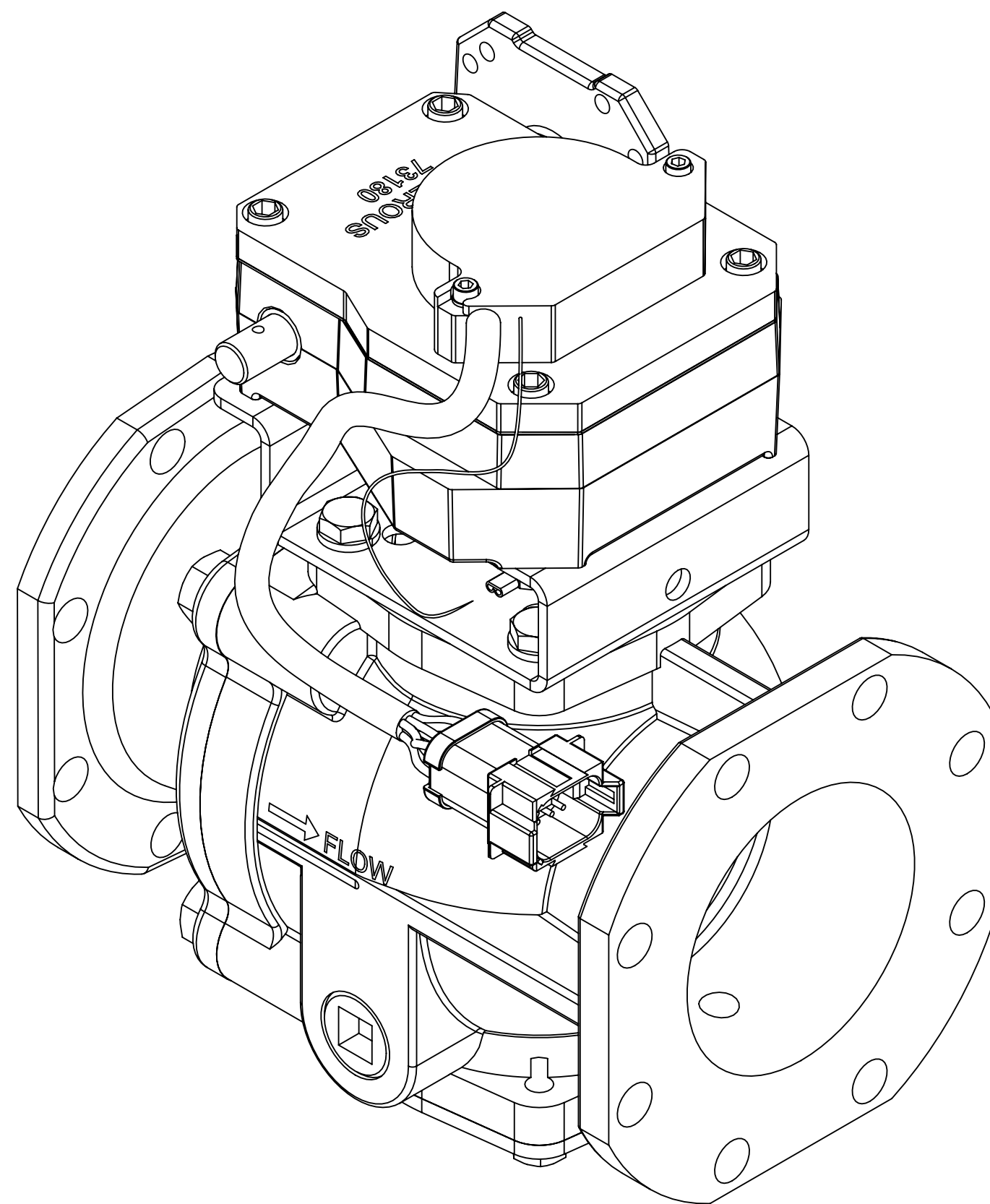
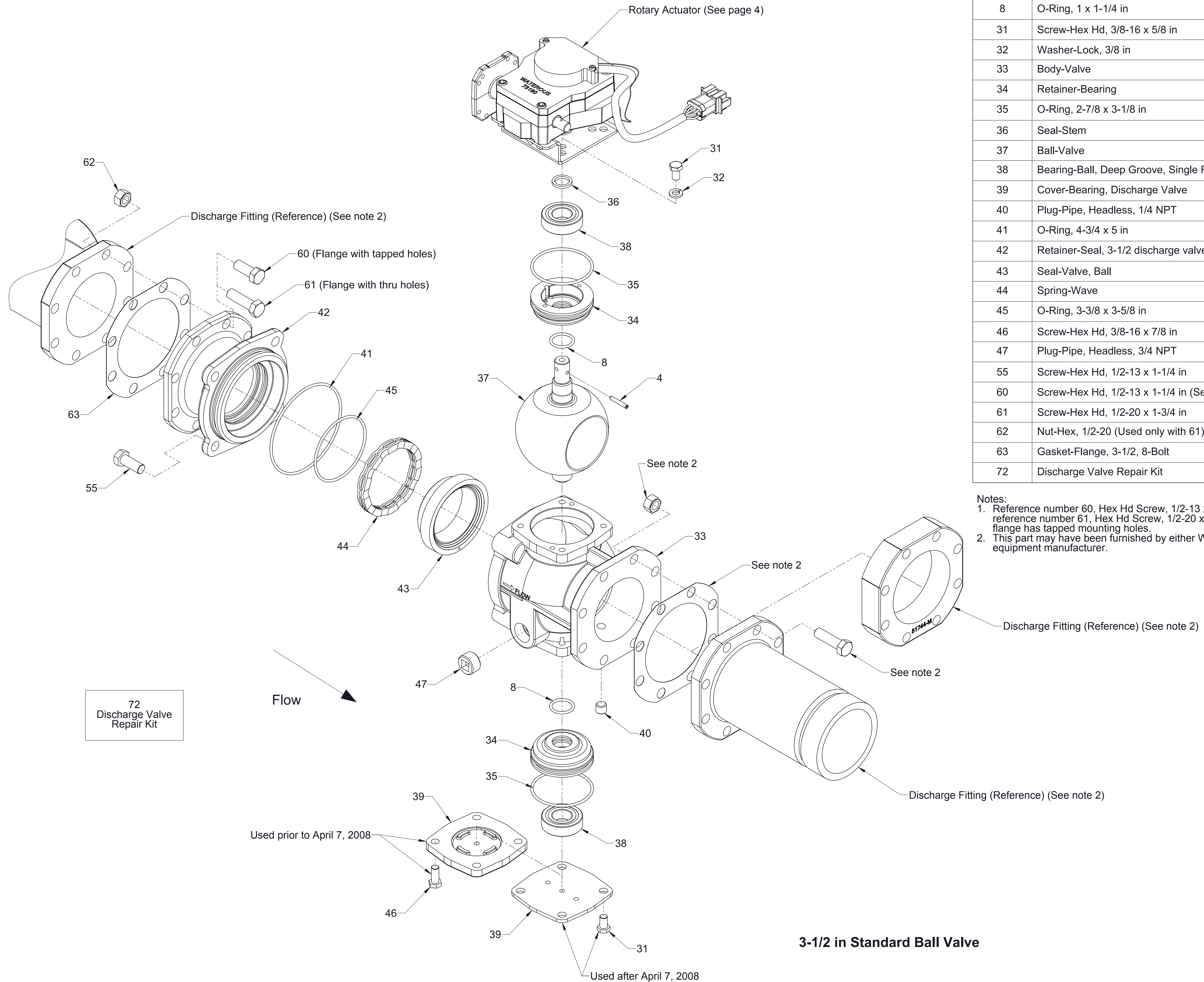


### 3-1/2 in. Standard Ductile Iron Discharge Valve Assembly with Manual Rotary Actuator

#### Service Parts List

Components	See Page
3-1/2 in. Standard Ball Valve	2
Cables and Panel Components	3
Available Repair Subassemblies	4

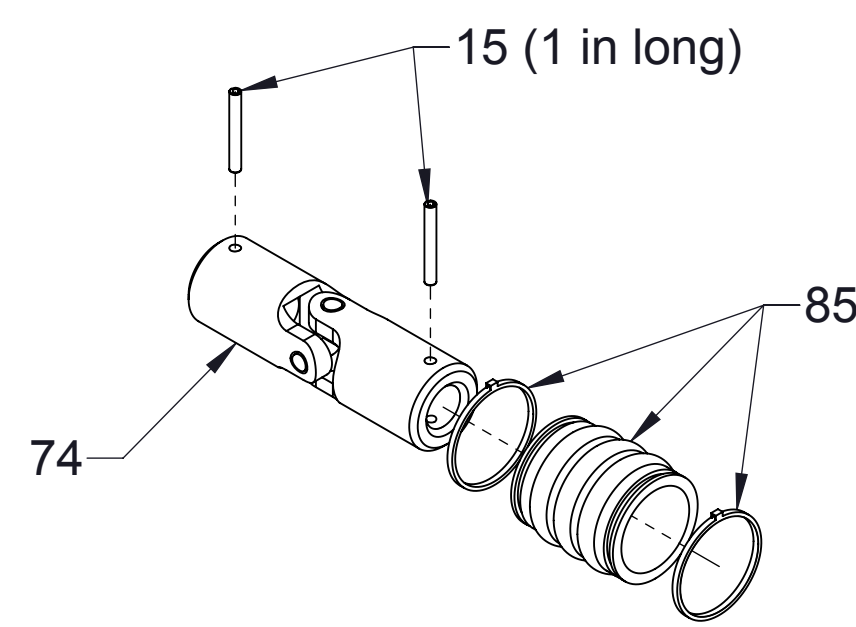
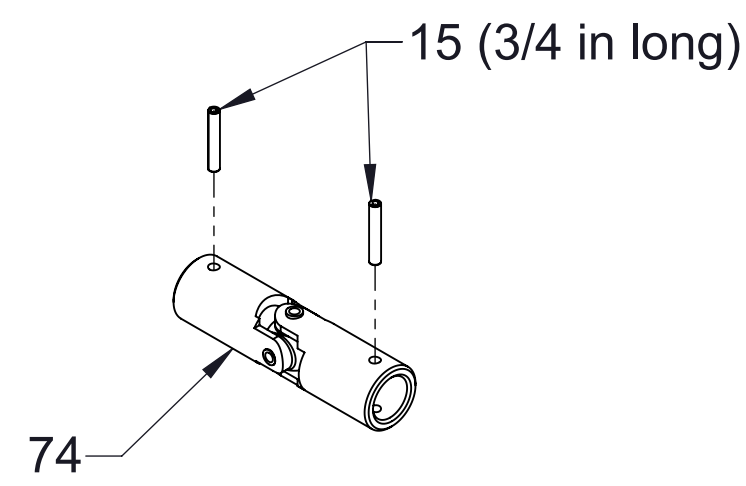




Ref No.	Description
4	Pin-Spring, 3/16 x 1-1/8 in
8	O-Ring, 1 x 1-1/4 in
31	Screw-Hex Hd, 3/8-16 x 5/8 in
32	Washer-Lock, 3/8 in
33	Body-Valve
34	Retainer-Bearing
35	O-Ring, 2-7/8 x 3-1/8 in
36	Seal-Stem
37	Ball-Valve
38	Bearing-Ball, Deep Groove, Single Row, Double Seal
39	Cover-Bearing, Discharge Valve
40	Plug-Pipe, Headless, 1/4 NPT
41	O-Ring, 4-3/4 x 5 in
42	Retainer-Seal, 3-1/2 discharge valve
43	Seal-Valve, Ball
44	Spring-Wave
45	O-Ring, 3-3/8 x 3-5/8 in
46	Screw-Hex Hd, 3/8-16 x 7/8 in
47	Plug-Pipe, Headless, 3/4 NPT
55	Screw-Hex Hd, 1/2-13 x 1-1/4 in
60	Screw-Hex Hd, 1/2-13 x 1-1/4 in (See note 1)
61	Screw-Hex Hd, 1/2-20 x 1-3/4 in
62	Nut-Hex, 1/2-20 (Used only with 61)
63	Gasket-Flange, 3-1/2, 8-Bolt
72	Discharge Valve Repair Kit

Notes:  
 1. Reference number 60, Hex Hd Screw, 1/2-13 x 1-1/4 in. used instead of reference number 61, Hex Hd Screw, 1/2-20 x 1-3/4 in. when discharge flange has tapped mounting holes.  
 2. This part may have been furnished by either Waterous or original equipment manufacturer.

3-1/2 in Standard Ball Valve

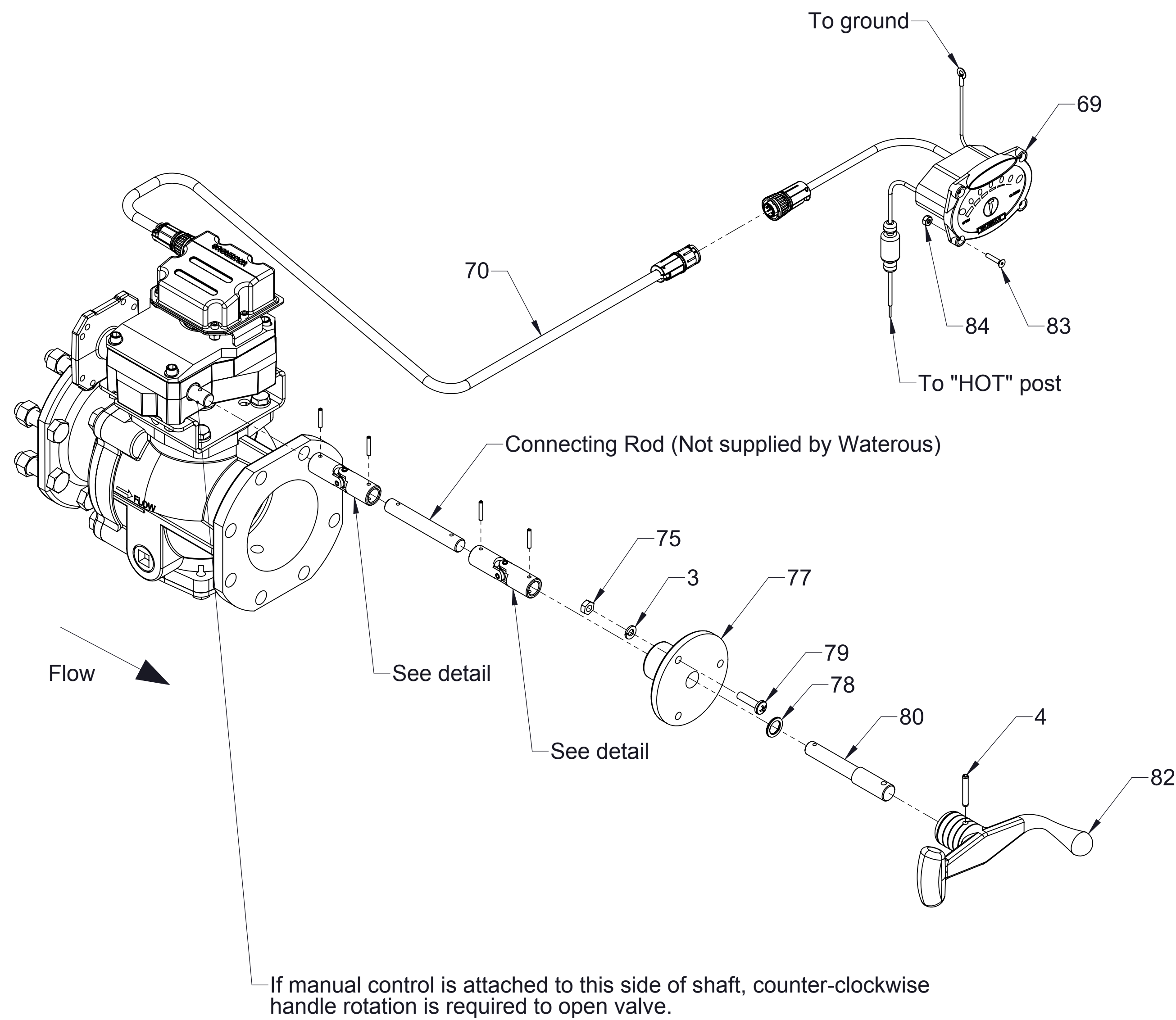


**Standard Configuration**

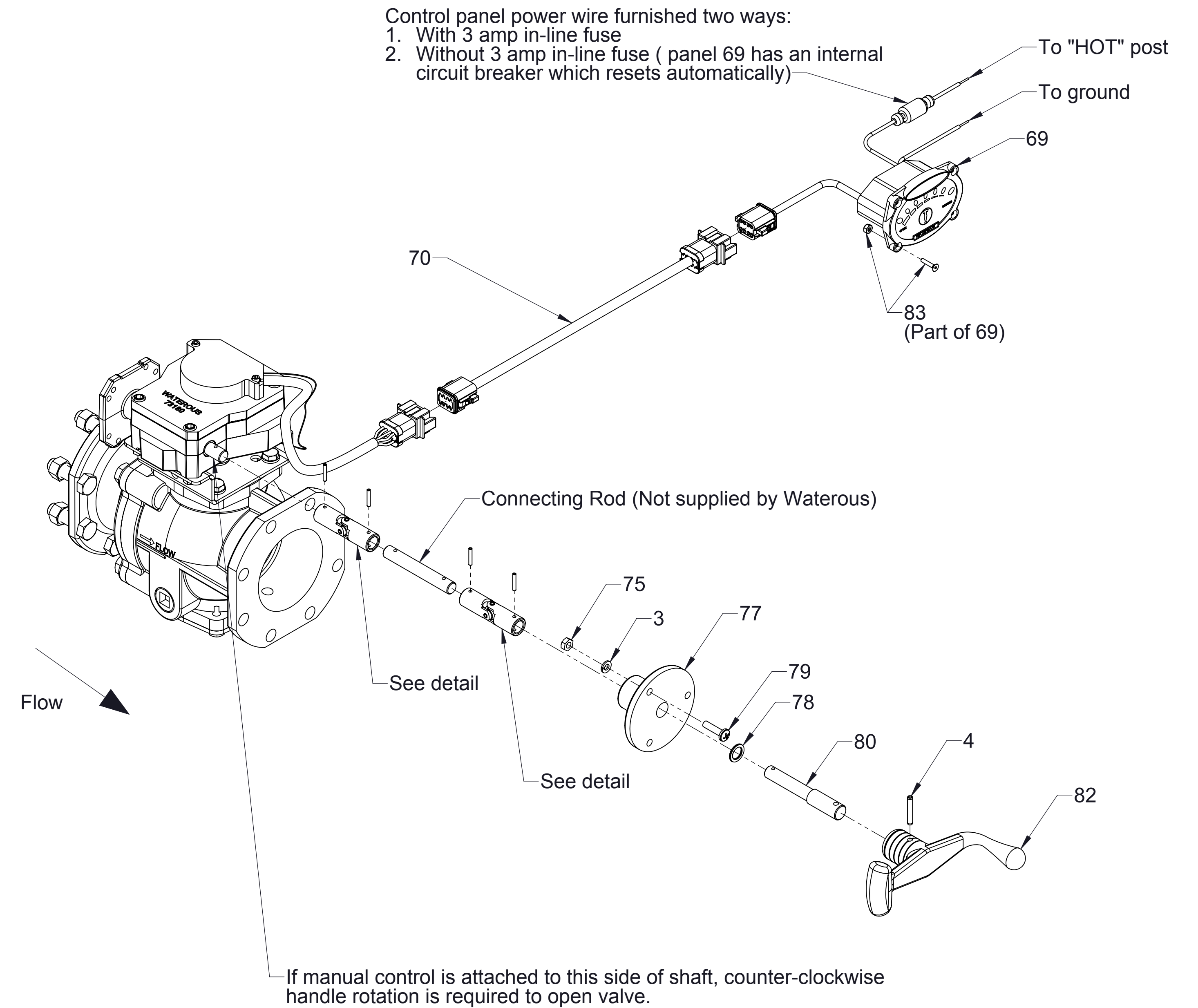
**Optional Configuration with Sealing boot**

**U-Joint detail**

Ref No.	Description	Ref No.	Description
3	Washer-Lock, 1/4 in	78	Bearing-Thrust
4	Pin-Spring, 3/16 x 1 1/4 in	79	Screw-Machine, Pan Hd, 1/4-20 x 1 in
15	Pin-Spirol, 1/8 x 3/4 in or 1/8 x 1 in	80	Shaft-Remote
69	LED Panel Wiring Assembly	82	Handle-Discharge Valve
70	Wire Assembly-Switch Extension	83	Screw-Machine, Flat Hd, Hex Soc, #6-32 x 3/4 in (Prior to November 6, 2006)
74	Joint-Universal	83	Control Panel Mounting Hardware (Includes (4) Socket Hd Screws, #6-32 x 3/4 and (4) Nylok Nuts, #6-32) (After November 6, 2006)
75	Nut-Hex, Machine, 1/4-20	84	Nut-Hex, Nylok, #6-32 (Prior to November 6, 2006)
77	Body-Remote	85	U-Joint boot (Includes cable ties)



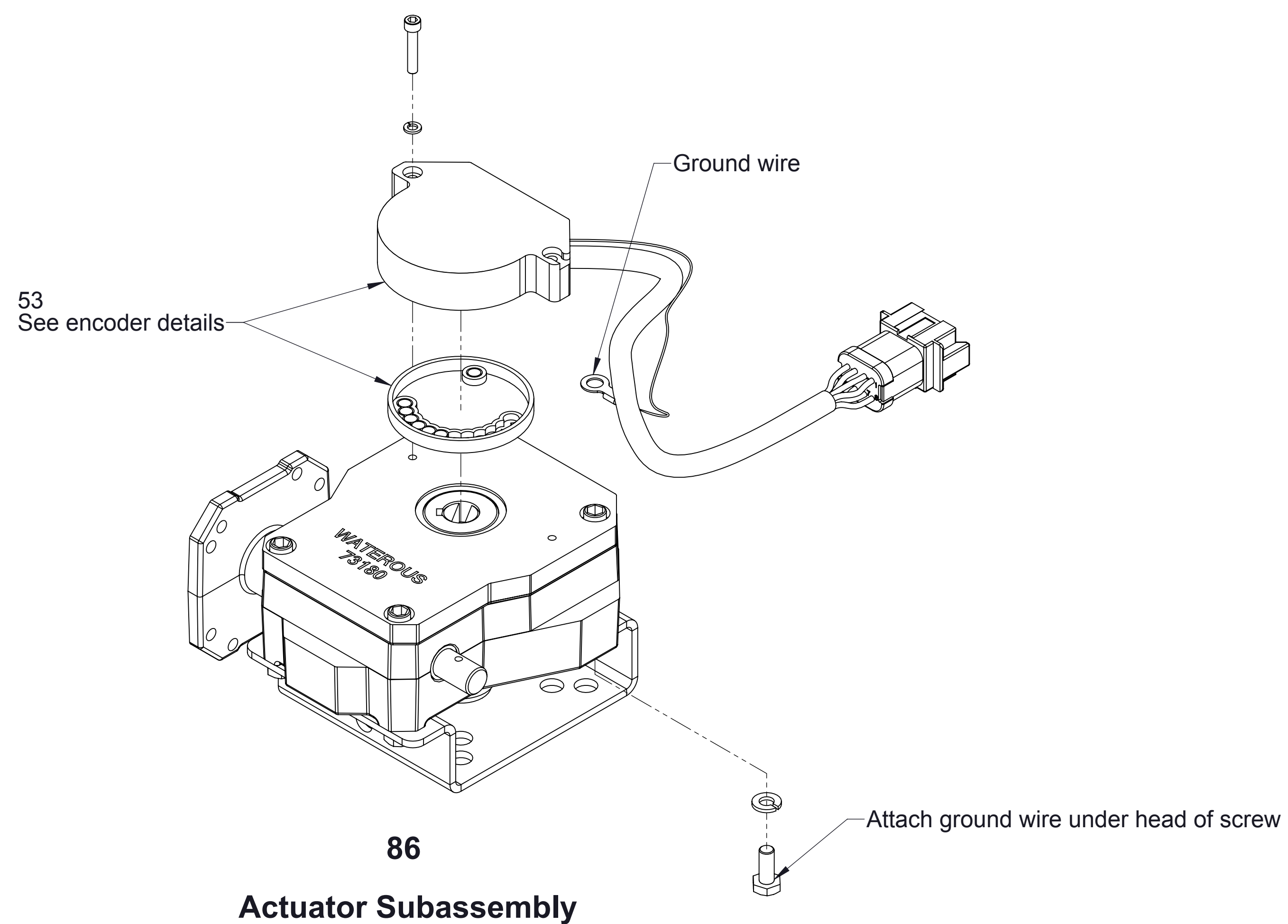
**Valves built prior to November 6, 2006**



**Valves built after November 6, 2006**

**Cables and Panel Components**

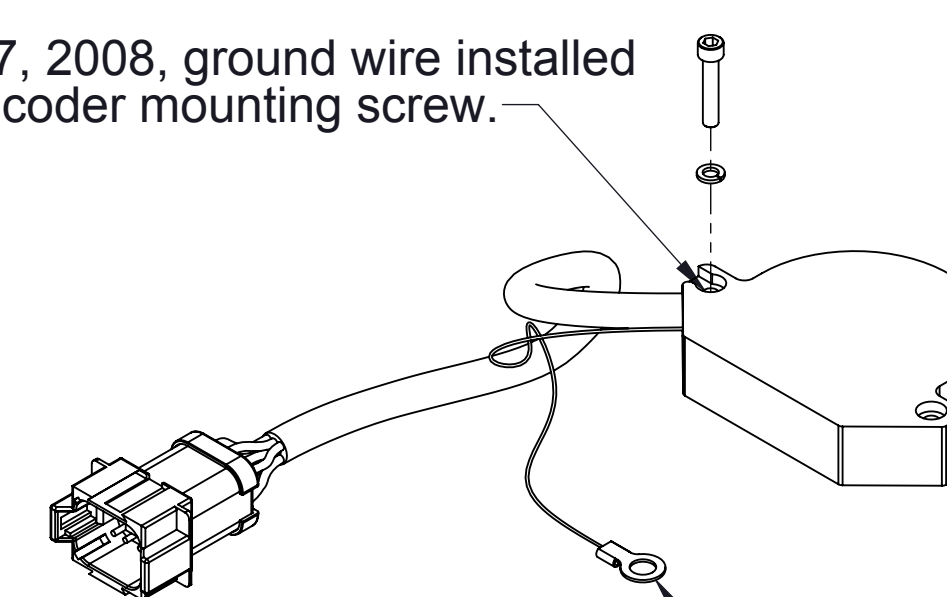
Ref No.	Description
53	Rotary Encoder Replacement kit
86	Actuator Subassembly
87	Valve and Actuator Subassembly



53  
Rotary Encoder  
Replacement Kit

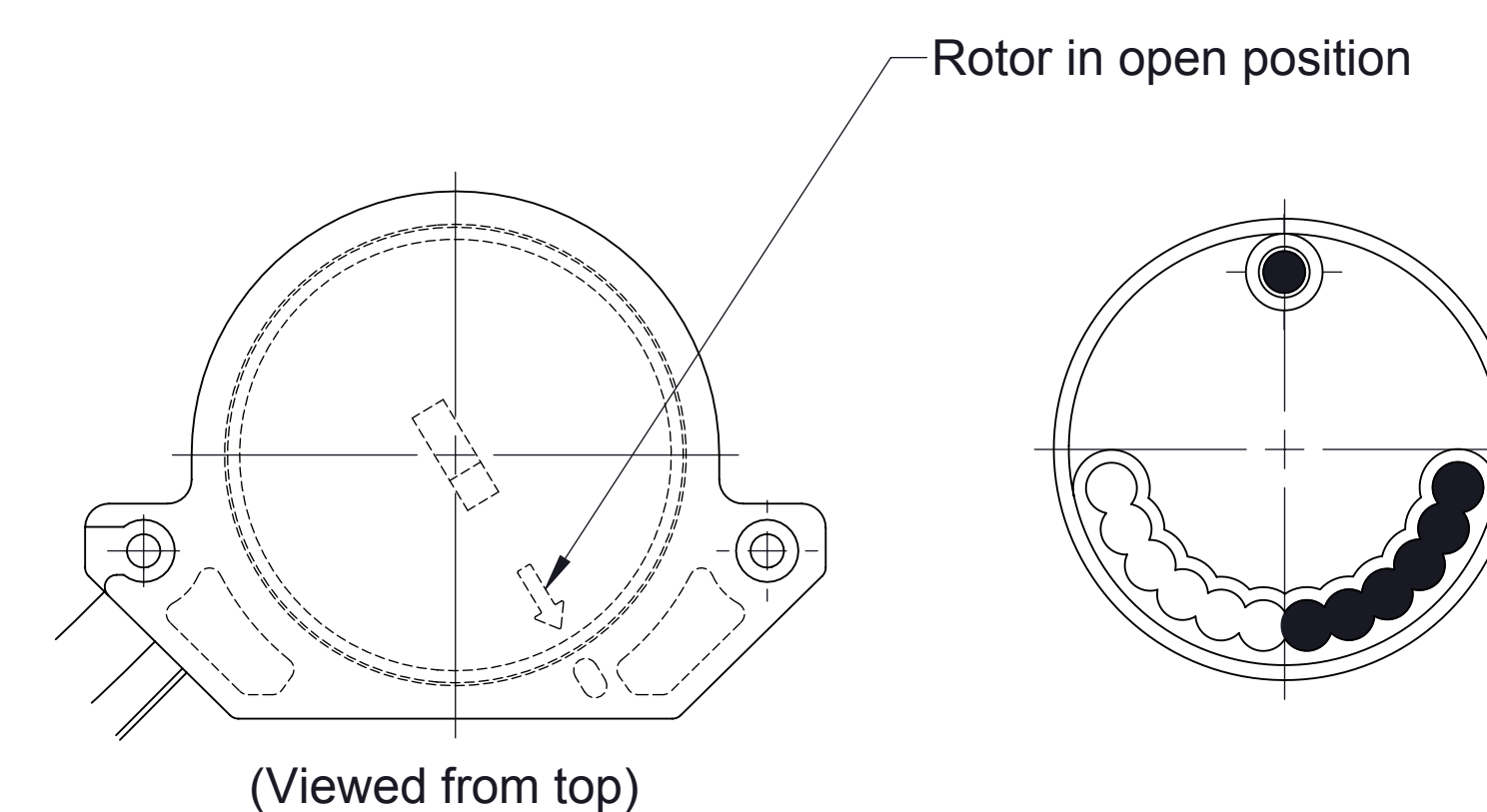
**Encoder Details**

Prior to January 7, 2008, ground wire installed under head of encoder mounting screw.



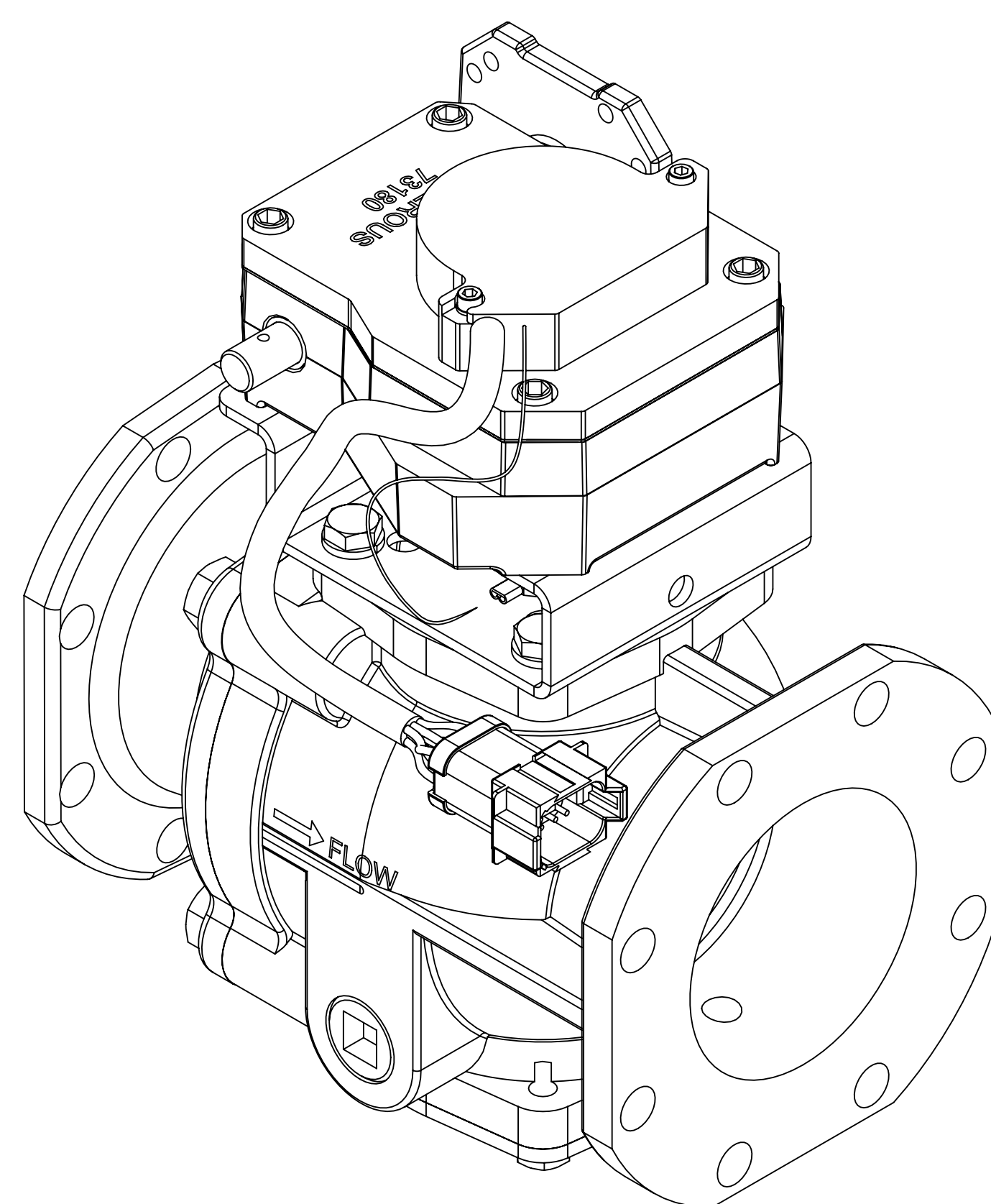
After January 7, 2008, ground wire installed under head of mounting bracket, see 120.

**Encoder Ground Wire Detail**



**Rotor Position**

**Rotor Magnet Positions**



87  
**Valve and Actuator Subassembly**

**Available Repair Subassemblies**