

# Installation & Maintenance Instructions

2-WAY DIRECT-ACTING SOLENOID VALVES  
REVISION "H" & "R"

NORMALLY OPEN OR NORMALLY CLOSED OPERATION

BRASS OR STAINLESS STEEL CONSTRUCTION – 1/8", 1/4", OR 3/8" PIPE THREADS

**SERIES**

**8262**

**8263**

I&M No.V9575R4  
(Section 1 of 2)

**IMPORTANT:** See separate solenoid installation and maintenance instructions for information on: Wiring, Solenoid Temperature, Causes of Improper Operation, and Coil or Solenoid Replacement.

## DESCRIPTION

Series 8262 and 8263 valves are 2-way direct-acting general service solenoid valves. Valves bodies are of rugged brass or stainless steel. Series 8262 or 8263 valves may be provided with a watertight/explosionproof solenoid enclosure.

## OPERATION

**Normally Open:** Valve is open when solenoid is de-energized; closed when energized.

**Normally Closed:** Valve is closed when solenoid is de-energized; open when energized.

**IMPORTANT:** No minimum operating pressure required.

### Manual Operation (Valves with Suffix MS)

Manual operator allows manual operation when desired or during an electrical power outage.

To engage manual operator, rotate stem on the side of the body clockwise until it hits a stop, approximately 90° from its original position. Do NOT rotate beyond stops. Do NOT apply excessive force beyond stops. Valve will now be in the same position as when the solenoid is energized. To disengage, rotate stem counterclockwise until it hits a stop, approximately 90° from its original position. Do NOT rotate beyond stops. Do NOT apply excessive force beyond stops.

MS option is not available on normally closed valves that have a pressure rating greater than 750 PSI. MS option is not available on normally open valves.

**CAUTION:** Do NOT rotate beyond 90° stops. Do NOT apply excessive force beyond stops. Rotating beyond the 90° stops could result in equipment damage.

**CAUTION:** For valve to operate electrically, manual operator stem must be fully rotated counterclockwise.

## INSTALLATION

Check nameplate for correct catalog number, pressure, voltage, frequency, and service. Never apply incompatible fluids or exceed pressure rating of the valve. Installation and valve maintenance to be performed by qualified personnel.

Note: Inlet port will either be marked "1" or "IN". Outlet port will be marked "2" or "OUT". (see Figure 1)

### Future Service Considerations.

Provision should be made for performing seat leakage, external leakage, and operational tests on the valve with a nonhazardous, noncombustible fluid after disassembly and reassembly.

### Temperature Limitations

For maximum valve ambient and fluid temperatures, refer to the following tables. Use catalog number, coil prefix, suffix, and watt rating on nameplate to identify the maximum ambient and fluid temperatures.

**NOTE:** The following Temperature Limitations Tables do not apply to Magnetic Latch Valves: Catalog Numbers 8262A610 to 8262A627; 8263A615 to 8263A618, and 8263A624 to 8263A627. See separate Instruction Manual.

Prefix ①	Coil Class	Watt Ratings			Max Ambient Temperature			
		AC		DC	Normally Closed		Normally Open	
		60Hz	50Hz		°C	°F	°C	°F
EF, EV	FT	6.1, 10.1	8.1, 10.1	–	52	125	52	125
EF, EV	FB	9.1, 17.1	11.1, 17.1	–	–	–	–	–
	FT	6.1, 10.1	8.1, 10.1	–	55	131	55	131
	FB	9.1, 17.1	11.1, 17.1	–	–	–	–	–
	HT	–	–	10.6, 11.6	40	104	55	131
	HB	–	–	22.6, 18.6				
EF, EV	HT	–	–	10.6, 11.6	②	②	–	–
EF, EV	HB	–	–	22.6, 18.6	–	–	–	–
	HT	6.1, 10.1	8.1, 10.1	–	60	140	60	140
	HB	9.1, 17.1	11.1, 17.1	–			55	131
EF, EV	HT	6.1, 10.1	8.1, 10.1	–	–	–	60	140
EF, EV	HB	9.1, 17.1	11.1, 17.1	–	–	–	–	–
	–	2	2	2	–	–	60	140

Valve Elastomer /Suffix	Coil Class	Watt Ratings			Max. Fluid Temp.	
		AC		DC	°C	°F
		60Hz	50Hz			
UR/None④	FT, FB, HT, HB⑤	6.1, 10.1, 9.1, 17.1, 2	8.1, 10.1, 11.1, 17.1, 2	10.6, 11.6, 18.6, 22.6, 2	60	140
NBR/None④					82	180
CR/J					⑤	⑤
Lt-Nitrile/A					75	167
EPDM/E					99	210
	FT	6.1, 10.1	8.1, 10.1	–	99	210
	FB	–	11.1, 17.1	–		
FKM/V & PTFE/T	HT with EF/EV Prefix	6.1, 10.1	8.1, 10.1	10.6, 11.6	③	③
	HB with EF/EV Prefix	9.1, 17.1	11.1, 17.1	18.6, 22.6	–	–
	HT	6.1, 10.1	8.1, 10.1	10.6, 11.6	121	250
	HB⑤	9.1, 17.1	11.1, 17.1	18.6, 22.6	③	③
	–	2	2	2	⑤	⑤

① = EF, EV data applies to Explosionproof coils only.

② = DC Normally closed solenoid valves can be operated at maximum ambient temperature of 55°C / 131°F with reduced pressure ratings. See page 5 of 5, Section 2 of 2 for maximum operating pressure differential.

③ = Solenoid coils with prefix EF & EV are limited to a maximum fluid temperature of 99°C/210°F.

④ = Urethane (UR) elastomer applies to catalog numbers 8262H079, 089, 096, 099, 106, 107, 154, 155, 159, 161, 167, 168, 173, 175, 176, 180, 181, 198, 199, 200, 214 and 8262R107, 181, 155, 161, 168, 169.

⑤ = Normally open 8262H & 8263H valves fitted with HB 17.1 watt AC coils have a maximum fluid temperature of 75°C(167°F)

## Positioning

These valves are designed to perform properly when mounted in any position. However, for optimum life and performance, the solenoid should be mounted vertically and upright to reduce the possibility of foreign matter accumulating in the solenoid base sub-assembly area.

## Mounting

Two (2) M5 threaded holes are provided in the valve body for mounting. (See Figure 1)

Optional mounting bracket can be obtained with valve as Suffix MB or separately as a kit.

## Piping

Connect piping or tubing to valve according to markings on valve body. Inlet port will either be marked "1" or "IN". Outlet port will be marked "2" or "OUT". Wipe the pipe threads clean of cutting oils. Apply pipe compound sparingly to male pipe threads only. If applied to valve threads, the compound may enter the valve and cause operational difficulty. Avoid pipe strain by properly supporting and aligning piping. When tightening the pipe, do not use valve or solenoid as a lever. Locate wrenches applied to valve body or piping as close as possible to connection point.

**IMPORTANT: To protect the solenoid valve, install a strainer or filter suitable for the service involved, in the inlet side as close to the valve as possible. Clean periodically depending on service conditions. See ASCO Series 8600 and 8601 for strainers.**

## MAINTENANCE

**▲ WARNING: To prevent the possibility of death, serious injury or property damage, turn off electrical power, depressurize valve, and vent fluid to a safe area before servicing the valve.**

NOTE: It is not necessary to remove the valve from the pipeline for repairs.

## Cleaning

All solenoid valves should be cleaned periodically. The time between cleanings will vary depending on the medium and service conditions. In general, if the voltage to the coil is correct, sluggish valve operation, excessive noise or leakage will indicate that cleaning is required. In the extreme case, faulty valve operation will occur and the valve may fail to open or close. Clean strainer or filter when cleaning the valve.

## Preventive Maintenance

- Keep the medium flowing through the valve as free from dirt and foreign material as possible.
- Periodic exercise of the valve should be considered if ambient or fluid conditions are such that corrosion, elastomer degradation, fluid contamination build up, or other conditions that could impede solenoid valve shifting are possible. The actual frequency of exercise necessary will depend on specific operating conditions. A successful operating history is the best indication of a proper interval between exercise cycles.
- Depending on the medium and service conditions, periodic inspection of internal valve parts for damage or excessive wear is recommended. Thoroughly clean all parts. Replace any worn or damaged parts.

## Causes of Improper Operation

- **Incorrect Pressure:** Check valve pressure. Pressure to valve must be within range specified on nameplate.
- **Excessive Leakage:** Disassemble valve (see Maintenance) and clean all parts. If parts are worn or damaged, install a complete ASCO Rebuild Kit.

## Valve Disassembly (see Figures 2, 3 & 4)

1. Disassemble valve using exploded views for identification of parts.
2. Remove solenoid, see separate instructions.
3. Unscrew solenoid base sub-assembly with wrench. Remove core assembly, core spring, and solenoid base gasket from valve body.
4. For normally open construction (Figure 4) remove spring, and disc holder assembly.
5. All parts are now accessible to clean or replace. If parts are worn or damaged, install a complete ASCO Rebuild Kit.

## Valve Reassembly

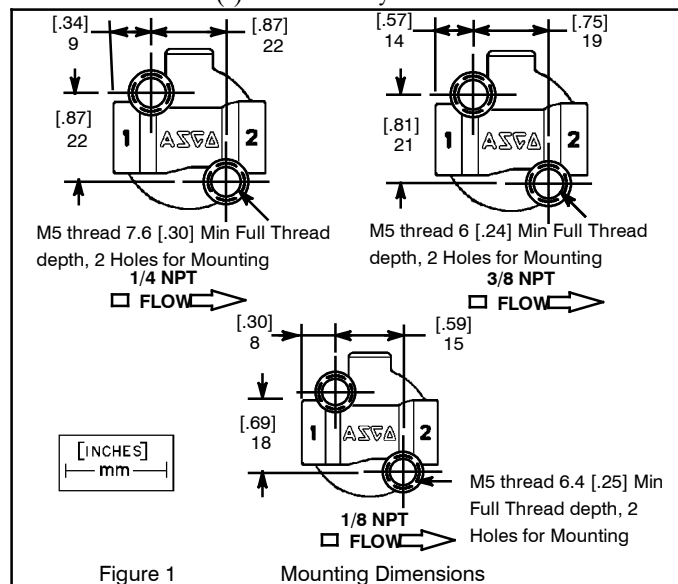
1. Use exploded views for identification, orientation and placement of parts.
2. Lubricate all gaskets with DOW CORNING® 200 Compound lubricant or an equivalent high-grade silicone oil.
3. For normally open construction (Figure 4), install disc holder assembly and disc holder spring.
4. Replace solenoid base gasket, core assembly with core spring and solenoid base sub-assembly. Note: For core assemblies with internal type core springs, install wide end of core spring in core assembly first, closed end of core spring protrudes from top of core assembly. (see Figure 2)
5. Torque solenoid base sub-assembly to  $175 \pm 25$  in-lbs [ $19,8 \pm 2,8$  Nm].
6. Install solenoid. See separate solenoid instructions. Then make electrical hookup to solenoid.

**▲ WARNING: To prevent the possibility of death, serious injury or property damage, check valve for proper operation before returning to service. Also perform internal seat and external leakage tests with a nonhazardous, noncombustible fluid.**

7. Restore line pressure and electrical power supply to valve.
8. After maintenance is completed, operate the valve a few times to be sure of proper operation. A metallic *click* signifies the solenoid is operating.

## ORDERING INFORMATION FOR ASCO REBUILD KITS

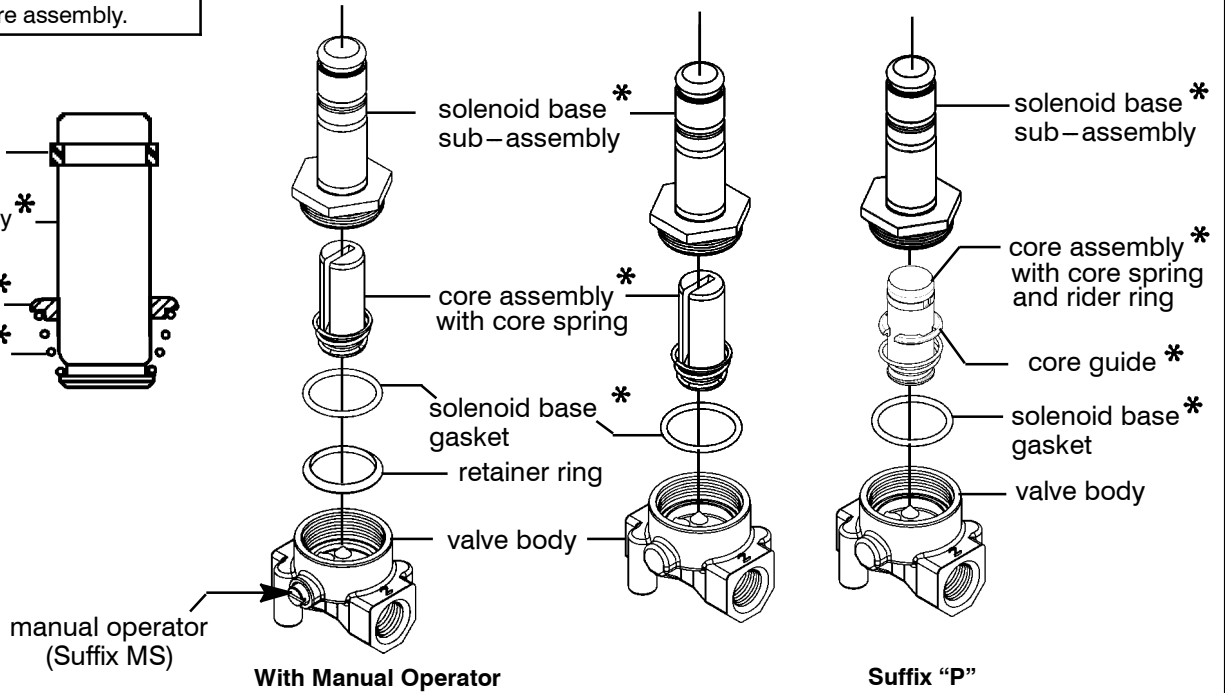
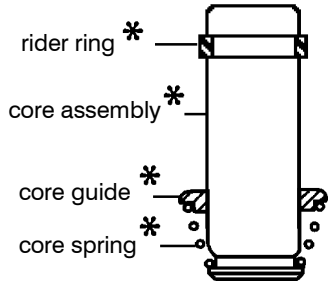
Parts marked with an asterisk (\*) in the exploded views in Figure 2 & 3 are supplied in Rebuild Kits. When Ordering Rebuild Kits for ASCO valves, order the Rebuild Kit number stamped on the valve nameplate. If the number of the kit is not visible, order by indicating the quantity of kits required, and the Catalog Number and Serial Number of the valve(s) for which they are intended.



### Torque Chart

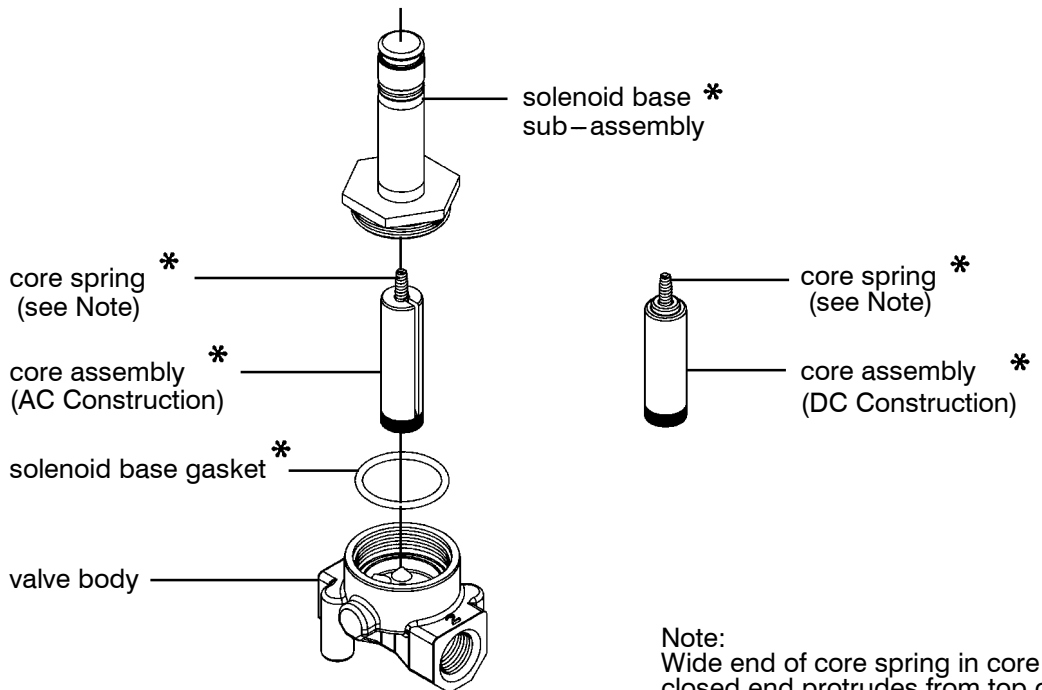
Part Name	Torque value Inch-Pounds	Torque value Newton-Meters
solenoid base sub-assembly	175 ± 25	19,8 ± 2,8

Partial cutaway view showing positioning of rider ring, core guide, and core spring on core assembly.



### External Spring Construction

\* Indicates Parts Supplied in ASCO Rebuild Kits.



### Internal Spring Construction

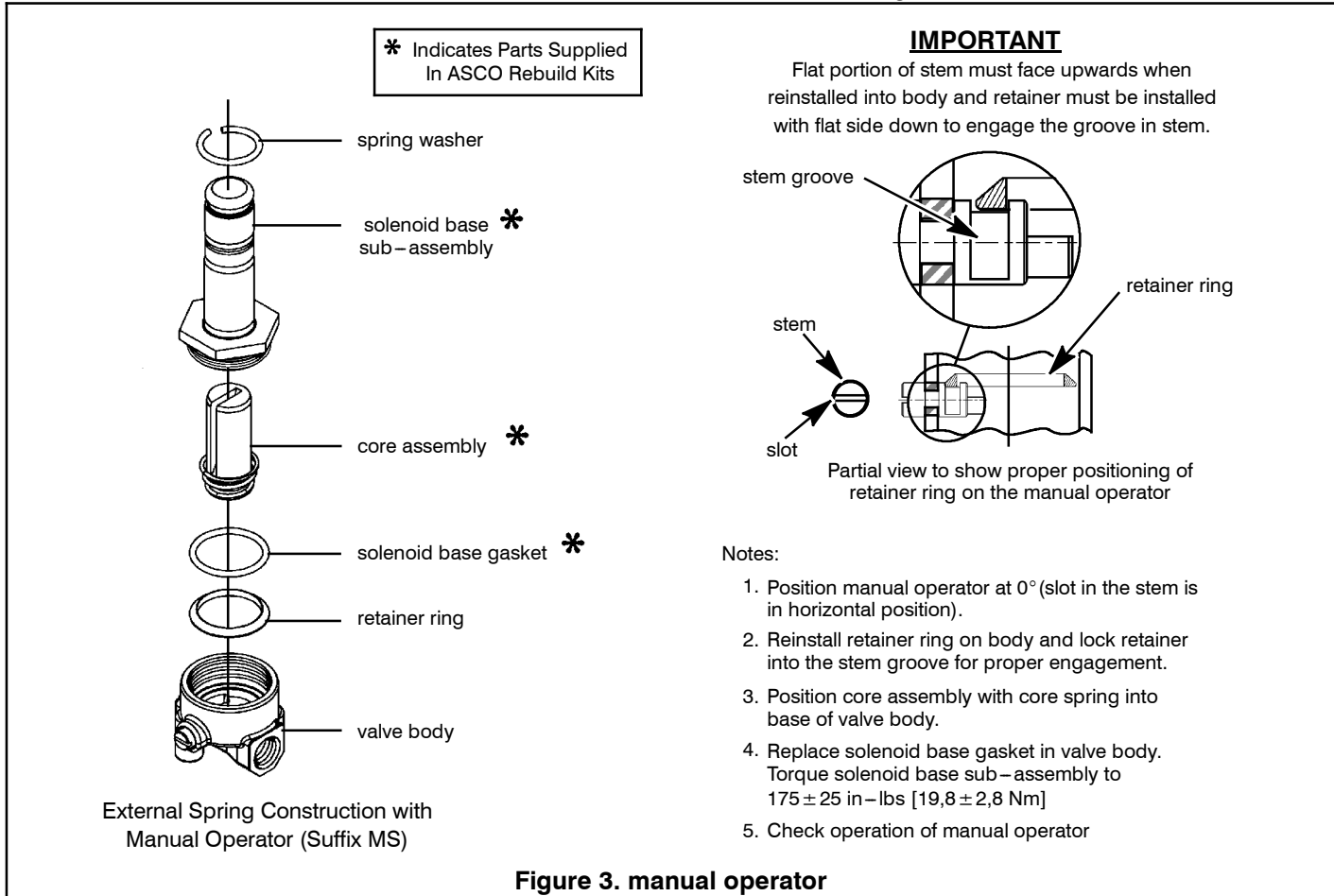
Note:  
Wide end of core spring in core first,  
closed end protrudes from top of core.

**Figure 2. Normally Closed Construction**

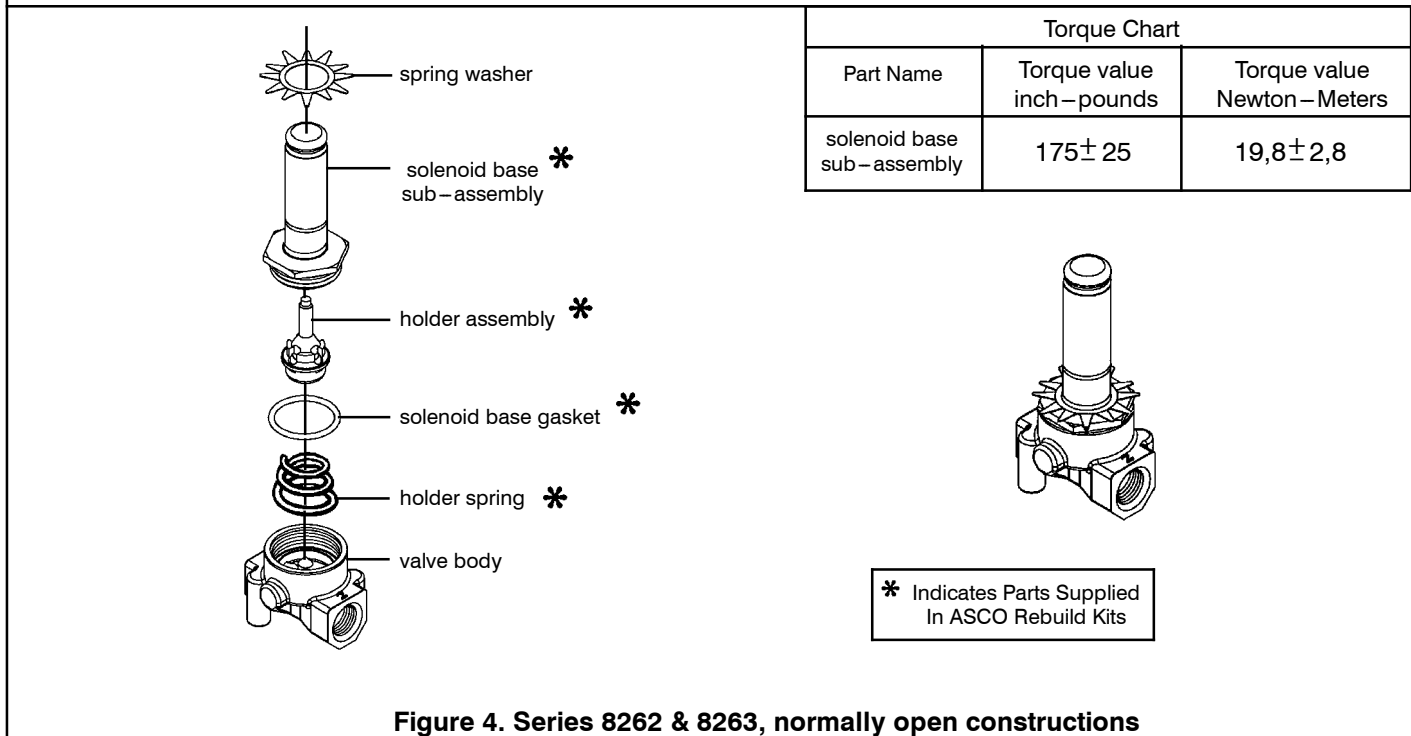
**Disassembly and Reassembly of Manual Operator (Refer to Figure 3)**

1. Position core assembly with core spring attached into base of manual operator body.
2. Insure retaining ring is properly located in valve body.

3. Replace solenoid base gasket and solenoid base sub-assembly into valve body. Torque solenoid base sub-assembly to  $175 \pm 25$  in-lbs [ $19,8 \pm 2,8$  Nm].
4. Check manual operator for proper operation. Turn stem clockwise and counterclockwise; stem should turn freely without binding.



**Figure 3. manual operator**



**Figure 4. Series 8262 & 8263, normally open constructions**