INSTALLATION AND MAINTENANCE INSTRUCTIONS

2-WAY DIRECT-ACTING SOLENOID VALVES NORMALLY OPEN AND NORMALLY CLOSED OPERATION 3/4 NPT

BULLETIN 8267

ASCO

DESCRIPTION

Bulletin 8267's are 2-way normally open or normally closed direct-acting solenoid valves. Standard valves have a General Purpose NEMA Type 1 Solenoid Enclosure. Valves may also be equipped with an enclosure which is designed to meet NEMA Type 4-Watertight, NEMA Type 7 (C or D) Hazardous Locations - Class I, Groups C or D, and NEMA Type 9 (E, F or G) Hazardous Locations - Class II, Groups E, F or G. For Installation and Maintenance Instructions for Explosion-Proof/Watertight Solenoid Enclosures, refer to Form No. V-5381.

OPERATION

Normally Closed: Valve is closed when solenoid is de-energized. Valve opens when solenoid is energized.

Normally Open: Valve is open with solenoid de-energized. Valve closes when solenoid is energized.

IMPORTANT: No minimum operating pressure differential is required.

INSTALLATION

Check nameplate for correct catalog number, pressure, voltage and service.

TEMPERATURE LIMITATIONS

For maximum valve ambient and fluid temperatures, refer to chart below. For higher ambient and fluid temperatures, consult factory. Check catalog number on nameplate to determine the maximum temperatures.

CATALOG NUMBERS	MAXIMUM FLUID TEMP. °F	MAXIMUM AMBIENT TEMP. °F
8267C19 8267C20 8267C23 8267C24	250	86*
8267C21 8267C22	267	86*
8267C17 8267C18	280	86*

*For catalog numbers prefixed "HT," (Class "H" Coil) maximum ambient temperature is 104°F.

POSITIONING

Valve must be mounted with solenoid vertical and upright.

MOUNTING

For mounting bracket (optional feature) dimensions, refer to Figure 1.

PIPING

Connect piping to valve according to markings on valve body. Apply pipe compound sparingly to male pipe threads only; if applied to valve threads, it may enter the valve and cause operational difficulty. Pipe strain should be avoided by the proper support and alignment of piping. When tightening the pipe, do not use valve as a lever. Wrenches applied to valve body or piping are to be located as close as possible to connection point.

IMPORTANT: For the protection of the solenoid valve, install a strainer or filter suitable for the service involved in the inlet side as close to the valve as possible. Periodic cleaning is required depending on service conditions. See Bulletins 8600, 8601 and 8602 for strainers.

WIRING

Wiring must comply with Local and National Electrical Codes. Solenoid housings are provided with accommodations (7/8 diameter hole) or connection for 1/2 inch conduit. The general purpose solenoid enclosure may be rotated to facilitate wiring by removing the retaining cap or clip. CAUTION: When metal retaining clip disengages, it will spring upward. Rotate solenoid enclosure to desired positions. Replace retaining cap or clip before operating.

SOLENOID TEMPERATURE

Standard catalog valves are supplied with coils designed for continuous duty service. When the solenoid is energized for a long period, the solenoid enclosure becomes hot and can be touched with the hand only for an instant. This is a safe operating temperature. Any excessive heating will be indicated by the smoke and odor of burning coil insulation.

MAINTENANCE

WARNING: Turn off electrical power supply and depressurize valve before making repairs. It is not necessary to remove the valve from the pipe line for repairs.

CLEANING

A periodic cleaning of all solenoid valves is desirable. The time between cleanings will vary depending on 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. Clean valve strainer or filter when cleaning solenoid valve.

PREVENTIVE MAINTENANCE

1. Keep the medium flowing through the valve as free from dirt and foreign material as possible.
2. While in service, operate the valve at least once a month to insure proper opening and closing.
3. Periodic inspection (depending on medium and service conditions) of internal valve parts for damage or excessive wear is recommended. Thoroughly clean all parts. Replace any parts that are worn or damaged.

IMPROPER OPERATION

1. **Faulty Control Circuit:** Check the electrical system by energizing the solenoid. A metallic click signifies the solenoid is operating. Absence of the click indicates loss of power supply. Check for loose or blown-out fuses, open-circuited or grounded coil, broken lead wires or splice connections.
2. **Burned-Out Coil:** Check for open-circuited coil. Replace coil if necessary.
3. **Low Voltage:** Check voltage across the coil leads. Voltage must be at least 85% of nameplate rating.
4. **Incorrect Pressure:** Check valve pressure. Pressure to valve must be within range specified on nameplate.
5. **Excessive Leakage:** Disassemble valve and clean all parts. Replace worn or damaged parts with a complete Spare Parts Kit for best results.

COIL REPLACEMENT (Refer to Figure 1)

Depressurize valve and turn off electrical power supply. Proceed in the following manner:

1. Remove retaining cap or clip and remove nameplate and housing cover off the solenoid base sub-assembly. CAUTION: When metal retaining clip disengages, it will spring upward.
2. Slip yoke containing coil, sleeves and insulating washers off the solenoid base sub-assembly.
3. Slip coil, insulating washers and sleeves from yoke. Insulating washers are omitted when a molded coil is used.
4. Reassemble in reverse order of disassembly paying careful attention to exploded view provided for identification and placement of parts.

CAUTION: Solenoid must be fully reassembled as the housing and internal parts are part of and complete the magnetic circuit. Place an insulating washer at each end of coil, if required.

VALVE DISASSEMBLY (Refer to Figure 1)

Depressurize valve and turn off electrical power supply. Proceed in the following manner:

1. Disassemble valve in an orderly fashion paying careful attention to exploded view provided for identification of parts.
2. Remove retaining cap or clip and slip the entire solenoid enclosure off the solenoid base sub-assembly. CAUTION: When metal retaining clip disengages, it will spring upward.
3. Unscrew solenoid base sub-assembly.
4. Remove bonnet screws (4), valve bonnet and solenoid base gasket.
5. Remove retainer/guide, core spring and core/disc sub-assembly.
6. Remove retaining spring and body gasket.
7. Slip retainer, disc guide and disc spring from valve body.
8. Remove valve seat and seat gasket. NOTE: Valve seat and seat gasket should only be removed if they are being replaced. **For general cleaning, do not remove valve seat and seat gasket.**
9. All parts are now accessible for cleaning or replacement. Replace worn or damaged parts with a complete Spare Parts Kit for best results.

VALVE REASSEMBLY

1. Reassemble in reverse order of disassembly paying careful attention to exploded view provided for identification and placement of parts.
2. Lubricate all gaskets with Dow Corning Valve Seal silicone lubricant or an equivalent high grade silicone grease.
3. Position seat gasket on valve seat and install into valve body. Be sure rectangular hole in valve seat is horizontal to valve body and seat is fully inserted (bottomed out) in valve body.
4. Replace retainer with disc guide and disc spring.
5. Install core/disc sub-assembly with sharp edge of hole in core/disc sub-assembly toward valve seat.
6. Replace body gasket, retainer spring, valve bonnet and bonnet screws. Torque bonnet screws in a crisscross manner to 95 ± 10 inch-pounds [10.7 ± 1.1 newton meters].
7. Replace solenoid base gasket, core spring (small end into core/disc sub-assembly first) and retainer/guide sub-assembly. Install small end of retainer/guide sub-assembly into large end of core spring.
8. Replace solenoid base sub-assembly and torque to 175 ± 25 inch-pounds [19.8 ± 2.8 newton meters].
9. Replace solenoid enclosure and retaining cap or clip.
10. After maintenance, operate the valve a few times to be sure of proper opening and closing.

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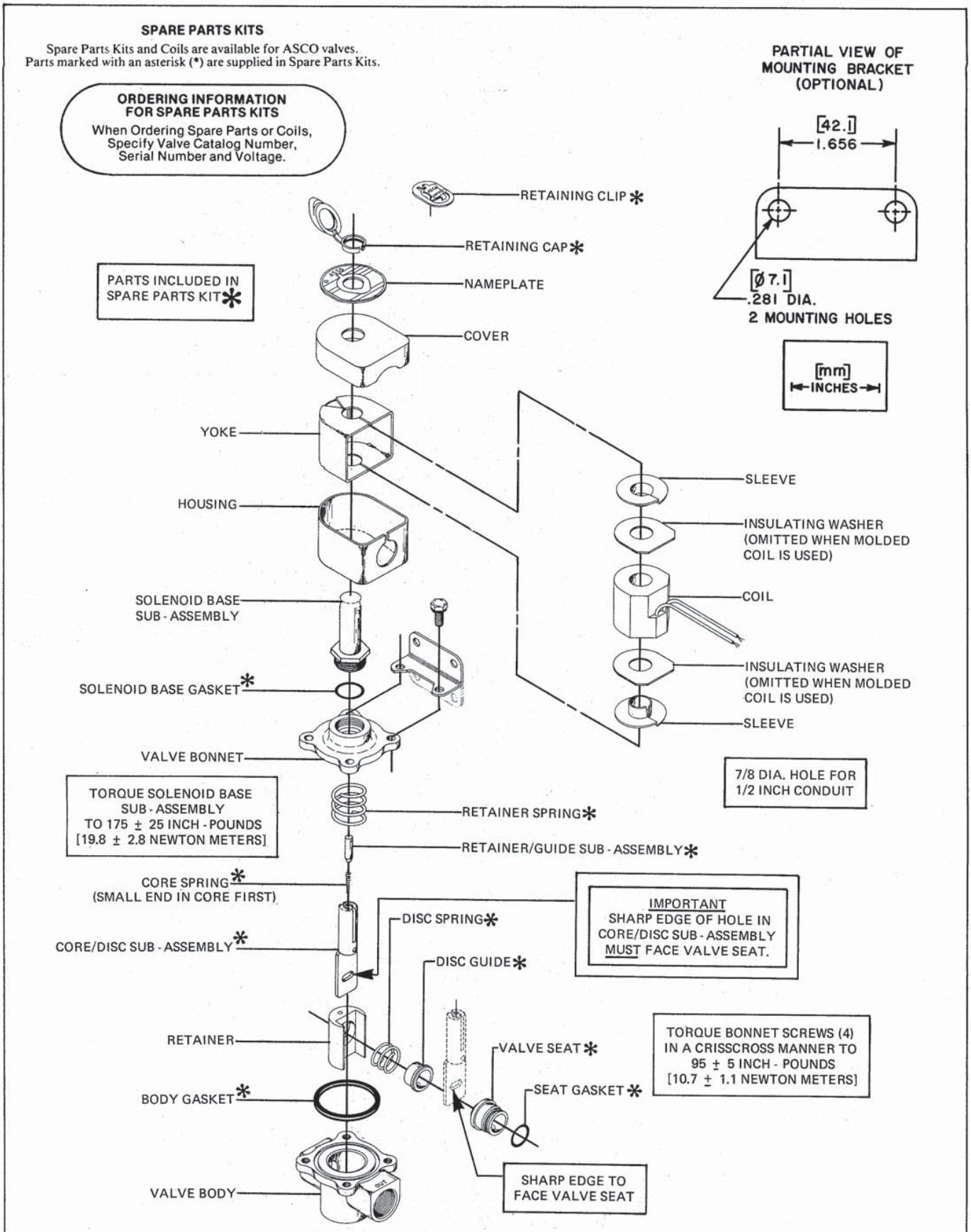
SPARE PARTS KITS

Spare Parts Kits and Coils are available for ASCO valves.
Parts marked with an asterisk (*) are supplied in Spare Parts Kits.

ORDERING INFORMATION FOR SPARE PARTS KITS

When Ordering Spare Parts or Coils, Specify Valve Catalog Number, Serial Number and Voltage.



Bulletin 8267
General Purpose Solenoid Enclosure Shown
For Explosion-Proof/Watertight Solenoid Enclosure, See Form No. V-5381.

Figure 1.

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