

INSTALLATION AND MAINTENANCE INSTRUCTIONS

2-WAY DIRECT ACTING MAGNETIC LATCH SOLENOID VALVE
(15mm COMPRESSION PIPE FITTINGS)

BULLETIN
H 262 BW

ASCO
JOUCOMATIC

DESCRIPTION

Bulletin 262 are 2-way magnetic latch solenoid controlled valves. Valves have brass bodies and fitted with 'SC' spade plug connection coils to ISO 4400 DIN 43650. The solenoid coil has single winding and is fitted with integral permanent magnet. The valve is latched by energising the coil with the specified DC voltage. The valve is unlatched by reversing the polarity of the voltage supply. (See Fig. 1). The valves comply with the requirements of Water Bylaws and Regulations and are "UK WFBs LISTED".

OPERATION

Valve is closed (unlatched) when reverse polarity supply voltage is momentarily applied. Valve is open (latched) when supply voltage is momentarily applied (as shown on wiring schematic). A positive "click" is heard. The valve will stay open (held by permanent magnet). To unlatch (close valve) reverse polarity supply voltage is momentarily applied. (See Fig 1).

CAUTION: The solenoid coil is designed for intermittent duty service and is limited to momentary operation. For momentary energisation (Pulse) times consult Factory.

INSTALLATION

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

Note 1. WARNING: To prevent the possibility of personal injury or property damage, the position of the valve LATCHED (open) or UNLATCHED (closed) must be determined. This cannot be done before installation. The valve must be tested in the line of final application to determine what operational mode it is in. See Initial Testing to determine valve mode section below.

INITIAL TESTING TO DETERMINE VALVE MODE.

CAUTION: Be sure valve can be test operated without affecting other equipment.

1. Install valve in line of final application and make electrical connections.
2. Pressurise system to normal operating pressure with non-hazardous, non-combustible fluid.
3. Electrically operate valve to determine proper valve mode for system start-up.

Future Service Considerations. Provision should be made for performing seat leakage, external leakage and operational tests on the valve with non-hazardous, non-combustible fluid after disassembly and reassembly.

NB. Certain water undertakers do not accept the use of duplex (alpha-beta) brass fittings.

POSITIONING

This valve is 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.

IMPORTANT: Valve must be mounted securely to avoid excessive shock or vibration. See Piping Section

PIPING

The valve body has G1/2 B Threads to BS 2779: and is supplied with 15mm capnuts and compression rings in accordance with BS 864: Pt2:1983.

Adequate support of piping and proper positioning and mounting must be made to avoid excessive shock or vibration to valve.

CAUTION: Excessive shock or vibration may cause valve to UNLATCH (close). When fitting the 15mm copper tube to the body ensure that the tube is fully inserted into the body (against the stop). Avoid pipe strain by properly supporting the 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.

Note 2. The tightening of the capnut is effected by hand as far as possible followed by 1 1/4 turns with a suitable spanner.

Since the compression joint makes a positive two point seal no jointing compounds are necessary. Indeed the application of such materials can impair the efficiency of the joint. A few drops of light oil applied to the thread before tightening the nut will reduce the load required to reach the number of turns. Remove all swarf from pipes before inserting into body as this may enter the valve and cause malfunction.

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, 8601 and 8602 for strainers.

WIRING

(See SCHEMATIC) (Figure 1).

Wiring must comply with Local and National regulations. Connector to the coil must be made via a spade plug connector to ISO 4400 (DIN 43650). The coil can be rotated through 360° to facilitate wiring.

Note: When fitted with spade plug connector and gasket the solenoid meets IP65.

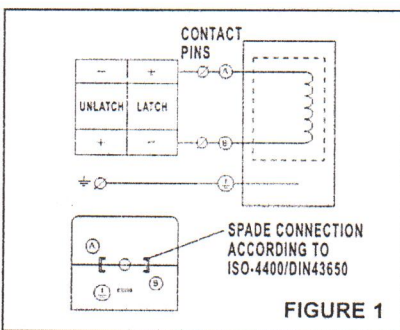


FIGURE 1

MAINTENANCE

WARNING: To prevent the possibility of personal 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 pipe line 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 valve strainer or filter when cleaning the valve.

PREVENTIVE MAINTENANCE

1. Keep the medium flowing through the valve as free from dirt and foreign material as possible.
2. Whilst in service the valve should be operated at least once a month to ensure proper opening and closing.
3. Depending on the medium and service conditions, periodic inspection of internal valve parts for damage or excessive wear is recommended. Thoroughly clean all parts. If parts are worn or damaged, install a complete ASCO Rebuild Kit.

CAUSES OF IMPROPER OPERATION

1. **Faulty Control Circuits:** Check the electrical system by energising the solenoid. A metallic click signifies that the solenoid is operating. Absence of the click indicates loss of power supply. Check for loose or blown fuses open circuited or grounded coil, broken lead wires or splice connections.
2. **Burned-out Coil:** Check for open-circuited coil. Replace coil as necessary. Check supply voltage; it must be the same as specified on nameplate.
3. **Low Voltage:** Check voltage across the coil leads. Voltage must be at least 85% of name plate rating.
4. **Incorrect Pressure:** Check valve pressure. Pressure to the valve must be within range specified on nameplate.
5. **Excessive Leakage:** Disassemble valve (see Maintenance) and clean all parts. If parts are worn or damaged install a complete ASCO Rebuild Kit.

COIL REPLACEMENT (Refer to Figure 2).

WARNING: To prevent the possibility of personal injury or property damage turn off electrical power.

Disassemble solenoid in an orderly fashion. Use exploded view for identification and placement of parts.

1. Remove retaining cap, nameplate, coil and spring washer from solenoid base sub-assembly.
2. Reassemble in reverse order of disassembly paying careful attention to exploded views provided for identification and placement of parts.

VALVE DISASSEMBLY AND REASSEMBLY

(Refer to Figure 2).

Depressurise valve. (See Note 1 in Installation).

1. Disconnect Spade Plug Connector.
2. Remove retaining cap, nameplate, coil and spring washer from the solenoid base sub-assembly.
3. Unscrew the solenoid base sub-assembly and remove core spring core assembly and body gasket.
4. All parts are now accessible for cleaning or replacement. Replace worn or damaged parts with a complete Kit.
5. Reassemble in reverse order to disassembly paying careful attention to Exploded Views provided.
6. Restore line pressure and electrical power supply to valve.
7. After maintenance is completed operate the valve a few times to be sure of proper operation. A metallic click signifies the solenoid is operating. (See Note 1 in Installation).

WARNING: To prevent the possibility of personal injury or property damage check valve for proper operation before returning to service. Also perform internal seat and external leakage tests with a non-hazardous non-combustible fluid.

REBUILD KITS

Kits and coils are available for valves. Parts marked with an asterisk (*) are supplied in Rebuild Kits. for plug connector kit consult factory.

ORDERING INFORMATION FOR REBUILD KITS

When ordering Kits or coils specify valve catalogue number, serial number and voltage.

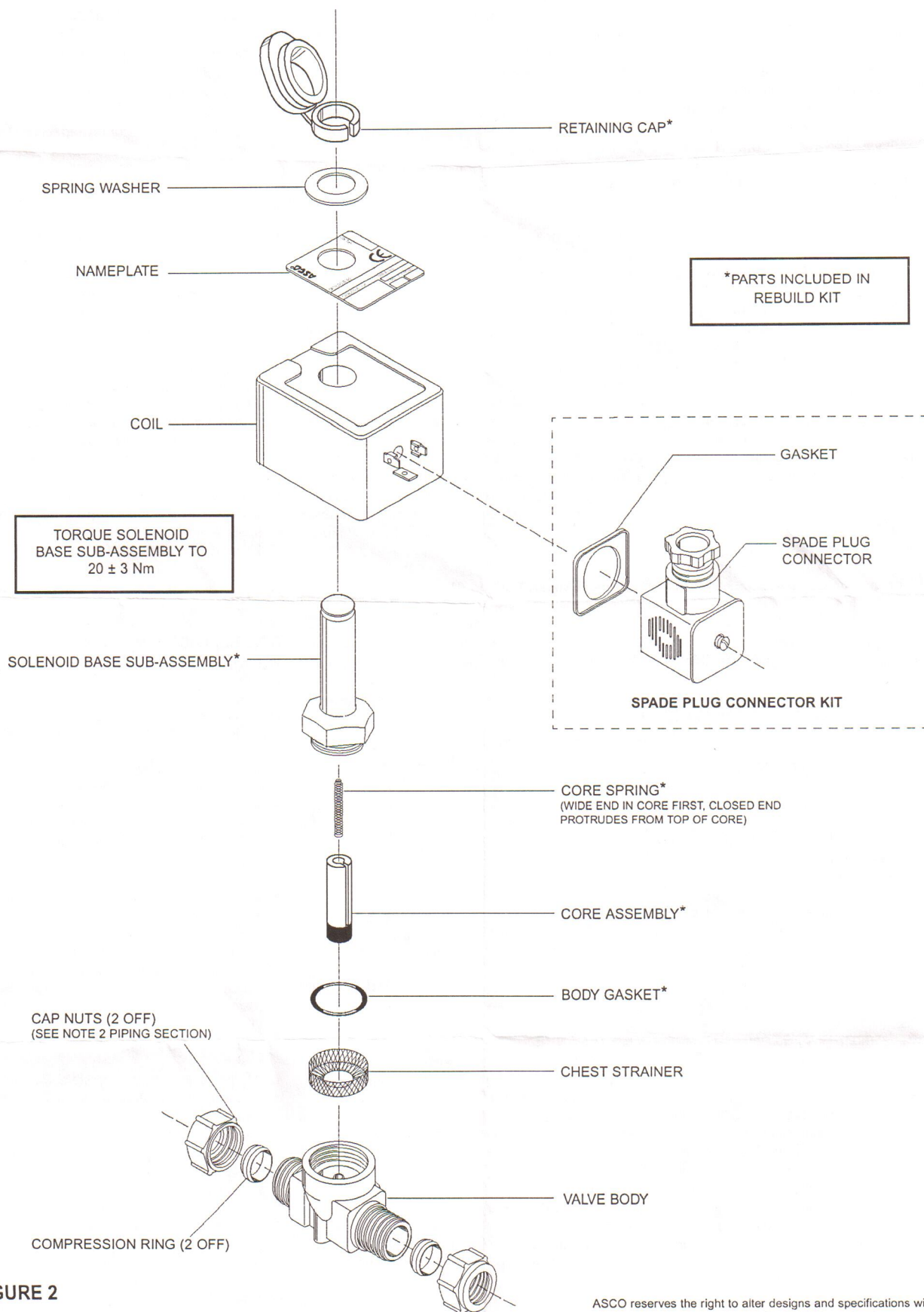


FIGURE 2

ASCO reserves the right to alter designs and specifications without notice