

ISIMET – General Service Brass Solenoids

January 2012

Servicing Procedures (Service should only be performed by a qualified service technician.)

Series 100 (0 psi) Series 200 (2 psi differential)

General Service valves are standard for many ISIMET domestic water and Compressed Air applications in sizes 1/2" – 3/4" – 1" – 1 1/4" - 1 1/2" – 2" valves.

Solenoids require periodic servicing to prevent failure of the valve. Piping systems should be purged of foreign materials and debris prior to placing the valve in service. ISIMET recommends that the solenoids receive periodic, routine service. Debris that has lodged on the piston, in the solenoid valve orifice or diaphragm will prevent the proper operation of the valve. Refer to typical valve contamination in images below. ISIMET recommends that wye-strainers be installed in-line directly upstream from each solenoid. These strainers should be cleaned by removal of the drain plug and flushing of the piping, and/or removal of the screen for thorough cleaning.

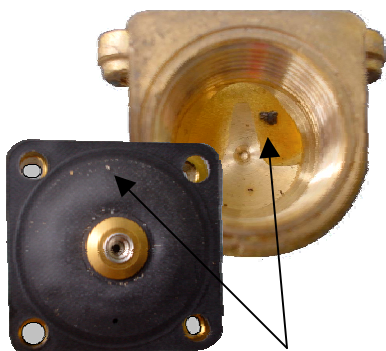
Sediment build-up due to hard water conditions will cause the piston to be locked in place, causing valve and coil failure. Locking in the open position will prevent proper closure of the valve. A partially diluted Vinegar compound will aid in removal of sediments build-up.

If sediment build-up locks the piston in the closed position and when energized, the coil is unable to pull open the valves, then coil failure due to overstress will occur. There is a risk that this coil failure will also cause other component failure including damage to the transformer or circuit board.

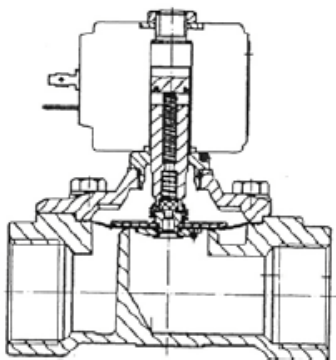
CAUTION: These solenoids are not recommended in operating environments containing excessive corrosive agents.

Disassembling the solenoid valve for servicing. (Typical)

CAUTION! Verify that power is turned OFF and service valve is closed prior to continuing.



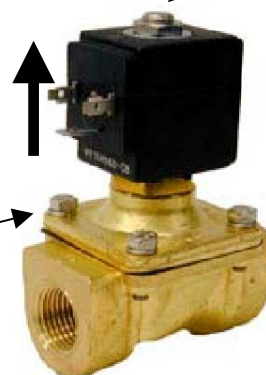
Typical debris that cause valve failure.



Typical Solenoid Valve Body Cross-Section.

1. Loosen and remove threaded nut.
2. Remove coil body.

Note: It is not necessary to remove the wiring connector from the coil.



3. Loosen and Remove the four (4) bolts that secure the valve bonnet on the valve body.

4. Remove the valve bonnet from the valve body.

Typical image:

Separate the bonnet and piston springs (2).

(Springs may not be able to be removed from some pistons)

Keep the piston and diaphragm or plunger in tack.

Examine the internal core of the valve body, piston, diaphragm, or Plunger.

Remove any debris, metal shavings or oil. Thoroughly clean all parts.

Re-assemble the valve. Make sure piston, diaphragm, plunger and all springs are in place when re-assembling. Tighten all bonnet bolts.

Pressure test the reassembled solenoid.

Reassemble the coil, firmly tighten coil retaining hardware. Energize the coil to verify that the solenoid opens when energized and closes when de-energized.

Power should be turned off to solenoids when utilities are not in service.

ISIMET recommends that a maintenance log be maintained for each solenoid. And encourages that maintenance reports be faxed to ISIMET upon completion of periodic inspection / service.

ISIMET General Service Solenoid Series 100 / 200 - Illustrated Parts List.

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Series 100 solenoid

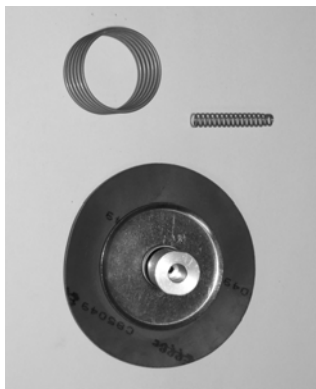
Solenoid Repair Kits:
(Typical)

SK-1 - 0 - X
or
SK-2 - 0 - X
Refer to chart below
For X indicator

Kit Includes:
Diaphragm, Piston and
Springs
(Note: O-Ring is not
provided in all kits)



Series 200 solenoid



1" Solenoid
200 Series Similar



1/2" - 3/4" Solenoids
100 Series



Wiring Connectors:

SCC-100 - Conduit
SCC-101 - Cable



Solenoid Coils:

SC-100 - 24vac
SC-101 - 120vac
SC-201 - 12vdc



Armature Assembly:

SP-210
Sizes 1/2" thru 2"



Coil Retaining Hardware:

SP-130 Sizes 1/2" thru 2"
Includes nut & washer



Bonnet Bolt-up Hardware:

SP-120 Sizes 1/2" thru 2"
(Includes 4 each bolts / washers)



Piston Upper Spring:

SP-110 Sizes 1/2" thru 2"
(Included in Repair Kit)

"X" Indicator Chart: 1 - 1/2" 2 - 3/4" 3 - 1" 4 - 1 1/4" 5 - 1 1/2" 6 - 2"