

Scotch®

Gas Valves

Versa Solenoid Retrofit Installation Instructions Models T4200 to T4600

(Applicable to all valves supplied up through 1997)

WARNING

ITT Corporation valves and related products are designed and manufactured using good workmanship and materials, and they meet all applicable industry standards. These valves are manufactured with various materials, and they should be used only in services recommended by a company engineer.

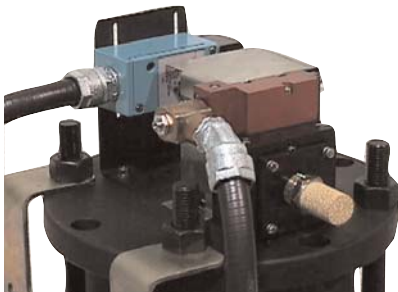
Misapplication of the product may result in injuries or property damage. A selection of valve and valve components of the proper material and consistent with the particular performance requirement is important for proper application.

Examples of misapplication or misuse of any products include use in an application in which the pressure / temperature rating is exceeded or failure to maintain valve or related product as recommended and use of products to handle caustic and / or hazardous substances when not designed for that purpose.

If valve exhibits any indication of leakage, do not operate. Isolate valve and either repair or replace.

Important:

- Make certain proper safety protocol is carried out prior to initiating work. This includes but is not limited to: depressurizing pneumatic supply and fuel lines, disconnecting electric and isolating fuel from valve.
- The outlet valve Proof of Closure Switch must be attached to an "L" shaped bracket. It cannot be directly mounted on the top cap. *If it is not mounted on a bracket, consult the factory for additional parts.*
- If the valve was originally ordered with Factory Mutual approval, Factory Mutual approval is maintained with this retrofit.



Materials:

Customer Supplied

- Pneumatic tubing (1/4" minimum size)
- Pneumatic fittings (as required)
- Conduit and fittings - Conduit and fittings must be to all local codes and suitable for the intended application.

Versa Solenoid Retrofit Kit

Actuator top cap with solenoid mounted

Actuator top cap "O" ring

Removal of existing actuator cap and solenoid:

- Clean the actuator top cap surface and actuator shaft so no dirt falls into the actuator during this procedure.
- For reference during installation of the new top cap assembly, mark on the air cylinder the position of the "F" stamped in the edge of the actuator top cap.

- Remove the switch cover from the actuator top cap and discard.
- Remove the switch bracket from the actuator top cap by removing the two screws holding it in place. Allow the switch to hang by the conduit. Save the fasteners.
- Remove the solenoid electrical connections from inside the junction box and remove the conduit from the junction box.
- Disconnect solenoid air supply.
- Remove the tie-rod nuts from the top of the actuator. *The actuator cylinder is not removed during this changeover. Only the nuts located on top of the actuator top cap need to be removed. Do not remove the nuts from the bottom. Save the fasteners.*
- Lift the actuator top cap (solenoid valve does not need to be removed) off the valve assembly and discard. Discard the large actuator cylinder o-ring.

Installation of the new Versa solenoid assembly:

- Check the condition of the actuator shaft surface where it rides through the actuator top cap seals. This surface needs to be smooth or actuator air leakage is likely to occur. Contact factory if surface is damaged. *Note: The new actuator top caps may differ from the originals in that a brass bushing arrangement is used in the center of the new cap.*
- Remove the protective masks (tape) in the center of actuator top cap. Lubricate and place the large O-Ring in the actuator top cap. *Note: Any common O-Ring lubricant, such as Dow Corning 55 can be used. Lubricant must be compatible with o-ring material.*
- Slip the new actuator top cap onto the actuator shaft being careful not to damage the u-cup and wiper seals in the process. Align the "F" with the reference mark made during removal of the existing actuator cap. Make certain the large o-ring does not slip out of position.

- Hand tighten the actuator tie rod nuts. Further torque these in a crisscrossing pattern in at least two increments: At least two threads should protrude from each nut.

	T4200	T 4300- T4600
1st Pass	75 ft-lbs	100 ft-lbs
2nd Pass	150 ft-lbs	200 ft-lbs

- Replace the proof of closure switch assembly.
- Purge all air lines prior to connecting.
- Connect pneumatic supply to the 1/4" NPT port marked "IN" on the solenoid assembly. Use thread sealant paste only. Do not use PTFE tape on the pipe threads.
- Assemble conduit run to the solenoid and wire to the junction box. On some Fail-in-Last applications it might be necessary to run another conduit run and provide a knock-out in the junction box. Conduit runs should be per all applicable electric codes.
- Verify the proof of closure switch is set correctly by testing according to the I/O manuals originally supplied with the valves.
- Verify the actuator seals and solenoid are not leaking.
- Install the switch cover on the actuator top cap. Align the supplied labels with the outlet valve actuator shaft and adhere to the cover.

Note: The new solenoid assembly is equipped with a speed control as standard. The opening speed can be adjusted by turning the screw located just above the large exhaust port with a hex wrench. This adjustment has no impact on closing speed.

- Return valve to service.

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