

Pilot Valve Assembly and Pilot Filter for DP27 Pilot Operated Pressure Reducing Valves Fitting Instructions

Warning

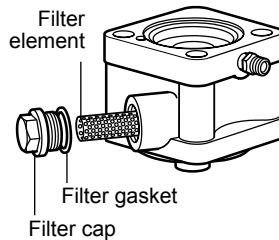
For full Installation and Maintenance Instructions, inclusive of safety information, see the following: IM-P470-03 supplied with the product.

Note: Installation and Maintenance Instructions are available separately from Spirax Sarco.

1. How to renew the pilot filter element

- 1.1 Isolate the reducing valve and zero the pressure.
- 1.2 Unscrew the filter cap and carefully withdraw the filter element.
- 1.3 Replace the element and tighten the filter cap to 90 - 100 N m (66 - 74 lbf ft).

Note: The gasket is re-usable.



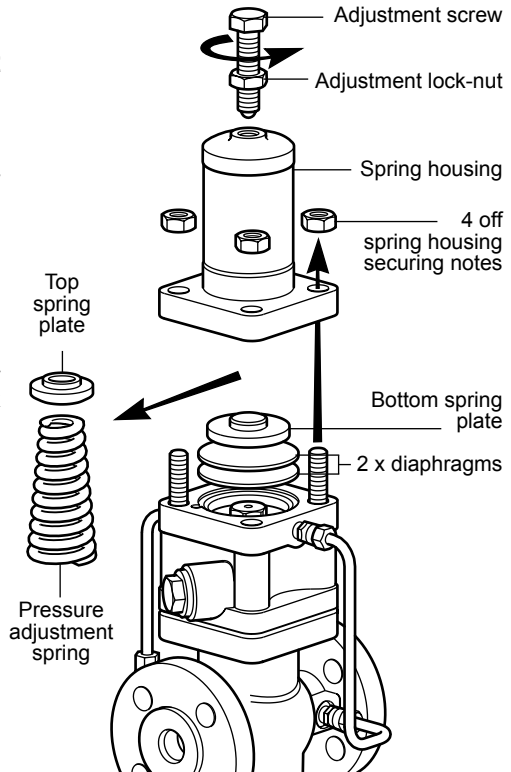
2. How to renew the pilot valve assembly

2.1 DP27, DP27E and DP27Y

Isolate the reducing valve and zero the pressure and proceed to unscrew the 4 off spring housing securing nuts and remove spring housing, bottom spring plate and diaphragms.

DP27R

Isolate the actuating air supply and zero the pressure and proceed to unscrew the 4 off actuating chamber nuts and remove the air control block and diaphragms.



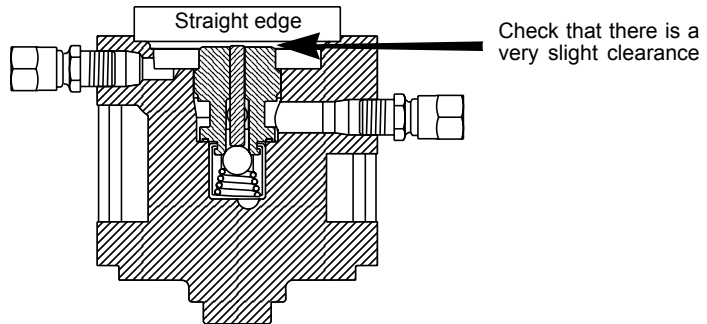
- 2.2** Unscrew and remove the pilot valve assembly (19 mm A / F). The pilot assembly has an integral PTFE seal.
The following handling precautions should be observed.

Handling precautions for PTFE

Within its working temperature range PTFE is a completely inert material, but when heated to its sintering temperature it gives rise to gaseous decomposition products or fumes which can produce unpleasant effects if inhaled. Fumes can be produced during processing: for example, when the material is heated to sinter it, or when brazed connections are being made to cable insulated PTFE. The inhalation of these fumes is easily prevented by applying local exhaust ventilation to atmosphere as near to their source as possible.

Smoking should be prohibited in workshops where PTFE is handled because tobacco contaminated with PTFE will during burning give rise to polymer fumes. It is therefore important to avoid contamination of clothing, especially the pockets, with PTFE and to maintain a reasonable standard of personal cleanliness by washing hands and removing any PTFE particles lodged under the fingernails.

- 2.3** Apply superlube grease to the threads before screwing the new pilot valve into the housing. Torque 45 - 50 N m (33 - 37 lbf ft).
- 2.4** Check that there is a very slight clearance between the top of the plunger and a straight edge placed across the diaphragm location recess.



- 2.5** Refit the two diaphragms making sure that they are fitted the same way round as they were removed and that all contact faces are clean. Diaphragms showing signs of wear or damage should be replaced.
- 2.6 DP27, DP27E and DP27Y**
Replace the bottom spring plate, pressure adjustment spring and top spring plate.
- 2.7 DP27, DP27E and DP27Y**
Assemble the spring housing and tighten the nuts to the recommended torques shown in Table 1.
- DP27R**
Assemble the air control block and tighten the nuts to the recommended torques shown in Table 1.

Bring the valve back into commission, following as many Steps as necessary in Section 4, page 14 of IM-P470-03 which would have been supplied with the original product.

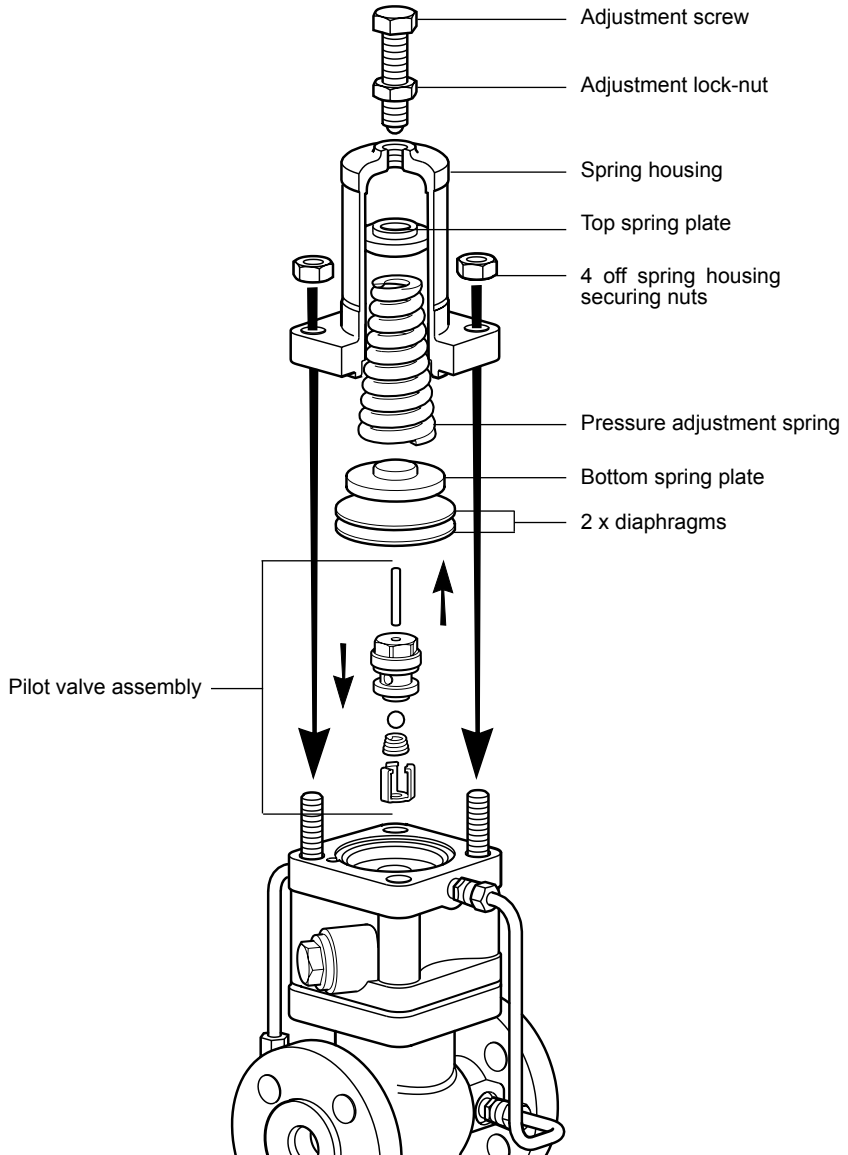


Table 1
Recommended tightening torques for spring housing/actuating chamber cover securing studs and nuts

Size of valve	Nut size	Tightening torques	
1/2", 3/4" and 1" DN15, DN20, DN25 and DN32	M10	40 - 50 N m	(30 - 37 lbf ft)
DN40 and DN50	M12	45 - 55 N m	(33 - 41 lbf ft)

