

HONEYWELL **ELSTER JEAVONS** **S300**

H.P. Over Pressure Slam Shut valve
Inlet pressures up to 20 bar



Commissioning Instructions
General Arrangements
Parts Lists
Maintenance Instructions
For: S300 Slam Shut Valve
3/4" and 1" sizes

S300: Commissioning Instructions

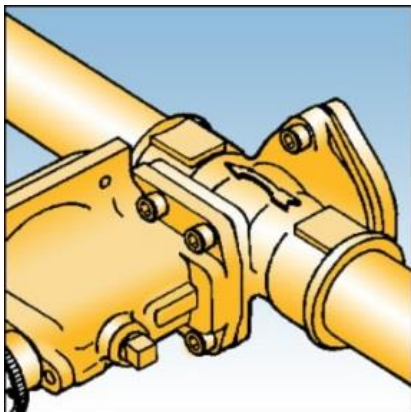


Fig. 1

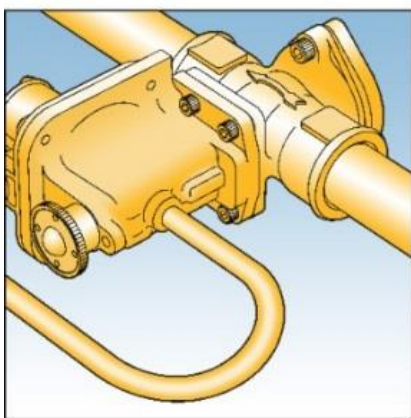


Fig. 2

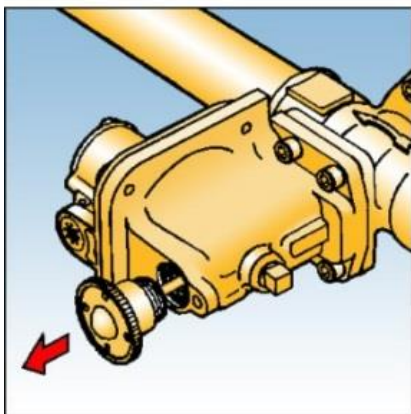


Fig. 3

INSTALLATION CONDITIONS

Body pressure range: 0 - 20 Bar

Temperature range: -20°C to +60 °C

OPERATING INSTRUCTIONS

- Ensure that this product is suitable for the chosen application.
- Installation, adjustment and maintenance by authorised, trained personnel only.
- When being fitted to an appliance, refer to the appliance manufacturers instructions.
- Ensure that the installation provides adequate protection to prevent over pressurisation.
- Traffic, wind and earthquake loadings should be considered when specifying the installation.
- The unit should be protected from the decomposition of unstable fluids.

Warning! Incorrect installation, adjustment, modification, operation and maintenance may cause injury or damage. Read the instructions before use. This control must be installed in accordance with the rules in force.

1. The unit should not be installed in a corrosive environment.
2. The ambient temperature (surface temperature) should be within the limits stated on the regulator catalogue.
3. Check the maximum allowable pressure on the regulator nameplate against the installation specification.
4. Remove the plastic protection plugs from inlet and outlet (and external impulse hole if applicable).
5. Ensure that installation pipework is thoroughly clean.
6. The direction of gas flow must be the same as arrows on the OPSS body. See Fig. 1.
7. Install the OPSS into pipework using a jointing compound approved to national standards.
8. If external impulsed unit, connect impulse pipe as per national standards. See Fig. 2.

OPSS COMMISSIONING INSTRUCTIONS (For non preset units)

1. Turn off upstream and downstream isolation valves.
2. Unscrew reset cap.
3. Firmly pull out reset spindle to re-cock OPSS and release spindle gently. See Fig. 3.
4. Remove top cap from OPSS cover.
5. Insert a flat bladed screwdriver into slot on the OPSS spring adjuster. See Fig. 4 HP or 5 LP.
6. Turn clockwise (+) to increase loading on OPSS spring to maximum.
7. Apply external pressure source to a suitable point on the downstream pipework, slowly increase pressure to that required for OPSS trip-off.

Note: If pressure point on underside of OPSS unit is used as external impulse, care must be taken to ensure that pressures are equalised across the orifice before re-cocking OPSS.

S300: Commissioning Instructions

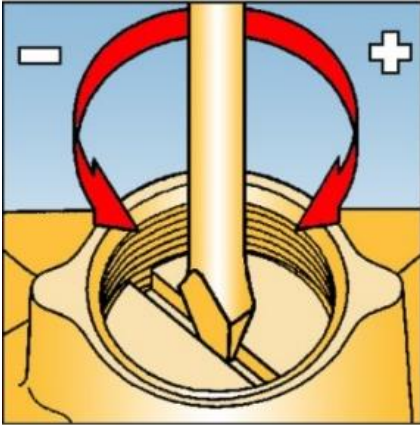


Fig. 4

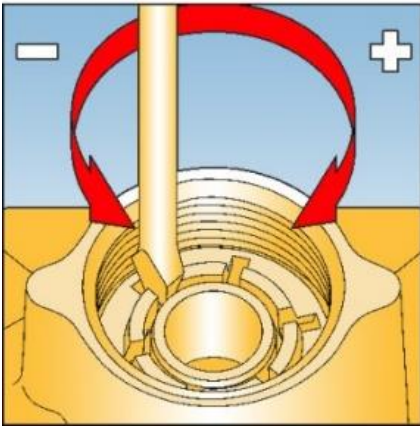


Fig. 5

8. Slowly turn OPSS spring adjuster anticlockwise (-) until OPSS device trips off. See Fig. 4 HP or 5 LP.
9. Exhaust external pressure source.
10. Re-cock OPSS by firmly pulling reset spindle. See Fig. 3. (Hold for approx. 5- 10 secs).
11. Slowly increase external pressure to check for OPSS trip-off. Trim adjustment if necessary.

Note: OPSS device is now set.

12. Remove external pressure source and replace OPSS top cap. (Wire seal if necessary).
13. Re-cock OPSS unit as instructed (iii) above.
14. Replace OPSS reset cap. (Wire seal if necessary).
15. Slowly open upstream valves to establish gas supply.

OPSS COMMISSIONING INSTRUCTIONS (For pre-set units)

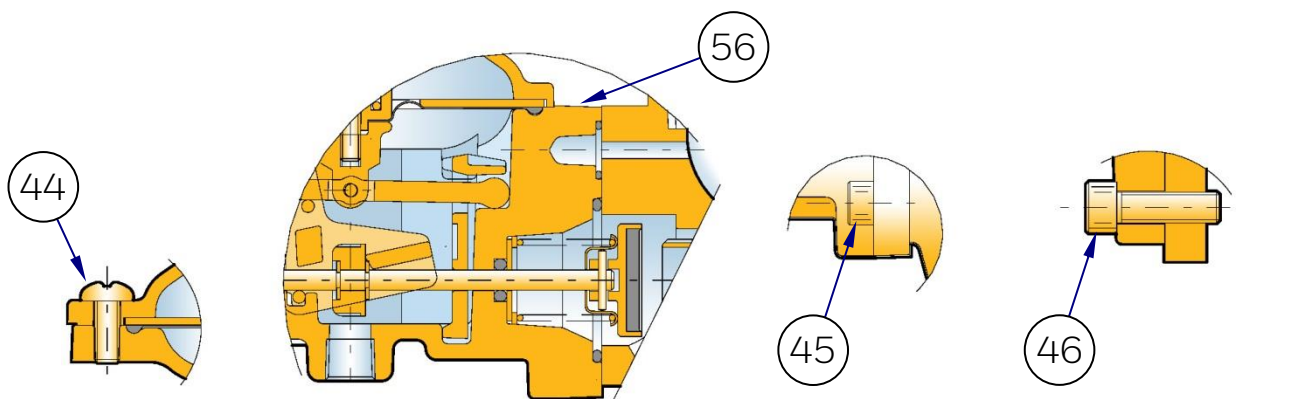
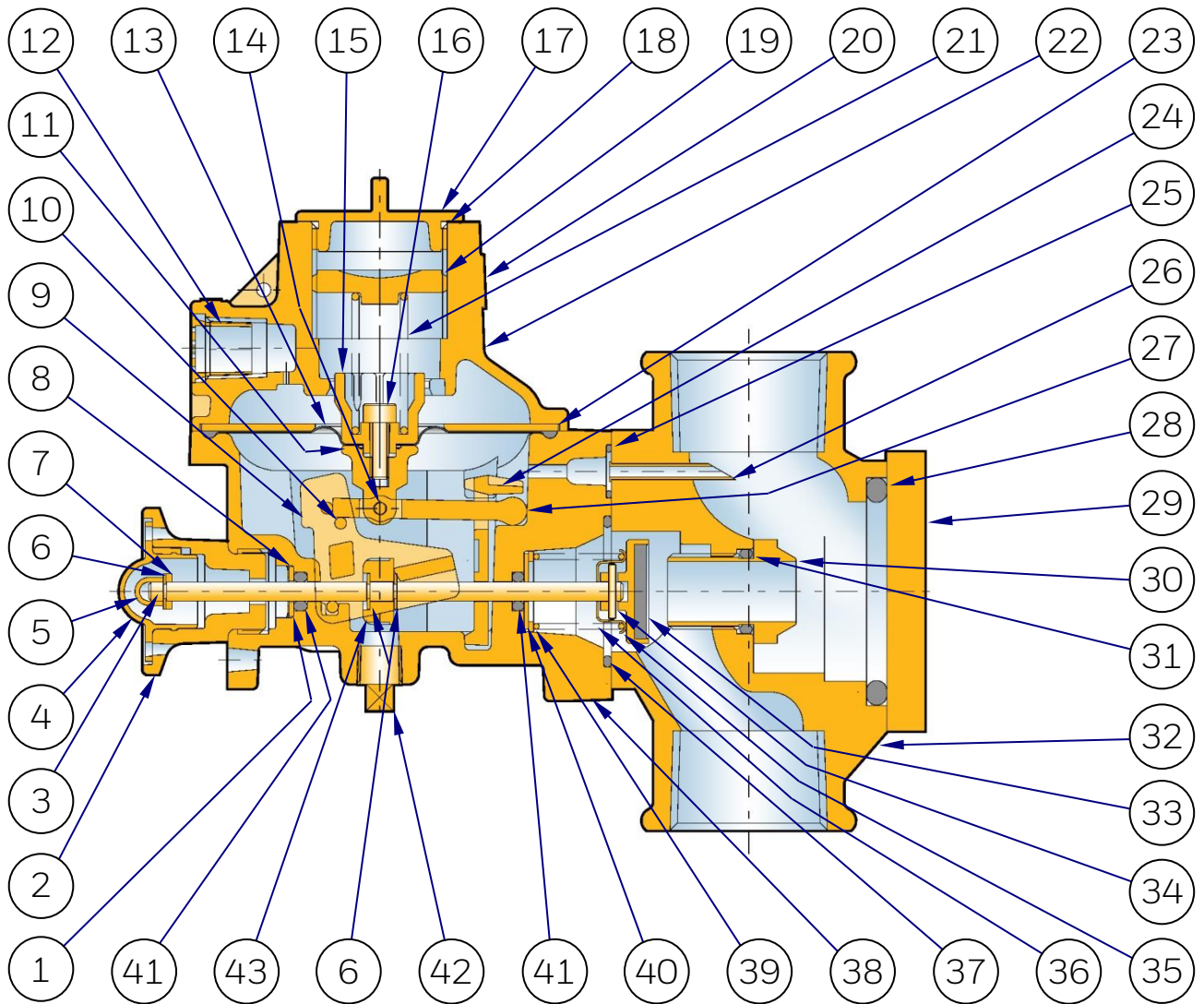
1. Turn off upstream and downstream isolation valves.
2. Unscrew reset cap.
3. Firmly pull out reset spindle to re-cock OPSS unit and release spindle gently. See Fig. 3.
4. Apply external pressure source to a suitable point on the downstream pipework, slowly increase pressure to that indicated on the label.
5. Note: If pressure point on underside of OPSS unit is used as external impulse, care must be taken to ensure that pressures are equalised across the orifice before re-cocking OPSS.
6. If unit functions as expected, exhaust and remove external pressure source.
7. Re-cock OPSS unit as instructed in (iii) above.
8. Replace OPSS reset cap. (Wire seal if necessary).
9. Slowly open upstream valves to establish gas supply.

RESETTING OPSS AFTER TRIPPING

1. Turn off all upstream valves.
2. Dissipate downstream gas through burning and close downstream valves.
3. Remove wire seal if fitted.
4. Unscrew reset cap.
5. Firmly pull out reset spindle to re-cock OPSS unit. Hold for 5 - 10 seconds and release spindle gently. See Fig. 3.
6. Slowly open upstream valves to re-establish gas supply.
7. If gas supply re-established, replace OPSS reset cap and wire seal if needed.
8. If gas supply not re-established, turn off all upstream valves and repeat steps 2, 5 and 6.
9. If after the second attempt the gas supply is not re-established,

S300: General Arrangement

High Pressure Unit – Fig. 6



OPSS Cover to Body Fixing

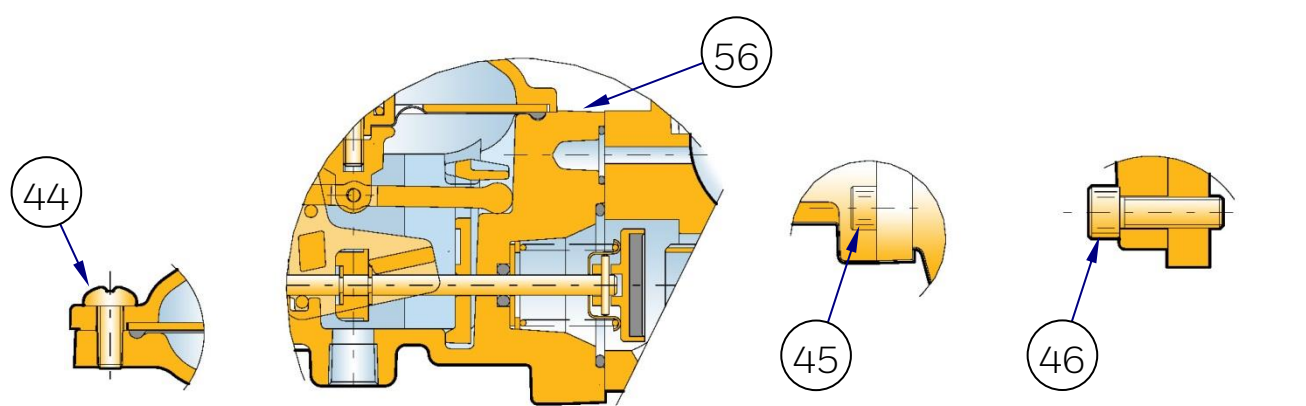
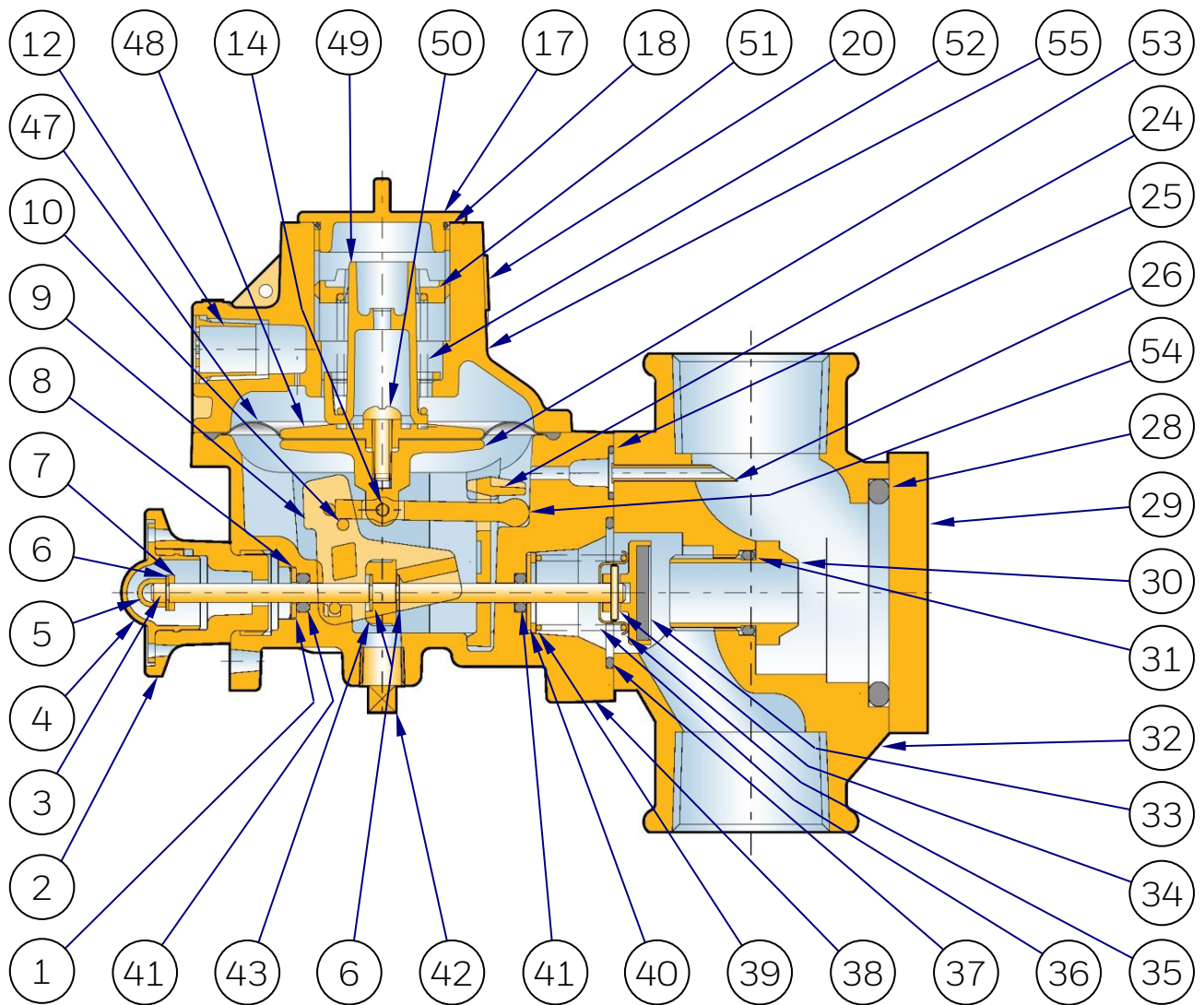
Part View Showing External Impulse Version

OPSS Assembly to Reg Body Fixing

Blanking Plate to Reg Body Fixing

S300: General Arrangement

Low Pressure Unit – Fig. 7



OPSS Cover to Body Fixing

Part View Showing External Impulse Version

OPSS Assembly to Reg Body Fixing

Blanking Plate to Reg Body Fixing

S300: Parts List

ITEM	DESCRIPTION	PART NUMBER	No. Off
1	REAR "O" RING RETAINING WASHER	J12506-253	1
2	RESET SPINDLE END CAP	J12506-254	1
3	VALVE SPINDLE	J12506-259	1
4	COVER FOR RESET END CAP	J12506-255	1
5	INDICATOR CAP	JCLOSEMC4	1
6	CIRCLIP FOR VALVE SPINDLE	03627606	3*
7	WASHER REAR CIRCLIP PROTECTION	J12506-292	1
8	STARLOCK WASHER	JCIR1305-043B	1*
9	TRIP-OFF LATCH	J12506-241	1
10	NEEDLE ROLLER	JNR02S	1
11	LOWER DIAPHRAGM PLATE (HP Unit)	J12506-304	1
12	SCREEN VENT	J12506-277	1
13	DIAPHRAGM (HP Unit)	J12506-306	1*
14	NEEDLE ROLLER	JNR02S	1
15	UPPER DIAPHRAGM PLATE (HP Unit)	J12506-305	1
16	SCREW FOR DIAPHRAGM PLATES (HP Unit)	JSA412SANZI	1
17	TOP CAP	J12506-142	1
18	"O" RING SEAL FOR TOP CAP	JORM0251-16	1*
19	TOP SPRING HOLDER (HP Unit)	J7705-085	1
20	NAMEPLATE	J7806-027	1
21	OPSS SPRING (HP Unit)	SEE TABLE	1
22	TOP COVER (HP unit)	J12506-240+03	1
23	DIAPHRAGM REDUCING PLATE (HP Unit)	J12506-303	1
24	TRIP-OFF LEVER RETAINING PLATE	J12506-243	1
25	"O" RING SEAL FOR IMPULSE PASSAGE	03110340	1*
26	IMPULSE TUBE (BRASS - UP TO SEPTEMBER 2011)	J4706-072	1
	IMPULSE TUBE (PLASTIC - FROM OCTOBER 2011)	J4806-120	1
27	TRIP-OFF LEVER Stainless Steel (HP Unit)	J12506-308	1
28	"O" RING SEAL FOR BLANKING PLATE/REG BODY	JO200325-4475	1*
29	BLANKING PLATE	J12506-310	1
30	VALVE SEAT 12.7mm (1/2")	J12506-299	1
31	"O" RING FOR VALVE SEAT	JORM0136-24	1*
32	MAIN BODY 1" SCREWED	J12506-226+08	1
	MAIN BODY ¾" SCREWED	J12505-226+08	1

Note: Part numbers marked + require connection thread to be specified with order.

S300: Parts List

ITEM	DESCRIPTION	PART NUMBER	No. Off
33	VALVE DISC HOLDER	J12506-271M	1*
34	NEEDLE ROLLER	JNR01	1
35	VALVE SPRING CUP	J12506-251	1
36	VALVE SPRING	J12506-182	1
37	"O" RING FOR OPSS BODY/MAIN BODY	JORM0276-24	1*
38	SLAM SHUT BODY (Internally Impulsed)	J12506-239+01	1
39	CIRCLIP FOR FRONT "O" RING WASHER	JCIR2000K-17B	1*
40	FRONT "O" RING RETAINING WASHER	J12506-252	1
41	"O" RING FOR VALVE SPINDLE	JO4-25	2*
42	MALL RAISED HD PLUG Rc1/8 (For Internal Imp)	JMFP101	1
43	TRIP-OFF BUSH	J12506-244	1
44	SCREW FOR OPSS COVER / BODY	JSA512TPTS	4
45	SCREW FOR OPSS BODY/MAIN BODY	JSA516SANSS	4
46	SCREW FOR MAIN BODY/BLANKING PLATE	JSA620SANSS	2
47	DIAPHRAGM (LP Unit)	J12506-246	1*
48	UPPER DIAPHRAGM PLATE (LP Unit)	J12506-245	1
49	BOTTOM SPRING HOLDER (LP Unit)	J12506-250	1
50	SCREW FOR SHUT-OFF DIAPHRAGM (LP Unit)	JSA412XPTZ	1
51	TOP SPRING HOLDER (LP Unit)	J12506-248	1
52	OPSS SPRING (LP Unit)	SEE TABLE	1
53	BOTTOM DIAPHRAGM PLATE (LP Unit)	J12506-247	1
54	TRIP-OFF LEVER Plastic (LP Unit)	J12506-242	1
55	TOP COVER (LP unit)	J12506-240+01	1
56	SLAM SHUT BODY (Externally Impulsed)	J12506-239+03	1

ITEMS MARKED * ARE INCLUDED IN SPARES KIT (See Separate Table)
PART NUMBERS THAT INCLUDE + REQUIRE CONNECTION INFORMATION.

S300: Spares Kits and Springs

SPARES KITS

Spares kit contents are marked * on parts list opposite

SPARES KIT CODE	DESCRIPTION
SK3006-01	S300 OPSS Low Pressure
SK3006-02	S300 OPSS High Pressure

HIGH PRESSURE OVER-PRESSURE SLAM-SHUT SPRINGS

Bar	PSIG	Part Number	Colour Code
0.5 - 1.0	7.25 - 14.5	J12506-311	DARK BLUE / BLACK
1.0 - 2.0	14.5 - 29.0	J12506-312	DARK BLUE / ORANGE
2.0 - 4.0	29.0 - 58.0	J12506-313	DARK BLUE / RED

LOW PRESSURE OVER-PRESSURE SLAM-SHUT SPRINGS

mbar	"wc	Part Number	Colour Code
18 - 60	7.5 - 24	J12506-281	BLACK
50 - 80	20 - 32	J12506-282	ORANGE
60 - 110	24 - 44	J12506-283	RED
100 - 210	40 - 84	J12506-284	DARK GREEN
200 - 350	3 - 5 PSI	J12506-287	YELLOW
280 - 500	4 - 7 PSI	J12506-288	WHITE

S300: Maintenance Instructions

Drawing Reference Figs 6 & 7

Dismantling Procedure.

1. Disconnect blanking plate (29) from main body (32) by removing the two cap screws (46).
2. Remove "O" ring (28).
3. Disconnect the safety shut-off unit assembly from main body (32) by removing the four cap screws (45).
4. Remove "O" rings (25 and 37) from face of safety shut-off unit (38 or 56).
5. Remove valve seat (30) from the main body (32).
6. Remove "O" ring (31) from valve seat (30).
7. Wipe clean the valve seat (30) , check for any damage, and replace if necessary.
8. If fitted check that the impulse tube (26) is clear. DO NOT REMOVE TUBE FROM BODY.
9. Unscrew top cap (17) and remove "O" ring (18).

For Low Pressure units go to instruction 16.

For High Pressure Version.

10. Unscrew and remove top spring holder (19) together with OPSS spring (21).
11. Remove top cover (22) by unscrewing the four screws (44).
12. Remove diaphragm reducing plate (23).
13. Lift diaphragm assembly from slam shut body (38 or 56).
14. Unscrew diaphragm clamping screw (16) & remove upper diaphragm plate (15) and main diaphragm (13).
15. Remove needle roller (14) to release lever arm (27) from lower diaphragm plate (11).

Go to instruction 22.

For Low Pressure Version.

16. Unscrew and remove top spring holder (51) together with OPSS spring (52).
17. Remove bottom spring holder (49).
18. Remove top cover (55) by unscrewing the four screws (44).
19. Lift diaphragm assembly from slam shut body (38 or 56).
20. Unscrew diaphragm clamping screw (50) & remove upper diaphragm plate (48) and main diaphragm (47).
21. Remove needle roller (14) to release lever arm (54) from lower diaphragm plate (53).

All Versions

22. Push valve spring cup (35) towards slam shut body (38 or 56) to release needle roller (34). Remove valve (33), valve spring cup (35) and valve spring (36).
23. Unscrew reset spindle end cap (2) and pull out until it comes to a stop.
24. Inside body prise visible circlip (6) from valve spindle (3) to release trip-off bush (43).
25. Slide trip-off bush (43) forward and prise second circlip (6) from valve spindle (3).
26. Withdraw valve spindle (3) and end cap assembly (2), (4), (5), (6) & (7) from slam shut body (38 or 56).

S300: Maintenance Instructions

Drawing Reference Figs 6 & 7

Dismantling Procedure Continued.

27. Remove trip-off lever retaining plate (24), trip-off bush (43) and trip-off latch (9).

28. Remove circlip (39), front "O" ring retaining washer (40) and front "O" ring (41).

NOTE: It is not recommended to interfere with the rear "O" ring (41) unless absolutely necessary. A new "O" ring and starlock washer should be refitted if dismantled.

29. Remove starlock washer (8), rear "O" ring retaining washer (1) and rear "O" ring (41) from slam shut body (38 or 56).

30. It is not necessary to remove bottom plug (42).

Rebuilding Procedure.

NOTE: Inspect all sealing "O" rings, diaphragms and gaskets and replace where necessary (a soft spares kit is available for this purpose see page 7).

The use of Molykote 111 "O" ring lubricant is recommended during the rebuild - unless for use with oxygen when no lubricant should be used.

31. Fit new "O" ring (41) into rear "O" ring groove in slam shut body (38 or 56) and apply "O" ring lubricant.

Replace rear "O" ring retaining washer (1) and secure with new starlock washer (8), making sure starlock washer is central in bore.

32. Locate lever retaining plate (24) into recesses in slam shut body (38 or 56).

33. Position trip-off bush (43) with slots over rails of trip-off latch (9) and arrow facing away from steel needle rollers. Relocate assembly into slam shut body (38 or 56) making sure needle roller is correctly positioned in raised recess in slam shut body (38 or 56).

34. Push valve spindle (3) and cap assembly (2),(4),(5),(6) & (7) through rear of slam shut body (38 or 56), trip-off bush (43), lever retaining plate (24) and front of slam shut body (38 or 56).

35. Slide trip-off bush (43) up against lever retaining plate (24) and fit a new circlip (6) into groove on valve spindle (3) furthest away from trip-off bush (43).

36. Slide trip-off bush (43) back against 1st circlip (6) and fit a 2nd new circlip (6) to groove on valve spindle (3) which clamps trip-off bush (43) to valve spindle (3).

37. Fit new "O" ring (41) into front "O" ring groove in slam shut body (38 or 56) and apply "O" ring lubricant, replace front "O" ring retaining washer (40) and secure firmly with new circlip (39).

38. Replace valve spring (36) into front face of slam shut body (38 or 56).

39. Locate valve spring cup (35) over spindle (3) and into valve spring (36).

40. Push valve spring cup (35) to compress valve spring (36) until valve (33) can be assembled to valve spindle (3). Align hole in valve (33) with hole in valve spindle (3) and replace needle roller (34). Release pressure on valve spring (36) allowing valve spring cup (35) to fit over needle roller (34).

For Low Pressure units go to instruction 19.

S300: Maintenance Instructions

Drawing Reference Figs 6 & 7

Rebuilding Procedure (Continued).

For High Pressure Version.

11. Align hole in diaphragm (13) with outer bead facing downwards, with hole in lower diaphragm plate (11). Locate spigot of top diaphragm plate (15) through diaphragm (13) and into recess in lower diaphragm plate (11). Secure with diaphragm clamping screw (16).
 12. Position slot in lever arm (27) over spigot on lower diaphragm plate (11) and align holes, replace needle roller (14) through holes.
 13. If screwed back in, unscrew reset end cap (2) and withdraw it, until it comes to a stop.
 14. Locate diaphragm assembly and lever arm (27) into recess between lever retaining plate (24) and slam shut body (38 or 56), ensuring bead of diaphragm (13) locates into groove in slam shut body (38 or 56).
 15. Position diaphragm reducing plate (23) on top of main diaphragm (13) ensuring that both are concentric.
 16. Replace top cover (22) and secure with four screws (44), making sure that diaphragm reducing plate (23) is located in recess in top cover (22) and that diaphragm bead (13) is not pinched.
 17. Replace OPSS spring (21) into bottom spring holder (15).
 18. Screw top spring holder (19) into chimney of top cover (38 or 56) locating spigot into OPSS spring (21).
- Go to instruction 27.

For Low Pressure Version

19. Align hole in diaphragm (47) with convolution upper most, with hole in lower diaphragm plate (53). Locate spigot of top diaphragm plate (48) through diaphragm (47) and into recess in lower diaphragm plate (53). Secure with diaphragm clamping screw (50).
20. Position slot in lever arm (54) over spigot on lower diaphragm plate (53) and align holes, replace needle roller (14) through holes.
21. If screwed back in, unscrew reset end cap (2) and withdraw it, until it comes to a stop.
22. Locate diaphragm assembly and lever arm (54) into recess between lever retaining plate (24) and slam shut body (38 or 56), ensuring bead of diaphragm (47) locates into groove in slam shut body (38 or 56).
23. Replace bottom spring holder (49) into chimney of top cover (55) by aligning ribs of bottom spring holder (49) with slots in top cover (55).
24. Replace OPSS spring (52) into bottom spring holder (49).
25. Screw top spring holder (51) into chimney of top cover (55) ensuring that castellated spigot is uppermost.
26. Replace top cover assembly (55) and secure with four screws (44), making sure that diaphragm bead (47) is not pinched.

All Versions

27. Fit new "O" ring (18) to top cap (17) and screw into chimney of top cover (22 or 55).
28. If removed, replace bottom plug (42).
29. Fit new "O" ring (31) to valve seat (30) and apply "O" ring lubricant.
30. Refit valve seat (30) into main body (32) by screwing it in until metal contact is made.
31. Fit new blanking plate "O" ring (28) into recess in main body (32) and apply "O" ring lubricant.
32. Replace blanking plate (29) and secure with two capscrews (46).
33. Replace "O" rings (25) and (37) into slam shut body (22 or 55) making sure the contact surfaces are clean and the "O" rings are lubricated.
34. Locate and secure the slam shut assembly (38 or 56) to body (32) and secure in place using four cap screws (45).
35. Test unit for gas tightness.
36. Commission unit as described on page 2.

Honeywell is committed to a programme of continuous quality enhancement. All equipment designed and manufactured within Honeywell benefits from the group's quality assurance standards, which are approved to EN ISO9001.

Honeywell has a programme of continuous product development and improvement and in consequence the information in this leaflet may be subject to change or modification without notice.

For more information

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