



# Maintenance & Commissioning Literature for

# J125

## Gas Pressure Regulators

*3/4" and 1" Sizes*

### Commissioning Instructions

*All Types and Sizes*

### General Arrangements

*Units with no slam shut*

*Units with OPSS slam shut*

*Units with OPSS & UPSS slam shut*

*Diaphragm Case Assembly*

*OPSS Assembly*

*OPSS/UPSS Assembly*

*UPSS Assembly*

### Parts List

*All Types and Sizes*

### Spring Table

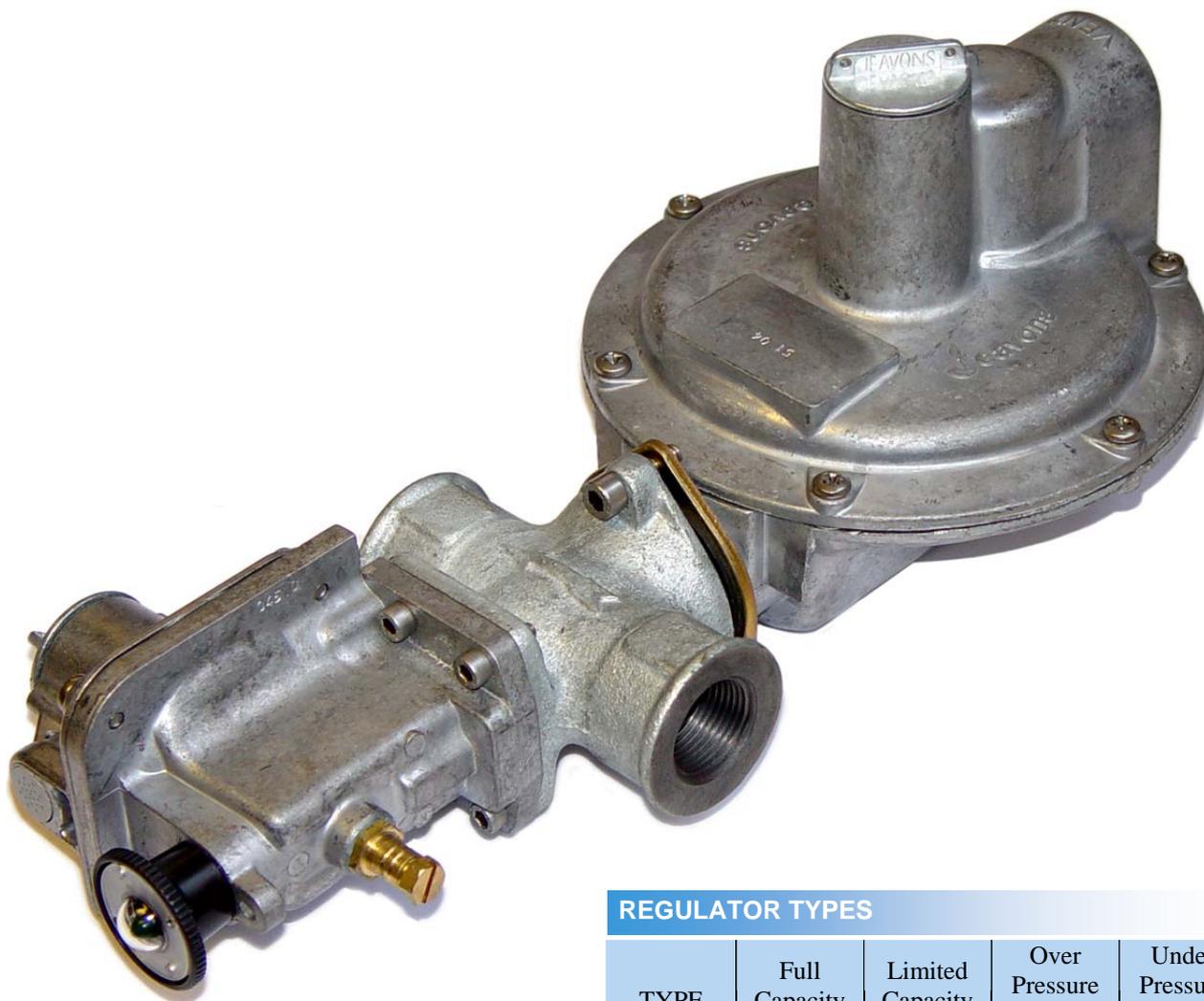
*Loading Springs Available*

### Maintenance Instructions

*All Types and Sizes*

CONTENTS

## COMMISSIONING AND MAINTENANCE INSTRUCTIONS



Check with designation number on regulator nameplate and cross reference to table to establish which, if any, of the safety features are fitted.

### REGULATOR TYPES

TYPE	Full Capacity Relief	Limited Capacity Relief	Over Pressure Safety Device	Under Pressure Safety Device
J125-S1				
J125-S2	✓			
J125-S3		✓		
J125-S4	✓		✓	
J125-S5		✓	✓	
J125-S6	✓			✓
J125-S7		✓		✓
J125-S8	✓		✓	✓
J125-S9		✓	✓	✓
J125-S10			✓	
J125-S11				✓
J125-S12			✓	✓

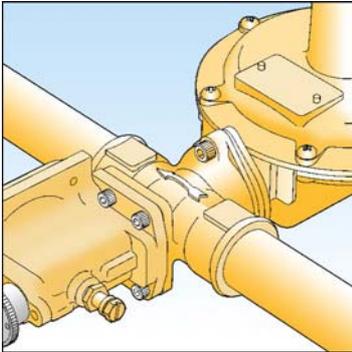


Fig. 1

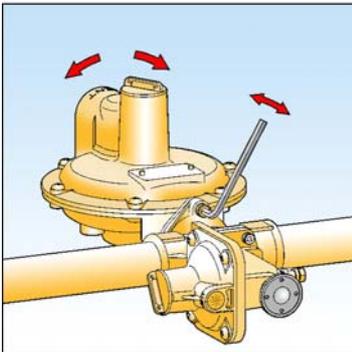


Fig. 2

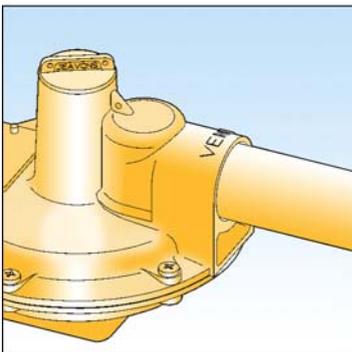


Fig. 3

## FITTING UNITS INTO PIPEWORK

- 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 protection plugs from inlet and outlet ports.
- 5) Ensure that installation pipework is thoroughly clean.
- 6) The direction of gas flow must be the same as the arrows on the regulator body. See Fig. 1.
- 7) Install the regulator into pipework using jointing compound approved to national standards.
- 8) In order to fit the regulator into confined spaces it may be necessary to rotate the diaphragm case. This is achieved by slacking off the two cap screws, rotating the diaphragm case, and then re-tightening the cap screws evenly. See Fig. 2.
- 9) For units with no OPSS fitted it is advised that a slam shut device is fitted to protect downstream equipment.

## INSTALLATION OF VENT LINE.

- 1) Remove clip and vent screen from regulator top cover.
- 2) Connect the vent line (1"), using a jointing compound approved to national standards, and lead to atmosphere in accordance with national standards. Ensure that no water can penetrate vent pipeline. See Fig. 3.
- 3) If the regulator is fitted with an internal relief valve, ensure that the vent line is of sufficient diameter to carry gas vented by the relief valve to a safe outside location. Reference to any national standard.

## FOR PRE-SET UNITS ONLY.

- 1) Turn off downstream valves.
- 2) Slowly turn on inlet supply.
- 3) If safety shut-off device is not fitted, go to instruction 6.
- 4) If safety shut-off device is fitted unscrew reset spindle end cap and firmly pull. Hold in this position until the outlet pipework is fully pressurised, then release reset spindle end cap gently. See Fig. 5.
- 5) Re-screw reset spindle end cap into body, ensuring not to jam reset spindle.
- 6) Commission downstream appliances.

**WARNING: DO NOT UNDER ANY CIRCUMSTANCES WEDGE OPEN SAFETY SHUT-OFF RESET END CAP AS THIS WILL NOT ALLOW THE SAFETY DEVICE(S) TO FUNCTION IN ADVERSE PRESSURE CONDITIONS.**

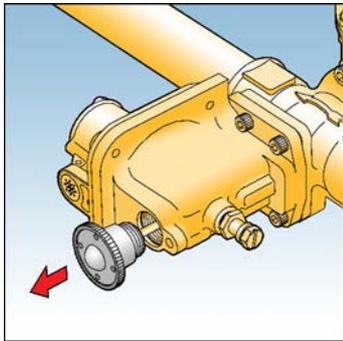


Fig. 4

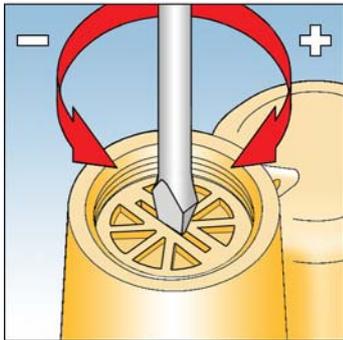


Fig. 5

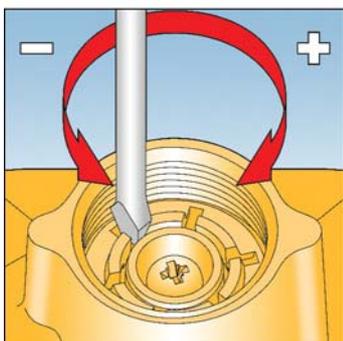


Fig. 6

**SETTING THE REGULATOR & SAFETY SHUT OFF DEVICE PRESSURES.**

OPSS = Over Pressure Safety Shut-off.

UPSS = Under Pressure Safety Shut-off.

- 1) Turn off inlet and outlet valve(s).
  - 2) Remove top cap from regulator cover.
  - 3) Insert a flat blade screwdriver into slot in top spring holder.
  - 4) Turn anticlockwise (-) to reduce loading on regulator spring to minimum. See Fig. 6 (If no safety devices are fitted go to instruction 12).
  - 5) Remove top cap from safety shut-off device cover (If UPSS only go to instruction 8).
  - 6) Insert a flat bladed screwdriver into one of the partial slots on the OPSS spring holder. See Fig. 6.
  - 7) Turn clockwise (+) to increase loading on OPSS spring to maximum.
  - 8) If UPSS fitted, insert a pozidriv screw driver (No.2 point) into UPSS adjusting screw in bottom spring holder. See Fig. 7.
  - 9) Turn anticlockwise (-) to reduce loading on UPSS spring, making sure screw head does not protrude from the bottom spring holder.
  - 10) Slowly open inlet valve(s).
  - 11) If safety device fitted, re-cock by unscrewing reset spindle end cap and pulling firmly. Hold in this position until the outlet pipework is fully pressurised, then release reset spindle end cap gently. Re-screw reset spindle end cap into body. See Fig. 4.
  - 12) Turn regulator adjustment screw clockwise (+) to increase the loading on the spring until the required outlet pressure, plus approximately 1"wg (2.5mbar) is obtained. (This is an allowance for the regulator being set with zero flowrate).
- If UPSS only go to instruction 20, if no safety device go to instruction 27.
- 13) Block vent valve opening to prevent relief valve from operating.
  - 14) Apply external pressure source to a suitable point on the outlet pipework. Increase pressure to that required for OPSS trip-off.
- Note: If pressure test point on underside of slam shut unit is used as external source point, care must be taken to ensure pressures are equalised across restricted orifice within test point.
- 15) Slowly turn OPSS spring holder anticlockwise (-) until OPSS device trips off. See Fig. 6.
  - 16) Reduce external pressure source to level set in instruction 14.

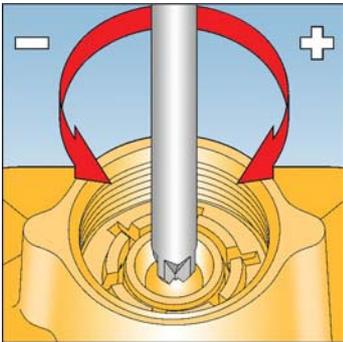


Fig. 7

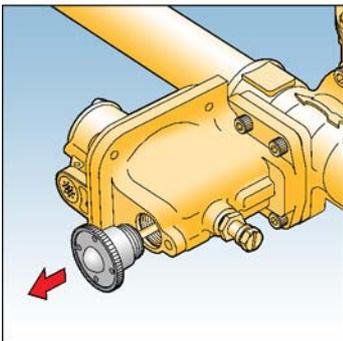


Fig. 8

17) Re-cock OPSS device by unscrewing reset spindle end cap and firmly pull. Hold in this position until the outlet pipework is fully pressurised, then release reset spindle end cap gently. Re-screw reset spindle end cap into body. See Fig. 8.

18) Slowly increase external pressure to check for OPSS trip-off. Trim adjustment if necessary and repeat instructions 16 - 18.

19) Remove external pressure source.

NOTE: OPSS device is now set.

20) Close inlet valves.

21) Reduce inlet pressure to approximately 140mbar (2 PSI).

22) Reduce outlet pressure by introducing a slow controlled bleed until the required UPSS trip-off pressure is obtained and close bleed.

23) Slowly turn UPSS adjusting screw clockwise (+) until UPSS device trips off. See Fig. 7.

24) Slowly open inlet valve to regain inlet pressure up to approximately 2 PSI (140mbar), then close inlet valve.

25) Re-cock UPSS device by unscrewing reset spindle end cap and firmly pull. Hold in this position until the outlet pipework is fully pressurised, then release reset spindle end cap gently. Re-screw reset spindle end cap into body. See Fig. 8.

26) Slowly reduce outlet pressure to check for UPSS trip-off. Trim adjustment if necessary and repeat instructions 24 - 26.

NOTE : UPSS device is now set.

27) Commission installations.

28) Trim the regulator outlet pressure if necessary once normal flow rates have been achieved.

29) Unblock vent opening.

30) Replace all top caps (seal if necessary).

**WARNING: DO NOT UNDER ANY CIRCUMSTANCES WEDGE OPEN SAFETY SHUT-OFF RESET END CAP AS THIS WILL NOT ALLOW THE SAFETY DEVICE(S) TO FUNCTION IN ADVERSE PRESSURE CONDITIONS.**

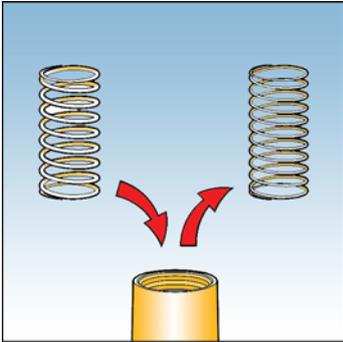


Fig. 9

IF THE REQUIRED REGULATOR OUTLET PRESSURE CANNOT BE ACHIEVED WITH THE SPRING FITTED.

- 31) Remove top cap from regulator cover.
- 32) Choose a loading spring from catalogue or page 17 that will give the required outlet pressure range.
- 33) Fully unscrew and remove the spring holder, See Fig. 10.
- 34) Remove spring and replace with new one. See Fig. 9.
- 35) Screw spring holder back in place, ensuring regulator spring is located in recess in underside of holder.
- 36) Adjust the outlet pressure as described previously.
- 37) Replace the top cap (seal if necessary).

NOTE: Outlet pressure is now set.

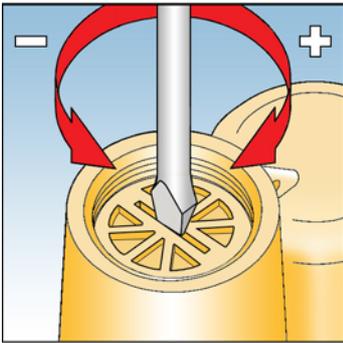


Fig. 10

IF THE REQUIRED TRIP-OFF PRESSURES CANNOT BE ACHIEVED WITH THE SPRINGS FITTED.

A) OPSS spring.

- 38) Remove top cap from the safety shut-off device cover.
- 39) Choose an OPSS spring from the catalogue or page 17 that will give the required pressure range.
- 40) Fully unscrew and remove top spring holder. See Fig. 11.
- 41) Remove spring and replace with new one. See Fig. 9.
- 42) Screw spring holder back in place, ensuring that castellated spigot is uppermost in chimney. See Fig. 11.
- 43) Adjust the trip-off pressure as described previously.
- 44) Replace the top cap (seal if necessary).

NOTE: OPSS pressure is now set.

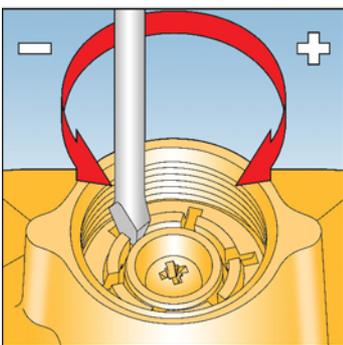


Fig. 11

B) UPSS spring.

- 45) Remove top cap from the safety shut-off device cover.
- 46) Choose an UPSS spring from the catalogue or page 17 that will give the required pressure range.
- 47) Fully unscrew and remove top spring holder. See Fig. 12.
- 48) Remove OPSS spring (or spacer tube if UPSS only).

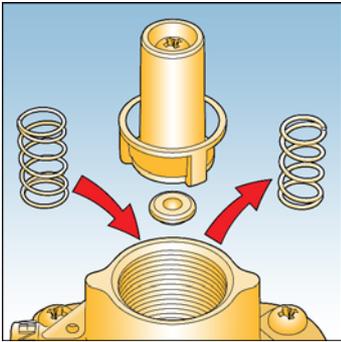
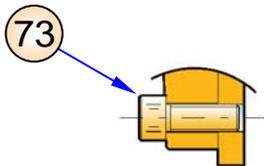
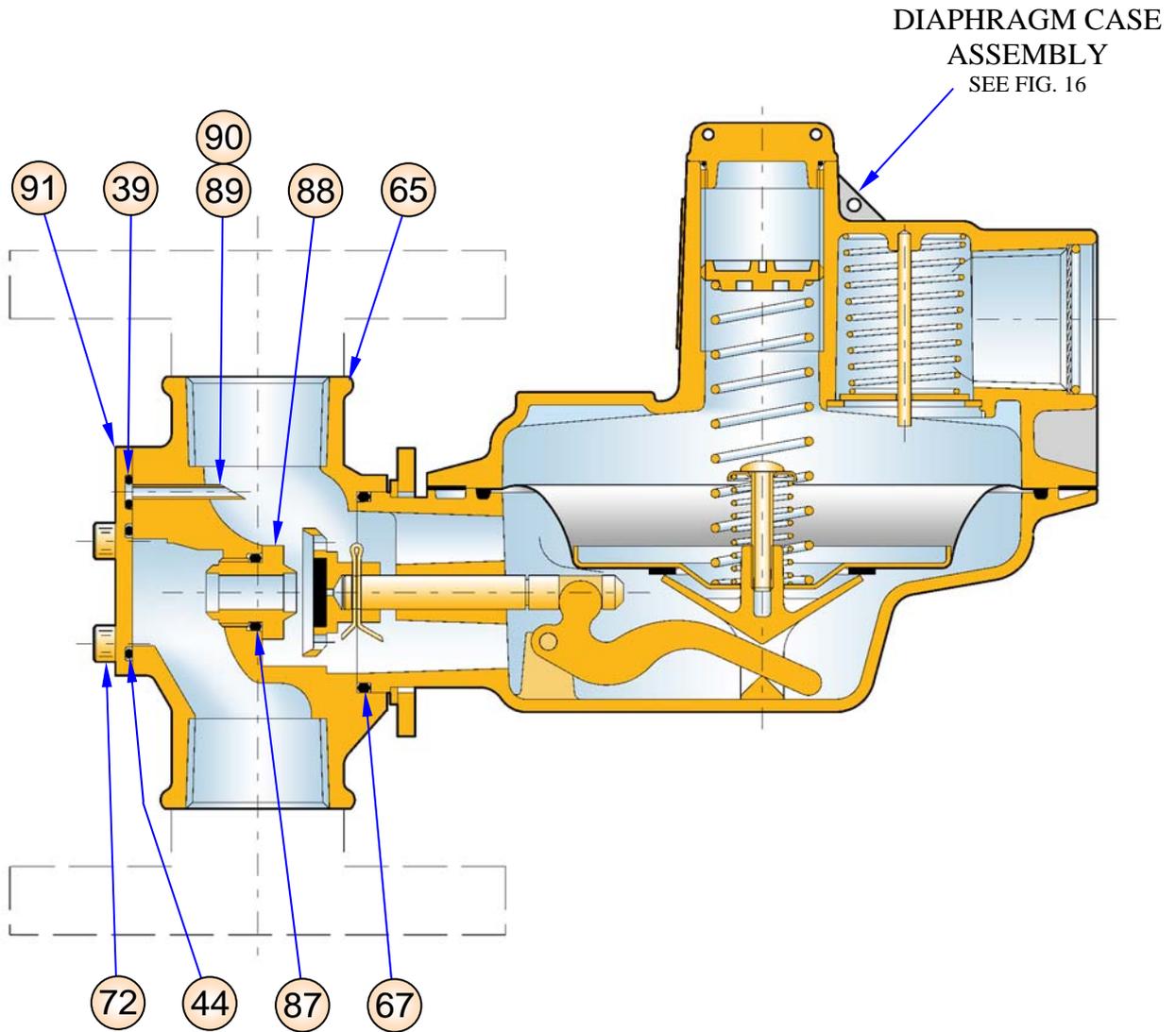


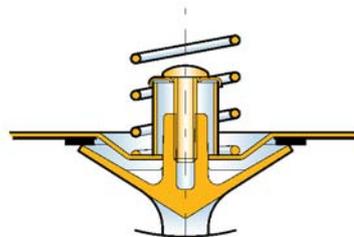
Fig. 12

- 49) Remove bottom spring holder and UPSS top spring holder.
- 50) Remove UPSS spring and replace with new one. See Fig. 12.
- 51) Replace UPSS spring holder, ensuring that spigot locates in UPSS spring.
- 52) Replace bottom spring holder locating three webs into slots in bottom of cover, ensuring not to disturb UPSS spring and UPSS spring holder.
- 53) Replace OPSS spring (or spacer tube if UPSS only).
- 54) Screw top spring holder back in place, ensuring that castellated spigot is uppermost in chimney. See Fig. 11. (If UPSS only ensure that spacer tube is firmly clamped).
- 55) Adjust the trip-off pressure as described previously.
- 56) Replace the top cap (seal if necessary).

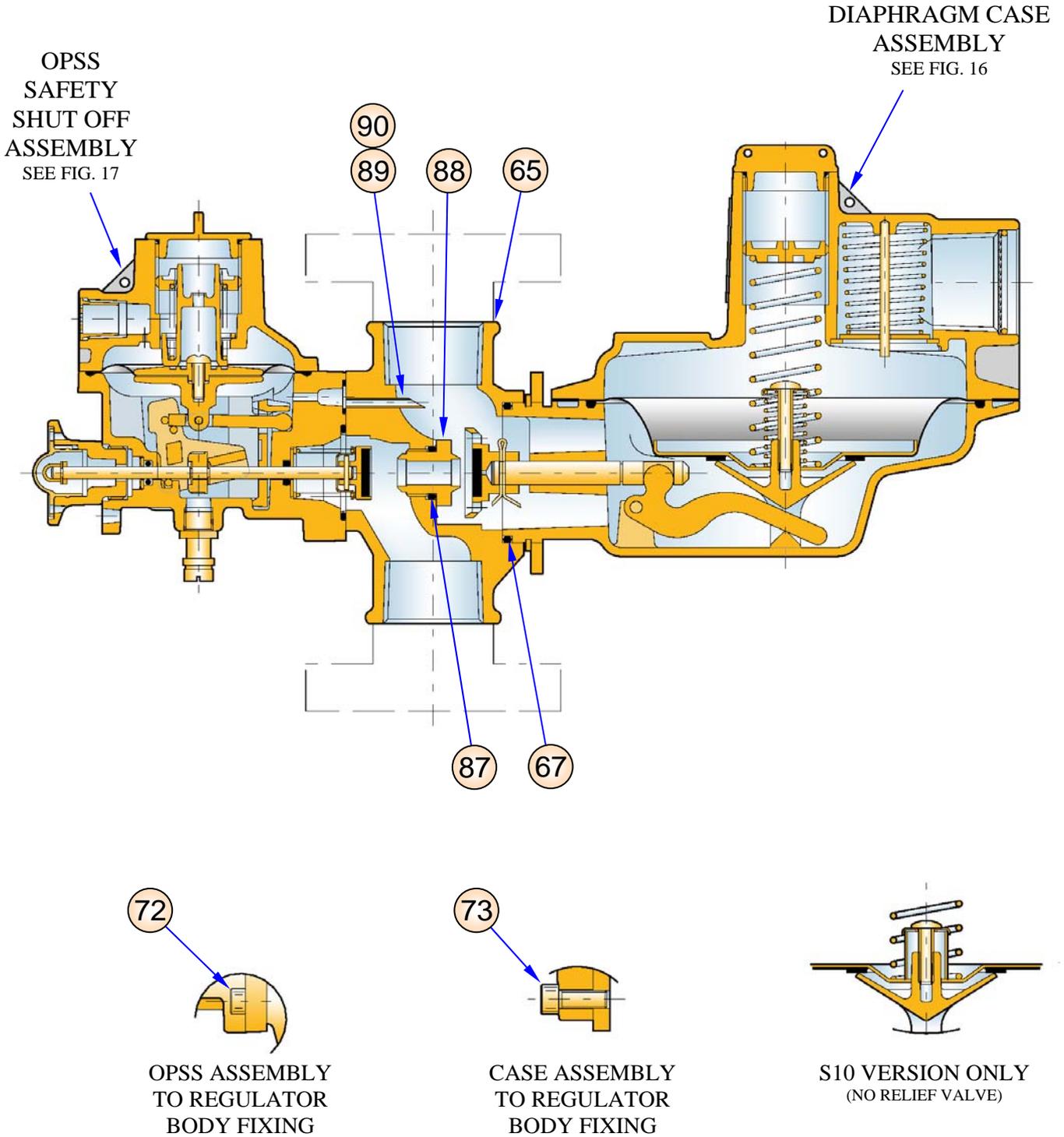
NOTE: UPSS pressure is now set.



CASE ASSEMBLY  
TO REGULATOR  
BODY FIXING

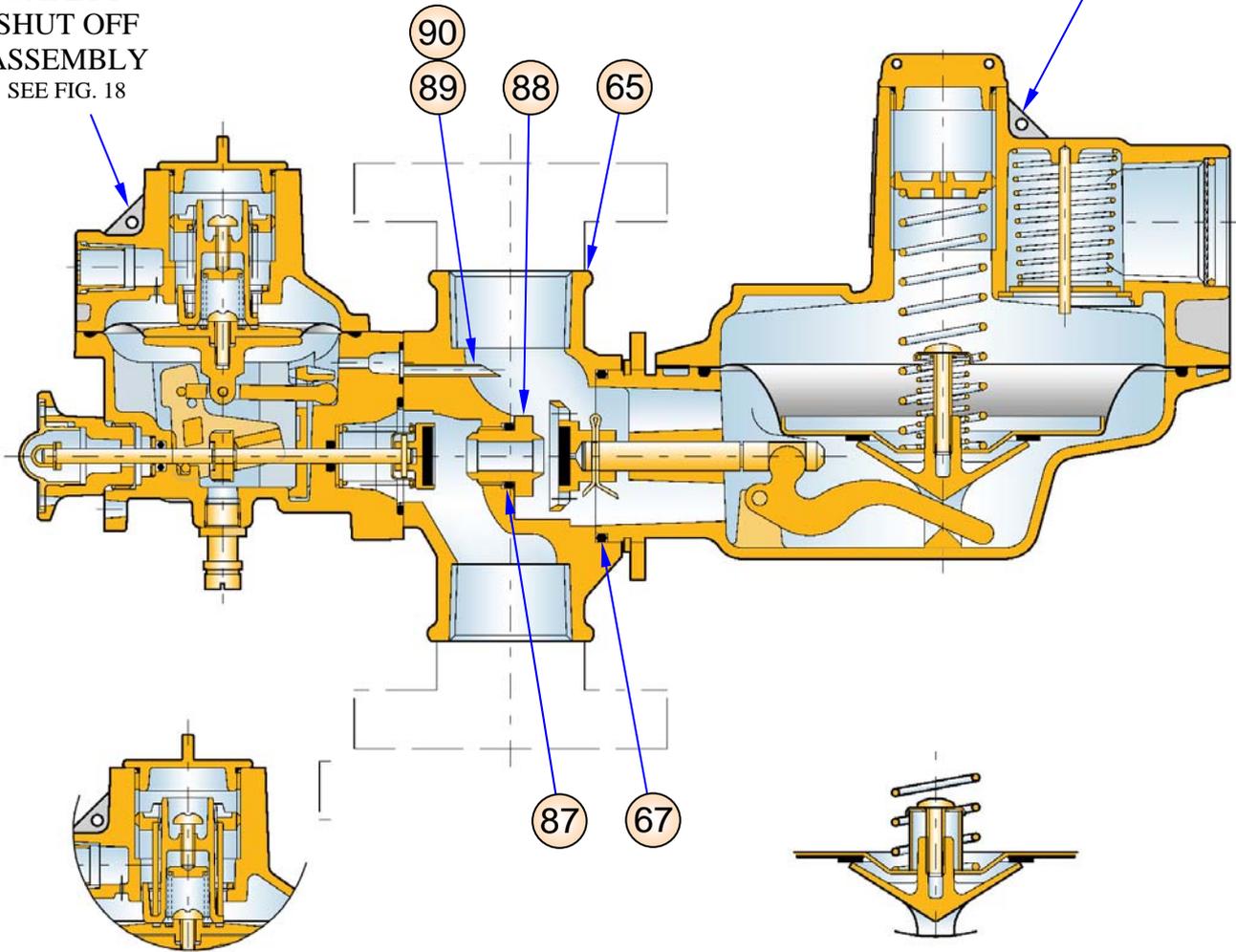


S1 VERSION  
(NO RELIEF VALVE)



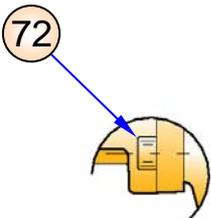
OPSS/UPSS  
 SAFETY  
 SHUT OFF  
 ASSEMBLY  
 SEE FIG. 18

DIAPHRAGM CASE  
 ASSEMBLY  
 SEE FIG. 16

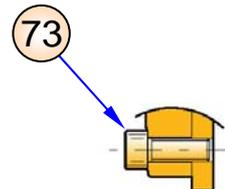


S6, S7 & S11 VERSIONS  
 UPSS ONLY  
 SEE FIG 19

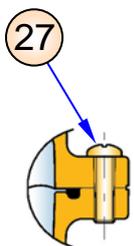
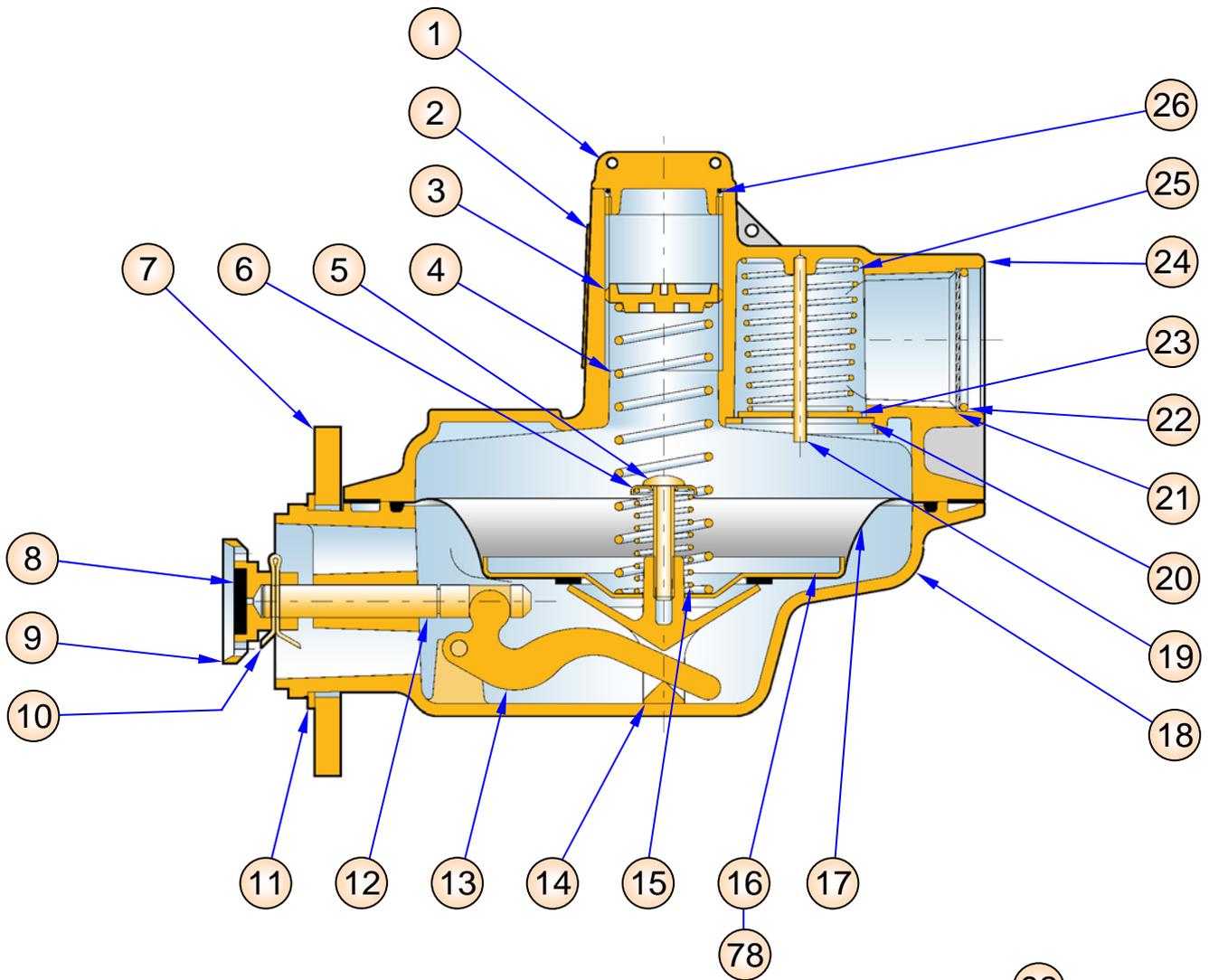
S11 & S12  
 VERSIONS ONLY  
 (NO RELIEF VALVE)



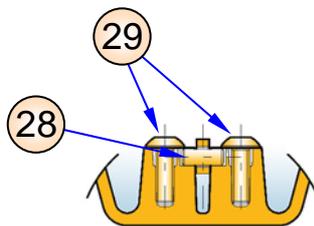
OPSS/UPSS ASSY  
 TO REGULATOR  
 BODY FIXING



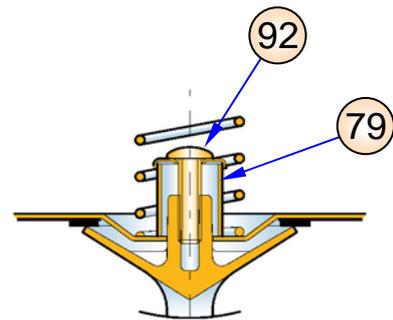
CASE ASSEMBLY  
 TO REGULATOR  
 BODY FIXING



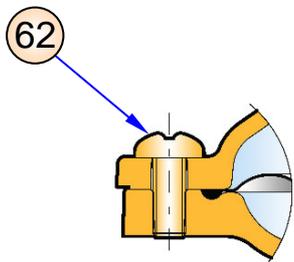
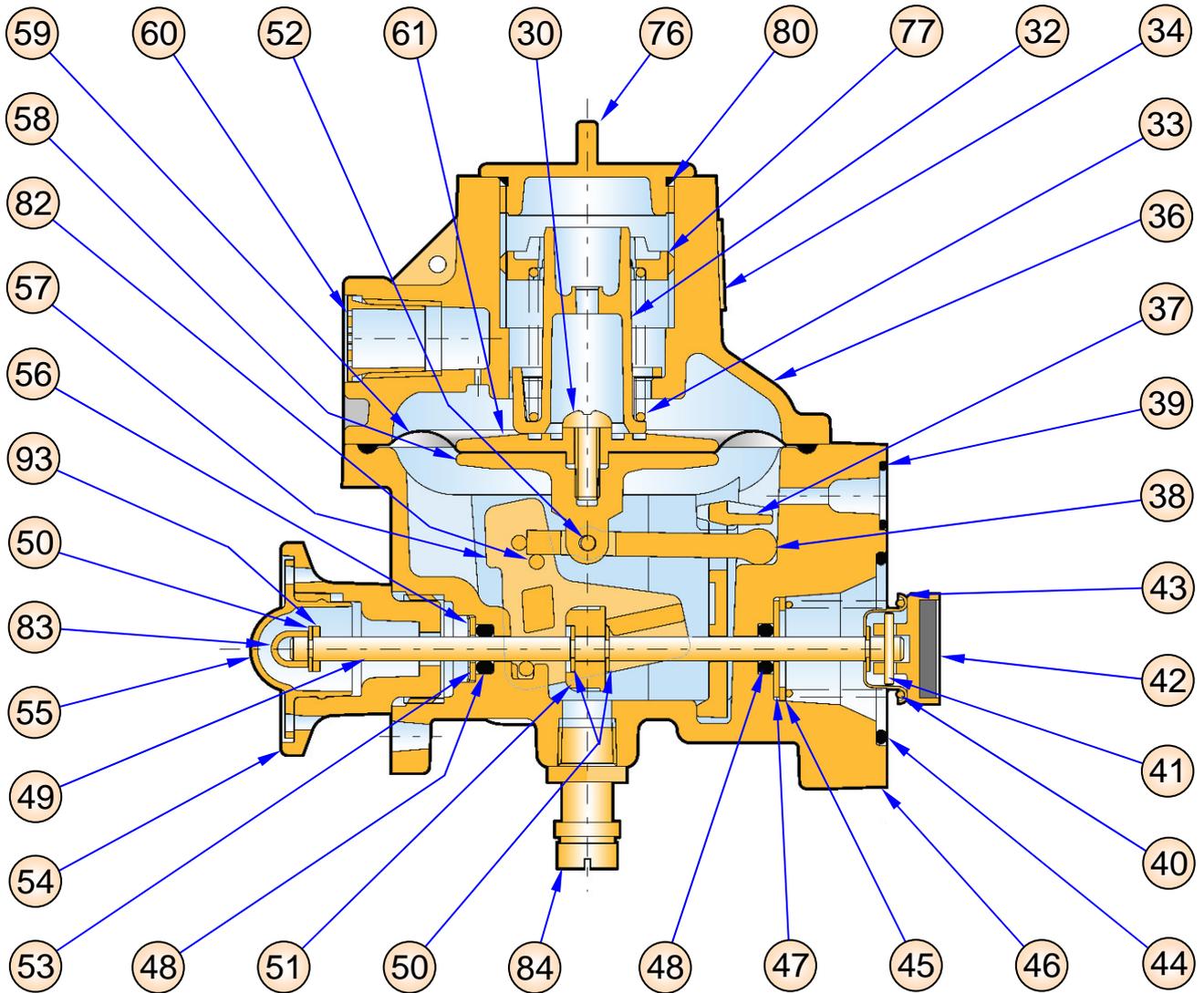
REGULATOR COVER  
TO CASE FIXING



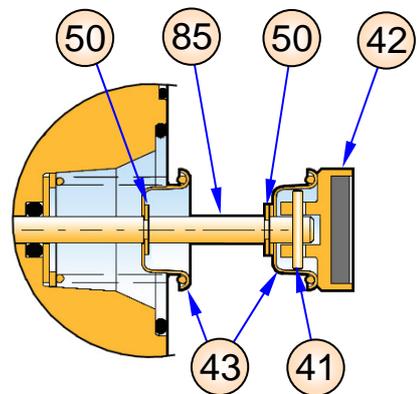
FULCRUM PIN  
FIXING



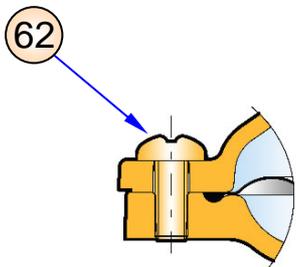
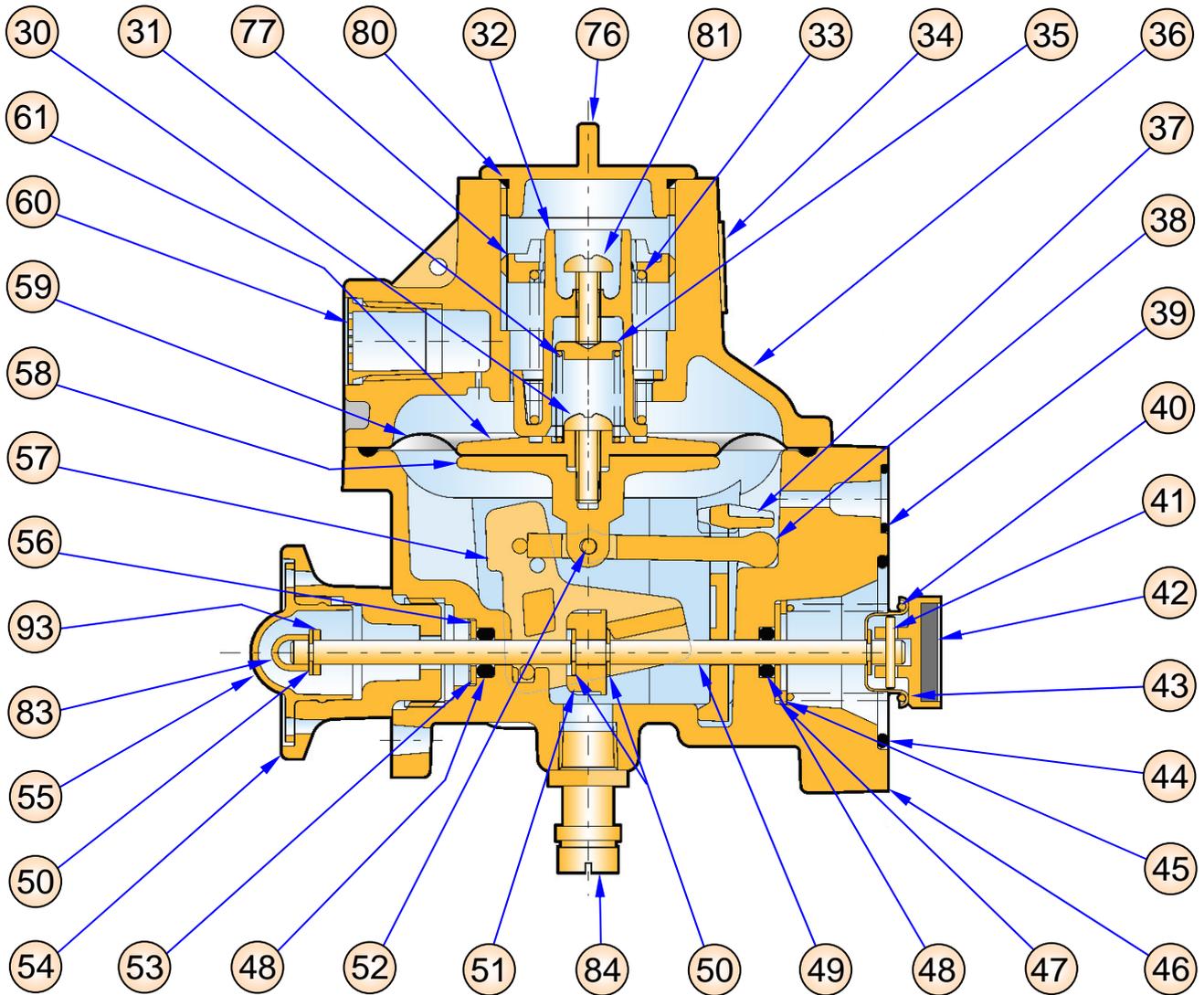
S1, S10, S11 AND S12  
VERSIONS ONLY  
(NO RELIEF VALVE)



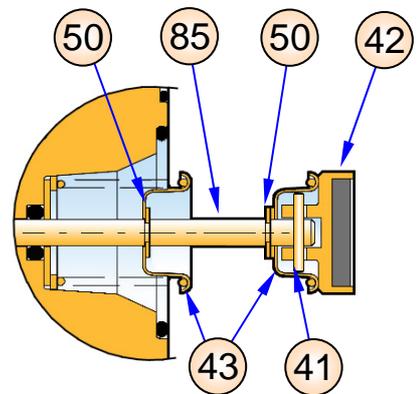
TOP COVER TO  
BODY FIXING



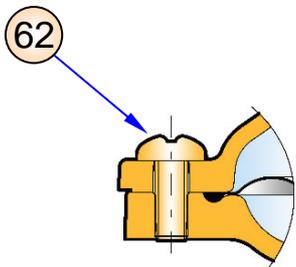
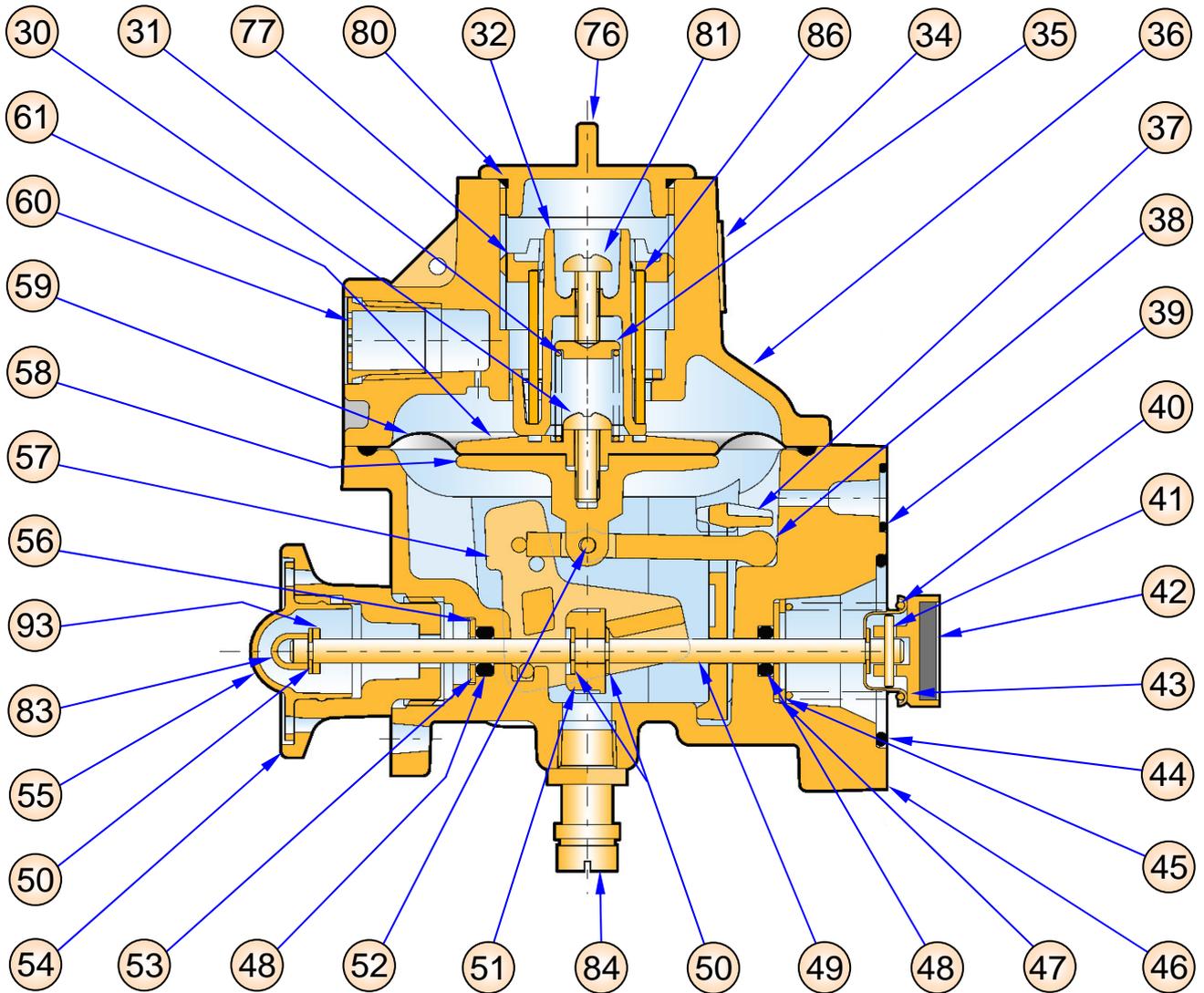
ALTERNATIVE  
VALVE FOR  
FLANGED UNITS



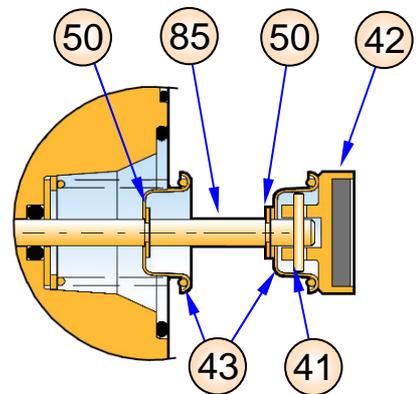
TOP COVER TO  
BODY FIXING



ALTERNATIVE  
VALVE FOR  
FLANGED UNITS



TOP COVER TO  
BODY FIXING



ALTERNATIVE  
VALVE FOR  
FLANGED UNITS

ITEM No.	DESCRIPTION	PART No.	No. OFF
1	REGULATOR TOP CAP	J12506-142	1
2	NAMEPLATE	J8112-124	1
3	REGULATOR SPRING HOLDER	J7705-085	1
4	LOADING SPRING	SEE TABLE	1
5	SCREW FOR RELIEF VALVE	JSDLXPTI	1
6	RELIEF SPRING WASHER	J12506-077	1
7	CLAMPING PLATE	J12506-197	1
8	VALVE DISC	J12506-010 *	1
9	VALVE DISC HOLDER	J12506-009 *	1
10	COTTER PIN	JCP5/64X3/4B *	1
11	CIRCLIP FOR DIAPHRAGM CASE	JCIR1400-47B	1
12	REGULATOR VALVE SPINDLE	J12506-273	1
13	LEVER ARM	J12506-272	1
14	RELIEF VALVE	J12506-027	1
15	RELIEF VALVE SPRING	J6406-014	1
16	REGULATOR DIAPHRAGM PLATE (FR)	J12506-025 *	1
17	REGULATOR DIAPHRAGM	J12506-024 *	1
18	REGULATOR DIAPHRAGM CASE	J12506-001Z01	1
19	SPIROL PIN	JTPS3X45S	1
20	VENT VALVE SEAT	J12506-034	1
21	VENT VALVE SCREEN	J12506-051	1
22	VENT MESH SPRING CLIP	J12506-082	1
23	VENT VALVE	J12506-035	1
24	REGULATOR TOP COVER	J12506-022 +	1
25	VENT VALVE SPRING	J12506-039	1
26	"O" RING FOR REGULATOR TOP CAP	JORM0251-16 *	1
27	SCREW FOR DIAPHRAGM CASE	JSDIXPTT	6
28	FULCRUM PIN	J12506-007	1
29	SCREW FOR FULCRUM PIN	JSK10GXFKI	2
30	SCREW FOR SHUT-OFF DIAP	JSA412XPTZ	1
31	UPSS SPRING	SEE TABLE	1
32	BOTTOM SPRING HOLDER	J12506-250	1
33	OPSS SPRING	SEE TABLE	1
34	SAFETY SHUT-OFF NAMEPLATE	J150D-076	1
35	UPSS SPRING HOLDER	J12506-249	1
36	SAFETY SHUT-OFF TOP COVER	J12506-240 +	1
37	TRIP OFF LEVER RETAINING PLATE	J12506-243	1
38	TRIP OFF LEVER	J12506-242	1
39	"O" RING IMPULSE PASSAGE <small>Replaces JORM0081-16D</small>	JOBS011D *	1

ITEM No.	DESCRIPTION	PART No.	No. OFF
40	VALVE SPRING	J12506-049	1
41	NEEDLE ROLLER	JNR01	1
42	VALVE	J12506-276M *	1
43	VALVE SPRING CUP	J12506-251	1*
44	"O" RING FOR SHUT-OFF TO REG. BODY	JORM0276-24D *	1
45	CIRCLIP FOR FRONT "O" RING WASHER	JCIR2000K-17B *	1
46	SAFETY SHUT-OFF BODY	J12506-239 +	1
47	FRONT "O" RING RETAINING WASHER	J12506-252	1
48	"O" RING FOR USSA SPINDLE (to end 2005)	JOBS105D *	2
	"O" RING FOR USSA SPINDLE (from 2006)	JO4-25 *	2
49	SAFETY SHUT-OFF VALVE SPINDLE	J12506-259	1
50	CIRCLIP FOR SHUT-OFF VALVE SPINDLE	JCIR1500-015B *	3*
51	TRIP OFF BUSH	J12506-244	1
52	NEEDLE ROLLER	JNR02S	1
53	STARLOCK WASHER	JCIR1305-043B *	1
54	RESET SPINDLE END CAP	J12506-254	1
55	COVER FOR RESET END CAP	J12506-255	1
56	REAR "O" RING RETAINING WASHER	J12506-253	1
57	TRIP OFF LATCH	J12506-241	1
58	LOWER DIAPHRAGM PLATE	J12506-247	1
59	SAFETY SHUT-OFF DIAPHRAGM	J12506-246 *	1
60	SCREEN VENT	J12506-277	1
61	TOP DIAPHRAGM PLATE	J12506-245	1
62	SCREW FOR SAFETY SHUT-OFF COVER	JSA512XPTS	4
65	REGULATOR BODY (3/4" SCREWED)	J12505-226 +	1
	REGULATOR BODY (1" SCREWED)	J12506-226 +	1
	REGULATOR BODY (25mm FLANGED)	J12506-103 +	1
67	"O" RING FOR CASE TO REG. BODY	JORM0415-30 *	1
72	SCREW FOR SHUT-OFF TO REG. BODY	JSA516SANSS	4
73	SCREW, CASE TO FLANGED REG BODY	JSA616SANSS	2
	SCREW, CASE TO SCREWED REG BODY	JSA620SANSS	2
76	SAFETY SHUT-OFF TOP CAP	J12506-142	1
77	SAFETY SHUT-OFF SPRING HOLDER	J12506-248	1
78	REGULATOR DIAPHRAGM PLATE (LR)	J12506-026 *	1
79	RELIEF VALVE SPACER TUBE	JV112-008	1
80	SAFETY SHUT-OFF TOP CAP "O"RING	JORM0251-16D *	1
81	SCREW FOR UPSS ADJUSTMENT	JSA412XPTZ	1

\* ITEM 43: 2 – OFF FOR FLANGED BODY VERSION

\* ITEM 50: 5 – OFF FOR FLANGED BODY VERSION

ITEM No.	DESCRIPTION	PART No.	No. OFF
82	NEEDLE ROLLER	JNR02S	1
83	SAFETY SHUT-OFF INDICATOR CAP	JCLOSEMC4	1
84	PRESSURE TEST NIPPLE	JPTN01-0.71	1
85	VALVE SPINDLE (FLANGED BODY)	J12506-298	1
86	SAFETY SHUT-OFF UPSS SPACER TUBE	J12506-279	1
87	"O"RING FOR VALVE SEAT	JORM0136-24 *	1
88	VALVE SEAT	SEE TABLE	1
89	IMPULSE TUBE (SCREWED BODY)	J4706-072	1
90	IMPULSE TUBE (FLANGED BODY)	J12506-106	1
91	BLANKING PLATE	J12506-278Z01	1
92	SCREW FOR RELIEF VALVE S1,S10,S11,S12	JSDIXPTT	1
93	WASHER - Rear Circlip Protection	J12506-292	1

NOTES: Items marked \* are contained in spares kits (See table below).  
Part Numbers ending with + require connection information.

### SPARES KITS

REGULATOR TYPE	SPARES KIT PART NUMBER
J125-S1 & S3	SK2506-15
J125-S2	SK2506-16
J125-S4, S6 & S8	SK2506-17
J125-S5, S7, S9, S10, S11 & S12	SK2506-18

### VALVE SEATS

ORIFICE SIZE	PART NUMBER
3.5mm	J12506-029
5mm	J12506-030
8mm	J12506-011
10mm	J12506-031

## REGULATOR SPRINGS

mb.	"w.g.	PART NUMBER	COLOUR
5 - 15	2 - 6	J12506-041	LIGHT GREEN / YELLOW
12 - 25	4.8 - 10	J12506-042	LIGHT GREEN / BLACK
22 - 35	8.8 - 14	J12506-043	LIGHT GREEN / ORANGE
32 - 50	12.8 - 20	J12506-044	LIGHT GREEN / BROWN
45 - 75	18 - 30	J12506-045	LIGHT GREEN / RED
72 - 140	29 - 56	J12506-046	LIGHT GREEN / DARK BLUE

## OVER PRESSURE SLAM-SHUT SPRINGS

mb.	"w.g.	PART NUMBER	COLOUR
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

## UNDER PRESSURE SLAM-SHUT SPRINGS

mb.	"w.g.	PART NUMBER	COLOUR
8 - 16	3 - 6	J12506-285	LIGHT BLUE
16 - 60	6 - 24	J12506-286	BROWN
60 - 150	24 - 60	J12506-289	PURPLE

NOTE: A minimum differential of 30mb must be maintained between OPSS and UPSS set pressures

Drawing Reference: Figs. 13, 14 & 15

Parts List Reference: Table 1

NOTE: Numbers in brackets identify items on drawings.

## Regulator Dismantling Procedure.

1. Disconnect diaphragm case assembly from regulator body (65) by removing the two cap screws (73), gently pull out the case from the body.
2. Disconnect the safety shut-off unit assembly, or blanking plate (91), from the regulator body (65) by removing the four cap screws (72).
3. Remove valve seat (88) from the regulator body.
4. Remove "O" ring (87) from valve seat (88).
5. Wipe clean the valve seat (88), check for any damage, and if necessary replace it.
6. Check that the impulse tube (89/90) is clear. **DO NOT REMOVE TUBE FROM BODY.**

## Regulator Rebuilding Procedure.

NOTE: Inspect all sealing "O" rings, and replace where necessary (a soft spares kit is available for this purpose, see page 16.)

The use of Molykote 111 "O" ring lubricant is recommended during the rebuild.

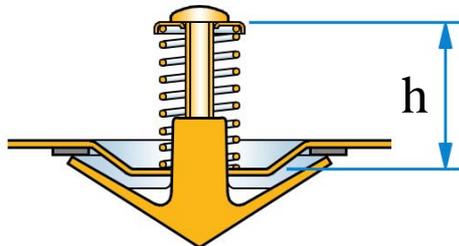
1. Fit new "O" ring (87) to valve seat (88) and apply "O" ring lubricant.
2. Refit valve seat (88) into body (65) by screwing it in until metal contact is made.
3. Fit new "O" ring (67) onto diaphragm case assembly and apply "O" ring lubricant.
4. Insert diaphragm case assembly into regulator body (65) being careful not to damage the "O" ring, secure in place with two cap screws (73).
5. Replace "O" rings (39) and (44) into safety shut-off body (46) or blanking plate (91), making sure the contact surfaces are clean and the "O" rings are lubricated.
6. Locate and secure the safety shut-off assembly, or blanking plate (91), in place using four cap screws (72).
7. Test unit for gas tightness.
8. Commission unit as described on pages 2 - 6.

Drawing Reference: Fig 16  
Parts List Reference: Table 1

NOTE: Numbers in brackets identify items on drawing.

### Diaphragm Case Dismantling Procedure.

1. Unscrew top cap (1) and remove "O" ring (26).
2. Unscrew and remove spring holder (3) and spring (4).
3. Remove top cover (24) by unscrewing the six screws (27).
4. Remove diaphragm (17), together with relief valve assembly, from the diaphragm case (18).
5. Prior to dismantling relief valve assembly, measure the height of relief valve spring (15). This height, "h", will be approximately 20mm. (Only required if relief valve is fitted).



6. Unscrew and remove fulcrum pin clamping screws (29).
7. Remove lever arm (13) and fulcrum pin (28).
8. Slide valve spindle assembly (12) out from diaphragm case (18).
9. Using a pair of pliers, straighten the cotter pin (10) and pull out to release valve disc holder (9).
10. Remove retaining screw (5) from relief valve assembly (14) to allow the assembly to be pulled apart.

NOTE: It is not recommended to strip down vent valve assembly (19), (20), (23) and (25).

### Diaphragm Case 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 16).

1. Check main diaphragm (17) for signs of damage, if necessary replace with a new diaphragm assembly (17) & (16/78).
2. Check that the sealing surfaces on the diaphragm and relief valve moulding (14) are clean, then insert the spigot of the relief valve (14) into position through the central hole in the diaphragm plate (16/78).
3. Place relief valve spring (15), or spacer tube (79), in position over the relief valve spigot (14) which is protruding through the diaphragm assembly.
4. Invert the relief spring washer (6) and place on top of relief valve spring (15), or spacer tube (79), and hold together using screw (5). Adjust screw (5) to the required height "h", as measured in the dismantling procedure (Screw down firmly if no relief valve fitted).
5. Check valve disc (8) and holder (9) for damage and excessive wear. If necessary replace with a new assembly. Refit onto the valve spindle (12) using a new cotter pin (10).
6. Insert valve spindle (12), complete with valve disc assembly, into hole in diaphragm case (18).
7. Relocate lever arm (13) assembled to fulcrum pin (28) into fulcrum recess in diaphragm case (18), with circular lug on arm in cut out slot in spindle (12).
8. Secure fulcrum pin (28) with two screws (29).
9. Relocate the main diaphragm and relief valve assembly into position making sure the following are observed :-
  - i) Lever arm (13) is correctly fitted into slot in relief valve (14).
  - ii) Outer sealing bead of diaphragm (17) is located correctly into groove of case (18).
10. Check that vent valve in top cover moves freely.
11. Replace top cover (24) and secure with six screws (27), taking care not to pinch diaphragm bead (17).
12. Place loading spring (4) into chimney of top cover (24).
13. Replace top spring holder (3) into chimney of top cover (24), ensuring regulator spring is located in recess in underside of holder.
14. Replace "O" ring (26) onto top cap (1).
15. Replace top cap (1) onto chimney of top cover (24).
16. For reassembly to body see page 18.

Drawing Reference: Figs. 17, 18 & 19.  
Part list Reference: Table 1.

NOTE : Numbers in brackets identify items on drawing.

## Safety Shut-off Dismantling Procedures.

1. Unscrew top cap (76) and remove "O" ring (80).
2. Unscrew and remove top spring holder (77) together with OPSS spring (33), or spacer tube (86).
3. Remove bottom spring holder (32) together with screw (81) if fitted.  
DO NOT REMOVE SCREW (81).
4. Remove top cover (36) by unscrewing the four screws (62).
5. If fitted remove UPSS spring holder (35) together with UPSS spring (31).
6. Lift diaphragm assembly from body (46).
7. Unscrew diaphragm clamping screw (30) and remove top diaphragm plate (61) and main diaphragm (59).
8. Remove needle roller (52) to release lever arm (38) from lower diaphragm plate (58).
9. For Screwed Body Versions.  
Push valve spring cup (43) towards body (46) to release needle roller (41). Remove valve (42), valve spring cup (43) and valve spring (40).  
For Flanged Body Versions.  
Remove circlip (50) from spindle (85). Push outer valve spring cup (43) towards body (46) to release needle roller (41). Remove valve (42). Push second valve spring cup (43) towards body (46) and remove circlip (50) from spindle (85). Remove valve spring cup (43) and valve spring (40).
10. Unscrew reset spindle end cap (54) and pull out until it comes to a stop.
11. Within body prise visible circlip (50) from valve spindle (49) or (85) to release trip-off bush (51).
12. Slide trip-off bush (51) forward and prise second circlip (50) from valve spindle (49) or (85).
13. Withdraw valve spindle (49) or (85) and end cap assembly (54), (55), (50), (83) & (93) from body (46). Remove trip-off lever retaining plate (37), trip-off bush (51) and trip-off latch (57).
14. Remove circlip (45), front "O" ring retaining washer (47) and front "O" ring (48).  
NOTE: It is not recommended to interfere with the rear "O" ring (48) unless absolutely necessary. A new "O" ring and starlock washer should be refitted if dismantled.
15. Remove starlock washer (53), rear "O" ring retaining washer (56) and rear "O" ring (48) from body (46).
16. It is not necessary to remove test point.

## Safety Shut-off Rebuilding Procedures.

NOTE: Inspect all sealing "O" rings, diaphragms and gaskets and replace where necessary (a soft spares kit is available for this purpose see page 16).

The use of Molykote 111 "O" ring lubricant is recommended during the rebuild.

1. Fit new "O" ring (48) into rear "O" ring groove in body (46) and apply "O" ring lubricant. Replace rear "O" ring retaining washer (56) and secure with new starlock washer (53), making sure starlock washer is central in bore.
2. Locate lever retaining plate (37) into recesses in body (46).
3. Position trip-off bush (51) with slots over rails of trip-off latch (57) and arrow facing away from steel needle rollers. Relocate assembly into body (46) making sure needle roller is correctly positioned in raised recess in body (46).
4. Push valve spindle (49) or (85) and cap assembly (50),(54),(55),(83) & (93) through rear of body (46), trip-off bush (51), lever retaining plate (37) and front of body (46).
5. Slide trip-off bush (51) up against lever retaining plate (37) and fit a new circlip (50) into groove on valve spindle (49) or (85) furthest away from trip-off bush (51).
6. Slide trip-off bush (51) back against 1st circlip (50) and fit a 2nd new circlip (50) to groove on valve spindle (49) or (85) which clamps trip-off bush (51) to valve spindle (49) or (85).
7. Fit new "O" ring (48) into front "O" ring groove in body (46) and apply "O" ring lubricant, replace front "O" ring retaining washer (47) and secure firmly with new circlip (45).
8. Replace valve spring (40) into front face of body (46).
9. Locate valve spring cup (43) over spindle (49) or (85) and into valve spring (40).
10. For Screwed Body Versions

Push valve spring cup (43) to compress valve spring (40) until valve (42) can be assembled to valve spindle (49). Align hole in valve (42) with hole in valve spindle (49) and replace needle roller (41). Release pressure on valve spring (40) allowing valve spring cup (43) to fit over needle roller (41).

### For Flanged Body Versions.

Push valve spring cup (43) to compress valve spring (40) until circlip (50) can be assembled into groove in spindle (85) nearest body (46). Release valve cup (43). Place second valve spring cup (43) over spindle (85) then fit valve (42) onto spindle (85). Align hole in valve (42) with hole in valve spindle (85) and replace needle roller (41). Push valve spring cup (43) up against valve (42) and replace circlip (50) into groove in spindle (85) locking valve (42) assembly into position.

11. Align hole in diaphragm (59) with convolution upper most, with hole in lower diaphragm plate (58). Locate spigot of top diaphragm plate (61) through diaphragm (59) and into recess in lower diaphragm plate (58). Secure with diaphragm clamping screw (30).
12. Position slot in lever arm (38) over spigot on lower diaphragm plate (58) and align holes, replace needle roller (52) through holes.
13. Unscrew reset end cap (54) and withdraw it, until it comes to a stop.
14. Locate diaphragm assembly and lever arm (38) into recess between lever retaining plate (37) and body (46), ensuring bead of diaphragm (59) locates into groove in body (46).

## Safety Shut-off Rebuilding Procedures - Continued

15. Replace bottom spring holder (32) together with screw (81) if fitted, into chimney of top cover (36) by aligning ribs of bottom spring holder (32) with slots in top cover (36).
16. Replace OPSS spring (33), or tube (86), into bottom spring holder (32).
17. Screw top spring holder (77) into chimney of top cover (36) ensuring that castellated spigot is uppermost. If tube (86) is fitted screw top spring holder (77) down firmly.
18. If fitted locate UPSS spring (31) into recess in top diaphragm plate (61), refit UPSS spring holder (35) ensuring that spigot locates in UPSS spring (31).
19. Replace top cover assembly (36) and secure with four screws (62), ensuring UPSS spring arrangement (31) and (35) if fitted is undisturbed. Take care not to pinch diaphragm bead (59).
20. Fit new "O" ring (80) to top cap (76) and screw into chimney of top cover (36).
21. If removed, replace test point (84).
22. For reassembly to body see page 18.

The following J125 types are also available which are not included in these instructions:

J125-C9

J125-S13

Separate instruction booklets are available upon request from Elster Jeavons.

Elster Jeavons is committed to a programme of continuous quality enhancement. All equipment designed and manufactured by Elster Jeavons benefits from the company's quality assurance standards, which are approved to ISO9001 (BS5750 Part 1).

Elster Jeavons 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.