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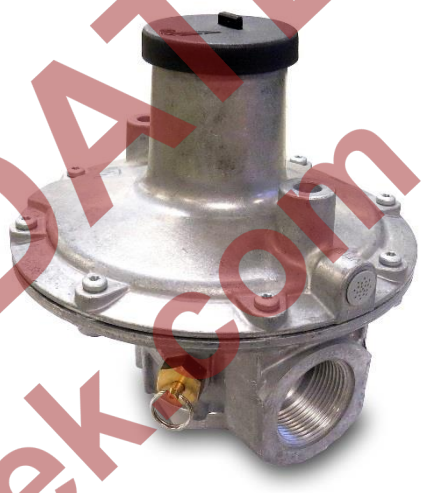
Elster Jeavons J120



Commissioning Instructions
General Arrangement
Parts List
Maintenance Instructions
For: J120 Low Pressure Cut Off Valve ¾” - 2"

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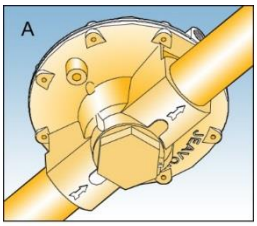
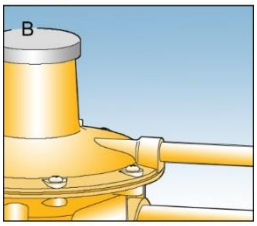
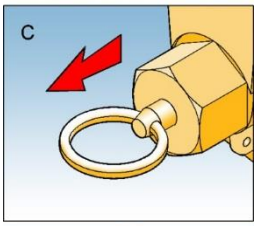
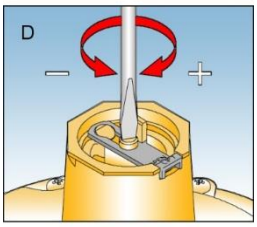
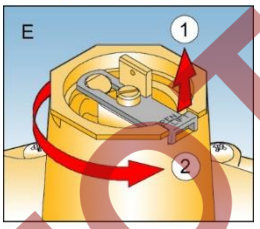
J120: Commissioning Instructions

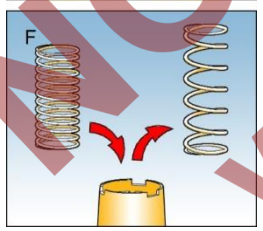












OPERATING INSTRUCTIONS

- 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.

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

FITTING REGULATOR INTO PIPEWORK (A)

1. Remove the plastic protection plugs from inlet and outlet (and breather if applicable).
2. Ensure that installation pipework is thoroughly clean.
3. The direction of gas flow must be the same as the arrow(s) on the regulator body.
4. Install regulator into pipework using a jointing compound approved to national standards.

INSTALLATION OF VENT LINE (B) IF required

1. Remove the plastic protection plug.
2. Connect the vent line (Rc1/4 connection), 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.

ESTABLISHING FLOW (C)

1. Turn off downstream valves.
2. Slowly turn on inlet supply.
3. Equalize pressure across valve. If automatic reset valve is fitted this is done shortly after inlet pressure established. If manual reset valve fitted, pull ring on reset until pressures equalized and valve opens.
4. Commission downstream appliance(s).

IF THE CUT-OFF PRESSURE HAS NOT BEEN PRE-SET (D)

1. Turn off downstream valves.
2. Remove the top cap.
3. Insert a flat bladed screwdriver into the slot in the end of the spring adjusting screw.
4. Turn anticlockwise to reduce pressure on the loading spring.
5. Slowly turn on inlet supply and adjust to normal operating pressure.
6. Equalize pressure across valve as in (11) above.
7. Commission downstream appliance(s).
8. Reduce inlet pressure to the required cut-off pressure (measured near to outlet).
9. Slowly increase loading on the spring by turning the spring adjusting screw clockwise until the valve closes and flow stops.
10. To check setting return inlet pressure to normal operating pressure.
11. Turn off downstream valves.
12. Equalize pressure across valve as in (11) above.
13. Commission downstream appliance(s).
14. Slowly reduce inlet pressure, notice pressure reading when valve operates and flow is cut-off.
15. If required repeat steps 15 to 22 until correct cut-off pressure is achieved.
16. To establish normal flow repeat steps 22 to 25.
17. Replace the top cap (and seal if necessary).

If the required cut off pressure cannot be achieved with the spring fitted. (E) & (F).

1. Choose a loading spring from the catalogue that will give the required cut-off pressure range.
2. Turn spring adjusting screw anticlockwise (to reduce loading on spring).
3. Carefully lift protruding end of locking lever just clear of adjusting bush (1), whilst in this position turn (octagon shaped) adjusting bush assembly anticlockwise until disengaged (2). The adjusting bush assembly can then be removed from the top cover.
4. Remove the loading spring.
5. Insert the new spring - take the label from the spares kit bag and stick it below the nameplate of the cut-off valve.
6. Screw top spring holder anticlockwise to within 10mm of underside of adjusting bush.
7. Position underside of top spring holder on to loading spring.
8. Align slots in top spring holder with splines in top cover and push adjusting bush assembly into top cover as far as possible.
9. Turn adjusting bush assembly clockwise until locking lever snaps into any of the three locking castellations in the top cover.
10. Adjust the cut-off pressure, as described above until the required setting is found.
11. Replace the top cap (and seal if necessary).

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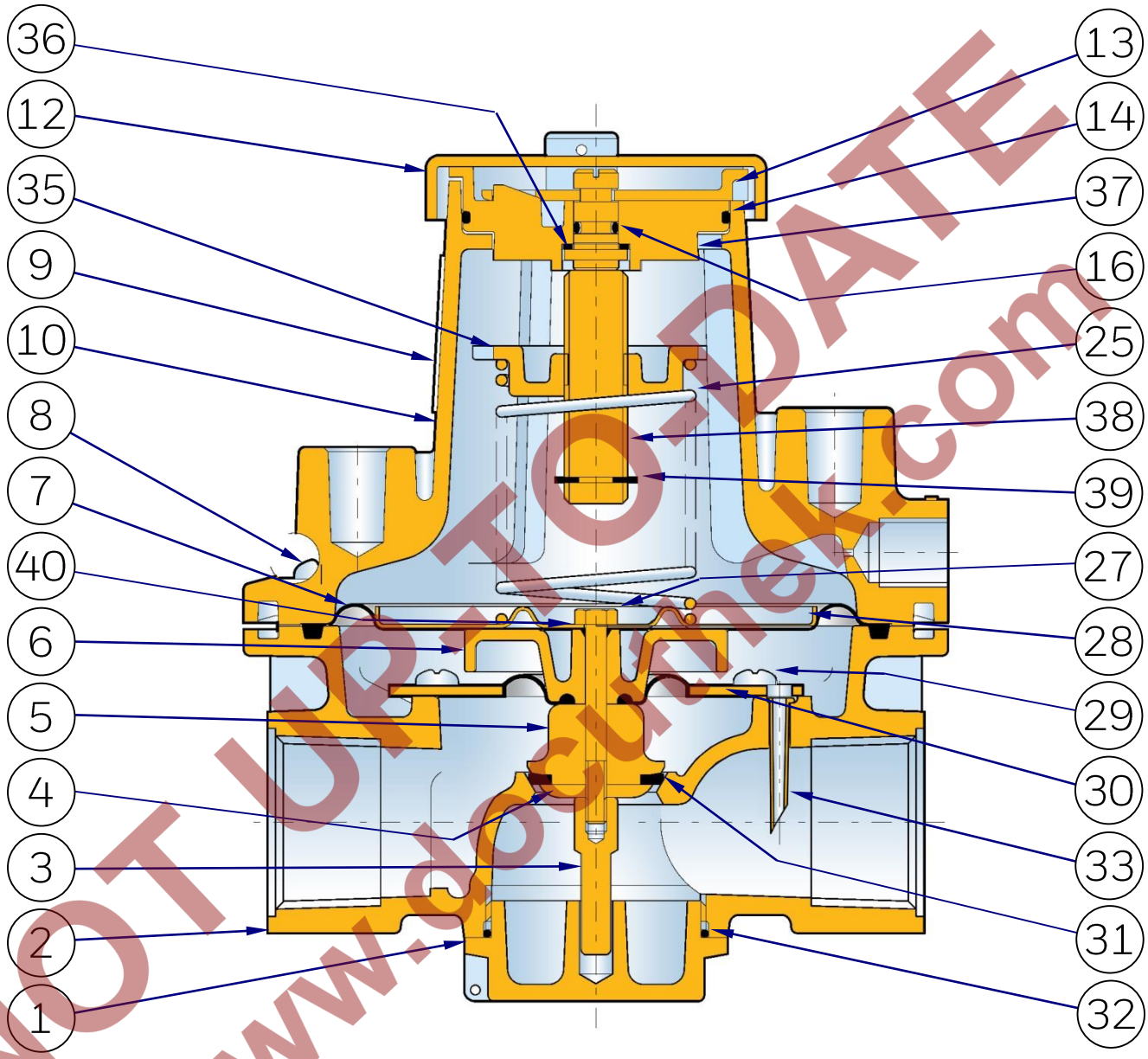
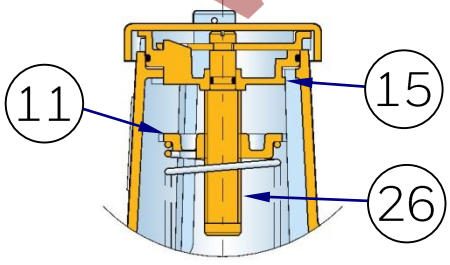
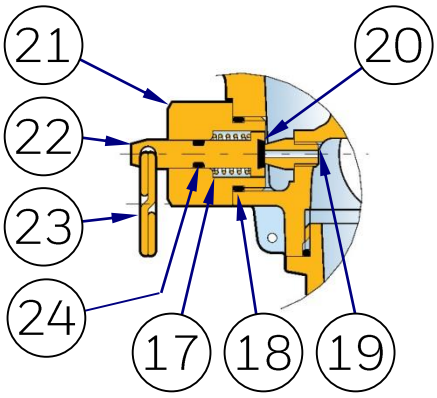
J120: General Arrangement

All Sizes

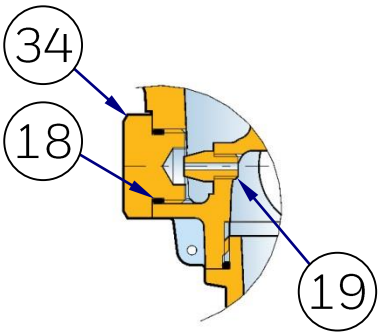




Spring Adjustment
Pre October 2000



Manual Reset



Automatic Reset

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J120: Parts List
¾" and 1" sizes

ITEM	DESCRIPTION	¾"	No. Off	1"	No. Off
1	BOTTOM PLUG	J4806-017Z03	1	J4806-017Z03	1
2	BODY	J4805-005+	1	J4806-094+	1
3	VALVE SPINDLE GUIDE	J4806K-003	1	J4806K-003	1
4	VALVE DISC CLAMP WASHER	J12006-014	1	J12006-014	1
5	VALVE SPACER	J12006-013	1	J12006-013	1
6	DIAPHRAGM SPACER	J4806-018	1	J4806-018	1
7	MAIN DIAPHRAGM	J4806-011	✶ 1	J4806-011	✶ 1
8	SCREW	JSA520XPTZ	6	JSA520XPTZ	6
9	NAME PLATE	J8112-124	1	J8112-124	1
10	TOP COVER	J4806-103+	1	J4806-103+	1
11	TOP SPRING HOLDER (Coarse Thread)	J4806-098	1	J4806-098	1
12	TOP CAP	J4806-099	1	J4806-099	1
13	LOCKING LEVER	J4806-105	1	J4806-105	1
14	"O" RING SEAL	JO200032-4475	✶ 1	JO200032-4475	✶ 1
15	ADJUSTMENT BUSH	J4806-100	1	J4806-100	1
16	"O" RING SEAL	JORM0051-16	✶ 1	JORM0051-16	✶ 1
17	CUT OFF VALVE SPRING	J9809-008	1	J9809-008	1
18	"O" RING SEAL	JORM0131-16	✶ 1	JORM0131-16	✶ 1
19	AMAL JET (Standard) see note below	JJA187/001	1	JJA187/001	1
20	CUT OFF VALVE DISC	J12006-010	✶ 1	J12006-010	✶ 1
21	CUT OFF VALVE SPINDLE BUSH	J12006-024	1	J12006-024	1
22	CUT OFF VALVE SPINDLE	J12006-020	1	J12006-020	1
23	SPLIT RING	JRS20MZ	1	JRS20MZ	1
24	"O" RING SEAL	JORM0031-16	✶ 1	JORM0031-16	✶ 1
25	LOADING SPRING	SEE TABLE	1	SEE TABLE	1
26	SPRING ADJUSTING SCREW (Coarse Thread)	J4806-097	1	J4806-097	1
27	VALVE SPINDLE	JSA440IPNZ	1	JSA440IPNZ	1
28	TOP DIAPHRAGM PLATE	J4806-003	1	J4806-003	1
29	SCREW	JSA410XPTZ	6	JSA410XPTZ	6
30	SECONDARY DIAPHRAGM	J4806-095	✶ 1	J4806-095	✶ 1
31	VALVE DISC	J4806-025	✶ 1	J4806-025	✶ 1
32	"O" RING SEAL	JORM0376-24	✶ 1	JORM0376-24	✶ 1
33	IMPULSE TUBE (IF FITTED)	J4806-120	1	J4806-120	1
	IMPULSE TUBE (PRE MAY 2011)	J4706-072	1	J4706-072	1
34	BLANKING PLUG (IF FITTED)	J12006-025	1	J12006-025	1
35	TOP SPRING HOLDER (Fine Thread)	J4806-127	1	J4806-127	1
36	WASHER	J4806-134	✶ 1	J4806-134	✶ 1
37	ADJUSTMENT BUSH (New Design)	J4806-100Z01	1	J4806-100Z01	1
38	SPRING ADJUSTING SCREW (Fine Thread)	J4806-128	1	J4806-128	1
39	CIRCLIP	JCIR1500-080Z	1	JCIR1500-080Z	1
40	SEALING WASHER	J7706A-044	1	J7706A-044	1

Note: Part numbers marked + require connection thread to be specified with order. Amal jet (Item 19) is available with a non standard jet size on request.

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J120: Parts List
1¼", 1½" and 2" sizes

ITEM	DESCRIPTION	1¼"	No. Off	1½"	No. Off	2"	No. Off
1	BOTTOM PLUG	J4808-017Z03	1	J4808-017Z03	1	J4809-017Z03	1
2	BODY	J4807-011+	1	J4808-084+	1	J4809-071+	1
3	VALVE SPINDLE GUIDE	J4808K-003	1	J4808K-003	1	J4809K-003	1
4	VALVE DISC CLAMP WASHER	J12008-003	1	J12008-003	1	J12009-003	1
5	VALVE SPACER	J12008-002	1	J12008-002	1	J12009-002	1
6	DIAPHRAGM SPACER	J4808-021	1	J4808-021	1	J4809-018	1
7	MAIN DIAPHRAGM	J4808-011	✶ 1	J4808-011	✶ 1	J4809-011	✶ 1
8	SCREW	JSA520XPTZ	8	JSA520XPTZ	8	JSA520XPTZ	8
9	NAME PLATE	J8112-124	1	J8112-124	1	J8112-124	1
10	TOP COVER	J4808-078+	1	J4808-078+	1	J4809-067+	1
11	TOP SPRING HOLDER	J4806-098	1	J4806-098	1	J4806-098	1
12	TOP CAP	J4806-099	1	J4806-099	1	J4806-099	1
13	LOCKING LEVER	J4806-105	1	J4806-105	1	J4806-105	1
14	"O" RING SEAL	JO200032-	✶ 1	JO200032-	✶ 1	JO200032-	✶ 1
15	ADJUSTMENT BUSH	J4806-100	1	J4806-100	1	J4806-100	1
16	"O" RING SEAL	JORM0051-16	✶ 1	JORM0051-16	✶ 1	JORM0051-16	✶ 1
17	CUT OFF VALVE SPRING	J9809-008	1	J9809-008	1	J9809-008	1
18	"O" RING SEAL	JORM0131-16	✶ 1	JORM0131-16	✶ 1	JORM0131-16	✶ 1
19	AMAL JET (Standard) see note	JJA187/001	1	JJA187/001	1	JJA187/001	1
20	CUT OFF VALVE DISC	J12006-010	✶ 1	J12006-010	✶ 1	J12006-010	✶ 1
21	CUT OFF VALVE SPINDLE	J12008-006	1	J12008-006	1	J12008-006	1
22	CUT OFF VALVE SPINDLE	J12006-020	1	J12006-020	1	J12006-020	1
23	SPLIT RING	JRS20MZ	1	JRS20MZ	1	JRS20MZ	1
24	"O" RING SEAL	JORM0031-16	✶ 1	JORM0031-16	✶ 1	JORM0031-16	✶ 1
25	LOADING SPRING	SEE TABLE	1	SEE TABLE	1	SEE TABLE	1
26	SPRING ADJUSTING SCREW	J4806-097	1	J4806-097	1	J4806-097	1
27	VALVE SPINDLE	JBA650HEXZG	1	JBA650HEXZG	1	JBA865HEXZG	1
28	TOP DIAPHRAGM PLATE	J4808-003	1	J4808-003	1	J4809-003	1
29	SCREW	JSA510XPTZ	6	JSA510XPTZ	6	JSA510XPTZ	8
30	SECONDARY DIAPHRAGM	J4808-070	✶ 1	J4808-070	✶ 1	J4809-070	✶ 1
31	VALVE DISC	J4808-035	✶ 1	J4808-035	✶ 1	J4809-027	✶ 1
32	"O" RING SEAL	JORM0546-24	✶ 1	JORM0546-24	✶ 1	JORM0745-32	✶ 1
33	IMPULSE TUBE (IF FITTED)	J4808-085	1	J4808-085	1	J4809-074	1
	IMPULSE TUBE (PRE MAY	J4808-076	1	J4808-076	1	J4709-060	1
34	BLANKING PLUG (IF FITTED)	J12006-025	1	J12006-025	1	J12006-025	1
35	TOP SPRING HOLDER (Fine	J4806-127	1	J4806-127	1	J4806-127	1
36	WASHER	J4806-134	✶ 1	J4806-134	✶ 1	J4806-134	✶ 1
37	ADJUSTMENT BUSH (New Design)	J4806-100Z01	1	J4806-100Z01	1	J4806-100Z01	1
38	SPRING ADJUSTING SCREW (Fine Thread)	J4806-128	1	J4806-128	1	J4806-128	1
39	CIRCLIP	JCIR1500-080Z	1	JCIR1500-080Z	1	JCIR1500-080Z	1
40	SEALING WASHER	J7706A-044	1	J7706A-044	1	J7706A-044	1

Note: Part numbers marked + require connection thread to be specified with order. Amal jet (Item 19) is available with a non standard jet size on request.

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J120: Loading Springs and Spares Kits
All Sizes

Spring Range		Part Number and Colour Code.		
mbar	"w.g.	¾" & 1"	1¼" & 1½"	2"
5 - 15	2.5 - 6	J4806-146 Dk. Green/ Lt Blue	J4808-102 Black / Light Blue	J4809-082 White / Dark Blue
12.5 - 25	5 - 10	J4806-004 Black	J4808-103 Black / Lt. Green	J4809-083 White / Dark Green
22.5 - 33.5	9 - 13.5	J4806-147 Dk. Green / Brown	J4808-104 Silver / Orange	N / A
31 - 41	12.5 - 16.5	J4806-006 Brown	N / A	N / A

SPARES KITS

Spares kit contents are marked ✶ on parts list

SPARES KIT CODE	SIZE
SK2006-01	¾" – 1"
SK2008-01	1¼" – 1½"
SK2009-01	2"

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J120: Maintenance Instructions

Dismantling Procedure:

1. Pull off top cap (12).
2. Turn spring adjusting screw (38) anti-clockwise (to reduce loading on spring).
3. Carefully lift protruding end of locking lever (13) just above adjusting bush (37). Whilst in this position turn (octagon shaped) adjusting bush (37) assembly anti-clockwise until disengaged. The adjusting bush (37) can then be removed from the top cover (10).
4. Remove the loading spring (25) from the top cover (10).

NOTE: If adjusting bush assembly is to be dismantled for "O" ring replacement, follow procedure. If it is to be left assembled proceed to instruction number 9.

5. Lift keyhole end of locking lever (13) over sloping peg in adjusting bush (37). Slide forward until disengaged from spring adjusting screw (38) and remove.
6. Pull spring adjusting screw (38) from adjusting bush (37).
7. Remove "O" rings (16) & (14) from spring adjusting screw (38) and adjusting bush (37) respectively.
8. Lift washer (36) from spring adjusting screw (38) and remove.
9. Remove top cover screws (8) then carefully remove top cover (10).
10. Unscrew bottom plug (1) and remove from body (2).
11. Remove "O" ring (32) from bottom plug (1).
12. Restrain valve spindle guide (3) with suitable box spanner and unscrew valve spindle (27).
13. Withdraw valve spindle guide (3) and valve disc clamping washer (4) through bottom plug opening.
14. Remove valve spindle (27).
15. Remove top diaphragm plate (28).
16. Carefully remove main diaphragm (7).
17. Remove diaphragm spacer (6).
18. Remove secondary diaphragm screws (29).
19. Carefully remove secondary diaphragm (30).
20. Remove valve spacer (5) together with valve disc (31).
21. Dismantle cut off reset valve as follows:

(If automatic reset option, go to instruction 22)

21i. Unscrew cut off spindle bush (21).
21ii. Remove “O” ring seal (18) from spindle bush (21).
21iii. Remove split ring (23) from cut off valve spindle (22).
21iv. If cut off valve disc (20) needs replacing then remove from spindle (22).
21v. Remove spindle (22) from spindle bush (21).
21vi. Remove spring (17) from valve spindle (22).
21vii. Remove “O” ring seal (24) from valve spindle (22).

22. If automatic reset, unscrew plug (34) and remove “O” ring (18).
23. If amal jet (19) needs replacing then remove from body (2).
24. Check hole in impulse tube (33) is clear. DO NOT REMOVE FROM BODY.
25. Wipe valve seat and body clean of any dirt particles, taking care not to damage sealing surface in body.
26. Inspect all diaphragms and soft seals and replace where necessary (a spares kit is available for this purpose).

Rebuilding procedure:

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

1. Assemble cut off reset valve as follows:-
   (If automatic reset option, go to instruction 2).

1i. Slide “O” ring seal (24) over cut off valve spindle (22) into “O” ring groove.
1ii. Slide “O” ring seal (18) over spindle bush (21) into “O” ring groove.
1iii. Slide spring (17) over valve spindle (22).
1iv. If cut off disc (20) has been removed, then push replacement into valve spindle (22) (larger diameter goes in first).
1v. Push valve spindle (22) assembly (small diameter leading) through counter bore of spindle bush (21).
1vi. Insert split ring (23) through hole in exposed end of valve spindle (22).

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J120: Maintenance Instructions

Rebuilding procedure continued:

2. Screw amal jet (19) into body (2) (if it has been removed).
3. Screw spindle bush assembly (21) into body (2), or plug (34) if automatic reset.
4. Assemble valve disc (31) onto valve spacer (5) with bead uppermost.
5. Locate through top of body (2), valve spacer assembly (5) onto valve seat.
6. Place secondary diaphragm (30) with convolution uppermost onto body (2). Ensure screw holes and impulse tube holes are aligned correctly.
7. Secure secondary diaphragm (30) in position using screws (29).
8. Place diaphragm spacer (6) on secondary diaphragm (30) ensuring diaphragm bead is located correctly in the groove.
9. Place main diaphragm (7) with convolution uppermost, ensuring that the bead is located in the groove in body (2).
10. Locate top diaphragm plate (28) ensuring raised edge is uppermost.
11. Insert the valve spindle (27) through the centre hole in top diaphragm plate (28), main diaphragm (7) and diaphragm spacer (6).
12. Locate valve disc clamping washer (4) onto valve spindle (27) through bottom plug opening, with flat side first.
13. Screw valve spindle guide (3) onto threaded end of valve spindle (27) through bottom plug opening.
14. Restrain valve spindle guide (3) with suitable box spanner and tighten valve spindle (27).
15. Place "O" ring seal (32) into "O" ring seal groove in bottom plug (1).
16. Replace bottom plug (1) complete with "O" ring, over centre shaft of valve spindle guide (3) into body (2) and screw tightly in position.
17. Carefully replace top cover (10) on to body (2) with vent facing the outlet and secure with top cover screws (8).
18. Insert loading spring (25) over spring location ridge in top diaphragm plate (28).
19. NOTE: If adjusting bush assembly (37) has been dismantled follow procedure, if it has been left assembled then proceed to instruction number 24.
20. Slide "O" ring seal (16) over slotted end of spring adjusting screw (38) into second groove. (i.e. groove nearest thread).
21. Replace washer (36) over slotted end of spring adjusting screw (38) and slide down until it sits on shoulder of adjusting screw.
22. Slide "O" ring seal (14) into "O" ring groove on adjusting bush (37).
23. Push spring adjusting screw (38) into hole in bottom of adjusting bush (37) until parts are firmly together.
24. Position key hole slot in locking lever (13) over slotted end of spring adjusting screw (38) and slide over slopping peg in adjusting bush (37) until firmly locked in position.
25. Screw top spring holder (35) anti-clockwise to within 10mm of underside of adjusting bush (37).
26. Position underside of top spring holder (35) on to loading spring (25).
27. Align slots in top spring holder (35) with splines in top cover (10) and push adjusting bush (37) assembly into top cover (10) as far as possible.
28. Turn adjusting bush assembly (37) clockwise until locking lever (13) snaps into any of the three locking castellations in top cover (10).
29. Replace top cap (12) by aligning slot in cap with sealing wire lug and push over until it clicks into position, and seal if necessary.

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Honeywell is committed to a programme of continuous quality enhancement. All equipment designed and manufactured within the Honeywell Group benefits from the groups 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.

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