

This spare part must only be installed by a qualified service engineer. Only original Vaillant spare parts must be used.

NOTE:

If converting appliance from natural gas or town gas to L. P. G. then operator must be changed along with operating nipple (5, fig. 1) and throttle jet in burner spigot. (Contact Vaillant Ltd. for further details).

Changing the operator

1. Switch off the main electricity supply and disconnect the plug at the main isolating switch and socket.
(If a switch is used, remove the fuse).
2. Turn off the gas supply at the gas service cock.
3. If appliance is open flued, remove burner tray (2, fig. 2) by slackening screws (1, fig. 2).
4. Unscrew retaining bolt (3, fig. 1) and move control line (4a) to one side.
5. Unscrew operator jet (5, fig. 1) and screw into the new spare operator.
(See note above).
6. Unscrew union nut (6, fig. 1) and move control line (6a) to one side.
7. Pull off two cable connectors (19, fig. 1).
8. Unscrew four retaining screws (9, fig. 1).
(Do not slacken the two central screws).
9. Pull out the complete operator (14, fig. 1) towards the front, together with the gasket situated behind.
10. Reassemble in reverse order using a new gasket but at this stage **do not** refit retaining bolt (3, fig. 1) and control line (4a) or union nut (6, fig. 1) and control line (6a).

11. Check for gas soundness.
12. Set ignition burner pressure and maximum burner pressure as described on page 5 according to the data given in either the appliance installation and servicing instructions or Table 1 or 2 in these instructions.

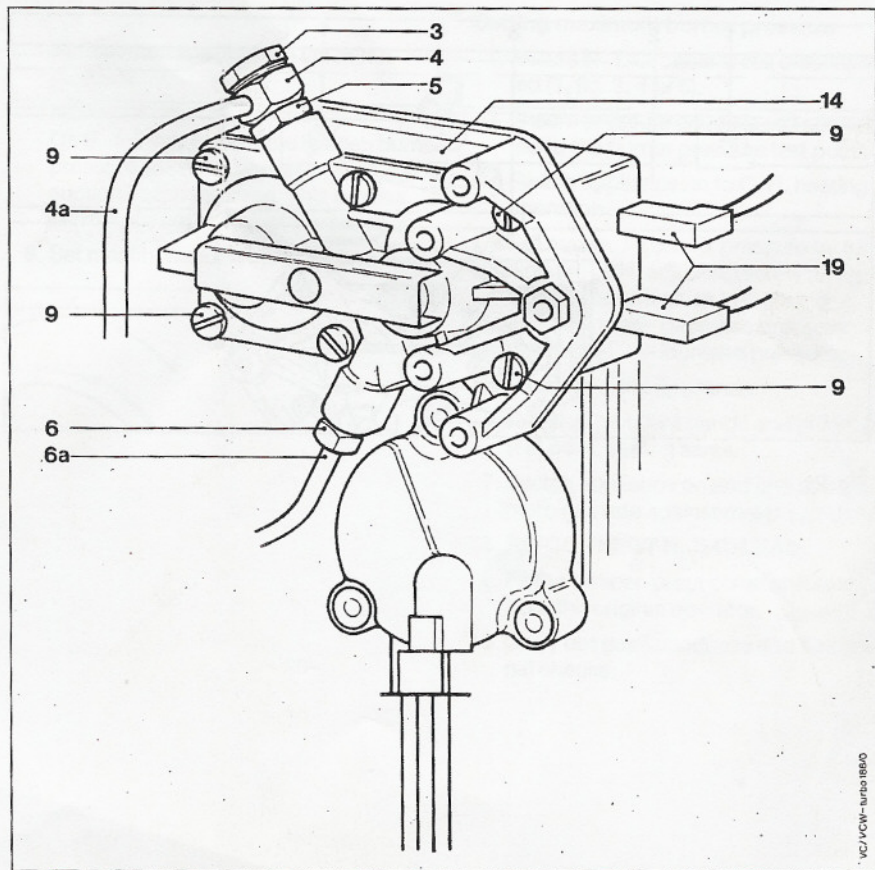
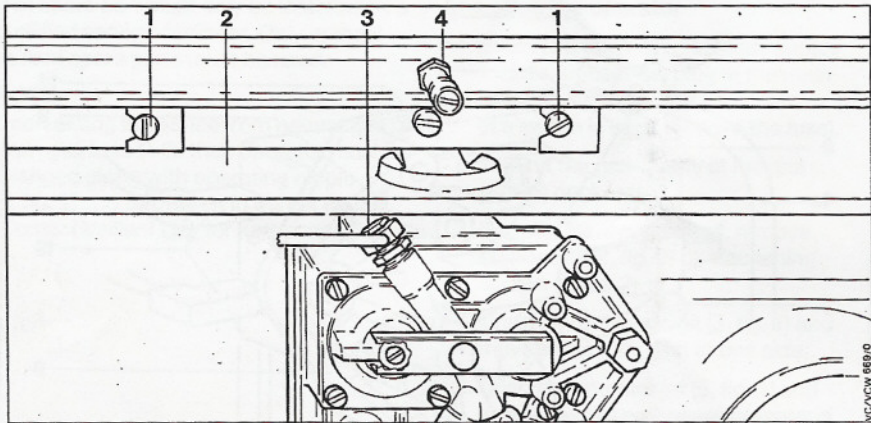


Fig. 1



UC/UCW 669/0

Fig. 2

Setting ignition burner pressure.

1. Ensure control lines 4a and 6a are disconnected, (Fig. 1).
2. VC appliances: Disconnect the clear NTC cable either at the NTC itself (1, fig. 5) or, where fitted, at the in-line cable connector (1, fig. 3). On VCW appliances disconnect the lead at the D. H. W. limit stat. (fig. 4) ensuring that the two joined leads (1 and 2, fig. 4) are separated from one another.
3. Connect a pressure gauge to the burner pressure test point (after slackening the sealing screw).
(2, fig. 3) – VC/VCW GB 221, 182 E, 242 E, 282 E
(4, fig. 2) –
VC/VCW GB 110, 180, 240, 280
(2, fig. 5) – VC GB 112 E, 142 E
4. Start up the appliance as described in the Lighting Instructions and switch on C. H. heating operation.
5. Set ignition burner pressure by turning the L. H. adjusting screw (4, fig. 3) to the pressure given in table 1 or 2.
anticlockwise – decrease pressure
clockwise – increase pressure
6. Shut down the appliance.
7. Refit control line (4a) and retaining bolt (3, fig. 1).

Refit control line (6a) and union nut (6, fig. 1).

NOTE:

On R. S. F. appliances the ignition burner pressure will now drop as a result of the suction inside the case. This is quite normal, do not re-adjust the pressure.

8. Set maximum burner pressure.

Setting maximum burner pressure

1. Ensure N. T. C. cable is still disconnected (1, fig. 3, 4 or 5).
2. Ensure pressure gauge is still connected to the burner pressure test point.
3. Switch appliance on to C. H. heating operation.
4. Set maximum burner pressure by turning the R. H. adjusting screw (5, fig. 3) to the pressure given in table 1 or 2.
anticlockwise – decrease pressure
clockwise – increase pressure.
5. Shut down the appliance.
6. Remove pressure gauge and retighten test point sealing screw.
7. Switch appliance on and check maximum gas rate against meter test dial.
8. **RE-CONNECT N. T. C. LEAD**
9. Fit the tamper-proof cover and seal from the original operator.
10. Carry out gas soundness and functional checks.

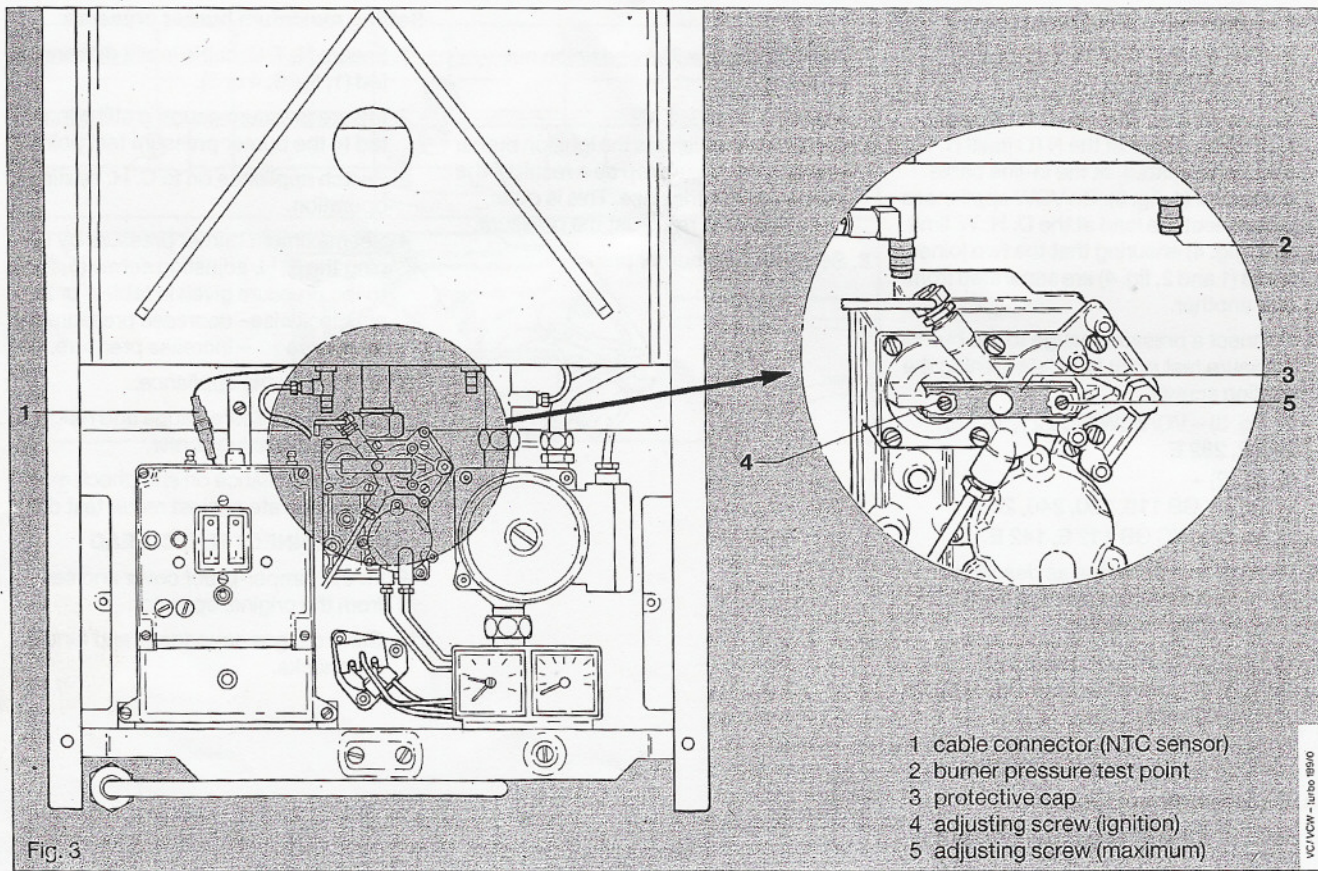
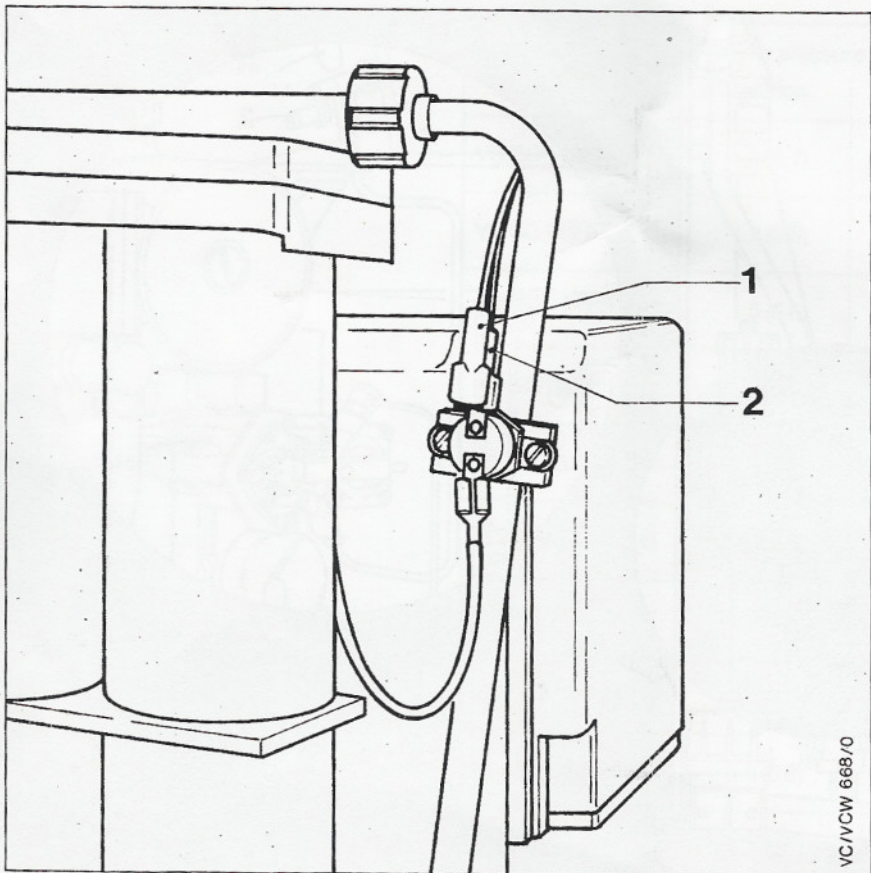


Fig. 3



VC/VCW 668/0

Fig. 4

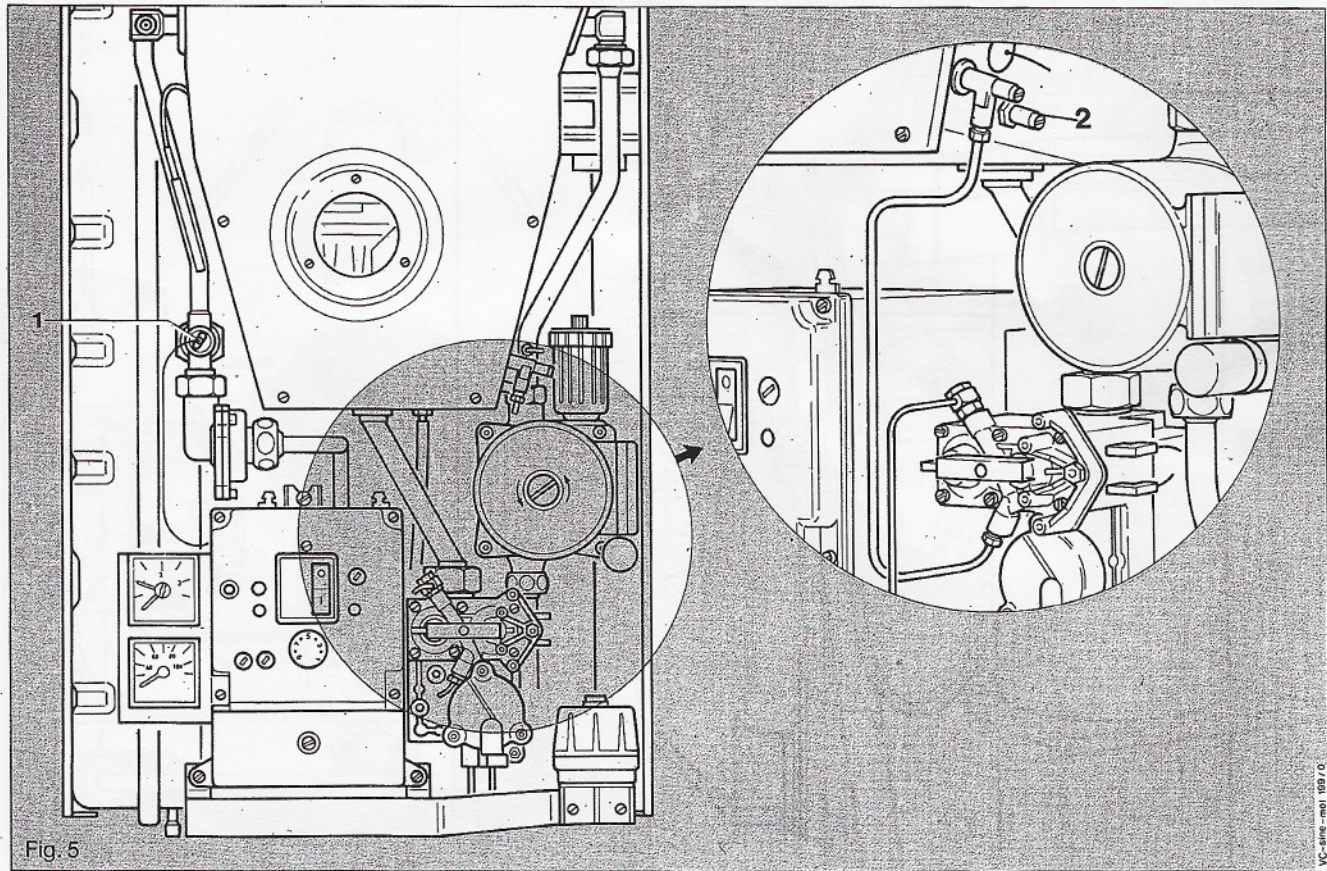


Fig. 5

Table 1 (natural gas G 20)
at 20 mbar inlet pressure

Appliance	Burner pressure mbar (in WG)		Maximum gas rate	
	Ignition	Maximum	m ³ /h	ft ³ /min.
VC GB 110 H	1.8 (0.7)	6.3 (2.5)	1.29	0.76
VC GB 112 EH	1.9 (0.8)	8.2 (3.3)	1.24	0.73
VC GB 142 EH	1.5 (0.6)	8.0 (3.2)	1.70	1.00
VC GB 180 H	1.3 (0.5)	4.6 (1.8)	2.19	1.29
VC GB 182 EH	0.6 (0.2)	4.9 (1.9)	2.11	1.24
VC/VCW GB 221 H	1.6 (0.6)	6.0 (2.4)	2.60	1.53
VC/VCW GB 240 H	1.3 (0.5)	4.8 (1.9)	2.97	1.75
VC/VCW GB 242 EH	1.5 (0.6)	5.1 (2.0)	2.82	1.66
VC/VCW GB 282 EH	0.6 (0.2)	6.8 (2.7)	3.33	1.96
VCW GB 280 H	1.3 (0.5)	5.8 (2.3)	3.37	1.98

Table 2 (LPG G 30 / G 31)

at inlet pressures:

28 mbar G 30

37 mbar G 31

Appliance	Burner pressure mbar (in WG)		Maximum gas rate	
	Ignition	Maximum	m ³ /h	ft ³ /min.
VC GB 110	G 30: 3.0(1.2)	20.5(8.1)	0.39	0.23
	G 31: 3.0(1.2)	27.0(10.6)	0.51	0.30
VC GB 112 E	G 30: 4.0(1.6)	20.0(7.9)	0.37	0.22
	G 31: 4.0(1.6)	26.0(10.2)	0.49	0.29
VC GB 142 E	G 30: 4.0(1.6)	25.5(10.2)	0.51	0.30
	G 31: 5.3(2.1)	33.2(13.3)	0.66	0.39
VC GB 180	G 30: 3.3(1.3)	16.0(6.3)	0.66	0.39
	G 31: 3.3(1.3)	21.0(8.3)	0.86	0.51
VC GB 182 E	G 30: 3.0(1.2)	16.0(6.3)	0.63	0.37
	G 31: 3.0(1.2)	21.0(8.3)	0.83	0.49
VC/VCW GB 221	G 30: 2.9(1.1)	15.1(5.9)	0.78	0.46
	G 31: 2.9(1.1)	20.0(7.9)	1.03	0.60
VC/VCW GB 240	G 30: 2.6(1.0)	16.5(6.5)	0.89	0.52
	G 31: 2.6(1.0)	22.0(8.7)	1.17	0.69
VC/VCW GB 242 E	G 30: 4.4(1.7)	17.5(6.9)	0.84	0.50
	G 31: 4.4(1.7)	23.0(9.1)	1.11	0.65
VC/VCW GB 282 E	G 30: 5.0(2.0)	18.8(7.5)	1.00	0.59
	G 31: 4.6(1.8)	24.0(9.5)	1.31	0.77
VCW GB 280	G 30: 2.2(0.8)	20.0(7.9)	1.01	0.59
	G 31: 2.2(0.8)	26.0(10.2)	1.33	0.78