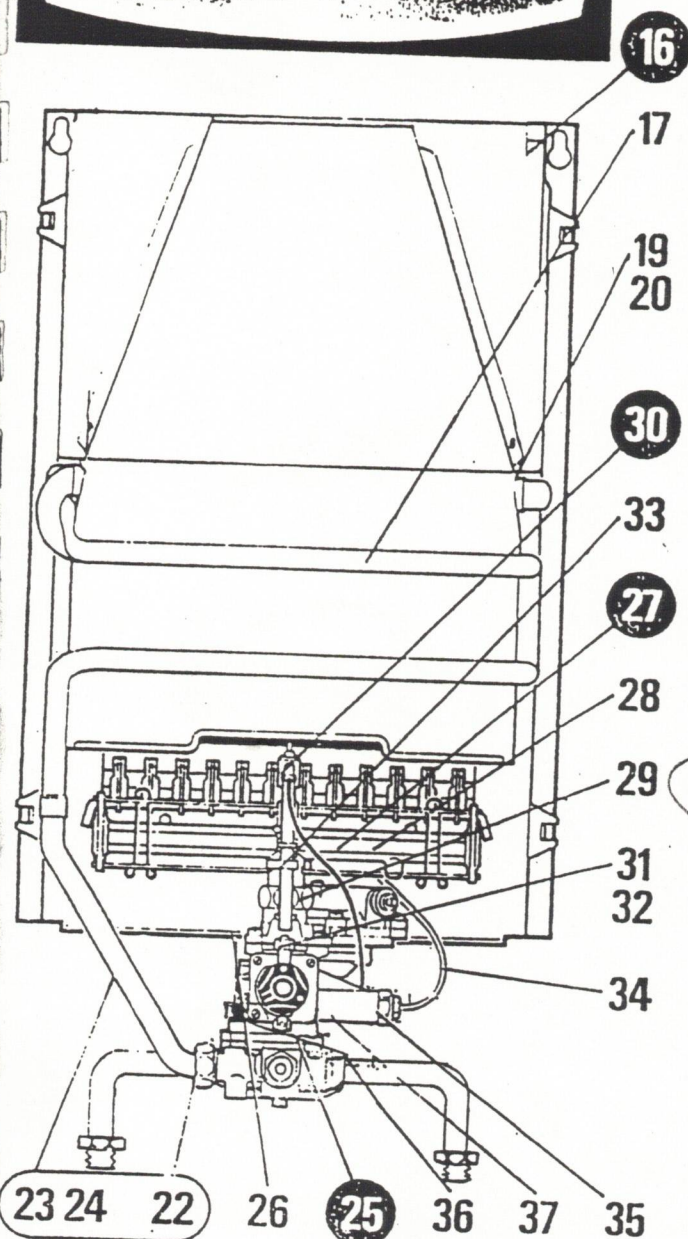


Instant gas hot water system



- 16 BACKPLATE ASSEMBLY
- 17 Heat exchanger (PR is low pressure)
- 19 Primary flue ducting
- 20 Fixing screw ducting
- 22 Heat exchanger connection
- 23 Cold water pipe
- 24 Hot water pipe
- 25 MECHANISM ASSEMBLY (water/gas)
- 26 Mechanism holding self tapper
- 27 BURNER ASSEMBLY
- 28 Burner injectors (nozzels or jets)
(1.20 for NG; 0.8 for LPG)
- 29 3/4" Nut manifold connection
- 30 PILOT LIGHT ASSEMBLY
- 31 Pilot light injector (nozzel or jets)
(0.32 for NG: 0.18 for LPG)
- 32 Pilot light injector locknut
- 33 Pilot light tube clip
- 34 Thermocouple
- 35 Magnetic coil
- 36 Piezo - electric ignitor
- 37 Ignitor bracket

WATER MECHANISM

94 WATER VALVE ASSEMBLY (mains pressure)

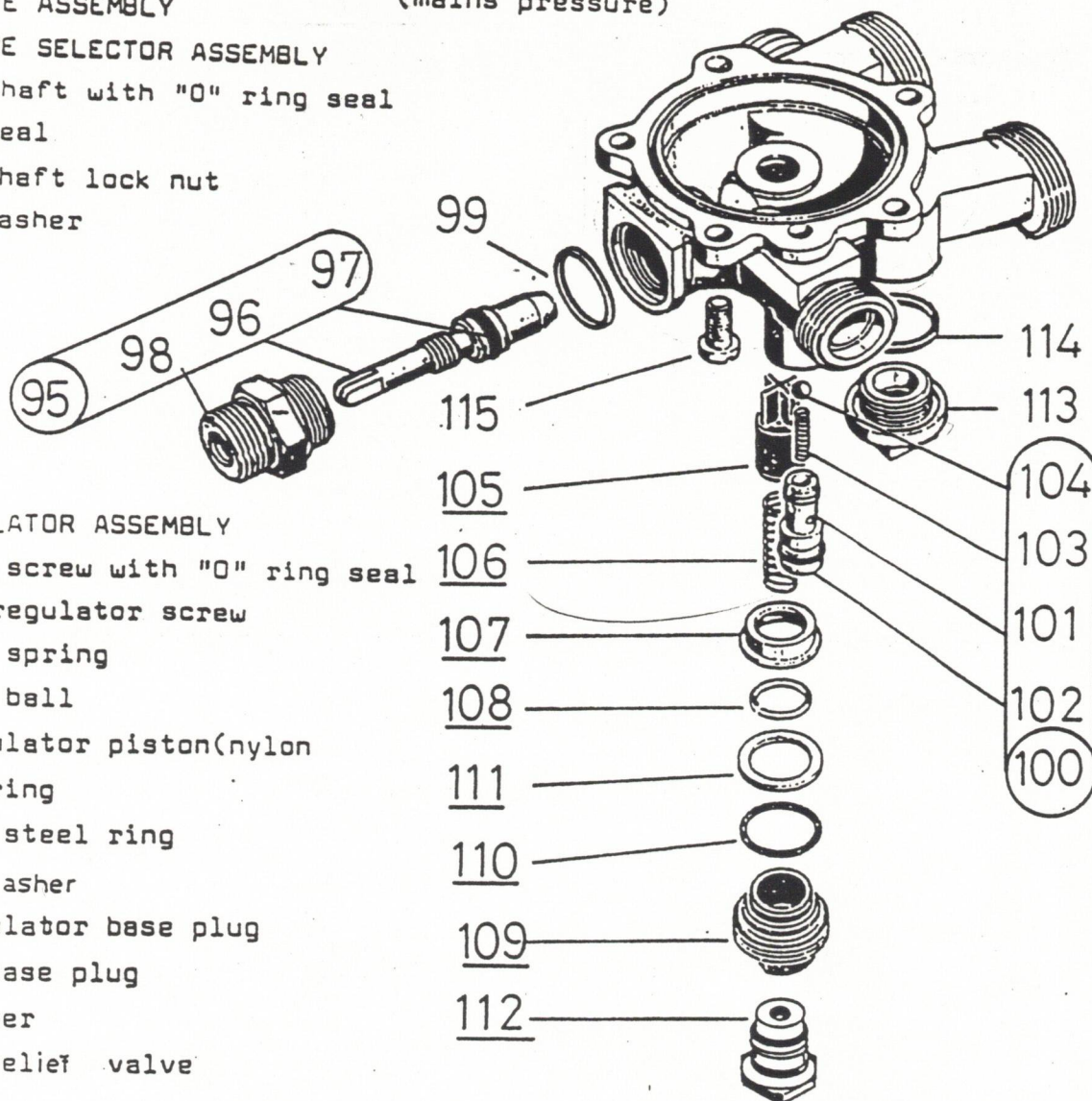
95 TEMPERATURE SELECTOR ASSEMBLY

96 Selector shaft with "O" ring seal

97 "O" ring seal

98 Selector shaft lock nut

99 Lock nut washer



100 BALL REGULATOR ASSEMBLY

101 Regulator screw with "O" ring seal

102 "O" ring regulator screw

103 Regulator spring

104 Regulator ball

105 Water regulator piston (nylon)

106 Piston spring

107 Stainless steel ring

108 Floating washer

109 Water regulator base plug

110 "O" ring base plug

111 Brass washer

112 Pressure relief valve

113 Plug

114 Plug washer

115 Water valve body retaining screws

WATER MECHANISM

(low pressure)

118 Low pressure value body plug

99 Plug washer

109 Water regulator base plug

110 "O" ring base plug

111 Brass washer

112 Pressure relief valve

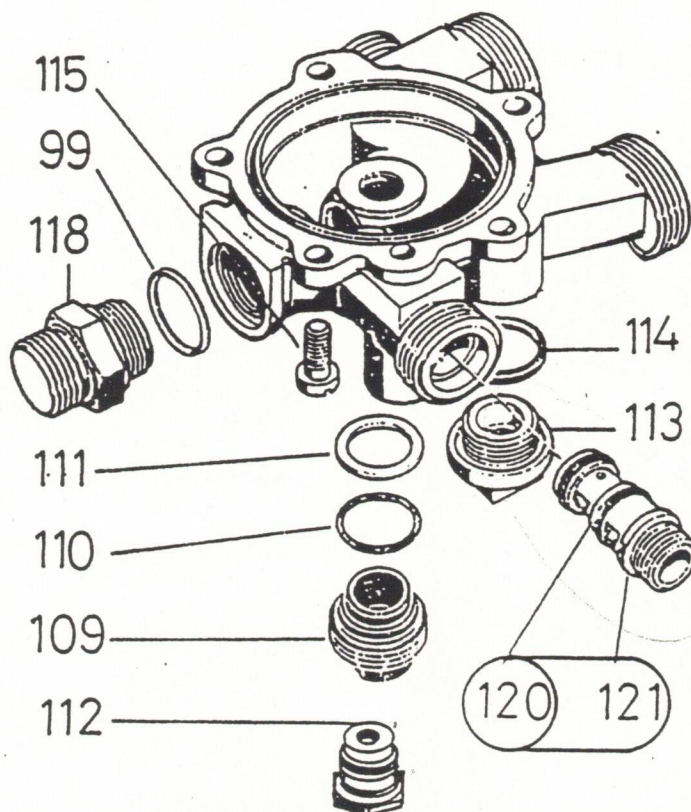
113 Plug

114 Plug washer

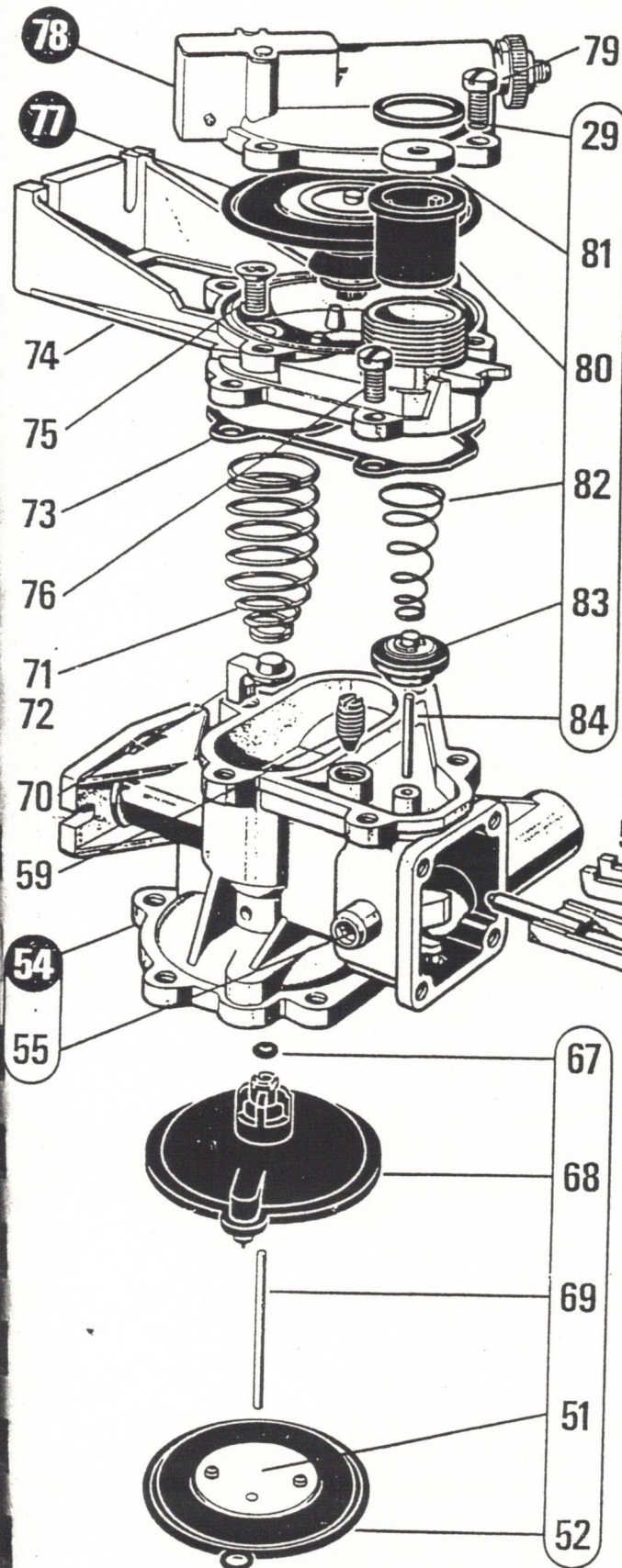
120 Venturi with 2 "O" rings

121 "O" rings

115 Water valve body retaining screws



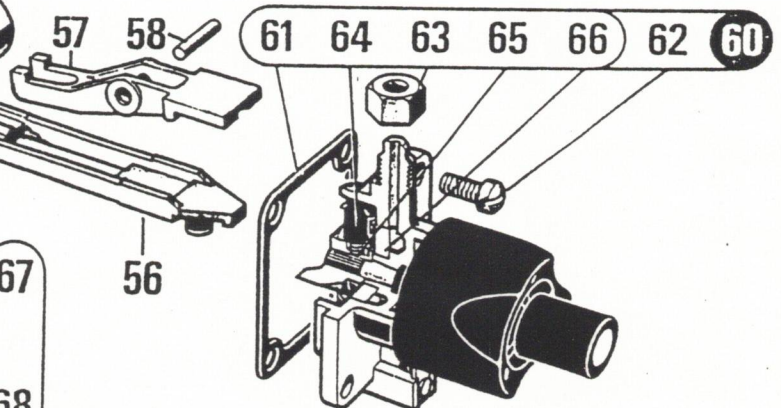
GAS MECHANISM



- 51 Thrust disc
- 52 Water diaphragm
- 55 Inlet pressure test nipple screw
- 56 Gas valve slide
- 57 Gas valve rocker arm
- 58 Rocker arm shaft
- 59 Rocker arm shaft shaft fixing screw

60 GAS CONTROL ASSEMBLY

- 61 Cork gas control seal
- 62 Fixing screw gas control (4)
- 63 Pilot light injector lock nut
- 64 Position indicator
- 65 Indicator spring
- 66 Pilot light filter
- 67 "O" ring gas mechanism
- 68 Nylon diaphragm seal
- 69 Thrust pin; spindle
- 70 Spring bearer saddle
- 71 Main spring PN
- 72 Main spring PR (low pressure)
- 73 Gas chamber seal (regulator type)
- 74 Gas mechanism bracket
- 75 Retaining screw inside
- 76 Retaining screw gas chamber

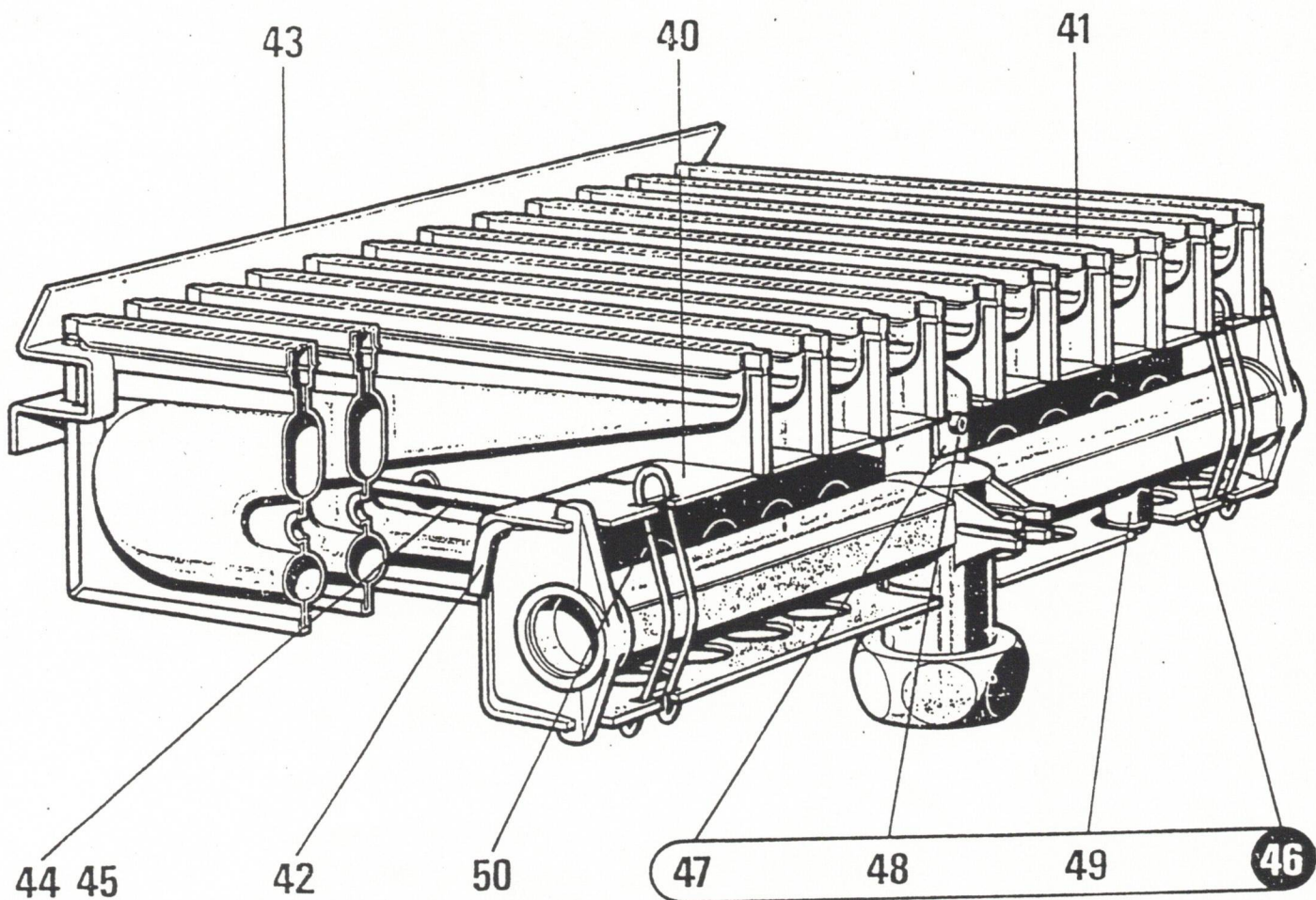


77 REGULATOR ASSEMBLY

78 REGULATOR COVER ASSEMBLY

- 79 Regulator cover retaining screw
- 80 Gas valve seat
- 82 Gas valve spring
- 83 Secondary gas valve
- 84 Gas valve thrust pin; spindle
- 125 Inlet gas valve NG
- 127 Inlet gas valve seal
- 128 Inlet gas valve screw

BURNER



27 BURNER ASSEMBLY

- 40 Front bracket
- 41 Burner head
- 42 Burner head locking pin
- 43 Back bracket deflector
- 44 Tie Rod
- 45 Tie rod nut

46 MANIFOLD ASSEMBLY

- 47 Thermocouple bracket
- 48 Bracket screw
- 49 Pressure test nipple crew
- 50 Manifold spring clip

TROUBLE SHOOTING SD210 GAS HEATER

<u>SYMPTON</u>	<u>POSSIBLE CAUSE</u>	<u>SOLUTION</u>
Read "Operating Instructions" first.		
Manometer not holding, testing pipework	(a) control knob in red position (b) faulty heater gas connection (c) dirt on inlet gas valve seating	turn gas control knob "off" position. check with soapy solution and fix. call EVERDURE or dismantle gas valve, clean and refit.
Pilot will not light	(a) no gas (b) pilot cap blocked (c) piezo does not click (d) no spark	fix manometer to inlet gas pressure test nipple, after taking out screw and check gas meter. clean pilot cap and refit (LPG = 0.18; NG = 0.28) replace or light pilot with match. free ignition wire if touching metal and make sure wire is dry. Check spark cap.
Pilot light not holding (after step 6 operating instructions)	(a) thermocouple not hot enough (b) thermocouple faulty (c) solenoid faulty (d) inside mechanism not in alignment	ignite again and make sure pilot flame is "flooding" thermocouple. replace. remove gas control knob and check with cigarette lighter if not holding, replace. check by turning red flame to the right, while proceeding with step 6. proceed to step 6.
Main burner will not ignite	(a) gas control knob in position step 2. (b) flow of water not enough (c) slow ignition device (venturi) blocked (d) diaphragm dislocated or punctured	check with 10 litre bucket to fill in less than 3 minutes. clean out and refit, leaving 1 free turn. replace diaphragm.
Main burner stays on (with no flow)	Diaphragm does not return because of:- (a) blocked slow ignition device (b) dirty water regulator gas valve does not return because of: i) dirt on seat ii) missing push rod	clean and refit. clean and refit. clean out gas valve. inspect.
Water flow too high	(a) water control knob fully open (b) ball missing from slow ignition device (c) Hole in diaphragm (d) Water regulator parts incorrectly assembled	turn knob clockwise. replace ball. replace diaphragm. reassemble parts in correct order.

MAINTENANCE SCHEDULE

RECOMMENDED ROUTINE MAINTENANCE

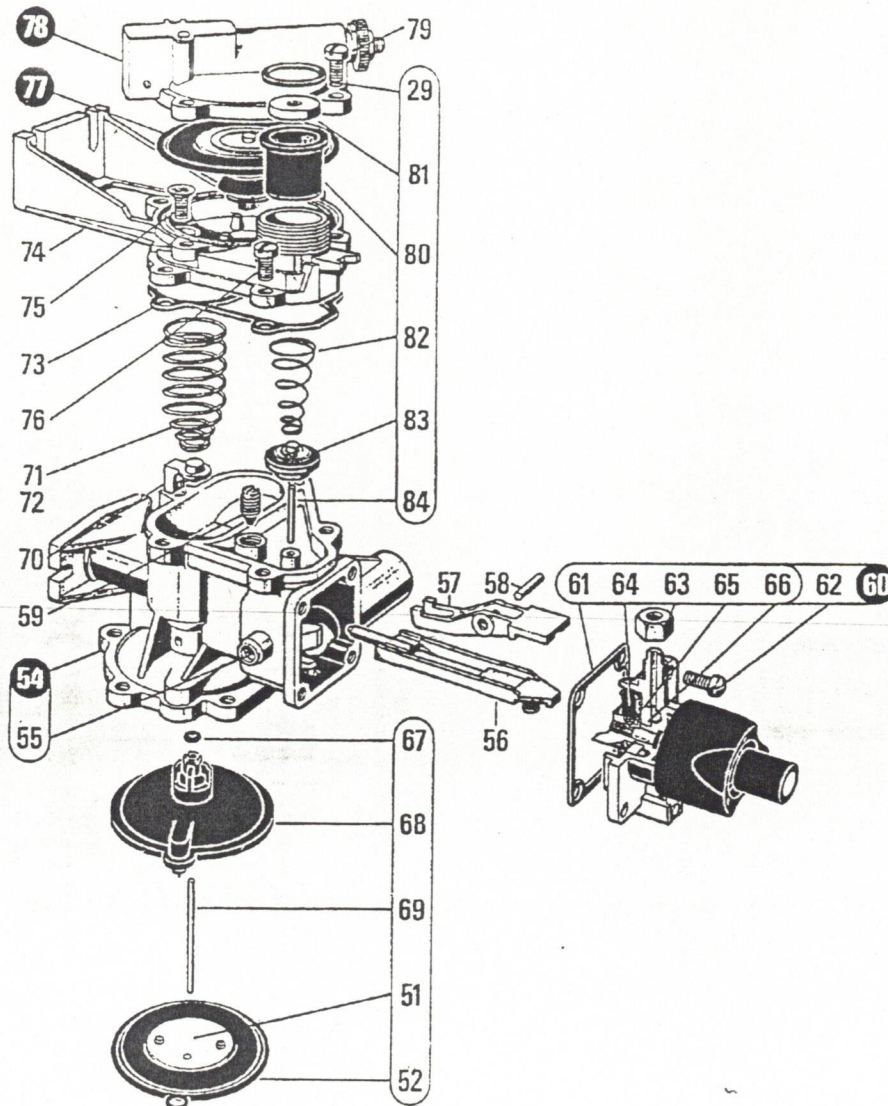
To ensure long trouble free service from your water heater, it is recommended the following routine service to be carried out, bi-annually.

BY AN AUTHORISED SERVICE AGENT :

- (a) Clean burner and pilot light and heat exchanger.
- (b) Replace diaphragm (complete with plastic cap, pin and "O" ring).
- (c) Clean or replace slow ignition device (venturi) (3 parts, screw, spring and ball).
- (d) Clean or replace inlet pipe filter.
- (e) Check burner gas valve and replace if gas valve is not one part.
Also replace thrust pin with teflon coated pin which is shorter.
- (f) Check piezo ignitor.
- (g) Check inlet gas pressure.
N.G. 1.25 Kpa
L.P.G. 2.75 Kpa
- (h) Pressure test internal gas mechanism.

SKYLINER SD210

MAINTENANCE Contd



- | | |
|--------------------------------------|---------------------------------------|
| 51. Thrust disc | 70. Spring bearer saddle |
| 52. Water diaphragm | 71. Main spring PN |
| 55. Inlet pressure test nipple screw | 72. Main spring PR (low pressure) |
| 56. Gas valve slide | 73. Gas chamber seal (regulator type) |
| 57. Gas valve rocker arm | 74. Gas mechanism bracket |
| 58. Rocker arm shaft | 75. Retaining screw (inside) |
| 59. Rocker arm shaft fixing screw | 76. Retaining screw gas chamber |
| 60. GAS CONTROL ASSEMBLY | 77. REGULATOR ASSEMBLY |
| 61. Cork gas control seal | 78. REGULATOR COVER ASSEMBLY |
| 62. Fixing screw gas control (4) | 79. Regulator cover retaining screw |
| 63. Pilot injector lock nut | 80. Gas valve seat |
| 64. Position indicator | 82. Gas valve spring |
| 65. Indicator spring | 83. Secondary gas valve |
| 66. Pilot filter | 84. Gas valve thrust pin spindle |
| 67. "O" ring gas mechanism | |
| 68. Nylon diaphragm seal | |
| 69. Thrust pin spindle | |

Fig. 4 EXPLODED VIEW OF GAS CONTROL

SKYLINER SD210

MAINTENANCE Contd

MAINS PRESSURE WATER SECTION

- 95. TEMPERATURE SELECTOR ASSEMBLY
- 96. Selector shaft with "O" ring seal
- 97. "O" ring seal
- 98. Selector shaft lock nut
- 99. Lock nut washer

- 100. SLOW LIGHT (VENTURI) ASSEMBLY
- 101. Slow light screw with "O" ring seal
- 102. Slow light adjustment screw
- 103. Slow light spring
- 104. Slow light ball bearing.

- 105. Water regulator piston (nylon)
- 106. Piston spring
- 107. Stainless steel ring
- 108. Floating washer
- 109. Water regulator base plug
- 110. "O" ring base plug

- 111. Brass washer
- 112. Pressure relief valve
- 113. Plug
- 114. Plug washer
- 115. Water valve body retaining screws

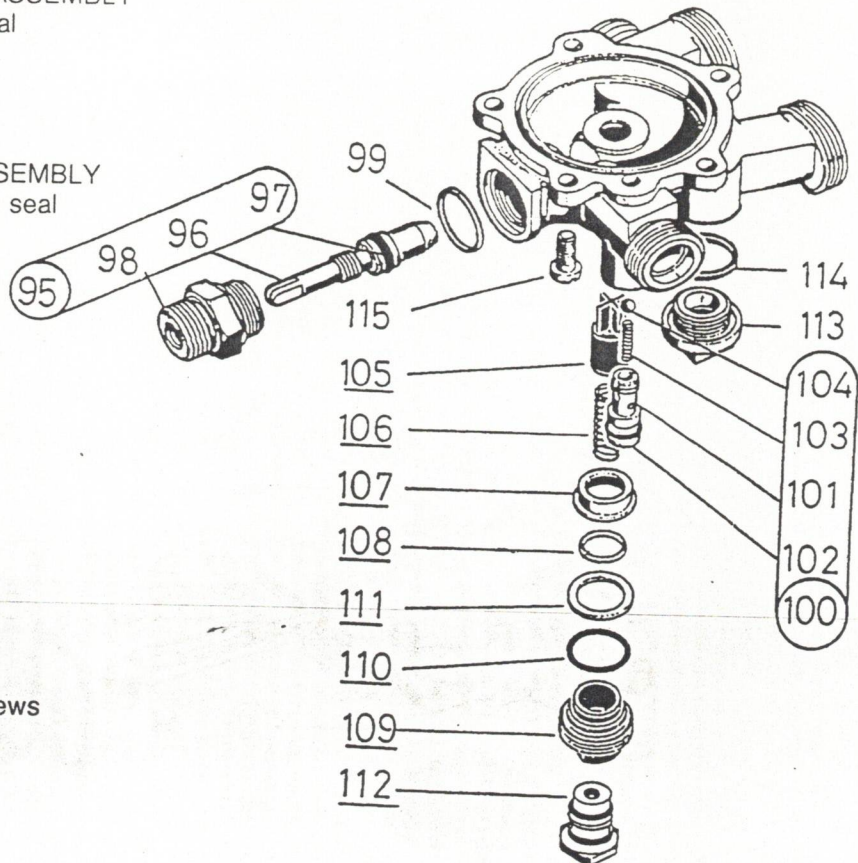


Fig. 5 EXPLODED VIEW OF MAINS PRESSURE WATER SECTION

LOW PRESSURE WATER SECTION

- 118. Low pressure valve body plug
- 99. Plug washer
- 109. Water regulator base plug
- 110. "O" ring base plug
- 111. Brass washer
- 112. Pressure relief valve

- 113. Plug
- 114. Plug washer
- 120. Venturi with two "O" rings
- 121. "O" rings
- 115. Water valve body retaining screws

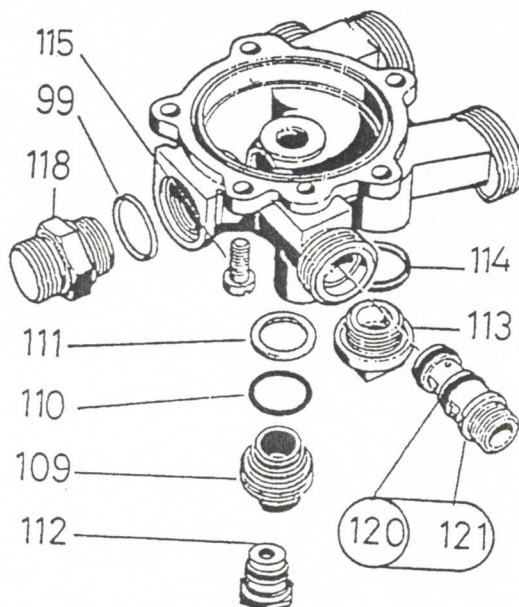
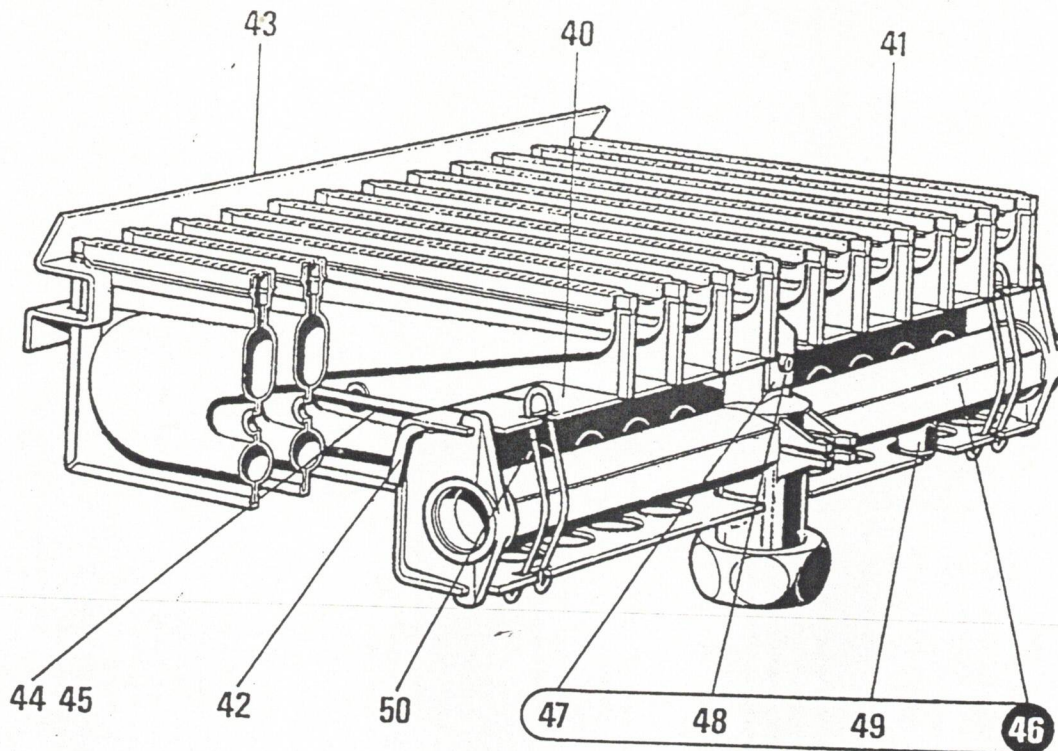


Fig. 6 EXPLODED VIEW OF LOW PRESSURE WATER SECTION

ON COMPLETION OF WORK TEST FOR GAS ESCAPES

SKYLINER SD210

MAINTENANCE Contd

**BURNER ASSEMBLY**

- 40. Front bracket
- 41. Burner head
- 42. Burner head locking pin
- 43. Back bracket deflector
- 44. Tie rod
- 45. Tie rod nut

46. MANIFOLD ASSEMBLY

- 47. Thermocouple bracket
- 48. Bracket screw
- 49. Pressure test nipple screw
- 50. Manifold spring clip

Fig. 7 EXPLODED VIEW OF BURNER/MANIFOLD ASSEMBLY

INSTALLATION

THE APPLIANCE SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS INSTRUCTIONS AND ALL RELEVANT STATUTORY REGULATIONS AND CODES OF PRACTICE.

GAS CONNECTION

$\frac{1}{2}$ " BSP male thread. A gas cock is required.

the cold water inlet.

HOT AND COLD WATER CONNECTIONS

$\frac{1}{2}$ " BSP male thread. A gate valve must be fitted to

FLUE

115 mm diameter flue is required for internal models.

CONVERSION

THE APPLIANCE SHALL ONLY BE CONVERTED TO A GAS FOR WHICH IT HAS BEEN APPROVED

LP(P) TO NG

1. Replace injectors - main burner and pilot.
2. Adjust regulator pressure by turning the

knurled wheel on the gas control counter clockwise.

3. Alter/change data plate.

SKYLINER SD210

REPLACEMENT PARTS

NO.	DESCRIPTION	PART NO.	QTY	CAT. NO.
	Water diaphragm set (diaphragm, thrust disc, water section thrust pin, nylon diaphragm seal, "O" ring)	G94	1	
	Slow light assembly (Slow light ball bearing, spring, adjustment screw)	G88A	1	
	Nylon gas valve assembly and thrust pin	G88E	1	
	Inlet gas valve	G98	1	
	Thermocouple lead	95	1	
	Magnetic unit	G88F	1	
	Piezo ignitor	G96A	1	
	Gas control knob assembly	G97	1	
	Heat exchanger	SD95	1	

Manufacturer Everdure Pty Ltd	Appliance Name/Model Skyliner SD210
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DESCRIPTION

Multipoint instantaneous water heater with piezo ignition and thermoelectric flame failure detection device. Internal and external models available.

TECHNICAL DATA

MASS (kg) Approx. 19

DIMENSIONS (mm)

	Width	Height	Depth
External model	350	920	280
Internal model	340	720	265

DATA PLATE LOCATION

On the back of the hinged lower front panel.

GAS RATE (MJ/h)

NG	LP(P)
75	75

INJECTOR ORIFICE (mm)

Main burner	1.35	0.77
Pilot	0.28	0.18

BURNER PRESSURE (Pa)

650	2500
-----	------

TEST POINT LOCATION**Inlet pressure**

Located on the LH side of the gas control.

Burner pressure

Located on the RH side of the burner manifold.

GAS CONTROL

Saunier Duval gas control.

REGULATOR

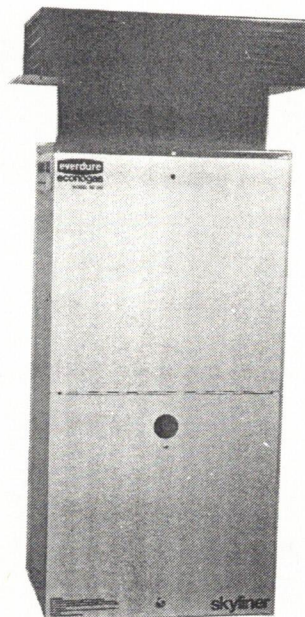
Incorporated in the Saunier Duval gas control. Adjustable from 400 Pa to 3500 Pa. For LP(P), the regulator is fully opened by turning the knurled wheel clockwise.

BURNERS

Ten pressed aluminised steel burner venturis with stainless steel burner heads.

IGNITION

Manual piezo ignition lighting a permanent pilot burner.



External model

AGA Approval No. 4345-001 External unit. 4352-001 Internal unit.	Approved for NG, LP(P)
--	---------------------------

FLAME SAFEGUARD

Thermoelectric flame failure detection system incorporated in the gas control.

WATER SECTION

Saunier Duval, mains pressure and low pressure models.

PRESSURE RELIEF VALVE

Fitted at the bottom of the water flow regulator, preset at 1400 kPa.

WATER FILTER

Mesh filter seated in the cold water inlet to the water section.

WATER FLOW AND SUBSEQUENT TEMP. RISE

10 L/min with 25°C temperature rise.
5 L/min with 50°C temperature rise.

INLET WATER PRESSURE (kPa)

Minimum - 70.
Maximum - 1000.

SKYLINER SD210

OPERATION

LIGHTING INSTRUCTIONS

1. Turn the gas control knob until the red flame symbol is at the top.
2. Depress the centre knob fully in and then release. The knob will return to the half way position and gas will flow to the pilot burner. Refer Fig. 1.
3. Wait for approx. 20 seconds.
4. Press piezo igniter and ignite the pilot.
5. Wait 15 secs for the thermocouple to heat up.
6. Press the centre knob all the way in and release. The knob will return all the way out.
7. The unit is ready to operate.

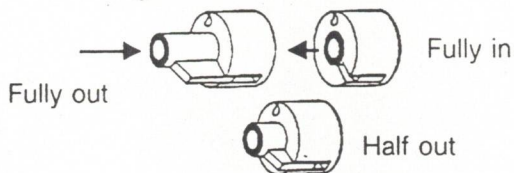


Fig. 1. GAS CONTROL KNOB

TO TURN THE HEATER OFF

1. Turn the gas control knob until the white dot is at the top. The pilot will extinguish and the flame safeguard system will operate.

MAINTENANCE

ENSURE THE APPLIANCE IS ELECTRICALLY SAFE AT ALL TIMES

BURNER REMOVAL

1. Isolate the gas supply.
2. Disconnect piezo ignition lead.
3. Disconnect the thermocouple lead.
4. Remove the pilot feed tube and electrode by unclipping the circlip.
5. Disconnect and remove burner.

GAS/WATER SECTION REMOVAL

1. Isolate the gas and water supplies.
2. Remove the burner.
3. Disconnect the four water connections on the water section (cold inlet, hot outlet and the two heat exchanger side arms).
4. Remove two flange screws from the inlet gas valve located behind the gas section.
5. Loosen the two philips head screws from the rear securing bracket attached to the gas section.
6. Lower the gas/water sections and remove.

NOTES: To dismantle the water/gas sections, refer to exploded views Figs 4/5/6.

The manufacturer recommends that the diaphragm, nylon diaphragm seal, thrust pin and "O" ring be replaced biannually.

The heaters are produced with either the gas valve assy shown in Fig. 4 (item no's. 80/ 81/82/83/84), or the nylon gas valve assembly shown in Fig. 3. Replace with the same type.

CAUTION:

A ball bearing sits on top of the slow light valve (venturi) in the water section. Take care not to misplace it whilst servicing the water section. Refer Fig. 2.

HEAT EXCHANGER REMOVAL

1. Isolate the gas and water supplies.
2. Remove the burner assembly.
3. Disconnect the heat exchanger side arm connections on the water section.
4. Remove the front casing - five screws.
5. Pull the heat exchanger down, towards the front of the appliance and remove.

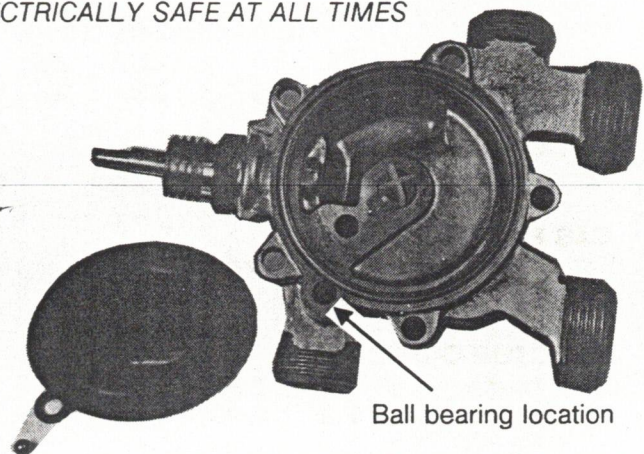


Fig. 2. BALL BEARING, DIAPHRAGM AND WATER SECTION

THRUST PIN LUBRICATION

1. Isolate the gas and water supply.
2. Remove the burner.
3. Remove the nylon gas valve assembly.
4. Using pointy nosed pliers, remove the thrust pin and lightly grease. Refer Fig. 3.

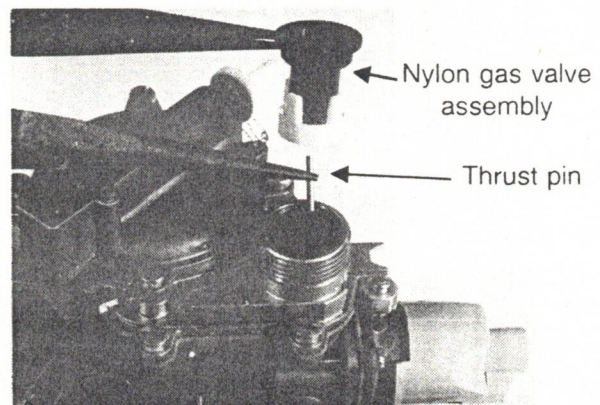


Fig. 3. THRUST PIN LOCATION

NOTE: To gain access to the thrust pin on models as per Fig. 4, remove the regulator assy (4 screws) and the gas control bracket assy (5 screws, 2 beneath the diaphragm).