

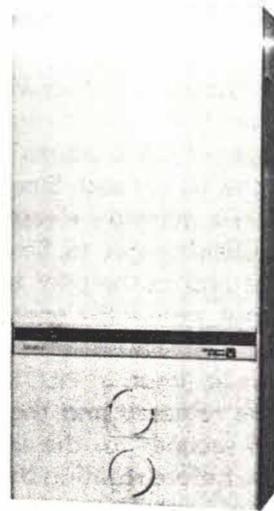
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<b>Manufacturer</b> Chaffoteaux et Maury (Aust.)	<b>Appliance Name/Model</b> Bayard 10 CFPV Bayard 13 CFPV
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### DESCRIPTION

The Bayard 10 CFPV or 13 CFPV is an open flued, instantaneous multi-point water heater with a gas rate of 82 MJ/h and 105 MJ/h respectively. The unit is designed to produce an instant output of heated water to several areas of utilization such as baths, showers and sinks.



### TECHNICAL DATA

#### DATA PLATE LOCATION

Adhesive label attached to the inside lower left of the front case.

#### GAS RATE (MJ/h)

	N.G.	T.G.	T.L.P.	L.P.(P)	L.P.(B)
10 CFPV:	82.0	82.0	82.0	82.0	
13 CFPV:	105.0	105.0	105.0	105.0	

#### RATED OUTPUT (kW)

10 CFPV:	17.4	17.4	17.4	17.4
13 CFPV:	22.7	22.7	22.7	22.7

#### INJECTOR ORIFICE (mm)

10 CFPV:	1.28	2.33	2.33	0.74
13 CFPV:	1.28	2.23	2.23	0.78
PILOT:	0.23	0.42	0.42	0.15

#### BURNER PRESSURE (Pa)

10 CFPV:	800	280	350	2750
13 CFPV:	900	460	460	2500

#### IGNITION

Piezo ignited permanent pilot.  
Electrode spark gap 3mm.  
Chaffoteaux piezo, Part No.20267.  
Chaffoteaux spark electrode, Part No.34239.

#### FLAME SAFEGUARD

Thermo - electric flame failure system.  
Open circuit test is 15 mV minimum.

#### BURNER

10 CFPV Model:  
12 bar, 12 injector stainless steel burner.  
13 CFPV model:  
14 bar, 14 injector stainless steel burner.

#### A.G.A. Approval No.

3460 (10CFPV)  
3461 (13CFPV)

#### Approved

N.G., T.G., T.L.P., L.P.(P)

#### PRESSURE RELIEF

Chaffoteaux Part No. 48987, pressure relief at 1000 kPa.

#### WATER FILTER

Chaffoteaux Part No. 39803 nylon mesh filter inserted into the water inlet connection.

#### MAXIMUM INLET WATER PRESSURE

1000 kPa.

#### MINIMUM INLET WATER PRESSURE

50 kPa

#### PERFORMANCE CHARACTERISTICS

With water flow and gas rate controls at maximum settings;

10 CFPV, 10 litres per minute, 25°C temperature rise.

13 CFPV, 13 litres per minute, 25°C temperature rise.

With gas rate control at maximum setting and water flow rate control at minimum setting;

10 CFPV, 5 litres per minute, 50°C temperature rise.

13 CFPV, 6.5 litres per minute, 50°C temperature rise.

APPLIANCE DATA

## BAYARD 10 CFPV & 13 CFPV

### OPERATION

When the gas control knob is in the OFF position (●) there will be no gas flow into the gas section of the unit.

By rotating the knob anti-clockwise through the ignition position (☞) the integral piezo will operate and generate a spark between the electrode and the pilot head. Simultaneously the pilot valve and the thermo-electric valve will be pushed open, allowing gas to flow into the gas section chamber and to the pilot head. (The pilot should light; if not, repeat the operation) (Fig.1).

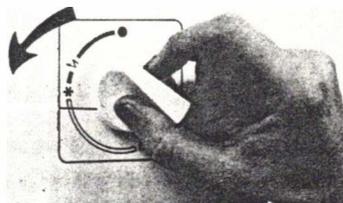


Fig. 1

After the pilot is lit (knob in PILOT position ★) the knob can be released and the pilot will stay alight. Allow 15 seconds for the thermo-electric valve to energise before rotating the knob.

By rotating the control knob further anti-clockwise, the gas control side valve will gradually open; and on reaching the MAXIMUM position (▲) (Fig.2) be fully open. By rotating this knob between maximum and minimum (↔) the gas rate to the burner can be varied.



Fig. 2

By turning on a hot water tap, the main gas valve (water diaphragm operated) will open and allow gas to the main burner.

The water flow through the unit can be controlled by the water control knob situated beneath the gas control knob (Fig.3).

#### NOTE:

Should the gas control knob be left in the PILOT position and the pilot extinguished, pilot gas will continue to flow from the pilot head. The knob should not be left in the pilot position. For extended OFF periods the knob should be returned to the OFF position.



Fig. 3

### MAINTENANCE

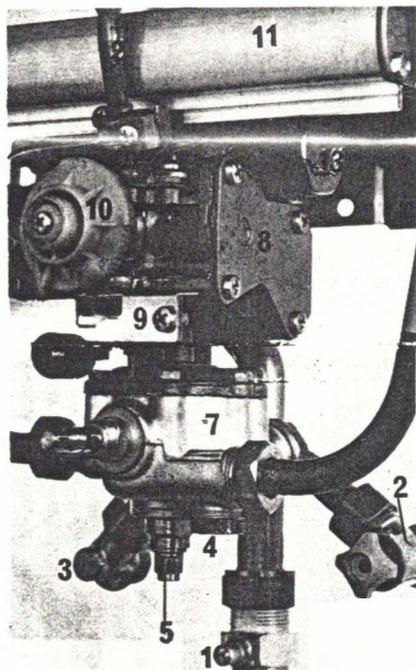
*ENSURE THE APPLIANCE IS ELECTRICALLY SAFE AT ALL TIMES*

#### FRONT CASE REMOVAL

1. Pull off the control knobs.
2. Unscrew the case retention ring from the water flow control.
3. Pull the case outward at the bottom to release the snap catches.
4. Lift the case upwards off the retention tabs and remove case.

**BAYARD 10 CFPV & 13 CFPV**

**MAINTENANCE Cont'd.**



1. Gas inlet pressure test point
2. Cold water inlet connection
3. Heated water outlet connection
4. Slow ignition adjustment
5. Water regulator & drain
6. Water flow control spindle
7. Water section
8. Gas section
9. Piezo assembly
10. Operating cam
11. Burner manifold
12. Pilot supply pipe
13. Gas regulation adjustment

**GAS AND WATER SECTIONS (Fig. 4)**

**GAS VALVE AND WATER SECTION ASSEMBLY REMOVAL (Fig.4)**

1. Turn off the gas and water supplies.
2. Remove front case and drain the unit (5).
3. Unscrew the pilot supply pipe retention bracket and remove pipe and bracket (12).
4. Unscrew the burner manifold retention screws and lift off the manifold (11).
5. Disconnect the two inlet and two outlet water connections from the water section.
6. Disconnect the gas supply connection.
7. Ease the complete assembly downwards and lift away.
8. On reassembly, test for water leaks and gas escapes.

**CONVERSION**

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

**T.G. & T.L.P. to N.G.**

REFER TO REPLACEMENT PARTS FOR N.G. SUBSTITUTES.

1. Remove the front case.
2. Remove pilot bracket and pilot supply pipe.
3. Fit N.G. pilot injector.
4. Remove the two screws from the burner manifold and withdraw the manifold.
5. Fit N.G. burner injectors or the complete N.G. manifold.
6. Unscrew the gas governor from top of gas section and replace gas float with N.G. float.
7. Reassemble and set the correct gas pressure.
8. Amend the label.
9. Test for gas escapes on completion.

**INSTALLATION**

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

**LOCATION**

Where a unit is to be fitted to a combustible wall surface the wall must be protected by a non-combustible panel. The rear of the unit has a retention slot designed for the wall bracket, which is packed with the appliance (Item 7 replacement parts). The wall bracket is attached to the wall by a single fixing screw.

Position the bracket on the wall so that the distance between the fixing screw and the centre of the water inlet pipe is 496 mm for the 10 CFPV model and 517mm for the 13 CFPV model.

**FLUE CONNECTION**

- 10 CFPV 110mm nominal
- 13 CFPV 125mm nominal

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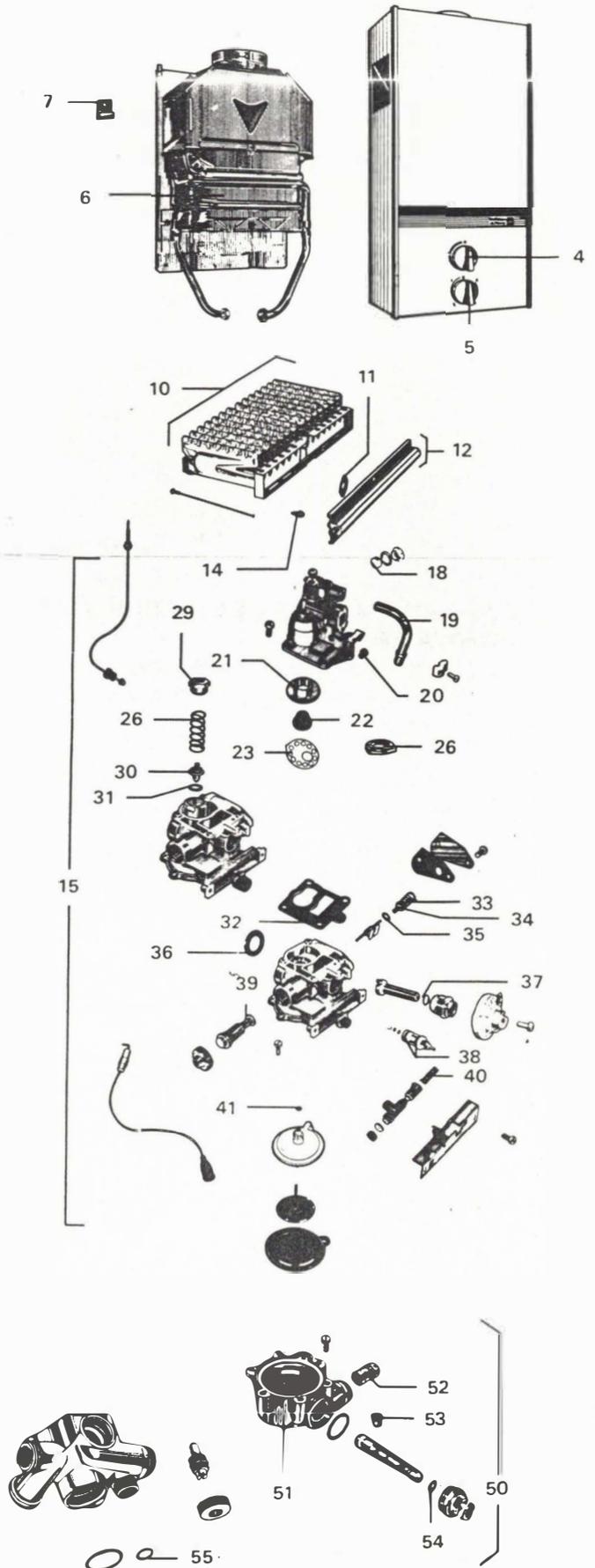
APPLIANCE DATA

# BAYARD 10 CFPV & 13 CFPV

## REPLACEMENT PARTS

SELECTED CHAFFOTEAUX PARTS LISTING;

KEY NO.	DESCRIPTION	PART NO.
4	(10PV) Gas control knob	58356
4	(13PV) Gas control knob	39218
5	(10PV) Wat.temp.control knob	42342
5	(13PV) Wat.temp.control knob	42341
6	(10PV) Heat exchanger	20385/6
6	(13PV) Heat exchanger	20353/6
10	(10PV) Main burner	59303
10	(13PV) Main burner	43005
14	Main burner inj. N.G.	14154/24
14	Main burner inj. T.G./T.L.P.	19224/4
14	Main burner inj. L.P. (P)	14154/20
15	(10PV) Gas section N.G.	56310
15	(10PV) Gas section T.G./T.L.P.	56317
15	(10PV) Gas section L.P. (P)	59494
15	(13PV) Gas section N.G.	56311
15	(13PV) Gas section L.P. (P)	59495
20	Pilot injector N.G.	49378
20	Pilot injector T.G./T.L.P.	42728
20	Pilot injector L.P. (P)	34079
21	Gas float N.G.	60746
21	Gas float T.G./T.L.P.	60747
22	Float holder N.G.	60468
22	Float holder T.G./T.L.P.	25367
26	Main valve spring N.G.	61275
26	(10PV) Main valve spring L.P.(P)	46722
26	(13PV) Main valve spring L.P.(P)	26928
30	(10PV) Main valve N.G.	60780
30	(10PV) Main valve L.P. (P)	46724
30	(13PV) Main valve N.G.	60757
30	(13PV) Main valve L.P. (P)	37042
33	Side spring	44371
34	Side valve N.G.	42727
34	Side valve L.P. (P)	34624
35	Gasket N.G. / T.G. / T.L.P.	11750
35	Gasket L.P. (P)	30305
36	Thermal gasket	19866/10
37	Gas control operating assy.	21061/3
38	Pilot valve	21061/34
39	Thermo magnetic valve	41064
40	Piezo	20267
-	Thermocouple	35087
41	Diaphragm assembly	21061/7
50	(10PV) Water section N.G.	60825
50	(10PV) Water section T.G./T.L.P.	60872
50	(10PV) Water section L.P. (P)	60873
50	(13PV) Water section N.G.	60824
50	(13PV) Water section T.G./T.L.P.	60872
50	(13PV) Water section L.P. (P)	60875
54	'O' ring water section	24164/10



**BAYARD 10 BFPV & 13 BFPV**

**INSTALLATION**

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

**FITTING THE FLUE ASSEMBLY**

Where the unit is to be fitted to a combustible wall surface, the wall must be protected by a non-combustible panel. Select the position on the wall and make a hole 305 mm. wide by 205 mm. high. If the hole is cut accurately there will be no need to line it, as the wall liner will seal off the cavity Fig.2. The standard flue set is suitable for walls with a thickness of 75mm. to 355mm. An optional flue kit is available for thicker walls of up to 610mm.

**FITTING THE WALL LINER**

Slide the wall liner through the wall horizontally, ensuring that the flanged end is flush with the face of the inside wall. If necessary trim to length so that the outer end of the duct is flush with the face of the outside wall Fig.2.

**FITTING THE TERMINAL**

The flue terminal may be fitted from the inside or outside of a building, by fixing the two spring loaded chains over the hooks on the inside of the wall liner Fig.2. If necessary bend the hooks to achieve better chain retention.

Where the terminal is to be installed from inside the building, it can be passed through the wall liner and pulled back into position by using the chains. Ensure that there can be no risk of the terminal falling. It is recommended that a length of cord or string be secured to the terminal, to prevent any risk of damage to the terminal, the building, or to persons in the vicinity.

**FITTING THE UNIT**

The unit is attached to the wall by two bolts at the top and two bolts at the bottom. A further optional fixing bracket is provided for installations where the wall adjacent to the top fixing holes is of unsound construction. The fixing bolts, screws and optional bracket are packed together with the connections and a gasket placed inside the heater.

**PROCEDURE**

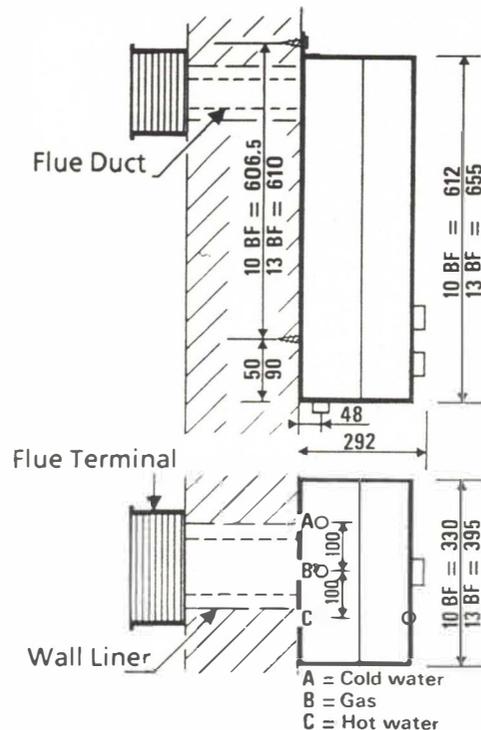
Remove the flue bend from the top of the heat exchanger, by releasing the fixing clip and removing the two screws.

If the optional top fixing bracket is to be used, this should now be attached to the top of the rear case, using the screws already fitted to the case.

Using the heater as a template, locate the spigot of the appliance into the wall liner. Ensure that the appliance is vertical, then mark the fixing holes. Drill and plug the wall and fasten the top and bottom bolts into position then secure the heater to the wall.

Slide the flue duct through the rectangular hole in the rear case and engage into the central spigot of the terminal so that it touches the two end stops.

Refit the flue bend so that the flue duct engages by at least 25mm. It may be necessary to cut the flue duct to the correct length. Ensure that the flue bend is seated correctly on the heat exchanger with the gasket in place. Replace the two screws and the clip which secures the flue bend.



**Fig.2**

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APPLIANCE DATA



<b>Manufacture</b> Chaffoteaux et Maury (Aust.)	<b>Appliance Name/Model</b> Bayard 10 BFEPV Bayard 13 BFEPV
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**DESCRIPTION**

The Bayard BFEPV is a multi-point instantaneous water heater. The appliance is for external installation, is weather protected and has a balanced flue.

**TECHNICAL DATA**

**DATA PLATE LOCATION**

Adhesive label attached to the inside lower left of the front case.

**GAS RATE (MJ/h)**

	N.G.	T.G.	T.L.P.	L.P.(P)	L.P.(B)
10 BFEPV:	72.0	72.0	72.0	72.0	
13 BFEPV:	93.0	93.0	93.0	93.0	

**RATED OUTPUT (kW)**

10 BFEPV:	17.4	17.4	17.4	17.4
13 BFEPV:	21.0	21.0	21.0	21.0

**INJECTOR ORIFICE (mm)**

10 BFEPV:	1.13	2.08	2.08	0.70
13 BFEPV:	1.18	2.23	2.23	0.72
PILOT:	0.23	0.42	0.42	0.15

**BURNER PRESSURE (Pa)**

10&13 BFEPV:	800	300	350	2450
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**IGNITION**

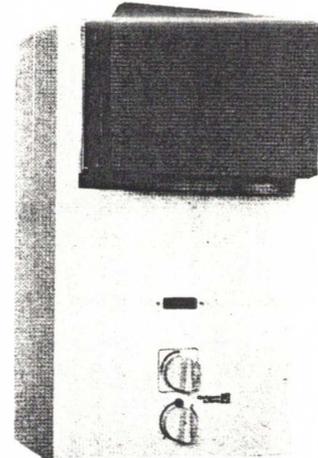
Piezo ignited permanent pilot.  
Electrode spark gap 3mm.  
Chaffoteaux Piezo Part No. 20267.  
Chaffoteaux spark electrode, Part No. 34239.

**FLAME SAFEGUARD**

Thermo - electric flame failure system.  
Chaffoteaux thermocouple, Part No. 35087.  
Open circuit test is 15mV minimum.

**BURNER**

10 BFEPV model:  
12 bar, 12 injector stainless steel burner.  
13 BFEPV model:  
14 bar, 14 injector stainless steel burner.



<b>A.G.A. Approval No.</b> 3707 (10BFEPV) 3845 (13BFEPV)	<b>Approved for</b> N.G., T.G., T.L.P., L.P.(P)
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**PRESSURE RELIEF**

Chaffoteaux Part No. 48987, pressure relief valve.  
Pressure relief at 1000 kPa.

**WATER FILTER**

Chaffoteaux nylon mesh filter inserted into the water inlet connection

**MAXIMUM INLET WATER PRESSURE**

1000 kPa

**MINIMUM INLET WATER PRESSURE**

50 kPa

**PERFORMANCE CHARACTERISTICS**

With water flow and gas rate controls at maximum settings;  
10 BFEPV, 8.6 litres per minute, 25°C temperature rise.  
13BFEPV, 11.0 litres per minute, 25°C temperature rise.  
With gas rate control at maximum setting and water flow rate control at minimum setting;  
10 BFEPV, 4.3 litres per minute, 50°C temperature rise.  
13 BFEPV, 5.5 litres per minute, 50°C temperature rise.

## BAYARD 10 BFEPV & 13 BFEPV

### OPERATION

THE OPERATION OF THIS APPLIANCE IS THE SAME AS THAT FOR THE BAYARD 10 CFPV & 13 CFPV. FOR INFORMATION, REFER TO PAGE 2 OF THIS SECTION.

### MAINTENANCE

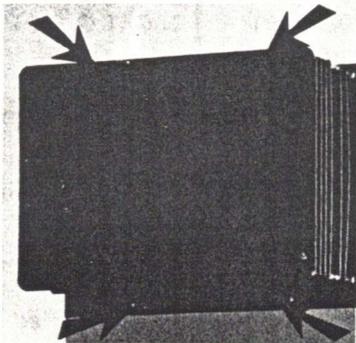
*ENSURE THE APPLIANCE IS ELECTRICALLY SAFE ALL TIMES*

#### FRONT CASE REMOVAL

1. Pull off the control knobs.
2. Unscrew the three retention screws (above the water flow control and top and bottom of the unit).
3. Pull the case forward and off.  
NOTE: This is a sealed case therefore when replacing the case, ensure that the unit is air tight.

#### BALANCED FLUE TERMINAL REMOVAL

The flue terminal can be removed from the front case by unscrewing the four retention screws, Fig.1.

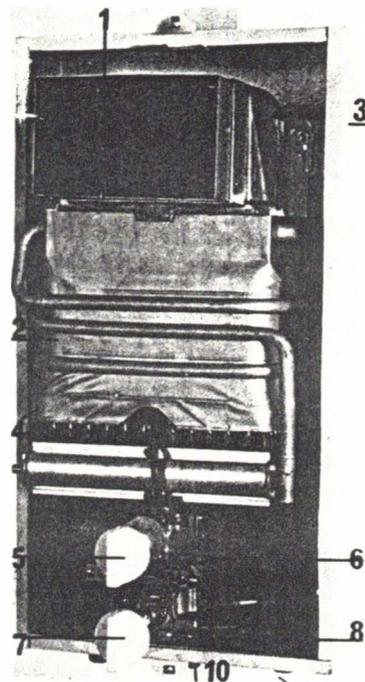


BALANCED FLUE (Fig 1)

#### GAS VALVE AND WATER SECTION, REMOVAL.

1. Turn off the gas and water supplies.
2. Remove the front case and drain the unit.
3. Unscrew the pilot supply pipe retention bracket and remove pipe and bracket.
4. Unscrew the burner manifold retention screws and lift off the manifold.
5. Remove the screws which retain the gas section to the rear case.
6. Disconnect the four water connections from the water section.
7. Disconnect the gas supply connection.
8. Ease the complete assembly downwards and lift away.

1. Flue exhaust
2. Heat exchanger
3. Sealing gasket
4. Main burner
5. Gas control
6. Gas section
7. Water flow control
8. Water section
9. Piezo assembly
10. Water regulator / drain



MAIN COMPONENTS (Fig.2)

## BAYARD 10 BFEPV & 13 BFEPV

### INSTALLATION

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

#### LOCATION

Where a unit is to be fitted to a combustible wall surface the wall must be protected by a non-combustible panel.

The unit must be installed so that the flue terminal is exposed to external air. The terminal must not discharge into a room, or space such as an outhouse or lean-to.

#### FITTING THE FLUE TERMINAL

The flue terminal and the appliance are packaged separately. A box which contains the plumbing fittings, securing screws, bracket, and a gasket are packed with the appliance.

First fit the gasket to the flue terminal. The flue terminal is then screwed onto the front case by the four screws provided (Fig.1).

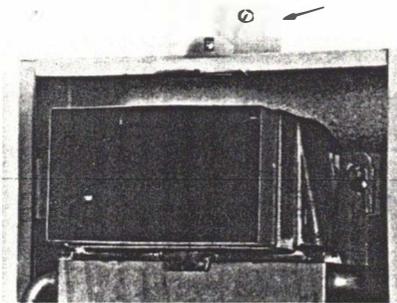
#### FITTING THE UNIT

The securing bracket is fitted to the top of the appliance by utilizing the screws already fitted to the rear case. The appliance is attached to the wall by a single screw fitted into the securing bracket and two retention screws fitted into the lower rear case (Fig.3).

Using the appliance as a template, locate it onto the wall in the required position and mark the fixing holes. Drill and plug the wall and fasten the top and bottom screws into position.

#### NOTE

Where inlet water pressure exceeds the 1000 kPa. maximum, a suitable pressure reduction valve must be fitted.



**SECURING BRACKET Fig.3**

### CONVERSION

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

#### T.G. & T.L.P. to N.G.

REFER TO REPLACEMENT PARTS FOR N.G. SUBSTITUTES.

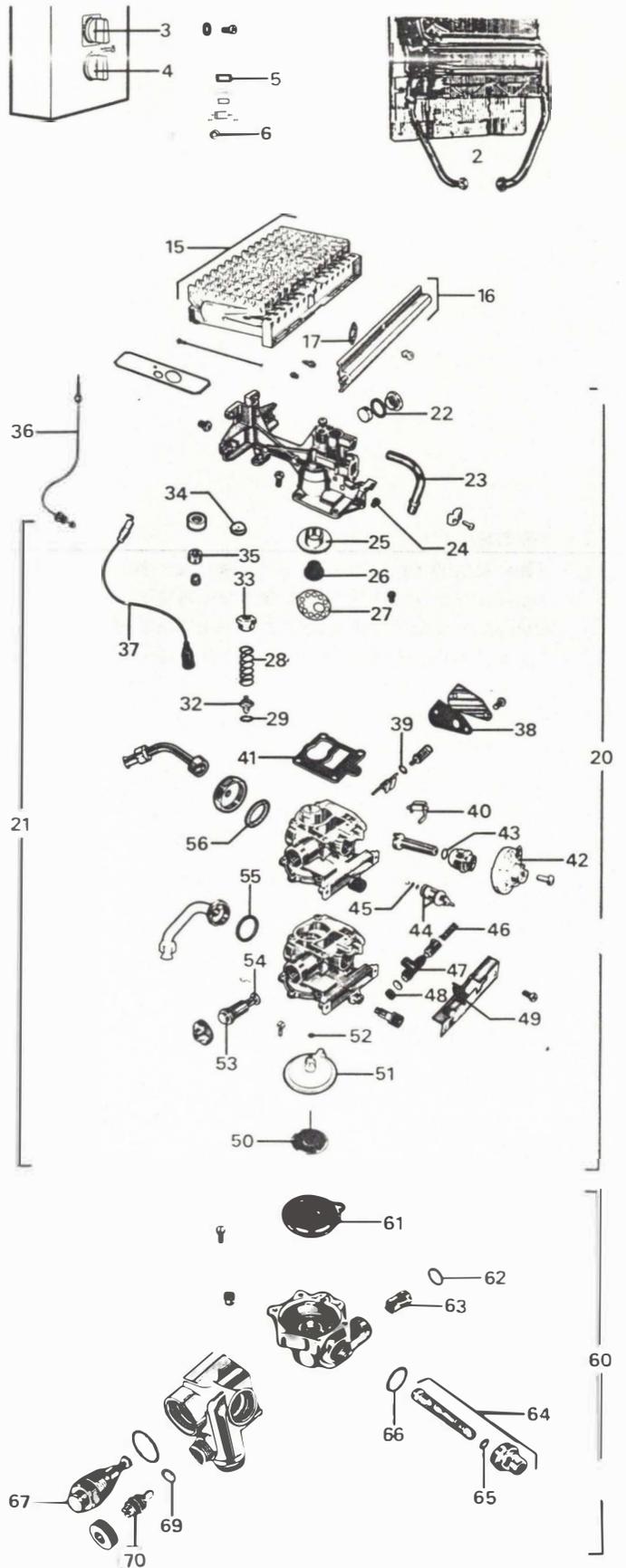
1. Remove the front case.
2. Remove pilot bracket and pilot supply pipe.
3. Fit N.G. pilot injector.
4. Remove the two screws from the burner manifold and withdraw the complete manifold with injectors attached.
5. Fit N.G. burner injectors or the complete N.G. manifold.
6. Unscrew the gas governor from top of gas section and replace gas float with N.G. gas float.
7. Reassemble and set the correct gas pressure.
8. Amend the label.
9. Test for gas escapes on completion.

# BAYARD 10 BFEPV & 13 BFEPV

## REPLACEMENT PARTS

### SELECTED CHAFFOTEAUX PARTS LISTING:

KEY NO.	DESCRIPTION	PART NO.
2	(10BFE) Heat exchanger	56418
2	(13BFE) Heat exchanger	48171/6
3	Gas control knob	55814
4	Water temp. control knob	55815
6	Retention screw	14044
15	(10BFE) Burner	40117
15	(13BFE) Burner	49995
16	(10BFE) Burner manifold assy.	61283
16	(13BFE) Burner manifold assy.	60998
21	(10BFE) Gas section	56319
21	(13BFE) Gas section	56314
24	Pilot injector N.G.	49378
24	Pilot injector T.G./ T.L.P.	42728
25	Gas float N.G.	25367
26	Gas float holder N.G.	60468
28	Main valve spring N.G.	61275
28	Main valve spring T.G./ T.L.P.	38474
32	(10BFE) Main valve	60781
32	(13BFE) Main valve	39223
36	Thermocouple	61645
37	Electrode	34239
39	Valve gasket	11750
39	Side valve	42727
39	Side spring	44371
42	Operating cam	44370
44	Pilot valve assembly	21061/34
47	Piezo	20267
50	(10BFE) Diaphragm spindle	60759
50	(13BFE) Diaphragm spindle	44117
51	Top cover (water diaphragm)	18961
53	Magnetic valve	35478
60	(10BFE) Water section	60790
60	(13BFE) Water section	56785
61	Water diaphragm	25809/20
67	Water regulator	48987
70	Slow ignition valve	18376



## FAULT FINDING, INSTANTANEOUS WATER HEATERS (BAYARD MODELS)

This guide should be used in conjunction with the appliance data relevant to the instantaneous water heater at fault.

### FAULT FINDING

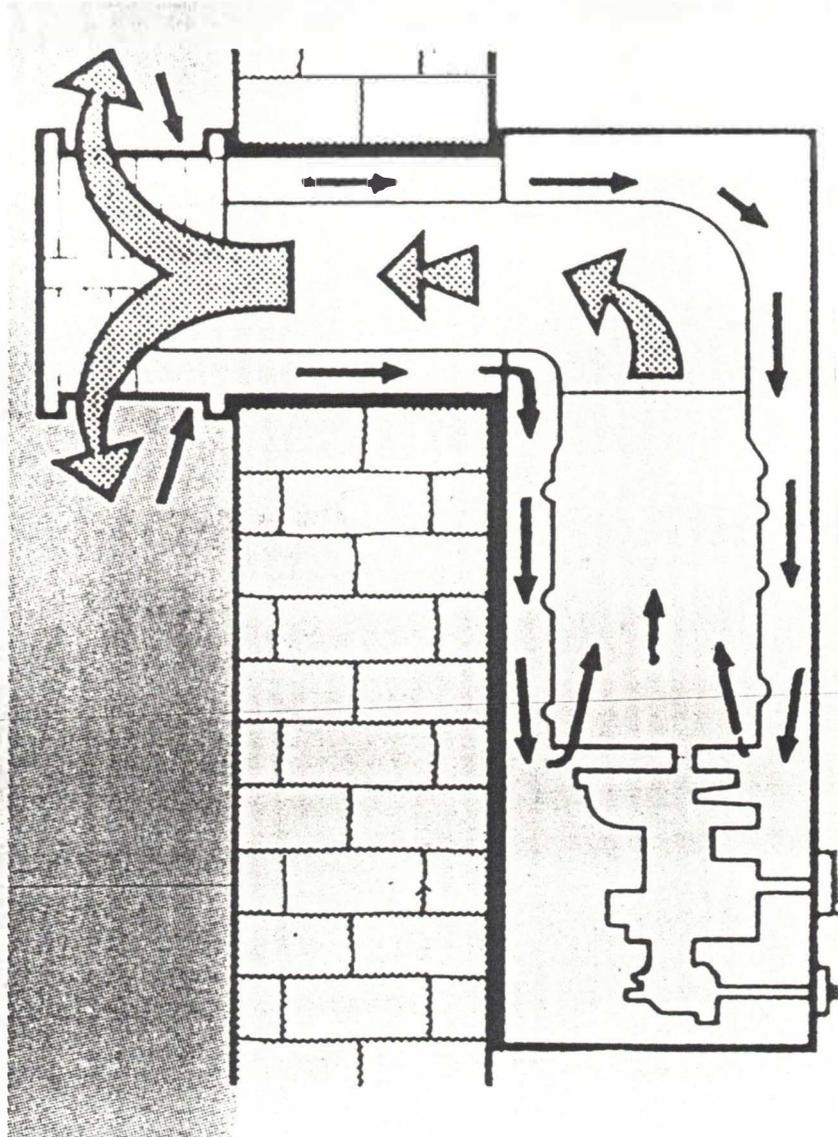
FAULT	CAUSE	REMEDY
Pilot not lighting	No gas supply Incorrect operation Air in gas pipes Pilot filter, injector or pipe blocked Operating cam or pilot valve fault No spark at electrode Weak spark from electrode	Check supply at meter and gas cock Refer to operating instructions Purge the gas pipes Replace filter, clean pipe or injector Replace cam, clean or replace valve Check piezo, wiring and electrode Check spark gap or replace electrode
Pilot will not remain alight (after control knob moved to max./min.position)	Incorrect operation, (premature movement of control knob) Incorrect gas pressure or aeration Thermocouple malfunction, incorrect flame position Thermo-electric valve malfunction	Refer to operating instructions Check, adjust gas pressure /aeration Check thermocouple and connections, also flame position Replace thermo-electric valve
Pilot flame poor	Pilot filter, pilot pipe or head blocked Pilot injector incorrect, damaged or partially blocked	Replace filter, clean pipe or head Replace or clean the injector
Main burner not lighting (pilot established)	Control knob left in pilot position Water rate insufficient, filter blocked Gas valve malfunction; spindle, valve seating etc. Water valve malfunction; venturi, diaphragm, etc.	Refer to operating instructions Check water rate, clean/replace filter Rectify malfunction or replace part Rectify malfunction or replace faulty part
Explosive ignition	Pilot flame or the flame direction incorrect Main burner tracking and/or lighting ports blocked Slow ignition device faulty Gas escape within appliance	Clean or replace pilot assembly, redirect flame direction Clean out the tracking and lighting ports Repair or replace slow ignition device Locate and rectify gas escape
Fluctuating and unstable flames	Water in gas supply Gas valve malfunction Water valve malfunction	Clear gas supply Rectify malfunction or replace part Rectify malfunction or replace part
Yellow flames, and / or carboning of unit	Heat exchanger blocked or holed Primary aeration restricted Injectors incorrect Fault in flue system	Clean heat exchanger or replace Check manifold for restrictions Replace injectors Check for flue blockage or incorrect installation

## FAULT FINDING, INSTANTANEOUS WATER HEATERS (BAYARD MODELS) Cont'd.

FAULT	CAUSE	REMEDY
Main burner remains alight or is slow to shut off (tipping)	Gas valve malfunction; dirt or grit contamination, faulty valve seat etc. Water section malfunction; dirt or grit contamination	Clean rectify malfunction or replace valve Clean, rectify malfunction or replace
Heat exchanger noisy	Scaling of heat exchanger Excessive gas flow Insufficient water flow	De-scale heat exchanger Adjust gas pressure Investigate water supply (see below)
Insufficient water flow	Water flow restricted Blocked venturi Poor water pressure Malfunction or foreign matter in water section	Investigate, remove restriction Clean venturi or replace Investigate water supply Clean water section or replace faulty part
Water temperature not hot enough	Water flow control fully open Incorrect gas pressure Venturi fault Water governor malfunction	Refer to operating instructions Check gas pressure, adjust gas rate Clean or replace venturi Clean, rectify or replace part
Water temperature too hot for requirements	Water flow control retarded	Refer to operating instructions
Gas smell	Pilot flame extinguished (knob left in pilot(*) position) Incomplete combustion Gas escaping from appliance or fittings Heat exchanger sooted Thermo-electric valve malfunction	Check cause of outage, and observe Chaffoteaux operating instructions Check ventilation, flue and burner Test appliance and fittings  Clean, determine cause and rectify Rectify /replace thermo-electric valve
Water leak	'O'ring's, seals or gaskets leaking Water connections loose Pinhole in heat exchanger coil Water section screws loose Diaphragm fitted incorrectly	Replace leaking parts Check washers, tighten connections Repair or replace heat exchanger Check water section secure screws Refit diaphragm

**ON COMPLETION OF WORK TEST FOR GAS ESCAPES**

# Balanced flue



This unique water heater uses outside air and doesn't rob the room of oxygen. Its twin flow (admission/exhaust) sealed construction is connected to outside air through a "suction cup" terminal piece, fitted onto the outer face of the wall. There is no need for a conventional flue.