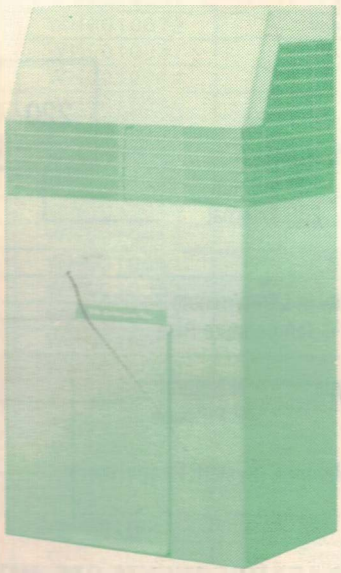
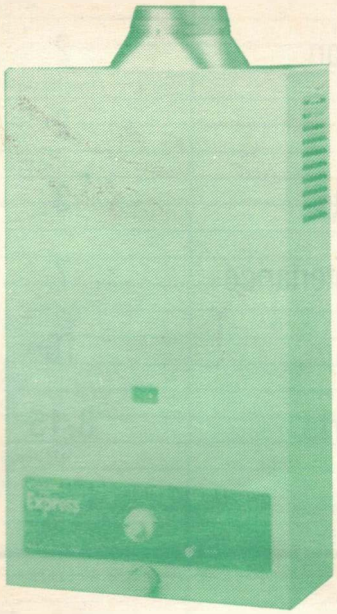
GAS

SOUTHCORP WATER HEATERS AUSTRALIA

SERVICE INSTRUCTIONS

VULCAN EXPRESS
CONTINUOUS FLOW GAS WATER HEATERS





MODELS	MANUFACTURED DATES
230010	November 1995
230013	November 1995
220010	January 1996
220013	January 1996

SOUTHCORP AUSTRALIA PTY LTD ACN 004213665

Part Number 889991 Revision A Published March 1996

INTRODUCTION

A mains pressure water heater is like any other appliance and will require attention from time to time. As with other appliances its efficiency and life is dependent on the quality of service it receives.

The purpose of this Service Manual is to provide sufficient information to allow a person with the skills required by the Regulatory Authorities to carry out effective repairs to a Vulcan Express Gas Water Heater in the minimum of time.

We feel that this Manual will assist you in servicing the Vulcan Express range of water heaters.

Should you have a problem with a Vulcan Water Heater, contact your nearest Southcorp Water Heaters Australia Service Department for further information where all genuine replacement parts are also available.

The information provided in these instructions is based on the water heater being installed in accordance with the Installation Instructions provided with each heater.

GENERAL DESCRIPTION

The Vulcan express range of continuous flow water heaters are the first of their type to be marketed under the "VULCAN" brand name.

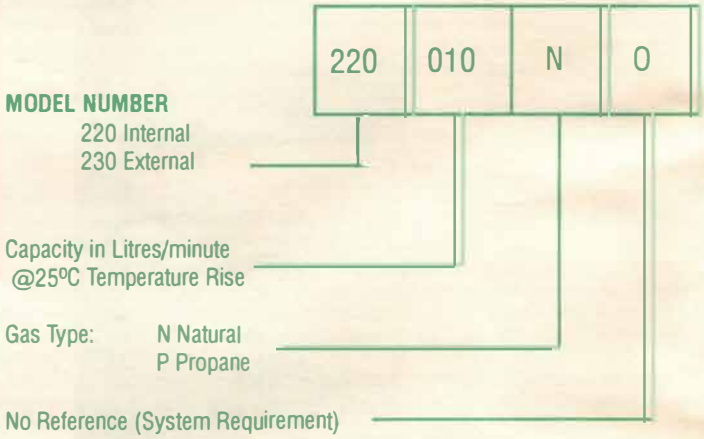
At present there are two sizes and four models. The sizes are either 10 litre per minute or 13 litre per minute flow rate with temperature rise minimum of 25°C above cold water temperature, each size has both an internal and external model. Gas input rating is 80MJ for the 10 litre model and 100MJ for the 13 litre model.

Internal models have a "White" vitreous enamel coated outer casing and the external has a "Burnt Almond" Colorbond weatherproof outercasing and a powder coated flue grill. It is possible to remove the outer casing from each model to carry out any servicing without the need to remove the appliance from the wall.

CONTENTS

HEATER MODEL IDENTIFICATION

The identification numbers are designed to convey detailed information about the heater to which it is attached. The model number consists of 7 digits and 1 letter.



TECHNICAL DATA

VULCAN EXPRESS 10-13 LITRE/MINUTE GAS WATER HEATER

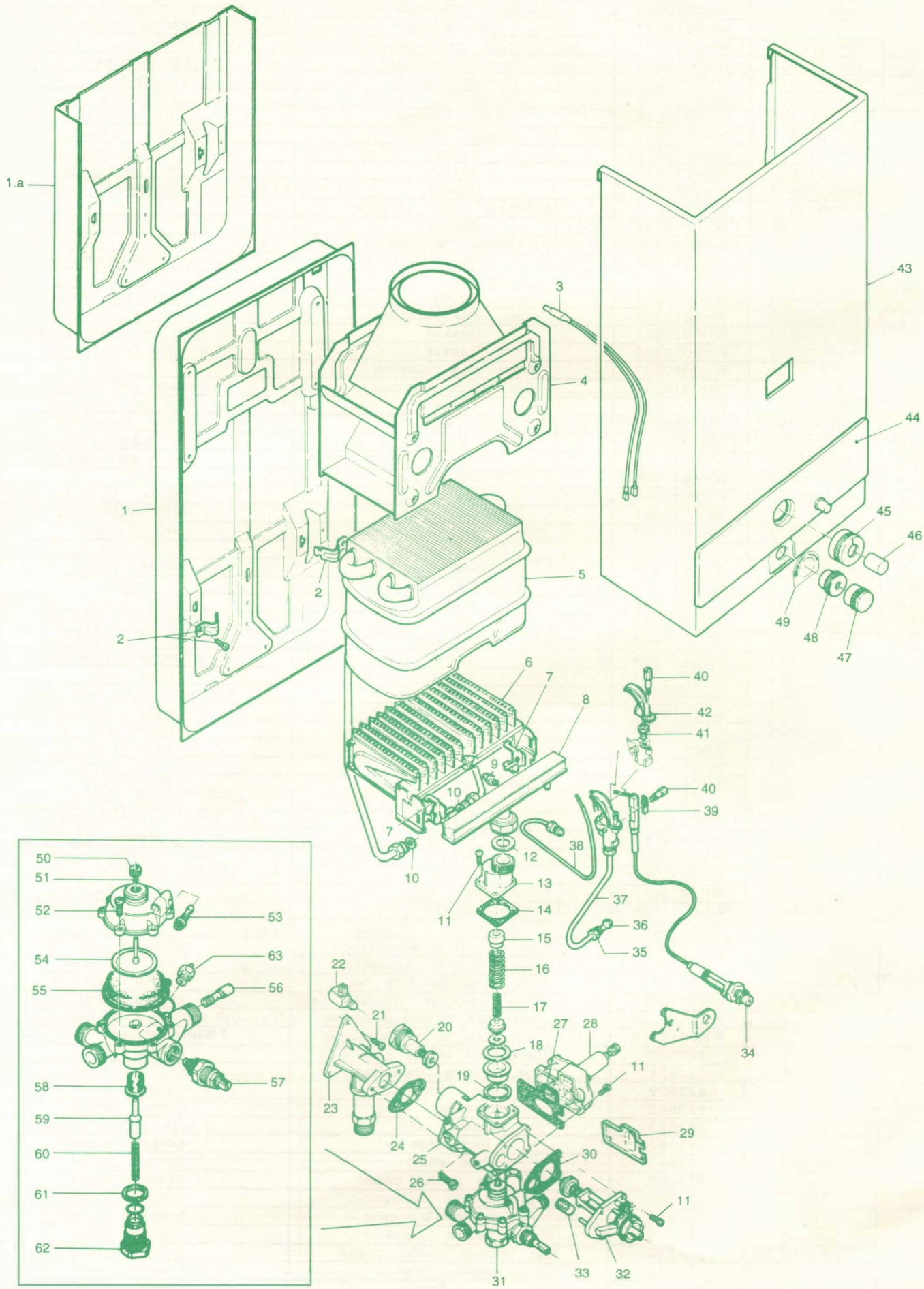
MODELS / GAS TYPE	220010NO 230010NO NATURAL	220010PO 230010PO PROPANE	220013NO 230013NO NATURAL	220013PO 230013PO PROPANE
Nominal hourly gas consumption MJ/HR.	80	80	100	100
Nominal output litres/minute raised 25 deg. C.	10	10	13	13
Minimum inlet water pressure kPa.	20	20	40	40
Maximum inlet water pressure kPa.	1300	1300	1300	1300
Maximum inlet gas pressure kPa.	3.5	3.5	3.5	3.5
Minimum inlet gas pressure kPa.	1.13	2.75	1.13	2.75
Burner gas test pressure kPa.	0.9	2.54	0.85	2.41
Burner injector mm	1.2	0.75	1.2	0.75
Pilot injector mm	0.25	0.18	0.25	0.18
Flue spigot outside diameter mm	110	110	130	130
Gas connection diameter mm	20	20	20	20
Water connections diameter mm	15	15	15	15

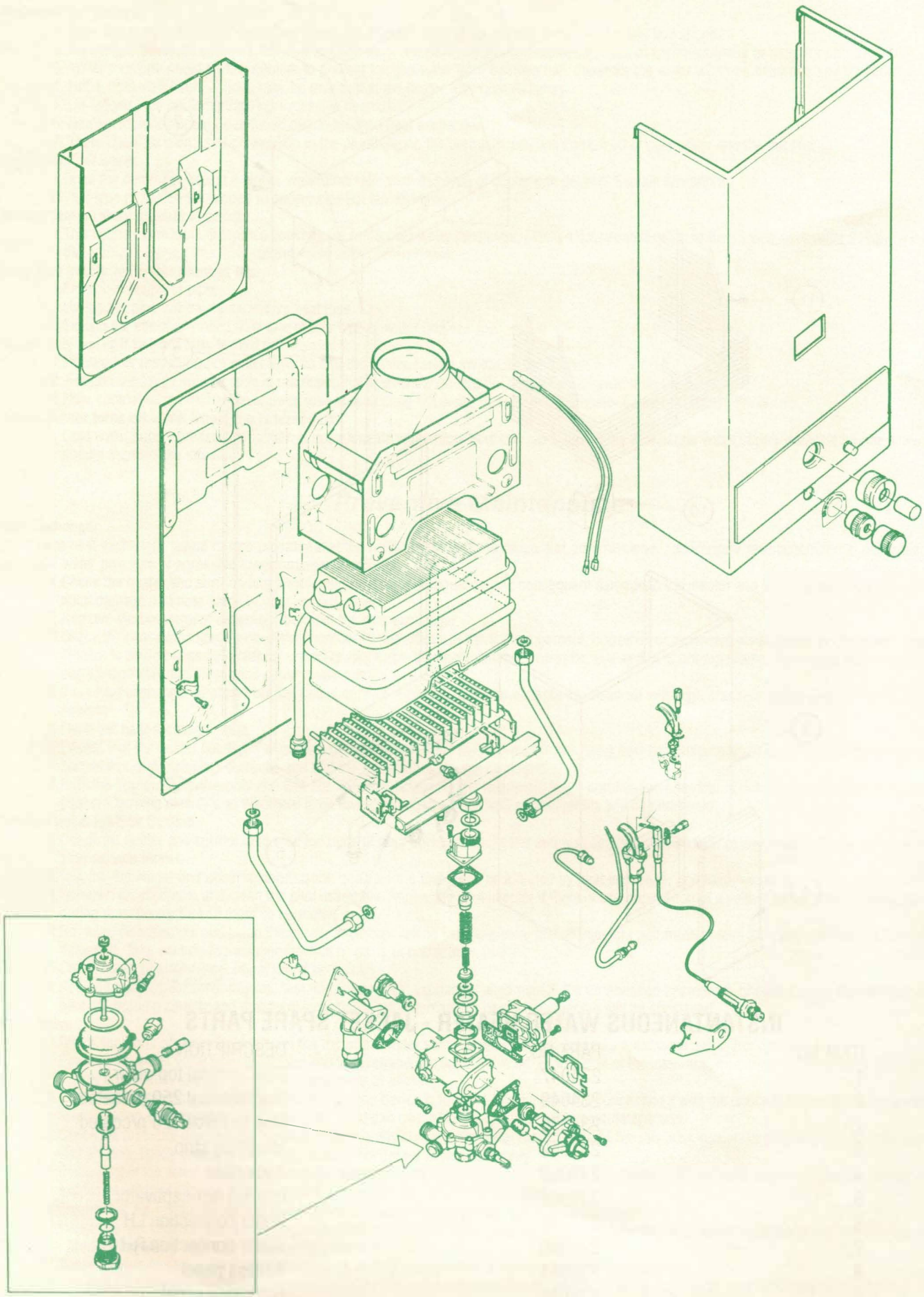
REPLACEMENT PARTS LIST

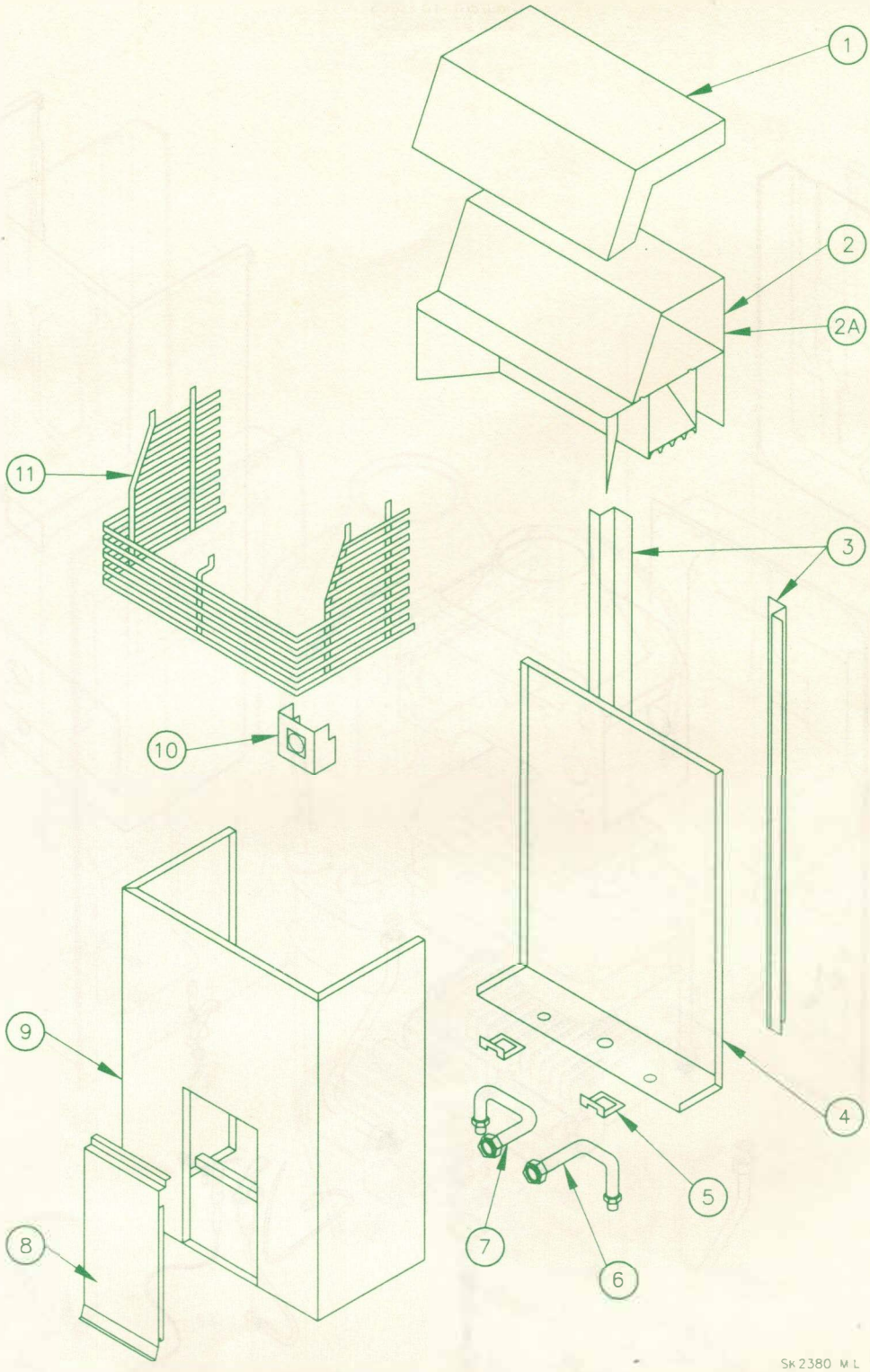
Ref No.	PART NUMBER 10 Litre/min.	PART NUMBER 13 Litre/min.	DESCRIPTION	IDENTIFICATION
1	WH0010001	WH0010002	Back Plate	Internal model
3	WH0010003	WH0010003	ECO thermostat	Blocked flue ECO 114 deg. C
4	WH0010004	WH0010071	Draft diverter	Internal model
5	WH0010005	WH0010007	Heat exchanger	
6	WH0010006	WH0010008	Burner assembly	NG & Propane
8	WH0010015	WH0010016	Manifold, burner	N G
"	WH0010021	WH0010026	Manifold, burner	Propane
9	WH0010009	WH0010009	Injector, burner	NG 1.20mm
"	WH0010011	WH0010011	Injector, burner	Propane 0.75mm
10	WH0010070	WH0010070	Gasket	1/2" for hot/cold water tubes
11	WH0010017	WH0010017	Screw	All gas valve fittings
12	WH0010012	WH0010012	Gasket	Burner/modulating valve
13	WH0010013	WH0010013	Modulating valve complete	
14	WH0010014	WH0010014	Gasket	
20	WH0010020	WH0010020	Magnet assembly	
22	WH0010022	WH0010022	Interrupter block	ECO to thermo-electric valve
23	WH0010023	WH0010023	Connection, gas	
24	WH0010024	WH0010024	Gasket	Gas valve to gas connection
25	WH0010025	WH0010029	Gas valve complete	
27	WH0010027	WH0010027	Gasket	Gas valve to gas pressure regulator
30	WH0010030	WH0010030	Gasket	Gas valve to gas switch
31	WH0010031	WH0010031	Water valve assembly	
32	WH0010032	WH0010032	Gas switch assembly	Excluding control knob
33	WH0010033	WH0010033	Filter	Pilot gas supply
34	WH0010034	WH0010034	Igniter assembly	Incl. electrode, piezo, H/T lead
35	WH0010035	WH0010035	Nut	Pilot supply tube
36	WH0010036	WH0010036	Olive	Pilot supply tube
38	WH0010038	WH0010038	Thermocouple	
41	WH0010040	WH0010040	Injector, pilot	Propane 0.18mm
"	WH0010041	WH0010041	Injector, pilot	NG 0.25mm
"	WH0010072	WH0010072	Injector, pilot (alternative)	NG 0.30mm
42	WH0010037	WH0010037	Pilot assembly	
43	WH0010043	WH0010044	Cabinet front	Internal model
45	WH0010045	WH0010045	Knob, gas control	On/Off
46	WH0010046	WH0010046	Knob	Pilot button
47	WH0010047	WH0010047	Knob	Temperature selector
48	WH0010048	WH0010048	Lock nut	Internal model
49	Wh0010049	WH0010049	Label	Temperature selector
51	WH0010051	WH0010051	'O'ring	Water valve
52	WH0010052	WH0010051	Screw, water valve lid	6 x required per water valve
53	WH0010053	WH0010053	Slow ignition valve	Water valve
54	WH0010054	WH0010054	Pressure disc	Water valve
55	WH0010055	WH0010055	Diaphragm	Water valve
56	WH0010056	WH0010050	Venturi	Water valve
57	WH0010057	WH0010057	Temperature selector	Water valve
58	WH0010058	WH0010058	Water filter	Water valve
59	WH0010059	WH0010059	Piston	Water quantity regulator
60	WH0010060	WH0010060	Spring	Water quantity regulator
61	WH0010061	WH0010061	Gasket	Water quantity regulator
62	WH0010062	WH0010062	Plug	Water quantity regulator
63	WH0010063	WH0010063	Pressure relief valve, water	1300kPa
-	WH0010064	WH0010065	Conversion kit - NG	
-	WH0010066	WH0010067	Conversion kit - Propane	
-	WH0010068	WH0010068	Gasket kit - 10-13 litre models	Complete set
-	WH0010069	WH0010069	'O' ring kit - 10-13 litre models	Complete set
-	WH0010073	WH0010073	Water connection RHS tail	Internal model
-	WH0010074	WH0010074	Water connection LHS tail	Internal model
-		WH0010075	Hot water tube to heat exchanger	13 litre only - left hand side
-		WH0010076	Cold water tube to heat exchanger	13 litre only - right hand side
-	123630	123630	Label, gas control knob	External model
-	123638	123638	Label, lighting instructions	External model
-	123639	123639	Label, warning	External model
-	123643	123645	Label, energy rating	External model
-	231052	231052	Mounting strip	2 x per external heater
-	231053	231052	Back plate	External model
-	231054	231054	Pilot shield	External model
-	231063	231063	Grill wire powder coated	External model
-	231065	231065	Bracket hex captivator	External model
-	234047	234047	Flue terminal top outer	External model
-	234048	234048	Front/side panel	External model
-	234049	234050	Flue terminal powder coated	External model
-	234051	234051	Access panel	External model
-	260064	260064	Label 'Express'	External model
-	274039	274039	Water connection LHS	External model
-	274040	274040	Water connection RHS	External model

Note: REF No. refers to items identified on the 10 litre drawing.

Diagram: 10 litres







INSTANTANEOUS WATER HEATER - JACKET SPARE PARTS

ITEM NO.	PART NO.	DESCRIPTION
1.	234047	Flue terminal top outer
2.	234049	Flue terminal 250 p/coated
2A	234050	Flue terminal 325 p/coated
3.	231052	Mounting strip
4.	231053	Back plate
5.	231065	Bracket hex captivator
6.	274039	Water connection LH
7.	274040	Water connection RH
8.	234051	Access panel
9.	234048	Front/side panel
10.	231054	Pilot shield
11.	231063	Grill wire

VULCAN EXPRESS

Performance Problems

Water not hot enough:

1. Does the customer expect higher temperatures than this type of heater can produce? Explain limitations.
2. Burner gas pressure could be low due to low supply pressure, undersized pipework, lack of commissioning or need for service.
3. Water pressure could be low enough to prevent the gas valve from opening fully therefore the water won't be heated to specification.
4. Hot & cold water connections may be reversed at the heater (new installations).
5. Un-lagged pipe could be causing excessive heat loss.
6. Heater efficiency could be reduced due to blocked heat exchanger.
7. There could be a crossed connection in the plumbing on the premises causing back-feed of cold water into the hot line.

Insufficient hot water:

1. Does the customer expect a higher water flow rate than this type of heater can deliver? Explain limitations.
2. This type of heater is intended to supply one hot tap at a time.

Shower temperature difficult to adjust:

1. This is due to the large difference between the hot & cold water pressures. Fitting a flow control valve to the shower cold water supply will correct the problem. Do not fit a flow control valve at the shower rose.

Long time before hot water reaches tap:

1. Excessive length of pipe.
2. Un-lagged pipe will cause excessive heat loss.
3. Explain the effect of limited flow rate of this type of water heater.

Heater only works if two hot taps turned on:

1. Pipework is restricting hot water flow so that the heater cannot switch on the burner.
2. 'Economiser' type shower rose is restricting hot water flow so that the heater cannot switch on the burner.
3. Flow control valve fitted at the shower rose is restricting hot water flow so that the heater cannot switch on the burner.

Heater burner turns off when a cold tap is turned on:

1. Cold water supply pressure to heater is not adequate when more than one tap is turned on. A separate water supply dedicated to the water heater should improve the situation.

Preventive Maintenance

Heat Exchanger

Short term heat exchanger failure is rare provided that the heater is correctly installed and commissioned, adequately maintained and is not subjected to excessive water pressure or agressive environmental conditions.

1. Check the heater and surrounding area for signs of poor combustion and consequent damage to the heater and building wall. Advise user of any such damage and note same in your service report.
2. Remove the burner/pilot assembly and then the heat exchanger.
3. Check the heat exchanger/combustion chamber for the effects of flame impingement, corrosion or excessive water pressure damage or blockage. If there is any damage i.e. holes or cracks or blockage, the heat exchanger must be renewed. It is not repairable. (Leaving a heater with a holed combustion chamber in service could cause a fire!)
4. If the heat exchanger is sound but the finned section is blocked by carbon deposits, clean off with high pressure water. Ensure that all fins are straight.
5. Flush out heat exchanger tube.
6. Ensure that the heater flue/flueway is clear of obstruction. Refit the heat exchanger using new gaskets(washers) ensuring that it fits into the flue connection(draft diverter) correctly and that the water tubes are not damaged.
7. Refit the burner/pilot assembly and test fire. Burner/heat exchanger alignment in the combustion chamber is critical. Ensure that the burners and pilot are burning cleanly and that there is no flame impingement, or heat exchanger life will be shortened.

Burner, Pilot & Ignition System

1. Check the heater and surrounding area for signs of poor combustion, heater and wall damage. Advise user of any such damage and note same in your service report.
2. Test fire the heater and observe combustion quality. Note that it can be affected by heat exchanger condition - refer to Heat Exchanger section.
3. Remove, disassemble and clean the pilot assembly. Renew the pilot injector if there is any suggestion of a yellow flame after cleaning. Take care during reassembly that all parts fit correctly.
4. Remove, disassemble and clean the burner assembly, taking care to ensure that all injectors and mixing tubes are clear and that the burner is not damaged. Take care during reassembly that all parts fit correctly.
5. Check spark operation and adjust gap if necessary.
6. Refit the burner/pilot assembly and test fire. Burner/heat exchanger alignment in the combustion chamber is critical. Ensure that the burners and pilot are burning cleanly and that there is no flame impingement, or heat exchanger life will be shortened.

Water Valve

1. Check for signs of water leaking from the top of the water valve, water valve lid, pressure relief valve and water connections.
2. Remove the water valve from the heater and then remove the water valve lid. Examine all of the internal components for the effects of harsh water supply conditions, foreign matter, excessive wear or sticking.
3. Clean the lid assembly. Ensure that the slow ignition device is free and that the passage connecting it with the orifice in the venturi in the water valve lower casting is completely clear. Failure to do so can cause boiling and heat exchanger destruction.
4. Check the pressure disc spindle for wear. If there is any suspicion of water having leaked from this area, renew the pressure disc spindle, gland nut and 'O' ring, lightly greasing them with water valve grease during assembly.
5. Disassemble the water valve lower casting and examine the filter and all moving parts for effects of harsh water supply conditions, foreign matter, excessive wear or sticking. Clean all parts and renew any which are damaged.
6. Ensure that the venturi throat and bleed orifice is clear before reassembly. Renew if damaged.
7. When you are satisfied that all moving parts operate freely, fit a new diaphragm, reassemble the water valve completely and fit it into the heater.

Gas Valve, Modulating Valve and Gas Pressure Regulator(if fitted)

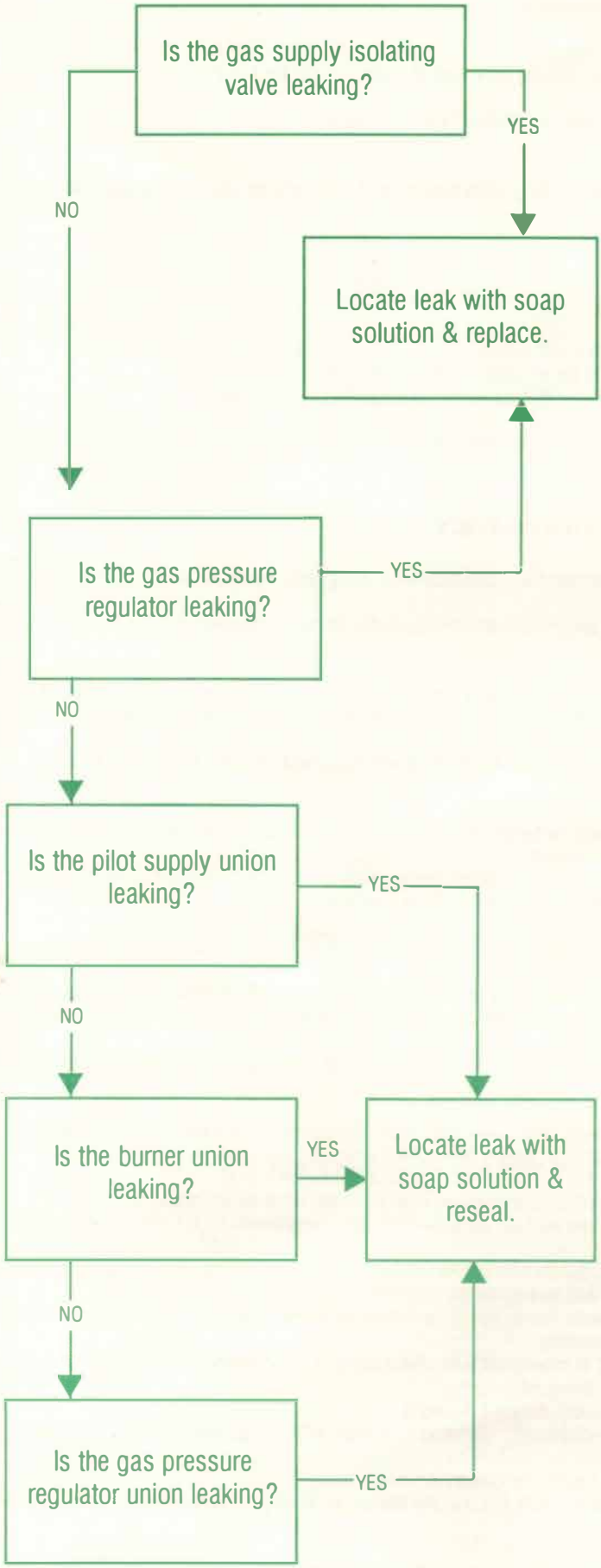
1. These assemblies have very few moving parts and do not normally require regular maintenence.
2. The only part which may require any attention is the gas valve actuating spindle which works through an 'O' ring. This may require light lubrication with an appropriate grease after prolonged use.

Thermo-electric Valve & Blocked Flue ECO(Internal Model)

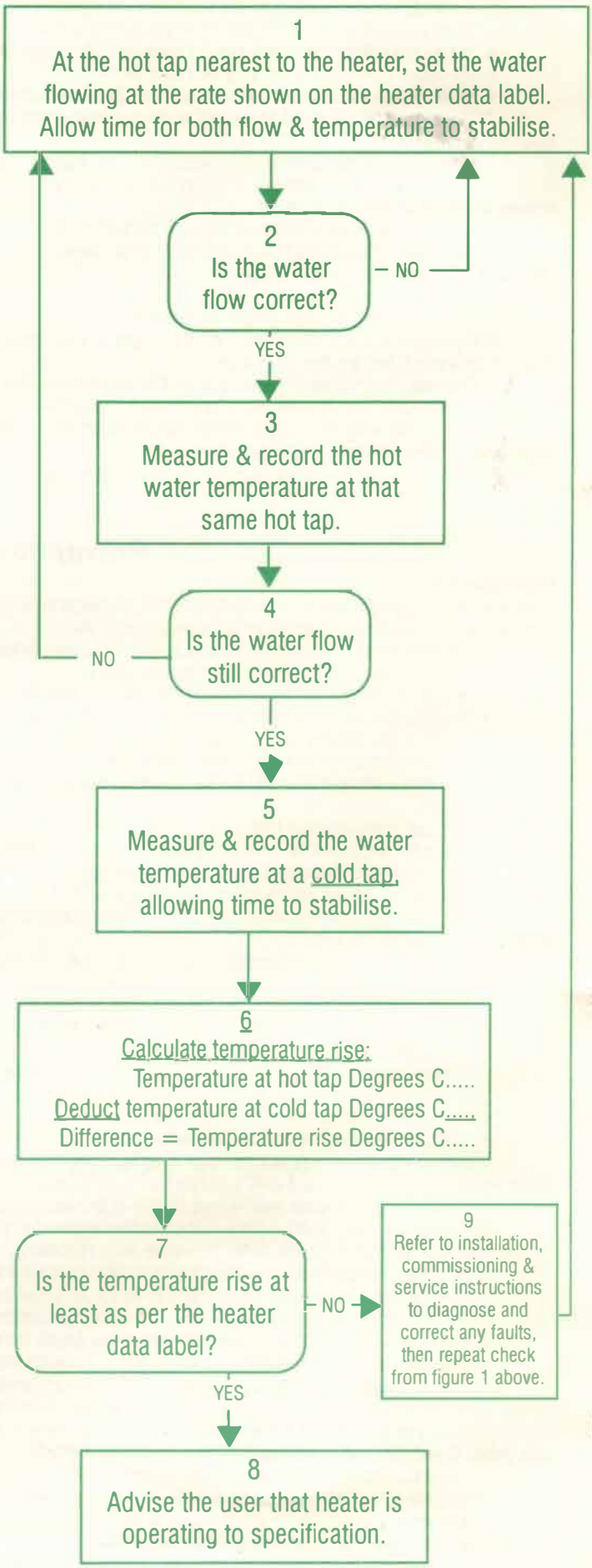
1. This assembly does not require any form of regular maintenence. Failure for any reason will leave the heater disabled in a safe condition.

VULCAN EXPRESS FAULT FINDING GUIDE

Smell Of Gas



Temperature Rise Check



Smell Of Combustion Products

Are heat exchanger fins or flue blocked?

YES → Remove heat exchanger and clean with high pressure water jet. Replace heat exchanger if damaged. Check for flue blockage & rectify or advise user to have rectified.

NO → Are the heat exchanger combustion chamber walls burnt away?

YES → Remove damaged heat exchanger, clean burners & pilot, install new heat exchanger. IMPORTANT: Combustion gas may contain substances which corrode the heat exchanger. Aerosols may contain compounds such as chlorine & other harmful airborne substances.

NO → Is the burner dirty or damaged?

YES → Clean or replace. Check for lint from unvented clothes dryer etc.

NO → Is the flue not drawing?

YES → Flue incorrectly installed or blocked. Isolate heater & advise user to have installation rectified to comply with regulations.

NO → Is the room where heater installed below atmospheric pressure?

YES → Locate cause, i.e. exhaust fan, lack of fixed ventilation & advise user to have rectified to comply with regulations.

NO → Is the gas pressure incorrect?

YES → Check gas supply pressure before heater & if inadequate, refer to gas Utility. Purge air from gas line. Adjust pressure to comply with appliance specification & retest. Check gas supply for availability, pressure or restriction. Check for sticking gas regulator.

Heater Leaking

Does water leak from the water valve?

YES → Water valve lid not sealing: Lid may be warped due to frost damage - replace water valve. Advise user that in freezing conditions heater should be isolated & drained overnight.

Water valve lid screws loose - tighten.
Stuffing box in water valve lid leaking: Replace stuffing box & diaphragm plate (pressure disc & spindle).

NO → Does water leak from the heat exchanger?

YES → Non-return device won't allow expansion: Stop tap, non-return valve, or pressure reducing valve fitted to cold supply - remove all & replace with single gate valve only.

Excessive water supply pressure - Fit cold water relief valve on supply.

NO → Does the relief valve relieve when hot tap is turned off?

YES → Non-return device won't allow water expansion: Stop tap, non-return valve or pressure reducing valve fitted to cold supply - remove all & replace with single gate valve only. Water supply pressure too high.

NO → Does the relief valve relieve when the heater is not operating?

YES → Non-return device won't allow expansion: Stop tap, non-return valve, or pressure reducing valve fitted to cold supply - remove all & replace with single gate valve only.

Water supply pressure too high: Water hammer in reticulation system: May be caused by high water supply pressure, unclipped pipes, user turning off taps too quickly, jumping tap valve/s, non-return valve or washing machine solenoid valves.

Water Temperature Fault

Water temperature too high, boiling?

YES

Gas pressure too high - adjust burner pressure.
Burner injector size incorrect - fit correct size injectors to comply with heater specification.
Water quantity regulator jammed - free mechanism or replace.
Water boils, burner slow to extinguish or does not extinguish
- slow ignition device/passage blocked.
Dismantle water valve assembly, remove venturi & slow ignition valve.
Clean connecting passage through lid, main casting, & venturi, then reassemble, replacing slow ignition valve if necessary.

NO

Water temperatures too low

YES

Water temperature selector set to 'COOL' - turn selector clockwise.
Burner pressure too low - adjust gas pressure - if still inadequate, refer to gas Utility.
Water supply pressure low (water valve not opening gas valve fully) - minimum (or more) water supply pressure as shown on the rating label must be available measured at the heater while operating.
- adequate water supply pressure may not be available.
- blocked water filter - clear or replace - ensure water supply gate valve fully open.
- supply pipe may be too small - enlarge.
- diaphragm in water valve may be stretched (perished) - replace.
- heat exchanger may have internal restriction - clean, descale, or replace - heat exchanger dirty or in poor condition - clean or replace.
- water quantity regulator not restricting flow - free or replace.
- cold water mixing with hot due to crossed connection. Turn off cold water isolating valve at heater. If water still flows from hot tap there is a crossed connection.

NO

Water temperature fluctuates

YES

Burner pressure fluctuating
- check burner pressure.
- water in gas supply - clear or refer to gas Utility.
- gas pressure regulator faulty - replace.
- service regulator faulty - refer to gas Utility.
Water supply pressure fluctuating
- water being drawn in another part of system - dedicated water supply to heater may assist.
- water flow control valve at shower rose will make condition worse - remove flow control valve.
- fit flow control valve to limit flow to shower cold supply only.
- quarter turn & 'flick' type taps only offer coarse flow control.
Heat exchanger fins very dirty
- remove heat exchanger & clean with high pressure water jet.
- examine heat exchanger & replace if necessary.
Heat exchanger combustion chamber walls burnt away
- remove damaged heat exchanger, clean burners & pilot, install new heat exchanger.

Pilot Fault

Will pilot ignite?

NO

Lack of gas
- check gas supply for availability, pressure or restriction & if inadequate, refer to gas Utility.
- purge air from gas line.
- clear blocked injector with compressed air or non-metal probe.
- check injector size aginst rating label.
- clear blocked pilot supply tube.
- clean pilot gas filter.
- adjust pilot rate screw where fitted.
- try lighting pilot with match.

No spark
- check spark gap, electrode, piezo unit & replace if necessary.

Pilot gas filter blocked
- clean filter & mixing tube ports.

Pilot hood bent
- restore to original shape or replace.

YES

Will pilot ignite but not hold?

YES

Air in gas line or pilot supply tube
- purge air from line.

Pilot flame too small
- clear blocked injector with compresses air or non-metal probe.
- check injector size against rating label.
- clear blocked pilot supply tube.
- clean pilot gas filter.

Auto reset E.C.O. open circuit? (Internal models only).
- unplug E.C.O. at thermocouple & perform test - should be a closed circuit when cold.
- check for blocked, undersized or ineffective flue, lack of fixed ventilation, presence of exhaust fan, & advise user to have rectified before further heater operation.
- is heater installed in a legal location? - if not, advise to have rectified before further heater operation.

Thermocouple not positioned in flame
- position thermocouple correctly in flame.

Control knob not pressed in fully &/or held long enough
- follow lighting instructions carefully.

Thermocouple/magnet/interrupter connections poor
- clean all contact surfaces.

Thermocouple fault
- test voltage under load typically 12-13mV.
- test voltage open circuit typically 25-30mV.

Thermo-electric valve faulty
- test dropout voltage (typically 1.5mV)
- replace thermo-electric valve.

NO

Does pilot reduce or extinguish when burner attempts to ignite?

YES

Gas supply indadequate
- check gas supply for availability, pressure or restriction.
- check gas supply pressure before heater & if inadequate, refer to gas Utility.
- purge air from gas line.
- check for sticking gas pressure regulator.

Pilot Fault

Pilot extinguishes when heater not in operation

YES

Pilot flame too small
- clear blocked injector with compressed air or non-metal probe.
- check injector size against rating label.
- clear blocked pilot supply tube.
- clean pilot gas filter.
- adjust pilot rate screw if fitted.
- EXTERNAL ONLY NG: If subject to exceptional winds, refer to replacement parts list for alternative larger orifice NG pilot injector.

Thermocouple not positioned in flame.
- position thermocouple correctly in flame.

Auto reset E.C.O. open circuit? (internal models only)
- unplug E.C.O. at thermocouple & perform test - should be a closed circuit when cold.
- check for blocked, undersized or ineffective flue, lack of fixed ventilation, presence of exhaust fan, & advise user to have rectified before further heater operation.
- is heater installed in a legal location? - if not, advise user to have rectified before further heater operation.

Thermocouple faulty
- test voltage under load typically 12-13mV.
- test voltage open circuit typically 25-40mV

Thermo-electric valve faulty
- test dropout voltage (typically 1.5mV)
- replace thermo-electric valve.

Thermocouple/magnet/interrupter connections poor
- clean all contact surfaces.

NO

Pilot extinguishes when heater is in operation

YES

NO

Pilot flame yellow

YES

Pilot filter blocked
- clean or replace filter.

Pilot burner dirty
- dismantle & clean pilot burner.

Pilot injector size incorrect
- check specification & fit correct size injector.

Gas supply pressure low
- check gas supply for availability, pressure or restriction.
- check gas supply pressure before heater & if inadequate, refer to gas Utility.
- purge air from gas line.
- check for sticking gas regulator.

Combustion gas contains substances which yellow the flame
- aerosols may contain compounds such as chlorine, lint & other harmful airborne substances.

Heat exchanger fins or flue blocked
- remove heat exchanger and clean with high pressure water.
- check for flue blockage & rectify or advise.

Thermocouple not correctly positioned in flame
- IMPORTANT - position thermocouple correctly in flame.

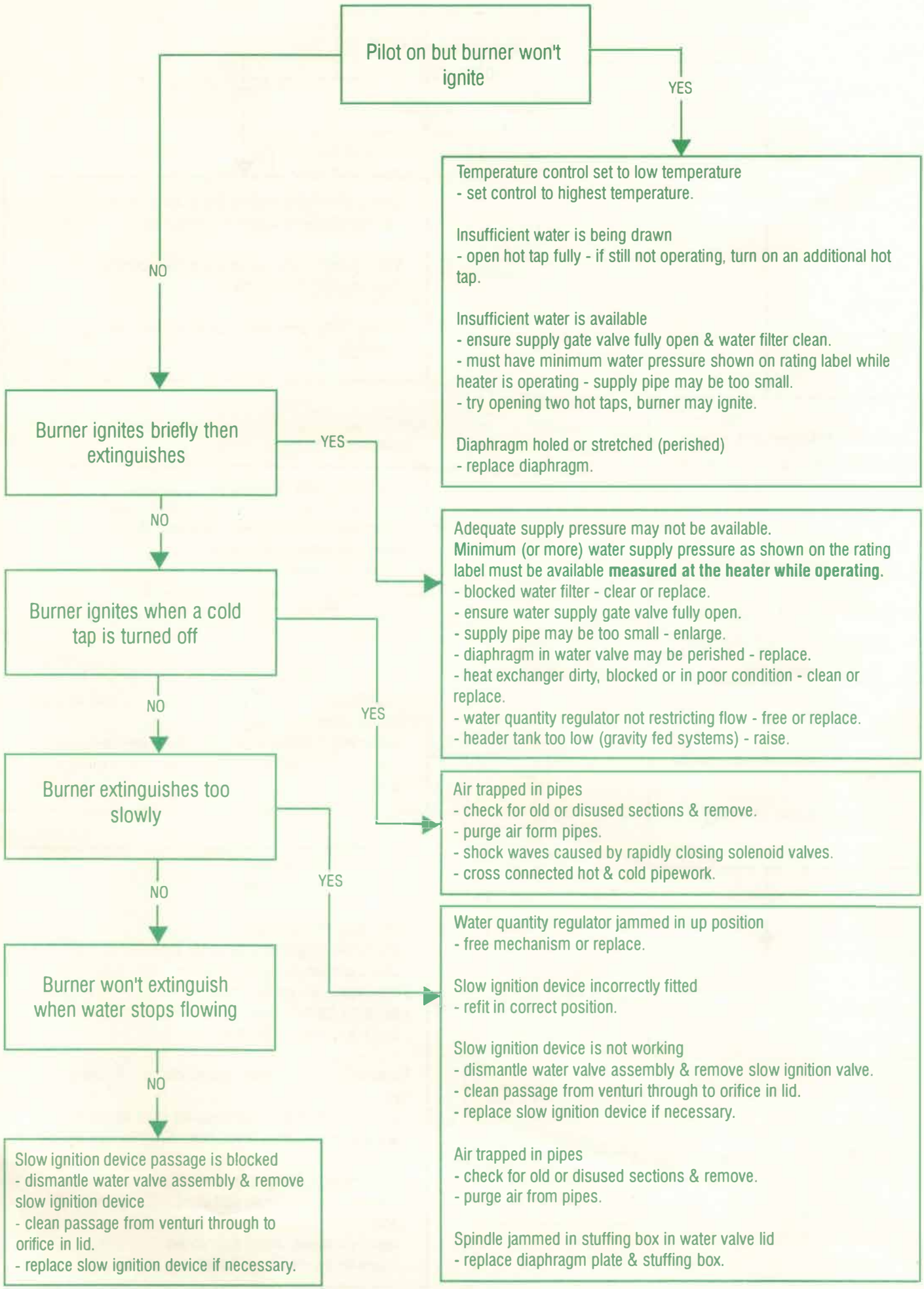
Auto reset E.C.O. open circuit? (Internal models only)
- unplug E.C.O. at thermocouple & perform test - should be a closed circuit when cold.
- check for blocked, undersized or ineffective flue, lack of fixed ventilation, presence of exhaust fan, & advise user to have rectified before further heater operation.

Thermocouple faulty
- test voltage under load typically 12-13mV.
- test voltage open circuit typically 25-30mV.

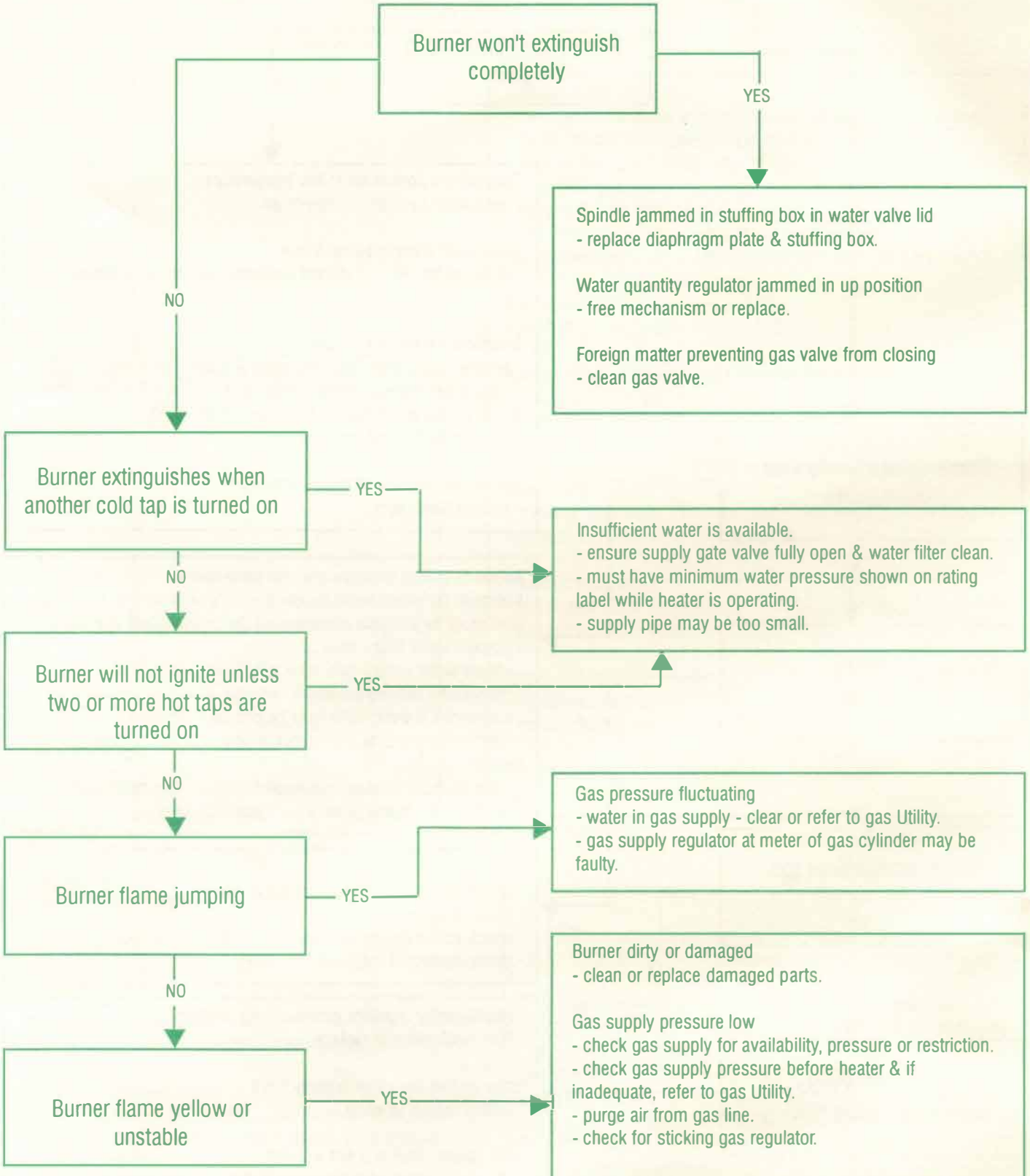
Thermo-electric valve faulty
- test dropout voltage (typically 1.5mV)
- replace thermo-electric valve.

Thermocouple/magnet/interrupter connections poor
- clean all contact surfaces.

Burner Fault



Burner Fault



Burner Fault

Burner ignition explosive

YES

Pilot flame too small
- clean pilot assembly & adjust rate if adjusting screw fitted.

Slow ignition device is not working
- dismantle water valve assembly & remove slow ignition valve -
- clean passage from venturi through to orifice in lid
- replace slow ignition device if necessary.

NO

Burner lights back to injectors

YES

Burner dirty or damaged
- clean or replace damaged parts.

Injector size incorrect
- install correct injectors to comply with heater specification.

Gas pressure incorrect
- adjust pressure to comply with heater specification.

NO

Burner operation noisy

YES

Gas pressure too high
- adjust pressure to comply with heater specification

Injector size incorrect
- install correct injectors to comply with heater specification.

Noisy Operation

Water hammer heard at heater

YES

Water hammer in the reticulation system may be caused by high water supply pressure, unclipped pipes, user turning off taps too quickly, jumping tap valve/s, non-return valve or washing machine solenoid valves.

NO

Water flow noisy

YES

Water quantity regulator jammed open
- free or replace water quantity regulator.

Scale in heat exchanger
- descale or replace heat exchanger.

NO

Burner ignition explosive

YES

Pilot flame too small
- clean pilot assembly & adjust rate if adjusting screw fitted.

Slow ignition device is not working
- dismantle water valve assembly & remove slow ignition valve-
- clean passage from venturi through to orifice in lid
- replace slow ignition device if necessary.

NO

Burner lights back at injectors

YES

Burner dirty or damaged
- clean or replace damaged parts.

Injector size incorrect
- install correct injectors to comply with heater specification.

Gas pressure incorrect
- adjust pressure to comply with heater specification.

NO

Burner operation noisy

YES

Gas pressure too high
- adjust pressure to comply with heater specification.

Injector size incorrect
- install correct injectors to comply with heater specification.

VULCAN CONTINUOUS FLOW WATER HEATER WARRANTY

(AUSTRALIA ONLY)

The Trade Practices Act 1974 and similar laws in each state and territory provide the Owner under certain circumstances with remedies in the event that a Vulcan Continuous Flow Water Heater fails due to defective materials or workmanship.
In addition, Southcorp Water Heaters Australia* makes the following promise: We will repair or, if necessary, replace a defective Vulcan Continuous Flow Water Heater on the following terms and conditions.
Southcorp will replace any failed component or, if necessary, arrange the installation of a new heater for the period shown on the following table.

Period	Model	Installation	Warranty
Component and Heat Exchanger warranty (from date of installation)			
12 months	All Models	All Installations	New component or heater free of charge, **including labour
Heat Exchanger Warranty (from date of installation)			
10 years	All Models	Heater installed in a single-family domestic premises	New heat exchanger free of charge, with installation and labour costs being the responsibility of the owner.
5 years	All Models	Heater installed in any other than a single-family domestic premises	

Notes: The warranty is applicable to water heaters manufactured from 1 September 1995. *Southcorp Water Heaters Australia is a registered business name of Southcorp Australia Pty Ltd A.C.N. 004213665. Southcorp Water Heaters Australia is the manufacturer/supplier of Vulcan water heaters. **Refer to item 3 of warranty conditions Southcorp Water Heaters Australia reserves the right to transfer fully functional components from the defective heater to the replacement heater if required.

WARRANTY CONDITIONS

1. The water heater must be installed in accordance with the Vulcan water heater installation instructions supplied with the water heater, and in accordance with all relevant statutory and local requirements of the state in which the water heater is to be installed.
2. Where a failed component or water heater is replaced under warranty, the balance of the original warranty period will remain effective. The replaced part or water heater does not carry a new warranty.
3. Where the water heater is installed outside the boundaries of a metropolitan area as defined by Southcorp Water Heaters Australia or further than 25 km from a regional Southcorp Water Heaters Australia branch office, or a Southcorp Water Heaters Australia Accredited Service Agent, the cost of transport, insurance and travelling costs between the nearest Southcorp Water Heaters Australia Accredited Service Agent's premises and the installed site shall be the owner's responsibility.
4. The warranty only applies to the water heater and original or genuine company component replacement parts and therefore does not cover any plumbing or electrical parts supplied by the installer and not an integral part of the water heater, e.g. pressure limiting valve, stopcock, non-return valve, electrical switches, pumps, or fuse.
5. The water heater must be sized to supply the hot water demand in accordance with the guidelines in Vulcan Water Heater literature.

WARRANTY EXCLUSIONS

REPAIR AND REPLACEMENT WORK WILL BE CARRIED OUT AS SET OUT IN THE VULCAN CONTINUOUS FLOW WATER HEATER WARRANTY ABOVE, BUT THE FOLLOWING EXCLUSIONS MAY CAUSE THE WATER HEATER WARRANTY TO BECOME VOID, AND MAY INCUR A SERVICE CHARGE AND COST OF PARTS (IF NECESSARY).

1. Accidental damage; Acts of God; failure due to misuse; incorrect installation; attempts to repair the water heater other than by Southcorp Water Heaters Australia Service Department, or Accredited Service Agent.
2. Where it is found that there is nothing wrong with the water heater; where the complaint is related to excessive discharge from the pressure relief valve due to high water pressure; where there is no flow of hot water due to faulty plumbing; where water leaks are related to plumbing and not the water heater or water heater components; where there is a failure of gas, electricity or water supplies.
3. Where the water heater or water heater component has failed directly or indirectly as a result of excessive water pressure, temperature and/or thermal input or corrosive atmosphere.
4. Where the water heater is located in a position that does not comply with the Vulcan water heater installation instructions or relevant statutory requirements, causing the need for major dismantling or removal of cupboards, doors or walls, or use of special equipment to bring the water heater to floor level.
5. Subject to any statutory provisions to the contrary claims for damage to furniture, carpets, walls foundations or any other consequential loss either directly or indirectly due to leakage from the water heater.

FOR SERVICE TELEPHONE

AUSTRALIA 131 031 OR REFER LOCAL YELLOW PAGES NEW ZEALAND 0800 657 335

SOUTHCORP WATER HEATERS AUSTRALIA, SOUTHCORP AUSTRALIA PTY. LTD

A.C.N. 004 213 665

SERVICE OFFICES

NEW SOUTH WALES
HEAD OFFICE: SYDNEY
13 Rachael Close, Silverwater 2141
Mail:Private Bag 105 Silverwater 2128
Phone: (02) 647 2700

BRISBANE
83 Balham Road, Archerfield
P.O. Box 550, Archerfield 4108
Phone: (07) 3213 0100

WESTERN AUSTRALIA
92 Robinson Avenue,
Belmont W.A. 6104
P.O. Box 453 Cloverdale 6105
Phone: (09) 479 9144

SOUTH AUSTRALIA
553 Grand Junction Road
Wingfield S.A. 5013
Phone: (08) 268 0000

CANBERRA
6/19 Tennants Street,
Fyshwick 2609
Phone: (06) 280 4743

VICTORIA
8 Dalmore Drive,
Scoresby Vic 3179
Phone: (03) 9212 8900

TASMANIA - AGENT
Crisp Ikin
36-38 Wellington Street
North Hobart, Tas 7002
Phone: (002) 34 9911

NEWCASTLE
76 Broadmeadow Road,
Broadmeadow 2292
Phone: (049) 613 515