

### **SECTION E – TROUBLE SHOOTING, SERVICE + REPAIR**

Kamco have a full “Service and Repair” facility at our premises in St Albans, and can either undertake full repairs or just supply replacement parts as required.

When your new Clearflow pump was first supplied it was flow and pressure tested after assembly to ensure that it would perform to a high standard. However, over time and use parts may have been physically damaged, worn out, or partially blocked by non-soluble matter.

If you are concerned that your pump may not be producing the same performance as when it left our factory there are a number of steps that you can take to test, and repair, your unit. These are listed below, they are not time consuming, do not require a high level of expertise and will not invalidate the warranty.

#### **Trouble shooting / problem solving.**

A flow chart is included on the following page to assist in diagnosing common problems that can be experienced on site. The chart and illustrated test are a useful guide in determining if a problem is related to the Clearflow pump or if it is a problem related to the heating system.

#### **How to check your Clearflow's performance.**

We suggest these checks be conducted outside and not within a clients premises.

#### **Test 1 - Pressure test**

**What you need:** Pressure gauge 0-30 psi adapted to 1" BSP male.

1. Fill the tank ½ full of water.
2. Point the flow reverser lever to the left.
3. Position the left hand valve to “Circulate”.
4. Position the right hand valve to “Dump”.
5. Attach one supply/return hose to the 1” BSP nipples. (short circuiting the flow).
6. Attach the dump hose as normal.
7. Holding the end of the dump hose away from you to a suitable discharge point, switch on the motor for five seconds. You should see a strong jet of water.
8. Attach the pressure gauge into the hose end and turn the motor on for 30 seconds.  
While the motor is running you should get a reading of approx 28psi.

#### **Test 2 - Flow rate test**

**What you need:** Empty clean 25 litre container

1. Repeat steps 1-7 of test above.
2. Hold the dump hose so that it will discharge water into the empty container.
3. When ready, use an assistant to time how long it takes to fill the container.  
It should take approx 25 seconds for the CF210 Titan.

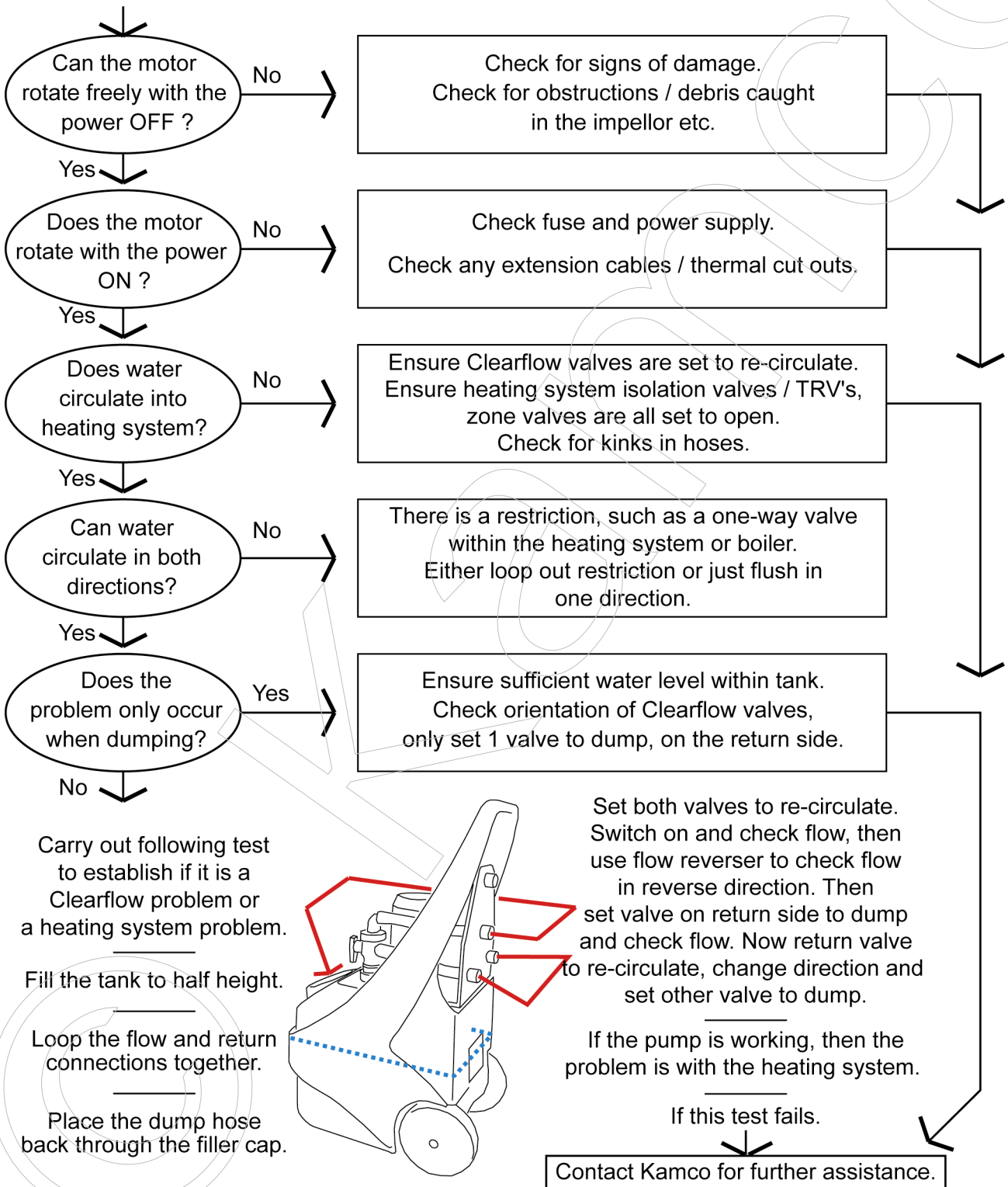
#### **Inspection**

1. Remove the 4 bolts that connect the flange to the tank.
2. Lift and withdraw the pump assembly from the tank.
3. Inspect the rotor cover at the bottom of the unit to ensure:  
It is flat.  
There are no bolts damaged or missing  
The O-ring is still in place and has not been pushed out.
4. Inspect the inside of the impeller to make sure that there is no debris inside.
5. Check all hose connection to ensure they are secure.

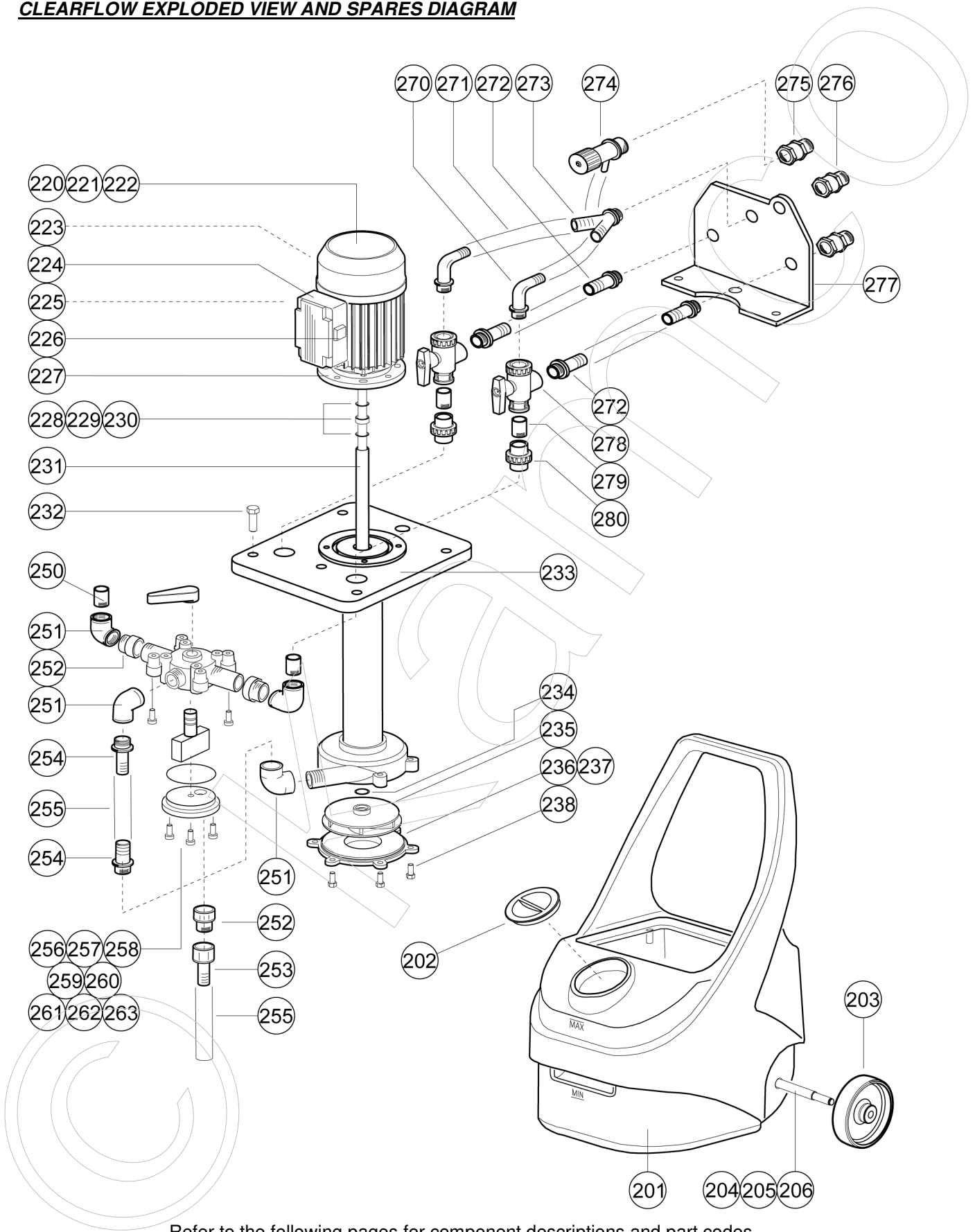
***If none of the above faults are apparent please call the Kamco Technical Help line on 01727 875020***

### TROUBLE SHOOTING / PROBLEM SOLVING

Use the flow chart to determine any likely problem and then if necessary undertake the simple flow test to establish if the Clearflow pump is functioning. If the pump is circulating and dumping with a good flow rate then any problem must be related to the heating system.



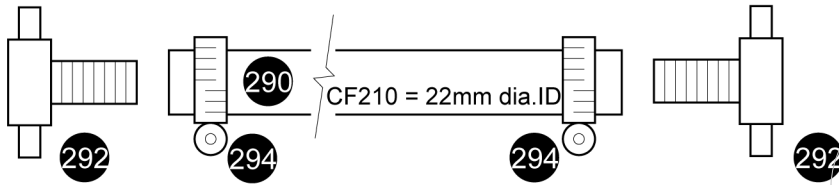
### CLEARFLOW EXPLODED VIEW AND SPARES DIAGRAM



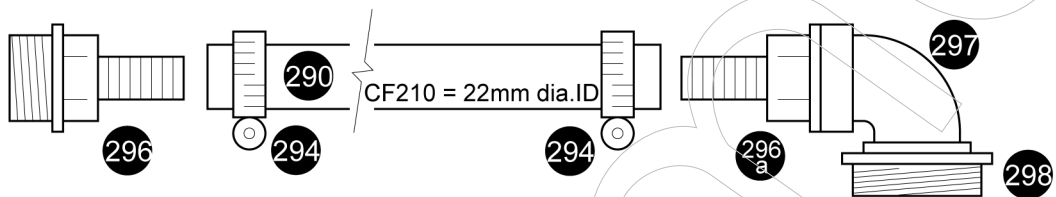
Refer to the following pages for component descriptions and part codes.

### EXPLODED VIEW OF HOSE ASSEMBLIES

2 x Flow and Return Hoses, each 5 mtrs long.



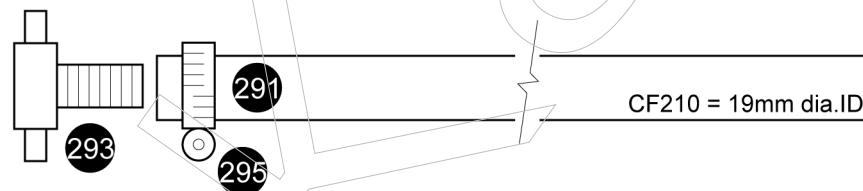
2 x Circulation Pump Hoses, each 0.5 mtrs long.



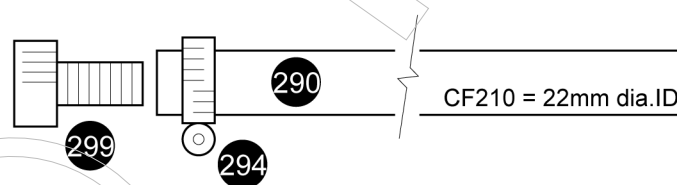
1 x Dump Hose, 8 mtrs long.



1 x Water Inlet Hose, 8 mtrs long.



1 x Overflow Hose, 3 mtrs long.



Refer to the following pages for component descriptions and part codes.





### HOSE COMPONENTS

No. on Diagram	Pump Type	Product Code	Description	Unit Price
290	CF210	HH022X30	Clear hose 22mm ID per metre (state length)	
291	CF210	HH019X30	Clear hose 19mm ID per metre (state length)	
292	CF210	H190F03	1" f x 25mm brass hose adaptor	
293	CF210	H090F07	3/4" f x 19mm brass hose adaptor	
294	CF210	H030F13B	Worm drive clip, 20-32mm	
295	CF210	H030F13A#	Worm drive clip, 16-27mm	
296	CF210	H190F05	1" m x 25mm PP hose adaptor	
296a	CF210	H190F04	3/4" m x 22mm PP hose adaptor	
297	CF210	H030F11	3/4" m/f elbow	
298	CF210	H030F19	1 1/2" m x 3/4" brass bush (each)	
299	CF210	H190F20	1" f x 25mm PP hose adaptor	
	CF210	H190F06A	CF210 complete hose washer kit	
	CF210	H190F06	Pack 10 x 1" washers	
	CF210	H030F38	1 1/2" washer (each)	
	CF210	H030F21	Transit container	

### HOSE ASSEMBLIES (for Clearflow CF210 Titan)

No. on Diagram	Pump Type	Product Code	Description	Unit Price
	CF210		Full hose set for CF210 (7No hoses)	
	CF210	HHCF210DH	8mtr dump hose	
	CF210	HHCF210FR	5mtr supply and return hoses (pair)	
	CF210	HHCF190OH	3mtr overflow hose	
	CF210	HHCF210Wi	8mtr water inlet hose	
	CF210	HHCF190CP	0.5mtr 1 1/2" circulation pump adaptor hoses (pair)	

