

# ATAG Fault Finding Chart (2019 Boilers onwards )



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Fault Code	101
Description	Overheat

Check all isolation valves are open, including boiler flow and return, magnetic filter valves, two ports valves and rad valves

No

Open valves, re-vent system as required and retry

Yes

Using parameter menu 8.3 check boiler flow and return temps. Is the differential greater than 30°C?

Yes

Check the pump is spinning freely, use the access screw on front of pump, PZ1 or 2 screwdriver, you need to push against the drive spring

Yes

Differential temp should now narrow to less than 25°C, OK now

Yes

OK

No

Replace the pump as could be seized

No

Check for Voltage at the pump. You can force the pump 'on' using manual settings in parameter menu 2. Set parameter 2.6.0 to 1 = Manual mode On, and 2.6.1 to 1 pump control 'On'. Please note change 2.6.0 to 0 manual mode 'off' after this test

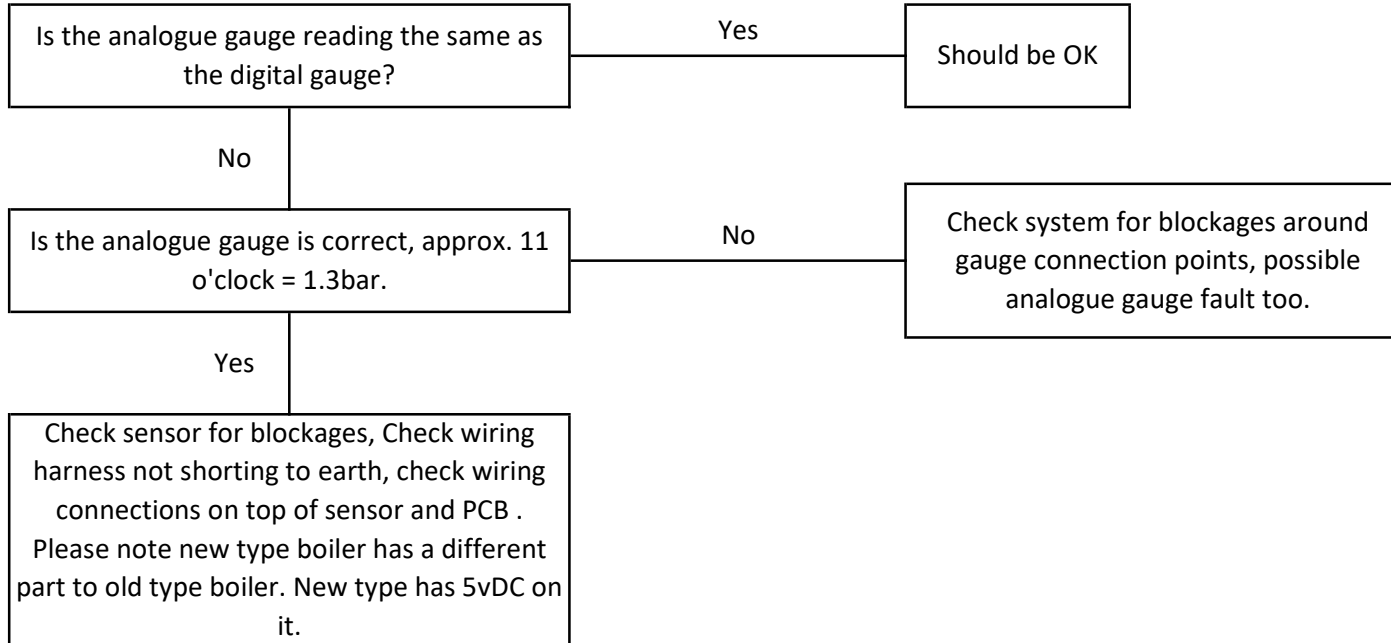
No

Check PCB, wiring harness etc

Yes

Contact ATAG Technical

Fault Code	102
Description	Pressure sensor fault



Fault Code	103, 104, 105, 106, 107
Description	Flow check failed

Check all isolation valves are open, including boiler flow and return, magnetic filter valves, two ports valves and rad valves

No

Open valves, re-vent system as required and retry

Yes

Using parameter menu 8.3 check boiler flow and return temps. Is the differential greater than 30°C?

Yes

Check the pump is spinning freely, use the access screw on front of pump, PZ1 or 2 screwdriver, you need to push against the drive spring

Yes

Differential temp should now narrow to less than 25°C, OK now

Yes

OK

Yes

Replace the pump as could be seized

No

Check for Voltage at the pump. You can force the pump 'on' using manual settings in parameter menu 2. Set parameter 2.6.0 to 1 = Manual mode On, and 2.6.1 to 1 pump control 'On'. **Please note change 2.6.0 to 0 manual mode 'off' after this test**

No

Check PCB, wiring harness etc

Yes

Contact ATAG Technical

Fault Code	IP4
Description	Pressure < Pmin (0.5 to 0.8 bar)

Top up pressure as required. **Please note update rate of new screen is slow at approx 10secs refresh rate. OVER FILLING POSSIBLE. Use analogue gauge set to approx 11 o'clock on a cold system, this should correlate to 1.2/1.3 bar on the digital display**

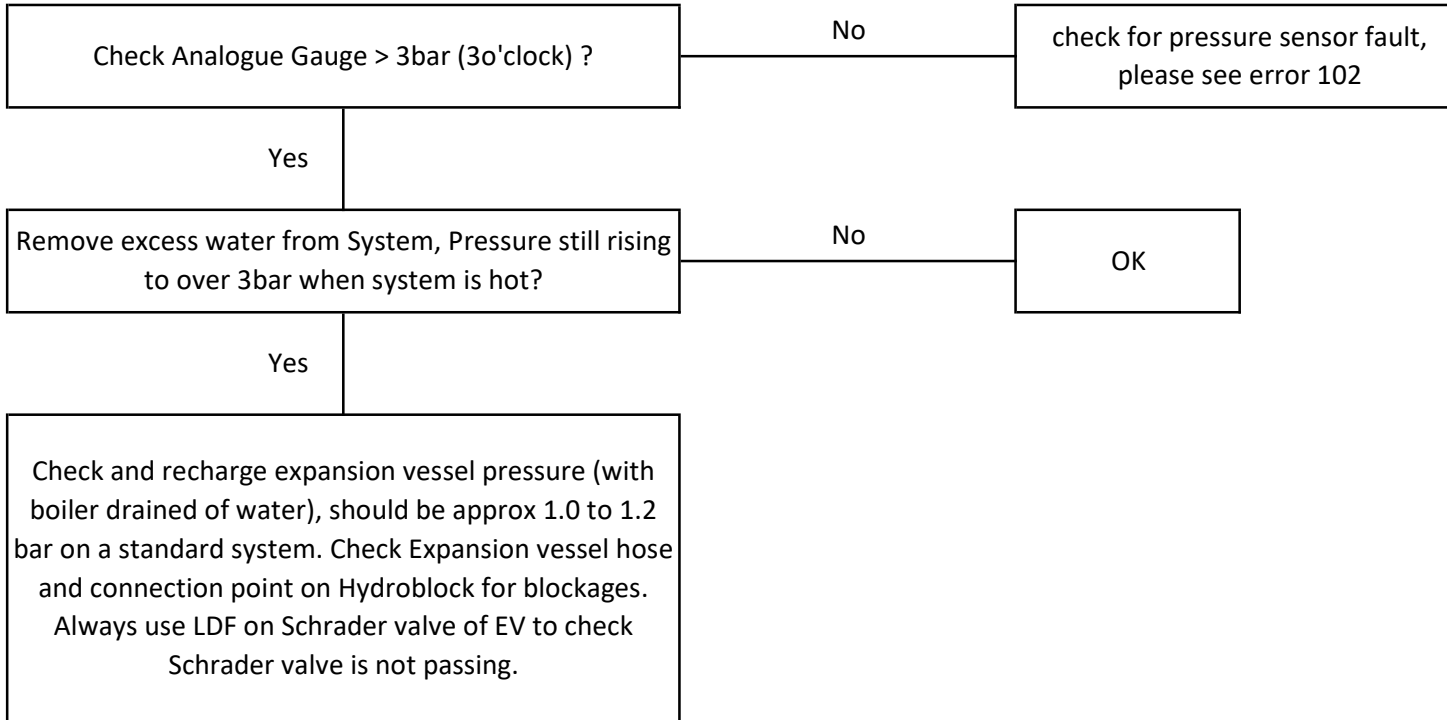
Fault Code	108
Description	Pressure <Pmin 0.5 bar Filling needed

Top up pressure as required. **Please note update rate of new screen is slow at approx 10secs refresh rate. OVER FILLING POSSIBLE. Use analogue gauge set to approx 11 o'clock on a cold system, this should correlate to 1.2/1.3 bar on the digital display**

Fault Code	IP1, IP2, IP3
Description	Flow Check Failed

See fault 101, 103, 104, 105, 106, 107

Fault Code	IP9
Description	Pressure > Pmax



Fault Code	110	112
Description	Send (Flow) probe	Return Sensor Fault

Check Sensor for short or Open circuit using a multimeter. Test resistance across pins of sensor with Wiring harness removed. Open or Short Circuit?

Yes → Replace sensor

No

Expected resistances  
 @ 25°C = 10kOhms  
 @ 60°C = 2.5kOhms  
 @ 80°C = 1.3kOhms

Fault Code	114
Description	Outside sensor damaged

This fault can occur when boiler PCB is 'looking' for a sensor in its configuration settings when one is not even fitted to the boiler. Check parameter 4.2.1 is set correct (not to 3 or 4). Summer activation parameter 4.1.0 set to 1 can affect this too if there is no WC sensor fitted. Reset boiler with parameter 2.8 can fix this.  
**Caution all settings will be return to factory settings including any LPG settings that may have been configured**

Check Resistances with wiring removed from Sensor  
 @ 0°C = 2.9kOhms  
 @ 10°C = 1.8kOhms  
 @ 20 C = 1.2kOhms

Yes

Check continuity of wiring from sensor to boiler, Check for water leaks affecting wiring effectiveness, check connection to PCB

No

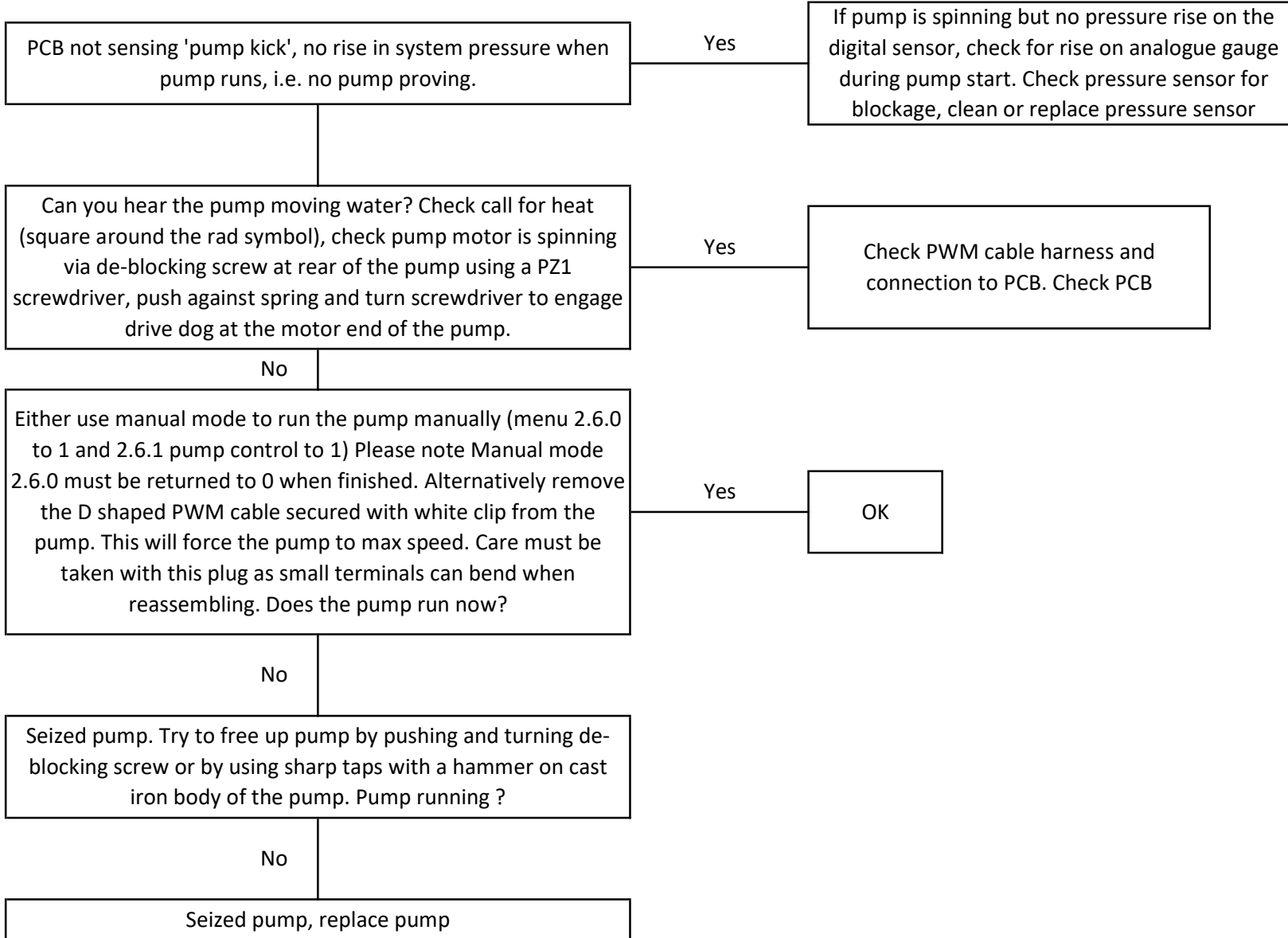
Replace sensor

Fault Code	118
Description	Send (flow) and Return Probe Plausibility Checks failed

This check is looking at Flow and Return Sensor readings. Usually where the boiler has been piped up incorrectly, where flow and return are reversed.  
Check sensor temperature readings in parameter menu 8.3 to confirm.



Fault Code	140
Description	Dynamic Pressure Check Failed (or no pump detection)



Fault Code	141
Description	CH Flow Switch Open (IR Boiler)

Poor flow through boiler from external system issues, not allowing the boiler flow switch to close when pump is on (located on return pipe to heat ex). Check for air in the system, open vent and cold feed configuration (correct 'H' Section installed before the pump), partial blockage of cold feed and vent (use a magnet to check this for magnetite blocking or partially blocking the copper pipework, the magnet will 'pull' into the non magnetic copper in the presence of a magnetic blockage) Flow switch is 'good' at 7 l/min (+/- 10%), most good flowing systems will deliver around 15 to 20 l/min flow rate around the system. Ensure maximum flow through TRVs, lockshields and any bypasses (Auto or Manual) are fully open for testing purposes.

First Check all valves including magnetic filters, 2 ports, rad and pump valves are fully open. External Auto bypass good and open to around mid position = 0.3 bar differential and installed after the pump before any 2 or 3 ports etc. Auto bypasses can go faulty too, hold open a 2 port, if fault occurs during 'off' cycle, to prove fault at bypass valve.

Yes

To check pipework is configured correctly. Temporarily link out flow switch (loom side), check flow and return temps on parameter menu 8.3. Flow should be hotter than return, OK?

Yes

Check external pump running OK?

Yes

possible blockage at cold feed and vent pipe, run a magnet across this area to check. (use a magnet to check this for magnetite blocking or partially the copper pipework, the magnet will 'pull' to the non magnetic copper)

No

Re-pipe the flow and return pipework to the correct orientation, Flow is on the left, Return on the right of the boiler.

No

Older non modulating pumps are likely to be weak, resistance can be checked, no more than 150 Ohms across pump L & N with all wiring removed, can the pump be stopped via bleed screw using a screwdriver? If so replace the pump.

Fault Code	201
Description	DHW probe Damaged

Check boiler version in 2.2.8. Should be set for Combi = 0, System boiler with NTC = 1 (Typically HWP systems), System Boiler with Thermostat = 2, Please note for Combis and for System boilers with NTC (HWP kits) will be looking for a good resistance reading from the NTC sensor installed. Check NTC resistances.

Check Resistances (with wiring removed) from HW Sensor  
 @ 25°C = 10kOhms  
 @ 50°C = 3.6kOhms  
 @ 60 C =2.5kOhms

Other checks to carry out, Check Sensor, Check Wiring harness for continuity, Check Wiring harness not shorting to earth, Check no water leaks affecting wiring harness, Check connection CN12 on PCB is located properly.

Fault Code	203
Description	Tank Probe Damaged

Check boiler version in technical menu 2.2.8. Combi = 0, System boiler with NTC = 1 (Typically HWP systems), System Boiler with Thermostat = 2, Please note for Combis and for System boilers with NTC HW sensor (HWP kits for example) PCB will be looking for a good resistance reading from the NTC sensor installed. Check NTC resistances.

Check Resistances (with wiring removed) from HW Sensor  
 @ 25°C = 10kOhms  
 @ 50°C = 3.6kOhms  
 @ 60 C =2.5kOhms

Other checks to carry out, Check Sensor, Check Wiring harness for continuity, Check Wiring harness not shorting to earth, Check no water leaks affecting wiring harness, Check connection to the yellow plug on PCB is located properly and terminal screws are tight.

Fault Code	303
Description	PCB Fault

Check PCB

Fault Code	304
Description	Too Many Resets

Too many resets (>5) in 15 minutes

Fault Code	306
Description	PCB Fault

Check PCB

Fault Code	309
Description	Gas Relay Check Failed

Check wiring harness connections, from PCB to Gas Valve CN2 on PCB, check earth connections

Press Reset

PCB Fault

Fault Code	3P9
Description	Scheduled Maintenance - Call Service

Scheduled Maintenance - Call Service, time has elapsed on service period - boiler service is due, call ASP to book in a boiler service

Service is due, service schedule time limit reached

Go to service menu, press back arrow and OK for 6 secs, insert technical code = 007 - Configuration wizard - Boiler 1, Service Options - Months remaining before service = time remaining on service schedule. Advise to call installer and get a boiler service done and get this reset to remove the service reminder flag.

To reset the service reminder flag, Go to service menu, press back arrow and OK for 6 secs, insert technical code = 007 - Configuration wizard - Boiler 1, Service Options - Service warning reset. This will reset the count down timer for the service reminder to the time period stated in the menu 'Months remaining before service, default value = 12 months

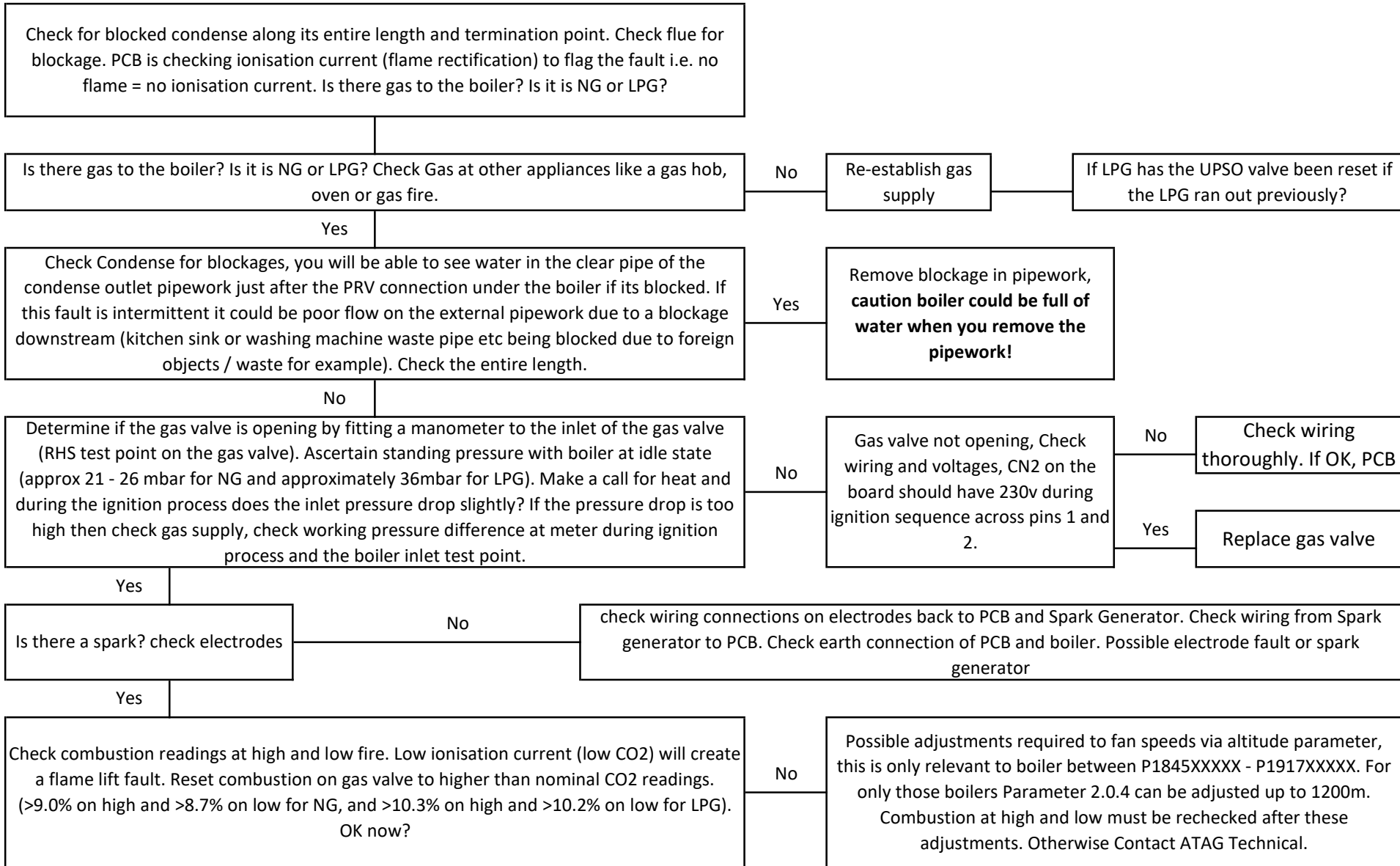
Fault Code	41Z ( Z = zone number, e.g. 411, 412 etc)
Description	Room Sensor faulty

Check PCB settings for configuration issue where a zone parameter has been configured incorrectly for the heating control equipment used. Room Sensors are either One Zone controllers or Cubes only. No other 3rd party thermostat will act as a 'room sensor' into this boiler.

Check Thermoregulation type in technical area 'complete menu' Zone Number.2.1 (e.g. 4.2.1 or 5.2.1 etc). This parameter can be set to 2 or 4 if One Zone or Cube is fitted. Please note the Zone assignment must be correct on the stat as well, so One Zone or Cube zone assignment must correspond to the zone parameter in question. i.e., zone 1 thermostat = zone 1 parameter 4.2.1, zone2 = 5.2.1 and so on.

Other 3rd party thermostats must have this parameter set to either 0 (on/off fixed flow temp) or 3 (weather comp with on/off, if 3 is selected an outside sensor must be fitted as well).

Fault Code	501	502	504	5P1	5P2	5P3
Description	No flame detected	Flame detected with Gas Valve Closed	Flame Lift	1st Ign Failed	2nd Ign Failed	Flame lift



Fault Code	612
Description	Fan Fault

