

## Indicative List of Gas Boilers and Associated Plant, Testing and Care Schedule

No.	Description	Frequency	Action	Notes
<b>Boilers - LTHW &amp; MTHW</b>				
1	Operation of Safety Controls		Note any visible defects Ensure system is full of water and the circuits are open.	
2	Combustion Test	6 monthly	Start up and carry out the following tests: Smoke, Draught chamber and flue Flue temperature, Fuel input and gas analysis including carbon monoxide.	
3	Thermostats – Pressure Sensors – altitude gauges and thermometers	Annually	Ensure correct operation of each device	
4	Electrical services		Locate isolation switch, and ensure it is in accordance with I.E.E. regulations Shut down, disconnect or remove fuses.	
5	Boiler return temperature and associated controls	Annually	Ensure correct operation of each device	
6	Boiler flueways, combustion chamber and connecting flues	Annually	Open and remove by brushing and/or vacuum all soot and scale	
7	Refractory linings	Annually	Check condition and report	
8	Boiler flueways and chamber		Reseal Check for air leaks Test run duplicate pumps	
9	Flue	Annually	Carry out smoke test	
10	Water quality		Check system water quality and inhibitor type and concentration and top up if required	
11	Boiler Mountings	Annually	Examine pipe connections, valve spindles and glands and repack as necessary. Test safety valves. Clean and test valves for free travel, repack and adjust as necessary. Examine drain cocks.	
12	Instruments and Gauges	Annually	Clean and check altitude, pressure and temperature gauges for accuracy, calibration and serviceability. Examine all meters	
13	Pumps	Annually	Clean and examine. Lubricate as necessary. Examine drive for alignment; adjust as necessary. Examine pulleys and keys. Test pipe and valve connection for leaks. Repack glands as necessary. Report on condition. Ensure all guards are in place. Renew V belts.	
14	Fan	Annually	Check operation and clean blades.	
15	Boiler	Annually	Reconnect and test fire, Carry out: Combustion test Refit casing and Thoroughly clean down.	
16	Distribution Pipework	Annually	Examine pipework, hangers, supports and thermal insulation. Check that ID banding is correctly installed. Examine weatherproofing on external runs. Examine for corrosion. Test for leaks.	
17	Expansion Tanks	Annually	Examine water level. Test ball valve and stop cock. Examine condition of tank and insulation. Examine overflows; ensure they are clear.	
18	Vent Pipes and Cold Feed	Annually	Examine vent pipes; ensure they are clear. Examine cold feed; ensure free flow. Test valves for free travel; repack and adjust as necessary. Test drain cocks. Report "Black Iron" construction, and presence of isolating valves and d.o.c's Examine insulation including ID banding	
19	Valves	Annually	Check isolating valves. Clean thermostatic valves and sensing devices. Test motorised valves. Test timers and controls. Test valves for free travel; repack and adjust as necessary.	

### Atmospheric Gas Burners

20	Gas, electrical and ventilating systems.	6 monthly	Check that all are in accordance with current Codes of Practice.	
21	General	6 monthly	Check casing for damage or breakages. Inspect for loose fittings or connections and any sign of leaks.	
22	Combustion test	6 monthly	Carry out flue gas analysis using certified test equipment Complete report to Client Affix service sticker to boiler casing	
23	Before proceeding with dismantling of boiler	Annually	Check casing for damage or breakages.	

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			Inspect for loose fittings or connections and any sign of leaks. Refer to manufacturer's specification. Remove previous servicing sticker from casing, and note on report when last service took place.	
24	Isolate boiler for gas and electrical supplies	Annually	Isolate electrically, disconnect or remove fuses, turn off and isolate the gas supply. Record any work which needs rectification or replacement.	
25	Thermocouple, probe pilot assembly, spark electrode and main burners.	Annually	Disconnect and remove from boiler, clean pilot and main burner. Cleaning should be thorough and carried out as per the manufacturer's instructions.	
26	Spark electrode and thermocouple / probe	Annually	Renew and refit along with main burner.	
27	Wiring to ignitor and/or probe, gas valve and boiler thermostats.	Annually	Examine flexible cables for wear, fraying braid and brittle insulation. Ensure that wiring terminal connections are sound.	
28	Remove burners and pilot assembly and baffles if fitted	Annually	Brush all flueways thoroughly from top to bottom, Clean all deposits from the burner box, Refit baffles and flue cover - checking cover seal.	
29	Pilot assembly - Pilot head, Pilot injection, Thermocouple tip	Annually	Remove and clean ports Unscrew and clean. Renew thermocouples and probes in each boiler reassemble Pilot. Clean by blowing through or washing. Make sure head lines up with thermocouple and not burner.	
30	Lint filter	Annually	Remove from burners and clean	
31	Burner top Filters Burners Gas valve, thermocouple and pilot tube.	Annually	Brush and check flame parts are clear Remove any deposits inside burner Check for cracking or wear Refit Refit Reconnect	
32	Electricity.	Annually	Switch on Ensure boiler thermostat is in off position	
33	Flame failure and associated controls	Annually	Turn on gas, check and adjust pilot flame to envelope thermocouple / probe Test flame failure device. Test flame setting and thermocouple sensitivity Check manifold gas pressure against manufacturer's settings, adjust if required.	
34	Gas settings	Annually	Check and adjust pressure to main burner.	
35	General	Annually	Examine securing bolts and tighten as necessary. Check door seals and gaskets, repair or renew as necessary. Check all joints for leakage and repair as required. Clean boiler fronts of combustion products and repaint with suitable approved paint. Clean and descale heating surfaces. De-sludge as necessary.	
36	Recommendations	Annually	Provide written report	This report should be signed by the servicing engineer and kept by the Client together with all the relevant manufacturer's literature.

### Blown Gas Burners

37	Gas, electrical and ventilating systems.	6 monthly	Check that all are in accordance with current Codes of Practice.	
38	General	6 monthly	Examine the burner under normal operating conditions	
39	Combustion test	6 monthly	Carry out full test with approved certified test meter	Provide written report
40	Burner general	Annually	Check pilot and mains gas pressures Adjust governors as required. Examine burner head, clean as necessary	
41	Electrical	Annually	Inspect H.T. leads from transformer to electrodes, Check terminals, Clean and reconnect. Clean and test flame failure photocell or probe and viewing glasses. Ensure "Fail Safe" operation.	
42	Fan	Annually	Check fan impellers for condition and true running, Clean and adjust as required. Clean and lubricate motors to manufacturer's instructions.	
43	Controls	Annually	Check function of control boxes, hydromotors and pressure boosters.	Provide written report

### Boilers Fire and Safety Circuits

64	Gas - Manually Operated Valves	Annually	Check to establish positive shut off of gas is achieved	
65	Gas - Pressure switches - Gas Boosters	Annually	Check for operation and sensitivity	
66	Gas - Detection Unit	Annually	Test sensitivity Recalibrate if required – to manufacturers standards manufacturer's standards	
67	Gas - Quick Release Mechanism	Annually	Actuate and recheck operation of the dead weight valve or solenoid	
68	Gas - Valves and Quick Release Mechanism	Annually	Reset Check that all interconnecting tension wire, fusible links fire buttons and pulleys are free for operation	

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69	Boiler control and high limit thermostats (thermal or manual reset)	Annually	Ensure these are set correctly.	
			Check operation of pressure switches	
			Operation should be within the manufacturer's switching differential.	
			Adjust if required	
70	Pressure switches	Annually	Check operation	
71	Foam inlets	Annually	Ensure foam inlet pipes are free from blockage.	
			Inspect diffuser nozzles for damage	
72	Smoke/heat detection	Annually	Check operation	
			Ensure alignment with BS 5839	
73	General	6 monthly	Check all fuel supply valves for free operation.	
			Ensure that each fuel supply valve is complete with own wheel or key.	
74	Combustion Air Source into Plant Room	Annually	Check that original provision has been left clear of any obstruction dirt.	

### Pressurisation Units Maintenance

75	System general	6 Monthly	Carry out physical inspection of all equipment including controls.	
			Locate equipment maintenance manual and determine unit set pressures for duty, high and low settings.	
			Examine securing bolts; tighten as necessary.	
			Examine anti-vibration mountings. Examine pressure gauges	
			Examine fixed and flexible pipework, couplings and joints for leaks. Tighten as necessary.	
			Report: Corrosion & Record readings	
76	Electrical isolation	6 Monthly	Determine if unit is interlinked with BMS.	
			Isolate electrical supply	
			Examine motor starters, contactors and relays. Test for correct operation.	
			Check overcurrent protection, adjust overloads where applicable. mechanical action of equipment, switches	
			Clean and Test pilot lamps.	
			Examine flexible cables for wear, fraying braid and brittle insulation.	
			Check terminals, tighten as necessary	
			Test operation of over-run timers and automatic changeover controls.	
			Report worn contacts	
Examine earthing arrangements & test				
77	Break tank	6 Monthly	Ensure adequate water supply available	
			Examine ball valves.	
78	Diaphragm expansion tank	6 Monthly	Isolate and drain, check cushion pressure, if necessary carry out adjustments in manner recommended by manufacturer	
			Check internal surfaces, report on condition, remove any sharp edges	
			Re-assemble, re-charge to correct cushion pressure.	
			Note from log when changes were last made indicating condition of diaphragm	
			Ensure diaphragm is in good condition, if necessary remove diaphragm for inspection and report condition. If necessary replace diaphragm	
79	Pressurisation unit	6 Monthly	Check closed valve pressure and pump capacity	
			Remove and clean pressure reducing valve filter.	
			Check pressure setting.	
			Dismantle and clean suction non-suction return valve.	
			Clean any debris from mains break tank and if necessary, clean and lubricate ball valve.	
			Check and if necessary adjust hydraulic accumulator cushion pressure.	
			Examine safety valves.	
80	External controls	6 Monthly	Check setting of high and low pressure cut-out switches.	
			Test operation of high/low pressure alarms	
81	Alarms	6 Monthly	Check alarms including signals to BMS	
82	System re-instatement	6 Monthly	Adjust setting of all cushion pressures, pressure switch and pressure reducing valve settings to conform with design information.	
			Recharge with nitrogen in accordance with manufacturer's instructions	
			Check pressure settings and ensure that they are appropriate for the installation	
			Adjust as necessary	
			Re-energise and check system running normally Leave system for immediate operation if required.	

### Small Commercial and/or Domestic Systems Maintenance

#### Boiler Plant

83	General	Annually	Clean and examine air intake grilles. Examine securing bolts and tighten as necessary.	
			Clean, lubricate and test dampers and draught stabilisers.	
			Test flues and dampers for air leakage.	
			Examine thermal insulation. Examine thermal brickwork.	
			Check door seals and gaskets, repair or renew as necessary.	
			Check all joints for leakage and repair as required.	
			Clean and descale heating surfaces.	
			Examine associated electrical cables and connections.	

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No.	Description	Frequency	Action	Notes
			Remove dust and debris from all accessible voids around inset boilers.	
84	Chimneys and Flues, Oil, Coal and Gas Fired	6 monthly	Sweep all flues and chimneys. Examine linings. Examine insulation. Examine exterior. Examine and test dampers and draught stabilisers. Examine and test access door seals. Record and report results.	

### Heating services

86	Pumps	Annually	Clean and examine. Examine for leaks. Lubricate as necessary. Repack glands as necessary. Test pipe and valve connections for leaks. Examine associated electrical cables and connections. Record and report results.	
87	Distribution pipework	Annually	Examine hangers, expansion joints and supports; adjust as necessary. Examine thermal insulation. Record and report repairs or renewal required. Examine for corrosion Test for leaks	
88	Expansion Tanks	Annually	Report non-compliance with Water Supply (Water Fittings) Regulations 1999 Examine water level. Test ball valves and stop cocks. Re-washer as necessary. Examine condition of tank and thermal insulation. Record and report repairs or renewal required. Examine for cleanliness or contamination. Ensure lids and covers are in place. Test automatic valves. Examine overflow pipes; ensure they are clear and vermin guards are in position	
89	Vent Pipes and Cold Feed	Annually	Examine vent pipes; ensure they are clear Examine cold feed; ensure free flow. Test valves for free travel; repack and adjust as necessary. Test drain cocks.	
90	Heating Appliances	Annually	Examine for leaks Examine for corrosion Vent radiators and coils. Examine fixings; tighten as necessary Test valves for free travel; repack and adjust as necessary. Test pipe and valve connection for leaks. Check for missing or loose pipe or radiator brackets; adjust as necessary. Check for missing valve heads. Clean thermostatic valves and sensing devices. Brush and vacuum clean all finned pipework and perimeter-skirting heaters, Brush and clean all internal surfaces and heating coils of forced fan convectors; clean or replace air filters.	
91	Valves	Annually	Check isolating valves. Clean thermostatic valves and sensing devices. Test motorised valves. Test timers and controls. Test valves for free travel; repack and adjust as necessary.	
92	Condensate	Annually	Examine condensate pipes; ensure they are clear	

### Domestic Hot and Cold Services

93	Domestic Hot Water Cylinders	Annually	Examine for leaks. Clean and test valves for free travel; adjust or repack as necessary. Test thermostatic controls. Examine vent pipes; ensure they are clear. Examine thermal insulation. Record and report repairs or renewal required.	
94	Distribution pipework and valves	Annually	Examine for leaks. Examine for corrosion. Examine thermal insulation. Record and report repairs or renewal required. Clean and test valves for free travel; adjust or repack as necessary. Report lead pipework	
95	Feed, Expansion and Storage Tanks	Annually	Report non-compliance with Water Supply (Water Fittings) Regulations 1999 Examine water level. Test ball valves and stop cocks. Re-washer as necessary. Examine condition of tank and thermal insulation.	

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			Record and report repairs or renewal required.	
			Examine for cleanliness or contamination	
			Ensure lids and covers are in place. Test automatic valves.	
			Examine overflow pipes; ensure they are clear and vermin guards are in position	
96	Draw Off Points	Annually	Test draw off points; rewasher as necessary.	
			Examine for leakage and corrosion.	
			Test valves for free travel.	
			Test thermostatic mixing valves ensuring no flow when cold supply isolated.	
			Test operation of non-thermostatic mixing valves.	
97	Cold Water Main	Annually	Test stop valves, rewasher as necessary.	
			Examine for leaks.	
			Examine for corrosion.	
			Examine thermal insulation.	
			Report lead pipework.	
98	General Controls	Annually	Examine and report condition of electrical connecting cables and conduits to boilers, pumps valves and fans.	
			Examine and test time switches and programmers.	
			Test calibration of thermostats.	
			Test operation of two port and three port valves.	
			Report condition of controls.	
99	Gas Services	Annually	Test gas safety shut off valves.	
			Solution test pipe connection for leaks.	
			Examine for corrosion.	
			Report gas pressures.	