Boiler Servicing Procedure

Boiler servicing procedure – the professional's approach:

A boiler service check list when visiting a client

Check	Operation
[ ]	Always introduce yourself politely and have your ID card on show, this will only reassure your customer that you are a registered member of Gas Safe and this is always a professional attitude to practice. First impressions always count to a new customer!
[ ]	Ascertain from customer any problems (if any) they may be experiencing.Also see Energy Companies Obligation (ECO): Boiler Assessment Checklist
[ ]	Carry out a visual risk assessment of the gas installation pipe work, gas meter / box and any sealing, other appliances, system controls and any ventilation provisions needed. Visual Checking of the installation • Check for water leaks? • Was the boiler installed correctly? • Is there damage to the boiler? • Is the boiler suitable for the home? • Are the controls working correctly? • Are the electrics in good order? • Are there signs of good previous boiler maintenance? • Is the boiler located correctly? • Is the boiler vented correctly? • Is the flue correctly installed and working? • Is the boiler still serviceable?

[ ] Carry out gas tests (let – by, tightness and governor operating pressure). Check that the volume of gas consumed by the boiler is compliant with the manufacturers specifications. See the boiler manuals on this site for detailed boiler manufacturer information

Check the Working Pressures

- Gas Meter
- Appliance Inlet
- Burner

Gas Meter Checks

Test the **Emergency Control Valve** (ECV) – sometimes some, older installations may have a missing or corroded valve. This should be treated as an emergency. **Legislation states that an ECV wheel or lever should be securely fitted** . It also advises that a lever should be parallel to the direction or axis of the gas pipe in the open position so make it clear if the valve is turned on or off. The ECV is normally positioned within two metres of the gas meters or within visual sight of the meter.

General Checks

- Is there correct labelling?
- Is there proper Electrical Safety Bonding ?
- Is the system letting any gas escape?
- Is the Flue functioning correctly? Is the Flue fitted correctly?
- Visually **inspect the flame** to make sure there is correct combustion
  Natural gas consists primarily of methane, a substance that gives off a blue color when burned. A properly burning gas heater should produce a sharply defined, blue-colored flame with just a little yellow glowing near the tip.
  If the pilot light in your gas heater shows a lot of yellow, orange, red, purple or green color, this indicates inefficient combustion because other condensates are burning along with the methane.

  These condensates might include tar, dust, rust or oil, all of which are potentially hazardous chemicals.

- Check the Expansion Vessel for condition and pressure
- Check the PH and Quality of the water supply

See the General Boiler Fault Finding Section

[ ] Inform the customer of any findings and immediately address any findings which may constitute a danger to life or property in accordance with the current industry standards.

[ ] Electrically isolate appliance and turn programmer / timer to on, room thermostat to maximum setting and boiler thermostat to maximum setting.

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[ ] Electrical safety checks (earth continuity, resistance to earth, short circuit and mains voltage polarity).

[ ] Before commencing to strip down appliance, ensure very briefly, both hot water and heating is functioning correctly.

[ ] Electrically isolate the appliance and remove fuse.

[ ] Remove burner and clean off any oxidation / debris accumulation using a soft brush, can of compressed air and hoover.

[ ] Inspect condition of combustion seals (they MUST be in good condition).

[ ] Inspect heat exchanger connections for signs of any leakage and brush clean the waterways using correct grade heat exchanger brush and hoover.

[ ]	Inspect fan assembly and clean off any dirt / debris accumulation using a soft brush, can of compressed air and hoover. (The fan may need to be removed when there is heavy accumulation present, as it can imbalance the impeller –**always handle with care**!).
[ ]	Carry out a visual assessment of the integrity of flue pipe, connections and termination. (Flues concealed within boxing-in, need access points)!
[ ]	Replace components previously removed for inspecting / cleaning and test. Some boilers may need the *condense trap* removed for cleaning.
[ ]	Undertake necessary flue flow continuity test / spillage test (open flue appliance only).
[ ]	Check all combustion case seals, especially on a positive fan assembly, using a tapered match. (Any leakage due to worn seals, the appliance MUST not be further used and the immediately dangerous procedure applied. THEY ARE STILL OUT THERE!
[ ]	Open all trv`s to maximum setting (if fitted).
[ ]	Check minimum and maximum gas setting pressures (if possible) and inlet working pressure.
[ ]	Check CO/CO^2 readings with electronic combustion gas analyser. (modern boilers will need to be forced into "*service mode*" for this procedure – follow manufacturer's instructions).
[ ]	Monitor the system water pressure gauge to ascertain if the correct vessel pre-charge is ok or if there is a faulty diaphragm.
[ ]	Visually inspect all internal parts for any signs of leakage.
[ ]	Vent system to remove any trapped hydrogen gas / air build up. (Hydrogen gas is a by product of electrolytic corrosion – FLAMMABLE!).
[ ]	Attach **service sticker** to appliance showing next due service date and contact details (remember, the property may change hands but if not, it will be another satisfied customer).
[ ]	Ensure property has been left clean and tidy and as you found it.
[ ]	Finally, discuss with the customer any possible **energy efficient system improvements** you think they could benefit from, by adding onto their existing system. Always look at it as your responsibility to raise their awareness in these matters as it can only maintain a positive and professional relationship, which should lead to more work.

Common improvements / upgrades are:

New trv`s, power flush system, new room thermostat, new timer / programmer, insulated copper cylinder, cylinder thermostat, insulated pipe work.