TM44 Inspections

The importance of a TM44 inspection runs in parallel with Part 4 of the Energy Performance of Buildings Regulations 2007, which requires the person who has control of the operation of **any** Air Conditioning System in a building with a collective cooling capacity of over 12kw, to have an inspection at least every 5 years. This is the law as Air Conditioning Systems are now regulated.

This means that any collective systems over 12kw that have not been inspected are currently breaching the regulations, and therefore liable to a fine and/or prosecution too, irrespective of Lockdown, COVID-19 or the likelihood of Hell freezing over anytime soon.

FGAS Inspections

Mandatory documented leak checks apply to air conditioning and refrigeration equipment based on according to how much damage could be caused to the atmosphere if the whole charge were released. The frequency of the test inspections is based on the GWP (Global Warming Potential) of the refrigerant multiplied by the estimated volume contained in each individual system – this gives the CO_2e figure. If the system contains between:

- 5 and 50 tonnes CO_2e it requires one inspection per year.
- 50 to 500 tonnes CO_2e require inspection every six months.
- Greater than 500 tonnes CO_2e require quarterly inspections.

The leak checking frequency can be halved if permanent leak detection systems are fitted. Permanent leak detection systems are mandatory for system charges of 500 tonnes CO_2 equivalent and above.

How often does a system need leak checking? Examples as below:

- R410A (2088 GWP) more than 2.39kg once a year, 23.9kg twice, more than 239kg four times – **VRF Systems are generally within this criteria.**
- R407C (1774 GWP) more than 2.81kg once a year, 28.1kg twice, more than 281kg four times - **VRF Systems are generally within this criteria.**
- R404A (3922 GWP) more than 1.27kg once a year, 12.7kg twice, more than 127kg four times – **Self explanatory on packs.**
- R134a (1430 GWP) more than 3.49kg once a year, 34.9kg twice, more than 349kg four times – **As applicable as we don't use that much R134a.**

Note: Some clients may ask for the Carbon Loading of an air conditioning or refrigeration system, especially if they are ISO14001 accredited, this is a simple calculation of the refrigerant GWP x total refrigerant charge. So for example a system with 25kg refrigerant of R410a has a carbon loading of 52200kg (25x2088). This is equivalent of 52.2 tonnes so two documented leak checks per annum are required.

Depending on the equipment type, quantities, and refrigerant volumes for each client, we should already know if the site needs either FGAS or a TM44. If we don't know this information then you will need to task the Maintenance Coordinators and other admin as applicable, to update the information on CLIK asap, as we are missing further revenue.