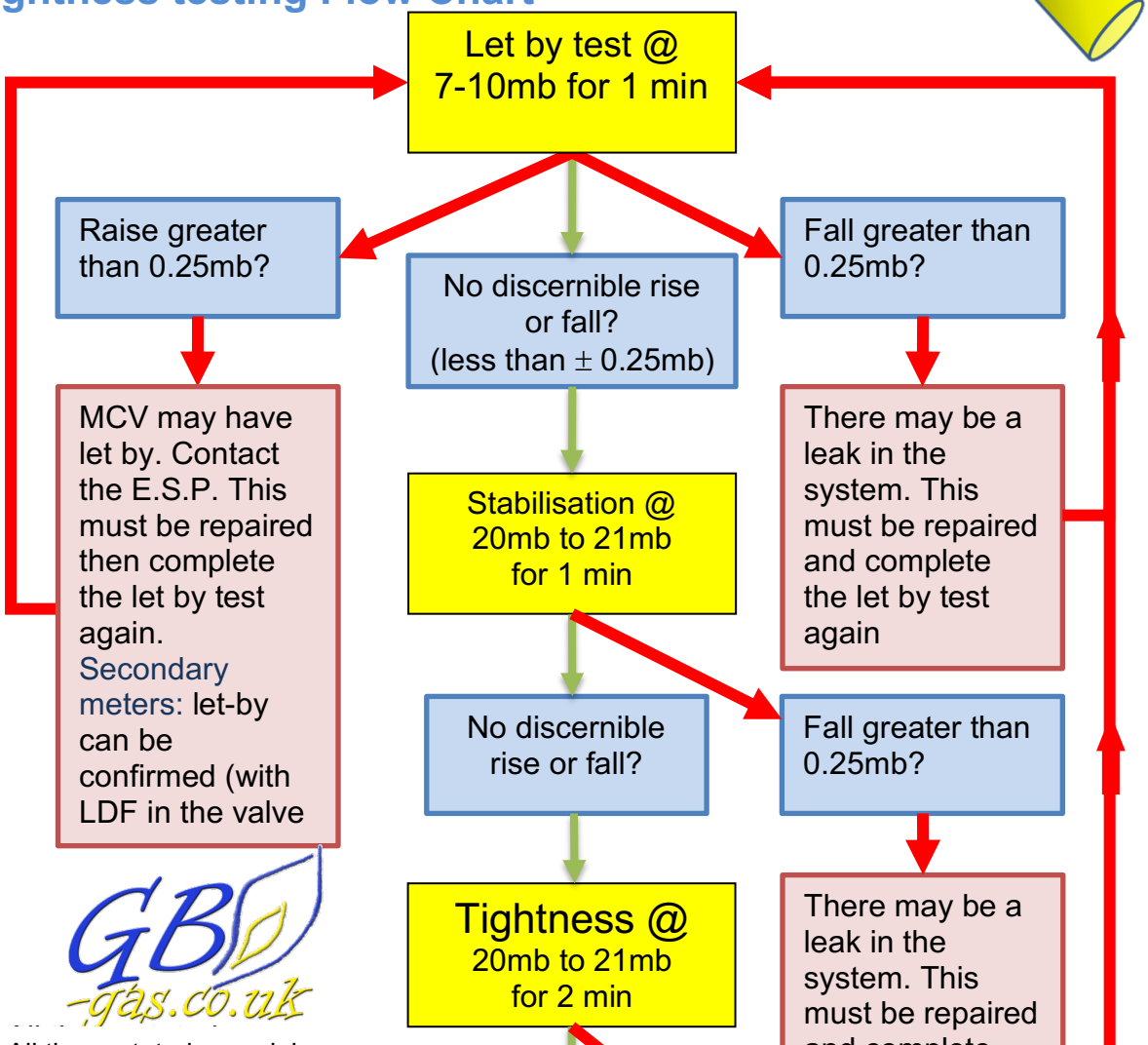
Tightness testing Flow Chart



All times stated are minimum, these can be extended.

A no discernible drop is 0.25mb for a water gauge, other gauge types will differ.

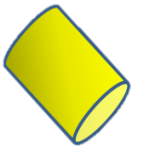
Allowable pressure drops in the two-minute test depend on volume. If a drop of more than 1mb is present, then an IV calculation must be completed.

The purge calc worksheet is at the back: find the IV installation volume at point D

Installation Volume m3	Drop
≤0.005	8mb
>0.005 ≤0.010	4mb
>0.010 ≤0.015	2.5mb
>0.015 ≤0.035	1mb

******Spray all the inlet pipework and test points to check for leaks. *******

Testing for tightness (Using Gas) Existing Systems



After visually inspecting the installation

1. Turn the gas off
2. Make sure all appliances are **connected**
3. Keep all pipework valves **ON** including lifting the cooker lid and grill door open.
4. Connect a zeroed manometer to the meter test point and start the test procedure

Test name	Reason	Test pressure	Test time
Let-by test	To check if MCV is passing, if rise is greater than **(max 0.25mb or 0.2mb with a digital)** report to supplier. To confirm let-by spray LDF in valve	7-10mb	1 min
Stabilisation	To allow for temp. differences	20-21mb	1 min
Tightness test	(See information below)	• 20-21mb	2 min

1. **If there is no discernible pressure drop or rise in the system and no smell of gas, then the system has passed.**
2. **If there is a drop greater than 0.25mb in the system, then all the appliances must be isolated, and the pipework tested on its own (a no discernible drop is all that is allowed in the pipework for new or existing systems).**
3. **If the drop is at the appliance(s) and within the IV leak limits and no smell of gas, then the system MAY be passed, check where the leak is use LDF or a Gas Sniffer to check from the isolation valve into the appliance FSDs / Solenoids / Gas taps and always advise repairing where possible.**
4. **If the drop is greater than 1mb then a volume calculation IV must be completed to know if the system MAY be passed.**

- **The test pressure must never be greater than 23mb as the governor may lock up, if so, you will have to spray all the inlet pipework at the meter to check for leaks.**

Maximum Tightness Test drops allowed for Natural Gas:

Installation Volume m3	Drop Allowed for Natural Gas	Please use the information from the Volume and purge calculations section towards the back of this book to complete a IV calculation. These only needs to be completed if the leak found is greater than 1mb and is coming from appliance(s).
≤0.005	8mb	
>0.005 ≤0.010	4mb	
>0.010 ≤0.015	2.5mb	
>0.015 ≤0.035	1mb	
* In any situation if the recorded drop is in the pipework, it is an immediate failure * If there is a smell of gas the installation is an immediate failure		

- **Spray all the inlet pipework and test points with LDF to check for leaks.**

Finding Gas Leaks

1. Isolate all the appliances and test the pipework on its own. If the leak is greater that 0.25mb on the pipework it must be found.
2. Turn on one appliance at a time and test to find out where all the leaks are.
3. If necessary and possible complete a drop test from the appliance isolation valve to confirm (remember drops at the appliance will always appear to be larger than from the meter due to volume).
4. If the installation is larger or pipework is not accessible, it may be necessary to split the pipework into sections to rule out or confirm leakages (Testing with air has the same limitations).