

Regulator Inspection Checklist Explained

- Ideally, all Yes/No type questions should be answered with a “Yes”. If there are any “No” answers the regulator may be unsafe to use and it will probably require some form of repair or replacement.
 - If the regulator is in use at the time of inspection it will not be possible to answer questions 16 to 18. Wait until an appropriate time, i.e. when the cylinder is being changed over, and then complete the checklist.
 - The information given below relates to each item on the checklist and should be read before the inspection is carried out.
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1. Due to the reaction of certain gases with different materials, it is essential that regulators are only used with the gas they are designed for. In some cases the regular may not bare the name of a specific gas but be labelled with a generic term such as “inert” or “special gas”.
2. The date stamp will be on the back of the regulator and takes the form: letter number letter letter, e.g. D4FA.
 - The first letter signifies the decade: A = 1970, B = 1980, C = 1990, D = 2000, etc.
 - The number signifies the year, 0 to 9.
 - The second letter signifies the month: A = Jan, B = Feb, C = Mar, D = Apr, etc.
 - The last letter indicates whether the regulator is new, indicated by an A or S, or rebuilt, indicated by an X.
3. It is best practice to replace/refurbish regulators every 5 years or as the manufacturer/supplier recommends.
4. All regulators should be clearly marked with the maximum inlet pressure (e.g. 230 bar). This is the maximum pressure the regulator can safely withstand.
5. The pressure of the cylinder attached to the regulator must not exceed this maximum inlet pressure.
6. The maximum outlet pressure of the regulator should also be clearly displayed. This is the maximum pressure the regulator can deliver.
7. Some older regulators have removable pressure adjusting screws which makes it possible to swap screws between regulators. This practice proved to be dangerous, so now regulators are fitted with captive adjusting screws, i.e. they will not come off no matter how far you turn them.
8. Check the edges of the hexagon nut for damage. This could indicate that excessive force has been used to tie down the regulator and this could have damaged the threads. Using a poorly fitting spanner may also damage the nut. Always use the correct size of spanner.
9. If the inlet is bent slightly, this is an indication of damage and may hamper the flow of gas up into the regulator.
10. All regulators should be manufactured to the relevant British or European Standard. Newer regulators will be designed to BS EN 585 or EN ISO 2503, and older ones to BS 5741 or BS7650.
11. Regulators are sensitive, precision instruments. If they have been damaged in any way this could affect the calibration and make them unsafe to use.
12. The HP nut is found on the side of the regulator. Its sole purpose is to allow the manufacturer to change the regulator from bottom to side inlet. It must not be tampered with. Ensure it is in place and tight.
13. The pressure relief device ensures the regulator does not over pressurise. Ensure it is in place and in good condition.
14. Most regulators are fitted with two gauges, one indicating cylinder pressure and the other indicating the outlet pressure as set by the user via the pressure adjusting screw. Gauges are designed to be used with specific gases and should not be replaced by the user.
 - Check that the gauges are suitable for the gas in use.
 - Check for the standard codes BS EN 562 or, on older regulators, BS 6752.
 - Check the gauges can be clearly seen and the lens is not damaged or missing.
 - Ensure there is no zero error and that the needle is straight and free to move.
 - Check the pop-out backs are undamaged and flush.
15. Staff must not attempt to repair or modify gas regulators. Regulators must only be repaired, modified or refurbished by approved bodies in line with recognised standards and codes of practice.
16. A sintered metal filter should be visible inside the stem. Check that it is in place and clean.
17. It is the bullnose that forms the seal with the cylinder valve. To seal fully it must be undamaged and completely clean.
18. Threads must be undamaged and free from dirt, grease and PTFE tape.