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## Overview

This standard is about maintaining systems and components for liquified petroleum gas (LPG). Liquified Petroleum Gas includes propane and butane. This standard covers that which is specific to working with LPG as opposed to other gas fuels. It can be used alongside other standards relating to maintenance for the downstream gas industry. It can also be used to extend the work range of individuals from other gas fuels to working with LPG.

It involves checking installation for damage, checking system operation, testing cylinders and valves for let by, checking cleanliness and charging and checking ventilation against regulations related to health and safety and gas safety.

This standard is for anyone who is maintaining liquefied petroleum gas (LPG) systems and components.

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## Performance criteria

*You must be able to:*

1. check system pressure regulators, under and over pressure cut off and limited relief valves work as required
2. measure, adjust and set LPG system controls to meet safety requirements
3. check LPG installations and components for damage and defects which will affect safe operation
4. test LPG cylinders and valves for let by at appropriate times
5. confirm that system and components comply with industry standards and manufacturers' instructions
6. check that system cleanliness and charging comply with industry requirements
7. check that ventilation provision and the continuity of any flue systems meet safety requirements

## Knowledge and understanding

*You need to know and understand:*

1. characteristics of propane and butane and the differences between them including specific gravity of LPG vapour and its effect in relation to air and other gas fuels, vaporisation of LPG liquid and off take and the effects of temperature, limits of flammability and its relationship to other gas fuels and calorific value of liquefied petroleum gas and its relationship to other gas fuels
2. regulatory, statutory and manufacturer's requirements and procedures for LPG fittings, methods and agents
3. current regulations for gas safety relating to installation and use of LPG and hazards associated with the use of LPG
4. LPG system components including pipework fittings and requirements for ventilation and flue systems
5. storage pressures for propane and butane in cylinders and storage vessels
6. system pressure including types of under pressure and overpressure cut offs, how to check system working pressure, read pressure gauges, deal with pressure regulators that are letting by and deal with under pressure and overpressure cut offs
7. installation, location and protection requirements for propane and butane and how the location of LPG cylinders and storage vessels will affect fire procedures
8. LPG tests on installation pipework and appliances and procedures for purging LPG supply
9. safety and fire precautions to be observed with LPG cylinders and storage vessels
10. identification and operation of emergency controls and LPG storage vessel shut off valves
11. LPG maintenance record keeping requirements

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