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## Overview

This national occupational standard is for gas engineers who are required to install, exchange and remove domestic gas cookers, tumble dryers and leisure appliances. This standard covers the work activities of planning, installing, exchanging, disconnecting, de-commissioning and commissioning those appliances.

## Performance criteria

- You must be able to:*
- Plan and prepare work activities for installing domestic gas cookers, tumble dryers and leisure appliances
  - 1. Identify, record and agree the customer's job requirements in accordance with company, industry and statutory requirements
  - 2. Survey the work site and consult site diagrams as necessary for any key structural features and existing defects that could affect the installation and record them, advising property occupier of any defects found
  - 3. Check that the proposed siting of the appliance meets the manufacturers' and industry standards' requirements for location, siting and clearance
  - 4. Check size, location and availability of all necessary input services meet the appliance manufacturers' and industry standards' requirements for the installation
  - 5. Produce a risk assessment and method statement which incorporates safety provisions in the work site, access to the work site, movement of the workforce, members of the public, and the movement and safe storage of materials, tools and equipment for the job
  - 6. Protect the work site and the building fabric against possible damage being caused during the de-commissioning and installation process
  - 7. Check and confirm all materials, tools and equipment necessary for the de-commissioning, installation and commissioning process are available as required and are fit for purpose
  - 8. Carry out all necessary checks and tests to confirm services and systems meet the manufacturers' and industry requirements for the installation
  - 9. Check existing installation for any unsafe appliances and system components and apply the gas industry unsafe situations procedures as required
- De-commission domestic gas cookers, tumble dryers, and leisure appliances to industry standards and manufacturers' instructions
- 10. Check that conditions within the gas and electricity systems will permit safe de-commissioning
  - 11. Select and use the correct tools and equipment for de-commissioning activities
  - 12. Use designated safe isolation methods, tests, and procedures to de-commission gas and electricity systems and components
  - 13. Take precautionary actions to ensure that temporarily de-commissioned appliances, systems, or components do not present a

safety hazard

14. Permanently disconnect and remove appliances, gas system components and electricity system components as required

Install, Exchange, and Remove domestic gas cookers, tumble dryers and leisure appliances to industry standards and manufacturers' instructions

15. Carry out preparatory work to meet the manufacturers' installation requirements

16. Carry out the installation process minimising damage to customer property and building features

17. Select and use the correct tools and equipment for installation activities

18. Remove existing gas and electricity system components as required by the installation

19. Fabricate gas and electricity system components as required by the installation

20. Position the appliance and confirm it meets the location, siting and clearances required by the manufacturers' and industry standards' specification

21. Provide the required ventilation for new or replacement appliance installations and systems

22. Ensure existing gas systems are clean and free of debris

23. Fix and connect gas and electricity system components to the appliance

24. Use tightness testing and purging and electrical testing procedures to confirm the integrity of the installed systems and appliance in line with industry standards

25. Take precautionary actions to prevent the unauthorised use of un-commissioned gas appliances, gas systems, electrical systems and components by isolation procedures and use of warning notices

Pre-commission and Commission domestic gas cookers, tumble dryers and leisure appliances to industry standards

26. Confirm the complete appliance installation complies with the manufacturers' specification, industry standards, Gas Safety (Installation & Use) Regulations, British Standards and Building Regulations

27. Check that conditions within the gas and electricity systems will permit safe commissioning

28. Select and use the correct tools and equipment for commissioning activities
29. Check and confirm the system and appliance operating pressures and gas rate meet industry standards and that they function and operate safely and in accordance with manufacturers instructions
30. Check the combustion performance visually and by flue gas analysis as required
31. Test chimney performance and reconfirm it performs according to manufacturers' and industry standards' requirements where required
32. Reconfirm that the ventilation requirements meet industry standards for the installation
33. Instruct the property occupier on the correct operation of the appliance and gas system and provide them with their copy of the appliance literature

Use and communicate data and information to carry out de-commissioning, installation and commissioning work

34. Liaise with the property occupier and others who will be affected by the work during the planning, de-commissioning, installation, and commissioning processes to minimise disturbance to the job
35. Use normative documents, industry standards, current British Standards and information from manufacturers' instructions for the appliance to ensure the work is done to the specification
36. Advise of any delays to the work, unsafe situations and required remedial actions to those who require the information
37. Check that the customer is satisfied with the finished job
38. Complete all records and documentation in line with organisational procedures
39. Submit details of installation and exchange appliance(s) to the Gas Work Notification Scheme

Resolve problems within own area of responsibility and competence which could affect the de-commissioning, installation and commissioning process

40. Rectify problems within own area of responsibility and competence and report deficiencies in gas and electric input services
41. Resolve problems in accordance with approved procedures where:
  - a) pre-commissioning checks and tests reveal gas appliance, gas system or component defects
  - b) gas appliances, gas systems and components being commissioned do not meet design requirements

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c) the gas appliance, the gas system or component cannot be restored to full performance

## Knowledge and understanding

*You need to know and understand:* General Knowledge

1. Regulations and guidance governing health and safety in the workplace, environmental protection and the use of risk assessments
2. Legislation covering the general responsibilities of the operative for their own safety and that of others
3. The limits of your own autonomy and responsibility

De-commissioning, Installing and commissioning domestic gas cookers, tumble dryers and leisure appliances

1. The health, safety and environmental factors which need to be incorporated in risk assessment for the domestic installation
2. The tools and equipment necessary to provide safe access to work at heights, or in confined spaces
3. The methods of working which protect the building décor, customer property and existing systems and components
4. The care and maintenance requirements of tools and equipment, and checks for safe condition
5. The tools, equipment, materials and components required for the gas appliance and gas system de-commission, installation and commission – ordering, supplying, advising, checking and delivery procedures
6. How to safely secure and store tools, equipment, materials and components to minimise loss or wastage
7. The potential hazards that could arise from all de-commissioning, installation and commissioning activities and the checks to be carried out before work takes place
8. The steps to take should materials, components, tools and equipment not be available at the site to commence the de-commissioning, installation and commissioning activity
9. How to access and correctly interpret the required information, including normative documents, industry standards guidance documents, British Standards and manufacturers' instructions applicable to the appliance, to ensure the work is done to the specification and industry standards
10. How to measure and record installation and site details for prefabrication purposes
11. How to confirm that services and system requirements are adequate for installation of the new gas appliance, gas system and components including extending the system or adding components
12. Safe isolation methods, tests, and procedures to de-commission

gas and electricity systems or components

13. The procedures for temporary and permanent de-commissioning of appliances and systems including use of temporary continuity bonds

14. The precautions to ensure that de-commissioned appliances or systems do not prove a safety hazard

15. Measures to prevent de-commissioned appliances or systems being brought into operation utilising safety and warning notices

16. The need to liaise with others whose procedures or routines may be affected by the suspension of the gas appliance and gas system operation and when co-operation and liaison may be required

17. The industry practices and work standards for fabricating and installing domestic gas cookers, tumble dryers, leisure appliances, gas systems and components to comply with the manufacturers' specification, industry standards, Gas Safety (Installation & Use) Regulations, British Standards and Building Regulations

18. The positioning and fixing requirements for domestic gas cookers, tumble dryers, leisure appliances, gas systems and components to comply with the manufacturers' specification, industry standards, Gas Safety (Installation & Use) Regulations, British Standards and Building Regulations

19. The procedures and work methods for connecting:

a) to input services and systems

20. The procedures and work methods of

b) domestic gas cookers, tumble dryers, leisure appliances and components to both new and existing gas, electric, ventilation and chimney systems

21. The process and procedures, equipment and legislative requirements for applying:

a) tightness testing and purging to appliances, gas systems and components

b) electrical tests to appliances, systems and components to ensure safe functioning e.g. preliminary electrical safety checks

22. The routines and sequences for commissioning domestic gas cookers, tumble dryers, leisure appliances, gas systems and components in accordance with manufacturers' specification and industry standards

23. The procedures for checking the correct operation, performance and safe functioning of domestic gas cookers, tumble dryers, leisure appliances, gas systems and components and checking against the design specification

24. The procedures for checking and confirming the gas system

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- operating pressures and appliance operating pressure and and gas rate
  - 25. The tests, checks and use of flue gas analysers which confirm the suitability of the gas combustion performance
  - 26. The tests and checks to confirm the integrity, suitability and performance of the systems
  - 27. How to complete all installation and commissioning documentation and records to be left with the property
  - 28. Measures to prevent un-commissioned gas appliances and gas systems being brought into operation utilising safety and warning notices
  - 29. The system handover procedures and demonstrating the operation of domestic gas cookers, tumble dryers, leisure appliances, gas systems and components to end users
  - 30. The steps to take when problems arise in the work activities
  - 31. Job management structures and methods of reporting and recording job progress or problems delaying progress
  - 32. How to safely collect and dispose of system contents that may be hazardous to health or the environment
  - 33. How to isolate unsafe gas appliances, gas systems and components and application of the gas industry unsafe situations procedure



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## Glossary

“Cookers” refers to Freestanding, Built In, Slide Under, Hotplates, Grilles, Range Cookers, and Dual Fuel Cookers

“Leisure Appliances” refers to Greenhouse Heaters, BBQ’s, Patio Heaters, Gas Flambeaux, and Outdoor Gas Lighting

“Work Site” refers to the area where the work will take place and all areas affected by the works

“Services and Systems” refers to water, central heating, gas, electricity supply, condensate disposal, chimneys and ventilation systems

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