

Australian Standard™

Gas appliances—Quality of servicing

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The following are represented on Committee AG-012:

AGA Certification Services
Australian Competition and Consumer Commission
Consumers' Federation of Australia
Energy Retailers Association of Australia
Gas Appliance Manufacturers Association of Australia
Gas Appliances and Services Association
Gas Technical Regulators Committee
Master Plumbers and Mechanical Services Association of Australia

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Australian Standard™

Gas appliances—Quality of servicing

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PREFACE

This Standard was prepared by the Standards Australia Committee AG-012, Gas Appliances—Quality of servicing. This is the first edition.

The intention of this Standard is to provide essential requirements and basic standards for the management and delivery of Type A gas appliances servicing and checking related aspects of the appliance installation.

This Standard is not to be regarded as being an instruction manual for untrained persons, but rather a technical specification containing the essential minimum requirements to ensure the safe operation and performance of the gas appliance being serviced.

This Standard has no legal standing in its own right, but may acquire legal standing in either of the following circumstances—

- (a) where adopted by a Government or other authority having jurisdiction over relevant installations; or
- (b) where adopted as part of an installation specification.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A normative appendix is an integral part of a Standard, whereas an informative appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard

Gas appliances—Quality of servicing

SECTION 1 SCOPE AND DEFINITIONS

1.1 SCOPE

This Standard specifies the minimum quality requirements for management and delivery of Type A gas appliance servicing and checking related aspects of the appliance installation.

1.2 REFERENCE DOCUMENTS

AS

5601	Gas installations
3814	Industrial and commercial gas-fired appliances
4269	Complaints handling

1.3 DEFINITIONS**1.3.1 Gas appliance**

An assembly, other than a vehicle refuelling appliance (VRA), part of which uses gas to produce flame, heat, light, power or special atmosphere and includes the following:

1.3.1.1 Type A appliance

An appliance for which a certification scheme exists.

1.3.1.2 Type B appliance

An appliance, with gas consumption in excess of 10 MJ/h, for which a certification scheme does not exist.

NOTE: A Type A appliance when used in an industrial/commercial application for which it was not intended is considered to be part of a Type B appliance. An example of this is a certified direct-fired space heater used as the heating/ventilating device in a spray/bake paint booth.

1.3.2 Management system

A system to direct and control an organization with regard to quality of servicing.

1.3.3 Servicing

Management and delivery of functions necessary to ensure—

- (a) the checking of the safety, operation and performance of the appliance and assessing aspects of the installation that impact on the operation of the appliance;
- (b) all the consequential actions, including—
 - (i) fault finding;
 - (ii) adjustments;
 - (iii) replacement of parts; and

- (iv) repairs needed to restore the appliance to correct operation, where this is practicable in accordance with the manufacturers' instructions or other proven procedures;
- (c) recording and reporting findings from the above actions.

NOTE: Repair or rectification of faulty installations (excluding the appliance) is not classed as servicing.

S E C T I O N 2 R E Q U I R E M E N T S

2.1 GENERAL

There shall be arrangements and procedures to ensure at least the following matters are addressed.

2.1.1 Allocation of service work – registration/licensing

Servicing work shall be allocated only to an accredited competent person/s as defined by the State/Territory in which they are working.

2.1.2 Allocation of service work – time to complete task

Servicing shall be allocated so the person carrying out service work has sufficient time to complete the task safely and effectively.

2.1.3 Maintenance of records

Servicing reports shall be issued, and records maintained for 7 years for all servicing work.

Documents and records should be in writing or in electronic form, kept safely, and be readily retrievable.

Access to records shall be controlled, and made available when requested.

2.1.4 Servicing equipment to be available and in good order

Servicing equipment (see Clause 2.3) shall be available as required, and maintained in good order (and where necessary, calibrated to an appropriate standard).

2.1.5 Access to service replacement parts

The service provider shall have the capacity to access replacement parts as required.

2.1.6 Detection of re-occurring problems

There shall be processes to detect re-occurring problems in servicing work and they shall be acted on in a timely way.

2.1.7 Investigation of complaints

Any complaints or reports of inadequate servicing shall be documented, properly investigated and resolved in a timely way. See AS 4269.

2.1.8 Review of servicing procedures

Servicing procedures and competencies shall be reviewed periodically, and updated as necessary. This shall include familiarisation and training in servicing of appliances new to the market, preferably through manufacturer supplied resources.

2.2 COMPETENCY OF PERSONNEL

2.2.1 Service personnel

The person carrying out service work shall be competent for the specific tasks to be undertaken. This includes—

- (a) knowledge of installation requirements for the type of appliance;
- (b) knowledge of all relevant Occupational Health and Safety requirements;
- (c) ability to diagnose faults in accordance with the manufacturer's manual, or, if no manual is available, according to written procedures for either that particular appliance or appliances of that generic type;

- (d) ability to determine and perform corrective actions to return the appliance to manufacturers in-service performance specification where reasonably achievable;
- (e) ability to make appliance safe where Item (d) is not reasonably achievable.

NOTE: Making an appliance safe may involve rendering it inoperable.

2.2.2 Supervisory personnel

Any person supervising servicing personnel shall have a good understanding of the technical aspects of the appliances to be serviced, and the safety issues that may arise from inadequate servicing.

2.3 TOOLS AND EQUIPMENT

The person carrying out servicing work shall have tools and equipment as appropriate to the tasks to be undertaken. This shall include at least the following:

- (a) Manometer or pressure gauge sufficient to measure and set appliance inlet and burner pressures according to the appliance manufacturers specification.
- (b) Suitable leak detection equipment to conduct leak testing.
- (c) Electrical test equipment (e.g., multimeter) of specification appropriate to gas appliance diagnostics.
- (d) Bonding straps.
- (e) Reference manuals and specifications for the appliances to be serviced (shall have ready access to information, and shall be current editions).
- (f) AS 5601.
- (g) Check lists and procedures as appropriate (see Appendix A).
- (h) Suitable means to show correct flue operation; (e.g., smoke matches).

NOTE: It is recommended that a service person have, or have access to, carbon monoxide detection equipment (digital or chemical tube type) or combustion analysis equipment e.g., carbon monoxide/carbon dioxide.

2.4 SPECIFICATION OF MATERIALS

Materials used in servicing shall be to an appropriate specification, and fit for purpose. Preference shall be given to manufacturer approved replacement parts, but where these are not economically or practically available the replacement part shall be of known quality and suitable for the function.

Where parts are repaired on site, or a salvaged and recycled part is to be used, the performance and durability of the part shall be assessed and determined to be suitable before completion of the work. If performance and durability cannot be assured, the repaired or recycled part shall not be used.

2.5 QUALITY OF SERVICING WORK

On completion of the work on the appliance—

- (a) the appliance shall be tested for safe and correct operation;
- (b) where any gas joint has been remade that joint shall be leak tested;
- (c) where alteration has been made to pipe work the installation shall be pressure tested; and
- (d) the service person shall verify that the installation of the appliance being serviced is safe.

Where the service person cannot (or is not permitted to) make the appliance/installation safe, the service person shall notify the owner/occupier in writing that the appliance/installation is defective and requires correction. If the owner/occupier is not prepared to allow or arrange corrective action, the service person shall promptly notify the Technical Regulator and/or the gas supplier (depending on the requirements in the State where the appliance/installation is fitted) of the details.

2.6 REPORTS AND RECORDS

2.6.1 Provision of report

The service person shall provide a report of the service work immediately on completion of the work on the appliance. This report shall show what adjustments, replacements and repairs have been made. Where the manufacturers instructions or the data plate gives settings that require checking during servicing, the report shall show the settings have been checked, and are correct on completion. This report shall state that the serviced appliance is, or is not, in a condition to operate satisfactorily, and if not what the owner/occupier must do to ensure safety. The owner/occupier shall be given a copy of the report showing the date and the identification (ID code is sufficient) of the service person.

2.6.2 Retention of report

The original service report for each service job shall be retained as a record and accessible for audit for a minimum of 7 years (see Clause 2.1.3) from the date of servicing.

2.7 AUDITING

Auditing shall be carried out in accordance with an audit plan and the findings recorded and reviewed.

2.7.1 Auditing of service work

Service work shall be internally audited. The service provider, in conjunction with the certifying body shall determine, and agree on, the level of auditing.

2.7.2 Auditing of management system

The certifying body shall audit the management system at least once every 2 years.

APPENDIX A
LIST OF SAFETY ITEMS FOR CHECKING
DURING TYPE A GAS APPLIANCES SERVICING CHECKLIST
(Informative)

A1 GENERAL

Whenever a gas appliance is serviced or repaired the service person is responsible for ensuring the appliance is operating to the manufacturer's specification and the installation of the appliance being serviced is safe and complies with the requirements of AS 5601.

A2 SAFETY ITEMS LIST CHECKLIST

The following key requirements should be verified by the service person as correct before leaving the appliance operational:

- (a) Assess the worksite for hazards before commencing servicing.
- (b) Confirm that the appliance is certified for use in the situation where it is installed and is suitable for the connected gas supply.
- (c) Where required, confirm that the appliance is installed in accordance with AS 5601.
- (d) Ensure the test point gas pressure is set to the manufacturer's specification (refer to the rating plate) and the gas pressure is constant and unaffected (except momentarily) by the operation of other appliances.
- (e) Check the secondary flue system on conventionally flued indoor products to ensure that —
 - (i) with the main burner(s) operating, there is room air being drawn into the draft diverter and flue products are not consistently spilling from the draft diverter indicating a blocked or partially blocked flue; and
 - (ii) there are no signs of combustible material in contact with the surface of single skin flues.
- (f) Confirm that there is an uninterrupted supply of fresh air to indoor appliances in compliance with AS 5601. If the air supply is via an internal door or wall, check that the adjacent room has the required openings to outside.
- (g) On indoor conventionally flued appliance installations check that ventilation fans, air conditioners, exhaust systems, other gas appliances or return air ducts will not cause flue products to be drawn back into the room.
- (h) Ensure that flammable and corrosive materials are not stored or used in the vicinity of any gas appliance.
- (i) Ensure that combustible items are not placed in the path of flue products in the case of unflued appliances or in contact or close proximity to hot surfaces.
- (j) Remove dust and debris build-up within and around an appliance that may be ignited by hot surfaces, flame rollout and electrical contacts. Ensure the adequate supply of fresh air is not inhibited by dust.
- (k) Check that external appliances are installed such that the flue terminal has the required clearances from openings to the building (windows, doors, ventilators), from eaves and building corners and from other equipment that may cause flue products to be drawn into the building.

- (l) Ensure that any rectification work carried out on wiring, components or pipe work does not compromise the safety of the appliance by—
 - (i) always using genuine replacement components unless completely confident that a substitute component will not compromise safety, performance or durability; and
 - (ii) after servicing or repairs always checking gas joints within the appliance for leaks with soapy water or equivalent and repairing any leaks and retesting.

NOTE: Some State regulatory authorities may require re-certification/re-acceptance of a modified appliance.

NOTES

Standards Australia

Standards Australia is an independent company, limited by guarantee, which prepares and publishes most of the voluntary technical and commercial standards used in Australia. These standards are developed through an open process of consultation and consensus, in which all interested parties are invited to participate. Through a Memorandum of Understanding with the Commonwealth government, Standards Australia is recognized as Australia's peak national standards body. For further information on Standards Australia visit us at

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Australian Standards

Australian Standards are prepared by committees of experts from industry, governments, consumers and other relevant sectors. The requirements or recommendations contained in published Standards are a consensus of the views of representative interests and also take account of comments received from other sources. They reflect the latest scientific and industry experience. Australian Standards are kept under continuous review after publication and are updated regularly to take account of changing technology.

International Involvement

Standards Australia is responsible for ensuring that the Australian viewpoint is considered in the formulation of international Standards and that the latest international experience is incorporated in national Standards. This role is vital in assisting local industry to compete in international markets. Standards Australia represents Australia at both ISO (The International Organization for Standardization) and the International Electrotechnical Commission (IEC).

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