

REGULATION ROUNDUP

ISSUE 47 | March 2021

A bulletin for electrical, gas and plumbing industry workers brought to you by the Office of the Technical Regulator

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Welcome to the 47th edition
of Regulation Roundup.

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FOR TECHNICAL ENQUIRIES:

Electrical

P: (08) 8226 5518 | (8:00am – 4:30pm)

Gas

P: (08) 8226 5722 | (8:00am – 4:30pm)

Plumbing

P: 1300 760 311 | (8:30am – 4:30pm)



Government of
South Australia

be energy safe

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Message from the Technical Regulator

Welcome to issue 47 of Regulation Roundup.

The Covid-19 situation has changed the way many of us are operating however it is pleasing to see that we are able to offer face to face roadshows this year. I would encourage you all to get along to one of the roadshows if you are able to. There are a number of topical issues that will be covered at the Roadshows with the opportunity for more interactive questions. Regulation Roundup is again filled with useful information that I hope you all will find informative. Once again I would encourage the industry to suggest any material they would like to see in upcoming editions of Regulation Roundup.

Robert Faunt, Technical Regulator

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ELECTRICAL SAFETY RECALL

Single module Compact RCBO Noark model no. Ex9NLE-N

Identification:

Products affected include:

- 90552 - 1 module RCBO 10A 30mA
- 90553 - 1 module RCBO 16A 30mA
- 90554 - 1 module RCBO 20A 30mA
- 90555 - 1 module RCBO 25A 30mA
- 90556 - 1 module RCBO 32A 30mA
- 90703 - 1 module RCBO 40A 30mA



These products have been sold in Victoria, South Australia and Western Australia between March 2016 and October 2019.

Defect: The products do not comply with the relevant mandatory electrical safety standard.

When the unit malfunctions, it does not switch off the circuit as required.

Hazard: Risk of electric shock, which can cause serious injury or death.

Action required: Consumers should immediately stop using the products and contact DKSH to arrange return of their product and for replacement product.

Contact Details: For further information, please contact DKSH Australia Pty Ltd by phone on **1800 006 137** (Monday to Friday, 9am - 5pm AEST), email recall.au@dksh.com or visit <https://dksh.com/noark-rcbo-recall>

See www.productsafety.gov.au for Australia Product Recalls Information

ELECTRICAL SAFETY RECALL

Residual Current Device (RCD)

Brand name Dielle, Model YK78, Approval mark N.21905



DEFECT:

RCD may fail product standard test requirements. Approval mark N.21905 is not valid.

IDENTIFICATION:

RCD product marked with 'Dielle', 'YK78' and 'N.21905' - see above photos.
6A, 10A, 16A, 20A, 25A and 32A.
Product sold from 2006 onwards.

HAZARD:

Potential risk to persons or property of electric shock or fire.

ACTION REQUIRED:

If you have or suspect you have the recalled RCD product installed within your premises, you should engage a licensed electrical contractor to examine the RCD/s and replace any affected product with an alternative RCD that has a valid Australian approval mark.
The distributor of the recalled RCD product, Dielle Electrical Distributors Pty Ltd, is no longer trading.

See www.productsafety.gov.au for Australian product recall information

CALLING ALL ELECTRICIANS

ROADSHOW 2021 SEMINAR SERIES

NECA SA/NT BRANCH will be hosting Roadshow Seminars throughout South Australia from **MARCH TO MAY 2021** to provide electricians with information on a range of topics, as detailed below.



Attendees will receive a NECA Show Bag and a Seminar handout containing the slides covered in the presentation.

Suppliers, manufacturers and wholesalers will be on location with their new products and service displays and NECA staff will also be on hand to answer your questions in regard to what we can do for you and your business.

Please be assured that all COVID-19 restrictions and requirements will be adhered to. This includes, but is not limited to, COVID-Safe QR check in at all events, changes to catering methods, provision of hand sanitiser and COVID-Safe signage and any other requirement as directed by the SA Government and the venue at the time of the seminar.

You will need to register to attend 7 days prior to your chosen event simply by completing and returning the registration form over the page or visiting our **Eventbrite Page:** <http://bit.ly/37eXSxE>



Tickets will be sent via email. Please ensure you provide a current email address on the registration form.

There is no need to print your ticket as your name will be on the door list if you have registered.

PROGRAM INCLUDES:

6:00PM Doors open
View sponsor displays

6:30PM NECA SA/NT

- NECA Opening Address / Introduction
- HSEQ Digital
- Dual Trade Apprenticeship

SA Power Networks

- Service and Installation Rules

Office of the Technical Regulator

- Latest Changes to Australian Standards
- Smarter Homes Requirements
- Testing and Isolation
- FAQs

8:55PM Formal Closure. Questions. Prize Draws. View Sponsor displays.

9:00PM Expected conclusion time.

FOR FURTHER INFORMATION OR ASSISTANCE CONTACT THE NECA SA/NT OFFICE ON (08) 8272 2966.



Electrical Bulletin

Shock received, due to non-compliant earthing

OTR has recently received a shock report identifying that the shock was caused by a non-compliant earthing system, installed by an electrical contractor.

The property was a block of 6 individual domestic units, with a common main switch board/meter position that supplied all 6 units. The main switch board/meter position had an earth electrode and MEN connection, with no sub main earths installed to any of the units.

It appears that the units were intended to be connected as separate MEN installations. (refer to clause 5.5.3.1 of AS/NZS 3000), however, instead of also installing an earth electrode and an MEN connection at each of the units, to comply with the requirements for separate MEN installations, there was only an earth electrode at each unit, and no MEN.

The hot water service in the unit where the shock was received had shorted to earth, livening the water pipes. With no MEN at the switchboard in the unit, for a separate MEN installation, the only fault path was through the earth electrode to ground, which is a high impedance path, that would not operate the circuit protection for the hot water service.

In addition, if you look at the left-hand side of the photo, you will see a 6mm cable with a connector on the end of it. That cable is the Off-peak hot water sub main from the main switchboard/meter position. The contractor had connected the circuit breakers for the hot water services, in all 6 units, to the peak tariff, costing the occupants hundreds of dollars on their electricity bills.



[Electrical Certificates of Compliance (eCoCs) and SAPN authority to connect forms]

OTR has identified several eCoCs and SAPN authority to connect forms, where:

1. (a) eCoCs have been completed and submitted:
 - with the related electrical work either not completed, or not having been started at all, or
 - the person listed on the eCoC, as the registered electrical worker certifying the work detailed, has never been at that property
- (b) Electrical work listed on the eCoC has been completed for more than 30 days, and the eCoC is still sitting as a draft on the data base and has not been submitted.
2. SAPN authority to connect forms, where the contractor has stated on the form:
 - eCoC emailed to eCoC@sapowernetworks.com.au, and the eCoC has not been submitted and emailed to SAPN.

The Electricity Act has penalties for providing false or misleading information, as well as not complying with standards, not carrying out the required examinations and tests, and not complying with the requirements for eCoCs.

South Australia

Electricity Act 1996

An Act to regulate the electricity supply industry; to make provision for safety and technical standards for electrical installations; and for other purposes.

90—False or misleading information

A person must not make a statement that is false or misleading in a material particular (whether by reason of the inclusion or omission of any particular) in any information furnished under this Act.

Maximum penalty:

If the person made the statement knowing that it was false or misleading—\$10 000 or imprisonment for 2 years.

In any other case—\$5 000.

61—Electrical installation work

(1) A person to whom this subsection applies who carries out work on an electrical installation or proposed electrical installation must ensure that—

- (a) the work is carried out as required under the regulations; and
- (b) examinations and tests are carried out as required under the regulations; and
- (c) the requirements of the regulations as to notification and certificates of compliance are complied with.

Maximum penalty:

- (a) if the offender is a body corporate—a penalty of \$50 000;
- (b) in any other case—a penalty of \$10 000.

Expiation fee: \$315.

It must be recognised that SAPN has provided the authority to connect forms to assist electrical contractors/workers, for specific cases where:

- The electrical work has been carried out in a location with a connectivity issue, in relation to the data network, and/or
- The electrical work has been carried out as an emergency

SA Power Networks

SERVICE & INSTALLATION RULES

Authority to Connect form

This authority will be relied upon by SA Power Networks when connecting/reconnecting an installation and is only to be used where it is not reasonably practicable to provide a printed Certificate of Compliance on site.

In regard to connection by SAPN, Certificates of Compliance and SAPN authority to connect forms are used by SAPN to confirm that the electrical installation complies with AS/NZS 3000 and the SAPN Service and Installation Rules and is safe to connect.

If, in the opinion of the Responsible Officer, the certification of the electrical installation is incomplete or invalid, or the electrical installation is considered unsafe, then it will not be connected or remain connected to the SA Power Networks distribution network.

The Construction Socket Outlet

The OTR has found multiple domestic installations, requiring a short-term socket outlet installed in the meter panel to facilitate the building works for contractors to use. This forms part of the fixed electrical installation and remains in place sometimes for many months. The socket outlet is repeatedly used over many sites and becomes damaged and therefore it should be checked every time for damaged wiring, loose connections and internal failures due to excessive use.

A common misconception is that the installation of a socket outlet on the Meter Panel / Main Switchboard doesn't require the completion of an Electrical Certificate of Compliance, this is NOT the case. Any electrical work performed must comply with all of the rules associated to the Australian Standard which covers its installation and as such the installation of a socket outlet (whether for short term use or permanent connection) must be tested to AS3000:2018 Amendment 1 (wiring rules), and AS3012:2019 Amendment 1 (construction and demolition sites), installed in accordance with the same standards and documented by the submission of an eCoC.

We have found many instances of the short-term socket outlet being installed and available for use and have been unable to locate an ECOC covering the works. This is a breach under Section 56 of the Electrical (General) Regulations 2012 and may attract enforcement action.

So, for all works described in the Australian Standards including electrical installation, testing and verification, remember an eCoC is required.



[Electrical Fatalities]

During the second half of 2020 the OTR investigated three work related fatalities involving licensed electrical workers performing their normal daily occupational duties. Our observations and tests carried out at each incident found evidence and conditions that were consistent with a person receiving a fatal electrical shock.

When these incidents involve an electrical worker, it has an emotional impact with the OTR's investigating officers.

All the incidents had similarities where each electrical worker either chose to work live or did not effectively confirm positive electrical isolation. In addition to not positively isolating the supply, other contributing factors included inadequate

PPE, inappropriate or non-insulated tools, confined working conditions and the incorrect function selected on a digital multimeter.

It is also significant to point out that no RCDs were installed on the circuits involved. Whilst they were not required at the time of the original installation, the risk of electric shock would have been significantly reduced. However, RCDs are not recognised as a sole means of basic protection therefore when working on or around live equipment RCDs must not be relied upon or substituted for isolation or other effective methods of protection.

Incident 1: Plumber with restricted electrical licence changing over a domestic hot water service (HWS)

- There was no lockable isolator adjacent to the HWS unit
- The electrical worker disconnected a faulty existing 240V directly connected HWS at the unit's terminals. This was done after allegedly confirming that there was no electrical supply.
- The supply active and neutral conductors were terminated with cable connectors.

- The worker changed over the faulty HWS with a new HWS, connected the plumbing connections and pressurised the unit.
- The worker removed active connector with bare hands and received an electrical shock between the live active conductor and earth wire or conductive earthed part(s).

[Electrical Fatalities] cont...

Three other very notable details to highlight:

1. The off-peak tariff element of the electrical meter was programmed for a daytime controlled load which appears to have initiated and energised the HWS circuit just prior to the victim reconnecting the electrical supply to the new HWS unit. The generation of renewable energy such as solar has created a situation where far more electricity is now generated in the middle of the day which creates a condition where supply exceeds demand, consequently causing grid instability and reliability. In an effort to control this, a "soak" of the excess of generation can be programmed with certain types of meters.
2. The circuits including the HWS circuit breaker were not labelled in the switchboard. The electrical workers licence restrictions and competency in identifying correct circuit isolation may have played a significant role.
3. Although not required during the original installation or for repairs, a lockable isolation switch adjacent to the HWS would have provided ultimate control and isolation for the victim. The latest edition of AS/NZS 3000 now has this as mandatory requirement for new installations or alterations to directly connected water heaters.



[Incident 1 location - Active conductor for HWS supply cable exposed]



[Incident 1 - Main switchboard - no circuit identification]

Incident 2: Unrestricted electrical worker fault finding ducted reverse cycle air conditioner within beauty salon roof space

- Fault finding a noisy 240V zone control actuator and removing from service.
- There was no isolation of circuit.
- There were cramped working conditions.
- The cover was removed from the zone actuator, exposing live soldered connections on a printed circuit board (PCB).
- There were multiple conductive earth return paths in the area.
- The worker received an electrical shock, likely due to contact between the PCB's active soldered connection and earthed conductive part(s).

Working in confined locations particularly within roof spaces, without isolating the electrical supply or following safe work practices is risky and can expose oneself to unforeseen dangers. This could be existing unsafe wiring or just simply losing your balance and inadvertently coming into contact with a live part you are working on. The potential of electric shock is somewhat further increased if a return path through conductive earthed components is in the vicinity of the working area.



[Incident 2 location - Confined roof space and multiple conductive earthed parts]



[Incident 2 - A/C zone actuator - live soldered connections exposed]



[Electrical Fatalities] cont...

Incident 3: Unrestricted electrical worker fault finding and repairing a commercial air conditioner on a shopping centre roof

- The electrical worker was working on a condenser unit control board for a tenancy air conditioning system
- The multimeter onsite was set on the incorrect function for the desired test
- There was no positive isolation confirmed
- Non-insulated pliers were used to strip a live conductor
- The worker had Inadequate PPE
- There were multiple conductive earthed return paths in the area
- The worker received an electrical shock between an active conductor and a conductive earthed part (i.e. roofing material or A/C chassis) likely while using uninsulated pliers.

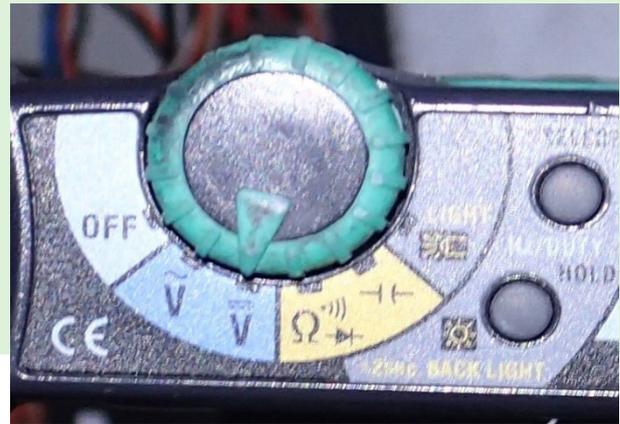
This situation reiterates the importance of positive isolation by proving the correct operation of meters on a known source before use and being familiar with the functional selections on the meter. During this investigation the multimeter onsite was found to be set on the Volts DC range, which when testing for AC voltages would have presented a misleading reading to the victim.



[Incident 3 location – condensing unit control board]



[Incident 3 - Electrical tester onsite]



[Incident 3 - Electrical tester function selected to Volts DC]

There will be circumstances where working on or in the proximity of live conductors is necessary or unavoidable therefore under the Electricity Regulations it is essential to have suitable protection from live parts in particular, appropriate PPE, barriers and the use of suitable equipment and insulated tools. Additionally, when undertaking work that involves danger of direct contact with live conductors, it is crucial that safe work practices are applied such as carrying out work with a competent assistant who is suitably trained in rescue and resuscitation.

All these tragic incidents had one underlining contributing factor—complacency. It is an extremely dangerous mindset when working, particularly when performing electrical work. Routine repetitive tasks, overconfidence and being disengaged from the task can send you into “auto pilot”. Furthermore, unreasonable demands and conditions issued by clients and employers can place additional pressure on workers. This can lead to poor decision making and taking short cuts and/or unnecessary risks which can have devastating consequences.

[Electric Shock Report Incidents]

Shock Source	Cause	Contributing Factors	Injuries	Action to Make Safe
Light switch.	Moisture.	Caravan park ablution block was not vented sufficiently, and moisture built up on and around the switch.	Electric shock to hand.	Contractor relocated switch and assessed ventilation required.
Food warmer.	Loss of earthing.	Earth conductor had become dislodged from overheated socket outlet.	Multiple persons received electric shock to hands.	Electrical Contractor replaced socket outlet.
Overhead supply cable.	Connections had overheated.	Active and neutral conductors joined after arcing fault, resulting in full mains voltage on water pipes and taps.	Homeowner received electric shock between hands and feet.	Network operator replaced mains connection box.
Extension cord and plug top.	Damaged plug top.	Student plugging in laptop charging trolley contacted exposed strands of the active conductor.	Student received electric shock to hands.	Electrical Contractor repaired connections.
Ceiling light Batten holder.	Conductors exposed.	Person changing light globe dislodged batten holder from ceiling exposing live conductors.	Electric shock to hands.	Electrical contractor repaired light fitting.
Commercial kitchen exhaust fan controls.	Moisture ingress.	Kitchen staff did not realise start stop station controlling exhaust fan was damaged when cleaning it with a damp cloth.	Electric shock to hands.	Electrical contractor replaced control station.
Driveway gates.	Underground neutral conductor damaged.	Homeowner went to open driveway gates with no knowledge of the underground cable fault. Because of the high impedance return path voltage had risen on earthed surfaces such as the metal gates.	Homeowner received electric shock between hands and feet.	Network Operator isolated supply and repaired cable.
Socket outlet.	Socket outlet was not fixed to wall correctly.	Student went to turn off socket outlet and contacted live exposed connections.	Student received electric shock to hand.	Electrical contractor isolated circuit and refixed socket outlet to wall.
Main Neutral conductor disconnected.	Fault in streets public lighting.	Voltage had risen on water pipes and taps because main neutral conductor was mistakenly disconnected.	Homeowner received electric shocks between hands and feet.	Network Operator investigated and rectified connections.
Metal covering on conveyor belt.	Damaged cable.	Worker removing metal covering from underneath conveyor accidentally pushed cover into cables damaging them.	Worker received electric shock between hands.	Electrical contractor isolated circuit and repaired cable.
Mobile phone.	Design of charger.	Occupant received shock between back and hand whilst using phone when it was plugged in and they were leaning on a metal wall.	Person received electric shock between hands and back.	The phone charger was working correctly, and voltage leakage was within allowable standards.
Damaged cable.	Mechanical damage.	When a worker moved a stainless steel trolley it contacted exposed conductors from a damaged cable supplying an adjacent socket outlet.	Worker received electric shock to hands.	Electrical contractor isolated circuit and repaired damaged cable.
New switch product.	Internal capacitor.	New switch being tested, however, when it was disconnected from the test power supply the worker contacted exposed connections.	Worker received electric shock to hands.	Manufacturer redesigned testing procedure to reduce the risk of the capacitor causing an electric shock.
Live components in Switchboard.	Fault finding.	Electrical worker at windfarm contacted live parts with the back of the hand whilst diagnosing a fault.	Electrical worker received electric shock to hands.	Safe working procedures to be reviewed to reduce/eliminate risk whilst fault finding.
Kettle supply cord.	Mechanical damage.	Tenant did not realise that where the flexible cord is attached to the appliance plug that it was severely damaged.	Tenant received electric shock between hands.	Motel manager replaced kettle.
Live switchboard.	Vandalism.	Persons broke into high voltage electrical cabinet to steal copper cables.	Persons unknown caused arcing fault and would likely have suffered burns.	Network Operator repaired switching cubicle.

Smarter Homes Update – Smart Metering

Some solar customers, installers and meter providers are being inconvenienced by a lack of communication on the Deemed to Comply Wiring Arrangement (DCWA) used onsite. This is sometimes leading to wiring errors, and loss of functionality of the inverter export monitoring, and return visits to site.

The OTR advises:

- Solar install contractors are recommended to leave a note in the meter box advising the DCWA for which the site has been wired, along with their contact details for meter installer queries.

- Meter installers need to take note of any DCWA Wiring Arrangement advised by the solar installer and contact them if the arrangement is not suitable for their meter.
- Meter installers should be aware that changing any wiring on the load side of the main switch may interfere with import-export monitoring by the inverter and affect functionality and compliance of the system.

Further information and guidance is given in the document “**Additional Information for Metering Coordinators, Providers and Electrical Contractors**” on the [Smarter Homes website](#).

For any further technical advice, please contact the Office of the Technical Regulator on (08) 8226 2108 (Monday to Friday, 9.00am to 4.30pm, or by emailing otr.smarterhomes@sa.gov.au

AS/NZS3000:2018 Electrical Installations

The last edition of Regulation Roundup called for public comment on Amendment Two, thank you to those who took the time to submit their thoughts and opinions.

It is anticipated that Amendment Two of the Wiring Rules will be published in April. Some of the clauses that will be changed or added include:

Clause 2.6.2.2 Types of RCD

Type AC RCD's are getting phased out, they will not be allowed to be installed in approximately two years' time, we are moving to Type A RCD's – these RCD's ensure tripping for alternating currents and pulsating direct currents.

Clause 2.6.3.2.5 Alterations to installations and replacement of switchboards.

“For domestic and residential installations, socket outlets, electrical equipment and luminaires added to an existing final sub circuit shall have RCD protection installed at the switchboard.”

Currently:

- An additional luminaires can be added to an existing final sub circuit without providing RCD protection
- A socket outlet added to an existing final sub circuit only required RCD protection from the commencement of the new cable.

With Amendment Two both these scenarios will require RCD protection to be installed at the switchboard.

Clause 2.6.3.2.6 Repairs

“The installation of an unswitched socket outlet at an existing lighting point, located in a roof space or at a height greater than 3 metres above the ground, floor or platform and specifically for the connection of a replacement item of electrical equipment such as a luminaire, fan or smoke alarm is deemed a repair and does not necessitate the retro fitting of an RCD on the circuit.”

This change will allow the installation of a plug base to replace a junction box on an existing lighting circuit to facilitate plugging in a replacement luminaire.

Clause 4.3.1 Connection of electrical equipment

“Electrical accessories complying with AS/ NZS 3105, AS/NZS 3122 or AS/NZS 3199 shall not be used to connect equipment wiring to installation wiring where the location is not readily accessible.”

The products standards have never allowed the practice of using extension cords and double adaptors to “wire up” luminaires and other electrical equipment in a roof space, the addition to this clause now also prohibits it in the Wiring Rules.

The existing **Clause 8.3.7 Polarity** and **Clause 8.3.8 Correct circuit connections** have been deleted and have been replaced with the following:

8.3.7 Polarity & Correct circuit connections

“Polarity and correct circuit connection testing shall be carried out to ensure that no shock hazard arises from the incorrect connection of active, neutral and earthing conductors.”

Clause 8.3.10 Operation of RCDs

The Australian exception has been removed from this clause, this means that the operation of the RCD is to be tested/verified even if the supply is not yet available.

Clause 8.3.1.1 Recording of results

After completing the mandatory tests set out in Section 8 it is recommended the results of these tests are to be recorded as per the legislative requirements of the Regulator.

A test results form has been added to eCOC, this is to enable the electrical worker that is conducting the tests to record the results, we recommend that you start using this form as soon as possible as it will become a mandatory requirement within the next 12 months.

OTR electrical expiations issued since the last edition of Regulation Roundup

Person	Non-Compliance	Breach	Expiation Fee + Levy
Contractor	Owner received electrical shock from live conductor in relation to a solar/battery installation	Section 61 (1) (a) Electricity Act 1996	\$375
	Examinations and tests not fully carried out as required	Section 61 (1) (b) Electricity Act 1996	\$375
	eCoC was certified by person who did not examine and test	Section 61 (1) (c) Electricity Act 1996	\$375
Contractor	Electricity meter and service fuse removed and reinstated without authority during a switchboard refurbishment	Section 59 (1) Electricity Act 1996	\$375
Contractor	Repeated failure to issue and submit eCoCs as required under the regulations	Section 61 (1) (c) Electricity Act 1996	\$375
Contractor	Repeated failure to issue and submit eCoCs as required under the regulations	Section 61 (1) (c) Electricity Act 1996	\$405
Contractor	Electricity meter and service fuse removed and reinstated without authority during a switchboard refurbishment	Section 59 (1) Electricity Act 1996	\$405
Contractor	Repeated failure to issue and submit eCoCs as required under the regulations	Section 61 (1) (c) Electricity Act 1996	\$405

A total of 12 Owner/Occupiers were expiated for failing to ensure a compliant and safe electrical installation Under Section 60 (1b) of the Electricity Act 1996

Dave Brown Retirement

The Office of the Technical Regulator Electrical section would like to thank Dave Brown for his service in the Department. Dave joined us in 2014. Previously employed as an Electrotechnology trainer with Marcellin Technical College from 2010, while being self-employed since 1987.

As we reflect over his time with the OTR, he will be remembered as a fair auditor with good characteristics. Dave was enthusiastic and took things seriously, his organisation skills were second to none which many envy.

This now gives him time to catch up with family both local and overseas (Covid permitting).

Dave loves his garden and walking his dogs with his wife Sue, who must now put up with him full-time – no returns!

We wish Dave & Sue a wonderful new chapter in their lives and thank him for his comradeship and service provided. – THANK YOU

As Dave would say “Ooroo”!





Gas Bulletin



[Identifying Certified Appliances]

Whenever installing, relocating or servicing any gas appliances, **you must ensure the appliance is certified** before connecting gas, servicing or repairing the appliance. As a licensed contractor you are in breach of your licence conditions and the *Gas Act 1997* if you connect, service or work on un-certified gas appliances.

If you cannot find any recognised certification labels or approval numbers, then this must be raised with the owners. Advise them that the appliance must not be used without certification. Use of any uncertified appliance is in breach of the *Gas Act 1997*. The appliance is potentially unsafe for use and that they should contact the OTR for further advice. If the appliance was already installed, then the appliance must be made safe by disconnecting the gas supply or tagging the appliance as dangerous. If you are unable to make safe, then submit an Immediately Dangerous Report (IDR) through the eCoC system.

Whenever installing, relocating or servicing any gas appliances, **you must ensure the appliance is certified** before connecting gas, servicing or repairing the appliance. As a licensed contractor you are in breach of your licence conditions and the *Gas Act 1997* if you connect, service or work on un-certified gas appliances.

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Advise them that the appliance must not be used without certification. Use of any uncertified appliance is in breach of the *Gas Act 1997*. The appliance is potentially unsafe for use and that they should contact the OTR for further advice. If the appliance was already installed, then the appliance must be made safe by disconnecting the gas supply or tagging the appliance as dangerous. If you are unable to make safe, then submit an Immediately Dangerous Report (IDR) through the eCoC system.

Type A's

There are five Type A appliance certifiers recognised by the OTR in South Australia. They are, the Australian Gas Association (AGA), SAI GLOBAL, GLOBAL MARK, BSI, and International Association of Plumbing and Mechanical Officials (IAPMO). A certified Type A appliance must display a label, such as the ones shown below. It should also have the model number and certification approved number displayed on the data plate of the appliance.

To help in determining whether Type A appliances or components are certified, you can search, using the model number or/and certification approved number, on the Gas Technical Regulators Committee (GTRC) National Database of Certified Gas Appliances and Components: www.gtrc.gov.au. For further assistance contact OTR Gas Safety team on 8429 3466.

Type A certification Labels:



Note: VIPAC is no longer a Type A certifier. However, their label may still be found on appliances which is a valid proof of the appliance being certified.



[Identifying Certified Appliances] cont...

Type B's

Type B appliance must have had examinations and tests carried out by a Type B Certifier authorised by the OTR. The assessment is in 2 parts, an initial desktop review of the type B submission provided by the commissioning agent and the second part is physical on-site testing to validate critical safety functions in accordance with AS 3814 Industrial and commercial gas fired appliances, and applicable parts of AS/NZS 5601 Gas Installations once the commissioning has been completed. If the equipment is compliant, the certifier issues a type B certificate and a label is attached to the appliance (see labels below).

As with Type A appliances, no work shall be performed on an uncertified appliance, and no gas connected to a new or re-located appliance without a commissioning letter issued by an Authorised Certifier. Any enquiries regarding Type B appliances can be made to Ron Jessen, phone 8429 3418.

Type B certification Labels:

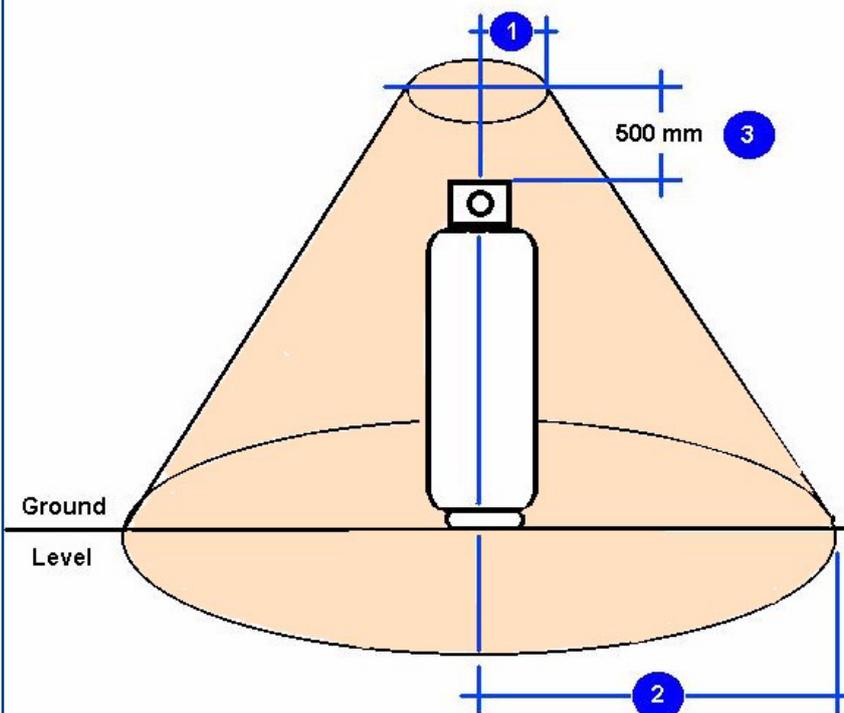
COMMISSIONED BY John Bloggs Heating Specialists DATE 27 November 2014 MANUFACTURER Rinn MODEL No. RFC 400 GAS CONSUMPTION 1900 MJ/HR GAS TYPE NG OPERATING PRESSURE 1.6 KPA MAX. INLET PRESSURE 2.0 KPA MIN. INLET PRESSURE 1.2 KPA COMBUSTION CHAMBER VOLUME 0.442 m ³ SWEEP VOLUME 0.232 m ³ PURGE TIME 67 sec ADDITIONAL INFORMATION Serial Number: 0001 Certificate Number: 1000 TG Certifications		 <p>SAFETY CERTIFIED GAS APPLIANCE No. GS1085 Assessed by: SELECT SOLUTIONS APPLIANCE TESTING (Gas Act 1997 SA - Office of the Technical Regulator)</p>	<table border="1"> <tr> <td colspan="2">LOCATION The Not For Real Company Paper St Woodfield</td> </tr> <tr> <td colspan="2">MANUFACTURERS NAME Fakesta MODEL/SERIAL No. 16/A230</td> </tr> <tr> <td>NOMINAL GAS CONSUMPTION</td> <td>26 743 MJ/h</td> </tr> <tr> <td>MAX. & MIN. GAS SUPPLY PRESSURE</td> <td>70 - 17 kPa</td> </tr> <tr> <td>GAS PRESS. AT BURNER HEAD FOR N.G.C.</td> <td>6 kPa</td> </tr> <tr> <td>COMBUSTION CHAMBER VOLUME</td> <td>6.93 m³</td> </tr> <tr> <td>TOTAL VOLUME SWEEPED TO FLUE</td> <td>8.45 m³</td> </tr> <tr> <td>GAS TYPE Natural</td> <td>DATE 12/4/03</td> </tr> <tr> <td>Job No 156/03</td> <td>PURGE TIME 145 sec</td> </tr> <tr> <td colspan="2">TEST OFFICER Joe Blo</td> </tr> </table>	LOCATION The Not For Real Company Paper St Woodfield		MANUFACTURERS NAME Fakesta MODEL/SERIAL No. 16/A230		NOMINAL GAS CONSUMPTION	26 743 MJ/h	MAX. & MIN. GAS SUPPLY PRESSURE	70 - 17 kPa	GAS PRESS. AT BURNER HEAD FOR N.G.C.	6 kPa	COMBUSTION CHAMBER VOLUME	6.93 m ³	TOTAL VOLUME SWEEPED TO FLUE	8.45 m ³	GAS TYPE Natural	DATE 12/4/03	Job No 156/03	PURGE TIME 145 sec	TEST OFFICER Joe Blo	
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GAS TYPE Natural	DATE 12/4/03																						
Job No 156/03	PURGE TIME 145 sec																						
TEST OFFICER Joe Blo																							

New 2020 AS/NZS 5601.2 Standard

- In October 2020 a fully revised AS/NZS 5601 Part 2 for LP Gas Installations in caravans and boats for non-propulsive purposes was published. As with the introduction of any new standard, a grandfather period of six months applies. This gives industry time to adjust manufacturing to comply with the new requirements. As of the 1st of April 2021, it is expected that the gas industry will be applying the new AS/NZS 5601-2020 edition of the Part 2 standard.

[Clearances from PV systems to NG gas meters, LP Gas cylinders and gas appliance]

- PV systems are considered an electrical ignition source as is an electrical meter or fuse box. Therefore the following applies;
 - As per the Figure 6.2, AS/NZS 5601.1-2013, the flue terminals and combustion air intakes of gas fired appliances must have a separation of 500mm to the PV system, (including panels, inverters DC or AC isolator switches).
 - For domestic and light commercial Gas billing meters, refer to the gas network operator documentation which refers to a 500mm separation from Electrical meter boxes and any ignition sources.
 - For LPG cylinder locations, the PV system must be outside the exclusion zone for ignition sources as per Appendix J Figure J3



Minimum Clearance to Ignition Sources

Radius	Exchange cylinder (mm)	In-situ fill cylinder (mm)
1	500	1500
2	1500	3500
3	This distance is taken from the top of the cylinder valve	

[Clearances from Air Conditioning (A/C) systems to NG meters, LP Gas cylinders and gas appliances]

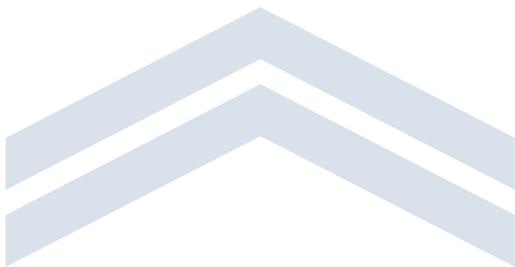
- For Gas billing meter situations in domestic and light commercial scenarios refer to the gas network operator requirement of 500mm separation from Electrical meter boxes, A/C condenser units or any ignition sources.
- For LPG cylinder locations, the AC condenser must be outside exclusion zone for ignition sources as per Appendix J Figure J3 (see above)
 - As for gas appliances, there must not be any obstruction horizontally within 500mm of the appliance, therefore the minimum distance from the casing of an A/C condenser unit to a gas appliance will be 500mm. Consideration shall also be made as the impact of air movement from the air conditioner's fan. This air movements shall not adversely impact the operation of the gas appliance, refer to AS/NZS5601.1:2020 clause 6.3.1
 - Refer to network operator requirements for clearances from gas meters to building mechanical air inlets particularly where venting reliefs and regulators are involved. Clearance in the order of 3 metres is required.

Over pressure protection (OPP) protection of critical appliances;

With the use of elevated pressures in consumer installations becoming the norm, gas contractors are advised to check the appliance specifications to ascertain the maximum supply pressure rating. Where potential installation fault pressures exceed the maximum pressures stated by manufacturers then additional OPP may be required to afford appliance protection in case meter service regulators fail subjecting the installation to the emergency overpressure rating, (7 kPa for domestic NG installations and 14 kPa for domestic LPG installations).

An example of this is;

- Continuous flow hot water heaters and other appliances rated at a maximum supply pressure of 3-3.5 kPa.
- For more information on maximum allowable pressures, over pressure protection, rated working pressures, maximum operating pressure, appliance pressure rating, requirements for regulators refer to AS/NZS 5601.1 clauses; 1.8.72, 1.8.73 1.8.81, 1.8.96, 2.4.9, 5.2.1, 5.2.2, 5.11.1.1, 5.11.2, 5.11.2.2, 5.11.1.5.



Outdoor Hot Water Heater Locations

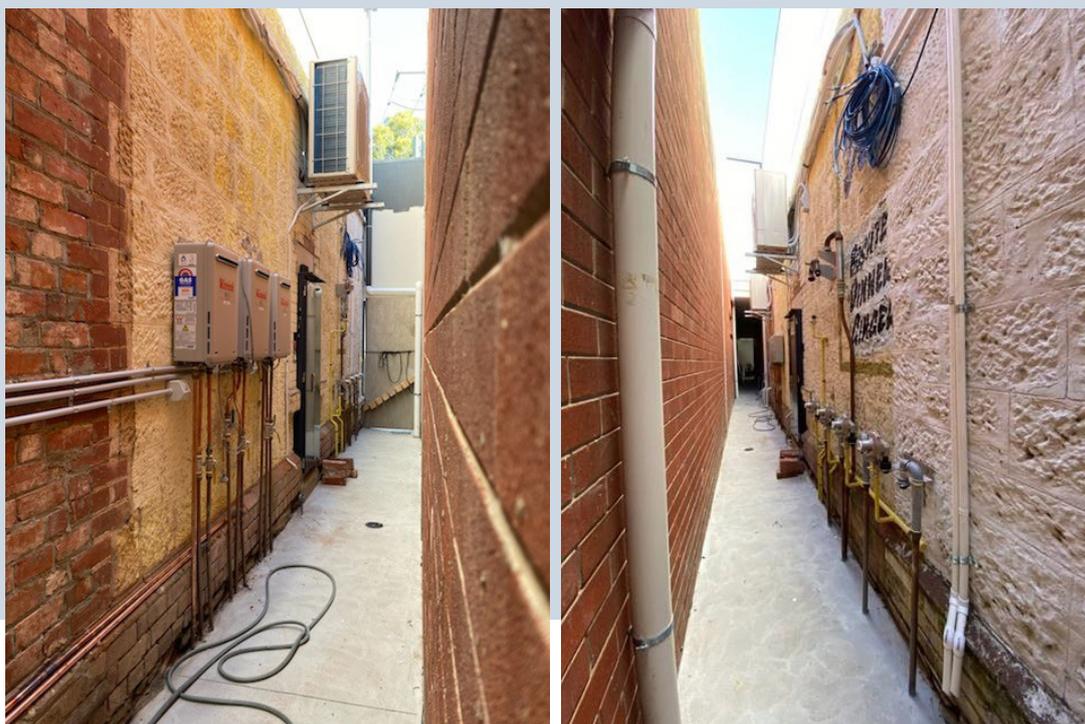
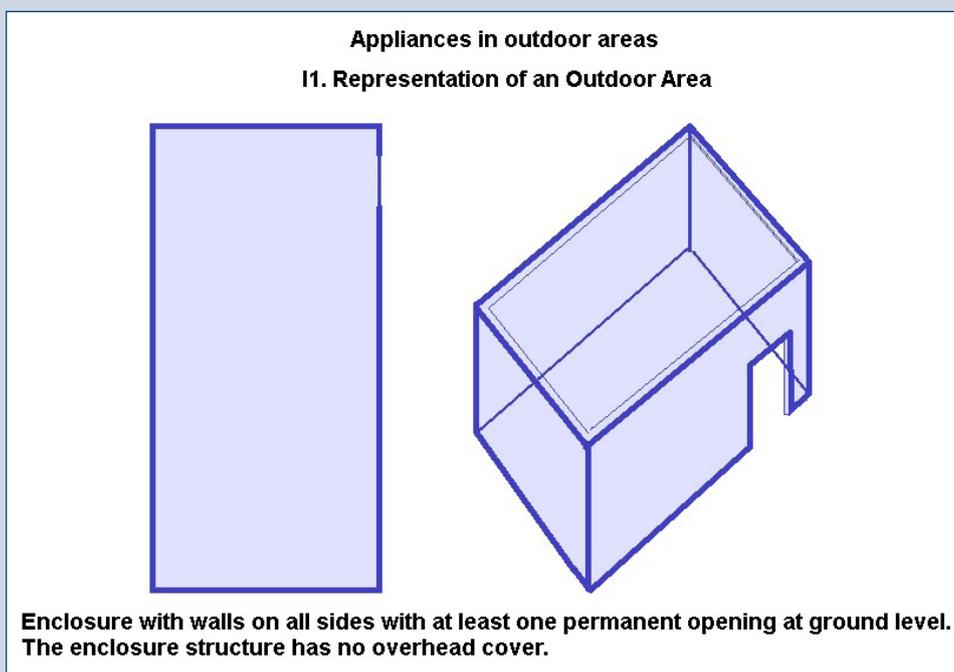
(What is outdoors and what is not)

There is increasing confusion by some developers and installers as to what represents an outdoor area, see Figure I1 below.

Figure I1 is generally suitable for single storey courtyard type applications for terminating flues or installing outdoor appliances. If however, the structure is higher, then the products of combustion may not easily rise due to the chilling effect of the surrounding cold air and down draughts. As a result, combustion products may stratify within the area and create hazards. To overcome this, you should consider raising the flue terminal to an acceptable location, in the case of continuous flow HWHs in smaller applications or where openable windows

are situated above the installation of an indoor model flued clear of the structure in a compliant manner can resolve this.

The photos below show a passage between two renovated buildings with no roof or eaves over hanging from either wall. The walls of these buildings are equivalent to two storeys high. The gas was not connected to the installation by the network because the buildings were only 1 metre apart and posed hazards for the accumulation of combustion products and hot flue gases from multiple heaters discharging in the face of occupants walking past the heaters. The installer had to return and relocate the HWHs' before the gas connection was made.

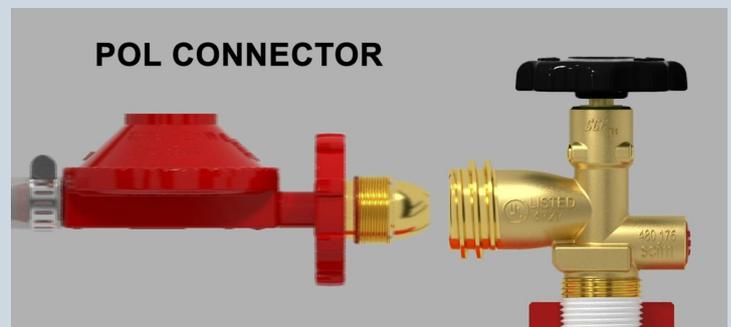


[Transitional requirements for the implementation of the new LCC27 LPG cylinder connection]

- <http://www.gtrc.gov.au/resources/Technical-Guidance-Bulletin-14--LPG-Cylinder-connection-transition-v1.1.pdf>
- As of April 2021, and over the next 12 months there will be a transition to replacing valves on cylinders up to 10Kg and portable gas appliances' connections to Type 27 connections.
- The initial transition from April to October 2021 will be on cylinders only which will affect the use of POL fittings with rubber seals (elastomer). These POL fittings with elastomer seals are not to be used with the Type 27-cylinder valve
- As of April 2022, all new portable gas appliances will be provided by the manufacturer with Type 27 connectors.
- Those existing cylinders and appliances with the POL connector will be able to continue to use these POL fittings until the test date of the cylinder and throughout the life of the appliance.



[Type 27 Leisure cylinder connection (LCC)]



[Type 21 POL cylinder connection]

Relocating gas appliances

Gas compliance / safety audits conducted by OTR gas inspectors periodically identify that newly installed gas appliances do not meet the manufacturer installation instructions or AS/NZS 5601 requirements. If this is the case, the gas fitter or owner may have to make arrangements to modify the area where the appliance has been installed to align it with the appliance type, or replace the appliance with an appropriate model for that application or relocate the appliance to another compliant area.

It is important to assess the situation thoroughly to ensure the installation does not create further compliance or safety issues. For instance, if you decide to relocate an external Hot Water Heater due to ventilation concerns, take a good look around and assess the proposed position, will the relocation cause a significant gas pressure drop when the appliance is working leading to the appliance being under gassed, will the new location create issues for other services such as air conditioner compressors, ability to service the appliance in its new location, will the flue products cause a nuisance to the owner or their neighbours.

There may be many scenarios you come across when relocating an appliance, it is important to risk assess the situation to ensure compliance.....you really want to get it right second time round!

Hydrogen Park South Australia

Hydrogen Park South Australia (HyP SA) will be South Australia's first renewable hydrogen project, commencing operations in the first quarter of 2021. HyP SA is located within the Tonsley Innovation District and will produce renewable hydrogen using renewable electricity and water.

Renewable hydrogen can then be used in the same way as natural gas, heating homes and businesses, generating electricity and as a transport fuel. Yet it doesn't produce any carbon emissions – only water and energy.

HyP SA is Australia's largest renewable gas project and the first to blend hydrogen with natural gas for supply to customers using the existing gas network. The clean burning gas will be supplied to approximately 710 nearby properties in Mitchell Park, South Australia with a blend of up to 5% renewable hydrogen and natural gas. Residents involved have been informed and won't notice any change to the gas, or the price they pay to their energy retailer. It's also as safe as the current natural gas supply.

With renewable gas, we can store vast amounts of energy for later use (such as when the sun is not shining, or the wind is not blowing) and still have the superior reliability and heating performance that natural gas provides. There's also potential for supply to local industrial customers by transporting hydrogen via tube trailers (long storage tubes on the back of semi-trailers).

The project is supported by the South Australian Government, and the State's vision to leverage its wind, sun, land, infrastructure and skills to be a world-class renewable hydrogen supplier.

HyP SA's Development Application was approved in September 2019, with the ground being broken by the Premier of South Australia the Hon. Steven Marshall MP on site in December 2019. First production at site was achieved in late 2020, with first supply of renewable hydrogen blended gas via the networks and first supply of renewable hydrogen to industry via tube trailers expected in the first quarter of 2021.

For more information, please visit the project website at blendedgas.agn.com.au.



HYDROGEN PARK SA



[Renewable Hydrogen blended Natural gas – Information for gas fitters re gas appliances and installations]

Natural gas appliances and installations within the boundaries of the Mitchell Park blended Hydrogen trial will continue to operate safely and reliably on blended 5% renewable Hydrogen gas.

The characteristics of the blended 5% renewable Hydrogen gas are consistent with those set out for Natural gas within the Australian Standard. Hydrogen has a lower heating value than Natural gas, this means Hydrogen carries slightly less energy for the same volume. As a result, gas customers in this trial will need a slightly higher volume of blended gas to provide the same amount of energy compared to using 100% Natural gas. Australian Gas Networks (AGN) will make a billing adjustment to ensure customers do not have to pay more than if they were using 100% natural gas.

Type A gas appliances sold in Australia are subject to testing and certification by a recognised Certification Assessment Body, this is to ensure they work safely and reliably with the applicable gas. In the case of Natural gas appliances, they are

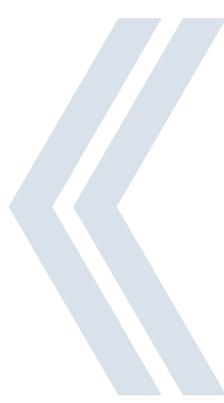
tested with different test gas compositions to account for the varying sources of Natural gas supplied around Australia. One of these “limit” test gas compositions already contains 13% Hydrogen, and therefore all certified household gas appliances sold in Australia have already undergone a range of safety tests with this level of Hydrogen.

AGN have also commissioned an independent appliance testing program where a certified laboratory tested a representative range of Australian Natural gas configured appliances with various percentages of Hydrogen. Initial test results confirm that appliances will work safely and reliably with a 5% Hydrogen blend. In terms of commissioning Natural gas configured appliances supplied by a 5% Hydrogen blended gas, gas fitters should configure the appliances as they would for Natural gas. There should be no change or appreciable difference to the gas commissioning process.



Recent Recalls on Gas appliances and components;

To browse the latest Gas appliance recalls, click [here](#).



Product Safety Recall



Adria Coral

660 DU, Plus 660 DU, 660 SCS, Plus 660 SCS, XL 660 SCS Supplied or sold between January 2014 to November 2020

Defect Liquefied Petroleum Gas (LPG) is a colourless, highly flammable gas that may leak and build up inside the caravan where the consumer gas piping is located inside the caravan.

The gas oven inside the motorhome may not be securely mounted, which could cause a possible rupture of the oven inlet gas line, resulting in a possible gas leak.

Hazard In the event of an LPG gas leak, gas may accumulate within the caravan and may present a risk of poisoning or a fire, which could cause serious illness, injury or death.

What to do Consumers should immediately stop using the appliance and isolate the gas oven by turning off the oven gas isolation valve. Affected owners will be contacted in writing to make an appointment to have their vehicle modified free of charge. Affected consumers may also contact AMH Products Pty Limited in relation to this recall, these contact details are in the section below.

Contact Details For further information, consumers can contact AMH Products Pty Limited on 1800 370 783 or email aftersales@adriaau.com.au to organise a time and location to have the oven modified.

**See productsafety.gov.au for
Australian product recall information**

Product Safety Recall

Slide Out Kitchen



**Sold by Lotus Caravans
between 1 January 2016 and 29 June 2018**

Defect The barbeque was modified to facilitate its installation. This has resulted in the temperature of the surrounding stainless steel surfaces exceeding the relevant gas standard's requirements.

Hazard If the surfaces overheat, there is an increased risk of burn injuries.

What to do Customers should stop using their Slide Out Kitchen and contact their closest Lotus Caravans dealership to schedule an appointment for rectification.

Contact details Consumers can contact Lotus Caravans on 03 9305 3907 or via the web form at <https://www.lotuscaravans.com.au/contact-us/>

**See [productsafety.gov.au](https://www.productsafety.gov.au) for
Australian product recall information**

GAS SAFETY RECALL

CHANT GAS HOSE ASSEMBLY Model No. A003

**As attached to Jumbuck Stardom 4 Burner BBQ
Model No. HS-884502**

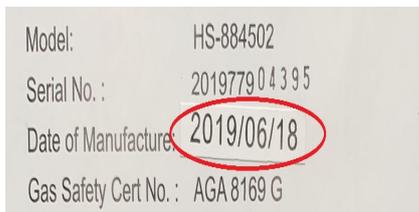
IDENTIFICATION:

All hose assemblies attached to a Jumbuck Stardom 4B BBQ, under the coverage of AGA certificate 8169G, with a manufacture year and month of 2019/06. The month of manufacture is stated on the data label located inside the cabinet door.

This product was sold through Bunnings stores nationally between 5th August 2019 and 23rd January 2020.



Hose assembly



Data label



Location of data label

DEFECTS:

The last thread of the handwheel on the hose assembly may not be completely machined. A hose assembly with this fault will not seal correctly with an LPG cylinder and gas may leak from the connection point.

HAZARD:

Risk of leaking gas at the connection with an LPG cylinder could lead to burns and/or a fire, and/or explosion which may result in serious injury.

What should I do?

Consumers should immediately turn off the gas supply and disconnect the hose assembly from the LPG cylinder.

Check the date of purchase and the month and year of manufacture of their BBQ - if in range - do not use the BBQ and contact Pacific Gas & Heating on 1300 793 978 to receive instructions on how to disconnect the hose assembly from the BBQ.

Consumers can either:

1. Request Pacific Gas & Heating to mail a replacement hose assembly to their home address.
2. Take the hose assembly to any Bunnings store to receive a replacement hose assembly.

For further information, contact Pacific Gas & Heating on 1300 793 978 or email us at info@pacificgas.com.au

**See productsafety.gov.au for
Australian product recall information**

Product Safety Recall

Escea Ltd Gas Fireplaces Models DF700 and DF960



DF700



DF960

**Sold by Escea Ltd between
23 January 2020 to 31 August 2020**

Defect: The air ramp redistributes some of the air flow through cut outs in the frame of the fireplace.

Hazard: The redistribution of heat can cause hot spots and a stain or discolouration on framing materials. This may result in slow combustion of surrounding materials and possible future fire. This increases the risk of serious injury or even death to users.

What to do: Consumers are requested to do the following:

- 1) If you purchased a fireplace between 23 January 2020 and 31st August 2020, please contact Escea to check your serial number to see if you have an affected fireplace. The serial number can easily be found by looking under the batteries in the remote control.
- 2) If your fireplace is one of the affected fires, stop using the fireplace until Escea has arranged a technician to repair the fireplace.

Contact details: For further information, contact Escea Australia Pty Ltd on 1800 460 832.

**See productsafety.gov.au for
Australian product recall information**

Product Safety Recall



Suburban Recreational Vehicle Water Heaters

Affected Model numbers are SW6PA, SW6DEA, SW6DA, SW4DEA, SW4DA, SW4DECA and SW6DECA with serial numbers between 181315552 and 193002648 (some serial numbers may end with a 'D') and between 8183311827 and 8190201139.

Available for sale by Coast to Coast Caravan and Leisure between 1 May 2018 and 25 September 2019

DEFECT - The flange securing the burner heat exchanger tube to the internal front fascia of the appliance may not be properly formed. During use on gas, hot water services with the defect may emit carbon monoxide into the caravan or motor home.

HAZARD - If the unit is powered by gas and is operated in an enclosed area – such as caravan or motorhome - carbon monoxide may spill into the vehicle and poisoning could occur resulting in serious illness, injury or death.

WHAT TO DO Consumers should immediately check if their appliance is affected and if so, **cease using the appliance powered by gas.**

To identify affected appliances: Open the exterior access door to the hot water service and check the model and serial number located on the right hand side. Affected Model numbers are SW6PA, SW6DEA, SW6DA, SW4DEA, SW4DA, SW4DECA and SW6DECA with serial numbers between 181315552 and 193002648 (some serial numbers may end with a 'D') and between 8183311827 and 8190201139. Manufactured between 4 April 2018 and 1 August 2019.

1. All water heaters in the recall range will be inspected by a licensed gasfitter to ensure a fully formed flange and the water heaters are properly installed.
2. Water heaters that do not have a fully formed flange will be replaced by a licensed gasfitter. All water heaters not properly installed will be remedied to ensure proper installation by a licensed gasfitter.

See productsafety.gov.au for
Australian product recall information

Product Safety Recall



Suburban Recreational Vehicle Water Heaters

Affected Model numbers are SW6PA, SW6DEA, SW6DA, SW4DEA, SW4DA, SW4DECA and SW6DECA with serial numbers between 181315552 and 193002648 (some serial numbers may end with a 'D') and between 8183311827 and 8190201139.

Available for sale by Coast to Coast Caravan and Leisure between 1 May 2018 and 25 September 2019

3. Water heaters within the recall range will be combustion tested by a licensed gasfitter with the capability to conduct such testing. If the combustion test fails then the water heater will be replaced.
4. As an added precaution to ensure public safety, the supplier will install a carbon monoxide (CO) alarm in every caravan where the water heater has been inspected, tested and passed.

Coast to Coast Caravan and Leisure will check every unit to ensure the water heater is properly installed and there is no infiltration of combustion by-products into the living area. If a customer's water heater fails the recall inspection and needs to be replaced, it will be replaced with a new 2020 Suburban like for like water heater.

Coast to Coast Caravan and Leisure will cover the costs relating to the supply and installation of the new water heater, and any required associated work (e.g. modification of cavity and gas and/or water lines). Coast to Coast Caravan and Leisure will offer compensation for any additional consequential loss suffered by the consumer where there is damage or devaluation to the caravan or motorhome attributed to the installation of a replacement water heater. Consequential loss will be determined on a case by case basis.

Consumers with affected appliances should contact Coast to Coast Caravan and Leisure's dedicated recall hotline on 02 9645 7685 for further information or to arrange an inspection.

**See productsafety.gov.au for
Australian product recall information**

GAS SAFETY RECALL

**GRILLMAN Gas Safety Shut-Off Valve and
GRILLMAN Gas Safety Shut-Off Valve with Hose and Regulator**



IDENTIFICATION: Gas safety Shut Off Valve with POL flitting, suitable for gas barbecues and outdoor gas heaters.

Batches GMGSG 2018/01 and GMGSG 2018/03

Sold by caravan, camping, hardware, barbecue and outdoor furnishing stores between March 6th 2018 to July 31st 2020.

DEFECT: The tail pipe and main body of the valve may come apart, this may cause the seal at this point to break and allow gas to escape when the valve to the gas cylinder is open.

HAZARD: Risk of leaking gas igniting, leading to burns and/or a fire and/or explosion, which may result in serious injury or death.

ACTION REQUIRED: Consumers should immediately stop using the products and return them to the place of purchase for a full refund.

CONTACT DETAILS: For further information, contact Mayo Hardware on 1300 360 211 or email grillmangas@mayohardware.com.au

See www.productsafety.gov.au for Australian product recall information



Plumbing Bulletin



**Master
Plumbers**
SOUTH AUSTRALIA

PLUMBING ROADSHOW

Join us for the 2021 Plumbing Roadshow and Mini Trade Expo - proudly presented by the Master Plumbers Association of South Australia and the Office of the Technical Regulator.



**Government of
South Australia**

***FREE for Master Plumbers SA Members | \$10 for non-members.**

DAY	DATE	TIME	LOCATION	VENUE
Wednesday	17 February	4.30 - 8.30pm	Mount Gambier	City Hall - Main Corner
Tuesday	2 March	4.30 - 8.30pm	Port Lincoln	Nautilus Arts Centre
Wednesday	3 March	4.30 - 8.30pm	Port Augusta	Access Training Centre Building
Wednesday	17 March	4.30 - 8.30pm	Gawler	Gawler Arms Hotel
Wednesday	24 March	4.30 - 8.30pm	Mount Barker	Mount Barker Community Centre
Wednesday	28 April	4.30 - 8.30pm	Kadina	The Farm Shed Museum & Tourist Centre
Wednesday	16 June	4.30 - 8.30pm	Tonsley	TAFE Tonsley

PLUMBING TOPICS:

- Fire services
- Backflow prevention, keeping up with AS2845.2
- Booking jobs for inspection
- Interactive water play features
- Trade waste installations
- Drainage installations
- Douche seats
- Recently published advisory notes
- Changes made to the Standard published by the Technical Regulator
- Hydraulic design submissions
- Chemical dispensers

WHO SHOULD ATTEND:

- Plumbers (including apprentices)
- Plumbing and Building Consultants
- Plumbing Trainers
- Council and Environmental Officers
- CFS and MFS Officers
- Architects

REGISTER NOW: Visit www.mpasa.com.au, or call us on (08) 8292 4000



[Local Government Water Entities collaborate through Risk Workshop]

Undertaking a risk assessment ensures that risks and hazards are identified; and mitigations and controls are applied. Identifying, understanding and mitigating risks are important steps to ensure that water entities are safe and reliable. For councils that run similar CWMS (Community Wastewater Management Scheme) facilities there is great value in collaborating to make the best use of resources and achieve better outcomes.

A recent Risk Management Workshop undertaken by the Legatus Group on 10 November 2020, is an excellent example of collaboration between council run water entities that run similar wastewater treatment facilities.

The Legatus Group is the trading name of the Central Local Government Region which is a regional subsidiary established under the Local Government Act 1999 (SA). The purpose of the Legatus Group is to undertake the co-ordination, advocacy and representation of its 15-member constituent councils at a regional level. The Legatus Group has a CWMS Advisory Committee which initiated a review of risk management.

Following advice from the Legatus Group CWMS Advisory Committee the Legatus Group approached LGA (Local Government Association) Mutual to undertake a facilitated workshop with the aim to better assess and manage CWMS risks. The session aim was to arrive at advice for an exemplary CWMS Risk Management Plan.

The Risk Workshop was facilitated by David Powell of Powell & Co who currently provides risk management consulting to the LGASA. David is an experienced Audit Committee Chair in Local Government and has provided probity advice on several CWMS projects for Local Government. The workshop focussed on gaining a shared understanding of Legatus Group CWMS risks and assessing those risks in respect of inherent risk, controls, treatment plans and residual risk. A report was provided to all Legatus Group member councils.

The Legatus Group CWMS Advisory Committee have indicated the workshop was very worthwhile and that it achieved:

- A current assessment of CWMS risks representing the collective view of participants;
- An expansion of Legatus Group's understanding of CWMS risks and risk management;
- A consensus view on the identification and management of CWMS risks on an ongoing basis; and
- Buy in from participants who were involved and hence committed to managing CWMS risks identified through controls and treatment plans.



Office of the Technical Regulator

Common drains

Plumbing Advisory Note

Revised March 2019

A common drain is a sanitary drain which transports on-site sewage from two or more Torrens title allotments into the sewerage infrastructure via a single connection point

Common sanitary drains connected to Torrens title allotments were installed under the *Adelaide Sewers Act 1878*.

Common sanitary drains were typically installed between 1878 and 1929. After this time the majority of properties had internal sanitary drains individually connecting to the sewerage infrastructure.

Home owners may become aware that their properties are serviced by common drains when:

- a drain becomes blocked or otherwise requires maintenance
- existing buildings on an adjacent property are demolished and a new building is erected
- a boundary alteration occurs
- additions are made to an existing building that extend over the drain
- plumbing alterations take place.

When the Office of the Technical Regulator (OTR) becomes aware of a common drain which is interconnected with drains from adjoining properties, a notice letter is sent to all affected property owners. This notice is provided to interested parties (on application) under the *Land and Business (Sale and Conveyancing) Act 1994*.

If the opportunity arises to connect your internal sanitary drain to the sewerage infrastructure by means of a separate sewer connection, you are advised to do so accordingly.

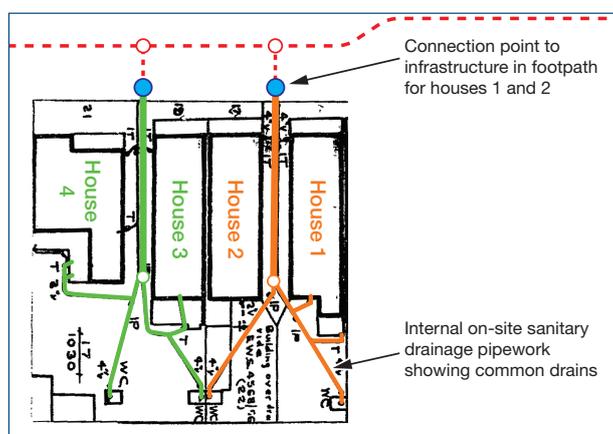


Image 1: Typical common drains.

Continued over page...

Office of the Technical Regulator

Water services for island benches

Plumbing Advisory Note – April 2020

Requirements exist which are specific to the installation of water services into island benches within Class 1a buildings.

Proximity to other services

AS/NZS 3500.1 Clause 5.2

Separation Distances

A separation of 100 mm must exist between any underground water service and:

- an electrical cable
- a consumer gas pipe
- a communication cable
- and any other service.

Branch Offtakes

- Branch offtakes shall not exceed:
- 6 m for pipes with an internal diameter of 12.5 mm
- 3 m for pipes with an internal diameter of 10 mm

Generally plumbers use PVC-U pipe as the sleeve to enable the hot and cold water pipes to be installed at the sink area.

In such cases, plumbers must ensure that:

- electrical, gas pipes and communication cables are not installed in the same sleeve
- the heated water pipe is insulated with a minimum 13 mm of closed cell polymer R=0.3
- the sleeve length is as short as possible
- where termite protection is required, the integrity of the chosen termite protection method shall not be compromised
- the number of joints under slabs are minimal.

Legislative requirements

The requirements for cold and heated water pipework are detailed in the *National Construction Code Series Volume Three, Plumbing Code of Australia (PCA), Parts B1 and B2.*

The 'deemed to satisfy' documents are AS/NZS 3500.1 and AS/NZS 3500.4 which contain sections on supporting and fixing above ground water services.



Figure 1 - Acceptable island bench installation using sleeve



Figure 2 - Non-compliant installation (electrical cable in sleeve with water pipes)

Office of the Technical Regulator

Plumbing for temporary on-site facilities

Plumbing Advisory Note – September 2020

Plumbing associated with temporary on-site facilities must meet all relevant technical and safety requirements as set out under the objectives of the Plumbing Code of Australia.

All on-site plumbing work must be carried out by a licenced plumbing worker — this includes plumbing work for temporary on-site facilities.

Requirements

The installation must be safe and fit for purpose. It must only use approved:

- materials
- products
- fixtures
- appliances.

Pipework

Pipework must be joined and supported to achieve a sound, leak-free sanitary installation using approved methods.

The water supply must be appropriately sized to service the facilities provided.

Water supply pipework must be adequately supported.

Sanitary drainage

Sanitary drainage pipe work must not interconnect with any other system (for example, storm-water).

Backflow and Cross Connection control

Plumbing pipework must be clearly identified.

Pressurised sanitary drainage pipework must never be reused in a water supply system.

All non-drinking water supply pipework must be colour-coded and identified.

The drinking water service must not have cross connections and must have backflow prevention devices installed where required.

Heated water services

Temperature control devices must be installed to heated water services where fixtures are used for personal hygiene purposes.

Temporary installations

Temporary plumbing installations must be maintained for the period of use and protected against incidental damage.

[Topics and Comments]

Site temp toilets–Check PAN for info on OTR website

Plumbing associated with temporary on-site facilities must meet all relevant technical and safety requirements as set out under the objectives of the Plumbing Code of Australia. *Although temporary, plumbing must be installed to ensure patrons using temporary facilities can do so safely.*

All on-site plumbing work must be carried out by a licenced plumbing worker – this includes plumbing work for temporary on-site facilities.

Requirements

The installation must be safe and fit for purpose. It must only use approved:

- materials
- products
- fixtures
- appliances.

Pipework

Pipework must be joined and supported to achieve a sound, leak-free sanitary installation using approved methods.

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Temporary installations

Temporary plumbing installations must be maintained for the period of use and protected against incidental damage.

Hot and cold-water feeds to island benches–Check PAN for info on OTR website

Yes, The OTR have noticed an increase in the installation of island benches in new and existing homes that require water and electricity to be run under the floor. Many of these installations don't meet the requirements of AS/NZ 3500.1 and AS/NZ 3000 as water and electrical are run in the same conduit.

Requirements exist which are specific to the installation of water services into island benches within Class 1a buildings.

Proximity to other services AS/NZS 3500.1 Clause 5.2

Separation Distances

A separation of 100 mm must exist between any underground water service and:

- an electrical cable
- a consumer gas pipe
- a communication cable
- and any other service

Branch Offtakes

Branch offtakes shall not exceed:

- 6 m for pipes with an internal diameter of 12.5 mm
- 3 m for pipes with an internal diameter of 10 mm

Summary

Generally, plumbers use PVC-U pipe as the sleeve to enable the hot and cold-water pipes to be installed at the sink area.

In such cases, plumbers must ensure that:

- electrical, gas pipes and communication cables are not installed in the same sleeve
- the heated water pipe is insulated with a minimum 13 mm of closed cell polymer R=0.3
- the sleeve length is as short as possible
- where termite protection is required, the integrity of the chosen termite

protection method shall not be compromised

- the number of joints under slabs are minimal

Common drains (old sewer act)–Check PAN for info on OTR website

A common drain is a sanitary drain which transports on-site sewage from two or more Torrens title allotments into the sewerage infrastructure via a single connection point

Common sanitary drains connected to Torrens title allotments were installed under the *Adelaide Sewers Act 1878*.

Common sanitary drains were typically installed between 1878 and 1929. After this time, the majority of properties had internal sanitary drains individually connecting to the sewerage infrastructure.

Common drains are not community title properties sharing a single GIO. For information on Community title properties see AS/NZ 3500.2 Section 14 Multi-unit developments.

Homeowners may become aware that their properties are serviced by common drains when:

- a drain becomes blocked or otherwise requires maintenance
- existing buildings on an adjacent property are demolished and a new building is erected
- a boundary alteration occurs
- additions are made to an existing building that extend over the drain
- plumbing alterations take place

When the Office of the Technical Regulator (OTR) becomes aware of a common drain which is interconnected with drains from adjoining properties, a notice letter is sent to all affected property owners. This notice is provided to interested parties (on application) under the *Land and Business (Sale and Conveyancing) Act 1994*.

If the opportunity arises to connect your internal sanitary drain to the sewerage infrastructure by means of a separate sewer connection, you are advised to do so accordingly.



Jeff Clark Farewell

a competent Plumbing foreman when he was just a fourth-year apprentice.

Jeff made a start in the plumbing regulatory environment as an Inspector at the Engineering and Water Supply department (EWS) and through his hard work and perseverance would eventually become the Plumbing standards and legislation manager at SA Water.

The list of Jeff's achievements are impressive and include; Chair of the National Plumbing Regulators Forum (NFRF) Technical Committee, Chair of the ASFlow committee signing a memorandum of understanding with Washington DC, collaborating the American Plumbing Industry on researching the effects of the reduced flows on plumbing systems. As a major contributor in the inception of the mandatory requirements for backflow prevention devices in Australia Jeff was able to ensure the protection of the public drinking water network.

His passion for our trade was clear, offering his time to numerous committees. These included the TAFE Plumbing Industry Reference Group and SA Health Wastewater Industry group.

One of Jeff's pleasures was his communication with the all levels of the profession, his availability to further explain the inference of technical standards has been of immense value to the Plumbing Industry in SA. Jeff always made himself available to answer any technical questions especially at industry presentations and roadshows.

In recent years Jeff enjoyed tirelessly worked on the Plumbing Standards and he was instrumental in the inclusion of the Reduced Air Velocity Stack Systems (RAVSS) being including into the AS/NZS 3500.2 amongst other significant changes to the Standards

Jeff's plans for the future show no indication of slowing down. He declares that he plans on spending more time furthering his personal fitness, continuing his sufferance as a life member of the Melbourne football club and further advance his Japanese dialect. All whilst continuing his life's vocation in a relaxed part time role in the private sector, conducting part time training and education for all levels of Plumbing Industry.

Jeff, we all thank you for service.

The Office of the Technical Regulator would like to thank Jeff Clark for an unparalleled fifty plus years of dedicated service to the plumbing industry, as Jeff has decided to retire from the South Australian State Government Regulatory duties.

Jeffery commenced his plumbing career as an apprentice plumber employed by Hall Brothers Plumbing and Roofing Contractors at Klemzig. Jeff still insists that Hall brothers not only taught all their apprentices to be an excellent craftsman, but also upstanding members of the community. Ken Hall, local operator of a successful plumbing company, will attest to this professional persona as he was one of Jeff's apprentices.

Jeff supervised many large commercial and industrial plumbing projects and was



John Barge Farewell

Elite Plumbing were fortunate enough to utilize John's experience and knowledge as a supervisor for four years, where he admits he took a lot of enjoyment from working with apprentices and perhaps that's where his passion to impart knowledge flourished.

Then in 2010 a big opportunity was presented to John, when he accepted the offer of becoming a Plumbing Inspector with SA Water. Proudly John recalls working under Kevin Claridge's recycled water team, where he was instrumental in conducting recycled water audits, all whilst continuing to conduct plumbing and drainage audits.

A major change in industry legislation in 2012, saw John transitioning from an SA Water inspector water to a transfer to the Office of the Technical Regulator. John acknowledges the roles were fundamentally the same but conducted under different parameters.

In his time as a valued team member at the OTR, John recalls himself, with Brian Williamson volunteering to do conduct

Plumbing audits in the Mt. Gambier regional area once a month.

He happily acknowledges he was proud of the good rapport that he was able to build up, in such a short time with all the Plumbers in the South East

As John reflects over his time with SA Water and OTR, he confesses that he thinks he'd be remembered as a fair inspector with good characteristics.

As time marched on and his old friends from OTR began to retire, John decided that he'd do the same, as he believed it was time to hand over the reins to the to the next generation of OTR Inspectors he aided developing.

In retirement John hopes to enjoy more time with his family, especially his three young grandchildren and to continue his travels (COVID permitting).

John would like to thank you all for your continued support, and we will all be grateful for the knowledge that he has imparted.

The OTR inspectorate group would also like to acknowledge the retirement of our Recycled Water specialist John Barge. John has decided to retire from his South Australian State Government Regulatory duties.

Immigrating from Kent in England, John arrived in Adelaide in 1991, with the City & Guilds of London Institute qualifications as an Advanced Plumber. Keen to start work in Adelaide, John started out working for RJ Wilkinson (that would later become Entire Plumbing) as a sub-contractor contracting for Hickinbotham Homes for 8 years. John continued his sub-contracting with Rolton & Hibbird.

[Contact List]

Electrical Technical Advice

Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide
(Reception on Level 4)

Phone: (08) 8226 5518 (8:00am-4:30pm)

Fax: (08) 8226 5529

Email: otrmail@sa.gov.au

Gas Technical Advice

Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide
(Reception on Level 4)

Phone: (08) 8226 5722 (8:30am-4:30pm)

Fax: (08) 8226 5866

Email: otr@sa.gov.au

Plumbing Technical Advice

Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide
(Reception on Level 4)

Phone: 1300 760 311 (8:30am-4:30pm)

Email: otr.plumbenquiries@sa.gov.au

www.sa.gov.au/otrplumbing

General Information

Licence and Address Change

Consumer & Business Services

Phone: 131 882

Email: occupational@sa.gov.au

Appointments and Information

SA Power Networks

Builders & Contractors Line

Phone: 1300 6500 14

Fax: 1300 6500 16

Australian Standards

Standards Australia

www.standards.com.au

AGA

Phone: (03) 9580 4500

www.gas.asn.au

Training

Gas

Master Plumbers Association

1 South Road, Thebarton

Phone: (08) 8292 4000

Fax: (08) 8292 4040

Gas Services SA

4/543 Churchill Rd, Kilburn

Phone: 1300 139 093

Gastrain

U1, 61-65 Tapleys Hill Road,
Hendon 5014

(PO Box 83, Royal Park 5014)

Phone: (08) 8447 7783

Phone: 1300 955 583

Fax: (08) 8447 7753

www.gastrain.com.au

Electrical and Gas TAFE info

(for all training enquiries)

Phone: 1800 882 661

Peer Veet

Rescue and Resuscitation, First Aid

& other Industry related courses:

1042 Port Road, Albert Park

Phone: (08) 8348 1200

www.peer.com.au

Electrical

Power Lines/Cables

Clearance Zones

Between vegetation and power lines
or building/structures and power lines

contact the **Office of the Technical**

Regulator

Phone: (08) 8226 5667

SA Power Networks (SAPN)

Phone: 13 12 61

For locations of Gas, Electricity or Telecommunications

“Dial Before You Dig”

This service is still available when doing
emergency excavations at short notice.

Phone: 1100

www.dialbeforeyoudig.com.au

For after-hours locations or gas emergency (including LPG)

Origin Energy LPG: 1800 808 526

Kleenheat: 1800 093 336

Elgas: 1800 819 783

APA Group Gas leaks: 1800 427 532
(1800 GAS LEAK)

For gas or electrical major incident reporting 24 hours / 7 days (South Australia only)

Office of the Technical Regulator

Phone: 1800 558 811

This number also appears in the 24-hour
emergency numbers section at the front
of the South Australian White Pages

Gas Trade contact

APA Group Gas Distribution

Network Operator

Phone: 1300 001 001

[Additional websites for further information]

South Australian Parliament for Acts and Regulations

www.legislation.sa.gov.au

SafeWork SA

www.safework.sa.gov.au

Gas Energy Australia (formerly ALPGA)

gasenergyaustralia.asn.au

Australian Competition and Consumer Commission (ACCC)

www.accc.gov.au

Australian Gas Networks Ltd

(formerly Envestra)

www.austriangasnetworks.com.au

Elgas

www.elgas.com.au

Origin Energy

www.originenergy.com.au

Kleenheat

www.kleenheat.com.au

Australian Standards

<https://infostore.saiglobal.com/store/>

The Backflow Shop—new address:

27 South Road, Hindmarsh

www.backflowshop.com.au

Tomlinson Energy

26 Phillips Street

Thebarton SA 5031

www.tomlinsonenergy.com.au