Electrical Safety Recall

Samsung top loader washing machine

Samsung Electronics Australia Pty Ltd is issuing a recall on specified Samsung top loader washing machines sold in Australia through various retailers.

Which models are affected?

Samsung top loader washing machines with the following model names manufactured in 2010, 2011, 2012 and some models in 2013 are affected:

SW75V9WIP; SW65V9WIP; SW70SPWIP; SW80SPWIP; WA85GWGIP; WA85GWWIP

Other models are not affected. Please contact Samsung for details of the affected serial numbers.

Where to find the model name on the machine?

The model name can be found on the back of the washing machine as shown below.

Product issue / hazard:

In some circumstances, there is a chance that moisture may penetrate the electrical connectors of the machines causing a fire hazard.

What should I do?

Check the model name of your washing machine. Visit www.samsung.com.au, call 1800 239 655 between 8am-8pm AEST Monday to Sunday or email wm.samsung@samsung.com to find out if your machine is affected.

Samsung will arrange for an authorised service technician to provide a free in-home service for all affected models.

If your model is an affected model, until the service is performed, Samsung recommends that as a precautionary measure, you only use your washing machine if you are present or nearby to monitor it. If you notice any smoke or smell coming out of the washing machine, turn off the machine at the power point.

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Electrical Bulletin

Double fatality in Western Australia: A tragic reminder to use safe working procedures

Following a fatal incident in Western Australia in February 2015 the Office of the Technical Regulator would like to remind all electrical contractors and owners of electrical infrastructure that all reasonable steps must be taken to ensure safety when carrying out work in proximity to exposed high voltage parts through the use of safe work practices.

EnergySafety WA reported earlier this year that two electricians were killed when the 11kV oil-insulated Long & Crawford combined-fuse switch they were maintaining exploded when a high current fault occurred in the tank of the unit. Most of the insulating oil in the tank was vaporised instantly.

EnergySafety WA states that the type of switch involved is designed to permit a work practice whereby the three fuse cartridges immersed in the tank can be changed while the in-coming high-voltage bus bars at the base of the tank remain energised.

This accident is under investigation by EnergySafety WA and WorkSafe WA. While the investigation is not complete, it appears that there was a short-circuit fault in the switch tank following the rupture and disintegration of a HV fuse within the unit.

When undertaking such work on any HV oil insulated combined-fuse switches, or any exposed parts in proximity to these switches, all electricity supplies should be isolated to ensure the safety of any person working on or near this equipment.

For more details please visit www.energysafety.wa.gov.au

AS/NZS 5033:2014 – Update

From 11 July 2015, the following installation requirements shall apply for new PV array installations:

- All power conversion equipment (PCE) shall comply with IEC 62109-1 and additionally inverters shall comply with IEC 62109-2 – see clauses 3.4.1 & 4.3.11.

PCE includes D.C./A.C. inverters, D.C/D.C converters, charge controllers etc, but does not include D.C. conditioning units (see clauses 1.4.40 & 2.1.5).

IMPORTANT INFORMATION - Have You Changed Your Address?

Remember to contact Consumer and Business Services (CBS) for any change of address or licence details. Their address is L3, 91-97 Grenfell Street, Adelaide 5000, phone 131 882 or you can email them on pge.bos@agd.sa.gov.au

Only contact the Office of the Technical Regulator for change of address notification if you receive Regulation Roundup but do not hold a trade licence.

Registration of Gas and Electrical CoC books

You can register your CoC books online by going to www.sa.gov.au/otr and clicking on the link in the Top 5 box on the left side of the page.

The link will bring you to a page where you can enter your details for the CoC book you are registering. Remember to enter the prefix letter of the book you are registering eg G200251.
Equipotential Bond to the reinforcing of installations where a provision for an alarming amount of new domestic appliances and the concrete floor or wall of a room containing a shower or bath shall be bonded to the earthing system of the electrical installation.

The OTR will publish an industry guideline with the above mentioned requirements. PV array systems will require compliance with clause 5.6.2.5 in AS/NZS 3000:2007 states – Any conductive reinforcing within a concrete floor or wall of a room containing a shower or bath shall be bonded to the earthing system of the electrical installation.

Clause 5.6.2.5 in AS/NZS 3000:2007 states – Any conductive reinforcing within a concrete floor or wall of a room containing a shower or bath shall be bonded to the earthing system of the electrical installation.

The onus is on the electrical contractor to exercise to provide one after the pour. This will avoid the costly and time consuming exercise to provide one after the pour. This does not suggest that electricians are not arranging or providing one after the slab has been poured but in some cases the first fix wiring has been completed with supply available but there is no evidence of an equipotential bond conductor to the earthing system is in place. This is only identified before the outer or inner walls are in place.

Certain alterations/additions to existing PV array systems will require compliance with the above mentioned requirements. The OTR will publish an industry guideline to assist electrical contractors, for further information go to www.sa.gov.au/otr and refer to the Electrical installations link.

Equipotential Bond – Showers and Bathrooms

During recent site inspections conducted by OTR electrical auditors, they found an alarming amount of new domestic installations where a provision for an equipotential bond to the reinforcing of a concrete floor had not been provided during a pour. This does not suggest that electricians are not arranging or providing one after the slab has been poured but in some cases the first fix wiring has been completed with supply available but there is no evidence of an equipotential bond conductor to the earthing system is in place. This is only identified before the outer or inner walls are in place.

Clause 5.6.2.5 in AS/NZS 3000:2007 states – Any conductive reinforcing within a concrete floor or wall of a room containing a shower or bath shall be bonded to the earthing system of the electrical installation.

Example of steel reinforcing rod provision for equipotential bond conductor – connected to the concrete slab reinforcement material.

The alarm system once activated is to continue repeating its operation at least at hourly intervals until the earth fault is corrected.

A set of operational instructions shall be provided to the system owner that includes what actions to take when the alarm operates; this includes action required to correct the earth fault.

Certain alterations/additions to existing PV array systems will require compliance with the above mentioned requirements. The OTR will publish an industry guideline to assist electrical contractors, for further information go to www.sa.gov.au/otr and refer to the Electrical installations link.

Switchboards on SWER transformer poles

Recent audits have identified switchboards located in meter boxes on SA Power Networks (SAPN) SWER transformer poles. Switchboards have always been prohibited from being installed on SWER transformer poles, including back in the old ETSA days. Meter boxes, with no switchboards, were previously permitted on SWER transformer poles subject to specific installation requirements. Current SAPN service and installation rules (SIRs) only allow consumer mains to be installed on SAPN poles and structures, and any other electrical equipment, including meter boxes, cannot be installed there without approval from an SAPN manager.

SWER stands for Single Wire Earth Return, where a single 19kV cable runs overhead between transformers, and the ground is used for the neutral. At the base of each SWER transformer pole is an electrode or grid which connects the transformer high voltage neutral to ground. When a switchboard is installed on or too close to a SWER transformer pole, the new installation earth and MEN connection within that switchboard creates a parallel path between that and the high voltage transformer neutral, which could result in the HV neutral current being distributed through the LV wiring. The SAPN SIRs also state that the installation earth electrode shall not be located within 3.5m of an SA Power Networks pole or sub-station earthing systems, which includes a SWER transformer pole.

Should you as a contractor install a switchboard on a SWER transformer pole, including installing a switchboard in an existing meter box on a SWER transformer pole, the implications are not only that you may have created a dangerous situation for your customer, but also that it could turn out to be a very expensive exercise for you to rectify. If you attend a customer’s property to perform some electrical work and notice an existing switchboard on a SWER transformer pole then we strongly recommend that you write it as an existing breach on your ECC and advise your customer and the OTR.
<table>
<thead>
<tr>
<th>Shock Source</th>
<th>Cause</th>
<th>Contributing Factors</th>
<th>Injuries</th>
<th>Action to make safe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boundary fence adjoining neighbour’s property sparking.</td>
<td>Illegal wiring at revenue metering of neighbours property.</td>
<td>By tampering with the connections at the revenue metering equipment the neighbour had caused the main neutral connection to burn out.</td>
<td>Home owner received electric shock and burnt finger from contacting arcing metal fence sheets.</td>
<td>Property was disconnected from supply and investigated by SAPOL for possibility of being a hydroponic grow house.</td>
</tr>
<tr>
<td>Ducted refrigerated air conditioning unit.</td>
<td>Conduits not secured into terminals of ceiling unit.</td>
<td>Refrigeration technician dislodged live cable from circuit breaker when securing cables with cable ties.</td>
<td>Worker received electric shock between hands.</td>
<td>Work practices to be reviewed to confirm isolation of supply before commencing work.</td>
</tr>
<tr>
<td>Flexible shower hose.</td>
<td>High impedance of main neutral conductor.</td>
<td>Birds had nested on top of the power pole supplying the property causing the connections to corrode.</td>
<td>Occupier received electric shock between hands.</td>
<td>Network operator replaced pole top junction box.</td>
</tr>
<tr>
<td>Bathroom handrail.</td>
<td>Termites.</td>
<td>Termites were active in wall which caused electricity to track from the light switch to the hand rail.</td>
<td>Occupier received electric shock between hands and feet.</td>
<td>Electrical contractor removed light switch and socket outlet from the termite affected area.</td>
</tr>
<tr>
<td>Electric fence.</td>
<td>Inattention.</td>
<td>Security guard was removing fallen branch from fence and did not realise that part of the fence was connected to the neighbours still energised security fence.</td>
<td>Security guard received electric shock to right arm.</td>
<td>Instruct personnel on isolation procedures before approaching electric fences.</td>
</tr>
<tr>
<td>Microwave oven.</td>
<td>Loose earth connection.</td>
<td>Faulty microwave oven had voltage present on cabinet.</td>
<td>Worker received electric shock between hands.</td>
<td>Microwave oven removed from service.</td>
</tr>
<tr>
<td>Unterminated lighting cable.</td>
<td>Lighting circuit.</td>
<td>New light fitted in one part of school and circuit reenergised but light fittings had been removed in next room.</td>
<td>Ceiling installer received electric shock to hands.</td>
<td>Electrical contractor disconnected circuit until all lights replaced.</td>
</tr>
<tr>
<td>Ceiling sweep fan.</td>
<td>Lack of effective earthing.</td>
<td>Installer had failed to connect the earth connection correctly resulting in a voltage being present on the conductive metal frame.</td>
<td>Home owner received electric shock to hands.</td>
<td>Electrical contractor repaired earth connection.</td>
</tr>
<tr>
<td>Door frame in hospital ward.</td>
<td>Fire services metal water pipe.</td>
<td>Fire services water pipe had been installed with cable jammed behind it causing the insulation to be damaged.</td>
<td>Care attendant received electric shock to hands as they leaned back on door frame.</td>
<td>Electrical contractor repaired cable and rerouted it away from fire service so that it cannot be damaged in the future.</td>
</tr>
<tr>
<td>Extension cord.</td>
<td>Plant attendant disconnecting appliance with wet hands.</td>
<td>Power was not turned off to automatic pool vacuum cleaner before being unplugged.</td>
<td>Plant attendant received electric shock to hands.</td>
<td>Work procedures to be revised. Pool cleaner was tested for correct operation.</td>
</tr>
<tr>
<td>Cables installed in ceiling space.</td>
<td>Unsighted cable in ceiling cut by worker.</td>
<td>Duct installer did not check for cables above the area he was cutting through to install an access panel.</td>
<td>Worker received electric shock to hands.</td>
<td>Workers to be instructed in electrical safety before commencing similar work.</td>
</tr>
<tr>
<td>Dishwasher.</td>
<td>Control panel switch surround damaged.</td>
<td>Dishwasher control panel was cracked and had allowed steam into the live terminal area.</td>
<td>Cook at early education centre received electric shock to hands.</td>
<td>Electrical contractor removed dishwasher from service.</td>
</tr>
<tr>
<td>Pallet lifter battery charger.</td>
<td>Broken pin in plug assembly.</td>
<td>Plug and cord assembly supplying battery charger had been stretched and caused the plug top to become live.</td>
<td>Worker received electric shock to hand.</td>
<td>Workers instructed to turn off supply before removing plug tops for battery charger supply.</td>
</tr>
<tr>
<td>Roller door.</td>
<td>Stop start station.</td>
<td>Operator went to raise roller door but didn’t realise water had entered start button enclosure.</td>
<td>Operator received electric shock to hands.</td>
<td>Electrical contractor replaced stop start station with suitable unit for exposure to the weather.</td>
</tr>
</tbody>
</table>
Are you connecting, modifying or moving Type B appliances or equipment?

Type B appliances include gas-fired, individually certified, industrial or commercial appliances and stationary engines.

There are specific rules for connecting gas to Type B appliances and equipment.

If in doubt about your obligations please contact Ron Jessen at the OTR on 8226 5517.

AS 3814:2015 Industrial and commercial gas-fired appliances

Clause 1.2.2 Appliance installation

Before an appliance is connected to a gas supply, a submission containing the standard and technical data specified by the Technical Regulator, might be required by the Technical Regulator.

Clause 1.2.6 Modifications or relocation of an appliance

Where an appliance is modified or relocated, it should be upgraded to meet the requirements of this Standard current at the time of the modification or relocation, and might need to be resubmitted to the Technical Regulator.

This is because once a Type B appliance is modified or relocated the pre-existing certification lapses. In South Australia, in order to comply with the requirements all Type B appliances must be certified by a recognised Type B appliance certifier.

To achieve this, a submission must be made to one of the two authorised certifying bodies, either Select Solutions or Tamar Gas Certification (TGC). Depending on the level of modification, the equipment may require part or full testing to recertify the appliance. Upon scoping the work the certifier will advise you what is required.

Modifications include physical alterations of the equipment, eg increasing/decreasing the appliance volume; addition or removal of fans; replacement of burners; automatic shut-off valves or burner management controls with unlike components; or altering combustion by increasing/decreasing gas rates.

For more information contact the OTR for a guide bulletin on Type B appliance certification.

2015 OTR / MPA Gas Roadshows

Seminars in Adelaide

The Office of the Technical Regulator (OTR), in conjunction with the Master Plumbers Association (MPA), will be holding Gas Roadshows in Thebarton on Thursday 15 October, Thursday 29 October, and one in Seaford on Wednesday 4 November.

Topics to be discussed include: the latest requirements for spillage tests; rating gas escapes without a gas meter; new developments for Type A and Type B gas appliance certification; update of the OTR electronic certificates of compliance project; and audits, incidents, and recall feedback.

It is highly recommend that you attend one of these Roadshow presentations.

For further information contact the MPA on (08) 8292 4000 or visit the OTR or MPA websites: www.sa.gov.au/otr or www.mpasa.com.au

Relief vent terminal locations

Whenever you install a regulator that has a relief vent, there are exclusion zones from the vent discharge point to ignition sources and openings into the building. This photo (below right) shows an example of a second stage LPG regulator with a high capacity relief installed too close to the opening section of a window. The solution was to fit a vent line to provide the required separation. It is important that the vent line is not obstructed or undersized as the relief vent on the regulator has an effect on the ability to provide over-pressure protection.

<table>
<thead>
<tr>
<th>Vent terminal diameter (not shown)</th>
<th>Exclusion zone, m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding 50mm</td>
<td>L     D     r</td>
</tr>
<tr>
<td>Exceeding 50mm</td>
<td>1.5T  T     0.5T</td>
</tr>
</tbody>
</table>

Relief vent line added
Revised AS 3814 Standard – February 2015

The revised AS 3814 Standard for Industrial and Commercial Gas-Fired Appliances was published in February 2015. The OTR allows a 3 month grace period for transition to the new standard.

The revised AS 3814 Standard should now be adopted by all Type B contractors from June 2015 onwards. Jobs that have commenced prior to the implementation (grandfather) dates can be finished using the 2009 edition.

The OTR will offer a Type B presentation to discuss the new changes. If you would like to attend please email the OTR at dsd.otr@sa.gov.au for more information.

Above 3kPa (elevated pressure) outlet service requirements

The Gas Regulations 1997 requires distribution system operators to ensure that gas is supplied to the consumer installation at a minimum pressure of 1kPa and a maximum pressure of 3kPa. Where gas is required at more than 3kPa, approval must be sought from the Technical Regulator.

In the case of installations above 3kPa, if you are installing a new outlet service or requesting an upgrade of pressure for an existing installation, then the OTR requires details to be submitted for review, preferably after the design work is complete. Contact the OTR for information about what should be submitted.

Blocked flue

While servicing a flued gas heater, a gasfitter was advised by the owner that when the fire was operating there was a lot of condensation on the inside of the windows.

The gasfitter checked the room for carbon monoxide emissions with his combustion analyser and obtained a reading of 10ppm, thus warranting further investigation. Upon accessing the roof, the gasfitter checked the flue cowl to see if there was a blockage in the flue pipe. It was found to be cold to the touch while the heater was running. The gasfitter then took the flue cowl off and immediately the flue pipe became hot as products of combustion vented to atmosphere.

The flue cowl had been inadvertently pushed down all the way onto the flue pipe terminal so that no flue gases could escape to outside atmosphere. As a result flue gases spilled into the room via the appliance draft diverter and caused the condensation on the windows. It was just pure luck that nobody was injured as the owners did not use the heater much and when they did they kept a window open to minimise the condensation build up.

This highlights the importance of performing the spillage testing on existing and new flued gas appliances to verify correct flue operation and to ensure that the operation of exhaust fans or A/C systems does not adversely affect flued gas appliances.

Carbon Monoxide (CO) – Safe levels

The OTR receives enquiries from gasfitters asking “What are the acceptable limits of CO recorded within a room that has a gas appliance?”. This enquiry generally relates to flueless heaters, however, as you can see from the previous article about a blocked flue, it is also relevant to open flued gas appliances.

In the gas industry, CO is measured in parts per million (ppm). The exposure limits of CO are not stated in the AS/NZS 5601 gas appliance standard but the World Health Organisation (WHO) publishes guidelines on CO exposure limits relative to time exposure.

There is reference to maintaining less than 9ppm over an eight hour period. But the question would be; why is there CO? Remember that age and general health may affect a person’s susceptibility to CO. Even low levels of CO can present a health risk to the elderly, infants, pregnant women and their unborn babies, and those with heart and breathing problems.

If you were to identify any CO ppm within the room from your CO monitor/analyser while the appliance is operating, then this should initiate further investigation as to what is producing the CO.

Remember that other sources (background levels) could apply, such as smoking, candles, etc. It also should be mentioned that any instruments for monitoring combustion should be checked/calibrated.
on a regular basis. Seek advice from the manufacturer.

You can find more information on CO on the OTR Gas Safety website (go to www.sa.gov.au and enter Gas Safety Carbon Monoxide in the search bar). You will find a lot of valuable information on this site.

**Thetford Triplex SOH71961Z cooker: Field retro-fit program**

In March 2015 it was reported that this appliance had a safety issue caused by incorrect installation of the fascia panel, which could inhibit the correct operation of the Copreci oven valve. The manufacturers, Thetford Ltd, came up with a field retro-fit program which has been in practice since March 2015. In South Australia as of mid-July, there were 70 units located - 59 of these were found to be satisfactory, 4 were unsatisfactory, and the remainder are outstanding.

Should you come across any of these cookers, please check for evidence that it has been reworked. If unsure contact the manufacturer (Thetford Ltd) and provide all of the appliance details and its location. They will be able to direct you on what to do. Their details are: Thetford Ltd, Unit 6 Brockfields Way, Marvers Rotherham, UK. Contact person is Martin Ellis, email mells@thetford.eu or phone +44 1709 766 758.

**Test point required**

On natural and LP gases a pressure test point is required to be provided at, or adjacent to, the outlet of a gas pressure regulator. This allows for checking and adjusting pressure and testing the installation for soundness.

A brass plug being provided at the outlet of the regulator instead of a test point is not deemed acceptable. However, a test point can be fitted in lieu of a plug.

This ruling includes changing an integral 2-stage regulator over or installing a new outlet service with only one appliance connected - you will need to ensure that there is a test point fitted at the **outlet of the pressure regulator**.

**Gas installation inspections & more**

In future, gas installation inspections (pro-active audits) may also include plumbing and electrical audits carried out simultaneously or in close succession.

Any licensing issues discovered will be referred to CBS for further action.
Deep fryer fault that requires modification

The OTR has been made aware of a combustion emission safety issue with the Frymaster 45 Series deep fryer. This appliance has been sold in Australia over a period of about nine years. Currently it is known that at least one unmodified unit was sold in South Australia (Model No: PMJ145GSDNG Serial No: 0905ga0038). The appliance may be prone to emitting high levels of CO during operation.

The manufacturer has arranged for Comcater Pty Ltd to carry out the authorised modifications to Frymaster 45 Deep Fryers that are found to be defective in accordance with the registered Rework Specification.

This unit, or any others from interstate, may be circulating in the second hand market and you may be asked to install or service them. If this is the case, firstly check and note the model and serial number and contact Comcater Pty Ltd on (03) 8369 4600 to see if it is one that needs modification prior to service or installation.

Height of regulators above LPG cylinder valves

The OTR still comes across installations where regulators are mounted too low compared to LPG cylinder valves.

The requirement in the AS/NZS 5601.1 Standard for fixed LPG installations is that the first stage regulator outlet shall be higher than the cylinder valve. Also, the regulator relief vents must face downward (note second stage regulator orientation in the photo).

Please note in Part 2 of the Standard (for Caravans, Motorhomes and Boats) the height is measured from the cylinder valve to the regulator inlet.

Using high gas pressure for testing

The APA Group advised the OTR of a dangerous practice: a contractor was found to have connected a new outlet service to an unregulated inlet pipe at 380kPa, we assume as a method of testing the outlet for soundness. This action had the potential to cause major damage and/or personal injury. As it turned out the outlet service was not even sound at 2.75kPa.

Over pressurisation from an unregulated supply can cause:

- Risk of fire or explosion
- Damage to appliances and pipes/fittings
- Gas within a building at greater than 7kPa without OTR approval
- Interference with infrastructure without approval
- Possible theft of gas

Gas appliances to be installed no more than 2.5m off the ground or floor

Attention: Architects, Builders and Gasfitters

On residential premises gas appliances must not be installed more than 2.5m off the ground or floor. If an appliance is to be installed externally on the roof, then the appliance will need to be at least 1.5m from the edge of the roof. The roof must also be able to carry the weight of a person and the roof pitch must not be more than 12 degrees.

If the appliance cannot be installed 1.5m from the roof edge then a suitable means of engineered fall protection is required, either by the installation of a parapet wall, harness tether point or balcony railing guards.

If the roof pitch is more than 12 degrees then a walkway/service platform that is capable of supporting the weight of a person will need to be installed.

In the case where a non-compliant hot water heater is installed and a request for a gas meter has been made, the OTR will no longer support the gas contractor's request for a provisional meter connection until suitable, safe and compliant access is made available.

Options for compliance include relocation, recessed units at ground level and internal types. Refer to AS/NZS 5601 Clauses 6.3.12 and 6.3.13.

Not safely accessible without platforms
DO NOT use ‘super glues’ in plumbing installations!
The OTR has been contacted by a number of plumbers with concerns that when doing maintenance work or servicing shower fixtures they have been unable to remove the shower arm due to the original installing plumber using Super Glue to seal the shower fitting to the wing-line elbow.
This has caused considerable damage to the fittings and, in some cases, part of the wall had to be removed and the wing-line elbow replaced.
This has also led to considerable additional costs to the home owner.

Plumbers need to be more diligent in the way they install shower fixtures.

Legionella risk management

Plumbing Advisory Note – Issued June 2015

Legionellosis is a potentially fatal disease caused by the bacteria Legionella. While there is risk associated with Legionella in any water system, those that distribute warm water pose a greater risk.

All warm water systems must comply with the requirements of the South Australian Public Health (Legionella) Regulations 2013, which are supported by the Guidelines for the Control of Legionella in Manufactured Water Systems in South Australia.

The National Construction Code Series Volume Three, Plumbing Code of Australia (PCA), Part B specifies the objectives and performance requirements related to installing water services. Plumbing must be installed in accordance with AS/NZS 3500 to satisfy the performance requirements of the PCA for controlling Legionella.

Plumbing Code of Australia requirements:

Heated water services

- Heated water supplied from new heated water services to fixtures and appliances used primarily for personal hygiene must be delivered at a temperature that reduces the likelihood of scalding.
- Heated water must be delivered to fixtures and appliances at flow rates and temperatures that are adequate for those fixtures and appliances to function correctly.
- Sanitary fixtures, sanitary appliances and supply outlets provided with heated water must have a safe and adequate piped heated water supply.

Heated water storage

Heated water must be stored and delivered in a way that avoids the likelihood of Legionella bacteria growing.

Dead ends in water services pipework

Dead ends in both heated water and cold water installations can place the drinking water at risk.

A dead end is a branch in a water supply line that does not have an outlet or draw-off point that allows it to be used. When there is no flow in the line, the water in the branch stagnates and the water quality deteriorates. Therefore, plumbers must remove dead ends in pipework to reduce the risk to drinking water.

In heated water systems a dead end, especially one that branches from a circulatory system, can create ideal conditions for Legionella growth. As such, dead ends must be avoided. Dead ends are more commonly created in renovation work rather than new installations. To eliminate dead ends, either remove the tee or branch fitting or disconnect the disused branch pipe and seal the branch.

Hot water systems not captured by the regulations

Hot water systems not captured by the regulations, particularly those providing a supply to vulnerable people (eg nursing homes, aged care facilities, hospitals and supported residential facilities), should be operated and maintained in line with the following risk management considerations:

- All heated water storage systems should be monitored to ensure they store and dispense water at or above 60°C at all times.
- All water heaters must be certified to AS 3498.
- Accurate plans and manuals that show all components of the heated water system must be available.
- All components of the heated water system, such as thermostatic mixing valves and backflow prevention devices, must be maintained according to the Plumbing Standards AS/NZS 3500, AS 4032.1 Thermostatic Mixing Valves and AS 4032.2 Tempering Valves.
- A program to reduce the risk of water stagnating should be implemented eg flushing all outlets at least weekly.

For specific information about controlling Legionella, contact your local council or visit the SA Health website www.health.sa.gov.au/pehs/legionella-regulations-guidelines.htm

For further information about plumbing installations, contact the Office of the Technical Regulator on 1300 760 311 or email otr.plumbenquiries@sa.gov.au

Energy efficiency in water heating – Industry survey

The Department of Industry and Science, on behalf of the Equipment Energy Efficiency (E3) Committee, is considering changes to the existing energy efficiency labels on air conditioners and the potential of applying labels to water heating products. If adopted it would affect products across both Australia and New Zealand.

There are multiple factors that can significantly influence the energy efficiency and performance of water heating and space conditioning products, including air and water temperature, humidity, cloud cover and frosting. By introducing a zoned energy rating label that is able to convey the effects of these conditions, consumers and suppliers will be able to make better informed decisions that can result in saving money on power bills and reduce energy consumption and greenhouse gas emissions.

The Department is now seeking assistance from professionals who would be installing/recommending such products. Industry views on clear ways to express sizing/capacity information to help select between comparable models would be appreciated. To participate in the survey, visit www.energylabels.com.au

For any technical queries please contact the Helpdesk on: energylabels@aussurveys.com

More information on the label and its development process can be found here: www.energyrating.gov.au/zoned-label/
Plumbing Regulation – Backflow Prevention

Protection of the drinking water supply

All water supply systems must be designed, installed and maintained to prevent contaminants being introduced into the water supply system.

What is Backflow?

Backflow occurs when water from a customer’s property flows backwards into pipework. This may be the Network Utilities pipework or on site pipework. When backflow occurs it has the possibility of carrying contaminants that can harm people’s health.

Backflow is more likely to occur if:

- there’s a drop in pressure in the main, eg during a main break (back siphonage)
- water pressure at the property is higher than at the main, eg if a pump is operating on the site (back pressure)

Backflow prevention device

Backflow prevention devices ensure the water supply isn’t contaminated from hazards on a customer’s property. They prevent water in a customer’s water pipe flowing back into the water main.

Testable backflow prevention devices are to be commissioned and tested by an accredited plumber after installation and prior to service. The device must be maintained in working order and tested for operational function at intervals not exceeding 12 months. Following completion of the test the plumber must within 7 days of completing the work forward the completed test form and Certificate of Compliance to the Office of Technical Regulator (OTR) at otr.plumbackflow@sa.gov.au

Annual testing

The OTR will be sending a ‘Notice of Annual Device Retest’ to the property owner advising them that their backflow prevention device must be tested by a licensed plumber before the required date to ensure protection of the drinking water supply is maintained.

Non-Compliance

Failure by the property owner to have the backflow prevention device tested by a licensed plumber and have the ‘Commission, Inspection and Maintenance Report’ submitted to the OTR before the stipulated notice date may result in action being taken by the OTR, including issuing an expiration notice, or court action seeking a maximum penalty of up to $2,500.

In the event of a property owner failing to have the backflow prevention device tested, the OTR may refer this matter to the Network Utility Operator who may disconnect the reticulated drinking water supply system to the relevant property in order to protect the system and public health.

Note: Examples where the system may be disconnected include:

- Failure to install a backflow prevention containment device following request from the Network Utility Operator or the OTR.
- Failure to carry out tests or maintain a backflow prevention containment device in accordance with AS/NZS 3500 and AS/NZS 2845.
- Failure to replace or repair a backflow prevention device.

Want to know more?

For more information on this matter please don’t hesitate to contact the OTR on 1300 760 311.

Water and Sewerage Infrastructure Technical Standards

The Technical Regulator is currently finalising his position on the technical standards in which a person who designs, installs, inspects, alters, repairs, maintains, removes, disconnects or decommissions water and sewerage infrastructure within the meaning of the Water Industry Act 2012.

The Technical Regulator is considering that the Water Services Association of Australia (WSAA) Codes be adopted as the technical standards for the South Australian water industry, noting that these standards are complementary to, and do not replace any standards, codes and/or guidelines that appear in current legislation or the Plumbing Standards.

We welcome any comments or feedback regarding this matter at dsd.otrwsslrastructure@sa.gov.au

Register Online

You can register online to receive Regulation Roundup electronically by going to www.sa.gov.au/otr and clicking on the link in the Top 5 box on the left side of the page. Requests for electronic versions of Regulation Roundup can also be emailed to dsd.otr@sa.gov.au. Include your name, licence number (if you hold a trade licence) and a contact phone number in case there are any difficulties with emailing. You will also see in this box a link where you can register your Electrical and Gas Certificate of Compliance books. Remember to contact us if you change your email address!
# Plumbing – contact details

For any plumbing related matters please see contact details below.

## OTR Plumbing Telephone List

<table>
<thead>
<tr>
<th>Service/Enquiry</th>
<th>Details</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plumbing Bookings</td>
<td>When making plumbing inspection bookings <strong>ONLY</strong></td>
<td>1300 884 055</td>
</tr>
<tr>
<td>Administration Enquiries</td>
<td>Backflow encumbrance administration issues and enquiries related to internal drainage plans</td>
<td>1300 760 311</td>
</tr>
<tr>
<td>Plumbing Bookings Enquiries</td>
<td>Amending plumbing inspection booking details (i.e. time, address details, job category, job type)</td>
<td>08 8226 5861</td>
</tr>
<tr>
<td>Plumbing Compliance Enquiries</td>
<td>Plumbing compliance, technical enquiries and regulatory enforcement</td>
<td>08 8204 1768</td>
</tr>
<tr>
<td>Fire Services &amp; Backflow Enquiries</td>
<td>Technical information relating to fire services, cross-connection control and backflow prevention</td>
<td>08 8204 1701 or 0400 881 271</td>
</tr>
<tr>
<td>Non-Drinking (Recycled) Water</td>
<td>Technical information relating to non-drinking water installations</td>
<td>08 8226 5788 or 0459 813 082</td>
</tr>
</tbody>
</table>

## OTR Plumbing Internet Addresses

<table>
<thead>
<tr>
<th>Service/Enquiry</th>
<th>Details</th>
<th>Address/Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plumbing Website</td>
<td>Plumbing Standard, Scheme, and Advisory Notes</td>
<td><a href="http://www.sa.gov.au/otrplumbing">www.sa.gov.au/otrplumbing</a></td>
</tr>
<tr>
<td>Plumbing Bookings Website</td>
<td>When making plumbing inspection bookings online</td>
<td><a href="http://www.plumbbooking.sa.gov.au">www.plumbbooking.sa.gov.au</a></td>
</tr>
</tbody>
</table>

## OTR Plumbing E-Mail Addresses

<table>
<thead>
<tr>
<th>Service/Enquiry</th>
<th>Details</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration Enquiries</td>
<td>General plumbing enquiries</td>
<td><a href="mailto:otr.plumbenquiries@sa.gov.au">otr.plumbenquiries@sa.gov.au</a></td>
</tr>
<tr>
<td>Plumbing Booking Enquiries</td>
<td>Amending plumbing inspection booking details (i.e. time, address details, job category, job type)</td>
<td><a href="mailto:otr.plumbbooking@sa.gov.au">otr.plumbbooking@sa.gov.au</a></td>
</tr>
<tr>
<td>Backflow Enquiries</td>
<td>Submitting backflow prevention commission, inspection and maintenance report sheets and technical enquiries related to backflow prevention and cross-connection control</td>
<td><a href="mailto:otr.plumbbackflow@sa.gov.au">otr.plumbbackflow@sa.gov.au</a></td>
</tr>
<tr>
<td>Building Plan Lodgements</td>
<td>Lodging applications of hydraulic plumbing designs for Commercial/Industrial developments, multi-storey developments of 3 or more levels, building developments within the Adelaide CBD, housing developments of 3 or more dwellings and buildings with a plumbing or drainage hydraulic alternative solution</td>
<td><a href="mailto:otr.plumbbidplanapproval@sa.gov.au">otr.plumbbidplanapproval@sa.gov.au</a></td>
</tr>
<tr>
<td>Internal Drainage Plans</td>
<td>When either requesting internal sewer drainage plans or lodging internal sewer drainage plans electronically</td>
<td><a href="mailto:otr.plumbinternaldrainage@sa.gov.au">otr.plumbinternaldrainage@sa.gov.au</a></td>
</tr>
<tr>
<td>Plumbing Compliance and Fire Services</td>
<td>Plumbing Compliance matters including technical enquiries and regulatory enforcement Matters relating to fire service installation requirements</td>
<td><a href="mailto:otr.plumbregulator@sa.gov.au">otr.plumbregulator@sa.gov.au</a></td>
</tr>
</tbody>
</table>

## SA Water Telephone List

<table>
<thead>
<tr>
<th>Service/Enquiry</th>
<th>Details</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIP Locations &amp; Sewer/Water Easements</td>
<td>Contact SA Water when requiring the precise location of a Government Inspection Point, any detail relating to a water or sewer street main or any easement enquiries</td>
<td>08 7424 1117</td>
</tr>
<tr>
<td>Trade Waste Pre-Treatment Requirements</td>
<td>Contact SA Water when enquiring about pre-treatment devices such as grease arresters</td>
<td>08 7424 1336</td>
</tr>
</tbody>
</table>

## Consumer and Business Services

<table>
<thead>
<tr>
<th>Service/Enquiry</th>
<th>Details</th>
<th>Contact Details</th>
</tr>
</thead>
</table>
Contact list

Electrical Technical Advice
Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide
Phone: (08) 8226 5518 (8:30am–4:30pm)
Fax: (08) 8226 5529
Email: dsd.otrmail@sa.gov.au

Electrical Certificates of Compliance
Available in person from the following agencies:
Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide
NECA
213 Greenhill Road, Eastwood
Phone: (08) 8272 2966
Master Electricians Australia
4A Northcote St, Torrensvale 5031
Phone: 1300 889 198
Lawrence & Hanson
All stores
MM Electrical
All stores
Middendorp
All Stores
Rexel Australia Ltd
All stores
P & R Electrical Wholesalers
All stores
CNW Wholesalers
All stores
Service SA Outlets
EDS Centre, 108 North Terrace, Adelaide and Regional Areas

Gas Technical Advice
Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide.
Phone: (08) 8226 5722 (8:00am–5:00pm)
Fax: (08) 8226 5866
Email: dsd.otr@sa.gov.au

Gas Certificates of Compliance
Available in person from the following agencies:
SA Water
250 Victoria Square, Adelaide
Gas Works
All stores
Norm’s Plumbing Supplies
John Street, Mt Gambier
Scott’s Plumbing
66 O.G. Road, Klemzig
Northern’s Plumbing Supplies
All Stores
TradeLink
All stores
Rexel Plumbing
All stores

General Information
Licence and Address Change
Consumer & Business Services
Phone: 131 882
Email: pge.bos@agd.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 (formerly PIA)
1 South Road, Thebarton
Phone: (08) 8202 4000
Fax: (08) 8292 4040
Technical Advisory Centre P/L
4/543 Churchill Road, Kilburn
Phone: (08) 8162 5640
Fax: (08) 8162 5638
www.techad.com.au
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
ATEC (Adelaide Training & Employment Centre)
Electrical Rescue & Resuscitation Certificate
Phone: (08) 8240 1233
www.atec.asn.au

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 5521
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)
Natural Gas Network: 1800 808 526
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 (SA only)
Office of the Technical Regulator
Phone: 1800 588 811
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 system 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
Australian Liquefied Petroleum Gas Association (ALPGA)
www.alpga.asn.au
Australian Competition and Consumer Commission (ACCC)
www.acc.gov.au
Australian Gas Networks Ltd (formerly Envestra)
www.australiangasnetworks.com.au
Elgas
www.elgas.com.au
Origin Energy
www.originenergy.com.au
Kleenheat
www.kleenheat.com.au
Australian Standards
www.infostore.saiglobal.com/store/

Plumbing Technical Advice
Office of the Technical Regulator
Level 8, 11 Waymouth Street, Adelaide
Phone: 1300 760 311 (8:00am-4:30pm)
Email: otr.plumbenquiries@sa.gov.au
www.sa.gov.au/otrplumbing

Plumbing Certificate of Compliance
Available in person from:
Service SA Outlets
EDS Centre, 108 North Tce
Adelaide and Regional Areas
IDENTIFICATION:
Affected product was sold to and available for purchase from electrical wholesalers in South Australia between January 2015 and July 2015 (inclusive) and can be identified by:
a) 230DRAS1MI with serial numbers between S12014480001 and S12015252308
b) 230DRAS2MI with serial numbers between S22014480001 and S22015100570

HAZARD:
A screw on the side of the meter isolator may be electrically live. There is a risk of electric shock if contact is made with this screw.

ACTION REQUIRED:
1. Check your stock for affected product.
2. Review sales and installations that may have used affected product.
3. Where affected product has been identified, please return immediately to place of purchase. If product is already installed and cannot be returned then contact us for further details about rectification.

For further information
Please direct all calls and any queries concerning this recall to

Website: clipsal.com/230DRASrecall Phone: 1300 733 907

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