



COOLCHANGE

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Fridgy is Australia's Apprentice of the Year

Cairns refrigeration technician Jennah Halley has beaten all comers in the Australian Training Awards to be named national Apprentice of the Year.

Jannah credits her success in no small part to the support of her three daughters, her son and her husband, and to her teachers at TAFE Queensland. As a proud Aboriginal woman making her mark in a male-dominated industry, she wants her kids – and women in general – to feel empowered, to stand out from the crowd and pursue their goals. Jennah says her job at Messina Air-conditioning and Refrigeration in Cairns is both varied and rewarding. "My typical day can be anything," she said. "It can start with routine maintenance and end up on the roof of a shopping centre on an emergency breakdown. I've literally worked on everything from domestic boats to commercial rooftops."

Forging a career in a male-dominated industry has enabled Jennah to provide for her three daughters and her son in more ways than one. "My children are my biggest cheerleaders," she said. "It's about teaching my kids they can do anything and they know that mum's doing what dads do, so that's a big thing to my kids." Recently married, Jennah said her husband – himself a refrigeration technician of 18 years' experience – was a daily source of inspiration and support. She is keen to break down stereotypes about women in trades. "There is this thought, particularly among young women and some men, that if you work in a trade you must not be feminine, and that's just not true," she said. "When I'm not at work in my uniform, I love wearing dresses, heels and makeup."

"I want to say to all the young girls or women, go and do it. There's nothing that I can't do that the guys can do at work, and probably my biggest supporters are my workmates. So if you can find that crew and that support, go and do it because it's rewarding and it's empowering as a female and as a woman and a mum."



See [Jannah's video testimonial](#), filmed at the TAFE Queensland Cairns campus where she trained.



Summer Campaign catches consumer eye

ARC's 'Look for the Tick' Summer Campaign is catching the eye of tens of thousands of consumers with its animated videos on YouTube and Connected TV and matching images on Google and Facebook.

The campaign is driving higher-than-ever numbers of consumers to visit the Look for the Tick website and find local ARCTick licenced companies and technicians for their air conditioning and refrigeration needs.

Connected TV commercials are increasing awareness while people are relaxed and watching TV, backed by more than 50,000 YouTube views. Google and Facebook campaigns are building on that awareness when people are on their computers or mobile devices.

The campaign images have been built around the ARCTick licence card – the sure symbol for a consumer that they are dealing with the right person for the job. Both stationary and automotive ads deliver the reassuring image of a technician displaying the card that confirms the licence holder has the competency-based training and qualifications to do the job properly and legally.



This year's campaign will continue through to the end of February.

Check out the video at youtu.be/6W2sax3EHkM

Annual indexation of RAC industry permit application fees

The Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 provides for the annual indexation of permit application fees.

The annual indexation formula uses the Wage Price Index (WPI) figures published by the Australian Bureau of Statistics. Consistent with the WPI figures for the September 2022 quarter, the refrigeration and air conditioning (RAC) industry permit application fees will increase by 3.192% per cent from 1 January 2023. The permit application fees for 2022 and 2023 are outlined here.



RAC Permit type	Permit duration	Application fee 2022	Application fee 2023
Refrigerant handling licence	1 year	\$80	\$83
	2 years	\$160	\$166
	3 years	\$240	\$249
Restricted refrigerant handling licence	1 year	\$80	\$83
	2 years	\$160	\$166
	3 years	\$240	\$249
Refrigeration and air conditioning trainee licence	1 year	\$34	\$35
Refrigerant trading authorisation	1 year	\$254	\$262
	2 years	\$508	\$524
	3 years	\$762	\$786
Restricted refrigerant trading authorisation	1 year	\$80	\$83
	2 years	\$160	\$166
	3 years	\$240	\$249

Aussie RAC training for Pacific Island trainers

Australia's climate control sector is making a valuable contribution to Pacific relations and to the Montreal Protocol's HCFC phase-out by training industry trainers from the Pacific Islands in the latest refrigeration and air conditioning technologies.

Box Hill Institute in Melbourne recently hosted a week-long session for 13 trainers from the Cook Islands, Fiji, Kiribati, Vanuatu, Tonga, Solomon Islands, Micronesia, Palau and Samoa.

The training covered installation, maintenance and repair of RAC equipment as part of an on-going commitment to helping Pacific Island countries improve their capability for HVACR training on good servicing practices.

Supported by the Australian government, the initiative is led by the Air Conditioning and Refrigeration Equipment Manufacturers of Australia (AREMA) and the United Nations Environment Programme (UNEP).

AREMA president Mark Padwick said industry and government could be proud of their successful efforts in supporting countries throughout the region in phasing out HCFCs under the Montreal Protocol.

The trainees will each receive a specially developed portable training pod, built by AG Coombs on the footprint of a standard pallet and combining an R32 high wall split supplied by Daikin and an R600A refrigeration system supplied by Danfoss.

ARC general manager compliance and training, Rod Cumming, himself a former Box Hill Institute teacher, thanked Box Hill teachers Len Raines and Nathan Dryzan for their expert training of the Pacific visitors. Len and Nathan were supported in the training by Michael Moller from Praxis Vocational.



Pacific Island trainers and their teachers

Len Raines, Nathan Dryzan, Rod Cumming

'Retrofit' reminder

Licence holders are reminded of an important regulatory change which may have slipped their attention when it came in two years ago.

The change, which came into force on 1 January 2020, applies to all (existing and new) licence holders.

It is an offence under the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 to charge RAC equipment with a refrigerant with a higher global warming potential (GWP) than the equipment was originally designed to use.

For example, it prohibits replacing R-1234yf (with a GWP of 1) in the automotive industry with HFC-134a (with a GWP of 1,430).

AS5149 contains specific requirements regarding retrofitting different refrigerant in air conditioning and refrigeration equipment which must be adhered to. Variations to the manufacturer's design specifications must be verified by a competent, independent person or persons.

More information at
www.dcceew.gov.au/environment/protection/ozone/rac/new-rules-charging-rac-equipment

NSW aligns with ARctick licence



The NSW Government has adopted the ARctick licence competency standards for refrigeration and air conditioning technicians.

NSW Office of Fair Trading (OFT) has also confirmed that the scope of work for air conditioning and refrigeration technicians will not change with the introduction of the mechanical services licence.

The decision follows extensive discussions between industry and OFT about fears that air conditioning and refrigeration technicians in NSW may have been excluded from key work by the mechanical services licence.

As of 1 March 2023, NSW requires a person to hold a full RAC licence issued by ARC to work in the field of mechanical services and medical gas work as defined by the OFT:

The construction, installation, replacement, repair, alteration, maintenance, testing or commissioning of a mechanical heating, cooling or ventilation system in a building, which is associated with the heating, cooling or ventilation of that building.

This is further defined on the [OFT website](#) under mechanical services and medical gas work.

The key factor for RAC technicians is that OFT has aligned with the ARC licence scheme, as spelt out in the following provisions:

You must also hold a National Refrigerant Handling Licence (RHL) to do any work related to refrigeration and air conditioning equipment. To find out if you need an RHL, please visit the Australian Refrigeration Council website.

If you currently hold an air-conditioning and refrigeration licence and are doing work that is listed under both mechanical services work or air-conditioning and refrigeration work, you can continue doing that work under the licence you hold.

The NSW decision acknowledges that the ARctick licensing scheme meets all the requirements it was seeking to address in relation to the specialist trades in the refrigeration and air conditioning sector (as opposed to the medical gases sector) with the proposed state licence changes.

While there remain some more minor issues to resolve, especially around water testing, the NSW Government has taken some big positive steps.

The NSW decision to align with the ARctick licence reduces industry confusion and lessens regulatory burden. It reflects that RAC is a specialised occupation requiring advanced skills, not a generic vocation.

Importantly, the ARctick licence applies to anyone working with RAC equipment designed to use prescribed refrigerants, not only to the use of the refrigerants themselves.



Coles refrigerated vans run on solar

Coles has introduced a test fleet of 10 online shopping delivery vehicles that use solar panels to power their refrigeration systems.



The new vehicles, with their solar-powered, battery operated refrigeration, will be used in Victoria and Queensland to help reduce emissions, fuel consumption and operational noise.

Coles estimates the solar power will reduce fuel usage by an average of three house visits each day per vehicle, as the vans will no longer need have their engines idling in order to keep groceries cool.

Another expected benefit for Coles customers and their neighbours is quieter deliveries because of the lack of an idling engine during deliveries.

Pair Coil investigations update

The Department of Climate Change, Energy, the Environment and Water (DCCEEW) and ARC are working closely together to investigate industry reports of micro-pitting problems with pair coil.

The reported issue is split system installations suffering from pair coil micro-pitting, also known as 'ant nesting'. Probable cause appears to be from a relatively unique blend of characteristics of chemicals being used in production, combined with environmental factors and installation practices which causes micro-pitting.

ARC and DCCEEW have been investigating the issue since early last year. DCCEEW is working with government and industry stakeholders, while ARC is consulting with the Industry Advisory Board and split system installers and contractors who have been directly affected.

If you have experienced micro-pitting on any of your installations, DCCEEW would like to know the details. In particular, the type of unit and when it was installed, the brand or type of pair coil and when and where it was purchased, and the date of the repair. This will add to the body of information already being assembled by investigators.

Send micro-pitting reports to comms@arctick.org.

Also, you can report problems with your supplier which are affecting your business to the Australian Competition and Consumer Commission: portal.accc.gov.au/forms/info-form/business-report/



Join the ARC team

The Australian Refrigeration Council (ARC) is seeking a field officer for NSW to help the refrigeration and air conditioning industry to deliver industry and environmental outcomes that protect the planet from global warming and ozone depletion.

If you have RAC experience, communication and people skills, a positive 'can do' attitude and a desire to help the industry to save the planet through the ARCTick licensing scheme, ARC would like to hear from you.

Field officers are ARC's main face-to-face contact to help, advise and support people in meeting the requirements of their license, not just to ensure people are complying.

We encourage applications from Aboriginal and/or Torres Strait Islander people, people with disability, culturally and linguistically diverse people and people of the LGBTIQ+ community, including transgender, gender diverse and intersex people.

If you think this might be you, contact Rod Cumming, GM Compliance & Training, on **0411 334 796** or rcumming@arctick.org.

Fridgies getting the message

ARCTick licensed technicians and businesses are clearly getting the compliance message, with a major reduction in non-compliance for the past 12 months.

Below is a summary of the compliance activities conducted by ARC for the year.

Compliance activity	
Permit condition checks/Desktop reviews	4,416
Education visits	46
Split System RHL Surveys	152
Reviews of potential breaches of the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 and Regulations 1995	130
Refrigerant trading authorisation applications declined due to on-going non-compliance	86

Importantly, the number of licenses not renewed due to ongoing non-compliance has dropped from 77 in 2020-21 to just 36 in 2021-22.

Got a story about your business? Contact us at coolchange@arctick.org



How much and how: pressure testing stationary RAC systems

The main purpose of Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 is to reduce the emission of fluorocarbon refrigerants into the atmosphere as they destroy the Ozone Layer and/or increase Global Warming.

Therefore, it is vital to ensure operating refrigeration and air conditioning systems do not leak refrigerant by pressure testing the system before the system is commissioned or re-charged with refrigerant after service work.

But how should the system be pressure tested and to what pressure? A new ARC Technical Resources bulletin answers these questions in detail.

In brief, the answers are determined by referring to the following Standards and Codes of Practice which are called up in the of Ozone Protection and Synthetic Greenhouse Gas Management Regulation 1995:

- **Australia and New Zealand Refrigerant handling code of practice 2007** Part 2, Section 5 Installation procedures, Clauses 5.1, 5.29 and 5.30.
- **Australian Standard AS/NZS 5149.2:2016 Refrigerating systems and heat pumps - Safety and environmental requirements, Part. 2: Design, construction, testing, marking and documentation**, with particular attention to Clauses 5.2.2.1, 5.3.3.3.1, 5.3.3.3.2 and 5.3.3.3.3.

What gas must the system be pressure tested with?

Clause 5.3.3.3.1 states 'Tests shall be performed with dry nitrogen or another non-flammable, non-reactive, dried gas. Oxygen, air, or mixtures containing them shall not be used.'

Two gases that are readily available and meet this requirement are Oxygen Free Nitrogen (OFN) and Nitrogen/Hydrogen Mix. Once the system is pressurised with one of these gases to the required level, all relevant piping and component joints must be checked for leaks using foam enhancer leak detection fluid.

What pressure must the system be pressure tested to?

This is determined by the type of refrigerant, the system's major components and the design ambient conditions. Information on this is in Australian Standard AS/NZS 5149.2:2016 Refrigerating systems and heat pumps – Safety and environmental requirements, Part. 2: Design, construction, testing, marking and documentation within Clause 5.2.2.1 Maximum allowable pressure (PS).

Summary: The installed connecting pipework and components of refrigeration and air conditioning systems must be pressure tested to an appropriate level based on the system's design conditions with dry, pure, high purity (HP) or ultra-high purity (UHP) Oxygen Free Nitrogen or Nitrogen/Hydrogen mix before the system is evacuated and charged with refrigerant.

If a leak is found, it must be repaired and then the system must be re-tested to ensure it is fixed and to check for other leaks. All leaks must be repaired before the system is evacuated and charged with refrigerant.

Pressure testing to just 1,000 kPa will not ensure the system will not leak refrigerant at high ambient conditions or normal operating conditions.



Download the full bulletin at
[www.arcltd.org.au/
technical-services](http://www.arcltd.org.au/technical-services)

New online application process in final testing

Testing is well advanced on the new online application and renewal process that will soon make it simpler to get a licence, with the system expected to be operational by mid-year. The new system has been built around improving convenience for applicants – it puts you in control of your application and makes for a quicker and simpler process.

It will enable you to upload qualifications and photographs with your application, and then finalise payment by credit card online. You will also be able to save your application at any stage during the process and come back later if you need to scan qualifications or photos (for an RHL) or collect your equipment and staff details (for an RTA).

The timeline for deeming an application to have been withdrawn, if the applicant does not supply required has been adjusted from 180 days to 120 days from the date of the information being requested.

You will also be able to update your ABN for your RTA permit as part of your application, reapplication or renewal. Payments will continue to be made online by credit card, but you will still have the option to pay by cheque or money order and make a hardcopy application by mail or in person if you prefer.

Watch for more details with your renewals once the new system is operating.

