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COOLCHANGE

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Understanding the scheme

The refrigeration and air conditioning (RAC) licence scheme is a successful partnership between industry, the RAC industry Board (ARC) and the Australian Government.

The roles of each stakeholder are equally important, helping Australia to implement its international obligations under the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that Deplete the Ozone Layer, and the United Nations Framework Convention on Climate Change and its Kyoto Protocol. They do this by:

- encouraging and carrying out responsible management of scheduled substances that are ozone depleting substances (ODS) and synthetic greenhouse gasses (SGG); and
- placing end-use controls on fluorocarbon refrigerants under the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 (Ozone Regulations) to reduce the risk of individuals emitting into the atmosphere.

RAC-LICENSED TECHNICIANS & BUSINESSES
(work practice – operational)

- Only technicians licensed under the ozone regulations can lawfully carry out work on RAC equipment containing fluorocarbon refrigerant
- Individuals or businesses that hold a refrigerant trading authorisation can acquire, possess and dispose of fluorocarbon refrigerants
- Ensure a well-trained, highly professional workforce

RAC INDUSTRY BOARD (ARC)
(administration – operational)

- Administer the RAC industry permit scheme assessing applications and issuing licences
- Conduct permit condition checks, education and awareness visits, and refer complaints of suspected offences against the OPSGG Act to the Department of the Environment and Energy
- Communicate regulatory requirements and issues affecting RAC permit holders, industry, consumers and other stakeholders

AUSTRALIAN GOVERNMENT
(Policy)

- Department of the Environment and Energy puts into force the Ozone Act and regulations, monitors the RAC industry permit scheme and inspects businesses and individuals suspected of committing offences under the Act and regulations
- The Department of Education and Training oversees the review of qualifications and training requirements for licences – e.g. Certificate II and III
- The Australian Skills Quality Authority (ASQA) regulates training quality nationally

Make sure your RTA records are up-to-date
> more inside

Young fridgie headed to the middle east to represent Oz

A young refrigeration and air conditioning technician from Jimboomba, South Eastern Queensland has been selected by WorldSkills Australia as a member of an elite team of young Australian tradespeople who will compete against their international counterparts in Abu Dhabi in October.

The 44th WorldSkills International Competition in Abu Dhabi will see more than 3000 participants, including competitors, experts and officials, from 77 countries compete in 51 skills. Australia, currently ranked 12th in the world, is aiming to finish in the top 10 in 2017. Nathan McHugh, 21, who was a student at TAFE Qld SkillsTech and is employed by DTM Air Services in Jimboomba, will compete in the refrigeration & air conditioning category.

The team was chosen after a four-day Global Skills Challenge. The challenge saw over 100 participants from 16 countries test their skills in 21 trades in the lead up to the 44th WorldSkills International competition. The Skillaroos, aged 19 to 22, also include the trade and skills; bricklaying, patisserie and confectionery, heavy vehicle mechanics, hairdressing, landscape gardening, carpentry, wall and floor tiling, as well as refrigeration and air conditioning. Nathan competed against refrigeration competitors from Russia, China, Hong Kong, Malaysia and Brazil, and at the end of the 4-day competition he was judged the winner by a team of international judges.

Nathan has been training towards possible selection to Abu Dhabi since May last year when he won the Gold Medal at Australia's Refrigeration and Air Conditioning National WorldSkills competition held as part of the 2016 ARBS Exhibition in Melbourne. As part of his reward for winning the national competition, in October 2016 he attended the Chillventa International HVACR Exhibition in Nuremberg, Germany. Nathan has worked closely with his mentor and WorldSkills Australia's international judge, Carl Balke and his fellow trainers at TAFE Qld SkillsTech in Brisbane. He has also worked with WorldSkills Australia's previous international judge, Chris MacDonald from City Holdings, and has been supported by the Australian Refrigeration Council's Technical and Training Manager, and previous WorldSkills Australia's international judge, Noel Munkman.

For more information, visit: **www.worldskills.org.au**

From everyone at the ARC, we say *Good Luck Nathan!*

No RTA = No Refrigerant

Wholesalers of refrigerant play an important role in managing the appropriate sale of fluorocarbon refrigerants.

RTA holders purchasing refrigerant are required to safely manage the use and storage of refrigerant and ensure refrigerant is only handled by a RAC licensed technician.

If you or your business do not hold the correct RAC industry permit to purchase, store and dispose bulk fluorocarbon refrigerant you may be committing an offence under the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 and a penalty of up to $2,100 may apply.

If you are aware of an individual or business that is purchasing and storing fluorocarbon refrigerant without a RTA, then we encourage you to lodge a complaint through the ARC at **www.arctick.org/information/lodge-a-complaint**

Tells us what's important to you!

In our experience, all RAC licence holders have a keen interest in the future of the industry, and that's a view we both share.

That's also why ARC is interested to know what you think – what matters to you and what can be done better? In particular, we're keen to get your thoughts on the following areas:

- What do you think is the best thing about the refrigeration and air conditioning licence scheme?
- What do you see as the biggest issues facing the licensing scheme?

If you have feedback on these questions, and other related issues, please send us an email at **enquire@arctick.org.** Whilst we won't be able to respond individually to all the emails, we will collate all feedback and present a report to the Australian Government on the common themes and issues highlighted.

Australian Government releases skill shortage data

The Department of Employment carried out research in 2016 to identify skill shortages in the Australian labour market. The research results showed skill shortages at the state, territory and/or national level.

The research program covered more than 100 skilled occupations, including refrigeration and air conditioning. Below are the results of their research into the refrigeration and air conditioning sector (mechanic) as of September 2016 (excluding automotive):

State	Current labour market rating (Sept 2016)	Previous labour market rating (Sept 2015)
ACT	No Shortage	Shortage
NSW	Metro shortage	Shortage
NT	Regional recruitment difficulty	Shortage
QLD	No Shortage	Shortage
SA	Shortage	No shortage
TAS	No Shortage	No Shortage
VIC	Shortage	Metro shortage
WA	Regional shortage	No shortage

RAC Permit scheme snapshot – 2016/17

Total RHL numbers	68,123
Total RTA numbers	18,347
Permit condition checks and education visits	5,318
Permits refused due to ongoing non-compliance	71
Phones calls assisting technicians and businesses	58,864

Get your Records!

If your business holds a Refrigerant Trading Authorisation (RTA), then you need to have in your possession specific equipment and records.

All businesses (or individuals) that hold a RTA may have a permit condition check conducted by a Field Officer from the Australian Refrigeration Council (ARC).

This permit check is a normal part of the conditions around holding an RTA. It's also a great opportunity to talk with an ARC Field Officer about how to meet your licence conditions. They can give advice on:

- managing your records and equipment
- how to develop your refrigerant risk management plan
- documentation required at licence renewal
- how to avoid harmful fluorocarbon refrigerant emissions in the workplace

Having this conversation with an ARC Field Officer at a permit check will help identify areas that may need greater action. This will allow you to get on with your business, confident that your RTA conditions are being met.

When it comes to record keeping, ARC Field Officers are finding the main areas for non-compliance during a permit condition check relate to:

Equipment maintenance records

Every quarter, RTA holders are required to inspect, maintain and keep records for leak detectors, vacuum pumps and refrigerant recovery units.

Cylinder leak test records

RTA holders are required to keep a list of all refrigerant containers (cylinders) in their possession during each quarter and their test dates. You will need to supply quarterly records that show you have checked cylinders for leaks, at least once during the quarter.

To help technicians and businesses with their record keeping, ARC has provided templates for you to use over the page. Please feel free to use these to help your business with its record keeping.

ARC provides handy record keeping templates for all reporting requirements on our website. Visit **www.arctick.org/business-authorisation/business-reporting-templates-and-guides**

Equipment maintenance records

Any equipment you use for managing refrigerant, including vacuum pump / recovery unit / electronic leak detector

Business name ❑ **Automotive** ❑ **Stationary** (please tick)

RTA Number

Quarter ending					Page number
Date in quarter	**Equipment type**	**Make**	**Model**	**Serial number**	**Maintenance carried out**
1/5/2017	Vac Pump	Vac Rite	12678	VP98765	Changed oil
1/5/2017	Recovery Unit	Rec Rite	CR-Evo	3965002	Tested operation
1/5/2017	Leak Detector	Detect Rite	XPLS - 100	51000062321	Replaced batteries

Cylinder leak test & in-test expiry date records

In-Test refers to the mandatory Hydrostatic Testing and Date Stamping of all Pressure Vessels at manufacture and every subsequent 10 Years

Business name ❑ **Automotive** ❑ **Stationary** (please tick)

RTA Number

Quarter ending					**Page number**
Refrigerant type	**Cylinder owner**	**Cylinder serial number**	**Date leak tested**	**Expiry date**	**Name of person who leak tested the cylinder**
R134a	Gas Supply Co.	MT122345 EXAMPLE	1/5/2017	1/10/2024	John Citizen

Insert 'Nil' where no cylinders are held

As a holder of a Refrigerant Trading Authorisation you are obliged to leak test any vessel containing refrigerant in your possession, irrespective if the vessel is owned or hired. These tests should be conducted as often as deemed appropriate relative to usage and potential leakage but not less than each quarter.

Update – Training in the RAC sector

ASQA to implement regulatory action against RAC training provider

The Australian Skills Quality Authority (ASQA) is initiating regulatory action against a QLD-based training provider found to be delivering sub-standard certificate II courses in split system installation.

In this case, the ARC provided a submission to ASQA highlighting a number of issues with the delivery of the certificate II course including:

- Short delivery duration of UEE20111 Certificate II in Split Air-conditioning and Heat Pump Systems not meeting required hours;
- Australian Quality Framework (AQF) certification issued to learners prior to training and assessment being conducted.

ASQA investigated the matter and substantiated the ARC's complaint and will be implementing appropriate regulatory action against the organisation.

The ARC continues to assist ASQA with their investigations to weed out sub-standard training providers. We welcome any advice from industry on sub-standard courses and encourage you to contact us at **enquire@arctick.org**

ARC Cert II and III case studies – the 'industry bible' for training hours

In 2016, ARC researched and published case studies on the Certificate II (split system air conditioning installation) and Certificate III (refrigeration and air conditioning) recognition of prior learning (RPL) processes, as it related to qualified electricians looking to attain these qualifications. We highlighted the time and competencies required to get RPL for both of these qualifications, in an effort to bring attention to the 'short-courses' being advertised for these qualifications. ASQA now use these ARC case studies when they investigate complaints about training providers delivering 'short-duration' courses relating to refrigeration and air conditioning.

New education pack drives auto gas knowledge

The ARC and the Department of the Environment and Energy have created valuable reference tools for technicians and businesses in the automotive industry to increase awareness about emerging refrigerants, in particular R1234yf and R744 (C02). This project was funded by the Victorian Ozone Board.

The reference tools included: development of educational wall charts and packs for workshops, an educational video and a dedicated page on the ARC website. The focus is on R1234yf and R744 refrigerants and covers the following key areas:

- Refrigerant characteristics and properties;
- Equipment requirements;
- Safety;
- Relationship to R134a.

We consulted with all ARC automotive member associations, as well as wholesalers and automotive businesses in the creation of these materials. Emerging refrigerant information packs, including a wall chart, stickers and booklet will be mailed to all automotive RTA holders. If you require more materials, please email **enquire@arctick.org** and ARC will post to you, pending stock availability.

To learn more about emerging automotive refrigerants R1234yf and R744, visit **www.arctick.org/information/autogas**

PROPERTIES	R1234yf	R744	R134a
Boiling Point	-29°C	-78°C	-26°C
Critical Point	95°C	31°C	102°C
Saturation Pressure at 25°C	580 kPa gauge	6370 kPa gauge	567 kPa gauge
Saturation Pressure at 80°C	2400 kPa gauge	Not Applicable	2490 kPa gauge
Global Warming Potential (100 ITH)	<1	1	1430
Flammability Rating	A2L Mildly Flammable	A1 Non Flammable	A1 Non Flammable