



COOLCHANGE

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Codes of Practice

The codes of practice are practical guides on how to comply with legal duties under the ozone legislation.

As part of your licence obligations, your work practices should mirror the codes of practice. This means you are actively working to reduce emissions of harmful refrigerant into the atmosphere, as well as practicing safe, efficient and professional work processes.

If you do not have a copy of the relevant codes of practice at your work, you can download a copy from the ARC website at www.arctick.org/licensing/codes-of-practice/

ARC Field Officers check to see that the codes of practice are being followed during an audit, so it is important that authorisation and licence holders are familiar with the requirements. Highlighted below are some of the questions that might be asked during audit:

- What action do you take when an air conditioner or refrigeration system is not operating correctly and the system is found to be out of refrigerant?
- How do you know what type of refrigerant is being recovered during a recovery exercise?
- Which label do you attach to a system after the completion of a service?
- What action would you take if you had doubts about the integrity of an air conditioning or refrigeration system?
- Have you marked recovery/pump down cylinders in accordance with the code of practice?
- Is the equipment you are using appropriate for the refrigerant type being used?

Contact your local ARC Field Officer at www.arctick.org/contact-us if you have any questions about audit requirements, or visit the ARC website to read more about the audit process www.arctick.org/business-authorisation/auditing



State of licensing

A refrigeration and air conditioning technician working in Australia must meet national and state / territory licensing requirements covering environmental, safety and consumer protection – depending on what state they are working in.

The one national licence requirement is the ARCTick licence. So, regardless of the state or territory, if you are working on refrigeration and air conditioning equipment where there is a risk that ozone depleting substances or synthetic greenhouse gases may be emitted (now and into the future), then an appropriate ARCTick licence is required.

The ARC works with various state-based licensing authorities to provide you with a simple guideline on the different state-based licences that might also be required for RAC work in your state or territory, depending on your trade. The list below isn't exhaustive, and we would encourage you to follow up with the authorities in your state for a more detailed understating of the licensing requirements and entitlements.

State	Licensing Administrator	Related licence type	Area of work	Further information
QLD	Queensland Building and Construction Commission	Refrigeration, Air Conditioning and Mechanical Services Including Limited Design	Refrigeration and air conditioning	www.qbcc.qld.gov.au
		Refrigeration, Air Conditioning and Mechanical Services Including Unlimited Design	Refrigeration and air conditioning	
		Air Handling Duct Installation	Duct work	
	Queensland Treasury	Restricted electrical work licence	Electrical work for refrigeration and air conditioning	www.justice.qld.gov.au
	Department of natural resources and mines	Gas work licence (hydrocarbon refrigerants)	Install flammable hydrocarbons or undertakes work on the gas system of a refrigeration appliance	www.business.qld.gov.au
TAS	Department of Justice – Building Standards and Occupational Licensing	Plumbing Practitioner licence (Mechanical Services)	Mechanical services plumbing	www.justice.tas.gov.au
NSW	New South Wales Fair Trading – Home Building Licensing	Licence class – air conditioning and refrigeration	Refrigeration and air conditioning	www.fairtrading.nsw.gov.au
SA	Commissioner for Consumer Affairs – Consumer and Business Services	Builders licence for refrigeration and air conditioning	Building work – Refrigeration and air conditioning	www.cbs.sa.gov.au
		(Un) restricted electrical worker registration	Electrical work – Refrigeration and air conditioning	
WA	Department of Commerce – energy safety	Refrigeration and Air conditioning Mechanic's Licence	Electrical work – Refrigeration and Air conditioning Equipment	www.commerce.wa.gov.au
		Refrigeration and Air conditioning Licence	Refrigeration and Air conditioning Equipment	
VIC	Victorian Building Authority (VBA)	Plumbing Practitioner licence	Plumbing mechanical services; and refrigerated and air conditioning work	www.vba.vic.gov.au
		VBA Practitioner Licence	Specialised class – Refrigerated Air Conditioning	
	Energy Safe Victoria	Restricted Electrical Workers licence	Electrical work refrigeration and air conditioning	www.esv.vic.gov.au
ACT	Access Canberra – Chief Minister Treasury Economic Development Directorate	Restricted – Electrotechnology Systems Refrigeration and Air Conditioning	Electrical work relating to air conditioning and refrigeration	www.accesscanberra.act.gov.au
		Restricted – Electrotechnology systems Plumbing and Gas fitting	Plumbing work relating to air conditioning and refrigeration	
NT	Northern Territory Electrical Workers and Contractors Licensing Board	Restricted Electrical Licence	Electrical work for air conditioning and refrigeration (not install)	www.electricallicensing.nt.gov.au

Home-grown innovation helping the environment

The success of the environmental licence scheme in reducing emissions of harmful refrigerants into the atmosphere is aided by innovation. Two such innovations have been brought to our attention recently. Both A-Gas and JVAC have produced initiatives that make refrigerant safety, quality and recovery a prime focus – and we wanted to shine a light on these creative ideas.

A-Gas Refrig Health Check™

Cost pressures on contracting organisations may at times impact systems maintenance. However, reduced systems maintenance may result in additional costs in the long-run due to a greater likelihood of equipment breakdowns, refrigerant leakage and reduced energy efficiency. Therefore, it is clear that insufficient maintenance is bad for business, as well as the planet.

With legislative change in the form of an HFC phase-down on the horizon, HFC refrigerant pricing may be anticipated to increase due to a reduction in availability. Therefore, now is a good time to establish better practices with regards to maintenance and leak prevention, which in turn will deliver increasing cost benefits over the years to come.

The A-Gas Refrig Health Check™ (RHC) is designed to support this requirement by making 'best practice' easier to achieve. The RHC is a boxed product which contains all required equipment allowing an engineer to take both oil and refrigerant samples from a running HVAC&R system. Samples are then returned via TNT to the A-Gas Quality Control Laboratory in Victoria. The subsequent analysis of these fluids identifies any contaminants and allows A-Gas to give advice on how to remove them to improve system performance, energy efficiency and extend working life. The RHC assists contractors with troubleshooting high maintenance systems, as a method of targeting maintenance to the specific needs of a system and as an insurance policy against compressor damage and system downtime.

Use of the RHC will allow system owners to identify if:

- Refrigerant is contaminated with another gas
- 400 series zeotropic blends have fractionated
- Refrigerant is moisture contaminated
- Refrigerant has become acidic
- Oil has become moisture contaminated
- Oil viscosity is incorrect
- System parts are suffering wear due to poor oil performance

RHC™ can also log system serial numbers, providing a benchmark on the system health and allowing historical comparisons of results. This enables system owners to check if remedial actions have been successful.



RECO GT refrigerant recovery and leak detection machine by JVAC

The RECO GT refrigerant recovery and leak detection machine is specially designed by JVAC engineers to be the most appropriate and cost-effective solution to achieve sustainability in recovery and leak detection.



JVAC's design and engineering manager, David Gordon says "The JAVAC RECO GT has been developed to recover both liquid and vapour refrigerant from chiller systems and transfer the refrigerant to suitable tanks, preventing loss into the atmosphere. There is both manual and automatic operation available with the unit providing both flexibility and cost savings". By choosing the RECO GT system, businesses not only benefit by being environmentally sound but also gain:

- Lower operation costs
- Reduce carbon footprint
- Reduce liability and risk
- Enhance marketability through higher return on investment

The solution is suitable for a range of systems including air conditioning and commercial refrigeration and best suited in a plant room environment. The engineers at JAVAC can consult a project team from layout and chiller specifications to the plant location, together with service back-up and technical support. The units can be customised for individual applications from small package systems to large multi chiller plants.

Highlighting technological innovations in the sector is also something you have told ARC you would like to see more of. Through the feedback facility on our website, we collect your suggestions for Cool Change articles and use this to plan our editions. Do you know of other environmentally conscious innovations in refrigeration and air conditioning? Let us know at enquire@arctick.org

Do the 'ARCTick licence checklist' before summer hits

Follow the checklist below to make sure your business is in prime position to capitalise on the busy summer ahead:

Make sure your business is following the legal requirements of its authorisation:

- ✓ Updated refrigerant records (quarterly – bought, sold, recovered)
- ✓ Updated refrigeration and air conditioning (RAC) equipment list and maintenance records
- ✓ Ensure you have a current risk management plan for handling/storage of refrigerant
- ✓ Ensure your cylinder leak test and test date records are current
- ✓ Notify the ARC of any changes to staff who hold a Refrigerant Handling licence

Advertising

- ✓ Have you organised your local/national advertising for summer? It is a condition of your authorisation to display your authorisation number on all RAC services advertising (including your vehicle, business stationery, print ads etc.) If you're advertising your business, make sure your authorisation number is there too.

Your record of air conditioning service
Your air conditioning was serviced/repaired on: / /
Service person ARC licence no: / /
Next service due: / /
lookforthetick.com.au

Refrigerant type used:
Refrigerant type used:
ARC logo

Promote your business with FREE ARCTick promo items

- ✓ 'Licensed Air Conditioning Maintenance' Posters
- ✓ 'Benefits of using Licensed Technicians' handouts for customers (RAC and Auto)
- ✓ Importance of regular maintenance handouts for customers (NEW)
- ✓ ARC Licensed stickers for vehicles (NEW)
- ✓ ARC Certificate and Authorised stickers
- ✓ Degassed stickers
- ✓ Air Con Information Guides for customers
- ✓ ARCTick Service tags and Stickers

Contact the ARC on 1300 88 44 83 or email enquire@arctick.org to order your free promotional items.



For more information contact us
call **02 6230 5244**
visit www.refrigerantreclaim.com.au



REFRIGERANT RECLAIM AUSTRALIA

The Australian Automotive Code of Practice 2008

The current Automotive Code of Practice for handling refrigerants was created in 2008, and is underpinned by the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*.

A review of the Automotive Code of Practice is being considered by a Working Group whose members are stakeholders from the automotive air conditioning and refrigerants sectors. At their most recent meeting discussions focussed on two key areas – highlighting the variety of uses of the Codes of Practice and issues that might be considered in a review.

Why and who uses the Code of Practice?

Uses for the Code of Practice	Who uses the Code of Practice
Standards/enforcement	Government
Education/training	Trainer/student
Reference guide	Technicians
Audits	ARC Field Officers
Evidence of workmanship/ consumer protection	Business and clients
Safe/known work environment	Technician

Issues for consideration during review

Education/training	Record keeping
Safety/retrofitting	Penalties – link to regulations
Information on all refrigerants	Reference and relevance to relevant departments
Return streams – mixtures	Risk assessments
Equipment testing	Electric vehicles
Labelling	Personal protective equipment (PPE) guidance
Original equipment manufacturer (OEM) guidelines	Level of equipment
Work practice standards	

Cool Change will keep you updated on all developments when they are available.

Australian Government announces intention to phase-down HFCs

On 11 August 2015 the Australian Government announced Australia would reduce greenhouse gas emissions by 26-28 per cent on 2005 levels by 2030.

Included in this announcement was an intention to fast track work in Australia to 'reduce domestic HFC (hydrofluorocarbon) emissions by 85 per cent by 2036, in-line with the most ambitious phase-down proposals under the Montreal Protocol'.

HFCs are generally potent synthetic greenhouse gases. They are commonly used in Australia in refrigeration and air conditioning and fire protection equipment, medical aerosols, foam and as solvents. Common HFC refrigerants are R134a, R410A and R404A.

A HFC phase-down will progressively reduce the quantity of HFCs that can be imported into Australia each year. A phase-down would be gradual so that existing equipment is not retired prematurely and sufficient time is available to introduce new technology into Australia.

There are two ways a phase-down can be implemented in Australia. Currently discussions are being held internationally to include a HFC phase-down under the Montreal Protocol on Substances that Deplete the Ozone Layer. The phase-down would use the same mechanism

and approach that successfully phased out CFCs in Australia in 1994 and 99.5 per cent of HCFCs by 2016.

A global phase-down of HFCs under the Montreal Protocol is the Australian Government's preferred option. The Government has committed that "Australia will show international leadership and encourage all countries to agree to a global HFC phase-down under the Montreal Protocol". A global agreement provides long term certainty for business, sends an investment signal to global gas and equipment manufacturers and puts all countries on a level playing field.

There are now four phase-down proposals being considered by the Montreal Protocol, with most seeking an 85 per cent phase-down by 2036 for developed countries, with developing countries having additional time. Currently all developed countries support a phase-down, and a significant number of developing countries also support a phase-down including island developing states and Africa as a group. Negotiations will resume in Dubai in November 2015.

Australia could also introduce a phase-down domestically ahead of international action. Other major trading partners have recently implemented legislation to phase-down HFC use. From 1 January 2015 the European Union has implemented a HFC phase-down of 79 per cent by 2030. The United States will ban certain uses of certain HFCs in motor vehicle air conditioning, retail food refrigeration and vending machines, aerosols, and foam blowing, through the Environment Protection Agency's Significant New Alternatives Program.

Options for a phase-down of HFCs and other initiatives to reduce HFC emissions in Australia are being developed through the review of the Ozone Protection and Synthetic Greenhouse Gas legislation. Options have been developed in response to public submissions and through consultation with industry. The options paper will be available for public consultation in late September or early October 2015. Comments received on the options paper will help to inform the Government in making its final decision in early 2016.

Further details of Australia's post 2020 greenhouse gas emissions reduction target and the review of the ozone legislation can be found at:

<http://www.environment.gov.au/climate-change/international>

<http://www.environment.gov.au/protection/ozone/legislation>



Vehicle Air Conditioning Specialists Association (VASA)

ARctick licence holders working in the automotive field may have noticed the VASA logo on the cover of the Automotive Air Conditioning Code of Practice.

VASA represents the interests of automotive air conditioning, electrical and cooling technicians across Australasia and was formed in 1993 to give the industry a voice on codes of practice, licensing regimes and to improve training standards.

In addition to providing members with high-quality training, technical information and industry updates, VASA is now regarded as a significant force that takes an active role in many national issues at the highest levels of government.

The fast-moving nature of vehicle technology makes it more challenging, yet increasingly important, for technicians to keep their knowledge and skills up-to-date, a prime example being the changes now happening in vehicle climate control with new refrigerants entering the market and updated regulations on the horizon.

It means more knowledge and skills are needed to stay ahead of the game, to keep impressing customers and gain new ones.

In recognition of these challenges, VASA has recently undergone some exciting changes that make membership even more attractive – even essential – to automotive technicians who are great at what they do.

VASA members have always been able to tap into the combined centuries worth of knowledge and experience held in the brains of VASA members around Australasia, and this has been enhanced with this year's launch of a member-exclusive, 24/7 online information exchange called SightGlass Live.

Members can network with real experts to learn and share tips and advice on tricky diagnosis or repair jobs. With none of the misinformation or nonsense typically found on a Google search, SightGlass Live will become the most valuable tool in a VASA member's workshop.

Also new in 2015 are bi-monthly SightGlass Tech bulletins, only available to VASA members. This ever-growing library of high quality printed vehicle-specific HVAC technical

bulletins provides exclusive test data, known issues, Autodata wiring diagrams and more.

VASA members also receive six issues per year of SightGlass News, a respected glossy printed newsletter supplemented by monthly SightGlass eNews updates delivering breaking industry news to their email inbox.

The biannual Wire & Gas convention organised by VASA is becoming a household name among the wider automotive industry, with numerous non-members knowing of it or having attended in the past – and regarding it as a benchmark industry event for the high-quality intensive training program and networking opportunities on offer.

Those unable to attend Wire & Gas can take advantage of VASA's professional SightGlass Training that travels from region to region and is delivered in down-to-earth terms by respected trainers to keep attendees at the cutting edge of technical developments and industry practices. Access to Wire & Gas and SightGlass Training is available to anyone, with VASA members receiving exclusive discounts.



*Driving
Industry
Excellence*

To find out more, contact VASA at:

VASA

**Membership Services,
Finance & Communications**

14 Motorway Circuit
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Phone: 1300 661 972

Fax: 1300 661 962

Membership Services & Finance:

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Webmaster and editorial:

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Australian Refrigeration Council
www.arctick.org ARC Hotline: 1300 88 44 83



*All Greenhouse Gas
emissions associated
with producing this
product have been offset.*

This product is 100% Carbon Neutral