Newsletter for the Refrigeration and Air Conditioning Industry

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Australian Government
Department of the Environment and Energy

COOLCHANGE

In this issue

Online application change keeps businesses moving

Adding a risk management plan (RMP) template to RTA applications has simplified the online process.

Under the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995, a condition of holding an RTA is implementing an effective RMP. A RMP should identify potential risks which could result in the emission of refrigerant to the atmosphere and identify processes and practices that minimise the possibility of those risks occurring.

"In the past a RMP needed to be submitted separately to an online application. The new pre-populated template provides businesses with a generalised RMP for refrigerants, which they can tailor to their specific needs. Hopefully these changes make life a little easier for businesses," said ARC CEO Glenn Evans.

"Businesses now have the opportunity for an uninterrupted application process, without delays and potential restrictions on refrigerant purchases. Basically, they can get on with what they do best," he said.

To view the RMP template visit the ARC website www.arctick.org/RMP

We've been EVERYWHERE
ARC regional visits
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ARC REGIONAL VISITS

We've been EVERYWHERE

With two ARC field officers based in each mainland State, we cover a lot of ground. However, it's not uncommon for businesses and technicians in remote areas to think we might not make it to see them.

While we can't be everywhere at once, the ARC makes sure field officers plan permit condition and education visits to reach remote places on a regular basis. Just recently, WA-based field officer Robert Clark did a 1,500 km round trip from Perth to Esperance, where he met with many businesses, providing guidance and advice on compliance, as well as gathering evidence into non-licensed activity.

In the past 3 months, ARC field officers have conducted permit condition checks and education visits to areas including:

- NSW South Coast, Eden to Batemans Bay
- the ACT
- WA, Esperance and surrounding areas
- QLD, Gladstone and surrounding areas.

The trips focused on:

- making sure automotive licence holders are working to the codes of practice
- ensuring refrigeration and air conditioning training providers had the understanding and appropriate equipment to deliver quality training for the sector
- making sure restricted licence holders are working within their licence entitlements, and
- visiting local councils and checking the processes for refrigerant recovery from end-of-life air conditioners and refrigerators.

We found the businesses and people we met were eager to do the right thing and were supportive of the ARC and the scheme. It was great to see many businesses had their refrigerant records in place and had a good grasp of what to do. In particular, it was great to see the new RTA record keeping templates in action.

Record keeping templates can be found on our website at **www.arctick.org/business-authorisation/business-reporting-templates-and-guides/**

In the coming months we are planning to visit parts of northern Victoria and central New South Wales, so keep an eye out for news about our trips and contact our customer service team on 1300 884 483 if you have any questions about your authorisation or licence.

Face-to-face education is the key to compliance

Statistics highlight the value of targeted face-to-face education when it comes to refrigeration and air conditioning businesses achieving compliance.

"About 30,000 permit condition checks have been performed over the past few years. Face-to-face conversations are essential for a better understanding of the regulations and better compliance outcomes," said ARC CEO Glenn Evans.

A visit from a qualified and experienced ARC field officer goes a long way to helping RAC businesses better understand their responsibilities, particularly when they have specific questions about reporting, equipment or gas cylinder maintenance. They may even help businesses find efficiencies in their reporting or refrigerant management.

ARC field officers provide education materials and fact sheets for businesses to use and share with their staff. They are available free of charge on the ARC website **www.arctick.org** and categorised for technicians, businesses and apprentices.

FREE promo materials & servicing stickers

The ARC provides free resources for you to promote your licence and authorisation to customers, and ensure your servicing and work is labelled correctly.

Whether your business already promotes its competitive prices, great service or years of experience, communicating your licence/authorisation provides that important 'tick' of credibility. It gives customers peace of mind they have chosen a qualified person to do the job and meet environmental regulation requirements.

The following is a check-list of free promotional items and servicing stickers developed for appropriate licence and authorisation holders.

Please note: For licence and authorisation holders, eligibility for some items is restricted by the entitlements of the licence held and by the licence holder(s) nominated under the authorisation.

Stickers

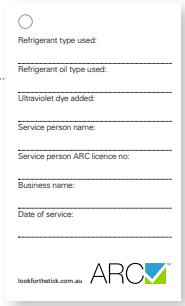
- General Service Tags (RAC only)
- General Air Conditioning Service stickers – (RAC and Auto)
- 'Degassed' stickers
- 'Licensed' Sticker for work vehicles
- Under Bonnet service stickers (Auto)

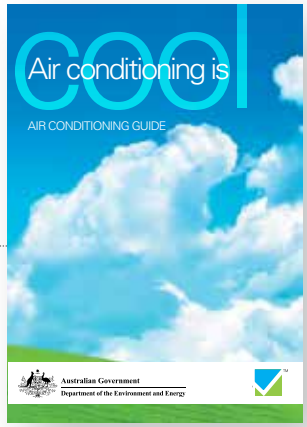
Posters

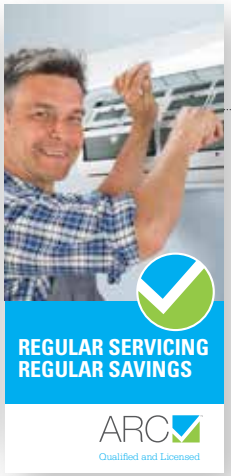
- 'Licensed Air Conditioning Maintenance' (A3) (RAC and Auto)
- 'Licensed Air Conditioning Service' outdoor signage for workshop/shop front (corflute, 45cm X 62cm) (RAC and Auto)

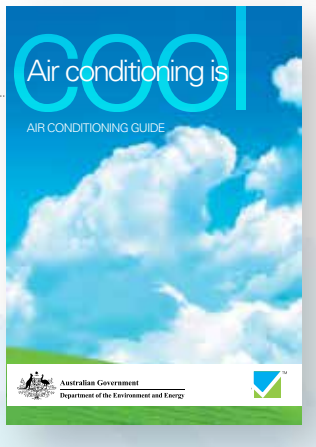
Hand-outs

- 'Benefits of using Licensed Technicians' – for customers (RAC and Auto)
- Air Conditioning Information Guides – for customers (Home and Auto air conditioning – only Auto shown)
- Encouraging regular maintenance – for customers

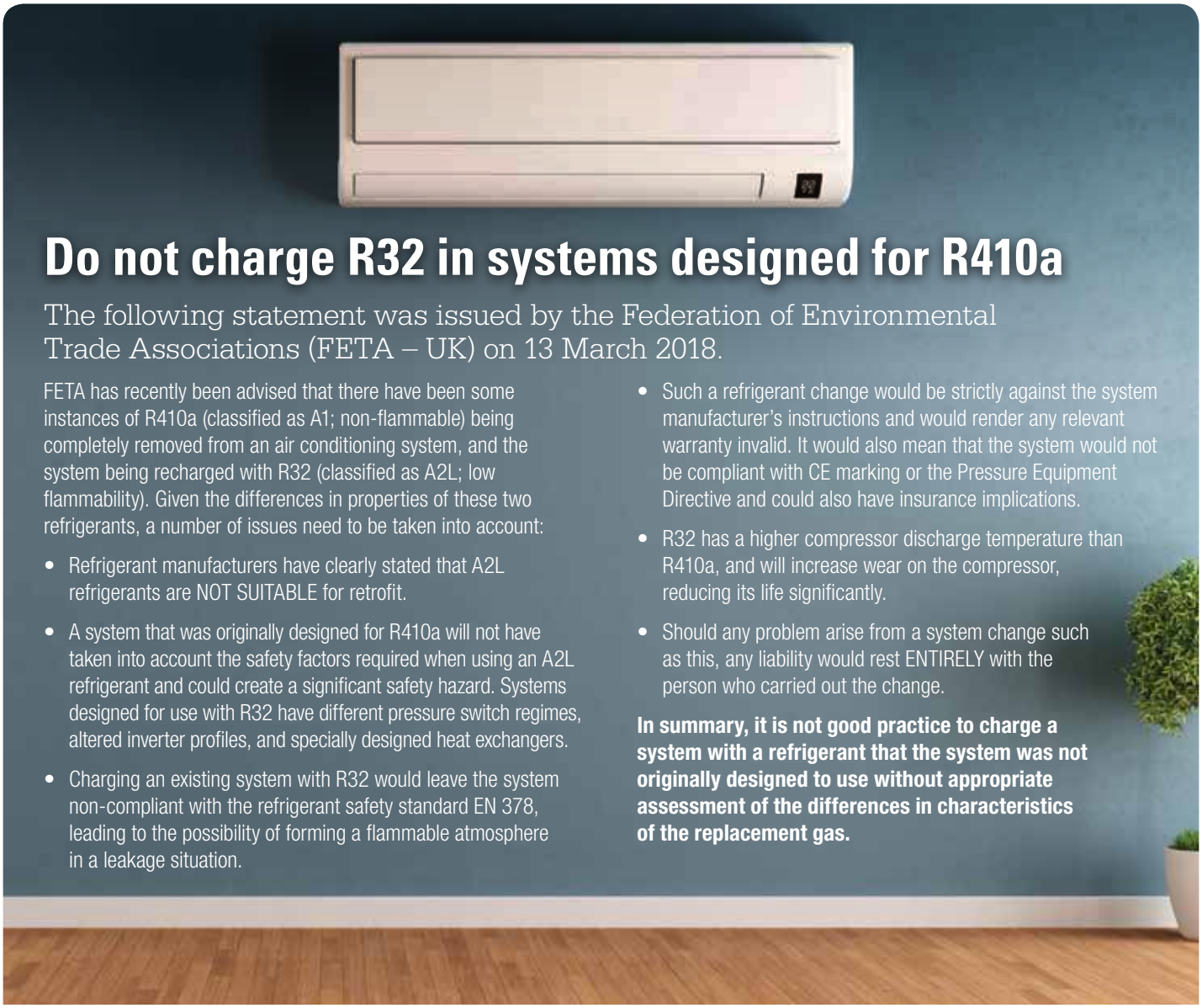








Contact the ARC via email at **enquire@arctick.org** to place an order



Do not charge R32 in systems designed for R410a

The following statement was issued by the Federation of Environmental Trade Associations (FETA – UK) on 13 March 2018.

FETA has recently been advised that there have been some instances of R410a (classified as A1; non-flammable) being completely removed from an air conditioning system, and the system being recharged with R32 (classified as A2L; low flammability). Given the differences in properties of these two refrigerants, a number of issues need to be taken into account:

- Refrigerant manufacturers have clearly stated that A2L refrigerants are NOT SUITABLE for retrofit.
- A system that was originally designed for R410a will not have taken into account the safety factors required when using an A2L refrigerant and could create a significant safety hazard. Systems designed for use with R32 have different pressure switch regimes, altered inverter profiles, and specially designed heat exchangers.
- Charging an existing system with R32 would leave the system non-compliant with the refrigerant safety standard EN 378, leading to the possibility of forming a flammable atmosphere in a leakage situation.
- Such a refrigerant change would be strictly against the system manufacturer's instructions and would render any relevant warranty invalid. It would also mean that the system would not be compliant with CE marking or the Pressure Equipment Directive and could also have insurance implications.
- R32 has a higher compressor discharge temperature than R410a, and will increase wear on the compressor, reducing its life significantly.
- Should any problem arise from a system change such as this, any liability would rest ENTIRELY with the person who carried out the change.

In summary, it is not good practice to charge a system with a refrigerant that the system was not originally designed to use without appropriate assessment of the differences in characteristics of the replacement gas.

Aussie innovation – rapid refrigerant recovery

In May, Melbourne-based refrigerant wholesaler A-Gas launched an innovative refrigerant recovery service that can empty refrigerant out of a system faster than conventional equipment.

The 'A-Gas Rapid Recovery' service operates in Victoria and New South Wales and allows contractors to sub-contract refrigerant recovery to A-Gas.

A-Gas will send a RAC licensed technician to a site in a fully equipped vehicle that has custom made, petrol powered refrigerant pumps mounted on it. Each pump weighs 275kg and can handle standard refrigerants and low-pressure liquids such as R11 and R123. The pumps cannot recover natural refrigerants.

A recent trial with a major supermarket involved pumping 320kg of R404a out of one of their LT racks leaving the system at atmospheric pressure. This recovery service was performed in 30 minutes and 33 seconds.

Refrigerant gas is recovered from systems into cylinders that can be left on site whilst maintenance is completed. The contractor will then pump it back in and call A-Gas to return to pick up the cylinders upon completion or request them to take the product away for recycling or destruction.

The same process applies if the refrigerant is being removed from a decommissioned system. A-Gas Rapid Recovery can either take the gas away for recycling or arrange for it to be destroyed. All jobs are recorded and the customer can access a full report of refrigerant records that can be used during a RTA permit condition check.

Do you know of other environmentally conscious innovations in refrigeration and air conditioning? Let us know at **enquire@arctick.org**

ARC Director gets nod for industry Hall of Fame

In May, Australian Refrigeration Council Director Mark Padwick was inducted into the Air Conditioning, Refrigeration and Building Services (ARBS) Hall of Fame.

As well as being an ARC Director, Mark is President of the Air Conditioning & Refrigeration Equipment Manufacturers Association and Managing Director of Sanden. Mark was also Chairman of the ARC for six years.

Mark's influence on the refrigeration and air conditioning sector over many years was recognised by ARBS member industry associations, who nominate inductees each year.

ARBS Hall of Fame inductees have significantly contributed to the development of the HVAC&R and building services industry. They are recognised for their outstanding service, contribution and commitment above and beyond the call of duty. The individuals have worked tirelessly, and in most cases voluntarily to further the industry and its endeavours with demonstrable achievements that have greatly benefited the industry.

In particular, ARBS recognised Mark's work influencing industry policy and representing the interests of technicians and businesses in the sector.

From everyone at the ARC we congratulate Mark on this prestigious achievement.

Mark Padwick with his ARBS Hall of Fame trophy

RAC apprenticeships taking off!

Refrigeration and air conditioning (RAC) training providers have announced that RAC apprenticeships have increased in the past 12 months – in some cases by up to 100 per cent.

At a May 2018 meeting of the National Refrigeration and Air Conditioning Training Alliance (RACTA), two trainers – one from Far North Queensland and one from New South Wales – each reported a 100 per cent increase in the number of students enrolled in RAC courses.

The RACTA group gives registered training organisations an opportunity to meet and discuss important information and direction on national training packages and future improvements to the training system and delivery. ARC's Technical and Training Manager, Noel Munkman is a member of this group.

Significantly, the examples from Far North QLD and NSW were not isolated. All other members of the RACTA group had similar stories to tell, with an average increase of 50 per cent across the group. This is a fantastic trend for the future of our industry.

There have been a number of quality initiatives delivered by various industry groups over the past two years focused on promoting the RAC sector. In early 2017, ARC produced an industry careers video which was sent to secondary schools Australia-wide, along with a package of information promoting the industry as vital to modern life, and a pathway to career opportunities.

Property managers told to 'look for the tick'

Recently, the ARC wrote to property managers Australia-wide about the benefits and legal requirements of using appropriately licensed tradespeople to repair and maintain cooling and heating systems under their care.

Property managers are key decision makers when it comes to choosing a business and technician to repair and maintain air conditioners in properties under their management. It is vital they understand only fully licenced refrigeration and air conditioning (RAC) technicians can perform these services.

Using RAC licensed tradespeople:

- reduces the risk of sub-standard repairs and maintenance, and related costs
- helps extend the running life of cooling systems
- minimises system down-times to maximise tenants comfort
- reduces emissions of fluorocarbon refrigerant into the atmosphere that can damage the ozone layer and contribute to global warming, and
- meets Government requirements that only technicians with a Full RAC licence can service RAC systems.

Be well-equipped: commercial freezer room

Working on commercial freezer rooms of varying sizes and locations means there are some things a technician may be required to comply with.

- Personal Protective Equipment (PPE)
  - Correct industrial clothing and footwear (compliance with AS4602 and AS2210). This may include eye protection, ear protection, gloves and a hard hat.
  - This may also include thermal clothing when entering a freezer room with temperatures of minus 20C or lower.
- Site induction or notification
  - Are you working alone or do you have an apprentice or another tradesman? (This may include plant room access too).
- Working at heights, hot works, confined spaces
  - Are on site permits required?
  - Do you have all the correct safety equipment and understand its correct function and application?
- Awareness of alarms when working in these areas
- Location and requirement for power isolation
  - Understanding the difference between control circuit isolation and mains isolation.
  - Restrictions may apply to mains isolation and permission or other persons may be required.
- Understanding of system pipework layout and all its functions
  - Correct isolation of system components when accessing system for service works.
- Compliance with refrigerant handling code of practice 2007 part 2
- Identification of refrigerant type and quantity required for correct operation
- Understanding correct system performance and operation
- Works completion documentation
  - Return of site security.
  - Notification of site departure and completion of any site documents.

Please note: This is not a prescribed list or an exhaustive list. There may be a significant number of other items that you are required to complete, either by your employer, Legislation (State or Commonwealth) or the site customer/occupant.

TECH TIP

Refrigerant identifiers are not all the same

On a recent visit with a refrigerant wholesaler, one of our field officers told the following story highlighting the potential for misdiagnosis from refrigerant identifiers:

"A wholesaler asked me to test a cylinder of refrigerant after they received a report from a customer that their refrigerant identifier indicated the R404a cylinder contained air. I have both a new and old model electronic refrigerant identifier, so I took both.

To ensure that both identifiers were operational, I did a test for R134a from a separate cylinder. Both identifiers tested 100% pure, indicating they were operational.

I began by testing the customer's refrigerant with the newer model identifier. This tested fine for R404a. However, the older model indicated air was present on both occasions I tested the cylinder.

I then checked the operating manual for the older model which stated it was able to identify R12, R134a, R22, HC and R410a. No mention of R404a. It turned out the customer had an older model identifier, and that the cylinder contained 100 per cent R404a."

Technicians should make sure their refrigerant identifiers are fit for purpose before testing refrigerant.