



Hot Air

NEWSLETTER

June 2011

The Automotive Air-conditioning, Electrical and Cooling Technicians of Australasia

Corporate affairs: secretary@vasa.org.au Phone: 0438 569 517 www.vasa.org.au

Administration: treasurer@vasa.org.au 72 Holtermann St CROWS NEST NSW 2065 Phone: 02 9437 9942

VASA's legend makes way for younger executives



VASA founding president Mark Mitchell is saying farewell to his seat on the VASA board of directors, but not to the organisation he has nurtured and represented, often loudly, through thick and thin over the past 20 or so years.

When nominations closed for the annual election of officers, which will take place at the AGM in Melbourne on 11 June 2011, Mark Mitchell's name was not on the list.

Mark, who is regarded as one of Australia's most knowledgeable technicians in the air conditioning and refrigeration sectors, and who has represented the Australian Government at world mobile air conditioning summits in Europe, has decided to step aside, for two good reasons.

He believes the time has come to encourage younger technicians to steer the VASA ship into the future, also his business interests have taken him to an international level, demanding more of his time here and abroad.

Another Queensland workshop owner, Brett Meads from Gympie, has nominated and Mark believes he will be an admirable Queensland representative on the new board. All other existing board members have re-nominated.

Mark had warned the board six months ago that he was considering stepping aside because he had embarked on a significant new business direction, including building a headquarters building at Ormeau

on the Brisbane-Gold Coast corridor.

He was president of VASA for the first ten years of its life, following the rally of the industry he helped organise back in 1993.

He stood aside at the 2004 election and took on the vice-presidency when Mark Padwick moved into the presidency.

To honour his work, at the 2004 Wire & Gas Convention Mark Mitchell was granted VASA's highest honour – VASA Legend – which has only ever been awarded to one person, Frank Allison, the then CEO of IMACA, the International Mobile Air Conditioning Association in the USA, which has since been absorbed into MACS Worldwide.

Because he represents VASA at board level on Refrigerants Australia and Refrigerant Reclaim Australia, Mark will continue to report directly to the VASA board until his tenure on those organisations expires.

"I haven't lost the interest or the passion," Mark said. "I will still contribute as an ordinary member of VASA. It is appropriate that someone from the next generation be given a chance to influence the path to the future. I want others to understand the privilege it is to serve their fellow technicians.

"VASA has a big role to play as a central reference point for the mobile air conditioning and electrical industry. While our membership is small, I am proud of the fact that we still have almost 300 businesses who have stayed loyal to us. This is commendable and when benchmarked against other similar organisations in the world, our representation is high."



Melbourne event reaches its target

business improvement.

Wholesalers that have always supported VASA have come to the fore again and, as a result, there will be a mini-trade show of the latest and greatest instruments and tools.

While it will be a no-frills event, there will be opportunities for socialising and networking.

VASA President Ian Stangroome is happy with the roll up. "It continues to amaze me the distances members are prepared to travel to come to a top class training event.

"If the feedback from the June weekend is good, as I suspect it will be, it means that VASA will continue to stage these low-cost, high quality, training events regionally. Future training weekends will be held in March and September," Ian added.

As this issue goes to press, technicians will be on planes, trains and automobiles heading for the Wire & Gas Training Convention over the June long weekend in St Kilda, Melbourne on 11 – 12 June.

The streamlined training event, the result of an overhaul of VASA's commitment to its members following the 2010 Wire & Gas Convention on the Gold Coast, looks like reaching its target number of 100 delegates.

It will be two solid days of intensive training with the best that VASA can offer, covering air conditioning, electronics and

Refrigerant survey reveals extent of refrigerant recycling in workshops

Refrigerant Reclaim Australia (RRA) has noticed a decline in the stocks of refrigerant being returned to their environmental destruction facility and would like to know why.

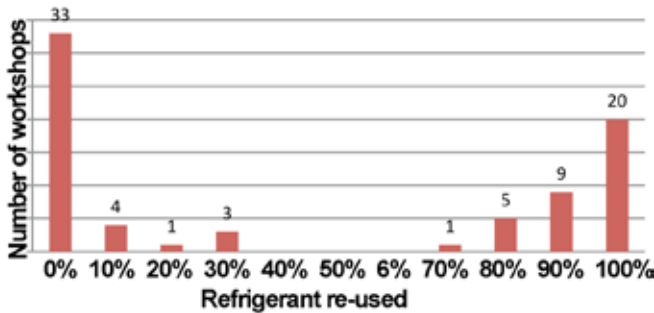
VASA was asked to survey its members with a series of questions relating to re-use of refrigerant, possible impact of increased price of refrigerant and

impact of HFCs being included in a proposed carbon pricing scheme.

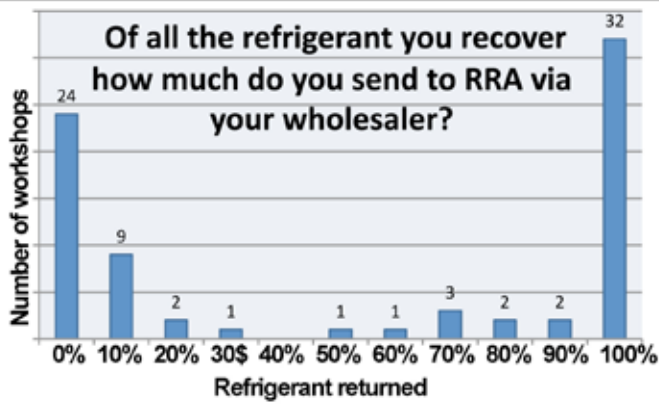
78 members responded, often quite vocally on the sensitive issues of pricing and carbon tax.

This was an excellent response rate and the results have been passed on to RRA.

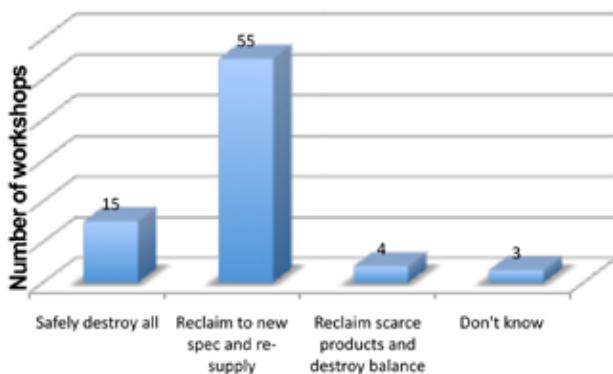
Of all the refrigerant you recover how much do you re-use in your own workshop?



Of all the refrigerant you recover how much do you send to RRA via your wholesaler?



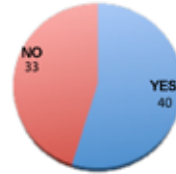
What should RRA do with recovered refrigerant



Are you concerned about the possibility of contamination?



Have you encountered contaminated systems already?



Members were vocal in their dismay that HFCs might be included in the government's proposed carbon price scheme.

Only nine of 78 respondents believed HFCs should be included in a carbon price scheme.

Members are concerned that refrigerant prices will become so unaffordable that some workshops might turn to cheaper alternatives including hydrocarbon refrigerant or blends.

There was general agreement that if such a tax were inevitable, the government would need to accept responsibility for explaining to consumers why maintenance and repair costs to air conditioning systems were increasing.

Of those who opposed the tax on HFCs, comments such as 'a rip off' and 'unfair' were frequent.

Asked how they would respond to a higher price for refrigerant, the majority of members admitted it would have to be passed on to the consumer, but many were concerned that customers might see this as a workshop money grab, rather than a government impost.

The responses also revealed many fears that higher prices could 'kill the industry'. Others were concerned with the move to cheaper refrigerants, including hydrocarbons and the negative impact that would have on contamination rates.

Several respondents said they would take the easy way out and just leave the industry.

Members were asked how they made sure the refrigerant they re-use in their workshops is of the right quality.

The most common method was to use new refrigerant from a reputable wholesaler.

Many members are using identifiers and others are stepping up their filter replacements on recovery equipment.

There seems to be a small but growing trend for workshops to recover refrigerant for re-use only from customers' cars that they intimately know. Some take a more determined stance and simply don't recover any refrigerant for re-use from suspect or interstate vehicles.

Asked what else could be done to limit emissions of refrigerants into the atmosphere, the respondents became quite vocal, especially about the quality of tradespeople and the lack of enforcement in what they saw as obvious areas, such as the panel shops.

There seemed to be a general acceptance that the licensing concept was worthwhile, but many wanted a greater level of policing, more powers to take action against workshops suspected of poor work practices and much stronger policing of wrecking yards and panel shops, where members believe there is widespread disregard for the environmental goals of licensing.

The poor quality of some air conditioning components and systems was criticised, especially those imported from Asian manufacturers.

Greater education of technicians and the motoring public was suggested, along with making all refrigerants controlled substances, including hydrocarbons.



The iPad contest will be launched at Wire & Gas in Melbourne

Earthquake wipes out VASA member business

A pioneer VASA member, Christchurch Auto Air, owned by Auckland Auto Air founder and former VASA director Barry Rogers and his son Philip, has closed down as a result of building and stock damage sustained in the Christchurch earthquake.

Barry Rogers told Hot Air of a terrifying time for Philip when the quake struck and their building at 10 Acton Street Christchurch began to shake violently.

Stock fell from the shelves and

Philip did what everyone had been told to do and ran out into the street to escape falling debris.

A white, cement like ooze spewed up through a crack in the floor and when this dried out, it turned to a fine white powder which smothered everything.

The Christchurch workshop and branch wholesaler for Auckland Auto Air was established 16 years ago. Barry said returning was out of the question so Philip and all his undamaged stock were moved back to the Auckland business.



This was the scene of devastation in Manchester Street, Christchurch after the 6.3 magnitude earthquake his in February. Christchurch Auto Air's premises were just three blocks away in Acton Street.



New members

Member # 952

Gavin Craske

Current Tech Auto Electrical
HUNTINGDALE WA 6110

Member #953

Jason Disher

Cartech Australia
ALBURY NSW 2640

Member # 954

Paul Evans

Kelso Radiator & A/Con Services
BATHURST NSW 2795

Trivia

In 1939 in the US, Packard introduced the first car air conditioner, a rather awkward affair with no independent shut-off mechanism. To turn it off, the driver had to stop the car and the engine and then open the hood and disconnect a belt connected to the air conditioning compressor.

Mechanical engineers soon introduced improvements, ultimately making air conditioning on wheels so de rigueur that even convertibles had it.

But as wonderful as cool air for summer drives was, it didn't have anywhere near the impact of the contribution of Frederick McKinley Jones, an inventor who was eventually granted more than 40 patents in the field of refrigeration.

The president wants a word

We are once again drawing the curtain closed on another fiscal year. How has your year shaped up? Have you been too busy to pay much attention yet, or has it been a year you would rather put behind you?



I like to reflect on the good aspects of the year and improve on, and do more of those, and analyse the things that didn't go so well and treat them as learning experiences. I try to do just that – learn from the experience.

There are day to day challenges in life and business throughout any year, but this past year, many people have succumbed to the effects of climate extremes and other natural occurrences resulting in significant social, environmental and economic costs, with floods throughout large areas of eastern Australia and the earthquakes in Christchurch, New Zealand being prime examples.

In contrast, extremely dry conditions have been experienced in the south west of Western Australia, with that region experiencing its driest period on record.

Very few of those living, working and conducting business in and around the worst flood and earthquake affected areas have escaped the direct or indirect effects of these occurrences and many of those affected are still living with the devastating resultant damage and impact on their lives, with many homes and businesses destroyed.

For those of us who do not live or carry on business in the areas which were affected, it can almost be impossible to comprehend the impact. Quite often our own difficulties pale in comparison.

With another financial year coming to an end, just like any cyclical period, it means another one commences, a new beginning, and with that an opportunity to improve.

Jones, a mechanic by training but largely self-taught, was issued a patent for a roof-mounted cooling device that would refrigerate the inside of a truck. Jones's device was soon adapted for use on trains and ships. Hand in hand with

A less painful way to improve is to learn from the experience of others. Lets face it, it is always much better for the confidence and the ego, to learn from the mistakes of others rather than your own mistakes, or learning experiences. It also invariably comes at a much lower cost both in terms of dollars saved and, more importantly, in time wasted.

Remember, if you don't learn from an experience, you will continue to get that same experience until you do learn from it. That's the way things work.

On learning, there are many ways to access information to acquire new knowledge or skills; books, the internet, your network, to name just a few. But nothing really compares to face to face training, such as the Wire & Gas training events.

For those who registered for the training event at St Kilda, Melbourne on 11th and 12th June, well done for expanding yourself.

The knowledge you acquire and the acquaintances you make over these two brief days will remain with you and serve you forever.

How does that stack up as a return on your investment? Pretty good I would suggest.

The greatest investment individuals can ever make is in themselves.

Best wishes
Ian Stangroome

Clarence Birdseye's invention of flash freezing, Jones's refrigeration system made readily available, no matter what the season, all manner of fresh and frozen foods from every corner of the nation and, indeed, the world.



VASA Technical Bulletin

Category: ELECTRICAL

Volume 1 Bulletin 2

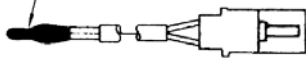
Every issue of Hot Air will revisit the RTP, in the order in which it was first delivered to members a decade ago. The technical information is as relevant now as it ever was. Members will find it a great resource for younger technicians, or those venturing into electrics and vehicle climate control repairs.

PRINCIPLES OF ELECTRONICS

These bulletins are concerned with principles from which we can build a working knowledge of basic electronics and fundamental meter usage which is vital for all technicians.

In the section on meters you should get a meter in your hands and do some basic testing while following the text if you are unfamiliar with the concepts presented in this bulletin.

Thermistor



Thermistors

Thermistors are simply temperature sensitive resistors.

Thermistors are used for temperature sensing/temperature signaling and feed that information into the computer or electronic control unit (ECU).

As temperature changes so does the resistance of the thermistor. If, as the

Thermistor testing is simple.

At certain temperatures there should be a corresponding resistance across the thermistor. Refer to manufacturers' specifications.

These specs will normally be shown in table or graph form as shown (at right).

A commonly asked question is 'are all NTC or PTC referenced the same?' The answer is definitely **no**. Each thermistor in a particular application will have a different temperature-to-resistance relationship

temperature rises, the resistance rises it is known as a Positive Temperature Co-efficient (PTC) thermistor.

If the resistance decreases as the temperature increases it is known as a Negative Temperature Co-efficient thermistor (NTC).

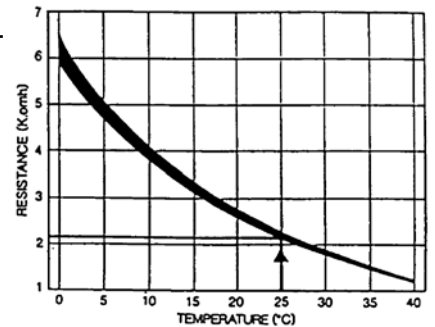
Automotive applications predominantly use NTC type thermistors.

depending on a number of factors, the most significant of which are operating range, the characteristics of the circuit they are to operate in, and the matching to the computer, controller or microprocessor.

This Bulletin has introduced the basic concepts of semi-conductors and semi-conductor devices.

They are handled in much more detail as circuits are introduced in future Bulletins.

°F	°C	Ohms
210	100	185
160	70	450
100	38	1,800
70	20	3,400
40	-4	7,500
20	-7	13,500
0	-18	25,000
-40	-40	100,700



The temperature versus resistance characteristics changes significantly from thermistor to thermistor.

Specifications are required for accurate testing.

Analogue multimeter



Digital multimeter incorporating a bar graph



Meter fundamentals

The basics of electricity and the basic units of volts, amps and ohms have been covered in earlier bulletins. The problem for many of us is we can't see electricity and so diagnostics is difficult. This is where meters come into play. Do not underestimate the value of a multimeter. It becomes our eyes to 'see' into a system. Knowing what you are looking for and being able to interpret meter readings is the key to diagnosing electrical and electronic circuits.

The first decision to make is what type of multimeter to purchase or use on a system.

Analogue (needle type) meters have some advantages over digital (number readout) meters for unstable circuits and varying voltage circuits and for some diagnostic code readouts.

In these applications it is an

advantage to observe a needle movement as opposed to rapidly changing numbers.

This advantage aside, analogue multimeters have largely been replaced by digital multimeters. Not only are analogue meters inadequate for testing many modern automotive circuits, they can damage sensitive internal computer (control unit) circuitry.

The modern digital multimeter, depending on selection, will cover a multitude of functions which will be identified and expanding on in later Bulletins.

At this point we are concerned only with basic functions.



When testing electronically controlled vehicle systems use only a good quality multimeter with at least 10 mega Ohm input impedance to protect sensitive electronics.

Most good quality modern digital multimeters conform to this specification.

Electrical stress is a common cause of computer or microprocessor failure.

This means the system may not fail at the time of testing but some time in the future due to it being overstressed when tested.

A voltmeter is always connected in 'parallel' with the circuit being tested - either across a component or between the circuit and earth.

With a single load circuit as shown opposite, the full system voltage should be used by that load - the clutch.

Voltage measurement

Voltmeters measure electrical pressure or the difference in potential between two points in a circuit.

They are polarity sensitive and must be connected in accordance with their direction of electrical pressure.

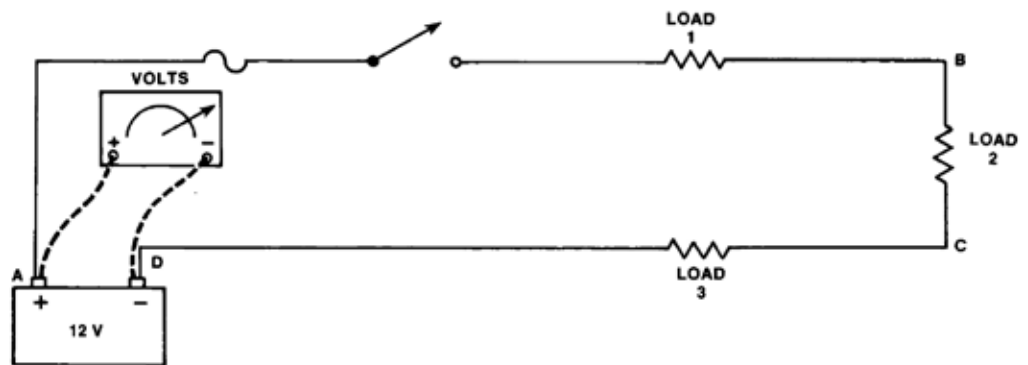
There are two basic functions of a voltmeter: 1) To measure voltage or pressure at any point

in the circuit with respect to earth (the black lead will be directly connected to battery negative or to a good earth point) and 2) To measure voltage drop across components (or loads) in the circuit.

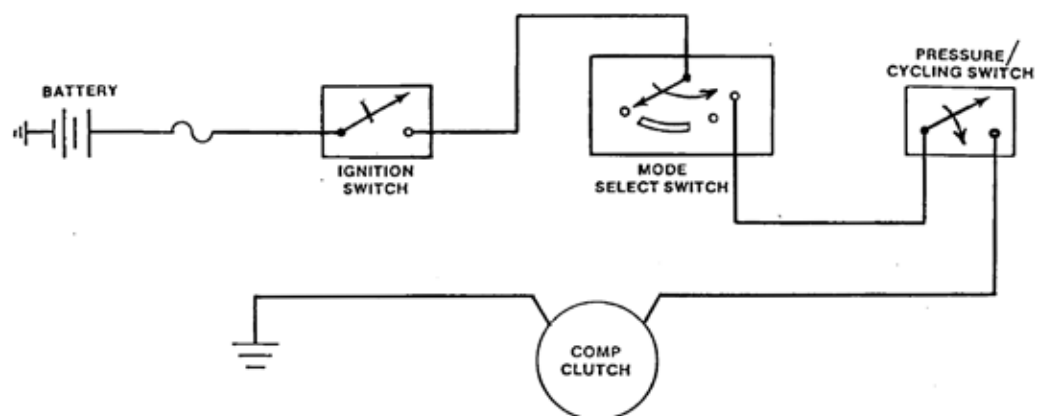
These 'loads' may be known (such as components) or unknown (such as unwanted resistance across connectors in looms).

In earlier bulletins the basic units and characteristics of systems, in particular the use of ohms law were covered.

We can now go one step further and look at an actual system, apply Ohms Law to that system, and tie that up with the use of a voltmeter in testing the circuit.



Basic compressor clutch circuit



On the above diagram there is only one 'load' in the circuit - the compressor clutch.

Assume the resistance of the clutch is 3 Ohms. Voltage supply is 12 volts - therefore the current flow through the circuit should be 4 amps, according to Ohms Law $I = \frac{V}{R}$

From a voltage perspective 12 volts should be present at the clutch with all switches closed with the other side of the clutch coil being at OV (earth potential).

Therefore from this simple example we can see the 12 volts has been 'used up' across the component (load) when work is done. In the circuit shown the

only 'load' on the circuit is the clutch hence the complete voltage is dropped (lost) across the clutch coil.

Voltage drop is a decrease in voltage as current passes through a resistance (for example: the clutch VD = 12V)

Unfortunately, there may be unwanted resistances across switches, connectors, frayed or broken wires which will introduce two new factors into the picture.

- Extra circuit resistance means a reduction in current flow. (Ohms Law)
- The full voltage will no longer be used only by the clutch but some will be 'lost' across any unwanted resistances.

If there is more than one resistor in a circuit the 12V will be 'divided up' between the resistors (in series circuits).



There are two more laws you need to consider:

- **The sum of the individual voltage drops in a circuit equals the total voltage impressed on the circuit (for series circuits)**
- **The amount of voltage dropped across each resistance is proportional to that resistance.**

If there is no current flow in a circuit (for example, a break in the circuit) there will be no voltage drops across loads or components.

The circuit will 'sit' at 12 volts up to the break and zero volts after the break.

Using a voltmeter on this circuit

There are two basic tests to verify circuit integrity – testing of the supply and earth circuits.

Is there near full battery voltage available at the clutch? (Connect the voltmeter in parallel to check for supply.)

To check the earth circuit ensure

the earth side of the coil reads zero volts.

Any reading above zero volts indicates resistance in the earth circuit.

If the earth side of the clutch coil is registering 12 volts the earth circuit is incomplete (open

circuit) with everything 'sitting at 12 volts' up to the point of the open.

Under these conditions there will be no current flow and no component operation since the circuit is incomplete.

NOTE: These examples are for supply switched circuits only. zero volts when the earthing switch is closed.

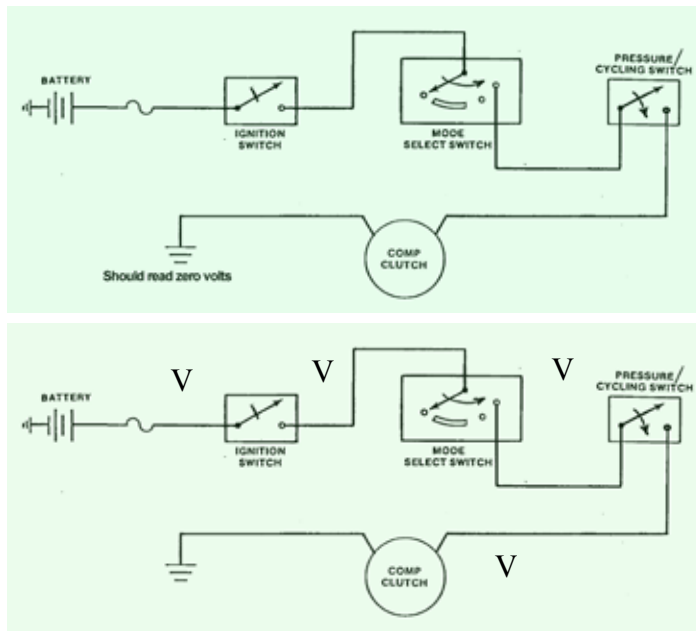
Earth switched circuits will have 12 volts to the clutch or component at all times with the earth side dropping to zero volts when the earthing switch is closed. These examples are being used to demonstrate the use of a voltmeter only – not for dedicated circuit analysis.

Ensure current is flowing – the circuit is complete – when conducting voltage drop analysis.

Voltage drops will only be exhibited when current is flowing.

If the supply to the clutch is less than 12 volts there is some voltage drop across a switch or connectors or in the supply loom acting as a second resistor in the circuit.

Testing in a sequential manner along the supply circuit will identify where the loss is occurring (see the bottom drawing).



Cabin filters - overlooked and underserviced

Cabin air filters are now found on nearly half of new US-registered vehicles and it's expected the Australasian proportion will be about the same, but they remain an unknown and often unchanged part.

Today, not too many models are found without a cabin filter but most owners don't even know their car has one. And like any filter, sooner or later it needs to be changed.

In most cases, the filter is a paper or fibre element that traps particulates, similar in



construction to the engine air filter. Luxury vehicles may use a charcoal filter to handle odours as well as airborne particles. Some cars use both types. Some products add disinfectant, or include baking soda to absorb odors.

Naturally, the smart shop will suggest replacing the filters as part of routine maintenance or a service package. They're usually an inexpensive item, and often quite easy to install. But because they're unaware, the customer may think you're pulling a fast one when you mention the addition. (continued next page)

In Hot Air so far we have covered the whole of Electrical Volume 1, Bulletin 1 of the famous Registered Technicians Program.

In this issue, we continue Electrical Volume 1, Bulletin 2 which covers the principles of electronics.

In the next issue we move on to the blower motor circuit.

To be continued next issue

Now that R-1234yf has been adopted - the questions begin

The following FAQs were prepared by Elvis Hoffpauir, President of MACS Worldwide, and first published in MACS ACTION magazine.



VASA is indebted to MACS for permission to adapt this article for Australasian readers.

The US EPA has listed R-1234yf for use in mobile air conditioners designed for it.

These are some of the most frequently asked questions and MACS responses.

What automobile manufacturers are planning to use R-1234yf, and when?

To date, only General Motors has formally announced that some 2013 models in the US will use the new refrigerant. However, we know that all major car manufacturers worldwide have been working on this option, and European regulations ban the use of R-134a in new platforms from 2011. We would expect to

see use of the new refrigerant by manufacturers in Europe this year, but it's likely to be introduced slowly. Whether or when European manufacturers will export these vehicles is unknown.

European regulations begin to phase out use of R-134a in mobile air conditioning in 2011, and eliminate its use in all new vehicles by 2017. Will the U.S. follow Europe's lead?

There is no similar proposal at the national level.

While new vehicles with R-1234yf can be expected to return to dealers through warranty programs, when can aftermarket repair shops expect to see these vehicles?

The 2013 year model vehicles are likely to hit the streets in 2012. Our industry's historical data suggests that most service is performed on vehicles between five and ten years old, but modern a/c systems are more robust and refrigerant leak rates have been substantially reduced, so a modern system can be expected to last longer.

Will service shops need dedicated equipment to service R-1234yf? What is this likely to cost?

Dedicated equipment will be required for the new refrigerant. The primary equipment will be recovery/recycle/recharge machines, refrigerant identifiers and electronic leak detectors.

We would expect that the cost of equipment for the new refrigerant would be in a similar range or slightly higher than the costs of equipment for R134a.

How does R-1234yf compare to R-134a?

Good service practices will become even more important with R-1234yf systems – pulling a deep vacuum on the system to remove air and avoiding introducing moisture into the air conditioning system. Both of those are concerns when servicing R-134a systems, and there are indications that improper service could be an even greater concern with the new R-1234yf systems.

Regarding components, there is an SAE International Standard, J2842, which states that “an evaporator from a vehicle air conditioning system shall not be repaired or removed from any (including salvage) vehicle air conditioning system with the intention of using it again in the same or a different vehicle.” In many other respects, however, we are told that the new refrigerant is very similar to R-134a in performance and for service.

What about the cost of the new refrigerant?

R-1234yf will be substantially more expensive than R134a. The manufacturers of the refrigerant have not quoted a price publicly, but estimates ranging from US\$40 to US\$60 a pound (approximately AUD\$74.80 to

AUD\$112.20 a kilogram) have been circulating in the industry.

What companies will be manufacturing R-1234yf?

Honeywell and DuPont have announced that they will begin supplying the refrigerant in the fourth quarter of 2011 for new vehicle builds.

R-1234yf is classified as a mildly flammable gas — should technicians be concerned about servicing these automobile a/c systems?

Technicians should be knowledgeable about the properties of this refrigerant and handle it properly. That being said, extensive testing is reported to have shown that it is difficult to ignite R-1234yf, but it can be ignited by, for instance, a cherry-red hot manifold or a match or butane lighter.

Will new technician training and certification be required for R-1234yf?

The US EPA will ultimately make that decision. EPA will consider whether it is necessary to modify our existing regulations to include additional specifications for HFO-1234yf.

VASA will keep members informed of any local regulations or policies in the use of the new refrigerant which will impact on Australasian workshops.

Cabin filters (continued)

Two suggestions can be helpful. First, if it's quick to find, remove a cabin filter and show one to the customer. It's almost a certainty that there will be enough crud on the filter to be convincing. If you must, take a picture with your cell phone, then e-mail it when you're selling the other work.

One look at what the filter traps often convinces a customer to

keep current on maintenance. If the filter isn't so easy to get at, a discussion of benefits may do the trick—you know those filters keep dust, road debris and other matter out of the car so everybody breathes better. It may also keep a larger item like a twig or dead leaf from lodging in the fan casing.

It should be a straightforward sale.

A recent survey forecasts that the cabin filter aftermarket could grow at a rate of 11.5% (unit shipments) and 14.1% (revenues) between 2010 and 2017.

The increase is attributed to a combination of increasing health concerns, owner awareness, and inclusion in more new vehicles.

The study also noted some challenges including improving

customer awareness of the benefits of the cabin air filter, and educating service providers who aren't up to date on fitment and applications.

The survey also noted the need for vehicle makers to rethink filter placement to facilitate installation.

VASA is indebted to MACS Worldwide for permission to reprint this article.

Automotive Air Conditioning PRACTICAL WORKBOOK

REFRIGERANTS AUSTRALIA

Professional AC service procedures
Establishing a partnership with the customer
Why components fail

Grant Hand wowed them at Wire & Gas conventions – you can see him at his best on this air conditioning servicing DVD that comes with a 24-page workbook. VASA member price is \$40.

To order your copy, email secretary@vasa.org.au with your name, membership number and phone number and we will post it to you immediately along with your invoice.



One of the big benefits of being a VASA member is that you receive a free copy of the TaT magazine, and with it free access to the TaT assist service.

This is a web-only service, so to access technical help, members must go to www.tat.net.au and log in, using the form which will be generated when you click this link on the left of your screen.

If this is your first sign-in Click Here and enter the same email you gave with your subscription to generate your login details.

In your case, as a VASA member, your email is already installed in the TaT system, so if it matches, you will be provided with your own password for all future visits.

In the members' pages at www.vasa.org.au

- All 51 bulletins of the VASA RTP bible on vehicle air conditioning
- MACS Worldwide service bulletins from Feb 2005
- Hot Air newsletters back to May 2005

MACS SERVICE REPORTS
By Peter Wain - MACS Technical Consultant July 2010
MORE ELECTRICAL TROUBLE-SHOOTING TIPS

Leading Wiring Faults
Open and Short Circuits
The most common wiring fault is an open circuit. This is usually caused by a loose connection or a broken wire. The symptoms are usually intermittent and can be difficult to trace. The first step is to check the battery and ground connections. If these are good, the next step is to check the fuses and relays. If these are also good, the next step is to check the wiring harness for any signs of damage or wear. If you find a fault, it should be repaired immediately to prevent further damage to the vehicle's electrical system.



VASA is proud to be affiliated with MACS Worldwide

Web access for members

Follow this simple logon procedure to www.vasa.org.au

1. On the front page of the site, you will see this box. Click on the top blue panel to login.

VASA Members
CLICK HERE TO LOGIN
Not a member? Click here to join.

2. Type your member number in the first box. In the password box type, in lower case, the first four letters of the suburb in which your membership has been listed.

Member Log In

Member Number:

Password:

LOG IN

If that doesn't work, please check your membership number and suburb and try again.

With password entry to websites, accuracy is essential. A capital letter in your password will block your entry. So will an errant

full stop, comma or any other accidental key stroke.

Remember that after five password attempts the site will lock you out, and you will need to wait 10 minutes before trying again.

VASA members need to be very clear about what they are looking for on the web. Here's a general rule:

For matters affecting your membership of VASA, technical archives containing the Registered Technicians Program, consumer information about VASA and a full listing of all members by location and type of membership, the website address is:

www.vasa.org.au

If you have a serious technical problem with a particular vehicle, no matter what the problem is, and for access to a growing library of vehicle faults and solutions, the website address is:

www.tat.net.au

New Code of Service for your workshop

Customer Code of Service

1. The customer will be treated with respect.
2. Dealing with the customer will reflect a high quality of service and a professional usage of a knowledgeable network of technicians.
3. Every vehicle will be diagnosed and repaired to full standards with the customer.
4. The aim is to get the vehicle safely back on the road as soon as possible, regardless of any outstanding issues or challenges, including to earlier repair, warranty disputes or incorrect diagnosis.
5. Wherever is not the customer's problem – such issues will be resolved amicably and professionally between the Service Centre and its suppliers, without compromising the customer in any way.
6. Following the preliminary inspection by the technician, the customer will be given an estimate of the cost of the necessary repair, an outline of the work and parts required. Replacement parts, where applicable, will be listed separately to the service charges.
7. The customer will be advised, verbally or in writing, whether the estimate is subject to further diagnostic tests, or whether the quotation is final.
8. Where a complete diagnosis is required, the customer will be advised of any charges for diagnostic tests and a written report.
9. Additional repairs are found to be necessary, the cost of which would exceed the amount quoted or estimated, the customer will be contacted to explain what is required and to seek authorisation for any additional work before any further work proceeds.
10. Full details of all work carried out will be listed on invoices along with the corresponding charges for labour, spare parts and materials.
11. All parts replaced will be available for inspection by the customer, where practicable, and an explanation of why the parts have failed will be offered.
12. Services or repairs will be guaranteed against any failure due to defective recommended parts or faulty workmanship.
13. Any dispute between the Service Centre and the customer will be resolved quickly and amicably.

The VASA Service Centre

1. Members of VASA Service Centres will engage in sufficient training, education or skills development to enable them to keep pace with the technological advances required to repair modern vehicles.
2. Members are responsible for applying the professional integrity and work ethics of the VASA network and the automotive industry, and will not accept any conduct that may bring discredit to VASA and its members.
3. Members will work with honesty, fairness and professional courtesy in all dealings with the public, other VASA members and fellow technicians.
4. Members will apply best work practices as set in relevant technical resources and Codes of Practice and will promote the use of approved and recommended parts, equipment and consumables in all repairs and maintenance.
5. Members will endeavour to educate the public on the long term value of using approved replacement parts. Where a customer decides to use a lower quality part option, the Service Centre will note on the final invoice that non-recommended parts have been installed by the customer. Otherwise the Service Centre will accept no liability for any failure of parts or subsequent damage to vehicle systems.
6. Members will discharge their responsibility to their employees by observing safety and collective and individual employment contracts or agreements, and by providing technical training, support and instruction to enable them to be productive and efficient employees capable of contributing positively to the welfare of the business.
7. Members will provide adequate working conditions, equipment and facilities, and ensure proper operation of all safety standards and work practices.
8. Members reserve the right to refuse to undertake any repair that is beyond the Service Centre's equipment capability or staff resources. This right also extends to any situation where the customer insists on a part or parts that, in the member's opinion, will put other consumers or systems at risk of failure. The member will inform the customer why such refusal is necessary.
9. Members will take the time to educate customers on the need for proper maintenance of specific vehicle systems and make available to customers parts to generate a better understanding of the need for scheduled maintenance.
10. Members will be responsible for their own conduct and will be prepared to guarantee that their practices, and the parts or equipment they fit in any repair, will provide the best protection when used in accordance with manufacturer's specifications.
11. Members will adopt open and readily understood warranty practices as an integral part of their business operations.
12. Members will actively promote the actions of fellow members, and use to strengthen the network through sharing of technical information and skills and offering assistance to fellow members when required.
13. Members will be environmentally responsible, ensuring compliance with environmental and energy efficiency guidelines or regulations.

Issued by the Board of Directors of VASA May 2010

www.vasab.org.au www.vasa.org.au

All members should have received the new two-part Code of Service.

One is a customer code and the other a workshop code and they can be displayed individually, or as a set.

The artwork will soon be available on the VASA website for those who want to print their own.

Hot Air is published every two months, and is posted to financial members of VASA, along with the current issue of the TaT magazine.

This newsletter contains information which will help you become a more productive technician. You are encouraged to leave past issues in your waiting room, so that your customers can see that you are a member of a professional repair network.