

Dusting off our past – Australian auto air conditioning

Last month, HVAC&R Nation[®] revealed the history of in-vehicle air conditioning. While so much is known of the American industry, it seems Australia's history and the pioneers who shaped the industry are largely undocumented. This month, we touch on what we know, and why VASA is making it a priority to discover it.

While automobile air conditioning has existed in the United States since 1930, when the C&C Kelvinator fitted out a Cadillac with a 0.37kW refrigeration unit powered by a 1.1kW gasoline engine, air conditioning in Australian automobiles only really became serious from the 1960's.

The previous 30 years in America had largely been spent pioneering a new industry. And it was an industry booming.

By 1965, General Motors had announced the production of its five millionth air conditioning unit, with 27% of its cars sold that year featuring air conditioning. Meanwhile, aftermarket air conditioning is also enjoying the boom, with no less than 15 different aftermarket companies making units. Car owners could even go to department stores to have an air conditioner installed.

Opening up Down Under

With the U.S. market strong, it was at this time that American manufacturers looked beyond their shores to the potential of the export market.

According to Frank Allison, former CEO of the International Mobile Air Conditioning Association (IMACA), in his *History of Mobile Airconditioning* article, published in the Nostalgia section of VASA's *Hot Air* newsletter; sophisticated market studies or consumer demographics were not available at the time, so the market selection process was simple.

"Choose a country with a hot climate, stable economy and enough cars on the road to justify the effort and expense necessary to find the customers and develop the business," Allison muses.

And so it was that automobile air conditioning entered the Australian psyche.

Until then, fresh air in Australian cars was sourced through a wind-down window, but Australians soon coveted the comfort in-car air conditioners promised, with a number of companies pioneering the Australian industry, including Barney Oros and Smiths Industries in Sydney, Marlandaire in Melbourne and Marlan in Sydney.

The Mitchell Company from Dallas, Texas, also entered the Australian market around the same time, buoyed by the successful introduction of the Mark IV in Japan by car-owning American servicemen stationed there.

Cautious of entering a new market by themselves, the Mitchell Company chose Sydney's Flexible Drives, who marketed the product through their Speedometer Screenwiper operation.



Mark Mitchell

"They did nothing to reach all of the potential firms who would be interested in car air so this was dissolved and Mark IV Australia was incorporated and we commenced business in Kogara NSW," says George R. Jackson in *Bringing air conditioning to Australia*, featured in VASA's *Hot Air* newsletter.

Most installations in those days were carried out at motor dealers, as few models offered factory fitted air conditioning. Naturally, the most popular models for installation were the luxury names – Chevrolet, Jaguar, Mercedes-Benz, Chrysler, Rambler, Ford Galaxy and the Fairlane.

According to Ralph Cadman, former director with VASA, Mark IV initiated selling to air conditioning dealers in kit form, and were closely followed by Smith Industries.

"Both suppliers sent rolls of copper tube for dealers to use as plumbing. Compressors commonly used were York, Femsa and Tecumseh, until the introduction of the Abacus swashplate compressor we came to know as the 508 in later years," says Cadman, in another article featured in VASA's *Hot Air*.

In those early days of after-market installation, installation times of up to eight hours were common. Trimming consoles or glove box areas, and the fabrication of compressor mount brackets and drive pulleys for some car makes made installation even more difficult.

"Much of this fabrication work was experimental, as there was very little sharing of information within the industry," recalls Cadman. "Some of this experimental work led to some interesting results, involving radiators, bonnets, hoses etc."

It didn't take long for car dealerships to cotton on to the financial potential of in-car air, as they discovered they could make almost as much out of an air conditioner added to the price of a car as they were making from the sale of the car itself.

It wasn't until the mid 1970's when Japanese-made cars entered the Australian market that things began to change. Japanese air conditioning systems were imported by Hitachi, Unicla and National, sold by Mark IV. It took no time for these systems to dominate the lower value car market, and installation times fell to an incredible 45 minutes.

VASA is formed

Despite the growing size of the industry, it remained unorganised until some 20 years later when the Vehicle Airconditioning Specialists of Australasia, known as VASA, was formed.

In 1993, recognising the need for higher standards of practice in the specialised field of vehicle air conditioning, VASA was formed at the association's first AGM in Surfer's Paradise, Queensland.

Taking the helm as its inaugural president was Gold Coast business-owner Mark Mitchell, renowned for the success of the SuperCool Group, a retail market leader in automotive air conditioning. Mark's knowledge of the industry and the pressures it faced made him an obvious candidate for the position.

VASA quickly led the industry into an era of certified training for technicians, and a national movement towards a mono-refrigerant industry. Under Mitchell's presidency, VASA was able to project the image of a professional, well-run industry in the eyes of Government, original equipment manufacturers (OEMs) and non-government organisations.

Uncovering the past

Despite having stood down from the VASA presidency in 2004, Mitchell remains a passionate and active member of the industry. During his time with VASA, Mitchell introduced the Pioneer Awards in 1996, which recognises the contribution of the industry's early innovators, and

has recently urged VASA to document the history of vehicle air conditioning in Australia.

"All of us in this industry universally understand mobile air conditioning has attracted an amazing, colourful and interesting bunch of individuals. Going right back to the beginning, the individuals during the late 1940's and early 1950's set the scene for a succession of events and personal achievement that have been with us right up until today," says Mitchell.

"It is now not only a matter for the history books, but makes a magnificently powerful and interesting story."

While VASA has kept an excellent record of its Pioneer Awards, it occurred to Mitchell that there remain a number of discrepancies in how the history of the industry in Australia has been recorded.

He says a Google search of the history of mobile air conditioning in Australia reveals little more than some references to educational text books.

"One of the other searches I did was in our National

Archives. They have a wonderful website, and my extensive searches resulted in zero information about our industry, particularly the aftermarket," says Mitchell.

"The US National Archives does quickly tell us about the discovery of R12, the DuPont family and first Buicks and Packards with AC, but nothing about the people and businesses who built and developed our industry."

"I personally find this a sad state of affairs, and to make sure I was not alone, I have asked several people for their thoughts and have received very strong support and encouragement to do something about it."

As a result, VASA has committed to documenting the industry's history. It plans to build a 'historical timeline' from the pioneer records in Australia, and through seeking historical records and summaries from existing industry leaders.

VASA also plans to honour those individuals and companies who were the early pioneers of the industry, but may not be members of VASA, nor have received awards in the past.

"Once this is completed, we plan to file it with National Archives so it is on record forever."

Mitchell has also gained the support of the Mobile Air Conditioning Society (MACS) Worldwide US, who will also look to document the history of the American industry.

"Our history in Australia and New Zealand is so deeply intertwined with (the American) pioneers. The US historical timeline for mobile AC is extremely important to Australia and the rest of the world," says Mitchell, adding that he hopes once collated, this information will be filed with the US National Archives also.

"If we as an industry can't supply this information, then of course no-one else can."

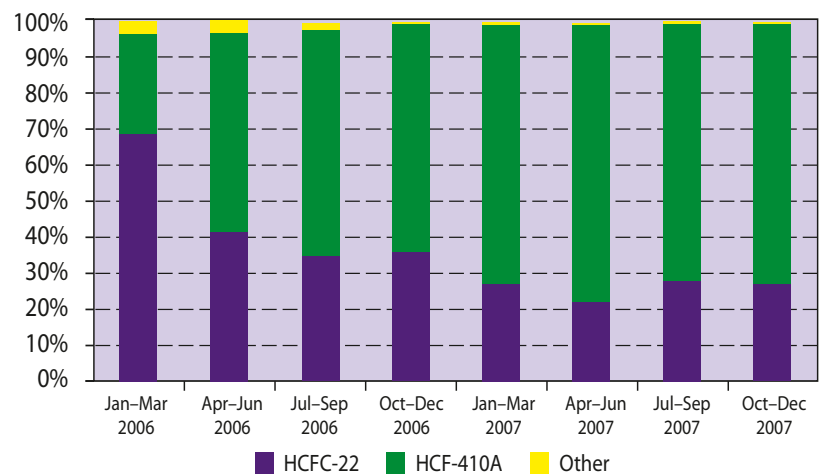
If you would like to add to VASA's documented history of vehicle air conditioning in Australia, contact VASA at secretary@vasa.org.au ▲

HVAC&R import statistics

Ever wondered how much HVAC&R equipment arrives in Australia each quarter or the number of units run on different refrigerants?

The following tables tell the story of the rise of R410A, the fall of R22 and the unrelenting increase in imports.

Single & multi head split system imports by refrigerant type



Number of units imported during quarter

Equipment Category	Jan-Mar 2007	Apr-Jun 2007	Jul-Sep 2007	Oct-Dec 2007
A/c – chillers	194	82	198	330
A/c – other	1485	1603	1964	2190
A/c – packaged – air cooled	3428	3876	2922	3232
A/c – packaged – window	15751	3825	31034	56647
A/c – packaged – water cooled	1554	1920	2524	329
A/c – refrigerated portable	7251	1276	21268	56147
A/c – split system – multi head	8155	5341	12001	17627
A/c – split system – single head	215149	88680	219010	362163
Refrigeration – commercial refrigerated cabinets	18984	12419	14461	20615
Refrigeration – domestic refrigerator and equipment	182912	158074	219125	267111
Refrigeration – other	20373	23688	31025	26301
Refrigeration – portable refrigerators	21786	22144	28827	23298
Refrigeration – self powered refrigerator	172	380	185	293
Vehicles – vehicles weighing less than 3.5 Tonnes gvm	159945	164944	159931	166831
Vehicles – vehicles weighing more than 3.5 Tonnes gvm	9243	9233	11038	10049
Refrigeration – vehicle powered refrigerator	1056	1572	2246	962

This information has been provided by the Department of the Environment, Water, Heritage and the Arts.