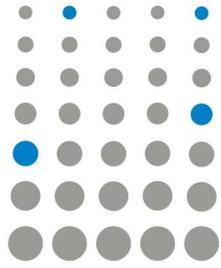


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MAC Improvement Activities in Australia

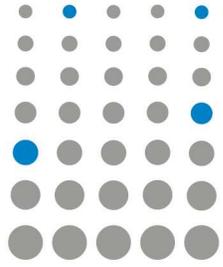
Steve Anderson, Executive Director,
Australian Fluorocarbon Council, MACs
Summit 2005, 15-16 March 2005, Sacramento
California



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MACs in Australia

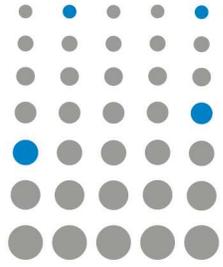
- ◆ Total vehicle fleet of approximately 14 million, about 75% airconditioned
- ◆ Average vehicle age 10.5 years
- ◆ Last year 1 million vehicles sold, close to 100% airconditioned



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Refrigerants

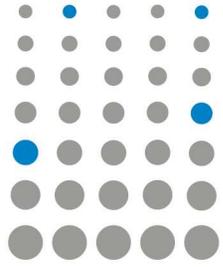
- ◆ Since 1994 all vehicles imported or manufactured use R134a
- ◆ Still a surprising amount of R12
- ◆ Some HC use in some states



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A Co-Regulatory Approach

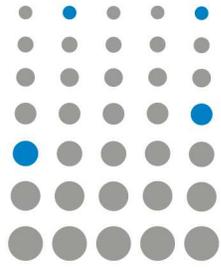
- ◆ Controls will be implemented by an industry board, under direction from the Federal Government
- ◆ Industry board will licence both technicians and workshops and OEMs, using agreed criteria
- ◆ Industry will also conduct audits and inspections



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Regulatory Background

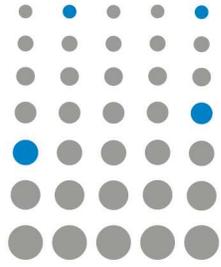
- ◆ Until recently, end use of ozone depleting substances only regulated by States
- ◆ Since December 2004 end use of all fluorocarbon refrigerants regulated by Federal Government



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Technicians

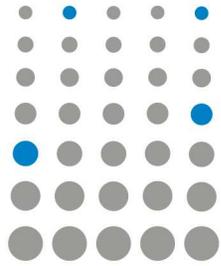
- ◆ Technicians will require a Refrigerant Handling Licence
- ◆ Requires a minimum skill level: Certificate 2 in Automotive (Mechanical Airconditioning), or demonstrate equivalent knowledge
- ◆ Product stewardship responsibility



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Workshops

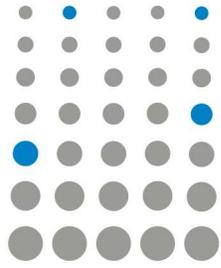
- ◆ Workshops will require a Manufacturing Authorisation
- ◆ Must have suitable premises, equipment and trained staff
- ◆ Product stewardship responsibility



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OEMs

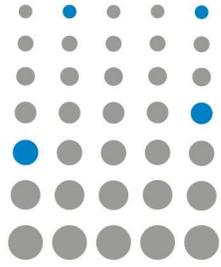
- ◆ Must have Refrigerant Manufacturing Authorisation
- ◆ Staff supervised by appropriately trained person
- ◆ Product stewardship responsibility



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Product Stewardship

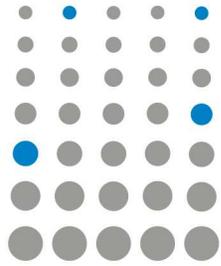
- ◆ Runs right through Australian system
- ◆ If you sell a good or service involving an FC refrigerant, you have to either accept its return or recover it, and ensure that it is safely destroyed.
- ◆ Preventable emissions involve heavy penalties



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Refrigerant Reclaim Australia

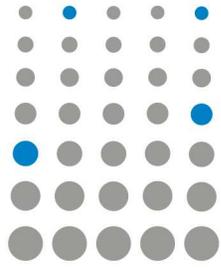
- ◆ Industry-managed, not-for-profit product stewardship program
- ◆ Financed by A\$1 per kg levy on all imported (no local manufacture) FC refrigerant
- ◆ Levy applies to refrigerant in bulk and in equipment



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Non HFC Refrigerants

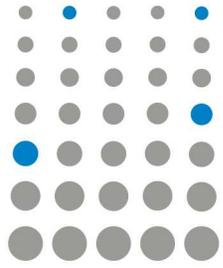
- ◆ HCs- use unquantified- strict controls in some states- retrofit illegal without written permission of OEM in Queensland, Northern Territory and Tasmania- illegal to place in MAC in NSW
- ◆ Uncontrolled in Victoria, West Australia, under consideration in South Australia



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Safety Issues with Retrofit

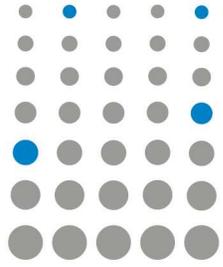
- ◆ Safety considerations continue to be unresolved
- ◆ Concerns heightened by recent 'safety demonstration'
- ◆ Development of Draft Code for Storage and Handling of Dangerous Goods



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R12- a Surprisingly Persistent Problem

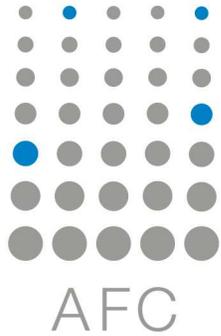
- ◆ VASA Survey- Southport, Queensland 2002- 19% of vehicles serviced contained R12, a further 25% had R12 mixtures



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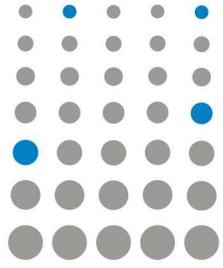
International Links

- ◆ Australia/US Climate Action Partnership
- ◆ Testing of 152a in extreme conditions
- ◆ Partners: Red Dot, Delphi, USEPA, Australian Fluorocarbon Council, Australian Greenhouse Office



In Summary: Australia's Strategy for MAC Improvement

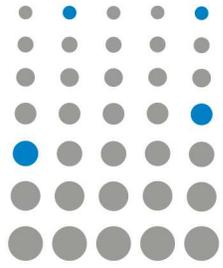
- ◆ Control access to refrigerants
- ◆ Train and certify technicians
- ◆ Use continuing education to keep up with international developments
- ◆ Set standards for both workshops and manufacturing operations



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Australian Strategy for MAC Improvement

- ◆ Push product stewardship obligations through every level of the system
- ◆ Provide economic incentives for product stewardship
- ◆ Don't forget R12



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And Finally...

- ◆ Put real effort and resources into compliance and enforcement