



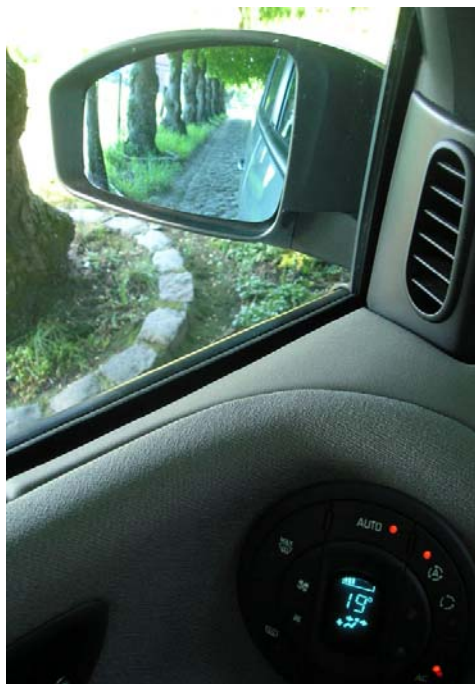
EFCTC NEWSLETTER

An update on fluorocarbons and sulfur hexafluoride

ISSUE 57 – May 2008

MOBILE AIR CONDITIONING: THE GREEN-MAC-LCCP MODEL, THE MOST CREDIBLE TOOL TO EVALUATE ENVIRONMENTAL PERFORMANCE

The [GREEN-MAC-LCCP](#) is peer reviewed, is accepted by equipments manufacturers, components suppliers, governmental organisations and other industry associations. It is therefore considered to be the most credible and the best available tool to evaluate the environmental performance of any [MAC](#) (Mobile Air Conditioning) System.



The GREEN-MAC-LCCP Model was developed and perfected by a global team of more than 50 world experts from the automotive industry, government, national labs, academia and other industry and non-governmental organisations. Experts of every competing technology are participating in the work. It is very comprehensive, incorporating data from Mobile Air Conditioner associations, the [US EPA](#), German and Japanese Automotive Association and European manufacturers.

The model allows the user to enter data obtained by any laboratory bench-test experimental set-up. Indeed a global equipments manufacturer's team came to a consensus that bench-test results currently are the most reliable source for AC system energy consumption.



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It is intended to submit the model for a [SAE International J Standard](#) (Society of Automobile Engineers - Ground Vehicle Standards) and it should become the global standard for measuring climate performance for vehicle AC regulations.

The model is under continuing development including the incorporation of vehicle-based test results. Refinements such as accounting for the difference between refrigerant leakage during complete charge release and when recovering the refrigerant for servicing, or between servicing by professional people and DIY (do-it-yourself) procedures have been included.

In March 2008, SAE requested regional information on how mobile air conditioning systems are used and serviced from the United Nations Environment Programme Division of Technology, Industry and Economics ([UNEP DTIE](#)) and national environmental authorities. Those data could further improve the GREEN-MAC-LCCP results.

Source : http://www.r744.com/news/files/green-mac-lccp_response_epa-gm-sae_apr2008.pdf

LETHAL PROPANE EXPLOSION IN A NEW ZEALAND SUPERMARKET

A propane fireball explosion in a New Zealand cold store close to the urban area of Hamilton, caused by a leak of the [hydrocarbon gas](#) used as a refrigerant, caused the death of a fireman and left six others seriously injured, one of them critically (having burns to 70 per cent of his body).



While the company had been granted the agreement in 2002 to build two new cold stores on the site, based on non-toxic and non-flammable [HCFC-22](#), apparently it decided to switch to propane for its refrigeration units, although experts opinion is that propane vapour explosion is one of the worst types of "[hydrocarbon ignitions](#)" due to its volatility.



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The plant director said the plant's safety systems were modern and fully compliant with standards.

After the accident the Environmental Risk Management Authority (ERMA) regulations could change, with the Institution of Professional Engineers of New Zealand planning a review of cold store refrigeration.

Source: http://www.nzherald.co.nz/feature/index.cfm?c_id=1501820

SIX TRAINING AND CERTIFICATION RULES IMPLEMENTING THE F-GAS REGULATION 842 (2006) JUST PUBLISHED

A second set of regulations as required by [the F-Gas Regulation 842/2006](#) have been published in the [Official Journal](#) (1), in which the Commission establishes [training and certification requirements](#) for companies and personnel handling F-Gases, and conditions for mutual recognition of qualifications between member states.

See also [Figaroo](#) for information on the implementation of the F-Gas Regulations and its practical significance.

The 6 regulations cover installation, maintenance and servicing of the different sectors concerned by the F-Gas Regulation and will all enter force on 23 April.

The Regulations are the following:

- Regulation 303/2008 for the certification of companies and personnel as regards **stationary refrigeration, air conditioning and heat pump equipment**.
A more detailed analysis of this Regulation can be found on [Figaroo](#).
- Regulation 304/2008 for the certification of companies and personnel as regards stationary **fire protection systems** and fire extinguishers.
- Regulation 305/2008 for the certification of personnel recovering F-Gas from **high-voltage switchgear**.
- Regulation 306/2008 for the certification of personnel recovering F-Gases based **solvents** from equipment.
- Regulation 307/2008 of 2 April 2008 for training programmes and training attestations for personnel maintaining **MAC systems** containing F-Gases.
- Regulation 308/2008 establishes the **format for notification** to the Commission of Member States training and certification programmes.

(1) *Changing the EN in the given URL gives access to the texts in other languages such as EL, ES, DE, FR, IT, NL, PL.*



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HFC BLOWING AGENT FOR AN AMERICAN ENVIRONMENTALLY FRIENDLY REEFER



New Super LT Reefer

Ahead of the [HCFC-22](#) ban in the US, an American trucks producer using Polyurethane foam to isolate its reefers has selected an HFC [blowing agent](#) for the foam. This foam system has an optimal thermal efficiency, giving the insulating foam an excellent cell structure and a low thermal conductivity. The insulation is also installed to be recyclable.

The PUR insulation is covered with a glass-reinforced liner designed especially for refrigerated trailers, where it completely seals the reefer's insulation - significantly reducing the traditional loss of insulation performance and extending the useful life of the trailer. The benefits of this feature are reduced operational costs through decreased cooling unit run-time, lower fuel consumption, reduced maintenance, which will extend the life of the cooling unit.

Source: Product Manufacturer