

E-Contaminator Newsletter

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Next Generation Refrigerants...Are They Really Coming and When?

The 2007 MACS show is just around the corner and the 2006 European AC conference is behind us by only a few weeks. This year, I had the pleasure to attend the EU Conference and listen to the OE's, Refrigerant Manufacturers and Component Suppliers discuss the "State of the State". After sorting through my notes and thinking about the presentations, I thought I would share a few of my impressions about where we are today and where we are going tomorrow.

The State of R134a

R134a prices have declined significantly from their highs in 2005. Refrigerant shortages never truly materialized as an influx of offshore product magically appeared in the North American market. Along with this decline in price has come a decline in the quality of some imported refrigerant. Mislabeled R134a was found at several major retailers this spring and R134a with high Non-condensable, excess moisture or mixed refrigerants were common in discount price product. With the exception of the questionable quality, the R134a market is back to status quo.

CO₂

CO₂ has been rumored for years to be the next refrigerant of choice for all European car manufacturers. In Europe, this technology has advanced greatly and it appears that several manufacturers may begin producing cars using CO₂ as their primary refrigerant. Don't expect to see these vehicles in the US market anytime soon though. There are still issues related to performance under severe climate conditions, OSHA safety concerns for service facilities (remember this refrigerant operates at 2000 PS I), and toxicity problems for the occupants of the passenger compartment.

DuPont, Honeywell & the Rest

Dupont, Honeywell and others have recently announced the development of new refrigerants with the intention of introducing these into the mobile air-conditioning marketplace. The refrigerants are blends designed to mimic the temperature and pressure of R134a with only minor impact on the environment when compared to R134a. The domestic car manufacturers as well as those in Japan have shown great interest in the development of these new refrigerants and we are all currently awaiting additional data concern toxicity and performance under environmental extremes. At this time it looks like it will be July 2007 before we can pinpoint which, if any, of these refrigerants may be in our future. Just in case you didn't know, R134a has a GWP of 1300 while CO₂ has a GWP of 0. The new refrigerants are targeting a GWP of less than 150.

Neutronics Website RefrigerantID.com Gets a Major Update!

In the next few weeks, RefrigerantID.com will get a major update. New content, new products, new links and new distributors will be up shortly so check back soon to get the great new resources!

New Standards from SAE for Recovery and Leak Detection

SAE J2788

The new SAE J2788 standard for R134a recovery has now been released. This new standard requires recovery machines to better evacuate the refrigerant from the system. Machines that meet this new standard will recover significantly more refrigerant from the vehicle allowing for more accurate charging and better performance. In addition a new standard requires greater accuracy during the charge cycle so that future vehicles with small amounts of refrigerant can operate at maximum efficiency. SAE J2788 was developed by the IMAC committee and approved in December of 2006. New recovery machines will be required to meet this standard beginning in December of 2007 although some recently introduced machines meet this standard today. For more information and a copy of the new standard please visit: http://www.sae.org/technical/standards/J2788_200612

SAE J2791

A new standard, SAE J2791 covering leak detectors is now in the works. This new standard will require electronic leak detectors to find smaller leaks with less false triggering from common underhood chemicals. In addition, the new standard is expected to require user selectable sensitivity to both, assist in pinpointing the leak source, as well as allowing the tool to be used on older vehicles that are not as sealed. The new standard is in the final stages of review and hopes to be issued during 2007.

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