

A Warning to Consumers about Hydrocarbon Refrigerants

Common Sense in Protecting the Environment Without Endangering Safety

Vehicle manufacturers, automotive parts suppliers, the United States Environmental Protection Agency (EPA), and other organizations are warning car and truck owners to avoid the use of flammable hydrocarbon refrigerants, which are being marketed on the Internet, at flea markets and swap meets, and in some service shops, but are not authorized for this use. In the United States, it is illegal to use hydrocarbon refrigerants to replace CFC-12 used in cars manufactured before 1994. Hydrocarbon refrigerants used in newer vehicles designed for refrigerant HFC-134a will void the air conditioner warranty and may endanger service technicians. Leaking air conditioning systems charged with hydrocarbons pose serious risks of fire or explosion under the hood or inside the passenger compartment.

“The U.S. EPA urges vehicle owners to do their part to protect the environment and to ensure their own safety by properly servicing air conditioners with refrigerants listed by EPA and recommended by vehicle manufacturers,” said Drusilla Hufford, Director of EPA’s Stratospheric Protection Division. “Professional service includes electronic refrigerant identification, leak testing, leak repair, defective parts replacement, and recovery and recycling of refrigerant.”

The Environmental Protection Agency (EPA), the Society of Automotive Engineers (SAE), the Mobile Air Conditioning Society Worldwide (MACS), and the vehicle manufacturers, automotive organizations and suppliers listed below agree that hydrocarbons are unsafe as refrigerants in vehicle mobile air conditioning systems designed for CFC-12 and HFC-134a.

“Existing mobile air conditioning systems are not designed to use a hydrocarbon refrigerant that is highly flammable and similar to what supplies the fire in your back yard barbeque.” said Ward Atkinson, Chair of the SAE Interior Climate Control Standards Committee.

Nineteen states and the District of Columbia have laws prohibiting the use of a flammable refrigerant in mobile air conditioning systems. (Arkansas, Arizona, Connecticut, Florida, Idaho, Iowa, Indiana, Kansas, Louisiana, Maryland, Montana, Nebraska, North Dakota, Oklahoma, Texas, Utah, Virginia, Washington, Wisconsin, and the District of Columbia).

The motor vehicle service community and environmental authorities are working to phase out the use of CFC-12 refrigerants that deplete the stratospheric ozone layer and to reduce the emissions of HFC-134a, a greenhouse gas. “Professional service protects the environment and saves money,” said Elvis Hoffpauir, President of the Mobile Air Conditioning Society, “Hydrocarbon refrigerants are dangerous products being sold to unsuspecting consumers.”

EPA has found no persuasive evidence that hydrocarbons are safe to use as refrigerants in vehicles designed for non-flammable refrigerants such as CFC-12 or HFC-134a. EPA banned

the use of hydrocarbon refrigerants as a replacement for CFC-12 under the authority granted by the Clean Air Act and has authority to take enforcement action to protect the public against companies violating the law.

Companies marketing hydrocarbon refrigerants point out that EPA lacks specific authority to prohibit the use of hydrocarbons to replace HFC-134a. They use this fact to argue that CFC-12 systems converted to an EPA-listed retrofit refrigerant such as HFC-134a can be safely converted to hydrocarbons. There is no evidence to prove that hydrocarbons are safe to use in mobile air conditioning systems designed for either CFC-12 or HFC-134a.

No vehicle manufacturer has endorsed or authorized the use of hydrocarbon refrigerants in current production mobile air conditioning systems and no professional or technical association has approved the use of hydrocarbon refrigerants. Vehicle warranties are voided for any air conditioning system that has been charged with hydrocarbons. Vehicle manufacturers only recognize HFC-134a as acceptable for use in their current mobile air conditioning systems. Easy identification by service technicians using sophisticated refrigerant identifiers will help avoid the risk of explosion and guard against the contamination of equipment when refrigerant is recovered and recycled.

“Every car has a manufacturer’s label under the hood that identifies the recommended refrigerant that is safe to use and that will provide reliable system operation.” said William Hill, General Motors. “Customers should only use the recommended refrigerant.”

“Manufacturers, owners and fleet managers of heavy trucks, buses, rescue and other specialty vehicles will want to take extra efforts to avoid hydrocarbon refrigerants that can endanger drivers and passengers.” said Dr. Alex Moultonovskiy, Vice President of ACC Climate Control.

“Off highway and large commercial vehicles require substantially more refrigerant than a passenger car. Use the refrigerant designed for the system--stay away from hydrocarbon refrigerants.” states Gary Hansen, Vice President of Engineering for Red Dot Corporation.

"The U.S. Army operates fleets of armored tactical vehicles equipped with air-conditioning," said John Manzione, Chief of the Environmental Technology R&D Team at Fort Belvoir, "But we would never jeopardize soldier safety by putting hydrocarbon refrigerants in our vehicles."

What Car Owners Can Do to Protect the Environment

- Service your A/C using quality parts and trained certified technicians.
- Insist that leaks be repaired before systems are recharged.
- Retrofit CFC-12 systems to HFC-134a.
- Service your HFC-134a air conditioner only with HFC-134a.
- Have your refrigerant tested for hydrocarbons if you suspect improper service.

This public service announcement is endorsed by the United States Environmental Protection Agency, the Society of Automotive Engineers, the Mobile Air Conditioning Society and supported by ACC Climate

Control, AGRAMKOW, AirSept, Association of International Automobile Manufacturers (Aston Martin, Ferrari, Honda, Hyundai, Isuzu, Kia, Maserati, Mitsubishi, Nissan, Peugeot, Renault, Subaru, Suzuki and Toyota), Audi, Australian Fluorocarbon Council, Behr, BMW, CalsonicKansei, DaimlerChrysler, Delphi, Federation of Automotive Products Manufacturers (Australia), Ford, General Motors, Goodyear, Institute for Governance & Sustainable Development, Manuli Automotive, Modine, Neutronics, Red Dot Corporation, RTI Technologies, Sanden, Spectronics Corporation Tracer Products Division, Transpro, U.S. Army, UView Ultraviolet Systems, Valeo, Vehicle Airconditioning Specialists of Australia, and Volvo Car Corporation.