



# SURFACE VEHICLE STANDARD

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(R) Standard of Purity for Recycled R-134a (HFC-134a) and R-1234yf (HFO-1234yf)  
for Use in Mobile Air-conditioning Systems

## RATIONALE

Refrigerant used in mobile air conditioning systems, under Federal Law, cannot be vented at service. The refrigerant can be recovered and generally be reused by using onsite recovery and recycling equipment that meet the appropriate SAE service equipment requirements. This SAE Standard identifies the level of purity of recovered and recycled refrigerant that can be considered acceptable for re-used in R-134a and R-1234yf mobile air conditioning systems.

### 1. SCOPE

This SAE Standard applies to:

- recycled R-134a refrigerant, used in servicing of motor vehicle air conditioning (A/C) systems that were designed for use with R-12 and have been retrofitted for use with R-134a;
- recycled R-134a refrigerant, used in servicing of motor vehicle air conditioning (A/C) systems that were designed for use with R-134a;
- recycled R-1234yf refrigerant, used in servicing of motor vehicle air conditioning (A/C) systems that were designed for use with R-1234yf.

Hermetically sealed, refrigerated cargo systems are not covered by this document.

#### 1.1 Purpose

The purpose of this SAE Standard is to establish the minimum level of refrigerant purity required for the certification of on-site recovery, recycling and recharging machines per SAE J2843 and SAE J2788.

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## 2. REFERENCES

### 2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

#### 2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

SAE J639	Safety Standards for Motor Vehicle Refrigerant Vapor Compression Systems
SAE J1771	Criteria for Refrigerant Identification Equipment for Use with Mobile Air-Conditioning Systems
SAE J2788	HFC-134a (R-134a) Recovery/Recycle/Recharging Equipment for Mobile Air-Conditioning Systems
SAE J2843	R-1234yf [HFO-1234yf] Recovery/Recycling/Recharging Equipment for Flammable Refrigerants for Mobile Air-Conditioning Systems
SAE J2844	R-1234yf (HFO-1234yf) New Refrigerant Purity and Container Requirements for Use in Mobile Air-Conditioning Systems
SAE J2845	R-1234yf [HFO-1234yf] and R-744 Technician Training for Service and Containment of Refrigerants Used in Mobile A/C Systems
SAE J2912	Performance Requirements for R-134a and R-1234yf Refrigerant Diagnostic Identifiers for Use with Mobile Air Conditioning Systems

#### 2.1.2 Other Publications

AHRI Standard 700C-2008: Appendix C to AHRI Standard 700 - Analytical Procedures for AHRI Standard 700-2006

## 3. PURITY SPECIFICATION

The refrigerant referred to in this standard, prior to its removal from a MAC system, shall have been identified with equipment certified to SAE J1771 for R-134a refrigerant or SAE J2912 for R-1234yf refrigerant as at least 98% pure, and SHALL HAVE been directly removed from, and intended to be returned to, a mobile A/C system that uses the specified refrigerant.