

	SURFACE VEHICLE RECOMMENDED PRACTICE	
	SAE	J1944 JAN2012
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Superseding J1944 SEP2000		
Truck and Bus Multipurpose Vehicle Windshield Washer System		

RATIONALE

Revised to include minor corrections, added references.

1. SCOPE

This SAE Recommended Practice provides the following for the windshield washer system for trucks, buses, and multipurpose vehicles with GVW of 4500 kg (10 000 lb) or greater:

- Minimum performance requirement
- Uniform test procedures. The test procedures are limited to those tests that can be conducted with uniform test equipment by commercially available laboratory facilities.
- Uniform terminology of windshield washer system characteristics and phenomena.

The minimum performance requirements and test procedures, outlined in this document, are based on currently available engineering data.

It is intended that all portions of the document will be periodically reviewed and revised as additional data on windshield washer system performance are developed.

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.

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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.

SAE J198	Windshield Wiper Systems—Trucks, Buses, and Multipurpose Vehicles
SAE J680	Location and Operation of Instruments and Controls in Motor Truck Cabs
SAE J726	Air Cleaner Test Code
SAE J942	Passenger Car Windshield Washer Systems
SAE J1037	Windshield Washer Tubing

2.1.2 ASTM Publication

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org

ASTM D 1149 Test for Accelerated Ozone Cracking of Vulcanized Rubber

2.1.3 TMC Publications

Available from Technology & Maintenance Council – American Trucking Associations, 950 N. Glebe Road, Arlington, VA 22203, Tel. 703-838-1763, <http://tmc.truckline.com>

RP 405B (T) Windshield Washer System Performance recommendations

RP 406C (T) Windshield Wiper System Performance recommendations

3. DEFINITIONS

3.1 WINDSHIELD WASHER SYSTEM

An apparatus for storing, filtering, and applying fluid to the exterior of the windshield glazing surface together with the necessary controls to actuate and arrest operations.

3.2 CONTROL

A means for actuating and arresting the operation of the windshield washer system. The actuation and arresting may be coordinated or semi-coordinated with components of the windshield wiper system or may be fully independent.

3.3 ACTUATION AND ARREST

A use of the controls which causes the windshield washer system to begin and cease operation.

3.4 FUNCTION (FUNCTIONAL)

Ability of the windshield washer system to both store and apply fluid to the windshield glazing surface.

3.5 PUMP

A device for transferring the washer solution from the reservoir through the washer system to windshield glazing surface.

3.6 RESERVOIR

A container capable of storing the washer solution.

3.7 WASHER SOLUTION

The fluid used in the washer system consisting of water or water with appropriate commercial additives.

3.8 COMMERCIAL ADDITIVES

Materials which are compatible with the system and which may be added to depress the fluid freezing point, assist in cleansing, and/or increase the wetting capacity of the washer solution.

3.9 LOW TEMPERATURE WASHER SOLUTION

A 50% solution of methyl or isopropyl alcohol and water for use with low temperature tests.

3.10 NOZZLE

A device for directing washer solution to the windshield glazing surface.

3.11 TARGET AREA

A design area on the windshield glazing surface to which the washer solution is directed by the nozzle, with the vehicle at rest.

3.12 DAYLIGHT OPENING (DLO)

The term "daylight opening" (DLO) refers to the maximum opening of any glass aperture which is unobstructed by moldings, masking, or framing.

3.13 WASH AREA

That portion of the windshield glazing surface within the DLO which is wiped when the wiper blade travels through a wiper cycle.

3.14 WIPER CYCLE

The movement of the wiper arm and blade from one extreme to the other and the return.

3.15 DURABILITY TEST CYCLE

The system actuation(s) required to deliver a minimum of 15 ml of washer solution within 30 s.

3.16 CLEANSER

Nonabrasive type that leaves no coating or residue on the glass.