SURFACE VEHICLE RECOMMENDED PRACTICE

J2349™ DEC2024

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Superseding J2349 NOV2012

Electric Windshield Wiper Switch - Trucks, Buses, and Multipurpose Vehicles

RATIONALE

Made minor corrections to sections 1.a. and 3.1.

SAE J2349 has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE

This SAE Recommended Practice establishes for trucks, buses, and multipurpose vehicles with GVW of 4500 kg (10 000 lb) or greater:

a. Minimum performance requirements for the switch for electrically or electro-pneumatically powered windshield wiping systems.

b. Uniform test procedures that include those tests that can be conducted on uniform test equipment by commercially available laboratory facilities.

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

It is the intent that all portions of the document will be periodically reviewed and revised as additional data regarding windshield wiping 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.

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 J258 Circuit Breaker - Internal Mounted - Automatic Reset

SAE J2348 Electric Windshield Washer Switch - Trucks, Buses, and Multipurpose Vehicles

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
SAE WEB ADDRESS: **http://www.sae.org**

For more information on this standard, visit
https://www.sae.org/standards/content/J2349_202412/

2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.2.1 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 J112 Electric Windshield Wiper Switch

SAE J198 Windshield Wiper System - Trucks, Buses, and Multipurpose Vehicles

SAE J553 Circuit Breakers

3. DEFINITIONS

3.1 ELECTRIC WINDSHIELD WIPER SWITCH

Part of an electric or electro-pneumatic windshield wiper system by which the operator of a vehicle causes the windshield wipers to function.

4. REFERENCE STANDARD

If the switch employs an internal circuit breaker(s), the circuit breaker shall comply with the requirements of SAE J258.

5. TEMPERATURE TEST

5.1 To insure basic function, the switch shall be manually cycled for 10 cycles at design electrical load at 24 °C ± 5.5 °C (75 °F ± 10 °F); 74, +0, –2.8 °C (165, +0, –5 °F); and –32, +2.8, –0 °C (–25, +5, –0 °F) after a 1 h exposure at each of these temperatures. The switch shall be electrically and mechanically operable during each of these cycles.

5.2 This same switch shall be used for the endurance test described in Section 6.

6. ENDURANCE TEST SETUP

6.1 The switch shall be set up to operate its design electrical load.

6.2 The test shall be set up to operate the switches for the prescribed number of completed cycles. One complete cycle shall consist of sequencing through each position from Lo, Medium (if applicable), Hi (with dwell in each position) and return with dwell in intermediate positions to the initial position. The test equipment shall be so arranged as to provide the following mechanical time requirements:

a. Travel Time - 0.1 to 0.5 s (time from one position to the next)

NOTE: If the switch employs a rheostat, the travel time through the rheostat segment in each direction shall be 1.0 to 3.0s.

b. Dwell Time - 0.50 to 1.0 s (time in each position)

NOTE: After switching to OFF, if a motor is used, sufficient dwell time shall be provided to allow the motor to park. The dwell time in OFF can then be greater (if required) than the dwell time range indicated previously.