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INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

SURFACE VEHICLE RECOMMENDED PRACTICE

An American National Standard

SAE J1167 | REV. JUL1998

Issued 1977-12
Revised 1998-07

Superseding J1167 JUN89

Motorcycle Stop Lamp Switch

Foreword—This document has also been changed to comply with the SAE Technical Standards Board Format. References were added as Section 2 and Definitions as Section 3. All other section numbers have changed.

1. Scope—This SAE Recommended Practice establishes test procedures and performance requirements for stop lamp switches intended for use in an AC or a DC circuit on motorcycles. In service use may impose specific conditions on the switch which can affect its functional life. Those conditions should be replicated, as necessary, during the testing described in this document to ensure the adequate functioning of the device.

2. References

2.1 Applicable Publications—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated, the latest revision of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available From SAE, 400 Commonwealth Drive, Warrendale, Pa 15096-0001.

SAE J213—Motorcycle Classification
SAE J575—Tests For Motor Vehicle Lighting Devices And Components

3. Definitions

3.1 A motorcycle stop lamp switch is a device used to energize the stop lamp circuit on a motorcycle with operator actuation of the brake control.

3.2 Motorcycle Classes—For motorcycle class definitions, see SAE J213.

3.3 For the tests described in this document, the switch shall be operated at 6.4 DC V for a 6 V circuit and 12.8 DC V for a 12 V circuit. These voltages shall be measured at the terminals.[1]

3.4 As used in this document, one cycle shall be defined as the energizing and de-energizing of the stop lamp circuit with the switch mechanism working throughout its designed travel and/or pressure.

1. If wiring is an integral part of the switch, the voltage drop measurement shall be made including 76 mm (3 in) of wire on each side of the switch.

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4. Temperature Test

4.1 To ensure basic function, the switch shall be operated for 10 cycles at design electrical load at each of the following temperatures:

24 °C ± 5.5 °C	(75 °F ± 10 °F)
74 °C + 0, –2.8 °C	(165 °F + 0, –5 °F)
–32 °C + 2.8, –0 °C	(–25 °F + 5, –0 °F)

This is to be done after a 1 h exposure at each temperature. The switch shall be electrically and mechanically operable during each of these cycles.

4.2 The voltage drop at the terminals[2] shall be measured before and at the end of this test. The voltage drop shall not, at either time, exceed the following values, using the average of three consecutive readings at design load:

6 V Circuit	0.30 V
12 V Circuit	0.40 V

4.3 This same switch shall be used for the endurance test described in Section 5.

5. Endurance Test—(See 4.3.)

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

5.2 The switch shall be operated for the number of cycles and at the temperature described in 5.4.

5.3 The voltage drop at the terminals(2) shall be measured before and at the end of this test. The voltage drop shall not, at either time, exceed the following values, using the average of three consecutive readings at design load:

6 V Circuit	0.30 V
12 V Circuit	0.40 V

5.4 The switch shall be capable of satisfactory operation during the following number of operations at 24 °C ± 5.5 °C (75 °F ± 10 °F):

Class A and D motorcycles—100 000 Operations
Class B and C motorcycles—50 000 Operations

6. Other Tests—The switch shall be subjected to the following tests in SAE J575 and shall meet the requirements therein. A separate switch from that used in Sections 4 and 5 may be used in each of the following tests:

3.4—Moisture Test
3.2—Corrosion Test

2. If wiring is an integral part of the switch, the voltage drop measurement shall be made including 76 mm (3 in) of wire on each side of the switch.

7. Notes

7.1 Marginal Indicia—The change bar (l) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

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