

Motorcycle Stop Lamp Switch – SAE J1167

SAE Recommended Practice
Approved December 1977

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Report of Motorcycle Committee approved December 1977.

1. Scope—This SAE Recommended Practice established test procedures and performance requirements for stop lamp switches intended for use on motorcycles.

2. Definition

2.1 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.

2.2 Motorcycle Classes—For motorcycle class definitions see SAE J213a (March, 1972).

3. Temperature Test

3.1 To ensure basic function, the switch shall be manually cycled for 10 cycles at design electrical load at:

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

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

3.2 This same switch shall be used for the endurance test described below.

3.3 The voltage drop at the terminals¹ shall be measured before and at the end of this test. The voltage drop shall not 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. Endurance Test

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

4.2 The test shall be set up to operate the switches for the prescribed number of completed cycles in paragraph 6.1. One complete cycle shall consist of energizing and de-energizing the stop lamp circuit with the switch movement working throughout its design travel.

4.3 The voltage drop at the terminals¹ shall be measured before and at the end of this test. The voltage drop shall not 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

4.4 During testing the switch shall be operated at 6.4 DC volts for a 6 V system and 12.8 DC volts for a 12 V system. These voltages shall be measured at the terminals.¹

5. Other Tests—The switch shall be subjected to the following tests in SAE J575F (April, 1975) and meets the requirements therein:

Section 4.2—Moisture Test

Section 4.4—Corrosion Test

6. Requirements

6.1 The switch shall be capable of satisfactorily operating the following endurance tests:

Class A and D motorcycles 100 000 operations at a temperature of 75±10°F (24±5.5°C).

Class B and C motorcycles 50 000 operations at a temperature of 75±10°F (24±5.5°C).

¹If wiring is an integral part of the switch, the voltage drop measurement shall be made including 76.2 mm (3 in) of wire on each side of the switch.

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