



SURFACE VEHICLE RECOMMENDED PRACTICE

J1192™

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Performance of Audible Warning Devices (Horns) for Motorcycles

RATIONALE

This document was revised as follows: The title was revised for clarity. The maximum height requirement for grass in the test area was eliminated. A section was added for definitions and other minor changes were made for conformity with SAE style and content guidelines.

FOREWORD

This SAE Standard establishes requirements and test procedures for the operational life, corrosion resistance, and sound pressure level output of motorcycle electric and electro pneumatic Audible Warning Devices (AWD). Test equipment, environment, and procedures are specified. Requirements for sound output after completion of life cycle and corrosion resistance tests, and a required minimum sound pressure level output as installed on the motorcycle are included. Two types of tests are specified: "Laboratory," to assess AWD durability, and "Vehicle," to assess AWD in-use acoustic performance.

1. SCOPE

The requirements of this document apply to all classes of motorcycles as defined in SAE J213.

1.1 Purpose

This document specifies performance and longevity requirements for motorcycle AWD's with the goal of enhancing the safety of vehicles and vulnerable road users.

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2. REFERENCES

2.1 Applicable Documents

The following standards contain provisions which, through reference in this text, constitute provisions of this recommended practice. At the time of publication, the editions indicated were valid. All standards are subject to revision, and users of this recommended practice are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

2.1.1 SAE Publication

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

SAE J184 Qualifying a Sound Data Acquisition System

SAE J213 Motorcycle Classifications

2.1.2 ASTM Publications

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 B117 Salt Spray (Fog) Testing

2.1.3 ANSI Publications

Copies of these documents are available online at <http://webstore.ansi.org/>

ANSI/ASA S1.4 PART 1/IEC 61672:1 American National Standard Electroacoustics - Sound Level Meters - Part 1: Specifications (a nationally adopted international standard)

ANSI/ASA S1.40 American National Standard Specifications and Verification Procedures for Sound Calibrators

3. DEFINITIONS

3.1 SHALL

A mandatory requirement.

3.2 SHOULD

Suggested or advisory, but not required.

3.3 MAY

Permitted, but not required.

3.4 Abbreviations

Audible warning device AWD

Direct current DC

Sound pressure level SPL

4. REQUIREMENTS

4.1 Component Level Requirements

4.1.1 Endurance

After completing the endurance test specified in 5.3.1, the AWD when tested per 4.2 shall produce a sound pressure level of at least 103 dB(A).

4.1.2 Salt Spray

After completing the salt spray exposure specified in 5.3.2, the AWD when tested per 4.2 shall produce a sound pressure level of at least 103 dB(A).

4.2 Vehicle Level Specifications

When tested on the motorcycle as specified in 5.4, the AWD shall produce a sound pressure level of at least 85 dB(A).

5. TEST METHODS AND PROCEDURES

5.1 General Instrumentation

The following instrumentation shall be used:

A sound level meter meeting the Type 1, Type S1A, Type 2, or Type S2A requirements of ANSI/ASA S1.4 -2014 / PART 1 / IEC 61672:1 or ANSI S1.4-1983 (R2006) or ANSI S1.4 1983. The meter shall be set on A weighting scale and fast response.

5.1.1 As an alternative to making direct measurements using a sound level meter, a microphone or sound level meter may be used with a recorder or other indicating instrument, provided the system meets the requirements of SAE J184.

5.1.2 A sound level calibrator with an accuracy of ± 0.5 dB conforming to ANSI/ASA S1.40-2006 (R2011) ANSI S1.40-1984 (R1997).

5.1.3 A windscreen which does not affect microphone response more than ± 1 dB for frequencies of 63 to 4000 Hz and ± 1.5 dB for frequencies of 4000 to 10 000 Hz.

5.1.4 An anemometer with steady-state accuracy of $\pm 10\%$ at 9 m/s (20 mph).

5.1.5 For additional general comments see Appendix A.

5.2 Component Level Tests

Perform off-vehicle tests using the facility, power supplies and sound measuring equipment noted as follows.