



SURFACE VEHICLE RECOMMENDED PRACTICE

J2005™

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Stationary Sound Level Measurement Procedure for Recreational Motorboats

RATIONALE

In order to be in harmony with ISO requirements, the ISO equivalent meter specification is being added as an alternate specification.

SAE J2005 has been reaffirmed to comply with the SAE Five-Year Review policy.

1. SCOPE

This SAE Recommended Practice establishes the procedure for determining if recreational motorboats have effective exhaust muffling means when operating in the stationary mode. It is intended as a guide toward standard practice and is subject to change to keep pace with experience and technical advances.

1.1 Purpose

This document specifies guidelines for stationary sound level measurements for boats with above-water exhaust systems.

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 ANSI Accredited Publications

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

ANSI S1.4 Specifications for Sound Level Meters

2.1.2 IEC Publications

Available from IEC Central Office, 3, rue de Varembe, P.O. Box 131, CH-1211 Geneva 20, Switzerland, Tel: +41 22 919 02 11, www.iec.ch.

IEC Standard 61672-1 Specifications for Sound Level Meters

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Documents

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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 +1 724-776-4970 (outside USA), www.sae.org.

SAE J34 Exterior Sound Level Measurement Procedure for Pleasure Motorboats

2.2.2 ANSI Accredited Publications

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

ANSI S1.1 Acoustical Terminology

ANSI S1.13 Methods for the Measurement of Sound Pressure Levels

3. INSTRUMENTATION

The following instrumentation shall be used for the measurement required:

- 3.1 A sound level meter which meets ANSI Standard S1.4 Type 1 or Type 2 Specification for Sound Level Meters, or
- 3.2 A sound level meter which meets IEC Standard 61672-1 Type 1 or Type 2 Specifications for Sound Level Meters.
- 3.3 A microphone windscreen that does not affect the overall reading by more than ± 0.5 dB(A).
- 3.4 A sound level calibrator (see 5.3).

4. PROCEDURE

4.1 Measurement Site

A suitable site is a body of water free of large obstructions or reflective surfaces such as buildings, boats other than those involved in this procedure, large embankments or breakwaters, etc., for a minimum distance of 3 m (10 feet) from the boat being measured. The boat being tested shall either be moored to a dock or lashed to another boat (see Figure 1). If the measurement is made from a dock, care should be taken to minimize the effect of sound waves reflected from the dock. If the measurement is made in open water, the boat being evaluated shall be lashed to the measurement boat to prevent relative motion and to allow positioning of the microphone in the prescribed location. The measurement boat shall be positioned to minimize reflected sound.