



SURFACE VEHICLE RECOMMENDED PRACTICE

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Sound Level of Highway Truck Tires

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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1. Scope

- 1.1 This procedure provides for the measurement of the sound generated by a test tire, mounted on a single-axle trailer, operated at multiple speeds.
- 1.2 The procedure describes test practices for both United States and International practices.
- 1.3 Specifications for the instrumentation, the test site, and the operation of the test apparatus are set forth to minimize the effects of extraneous sound sources and to define the basis of reported sound levels.

2. References

- 2.1 **Applicable Publications**—The following publications pertain to noise measurement and tire noise. The references not directly cited in the text are suggested background information for individuals performing tire noise testing.

- 2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J184—Qualifying a Sound Data Acquisition System

- 2.1.2 ANSI PUBLICATION—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ANSI S1.4 & S1.4A—Specification for Sound Level Meters

- 2.1.3 ISO PUBLICATION—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ISO 10844—Acoustics—Test surface for road vehicle noise measurement

- 2.2 **Related Publications**—The following publications are provided for information purposes only and are not a required part of this publication.

- 2.2.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE Publication SP-373—Truck Tire Noise

SAE Paper 740607—Effect of Road Surface and Bed Clearance on Truck Tire Noise, Thurman, G.R

SAE Paper 740606—Regulatory Implications of Truck Tire Noise Studies, Close, W.H.

SAE Paper 850969—Vehicle Sound Measurement—20 Years of Testing, Howell, T.M. and Schumacher, R.F.

SAE Paper 800282—Relative Influence of Pavement Texture and Tire Type on Pavement/Tire Noise, Osman, M.M. and May, D.N.

SAE P-70—Proceedings from the SAE Highway Noise Symposium, Nov., 1976

- 2.2.2 ACOUSTICAL SOCIETY OF AMERICA PUBLICATIONS—Available from Acoustical Society of America, 500 Sunnyside Boulevard, Woodbury, NY 11797-2999.

J. Acoust. Soc. Am., 76(4), October 1984, pp. 1150–1160, “Effects of Environmental Variables on Truck Noise Emission and Noise Propagation to Test Microphones,” Hemdal, J.F., Baker, R.N., and Saha, P.

J. Acoust. Soc. Am., Vol. 58, No. 1, July 1975, pp. 39–50, “Tire-Road Interaction Noise,” Leasure, W.A. and Bender, E.K.