

Australian Standard[®]

**Acoustics—Industrial trucks—
Noise measurement**

This Australian Standard was prepared by Committee AV/6, Acoustics — Machinery Noise. It was approved on behalf of the Council of Standards Australia on 28 April 1989 and published on 13 October 1989.

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Australian Compressed Air Institute
Australian Environment Council
Australian Federation of Construction Contractors
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Construction Equipment, Importers and Manufacturers of Australia
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PREFACE

This Standard was prepared by the Standards Australia Committee on Acoustics Machinery Noise in collaboration with the Standards Australia Committee on Industrial Trucks. It is based on Section 5 of the recommended practices manual published by the Australian Industrial Truck Association (AITA).

The methods of sound measurement in this Standard apply to both the operator position and the bystander position, and have been designed to meet consistent repeatability and reproducibility requirements and at the same time offer realism in the operating conditions of the trucks.

The Standard offers tests for the truck both in motion and stationary, but with lifting gear (where appropriate) in operation.

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STANDARDS AUSTRALIA

Australian Standard

Acoustics—Industrial trucks—Noise measurement

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard sets out methods for the measurement, at the operator's position and at specified positions of bystanders for the purpose of hearing conservation, of the sound emitted under normal operating conditions of counterbalanced and non-counterbalanced, sit-drive and pedestrian controlled lift-trucks, as defined in AS 1763 and AS 2359.1.

NOTES:

1. This Standard is not to be used for assessment of annoyance.
2. For additional information on Hearing Conservation see AS 1269.

1.2 REFERENCED DOCUMENTS. The following documents are referred to in this Standard:

AS	
1259	Sound level meters
1269	Hearing conservation
1763	Industrial trucks—Glossary of terms
2359	SAA Industrial Truck Code
2359.1	Part 1: Design and manufacture
2659	Guide to the use of sound-measuring equipment
2659.1	Part 1: Portable sound level meters

SECTION 2. MEASURING EQUIPMENT

2.1 METERS. Meters used to measure sound levels shall have an accuracy not less than Type 2 instruments complying with AS 1259.

2.2 FREQUENCY WEIGHTING. A-type frequency weighting, as defined by AS 1259, shall be used.

2.3 TIME WEIGHTING. S-type ('slow' on older instruments) time weighting, as defined by AS 1259, shall be used.

2.4 CALIBRATION. All component parts of the measuring system, including portable calibration devices, shall be calibrated over their full frequency and dynamic range and the configuration for calibration shall be in accordance with the manufacturer's instructions if available. A comprehensive recalibration by a suitably equipped laboratory shall be carried out at least every 2 years (see AS 2659.1 and AS 2659.2).

2.5 FIELD CHECKS. The performance of the instrumentation shall be checked periodically with a pistonphone, portable calibrator or other portable checking device appropriate to the sound level meter or other instrumentation system, and immediately before

and after measurements are made. For extended measurement periods, ideally these checks should be repeated at least four times during an entire day; however, the lapse of time between checks will depend on the type of instrumentation and its reliability. Except where the calibration signal cannot be excluded from the data, the instrument shall not be switched off between checks. In all cases, the operating instructions for the instrument shall be followed carefully. If the instrumentation system registers a discrepancy equal to or greater than 1 dB between consecutive checks, any measurements in the interval between the two checks shall be considered invalid.

2.6 WIND SCREEN. A wind screen attachment shall normally be used on the microphone. Compensating corrections shall be applied to the readings in accordance with manufacturer's instructions to allow for any influence by the wind screen.

2.7 RECORDS. The sound level readings recorded shall be the highest values obtained during each test operation of the vehicle, except that any peak which is due to other extraneous noise shall be ignored.