



SURFACE VEHICLE RECOMMENDED PRACTICE

J2530™

APR2016

Issued 2004-03
Revised 2016-04

Superseding J2530 NOV2009

Aftermarket Wheels - Passenger Cars and Light Truck - Performance Requirements and Test Procedures

RATIONALE

The marking stamp size was reduced by 0.2mm to match the DOT size. The marking includes rim size designation which adds the rim profile to the currently stated rim diameter and rim width. THE LARGEST OVERALL DIAMETER OF AN INSTALLED TIRE (CURRENTLY AN OPTIONAL MARKING) WAS DELETED. The wheel supplier definitions were added to include the added Importer of record, Remanufacturer, Vehicle manufacturer, and Wheel manufacturer, producer, or fabricator. Added minimum performance requirement to the definitions and added Kinstler SAE paper on the science and methodology of SAE Wheel fatigue test specifications. The test termination for the rotary fatigue test (section 6.5e) was clarified to provide wording to show repeated lug bolt failures are a reason for test termination and that the cause can be investigated and if not caused by the wheel, then the test can be invalidated.

1. SCOPE

This SAE Recommended Practice provides performance, sampling, and certifying requirements, test procedures, and marking requirements for aftermarket wheels intended for normal highway use on passenger cars, light trucks, and multipurpose passenger vehicles. For aftermarket wheels on trailers drawn by passenger cars, light trucks or multipurpose vehicles, see SAE J1204. These performance requirements apply only to wheels made of materials included in Table 1 and Table 2. New nomenclature and terms are added to clarify wheel constructions typically not used in OEM applications. The testing procedures and requirements are based on SAE standards listed in the references.

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 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 J175 Wheels - Impact Test Procedures - Road Vehicles

SAE J179 Labeling - Disc Wheels and Demountable Rims - Trucks

SAE J328 Wheels - Passenger Car and Light Truck Performance Requirements and Test Procedures

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2016 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
SAE WEB ADDRESS: http://www.sae.org

**SAE values your input. To provide feedback
on this Technical Report, please visit
http://www.sae.org/technical/standards/J2530_201604**

SAE J1204 Wheels - Recreational and Utility Trailer Test Procedure

SAE J1982 Nomenclature - Wheels for Passenger Cars, Light Trucks, and Multipurpose Vehicles

SAE paper 2005-01-1826 The science and methodology of SAE wheel fatigue test specifications by John Kinstler

2.1.2 Tire and Rim Association Publication

Available from Tire and Rim Association, 175 Montrose West Avenue, Suite 150, Copley, OH 44321.

Yearbook, The Tire and Rim Association, Inc.

2.2 Relationship of SAE Standard to ISO Standard

The following ISO standards provide test specifications for wheels which are comparable to this standard.

ISO 3006:1995 Road Vehicles - Passenger Car Wheels for road use - Test Methods

ISO 7141:1995 Passenger cars-Light alloy wheels-Impact test

ISO 3894:1995 Commercial vehicles- Wheels/Rims - Test Methods

3. DEFINITIONS

3.1 AFTERMARKET WHEEL

The classification used for wheels generally designed for fitment to multiple vehicle applications that may be sold to the general public subsequent to the initial purchase of such vehicles. Aftermarket wheels are sold as an intended replacement of OEM wheels provided for said vehicles.

3.2 FUNCTIONAL FASTENER

A connection device such as a bolt, rivet or wire spoke used to join together the individual components of the wheel assembly.

3.3 LUG BOLT/NUT

Hardware designed for securing the wheel to the vehicle.

3.4 OFFSET

The inset, zeroset or outset of the wheel as defined in SAE J1982 Figure 3 (noted in mm).

3.5 WHEEL LOAD

The maximum load rating of the wheel as specified by the wheel manufacturer and shall be no less than one-half of the vehicle static load of the heaviest axle (as specified by the vehicle manufacturer) of any vehicle for which the wheel is intended (as determined by the wheel manufacturer)

3.6 IMPORTER OF RECORD

U.S. [Customs](#) term for the [entity](#) responsible for (1) ensuring the imported [goods comply](#) with [local laws](#) and [regulations](#), (2) [filing a completed duty entry](#) and [associated documents](#), and (3) [paying](#) the assessed [import duties](#) and other [taxes](#) on those goods.

3.7 REMANUFACTURER

An identifiable and unique company that reworks or modifies an existing wheel including (1) refinishing, (2) subassembly, or (3) repairing to install back on a vehicle

3.8 VEHICLE MANUFACTURER

An identifiable and unique company, which manufactures and retails on-road vehicles (fitted with original wheel and tire assemblies) under the company's brand name(s)

3.9 WHEEL MANUFACTURER, PRODUCER, OR FABRICATOR

An identifiable and unique company producing a vehicle wheel from raw material into a final product with a unique part number and ready to be installed on a vehicle

3.10 WHEEL SUPPLIER

An identifiable and unique company selling wheels to the market using a specific design with a unique code, marking, and under a proprietary brand. Wheel supplier also applies as a general term to reference companies fulfilling any definitions per items 3.6 to 3.9

3.11 MINIMUM PERFORMANCE REQUIREMENT

A wheel design that meets or exceeds the pairing of test factor and cycle requirements in Tables 1 and 2 should have acceptable field performance in its intended service. The cycle requirements associated with 7 samples in Tables 1 and 2 represent historical, non-statistical, minimum performance requirements. Pairings of test factor and cycle requirements for sample sizes less than 7 represent equivalent confidence and reliability

4. WHEEL MARKINGS

Wheels that comply with this specification must be permanently marked with the following information. The characters shall be legible and the character size shall not be less than 3.0 mm high and impressed to a depth from the wheel surface or, at the option of the wheel manufacturer, embossed to a height from the wheel surface of not less than 0.125 mm.

- 4.1 Wheel supplier's name, trademark, symbol or brand.
- 4.2 Date of manufacture of the wheel, indicating the month and year, which may be either coded or specifically indicated.
- 4.3 Wheel supplier's part number or code.
- 4.4 Country of manufacture.
- 4.5 Rim size designation – Rim diameter, width, offset and rim profile (e.g. 16 x 7J IS44 for a 16 diameter, 7 wide, J profile and 44 inset wheel).
- 4.6 The manufacturer's wheel load rating as established by design validation testing to this specification expressed in lbs or kg.
- 4.7 The symbol "DOT", constituting a certification by the manufacturer that the rim complies with all applicable motor vehicle safety standards.

Following the symbol, "DOT", a designation which indicates the source of rim's published nominal dimensions as follows:

"T" indicates The Tire and Rim Association, Inc.

"E" indicates The European Tyre and Rim Technical Organisation

"J" indicates Japan Automobile Tyre Manufacturers Association, Inc.

"D" indicates Deutsche Industrie Norm