



SURFACE VEHICLE RECOMMENDED PRACTICE

J1561™

SEP2019

Issued 1988-10
Revised 2001-02
Reaffirmed 2019-09

Superseding J1561 FEB2001

(R) Laboratory Speed Test Procedure for Passenger Car Tires

RATIONALE

Committee recommends to reaffirm so that the method can be reviewed again within 5 years due to potential adoption by GTR.

Foreword—This document has also changed to comply with the new SAE Technical Standards Board format. Definitions changed to Section 3. All other section numbers have changed accordingly.

Having a standardized method of evaluating the speed capability of tires is useful in selecting appropriate tires for motor vehicles. This SAE Recommended Practice provides a laboratory method for determining the speed capability of passenger car tires under controlled conditions. The procedure is intended to provide a way of testing tires and gathering data on a uniform basis.

1. **Scope**—This SAE Recommended Practice provides a method for testing the speed performance of passenger car tires under controlled conditions in the laboratory on a test wheel. This procedure applies to “standard load,” “extra load,” and “T-type high-pressure temporary-use spare” passenger tires.
2. **References**—There are no referenced publications specified herein.
3. **Definitions**
 - 3.1 **Ambient Temperature**—This is the temperature of the air measured during a high-speed test at a fixed location near the tire. The fixed location of ambient temperature measurement is defined as a point on the rotational axis of the tire, 0.31 m (12 in) from the plane touching the nearest tire sidewall (or at a point where an equivalent temperature exists).
 - 3.2 **Bead Separation**—A breakdown of the bond between components in the bead area.
 - 3.3 **Capped Inflation Pressure**—The process of inflating the tire to a specified pressure and allowing the inflation pressure to build up, as the tire temperature increases during the test procedure.
 - 3.4 **Chunking**—The breaking away of pieces of the tread or sidewall.
 - 3.5 **Cord Separation**—The parting of cords from adjacent rubber compounds.
 - 3.6 **Cracking**—The parting within the tread, sidewall, or innerliner of the tire extending to cord material.
 - 3.7 **Innerliner Separation**—The parting of the innerliner from cord material in the carcass.

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3.8 Maximum Application Load—For tires having a designated speed category of 240 km/h (149 mph), V speed symbol: = 91% of the maximum load.

For tires having a designated speed category above 240 km/h (149 mph), Z speed symbol: =

95% of the maximum load - 250 km/h (155 mph) max

90% of the maximum load - 260 km/h (161 mph) max

85% of the maximum load - 270 km/h (167 mph) and above

3.9 Maximum Load—The maximum load that is molded on the tire sidewall or, if not molded, shown in the publication of a recognized tire standardizing body.

3.10 Ply Separation—The parting of rubber compound between adjacent plies.

3.11 Service Description—A service designation, which is distinct from the size designation, consisting of the load index and speed symbol.

EXAMPLE—P205/60R15 90H

P205/60R15 90V

3.12 Sidewall Separation—The parting of the rubber compound from the cord material in the sidewall.

3.13 Speed Category—A category assigned to a tire denoting the maximum speed for which the use of the tire is rated.

3.14 Tread Separation—The pulling away of the tread from the carcass.

4. Test Equipment

4.1 Test Wheel Specifications

4.1.1 DIAMETER—The diameter of the standard test wheel used for the high-speed test is 1.708 m (67.23 in). An optional test wheel of 2.0 m (78.74 in) diameter may be used with the alternate operation specified in 6.2.1.

4.1.2 WIDTH OF THE TEST SURFACE—This must exceed the tread width of the test tire.

4.1.3 OUTER SURFACE—Smooth steel.

4.2 Test Rim—It must have a contour and width as specified by a recognized standardizing body for the tire size to be tested.

4.3 Control Accuracy—Operating conditions must be maintained within the following accuracies:

- a. Test Load: $\pm 1\%$
- b. Speed: +2, -0 km/h (+1, -0 mph)

4.4 Instrumentation Accuracy

- a. Test Load: ± 20 N (5 lbf)
- b. Inflation Pressure: ± 4 kPa (0.5 psi)
- c. Temperature: ± 0.5 °C (1 °F)
- d. Speed: ± 0.5 km/h (0.3 mph)