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# SURFACE VEHICLE RECOMMENDED PRACTICE

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## Test Procedures for Measuring Truck Tire Revolutions Per Kilometer/Mile

***Foreword*—**This Document has not changed other than to put it into the new SAE Technical Standards Board Format. References were added as Section 2. All other section numbers have changed accordingly.

***1. Scope*—**This SAE Recommended Practice provides a test procedure for determining revolutions per mile for new truck tires.

***2. References***

**2.1 Applicable Publication—**The following publication forms a part of this specification to the extent specified herein.

2.1.1 TIRE AND RIM ASSOCIATION—Tire and Rim Association, 175 Montrose West Avenue, Suite 150, Copley, OH 44321.

Tire and Rim Association Yearbook

***3. Road Conditions*—**The test road shall be a 3.2 km (2 mile), reasonably level and straight section of dry pavement of consistent construction and surface, that is, concrete or blacktop. It should not have intermittent sections of each.

***4. Temperature*—**Ambient temperature for measuring, break-in, warmup, and test shall be between 4 and 32 °C (40 and 90 °F).

***5. Vehicle Preparation and Test Load***

**5.1 Tire Position—**Since most speedometers are actuated from the driveshaft, the tires to be tested should be installed on the drive wheel positions. The tires shall be a matched set of the same type and brand, having outer diameters within 0.5% of each other. Tires shall be run as singles on a test vehicle with single drive axle.

**5.2 Tire Load and Inflation—**The load on each tire shall be the maximum load for the load range (maximum single load for light truck and wide-base truck tires and maximum dual load for all others where there is both a single and dual load table) as given in the current Tire and Rim Association Yearbook. The tire inflation shall be the specified inflation pressure that corresponds to the load.





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**5.3 Tire Measurement—**The outside diameter of each tire is measured after being inflated at least 24 h at the ambient temperature specified previously and at the inflation pressure specified previously, and under no applied load.

**5.4 Break-in—**Prior to the test, the tires shall be conditioned by running a break-in schedule of 160 km ± 32 km (100 miles ± 20 miles) at approximately 96 km/h (60 mph) and then stopping for at least 3 h to allow the tire temperature to return to the ambient level.

**5.5 Test Speeds—**The revolutions shall be counted at 72 km/h (45 mph) using a fifth wheel for measurement of the test speed.

***6. Method of Test*—**Immediately prior to testing, the inflation shall be adjusted to the pressure specified previously with the tire at the ambient temperature. Tires shall be warmed up by running 30 min at 72 km/h (45 mph). After warmup, the inflation shall not be readjusted; the test is run with pressure buildup to duplicate normal service conditions. A measured course or calibrated fifth wheel may be used for distance determination.

Immediately run the test at 72 km/h (45 mph) over the test course, counting the tire revolutions required to traverse a 3.2 km (2 mile) distance, excluding the distance required for acceleration and deceleration. This determination is to be made twice in each direction of travel on the test course; total travel is 12.8 km (8 miles) .

In the event of the stoppage or interruption of the test, a tire warmup shall be run for 30 min at the test speed. Tire revolutions per mile at 72 km/h (45 mph) is derived by averaging the results of four runs which are within 1% of each other. If desired, revolutions per mile at other speeds may be determined by following the previously procedure.



PREPARED BY THE SAE HIGHWAY TIRE FORUM COMMITTEE