

SERVICE BULLETIN

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P-METRIC VS. EUROPEAN METRIC TIRE SIZE DESIGNATIONS

Two of the more common passenger tire size designation systems presently in use are the P-Metric and European Metric systems. The obvious difference in the size designation is the use of the prefix "P" for the P-metric size.

Example: P-metric designation - P195/70R14; Euro-metric designation - 195/70R14

The "P" indicates that the tire is designated as a passenger car size. The remaining characters in each of the referenced size designations are identical:

195 = Cross section width in millimeters

70 = Ratio of the section height to cross section width

R = Radial construction

14 = Rim diameter in inches

Standards for the P-metric system are developed and administered by the Tire and Rim Association Inc. (TRA) which has its headquarters in Copley, Ohio. This organization is composed primarily of domestic (U.S.) manufacturers of tires and rims. Standards for the European metric system are developed and administered by the European Tyre and Rim Technical Organisation (ETRTO) which has headquarters in Brussels, Belgium. As you would expect, this organization is composed primarily of European tire and rim manufacturers.

In comparing the standard tire dimensions, specifically design section width and design overall diameter (which relate to vehicle component clearance requirements), the P-metric and Euro-metric sizes are similar for the various tire sizes.

Continuing with our example, the following are design new tire dimensions:

<u>Tire Size:</u>	<u>P195/70R14</u>	<u>195/70R14</u>
Design Rim Width	6.00"	6.00"
Section Width	7.91"	7.91"
Overall Diameter	24.80"	24.80"

The most significant difference between systems involves variations in the load carrying capacity of correspondingly sized tires (P195/70R14 vs. 195/70R14). Generally, the maximum load carried by a P-metric size tire will be less than the correspondingly sized Euro-metric. This is the direct result of differences in the load formulas used by the respective TRA and ETRTO standardizing bodies.

In most instances, a Euro-metric size tire can be substituted for a corresponding P-metric size tire. This is because the tire dimensions are similar, and the Euro-metric has a greater load carrying capacity. These load capacity differences will be evident in the stamping information on the tire sidewall. The load capacity information stamped in the bead area, as well as the load index stamped on the sidewall near the tire size designation, will provide specific information between corresponding tire sizes.

Note the following example:

<u>Tire Size:</u>	<u>P195/70R14</u>	<u>195/70R14</u>
Design Inflation	240 kPa	250 kPa
Max. Load	1312 lbs.	1356 lbs.
Load Index	90	91

In determining a proper replacement tire for a passenger car, it is recommended that the RMA Replacement Guide for Passenger Car Tires be consulted. This guide will help you determine if a particular tire size can be substituted for another.

- Always refer to the vehicle owner's manual and vehicle tire information placard (located on the glove box door, door edge, or door post) for the correct tire size and inflation pressure.
- It is not always possible to select the same tire size for a replacement tire.

- If a tire size, other than those shown on the vehicle tire information placard, is desired or used, remember that replacement tires must have:
 1. Adequate load-carrying capacity - equal to or greater than required on the vehicle tire information placard.
 2. Inflation pressure capability - equal to or greater than the operating pressure specified on the vehicle tire information placard.
 3. Sufficient tire/vehicle clearance.

Again, it is recommended that you consult the RMA Replacement Guide for Passenger Car Tires to assist in determining and selecting the proper size replacement tire.

If you wholesale tires to other dealers (sub-dealers), each should receive a copy of this Service Bulletin. Please advise Cooper or your supplier of the number of Service Bulletins that are needed for your sub-dealers and we will provide them to you at no charge. You may order this Service Bulletin through the Consumer Relations Department, Cooper Tire & Rubber Company, Findlay, Ohio 45840.