

SERVICE BULLETIN

No. 107

TIRE MIXING

When tires need to be replaced, do not guess what tire is right for the vehicle. You must consult the tire placard, which is normally located on the vehicle door edge, door post, glove box or fuel door. The placard tells you the size of the tires (including the spare) that were mounted on the vehicle as original equipment (OE). It also includes the recommended cold inflation pressures for the front/rear axles and the spare tire as well as the load capacity. If the vehicle does not have a placard, check the owner's manual or consult with the vehicle manufacturer or tire manufacturer.

IMPORTANT: ALWAYS check the vehicle manufacturer's recommendations for the OE tire size, load capacity, inflation pressure, and speed symbol information before replacing a tire with a different size and construction. It is not always possible - usually due to temporary emergency conditions - to select the same tire size for a replacement tire. Never choose a smaller size replacement tire and/or a tire with less load carrying capacity than the specified size on the vehicle placard.

The RMA provides the following insight for emergency/temporary nonstandard fitments:

The following is a passage from the RMA Replacement Guidelines for Passenger & Light Truck Tires manual.

TIRE MIXING

- It is recommended that all four tires be of the same size, speed rating, and construction (radial, non-radial). In some cases the vehicle manufacturer may require different sized tires for either the front or rear axles. NEVER mix P-Metric or European Metric passenger tires with light truck sized tires on the same vehicle.
- Match tire size designations in pairs on an axle, except for temporary use of a spare tire. (See Cooper Service Bulletin #113 "Replacing Less Than Four Tires").
- If two radial tires and two non-radial tires must be used on a vehicle, put radials on the rear axle. If radial and non-radial tires are used on a vehicle equipped with dual rear tires, the radial tires may be used on either axle.
- **Speed rated tires**¹ - If the vehicle tire placard and/or owner's manual specify speed rated tires, the replacement tires must have the same or higher speed rating to maintain vehicle speed capability².

¹ Also, see RMA Tire Information Service Bulletin Vol. 25 *Speed Ratings for Passenger and Light Truck Tires*.

² Tire speed ratings do not imply that vehicles can be safely driven at the maximum speed for which the tire is rated, particularly under adverse road and weather conditions, or if the vehicle has unusual characteristics. Never operate a vehicle in an unsafe or unlawful manner.

- If replacement tires have lower speed capability than specified by the vehicle manufacturer, the vehicle's speed must be restricted to that of the replacement tire. Also, vehicle handling could be affected. Consult vehicle manufacturer or tire manufacturer for recommendations — and warn the consumer verbally and in writing that the speed must be restricted to the limits of the replacement tire.
- With the exception of winter/snow tires (see below), if tires with different speed ratings are used, it is recommended that lower speed rated tires should always be placed on the front axle. This is to prevent a potential oversteer condition.
- **Four-wheel drive (4WD) and All-wheel drive (AWD) vehicles** - If no instructions for tire mixing appear in the vehicle owner's manual, follow these guidelines:
 - DO NOT mix tire sizes. All four tires must be marked with the same tire size, unless otherwise specified by the vehicle manufacturer. This also applies to winter/snow tires.
 - DO NOT mix radial and non-radial tires. All four must be either radial or non-radial.
 - DO NOT mix tread pattern types such as all-terrain and all-season.
- **Winter/Snow tires³** - It is always preferable to apply winter/snow tires to all wheel positions, including duals, to maintain vehicle mobility and control. (See Cooper Service Bulletin #114 "Application of Winter/Snow Tires and Studded Winter/Snow Tires").

You can order additional copies of this Service Bulletin through the Consumer Relations Department, Cooper Tire & Rubber Company, Findlay, Ohio 45840 or call 1-800-854-6288. If you wholesale tires to other dealers (sub-dealers), each should receive a copy of this Service Bulletin.

Should you wish to order copies of RMA Replacement Guidelines for Passenger & Light Truck Tires manual, you should contact RMA at the following address:

RUBBER MANUFACTURERS ASSOCIATION
 PUBLICATIONS DEPARTMENT
 1400 K STREET, N.W.
 WASHINGTON, D.C. 20005
 PHONE 800-325-5095

³ Also see RMA Tire Information Service Bulletin Vol. 42 *Application of Winter/Snow Tires and Studded Winter/Snow Tires*.