

## Mismatching Tire Bead & Rim Diameters

**T**here is danger in installing a tire of one rim diameter on a rim of a different rim diameter.

Always replace a tire on a rim with another tire of exactly the same rim diameter designation and suffix letter.

For example a 16" tire goes with a 16" rim. **Never mount a 16" size diameter tire on a 16.5" rim.** While it is possible to pass a 16" diameter tire over the lip or flange of a 16.5" size rim diameter, it cannot be inflated enough to position itself against the rim flange. If an attempt is made to seat the tire bead by inflation, the tire bead will break with explosive force and could cause serious injury or death.

Various materials have been published on the importance of properly matching tire bead and rim diameters prior to attempting to mount the assembly. Listed below is a sampling of that material.

### **Bridgestone:**

#### **1. Technical Bulletin #T9104TD**

##### **Sec. V Tire and Rim Matching Importance**

Remember the importance of proper matching of tires and rims. In particular, special care must also be used in the mounting of any 16" diameter tire sizes, as well as the 15.5" and 17.5" sizes. The 16" size tire must be mounted only

on the approved 16" rims and not the 15.5" or 16.5" rims. In addition, any 15" size tire must be mounted only on approved 15" rims not on the 15.5" rim and any 17" size tire must be mounted only on approved 17" rims not on the 17.5" rim.

If mounting of a 15" diameter tire is attempted on a 15.5" rim, or a 16" tire is attempted to be mounted on a 16.5" rim, or a 17" tire is attempted to be mounted on a 17.5" rim, serious injury or death may result.

#### **2. Tire Label Safety Warning**

##### **Safety Warning**

- Serious injury or death may result from an explosion of tire/rim assembly due to the use of excessive pressure during mounting.
- Never exceed 40 psi (275 kpa) to seat beads. After beads are seated, adjust inflation to pressure recommended by vehicle manufacturer.
- During tire inflation, always have assembly secured, stand clear, and use remote controlled clip on air hose.
- Only specially trained persons should mount tires.
- Mount only on 16 inch\* diameter rims.

*\*Warning: Varies by tire size.*

### 3. Molded Sidewall Safety Warning

#### Safety Warning: Serious Injury may result from:

- Tire failure due to inflation/overloading — follow owner's manual or tire placard in vehicle.
- Explosion of tire/rim assembly due to improper mounting — never exceed 40 psi (275 kpa) to seat beads — mount only 16 inch diameter rims\* — only specially trained persons should mount tires.

\*Warning: Varies by tire size.

### Rubber Manufacturer Association (RMA)

#### 1. Care and Service of Automobile and Light Truck Tires \*

\* Copies from the RMA material can be ordered from:  
Rubber Manufacturers Association  
1400 K Street N.W.  
Washington, D.C. 20005

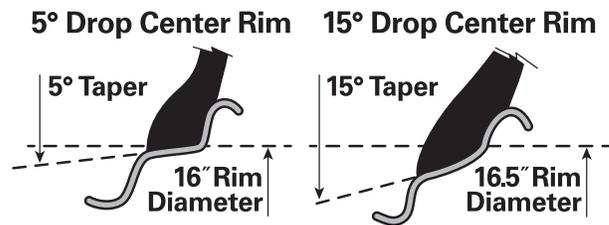
### WARNING

There is danger in installing a tire of one rim diameter on a rim of a different diameter.

Always replace a tire on a rim with another tire of exactly the same rim diameter designation and suffix letter.

For example a 16" tire goes with a 16" rim. Never mount a 16" size diameter tire on a 16.5" rim. While it is possible to pass a 16" diameter tire over the lip or flange of a 16.5" size rim diameter, it cannot be inflated enough to position itself against the rim flange. If an attempt is made to seat the tire bead by inflation, the tire bead will break with explosive force and could cause serious injury or death.

Rims of a different diameter and tapers cannot be interchanged. The following diagram illustrates the difference between rims of two different tapers and diameters:



The following diagram shows how the beads of a 16" tire will not seat on a 16.5" rim. The beads cannot be forced out against the rim flanges by using more air pressure, because this will break the beads and the tire will explode.



Mismatching Tire Bead & Rim Diameters **2/3** continues >>>

### WARNING

**Never inflate beyond 40 pounds pressure to seat beads.**

**Never stand, lean or reach over the assembly during inflation.**

Inspect both sides of the tire to be sure that the beads are evenly seated. If tire mounted on a machine that does not have a positive lock-down devices to hold the wheel, inflation should be done in a safety cage. If both beads are not properly seated when pressure reaches 40 pounds, completely deflate the assembly, reposition the tire and/or tube on the rim, relubricate and reinflate. Inflating beyond 40 pounds air pressure when trying to seat the bead is a DANGEROUS PRACTICE that may break a tire bead (or even the rim) with explosive force, possibly resulting in serious injury or death. After the beads are fully seated, pressure may be increased above 40 psi to operating pressures, not to exceed the maximum labeled on the tire sidewall.

### WARNING

**Serious Injury May Result From:**

- **Tire failure due to underinflation/overloading – follow owner’s manual or tire placard in vehicle;**
- **Explosion of tire/rim assembly due to improper mounting – only specially trained persons should mount tires.**

### WARNING

**Tire changing can be dangerous and should be done by trained personnel using proper tools and procedures. Always read and understand any manufacturer’s warning contained in their customer’s literature or molded into the tire sidewall.**

Failure to comply with these procedures may result in faulty positioning of the tire and/or rim parts, and cause the assembly to burst with explosive force, sufficient to cause serious physical injury or death. Never mount or use damaged tires or rims.

**2. “Demounting and Mounting Procedures for Automobile Tires” (Wallchart)\***

**3. “Tire Replacement Guide for Light Trucks” (Wallchart)\***

### Consumer Inquires:

If questioned by a consumer on this matter, it is recommended that you stress the following areas:

1. Bridgestone tires are designed with adequate strength to withstand mounting and demounting stresses when correctly matched to rims of the correct diameter.
2. All Bridgestone 16” and 16.5” tires carry a safely warning permanently molded into the tire sidewall which directs trained personnel to mount only the approved matching rim (example: “Mount only on 16 inch diameter rims.”)\*

*\*Warning: Varies by tire size.*