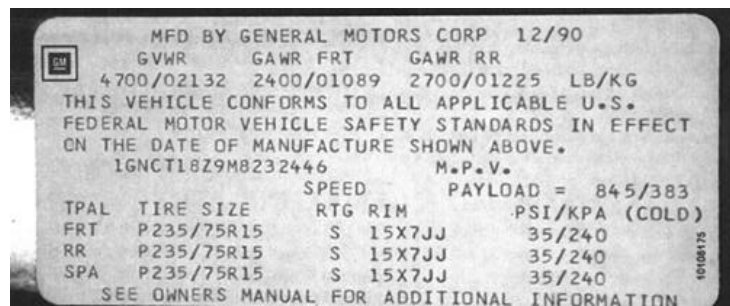


## Selecting Replacement Tires

### Procedure: Inspect the vehicle

Determine the following:

1. Original equipment size. Check the tire decal in the vehicle or the vehicle owner's manual for the O.E. tire size recommended by the vehicle manufacturer. If your customer's vehicle has been modified, refer to the other methods of substitution and inflation in this guide.
2. Identify from the vehicle owner's manual any tire type, tire size, and/or speed rating restrictions that could adversely affect the operation of the vehicle.
3. Recommended tire inflation pressure. This information can be found along with the O.E. tire size.
4. Rim size: Check the size of the rim on which you will mount the replacement tire. If the size has not been stamped on, the rim should be measured.



### Passenger Tires on Light Truck Vehicles

When a passenger car tire is fitted to a light truck (pick-ups, vans, mini-vans and sport utility vehicles), the rated load-carrying capacity of the tire must be reduced because these vehicles often experience more severe service situations. If you examine the vehicle's tire placard and determine that passenger car tires were original equipment on the vehicle, the vehicle manufacturer has already reduced the tire load to what appears on the placard.

On the other hand, if the vehicle's tire placard indicates that the vehicle's original equipment fitment was a light truck tire, and the customer requests a passenger tire replacement, you must reduce the rated load shown on the tire sidewall as follows:

**FORMULA:**

$$\frac{\text{Rated load}}{1.1} = \text{Reduced load for light trucks}$$

(approximately 91% of rated load)

**EXAMPLE:**

If you have a P235/75R15XL with a rated load of 2183 at 41 psi that you want to use on a light truck, you would reduce the rated load by dividing it by 1.1.

$$\frac{2183}{1.1} = 1985 \text{ at 41 psi}$$

Remember to reduce the passenger tire rated load before considering the passenger tire as a replacement for the O.E. tire. If the vehicle comes equipped with load range “D” or “E” light truck tires, you will find it impossible or impractical to consider passenger tires as replacements because they do not have sufficient load capability.

### Tire Size and Maximum GAWR For Light Truck Applications

Maximum Vehicle GAWR	Flotation	LT Metric	Metric & LT Numeric	Metric & P-Metric
6960	35x12.50R17/C			
6960	37x12.50R17/D			
6830		LT265/75R16/E		
6830		LT295/75R16/D		
6770	35x12.50R16/D			
6610		LT285/75R16/D		
6340			9.50R16.5LT/E	
6084		LT235/85R16/E		
6084		LT245/75R16/E		
6000		LT255/85R16/D		
5860	33x12.50R16.5/D			
5820		LT315/70R15/C		
5560			7.50-16/E	
5560			9.50R16.5LT/D	
5510		LT235/75R15/E		
5360		LT255/70R16/D		
5360		LT215/85R16/E		
5360		LT225/75R16/E		
5246		LT235/85R16/D		
5246		LT245/75R16/D		
5240	33x10.50R15/C			
5110	35x12.50R15/C			
5070		LT245/70R16/D		
5070		LT285/70R15/C		
5070		LT315/75R16/C		
5060	32x11.50R15/C			
5020	33x9.50R15/C			
4940		LT265/75R16		
4940		LT265/70R17/C		
4700			8.75-16.5LT/D	
4700			8.75R16.5/D	
4700			9.50R16.5	
4670		LT225/75R16/D		
4660			8.00-16.5LT/E	
4620			7.50-16/D	
4620			7.50R16LT/D	
4540		LT285/60R16/C		
4500	31x10.50R15			
4450	33x12.50R15/C			
4410		LT245/75R16/C		
4390		LT345/55R17/C		
4360		LT215/85R16/D		
4230		LT345/55R16/C		
4190		LT215/75R15/D		
4190		LT325/60R15/C		
4120			7.50-16	
4120			7.50R16	
4090			8.00-16.5LT/D	
4080			7.00R15/D	P255/70R16
4080				P245/75R16
3980	30x9.50R15LT			
3980			8.75-16.5LT/C	
3980			8.75R16.5	
3970		LT235/75R15/D		
3970		LT235/70R16/C		
3929				P235/75R15/XL
3880		LT215/85R16/C		
3880		LT225/75R16/C		
3750		LT225/70R16/C		
3750		LT245/65R15/C		
3748			185/75R14	
3748			185R14/D	
3680		LT315/55R16/C		
3650	29x9.50R15LT/C			P235/75R15
3640				P225/75R16
3571				P235/70R16
3571	31x10.50R15LT/B			
3550		LT215/75R15/C		
3530		LT215/70R16/C		
3460			8.00-16.5LT/C	
3460			8.00R16.5	
3420		LT195/75R14/D		
3418			185R14/C	
3373				P225/75R15
3136				P215/75R15
3130			175R14/C	
3120			9-15/B	
3040	27x8.50R14/C	LT195/75R15/C		
3030				P205/75R15
2876		LT195/75R14		
2870				P205/75R14
2758				P205/70R14
2698				P195/75R15
2659				
2653			185R14/RF	
2520				P195/75R14

\*When passenger car tires are used on light trucks, the rated load-carrying capacity of the tire is reduced by dividing by a factor of 1.1 because of the severe service often encountered by light trucks. (See the important size and load carrying considerations section of this guide for more information.)

Note: Tires selected using this method are the smallest suitable for the weight of the vehicle and must be inflated to their maximum inflation pressure.

## **Tire Mixing**

We recommend that all tires on a vehicle comply with the vehicle manufacturer's recommendations as defined on the vehicle's tire placard or certification label. Deviations from that recommendation must be done with care. Unless the vehicle was originally equipped with different sizes on the front and rear axles, all tires on the vehicle should be of the same size, tread design, speed rating, load capacity, and construction...radial or non-radial. If tire mixing cannot be avoided, the following guidelines are provided to help you ensure your customers' safety.

## **Tire Replacement**

Replacing a single tire on a vehicle can have an adverse affect on suspension systems, gear ratios, transmission and tire treadwear. If single tire replacement is unavoidable, follow these guidelines:

- If a fairly new full-size spare is available, pair it with the new tire and place both on the rear axle.
- If no full-size spare is available or is fairly worn, it is recommended that two new tires be mounted on the rear axle.
- If it is impossible to obtain two new replacement tires, it is recommended that the single new tire be paired with the deepest tread tire from the vehicle and both be placed on the rear axle.

**CAUTION:** Significant differences in tread depth may contribute to handling and/or mechanical problems. Consult vehicle manufacturer.

Except when replacing with only two lower speed rated tires (see below), two new replacement tires, two new replacement tires should be installed on the rear axle.

## **Sizes**

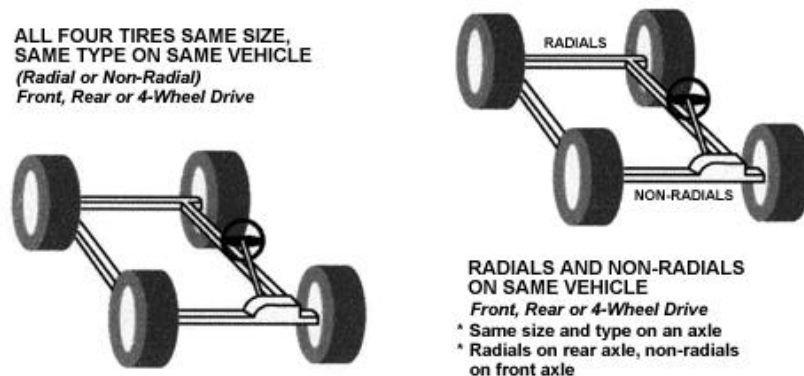
If it is necessary to mix tire sizes on a vehicle, the size of the tires on the same axle **MUST** be the same. Vehicles equipped with ABS, traction control, four wheel drive, and all wheel drive systems **MUST** have equivalent tire size on all wheel positions. The only exception is when a temporary spare is in use.

## **Speed Ratings**

If tires of different speed ratings are mounted on a vehicle, it is recommended that the lower speed-rated tires be placed on the front axle regardless of which axle is driven. This is to prevent a potential oversteer condition. Vehicle handling may be adversely affected and the vehicle's speed capability is now limited to the lowest speed-rated tire.

## Radial and Non-Radial

If two radial and two non-radial tires are to be installed on a vehicle, the two radials **MUST** be installed on the rear axle and the two non-radials on the front axle. If the vehicle has dual rear wheels, two radials could be used on the front and four non-radials on the rear. Another acceptable option may be to install two non-radials on the front axle and four radials on the rear axle.



## Vehicles Equipped with ABS, Traction Control, and All Wheel Drive Systems.

All four-wheel positions must be equipped with the same tire size to insure ABS, traction control, and all wheel drive systems function properly.

## Four-Wheel Drive

If no instructions for tire missing appear in the vehicle owner's manual, adhere to the following guidelines:

- Do not mix sizes. All four tires must be branded with the same tire size.
- Do not mix radial and non-radial tires. All four tires must be either radial or non-radial.
- Be sure that the outside circumference of all four tires is within one and one-half (1-1/2) inches of each other.
- Do not mix tread pattern types such as all-terrain's and all-season.

## Winter Tires

It is recommended that winter tires be applied on all four positions.

It is acceptable to install winter tires only on the rear position of a rear wheel drive vehicle.

If winter tires are installed on the front position of any vehicle, they **MUST** also be installed on the rear position. Without winter tires on the rear vehicle handling can be adversely affected. This may result in loss of vehicle control, which could cause serious injury or death.

### **Studded winter Tires**

Studs should only be installed in new tires molded for studs. Never insert studs in a used tire (even if only slightly used). Consult tire manufacturer for proper stud size.

It is acceptable to install studded winter tires only on the rear position of a rear wheel drive vehicle.

If studded winter tires are installed on the front position of any vehicle, they **MUST** also be installed on the rear position. Without studded winter tires on the rear, vehicle handling can be adversely affected. This may result in loss of vehicle control, which could cause serious injury or death.

**NOTE:** Most states maintain regulations for the application of studded tires. Before mounting studded tires to your customers' vehicles, be sure to check the regulations in your area.



**Warning:** Improper chain type or size may damage the sidewall of a tire, causing failure.