Welcome! This module will help you understand the purpose and meaning of the information you find on the sidewalls of truck tires.

Overview
We will focus on *Tire Size, DOT (or Department of Transportation) Number, *Load and Construction Information, *Safety Warning, *Colored Dots, and *Tread Wear Indicator.

Tire Size Section
What do those numbers mean in the Tire Size section of the tire? The first is Nominal Section Width – On low profile tires, section width will usually be in millimeters, as in this case, “295”. On tall profile tires, nominal section width will be in inches, as in the "11" in "11R22.5". Aspect Ratio – Describes the shape of the cross section. *R indicates Radial construction *Nominal Wheel Diameter in inches*

Aspect Ratio
Aspect Ratio

Low profile tires might be 80, 75, 70, 65, or even 60.
Tall profile tires are considered to have 90 or 100.
The lower the aspect ratio is, the lower the sidewall height.

Narration: Aspect Ratio equals Nominal section height divided by Nominal section width times 100. Typical aspect ratios for low profile tires might be 80, 75, 70, 65, or even 60. *Tall profile tires are considered to have an aspect ratio of 90 or 100. *The lower the aspect ratio is, the lower the sidewall height. *

Radial Construction
Narration: "R" indicates Radial Construction. Nominal Wheel Diameter in inches is measured from bead seat to bead seat, which is approximately the diameter of the hole in the tire. *

D.O.T. Number
Narration: Next is DOT, or Department of Transportation, Number, which can be found in this area of the tire.

D.O.T. Number
Narration: All tires used on U.S. highways must display a D.O.T. number. *Retreads must display a retread D.O.T. number, which starts with "R" instead of "D.O.T. The Manufacturing Codes are the next three set of numbers/letters. *Digits 1 and 2 indicate manufacturer and plant. *Digits 3 and 4 are a tire size code. *Digits 5, 6, and 7 are for optional use. The last group is Manufacturing dates. *The manufacturing date can be very important in determining whether a tire is in warranty, or in deciding whether or not to retread. *Digits 8 and 9 in this series designate the week, so 1-53, of the year and in this case it’s the 36th week. *The last two digits in this series, or digits 10 and 11, represent the last digits of the year of manufacturing, so in this case it’s 2012. *

Load & Construction
Narration: Load and Construction information is found in this area of the tire.*

Ply Rating/Load Range
Narration: Ply Rating/Load Range: The chart shows the relationship between load range and ply rating (PR). These designations provide a relative indication of maximum inflation pressure and the corresponding maximum load for which a tire is designed. Also sometimes considered an indicator of relative casing strength.

Load Ratings
Maximum Load Ratings: Maximum loads depend on inflation pressure and on whether the axle has a single tire and wheel assembly, or duels (two bolted together). Dual load ratings are somewhat lower than single ratings to compensate for typical mismatching of inflation pressure, as well as momentary overloading if the tires encounter an uneven road surface. Do not exceed the load or inflation pressures shown on the tire sidewall. Lower inflation pressures may be used, but only with lighter loads. More detail is provided in manufacturer’s load and inflation tables. * “Cold” means that the tire has been run less than one mile during the past 4 or more hours. On an extended trip in hot weather, heat can cause tire pressures to rise by as much as 15 to 20 percent. * Description of Graphics, Functionality and Copy Show graphic similar to one below that was provided.

Construction Information
Construction Information: In this example, a single steel body ply runs from bead to bead. The sidewall, therefore, has one steel ply. Four steel belts are added between the body ply and the tread to make a total of five steel plies in the tread area.

Safety Warning Information
The Safety Warning Information can be found in this location on the tire. *

Yellow Dot
What is the dot for on a tire? You can help minimize the amount of weight needed to balance a tire and wheel assembly by mounting the tire so that its light balance point is matched up with the wheel’s heavy balance point. *All new Bridgestone truck and bus radials are factory-marked with a yellow dot at the light balance point. Generally, the heavy balance point of a wheel is at the location of the valve stem. This is true regardless of whether the wheel is steel or aluminum. For best initial balance, match yellow dots to valve stems.

Tread Wear Indicator
This is a tread wear indicator and is for maintenance purposes. A strip of rubber runs across the face of the tread that is the same depth as the minimum legal limit. There are usually 6-8 tread depth indicators around the edge of the tire. When using your tread depth gauge, avoid this area of the tire. *

Thank You!
Narration: Thank you for viewing “Truck Sidewalls”

Question #1
What does the first number in the Tire Size section of the tire indicate?

- a. Load Range
- b. Manufacturing Code
- c. Aspect Ratio
- d. Nominal Section Width

Question #2

True or False: All tires used on U.S. highways must display a D.O.T. number.

- a. True
- b. False
Question #3

Why is manufacturing date important in regard to tire safety?

- a. Determining whether a tire is in warranty
- b. Manufacturing dates must match vehicle manufacturing dates
- c. Deciding whether or not to retread
- d. a and c
- e. All of the above

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Question #4
Maximum load depends on which of the following:

- a. Inflation pressure
- b. Whether the tire has a single tire and wheel assembly
- c. Whether the tire has duals (two assemblies bolted together)
- d. All of the above

Question #5

How many tread depth indicators can usually be found around the edge of a tire?

- a. 6-8
- b. 10-12
- c. 2-4
- d. 1-2