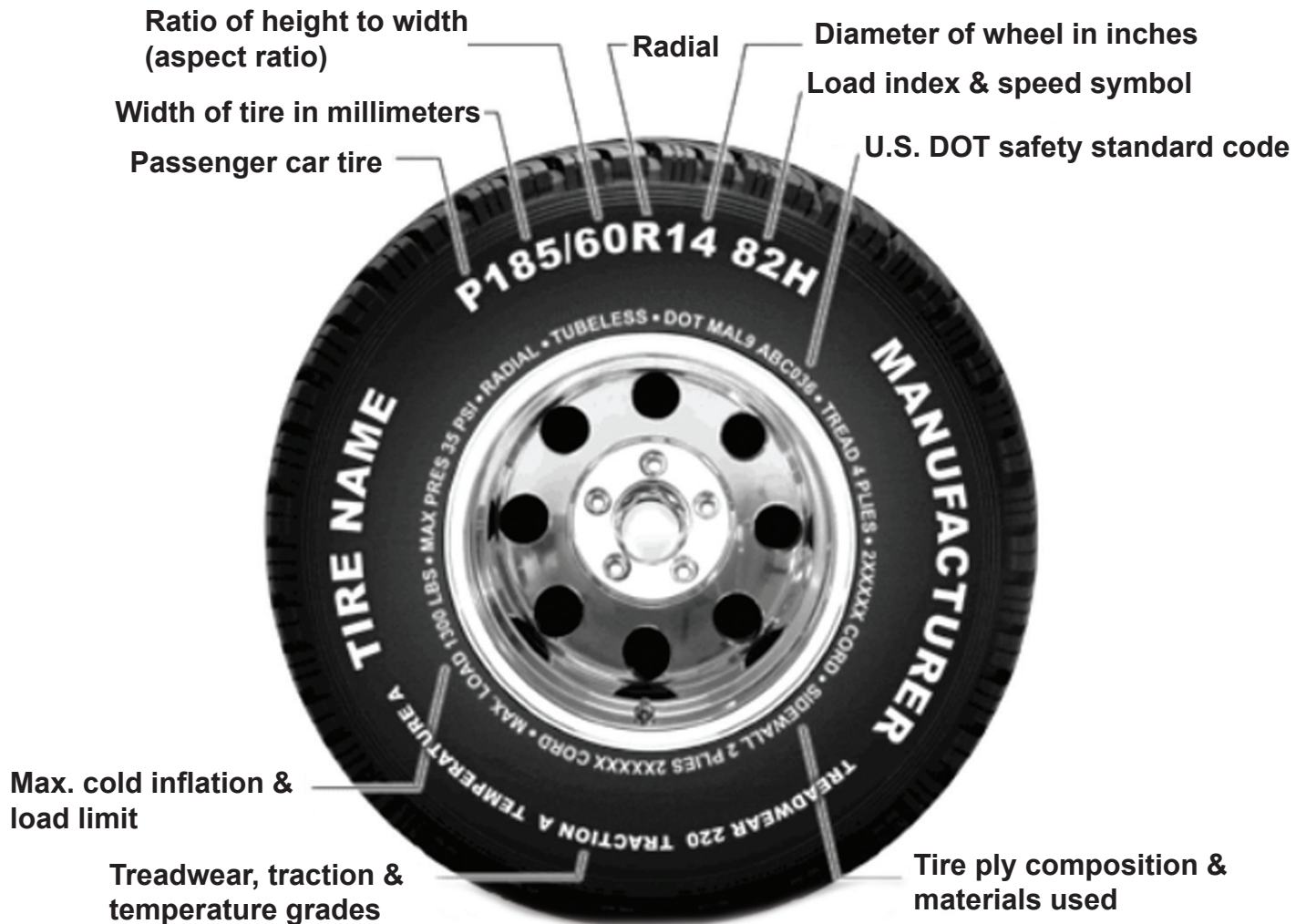


TIRE BASICS

HOW TO READ A SIDEWALL



Let's look at this tire size for example – **P185/60R14 82H**

The **P** stands for **P-Metric**. This tells you that the tire is a passenger tire. When a tire sidewall imprint begins with **LT** you have a light truck tire.

The number **185** – indicates the tire's **section width**. That's size of the tire, measured in millimeters -- from sidewall to sidewall.

The number **60** – represents the tire's **aspect ratio**. This number is a percentage that is determined by comparing the tire's section height with the tire's section width. So, the number **60** means that the tire's section height is 60% of the tire's section width. So **205 x .60 = 133.25mm**

TIRE BASICS

HOW TO READ A SIDEWALL

The letter **R** – identifies the type of tire casing or construction used to build the tire. The R lets you know that this tire has a **radial construction**. **B** stands for **belted bias** and **D** means that the tire has a **diagonal bias construction**.

The number **14** – The last dimension listed in the size is the diameter of the wheel rim, which is most often measured in inches.

The number **82**, following the tire size – is a **service description** for the tire. It represents both the load index and speed rating of the tire.

The **load index** indicates how much weight the tire is designed to support when it's properly inflated. And you'll find that load indices typically range from **75 - 105** for passenger tires, with each numeric value corresponding to a certain carrying capacity. The carrying capacity for each value can be found on a load index chart. On each U.S. passenger car tire, the load limit is listed in pounds. European tires have the load limit listed in kilograms and sometimes pounds.

Load Index	Pounds	Kilograms	Load Index	Pounds	Kilograms
71	761	345	99	1709	775
72	783	355	100	1764	800
73	805	365	101	1819	825
74	827	375	102	1874	850
75	853	387	103	1929	875
76	882	400	104	1984	900
77	908	412	105	2039	925
78	937	425	106	2094	950
79	963	437	107	2149	970
80	992	450	108	2205	1000
81	1019	462	109	2271	1030
82	1047	475	110	2337	1060
83	1074	487	111	2409	1095
84	1102	500	112	2484	1129
85	1135	515	113	2561	1164
86	1168	530	114	2640	1200
87	1201	544	115	2721	1237
88	1235	560	116	2806	1275
89	1279	580	117	2892	1315
90	1323	600	118	2982	1355
91	1356	615	119	3074	1397
92	1389	630	120	3169	1440
93	1433	650	121	2367	1485
94	1477	670	122	3368	1531
95	1521	690	123	3472	1578
96	156	710	124	3580	1627
97	1609	730	125	3690	1677
98	1653	750			

TIRE BASICS

HOW TO READ A SIDEWALL

You will notice that some light truck tires have **dual load index** values designated on the sidewall.

- The first load index applies to single tire fitments.
- And the second load index applies when the tire is used with dual assemblies.

When light truck tires are used for dual assemblies, the load capacity is reduced by 9 percent of the single load capacity to accommodate for the road crown – a slope in the road surface that allows for water drainage.

SPEED RATED TIRES

The **W** (see below) – represents the tire's **speed rating**. You'll find that speed ratings range from A to Z. Each letter indicates to the maximum speed a tire can sustain under its recommended load capacity. That means that a tire with a W speed rating is engineered to sustain a maximum speed of 168 miles per hour. However, just because a tire is engineered to perform at this speed, Continental Tire does not advocate exceeding legal speed limits.

Every tire is given a speed rating by the U.S. Government through meeting minimum standards for reaching and sustaining a specified speed. If a vehicle calls for a speed-rated tire, use replacement tires with an equal or greater speed rating.

Speed Ratings are denoted on a tire in 1 of 3 ways:

P185/60HR14

P185/60R14 82H

245/45ZR17 95W

SPEED SYMBOL	SPEED CATEGORY	OPEN-ENDED SPEED CATEGORY
S	180 Km/h (112 mph)	
T	190 Km/h (118 mph)	
U	200 Km/h (124 mph)	
H	210 Km/h (130 mph)	
V	240 Km/h (149 mph)	
W	270 Km/h (168 mph)	Z
Y	300 Km/h (186 mph)	Z
	Over 300 Km/h (186 mph)	Z

TIRE BASICS

HOW TO READ A SIDEWALL

More recently, speed ratings have been referred to as the “**performance rating**” of the tire – because higher speed-rated tires generally offer improved handling and maneuverability, compared to tires with a lower speed rating.

Typically, a higher speed rating will result in better car handling. But keep in mind that the speed ratings represent test speeds – not recommended speeds.

When **Z** appears in the tire size with the service description – **205/45ZR16 83W**

The maximum speed is indicated by the speed symbol in the service description – in this example, 168 mph. **ALWAYS** consult the manufacturer for maximum speed capability when there is no service description.

DO consult the tire manufacturer for maximum speed for open-ended V- and Z-rated tires – when there is no service description.


DO replace original equipment tires with tires of the same speed rating or higher.

NOTE THAT – replacing OE tires with a tire with a higher speed rating will not necessarily increase the vehicle’s speed capability.

DO NOT mix and match tires with different speed ratings on your vehicle. This will cause serious problems with vehicle handling.

DO NOT downgrade the speed rating of tires specified for a vehicle. This can result in poor handling and unpredictable steering.

Here’s how you sell it! DO encourage a speed rating upgrade if a customer wants better cornering response.

 **WARNING:** Never operate tires in excess of their rated speed limit. Exceeding their capability will cause overheating of the tire and sudden failure, potentially leading to loss of control of the vehicle. Speed ratings do not imply that a vehicle can be driven safely at speed at which it is rated. Always operate vehicles within posted legal limits. Continental Tire does not promote operating any vehicle in a manner that is either unsafe or unlawful.

TIRE BASICS

HOW TO READ A SIDEWALL

The “**DOT**” symbol on this tire certifies the tire manufacturer’s compliance with the U.S. Department of Transportation tire safety standards. You’ll find that tires manufactured in the United States have the DOT serial number located on the inside sidewall near the rim. Example:



DOT CUNB A186 0114

DOT – refers to **Department of Transportation**.

CU – designates the **Plant Code** where the tire was made.

NB – represents the **tire size**.

A1 86 – designates the **tire type**.

0114 – is the tire’s manufacturing date by week and year. So this tire was made the 1st week of 2014.

Max Load and Inflation – relates to the maximum load that a tire can carry at the maximum inflation pressure.

The Safety Warning – advises that overloading and overinflation will lead to tire failure.

M+S – indicates that this tire meets the Rubber Manufacturers Association’s definition of a mud and snow tire – so it can be driven year-round.