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Can advancements  
in vehicles make  
tires better?

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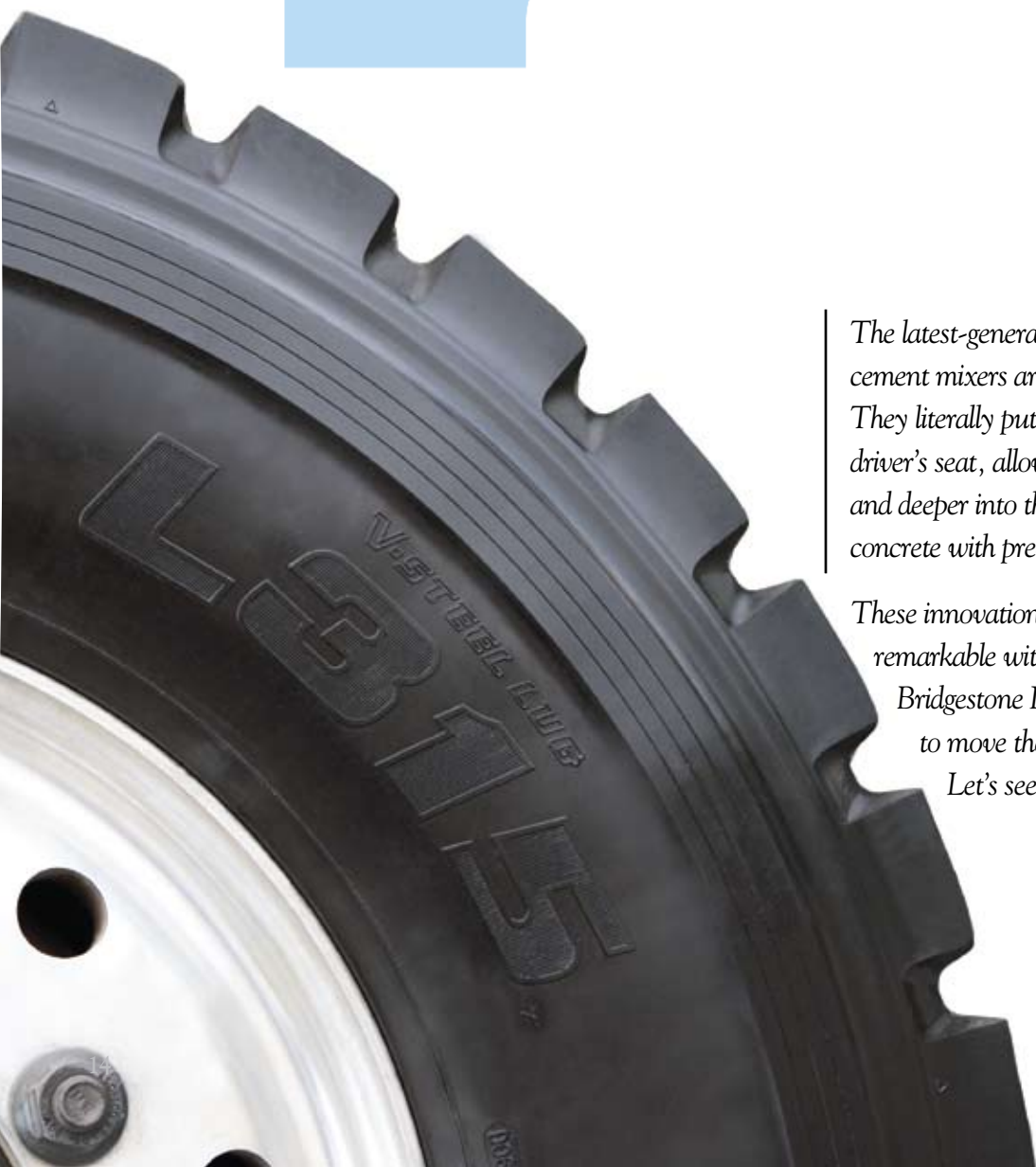
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# Can advancements in vehicles make tires better



*The latest-generation front-discharge cement mixers are remarkable machines. They literally put the operators in the driver's seat, allowing them to go farther and deeper into the jobsite and pour concrete with precision.*

*These innovations wouldn't be quite as remarkable without next-generation Bridgestone L315 on/off-highway tires to move these monstrous machines. Let's see how they do it.*



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## What's the most important feature of the new L315 tires?

Because a front-discharge mixer has greater access into construction sites, soft-surface traction is important. The **L315 uses an ultra-deep lug tread** that is extremely aggressive. One look at that tread and you know it was built for tough, messy off-highway work. The **thick, knobby lugs** create dozens of **biting edges** so the tires can claw through the mud to reach dryer, more solid ground. The **open shoulder design** improves mud traction further by releasing mud from the tread surface.

The wide base design also promotes **traction**.

## How is it different from other wide base designs?

In the past several years, you've heard a lot about wide base singles like Bridgestone's Greatec. These on-highway tires are built to replace dual assemblies in the drive and trailer positions. This conversion reduces a vehicle's weight, which fleets can use to haul more revenue-producing freight.

Wide base tires have been used in on/off-highway applications for a long time. While the L315 is a **drive-position tire**, concrete firms tend to mount this tire in the steer position on their front-discharge cement mixers because the front axles are driven.


## How does wide base make a difference?

The weight of the machine is distributed over a larger footprint. Front-discharge cement mixers are three- to seven-axle trucks that can weigh anywhere from 27,000 to 36,000 pounds. That's why you need a **powerhouse** at the steer axle.

The L315 carries an **"L" load range rating** – that's a tremendous amount of weight – up to 12,300 lb on each tire @ 120 psi.

Fleets in the construction business, especially those working in "mud season," need a good, wide base tire. It's the same idea as wearing snowshoes to prevent sinking into the snow. But in the L315 case, it's typically mud.

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When you hear a tire described as "a high void tread," it means the tire digs into the mud exceptionally well. Take a look at this L315 tread. You'll see more black on the tread surface. These empty areas create higher void and more biting edges.

Cap/base construction gives L315 good wear on the highway. The top compound is engineered for superior traction and wear while the base compound insulates the casing for outstanding retreadability.

## What about durability?

L315 has a **heavy-duty casing** for longer tire life and superior retreadability.

The belts use a **thicker, stronger cord** for durability. And the **enhanced chafer design** adds two nylon chafers to further shield the casing. This added protection reinforces the bead area – an important factor, as extremely heavy loads generate high heat.

Concrete firms will tell you they have a very small window to deliver concrete, usually less than two hours. Crews need to prep the area. And then they wait. And if a mixer breaks down en route, everybody waits. Tire durability is critical. Depending on the “mix” and weather conditions, it only takes a matter of hours before it begins to harden inside the drum. And that’s when the real trouble begins.

## What improves tire durability off the highway?

Take a close look at L315’s grooves and you’ll see they are super wide. Take an even closer look and you’ll see the lug blocks are built at an angle.

It’s what Bridgestone engineers call “**better groove geometry**” and it means sharp stones can easily slide out of the groove, reducing the possibility for stone drilling.

The L315 uses **super-tough tread compounds** to resist cuts, chips and chunks for longer tire life. This tread compound is really important when the cement mixers are working on wet ground.

## What makes it good for that?

Pouring concrete is a wet job. The trucks must be hosed off when entering or leaving the yards. And water trucks are used to keep dust down in the yard, as well as the construction area. Whenever you see wet rocks, watch out! Wet rocks can slice tires like a sharp knife.

## How is a wet rock different?


It’s lubricated. That’s why you see people using a wet blade to cut through materials with a single slice. The tough tread compound can stand up to most of the abuse encountered in a construction site.

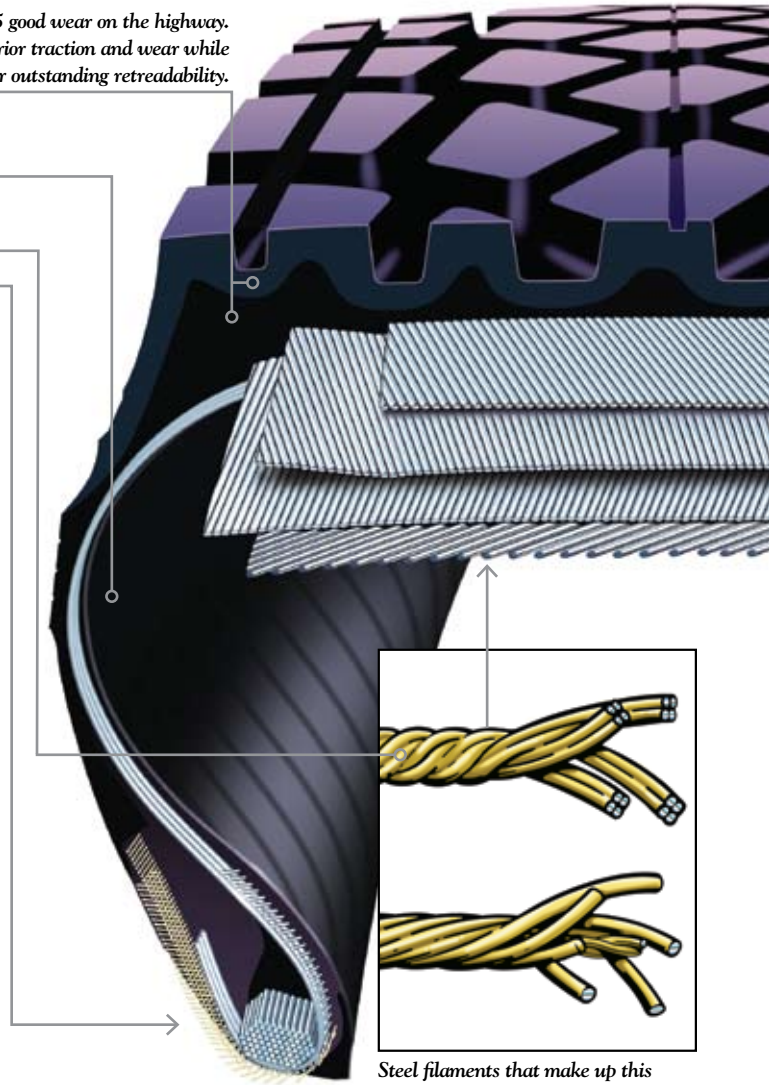
Speaking of dangerous obstacles in a jobsite, the L315 uses **tough protector ribs** on both sidewalls to protect the sidewall and improve tire life. If one side wears out, flip the tire over for continued protection.

## Can L315 be used on any other vehicles besides front-discharge cement mixers?

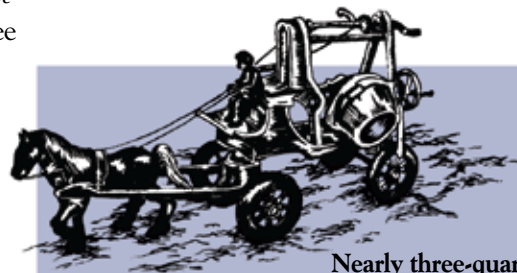
The L315 is a popular choice on heavy-duty dumps and construction vehicles that carry heavy loads, **up to 20,000 lb on steer axles**. The L315 is also seeing a lot of service in oil fields.

## In what size is it offered?

L315 is available in 445/65R22.5. 



Steel filaments that make up this on/off-highway tire’s belt cords have a tighter “wind” to allow it to absorb shocks.



Nearly three-quarters of all concrete is ready-mix, which is manufactured to the customers’ specifications – or recipe – at a central plant. In 1909, horse-drawn mixers used paddles turned by the cart’s wheels to blend the concrete while driving to the jobsite. In 1916, Stephen Stepanian of Columbus, Ohio, developed a self-discharging motorized transit mixer that was the predecessor of the modern ready-mixed concrete truck.