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Are you giving away rubber?

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Are you giving away rubber



Sometimes, the rubber you leave on a tire when you send it for retreading might have been better used someplace else.

Here's a way you can actually remove drive tires a bit "early," and in spite of that, make your drivers, your maintenance department and your accountant happy.



PULL

BRIDG

FR
TR

ME

READ

FREE
TREAD

What do you mean by “giving away rubber”?

Whatever tread rubber is left on a tire when you send the casing for retreading – or sell it – ends up being buffed away and lost forever. And a lot of tires – and a lot of tread rubber – gets lost this way.

How does this happen?

Even with today’s ultra-deep drive tires, like the M726 EL, once they’re worn down to a certain point, driver confidence in their pulling power starts to fade.

They look at their drive tire treads and begin complaining that they’re not going to get enough traction, especially as winter approaches.

This tends to happen at around $12/32$ ” remaining tread depth, and many fleets pull their drive tires at that level and send them for retreading – as much as anything, to reduce driver complaints.

What alternative is there?

Instead of sending all that remaining rubber to the buffer, you may be able to “rotate” these tires from a relatively rapid wear axle position to a slower wear axle position.

How does that work?

Let’s say that you have established a policy to optimize retreadability of your casings, and perhaps that means you send them for retreading at $6/32$ ”.

Chances are, you can let trailer tires go to that level, and maybe steers too.

But to keep drivers happy (and maybe also your Safety Department), you may be pulling drives at $12/32$ ”. If you move these drives back to your trailer positions and run them out, using up $6/32$ ” of that remaining tread, you get some real bonus benefits.

What are those?

First of all, you can make drivers happy by replacing their drive tires with brand-new ones when the old ones reach about $12/32$ ”. As winter approaches, they’ll welcome that change.

And, when you move these partially worn drives back to trailer positions, it’s like giving drivers a brand-new set of trailer tires as well.

What do you mean?

You’ll be putting tires onto the trailers with a full $12/32$ ” of tread on them, which is about the tread depth of brand-new trailer tires (Bridgestone’s R195F trailer radial has an original tread depth of $11/32$ ”).

Plus, these drive radials are still “virgin” casings, unretreaded tires, and have a much more aggressive tread than typical trailer radials. Those things also should make these “rotated” drives popular with drivers.

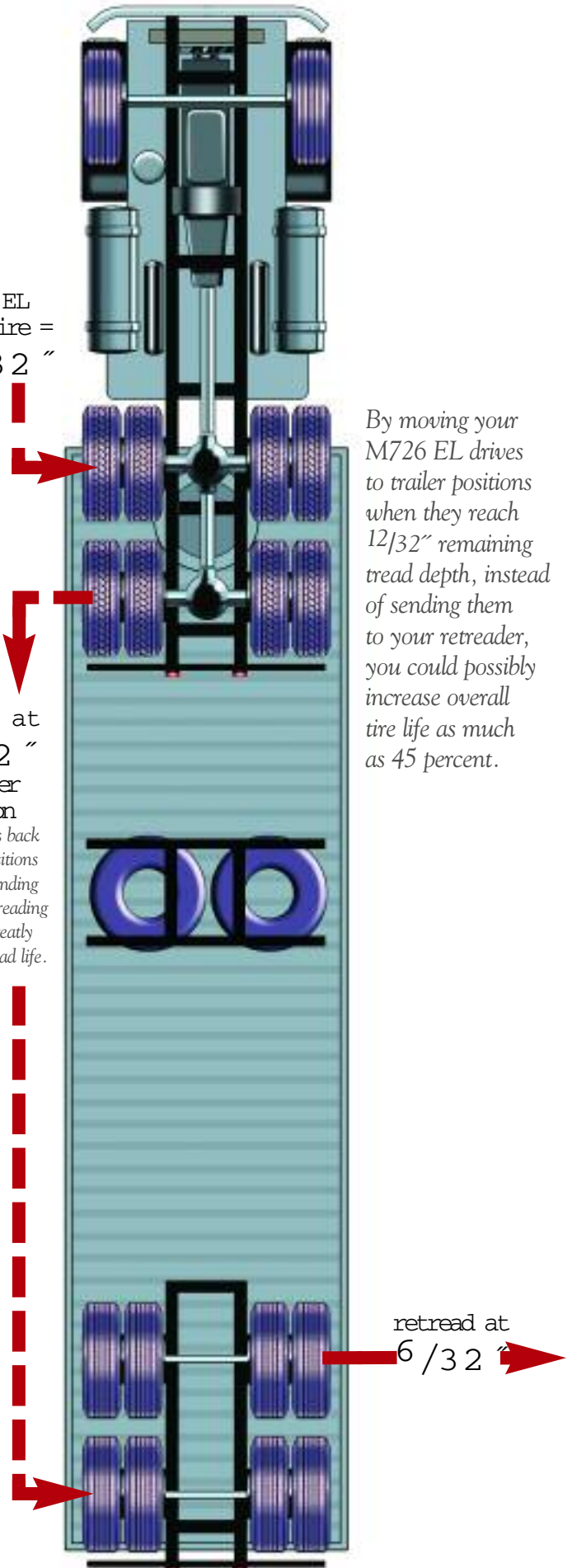
And, because these tires have already run for quite a while on drive axles, chances are they’re going to exhibit extraordinarily even wear. Drive axles rarely show irregular wear to begin with, and used drive tires seem to have even wear built in to their treads.

new
M726 EL
drive tire =
 $32/32$ ”

move
M726 EL at
 $12/32$ ”
to trailer
position
*Moving tires back
to trailer positions
instead of sending
them for retreading
at $12/32$ ” greatly
increases tread life.*

By moving your M726 EL drives to trailer positions when they reach $12/32$ ” remaining tread depth, instead of sending them to your retreader, you could possibly increase overall tire life as much as 45 percent.

retread at
 $6/32$ ”

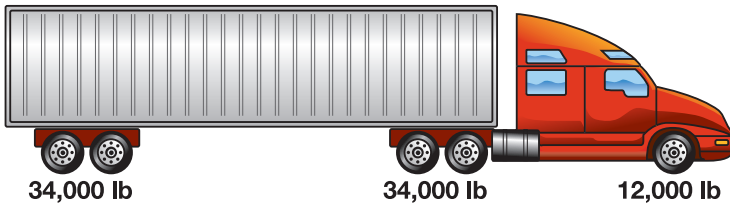


And the advantage to us?

Trailer axle positions are typically the easiest on tires. If you think about it, your steer axles, besides having to control the direction of the whole 80,000 lb truck, are also the ones bearing the heaviest individual load, at about 6,000 lb each.

Drive tires and trailer tires share about equal loads. If the load on the steers is about 12,000 lb, then the drives and trailer tires are each loaded at about 4,250 lb when the vehicle is maxed out at 80,000 lb.

AXLE WEIGHT DISTRIBUTION



A typical 18-wheel truck loaded to 80,000 lb might have an axle weight distribution like this.

So why are trailer positions easier on tires?

Drive tires, unlike trailer tires, are constantly subjected to the torque of the engine. For that reason alone, they experience more scrub and wear faster. Trailer tires are free-rolling.

Then trailer tires wear more slowly?

As a rule, yes. Engineers usually talk about wear rates using the terminology “miles per 32nd” or “miles per millimeter.”

In a long distance, slow-wear, line haul operation, you might find the drive tires are running about 20,000 miles per 32nd. In that same fleet, the trailer tires could run 30,000 miles per 32nd.

And by moving partially worn drives to trailers, we can take advantage of this slower wear rate?

Exactly. Let’s say that at 12/32” you moved your drives to your trailer positions. The chart shows what happens.

As you can see, if you just pull at 12/32” because of driver complaint and send the drive tires for retreading, you might get about 240,000 miles from those drives.

On the other hand, if you pull them at 12/32” and move them back to trailer positions, then run them down to 6/32”, you add an additional 180,000 miles, for a total tire life of 420,000 miles.

That’s a 75 percent increase in tire life!

But those aren’t typical wear rates for us.

Of course, you’ll need to plug in your own wear rates. The principle remains the same, however. Because the

trailer positions wear so much more slowly, you gain a lot of extra miles by running out those last few 32nds of tread back there.

What if we typically run our drive tires down to the target removal depth - on our drive axles?

There’s still an advantage with this technique. In the examples we gave, if your drive tire “miles per 32nd” is 12,000, you’ll get (26 x 12,000 =) 312,000 miles, as opposed to 240,000 with the move-back system.

That’s still an increase of 35 percent in overall tire life by using the move-back concept instead of keeping the tires on the drives.

Are there drawbacks to this technique?

You do have to move the tires back to the trailer positions, so there’s some labor there, but if you’re typically pulling your drives at 12/32”, you’d be removing, demounting and remounting new tires onto those wheels anyway.

On the whole, it’s an excellent tactic for extending drive tire life and reducing driver complaints.

You can give that extra rubber to your retreader or to yourself. We figure you’ll choose the latter. **TA**

Mileage Increases Using Move-Back Rotation

ENVIRONMENT: Long Distance/ Line Haul

	32nds USED		Typical Wear Rate, MILES / 32nd	=	MILES
Drive	20	x	12,000	=	240,000
Trailer	0	x	30,000	=	0
TOTAL	20				240,000

	32nds USED		Typical Wear Rate, MILES / 32nd	=	MILES
Drive	20	x	12,000	=	240,000
Trailer	6	x	30,000	=	180,000
TOTAL	26				420,000

INCREASE 75%