



Behind the Wheels Podcast Transcription Season 2, Episode 2: Why Wide Base Wheels?

ANNOUNCER

You're listening to Behind the Wheels with Doug Mason, Dave Walters, and Mike Yagley. This is a show where we talk about heavy truck and medium duty axle ends. Doug, Dave, and Mike bring close to 100 years of experience and expertise in the transportation business.

Join us once a month to learn new things about axle ends. Sponsored by Alcoa® Wheels, the global leader in aluminum wheel innovation.

MIKE YAGLEY

Welcome to another episode of Behind the Wheels. I'm Mike Yagley.

DOUG MASON

I'm Doug Mason.

DAVE WALTERS

And I'm Dave Walters.

MIKE YAGLEY

Today we're going to be talking about wide base wheels, and if we have time, we're going to dive into some other applications, maybe severe service, but we'll see. Really, this all came about when we were talking a little bit internally here about what is it that customers are looking for from wide base wheels? There's a lot of knowledge we have in our shop. There's a lot of people who work for Alcoa Wheels and not everybody is an expert on what the customers need. We thought it would be a really good idea to sort of get our understanding, at least at this point in time, out on a podcast to sort of give the lay of the land.

MIKE YAGLEY

Now, the market is a very dynamic place. What we're saying today is going to be changed by the marketplace, I guarantee it, in the next five or 10 years. But at least at this point in time, we'll be telling you the way we see things. And we'll also be spending a little bit of time pointing out those places where you have something like fuel costs. Fuel cost affects the market and it affects wide base usage and how that all happens.

MIKE YAGLEY

Before we went online, before we started recording, I was asking Dave about why we're not using... the whole industry has gone to the 14-inch wheel for wide based applications here in North America. I was asking Dave, why did we move away from the 13-inch, the 12.25 for those wide based applications in drive and trailer applications. And I'm just going to ask you, Dave, why don't we go start from there?




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DAVE WALTERS

What happened years ago was the industry came out with some wide base, and wide base was normally used on steer axles on vocational vehicles. So, cement mixers, coal trucks, logging trucks. So, what they did was they came out with these wide base wheels and they stuck basically construction tires on these wheels, replacing a set of duals. They were lighter. The tires were definitely a lot heavier, the construction type tires, but as a wheel tire, you took off weight off your trucks. So immediately, certain segments of our industry like gasoline haulers, cryogenic gas haulers, and those could an instant return on revenue, they switched to those very quickly. There were some over the road type of trucks that switched to that, but really when you got down to it, the tires were really designed to be construction type tires, and so they did somewhat well, but not fantastic.

DAVE WALTERS

Then when they came out with the 445 tires and the 455 tires, they were designed to actually be over the road tires. So, there's your mileage, they're lighter weight, the durability of what they're designed to do did a lot better. So, our country kind of switched to that. So here you were saving weight, plus there was definitely fuel mileage gain on those.

DAVE WALTERS

At the time, a lot of fleets were very interested in those two concepts. Since then, a lot of fleets... the price of fuel right now is very low and the tires have gotten to be more expensive, so they really weigh two things. Is the cost of the tire and the fuel savings and all this stuff, is it right for my fleet? So, it's really fleets deciding that. But if you're in a tanker and cryogenic hauler, they're still 100% tire wear issues, especially on drives. Trailers, you really have good tire life. On the drive, you could reduce your tire life by 50%. So, there's a lot of things that they weigh out. It's really a fleet decision on which product they would like.

MIKE YAGLEY

One of the things that, like you said, the fuel prices right now, and at the moment they're running, floating around two bucks a gallon for diesel. Maybe a little higher in some places, maybe a little lower in some places. That is a game changer for wide base. A few years ago, it might've even been 10 years ago, we were seeing fuel prices double that, diesel fuel prices double or even more. I would imagine that in that environment, wide base gets very appealing, sort of like what we see in Europe.

DOUG MASON

Yeah. Another thing to take a look at too, is wide base has been on the market for a number of years now. The early 2000s, Dave, I think they started coming out, and the rolling resistance was significantly better with the wide base. Talking to the different fleets who are evaluating this, we've seen that the other tire companies or within the own tire company, the standard duals, the rolling resistance is improving with all the material improvements, with the design that they know how to implement to reduce rolling resistance, which is one of the best benefits for the fuel savings is the gap is getting smaller.

DOUG MASON

Again, the benefit from a fuel mileage savings is being reduced between a standard set of duals with low rolling resistance tires and wide base with the rolling resistance that they have. I think it's a combination of both. There are definitely very strong segments, as you noted, that really benefit from the wide base trailers. You were mentioning Dave, flatbeds and different applications there. I think we'll see it going up and down and I'm sure that those tire manufacturers making the wide base are continuing to try to drive the rolling resistance improvement there as well. It'll be a constant moving target, but it is a niche segment for the most part.

DAVE WALTERS

What I would say is, as our industry revolves around fuel costs, fuel is by far the biggest expense that these fleets deal with on a daily basis, but tire cost is number two. Fuel is definitely the number one by a long ways, but you have to stay in line with the tires and the costs and all that. It's a moving target. As I will state, on the drives there's a lot of reduction in tire life. On the trailers, there's really no reduction. Again, it's a decision. What I've learned in my years in this industry is these fleet maintenance directors are very sharp at figuring out what's their cost and what makes sense for them, and they do an excellent job. It's really a fleet decision.

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DOUG MASON

And Dave isn't there a... they've come a long ways too in automatic tire inflation systems, which really are even more critical on the wide base than in a dually situation. Obviously, you've only got one tire on the road and you're looking at its life from a wear perspective, so critical to keep the tire pressure where it needs to be, and it's easier to do on the trailers, obviously. So that has also, I think, helped with the life of the wide base and allowing that to continue to be used in more applications by some of these newer technologies that are coming on.

DAVE WALTERS

Absolutely. I mean, wide base, the inflation systems have really done and they're mostly the active systems are on the trailer. The fleets understand, hey, I can maybe run these on the trailer and I'm not going to have all the other issues. Again, it's always been if I go down, when a wide base goes down, the service calls are such an expense and you can't limp it back to a truck stop. There's so much decision making in what they do. Active inflation systems have really helped because that's always been something that... road calls are so expensive and they understand that, so the active system has really helped.

MIKE YAGLEY

One area that I honestly don't know what kind of attention it gets is on the OEM side. The government put out what they call the GEM calculator. What the GEM calculator does is it takes a truck set up, what kind of engine you've got, what kind of tires you've got, what kind of wheels you've got, what kind of drive train, the whole bit, the weight of the truck, everything, and it calculates the fuel savings versus a base truck.

MIKE YAGLEY

One of the things that's in that calculator is wide base. Wide base wheels, wide based tires, and an OEM can get credits toward what the EPA efficiency, green technology or whatever, it escapes me what the specific terminology is, but it gets these credits for using wide base wheels. The reason I say I don't know how much attention is being given to that is because every time I've spoken with anybody in that business with the OEMs, their focus is on the big- ticket items of the engine and the drive train. They don't typically get down to looking at getting the little bit of savings they can get from going to having a higher percentage of wide base on their portfolio.

MIKE YAGLEY

That's probably the only area that I know that the fleets, because the fleets, like you said, Dave, the fleets from a maintenance manager standpoint, those maintenance managers are just so sophisticated and are looking at exactly their specific situation.

MIKE YAGLEY

When you get up to the OEM level, you've got people looking at all the different applications out there, all the different fleets, they've got all this complexity they're trying to consider. I don't know if there's really a lot of attention that gets to the benefits of wide base for the OEM level, but that's probably the only area that I know of. They might be able to work their way through it, but I agree with you wholeheartedly on the fleet level, I think those guys are really on top of everything that's going on.

DOUG MASON

I've got another question. I believe that this is the case, but they've also significantly improved the retreadability of the wide base tires. I thought when they first came out, that was one of the issues, but that has improved. Dave, you probably know that better than I do, but that would go a long ways toward the life as well and the benefit of wide base, correct?

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DAVE WALTERS

Yeah. One of the big things was retreads, and retread's gigantic in our industry. When they first came out and there wasn't a lot of them, that's been a big issue is the retread-ability. Because one time the casings weren't out there. It's on the road, can you get another one? Can you get something that's that? All those things were a big factor at first. As I would say, these major fleets can solve all their own issues. They made that more readily available. They didn't like... first they wanted you to exchange casings, so you wouldn't even know you're getting your own casings. And casing life is basically made up of inflation pressures, and if you're a fleet and you spend a lot of time making sure your inflation pressures are correct, you don't really want somebody else's casing, because you don't know what their practices are. There was a lot of issues with that at first. They've kind of ironed those out.

DAVE WALTERS

As I would say, these guys, I'm amazed every time I talk to them because they know their costs, the cost of the tire, the cost per mile of this, what's it getting them in the fuel mileage is this. Can they haul any more weight? Has their loads changed? As the truck changes and they're putting more after treatments on, they're getting heavier, can they offset all these costs? What's the general load? These guys are marvels of what they do. They figure out a lot of costs and how to do that for their fleet.

MIKE YAGLEY

My deep introduction to wide base wheels was a few years ago, when we had the two-inch outset issues on trailer applications. Oh, I'm sorry, in drive axle applications. The industry has, I think, solved that for the most part. I haven't heard a whole lot about that.

MIKE YAGLEY

Basically, for our listeners who aren't familiar with that, there was a premature bearing failure when you had a two-inch outset wheel. Basically, what was happening was there were some lower quality bearings that found their way into the marketplace, and so when you had the two-inch outset wheel, the center of the tire created a little bit of a moment arm on those bearings and it wore out the bearings prematurely. There was all sorts of problems in the market, and now either the fleets have gone to the zero offset, I think in a drive axle application, typically I think they're at zero offset, and they're sticking with that, last I heard. Is that still the case, Dave?

DAVE WALTERS

Back when we were going through that, there's P spindles and there's N spindles, and one's a tapered bearings and one are other type of bearings. The fleets are very quickly to say, hey, look, if I spec'd a P spindle, I was not having this trouble, if I spec'd an N spindle, I was. A lot of those changes NCMC wrote in RP, the industry got involved. Again, the tractor and the trailer, we wrote an RP saying, hey, on a tractor, you can use up to a one inch outset but no more. Trailers, it'll dominate on two, which tracks out to the duals. Again, those guys really got involved with that. That was a major thing there.

DAVE WALTERS

What I've always said is certain fleets, I'm amazed because they would go to a different bearing package with a P spindle and the problem went away overnight. They're very good at adjusting. If a product doesn't work for them, they adjust very quickly. I'm amazed at how quick the truck industry adapts to an issue and say, okay, well, here's what I can do and I'm not going to have that problem.

DAVE WALTERS

You're absolutely right. It was a big issue for awhile. It's really gone away because the education of the Ps and the Ns and they know which ones work now for them, which ones don't.

MIKE YAGLEY

That was actually... I made a lot of friends in the industry. I found myself in the middle of it somehow, and I got to know a lot of people there. I learned a lot. I learned a lot about wide base and about axle ends, going through the traps on that one.

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MIKE YAGLEY

We're pretty much set with wide base, at least here in North America. Of course, there's the wide base like we said, we alluded to very quickly early on, is that wide base is much more popular in Europe, especially in trailer applications. I was over there, I think last year, a year and a half ago, and every trailer I saw, 1175 tires, 1175 wheels on it. I think Dave, you pointed out exactly what that is. The fuel costs in Europe are just through the roof compared to what we've got here, and so that has them chasing every penny. The fuel efficiency that you get from the 1175 wheels on the trailer applications, they see the financial benefit for that, that additional fuel efficiency go into wide base. We're not seeing it here primarily because of the low cost. Is that just a quick summary of the global marketplace?

DAVE WALTERS

Yes. I mean, in your trailer markets, over my years of experience that I have seen, you just don't lose any tire mileage at all. A lot of fleets are like, wow, this is not a bad application keep them on trailers. It's the drives where they really start to get in. The European truck assemblies are single drive, too. We're running basically a four by two, instead of a six by four over here. It's very beneficial to them and their applications of how they run their trucks.

MIKE YAGLEY

Right. Let's move on. Unless you have any last comments, anybody.

DOUG MASON

Maybe you could just a wrap up of what we're saying are the best applications for a wide base.

MIKE YAGLEY

Okay, well, I'll take the first one. Best application for a wide base is going to be the bulk haulers, any sort of bulk hauling, where you make money for every pound you save in your vehicle weight. You can translate that into additional carrying capacity. When I look around in the North American marketplace, I think wide base has pretty much at this moment, seems to be pretty much constrained to that market. Dave, is there anything, any other part of the marketplace that I'm not thinking of?

DAVE WALTERS

Again, as Doug brought up, the active systems have really helped. A fleet that they're running an active system, they're really not losing much on the things and they can gain the extra weight and probably some fuel mileage advantage. It's really, to them, is this tire costs and all that going to play out. They're much more receptive on trailers than drives. That's really, the niche is trailers, but if you're a gasoline or a cryogenic, or every ounce counts they're going to on the drives, and we can offset that by the weight we haul. It's really a decision, but I would definitely say trailers are more apt to have them than the drives right now, in this country.

DOUG MASON

So, there may be more applications out there from a trailer perspective moving forward then, then we see currently. But like you said, Mike, the bulk hauler market really is pretty much set to wide base because of the significant hauling benefits. Good. Good discussion.

MIKE YAGLEY

Yeah, very good discussion, thanks. The next thing we wanted to touch base on, and we seem like we have a little bit of time is severe service. Dave, severe service is one of those things... Just so for our listeners who aren't familiar with the term severe service, Alcoa Wheels has basically the highest volume applications out there, 22.5 by 8.25, I think 24.5 by 8.25. We have our standard wheels that we sell that are for 95% of the people out there, but then there's going to be the severe service applications, those high load applications that they need a little bit more carrying capacity out of their wheels. Logging. There's all sorts of different applications that are going to be needing those severe service wheels.

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MIKE YAGLEY

I wanted to talk a little bit about that and maybe give a few war stories, Dave, you're the one who's out there. When you go out to see these customers that are having wheels cracking on them. They buy our standard wheels, the wheels are cracking left and right, primarily because they're overloaded and you're the one who's sort of guiding them toward that severe service application. Do you have any insights or any... love to hear war stories on this one.

DAVE WALTERS

Well, I've got lots of them, that's for sure. Severe service wheel... I'll be honest with you, I remember years ago coming to our engineering manager and saying there are fleets in the vocation industry that loves aluminum wheels, but as we continue our light-weighting, that's really not what they need. They need the strength and durability of some of the wheels, so basically we made a decision to have a severe service in the 22 5/8 and 1/4 and the 24 5/8 and 1/4, because if you're a coal hauler, or you're a logging industry, or cement, or what we call the vocation types, a refuse truck and those, it just makes sense to have a severe service wheel made for that application. We talked earlier about tires being made for over the road or construction type. We basically made a wheel that's for that.

DAVE WALTERS

I'll give you an example. There was a coal truck fleet in Pennsylvania, and the guy was breaking a number of wheels in a year. I mean, a very high number. He was running a tire... he probably should have been running a nine inch, but he didn't want to have a nine inch on the front and the duals not match, so he wanted to run a 24 5/8 and 1/4 the whole way through the truck. When we made the severe service wheels... I used to see this guy about every six months as he brought over the warranty wheels to us and all of a sudden he called me the one day and he's like, "I miss going out to lunch with you. Could you come by sometime because you put me on these severe service, I've never broken one of these things."

DAVE WALTERS

It's just like, we put them on the right wheel for his application. You just feel like, wow, we made one change to give him the wheels that he needed. Alcoa should be very proud because as Mike said, it's probably 5% of the market. It's not a big segment of the market, but we make a wheel that if you're in a vocation type of truck that you can put on these wheels and they're going to take the punishment.

DAVE WALTERS

There's just a story where we put some lightweight wheels on a transfer truck and when they take their garbage out of a transfer station into a landfill trip after trip, that's a rough application. They put them on tipper trailers or they might have a docking tour trailer. I mean, they're in the dock every day. The one guy says, "Wow, I understand why we spec severe service wheels." They are made to do a vocation type of job.

MIKE YAGLEY

Absolutely. We took that concept of the severe service wheel and Europe now has their own, they call it the Workhorse Wheel. It's a very similar concept, a very, very strong wheel. When we went to China, the learnings that we had in the severe service marketplace really positioned us well, when we first went to China. In China, everybody overloads, everybody over inflates, especially back then. The Chinese government has come down on that a little bit. They've put a lot more scales in throughout the country, so they're not seeing the overloading that they used to, but I'll tell you that severe service marketplace and the learnings that we had there were critical to going out into these other places, these other markets in the world and really giving them what they needed to succeed right out of the box. It's funny how all these things work together. You go and help out some, like you said, Dave, a relatively small component of the market, but then that's a launching pad to go out and do some really good things globally.

DAVE WALTERS

To give you an example, another one is Canada, for example. Legal loads in Canada are 129,000 pounds, where in the U.S. they're mostly 80. You get into a truck, that's say, for example, running a spread axle flatbed trailer at those types of loads, you need a severe service wheel. What I say is, when you go out to these people who's having wheel issues, you can say, hey, look, we make a wheel that's going to help you out of this. I found more customer satisfaction of saying, "Wow, you guys actually care about us." Because a lot of people don't care about the 5% or the smaller number percentage of people. They want the over the road guys and that's what they look for. I've been a real proponent of severe service. Like you said, now it's going to Europe, China, and the rest of the world.

DOUG MASON

Another thing to take a look at too, is in my mind also, be an application where we see a lot of flange wear with these specific, severe service type applications. There's a way that we've addressed that as well, or the market has addressed that with what we call Dura-Flange, obviously on Alcoa wheels, but this would apply to this application pretty heavily, wouldn't it?

DAVE WALTERS

Yes, absolutely. You hit the nail on the head there, Doug, because really what this segment is, is these guys who do a lot of vocations, they unequivocally get more rim flange wear than an over the road truck. What we see mostly in Canada is Dura-Flange wheels on severe service, and it's solving a couple problems. A lot of the coal haulers that I've dealt with will spec Dura-Flange. It just makes sense. It's a severe service wheel put in applications that are extremely rough and everybody says, why don't they buy a steel wheel? Well, a forged aluminum wheel is actually stronger than a steel wheel because it's two pieces welded together. They're getting the strongest wheel and it's more durable than that, and so they see a great advantage to it.

DAVE WALTERS

It's been a very... like I said, I am so happy that we have that option because if you went out to a fleet and said, "Wow, I don't think we make a wheel for this," they don't like that. They like options. Like I said, as we talk, they understand their business. I think as vendors, we've talked about TMC, I think when we get together in those rooms and we talk about their issues, it's easy to understand that, hey, we listened to you. We made wheels, say for example, the refuge industry. They're stopping a ton of times and they needed a more severe service wheel. We came out and we made some of those and even went to nine-inch because they went to bigger tires because of the load. I mean, many things that we've done with severe service.

MIKE YAGLEY

Okay. Well, I think that pretty much covers it for both wide base and severe service. I hope everybody has enjoyed this episode of Behind the Wheels. We'll be getting back with you next time. Thanks for listening.

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