Behind the Wheels Podcast Transcription
Bonus Episode 9
Tire Safety with Tire Industry Association.

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

DOUG MASON
I'm Doug Mason.

DAVE WALTERS
I'm Dave Walters.

MIKE YAGLEY
And today we have Kevin Rohlwing from TIA. Kevin, great to have you on board.

KEVIN ROHLWING
Thanks for having me.

MIKE YAGLEY
Kevin, again, thank you for joining us. Now, Kevin is one of the world experts-

DOUG MASON
No, he's the world expert according to Dave.

MIKE YAGLEY
The world expert, according to Dave. That's a high praise on tires. We have some questions about tires. When we have problems, we have questions, we go to the expert. So we brought Kevin in to help us work through a couple of things. Give us a little bit of his insights.

DOUG MASON
And I guess what we'd like to do, first of all, Kevin, give us a little bit of your background. So people know why you're the expert in tires.

KEVIN ROHLWING
I would say expert in tire service, [crosstalk 00:01:15] just to clarify that. I was born and raised in a tire dealership. Started at 15 years old, sweeping floors, stacking tires, scrubbing white walls. On my 16th birthday, my father gave me good news and bad news. And the good news was I was getting a raise and the bad news I was going to start paying taxes. And then I started changing tires. Started with car tires and then transitioned over to truck, small OTR farm, if it's round and it's black and it fits in the back of a pickup truck, I've serviced it. I've demounted, mounted, inflated, changed, repaired, but never retreaded, right Dave?

DAVE WALTERS
No, no.

KEVIN ROHLWING
Not a retreader. We established that. I am not a retreader.

DAVE WALTERS
Not a retreader.

KEVIN ROHLWING
I've been around it for 24 years, but I'm not a retreader.

MIKE YAGLEY
So 24 years you've been playing this game.

KEVIN ROHLWING
I've been in the association for 24 years.

MIKE YAGLEY
Okay. How many years have you been in the tire business?

KEVIN ROHLWING
38.

MIKE YAGLEY
Dang.

KEVIN ROHLWING
Ever since I was 15. From 15 to-

DOUG MASON
You can add that up now, 15 and 38-

KEVIN ROHLWING
Yeah. 15 years at the dealership working for my dad. And then 24 years with the association. So yeah, I mean 14, 28, 38. Yeah, somewhere around there. It's a long time. Most of my adult life.

DOUG MASON
And what are your responsibilities at TIA right now? What all do you handle?

KEVIN ROHLWING
My title is Senior Vice President of Training. So my primary responsibilities are all of our technical training programs. I am also involved in events. I do government affairs, marketing publications, pretty much everything that TIA does, my hands are in it one way or the other.

MIKE YAGLEY
Sort of a catch all type thing.

KEVIN ROHLWING
Yeah. I have to do a lot of different things. It's a small association. And nonprofits, Senior Executives typically have to wear a lot of hats.

DAVE WALTERS
If you could, Kevin, briefly, a lot of people doesn't know what the TIA certification program is and all that. Could you briefly describe like your program, and how you train the technicians, and train the trainers? Give us an overview of what you at TIA does?

KEVIN ROHLWING
Okay, yeah. We have training programs in automotive, commercial, earth-mover, farm, and industrial tires. So we provide training for everybody. On the commercial space, we have two different types of programs. We have what we call a basic 200-level program, which is OSHA compliance, designed for new hires. So OSHA requires training for anybody that touches a truck tire. Doesn't matter what they do or how many they do. If they're touching truck tires, they have to have OSHA training. So our 200-level, what we call our basic program is designed specifically for OSHA compliance. That's what it does.

KEVIN ROHLWING
The next step is our certification program, which is our train the trainer, where somebody sends a key employee to a four-day class. That person becomes a certified instructor. And then that instructor then goes back into the field and actually trains technicians. In a world and in an age where everything seems to be going electronic and it's all computer-based training and there's all this LMSs and modular based learning, the tire industry since 1997 has always tried to preserve that one-to-one contact. That discussion between instructor and student. That personal, attach their words, not just read the book or do the thing and go out.

KEVIN ROHLWING
But actually answering questions and getting dialogue. And it's really been kind of fun to watch because when I first started back in '97, we were just trying to convince people they had to follow OSHA. And that took a couple of years. And what it's evolved to now is, especially in the truck tire space, you've got comprehensive employee training and safety programs now. And there's a group of safety and training professionals now, in the tire industry that are getting together and gathering and sharing ideas. 23 years ago, 24 years ago when I started that wasn't possible because they didn't exist.

KEVIN ROHLWING
So I think what we've done at TIA is that we've brought attention to the safety aspect of changing truck tires and the importance of educating technicians on procedures and safety guidelines and OSHA regulations to protect it. Our logo at TIA is "Tire Safety Starts Here." And that can encompass a lot of things. But I think the main thing is that it starts with a trained technician. And I'm real big about identifying hazards. I want guys to know. And we're very, very upfront about that in our training to more or less say, "Look, here are the ways you're going to die, okay? These are the ways that you're going to die, and this is how it's going to happen." And when you know the hazards and you understand the hazards, now, you're making decisions for your own personal safety. Because I can tell people, you got to do this, or you got to do that and are they going to believe me? Maybe they will. Maybe they won't.

KEVIN ROHLWING
But when I put a mannequin in front of a cage and I have a zipper rupture that blows up and sends shards of mannequin all over the place, it's very easy for me to tell a technician don't stand there when you're inflating a tire. The zipper rupture tests that we did in Knox years ago, same thing. When they can visualize the risk, then they understand it better. And now, they're going to make a decision for themselves. And when I'm in a class and I'm teaching technicians and I show that video and the guys that have never seen it before, the first thing out of their mouths are, "Well, I'm not going to stand there when I'm inflating a tire." I just did my job.

DOUG MASON
That's right.

DAVE WALTERS
And some of the videos that me and you and Pat did at Michelin years ago, great videos just to kind of help the industry. I've been very fortunate because I went to your school for the four days and all my staff has gone to your schools and became certified. I think that's important for us to understand when we go out in the field, a lot about what the tire is going on the wheel. And so it's nice that every one of my people are basically certified trainers from TIA, which I recommend that to anybody that's going to be out in the field a lot, because you can relate to the people.

KEVIN ROHLWING
Sure. And I think it's not just that your guys are going to go out and actually train technicians, because it's not their job. But certainly when they have that background knowledge, they can visit a dealer, they can visit some place and recognize that, "Hey, that's unsafe or what you're doing right there is not correct." And maybe not be the actual trainer, but to speak up and say something. You kind of overstate it a little bit, but I mean, you have the potential to save someone's life.

DOUG MASON
Oh, totally.

KEVIN ROHLWING
And I think that can't be lost. And I think that's part of what has made us successful over the years, is that we do keep the emphasis on safety. And I want people to go home at the end of the day. That's my thing. I don't care about the rest of that stuff. We sit in meetings and go over kind of stuff like that. As soon as it affects safety, that's when you're going to get my attention because I know how dangerous it is. And I investigate the accidents and I've been part of the OSHA investigations, and I've been through all that stuff. So I know how they're going to get hurt. I know how they're going to die. So if I can relay that information and save them or their family that pain, then that's my job. That's how I look at it.

MIKE YAGLEY
Let's say you have somebody, you don't have your video with you. What's the number one thing that you want them to-

DOUG MASON
Just walk through-

MIKE YAGLEY
Walk through a couple of the critical things that you're trying to get across.

KEVIN ROHLWING
I can tell you right now. Statistically, there's three ways you're going to die changing a truck tire. Number one is the tire's going to blow up on you while you're inflating it. Now, if it's in a safety cage, if it's in a restraining device and you've got an OSHA compliant inflation device, and you're standing outside the trajectory and the tire blows up inside the cage, we call that a Code Brown. And then you basically, get a wardrobe change and go back to work. The other way is you're going to have the vehicle fall on you because you didn't use a jack stand. Jacks are designed to lift and position. Jack stands are designed to support. If you work on a vehicle that's on a jack without a jack stand, you're basically putting your life in the hands of a $2 Chinese plastic ring at the bottom of the rim. Now, if the vehicle is on a jack stand, then if the jack fails, the jack doesn't matter because it's on a jack stand, mechanically locked out. And then the other way is what we call a rollover. And we've been monitoring the OSHA fatalities for the last 10 years. And what we found is, statistically, those are the three ways and the rollover is, you're working on the truck and under the truck and somebody hops in the driver's seat and drives away.

MIKE YAGLEY
Oh my goodness.

KEVIN ROHLWING
Oh yeah, it happens all the time. Especially with CSA. We've noticed that since CSA come on board, maintenance is a lot more up in front of the reach of the fleets. They're much more concerned about breaks and stuff like that. So there's more people under the trucks. So when CSA took over, we noticed that really kind of ticked up a lot. So what we did was, we put a lot of emphasis on lockout-tagout. Is what we're saying is that you've got to have lockout-tagout, not so much that you're mechanically isolating the machine, but it's communication. It's a steering wheel cover. It's something across the door. It's something that communicates to the person that's jumping in the driver's seat of that vehicle that it's being worked on. And it shouldn't be moved.

KEVIN ROHLWING
And I've investigated several accidents where technicians were under the vehicle and the driver gets in the vehicle and drives off and then... "What was that?" "That was just the technician you ran over and now he's dead." And there's no lockout-tagout, so he didn't know. The driver feels terrible about it, but how is he supposed to know? So we've put a lot of emphasis in the last few years on lockout-tagout and the rollover accidents have plummeted.

DOUG MASON
I should say, how did you get the word out? I mean, lockout-tagout, people who work in a plant or anything like that very familiar with lockout-tagout, but you wouldn't even really think about that with a vehicle.

DAVE WALTERS
The great thing is at TMC, we've made our Ps on every one of these subjects now. When Kevin or one of us see something out in the field, we bring it to TMC and we make and RP. We always kid Kevin about being the expert on lifting and jacking-

KEVIN ROHLWING
Absolutely-

DAVE WALTERS
and said-

KEVIN ROHLWING
Jacking and lifting. It was jack first then lift.

DAVE WALTERS
Jack first and then lift. But every time we write an RP, that's going out in the industry from TMC. And we're doing the lockout-tagout. The great thing about it is we diagnose a problem, bring it into an organization like TMC, get it out. TIA is another great organization with the technicians. So I mean, that's our job as being in the industry is to get it out.

MIKE YAGLEY
I'd like to just take one moment here because Kevin, you realize this, but this podcast is going to be going global. So people down in South America are taking what we're saying here. I'm being told that they're going to be doing some transcribing and then putting it into local languages. And so when we talk about CSA, they might not be familiar with what we're talking about there.

KEVIN ROHLWING
Well, CSA is Compliance, Safety and Accountability, which is a new initiative from the government back in 2010 to better grade or assess the safety, I don't know what you call it, but just the level of operation of a fleet, because it's more than just maintenance. It's medical cards, it's accidents, it encompasses the basics. I don't know, I can't remember what the exactly are. But there's more attention being given right now to vehicle maintenance. And that means you have more people under the vehicles, which is kind of where that came from.

DAVE WALTERS
CSA score is so important to fleets right now because it's not only about your safety, it's about the driver's safety and his record. And it's about log violations. And it's about the whole picture. Are you running a safe operation?

DOUG MASON
Correct. That goes straight to your insurance.

DAVE WALTERS
And it goes to your insurance.

KEVIN ROHLWING
Well, they had to change it though, because it was being like anything else, a lot of great ideas are great ideas. And then in practice it starts getting taken away because people were starting to check scores.

DAVE WALTERS
Yes.

KEVIN ROHLWING
And they've had to change how they do that because they were doing it originally, where they would rank you in your group. And see, you have groups from zero to 100. Now, the difference between 90 and 20 might be very, very minimal in actuality. But when you look at a number and there are 10% maintenance and this is a 90% maintenance, or a 90, the lower the number the better. So they've had to change a little bit so it's not misused, but it's still a good grading. And what I think is the most important thing about it, that I noticed when we were doing our CSA video with Michelin, was it's the enforcement officials.

KEVIN ROHLWING
That's where the change has gone. Because when you're graded on everything, when you're graded on medical cards, and you're graded on safety, and you're graded on ins'... And all those different things, the enforcement officials on the side of the road, they only have like five to 10 minutes to inspect the vehicle. They know exactly where to go. They've got your CSA scores when you're coming across the scale. If your maintenance scores are good, they're not going to go to maintenance. But if your medical card scores are terrible, they're going to ask for those. If your log scores are terrible, they're going to ask for those. And I think that's the thing that CSA has done, it's become a tool for enforcement officials to know where to look.

DAVE WALTERS
And a lot of the CSA or CVSA inspectors, they know that there are fleets that have perfect maintenance. And they wave them through because it's a waste of time-

KEVIN ROHLWING
Correct.

DAVE WALTERS
For them to go through at all. So, I mean-

DOUG MASON
So it's really helped out the fleets a lot from that standpoint-

KEVIN ROHLWING
If you're good. [crosstalk 00:14:41]. If you're not good it's kind of hard to hide.

MIKE YAGLEY
But then also, being good at that puts a lot of incentive to have that guy underneath the truck, and lockout-tagout becomes hugely important because it's at a high, much more likelihood. That's going to be something that happens in that Bay.

KEVIN ROHLWING
Right. And back to what Dave said before, TIA, we update our programs every five years. So we're updating our programs constantly as well. And because we are active in TMC, the TIA material lines up perfectly with TMC, which lines up perfectly with USTMA, which lines up with TRMG-

DAVE WALTERS
Which lines up with the Alcoa service manual because every five years, everybody would say, "Why do you want to change the manual every five years?" "Well, with TMC changes and TIA, we all go together."

KEVIN ROHLWING
We're all singing from the same sheet of music.

DAVE WALTERS
We're all singing from the same book.

KEVIN ROHLWING
And I know Dave does this as well as I do. We've spent some time in court defending procedures and guidelines and processes. And when everybody's the same, when you can go into a courtroom and be like, "Well, these guys..." Everybody says the same thing. It makes the job of the plaintiff's attorney much more difficult to place blame on something that probably had nothing to do with it. But it was just something that was inconsequential. In many cases.

DOUG MASON
It makes it truly an industry standard, right? It's not an Alcoa standard or a TIA standard-

KEVIN ROHLWING
I use the word standard.

DOUG MASON
Well, you know what I mean?

KEVIN ROHLWING
Yeah. But no, you're right. I mean, it is. There's consistency. And I think that's the biggest strength that we've had at TIA over the years is that we have taken those steps to ensure that we're consistent with everybody. That's part of the reason why we're here. I started in TMC back in '96 and it's been incredible for me professionally and personally, because I've learned so much. And all the people that taught me now, have kind of moved on. And now this is the scary part, Dave and I now, are the teachers. These are the teachers right here. We're the guys that are teaching everybody. But-

DAVE WALTERS
What is really scary is when I come here and somebody asked me yesterday, one of the T lot kids and said, "When did you start coming to TMC?" And I said, "Regularly, 1992."-

DOUG MASON
And they weren't born yet.

DAVE WALTERS
And that's exactly what the kid said, "I wasn't even born."

KEVIN ROHLWING
I get that too.

DAVE WALTERS
And I'm like, "Oh boy, I feel old." But over the years of coming to TMC, it's been great. Kevin, you're a part of this stuff. But one of the greatest things that I've ever seen happen at TMC was the day that every wheel company had a different wheel torque, every truck had a different wheel torque. And I remember sitting in a meeting saying, "By at the end of the day, you wheel guys are going to come to a torque that we can go across the industry." And that is what's so great about TMC because you have this vast knowledge of people sitting in a room and we all had to give and take a little bit. But by the end of the day, we came up to 450 to 500 foot pounds, regardless of what wheel, what truck-

KEVIN ROHLWING
For disc wheels, yeah.

DAVE WALTERS
For disc wheels, 22 millimeter studs. And that's gigantic for the industry to have standard. And we even went ball seat on that. So, I mean, those are great things that when we sat in these meetings and we talk about something and we banter back and forth, by the end of the day we come out with something great for the industry, like a common wheel torque.

DOUG MASON
Let's put in a little plug for anybody who's out there going to be listening to this. TMC is an organization to really get involved in to improve your fleet efficiency overall, safety overall.

MIKE YAGLEY
Absolutely.

DOUG MASON
It's all there.

MIKE YAGLEY
It's the best thing in North America for the maintenance organization.

KEVIN ROHLWING
Oh, no question.

MIKE YAGLEY
And it really is. I've spent a lot of time overseas. I can't tell you how many times I have been frustrated by the ability to spread the word and Japan and China and South America and Europe. Every shop is different and there's no TMC. There's no way to get the word out easily. It takes a Herculean effort to get anything done.

KEVIN ROHLWING
I'll give you a perfect example of that, in the heat damage to disc wheels issue that we had years ago. I've got 4,000 instructors that I can reach in the snap of a finger. And when it came to stuff like that, when we understood what heat damage to disc wheels was about. We had that stuff out in the field within a month. I mean, it's like, "This is a problem and this is the check." And we had that stuff out right away. We have a bi-monthly magazine that we put out there. So we can reach the tire guys real fast and TMC can reach the fleets really fast. You can literally, within 30 days, you can reach a huge swath of North America. And any kind of technical or safety concerns and hit right at it, and get it to the guy in the field. Stuff sits on the boss' desks all over the nation, but our instructors are very dedicated to their guys.

MIKE YAGLEY
A lot of these guys that you're talking about have been through your training. They might not be the Manager. These are just grunt guys who are actually going out and doing the work. And they're getting something in their inbox that says, "Hey, this is what's going on."

KEVIN ROHLWING
And they're creating career paths that was my big thing. My big thing years ago was, look, we've got all these technicians who have all this experience and then their bodies break down. And then what we do with-

DOUG MASON
And need to move on.

KEVIN ROHLWING
What do we do with them? And we're losing all that. We're losing all that institutional and all that industry experience. Let's take that guy with 15, 20 years of experience and turn them into an instructor. And now he can pass that knowledge onto the next guys. When I'm in a meeting and I see a guy that was a technician and he became an instructor and he did so well that they made him a Safety Manager, and now he's the Director of Safety.

DOUG MASON
That's exciting.

KEVIN ROHLWING
For me it is fun to watch that because we're making it safer. The insurance companies are now looking at us as an industry and say, "You guys aren't that bad anymore."

MIKE YAGLEY
That's great.

KEVIN ROHLWING
"20 years ago, you guys were a disaster. And now, you're not a bad risk? You do a pretty good job. You're managing risk." And I think that's main thing is that we're getting tire dealers to manage risk. Because you can't eliminate, all you can do is manage it.

MIKE YAGLEY
We talked before we went online here, before we went live. We talked a little bit about some of the things that we really need those guys to know. We talked a little bit already about the safety stuff. Moving past the safety stuff, what's next?

DAVE WALTERS
Like putting a tire on a wheel-

DOUG MASON
Yeah, go through it. Step by step.

DAVE WALTERS
Let's talk about number one issue, which me and you have had this conversation-

KEVIN ROHLWING
We've had quite a few.

DAVE WALTERS
Quite a few.

KEVIN ROHLWING
I think if you're going to divide it up, of course, you got to get tires off the machine, off the vehicle. So it starts with the lifting and support. Use a jack stand and a jack and stabilize it, mechanically lock it up so it can't fall on me. Then you're going to remove the assembly, which is pretty simple. That's not really a big deal.

DOUG MASON
I've had people talk to me and say, "Well, it's rusted on. I can't get it off." I loosen the lug nuts, and drive it around, right?

KEVIN ROHLWING
No. I would suggest in those instances, of course the easiest solution is just to get a rubber mallet or a dead blow hammer and get behind it and just take some swings. Take out a little frustration on people. But there are new devices now, if you've seen the Shark Fin, Ken-Tool came out with a device called a Shark Fin, which is designed off of the airbags, used in fire and rescue. It's a little... It's only probably about like a half or maybe an inch wide. And then you inflate it and it creates separation.

DOUG MASON
Perfect.

KEVIN ROHLWING
So it's not damaging the wheels because they had wheel pullers from years ago that would pull off the hand holes. I show those to Dave and Dave is like, "I don't want people putting metal hooks in my hand holes and pulling my wheels off because you're damaging the material." But if you take a rubber inflatable pad and put it between the wheels and use that to get separation, you're not damaging the wheels. You're not going to do anything like that. And you really, make it safer. If the wheels won't come off with the hammer and all that stuff, then what you got to do is you get a Shark Fin or you get something else. There's a lot of different ways to do it, but we're real big on following manufacturer's procedures.

KEVIN ROHLWING
We reference Alcoa in our training and we encourage all of our guys to have the manuals from all the different rim companies. We put the TMC user's guide in our manual because, again, we just feel they need to have that information. So once you've got the tire off the machine or off the vehicle, and now you're going to get into the demounting and mounting. For years, you had the tire hammer, the duckbill hammer. And guys are taking the duckbill hammer and swinging the duckbill hammer.

KEVIN ROHLWING
Alcoa doesn't want people smacking the rim flanges and the bead seat areas with a metal hammer. So we had to kind of adjust that and get them into the slide hammers and use it on that correctly to unseat the beads. Now you're going to demount the tire, okay? There's different tools to demount and mount the tire, but the first thing is to lube. Put some form of a rubber lubricant on the beads so that you're not tearing the beads up as you're removing the tire from the rim. In most cases, you're going to save that casing for retreading.

KEVIN ROHLWING
And if you tear up the beads too much, then you can't retread the casing. Now you've lost the asset. Now the fleet loses that asset and that's huge for them. I mean, that's costing them money. So we're trying to be professional. So we're real big on that. Now, once you've got the tire dismounted and the tires off the rim, we're real big on inspection. We really spend a lot of time on inspection. Inspection of components, inspection of the rim, inspection of the surfaces. I mean, it's really important for us, so we put a lot of emphasis on that and then it comes to mounting. And this is where Dave and I have had a number-

DOUG MASON
[crosstalk 00:24:38] back for a second.

KEVIN ROHLWING
Yeah.

DOUG MASON
We're strictly talking about the tire here. What are they looking for in the tire? When you're doing this inspection, what are the main things that they should be concerned about? And what would you kind of step through for an inspection?

KEVIN ROHLWING
We always divided up. You're going to do tread, sidewall, beads, and interior, okay? So tread, we're looking to make sure we have sufficient tread. You don't want any cuts or chips that expose any plies. You don't want to have any steel or now we're not saying fabric, everyone says textile.

DOUG MASON
Yes. I saw that.

KEVIN ROHLWING
For years it's been fabric. We're leaving it as fabric because my guys won't understand textile. So I'm leaving it as fabric. That will be a difference.

DOUG MASON
Textile is a plant, right?

KEVIN ROHLWING
I mean, yeah. Textile could be anything. I mean, it's fabric. There's some real geniuses in there sometimes-

MIKE YAGLEY
I'm confused. They want to get rid of fabric?

KEVIN ROHLWING
Yeah. We don't refer to it now as fabric, we refer to it as textile. It's textile, which-

MIKE YAGLEY
This is an offline discussion.

DOUG MASON
No, no, no. They're wondering why.

KEVIN ROHLWING
Because there are people in that room that felt textile was more accurate. So I really don't care. I'm leaving it as fabric.

MIKE YAGLEY
Okay.

KEVIN ROHLWING
I run TIA, so I get to do what I want. So we're leaving it as fabric. But you want to look for those things. You're looking for damage. You're looking for insufficient, tread depth. You're looking for anything that could jeopardize the safety or the integrity of the casing from the tread side. Same thing with the sidewall. You're looking for bulges. You're looking for anything that exposes material, fabric or steel. Same in the beads. Some bead damage is repairable. Some bead damage is not. So you have to know which is which. Is this repairable damage or it isn't? And then the same thing on the inside.

DOUG MASON
That type of literature, there'll be something TIA puts out? Or-

KEVIN ROHLWING
That's in all of our [crosstalk 00:26:13]-

DAVE WALTERS
Like I said, TMC, TIA, everybody kind of goes to the same [crosstalk 00:26:20].

DOUG MASON
So people realize they can find it-

MIKE YAGLEY
So [crosstalk 00:26:21] into the show notes, TIA website. People could be able to go-

KEVIN ROHLWING
Yeah. tireindustry.org. Just go to wwwtireindustry.org. The great thing is, like I said, now we have our own online learning platform. So we can provide training anywhere in the world for that matter.

DOUG MASON
Perfect.

KEVIN ROHLWING
If you buy it that way, and you've got complete training across the board. You just sign up for the online... Now it's all in English, but English is a pretty common language now from a business perspective. And other people have said, "Look, even if I can't read the language, I can understand language. I can still see the pictures."

MIKE YAGLEY
There's plenty of graphics-

KEVIN ROHLWING
Oh, yeah. Videos. We do a lot of video. We're visual learners. Tire guys are fingertips in. Tire guys, everything's fingertips in. You ask them to think outside their fingertips they can't do it. If they can't touch it, feel it, hold it, move it and manipulate it physically? They don't understand it. So you really got to kind of stick with the visual learning. And that's what we do. We put a lot of that in there. A lot of the visual learning. So that's available for them as well. So I mean, that's the easy part. Getting the tire off the machine, getting the tire off the vehicle and getting it off the rim, that's the easy part. The hard part comes next. And that's the mounting and the installation. On the mounting side of it, when we inspect the rim, we're inspecting rim flanges. We're inspecting bolt holes. We're inspecting bead seat areas. We're inspecting drop centers. We're inspecting everything on that rim. I'm going to get the best inspection when it's off the tire. When I've got just a bare rim-

DOUG MASON
Clean it up.

KEVIN ROHLWING
Yeah, absolutely. Get the bead seating services and for the mounting process-

DOUG MASON
So important.

KEVIN ROHLWING
Yeah, exactly. On an aluminum wheel, it's a symmetrical drop. So which side are you going to demount and mount from? The side that people don't see. So we try and give that to them as well, just so that they're understanding what their role is in the system. And then we get back to lube and this is where Dave and I have had a number of conversations is, what do you lube? And Dave always calls it as lube-lube. You lube the tire and the rim. We're real good about lubricating the tires, but we don't do a good job lubricating the rim all the time. When you just put lube on the beads, most of that lube gets rubbed off on the flanges as the tire slides over the flange. So now it's a dry mount. And when you dry mount a tire, concentric bead seating is going to be much more difficult. You're going to get irregular wear patterns. You're going to get vibrations. I mean, there's 1,000,001 things that can go wrong when you don't lubricate the rim, as well as the beads. So we put a lot of emphasis on that using lubricants with anti-corrosive properties. It's all part of the process of getting that tire centered on that rim.

DAVE WALTERS
Couple of things I'll bring up real quick is, again, at TMC, the conversations we had on lube because the wheel could take a petroleum based product or vegetable based where the tires are made of petroleum. So they don't want the petroleum based lube. Water is bad for both of these. But again, as we go through this and we all stay the same. So we know that this is a type of lube that we need. Lube-lube is critical in our industry because Kevin brought up about concentric seating. And I always say that's one of the dark secrets of our industry. There's a lot of concentric seating issues because they did not lube-lube.

KEVIN ROHLWING
Or they seated the beads with the tire standing up.

DAVE WALTERS
Yeah.

KEVIN ROHLWING
I mean, gravity, it's real simple. If the is standing up, the wheel going to fall down. So as the bead seat, you've got gravity working against you. Especially on steer tires, you should seat the tires with the laying flat. And there's stands out there now. People put them on buckets, there's all kinds of different ways to do it. But the objective is to seat the beads on the rim so that it's centered on the rim. It's concentric seated on both sides and it'll tear steer tires up. You want to talk about irregular wear patterns on a steer tire, get a non-concentric seated bead and it'll tear up in 50,000 miles. You'll have all kinds of crazy wear because the treads basically working like a snake. Every time that sidewall's in a little bit over here, it's 650 revolutions per mile, right?

DAVE WALTERS
Mm-hmm (affirmative).

KEVIN ROHLWING
So after a thousand miles at 650,000 times that tire's scrubbed sideways. Scrub anything sideways 650,000 times what's going to happen?

DOUG MASON
And on the tire, there's the, they call it the GG ring, right?

KEVIN ROHLWING
The molded rib yeah. The molded rib on the lower sidewall. GG ring is a Goodyear specific term, but-

DOUG MASON
Oh, I'm sorry.

KEVIN ROHLWING
That's okay though. Everybody calls it the same thing. All the old Goodyear guys will always, "GG rings-"

DOUG MASON
That's why they call our wheels Alcoas, right?

KEVIN ROHLWING
Yeah, exactly. Well, just the aluminums. Just the aluminums, not the steel wheels.

DAVE WALTERS
One of the things when we're talking about that, you have to have two thirty seconds but most of the time-

KEVIN ROHLWING
For driving trailer.

DAVE WALTERS
Yeah. Most of the time I can go and look at the beads and they kind of like, come in and out. If you see that you know you got concentric seating issues. And the question always from the person is, "Which one's bad the tire or wheel?" And say, "Neither, it was the way you mounted up."

KEVIN ROHLWING
Yeah, the rim's running true, but the tires doing this. The tire's going side to side and the rim's running straight down the road. It's-

DOUG MASON
You to get them aligned.

KEVIN ROHLWING
Exactly. Wheels can bend too. But it's unlikely that you're going to get that much lateral bend in a wheel, especially on an aluminum wheel because it'll probably crack before it'll bend.

MIKE YAGLEY
Now there's a lot of discussion about whether or not to lube the drop wall. Experts can disagree, we'll say on this one. But I'd like to get your input on that.

KEVIN ROHLWING
We recommend that you lubricate the entire surface of the rim, just because it's the best practice. And if you're using a proper lubricant and it isn't water-based, and it has some anti-corrosive properties, it's not going to hurt anything. It's going to give you a better seat. The issue comes into, if you're using any kind of a dry balance compound and there's lubricant on the drop center of the rim, you're going to get issues there. It's going to stick to it. It's going to make it less effective. It's going to ball up. You've got to minimize the amount of moisture inside the cavity when you've got a dry compound, obviously. So the dry balance compound guys would prefer that you do not lubricate the rim because of that.

DAVE WALTERS
And now again, I can bring up the pressure sensors and stuff. They don't like that either. As we debate this my number one concept is lube-lube. Lube the beads of the wheel, beads of the tire absolutely. And it's really, when I'm saying is, if you have sensors, you got compounds, that's really going to dictate, do you want to do the center of the wheel?

KEVIN ROHLWING
Yeah, I would agree with that. We're going to stay with what we're doing. And Dave and I have had this conversation as well. If a properly mounted tire is on a high quality rim, it probably shouldn't have a lot of imbalance to begin with.

DOUG MASON
Right. That's true.

KEVIN ROHLWING
Let's face it, the Alcoa wheels or any-

DOUG MASON
We're talking thousands.

KEVIN ROHLWING
Yeah, exactly. The amount of run-out is so small and the imbalance is so small. And in a high- quality truck tire, it's the same thing. It doesn't need a lot of balance. There are instances where balance has shown to help. And I mean, we've both been part of all that and I'm not going to say you don't need to balance. I'm just saying that it's not as important as some might seem to think. If you've done everything properly, then balance is going to be a minor factor.
Doug Mason
Okay.

KEVIN ROHLWING
In a process. But if you've-

DOUG MASON
You're fixing an issue, [crosstalk 00:33:37].

KEVIN ROHLWING
Yeah. Exactly. If it's not concentrically seated, then I can spend all the money I want on balance technology. And I'm still going to get irregular wear because it's not going to roll in a straight line. It's going to have a little bit of a kick. So I mean, scrub is scrub. Like I said, if it scrubs a quarter of an inch, 650,000 times, every 5,000 miles, every 1,000 miles, that's a lot. Move anything 650,000 times it's going to have an impact.

MIKE YAGLEY
Sure. So let's talk a little bit about seating that bead, lots of different ways-

DOUG MASON
It's all lubed up nice, it's all ready to go.

MIKE YAGLEY
It's all ready to go. Now it's time to seat the bead. What do you got to say there?

KEVIN ROHLWING
Well, I mean, everybody uses some kind of a compressed air blasting device. It's a tank that has compressed air in it and you shoot the air in it and expends the beads out and that'll get the beads to seat on the rim so that it's sealed. So now it's airtight. Now, one of the things that we do at TIA is that we are adamant about always inflating tires with the valve cores removed. You never inflate a tire with the valve core in the valve stem.

DOUG MASON
Okay-

KEVIN ROHLWING
Never. If the valve core is in the valve stem and during the inflation process something goes wrong, you notice a bulge, you're noticing a separation, there's a crack in the rim or something like that. Air chucks don't always stay on valve stems enough to depress the pin on the valve core to allow the air to go in and out. So if the air chuck were to somehow dislodge itself from the valve stem so that it's not depressing, the valve core anymore, how am I going to deflate the tire?

DOUG MASON
I see, yeah.

KEVIN ROHLWING
I'm going to have to go into the trajectory zone-

DOUG MASON
Yeah, to do that.

KEVIN ROHLWING
To do that. Now, if there's no valve core in the valve stem and I see a problem, cut the hose, disconnect the hose. I really don't care. I can pull on the hose and rip it off the valve stem and it's going to deflate itself. But when the valve core is in the valve stem during inflation, you have no recourse. There's no way to get the air out of that tire, if the air chuck does not depress the valve core to the point where air is allowed in and out of the valve stem.

DOUG MASON
And so you just brought up another point though, while you're doing the inflation, you just basically mentioned another inspection, right?

KEVIN ROHLWING
Yeah. Oh, sure. Well, you're inspecting for a zipper rupture. And a zipper rupture occurs in a steel radial truck tire where it's over flexed in the sidewall and it's a circumferential separation. They don't want to use separation. I'm leaving it as separation. This is together. It comes apart. It's separated. So when you get a circumferential separation in the sidewall of a tire, it's called a zipper rupture. It's caused by overinflation and overloading. And it's a blast of air. And here's the thing. It's not the blast of air that kills you. That's not what kills you, you know what kills you, blunt force trauma. When it knocks you off your feet and you land on your back and you smack your head on the concrete or the machine next to you or the trailer next to you, or the post, or the wall.

DOUG MASON
Another reason to stay out of the line of trajectory.

KEVIN ROHLWING
Exactly. I always say this, if you can see the sidewall of the tire when you're inflating it, you're in the wrong place. And I don't care what it is.

MIKE YAGLEY
Even on a cage.

KEVIN ROHLWING
I don't care what it is. Bicycles, motorcycles, car tires, a little bitty forklift tires, wagon tires. I don't care. When you're inflating a tire. You stand even with the tread. If you're even with the tread, then you're in the safest place you could possibly be. Tires will never separate at the tread when they're being inflated, always sidewall.

DAVE WALTERS
When we were doing a zipper test for TMC in Knox years ago, I was amazed that the Tire Engineers would walk right up to the tread side and they were not scared whatsoever. But my goodness, they would never be in front. And it was like, these guys designed these and they're scared to death.

KEVIN ROHLWING
Except for the one time though, remember the one time we were videotaping it. We set the camera up so we could see it from the side. And as I was like aiming the camera, one let go on me. And I was a good 10, 15 feet away. And I think I did almost a complete back flip coming off the chair to get the hell out of the way. That was the fastest I think I've ever moved. But yeah, Dave's exactly right. When we were doing those tests, we had no qualms whatsoever about walking up to a tire with big bulges all over it. As long as we were even with the tread. But no one would stand in front of it. No one would get into the trajectory of that sidewall because that's where you're going to get hurt. That's where the accidents occurred.

DAVE WALTERS
Now, one thing when we talk about mounting the tire and I know, you know me go way back-

DOUG MASON
Oh, yeah.

DAVE WALTERS
Before bead blasters or-

DOUG MASON
Yup. I heard these stories. This is going to be good.

DAVE WALTERS
So if this-

DOUG MASON
Personal experience and this-

DAVE WALTERS
I've done it many a time.

KEVIN ROHLWING
And I've never done it.

DAVE WALTERS
I've done it many at times, unfortunately. The old can of ether and just spray it around, throw the match to it. And the seat your bead, the most dangerous practice I've ever seen. Couple of years ago in the ice road truckers, I seen one of their drivers doing that saying, "This is the way you do it. I'm here to tell you-"

DOUG MASON
Did you give him a call?

DAVE WALTERS
This is scary.

KEVIN ROHLWING
Yeah. We've done that. We've sent letters to television shows and they just don't respond. They don't want to hear that. Dave's exactly right. I mean, when you put a flammable substance inside of a tire and ignite it to seat the beads, there's remanence there. There's going to be explosive gases inside that tire. And there have been some accidents where a guy takes a duckbill hammer on a steel wheel and goes to swing it and it sparks it. And it blows up on him.

DAVE WALTERS
The one that I seen most was a guy who was taking the valve core out of the tire, guy's grinding over and the next thing spark hits that air coming out and boom explosion. They're like, "So what happened?" "Well, you ethered it to start with now it blew up."

KEVIN ROHLWING
It can contribute to a chamber fire. If enough of it's put in there. And it kind of soaks itself into the rubber on the inside of the tire. When you put it in a chamber during the retread process, that's high pressure and high temperature for hours at a time point. It'll start it on fire. And if you have any kind of flammable residue on the inside of the tire and it goes in a chamber, it starts a fire inside the chamber. And now you've got a bomb. You've got a bomb. And not to mention the fact that you're going to destroy a quarter of a million-dollar chamber. There's a lot of bad things that happen when people use flammable material to seat the beads on tires. Fortunately in the professional space, no one does it anymore.

DAVE WALTERS
No. When I go out to do training classes, I can tell the veterans against the younger ones. The younger ones don't even know what that is. Because every time you mentioned that the veterans kind of snicker and grin and you thinking-

DOUG MASON
They did it.

DAVE WALTERS
They did it.

KEVIN ROHLWING
We did it back when I was working for my dad. Before I got there, and one went bad. And you could still see the ring in the concrete and the hole in the ceiling from when it blew up and went straight up. And fortunately, nobody was standing in front of it when it blew. From that point forward, my dad was just like, "No more. We're throwing away all the ether." And he went out and bought the big seat rings and all the different blasting devices and said, "This is how we're going to do it. If I find ether you're fired." It was a-

DOUG MASON
That would have been a scary, scary situation.

KEVIN ROHLWING
Yeah. He said that when he heard the explosion, he came running out of his office and we had a new skylight. And that was the end of that. But we left the ring in the concrete in the shop.

MIKE YAGLEY
As a show, for something to talk about.

KEVIN ROHLWING
Yeah. I never liked to hire experienced guys because they bring bad habits into my shop. I would prefer a guy that's green that knows nothing and then I can teach him the right way from the start. And we would get guys that would come in and say, "Where's the ether?" And everybody would just point to the ring on the floor and say, "It's right there" "What's that?" "That's what happened the last time we used ether in the shop. And if you're caught using ether, you'll be unemployed." [crosstalk 00:41:35]. But it's more about-

MIKE YAGLEY
Ether is still is out there-

KEVIN ROHLWING
Oh, no. It is. We had road service trucks and that's the thing is that, I have control in the shop.

DOUG MASON
Yeah. That's right.

KEVIN ROHLWING
On the road service truck, I got nothing, man. I got nothing. I don't know what those guys are doing out there. I got no clue. All I know is that the truck doesn't get wrecked. They don't lose their tools. And the stuff that they fixed stays fixed. That's success in the tire business on road service. Because we have no idea... these guys are like independent. It's just them in their truck on the road. You don't know what they're doing out there. So that's the concern that we had was that, we would just spot check trucks and just make sure that... We had one guy that talked about it and I just warned him. I said, "Look, if the old man finds ether in your truck..." First of all it's a diesel. So you can't give the old... I needed to start the truck nonsense because you're not going to be able to do that. "I needed to start my truck." " It's a diesel genius."

KEVIN ROHLWING
Now that's not going to do anything for you. We're a lot safer today. The industry is a lot safer. TIA has played a role in that. Our thousands of instructors have played a role in that. The dealers have embraced safety and they've finally seen the high costs of low training. So it's really been an evolution in many ways. And I'm proud to be part of it, and Dave's part of it, and Alcoa's part of it, and TMC's part of it. And everybody that participates in the RP is part of it. So it's really a community thing. And I think, we have a lot to be proud of as an industry that we've made it more professional. We've made it safer and we've turned it into something that is sustainable long-term because it's hard work. Tire service is not easy, but you could make a good living at it. You just got to work.

DOUG MASON
So you've got the tire inflated, now. We got that far. We got to the tire being inflated. But once they've got that inflated and they do a little inspection while it's still in the cage, it sounds like-

KEVIN ROHLWING
Yeah, we'll do inspections while still in the cage. And we over-inflate it to do kind of like a pressure test and then put the valve core in it and now comes the-

DOUG MASON
You said over-inflate it?

KEVIN ROHLWING
Yeah. We'd over-inflate radial truck tires.

DOUG MASON
Okay. So what would you inflate them to?

KEVIN ROHLWING
20 pounds over the sidewall.

DOUG MASON
Okay.

KEVIN ROHLWING
It's a pressure test. I mean, again, in that zipper rapture-

DOUG MASON
This is standard, right?

KEVIN ROHLWING
Oh, yeah.

DOUG MASON
For anybody who's working out there is doing this inflate... Any tire you're inflating-

KEVIN ROHLWING
Radial truck tires.

DOUG MASON
Radial truck tires? Okay

DAVE WALTERS
That was part of the tests that we ran in Knox years ago. Because it used to be, we had to go 20 minutes with 20 pounds. So what we proved by doing our testing is they blew up before-

KEVIN ROHLWING
The 20 minute rule was not applicable. The 20 minute rule was not applicable as a-

DOUG MASON
20 PSI-

KEVIN ROHLWING
20 PSI over whatever is on the sidewall, not to exceed 120 or 140, depending on the tire. But it's a pressure test.

DOUG MASON
That makes sense.

KEVIN ROHLWING
If it doesn't blow up at 120, in the cage, it's not going to blow up at a hundred when it's in my face.

DOUG MASON
Right.

KEVIN ROHLWING
Because it's really kind of hard to install it on the machine or the vehicle without being in the trajectory of the sidewall.

DOUG MASON
You have to be.

KEVIN ROHLWING
You're right in front of it. So over-inflated. And if it doesn't blow up there, then it shouldn't blow up in your face. So we always prescribe that procedure. And again, most of our people... Now everybody's gone to automatic inflators that do it automatically.

DOUG MASON
Oh, okay.

KEVIN ROHLWING
I mean, you just basically hook the air chuck on there and hit the button and it takes it to 20 PSI and it stops. And then you got to do the inspection and then you have to hit the button to make it go to 120. And then it goes to 120 and then you inspect it, and then you hit the button again. And then it brings it back down to a hundred and then it's on the way. So you don't have to stand there and watch every pound going in. It's a high-pressure type thing. It inflates faster.

DAVE WALTERS
Most of the shops have multiple of these.

KEVIN ROHLWING
Oh, yeah.

DOUG MASON
Yeah.

KEVIN ROHLWING
Yeah, big shops.

DAVE WALTERS
They're doing multitudes these over time. The automatic inflators have really made their life great. So-

KEVIN ROHLWING
It's made more efficient. Yeah, no question. It's more efficient. So-

DAVE WALTERS
Now, we go put it on-

KEVIN ROHLWING
Here we go. This started, Oh boy, 13, 14 years ago, maybe even more, 15 years ago. We were doing work with a large retailer on the car side. We're real big on using proper torque. So it's a procedure that kind of leads up to it. And this particular retailer that we were working with said, "You know what? I need an acronym. I need something that I can teach my guys, that's going to remind them of what to do when you install a wheel." And that's when I came up with RIST, the RIST procedure. And the RIST procedure is now the industry standard for wheel installation across the board. And RIST is remove, inspect, snug, torque, okay? Remove, remove debris from mating surfaces. Alright, Dave, if I've got debris on the mating surfaces, what's going to happen?

DOUG MASON
Bad things.

DAVE WALTERS
Loose joint.

KEVIN ROHLWING
Or I put... I got the right torque though. I got the right torque, Dave. No, Dave. I went out and I bought $20,000 torque devices. And I'm guaranteed to be within half of a foot pound of 475 foot pounds. But if I don't clean the mating surfaces?

DAVE WALTERS
It's going to loosen up and then lose-

KEVIN ROHLWING
The joint settles. The material works itself out. I've lost my bolt tension. I lose my clamping force, but I had the right torque.

DAVE WALTERS
And again, they tell you that everyday.

KEVIN ROHLWING
I had the right torque, Dave.

DAVE WALTERS
I know.

MIKE YAGLEY
This sounds like a discussion that you guys have had once or twice.

KEVIN ROHLWING
Many times-

DAVE WALTERS
Many.

DOUG MASON
There's many reasons have the right torque, but not the right tension.

KEVIN ROHLWING
Well, I mean, again-

DAVE WALTERS
And then the best one is, "Hey, we have those little indicators."

KEVIN ROHLWING
Oh, jeez.

DAVE WALTERS
Me and Kevin both understands that doesn't tell you that-

KEVIN ROHLWING
They look pretty.

DOUG MASON
You can settle a joint without it moving.

KEVIN ROHLWING
Mm-hmm (affirmative).

DAVE WALTERS
Yes.

KEVIN ROHLWING
As you can. And by the time that wheel comes loose, you're never going to find those little indicators.

MIKE YAGLEY
So you got RIST. So it's-

DOUG MASON
Remove-

KEVIN ROHLWING
Remove debris for mating surface.

DOUG MASON
Perfect.

KEVIN ROHLWING
We got to have clean mating surfaces.

DOUG MASON
Perfect.

KEVIN ROHLWING
I as inspect. You got to inspect the components, all right? If it's a ball seat, even when the ball seats are worn but I got the right torque, wrong tension. If it's a hub piloted, system and the flanges don't move. I've got the right torque, but I'm going to get the wrong tension. If the bolt holes are worn, if the studs are necked out. I mean, again, the fallacy and the disservice that this industry had been doing for so many years was torque, torque, torque, torque.

DOUG MASON
It's a good thing. I mean, we really hammered on torque. But you're making a great point. It's not just torque.

KEVIN ROHLWING
No. We say this torque is the setting on the oven. The recipe for clamping force in bolt tension is remove, inspects, snug.

DOUG MASON
That's right.

KEVIN ROHLWING
And we use that when we're teaching our classes. If you've got the right temperature on the oven, does it guarantee that your recipe is going to come out correctly? No. It guarantees nothing. I mean, if I'm supposed to grease the pan and I don't grease the pan, then whatever I put in the pan ain't coming out of the pan.

DOUG MASON
So one step in the process.

KEVIN ROHLWING
Correct. So we try and use that recipe. RIST is the recipe for bolt tension and clamping force. So remove debris from mating surfaces, and then you're going to inspect all the components. Inspect the studs, the nuts, the bolts, the wheels, the bolt holes, everything all has to be in good condition. And then S is snug in a star pattern. You got to seat the wheels. You don't want hub piloted wheels, position the pilot pad at 12 o'clock. Make sure the wheels are properly seated. I know Dave and I have gone through this a lot with... Look, if the wheels aren't properly seated, then as soon as the thing's underweight-

DOUG MASON
Is gone.

KEVIN ROHLWING
Click back into place. And then exactly. Now, we got loose wheels, but we had the right torque. You keep going back to that. We have the right torque. Well, but if the wheel's not seated properly, if I don't have equal distribution of force between all 10 of the bolts and the lug nuts, same thing. You can have the greatest torque devices in the world, but if it's not seated properly, the wheels are still coming loose.

MIKE YAGLEY
I think a lot of folks don't realize how little movement of that nut-

DOUG MASON
Rotation.

MIKE YAGLEY
Rotation of the nut it takes to get to from hand-tightened to 500 foot pounds.

KEVIN ROHLWING
Especially on a hub piloted system.

MIKE YAGLEY
Especially on a hub piloted system. I mean, a half a turn, three quarters of a turn, something like that is going to take-

KEVIN ROHLWING
Hundreds.

MIKE YAGLEY
From hand-tighten to where you need to be. They pull out the big guns, they drive it down, they take it three or four turns, and it's way over-torque. You don't need a whole lot past that hand-tightened-

KEVIN ROHLWING
In the tire business. We call them ugga duggas How many ugga duggas does it take to get to the right torque? And you can't guess that. And I will, to give credit where credit's due. Alcoa came out with those centering pins that I always give them a hard time about how much they cost. If the Alcoa marketing people are listening right now, you're charging too much for your damn pins. And now there's all kinds of private market... But I mean, those things are fantastic. And we promote those in our classes and we put them in our videos because you're going to get the drum seated. If you use those pins, if you use those centering pins to get those drum seated first, now, you're guaranteed that the drum is seated on the end of the axle. Then the wheels go on much easier. And again-

DOUG MASON
Protect the threads.

DAVE WALTERS
You can't get them cocked. And that's-

KEVIN ROHLWING
No. There's so many good things. And I've got more guys now, especially on the younger techs that are like, "Wow, it's a lot easier with those pins. All I have to do is just get a couple of bolt holes lined up in the wheel slide right on." So they're using more of those. And when those first came out, I was on those right away. I had one of the first sets. I think I had them before they were even commercially available. I was using them in my classes because I saw the value in it. I'm like, "Wow, that's going to seat the drum." And I know that you worked on that a lot.

DAVE WALTERS
I worked on that-

KEVIN ROHLWING
I know.

DAVE WALTERS
For a couple years and the expense and it's hard to... But we had to heat treat those because we're pushing on drums.

KEVIN ROHLWING
Right.

DAVE WALTERS
And back when they were cheaper-

KEVIN ROHLWING
That's why they're so expensive?

DAVE WALTERS
That's why they're so expensive.

KEVIN ROHLWING
I knew that was coming.

DAVE WALTERS
Heat treated them-

DOUG MASON
And you can also torque them pretty high.

DAVE WALTERS
Yeah. When we figured out they could push on the drum and seat the drum, that was gigantic. You really don't cock the front wheel, but boy, the rear wheels, you could get them cocked pretty easy. Because a lot of technicians would put them on and they're going to lean back on them. And if you tighten that bottom nut, you just screwed up the whole system. You got to slide them on by doing that top one-

KEVIN ROHLWING
And do 12-6.

DAVE WALTERS
And that's critical. Me and Kevin, that's funny because we come up with sayings when Peggy used to try to separate us, like little kids in school because we'd sit back there and make up names. So the gutentight (Good and tight) method.

KEVIN ROHLWING
Gutentight

DAVE WALTERS
Gutentight, that's the German method.

KEVIN ROHLWING
The German wheel installation procedure, gutentight.

DAVE WALTERS
The gutentight.

KEVIN ROHLWING
How many ugga duggas?

DAVE WALTERS
Tell them about the gutentight because-

KEVIN ROHLWING
Yeah. The gutentight is just taking impact wrench, and hammer on it till it stops moving. On a hub piloted system, you'll be upwards of 1100, 1200 foot pound, easily.

DOUG MASON
You've totally gone past the-

KEVIN ROHLWING
We've done a really good job, I think, as an industry, over the years of getting people interested in doing it correctly and professionalism. And I absolutely know that RIST... I mean, it's not just truck tires, but it's car tires, earth-mover tires, everything. I mean, we've made RIST the worldwide installation procedure for wheels. When I first came up with it, you were one of the first people I called and I said, "What do you think about this?" And he was like, "That's perfect." I mean, remove, inspect, snug torque. Remove, inspect... I mean, people got stickers on buildings, and posters and shops and stuff-

MIKE YAGLEY
Perfect, great.

DOUG MASON
Does it have your face with it or?

KEVIN ROHLWING
No, no, no, no. I have a face for radio. That's why I'm glad this is a podcast. Because-

DAVE WALTERS
I did want to bring up one story about the gutentight method because I had a customer and he was having tremendous issues with stud breakage. So he schooled his technician for about a month or two before he allowed me to come down and watch him. And I think he probably went to TIA in the meantime, but he was down there and he did this process. And I mean, he was lube-lube and doing the two drops of oil and doing the drop and making-

KEVIN ROHLWING
Doing 90% right.

DAVE WALTERS
Doing everything right. And then he snugs him up. He grabs a one-inch gun and he... Then he grabs a torque wrench and he goes around and he clicks them on, and he smiles at me like, "See?" And then at the end of the process, the superintendent of the company looks at me and says, "And may you critique one thing that we did wrong?"

DOUG MASON
I only needed to critique one thing.

DAVE WALTERS
And I said, "Let's grab that torque wrench and turn it up to the highs it will go." And it went, click, click, click. And then he says, "How tight?" So we went to a earth-moving dealership, brought their torque wrench back. It was 1200 foot pounds.

KEVIN ROHLWING
Easily.

DAVE WALTERS
And they wondered why they were breaking studs. I said, "This is the gutentight method that we've talked about for years." You snug them up, you run them up... I mean, you don't even need a one-inch gun. I mean the half inch guns or three quarter get you up there, then you bring them to torque. So, I mean, that's very critical in what we do.

KEVIN ROHLWING
Max torque on a one-inch impact wrench is right around 15 to 1600 pounds in most cases. That's max torque. Now, we've always used the one-inch gun because we feel we need that to get them off, put in a hub piloted system. It's 90 something percent of what's out there right now, but our guys just won't get away from that.

DOUG MASON
We were talking to a gentleman last night here, said, basically, they've taken out the forward pin. You can't use your one-inch gun to put anything on. You can only use it to take it off.

KEVIN ROHLWING
Some of the newer models they've done that. But I mean, it's still a rough business and people are hard on equipment and tools. So Dave and I have gone round and round about torque sticks, how they are better than gutentight, but they're still not accurate. And the biggest problem with the torque stick is that if you've got an insufficient air flow or a deficient air wrench, torque stick will actually make you go under. Now the torque stick will keep you from going way over, the danger there is that you're going to be on-

DOUG MASON
The big issue there too.

KEVIN ROHLWING
And now you're getting into air flow issues. You're going to get into CFM. You're going to get into all kinds of other problems that go along. I mean, the amount of power that's applied to a pneumatic tool is dependent on a lot of factors and it varies. How many tools are being used at the same time? Do I have enough flow in the entire system? If I'm using two impact wrenches at the same time, what are my line size? What is the compressor? Is there a reserve tank? I mean, we can get into all that stuff.

DAVE WALTERS
And one of the things we did here at TMC was, we figured out it needed 90 PSI at the gun.

KEVIN ROHLWING
Right. That's rated on the gun it's actually-

DAVE WALTERS
It's rated on the gun. So, I mean, there's a lot of things when you're trying to explain to people like you need 90 PSI on this gun, and if you don't have that-

KEVIN ROHLWING
And that's free running.

DAVE WALTERS
Yes.

KEVIN ROHLWING
That's free running. We would do a test, back in... When I was in Louisville, when I had the static pressure at 125 on a 25-foot hose, I would get 90 PSI at the gun. If I used a 50-foot hose, I needed 145 pressure at the end because I had all that extra length. And again, on the torque stick side of it, running pressure means everything in terms of the power of the wrench. So there's so many variables in there. And one of the things I saw, I don't even know if you've seen this yet, but it's over in the Tuffy booth over here. Milwaukee has got a new brand of 18-volt rechargeable, cordless impact wrenches. And they actually have the ability to shut the torque off at particular torques because it's electric. So here's an impact wrench.

KEVIN ROHLWING
That'll pull the nuts off like any other one-inch impact wrench, but when you go to install it, you set one of the four preset settings. You could have a preset setting at four 75 and it'll actually deliver 475 foot pounds with the impact wrench at installation. I would probably, periodically, spot check myself, not just as a thing, but there's pneumatic nut runners out there. And there's a lot of technology. It's available to get us to the right torque.

MIKE YAGLEY
It's coming. It's here, but it's not everywhere.

KEVIN ROHLWING
No, it's not. And you can still just go to the old manual torque wrench. This is a funny story, when we do our videos, we typically use what's called a breakneck torque wrench. And a breakneck torque wrenches, when you put enough force on the handle, the handle actually bends. It's a slang is a breakneck torque wrench. And I had a torque wrench guy corner me in Vegas a couple of years ago. And just read me the riot act on, "Why do you use breakneck torque wrenches? And I make a clicker torque wrench and it's better than a breakneck. And it's all you show in your videos are breakneck torque wrenches. And you've got to be on their payroll and they're giving you a kickback and you're getting this and this."

KEVIN ROHLWING
And I sat there and I just kind of waited and waited and waited. And I said, "Can I talk now?" And he said, "Sure, go right ahead. I'd like to hear your answer as to why you only feature breakneck torque wrenches in your videos" And I looked him right in the eye and said, "It looks better on film. I can't see a click. That's why, simple." And look, I don't care what torque wrench you're using, but in a video, I can't see a click. I can the handle break. It just looks better on film. That was the reason. I mean, I don't really care what torque wrench you're using. As long as you're using a torque wrench.

MIKE YAGLEY
And get a good two to 500 or four 75 or whatever it is your target.

KEVIN ROHLWING
Exactly. But we really stress though on the RIST side of it, proper torque guarantees nothing. I can't tell you how many times I've said that over the last 15 years or my instructors, proper torque guarantees nothing. If you don't have clean mating services, if you don't have good fasteners and hardware, if the drums not seated properly in the end of the axle, I can have the highest quality torque device in the planet and I'm still going to get loose wheels.

MIKE YAGLEY
Very good.

KEVIN ROHLWING
So we hammer on the procedures and processes. That's our big thing and safety.

DOUG MASON
You've gone through RIST.

KEVIN ROHLWING
Yeah.

DOUG MASON
Now you're done.

KEVIN ROHLWING
We'll recommend that there is a torque check after 50 to a hundred miles. I know that I've done a very good job of eliminating the re-torque. We don't use re-torque anymore because re-torque assumes that you didn't do it right the first time.

DOUG MASON
Right.

KEVIN ROHLWING
So we say, torque check. Recommend a torque check after 50 a hundred miles.

DAVE WALTERS
And we're a little different than most because we go five and what our thing is, get the vehicle out, run it around, try to twist and turn and get back. And what we have learned from our testing, which was all done by fleets at TMC, is once you check it at five and you re-check, and that joint is pretty good there... We had one fleet that never lost any torque through the whole life of that wheel on that. Their process was so under control. They were cleaning, they were oiling the stud correctly. They were making sure the nut was right. And they used to bring their trucks in and it saved them literally thousands and thousands of dollars because they proved that their process is under control. We wrote an RP at TMC... Me and Kevin we've had so many conversations over the years, but the lawyer's dictate-

KEVIN ROHLWING
Some about being tires and wheels-

DAVE WALTERS
Lawyers dictate what we do. And if you have this little chart saying, I've checked 30 and there's our data and dah, dah, dah, dah. So as a fleet, you want to save these little charts to say, "Hey, I got my process under control. I check it." So, I mean, that's a big thing in the industry, but again, that TMC come up something with fleet friendly usage. So-

KEVIN ROHLWING
Now that's specific to fleets though, because it's a captive fleet.

DAVE WALTERS
Yes.

KEVIN ROHLWING
They're doing all their own work. Now, on our side of it, I don't know who I'm going to get. I mean, I don't know where that thing was last week, last month, last year. So anybody could have serviced it before me. So we don't have that luxury in the sense that, I don't know who did it before me. Did the other guy do it at 1200 foot pounds? With an ugga dugga and a gutentight, it's got four ugga duggas and a gutentight. Now, I'm going to do it correctly. And the industry is still pretty much 50 to 100-foot pounds as far as everybody... But yeah, I agree with Dave and we say that too. We don't say it officially, but I mean, at a minimum, some figure eights and some railroad tracks, just something to flex that wheel. Make those wheels flex in both ways and run over some speed bumps or some railroad tracks or something. But you've got to get that and you've got to get that joint to settle. And if it's done properly, it won't.

DOUG MASON
Exactly.

KEVIN ROHLWING
It'll retain all of it's-

DOUG MASON
And if you didn't do it properly. You'll be able to find out.

KEVIN ROHLWING
Correct.

DAVE WALTERS
Yes.

KEVIN ROHLWING
And you'll see movement.

MIKE YAGLEY
Right. And do it once. Do it right. Now, that's what you're looking for.

KEVIN ROHLWING
We'd agree with that a hundred percent. So..

DOUG MASON
So you've got it on there. You've checked it, torque's good, we're out on the road. Don't have to worry about my tires again.

KEVIN ROHLWING
Well, I mean, every tire should be pre-checked before every trip and you got to check inflation pressure without kicking it. The boot-o-meter is not accurate. We talked about this yesterday a little bit. Is it a behavior issue? Is it a process issue? I think that drivers have to recognize that they play a role in all this as well. They're the ones that see it every day. So they have to be checking for loose wheels. They have to be checking their inflation pressures with more than a mallet or a tire Billy or something like that. It's an ongoing maintenance thing, things change. We typically say that if the wheels fall off in the first 500 miles, it's probably installation. But I've seen wheels come loose after 20, 30,000 miles.

KEVIN ROHLWING
And they're trying to pin it on the technician that installed it. Look, if I lost tension at installation, it ain't going to go 20,000. And that's just the way that it is. So we try and make sure that we distinguish that a little bit. I've been in a couple of cases where they've said that and they've said, "Oh, this is installation." I'm like, "It's been running for 20,000 miles." "Well, but they did something wrong." I mean, it's a hub piloted wheel. If it was loose when we installed it and ain't going to make 20,000 miles.

MIKE YAGLEY
Right. So the job is never done.

KEVIN ROHLWING
No, exactly. It's never done.

DAVE WALTERS
We've had this conversation, a normal tire, there used to be... A normal tire, loses so much air pressure per month.

KEVIN ROHLWING
One to two PSI per month. Yes.

DAVE WALTERS
And when you try to tell somebody like, "Hey, that is just normal." Now, if you don't have some type of other issue, like a valve cap on it that's not-

KEVIN ROHLWING
Valve stems.

DAVE WALTERS
Valve stems. Anything type of leakage or anything like that. So people will say, "Well, tires are perfect." Well, nothing there-

KEVIN ROHLWING
No.

DOUG MASON
Well, the thing is you're going to get leakage from the system overall, just to jump in. I mean, a valve is allowed to lose 0.2CC during this initial leak testing. So there's always some sort of seepage, so you've got to check.

KEVIN ROHLWING
Nothing's completely airtight. And I think that's where the... I know that the... On the driver's side of it. And we say this well, and this is a message for all the fleets out there. If you're not paying for a high quality inflate through valve cap, you can't ever inspect your inflation pressure to get checked. Because one of the two things are going to happen either, we're going to run it without a valve cap, and you're going to have an exposed valve core, which nobody wants, or we're going to put a self-sealing metal valve cap on there. And it's never going to come off. I can tell you that as a young technician and we had a fleet that ran a lot of aluminum wheel, and they had the small... It's 20 degrees out below zero in Chicago, and I'm not taking valve... I'll take valve caps off once.

KEVIN ROHLWING
And then I'm going to put them in a box and then they're going to stay in the box. But if you don't put in fleet through valve caps on valve stems, then you can't ever inspect anyone to check that inflation pressure. It's just not going to happen. So if it's important to you, then pay for a high quality inflate through valve cap and put it on there. And now there's no excuses then it's just a... And now you got TPMS, you got ATIS on trailers. I mean, it's that next phase of the evolution type thing. We have TPMS standard on all cars since the 2008 model year. And yet here we are with 80,000 pounds of gasoline running down a road at 65 miles an hour.

KEVIN ROHLWING
And the only way that the driver can check the inflation pressure is to actually get out and hit it with a gauge. And I write stuff for FleetOwner, and I'm always harping on RFID. And I'm always harping on TPMS and I'm always harping on leveraging technology. We've got to leverage technology if we really want to make an impact, and we're just not doing it. It's the fleets don't see value, or the manufacturers don't see value or whatever. I think from a liability perspective, it would make sense. I'm seeing more and more of it. We've already trained to it. We've already trained to demounting and mounting tires with valves stem sensors anticipating it, so that we're already prepared. So we know it and that's worked really well, but it would seem to me to be so easy to put a light on the dashboard and put sensors on all 10 tires on the tractor. ATIS and those types of systems on trailers are fantastic.

KEVIN ROHLWING
I believe it is a tire pressure monitoring system. It's not traditional, but I still think you're monitoring pressure. The driver still gets notified if it's losing air, it's providing air. Air to the tire is the lifeblood. It's the engine oil, it's the transmission fluid. It's critical. And to not focus on that and to just ignore that is shortsighted, and it's going to cost people money and potentially it could be dangerous. I mean, let's face it. If the tires go flat on route, on the road. Yeah, exactly. It's depends on where, and all the different factors that kind of go into that. But it's a complex system that's very simple, roughly what it is. And without air you're not going to have anything. And so, I mean, we look at again as a systems approach, it's everything. It's a lot better than it was when we first started, Dave.

KEVIN ROHLWING
We're a lot safer today than we were years ago. I think we're going to all have the same problems moving forward with finding people. I know that that on the truck tire side of it, I can promise you long days. When it's hot, you're hot. When it's cold, you're cold. When it rains, you're going to get wet. When it's parked in snow, you're going to be working in snow. When it's parked in something else, you're going to work on that too. The youth of today aren't really interested in working hard with manual labor. It's hard to find people that want to do this job. So we've got to find ways to make it easier. And we have to find ways to leverage technology.

KEVIN ROHLWING
I know that I was just talking with a dealer before that said, they're moving to tire changing machines now, because they can't get guys to do the physical work. It's not going to be doing it for them. So now they've got tire changing centers, they got $25,000 tire changing machines. And the guy just sits there and runs the joysticks. And they're like, "Yeah, young people will do that all day. They'll stand there all day and just do the joysticks and stuff like that because they're not doing the labor." Now, if you want the money, you got to go into road service. And that's where the money is. And that's where you're going to get your overtime.

DOUG MASON
I got a question on that on the road service. Isn't it allowed to change the tire right on the truck without taking it off.

KEVIN ROHLWING
That is a-

DOUG MASON
I've heard that

KEVIN ROHLWING
The one time that it's legally acceptable is if you're installing a new tire.

DOUG MASON
Okay.

KEVIN ROHLWING
If I'm going to mount a new tire on an outside position, technically I don't have to take the wheel off the rim.

MIKE YAGLEY
Okay. We're getting to the end of our discussion.

KEVIN ROHLWING
There you go.

MIKE YAGLEY
I guess we're done. Yeah.

KEVIN ROHLWING
Boss says we're done.

MIKE YAGLEY
So Kevin, hey, thank you so much for coming by.

DOUG MASON
We appreciate it.

MIKE YAGLEY
Really, really great discussion.

DOUG MASON
We'll see you next time.

KEVIN ROHLWING
Yeah.

DOUG MASON
Well, no, we'll hear you next time.

KEVIN ROHLWING
Yeah, probably.

DOUG MASON
All right. Very good.

KEVIN ROHLWING
That's probably a good thing. Thank you.

DOUG MASON
Thank you.

ANNOUNCER
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