



News Release

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FOR IMMEDIATE RELEASE
From the Bendix Tech Tips Series

BENDIX TECH TIPS: WHAT TO LOOK FOR IN REMANUFACTURED PARTS

*How to Select the Right Air Compressors, Air Disc Brake Calipers,
Drum Brake Shoes, and Steering Gears*

AVON, Ohio – Nov. 29, 2021 – When it comes to truck maintenance, choosing the right replacement part is an all-important step. But in the crowded commercial vehicle aftermarket, making that choice can be confusing, especially when selecting remanufactured and rebuilt components. And the wrong choice comes with the risk of part failure, as well as damage that can more than eliminate any savings from opting for the lowest-cost option.

The stakes are even higher when the parts are key to a vehicle's safe operation – such as an air brake system's compressor, calipers and brake shoes, and steering gears. This installment of the Bendix Tech Tips series will help equip you to make the right decision by offering guidance on what to ask suppliers when replacing these parts, and by being informed about the differences between remanufacturing and rebuilding.

Reman vs. Rebuild

Understanding the distinction between remanufacturing and rebuilding is key. A remanufacturer always replaces or repairs a core's components to bring the part up to original equipment manufacturer (OEM) specs. In addition, remanufacturers always replace certain components – referred to as wear components – with new versions. True remanufacturers never reuse wear components such as gaskets, washers, and O-rings.

“By comparison, when a rebuilder disassembles the core of a product for reuse, they don't necessarily replace the components of that product with new ones or bring the product

back to its OEM specs,” said Richard Nagel, Bendix director, marketing and customer solutions – Aftermarket and Air Supply. “Rebuilders may simply clean or repaint components. And even if they do replace them, rebuilders may not have full access to OEM-quality parts – so you’re rolling the dice.”

Manufactured Again Certification can help you determine a true remanufacturer. The certification program, launched in 2017, is overseen by MERA – The Association for Sustainable Manufacturing. The criteria align with the internationally recognized quality management standard ISO 9001 and IATF 16949, one of the automotive industry’s most widely used international quality standards. To receive Manufactured Again Certification, remanufacturers are required to submit third-party evidence of conformance to the accepted quality standards. Nagel pointed out that Bendix was among the inaugural class of 14 leading remanufacturers initially approved for participation.

A Look Inside the Air Compressor

Be sure to ask about those wear components when considering a remanufactured air compressor, Nagel advised.

Pistons, connecting rods, and crankshafts undergo a great deal of stress, and the compressor’s head and valves experience carbon buildup. They remain failure points if they’re not replaced as part of the reman process – underscoring the importance of knowing whether the remanufacturer has replaced those parts with OEM components.

Also consider whether your remanufactured compressor’s piston has been re-honed and matched with a new piston to fit the bore.

Nagel explained: “Over time, the bore gets worn and scuffed, and it no longer shares its precise original fit with the piston. Re-honing a piston during remanufacturing restores that fit, which is key to ensuring the piston passes just the right amount of oil during operation. A small amount is necessary to lubricate the compressor, but too much, and you risk contaminating the air supply – and that can lead to huge headaches.”

Up-to-Spec Air Disc Brakes

Air disc brakes are showing up on more used commercial vehicles as they grow in popularity. For second and third owners of these trucks, in particular, remanufactured calipers make sense as a replacement option.

According to Mark Holley, Bendix director of marketing and customer solutions – Wheel-End, fleets and owner-operators seeking to save costs while maintaining the safety and

performance advantages of air disc brakes should ask these four questions when buying remanufactured calipers:

- *How long is the warranty?* “That will say a lot about the supplier’s confidence in its parts,” Holley said.
- *Which caliper components are replaced with new OEM parts?* “Again, hardware like caps, boots, bushings, and adjuster bearings should all be replaced – not just cleaned and reinstalled,” he noted. “Working with an OEM supplier also ensures you’re getting the most up-to-date versions of these components, which may have been improved upon since their original release.”
- *How are caliper cores cleaned?* Holley said, “Many rebuilders will bake calipers at a high temperature to remove grease and dirt, but Bendix has found that doing so can change a caliper’s material properties. We have a cleaning process that maintains the caliper’s integrity.”
- *Does their reman process include pre-stressing?* “This Bendix-patented process returns life to the caliper,” he said. “Without it, we have seen rebuilt calipers with up to two-thirds less service life due to fatigue.”

Best Practices in Drum Brake Shoes

“The road is a terrible place to wonder whether those replacement drum brake shoes were truly remanufactured or whether they were just relined and given a new coat of paint,” Holley said. “In this case, true remanufacturing means correcting the deformities caused by force and temperature changes during the shoe’s previous life.”

Coining is a process in which a press returns a shoe to its originally engineered geometry. Use reman shoes that have been re-coined. Otherwise, the shoe may not make full contact at the anchor pins or in the roller pockets at the S-cam. An uncoined reman shoe can also lead to problems reinstalling the drum. And even if it’s relined with new friction, an uncoined shoe may not provide full drum contact, which could lead to unpredictable brake performance and uneven wear.

Further, Holley pointed out, make sure the new lining has been certified for Reduced Stopping Distance compliance. “The regulation has been on the books for years now, but there are still non-compliant versions out there that may not deliver the required performance,” he said. “Your drivers may be accustomed to a certain stopping distance and are likely to get something different if the friction is not RSD compliant.”

The Reman Standard for Steering Gears

As with other components, remanufactured steering gears are brought back up to OEM standards through 100% inspection of all hard parts, along with the replacement of key parts that typically wear out.

“In this case, that includes production-released hydraulic seals, all steel recirculating balls, cover retaining rings, and ball guides, plus slot valves when necessary,” said TJ Thomas, Bendix director of marketing and customer solutions – Controls. “Each of these must be replaced with parts identical to the ones found on a brand-new product.”

Additionally, remember to ask your reman supplier about how they test their products. OEM manufacturers such as Bendix regularly subject their remanufactured parts to the same substantive testing as their new part. They use the same equipment and aim for the same high standards to ensure tolerance, performance, and dependability.

“Delivering quality along with a reduced replacement cost is what genuine remanufacturing is ultimately about – helping fleets and owner-operators manage their bottom line while extending vehicle life and reducing total cost of ownership,” Nagel said. “Asking the right questions along the way will help keep trucks and truck drivers on the road and rolling safely.”

Information in the Bendix Tech Tips series can be found in the Bendix multimedia center at knowledge-dock.com. Further instructional videos and interactive training on wheel-ends, air systems, and electronics are available at the Bendix On-Line Brake School, www.brake-school.com. For more information, contact the Bendix Tech Team at 1-800-AIR-BRAKE.

About the Bendix Tech Tips Series

Bendix, the North American leader in the development and manufacture of leading-edge active safety, air management, and braking system technologies, is committed to helping keep commercial vehicles on the road and in good working condition. The Bendix Tech Tips series addresses common commercial vehicle maintenance questions and issues concerning the total range of components found within foundation and air brake systems, as well as advanced safety systems.

About Bendix Commercial Vehicle Systems LLC

Bendix Commercial Vehicle Systems, a member of Knorr-Bremse, develops and supplies leading-edge active safety technologies, energy management solutions, and air brake charging and control systems and components under the Bendix® brand name for medium- and heavy-duty trucks, tractors, trailers, buses, and other commercial vehicles throughout North America. An industry pioneer, employing more than 4,100 people, Bendix – and its wholly owned subsidiary, R.H. Sheppard Co., Inc. – is driven to deliver the best solutions for improved vehicle safety, performance, and overall operating cost. Contact us at 1-800-AIR-BRAKE (1-800-247-2725) or visit bendix.com. Stay connected and informed through Bendix expert podcasts, blog posts, videos, and other resources at knowledge-dock.com.

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