AVON, Ohio – March 7, 2022 – Bendix’s air drying technology for commercial vehicles has gotten smarter: It can increase its drying capacity to provide more dry air when needed, optimize energy use for increased efficiency, and monitor air consumption for diagnostic purposes.

These functions, all built into the recently released Bendix® AD-HFi™ Air Dryer with Electronic Air Control (EAC), have earned the AD-HFi recognition as one of the top 20 products of the past year as determined by Heavy Duty Trucking magazine.

Bendix launched its AD-HFi Air Dryer with Electronic Air Control in September 2021 as an enhanced version of the leading-edge Bendix® AD-HF® air dryer, introduced in 2020. The AD-HFi air dryer incorporates a solenoid-operated valve that replaces the traditional mechanical governor. The electronically controlled governor, using Bendix’s Electronic Air Control software, increases the product’s air drying capacity depending on the vehicle’s needs, can match its charge cycles against more favorable engine energy states, and tracks ongoing usage and performance of the air dryer’s regeneration cycles.

The Bendix AD-HFi is available for order through several major North American commercial vehicle manufacturers.
“We’re thrilled that the standout innovations built into our Bendix® AD-HFi™ air dryer have earned it wide industry recognition from Heavy Duty Trucking as a Top 20 Product for 2021,” said Richard Nagel, Bendix director, marketing and customer solutions – Aftermarket and Air Supply. “The AD-HFi air dryer can automatically increase air drying capacity when needed, save vehicle energy use, and diagnose the condition of the air system. Together, these features can help both vehicles and maintenance operations maximize their efficiency.”

**Responsive Charging and Regeneration**

The AD-HFi air dryer’s solenoid-operated valve works in tandem with Bendix’s Electronic Air Control software, which monitors a range of data broadcast across a truck’s J1939 network, including speed, engine torque, and RPM.

Instead of two fixed setpoints for charging and regeneration, as is standard with a mechanically controlled governor, the AD-HFi is able to regulate and modify its charge cycle based on air system and engine demands. The dryer does this using a patent-pending technology called Interrupted Charge Regeneration, through which it can command additional short purge cycles if the software determines the air system requires extra drying capacity.

“The software-controlled system that commands the AD-HFi air dryer provides for enhanced drying capacity when needed, such as for a vehicle with multiple trailers or extra axles,” Nagel said. “And because the dryer can command additional short purge cycles in these situations, it provides significantly more dry air throughout the vehicle’s air system.”

**Built to Save Energy**

A second benefit also built into the software is the ability to detect when vehicles are operating in a favorable energy state – such as when going downhill or idling – so that it can automatically charge the compressor during those periods.

“During these ‘overrun’ situations, the EAC temporarily increases the cut-in and cut-out pressures, because the compressor can charge above the standard, programmed pressure without the driver losing engine power,” Nagel explained.

By the same token, the EAC can also – to an extent – help prevent the compressor from charging during “overtake” periods when more engine power is needed, such as when the vehicle is climbing a hill.

“This ability to adjust cut-in and cut-out charging thresholds based on the engine’s energy needs provides energy savings for the vehicle because it allows the engine to run more efficiently,” Nagel said. The software is programmed to never reduce the cut-in pressure below a safe setting per FMVSS-121 regulation, however.
Condition Monitoring and Diagnostic Capabilities

A third benefit provided by the Bendix® AD-HFi™ air dryer is its diagnostic and condition monitoring features: The Electronic Air Control software continuously monitors performance for excessive air demand, which can indicate system leaks or a faulty compressor, as well as frequency of regeneration cycles, which indicates the total amount of air processed over the life of the air dryer cartridge. By using this information, along with other data, the EAC can signal when it’s time to replace the cartridge.

“Altogether, the ability of the AD-HFi to increase dry air processing capacity, to coordinate charging and regeneration cycles against engine use, and to monitor the ongoing condition of the air dryer cartridge can lead to major safety and efficiency improvements for fleets and owner-operators,” Nagel said. “This ultimately allows fleets and owner-operators to get the most out of their air dryers and cartridges.”

A Legacy of Top Products

Heavy Duty Trucking is presenting Bendix with the Top 20 Products award during the 2022 TMC Annual Meeting and Transportation Technology Exhibition in Orlando, Florida. TMC (Technology & Maintenance Council) is part of the American Trucking Associations. The product also was featured in the January-February issue of Heavy Duty Trucking (HDT) magazine and on truckinginfo.com.

This year’s award represents the seventh Bendix innovation to have earned Top 20 Products honors from HDT over the past 10 years. In fact, Bendix has earned this distinction five times over the past six years. Most recently, in 2020, Bendix’s ADB pad wear sensing – noted for its ability to alert fleets to the approaching need for pad replacement – earned a Top 20 Products award.

HDT selects its Top 20 Products based on their innovation, ability to address important industry issues, and potential to improve a fleet’s bottom line. This year’s winners were selected by a three-person panel of HDT trucking industry editors with the help of a panel of fleets representing HDT’s Editorial Advisory Board and HDT Truck Fleet Innovators.

The outlet has been awarding its Top 20 Products honors since 2011. Entire vehicles are not included, and products must be commercially available or scheduled to become commercially available during the year the award is presented.

For more information about Bendix air management systems, visit www.bendix.com or call 1-800-AIR-BRAKE (1-800-247-2725). Additional Bendix insight can be found in Bendix’s multimedia center at knowledge-dock.com.

-more-
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. Follow Bendix on Twitter at twitter.com/Bendix_CVS. Log on and learn from the Bendix experts at brake-school.com. And to learn more about career opportunities at Bendix, visit bendix.com/careers.

# # #