

News Release

For more information, contact:

Barbara Gould Director, Corporate Communications – North America (440) 329-9609 / (440) 225-6869 barbara.gould@knorr-bremse.com

FOR IMMEDIATE RELEASE

KNORR BRAKE COMPANY AND NEW YORK AIR BRAKE PARTNER TO DELIVER NEXT-GENERATION PASSENGER RAIL BRAKE SYSTEM

EE-26[™] Brake System Delivers Safety, Reliability, and Uptime Advantages While Laying the Foundation for Electropneumatic Control Systems in North America

WESTMINSTER, Md., and WATERTOWN, N.Y. – Feb. 23, 2021 – Partnering to deliver an improved and innovative solution for passenger rail car brake control, Knorr Brake Company (KBC) and New York Air Brake (NYAB) have developed the EE-26[™] brake system, engineered for safety, performance, uptime, and lower total cost of ownership. The EE-26 employs electronic closed-loop control to provide higher reliability, real-time diagnostic capability, and a platform for future advancements. Designed in compliance with American Public Transportation Association (APTA) standard PR-M-S-020-17, EE-26 is aligned with new standards being adopted by many leading railways.

KBC, headquartered in Westminster, Maryland, and Watertown, New York-based NYAB are sister companies within Munich, Germany-based Knorr-Bremse, the global market leader in braking systems and a leading supplier of other safety-critical rail and commercial vehicle systems.

"North American passenger railcars have been equipped with the same conventional pneumatic brake control for decades," said Michael Gibbs, KBC's deputy director of OE sales. "Now, with adoption of electropneumatic control technology significantly increasing in North

KNORR BRAKE COMPANY AND NEW YORK AIR BRAKE PARTNER TO DELIVER NEXT-GENERATION PASSENGER RAIL BRAKE SYSTEM Feb. 23, 2021/Page 2

America, we've engineered the EE-26[™] brake system with the capability to handle both true pneumatic and electropneumatic control of a braking system. It's a bridge to the future of passenger car brake control."

Looking Ahead, Built on Success

In a traditional purely pneumatic system, individual passenger car brakes are activated in response to changes in air pressure through a control pipe that runs the length of a train. In an Electronically Controlled Pneumatic (ECP) system, the brakes respond to electronic signals sent from the locomotive. ECP braking – widely used across the rail industries in Europe, Australia, Africa, the Middle East, and Asia – provides increased safety, improved train-level brake performance, and better diagnostics.

"We often relate the comparative communications speed of pneumatic and ECP signals through a brake system to the speed of sound versus the speed of light," explained Brendan Crowley, NYAB manager of sales and systems engineering. "In addition to the safety and performance enhancements of greater signal speed, ECP systems deliver real-time diagnostic information and alerts to operators and maintenance staff, which benefits train engineers and technicians, improves train handling, and decreases maintenance downtime."

Based on NYAB's service-proven EP-60[®] product line, the EE-26 brake system represents the future of passenger ECP braking in North America. The system increases the recommended valve overhaul period to 10 years, more than doubling the previous four-year period. The EE-26's modular design, using the preferred panel-mounted valve approach from other transit applications, saves space, makes installation easier for car manufacturers, and provides more accessible maintenance compared to existing traditional pipe-mounted equipment. Additionally, the EE-26's integrated diagnostics technology and vehicle networking enable rapid problem identification for quicker repairs and provide more detailed data that helps expedite routine maintenance, overhaul, and replacement planning.

Moreover, the EE-26 utilizes the Association of American Railroads (AAR) approved Car Control Device (CCD) as the foundation of its brake control operation, leveraging service-proven components for system reliability and smooth product introduction. Proven to perform, the EE-26 system has undergone a rigorous battery of testing at both KBC and NYAB's laboratories and has been under continuous field trial in North America since 2014, accumulating over 1.8 million miles of service.

Signaling the Future

Designed in accordance with APTA standards to be interoperable with vehicles that have legacy brake control valves, the EE-26[™] brake system means railroads can gradually migrate to the modern system without forcing fleetwide upgrades. This reduces operating costs while providing safe, uninterrupted service. And since it is based on globally accepted EP-60[®] technology, the EE-26 system is easily upgradable to an APTA-compliant ECP braking system.

"We included a simplified and standardized application platform in the new EE-26 design, so that the system can be easily incorporated by all car builders," Crowley noted. "Combine the ease of integration together with advanced diagnostics and high reliability, and you're looking at lower life-cycle costs in a higher-performance system. The obsolescence of legacy pneumatic valves, along with their more intensive maintenance requirements, is driving customers toward systems that only need to be overhauled every 10 years or so."

To address the North American passenger rail market's needs while building a foundation for the next stage of braking system evolution, NYAB and KBC created a second variation on the EE-26: the EP 60/26[™] brake system, which can handle ECP as well as respond to traditional pneumatic control.

"We needed to bring together both old and new, because the jump to a completely electronically controlled brake system would have created problems interfacing with older locomotives and trains," Gibbs said. "We need to make sure we're serving everyone, so even as railway transit authorities are considering new cars, they're still seeking to retrofit older cars, some of which may be around for another 10 or 20 years.

"The EE-26 and the EP 60/26 system reflect the dedication, expertise, and rail-proven technologies of both New York Air Brake and Knorr Brake Company, and our combined teams are proud to help drive North American passenger rail transit into a safe and dependable tomorrow."

About Knorr Brake Company

Since 1973, Knorr Brake Company has been the innovative leader in supplying North American rail market customers, including light rail vehicles, metro, and high-speed trains. With its headquarters in Westminster, Maryland, the company operates sales and service facilities in Carmel, New York; and Union City, California. KBC's subsidiaries – IFE North America LLC (passenger door systems) and Merak North America LLC (climate-control systems) – are co-located in Westminster. Knorr Brake Company is a member of the Munich, Germany-based Knorr-Bremse, the global market leader in braking systems and a leading supplier of other safety-critical rail and commercial vehicle systems. Contact Knorr Brake Company at knorrbrakecorp.com and follow us on LinkedIn at

KNORR BRAKE COMPANY AND NEW YORK AIR BRAKE PARTNER TO DELIVER NEXT-GENERATION PASSENGER RAIL BRAKE SYSTEM

Feb. 23, 2021/Page 4

linkedin.com/company/knorr-brake-company. To learn more about career opportunities at KBC, please visit www.kbnajobs.com.

About New York Air Brake LLC

New York Air Brake LLC (NYAB), a member of Knorr-Bremse, develops and supplies leading-edge air brake control systems and components, electronically controlled braking systems, foundation brakes, training simulators and train handling systems, and wayside equipment to the rail industry. An industry pioneer since 1890, our over 750 team members have a deep customer commitment that fuels us to deliver solutions for improved rail performance, safety, and overall operating cost. New York Air Brake is headquartered in Watertown, New York, with manufacturing plants in Nixa, Missouri; Riverside, Missouri; Salisbury, North Carolina; West Chicago, Illinois; and Wheatland, Missouri; along with Train Dynamic Systems (TDS), a technology development unit located in Irving, Texas. For more information, visit www.nyab.com and follow us on LinkedIn at linkedin.com/company/new-york-air-brake. To learn more about career opportunities at KBC, please visit www.nyabcareers.com.

###