



News Release

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FOR IMMEDIATE RELEASE

THE ROAD TO SAFER SCHOOL BUSES

Bendix Marks National School Bus Safety Week with Focus on Technologies That Support School Bus Drivers and Enhance Student Transportation Safety

ELYRIA, Ohio – Oct. 21, 2020 – Helping to make the safest form of school transportation even safer is a year-round pursuit – and it comes even more sharply into focus each fall as students across North America return to classes. During National School Bus Safety Week (Oct. 19-23), Bendix offers a look at the technologies that manufacturers are providing, and school districts are adopting – in growing numbers – to make student transportation safer for everyone on the roads.

National School Bus Safety Week is a public education program from the National Association for Pupil Transportation (NAPT) designed to promote school bus safety the third, full week of October each year. The NAPT's "Zip. Zero. Nada. None." campaign is aiming for an entire school year free of such fatalities no later than the school year ending June 30, 2025.

"It's well-documented that taking the school bus is the safest way for students to get there – 70 times safer than walking, bicycling, or riding in a passenger car or light truck, according to National Highway Traffic Safety Administration (NHTSA) data," said TJ Thomas, Bendix director of marketing and customer solutions – Controls. "Drivers of these buses carry nearly 25 million children on regular routes. You look at those numbers, and it's easy to see why the NAPT encourages equipping school bus fleets with the latest safety systems and braking components from the ground up."

The Air Disc Brake Difference

Safety – in the form of reliable and improved stopping power – has been a major factor in the increasing availability and adoption of air disc brakes on school buses in recent years. Where drum brakes can heat up and experience decreased performance during downhill applications or stop-and-go usage, such as on a school bus route, the design of air disc brakes virtually eliminates this brake fade. Air disc brakes also provide shorter, smoother, and more stable stops than drum brakes.

“We introduced the Bendix® ADB22X® air disc brake to the school bus market in 2008, and adoption has really picked up in the past five years or so, to the point where now there are generally a couple thousand new school buses hitting the road with air disc brakes each year,” said Keith McComsey, Bendix director of marketing and customer solutions – Wheel-End. “The safety difference is especially striking to see in action: We recently conducted a [Virtual School Bus Demo](#) that included a side-by-side look at the real-world effect of brake fade on stopping distance, and it’s pretty eye-opening.”

All of North America’s major school bus manufacturers – including Blue Bird Corporation, Navistar’s IC Bus, and Thomas Built Buses – offer the industry-leading ADB22X as a factory-installed option.

In addition, air disc brakes at the wheel-ends help optimize performance of the higher-level safety systems that are also becoming more common in school bus fleets.

Advantages of Advanced Driver Assistance Systems (ADAS)

Since 2018, both Blue Bird and IC Bus have made Bendix® ESP® Electronic Stability Program full-stability system standard equipment on air-braked buses, even though full-stability technology – already mandatory on most motorcoaches and commercial trucks – is not a requirement for school buses. Bendix ESP functions in a wide range of driving and road conditions, including snowy, ice-covered, and slippery surfaces, utilizing a system of sensors to recognize and mitigate conditions that could lead to rollover and loss of control.

Full-stability systems like Bendix ESP also provide the technological foundation for advanced driver assistance systems (ADAS), including the Bendix® Wingman® family of collision mitigation systems.

Bendix® Wingman® Advanced™ – A Collision Mitigation Technology uses a single radar sensor mounted to the front of the vehicle to deliver active cruise control with braking features, providing both warnings and active interventions to help drivers potentially avoid rear-end collisions, or at least help reduce their severity. Bendix® Wingman® Fusion™ – the company’s

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flagship technology – integrates a forward-facing camera with the radar and the vehicle’s brake system, creating a comprehensive driver assistance system. With a suite of sensors working together, and not just in parallel, Bendix® Wingman® Fusion™ uses deep, multisystem integration to create a detailed and accurate data picture, setting it apart from radar-only systems.

IC Bus became the first North American school bus manufacturer to offer collision mitigation technology as a standard feature in 2018, spec’ing Bendix® Wingman® Advanced™ on its CE Series and RE Series, and offering Wingman Fusion as an option on the CE Series.

“These are road-proven, effective systems making a difference on the road right now,” Thomas said, “and both the National Transportation Safety Board (NTSB) and NAPT support the adoption of full-stability and collision mitigation on school buses. We’re proud to partner with school districts and bus manufacturers to make that happen.”

Driver Support, Student Safety

Another technology to support bus drivers while enhancing safety is the Bendix® Intellipark® Electronic Parking Brake, which helps to prevent rollaway and runaway crashes by automatically setting the brakes if the driver forgets to. Intellipark uses interlocks installed in critical areas – the driver’s seat, seat belt, or cab door, for instance – to help determine when the parking brakes should be set. Since Intellipark is electronic, it is also positioned for integration with Wingman Fusion, enabling the use of the parking brakes to further enhance driver assistance functions.

“Intellipark replaces those red-and-yellow, push-pull dash valves with easy-to-engage electronic switches – they literally take the ‘sting’ out of engaging the parking brake,” Thomas said. “They also have built-in indicator lights that show the status of the brake at a glance, unlike the traditional valves.”

Thomas noted that even the most leading-edge safety systems are driver assistance technologies, and not driver replacement systems: Drivers are ultimately responsible for safe operation of buses at all times, and remain in control of the vehicle at all times. School bus safety is still dependent upon safe bus drivers practicing safe driving habits, and supported by ongoing, proactive training.

“We’ll keep making sure North America’s school bus drivers are behind the wheel of the safest vehicles that Bendix and its industry partners can put on the road,” Thomas said. “The students of today and tomorrow are counting on it.”

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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 is driven to deliver solutions for improved vehicle safety, performance, and overall operating cost. Contact us at 1-800-AIR-BRAKE (1-800-247-275) 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.

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TOWARD A SAFER FUTURE FOR SCHOOL BUSES

National data supports that school buses are the safest way to transport students to and from school. But crashes do happen, and even a single school bus accident is one too many. Advanced safety technologies – increasingly available on school buses – can help make school buses even safer. Here are four:



Collision Mitigation

- Built on full stability
- Can use a radar sensor alone or be "fused" with a camera for additional functionality
- Delivers warnings and active interventions
- Helps mitigate potential rear-end collisions or reduce their severity

Full Stability

- Helps mitigate potential rollover and loss of control
- Also known by its generic term, Electronic Stability Control (ESC)
- Adds additional sensors and capabilities to ABS, and delivers automatic brake interventions
- Works in a range of conditions, including rain, ice, and snow



Electronic Parking Brake

- Helps prevent rollaway and runaway crashes
- Sets parking brake if driver forgets
- Uses interlocks in critical areas, such as door, seat belt, wheel speed, or other

Air Disc Brakes

- Significantly shorter stopping distances
- Passenger car-like feel
- Consistently straight, stable stops
- Virtually eliminates brake fade



Bendix is the foremost supplier of safety technologies for school buses. Technologies include the Bendix® ADB22X® air disc brake, Bendix® ESP® Electronic Stability Program full-stability system, Bendix® Wingman® Advanced™ – A Collision Mitigation Technology, Bendix® Wingman® Fusion™, and the Bendix® Intellipark® Electronic Parking Brake.

Bendix® safety technologies complement safe driving practices and are not intended to enable or encourage aggressive driving. No commercial vehicle safety technology replaces a skilled, alert driver exercising safe driving techniques and proactive, comprehensive driver training. Responsibility for the safe operation of the vehicle remains with the driver at all times.

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