



Bendix® Wingman® Fusion™

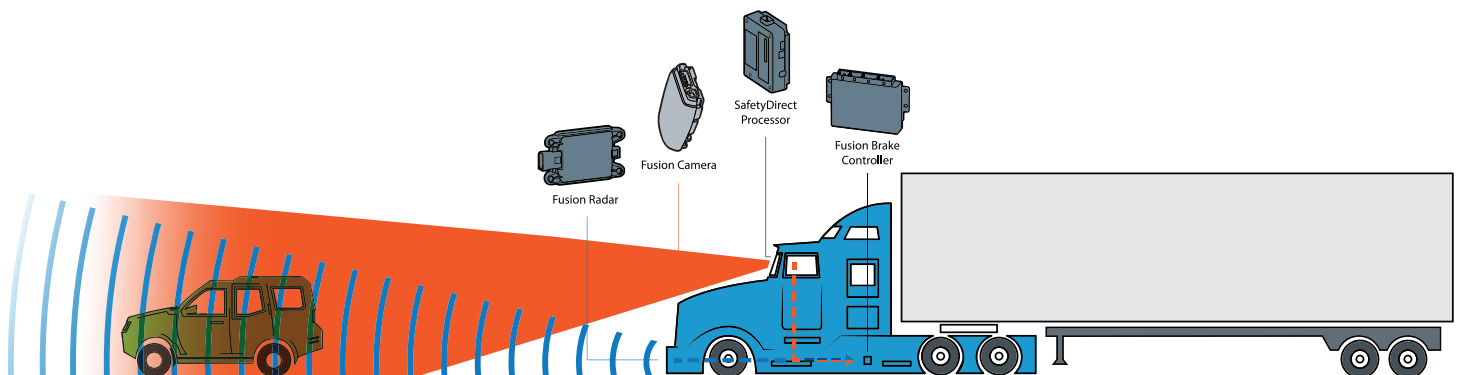
Our flagship Advanced Driver Assistance System – now with a new and enhanced feature set – delivers more performance and safety for you.

Protect Your Fleet with Our Most
Advanced Safety System Ever



BENDIX® WINGMAN® FUSION™ ... ADVANCED DRIVER ASSISTANCE SYSTEM WITH AN ENHANCED FEATURE SET

We're driven to create the best solutions. That's why our flagship Bendix® Wingman® Fusion™ system has now been enhanced with features designed with your fleet in mind. The Fusion system – the commercial vehicle market's first integrated advanced driver assistance system – adds enhanced braking and collision mitigation capabilities, features, and even more integration potential to create a system that does even more – and does it even better – for your operation.



Near Elimination Of False Alerts And Deep Multi-Sensor Integration

What's always kept Fusion at the leading edge of safety and driver assistance is its integration of information from multiple sources, working together as a system, and not just in parallel. The enhanced feature set of Bendix Wingman Fusion is no exception ... continuing to build on the full integration of proven Bendix® technologies. The camera, radar, Bendix® ESP® full-stability, and SafetyDirect® by Bendix CVS, provide different, complementary information – combined and cross-checked to create a detailed data picture of your vehicle and its surroundings, nearly eliminating false alerts and activations. Fusion's ability to integrate sensors with vehicle and environmental information – a critical contributor of its outstanding performance on the road – helps to keep your drivers and your back office on top of what's happening.

Figure A

Bendix Wingman Fusion integrates complementary systems – the radar, camera, and brakes, plus the SafetyDirect web portal – to help provide enhanced safety for today's North American commercial vehicles.

Delivering A Solid Foundation for Advanced Safety

Introduced in 2015, the Bendix® Wingman® Fusion™ system delivers a potent combination of advanced safety features in an elegant and efficient single, integrated system. Fusion also helps drivers mitigate potential rollovers and loss-of-control situations because it incorporates the power and reliability of our Bendix® ESP® Electronic Stability Program full-stability as a foundation.

Fusion delivers more for your fleet because our enhanced feature set now offers full braking power on the tractor. Combined with earlier object detection and increased braking authority, the system can help reduce the vehicle's speed by as much as 50 mph/80 kph in many emergency situations.

Take Advantage of These New or Enhanced Features

Enhanced

Enhanced Collision Mitigation: Even at lower speeds, the Wingman Fusion collision mitigation feature is ready to intervene, if needed, when Fusion determines that a potential collision with a slower moving vehicle ahead is imminent. Fusion's combined video, radar, and braking system can automatically apply full foundation brakes, if needed, to help mitigate, or lessen the severity of, a potential collision. In fact, our enhanced Fusion feature set can decelerate up to 50 mph/80 kph when encountering stationary and slower-moving vehicles.

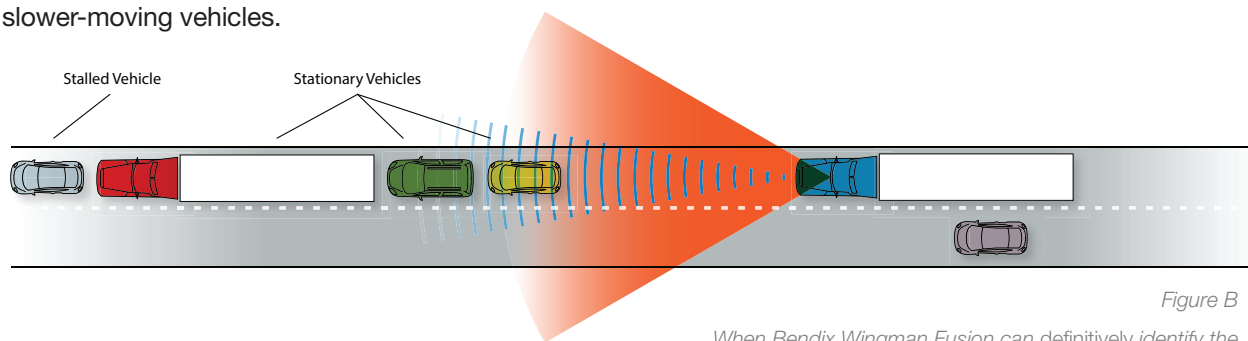


Figure B

When Bendix Wingman Fusion can definitively identify the large, stationary, in-lane, metallic object as a vehicle, the system will alert the driver with up to 3.5 seconds notice. Then, if necessary, it will automatically apply the vehicle's foundation brakes to help mitigate, or help lessen the severity of, a potential collision.

Enhanced

Stationary Vehicle Braking (SVB): Always-available even at lower vehicle speeds, when Wingman® Fusion™ system can definitively identify a situation ahead – such as an in-lane vehicle at the end of a line of stopped traffic, or a stalled vehicle – its SVB feature can automatically alert your driver up to 3.5 seconds before impact and apply the vehicle brakes to decelerate the vehicle up to 50 mph/80 kph before that impact. If the Fusion-equipped tractor is traveling at a vehicle speed less than 37 mph/59 kph, and the system cannot definitively identify the stationary vehicle in its lane of travel, the driver will get up to 3.0 seconds of alert, but no automatic braking will be applied. For Fusion-equipped vehicles traveling at speeds greater than 37 mph/59 kph, Fusion's alert time will be reduced. (See Figure C on page 4).

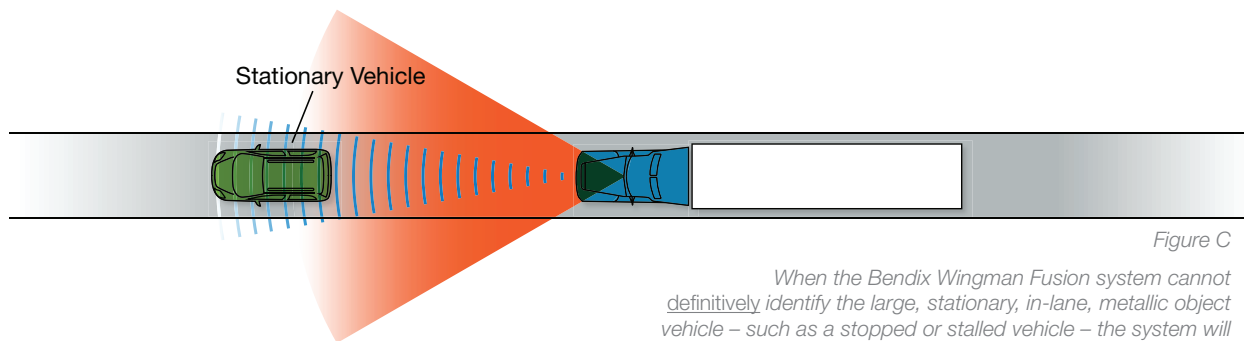


Figure C

When the Bendix Wingman Fusion system cannot definitively identify the large, stationary, in-lane, metallic object vehicle – such as a stopped or stalled vehicle – the system will issue an alert only, up to 3.0 seconds from the potential impact.

Exclusive New Feature

Multi-lane Autonomous Emergency Braking:

Fusion's exclusive Multi-lane autonomous emergency braking can help your driver mitigate both the first, and potentially second, crash situation when more than one highway lane is blocked. Once a collision mitigation braking event begins and the driver steers into an adjacent lane to avoid the forward vehicle, this Fusion feature continues to apply the brakes – if needed – when it detects another forward vehicle ahead posing a threat in the new traffic lane.

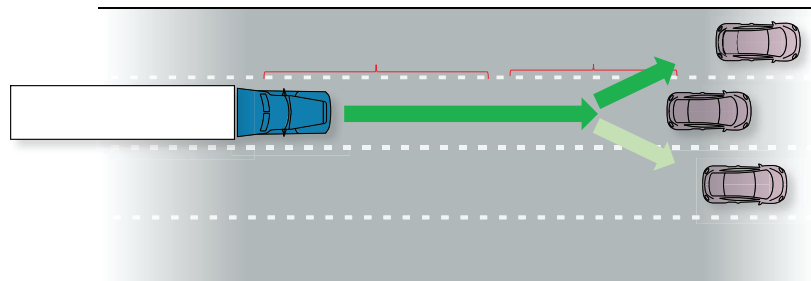


Figure D

Fusion's exclusive Multi-lane Autonomous Emergency Braking feature can help the driver mitigate both the first, and potentially second, crash situation when more than one traffic lane is blocked.

Exclusive New Feature

Highway Departure Warning & Braking (HDW/HDB): Building on the Fusion system's existing lane departure warning capability, HDB provides an auditory alert to your driver and, if necessary, applies the foundation brakes to help moderately reduce vehicle speed to assist the driver if the system determines the vehicle has left the roadway unintentionally. Highway Departure Warning and Braking is especially helpful in situations where your driver may have become drowsy behind the wheel.

New Feature

ACB Auto-Resume™: Re-engages cruise control after the Wingman Fusion system brakes the vehicle above a certain speed threshold. With this feature, if the system brakes, the cruise control disengages. With Fusion's ACB Auto-Resume, the driver won't have to resume cruise if Fusion has applied the brakes and the vehicle is still above the minimum cruise control speed.

New Feature

ACB (Active Cruise with Braking) Stop & Driver Go™: ACB Stop & Driver Go is a low-speed approach to adaptive cruise control for traffic situations. Offering additional convenience, this feature allows your driver to resume cruise control – after braking to a stop – without having to push the resume switch. With ACB Stop & Driver Go, the driver need only press down on the throttle and the vehicle will accelerate to the vehicle set speed while maintaining a gap with the forward vehicle.

Depend On The Performance & Features You've Come To Expect

Active Cruise with Braking: Reduces throttle, engages the engine retarder, and applies the vehicle's foundation brakes to help your driver maintain a set following distance after setting the vehicle's cruise control.

Following Distance Alerts (FDA) and Lane Departure Warning (LDW): Designed to support your driver on the road, the audible and visual FDA alerts activate when the truck is getting too close to a forward vehicle. In addition, above 37 mph/59 kph, in most vehicle applications, if the vehicle unintentionally departs the lane without the turn signal activated, Wingman® Fusion™ will sound a “rumble strip” LDW audio alert to help your driver correct the unintentional lane departure. This can be particularly valuable to help mitigate run-off-the-road accidents usually caused, in part, by drowsiness or a distraction.

Alert Prioritization: In the event of multiple, simultaneous system alerts – such as a lane departure warning and an FDA impact alert – during potentially severe events, the Wingman Fusion system will automatically prioritize them in order of importance, delivering only the most crucial alert to your driver to help minimize possible distractions.

Overspeed Alert & Action: The Fusion system's camera can read most roadside speed limit signs within North America. If the vehicle equipped with Wingman Fusion is traveling +5 mph/8 kph over the speed limit, the system will alert the driver to slow down. If the vehicle is traveling +10 mph/ 16 kph or greater over the speed limit, Fusion will alert the driver, de-throttle the engine for one second, and transmit a J1939 message for SafetyDirect® to monitor. The message can be picked up by SafetyDirect (subscription fee applies) and transmitted to your back office for review. Both the +5 mph/8 kph and +10 mph/16 kph thresholds are customizable by your fleet.

IMPORTANT: Because each truck manufacturer may implement differing feature sets of Bendix Wingman Fusion, please check with the OE to confirm available features and vehicle capabilities.

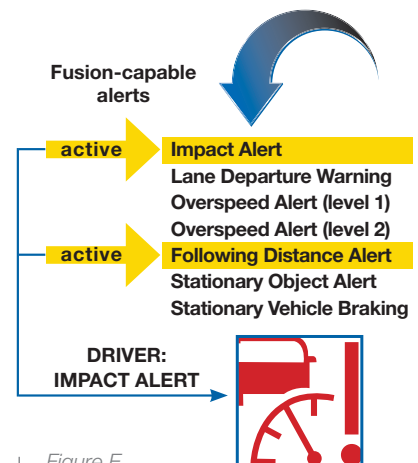


Figure E

To minimize driver distraction – especially common from independent alert systems – Wingman Fusion will sound only the most important alert to the driver. This allows them to focus attention on the most critical situation.

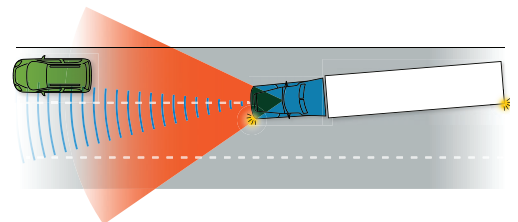


Figure F

Above 37 mph/59 kph, when an unintended lane departure is detected, the system makes a “rumble strip” sound to alert the driver. The alert is silent when the turn signal is used.

Integrate Fusion with SafetyDirect® For More Actionable Information

SafetyDirect® by Bendix CVS provides an end-to-end safety enhancement solution. The user-friendly web portal – a valuable option for your fleet – wirelessly transmits near real-time driver performance data, videos, and event-based information for back office analysis. It's an essential, customizable tool that delivers actionable information that can help further improve fleet and driver safety and accelerate your return on investment. Data from Wingman® Fusion™'s brake sensors, camera, and radar provides near real-time knowledge and insight about your vehicles and their surroundings while on the road. The SafetyDirect web portal captures that data then, using your fleet's telematics system, automatically transmits driver performance and event-based information – including video – to your back office. The more information SafetyDirect knows, the more prepared your fleet can be.

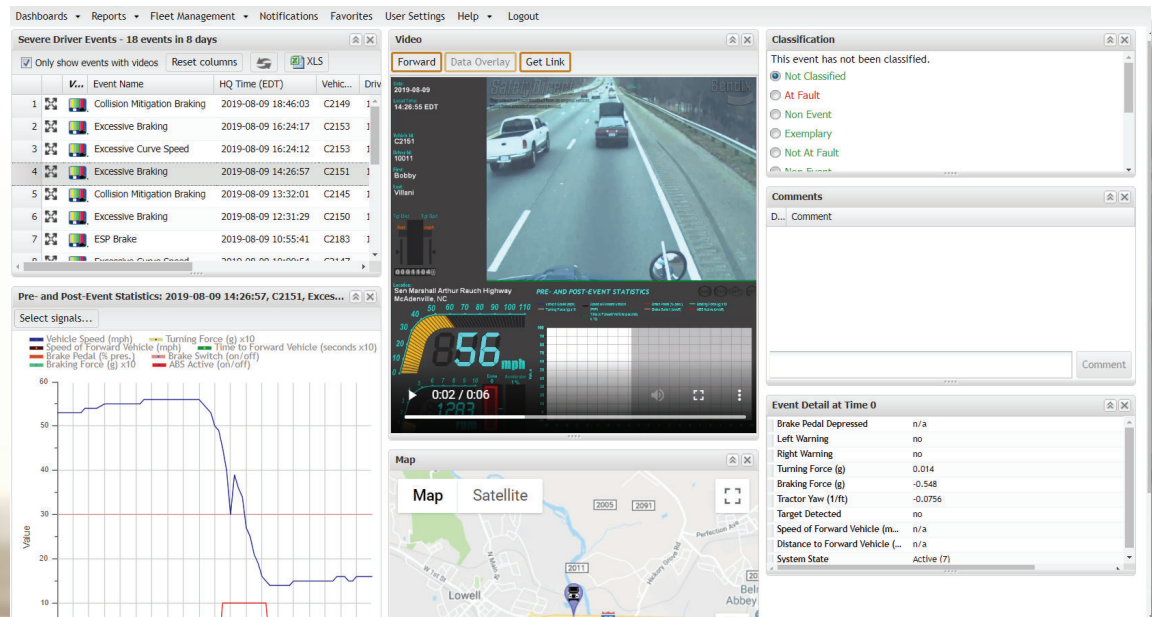


Figure G

SafetyDirect shows a Wingman Fusion-equipped vehicle involved in a rear end collision caused by the hood of the forward vehicle coming up while driving. SafetyDirect was able to show the driver of the truck responded quickly and correctly to the incident.

Bendix safety technologies complement safe driving practices.

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.

Performance, ROI, And More

Upgrade To New Features How And When It's Right For You

Perhaps you want to keep your current vehicles longer, or you simply want to ensure the trucks in your fleet offer the same features and functions vehicle-to-vehicle to help with driver satisfaction. Whatever the reason, many features of Bendix® Wingman® Fusion™ with our enhanced feature set are now retrofittable on earlier generations of the system. That means your fleet can take advantage of the latest technology advancements on your in-service vehicles from Bendix.

We approach each step as a foundation for the next – an ever-expanding platform of software, sensors, and system integration – to help build even more effective vehicle and highway safety systems that help drivers navigate more challenging situations.

To learn more about the Bendix Upgrade Program and what it can do for your fleet, contact us for more information or visit bendixcvsupgrade.com.

Here's What Other Fleets Are Saying

North American fleets, equipping the family of Bendix Wingman driver assistance technologies on their vehicles, report significant reductions in rear-end collisions – as much as 90 percent – and decreased severity of those that did occur. Ask us for more information about what fleets who equip their vehicles with Fusion are sharing.

Bendix Wingman Fusion with our enhanced feature set builds on our proven collision mitigation and advanced driver assistance technology, adding enhanced braking power and collision mitigation capabilities, additional features and new integration potential for you.



Integration means multiple sensors are confirming situational data, resulting in more robust decision making for the system as a whole. Fusion, with the enhanced feature set, is the most powerful and effective Bendix Wingman ever.

Wingman® Fusion™ is a powerful combination of safety features available now on most commercial vehicle nameplates.

Bendix® System Comparison

Wingman Fusion with Enhanced Feature Set.
Our most advanced safety system yet.

Bendix® Wingman® Advanced™
Bendix® Wingman® Fusion™
Bendix® Wingman® Fusion™
with Enhanced Feature Set

Features

Collision Mitigation	
- Enhanced Autonomous Emergency Braking (full braking early and throughout, up to 50 mph)	■
- Autonomous Emergency Braking	■ ■ ■
- Enhanced Stationary Vehicle Braking (full braking early and throughout, up to 50 mph)	■
- Stationary Vehicle Braking	■ ■
- Multi-Lane Autonomous Emergency Braking	■
- Highway Departure Warning and Braking	■
Active Cruise with Braking (ACB)	
- Active Cruise with Braking	■ ■ ■
- ACB to Full Stop	■ ■
- ACB Auto-Resume	■
- ACB Stop and Driver Go	■
Alerts	
- Overspeed Alert and Action	■ ■
- Lane Departure Warning	■ ■
- Following Distance Alert	■ ■ ■
- Impact Alert	■ ■ ■
- Stationary Object Alert	■ ■ ■
Additional Integration	
- Compatible with Safety Event Video/Data Recording	■ ■
- Compatible with Bendix® BlindSpotter® side object detection (CAN connected)	■ ■

■ ■ ■ Denotes system feature



See for yourself how Wingman Fusion is revolutionizing fleet safety. Visit safertrucks.com/fusion or talk to your account manager today.

*The camera is powered by the Mobileye® System-on-Chip EyeQ® processor with state-of-the-art-vision algorithms.

See for yourself how Bendix® Wingman® Fusion™ continues to revolutionize fleet safety.

Visit safertrucks.com/fusion or talk to your account manager today.

Bendix safety technologies complement safe driving practices. 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.

The Wingman® Fusion™ camera is powered by the Mobileye® System-on-Chip EyeQ® processor with state-of-the-art-vision algorithms.



Talk to your Bendix Account Manager.
Call **1-800-AIR-BRAKE** or visit safertrucks.com/fusion.

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