

# BENDIX® FUSION™

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

Help Protect Your Fleet with Our  
Most Advanced Safety System Ever

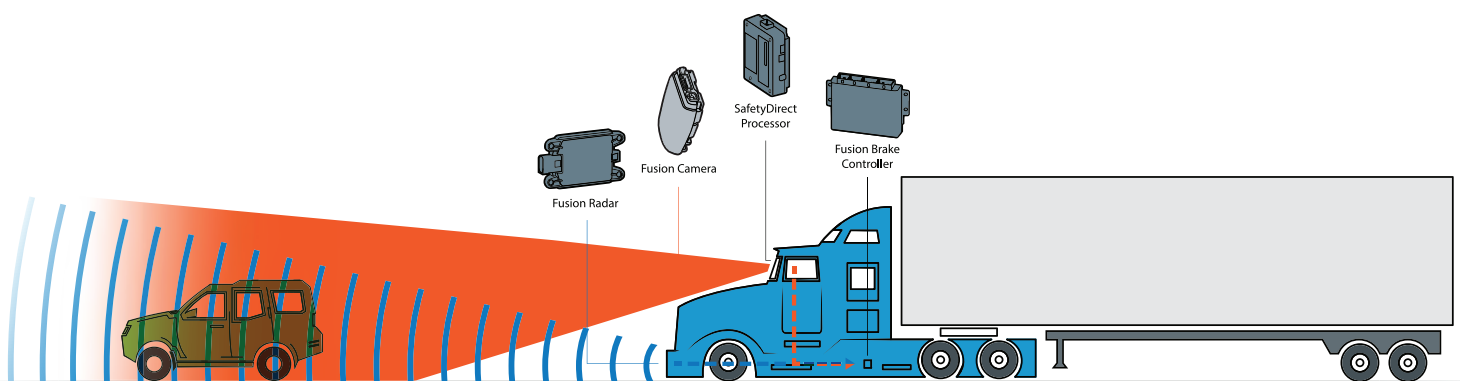
**Bendix**





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

We're driven to create the best solutions. That's why our flagship Bendix® Fusion™ system has even more capability. The Fusion 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 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 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® 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® full-stability system as a foundation.

## Take Advantage of These New or Enhanced Features

### Enhanced

**Enhanced Collision Mitigation:** Even at lower speeds, the 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.

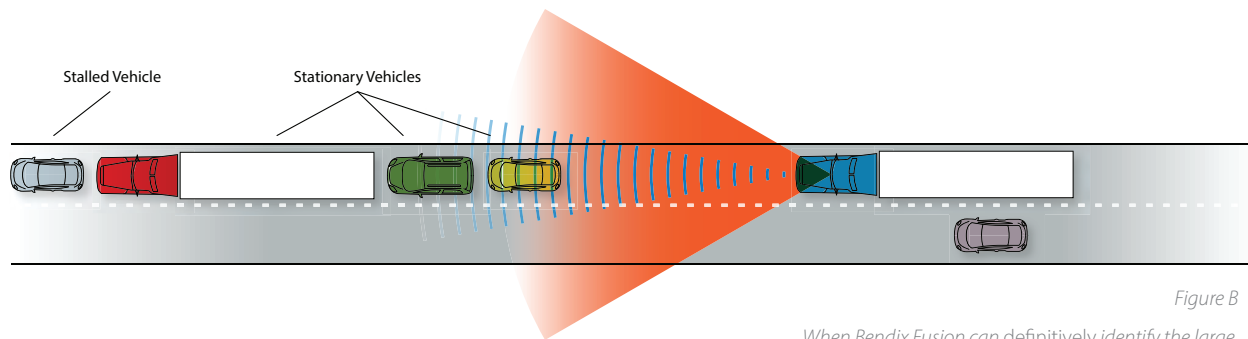


Figure B

*When Bendix 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):** Available at lower speeds, when the Bendix Fusion system can definitively identify a stationary forward vehicle that poses a potential threat – 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 can apply full brakes – if needed – to help decelerate the vehicle before 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).*

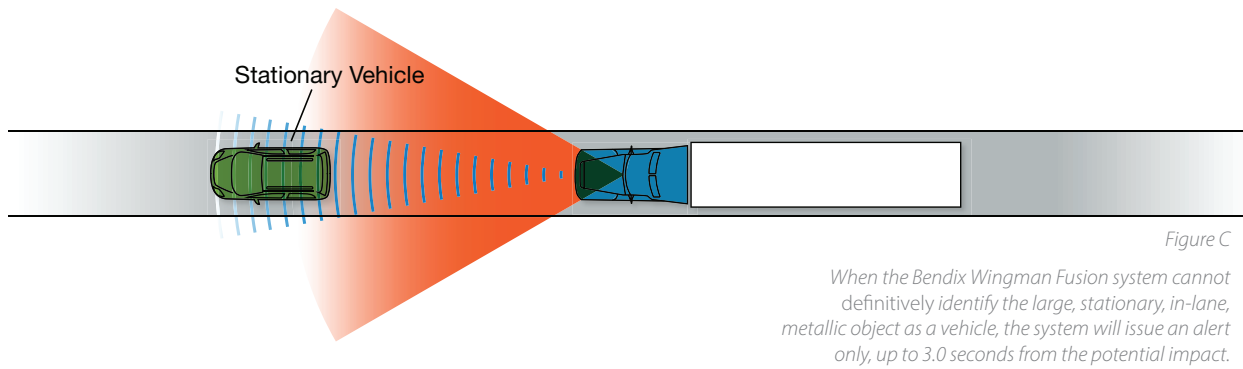


Figure C

When the Bendix Wingman Fusion system cannot definitively identify the large, stationary, in-lane, metallic object as a 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 can continuously apply the brakes – if needed – when it detects another forward vehicle ahead posing a threat in the new traffic lane.

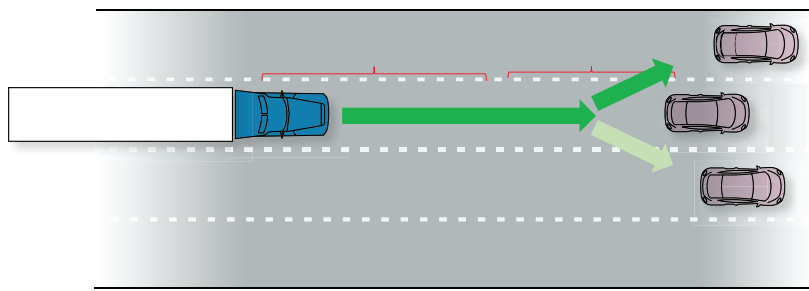


Figure D

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 reduce vehicle speed to assist the driver if the system determines the vehicle has left the roadway unintentionally. Highway Departure Warning and Braking can be especially helpful in situations where your driver may have become drowsy behind the wheel.

**New Feature**

**ACB Auto-Resume™:** This feature re-engages cruise control after an ACB braking event as long as the vehicle speed is above the minimum cruise control set speed (set by the OEM). Now, the driver will have to reset cruise control in fewer situations which helps reduce fatigue.

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

**Active Cruise with Braking:** Can reduce the throttle, engage the engine retarder, and apply 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, 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 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 can read most roadside speed limit signs within North America. If the vehicle equipped with 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® Fusion™, please check with the OE to confirm available features and vehicle capabilities.**

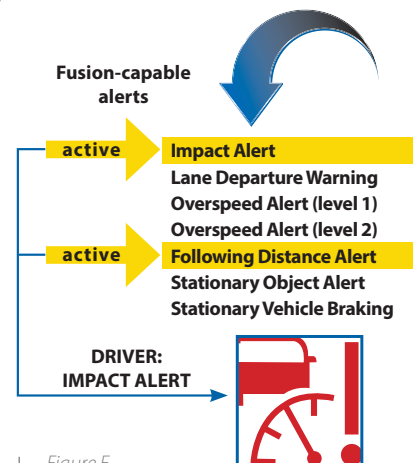


Figure E

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

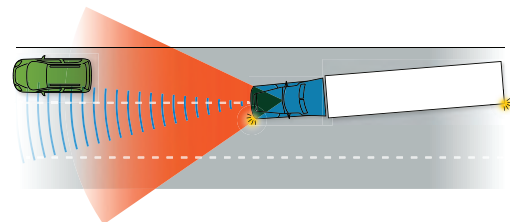


Figure F

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

Optional 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 Fusion™'s and Bendix® ESP®'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.

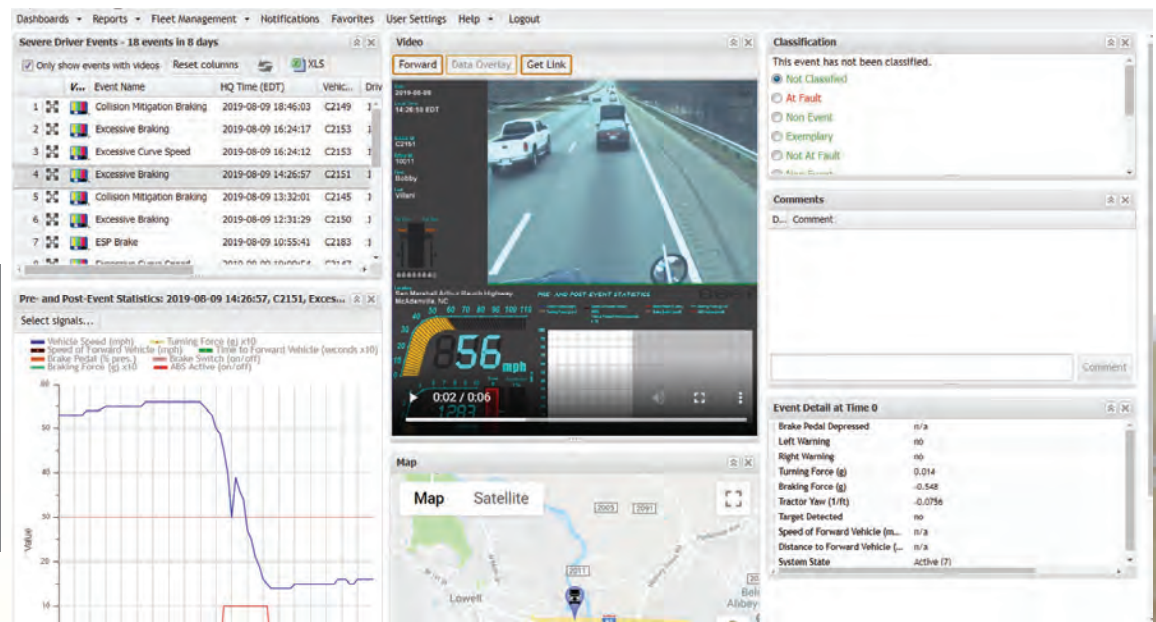


Figure G

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® 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](http://bendixcvsupgrade.com).**

### Here's What Other Fleets Are Saying

North American fleets, equipping the family of Bendix Fusion 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.

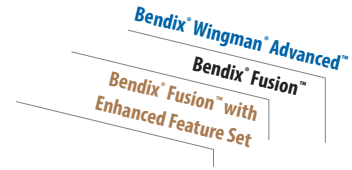
**Bendix Fusion, with our enhanced feature set, builds on our proven collision mitigation and advanced driver assistance technology, adding enhanced braking power and collision mitigation capabilities, additional features, and new integration potential for you.**



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 system ever.

# Bendix® System Comparison

Bendix® Fusion™ with Enhanced Feature Set.  
Our most advanced safety system yet.



## Features

Collision Mitigation			
- Enhanced Autonomous Emergency Braking (full braking possible early and throughout)	■		
- Autonomous Emergency Braking	■	■	■
- Enhanced Stationary Vehicle Braking (full braking possible early and throughout)	■		
- 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™	■		
Alerts			
- Overspeed Alert and Action	■	■	
- Lane Departure Warning	■	■	
- Following Distance Alert	■	■	■
- Impact Alert	■	■	■
- Stationary Object Alert	■	■	■
Additional Integration			
- Compatible with Safety Event Data Recording	■	■	
- Compatible with Bendix® BlindSpotter® side object detection (CAN Connected)	■	■	

■ ■ ■ Denotes system feature



See for yourself how Fusion is revolutionizing fleet safety.  
Visit [safertrucks.com/fusion](http://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](https://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](https://safertrucks.com/fusion).

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