



## Bendix® Wingman® ACB – Active Cruise with Braking Questions & Answers

*Please note: This document is designed to assist you in understanding select aspects of the Bendix® Wingman® ACB – Active Cruise with Braking – system, not to serve as a performance guarantee. No system will prevent 100% of the incidents you may experience. Not all aspects of the system are referenced in this document. This information is subject to change without notice. Please refer to the “Operator’s Manual” for additional information about the system.*

### 1. What is the Bendix® Wingman® ACB system and how does it operate?

With the addition of the Bendix Wingman ACB – Active Cruise with Braking system to your vehicle, you will not only maintain the cruise control “set” speed, but also a set following distance (about 3.0 seconds) behind the vehicle you are following (forward vehicle). And, when not in cruise control, the system will continue to provide following distance alerts to warn if the following distance between the truck and forward vehicle is closing.

The system is automatically activated when the cruise control is “set”. Using a radar sensor mounted to the front of your vehicle (typically behind the bumper), the Bendix Wingman ACB system monitors 32 objects within approximately 500’ of the front of your vehicle.

If the forward vehicle slows down below the your vehicle’s cruise control set speed, the system will de-throttle the engine, progressively apply the engine retarder, and then apply the foundation brakes in an attempt to maintain the set following distance behind the forward vehicle.

If the forward vehicle accelerates away, the Bendix Wingman ACB system will automatically accelerate your vehicle to the original cruise control set speed, and again maintain a set following distance behind the forward vehicle.

Since the Bendix Wingman ACB system operates with normal cruise control, all the features built into normal cruise control also apply.

Limits imposed by factory-set road speed governors or other vehicle cruise control features are fully supported by the Bendix Wingman ACB system.

### 2. Which commercial vehicle OEMs are currently offering Bendix® Wingman® ACB?

The Bendix system is currently offered on Mack®, Volvo® and International® highway vehicles, and will be available on Kenworth® and Peterbilt® vehicles before the end of 2010. The following chart provides additional information regarding system availability and option codes:

OEM	Product	Option Code
Volvo	Volvo Enhanced Cruise (VEC) by Bendix®	GC-H2
	Bendix™ BlindSpotter® Side Object Detection System	GC-H3
	VEC by Bendix + BlindSpotter	GC-H1
Mack	Mack Road Stability Advantage with Adaptive Cruise Control by Bendix® with timegap switch	548-1002
	Mack Road Stability Advantage with Adaptive Cruise Control by Bendix® with timegap switch + Bendix™ BlindSpotter® Side Object Detection System	548-1001
	Mack Road Stability Advantage with Adaptive Cruise Control by Bendix® + Bendix™ BlindSpotter®	548-1003
	Mack Road Stability Advantage with Adaptive Cruise Control by Bendix®	548-1004
	Bendix™ BlindSpotter® Side Object Detection System	548-1005
International	Bendix® Wingman® ACB – Active Cruise w/Braking	08TKY
	Bendix™ BlindSpotter® Side Object Detection System	08TSB

Contact Mack, Volvo or International dealers for additional information regarding option availability and pricing.

### 3. Are automatic foundation brake interventions “always on”?

Not at this time. In order for the Bendix Wingman ACB system to provide automatic interventions – including reducing throttle, engaging the engine retarder or applying the foundation brakes to help the driver maintain a set following distance – cruise control must be “on” and then “set” by the driver.

Unlike other “always on” systems, the Bendix system provides earlier warnings, which may provide the driver more opportunity to slow or steer to avoid the potential collision.

**None of the automatic interventions will function if there is a system fault.** If the system is faulted, information should appear on the vehicle dashboard.

In the future, Bendix will offer an “always on” option for Bendix Wingman ACB. This will be an upgrade to the software and can be added at a fleet’s discretion. This feature will not require a change to the current Bendix ACB radar.

### 4. Are the warnings “always on”?

Yes. Newest releases of Wingman enable an “always on” mode for all of the warnings. This includes: “Following Distance Alerts”, “Impact Alerts” and “Stationary Object Alerts.” The originally released Wingman system (release in 2009) enabled only the “Following Distance Alerts” as always on. Please check with your owner’s manual for specific information.

Vehicles equipped with the Bendix Driver Interface Unit (DIU) allow for volume adjustments. Vehicles that display Wingman ACB warnings directly through the instrument cluster may or may not allow for volume adjustment. Please check your owner’s manual.

**None of the system alerts will work if there is a system fault.**

**5. How can I tell the difference between the unique alerts?**

A beeping alert means your truck is following too close to the vehicle ahead. A solid tone means you should actively apply the brakes immediately because the Bendix Wingman ACB system braking is not enough to ensure continued safe following distance.

The alerts are audibly unique so you can keep your attention on the road, not on the dash. Also, when appropriate, further information about what the alert is will be displayed on the DIU or dash.

**6. My current system has a lot of false alerts. How many false alerts can I expect?**

Radar technology is not perfect, and false alerts can happen. The Bendix Wingman ACB system should have significantly less false alerts than earlier systems.

**7. What is the set following distance and can this be changed?**

The default set following distance from Bendix is 2.8 seconds. However, your fleet has the option to change the following distance through the use of Bendix<sup>®</sup> ACom<sup>®</sup> software (version 6.3 or higher).

*For vehicles equipped with an optional distance switch:*

Drivers may change the following distance by using the optional “distance switch.” Note that this is an option and must be ordered from the factory. The location of the distance switch in the vehicle can vary depending on the manufacturer. Please refer to the “Bendix Wingman Operator’s Manual” included with your vehicle for details on switch location.

**8. How have drivers and fleets reacted to the Bendix<sup>®</sup> Wingman<sup>®</sup> ACB system?**

From more than 3 million miles of testing conducted by Bendix to date, drivers say that they are able to stay in cruise longer and have less need to continually re-set cruise when vehicles in front of their truck slow. This appears to indicate drivers have less repetitive motions, which may help keep them more alert throughout their shift, helping to reduce potential accidents.

Remaining in cruise control mode for longer periods of time may also result in better fuel economy for the fleet as well.

**9. What is the Bendix<sup>®</sup> ESP<sup>®</sup> system and why is it part of the system?**

Bendix<sup>®</sup> ESP<sup>®</sup> is a full stability system that is an integral part of the Bendix<sup>®</sup> Wingman<sup>®</sup> ACB system.

The Bendix ESP system provides additional stability support to help drivers mitigate rollover and loss-of-control situations on dry, wet, snow and ice-covered roadways.

The Bendix<sup>®</sup> Wingman<sup>®</sup> ACB system uses Bendix<sup>®</sup> ESP<sup>®</sup> to provide additional information regarding your vehicle’s position in a turn, and to help maintain the stability of the vehicle during automatic brake application on slick surfaces.

More information on the Bendix ESP stability system is available at [www.bendix.com/abs6](http://www.bendix.com/abs6).

**10. What data is available from the Bendix® Wingman® ACB system and how do I retrieve it?**

Your fleet can acquire useful data from the Bendix ACB system using Bendix® ACom® diagnostic software, available free from Bendix either as a CD or download at [www.bendix.com](http://www.bendix.com). The data reported from the system includes a following distance histogram in feet and seconds; the number of hard braking events and impact alerts; trip mileage; idle time; stability events; and other useful information.

In the future, real-time data will also be available using telematics systems, such as those available from Volvo®, Mack®, International®, Qualcomm® and others.

NOTE: Bendix Wingman ACB is shipped from the factory with the data capturing feature turned “OFF.” Fleets may turn “ON” data availability using Bendix ACom diagnostic software (version 6.3 or higher).

**11. Does the Bendix® Wingman® ACB system warn on stationary objects? How about non-metallic objects, such as animals or vehicles primarily constructed of limited metallic?**

***Stationary Objects:***

Bendix Wingman ACB now has the capability to warn on stationary metallic objects. The “Stationary Object Alert” (SOA) feature of Bendix Wingman ACB provides audible and visual alerts to the driver when approaching a stationary metallic object, such as a car, steel drum or other metallic obstruction in the road.

This “always on” alert is typically given between 1.0 and 2.8 seconds before a potential collision with a stationary object in the vehicle’s lane of travel. The driver can either slow down or maneuver in an attempt to avoid the object. Stationary Object Alerts are warnings only; there is no active braking with SOA at this time.

Check with your vehicle’s manufacturer for information about this feature and whether it is available on your vehicle. However, you should always be attentive to stopped vehicles on the roadway. The Bendix Wingman ACB system will only warn and ***will not decelerate the vehicle*** when approaching stationary objects.

This feature is “always on” and will provide warnings in all types of weather situations – including rain, snow or fog – and at night. Drivers during testing have found this to be an especially useful feature in limited visibility situations.

If you have a vehicle purchased in 2009 with Bendix Wingman ACB and do not have stationary object warning, you may be able to upgrade your system to include this feature. Please contact your vehicle manufacturer for additional information.

***Non-metallic objects:***

Bendix Wingman ACB will not warn or react on animals.

In addition, as you approach other non-metallic objects, the Bendix Wingman ACB system will not react or warn on them.

As you approach objects with limited metal surfaces (such as recreational vehicles, horse-drawn buggies, motorcycles, logging trailers, etc.) traveling in your lane, the Bendix Wingman ACB system *may not be able to react to them and automatically manage the set following distance* between your

vehicle and the forward vehicle. You should always be aware when approaching all types of vehicles and objects.

**12. When should you not use Bendix® Wingman® ACB?**

Never use the Bendix Wingman ACB system on roads where you cannot drive safely at a steady speed, including city roads, winding roads, grades or when road conditions are poor – such as on gravel, dirt, ice, or wet surfaces (wet surfaces may increase the risk of hydroplaning) – or in fog, heavy rain, or snowy conditions.

Always turn off the Bendix Wingman ACB system when entering turning lanes, entering or exiting highways, driving through construction zones, or similar situations. See the “Operator’s Manual” for more information on when not to use Bendix ACB.

**13. How do you maintain the Bendix® Wingman® ACB system?**

The system requires little maintenance to ensure optimum performance, but sensor obstruction should be monitored often and routinely.

As part of your pre-trip vehicle inspection, check to see that there is no mud, snow, ice build-up, or other obstruction in front of the sensor. You should inspect the radar sensor mounting and remove any obstruction that may impair the sensor functioning.

Also inspect the bumper and sensor for any potential damage that may result in misalignment of the Bendix Wingman ACB sensor. The Bendix Wingman ACB sensor will not function properly if misaligned. Information may appear on the dash read-out to let you know if the sensor is misaligned. Realigning the sensor requires a qualified technician to inspect and repair.

The Bendix Wingman ACB system braking requires properly maintained foundation (Drum or Disc) brakes which meet appropriate safety standards and regulations. Optimal brake performance also requires the vehicle be equipped with properly sized and inflated tires with a minimum safe tread depth.

**14. Can the Bendix® Wingman® ACB system be retrofit onto a truck already equipped with the Bendix® ESP® stability system?**

Not at this time. In the future, Bendix will offer retrofit kits that will enable you to install Wingman ACB on select ESP-equipped vehicles.

One final note: You cannot use the Bendix Wingman ACB radar sensor on other radar-based warning or cruise systems, such as VORAD® SmartCruise®.

**15. What is the warranty on the Bendix® Wingman® ACB system?**

The Bendix warranty is 3 years or 350,000 miles, whichever comes first, for parts and 1 year / 100,000 miles, whichever comes first, for labor. Please contact your vehicle manufacturer regarding any potential warranty claims. Damage to the sensor or improper maintenance practices will void this warranty.

**16. Where can you learn more about the Bendix® Wingman® ACB system?**

Please refer to the “Operator’s Manual” included with your vehicle. Copies are also available at [www.bendix.com](http://www.bendix.com). For technical information, please refer to Bendix Service Data Sheet SD-13-3333.