



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 system to your vehicle, you will not only maintain the cruise control “set” speed, but also a set following distance (a time-based measure) 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 following distance between the truck and forward vehicle is closing.

The system is activated when the cruise control is engaged. Using a radar sensor mounted to the front of your vehicle (typically behind the bumper), the Bendix Wingman ACB system monitors vehicles moving in the same direction ahead of the truck (in its lane of traffic). The radar sensor can detect up to 32 objects within ~ 500' of the front of truck.

If the vehicle in front of the truck slows down below the truck’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 the truck 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® and Volvo® highway vehicles.

- Option Code for Mack is: 548-1000

Note: On Mack vehicles, the system is known as “Mack® Road Stability Advantage with Adaptive Cruise Control by Bendix®”)

- Option code for Volvo is: GC-H2

Note: On Volvo vehicles, the system is known as “Volvo® Enhanced Cruise by Bendix®”)

Please see your Mack or Volvo dealer for additional details.

3. Are automatic interventions “always on”?

No. 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 “set” by the driver.

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.

4. Are the warnings “always on”?

The “Following Distance Alerts” and “Close Cut-In Alert” are always on, even if the vehicle is not in cruise control mode. The “Impact Alert” activates only when the vehicle is in cruise control mode and the Bendix® Wingman™ ACB system is functioning properly.

There are no “OFF” or “Volume-Control” switches for the alerts.

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 modulating tone means you should actively apply the brakes 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.

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® ACom™ software (version 6.3 or higher).

For vehicles equipped with an optional distance switch:

Drivers may change the following distance setting by using the optional “distance switch.” Note that this is an option and must be ordered from the factory. On Mack® brand vehicles, the distance switch is located next to set/resume as a rocker switch on the dash panel. On Volvo® brand vehicles, the distance switch is located on the turn signal stalk next to on/off.

8. What has been driver and fleet reaction to the Bendix® Wingman™ ACB system?

From the over 1.5 million miles of fleet testing conducted by Bendix to date, drivers say that they are able to stay in cruise longer and have less need to continually reset 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 reduce potential accidents.

Being able to stay in cruise control for a longer period of time may also result in better fuel economy for the fleet.

9. What is the Bendix® ESP® system and why is it part of the system?

Bendix® ESP® is a full stability system that is an integral part of the Bendix® Wingman™ ACB system.

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

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

More information on the Bendix ESP stability system is available from 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 from 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, data may also be available via real-time using telematics systems, such as those available from Volvo®, Mack®, Qualcomm® and others.

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:

Not at this time. You should always be attentive to stopped vehicles on the roadway. The Bendix Wingman ACB system only tracks moving objects and *will not alert or decelerate the vehicle* when approaching stationary objects. Plans are underway to address this issue in the next system release, scheduled for 2010.

Non-metallic objects:

Bendix Wingman ACB will not warn or act on animals.

In addition, as you approach 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 certain 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, 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.

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 to let you know if the sensor is misaligned. Realignment of 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?

No. Today you cannot retrofit the system on any vehicle, whether it is equipped with the Bendix® ESP® stability system or not.

However, you can transfer the radar unit from one vehicle to another, as long as both vehicles have been equipped with the Bendix Wingman ACB system, no matter the make of the vehicle.

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

15. 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.