



DETROIT ASSURANCE[™] SUITE OF SAFETY SYSTEMS

Technical Specifications

Make safety your top priority with Detroit Assurance—for exceptional control, protection, and driver experience.

Detroit Assurance provides optimum on-road safety, as it integrates seamlessly in the Freightliner Cascadia[®] and Cascadia Evolution equipped with a Detroit[™] engine with either a DT12[™] or a manual transmission.

The Detroit Assurance system collects, shares, and validates safety-related information by tracking up to 40 objects simultaneously up to 660 feet away and reporting information about six vehicles in the truck's path—their distance, velocity, width, lateral offset, type, and confidence level—while the Video Radar Decision Unit (VRDU) refreshes the speed, distance, and time calculations 200 times per second. All these actions work together to provide the safest environment possible.



RADAR SYSTEM (STANDARD)

ACTIVE BRAKE ASSIST (ABA) is always on, automatically tracking the distance from the front of the truck to other vehicles in its path using bumper-mounted radar. When a truck gets too close to another vehicle, three phases of collision mitigation are activated:

- 1. AUDIO/VISUAL WARNING** The driver receives a visual alert of impending objects via the Instrumentation Control Unit (ICU4ME) and the radio mutes and sounds an alarm.
- 2. HAPTIC WARNING** If the driver does not respond to the audio/visual warning, ABA sends a physical warning by partially braking the truck.
- 3. ACTIVE BRAKING** If there is still no driver input, ABA slows the truck using the transmission, engine brake, and service brake.

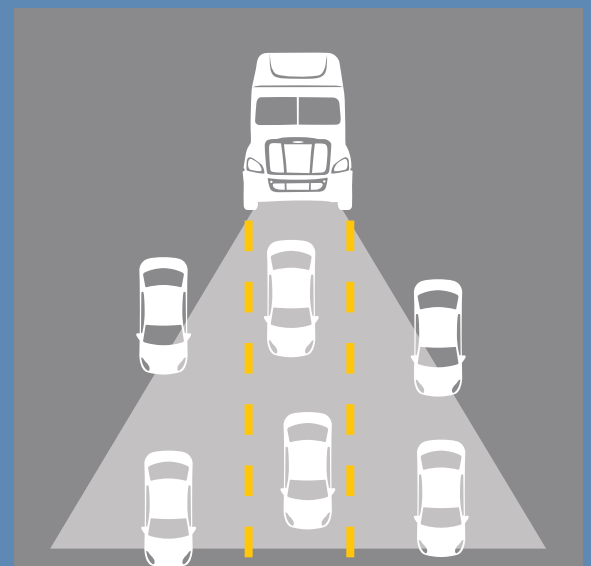
ADAPTIVE CRUISE CONTROL (ACC) automatically adjusts the truck's cruising speed to maintain a safe following distance—3.5 seconds—from other vehicles in its path, allowing the truck to remain in cruise control longer. With the optional headway switch, distance can be adjusted between 2.3 and 3.5 seconds.

ACC progressively reacts to detected risks:

- Decelerates truck when sensing a slower vehicle ahead.
- Maintains reduced cruising speed.
- Reaccelerates to set cruising speed when the slower vehicle clears.

CAMERA SYSTEM (OPTIONAL)

Lane Departure Warning (LDW) tracks the truck's position and sounds a warning if the truck veers out of its lane. A windshield-mounted, forward-facing camera detects the reflective paint and raised reflectors in lane markers. If the truck crosses those markers without using a turn signal, the radio is muted and an audible warning is sent through the speaker.



Detroit Assurance radar reports the distance, velocity, width, lateral offset, type, and confidence level of six vehicles in the truck's path.

Detroit Assurance is available with partner supplier products to maximize the safety of your Freightliner Cascadia® or Cascadia Evolution.

Bendix AutoVue with Video Capture and SafetyDirect®

Available for order with Detroit Assurance radar.








The LDW camera on the windshield continuously records video of the truck's activity on the road to capture any severe events. Then, a 10-second event—along with other driver performance data—is wirelessly transmitted to the SafetyDirect web portal for fleet operators and safety personnel to download and analyze.

Lytix DriveCam

Customer-furnished system includes forward- and rear-facing cameras.

The Video Event Recorders (VER) continually record driving data and provide ongoing feedback to the driver. With onboard cell or Wi-Fi, this system records video and audio up to eight seconds before a significant event and four seconds after. The driver is also able to manually start an eight-second before / four-second after recording by pressing both buttons on the bottom of the unit simultaneously.

Detroit Assurance System Compatibility

RADAR ONLY	CAMERA + VIDEO CAPTURE	RADAR + SIDE-OBJECT DETECTION	CAMERA + VIDEO CAPTURE	
SpecPro Data Code: 736-1AU or 736-1AV 	SpecPro Data Code: 73B-004 	SpecPro Data Code: 736-1A5 or 736-1A6 	SpecPro Data Code: 73B-004 	
	SpecPro Data Code: 73B-006 		SpecPro Data Code: 73B-006 No LDW Video Capture Available from Third Party: DriveCam®	SpecPro Data Code: 73B-007 
	SpecPro Data Code: 73B-998 No LDW Camera Available from Third Party: DriveCam®		SpecPro Data Code: 73B-998 No LDW Video Capture Available from Third Party: DriveCam®	SpecPro Data Code: 73B-008 
			SpecPro Data Code: 73B-998 No LDW System Camera Available from Third Party: DriveCam®	

Frequently Asked Questions

Q: Are Detroit Assurance and Detroit™ Connect the same system?

A: No, Detroit Assurance is a collision mitigation system with an optional lane departure warning. Detroit Connect is a suite of connected vehicle services, which includes Virtual TechnicianSM remote diagnostic system. Though separate, having both systems in your truck will help provide the utmost in driver safety and performance feedback.

Q: How far ahead does the radar scan?

A: 660 feet.

Q: How often does the radar refresh?

A: 200 times per second.

Q: What size/type of objects does the radar detect?

A: Any metallic object, but it only reacts to cars, trucks, and motorcycles.

Q: Can the following time for ACC be adjusted without the optional headway switch?

A: No, the headway switch must be used to adjust the following time.

Q: Does LDW recognize road borders (grass, dirt, and snow) or just lines?

A: LDW only recognizes reflective paint and raised reflectors in road lines.

Q: Does Detroit Assurance allow for video capture of driver collision mitigation events?

A: Yes, when it is paired with the Bendix AutoVue and SafetyDirect systems.

Q: Does Detroit Assurance allow for driver-facing cameras?

A: It is not a factory-available feature, but it can be added by pairing with the Lytx DriveCam System.



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