



DETROIT ASSURANCE™ 4.0 SUITE OF SAFETY SYSTEMS

Technical Specifications




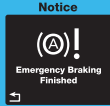
Make safety your top priority with Detroit Assurance 4.0, which integrates seamlessly in the new Freightliner Cascadia® equipped with a Detroit™ engine with either a DT12™ or a manual transmission.

The Detroit Assurance radar system:

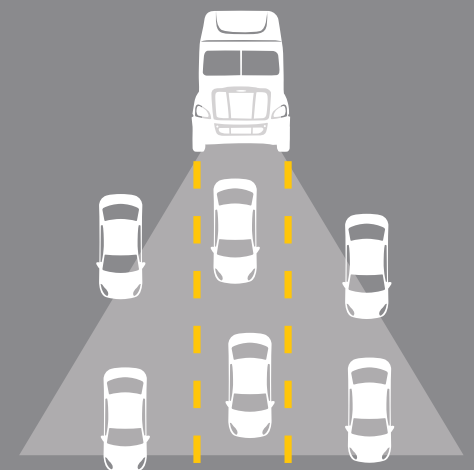
- Tracks up to 40 objects simultaneously, up to 825 feet in front of the truck, identifying the top six vehicles by level of threat.
- The Video Radar Decision Unit (VRDU2) refreshes the speed, distance, and time calculations 200 times per second. All these actions work together to provide the safest environment possible.

RADAR (STANDARD)

ACTIVE BRAKE ASSIST 4.0 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, the following warnings are initiated in order:

 Warning Collision Warning	1	 Warning Haptic Warning	2	 Warning Active Braking	3
<p>Audio with Visual Warning</p> <p>The driver receives a simultaneous visual dash alert and pulsating warning tone.</p>		<p>Haptic Warning</p> <p>If the driver does not respond, the system will send a visual dash alert and solid warning tone while pulsating the brakes simultaneously.</p>		<p>Active Braking</p> <p>If there is still no driver input, the system will send a visual dash alert, solid warning tone, and slow the truck using the transmission, engine brake, and service brake.</p>	
		 Notice Emergency Braking Finished			

Full braking on stationary objects (ABA 4.0) With Active Brake Assist 4.0, the radar now tracks constantly stationary objects and has the capacity to engage full braking on these objects, such as a vehicle parked and unloading or stopped traffic in the truck's path that has not moved as the truck approaches.



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

Moving pedestrian warning (ABA 4.0) With Moving Pedestrian Warning, the radar system on the new Cascadia can detect most pedestrians in motion and, as long as they stay in motion, can act to help mitigate a collision at vehicle speeds below 25 MPH. Moving Pedestrian Warning can detect most pedestrians that are moving within the truck's path. If the Moving Pedestrian Warning system detects a pedestrian in motion within the radar system's parameters for potential danger, the truck will engage in partial braking. Moving Pedestrian Warning is not functional at highway speeds and may not detect pedestrians in every possible situation, nor is it a substitute for cautious driving.

ADAPTIVE CRUISE CONTROL (ACC) automatically adjusts the truck's cruising speed to maintain a safe following distance – 3.6 seconds – from other vehicles in its path, allowing the truck to remain in cruise control longer. With the optional headway control in the new interactive dash display, distance can be adjusted between 2.4 and 3.6 seconds.

TAILGATE WARNING Independent of the Active Brake Assist and Adaptive Cruise Control features, Tailgate Warning will activate according to a truck's speed and the following distance.

- If a driver remains at the following speeds for 10 seconds or longer, a visual dash alert will trigger:
 - Greater than 45 mph, following within 2.7 or fewer seconds
 - At speeds between 35 and 45 mph, following at a ramp-up distance between 1.8 and 2.7 seconds
 - Between 25 and 35 mph, following within 1.8 seconds or less
- Once activated, Tailgate Warning will deactivate only at speeds less than 20 miles per hour.
- By remaining in any Tailgate Warning mode for 10 seconds or longer, the event will become reportable via J1939 to the selected telematics system.

CAMERA SYSTEM (OPTIONAL)



LDW Dash Display Card

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 Bendix AutoVue 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 corresponding speaker on the side of the truck that crosses the lane marker.

Video Capture with Bendix SafetyDirect

The camera on the windshield continuously records video of the truck's activity on the road to capture any severe collision mitigation events. Then, a total of 20-30 seconds of recording – along with other driver performance data – is transmitted to the SafetyDirect web portal for fleet operators and safety personnel to download and analyze.

Detroit Assurance 4.0 is available with partner supplied products to maximize driver safety.

Bendix Side Object Detection This feature helps professional drivers with vehicle blind-spots by alerting them to large metallic objects within the range of the radar sensor mounted on the right side of the vehicle.

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

Detroit Assurance System Compatibility

RADAR	CAMERA + VIDEO CAPTURE	SIDE OBJECT DETECTION
<p>SpecPro Data Codes: 736-1A5 or 736-1A6</p> <p>Detroit Assurance Radar</p>	<p>SpecPro Data Code: 73B-004</p> <p>Bendix AutoVue + Bendix SafetyDirect</p>	<p>SpecPro Data Code: 73K-001</p> <p>Bendix Side Object Detection</p>
	<p>SpecPro Data Code: 73B-007</p> <p>Bendix AutoVue + No LDW Video Capture Available from Third Party: DriveCam®</p>	
	<p>SpecPro Data Code: 73B-998</p> <p>No LDW System Camera Available from Third Party: DriveCam® + No LDW Video Capture Available from Third Party: DriveCam®</p>	



DDC-EMC-FLY-0070-0816. Specifications are subject to change without notice. Detroit Diesel Corporation is registered to ISO 9001:2008. Copyright © 2016 Detroit Diesel Corporation. All rights reserved. Detroit™ is a brand of Detroit Diesel Corporation, a subsidiary of Daimler Trucks North America LLC, a Daimler company