



DETROIT[™]
ASSURANCE

RADAR SYSTEM

CAMERA SYSTEM

DETROIT ASSURANCE[™] SUITE OF SAFETY SYSTEMS



**New Cascadia[®]
Detroit Assurance 4.0**



**Cascadia[®]
Detroit Assurance 2.0**

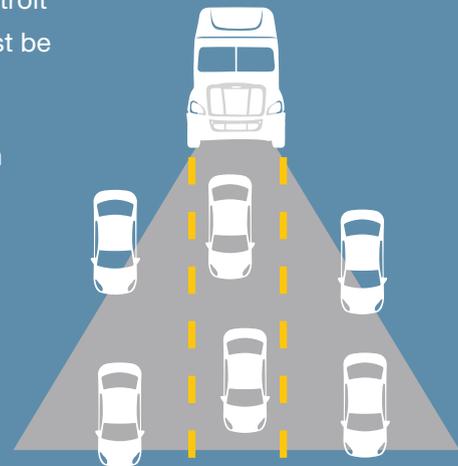
Detroit Assurance delivers exceptional control, protection, and driver experience.

Through a radar and optional camera system, Detroit Assurance provides optimum on-road safety, as it integrates seamlessly into any of the Freightliner Cascadia models. Detroit Assurance 2.0 will continue to be offered in the Cascadia, whereas the new Cascadia will offer Detroit Assurance 4.0. As a requirement of Detroit Assurance, all models must be equipped with a Detroit™ engine and DT12™ or manual transmission.

With the bumper-mounted radar and the optional camera mounted on the windshield, Detroit Assurance communicates information to the truck's brakes, engine, and transmission in real time.

The radar system, working with the Video Radar Decision Unit (VRDU or VRDU2), tracks up to 40 objects at once and identifies the top six by level of threat while refreshing 200 times per second.

Detroit Assurance 4.0 in the new Freightliner Cascadia offers additional features that build upon existing technology to create even more peace of mind for drivers.



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



RADAR SYSTEM (standard)



Active Brake Assist

Active Brake Assist 2.0 (ABA 2.0) or Active Brake Assist 4.0 (ABA 4.0) is always on, detecting the distances to objects, calculating speed, and determining if a warning or braking action is necessary. Based on the position and speed of your truck and other vehicles, both Active Brake Assist versions warn the driver and have the potential to engage full or partial braking to mitigate collisions that might otherwise be unavoidable.

How Active Brake Assist works



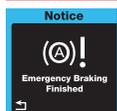
ABA 4.0 Dash Display

1. VISUAL/AUDIO WARNING

The driver receives a simultaneous visual dash alert with a warning tone.

2. PARTIAL BRAKING

If the driver does not respond, the system will send a visual dash alert and solid warning tone while simultaneously applying partial braking.

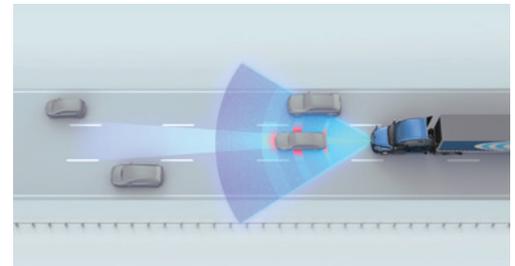


ABA 4.0 Dash Displays

3. FULL EMERGENCY BRAKING*

If there is still no driver input, the system will send a visual dash alert and solid warning tone, and engage in full emergency braking using the service brakes.

*Detroit Assurance 2.0 offers partial braking on stationary objects.



Detroit Assurance 4.0: Additional features in new Cascadia

Full braking on stationary objects (ABA 4.0) With ABA 4.0, the radar now tracks constantly stationary objects and has the capacity to engage in 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.

Moving Pedestrian Warning and Partial Braking (ABA 4.0) With Moving Pedestrian Warning and Partial Braking, 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 and Partial Braking can detect most pedestrians that are moving across the truck's path. If the Moving Pedestrian Warning and Partial Braking 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 and Partial Braking is not functional at highway speeds and may not detect pedestrians in every possible situation, nor is it a substitute for cautious driving.

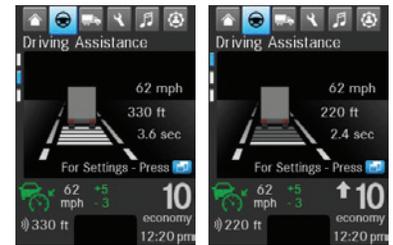
RADAR SYSTEM (standard)



Adaptive Cruise Control

Adaptive Cruise Control (ACC) automatically adjusts the truck's cruising speed to maintain a safe following distance—3.5 seconds on Cascadia and 3.6 seconds on new Cascadia—from other vehicles in its path, allowing the truck

to remain in cruise control longer. With the optional headway switch on the Cascadia, following distance can be adjusted between 2.3 and 3.5 seconds. On the new Cascadia, the optional headway control is part of the new interactive dash display and distance can now be adjusted between 2.4 and 3.6 seconds.



Cascadia



Optional headway switch on the instrument panel to adjust following time.

FOLLOWING DISTANCE SETTINGS
3.5 SECONDS
3.2 SECONDS
2.9 SECONDS
2.6 SECONDS
2.3 SECONDS

New Cascadia

FOLLOWING DISTANCE SETTINGS
3.6 SECONDS
3.2 SECONDS
2.8 SECONDS
2.6 SECONDS
2.4 SECONDS

ACC progressively reacts to detected risks:

- Decelerates truck to a preset distance using torque reduction, engine braking, and service braking when sensing a slower vehicle ahead
- Maintains reduced cruising speed
- Reaccelerates to set cruising speed when slower vehicle clears

Detroit Assurance 4.0: Additional features in new Cascadia



Tailgate warning Independent of the ABA and ACC 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 and audible alert will trigger:

- At speeds greater than 45 miles per hour, following within 2.7 seconds
- At speeds between 35 and 45 miles per hour, following between 1.8 and 2.7 seconds
- At speeds between 25 and 35 miles per hour, following at 1.8 seconds or less

Once activated, Tailgate Warning will deactivate only at speeds of less than 20 miles per hour. By remaining in any Tailgate Warning range for 10 seconds or longer, the event will become reportable via J1939 to the selected telematics system.

CAMERA SYSTEM (optional)

OPTIONAL FEATURE:

Lane Departure Warning

The optional camera system is only available as an addition to the radar system.

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, a visual warning appears on the dash, the radio is muted* and an audible warning is sent through the speaker on the side of the truck crossing the lane marker.

*Applies to Detroit Assurance 2.0 only.



Cascadia

Lane Departure switch is available on the instrument panel to disable LDW for 15 minutes.

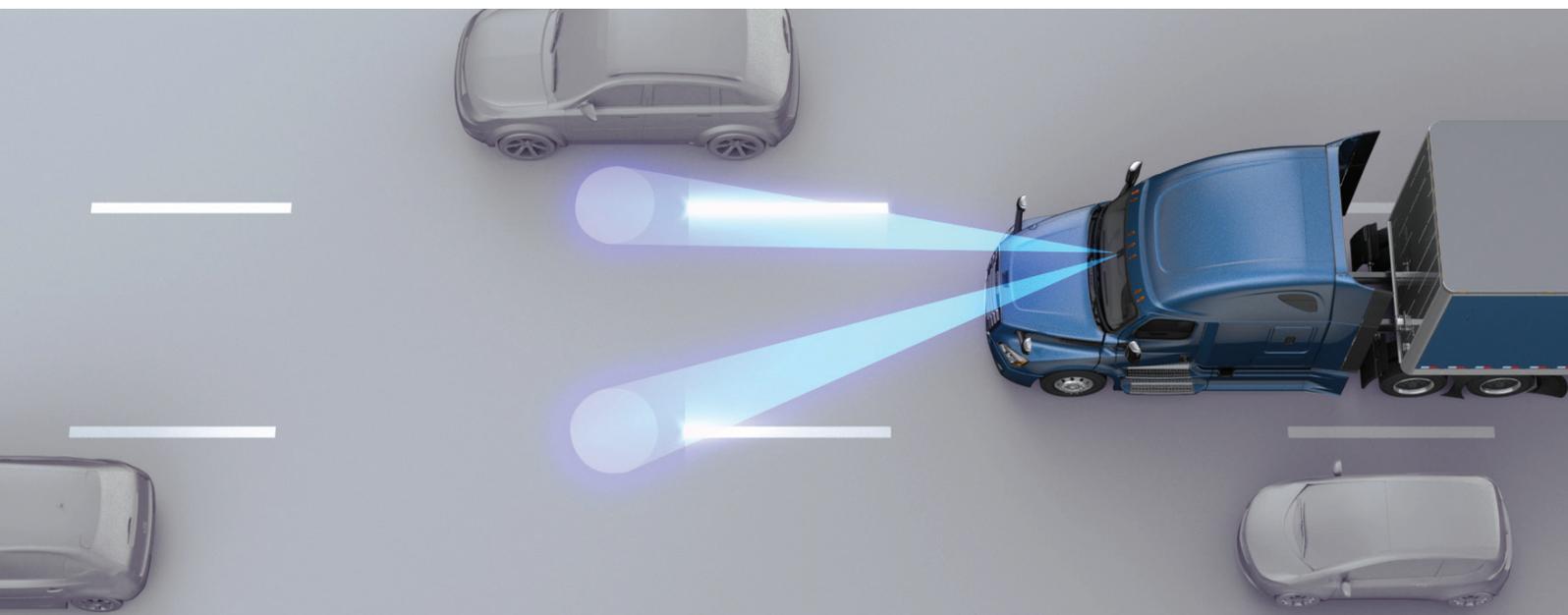


New Cascadia

Lane Departure switch is available on the instrument panel to disable LDW for 15 minutes.

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. In such an event, 10-15 seconds of video footage are captured before and after the event for a total of 20-30 seconds of recording. This video—along with other vehicle parameters—is transmitted to the Bendix SafetyDirect web portal for fleet operators and safety personnel to view and analyze.



DETROIT SUPPORT. ANYWHERE.

- Unmatched parts availability
- Factory-certified technicians
- Live technical support
- Hundreds of Freightliner dealership service locations

Notice: The Detroit Assurance system is intended solely as an aid for an alert and conscientious professional driver. It is not intended to be relied upon to operate a vehicle. The Detroit Assurance system is not a substitute for safe, normal driving procedures, nor will it compensate for any driver impairment such as drugs, alcohol, or fatigue. Failure to drive safely and use the system properly could result in personal injury and/or death and severe property damage. For a complete description of the Assurance system, limitations and restrictions, please refer to the Cascadia and new Cascadia owner manuals.



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