DETOUR ASSURANCE® SUITE OF SAFETY SYSTEMS

DETOUR ASSURANCE® 5.0
The Detroit Assurance suite of safety systems delivers exceptional control, protection, and driver experience.

Through radar and a proprietary high-definition camera system, Detroit Assurance 5.0 provides optimum on-road safety, integrating seamlessly into the Freightliner new Cascadia® equipped with a Detroit™ powertrain.

Using fused technology, the bumper-mounted radar and the windshield-mounted HD camera communicate with the ABS brakes, engine, and transmission in real time.

The system tracks up to 40 objects at once and identifies the top six by level of threat while refreshing 200 times per second.

Detroit Assurance 5.0 offers unprecedented safety features for advanced on-road protection.

Detroit Assurance radar reports the distance, velocity, width, lateral offset, type, and confidence level of the top six priority vehicles in the truck’s path.
**Adaptive Cruise Control (ACC) to 0 mph**

ACC automatically adjusts your truck’s cruising speed to maintain a safe following distance—3.6 seconds by default on the new Cascadia—from other vehicles in its path, allowing the truck to remain in cruise control longer. The following distance can be optionally adjusted between 2.4 and 3.6 seconds within the interactive dash display.

ACC now works in stop-and-go traffic. If the vehicle in front comes to a stop, the new Cascadia will also come to a full stop—0 mph—and hold indefinitely. If the vehicle in front starts to move within two seconds of coming to a stop, then the truck will resume moving at a safe following distance. If the complete stop is longer than two seconds, then the driver must push the throttle or press set/resume. ACC to 0 mph helps reduce driver fatigue, which improves the overall driver experience.

**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 distances for 10 seconds or longer, a visual dash alert will become reportable via J1939 to the selected telematics system.

- 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 mode for 10 seconds or longer, the event will become reportable via J1939 to the selected telematics system.

**Active Brake Assist**

Active Brake Assist 5.0 (ABA 5.0) is always on, detecting the distances to objects ahead in its path, calculating speed, and determining if a warning or braking action is necessary. In addition, ABA 5.0 features full braking on stationary and moving objects. The camera and radar signals are fused together for greater object recognition, which allows for enhanced braking capabilities.

**How Active Brake Assist Works**

ABA 5.0 Dash Displays

1. INITIAL WARNING/NO BRAKING
   The driver receives a simultaneous visual dash alert and pulsating warning tone.

2. WARNING/PARTIAL BRAKING
   If the driver does not respond to the visual/audio warning, the system will trigger a visual dash alert with solid warning tone and simultaneously initiate partial braking.

3. WARNING/FULL BRAKING
   If there is still no driver input, the system will trigger a visual dash alert, solid warning tone, and engage in full braking.

4. ABA FULL BRAKING EVENT FINISHED, BRAKES ON HOLD
   At this point, the full braking event is finished, with the truck at a complete stop and the brakes being held.

**Full Braking on Moving Pedestrian**

When the signal from the radar and camera system detects a moving pedestrian who is about to cross the truck’s path, an audible and visual warning occurs with simultaneous partial braking, followed by full braking if the driver does not react.
Financial Impact of Collisions
The Centers for Disease Control and Prevention (CDC) Foundation found motor vehicle crashes cost U.S. employers:
• $25 billion per year
• $671,000 per death
• $65,000 per nonfatal injury

Even a minor collision can negatively impact your bottom line with unplanned expenses including repairs, lost productivity, missed deliveries, replacement vehicle rental, and towing totaling:
• $10,000 to $20,000 per occurrence

Consider these realities when spec’ing your next truck with a collision mitigation system.


Optional Video Capture with Detroit Assurance 5.0 Camera
The standard Detroit Assurance 5.0 HD camera with optional forward-facing video capture records video of the truck activity on the road to capture any severe traffic events.

In addition, the optional driver-facing camera can record video of the driver’s actions during the same time period. In such an event, a total of 20 to 30 seconds of recording from before, during, and after such an occurrence - along with other vehicle parameter data - is transmitted to the Bendix SafetyDirect web portal for fleet operations and safety personnel to download and analyze.

Note: Requires a subscription to the Bendix SafetyDirect web portal.

Additional Features with Detroit Assurance 5.0

Traffic Sign Display
The camera recognizes the speed limit and other traffic signs, and then displays those signs in the instrument cluster. Traffic Sign Display has the capability to display two signs at the same time.

Automatic Wipers/Headlamps
The new Cascadia comes equipped with a Rain/Light Sensor that detects precipitation on the windshield and low-light situations. When wiper controls are set to auto position and it starts to rain or snow, the sensor will automatically turn the wipers on. Once the precipitation stops, the sensor will turn the wipers off. When the headlight switch is in “auto” position, the Rain/Light Sensor detects low light and the headlights will automatically turn on. When lighting conditions improve, the headlights will automatically turn off.

Intelligent High Beam
When the driver sets the headlight switch to auto high beam, the Detroit Assurance camera technology automatically switches to low beams when it detects the headlights or tail lights of another vehicle, as well as city lights. Once the vehicle or city lights are out of sight, the high beams automatically come back on.

Optional Video Capture with Detroit Assurance 5.0 Camera
The standard Detroit Assurance 5.0 HD camera with optional forward-facing video capture records video of the truck activity on the road to capture any severe traffic events.

In addition, the optional driver-facing camera can record video of the driver’s actions during the same time period. In such an event, a total of 20 to 30 seconds of recording from before, during, and after such an occurrence - along with other vehicle parameter data - is transmitted to the Bendix SafetyDirect web portal for fleet operations and safety personnel to download and analyze.

Note: Requires a subscription to the Bendix SafetyDirect web portal.

Optional Features

Active Lane Assist
Lane Departure Protection (LDP)
This optional feature auto enables once speed exceeds 37 mph. The camera system detects the reflective paint and raised reflectors in lane markers. If the truck crosses those markers without the driver using a turn signal, a Lane Departure Warning (LDW, now standard with Detroit Assurance 5.0) will be issued first. An audible warning is sent through the corresponding speaker on the side of the truck that crosses the lane marker, along with a visual warning on the instrument panel. If the truck continues to veer out of its lane, it will be actively steered back into its lane.

Lane Keep Assist (LKA)
When Adaptive Cruise Control is enabled, Lane Keep Assist uses micro-steering movements to keep the new Cascadia centered in its detected lane. Lane Keep Assist works at all speeds, but some road curves may be too sharp for this feature. The driver can disable it by turning the feature off.

Side Guard Assist (SGA)
SGA detects objects in the truck’s blind spot and warns the driver not to change into an occupied lane or make a right turn that would cause the truck to contact an object or person.
DEMANDDETROIT.COM

DETROIT SUPPORT. ANYWHERE.

• Unmatched parts availability

• Factory-certified technicians

• Live technical support

• Hundreds of Freightliner dealership service locations

NOTICE: The Detroit Assurance suite of safety systems is intended as an aid for an alert and conscientious professional driver. It should not be relied upon to operate the vehicle and is not a substitute for safe, normal driving procedures, nor will it compensate for driver impairment, such as drugs, alcohol, or fatigue. The Detroit Assurance suite of safety systems may not work as intended under all conditions, and may be affected by weather, road, and traffic conditions. Failure to drive safely and use the systems properly could result in personal injury and/or death and severe property damage. Please consult the Drivers’ Manual for the vehicle for additional limitations and details.