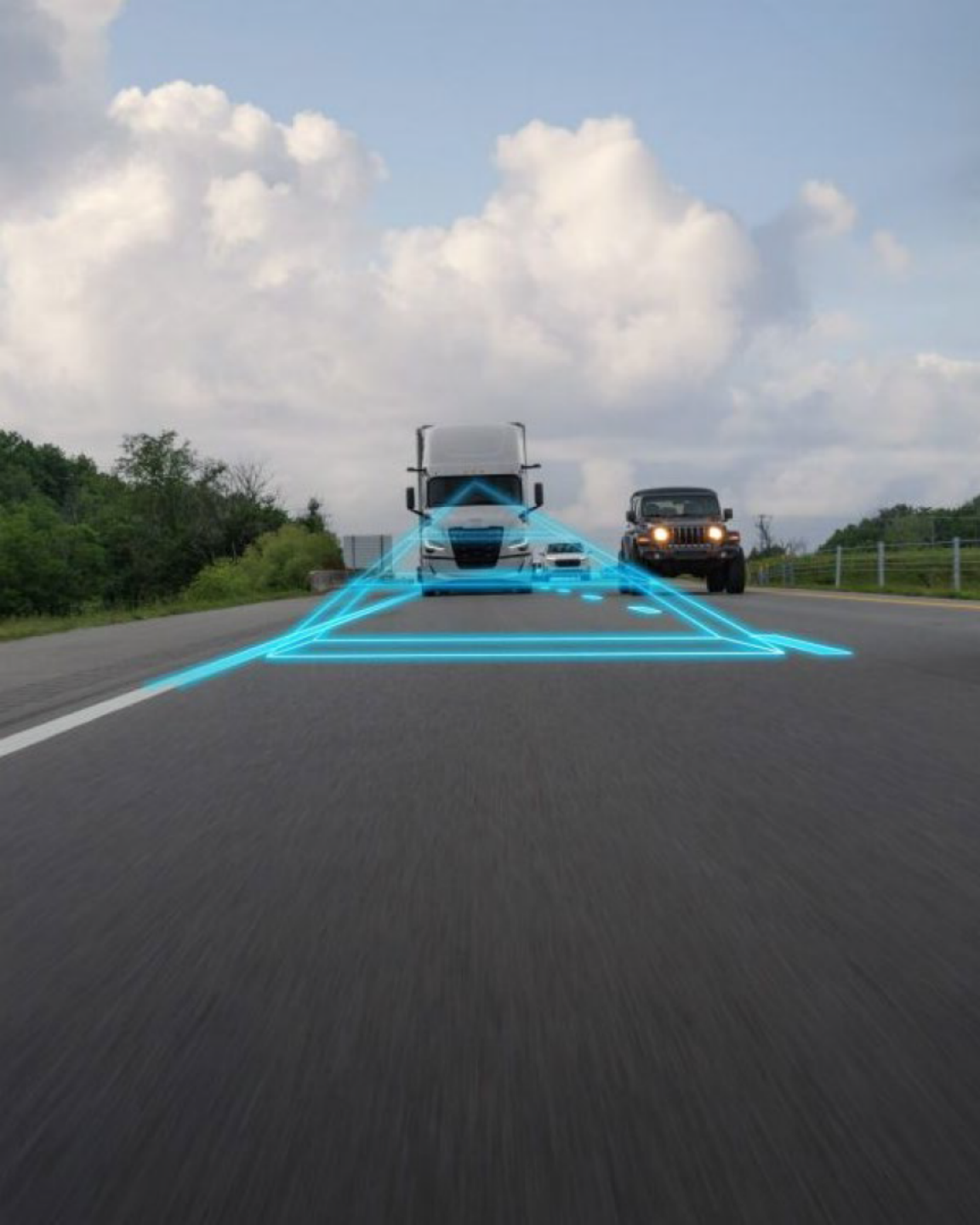




Detroit Assurance Active Lane Assist 2



Active Lane Assist 2 (ALA2)

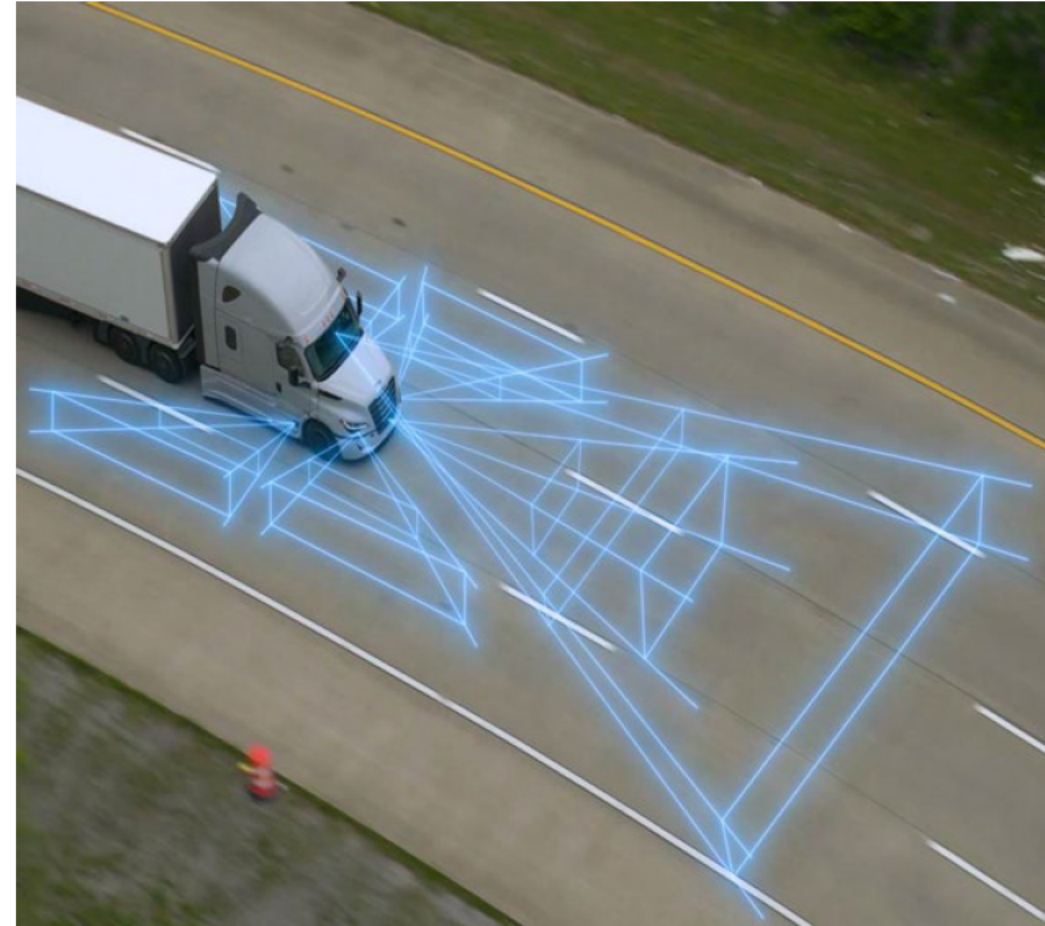
What is it?

Detroit Assurance Active Lane Assist 2 (ALA2) is an optional driver assistance feature that utilizes an electric steering motor to provide automatic lateral steering in various situations. ALA2 uses the Detroit Assurance camera to identify lane markers and corrects lane drifting through Lane Departure Protection (LDP) and keeps the truck centered in its lane through Lane Keep Assist (LKA). And now, with the introduction of the fifth generation Cascadia, ALA2 also helps mitigate out of lane accidents through Lane Change Assist (LCA). LCA intentionally steers a driver back into their lane if a lane change is intended into an already occupied lane along the side of the tractor and trailer at speeds of >37 mph, even when the turning signal is set.

Why is it important?

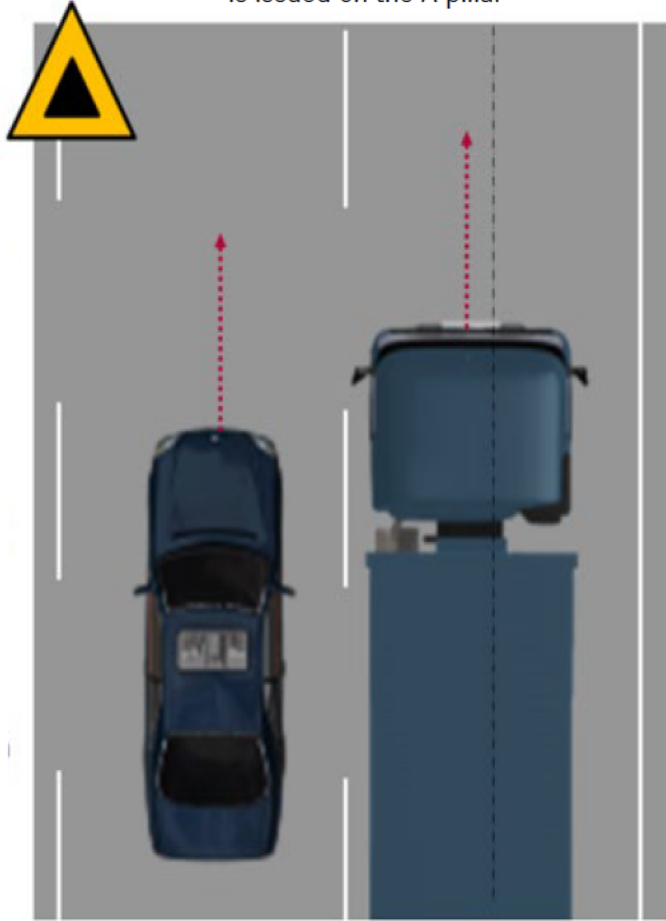
Reduced downtime through decreased accidents, increased public safety by keeping drivers from swerving/steering out of lane, enhanced driver confidence by aiding them not to drive into an occupied lane by accident.

Due to the Bosch servotwin motor mounted at the truck's steering column, ALA2's enhanced ease of steering makes the job of truck driving much easier by reducing stress on arms, necks and shoulders.



Active Lane Assist 2 (ALA2) - Lane Change Assist (LCA)

A vehicle appears in the blind spot of the tractor and trailer, a yellow warning sign is issued on the A-pillar



If the driver sets the turning signal into the occupied lane, the yellow triangle turns red, an acoustic alarm sounds, and the truck receives level 1 (haptic) steering correction



If the driver continues and attempts to enter into the occupied lane, a level 2 steering correction is issued, along with optical and acoustic warnings



Active Lane Assist 2 (ALA2) - Lane Keep Assist (LKA)

Lane Keep Assist (LKA) – when a driver switches on Adaptive Cruise Control, the system automatically engages LKA which assists the driver in keeping the truck in its lane by providing micro steering corrections



Active Lane Assist 2 (ALA2) - Lane Departure Protection (LDP)

Lane Departure Protection (LDP) – LDP is a supplemental feature of standard LDW. In the event that the truck begins to depart its lane without a turning signal set, the LDW warnings are issued, supplemented by Detroit Assurance's LDP system which actively steers the truck back into its lane

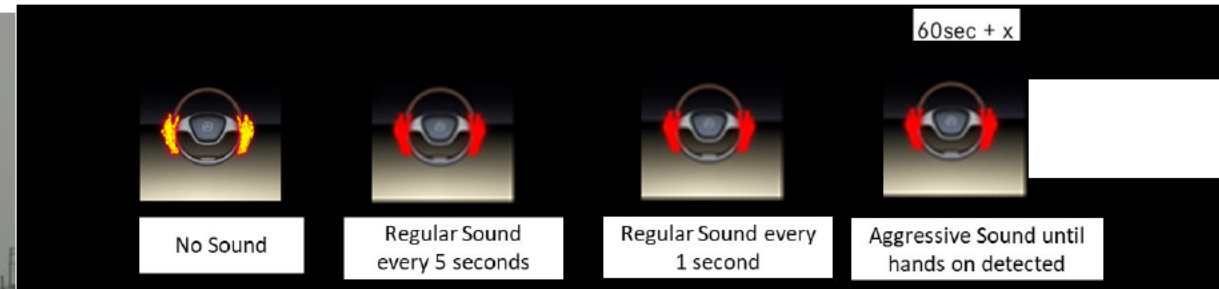


Active Lane Assist 2 (ALA2)

LKA Attentive Driver Protection

In case a driver gets incapacitated while in ALA mode and their hands slip off the steering wheel, the system issues a series of alarms after 15 seconds, which get more frequent the longer the hands are off the steering wheel.

After 60 seconds, the system disengages ACC and brings the truck to a complete stop, all while keeping the truck safely in its lane. Upon coming to a stop, the flashers are activated.



Attentive Driver Protection Cadence



LKA remains active until stop →

Active Lane Assist 2 (ALA2)

ALA2 Driver Comfort Features

Next to its advanced safety features, ALA2 offers various driver comfort features through Steer Assist, which significantly reduces stress on drivers' arms, necks & shoulders. It reduces the necessary steering force by ~ 10.5Nm, roughly equaling 7.7lbs, the weight of a gallon of milk, for example.

- Vibration Assist – Steer Assist dampens vibrations from rough roads and issues minimal directional adjustments which translates into significantly less strain from driving
- Center Return Assist – Steer Assist provides near effortless steering and returns the steering wheel to neutral automatically when released, saving driving effort and bringing the truck into a straight line fast and effortlessly
- Cross Wind Assist – Steer Assist corrects for the effect of strong side winds, resulting in significantly less driver effort and enhanced driving safety
- Maneuverability Assist – Steer Assist facilitates maneuvering in tight spaces at low speeds, such as in docking scenarios, for example
- Blow-out Tire Assist – Steer Assist counter-steers a truck's tendency to drift towards the direction of a blown-out tire



Active Lane Assist 2 (ALA2)

Key Features:

- **NEW:** Lane Change Assist (LCA) – preventing the truck from entering an occupied lane through counter-steering
- Lane Keep Assist (LKA) – keeping the truck centered in its lane (can be adjusted slightly to right or left) and includes Attentive Driver Protection which, in the case of an incapacitated driver, brings the truck to a safe stop while keeping the truck in it's lane.
- Lane Departure Protection (LDP) – steering the truck back into its lane after swerving out of lane.
- The Bosch servotwin steering motor mounted at the steering column increase driver comfort through vibration reduction, ease of steering, assisting with cross winds, etc. that make truck driving significantly easier.

Resources:

- Owners Manual [Link](#)
- Driver training videos on Highspot and VIN lookup tool/website (ETA 3/25)
- This Is Detroit Assurance presentation [Detroit Assurance](#)

Affected models:

Fifth generation Cascadia

Data Codes:

73X-004	DETROIT ACTIVE LANE ASSIST 2 - LANE KEEP ASSIST, LANE DEPARTURE PROTECTION AND LANE CHANGE ASSIST WITH ATTENTIVE DRIVER PROTECTION	Optional
536-100	BOSCH RB SERVOTWIN APS POWER STEERING GEAR	Optional
736-998	NO LATERAL VEHICLE CONT SYS(SCO)	Standard