



# Active Brake Assist 5 (ABA5) and Active Drive Assist (ADA)

## What is Active Brake Assist 5?

- The new Active Brake Assist 5 (ABA5), with pedestrian recognition, gives unrivalled urban prowess delivering greater safety for all
- ABA5 is the benchmark for emergency braking assistance systems. It uses state of the art technology to interpret data from on-board radar and camera systems, warning the driver and intervening if necessary

## What is Active Drive Assist?

- Active Drive Assist (ADA) is a world-first for a production truck, delivering level two automation
- It actively supports the driver when appropriate, guiding the truck through automatically braking, accelerating and keeping it perfectly positioned in the lane





## Active Brake Assist 5

### What are the benefits?

#### In town

Driving a large truck through towns and cities can be particularly challenging; with pedestrians, narrow streets, junctions, parked cars and of course, finding an address to make a delivery.

This is when accidents can happen, and this is when ABA5 assists by working alongside the driver to share the burden of continuously monitoring the vehicle's surroundings. At speeds below 50 km/h (31 mph) ABA5 can apply full emergency brake power bringing the vehicle to a stop\*, when encountering pedestrians crossing its path from behind a parked car, for example.

#### Out on the open road

When travelling long distances on motorways or country roads, ABA5 is ready to assist should the driver be fatigued during long journeys and fail to notice the approaching hazards or danger.

Most trucks will be on a fast A-road, dual carriageway or motorway at some point during the day and a momentary lapse in concentration or a poorly timed interaction with the radio or other distraction could spell at best a near miss or at worst a fatal collision. This is when having ABA5 can make all the difference.

If ABA5 detects the risk of collision with a vehicle travelling ahead, a stationary obstacle or a person, the driver is alerted to the danger by a three-stage escalating warning system. First, an audible and visual warning will occur. Next, partial braking will be applied to begin to slow the vehicle. If the driver still fails to react, the system will carry out an emergency brake application to bring the vehicle to a full-stop\*. At speeds over 50 km/h (31 mph) rapid flashing of the hazard lights is activated in order to warn following traffic. Finally, when coming to a stop, the vehicle applies the new electronic parking brake and the hazard lights are switched to the normal flashing rate.

\*Within system limits. Please note that if the driver fails to adapt their driving style or if they are inattentive, the driver assistance systems and driving safety systems described here can neither reduce the risk of an accident nor override the laws of physics. Driving assistance systems and driving safety systems are merely aids designed to assist driving. The driver is responsible for the distance to the vehicle in front, for vehicle speed, steering and for braking in good time. The driver should always adapt their driving style to suit prevailing road and weather conditions and drive carefully.



## Active Drive Assist

### What are the benefits for the driver?

ADA\* is a valuable support tool in many different situations. Like an autopilot on an aircraft, it intuitively makes minor steering corrections and regulates the vehicle speed as required.

As soon as the driver has activated cruise control and set a speed, ADA is initiated and looks to take control. When the system's camera detects lane markings on both sides of the road, ADA starts supporting the driver by guiding the vehicle in the lane.

This is indicated to the driver in the primary display on the Multimedia Cockpit in the form of a small blue steering wheel symbol and blue road markings.

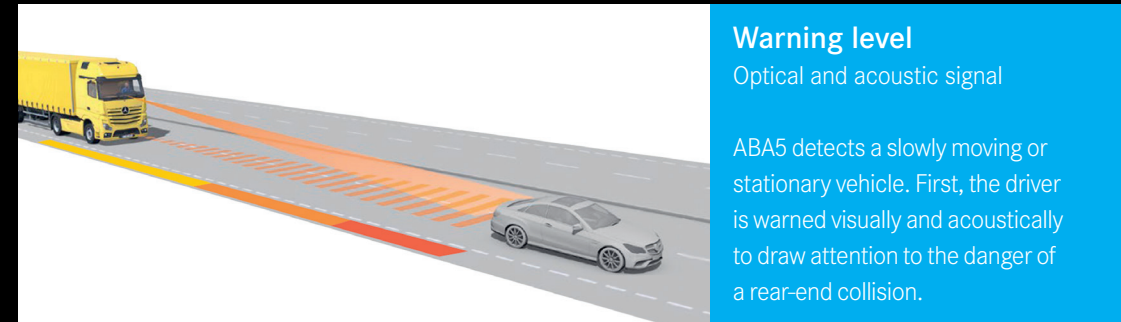
When the traffic is heavy, ADA will keep a safe distance from the vehicle in front, purposefully altering the gap as the speed changes. Additionally, in congested traffic, it becomes a willing partner taking on the workload thanks to its stop-and-go function.

On longer journeys, the driver's workload is reduced as ADA takes over the driving fundamentals, continuously making the slight steering corrections and power adjustments to keep the vehicle effortlessly on track.



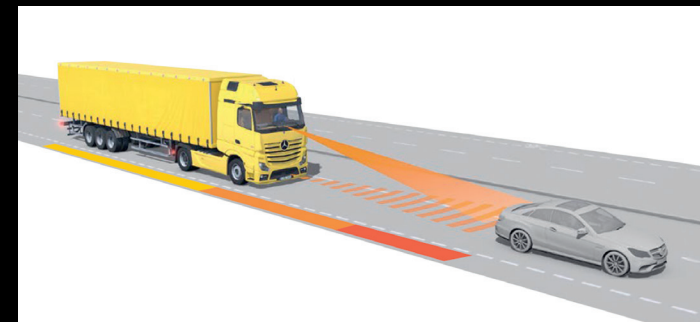
\*ADA is only available on some models.

## Active Brake Assist 5 in operation



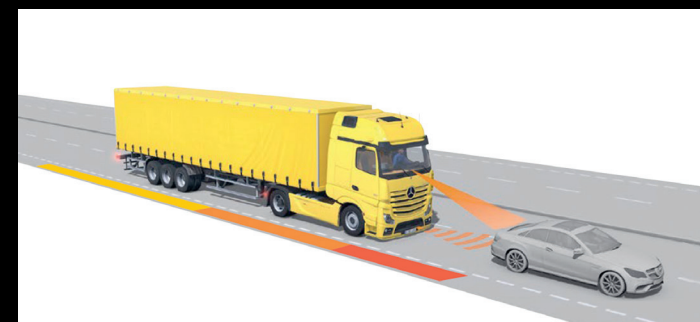
**Warning level**  
Optical and acoustic signal

ABA5 detects a slowly moving or stationary vehicle. First, the driver is warned visually and acoustically to draw attention to the danger of a rear-end collision.



**Partial braking**  
50% of the maximum braking power

If the driver does not react adequately, the system initiates partial braking at 3 m/s (about 50% of the maximum braking power) in a second step.



**Emergency braking**  
100% of the maximum braking power

If a collision threatens nevertheless, the system carries out an autonomous emergency braking, which leads to the truck stopping within the system limits if necessary.



**Emergency braking with person recognition**  
100% of the maximum braking power

ABA5 can also assist the driver in the event of a collision with a person crossing, oncoming or in one's own lane, with emergency braking if necessary.

### Did you know...



**There are five Levels of autonomous driving. The new Actros and Arocs with ADA are Level 2.**

- Level 0: manual driving
- Level 1: assisted driving
- Level 2: partially automated driving
- Level 3: conditionally automated driving
- Level 4: highly automated driving
- Level 5: fully automated driving

## Autonomous driving

### What will the future of transport look like?

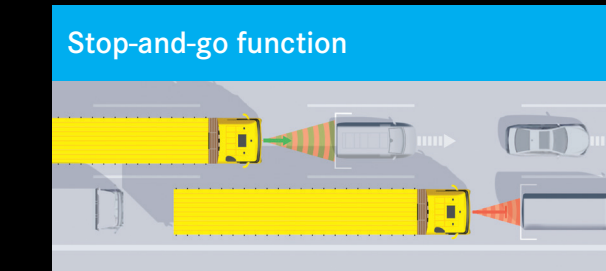
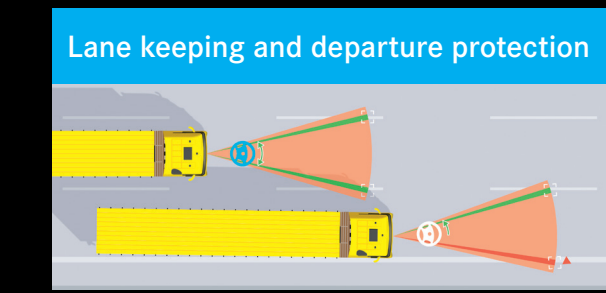
It's difficult to know exactly what the vehicles and infrastructure of the future will look like, but the industry is moving towards fully connected and autonomous vehicles in the near future. The new Actros and Arocs with ADA is a further step on this exciting journey.

We already have fully autonomous vehicles operating on the road under test conditions, but a lot of technology and legislation will have to change or be updated before any transport industries move to fully autonomous vehicles.

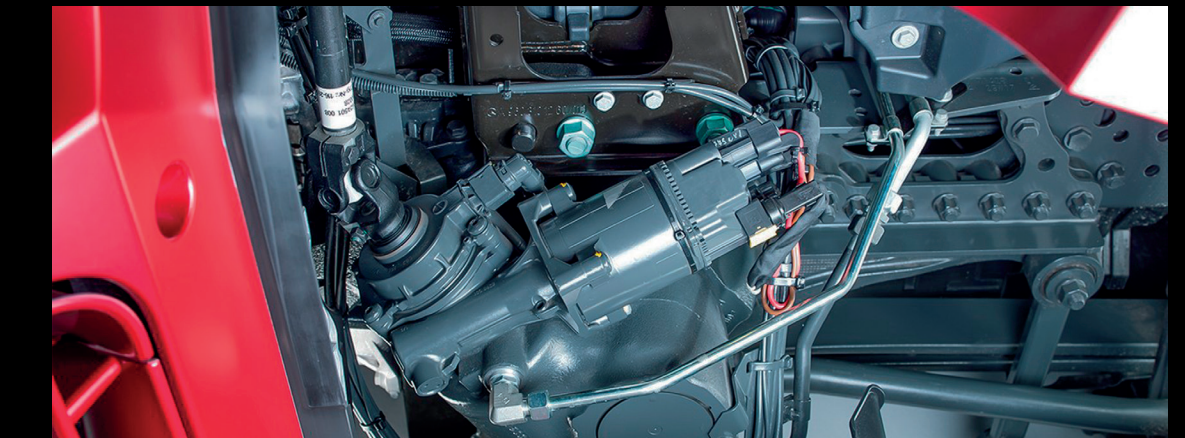


- 1 **Platooning**
- 2 **Connectivity – 6G technology**
- 3 **Accident warnings from vehicles ahead**
- 4 **Connected autonomous vehicles and infrastructure**

## Active Drive Assist



- Active Drive Assist is a new innovation in the new Actros and Arocs, which allows semi-automated driving in a production truck
- The system can automatically brake, accelerate and steer to create a complete support system for the driver:
- The system uses the advanced radar and camera technology of ABA5 and Proximity Control Assist
- As an extension of Proximity Control Assist with stop-and-go function, ADA can keep the distance to the vehicle in front as set
- Lane Keeping Assist and servo-twin (the electro-hydraulic steering system) are responsible for the active lateral guidance of the truck in the lane. The function warns the driver as soon as the truck leaves the lane. If the driver does not react, the system guides the truck back into the lane with corrective steering intervention



- Electro-hydraulically operated servo-twin steering**
- ADA utilises the familiar Lane Keeping Assist and this new steering system to give active lateral guidance of the truck in lane
  - An added bonus for safety: Active Lane Guidance continues even if the driver has deactivated ADA
  - The electro-hydraulic steering assistance supplements the steering effort of the driver by supplying additional steering torque to improve driving comfort – making the vehicle easier to steer and manoeuvre

# Testimonials

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“I always use Active Drive Assist when I’m out on the open road and it’s lovely. Rygor’s Truck Training Manager Chris Moore gave us a clear and thorough overview during the handover, and I find the system very simple to operate. It’s another tool in the box that helps to make the job that bit easier and less stressful.”

MARTIN FARRELL, DEXTRA GROUP PLC

“We’re very conscious at Alan Davie of our Duty of Care to colleagues and, indeed, the general public, Mercedes-Benz is very good when it comes to safety technology, and is clearly ahead of the competition in this respect.”

ALAN DAVIE, ALAN DAVIE

“Fantastic Mercedes-Benz technology such as MirrorCam and Active Brake Assist 5, combined with the third-party camera systems we fit on all our trucks, and our industry-leading commitment to driver training, mean that our new Actros' are right up there with the safest trucks on the road.”

SAMWORTH BROTHERS



Scan this QR code to see  
Active Drive Assist in action



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Active Brake Assist 5 in action