

ACC

Adaptive Cruise Control
The intelligent solution



WABCO

S a f e t y D r i v e s U s

Comfort and safety through adaptive distance control

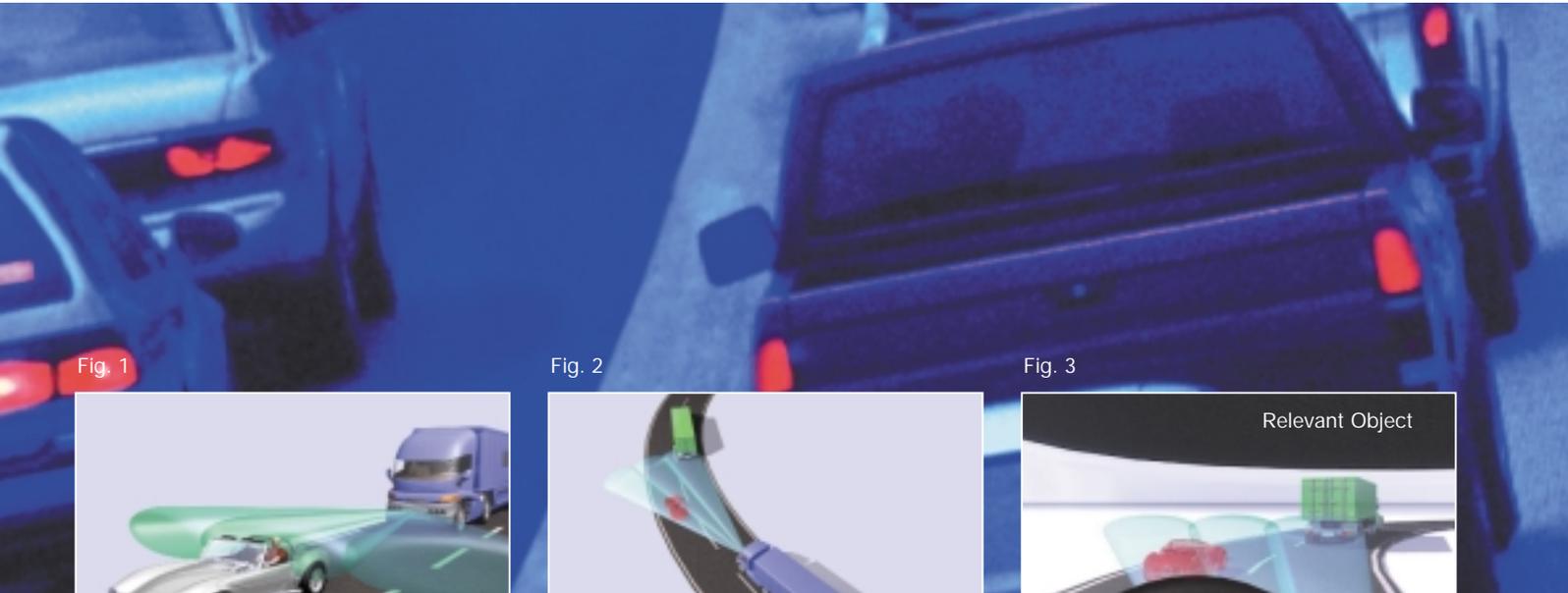


Fig. 1

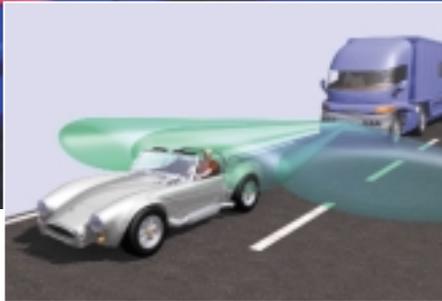


Fig. 2

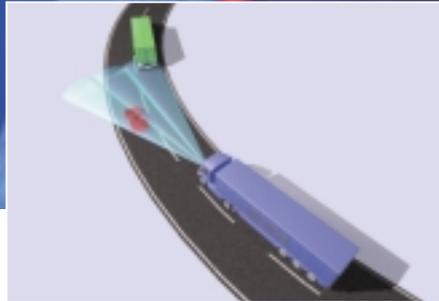


Fig. 3



Increasing volumes of traffic and constantly growing demands on vehicles and drivers mean that driver support systems make more sense than ever before. The WABCO ACC is a new development in this field and is specifically designed for commercial vehicles. This is a cruise control system which at the same time controls the distance to the vehicle in front. The effects of WABCO ACC are noticeable for both drivers and fleets, especially by feeling an increase of comfort and safety.

“Comfort” means: The automatic maintaining of a safe distance to the vehicle in front brings relief to the driver and thereby reduces stress and symptoms of fatigue.

“Safety” means: If the vehicle in front brakes sharply, or if a slower vehicle crosses into the lane immediately ahead, WABCO ACC warns the driver via an acoustic or visual signal and automatically initiates a brake application with limited

deceleration. In critical situations, the system often reacts more quickly than the driver, so that the stopping distance can be shortened.

How does WABCO ACC work in practice?

Like a conventional cruise control system, WABCO ACC requires input of the desired speed. The following distance to the vehicle in front can also be varied within a range of preset values.

In operation WABCO ACC works on three levels:

1. Cruise control function: Where no other vehicles are detected in the same lane, WABCO ACC automatically maintains the constant set speed.

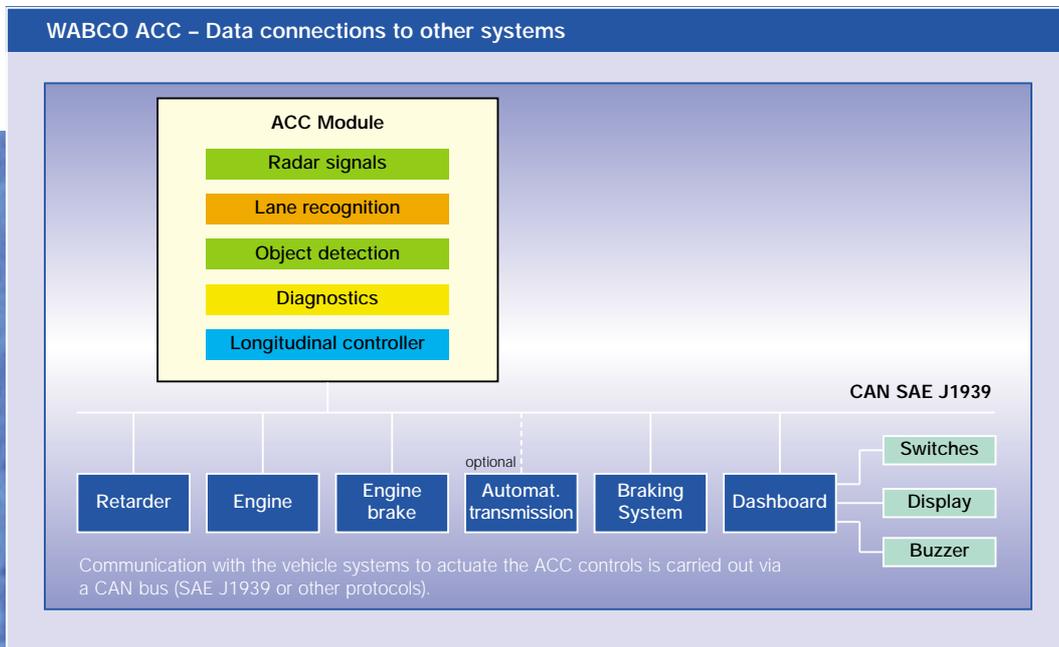
2. Adaptive distance control: If the vehicle immediately ahead and in the same lane is travelling at a speed which

is slower than the desired set speed, then WABCO ACC adjusts the speed of the host vehicle in order to maintain a safe distance.

3. Warning function: WABCO ACC warns the driver when the distance to the vehicle ahead decreases very suddenly, while automatically braking and, where the situation demands, also calling upon the driver of the host vehicle to brake.

WABCO ACC features automatic lane recognition

The WABCO ACC radar sensor monitors not only the area in front of the host vehicle, but also parts of the adjacent lanes (fig. 1+2). With the aid of the integrated yaw sensor, WABCO ACC constantly identifies road curvature and can therefore differentiate between vehicles in the same lane and those in other lanes (fig. 3).



Global compatibility is guaranteed

WABCO ACC can be integrated into the most varied vehicle configurations. It is compatible with all globally used standard braking systems and offers enhanced functions when used in conjunction with WABCO ABS and EBS braking systems.

CAN interfaces to the electronic engine control and at least one wear-free endurance brake are necessary to provide the basic functions. Operational functions are enhanced when the system is used in conjunction with the service brakes (EBS or ABS), additional retarders and automatic transmission.

Communication with the vehicle systems to actuate the ACC controls is carried out via a CAN bus (SAE J1939 or other protocols).



WABCO ACC – Technical Data

- Areas of application: Motorways and expressways
- Object detection through radar sensor
- Radar sensor range: 7 m to 150 m
- Radar frequency: 76-77 GHz
- Object detection using three differentiable radar beams
- Housing dimensions: approx. 140 x 140 x 50 mm
- Weight: approx. 1 kg
- CAN SAE J1939 compatible/other CAN protocols possible



WABCO is an international group of companies and co-operation partners located in Austria, Belgium, Brazil, China, Czech Republic, France, Germany, Great Britain, Hungary, India, Italy, Japan, Korea, Poland, Russia, South Africa, Spain, Sweden, Switzerland, The Netherlands, USA and other countries.

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