PRINCIPLE OF OPERATION

The Adaptive Cruise Control (ACC) system is designed to assist the driver in maintaining a gap from the vehicle ahead, or maintaining a set road speed, if there is no slower vehicle ahead. The system is intended to assist the driver, when following other vehicles which are in the same lane and travelling in the same direction.

WARNING

ACC is not a collision warning or avoidance system. Additionally, ACC will not react to:

Stationary vehicles or vehicles moving at less than 10 km/h (6 mph).

Pedestrians or objects in the roadway.

Oncoming vehicles in the same lane.

The ACC system is based on the use of a radar, which projects a beam directly forward of the vehicle, to detect objects ahead.

The radar is mounted centrally behind the bumper, above the grille, to provide a clear view forward for the radar beam.

USING ACC

WARNING

Only use ACC when driving on main roads, with free flowing traffic.

Do not use in poor visibility, specifically fog, heavy rain, spray or snow.

Do not use on icy or slippery roads.

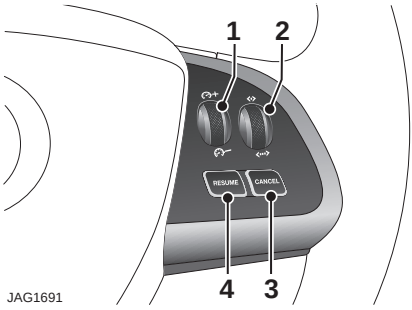
It is the driver's responsibility to stay alert, drive safely and be in control of the vehicle at all times.

WARNING

Keep the front of the vehicle free from dirt, metal badges or objects, including vehicle front protectors, which may interfere with radar operation.

Do not use ACC when entering or leaving a motorway.

The system is operated by controls mounted on the steering wheel. The driver can also intervene at any time by use of the brake or accelerator pedal.



The steering wheel controls operate as follows:

1. Speed adjust control: Use the thumbwheel to set the speed. Rotate upwards (**+**) to increase, or downwards (**-**) to decrease the set speed.

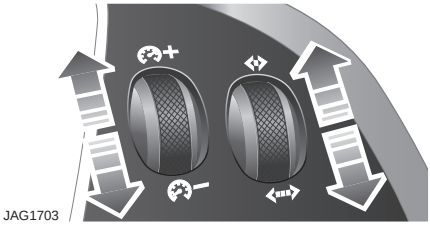
2. Gap increase or decrease: Four gap settings are selectable by adjusting the thumbwheel.

3. **CANCEL** - Cancels but retains the set speed in memory.

4. **RESUME** - Resumes the set speed after it has been cancelled.

Setting the speed

Accelerate as normal until the required speed is reached.



Briefly rotate the speed adjust control upwards (**+**), to store the speed in the memory and engage the system.

SET SPEED
80 KM/H (50 MPH)

The set speed will be displayed on the message centre:

Changing the speed

There are three ways to change the set speed:

- Accelerate or brake to the desired speed then briefly rotate the speed adjust control upwards (**+**).
- Increase or decrease the speed by rotating the speed adjust control upwards (**+**) or downwards (**-**), until the required set speed is shown on the message centre. The vehicle speed will gradually change to the selected speed.
- Increase or decrease the speed in steps of 2 km/h (1 mph), by briefly rotating the speed adjust control upwards (**+**) or downwards (**-**), until the desired speed is obtained.

ACC operates between approximately 34 km/h and 180 km/h (21 mph and 112 mph) dependent on the country specification.

Set speeds outside this range will not be captured.

The ACC may apply the brakes to slow down the vehicle to the new set speed. The new set speed will be displayed on the message centre until ACC is cancelled.

Follow mode gap settings

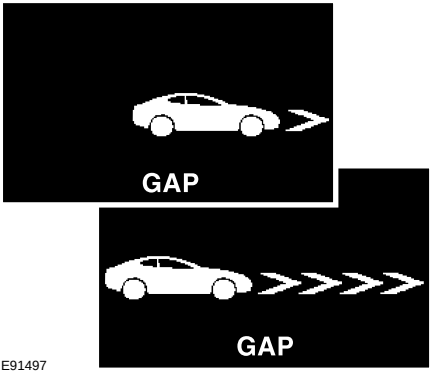
WARNING

When in follow mode, the vehicle will not decelerate automatically to a stop, nor will the vehicle always decelerate quickly enough to avoid a collision without driver intervention.

Once a set speed has been selected, the accelerator can be released and the set road speed will be maintained.

When a vehicle ahead enters the same lane or a slower vehicle is ahead in the same lane, the vehicle speed will be adjusted automatically until the gap to the vehicle ahead corresponds to the preset gap (Gap 3, identified by 3 chevrons is the default). The vehicle is now in follow mode.

The warning indicator in the instrument panel will be illuminated.



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The message centre will display the gap set. The shortest (Gap 1), represented by 1 chevron, and the longest (Gap 4), represented by 4 chevrons, are illustrated above.

The vehicle will then maintain the time gap to the vehicle ahead, until:

- The vehicle ahead accelerates to a speed above the set speed.
- The vehicle ahead moves out of lane or out of view.
- A new gap distance is set.

If necessary, the brakes will be automatically applied to slow the vehicle, to maintain the gap to the vehicle in front.

The maximum braking which is applied by the ACC system is limited and can be overridden by the driver applying the brakes, if required.

Note: *Driver braking will cancel ACC.*

If the ACC system predicts that its maximum braking level will not be sufficient, then an audible warning will sound while the ACC continues to brake. **DRIVER INTERVENE** will be displayed on the message centre. The driver should take immediate action.

When in follow mode, the vehicle will automatically return to the set speed when the road ahead is clear, for instance when:

- The vehicle in front accelerates or changes lane.
- The driver changes lane to either side or enters an exit lane.

The driver should intervene if appropriate.

Changing the follow mode set gap

The gap to the vehicle ahead can be adjusted by rotating the gap increase/decrease control on the steering wheel. Four gap settings are available and the selected gap is represented by the corresponding number of chevrons in front of the car icon displayed on the message centre (Gap1 = 1 chevron, Gap 4 = 4 chevrons). After the ignition is switched on, the default gap setting (Gap 3), will be automatically selected ready for ACC operation.

Note: *When the ignition is switched off, the gap setting will revert to the default setting (Gap 3) when switched on again.*

Note: *It is the driver's responsibility to select a gap appropriate to the driving conditions.*

Overriding the speed and follow mode

WARNING

Whenever the driver overrides the ACC by pressing the accelerator pedal, the ACC will not automatically apply the brakes to maintain the gap to any vehicle ahead.

The set speed and gap can be overridden by pressing the accelerator pedal when cruising at constant speed or in follow mode. If the vehicle is in follow mode, the warning indicator will extinguish when the ACC is overridden and **CRUISE OVERRIDE** will be displayed in the message centre. When the accelerator is released, ACC will operate again and vehicle speed will decrease to the set speed, or a lower speed when appropriate if follow mode is active.

Automatic low speed switch off

If vehicle speed decreases below 30 km/h (18 mph), the ACC system automatically switches off and the warning indicator will extinguish.

If the brakes were being applied by the ACC system, they will be slowly released.

This will be accompanied by an audible warning and **DRIVER INTERVENE** will be displayed in the message centre. The driver must take control.

Automatic switch off

ACC will disengage, but not clear the memory, when:

- The **CANCEL** button is pressed.
- The brake pedal is pressed.
- Neutral, Park or Reverse gear positions are selected.
- Dynamic Stability Control activates.

ACC will disengage, and clear the memory, when:

- The ignition is switched off
- Maximum vehicle speed is reached
- A fault occurs in the ACC system.

Resuming the speed and follow mode

CAUTION

RESUME should only be used if the driver is aware of the set speed and intends to return to it.

By pressing the **RESUME** button after ACC has been cancelled (e.g. after braking), the ACC will become active again, provided that the set speed memory has not been erased. The set speed will be displayed for four seconds and the original set speed will be resumed, unless a vehicle ahead causes follow mode to become active.

Hints on driving with ACC

The system acts by regulating the speed of the vehicle using engine control and the brakes. Gear changes may occur in response to deceleration or acceleration whilst in ACC.

ACC is not a collision avoidance system. However, during some situations, the system may provide the driver with an indication that intervention is required.

An audible alarm will sound, accompanied by the message **DRIVER INTERVENE**, if the ACC detects:

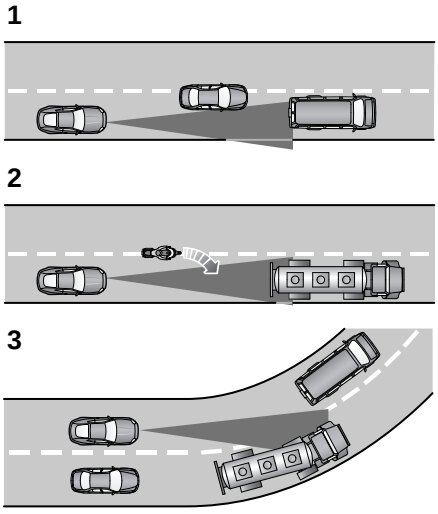
- A failure has occurred while the system is active.
- That using maximum ACC braking only is not sufficient.

Note: *ACC operates when the gear selector lever is in position* ***S*** *or* ***D****.*

Note: *When engaged, the accelerator pedal rests in the raised position. Fully release the pedal to allow normal ACC operation.*

Note: *When braking is applied by the ACC, the vehicle brake lamps will be switched on although the brake pedal will not move.*

Detection beam issues



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Detection issues can occur:

1. When driving on a different line to the vehicle in front.
2. With vehicles that edge into your lane. They can only be detected once they have moved fully into your lane.
3. On bends in the road. There may be issues with the detection of vehicles in front, when going into and coming out of a bend.

CAUTION

In these cases, ACC may brake late or unexpectedly. The driver should stay alert and intervene if necessary.

ACC malfunction

If a malfunction occurs during operation of the system in cruise or follow modes, the ACC system will switch off and cannot be used until the fault is cleared. The message **DRIVER INTERVENE** appears briefly, and is then replaced by the message **CRUISE NOT AVAILABLE**. If malfunction of the ACC, or any related system, occurs at any other time, the message **CRUISE NOT AVAILABLE** will be displayed. It will not be possible to activate the ACC system in any mode.

Accumulations of dirt, snow or ice on the radar or cover, may inhibit ACC operation. Fitting of a vehicle front protector, applying stone chip protection or fitting metallised badges, may also affect ACC operation.

The ACC system relies on its radar to detect objects and constantly scans ahead. If the radar detects no objects ahead in ACC or follow mode, then the ACC will be deactivated, the audible alarm sounds and the message **DRIVER INTERVENE** displays briefly. The message **ACC SENSOR BLOCKED** will then be displayed.

The same messages may also be displayed while driving on open roads with few roadside objects for the radar to detect or in heavy rain.

Clearing the obstruction allows the system to return to normal operation. If the obstruction is present when ACC is inactive, e.g. on initial starting or with the ACC system switched off, the message **ACC SENSOR BLOCKED** will be displayed.

Tyres other than those recommended may have different sizes. This can affect the correct operation of the ACC.

Adverse weather conditions

WARNING

Do not use in poor visibility, specifically fog, heavy rain, spray or snow.

Do not use on icy or slippery roads.

During adverse weather conditions such as heavy rain or snowfall, the sensitivity of radar blockage detection is increased, so that it can correctly detect any reduced performance caused by a blocked sensor.

During these conditions, the warning message **ACC SENSOR BLOCKED** may be displayed more frequently, especially in areas where there are few roadside objects for the radar to detect.