PRINCIPLE OF OPERATION

In the event of a collision, the airbag control unit monitors the rate of deceleration induced by the collision, to determine whether the airbags should be deployed.

Operation of the airbag SRS is dependent on the rate at which the vehicle's passenger compartment changes speed as a result of a collision. The circumstances affecting different collisions (vehicle speed, angle of impact, type and size of object hit, for example), vary considerably and will affect the rate of deceleration accordingly.

When deployed, inflation of the airbag is virtually instantaneous and occurs with considerable force, accompanied by a loud noise. The inflated bag, together with the seat belt restraint system, limit the movement of an occupant, thereby reducing the risk of injury to the head and upper torso.

Provided the occupants are correctly seated, with the seat belts properly worn; in the event of a severe frontal impact, the airbags will provide additional protection to the chest and face of the front seat occupants.

In the event of a severe side collision, airbags provide additional protection to the side of the head and body facing the impact for front seat occupants and to the side of the head facing the impact for outer rear seat occupants.

Note: *Inflation and deflation of the front and seat mounted side airbags takes place very quickly and will not protect against the effects of secondary impacts that may occur. Head airbags deflate at a slower rate and therefore do offer some additional protection in the event of a secondary impact.*

The Supplementary Restraint System (SRS) components include:

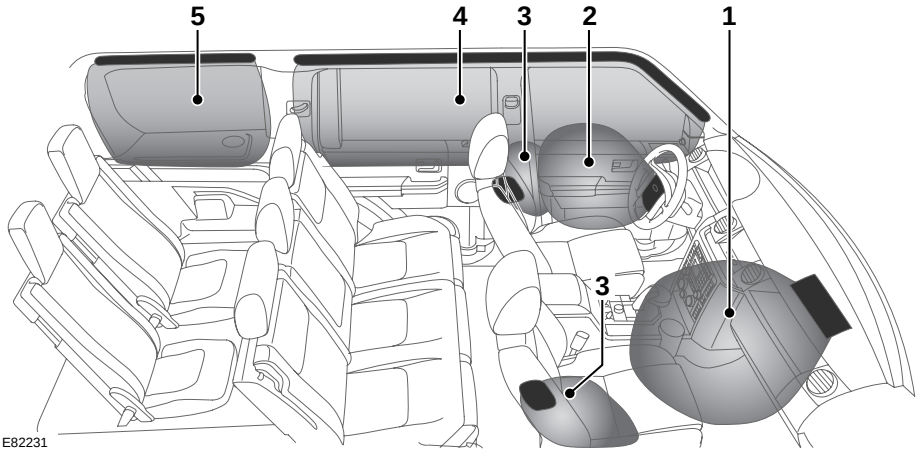
- SRS warning indicator.
- Rotary coupler.
- Airbag modules.
- Airbag diagnostic control unit.
- Crash sensors.
- Airbag wiring harness.
- Seat occupancy sensor.

The airbag SRS is not designed to operate as a result of:

- Rear collisions.
- Minor front impacts.
- Minor side impacts.
- Heavy braking.
- Driving over bumps or potholes.

It follows, therefore, that significant superficial damage can occur without the airbags deploying or, conversely, that a relatively small amount of structural damage may cause the airbags to be deployed.

Airbags



1. Front passenger's airbag.
2. Driver's airbag.
3. Side airbags.
4. Front curtain airbags.
5. Rear curtain airbags.

WARNINGS

High speed impacts may cause serious injury or death irrespective of safety features fitted to a vehicle. Always drive with caution and consideration for the vehicle's characteristics, road and weather conditions, and do not exceed any speed limits in force.

Seat belts should be worn at all times, by the driver and passengers in all seating positions. The airbag supplementary restraint system (SRS) cannot provide protection in some types of impact. Under these circumstances the only protection will be provided by a correctly worn seat belt.

WARNINGS

Airbags inflate at high speeds, and can cause injuries. To minimise the risk of injury, ensure that all vehicle occupants wear correctly positioned seat belts, sit correctly in the seats, and position the seats as far back as practical.

Ensure that a gap is maintained between the side of the vehicle and the head and torso. This will enable unobstructed inflation of the curtain, and seat mounted side airbags.

Airbag inflation takes place instantaneously and cannot protect against the effects of secondary impacts. Under these circumstances the only protection will be provided by a correctly worn seat belt.

Phone systems should only be installed by qualified persons familiar with the operation of, and requirements for, vehicles fidgets with SRS. If you are in any doubt, seek advice from your Dealer/Authorised Repairer.

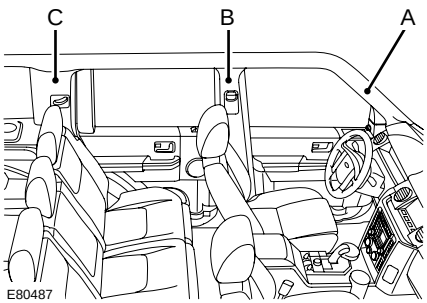
Obstruction of airbags

WARNINGS

For the airbags to operate correctly the roof lining and door posts must be in good condition, correctly fitted, and free from obstruction. Any damage, wear or incorrect fitment should be referred to your Dealer/Authorised Repairer as soon as possible for examination and repair.

Do not allow passengers to obstruct the operation of the airbags by placing any part of their person, or any objects in contact with, or close to, an airbag module. Airbags deploy at very high speeds and can cause death or serious injury if objects are within the area of deployment.

Do not attach or position items on, or close to the roof lining, **A**, **B** and **C** post finishers, front seat backrests or to an airbag cover, which could interfere with the inflation of the airbag or be propelled inside the vehicle causing injury to the occupants.



Do not use non-approved seat covers/accessory seat covers over a front seat; in particular, seat covers that have not been designed for use with side airbags. If in doubt, consult your Land Rover Dealer/Authorised Repairer.

Note: *Unauthorised modification of the vehicle or parts may invalidate the vehicle's warranty.*

Deployment effects

WARNINGS

After inflation some airbag components are at high temperatures. To prevent injury, do not touch the airbag components until they have cooled.

In order to react with sufficient speed, airbags are deployed by an explosive charge. Consequently airbag deployment is accompanied by a very loud noise which may cause discomfort and temporary loss of hearing.

An airbag will only provide additional protection in certain types of frontal collisions. No protection is afforded against the effects of rear impacts, or minor frontal impacts.

Inflation and deflation take place instantaneously and will not provide protection against the effects of secondary impacts that can occur during multiple vehicle collisions.

When an airbag inflates a fine powder is released. This is normal and not an indication of a malfunction. However, the powder may cause irritation to the skin and should be thoroughly flushed from eyes and any cuts or abrasions.

Activation of an airbag creates dust, causing possible breathing difficulties for asthma sufferers or other people with respiratory problems. If an airbag is activated, any occupant who suffers from breathing difficulties should either leave the vehicle as quickly as possible, or obtain fresh air by fully opening the windows and doors.

After inflation, the front and seat mounted side airbags deflate immediately (curtain airbags deflate slowly). This provides a gradual cushioning effect for the occupants and also ensures that the driver's forward vision is not obscured.

Disability modifications

Occupants with disabilities that may require the vehicle to be modified must contact a Land Rover Dealer/Authorised Repairer before any modifications are made.

SIDE AIRBAGS

WARNING

Ensure that a gap is maintained between the side of the vehicle and the torso, to enable unobstructed inflation of the seat-mounted side airbags.

Side airbags are designed to protect the thorax region of the torso and will only deploy in the event of a severe side impact. They will not inflate as a result of frontal or rear impacts only. The airbags on the non-impacted side of the vehicle will not be deployed.

CURTAIN AIRBAGS

WARNING

For the curtain airbags to deploy correctly, the roof lining and A post trim must be undamaged and fitted correctly. Any damage or suspect fitting should be referred to a Land Rover Dealer/Authorised Repairer for examination.

Curtain airbags are designed to protect the head in the event of a severe side impact or rollover event. They will not inflate as a result of frontal or rear impacts alone.

DISABLING THE PASSENGER AIRBAG

WARNING

Crash test data and statistics show that the safest place for a child to be restrained is in a child seat correctly fitted to the vehicle's rear seat.

Do not use a child restraint on a seat protected by an operational airbag in front of it. Doing so presents a high risk of death or serious injury to the child in the event of an accident.

Do not fit a child restraint to the front passenger seat if the SRS warning lamp illuminates continuously with the ignition on.

As soon as a child seat is removed from the front passenger seat the airbag must be turned on. Failure to do so will put a front seat passenger at greater risk of death or serious injury in the event of a frontal impact.



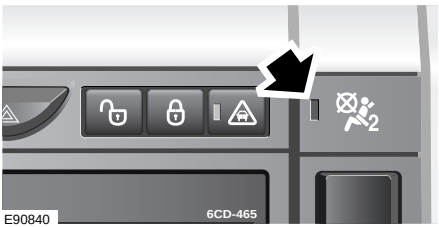
Note: *The passenger airbag should be disabled only when a rearward facing child restraint is fitted to the front passenger seat.*

Prior to fitting a child restraint on the front passenger seat, open the passenger door and using the starter key, turn the airbag disabling switch to the **OFF** position.

Passenger airbag status indicator

WARNING

When checking the operational status of the front passenger airbag, ensure that the ignition is switched on.



E90840

When the airbag disabling switch is turned to the **OFF** position, the passenger airbag status indicator (arrowed) will illuminate (yellow) whenever the starter key is turned to position **II** or the engine is running.

When switching the passenger airbag on or off, check that the status lamp shows the correct condition.

Note: *The indicator will only illuminate when the ignition is turned on or the engine is running.*

Airbag switched OFF

WARNING

To avoid the risk of injury, never use a child restraint in the front of the vehicle unless the passenger airbag has been switched OFF.



E82245

In order to fit a child restraint to the front passenger seat, use the starter key to turn the passenger airbag disabling switch to the **OFF** position.

Check that when the starter key is turned to position **II**, the status indicator on the facia is illuminated confirming that the passenger airbag is not operational.

If the airbag SRS warning indicator in the instrument pack illuminates continuously, remove the child restraint from the front seat and consult your Land Rover Dealer/ Authorised Repairer.

Airbag switched ON

WARNING

To ensure that the adult restraint system performs as intended, make sure that the passenger airbag is switched ON.



E82246

When an adult is seated in the front passenger seat of your vehicle, ensure that the passenger airbag disabling switch is turned to the **ON** position.

This will ensure that the airbag will perform as intended in the event of a crash.

Check that when the starter key is turned to position **II**, the operational status lamp on the facia is not illuminated, confirming that the passenger airbag is operational.

AIRBAG WARNING LAMP

WARNING

If the warning indicator signals that a fault is present in the system, do not use a child restraint on the front passenger seat. Doing so will increase the risk of death or serious injury to the child.

A red warning indicator in the instrument pack will alert you to any malfunction of the airbag SRS. On vehicles with a message centre, this will be accompanied by the message **AIRBAG FAULT**. Seek qualified assistance urgently if any of the following symptoms occurs:

- The warning indicator fails to illuminate when the starter switch is turned to position **II**.
- The warning indicator fails to extinguish within approximately four seconds after the starter switch is turned to position **II**.
- The warning indicator illuminates after the engine is started, or while the vehicle is being driven.

AIRBAG SERVICE INFORMATION

WARNING

For your safety a Land Rover Dealer/Authorised Repairer must carry out any of the following tasks:

Removal, replacement, repair, or modification, of any wiring or component in the vicinity of the SRS components, including the steering wheel, steering column, door trim, roof lining, instrument pack and instrument panel.

Installation of electronic equipment such as a mobile phone, two-way radio or in-car entertainment system.

Modification to the front or side of the vehicle, including the bumper and chassis.

Attachment of accessories to the front or side of the vehicle.

Do not attempt to service, repair, replace modify, or tamper with, any part of the SRS. This includes wiring or components in the vicinity of SRS components. Doing so may cause the system to trigger, or render the system inoperative, either of which may result in death or serious injury.

Do not use any electrical test equipment or devices in the vicinity of SRS components or wiring. Doing so may cause the system to trigger, or render the system inoperative, either of which may result in death or serious injury.

In addition, always contact your Land Rover Dealer/Authorised Repairer if:

- An airbag inflates.
- A seat belt pre-tensioner activates.
- The front or side of the vehicle is damaged, even if the airbag has not inflated.
- Any part of the airbag trim, module cover shows signs of cracking or damage.