PARTS AND ACCESSORIES

The fitting of non-approved parts and accessories, or the carrying out of non-approved alterations or conversions, may be dangerous and could affect the safety of the vehicle and occupants and also invalidate the terms and conditions of the vehicle warranty.

Jaguar Land Rover Limited will not accept any liability for death, personal injury or damage to property which may occur as a direct result of fitment of non-approved accessories or the carrying out of non-approved conversions to Land Rover vehicles.

Under no circumstances should any part of the air conditioning system be serviced, dismantled or replaced by anyone other than suitably qualified and certified personnel. Always make sure the correct containment of the refrigerant at all times.

AIRBAG SYSTEM

The components that make up the airbag system are sensitive to electrical or physical interference, either of which could easily damage the system and cause inadvertent operation or a malfunction of the airbag module.

To prevent malfunction of the airbag system always consult your Dealer/Authorised Repairer before fitting any of the following:

- Electronic equipment such as a mobile phone, two-way radio or in-car entertainment system.
- Accessories attached to the front of the vehicle.
- Any modification to the front of the vehicle.
- Any modification involving the removal or repair of any wiring or component in the vicinity of any of the airbag system components, including the steering wheel, steering column, instrument or fascia panels.
- Any modification to the fascia panels or steering wheel.

ANTI-THEFT SYSTEM

No modifications or additions should be made to the anti-theft system. Such changes could cause the system to malfunction.

OWNER MAINTENANCE

Any significant or sudden drop in fluid levels, or uneven tyre wear, should be reported to a qualified technician without delay.

In addition to the routine maintenance, a number of simple checks must be carried out more frequently.

DAILY CHECKS

- Operation of lamps, horn, direction indicators, wipers, washers and warning lamps.
- Operation of seat belts and brakes.
- Look for fluid deposits underneath the vehicle that might indicate a leak.

WEEKLY CHECKS

- Engine oil level.
- Engine coolant check.

- Brake fluid level.
- Dynamic response fluid level.
- Screen washer fluid level.
- Tyre pressures and condition.
- Operate air conditioning.

Note: *The engine oil level should be checked more frequently if the vehicle is driven for prolonged periods at high speeds.*

BRAKE PADS

It is recommended that brake pads should be replaced when they reach a minimum thickness of 3mm.

WHEEL BALANCING

Note: *All wheel assemblies must be dynamically balanced.*

Balance Weight	Inner	Outer
Minimum	10g	10g
Maximum	120g	120g

ARDUOUS DRIVING CONDITIONS

When a vehicle is operated in extremely arduous conditions, more frequent attention must be paid to servicing requirements.

Arduous driving conditions include:

- Driving in dusty and/or sandy conditions.
- Driving on rough and/or muddy roads and/or wading.
- Driving in extremely hot/cold conditions.
- Towing a trailer or driving in mountainous conditions.
- Driving in areas using road salt or other corrosive materials on the driving surface.

Contact a Land Rover Dealer/Authorised Repairer for advice.

DIESEL PARTICULATE FILTER (DPF)

Diesel vehicles equipped with a particle filter have more efficient emission control. The particles in the exhaust gases are collected in the filter during normal driving.

When a DPF message is displayed, accompanied by an amber warning lamp, the filter requires a regeneration cycle to clean itself. This requires the engine to have reached normal operating temperature. Regeneration takes place automatically at an interval of approximately 300-900 km (190-560 miles) depending on driving conditions. Regeneration normally takes 10-20 minutes and is automatically requested by the engine control module if the vehicle is driven steadily at vehicle speeds between 60 km/h to 112 km/h (40 mph to 70 mph). It is possible that the regeneration process will occur at lower vehicle speeds, but the events may take a little longer at a 50 km/h (30 mph) average speed.

Note: *If regeneration is not successfully carried out, the amber warning lamp will eventually be replaced by a red warning lamp.*

Note: *If diesel fuel with a high sulphur content is used regularly, when a DPF regeneration cycle starts the exhaust will emit a cloud of smoke. This is the sulphur deposit being burnt off and is no cause for concern. If possible, use only low sulphur diesel fuel.*

If a DPF message is displayed, accompanied by a red warning lamp, contact a Dealer/Authorised Repairer as soon as possible.

DRIVING SHORT DISTANCES OR IN COLD WEATHER

If the vehicle is frequently driven short distances or in cold weather conditions then the engine may not reach normal operating temperature. This means that regeneration of the diesel particle filter does not take place and the filter is not efficiently cleaned. When the filter reaches a condition when a filter regeneration is appropriate and the current drive style is not appropriate, a warning triangle on the instrument panel illuminates and the message **DPF Full. See manual** is displayed in the Message centre. This is not indicating a fault condition with the vehicle and no dealership support should be required. Start regeneration of the filter by driving the vehicle, preferably on a main road or motorway. The vehicle should then be driven for approximately 20 minutes or more.

When regeneration is complete the warning text is cleared automatically.

Note: *A small increase in fuel consumption may be noticed temporarily during regeneration.*

ROAD TESTING DYNAMOMETERS (ROLLING ROADS)

It is essential that any dynamometer testing is carried out only by a qualified person, familiar with the dynamometer testing and safety procedures practised by Land Rover Dealers/ Authorised Repairers.

SAFETY IN THE GARAGE

If the vehicle has been driven recently, do not touch the engine, exhaust and cooling system components until the engine has cooled.

Never leave the engine running in an unventilated area - exhaust gases are poisonous and extremely dangerous.

Do not work beneath the vehicle with the wheel changing jack as the only means of support.

The jack is designed for wheel changing only. Never work beneath the vehicle with the jack as the only means of support. Always use correctly rated vehicle support stands, before putting any part of your body beneath the vehicle.

Keep your hands and clothing away from drive belts, pulleys and fans. Some fans may continue to operate or start operating after the engine has stopped.

Remove metal wrist bands and jewellery, before working in the engine compartment.

Do not touch electrical leads or components while the engine is running, or with the starter switch turned on.

Do not allow tools or metal parts of the vehicle to make contact with the battery leads or terminals.

FUEL SYSTEM

Under no circumstances should any part of the fuel system be dismantled or replaced by anyone other than a suitably qualified vehicle technician.

Make sure sparks and naked lights are kept away from the engine compartment.

Wear protective clothing, including, where practicable, gloves made from an impervious material.

POISONOUS FLUIDS

Fluids used in motor vehicles are poisonous and should not be consumed or brought into contact with open wounds.

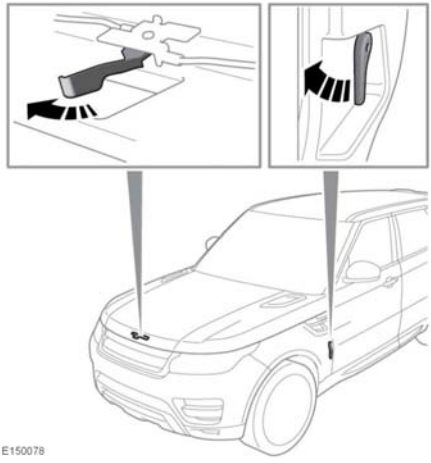
For your own safety, always read and obey all instructions printed on labels and containers.

USED ENGINE OIL

Prolonged contact with engine oil may cause serious skin disorders, including dermatitis and cancer of the skin. Always wash thoroughly after contact.

It is illegal to pollute drains, water courses or soil. Use authorised waste disposal sites to dispose of used oil and toxic chemicals.

OPENING THE BONNET



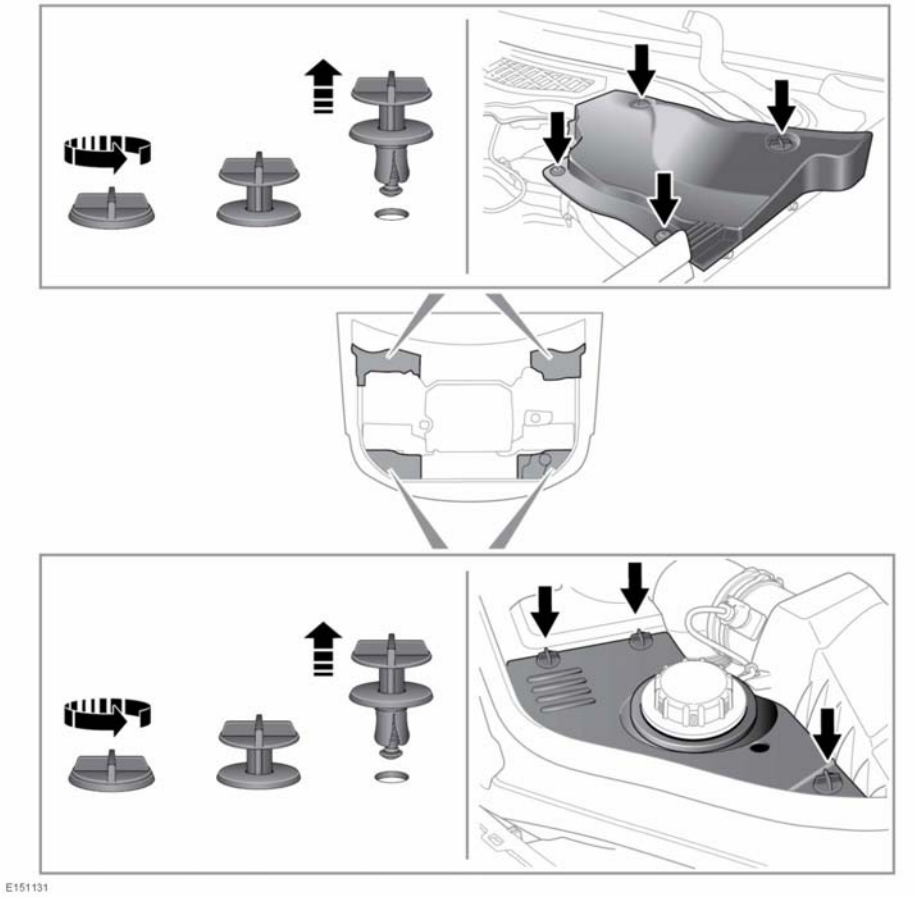
1. Pull the bonnet release lever, located in the left-hand front footwell.
2. Push the bonnet safety catch lever, located underneath the centre of the bonnet at the front, then raise the bonnet.

CLOSING THE BONNET

Do not drive with the bonnet retained by the safety catch alone.

1. Lower the bonnet until the safety catch engages. Using both hands, press the bonnet down until the catches click.
2. Check that both catches are engaged, by trying to lift the front edge of the bonnet.

UNDER BONNET COVERS - REMOVAL



1. Release and remove the turnbuckle clips securing the cover.
2. Lift the front edge of the cover and slide forwards to remove.

UNDER BONNET COVERS - REFITTING

Before refitting the underbonnet covers, make sure no pipes, cables or other items, have been trapped between the cover and casing.

1. Place the cover over the casing, ensuring the 4 holes are aligned.

2. Push the cover down firmly and fasten the 4 turnbuckle clips.

UNBLOCKING WASHER JETS

Do not operate the washer jets during unblocking or adjustment. Windscreen washer fluid may cause irritation to the eyes and skin. Always read and observe the washer fluid manufacturers instructions.

If a washer jet becomes blocked, use a thin strand of wire to unblock the jet by inserting the wire into the jet. Make sure the wire is completely removed after unblocking. The washer jet position may also be adjusted by inserting the point of a needle into the jet and gently repositioning it.

CHANGING A BULB

All lamps that are either LED or Xenon units and must only be replaced by a Land Rover Dealer/Authorised Repairer.

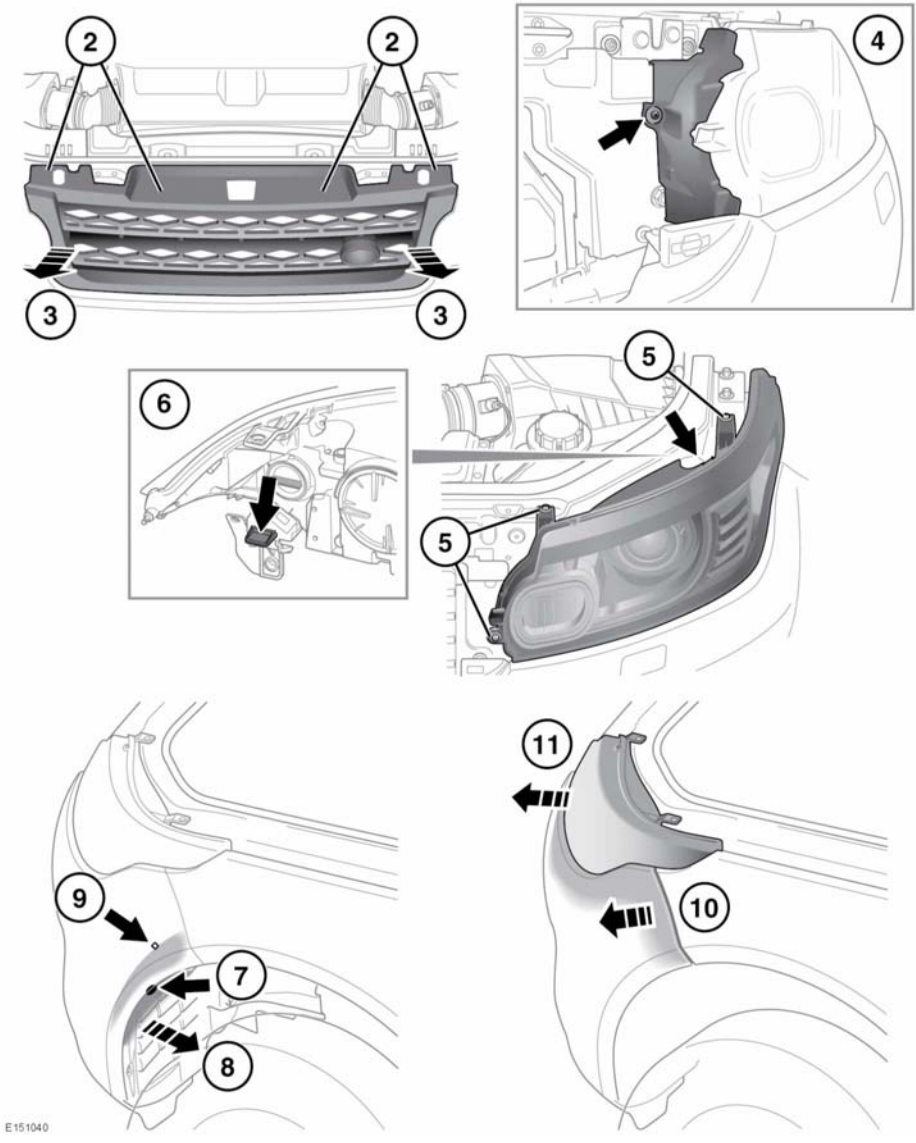
Before attempting a bulb change, make sure the ignition and the affected lamp are turned off.

Always replace bulbs with the correct type and specification. If you are in any doubt contact your Land Rover Dealer/Authorised Repairer for advice.

Note: *In certain territories it is a legal requirement to carry spare bulbs. A replacement bulb kit is available as an approved accessory from your dealer.*

Note: *After replacing a headlamp bulb, headlamp alignment should be checked with the appropriate equipment.*

HEADLAMP REMOVAL



Set the air suspension to the Off-road height position, for increased access to the bumper fixings. See **108, OFF-ROAD HEIGHT**.

1. Remove the under bonnet access cover next to the headlamp to be removed. See **203, UNDER BONNET COVERS - REMOVAL**.
2. Remove the 4 securing clips from the grille.
3. Gently and evenly pull the grille forwards to release the 4 lower clips and remove the grille. Place the grille where it will not be damaged.
4. Remove the fixing and release the covering trim.
5. Remove the 3 retaining bolts from the headlamp.
6. Using a suitable tool, gently apply downward pressure to release the securing clip.

Do not attempt to remove the headlamp at this stage.

7. Remove the fixing from the wing splash shield.
8. Gently pull the splash shield rearward for access.
9. Remove the bumper securing screw.
10. Gently and evenly pull the edge of the bumper to release the 3 securing clips from the wing panel.

Do not use excessive force, as this may cause damage to the vehicle.

Note: *Only limited movement is required to separate the upper edge of the bumper from the lower edge of the headlamp.*

11. Release the electrical connectors and remove the headlamp.
    Place face down on a flat surface covered in a soft material to prevent damage.

Note: *Refitting of the headlamp unit is the reverse of the removal process.*

XENON LAMPS

Replacement or maintenance of Xenon lamps should only be carried out by suitably qualified personnel.

High voltage is required to ignite the gas and metal vapour which are used to power Xenon lamps. Contact with this voltage can cause serious injury.

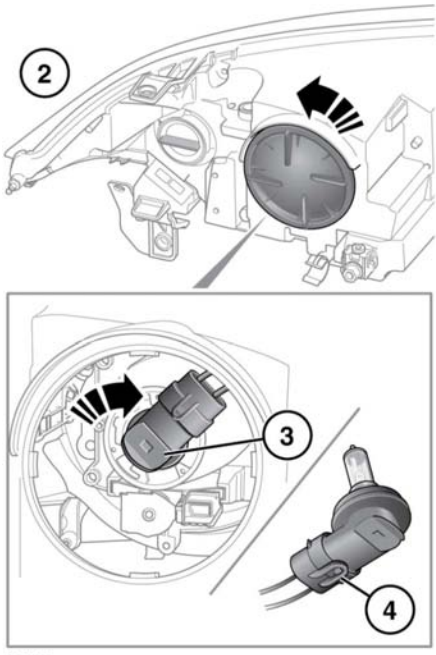
Xenon lamp units operate at a very high temperature. Make sure the lamp units have cooled before attempting to touch them.



Seek advice about the correct disposal of Xenon lamp units from a Land Rover Dealer/Authorised Repairer, or your local authority.

HALOGEN BULBS

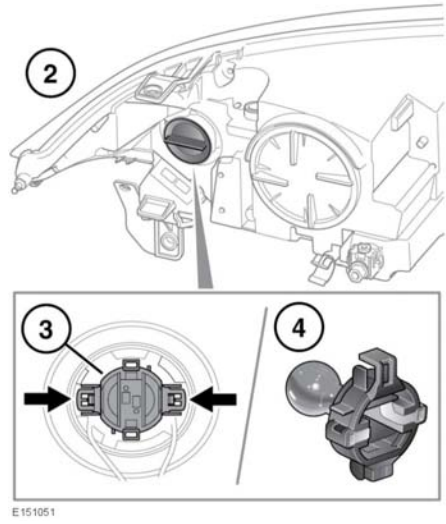
Take care not to touch this type of bulb with your fingers; always use a cloth to handle them. If necessary, clean the bulb with methylated spirits to remove fingerprints.



E151046

1. Release the headlamp to gain access. See **205, HEADLAMP REMOVAL**.
2. At the back of the headlamp unit, remove the cover. Turn it counter clockwise to release.
3. Pull off the electrical connector.
4. Release the bulb from the retaining tags and remove bulb.
5. Insert the new bulb and repeat the above procedure in reverse order.

DIRECTION INDICATOR BULB REPLACEMENT

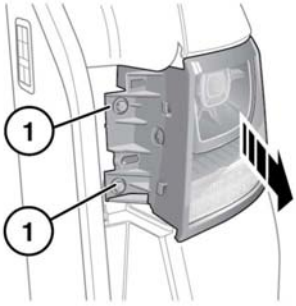


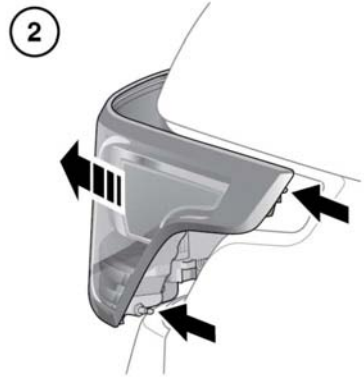
E151051

1. Release the headlamp to gain access. See **205, HEADLAMP REMOVAL**.
2. Twist and lift off the cap.
3. Press the catches and pull the bulb holder from the unit.
4. Push and twist to remove the bulb.

REAR LAMP REMOVAL

To change any of the rear bulbs, it is necessary to completely remove the lamp unit from the vehicle.

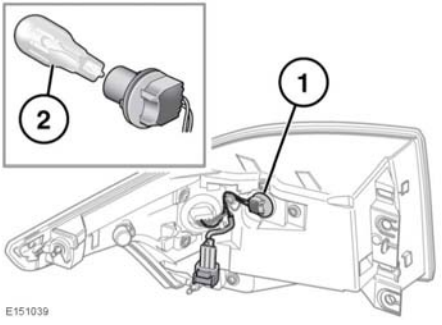




1. With the tailgate open, remove the trim panel and then remove the 2 screws from the inner edge of the unit.
2. Firmly but carefully pull the unit away from the vehicle, releasing the 2 lugs situated at the rear of the lamp unit.
3. Disconnect the electrical connector and remove the unit from the vehicle. Place face down on a flat surface covered in soft material to prevent damage.

REAR LAMP BULB REPLACEMENT

Note: *The direction indicator lamp, stop lamp, and tail lamp are LED units, and cannot be serviced.*



1. Reversing lamp.
2. Twist the relevant bulb unit and pull to access the bulb. Push, twist and pull to remove the bulb.

REAR FOG LAMP BULB REPLACEMENT

⚠ **Always find a safe place to stop, off the highway and away from traffic.**

⚠ **Apply the parking brake and engage Park (P).**

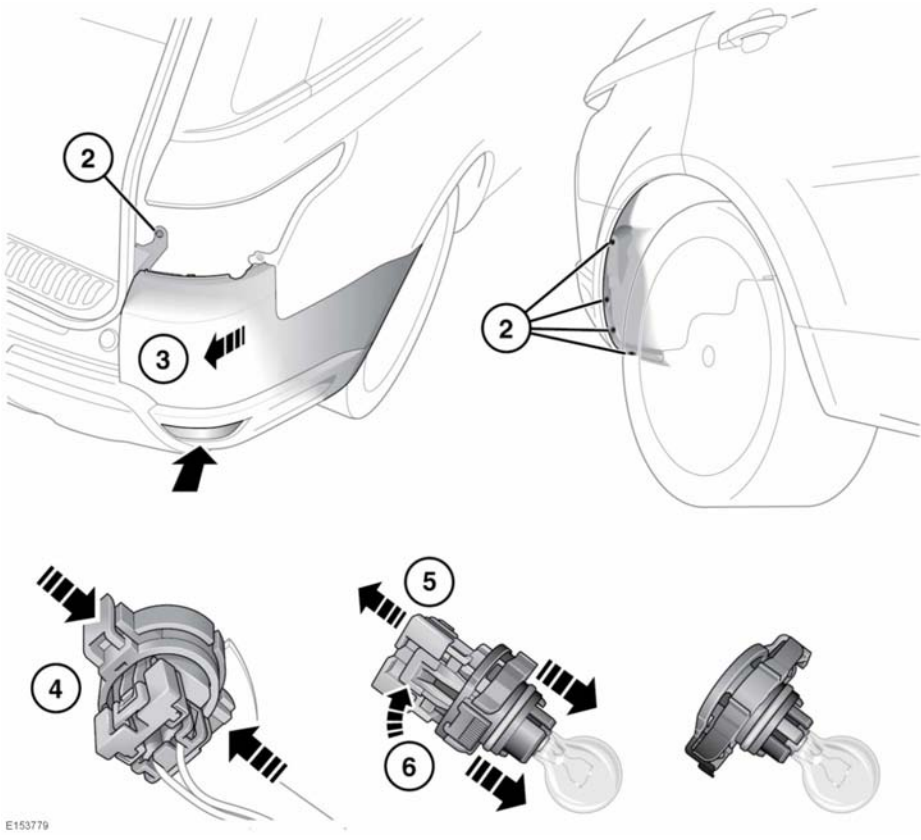
⚠ **Switch on the hazard warning lamps.**

⚠ **Place a warning triangle at a suitable distance behind the vehicle, facing towards oncoming traffic.**

⚠ **Disconnect trailer/caravan from vehicle.**

⚠ **Make sure all passengers, and animals, are out of the vehicle and in a safe place away from the highway.**

⚠ **If the vehicle has been driven recently, do not touch the exhaust system components until they have cooled.**



Access to a rear fog lamp housing is from above and behind the rear bumper. The bulb holder is a black plastic unit that incorporates the bulb.

Set the air suspension to the Off-road height position, for increased access to the bumper fixings. See **108, OFF-ROAD HEIGHT**.

1. Remove the rear lamp unit. See **207, REAR LAMP REMOVAL**.
2. Remove the 5 fixings from the bumper.
3. Gently and evenly pull the bumper to release the 8 securing clips from the wing panel.

Do not use excessive force, as this may cause damage to the vehicle.

Note: *Only limited movement is required to allow access to the rear of the fog lamp unit.*

4. To remove the bulb holder, press in the outer wings on the black plastic unit and pull the holder free of the housing.
5. To separate the bulb holder from the electrical connector, first push up the connector lock.
6. Push in the release mechanism while pulling the connector and bulb holder apart.

Note: *Inside the bulb holder, there are three locating lugs. When fitting the new bulb unit, the lugs must line up with the connector correctly.*

Refitting is a reverse of the removal process. Make sure the connector lock is pressed down and that the bulb unit locates securely into the fog lamp housing.

WIPERS SERVICE POSITION

Before changing a front wiper blade, the wiper arms must be set to the winter park position. See **60, WINTER PARK POSITION**.

Note: *The Smart key must remain in the vehicle while wiper blades are replaced.*

WINDOW RESET

The windows will need to be reset if the battery is disconnected, becomes discharged or power supply is interrupted.

Reset as follows:

1. Close the window fully.
2. Release the switch, then lift it to the close position and hold for 1 second.
3. Repeat the procedure on each window.

SUNROOF RESET

If the battery is disconnected or the power supply is interrupted while the sunroof is partially open, it may need to be recalibrated.

Once the battery is reconnected or the power supply is restored, recalibrate the sunroof as follows:

1. Switch the ignition on.
2. With the roof and blind closed, press the front of the roof switch and hold for 20 seconds. See **70, ELECTRIC WINDOWS**.
3. After 20 seconds, the sunroof will begin to move. Release the switch. Within 5 seconds press and hold the front of the roof switch until the blind and roof complete a full open/close cycle.

   Note: *The blind will open first and close last.*
4. Once the blind has stopped moving, release the switch.

The sunroof can now be operated as normal.

CLEANING THE EXTERIOR

Following cleaning of the vehicle exterior (particularly with a pressure washer), it is recommended that the vehicle is taken for a short drive to dry out the brakes.

Remove any heavy deposits of mud and dirt with a hose, before washing the vehicle.

Some high pressure cleaning systems are sufficiently powerful to penetrate suspension joints, door/window seals and damage trim and door locks. Never aim the water jet directly at any cameras, the engine air intake, heater air intakes, body seals (doors, sunroof, windows etc.) or at any components which may be damaged (lights, mirrors, exterior trim, suspension seals and gaiters, etc.). Make sure the pressure washer nozzle is always at a distance of more than 12 inches (300 mm) from any component of the vehicle.

Do not use a power wash system in the engine bay area.

Following cleaning of the vehicle exterior (particularly with a pressure washer), it is recommended that the vehicle is taken for a short drive to dry out the brakes.

Substances which are corrosive, such as bird droppings, can damage the vehicle's paintwork and should be removed as soon as possible.

Use only cleaning products approved for use on vehicles.

Do not apply polish to any unpainted areas of bumper mouldings. It will become ingrained in the textured finish.

UNDER BODY MAINTENANCE

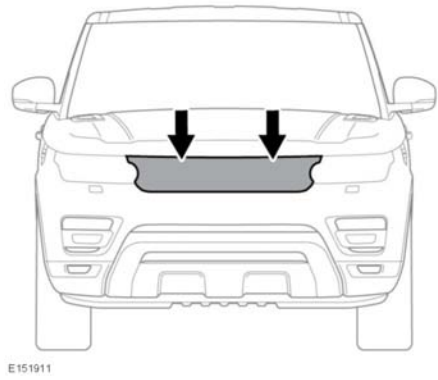
Regularly flush the underbody with plain water, and pay particular attention to areas where mud and debris collect.

If damage or corrosion are detected, have the vehicle checked by a Land Rover Dealer/Authorised Repairer as soon as possible.

CLEANING AFTER OFF-ROAD DRIVING

Make sure the areas around air intakes and the front grille are clean and clear of debris. Pay particular attention to the lower grille, radiator and intercoolers. Failure to do so may cause the engine to overheat, leading to severe engine damage.

Make sure the vehicle underside is cleaned as soon as possible after driving off-road.



To improve aerodynamics, some vehicles are fitted with active vanes that open only when the engine temperature rises or when the air conditioning is turned on. The active vanes must be opened manually to allow access to clean any debris from the radiator and the air conditioning condenser after off-road driving.

1. Start the engine and allow it to run for a few seconds. See **97, STARTING THE ENGINE**.
2. Switch off the engine.
3. Switch on the ignition. See **97, SWITCHING ON THE IGNITION**.
4. Select Sand mode on the terrain response system. See **133, TERRAIN RESPONSE OPERATION**.
5. Switch off the ignition.
6. Using a hose pipe, direct clean water through the front bumper (where shown) to remove mud from the radiator and air conditioning condenser.

CLEANING THE INTERIOR

Some cleaning products contain substances that are harmful and can cause health problems if used incorrectly and may cause damage to the interior.

CLEANING FABRIC UPHOLSTERY

Do not polish the instrument panel. Polished surfaces are reflective, and may interfere with the drivers view.

Clean plastic or cloth faced surfaces with warm water and non-detergent soap. Then wipe clean with a soft cloth.

CLEANING LEATHER UPHOLSTERY

Only use cleaning products specifically designed for use on leather. Do not use chemical, alcohol, or abrasive materials, as they will cause rapid deterioration of the leather. The use of products which are not approved will invalidate your warranty.

If you are in any doubt as to which products to use, consult your Land Rover Dealer/Approved Repairer.

Leather should be cleaned and protected at least every six months.

To prevent ingrained dirt and staining, inspect the seat upholstery regularly, and clean every 1 to 2 months as follows:

1. Wipe off fine dust from the seat surfaces using a clean, damp, non-coloured cloth. Avoid over wetting the leather.
2. If this is not sufficient, use a cloth which has been dampened with warm soapy water and then wrung out. Use only mild non-caustic soap.
3. Use Land Rover leather cleaner for heavily soiled areas. Dry off and rub the with a clean soft cloth, changing surfaces regularly.

Use Land Rover leather cleaner several times a year to maintain the leather's suppleness and appearance. The cleaner will nourish and moisturise and help to improve the surface protection film against dust and substances.

- Dark clothing may stain leather seats just like other upholstery products.
- Sharp objects such as belts, zippers, rivets etc can leave permanent scratches and scratch marks on the leather surface.
- Unless spillages such as tea, coffee or ink are washed away immediately, permanent staining may have to be accepted.

If a valet service is used, make sure the specialist concerned is aware of, and follows, these instructions precisely.

Note: *Some materials/fabrics are prone to dye transfer, which can cause unsightly discolouration of lighter coloured leathers. Affected areas should be cleaned and re-protected as soon as possible.*

CLEANING THE SEAT BELTS

Do not allow any water, cleaning products, or fabric from cloths to enter the seat belt mechanism. Any substance which enters the mechanism may affect the performance of the seat belt in an impact.

Extend the seat belts fully, then use warm water and a non-detergent soap to clean. Allow the seat belts to dry naturally while fully extended.

Note: *While cleaning the seat belt, take the opportunity to examine the webbing for damage/wear. Any wear or damage should be reported to, and rectified by, a Land Rover Dealer/Approved Repairer.*

AIRBAG MODULE COVERS

Airbag covers should only be cleaned using a slightly dampened cloth, and a small amount of upholstery cleaner.

Do not allow the airbag covers, or surrounding areas, to become contaminated with liquids. Any substance which enters the mechanism can prevent correct deployment of an airbag during an impact.

CLEANING THE TOUCH SCREEN

- Clean with the cloth provided with the vehicle.
- Do not use chemical agents or domestic cleaners.
- To prevent errors occurring, make sure only one finger at a time is in contact with the screen.
- Do not use excessive pressure.
- Do not allow sharp, hard or abrasive objects to make contact with the screen.
- Avoid exposing the screen to direct sunlight for long periods.