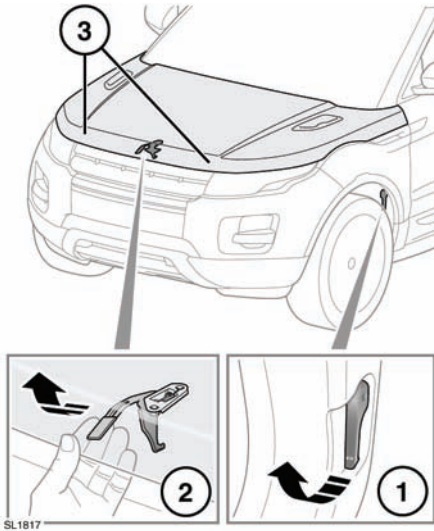


## OPENING AND CLOSING THE HOOD



### Opening

1. Pull the hood release lever, located in the left-hand front footwell.
2. Lift the hood safety catch lever, located below the center point of the hood, then raise the hood.

### Closing

## **⚠ WARNING**

**Do not drive with the hood secured by the safety catch alone.**

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

## 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.

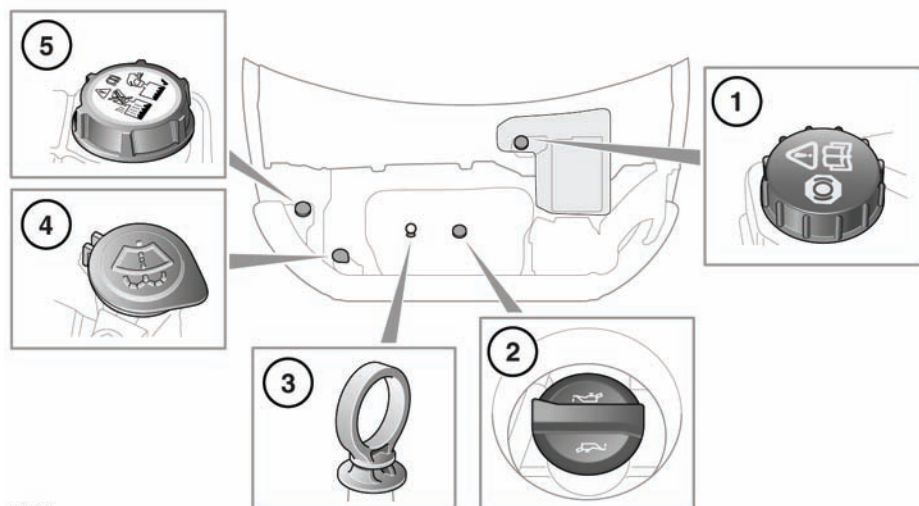
## USED ENGINE OIL

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 authorized waste disposal sites to dispose of used oil and toxic chemicals.

## ENGINE COMPARTMENT OVERVIEW



SL1948

1. Brake fluid reservoir cap (beneath cover):
2. Engine oil filler cap.
3. Engine oil level dipstick.
4. Washer fluid filler cap.
5. Engine coolant filler cap.

### **⚠ WARNING**

While working in the engine compartment, always observe the safety precautions. See 159, SAFETY IN THE GARAGE

### **⚠ WARNING**

Do not drive if there is a possibility that leaked fluid will come into contact with a hot surface, such as the exhaust.

## ENGINE OIL CHECK

### **NOTICE**

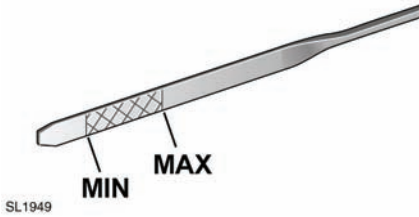
Check the engine oil weekly. If any significant or sudden drop in oil level is noted, seek qualified assistance.

### **NOTICE**

Never allow the oil level to fall below the lower mark or notch on the dipstick.

### **NOTICE**

If the message **ENGINE OIL PRESSURE LOW** is displayed, stop the engine as soon as it is safe to do so and seek qualified assistance. Do not start the engine until the cause has been rectified.



Engine oil dipstick MIN and MAX positions.

## OIL CHECK PREPARATION

Prior to checking the oil level ensure that:

- The vehicle is on level ground.
- The engine oil is cold.

**Note:** If it is necessary to check the oil level when the engine is hot, switch off the engine and let the vehicle stand for 5 minutes to allow the oil to drain back into the sump. Do not start the engine.

The oil level can then be checked as follows:

1. Withdraw the dipstick and wipe the blade clean with a lint free cloth.
2. Fully re-insert the dipstick and withdraw again to check the oil level.

As a general guide, if the oil level on the dipstick:

- Is nearer to the upper mark or notch than the lower, do not add oil.
- Is nearer to the lower mark or notch than the upper, add 1 pint (0.5 liter) of oil.
- Is below the lower mark or notch, add 1.7 pints (0.8 liter) of oil and re-check the level after a further 5 minutes.

## TOPPING UP THE ENGINE OIL

### NOTICE

Low quality or obsolete oils do not provide the protection required by modern, high performance engines.

### NOTICE

Failure to use an oil that meets the required specification could cause excessive engine wear, a build up of sludge and deposits, and increase pollution. It could also lead to engine failure.

### NOTICE

Your vehicle's warranty may be invalidated if damage is caused by the use of unapproved engine oil.

### NOTICE

Do not use oil additives of any type as engine damage could occur. Use only specified lubricants.

### NOTICE

Overfilling with oil could result in severe engine damage. Oil should be added in small quantities and the level re-checked to ensure that the engine is not overfilled.

1. Remove the oil filler cap.
2. Add oil to maintain the level between the **MIN** and **MAX** marks or notches on the dipstick.
3. Clean up any oil spilled during topping-up.
4. Check the oil level again after 5 minutes.

It is essential to use the correct specification oil and to ensure it is suitable for the climatic conditions in which the vehicle is to be operated.

**Note:** The approximate quantity of oil required to raise the level from **MIN** to **MAX** on the dipstick is 1.8 pints (0.85 liters) for all models.

## ENGINE OIL SPECIFICATION

It is important that the correct oil specification is used.

Land Rover recommends Castrol oils. See **190, LUBRICANTS AND FLUIDS**.

## COOLANT LEVEL CHECK

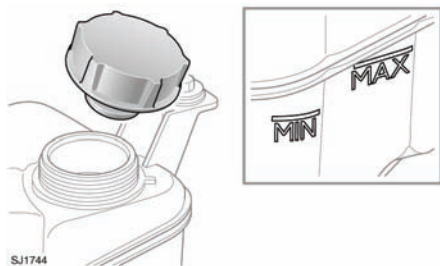
### **NOTICE**

*Running the engine without coolant will cause serious engine damage.*

### **NOTICE**

*If persistent coolant loss is noticed, seek qualified assistance immediately.*

The coolant level in the expansion tank should be checked at least weekly (more frequently in high mileage or arduous operating conditions). Always check the level when the system is cold.



Ensure the coolant level remains between the **MIN** and **MAX** indicator marks on the side of the expansion tank.

If the level has dropped suddenly, or by a large amount, arrange for the vehicle to be examined by a qualified technician as soon as possible.

## TOPPING UP THE COOLANT

### **⚠ WARNING**

**Never remove the filler cap when the engine is hot - escaping steam or scalding water could cause serious personal injury.**

**Unscrew the filler cap slowly, allowing the pressure to escape before removing completely.**

### **⚠ WARNING**

**Antifreeze is highly inflammable. Do not allow antifreeze to come into contact with naked flames or other sources of ignition (e.g. a hot engine) - a fire may result.**

### **NOTICE**

*When travelling in areas where the water supply contains salt, always ensure you carry a supply of fresh (rain or distilled) water. Topping up with salt water will cause serious engine damage.*

Top-up to the **MAX** indicator mark on the side of the expansion tank. Use only a 50% mix of water and Texaco XLC antifreeze.

**Note:** *In an emergency - and only if the approved antifreeze is unavailable - top-up the cooling system with clean water, but be aware of the resultant reduction in frost protection. Do not top-up or refill with conventional antifreeze formulations. If in doubt consult a qualified technician.*

Ensure the cap is tightened fully after top-up is completed by turning the cap until the ratchet cap clicks.

## COOLANT ANTIFREEZE

### WARNING

Antifreeze is poisonous and can be fatal if swallowed - keep containers sealed and out of the reach of children. If accidental consumption is suspected, seek medical attention immediately.

### WARNING

If the fluid comes into contact with the skin or eyes, rinse immediately with plenty of water.

### **NOTICE**

*The use of non-approved antifreeze will have an adverse effect on the engine cooling system and therefore engine durability.*

### **NOTICE**

*Antifreeze will damage painted surfaces; soak up any spillage with an absorbent cloth immediately and wash the area with a mixture of car shampoo and water.*

Antifreeze contains important corrosion inhibitors. The antifreeze content of the coolant must be maintained at 50%  $\pm$  5% all year round (not just in cold conditions). To ensure that the anti-corrosion properties of the coolant are retained, the antifreeze content should be checked once a year and completely replaced every ten years, regardless of distance travelled. Failure to do so may cause corrosion of the radiator and engine components.

The specific gravity of a 50% antifreeze solution at 68°F (20°C) is 1.068 and protects against frost down to -40°F (-40°C).

## BRAKE FLUID CHECK

### WARNING

Brake fluid is highly toxic - keep containers sealed and out of the reach of children. If accidental consumption of fluid is suspected, seek medical attention immediately.

### WARNING

If the fluid comes into contact with the skin or eyes, rinse immediately with plenty of water.

### WARNING

Take care not to spill brake fluid onto a hot engine - a fire may result.

### WARNING

Do not drive the vehicle with the fluid level below the MIN mark.

### WARNING

Seek qualified assistance immediately if brake pedal travel is unusually long or if there is any significant loss of brake fluid. Driving under such conditions could result in extended stopping distances or complete brake failure.



USA.



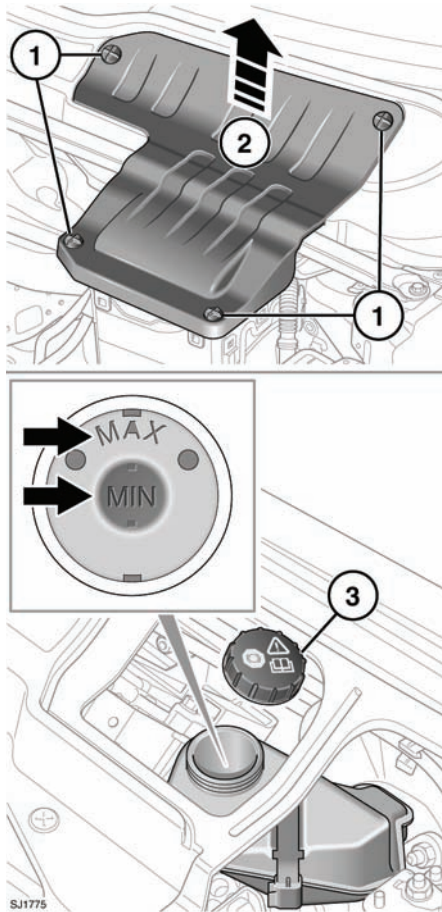
Canada.

If the quantity of fluid in the brake reservoir drops below the recommended level, a red warning lamp in the instrument panel will illuminate.

**Note:** *If the warning lamp illuminates while the vehicle is being driven, stop the vehicle as soon as safety permits by gently applying the brakes. Check and top-up the fluid level if necessary.*

## Fluid level checks

With the vehicle on level ground, check the fluid level at least every week (more frequently in high mileage or arduous operating conditions).



1. Remove the battery cover. Turn the four fasteners 90 degrees counter-clockwise to release.
2. Lift the cover clear.

3. Clean the filler cap before removing to prevent dirt from entering the reservoir. Remove the cap.

The brake fluid level should be between the **MIN** and the **MAX** marks.

**Note:** The fluid level may drop slightly during normal use as a result of brake pad wear, but should not be allowed to drop below the **MIN** mark.

### TOPPING UP THE BRAKE FLUID

#### NOTICE

Brake fluid will damage painted surfaces. Soak up any spillage with an absorbent cloth immediately and wash the area with a mixture of car shampoo and water.

#### NOTICE

Only use new fluid from an airtight container. Fluid from opened containers or fluid previously bled from the system will have absorbed moisture, which will adversely affect performance, and must not be used.

#### NOTICE

**Top up the brake fluid with Shell DOT4 ESL brake fluid.** If unavailable, use a low viscosity synthetic compatible DOT4 brake fluid that meets ISO 4925 class 6 specification. Only fluid of this type and standard may be used.

#### NOTICE

Do not top up the brake fluid to the maximum mark unless the brake pads have been replaced. If unsure, seek qualified assistance.

1. Top up the reservoir to at least the minimum mark.
2. Replace the reservoir cap.
3. Refit the reservoir cover.

## WASHER FLUID CHECK

### WARNING

Some windshield washer products are flammable, particularly if high or undiluted concentrations are exposed to sparking. Do not allow washer fluid to come into contact with naked flames or sources of ignition.

### WARNING

If the vehicle is operated in temperatures below 40°F (4°C), use a washer fluid with antifreeze protection. In cold weather, failure to use a washer fluid with frost protection, could result in impaired vision and increase the risk of a vehicle crash.

### **NOTICE**

*Do not use an antifreeze or vinegar/water solution in the washer reservoir - antifreeze will damage painted surfaces, while vinegar can damage the windshield washer pump.*

### **NOTICE**

*Body panels may suffer discoloration as a result of windshield washer fluid spillage. Take care to avoid spillage, particularly if an undiluted or high concentration is being used. If spillage occurs, wash the affected area immediately with water.*

The washer reservoir supplies the windshield and headlamp washer jets.

Check and top-up the reservoir level at least every week. Always top-up with windshield washer fluid to prevent freezing.

Operate the washer switches periodically to check that the nozzles are clear and properly directed.

## TOPPING UP THE WASHER FLUID

**Note:** National or local regulations may restrict the use of Volatile Organic Compounds (VOCs) which are commonly used as antifreeze agents in washer fluid. A washer fluid with limited VOC content should be used only if it provides adequate freeze resistance for all climates in which the vehicle is operated.

1. Clean the filler cap before removing to prevent dirt from entering the reservoir.
2. Remove filler cap.
3. Top-up the reservoir until the fluid is visible in the filler neck.
4. Replace filler cap.

## BLOCKED WASHER JETS

### WARNING

**Do not operate the washer jets during unblocking or adjustment. Windshield 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. Ensure that the wire is completely removed after unblocking.