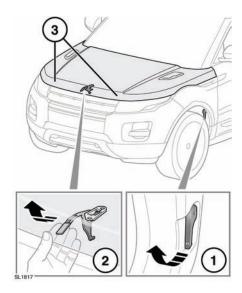
# OPENING AND CLOSING THE BONNET



# Opening

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

#### Closing



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

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

#### 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**

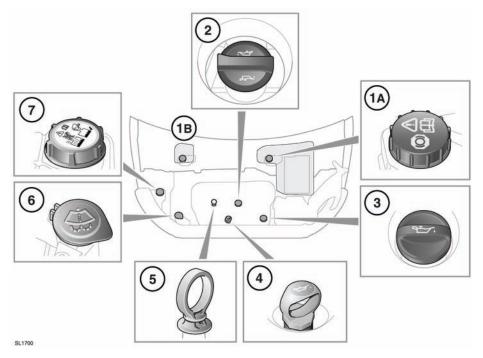
and toxic chemicals.

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

## **ENGINE COMPARTMENT OVERVIEW**



#### 2.0L petrol engine

- **1.** Brake/clutch fluid reservoir caps (beneath covers):
  - A. Left-hand drive vehicles.
  - B. Right-hand drive vehicles.
- 2. Engine oil filler cap.
- 5. Oil level dipstick.
- 6. Washer fluid filler cap.
- 7. Engine coolant filler cap.



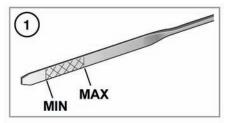
Do not drive if there is a possibility that leaked fluid will come into contact with a hot surface, such as the exhaust.

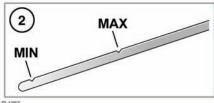
# 2.2L Diesel engine

- **1.** Brake/clutch fluid reservoir cap (beneath covers):
  - A. Left-hand drive vehicles.
  - **B.** Right-hand drive vehicles.
- 3. Engine oil filler cap.
- 4. Oil level dipstick.
- 6. Washer fluid filler cap.
- 7. Engine coolant filler cap.

#### **ENGINE OIL CHECK**

- Check the engine oil weekly. If any significant or sudden drop in oil level is noted, seek qualified assistance.
- Never allow the oil level to fall below the lower mark or notch on the dipstick.
- 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.





- 1. 2.0L petrol engine.
- 2. 2.2L diesel engine dipstick

#### **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 0.5 litre (1 pint) of oil.
- Is below the lower mark or notch, add for the diesel engine, 1.5 litre (2.6 pints) of oil and for the petrol engine, 0.8 litre (1.4 pints) of oil. Re-check the level after a further 5 minutes.

# TOPPING UP THE ENGINE OIL

- Your vehicle warranty may be invalidated if damage is caused by using oil that does not meet the required specification.
- 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.
- 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.

- 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 petrol engine dipstick is 0.85 litres (1.5 pints) and on the diesel engine dipstick is 1.5 litres (2.6 pints).

#### **ENGINE OIL SPECIFICATION**

It is important that the correct oil specification is used. Vehicles fitted with a diesel particulate filter (DPF) must use the specified oils otherwise significant engine damage will occur. Specified oils ensure that the life of the DPF is maximised.

When a new vehicle is sold into markets where the diesel fuel has a high level of sulphur content, a DPF is not fitted and alternative oils are specified. See **160**, **SULPHUR CONTENT**. Use of incorrect oils will result in serious engine damage.

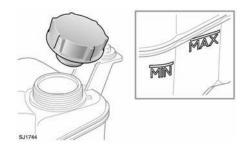
Land Rover recommends Castrol oils. See **195**, **LUBRICANTS AND FLUIDS**.

# **COOLANT LEVEL CHECK**



Running the engine without coolant will cause serious engine damage.

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



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



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.



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



When travelling in territories 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 XI C antifreeze.

# Fluid level checks

**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



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.



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



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



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 renewed 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 20°C (68°F) is 1.068 and protects against frost down to -40°C (-40°F).

## BRAKE/CLUTCH FLUID CHECK



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.



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.



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



Brake fluid is highly inflammable. Do not allow brake fluid to come into contact with naked flames or other sources of ignition (e.g. a hot engine).



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



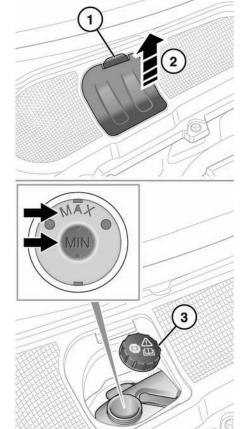
If the quantity of fluid in the brake reservoir drops below the recommended level, a red warning

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.

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

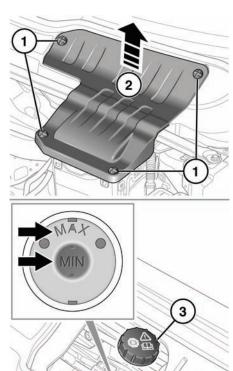
### Right hand drive:



- 1. Release the catch and pull forwards.
- 2. Pull up to release and 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.

#### Left hand drive:



- 1. Remove the battery cover. Turn the four fasteners 90 degrees counter-clockwise to release.
- 2. Lift the cover clear.
- Clean the filler cap before removing to prevent dirt from entering the reservoir. Remove the cap.

# Fluid level checks

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/CLUTCH FLUID

- 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.
- Only use new fluid from an airtight container (fluid from open containers or fluid previously bled from the system, will have absorbed moisture, which will adversely affect performance, and must not be used).
- 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 and Land Rover LRES22BF03
  specification. Only fluid of this type and
  standard may be used.
- 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**

 $\triangle$ 

Do not allow screen washer fluid to come into contact with naked flames or sources of ignition.



If the vehicle is operated in temperatures below 4°C (40°F), use a washer fluid with frost protection.



Only use approved washer fluid.



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.

# **TOPPING UP THE WASHER FLUID**

The washer reservoir supplies the front and rear screen washer jets and headlamp washer jets.

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

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

- 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.
- Replace filler cap.

#### **BLOCKED 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. Ensure that the wire is completely removed after unblocking.