BATTERY WARNING SYMBOLS

Do not allow naked flames or other sources of ignition near the battery, as the battery may emit explosive gases.

Ensure that when working near or handling the battery, suitable eye protection is worn, to protect the eyes from acid splashes.

To prevent risk of injury, do not allow children near the battery.

Be aware that the battery may emit explosive gases.

The battery contains acid which is extremely corrosive and toxic.

Consult the handbook for information, before handling the battery.

CONNECTING JUMP LEADS

Do not connect the jump leads to any battery terminal on your vehicle. Doing so may cause a spark, which can result in an explosion. It may also result in damage to the charging system.

Rotating parts of the engine can cause serious injury. Take extreme care when working near rotating parts of the engine.

Before attempting to start a vehicle, make sure that the parking brake is applied, or suitably chock the wheels. Make sure that Park is selected.

Suitable eye protection must be worn when working in the area of the battery.

Do not attempt to start a vehicle if it is suspected that the electrolyte in the battery is frozen.

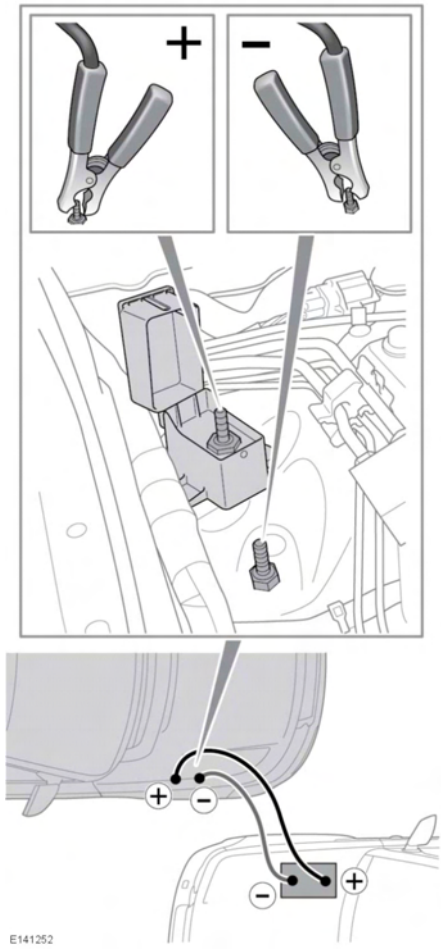
During normal use, batteries emit explosive gas sufficient to cause severe explosions and capable of causing serious injury - keep sparks and naked lights away from the engine compartment.

Make sure there is no physical contact between the donor and disabled vehicles other than the jump leads.

Make sure that any battery or starting aid is a 12 volt device.

Disconnect the jump leads before operating any electrical equipment.

Note: *Before connecting jump leads make sure that the battery connections on the vehicle are correct and that all electrical equipment has been switched off.*



1. Connect 1 end of the positive (Red) jump lead to the positive terminal on the donor vehicle.
2. Connect the other end of the positive (Red) jump lead to the positive terminal on the disabled vehicle.
3. Connect 1 end of the negative (Black) jump lead to the negative terminal on the donor vehicle.
4. Connect the other end of the negative (Black) jump lead to the earth/ground terminal on the disabled vehicle.

   Note: *Check that all cables are clear of any moving components, and that all 4 connections are secure.*
5. Start the engine of the donor vehicle, and allow it to idle for a few minutes.
6. Start the engine of the disabled vehicle.

   Note: *Do not switch on any electrical circuits on the previously disabled vehicle, until after the jump leads have been removed.*
7. Allow both vehicles to idle for a few minutes.
8. Switch off the donor vehicle.
9. Disconnect the negative (Black) jump lead from the previously disabled vehicle.
10. Disconnect the negative (Black) jump lead from the battery of the donor vehicle.
11. Disconnect the positive (Red) jump lead from the previously disabled vehicle.
12. Disconnect the positive (Red) jump lead from the donor vehicle.

CONNECTING A STARTING AID

Do not connect the starting aid to any battery terminal on your vehicle. Doing so may cause a spark, which can result in an explosion. It may also result in damage to the charging system.

To start the vehicle using a starting aid or a slave battery, follow the instructions in the sequence given.

1. Connect the positive (Red) cable to the positive terminal of the disabled vehicle.
2. Connect the negative (Black) cable to the negative terminal of the disabled vehicle.

3. Connect/switch on the starting aid.
4. Start the engine and allow it to idle.
5. Disconnect/switch off the starting aid.
6. Disconnect the negative (Black) cable from the negative terminal of the vehicle.
7. Disconnect the positive (Red) cable from the positive terminal of the vehicle.

REMOVING THE VEHICLE BATTERY

Switch the ignition off before disconnecting battery terminals. Always disconnect the negative terminal first and reconnect last.

Remove all metal jewellery before working on, or near, the battery, and never allow metal objects or vehicle components to come into contact with the battery terminals. Metal objects can cause sparks, and/or short circuits, resulting in an explosion.

Do not allow the battery posts or terminals to come into contact with your skin. They contain lead, and lead compounds which are toxic. Always wash your hands thoroughly after handling the battery.

Always disconnect the negative terminal first and reconnect last.

Use caution when lifting the battery out of, or into, the vehicle. It is heavy, and may cause injury when lifting, or if dropped.

Do not tip the battery when lifting or moving as tilting the battery more than 45 degrees may damage the battery, and may cause the electrolyte to leak out. Battery electrolyte is highly corrosive, and toxic.

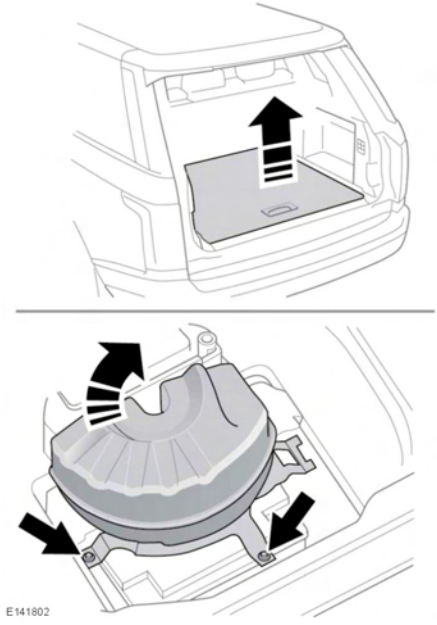
The vent pipe must be in place at all times when the battery is connected to the vehicle. Make sure that the vent pipe is clear of obstructions and not kinked. Failure to do so may cause a pressure build up in the battery, resulting in an explosion.

Do not rest the battery on any part of the vehicle as it may cause damage due to its weight.

Do not run the engine with the battery disconnected. Doing so may damage the charging system.

Note: *Make sure that all electrical circuits are switched off, all windows are closed, and the alarm is disarmed.*

Note: *Remove the Smart Key from the vehicle and wait 2 minutes to allow the systems to power down fully*



1. Remove the loadspace floor panel.

2. Remove the spare wheel. See **246, REMOVING THE SPARE WHEEL**.
3. Remove the 2 bolts. Lift the left hand side of the compressor mounting plate and raise to the vertical position.
4. Remove the insulation panel.
5. Undo the negative clamp nut. Lift the cable and clamp clear of the battery terminal.
6. Undo the positive clamp nut. Lift the cable and clamp clear of the battery terminal.
7. Pull the breather pipe to release.
8. Lift out the battery using the handles.

EFFECTS OF DISCONNECTING

Disconnecting the battery can affect a number of vehicle systems, especially if there is insufficient battery power before disconnection. For example, the alarm may trigger depending on it's state when the battery was disconnected. If the alarm does sound, use the Smart Key in the normal way to disarm the security system. The windows may need resetting to operate correctly.

CHARGING THE VEHICLE BATTERY

Ensure that the correct type and rating of charger is used. Using an unsuitable charger may damage the battery, and could cause the battery to explode.

Always charge the battery in a well-ventilated area away from any naked flames, sparks or other ignition sources. During charging the battery can produce a highly explosive and flammable gas.

The battery must be disconnected and removed from the vehicle before charging. Failure to do so could result in damage to the vehicle's electrical system.

Always follow the instructions supplied with the battery charger. Failure to do so may result in damage to the battery.

Note: *Your vehicle is fitted with a maintenance-free battery. You cannot check or top up the electrolyte level.*

1. Remove the battery. See **234, REMOVING THE VEHICLE BATTERY**
2. Connect the battery charger in accordance with the manufacturer's instructions.
3. Once the charge is complete switch off the power to the charger.
4. Disconnect the charger cables from the battery.
5. Allow the battery to stand for an hour before connecting to the vehicle. This will allow any explosive gasses to dissipate, and reduce the risk of explosion.

REPLACING THE VEHICLE BATTERY

Only fit a battery of the correct type and rating. Fitting an incorrect battery may result in a fire, or damage to the electrical system. If you are in any doubt when fitting a battery seek qualified assistance.

Used batteries must be disposed of correctly as they contain a number of harmful substances. Seek advice on disposal from your Dealer/Authorised Repairer and/or your local authority.

When refitting the battery make sure that no metal objects, or vehicle components, come into contact with the battery terminals. Metal objects can cause a spark or short circuit, both of which may result in an explosion.

Make sure that when fitting a battery to the vehicle, the terminals and battery clamps are clean, and lightly coated with petroleum jelly. This will ensure good electrical connections are made, and help to prevent corrosion.

Always follow the battery manufacturers instructions. Failure to do so may result in damage to the vehicle and/or the electrical system.

A new battery should be supplied with plastic terminal covers. Leave the covers in place when fitting the battery, and remove them 1 at a time to fit the battery cable clamps.

Refitting is an exact reversal of the removal procedure. See **234, REMOVING THE VEHICLE BATTERY**.

If you are in any doubt about fitting a battery, seek qualified assistance beforehand.

BATTERY MONITORING SYSTEM

If excessive battery discharge occurs, the Intelligent Power System Management (IPSM) will begin to shut down non-essential electrical systems to protect battery power.

If the message, **Energy Management** is displayed on the touchscreen while the engine is switched off, after 3 minutes IPSM will begin a shut down operation. Normal system function will resume when the engine is started.

If the message, **Low Battery - Please Start Engine** is displayed on the touchscreen and in the Message centre while the engine is switched off, after 3 minutes IPSM will begin a shut down operation. The Message centre will continue to display the message until either the vehicle is completely turned off or the engine is started. Normal system function will resume when the engine is started.

Note: *If the message* **Low Battery - Please Start Engine** *is displayed, drive the vehicle for at least 30 minutes in temperatures above 0°C (32°F) or at least 60 minutes if temperatures are below 0°C (32°F). This will allow the battery to recover to an acceptable level.*