Vehicle battery

BATTERY WARNING SYMBOLS



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



Make sure 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.

BATTERY CARE

If battery electrolyte comes into contact with your eyes, skin, or clothes, you should remove the affected clothing and flush the skin/eyes with large amounts of clean water. Seek medical assistance immediately.



If swallowed, battery electrolyte can be fatal, seek medical assistance immediately.



The cell plugs and vent pipe must be in place at all times when the battery is connected to the vehicle. Make sure 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 expose the battery to a naked flame or spark as the battery produces explosive, flammable gas.



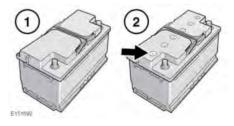
Never jump start (boost), charge, or try to start a vehicle with a frozen battery. Doing so can result in an explosion.



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.



Vehicle battery

Your vehicle is fitted with either an Absorbed Glass Matt (AGM) (1) battery or a low maintenance (2) battery.

Note: AGM batteries are sealed for life and require no maintenance.



Do not attempt to open or remove the top from an AGM battery.

In hot climates, more frequent checks of the low maintenance battery electrolyte level and condition are required. Contact a Retailer/Authorised Repairer to have the battery checked.

CONNECTING JUMP LEADS



Remove all metal jewellery before working on, or near, a battery or boost terminals. Never allow metal objects or vehicle components to come into contact with the battery or boost 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.



Do not expose any battery to a naked flame or spark, as the battery produces explosive, flammable gas.



Never jump start (boost), charge, or try to start a vehicle with a frozen battery. Doing so can result in an explosion.



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 Electric Parking Brake (EPB) is applied, or suitably chock the wheels. Make sure that Park (P) is selected, for automatic transmissions.



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



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 battery.



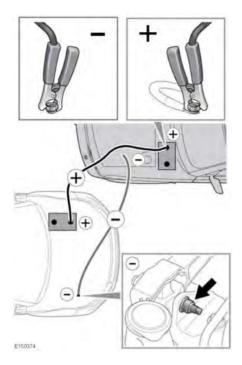
Make sure there is no physical contact between the donor and disabled vehicles, other than the jump leads.

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 the jump leads to the disabled vehicle's boost point terminals, make sure that the donor vehicle's boost point connections are correct and that all electrical equipment has been switched off.



 Connect the positive (Red) jump lead to the recommended positive (+) boost terminal on the donor vehicle.

Note: Refer to the donor vehicle's handbook for the recommended positive boost terminal.

- Connect the other end of the positive (Red) jump lead to the positive (+) terminal on the discharged battery.
- Connect the negative (Black) jump lead to the recommended negative (-) boost terminal of the donor vehicle.

Note: Refer to the donor vehicle's handbook for the recommended negative boost terminal.

4. Connect the other end of the negative (Black) jump lead to the earth point on the disabled vehicle (as illustrated).

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 of the disabled vehicle until after the jump leads are removed.

- **7.** Allow both vehicles to idle for 2 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 donor vehicle.
- **11.** Disconnect the positive (Red) jump lead from the previously discharged battery.
- **12.** Disconnect the positive (Red) jump lead from the donor vehicle.

CONNECTING A STARTING AID

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

- Connect the positive (Red) jump lead to the positive (+) battery terminal of the discharged battery.
- 2. Connect the negative (Black) jump lead to the vehicle's earth point.
- 3. Switch on the starting aid.
- 4. Start the engine and allow it to idle.
- 5. Disconnect the negative (Black) jump lead from the vehicle's earth point.
- **6.** Switch off the starting aid.

7. Disconnect the positive (Red) jump lead from the battery terminal of the vehicle.

REMOVING THE VEHICLE BATTERY

Special tools are required to refit the battery after removal, therefore, battery removal and refit should be carried out only by qualified personnel. Consult your Retailer/Authorised Repairer.

CHARGING THE VEHICLE BATTERY

If the vehicle's battery should require charging, the battery must be removed from the vehicle. Consult your Retailer/ Authorised Repairer.



Battery disconnection, removal and renewal should be carried out only by qualified personnel. Consult your Retailer/Authorised Repairer.



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

REPLACING THE VEHICLE BATTERY

If the vehicle's battery should require replacing, the battery must be removed from the vehicle. Consult your Retailer/ Authorised Repairer.



Battery disconnection, removal and renewal should be carried out only by qualified personnel. Consult your Retailer/Authorised Repairer.



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

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 its 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 recalibrating to operate correctly.

BATTERY MONITORING SYSTEM

The Intelligent Power System Management (IPSM) continuously monitors the condition of the main vehicle battery. If excessive battery discharge occurs, the system will begin to shut down non-essential electrical systems in order to protect the battery.

If the IPSM calculates that the battery's condition is not within the set parameters, there are 2 levels of action which can be taken. Both levels have an accompanying message on the Touch screen, and in the case of the low battery warning, in the Message centre.

Vehicle battery

- Energy Management: Will be displayed on the Touch screen if the engine is not running, and system features are causing excessive battery discharge. After 3 minutes, the IPSM will begin shutting down the vehicle's systems. Normal system operation will resume when the engine is started.
- Low Battery Please Start Engine: Will be displayed on the Touch screen and in the Message centre if the engine is not running. After 3 minutes, the IPSM will begin shutting down the vehicle's systems. Normal system operation will resume when the engine is started.



Only start the engine, if it is safe to do so.

Note: If the message **Low Battery** -**Please Start Engine** is displayed, drive the vehicle for at least 30 minutes in temperatures above 0°C, or at least 60 minutes if temperatures are below 0°C. This will allow the battery to recover to an acceptable level. If normal system operation is not resumed when the engine is switched back off, the battery may not have been sufficiently charged. If safe to do so, restart the engine. If problems still exist, contact your Retailer/Authorised Repairer.