
SF90 XX
STRADALE


SF90 XX
SPIDER

Important note

Some of the information in this pamphlet has been taken from the Owner's Manual supplied with the vehicle. Therefore, any references to chapters refer to the "Owner's Manual" and must be consulted there.

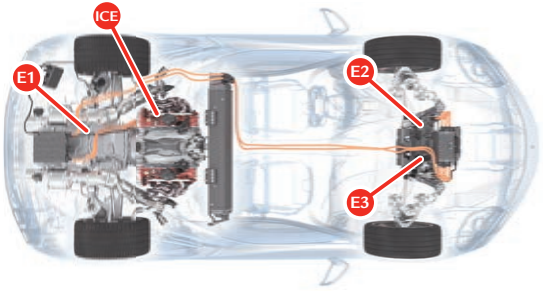

Ferrari

Introduction

The SF90XX Stradale and the SF90XX Spider are hybrid vehicles: traction is provided by an internal combustion engine (**ICE**) and three electric motors (**E1**, **E2**, **E3**) powered by a high voltage battery located behind the seats on the chassis.

The SF90XX Stradale and the SF90XX Spider have the same PHEV (Plug-in Hybrid Electric Vehicle) hybrid system: the internal combustion engine is assisted by three electric motors, two independent ones on the front axle (RAC-E system) and one (MGUK) between the engine and the gearbox at the rear.

In certain driving conditions, the electric motors also act as generators by capturing the kinetic energy that would normally be lost as heat energy and transforming it into electricity to recharge the high voltage battery.



This guide provides the information required to act as safely as possible if this vehicle is involved in an emergency situation. The emergency procedures for the SF90XX Stradale and the SF90XX Spider are similar to those for conventional vehicles with the addition of a number of specific provisions related to the presence of high voltage components. This guide also describes the procedure for deactivating the high voltage system in an emergency.

The images show the SF90XX Stradale unless indicated otherwise.

The main priority for emergency response personnel is to help save the lives of accident victims without exposing the victims or themselves to further risk. This emergency response manual contains information on how quick, safe access to accident victims can be facilitated. Since the materials and production engineering used in the automotive industry are constantly evolving, we recommend using state-of-the-art emergency equipment.

Danger - High voltage

A failure to observe the procedures outlined here during an emergency response can result in severe burns or electric shocks which can also be fatal. Please read this manual carefully to fully understand the characteristics of this vehicle and act correctly if it is involved in an accident. By closely following the procedures indicated here, you will contribute to the success of any emergency response operations.

Whenever you have to intervene on a damaged hybrid vehicle which has been involved in an accident or fire or in rescue or recovery situations, always assume that the vehicle's high voltage system is powered up.

How to identify the vehicle 10
Hybrid propulsion 11
Diagram of hybrid system components 12
Hybrid system precautions 13
Guide to emergency response on a hybrid vehicle 14
Procedure for deactivating the high voltage system 16
Hybrid system batteries 17
Electronic alarm 19
Doors 21
Reactivating the fuel inertia switch 25
Disconnecting the 12V battery 27
Battery charging 28
High voltage and 12V battery charging socket 34
Engine compartment lid 35
Front lid 36
Fuel filler neck 38
Fuel filler flap emergency opening device 41
Guide to extrication 42
Diagram of components for cutting and extrication 43
Using the electric parking brake - EPB 45
Before a trip 45
Starting the vehicle 47
Starting the vehicle 49
Using the gearbox 50
Selecting reverse gear - R 53
Switching off the engine and vehicle system 54
Dimensions and weights 56
Tool kit and tyre inflation and/or repair kit 60
In case of a tyre puncture 62
Replacing a wheel 64
Towing 65
Emergency release of the electric parking brake - EPB 67
Park Lock emergency release 68
Lifting the Vehicle 69

Loading the vehicle onto the trailer 70
Securing the vehicle to the trailer 71
Storing a hybrid vehicle 71
On-line technical information and technical support ... 71



Roadside Recovery

How to identify the vehicle

The SF90XX Stradale and SF90XX Spider are shown below so that they can be easily identified.





However, a collision may damage the vehicle and make identification difficult. In these circumstances, the emergency response personnel must visually inspect the vehicle to ascertain whether high voltage components are present.

The wording “HYBRID VEHICLE” under the chassis number on the left hand side of the windscreen indicates that the vehicle is equipped with a high voltage hybrid system.



SF90XX Stradale



SF90XX Spider

Hybrid propulsion

Architecture

Important note

This vehicle has hybrid propulsion and therefore features and characteristics that are different from conventional vehicles.

The hybrid system architecture has the following main (see page 12)components:

1. Internal combustion engine.

2. Gearbox with electronic differential (E-Diff).

3. Rear electric motor (MGUK) in line with the ICE and positioned between this and the gearbox.

4. Power electronics (inverters) for handling the rear electric motor.

5. Front electric axle (RAC-E) axle with two independent electric machines. The electric axle also provides the only propulsion when in electric drive mode (eDrive).

6. Power electronics (inverters) for handling the front electric motors.

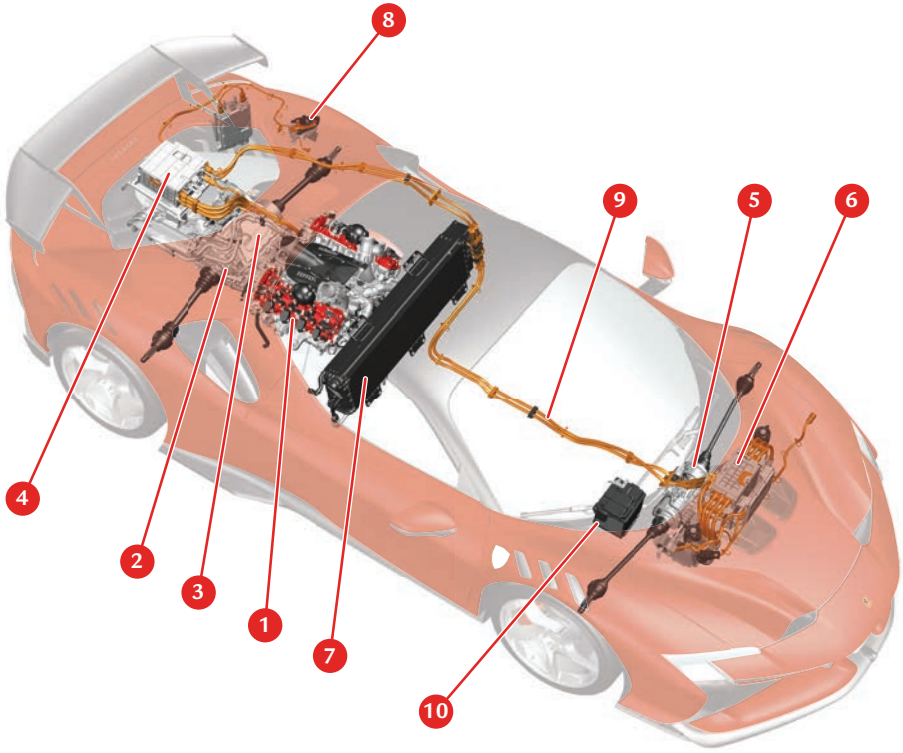
7. High voltage battery.

8. High voltage and 12V battery charging socket.

9. High voltage connector cables.

10. 12V battery.

Diagram of hybrid system components



Hybrid system precautions

The symbol shown below which is included in the caution notes identifies the high voltage electrical parts on the vehicle that may put your safety at risk.



Important note

The high voltage electrical system is powered when the vehicle system is switched on (KEY-ON).

It is no longer powered when the vehicle system is switched off (KEY-OFF) or the inertia switch has been triggered.

Danger - High voltage

In addition to a conventional 12V electrical system, the vehicle also has a 400 volt high voltage system.

High voltage is extremely dangerous and may cause serious burns and a violent electric shock which can result in serious or fatal injury.

Danger - High voltage

Each component in the high voltage system is identified by a special label indicating a potential risk of violent electric shock whereas the cables in the high voltage system have an orange covering.

Danger - High voltage

Risk of serious burns or violent electric shock resulting in injuries that can be fatal.

The high voltage electrical system and high voltage battery are dangerous and may cause burns, other serious injuries or death. Never attempt to remove or tamper with the high voltage cables (with orange covering), the high voltage battery, connectors or any other component in the high voltage electrical system, especially if it appears to be damaged.

Danger - High voltage

During and after activation, the hybrid system components may become very hot since the system uses high voltage to power the electric motors. Be careful of both the high voltage system and the high temperature of the components and always observe the vehicle caution labels.

Danger - High voltage

Never leave the vehicle without performing a KEY-OFF.

When leaving the vehicle, always take the key with you.

Never leave children unattended in the vehicle.

Danger - High voltage

Make sure that the vehicle is switched off (KEY-OFF) before refuelling.

Danger - High voltage

Drivers are responsible for leaving the vehicle without performing a KEY-OFF: drivers must always perform a KEY-OFF before getting out of and leaving the vehicle.

Danger - High voltage

Leaving the vehicle without performing a KEY-OFF can put those who are in the vicinity of the vehicle at serious risk.

Danger - High voltage

Do not push start the engine (ICE): do not attempt under any circumstances to push start the engine down a hill or by towing the vehicle.

Guide to emergency response on a hybrid vehicle

Danger - High voltage

The vehicle is equipped with a number of safety systems which have been designed to protect your safety. These systems help to guarantee safe access to the vehicle under various conditions.

In any case, whenever you have to intervene on a damaged hybrid vehicle which has been involved in an accident or fire or in rescue or recovery situations, always assume that the vehicle's high voltage system is only no longer powered when the vehicle system has been switched off (KEY-OFF) or the inertia switch has been triggered.

In all other cases, it is powered by the high voltage battery.

Danger - High voltage

Failure to observe the following instructions may lead to a risk of fire, serious injury or electric shock which may be fatal.

In the vehicle has been involved in an accident but can still be driven or the vehicle body or underside have been hit (for example, by a post, raised kerb or other street furniture), the high voltage electrical system or battery may be damaged. If this is the case, take the following precautions:

- Stop the vehicle in a safe place to avoid further accidents, deactivate all the systems on the vehicle by performing an ENGINE STOP, if the engine/electric motors are running, or perform a KEY-OFF.

- Manually activate the parking brake.

- Do not touch the high voltage components, cables or connectors.

- If there are exposed electrical cables inside or outside the vehicle, coming into contact with them may cause a violent electric shock. Never touch exposed electrical cables.

- If there is a fire, leave the vehicle as quickly as possible. If the vehicle has a fire extinguisher, use it appropriately after removing it from its housing in the passenger compartment. See the "Passenger compartment accessories" chapter for more information. Never use fire extinguishers that are not specifically for fires caused by electrical equipment and never use water. The use of water, even small amounts, can be dangerous.

Danger - High voltage

Towing is not allowed. Towing can cause serious damage to the vehicle and the high voltage hybrid system.

For more information, see the "Towing" chapter.

Danger - High voltage

Never lift the vehicle using the bottom of the high voltage battery as a point of support. There is a risk of serious and even fatal injury.

For further information on the support points to use to lift the vehicle, see the "Lifting the vehicle" chapter.

Danger - High voltage

If the inertia switch has been triggered, the high voltage system is no longer powered but it must be deactivated and discharged following the procedure outlined in the paragraph "Deactivating and discharging the high voltage system".

Danger - High voltage

NEVER assume that the vehicle is switched off simply because it does not make any noise.

Danger - High voltage

A failure to deactivate the high voltage system before performing normal emergency response procedures can result in serious burns or electric shocks which can also be fatal. To avoid the risk of severe injury, NEVER touch high voltage system cables, connectors or components with your bare hands.

Danger - High voltage

If you have to touch a high voltage system cable, connector or component, always wear suitable Personal Protective Equipment.

How to approach a damaged hybrid vehicle

Precautions that must be taken in any emergency situation involving a hybrid vehicle equipped with a high voltage system are listed below:

- Remove all jewellery (watches, necklaces, earrings, etc). Metal objects conduct electricity.
- Wear suitable Personal Protective Equipment (insulating gloves, insulating hard hat/helmet, insulating boots, protective raincoat).
- Have the following equipment to hand: a powder-based fire extinguisher suitable for extinguishing class A, B, C fires and a non-conductive object, approximately 1.5 metres long, to safely push someone away from the vehicle who may have accidentally come into contact with the vehicle high voltage system.

Stabilising the vehicle

If possible, stabilise the vehicle by applying the electric parking brake EPB (see page 45) before deactivating the 12V electrical system: press the brake pedal firmly and pull the lever on the dashboard to the left of the steering wheel.

Vehicle submerged in water

Danger - High voltage

If the vehicle is immersed completely or partially in water, do not touch any high voltage system cables, connectors or components.

Normally, contact with the bodywork of a hybrid vehicle submerged in water does not pose a high voltage risk and normal extrication procedures can therefore be performed and the vehicle safely moved by following these recommendations:

- remove the vehicle from the water;
- if possible, let the water drain out of the vehicle;
- follow the procedures for stabilising the vehicle and deactivating the high voltage system.

In the event of fire

Danger - High voltage

DO NOT extinguish a fire using small amounts of water. Small amounts of water may cause toxic gas to be emitted due to a chemical reaction with the lithium-ion electrolyte of the high voltage battery.

Danger - High voltage

If the fire is limited in size, a powder-based fire extinguisher suitable for extinguishing class A, B, C fires caused by electrical cables or components, etc. or oil may be used.

Important note

If electric/hybrid vehicles ignite, there is the same risk of harmful combustion fumes as conventional vehicles due to the presence of inflammable materials such as plastic.

High voltage battery damaged and/or detached from the vehicle

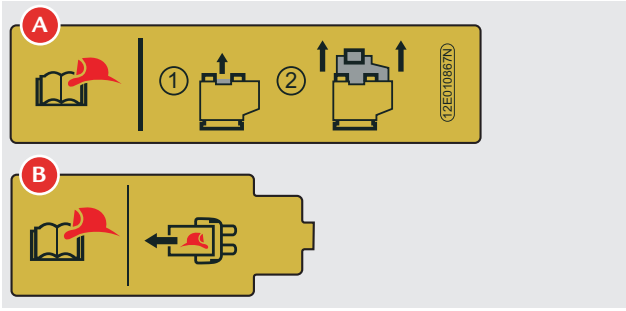
If the battery is damaged and/or detached from the vehicle, the high voltage battery components must be retrieved and raised off the ground with insulating material. The components can be loaded onto a lorry that has insulating material on the trailer and covered with a non-conductive sheet. A special high voltage warning sign must be affixed.

Danger - High voltage

If the high voltage battery is damaged and/or detached from the vehicle, special personal protective equipment must be used to recover it. Risk of electrocution and/or burns.

Procedure for deactivating the high voltage system

Deactivating the high voltage system labels



Located in the engine compartment, label (**A**) indicates the operations that must be performed to deactivate the high voltage system in an emergency using the HV service connector. Label (**B**) is located on the high voltage fuse in the fuse box placed underneath the driver side door pillar and indicates the operations that must be performed to deactivate the high voltage system in an alternative emergency procedure which involves disconnecting the fuse.

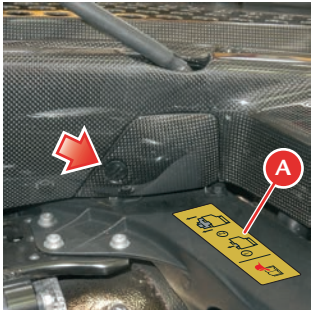
Procedure for deactivating the high voltage system

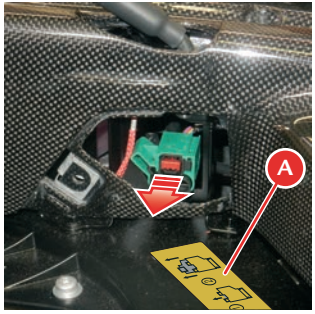
Important note

This procedure may only be carried out by qualified technical personnel, who have the necessary experience, documentation and equipment to work in complete safety.

Perform the following steps in the same order as below.

1. If the vehicle is still running, perform a KEY-OFF (see page 54).
2. Open the engine compartment lid and leave it open, as described in "Engine compartment lid" (see page 35).
3. Open the flap on the engine compartment RH trim panel and turn the screw shown in the figure a quarter turn counterclockwise.
4. Go to the HV service connector and pull the release device shown in the figure out, as indicated on label **A** affixed to the trim panel.

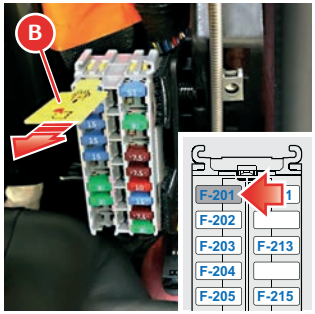




If the HV connector is not accessible, follow the procedure described below:

- Remove the protective cover on the LH rear side, as shown in the figure.
- Remove the fuse shown in the figure with tab **B**.





Danger - High voltage

When deactivated with the HV service connector or by removing the fuse, the high voltage system does not discharge immediately: as a precaution, wait at least 30 seconds before working on the vehicle.

Never touch or cut any of the high voltage system components, cables or connectors: there is a risk of serious and even fatal injury.

Hybrid system batteries

The vehicle has two types of battery:

- high voltage 400 Volt batteries for powering the three electric motors (traction battery) and charge the 12V battery
- lower voltage 12V battery for powering auxiliary equipment on the vehicle.

Danger - High voltage

Never carry out any operations on the batteries by yourself. Always get the FERRARI SERVICE NETWORK to perform any operations on the batteries. It has qualified and specialised technicians with the necessary experience, documentation and equipment to work in complete safety.

High voltage battery

The pack of series-connected cells that form the high voltage battery is located behind the seats on the chassis.

Battery autonomy depends on driving style: the system that controls the power unit constantly monitors the battery charge level and recharges it in certain driving conditions.

The high voltage battery charge level (SOC) is always displayed on the instrument panel: for more information, see the "Battery charging" (see page 28) chapter.

Warning

Like all batteries, the high voltage battery should also be kept at a good charge level. If you will not be using the vehicle for over a week, you must connect the vehicle to the mains using the charge lead supplied with the vehicle.

For further information on charging, refer to the special manual included in the on-board documentation.

12V battery

The other type of battery on the vehicle is a maintenance-free sealed 12V lithium ion battery located behind the passenger-side footrest.

This battery is part of the low voltage system and is used to power on-board auxiliary equipment (airbags, lights, windscreen wipers, audio systems, etc.) without having to use the internal combustion engine.

Warning

Do not place the battery near sources of heat, sparks or naked flames.

Warning

Never disconnect the 12V battery from the electrical system or remove it from the vehicle, see label "D" in the chapter "Identification, homologation and warning plates and labels". This must only be performed exclusively by the FERRARI SERVICE NETWORK.

Warning

Connect the vehicle to the mains using the charge lead supplied with the vehicle to keep the 12V battery at a sufficient charge level when the vehicle is not in use.

For further information on charging, refer to the special manual included in the on-board documentation.

Warning

The only way to charge the 12V battery, without removing it from the vehicle, is to use the supplied power lead and connect it to the mains. Do not use battery chargers connected to the 12V battery terminals.

Emergency starting

Warning

The 12V battery CANNOT be used for emergency starting of the engine.

Never attempt to perform an emergency start by connecting the battery to the battery on another vehicle, a portable jump starter or an external battery.

Reconnecting the battery

Place the clamp of the disconnected cable on the negative battery terminal and fasten it by closing the locking lever.

Each time the battery is reconnected, do the following before starting the engine:

- close both doors and close the front lid;
- lock and unlock the doors using the remote control;
- open the front lid using the remote control;
- close both doors, fully raise the driver side and passenger side windows to their upper limit and check that the windows move down to the “target position” when the doors are opened.

Electronic alarm

The electronic alarm system performs the following functions:

- remote control for central door locking/unlocking;
- perimeter surveillance, detecting if doors and lids are opened;
- seat surveillance;
- vehicle movement surveillance.

Activation

From outside the vehicle, press button **A** on the key once to activate the alarm system:

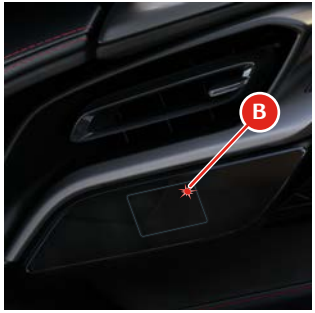
- the turn indicators flash once;
- the system beeps once;
- The red LED **B** on the secondary control panel, on the LH side of the dashboard, flashes;
- the central door locking system of the vehicle is activated and the doors are locked.

The system activates after approximately 25 seconds.

By pressing button **A**, other functions, in addition to the anti-theft system, are activated: see the "Vehicle keys" chapter for more information.

When the electronic alarm is activated, it can be deactivated to open the front lid by pressing button **C** on the key twice; in this case, the seat surveillance and anti-lift sensors (if available) are temporarily deactivated.





If the front lid is then closed, the sensors will be reactivated.

If the turn indicators and the red LED **B** on the dashboard flash 9 times when the alarm system is activated, this means that one of the doors or

the front lid is open or not closed properly and is therefore not protected by the perimeter surveillance function. If this is the case, check that the doors and front lid are closed properly and close any door or lid that is open without deactivating the alarm system. When the luggage compartment is closed properly, it will be included in the perimeter surveillance function. If an attempt is made to lock the vehicle and a compartment is open, it will remain unlocked but the alarm will be activated. The engine compartment is the only compartment that allows the vehicle to be locked even if open.

Important note

For the SF90XX Spider only, the alarm system is activated even when the RHT system is open. Items such as leaves that fall into the passenger compartment can therefore unintentionally activate the anti-theft system.

Warning

If the turn indicators and the red LED on the dashboard flash 9 times when the alarm system is activated and the doors and front and rear lids are properly closed, it means that the self-diagnostic feature has detected a malfunction in the system. Contact the FERRARI SERVICE NETWORK to have the system checked.

Deactivation

From outside the vehicle, press button **C** on the key once to deactivate the alarm system:

- the turn indicators flash twice;
- the system beeps twice;
- the red LED **B** on the dashboard goes out;
- the ceiling lights come on;
- the central door locking system of the vehicle is deactivated and the doors are unlocked.

Pressing button **C** once if the function is activated from the instrument panel unlocks the doors and the front lid and also turns on the low beams for 30 seconds. The alarm system is deactivated and you can now get into the vehicle and perform a KEY-ON.

By pressing button **C**, other functions, in addition to the anti-theft system, are deactivated: see the "Vehicle keys" chapter for more information.

Deactivating the anti-lift alarm (if available)

Press button **D** (if available) on the roof panel dome light to deactivate the anti-lift function of the alarm system. When this function is deactivated, the LED on the button will flash for about 3 seconds and will then turn off.



Alarm memory

If, when the vehicle is started, a pop-up with the CODE symbol appears on the instrument panel for 10 seconds after the system diagnosis

cycle, together with the message “Break-in attempted”, this means there has been an attempt to break into the car, causing the alarm to activate.

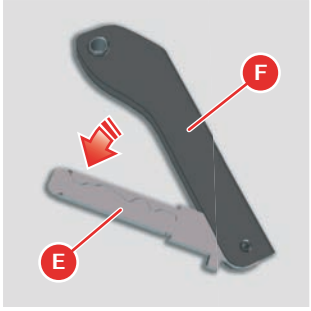
When the engine/motors are switched on, the alarm system memory is reset.

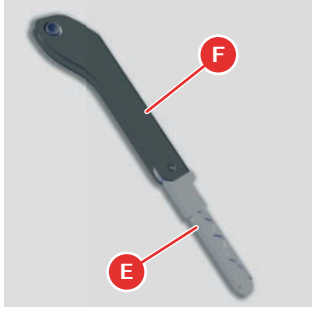
Flat remote control battery

If you cannot open the door after pressing button C on the key, the remote control battery may be flat.

If the remote control battery is flat, use the emergency key supplied with the keys to get into the vehicle.

- Pull out the metal insert E from the main part F of the emergency key and block it in a fully pulled out position.
- Press the external handle G on the driver-side door and hold it down.
- Put the metal insert F into the lock on the bottom of the handle recess and turn it counterclockwise to deactivate the door locking device: the alarm siren will activate.
- Remove the emergency key, open the door and get into the vehicle. Press the ENGINE START/STOP button and do a KEY ON. The alarm siren will deactivate after KEY ON.









Homologation

The installed electronic alarm system complies with EU (European Union) regulations on electromagnetic compatibility and it is marked accordingly.

For those markets that require the transmitter and/or receiver marking, the homologation number is found on the component.

Doors

General information

The key-less system on the vehicle allows you to open the doors while the key with remote control is in your pocket or you are at a maximum distance of 50 cm from the opening handle.

Important note

The key-less system works via a wireless connection. To avoid a risk of theft caused by intercepting this connection, we recommend - when the vehicle is not being driven - keeping the keys in a special metal container (e.g. Faraday pouch). For information on this product, contact the FERRARI SERVICE NETWORK.

The door locks are fully electric and relays are used instead of the traditional mechanical devices.

In addition to the electric lock, the driver-side door also has a mechanical lock which can be opened using the emergency key if the remote control battery is flat, as described in the chapter "Electronic alarm".

When a door is opened, if the window was completely closed, it automatically moves down by approximately 2 centimetres (to its “target position”) to avoid colliding with the upper weather strip.

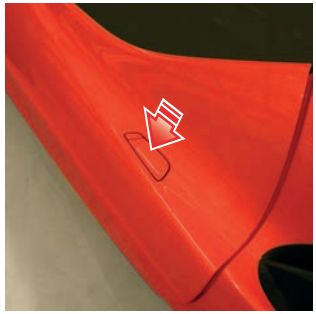
When the door is closed, the window automatically moves up from this position until it reaches the “upper limit”. If the window is manually lowered by the user below the "target" position, it will not be automatically closed when the door is closed.

Opening the doors from outside

To open the vehicle using the external handle, the vehicle does not have to be unlocked: if the handle is used with the key in the driver's pocket, the window is lowered, the vehicle is unlocked and the alarm is automatically deactivated. Only the driver door can be unlocked or all the doors depending on the "Driver only" setting selected on the instrument panel, if the driver door handle is used. If the same operation is performed using the passenger door, on the other hand, the entire vehicle is unlocked, as described in "Vehicle keys". The front lid remains closed until it is opened using the handle inside the vehicle.

With the anti-theft system deactivated and the key in your pocket or within a range of 50 cm, press the handle where indicated and open the door: the window will move down to its “target position”.

From this position, when the door is closed, the window automatically moves up until it reaches the “upper limit”.



Warning

Always carefully check manually that the doors have been closed properly to prevent them from opening while driving.

WAL (Walk Away Locking) function

This function is used to automatically lock the doors and front lid when the key is moved from inside the vehicle to outside or when a door opened using the passive entry system is closed again with the key outside the vehicle. Automatic locking occurs if the driver with the key moves at least 1.5 m away from the vehicle. If the driver remains within this range, after a timeout of approx. 5 minutes, the WAL function will be deactivated and the doors and lid will not be locked.

In addition, the WAL function will be deactivated in the following situations:

- when the doors are unlocked or locked by pressing the button on the key (if the user locks the vehicle, the WAL function does not lock it again);
- deactivating the function by pressing button on the key twice;

- if a valid key remains inside the vehicle and the doors are locked when the WAL function locks it;
- if the key is not detected when it is moved from inside the vehicle to outside (e.g. due to a flat battery);
- if a door is left open or the timeout expires because the key remains in the 1.5 m range for too long;
- the vehicle is in motion;
- there is a switch from KEY-OFF to KEY-ON or the vehicle is already in KEY-ON.

Locking the doors from inside

Both doors can be locked by activating/deactivating button **A** on the roof panel. When the door lock is activated, the light on button **B** comes on.

To deactivate the door lock, press button **A** until the light goes out.



The function that automatically inserts the door lock when the vehicle is moving at a speed of 20 km/h or over can be activated using the controls on the RH spoke of the steering wheel.

Call up the "Settings" screen on the instrument panel, go to the "Car" menu and flag the "Automatic doors lock" function in the "Doors and mirrors" submenu.



Opening the doors from inside

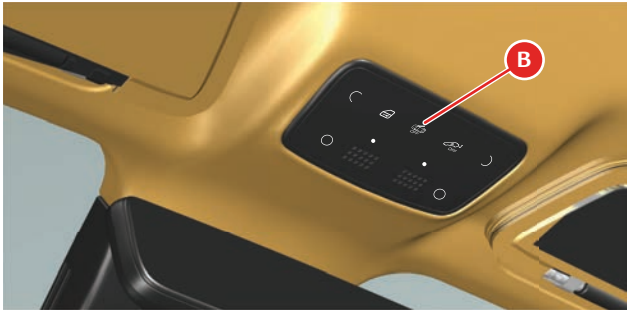
Press the button shown on the inner door panel to release the lock and open the door: the window will move down to its “target position”. From this position, when the door is closed, the window automatically moves up until it reaches the “upper limit” (if the window is manually lowered by the user below the "target" position, it will not be automatically reclosed when the door is closed).

The button for opening the door from inside is deactivated at a speed of over 8 km/h. Pressing the unlock button unlocks both doors.





Press button **B** on the roof panel to deactivate the switching on of the dome lights when the doors are opened and closed at KEY OFF.



Emergency opening of the doors from inside

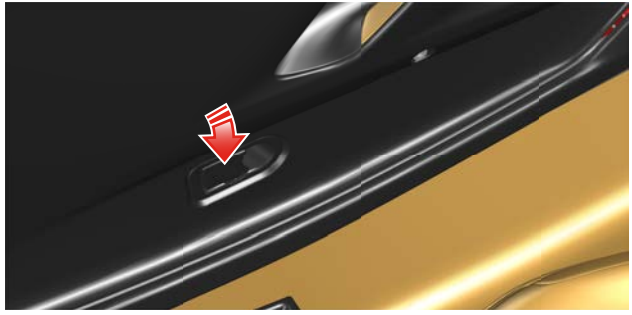
If the door unlocking system using the button on the inner door panel is not working properly, the lock can be manually released using the lever underneath the panel in the lower part of each door.

Pull the pull ring out. When the pull ring comes out, you can hear a click. Turn the pull ring until the lock is unlocked and the door opens.

After releasing the lock, the lever must be moved back into its original position and inserted into place: when it has been inserted,you can hear a click.

Important note

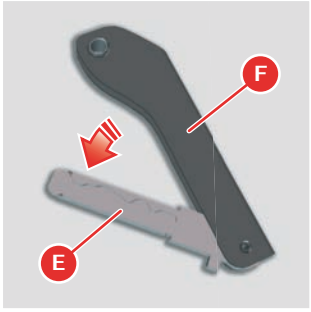
Contact the FERRARI SERVICE NETWORK as soon as possible to correct the malfunctioning.

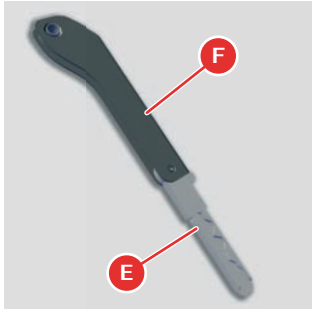


Emergency closing of the doors from outside

If the 12V battery is flat, use the emergency key supplied with the keys to close the vehicle.

- Pull out the metal insert **E** from the main part **F** of the emergency key and block it in a fully pulled out position.
- Press the external handle **G** on the driver-side door and hold it down.
- Put the metal insert **E** into the lock on the bottom of the handle recess and turn it clockwise to activate the door locking device.
- Remove the emergency key.









Important note

In this case, the window does not move into its "target position" when the door is locked and the door must be slowly accompanied until it closes to avoid damaging the window which may collide with the weather strip.

Important note

Contact the FERRARI SERVICE NETWORK as soon as possible to correct the malfunctioning.

Reactivating the fuel inertia switch

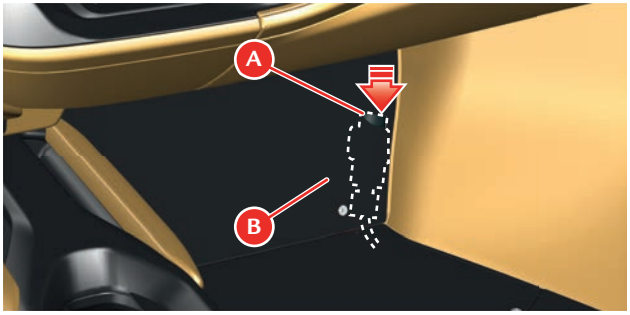
The fuel inertia switch is a safety device which deactivates the ICE fuel pump relays if a collision occurs.

A pop-up appears on the instrument panel with a symbol and specific message, a special warning light comes on, as described in the chapter "List of symbols and warning lights on the instrument panel", and the hazard warning lights come on to indicate that the inertia switch has been activated.

When the fuel inertia switch is activated, the doors are also unlocked (if locked) and the dome lights come on.

Warning

The fuel pump relays can be reactivated by pressing the button on the inertia switch **A** which can be accessed from the flap on the top outer corner of the passenger-side footrest **B**.



Important note

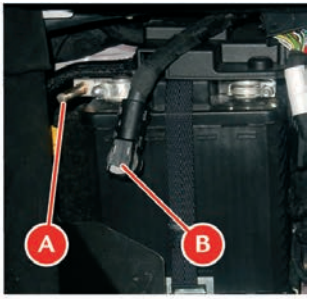
If a collision occurs and the airbags are deployed, the fuel pump relays cannot be reactivated for safety reasons. If this occurs, contact the Ferrari Service Network.

Disconnecting the 12V battery

The battery is situated behind the footrest on the passenger side. To disconnect the power supply from the battery to the low voltage electrical system, remove the cable with quick release **B** from pin **A** on the negative terminal of the battery.

After reconnecting or replacing the 12V battery, the new component must be reintroduced to the system and all the self-adaptive parameters must be reset before starting up the vehicle. To do this, contact the FERRARI SERVICE NETWORK.





Battery charging

A power lead with a control unit is supplied with the vehicle that has a PWM (Pulse With Modulation) safety system which is used to charge both the high voltage and the 12V battery and keep the charge level constant when the vehicle is not in use.

This device should be connected to the socket on the vehicle and the mains socket.

The batteries can also be charged using certified charge points/wall boxes installed in charging stations of the following types:

1. charging stations with public charging points not equipped with integrated charge cable - in this case, an additional charge cable (Mode 3 cable) must be used, which is not included with the vehicle;
2. charging stations with semi-public charging points equipped with integrated charge cable.

Important note

To maintain an optimum charge level (SOC) of the 12V battery and high voltage battery on the hybrid system and help it last longer, FERRARI recommends ALWAYS connecting the supplied power lead to the mains socket when the vehicle is not in use.

The supplied power lead is designed to charge the batteries when the vehicle is not in use and also serves as a battery conditioner. Consequently, it is not suitable for charging the high voltage battery on the hybrid system rapidly when the battery has been discharged as the result of heavy-duty use of the vehicle (e.g. on the race track).

Warning

If you will not be using the vehicle for over a week, the vehicle must be connected to the mains using the supplied lead. Failure to do so may stop both batteries working properly and cause permanent damage to them.

Low battery charge warning

When the vehicle is stopped and a KEY-OFF performed, if the high voltage battery charge level (SOC) is low, a message prompting the driver to connect the charge plug appears accompanied by a special symbol described in the chapter "List of symbols and warning lights on the instrument panel" appears on the instrument panel.

This warning varies according to the high voltage battery charge level:

- If the battery charge level (SOC) is low or there is cell imbalance, a pop-up appears with a warning to connect the charge plug if the vehicle is not used for a long period of time.
- If the battery charge level (SOC) is very low or there is significant cell imbalance, a pop-up appears with a warning to connect the charge plug immediately.
- If the discharge condition has damaged the hybrid system components (degradation or failure), the warning tells the driver to go to the nearest FERRARI SERVICE NETWORK and charge the battery.

Important note

In all cases, charging must be done by carefully following the procedure indicated in the special manual included in the on-board documentation.

Access to the power socket

The socket for connecting the supplied power lead or the charging station lead is located on the LH side of the vehicle and may vary from the one shown according to market requirements. To access the socket, open the flap as indicated in the chapter "High voltage and 12V battery charging socket" (see page 34).

Connecting the power lead to the vehicle

Important note

This paragraph only describes how to connect the supplied power lead to the vehicle socket. As far as the order the operations are performed in and connection to the mains are concerned, follow the instructions given in the special manual included in the on-board documentation.

Before connecting the lead, make sure that the parking brake has been engaged and that the vehicle is close to the mains socket.

Danger - High voltage

- If the power lead is connected to the domestic power grid, the plug must be inserted in a suitable socket that has been correctly installed and earthed in accordance with local regulations and is not damaged in any way.

- Always check that the current and voltage characteristics of the mains socket match the requirements of the power cable device included with the vehicle. The specifications of the power cable device equipping the vehicle are indicated on the back of the component. Risk of overheating and fire.

- Children and pets must be supervised when in the vicinity of the charge lead when it is connected to the mains.

- Never connect the power lead if there is a risk of a storm or lightning.

- Never connect the power lead to an extension lead or multiple socket and do not use adaptors.

- Always place the power lead where it cannot be stepped on, damaged or cause personal injury.

- Do not use the power lead if it is damaged: a damaged or faulty cable can only be repaired or replaced by the FERRARI SERVICE NETWORK.

- Never use the power cable when still coiled and stowed in its case

- Always lay the power cable out before use, avoiding excessively tight bends and making sure that it cannot be crushed or pinched. Do not use extension leads.

- To prevent the infiltration of liquids affecting the high voltage cables during atmospheric events or when washing the vehicle, always put the internal protective cap (if provided) on the socket once the power lead plug has been removed.

- Unwind and lay out the cable, avoiding excessively tight bends and making sure that it cannot be crushed or pinched.

- DO NOT use extensions of any type. DO NOT use adapters of any type.

Important note

The engine must not be started up as long as the power lead is connected to the vehicle socket. If the instrument panel is on, a pop-up appears with a message accompanied by a special symbol.

Warning

Never try and start the vehicle with the power lead connected.

Take the power lead for charging the battery out of the bag.

Make sure that the lead is not damaged: if damaged, do not use it and contact the FERRARI SERVICE NETWORK to get it replaced.

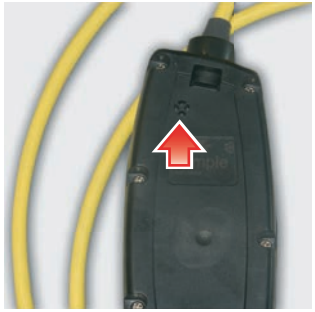
Make sure that the vents on the back of the control unit, shown in the figure, are open and clean.

Warning ⚠

Do not close or cover the vents on the back of the control unit.

Do not put objects into the vents.





If the power lead is very dirty, clean it as described in the chapter "Cleaning the battery charging power lead" before using it.

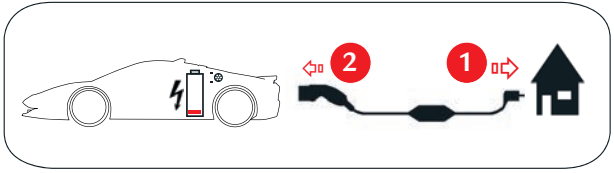
Unwind and lay out the cable, avoiding excessively tight bends and making sure that it cannot be crushed or pinched. Do not use extension leads.

Remove the indicated protective cap from the charge socket on the vehicle and clip it onto the holder on the flap (for EU countries only) / open the protective flap (NON-EU countries).





Follow the same order for connecting the battery charging lead indicated in the special manual included in the on-board documentation and summed up in the figure.



After removing the protective cap, place the power lead plug in the vehicle socket and push it fully in.



Danger - High voltage

Do not attempt to remove or tamper with the power lead connection sockets. Risk of serious burns or electric shock resulting in injuries that can be fatal.

Warning

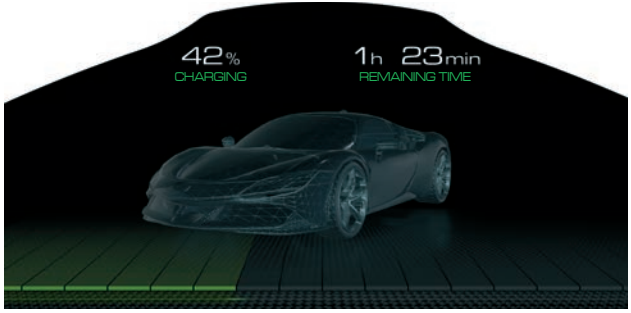
If the vehicle side plug of the power cable is not connected or not plugged in correctly, a warning message is displayed on the instrument panel.

Important note

In order to perform the charging procedure correctly, you must follow the instructions given in the special manual included in the on-board documentation.

Charging is only possible if the vehicle is locked: charging can be interrupted and the power lead plug released by using the buttons on the remote control as indicated in the chapter "Vehicle keys".

After KEY-OFF with the vehicle unlocked using the remote control, the power lead connected and recharging in progress, the instrument panel displays the screen shown in the figure, with the charge percentages at that time and the remaining time needed to complete charging. This screen remains displayed according to the key cycle and timeout.



With the instrument panel on, the connected power lead is displayed on the instrument panel with the special green symbol shown in the figure.

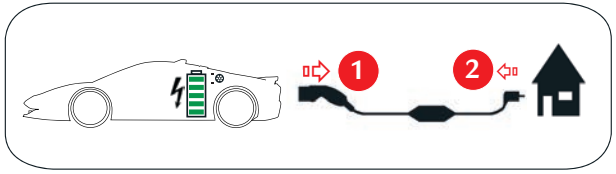
If there are connection problems, a message appears with the same symbol in amber and the system switches to "recovery" status.

Once charging has been completed, the lead plug in the vehicle socket must be released by pressing the release button indicated on the remote control, as described in the chapter "Vehicle keys".





After charging, follow the same order for disconnecting the power lead indicated in the special manual and summed up in the figure.



Fit the protective cap.

Wind up the power cable, avoiding excessively tight bends, and put it into its bag.

Fit the indicated protective cap onto the charge socket on the vehicle (for EU countries only) / close the protective flap (NON-EU countries)

Danger - High voltage

ALWAYS check that the power lead has been disconnected before starting up the vehicle.

Emergency release procedure for charge socket flap on vehicle

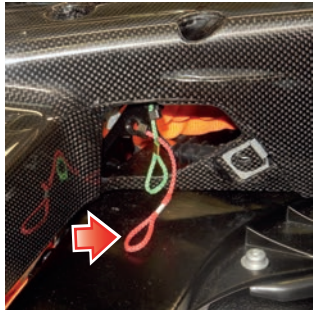
A specific message is displayed on the instrument panel to warn the driver In case of malfunction of the charge socket flap release button. In this case, the flap may be opened with an emergency procedure using the specific cable accessible from the engine compartment.

To access the emergency cable, after lifting the engine lid as described in "Engine compartment lid" (see page 35), remove the flap on the engine compartment LH trim panel.

Turn the screw shown in the figure a quarter turn counterclockwise and remove the flap.

Take out the red cable and pull it to release the lock and open the external flap.







Important note

If the emergency procedure has to be used frequently, have the device checked by the FERRARI SERVICE NETWORK.

Warning

The emergency manual release procedure may only be carried out by a specialised service centre technician. In an emergency, contact a FERRARI SERVICE NETWORK centre.

Emergency release of charge connector (for EU countries only)

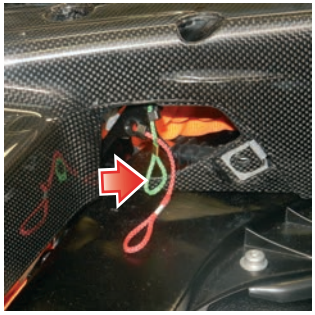
In case of malfunction of the relative button on the remote control fob, an emergency release procedure may be performed using the green cable accessible from the engine compartment.

To access the emergency cable, after lifting the engine lid as described in "Engine compartment lid" (see page 35), remove the flap on the engine compartment LH trim panel.

Turn the screw shown in the figure a quarter turn counterclockwise and remove the flap.

Take out the green cable and pull it to release the charge connector.







Important note

If the emergency procedure has to be used frequently, have the device checked by the FERRARI SERVICE NETWORK.

Warning

The emergency manual release procedure may only be carried out by a specialised service centre technician. In an emergency, contact a Ferrari Service Network centre.

Charging system failure warnings

If the plug-in charge system malfunctions, a message on the instrument panel will inform the user and suggest which checks and/or actions should be carried out to resolve the problem.

Examples of these warnings are plug-in recharge not available, LVB 12V recharge not available or next vehicle start not available, etc.

High voltage and 12V battery charging socket

The socket used to charge the high voltage battery and the 12V battery by way of the special power lead supplied with the vehicle or the charging station lead is located on the LH side of the vehicle. The socket can be accessed by opening the external flap.

Opening the charge flap

For the SF90XX Stradale only, the charge flap can only be opened in the following conditions:

- the vehicle must be stationary;
- the engine and electric motor must be switched off (ENGINE STOP);
- the instrument panel must be on;
- the parking brake (EPB) must be engaged.

For the SF90XX Spider only, the charge flap can only be opened in the following conditions:

- the vehicle must be stationary;
- the engine and electric motor must be turned off (ENGINE STOP) and the hard top must be either open or closed especially if the charge flap is opened using the cable (manual opening); if the hard top is moving, the cable will be severed by the hard top;
- the instrument panel must be on;
- the parking brake (EPB) must be engaged.

To open the charge socket flap, press the button shown by the arrow on the driver-side inner door panel: the flap will open automatically and a pop-up will be displayed on the instrument panel with the message "Charging flap open".

Before charging the batteries, wait for the message to appear.





Warning

If the conditions that allow the charge flap to be opened are not met or the system that controls the opening of the charge flap is faulty, pop-up messages specifically for each situation will be displayed on the instrument panel.

To charge the vehicle batteries, see the "Battery charging" (see page 28) chapter and the special manual included in the on-board documentation.

Closing the charge flap

To close the charge flap, push it until it clicks in place.

If the charge flap is left open, after charging, a pop-up message will appear on the instrument panel prompting the driver to close it.

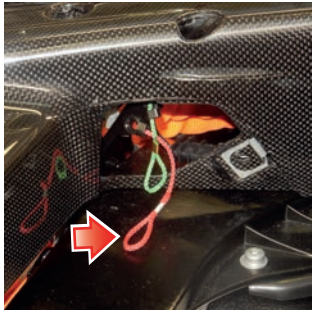
Emergency opening of charge flap

If the flap does not open when the button on the driver-side door panel is pressed, this condition is indicated by a pop-up and symbol on the instrument panel. If this is the case, the vehicle has an emergency opening cable which can be accessed on the LH side of the engine compartment after lifting the lid as described in "Engine compartment lid" (see page 35).

Remove the protective cover by turning the screw shown a quarter turn counterclockwise.

Remove the red cable and pull it to release the lock and open the external flap.





Important note

After opening the flap using the emergency cable, have the opening device checked by the FERRARI SERVICE NETWORK.

Closing the charge flap

After removing the power lead plug from the vehicle socket, put on the protective cap.

Check that the cap tether is inside the compartment and close the external flap by pressing it until it clicks into place.

Engine compartment lid

Opening

The engine compartment lid can be opened from inside the vehicle.

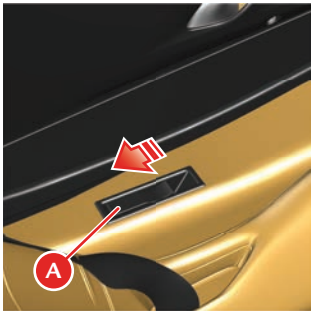
Pull the release lever **A** on the underdoor footrest on the driver side.

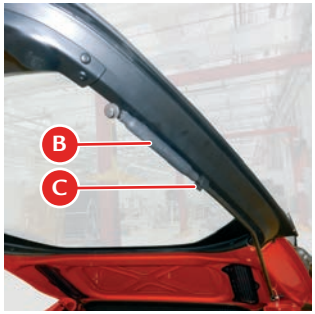
Warning

To avoid damage, check there is enough room to open the luggage compartment lid.

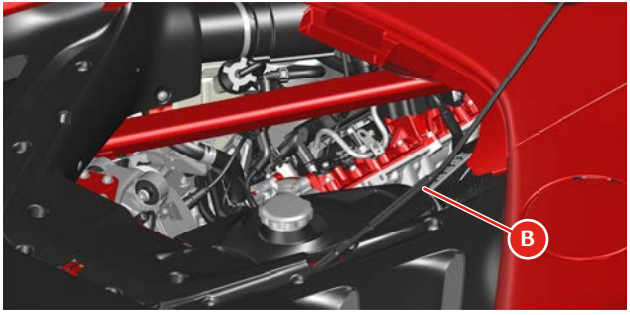
Lift the engine compartment lid and keep it raised.

Unhook the end of the support rod **B** from the clip **C**, on the RH side of the lid.





Pull the support rod down and put the end in the special slot on the frame, as shown in the figure.



Closing

Take the end of the support rod **B** out of the slot on the frame.

Put the rod onto the clip **C** and lower the engine compartment lid until it rests on the lock.

Then press the lid above the lock until you hear it click in place.

Warning

Before opening or closing the engine lid, make sure there are no persons, animals or objects in the immediate vicinity.

Warning

Always check manually that the engine compartment lid has been closed properly to prevent it from opening while driving.

Front lid

Opening

The front lid can be opened from both outside and inside the vehicle.

When outside the vehicle, press the button indicated on the key fob twice within 500 ms. When inside the vehicle, press the release button indicated on the driver side door panel.





Stand in front of the vehicle, slightly lift the lid and move the retaining lever indicated up to lift it.

Unhook the end of the support rod from the clip, extend it and put the end in the special slot.

Warning

To avoid damage, check there is enough room to open the front lid.





Important note

After disconnecting the vehicle 12V battery from the electrical system, a door lock/unlock cycle must be performed using the buttons on the key fob when reconnecting so that the release button on the driver-side door panel resumes normal operation (electronic system self-acquisition procedure).

Closing

Take the end of the support rod out of the slot. Put the rod on the clip and lower the front lid until it rests on the lock.

Then press the lid above the lock until you hear it click in place.

Warning

Always check manually that the front lid has been closed properly to prevent it from opening while driving.

Warning

Only open or close the front lid when the vehicle is stationary.

Warning

Before opening or closing the front lid, make sure there are no people, animals or objects in the immediate vicinity.

Emergency Opening

If the front lid release button on the driver-side inner door panel does not work, there is a string for manual emergency opening underneath the dashboard to the left of the steering wheel as shown in the figure.



Fuel filler neck

Warning

Refuelling in enclosed areas is not allowed.

Always turn off the engine and electric motor when refuelling.

Do not smoke or use naked flames when refuelling. There is a risk of fire.

The following can be harmful for your health: skin contact with petrol, inhaling petrol fumes.

The fuel filler neck is located on the RH side of the vehicle and can be accessed by opening the external protective flap.

Opening the fuel filler flap

For the SF90XX Stradale only, the fuel flap can only be opened in the following conditions:

- the vehicle must be stationary;
- the engine and electric motor must be switched off (ENGINE STOP);
- the instrument panel must be on;
- the gearbox must be in the "P" (parking) position;
- the parking brake (EPB) must be engaged.

For the SF90XX Spider only, the fuel flap can only be opened in the following conditions:

- the vehicle must be stationary;
- the engine and electric motor must be turned off (ENGINE STOP) and the hard top must be either open or closed especially if the charge flap is opened using the cable (manual opening); if the hard top is moving, the cable will be severed by the hard top;
- the instrument panel must be on;
- the gearbox must be in the "P" (parking) position;
- the parking brake (EPB) must be engaged.

Important note

After a driving cycle, check that the message "Fuel filler flap open" appears on the instrument panel after pressing the flap opening button.

If the message "Refuelling not available" appears, press the flap opening button a second time.

To open the fuel filler flap, press the release button shown by the arrow on the driver-side inner door panel: the flap will open automatically and a

pop-up will be displayed on the instrument panel with the message "Fuel filler flap open".

Capless filler neck

This vehicle has a capless fuel filler. This system allows you to refuel by simply placing the nozzle in the filler neck without having to unscrew a cap and screw it up again. See the specific pamphlet for more details.

The sealing function of a conventional filler cap are performed by two flaps arranged in sequence inside the filler neck, which are both equipped with airtight seals. The internal flap is locked by a series of “teeth”: and the only way to open the flap correctly is by inserting a fuel pump nozzle or the funnel in the tool kit.

Closing the fuel filler flap

To close the fuel filler flap, push it until it clicks in place.





Emergency opening of fuel filler flap

If the release button on the driver-side inner door panel does not work, the vehicle has an emergency cable for manually releasing the fuel filler flap.

To access the emergency cable, after lifting the engine lid as described in "Engine compartment lid" (see page 35), remove the flap on the engine compartment RH trim panel.

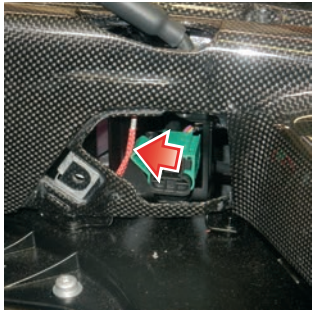
Turn the screw shown in the figure a quarter turn counterclockwise and remove the flap.

Pull the red cable shown in the figure to manually release the fuel filler flap.

Warning ⚠

The emergency cable for manually releasing the fuel filler flap must only be used by specialised workshop technicians. In an emergency, contact the FERRARI SERVICE NETWORK.





Warning

Before refuelling, ALWAYS wait for the message "Fuel filler flap open" to appear on the instrument panel. Once the message appears, refuel within 15 minutes.

If the fuel filler flap remains open for more than 15 minutes, an acoustic signal (horn) is emitted which prompts the driver to close the flap. After the acoustic signal is emitted, you must do the following to continue to refuel:

- close the fuel filler flap;
- repeat the "Opening the fuel filler flap" procedure described above.

Warning

Place the nozzle in the filler neck carefully to avoid damaging the device seal.

Do not try to open the external flap of the filler neck by pushing it with your fingers or lever it open using unsuitable tools (e.g., screwdrivers). This may damage the external flap mechanism and the seal.

Warning

Do not overfill the fuel tank: this may cause the fuel to leak out.

After fuelling, wait for about 10 seconds before slowly removing the nozzle from the filler neck: in this way, the last drops of fuel will flow into the tank and will not drip onto the vehicle.

Warning

Do not place funnels or portable container nozzles in the filler neck.

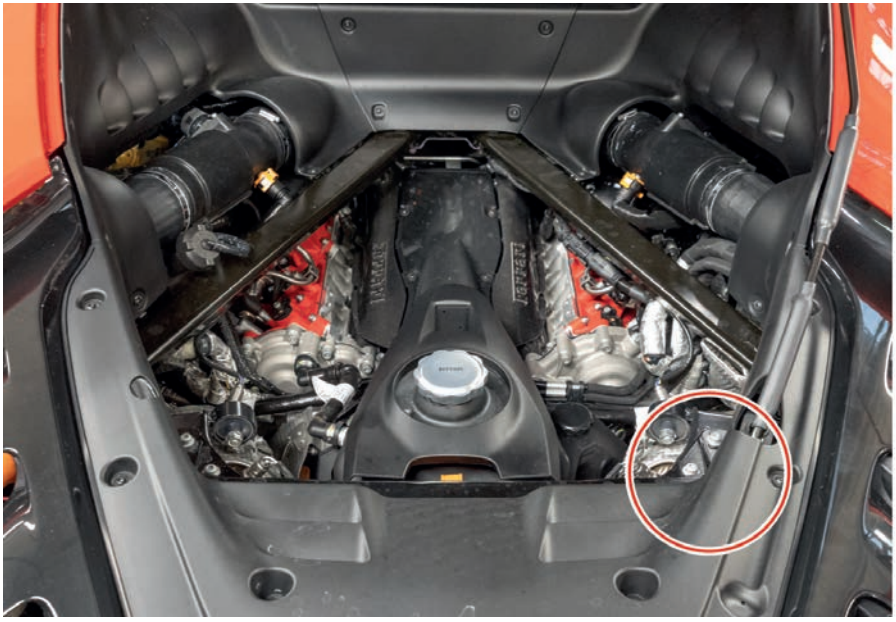
If it is necessary to refuel from a portable fuel container, only use the funnel included in the tool kit, which releases the automatic filler neck locking mechanism.

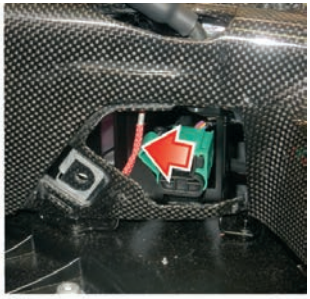
Warning

If the conditions that allow refuelling are not met or the system that controls the opening of the fuel filler flap is faulty, pop-up messages indicating that refuelling is not available or malfunctioning will be displayed on the instrument panel.

Fuel filler flap emergency opening device

To release the closing device and manually open the fuel flap, pull the cable indicated on the RH rear side of the engine compartment.





Guide to extrication

When arriving on the scene of an accident, emergency response personnel must follow their standard procedures for car accidents.

Important note

NEVER assume that the vehicle is switched off simply because it does not make any noise.

Before proceeding with extrication:

- Immobilise the vehicle by clamping the wheels and (if possible) activating the EPB (see page 45).
- Perform the Procedure for deactivating the high voltage system (see page 16).
- Refer to the Diagram of components for cutting and extrication (see page 43).

Danger - High voltage

Do not cut the high voltage hybrid system areas: there is a risk of serious and even fatal injury.

Danger - High voltage

Do not cut the hybrid system high voltage battery: there is a risk of serious and even fatal injury.

Danger - High voltage

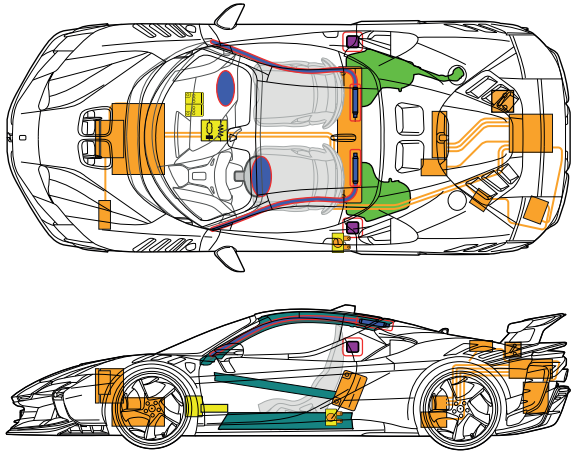
If vehicle components have to be removed, NEVER touch any of the high voltage system components or the high voltage cables. there is a risk of serious and even fatal injury.

Danger - High voltage

Emergency response personnel can cut the vehicle when at least 30 seconds have elapsed after deactivation of the high voltage system with the exception of the areas where the high voltage system cables, connectors and components and the high voltage battery are located.

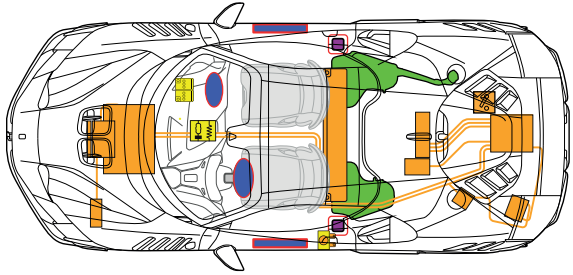
Diagram of components for cutting and extrication

	Airbag		Stored gas inflator		Seat belt pretensioner		SRS control unit		Pedestrian protection active system
	Automatic rollover protection system		Gas strut/ Preloaded spring		High strength zone		Zone requiring special attention		
	Battery low voltage		Ultra capacitor, low voltage		Fuel tank		Gas tank		Safety valve
	High voltage battery pack		High voltage power cable/ component		High voltage disconnect		Fuse box disabling high voltage system		Ultra capacitor, high voltage



SF90XX Stradale

	Airbag		Stored gas inflator		Seat belt pretensioner		SRS control unit		Pedestrian protection active system
	Automatic rollover protection system		Gas strut/ Preloaded spring		High strength zone		Zone requiring special attention		
	Battery low voltage		Ultra capacitor, low voltage		Fuel tank		Gas tank		Safety valve
	High voltage battery pack		High voltage power cable/ component		High voltage disconnect		Fuse box disabling high voltage system		Ultra capacitor, high voltage



SF90XX Spider

Using the electric parking brake - EPB

Using the electric parking brake

The parking brake acts on the rear discs using brake callipers operated by an electric actuator.

To apply the parking brake, pull the lever with the symbol Ⓟ on the dashboard, to the left of the steering wheel. With the instrument panel on, a warning light comes on on the instrument panel , as described in the chapter "List of symbols and warning lights on the instrument panel", to indicate that the parking brake is engaged.

To release the parking brake, pull the lever with the symbol ⒫B and keep the brake pedal pressed. The warning light will turn off when the parking brake is fully released.

The electric parking brake can be used as an emergency brake when the vehicle is in motion. If this is the case, when the lever with the symbol Ⓟ is pulled, the system acts on all four wheels until the lever is released by communicating with the ESP system which prevents locking.



Warning

Always apply the parking brake when the vehicle is parked. The vehicle should be blocked. If this is not the case, please contact the FERRARI SERVICE NETWORK.

"Autopark" function

The "Autopark" function of the EPB automatically activates the electric parking brake after performing the ENGINE STOP function. The Autopark function is always active by default at KEY-ON: this means that the driver does not have to apply the parking brake at every ENGINE STOP.

However, the function can be temporarily deactivated before ENGINE STOP by pressing the **AUTO PARK** button on the dashboard: the pop-up with the message “PARK OFF” is displayed on the instrument panel for 5 seconds. In this case, after ENGINE STOP, the parking brake must be engaged manually by pulling the lever with the symbol Ⓟ.

To re-enable automatic activation of the EPB at the next ENGINE STOP, press the **AUTO PARK** button again when the vehicle is in KEY ON or ENGINE ON; the EPB will be automatically activated after the next KEY-OFF; the pop-up with the message “PARK ON” is displayed on the instrument panel for 5 seconds.

Before a trip

Preliminary checks

Warning

Before setting off always check:

- the seat belts have been positioned and fastened correctly;
- the doors are closed;

- the seat and steering wheel are in the correct position;
- the external and internal rearview mirrors are in the correct position.

Check the following at regular intervals and always before long trips:

- tyre pressure and condition;
- levels of fluids and lubricants on the engine;
- condition of windscreen wiper blades;
- if the lenses of the external lights and all glazed surfaces are clean;
- check on the instrument panel that the warning lights and external lights work correctly.

Important note

In any case, it is advisable to perform these checks at least every 1000 km and always comply with the maintenance schedule found in the "Warranty Booklet".

Checking the hybrid system battery charge level and autonomy

To fully exploit the potential of the hybrid system, before setting off you are advised to check the high voltage battery charge level (SOC) and the autonomy available.

After each KEY-ON, in each configuration/mode, the instrument panel displays the filling status of the fuel tank and the high voltage battery charge level (SOC) at the bottom as dynamic bars. The line below, in addition to the total odometer, displays the autonomy available in km or miles using the engine (symbol in amber) and the electric motors (symbol in green).



If there is not enough fuel in the tank and/or the high voltage battery charge is too low for the journey you intend to make, refuel and/or recharge using the cable supplied with the vehicle before setting out.

Warning

Refuelling and charging at the same time without keeping a safe distance from highly flammable substances and devices may lead to a risk of fire and cause burns and damage to the vehicle. For this reason, avoid refuelling and recharging at the same time.

Warning

When refuelling, use unleaded fuel only. Using leaded fuel would permanently damage the catalytic converters.

See the "Fluids and lubricants" table for the specifications and quantities of lubricants and fluids.

To charge the vehicle batteries, see the "Battery charging" (see page 28) chapter and the special manual included in the on-board documentation.

Starting the vehicle

System start-up (KEY-ON)

When you perform a KEY-ON, the instrument panel and all the on-board controls (steering wheel, dashboard, etc.) are switched on: at the same time, a system diagnosis is carried out. During diagnosis, which lasts 5 seconds, a check is performed on the warning lights on the instrument panel and a check to see if there are any faults.

If diagnosis detects any errors, they are only displayed once the 5 seconds required for the check have elapsed. The cases listed below are an exception and errors are displayed as soon as the key is turned to on, even during diagnosis:

- Low engine oil pressure.
- Inertia switch triggered (shown in figure).
- DCT safety warnings.
- EPB deactivation warning, as described in "EPB - Electric parking brake". (see page 45)



When approaching the deadline for the next scheduled service, at each Key-ON, information concerning scheduled maintenance is displayed automatically after the diagnostic cycle. The relevant message and the dedicated warning light will appear. For further information, see the “Maintenance Schedule” in the "Warranty Booklet".

At each KEY-ON, once the diagnostic cycle is complete, if applicable, a message is displayed to notify the driver if the alarm was activated due to an attempted break-in: see chapter "Anti-theft system".

Once the system check has been completed, the letter “P” (Parking) or “N” (Neutral) will be displayed in the gearbox area of the instrument panel.

Important note

If the gearbox warning light does not turn off after diagnosis, indicating a fault in the gearbox (which is also indicated by a pop-up with a symbol and specific message), contact the FERRARI SERVICE NETWORK.

“Key-Less” ignition system

The FERRARI keys use a Key-less start system (see also the specific warning sheet) which can be used to perform a KEY-ON switch and then start the electric motors or the engine by simply placing the key inside the vehicle in the vicinity of the driver zone. The dedicated ECU recognises the vehicle key by the electronic ID code it contains. The **ENGINE START/STOP** button on the steering wheel controls the KEY-ON, KEY-OFF, ENGINE START and ENGINE STOP functions.

- KEY-ON: to activate the vehicle system (instrument panel, air conditioning and heating system, infotainment system, etc.), press and quickly release the **ENGINE START/STOP** button on the steering wheel without depressing the brake pedal.
- KEY-OFF: to deactivate the vehicle system press the **ENGINE START/STOP** button again WITHOUT pressing the brake pedal if the previous state was KEY ON; it can also be pressed if the previous state was ENGINE/eDRIVE ON.
- ENGINE START: to start up the electric motors or start the engine, press down the brake pedal and press the **ENGINE START/STOP** button when the vehicle is stationary.

Important note

Hold the brake pedal down while starting the engine.

- ENGINE STOP: to deactivate the electric motors and stop the engine if running, press the **ENGINE START/STOP** button when the vehicle is stationary.



Under normal conditions of use, the "Hybrid" driving mode is set as default: one the ENGINE START function has been performed, the vehicle sets off in electric mode if the high voltage battery has a sufficient charge level.

In some situations, for example, when it is cold or the high voltage battery charge level (SOC) is too low, the engine will start up.

Important note

Do not perform an ENGINE START with the charge lead connected.

If the key battery has a charge level that is only just sufficient, the vehicle informs the driver via a pop-up on the instrument panel with a message and recommends replacing the battery as soon as possible.

Warning

If the anti-theft system activation and central locking button on the key is pressed when inside the vehicle, the ENGINE START function is disabled. You must press the other button on the key to deactivate the alarm and unlock the doors; in this way, the ENGINE START function can be used again. This occurs even if the anti-theft system activation and door locking command is given by a key outside the vehicle when a second key is inside. The ENGINE START function of the second key (inside the vehicle) will be disabled. When the anti-theft system deactivation and door opening command is given on any registered key, the ENGINE START function is reset.

If the engine still fails to start after several attempts, check for one of the following causes:

- flat high voltage battery;
- ignition system faulty;
- electrical contacts faulty;
- fuel pump fuses blown.

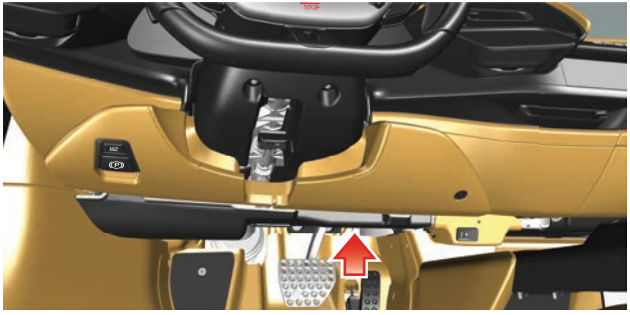
Warming up the engine

Do not run the engine at high speed until the engine oil temperature has reached at least 65-70 °C, approximately.

Alcohol interlock connector prewiring

The car is prewired to connect an alcohol interlock device.

The Alcohol interlock is a device that works just like a car breathalyser. If the driver's blood alcohol level is high, the system stops the engine from starting. The device works exactly like a breathalyser: once seated, the driver has to blow into the device. If the system detects an out-of-range value, then it prevents the driver from starting the engine which can only be started when the driver has a blood alcohol level that is within the permitted limits.



To purchase and install the device, as well as having more information on how it works, contact the FERRARI SERVICE NETWORK.

Starting the vehicle

Start-up mode

At KEY-ON the vehicle system is set by default to the "Hybrid" mode. In this mode, both the engine and the electric motors drive the wheels according to how they are used which is controlled by the electronic control system. In electric mode, the front axle is the drive axle. The ICE is always started up in "Performance" and "Qualifying" modes.

When the "eDrive" mode is selected, the internal combustion engine remains off and traction is assigned to the electric front axle only. In this case, simply press the accelerator pedal and select 1st gear to move forwards or select reverse as indicated for the other modes.

Gearbox mode at start-up

Important note

In "eDrive" mode, the gearbox is in “Automatic” mode.

The standard DCT gearbox transmission is “Automatic”, as described in "Using the gearbox" (see page 50).

At each KEY-ON, the DCT gearbox is in “Auto easy exit” mode unless the vehicle was in “Automatic” or "Manual" mode when the engine was turned off.

The DCT has an electro-hydraulically controlled gearbox system that uses paddles on the steering wheel for manual gearshifting.

To exit the “Auto easy exit” mode, simply use the **UP** or **DOWN** paddles behind the steering wheel (while the vehicle is moving) or (when the vehicle is stationary) press the central lever of the gearbox selector to activate the "Automatic" or "Manual" mode as described in the relevant paragraphs.

With the power unit (rear electric motor or ICE) running, the vehicle stationary and the brake pedal pressed, pull the RH **UP** paddle towards the steering wheel to engage 1st gear.

Release the brake pedal and press the accelerator to start off.

With the power unit running and the vehicle stationary, you can go directly from 1st gear to “R” (reverse) by using the gearbox selector as described in "Selecting "R" (reverse)" (see page 53). Under the same conditions, you can go from "R" to 1st gear by pulling the **UP** paddle towards the steering wheel and releasing it.

Warning

If the “**UP**” and “**DOWN**” paddles are not working, a pop-up will appear on the instrument panel with the message “Depress brake pedal and press LAUNCH to engage gear”. You can therefore engage 1st gear by pushing the RH lever of the gear selector to **L** and releasing it and pressing the brake pedal at the same time. In these cases, the “Launch Control” is not available. If the gear engaged was R, repeat the above procedure twice to engage 1st gear.



Push start

Warning

Push starting is not allowed.

Using the gearbox

Using the gearbox in “Manual” mode

To set the gearbox "Manual" mode, pull the central lever of the gearbox selector on the centre console onto M and release it so that it goes back into its initial position: the M on the gearbox selector will turn red. This mode is indicated on the gearbox area of the instrument panel by a number or letter corresponding to the selected gear: **1**, **2**, **3**, **4**, **5**, **6**, **7**, **8** and **N** without **AUTO**.

Important note

"eDrive" mode is disabled when the gearbox in "Manual" mode.





To upshift or downshift, use the **UP** and **DOWN** paddles behind the steering wheel.



Important note

Immediately release the **UP** and **DOWN** paddles as soon as the selected gear is displayed in the gearbox area of the instrument panel; if held too long, the red gearbox failure warning light will come on and an acoustic signal will be emitted.

Important note

If the front lid is open or not properly closed, none of the gears can be engaged. When the vehicle is stationary, with the driver-side door open or not properly closed and the brake pedal released, the system disengages the gear engaged after approximately two seconds.

UP-shifting

Use the right-hand **UP** paddle without releasing the accelerator pedal. An UP-shift request is not accepted when selecting the requested gear forces the engine to underrev or if an UP-shift is already in progress because of engine overrevving.

In any event, it is advisable to:

- shift gears without releasing the accelerator pedal if pressed;
- Wait until gearshifting has been completed before requesting the next shift, avoiding a rapid sequence of multiple requests.

UP-shifting due to overrevving

The system automatically selects a higher gear if the accelerator pedal is pressed and the engine approaches the “runaway speed rate” (over-revving).

Important note

UP-shifting due to overrevving will not occur when the system is in "SPORT", “RACE”, “CT OFF” and “ESC OFF” driving modes.

DOWN-shifting

Use the left-hand **DOWN** paddle without releasing the accelerator pedal. A DOWN-shift request is not accepted if engagement of the requested gear forces the engine beyond a certain RPM, depending on the gear requested, or if a DOWN-shift is already in progress because of engine under-revving.

In any event, it is advisable to:

- shift gears without releasing the accelerator pedal if pressed;
- if DOWN-shifting is requested to start overtaking which requires quick acceleration, press the accelerator pedal just before using the paddle;
- wait until gearshifting has been completed before requesting the next shift, avoiding a rapid sequence of multiple requests.

DOWN-shifting due to underrevving

The system shifts down “automatically” if the engine goes below a minimum number of revs (1250 RPM).

The DOWN-shift request from the paddle is ignored if gearshifting is already in progress due to engine under-revving.

Sequential downshifting

During deceleration, with the brake pedal pressed and the ABS system disabled, sequential down-shifting can be performed by holding the left-hand “**DOWN**” paddle down.

The sequential gearshifting request is accepted until the second gear is engaged.

Using the gearbox in “Automatic” mode

The standard DCT gearbox transmission is "Automatic".

To set "Automatic" mode, push the central lever of the gearbox selector on the centre console towards **A** and release it so that it goes back into its initial position: the **A** on the gearbox selector will turn red.

When this mode is activated, the word **AUTO** appears in the gearbox area on the instrument panel underneath the number corresponding to the selected gear or **eD** if the electric only mode is activated.

To exit “Automatic” mode, move the central lever of the gearbox selector until **A** on the gearbox selector and **AUTO** on the instrument panel go out.



When “Automatic” mode is selected, the system automatically shifts UP and DOWN in relation to vehicle speed, engine speed and the torque/power requested by the driver.

When in “Automatic” mode, you can still manually shift gears using the **UP** and **DOWN** paddles. The gearbox will remain in “Automatic” mode and the word **AUTO** will appear in the gearbox area when the paddles are used.

When the vehicle is stationary, a “N”, 1st gear or “R” request will not result in a change from “Automatic” to “Manual”.

“Auto easy exit” mode

At each KEY-ON, the vehicle starts up in “Auto easy exit” mode unless it was in “Automatic” or "Manual" mode when the engine was turned off. In this case, at the next KEY-ON, it remains in the mode it was in before KEY-OFF.

Activation of the “Auto easy exit” mode is signalled by the word **AUTO** and an arrow ▽ in the gearbox display area.

In this mode, the system will automatically UP-shift and DOWN-shift according to vehicle speed, engine revs and the torque/power request of the driver.

To exit “Auto easy exit” mode and switch to “Manual” mode, simply use the **UP** or **DOWN** paddle (while the vehicle is moving) or (when the vehicle is stationary) pull the central lever of the gearbox selector towards **M** and release it: the **M** will turn red and the word **AUTO** will no longer be displayed in the gearbox area.

If, on the other hand, you want to set the “Automatic” mode, push the central lever of the gearbox selector towards **A** as stated above. The system will implement "Automatic” mode in full.

“N” (Neutral) request

In any driving modes (electric or hybrid), pull both **UP** and **DOWN** paddles towards the steering wheel at the same time without pressing the brake pedal to request neutral “N”. If necessary, “N” can be requested at any speed. Subsequently, if an “UP” or “DOWN” shift is requested in the driving modes that the gearbox is used in, the system will engage the gear most suited to the speed of the vehicle.

During prolonged stops with the ICE running, we recommend putting the vehicle into “N” (neutral).

Important note

If you allow the vehicle to move forward in “N”, when “UP” or “DOWN” is requested, a gear will be engaged that corresponds to the speed of the vehicle.

Stopping the vehicle

When the vehicle stops, the system automatically engages 1st gear unless Neutral has already been requested. When the vehicle is stationary while the engine is running, keep the brake pedal depressed until you are ready to move off again.

Selecting reverse gear - R

Reverse is a function performed by the front electric axle only.

If the high voltage battery is not sufficiently charged, the power needed to engage reverse is guaranteed by the rear power unit consisting of an electric motor and the ICE.

To select reverse gear, pull the LH lever of the gear selector towards **R** and release it so that it goes back into its initial position. The letter **R** appears in the gearbox area of the instrument panel and **R** lights up in red on the selector to indicate that reverse has been selected.

Reverse gear must always be selected when the vehicle is stationary and the brake pedal pressed.

Important note

When reverse is selected, an acoustic safety signal beeps intermittently as long as “R” (reverse) is engaged.



Switching off the engine and vehicle system

Switching off/stopping the engine

Warning

Press **ENGINE START/STOP** on the steering wheel to activate the ENGINE STOP function: if the electric units are in operation, they are deactivated and if the engine is running, it is switched off.

If the traction units have to be stopped while the vehicle is in motion, press and hold the **ENGINE START/STOP** button for at least 2 seconds: alternatively, press the button rapidly 3 times in succession.

The hybrid system traction units can also be switched off in this way with the gearbox either in "N" or with a gear engaged. After the ENGINE STOP function has been activated, the instrument panel remains on for a few seconds and indicates which gear is engaged. If the gearbox is in "N", an acoustic alarm that lasts 15 seconds is emitted and a pop-up appears with the message "Gearbox not in Parking position". Before switching off, the letter "**P**" is displayed on the instrument panel to inform the driver that the Park Lock has been activated.



For information on the Park Lock, see chapter "Park Lock".

Warning

Never leave the vehicle with the gearbox in "N". Always make sure that the letter "P" (Parking) appears in the gearbox area of the instrument panel. If the Park Lock system is not working properly (gearbox locked in "N" position), contact the FERRARI SERVICE NETWORK.

Warning

NEVER leave the vehicle without activating the ENGINE STOP function.

If the driver unfastens the seat belt, opens the driver-side door, closes the door and walks away with the car key when the motor/engine (i.e. the hybrid system traction units) is still running, the horn sounds 5 times to warn the driver that the motor/engine must be switched off. If the vehicle remains stationary with the engine or electric motor running for more than 20 minutes without using the brake or accelerator, a pop-up is displayed on the instrument panel with the message "Turn OFF engine" and a 30 second countdown begins. When the countdown has ended, a loud acoustic signal is emitted. Switch off the engine by performing the ENGINE STOP function to stop the acoustic signal.

Warning

Never leave the vehicle with the engine running in enclosed spaces (e.g.: garage). The exhaust gases of the engine contain carbon monoxide which is a colourless, odourless gas that can cause serious damage to health, unconsciousness, and even death.

Switching off the vehicle system (KEY-OFF)

After performing the ENGINE STOP function or KEY-ON, you must performing a KEY-OFF by pressing the **ENGINE START/STOP** button on the steering wheel to switch off the vehicle system.

Warning

KEY-OFF is only performed correctly if the engine has been switched off and, if driving in eDrive mode, the word "READY" as shown in the figure, does NOT appear on the instrument panel.



Dimensions and weights

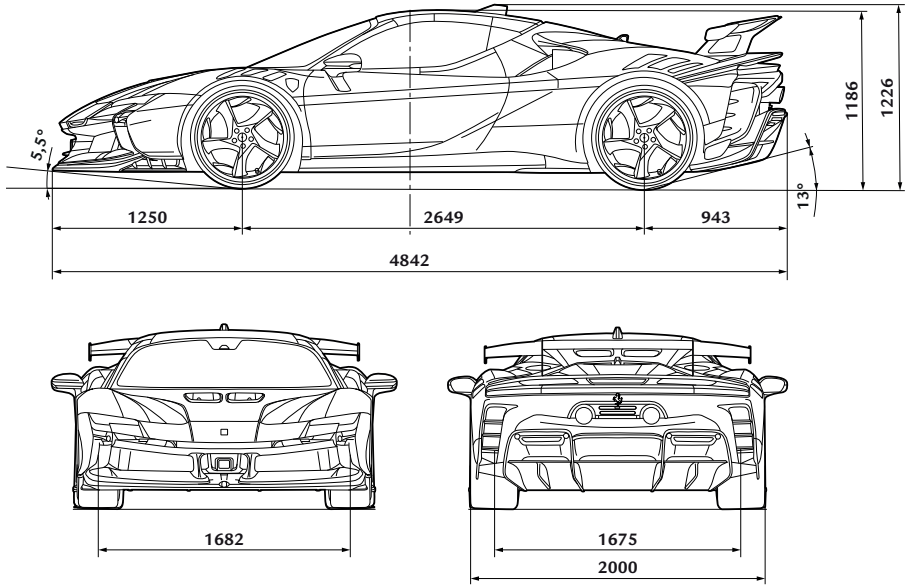
SF90XX Stradale

Dimensions

Wheelbase	2649 mm
Max. length	4842 mm
Max. width	2000 mm
Max. width (with rear-view mirrors unfolded)	2304 mm
Max. height	1226 mm
Front track	1682 mm
Rear track	1675 mm
Front overhang	1250 mm
Rear overhang	943 mm
Front ramp angle	5.5°
Rear ramp angle	13°

Weights

Kerb weight	1835 kg *
Maximum allowable mass Front axle Rear axle	2020 kg 905 kg 1115 kg
*with standard version and driver	



SF90XX Stradale

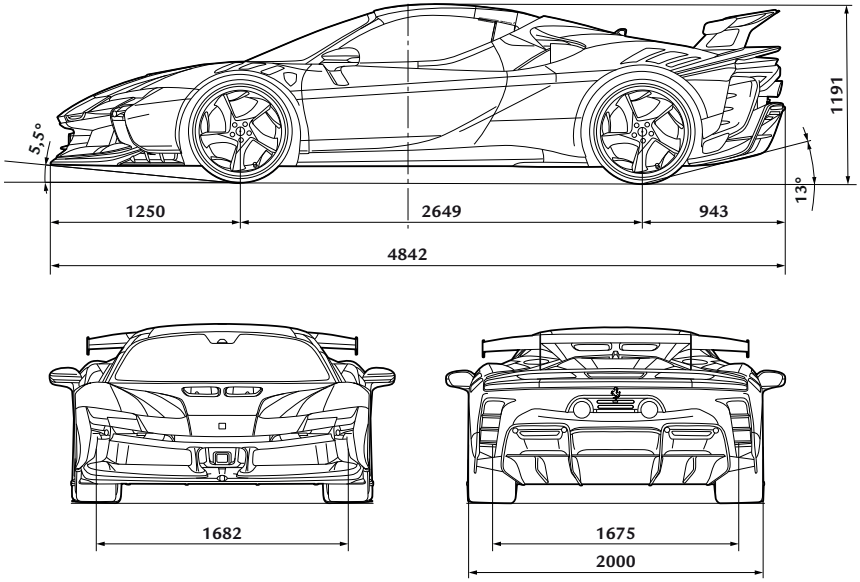
SF90XX Spider

Dimensions

Wheelbase	2649 mm
Max. length	4842 mm
Max. width	2000 mm
Max. width (with rear-view mirrors unfolded)	2304 mm
Max. height	1191 mm
Front track	1682 mm
Rear track	1675 mm
Front overhang	1250 mm
Rear overhang	943 mm
Front ramp angle	5.5°
Rear ramp angle	13°

Weights

Kerb weight	1915 kg *
Maximum allowable mass Front axle Rear axle	2105 kg 910 kg 1200 kg
*with standard version and driver	



SF90XX Spider

Tool kit and tyre inflation and/or repair kit

The equipment is kept in two compartments at the front of the vehicle. To access the compartments, remove the covers using the Allen key supplied with the vehicle which can be found in the document wallet.



The compartment on the RH side contains:

- Park Lock emergency release tool and extension;
- Park Lock emergency release warning label;

- 400 ml bottle containing the liquid sealant for the tyre repair kit.
- only for the SF90XX Spider: RHT system safety locking tool.

The compartment on the LH side contains:

- tyre repair kit compressor and instruction booklet;
- tow hook;
- funnel for emergency fuelling;
- screwdriver for slotted and crosshead screws;
- bag for cotton gloves.

The equipment also includes a kit with a power lead with control unit for charging the batteries and keeping them charged which is kept inside the passenger compartment.

In case of a tyre puncture

Useful accessories

In addition to the tools supplied with the vehicle, the hazard warning triangle and fluorescent safety jacket should always be kept on board in order to signal hazardous situations in compliance with traffic regulations.

Emergency tyre repair and inflation kit

The kit components are housed in the compartments under the front lid; The kit can be used in the event of a puncture or low pressure of a tyre to repair and/or inflate the tyre sufficiently to continue the journey safely.

Important note

To use the tyre repair and inflation kit correctly, refer to the instruction booklet provided with the kit.

Warning

Give the instruction manual supplied with the kit to the personnel that will handle the tyre repaired with the tyre repair kit.

Warning

If damaged by foreign objects, tyres can be repaired with cuts of up to 4 mm in diameter on the tyre tread and shoulder.

Warning

Punctures cannot be repaired on the sides of the tyre. Do not use the tyre repair kit if the tyre has been damaged after driving with a flat tyre.

Warning

Damage to the wheel rim that causes air leaks cannot be repaired. Do not remove foreign objects (screws or nails) that have penetrated the tyre.

Warning

After using the repair kit, the vehicle must be considered in an emergency situation: drive with the greatest care (maximum permissible speed 80 km/h).

Warning

Apply the sticker supplied with the kit where it can easily be seen to indicate to whoever will be doing the repair work that the tyre has been treated with the tyre repair kit. Drive carefully especially on bends. Avoid sudden accelerations or braking.

Warning

The kit can be used to temporarily repair only one tyre punctured by small objects: the kit may not be useful if there are large punctures or tearing.

Important note

After driving for approximately 10 minutes, stop and recheck the tyre pressure. Remember to apply the parking brake.

Warning

If pressure has dropped to below 1.8 bar, stop driving: the kit cannot guarantee the correct hold because the tyre is too damaged. Contact the FERRARI SERVICE NETWORK.

If, on the other hand, the pressure is at least 1.8 bar, pump the tyre up to the correct pressure and continue driving. Drive very carefully to the nearest FERRARI SERVICE NETWORK centre.

Warning

The repaired tyre must be replaced as soon as possible and the workshop personnel must be informed that the tyre was treated with tyre repair fluid.

Warning

Keep the kit in its box and out of children's reach.

Do not inhale or swallow the fluid in the bottle and avoid contact with the skin and eyes.

Warning

The bottle contains ethylene glycol and latex.

The latex may cause an allergic reaction, is harmful if swallowed and is irritating to eyes. May cause sensitisation by inhalation and skin contact. Avoid contact with eyes, skin and clothing. In case of contact, rinse immediately with plenty of water. If swallowed, do not induce vomiting, rinse mouth, drink plenty of water and seek immediate medical advice. Keep out of reach of children. The product should not be used by asthma sufferers. Do not inhale vapours during use. In the event of an allergic reaction, seek immediate medical advice. Store the bottle in the tool kit in the front compartment on the RH side away from sources of heat.

The liquid sealant has an expiry date: the expiry date is indicated on the kit bottle.

Environment

Replace the tank containing the expired liquid sealant. Do not dispose of the tank and sealant in normal domestic waste. Dispose of in accordance with national and local regulations or ask the FERRARI SERVICE NETWORK to take care of disposal.

Warning

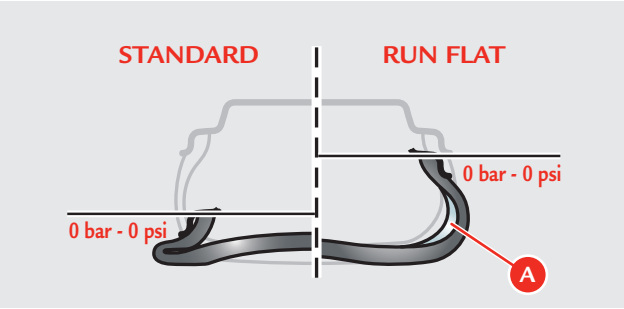
The sealant in the kit tank can damage the sensor inside the wheel rim on vehicles fitted with a tyre temperature and pressure monitoring system (TPMS). If this occurs, the sensor must be replaced. Contact the FERRARI SERVICE NETWORK.

Warning

Wear the protective gloves supplied with the vehicle.

Run Flat tyres (optional)

The vehicle can be fitted with "Run flat" tyres, if required. This type of tyre has a reinforced side **A** which allows the vehicle to continue travelling at moderate speed (80 km/h), even after a puncture, for a specific distance (80 km).



When the instrument panel receives the “tyre puncture” information from the tyre pressure and temperature monitoring ECU, it calculates the residual tyre life, and displays a pop-up with a warning after 40 km.

After 80 km, a message warning the driver to stop the vehicle will be displayed (for further information, see the chapter “Tyre pressure and temperature monitoring system - TPMS” .

Warning

Observing the recommended wheel alignment values is essential in order to obtain the best performance and the longest life of these tyres.

Warning

If you are going to use standard tyres on a vehicle that was originally equipped with “Run Flat” tyres, you must contact the FERRARI SERVICE NETWORK to have the system that controls the warnings on the instrument panel reprogrammed.

Environment

Maintaining correct tyre pressure helps to improve tyre rolling and reduce fuel consumption.

Replacing a wheel

Warning

The procedure to change a wheel is very delicate and must only be performed by expert personnel using the necessary tools.

Have this procedure carried out by a FERRARI SERVICE CENTRE.

Important note

If one or more wheels need to be replaced, proceed as follows:

• replace any wheel stud bolts with damaged threads or tapers. Contact the FERRARI SERVICE NETWORK for information on the correct studs to use.

• do not lubricate the contact surfaces between the stud bolt and the wheel rim and between the wheel rim and the brake disk.

To prevent damage to the anti-seize coating, do not clean the conical wheel and stud seats to preserve the solid lubricant which may have been transferred from the stud bolt to the wheel.

When refitting, tighten the stud bolts to a torque of 150 Nm with a torque wrench.

Important note

If the wheel is replaced, use new stud bolts. Contact the FERRARI SERVICE NETWORK for information on the correct stud bolts to use.

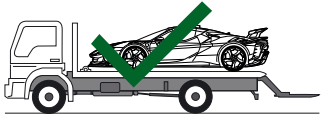
Towing

Warning

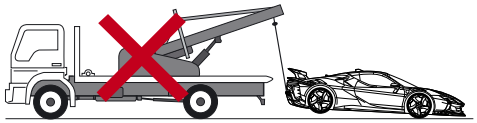
Towing is not allowed. Towing can cause serious damage to the vehicle and the high voltage hybrid system.

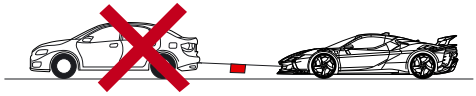
Warning

Use of the tow hook provided is only allowed in an emergency to load the vehicle onto the ramp of a breakdown truck or trailer.

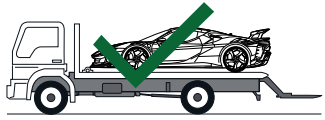




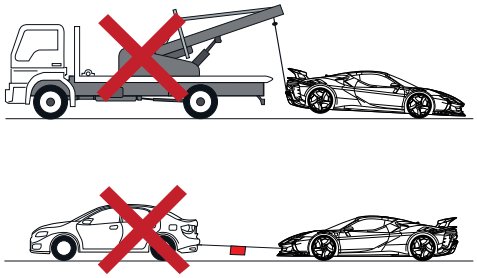




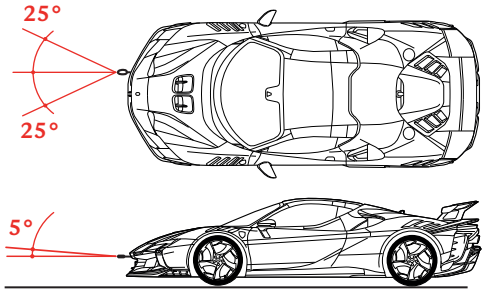
SF90XX Stradale







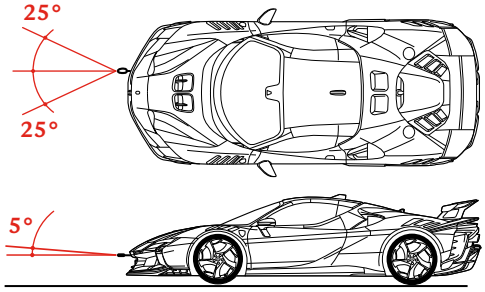
SF90XX Spider



SF90XX Spider

Important note

Maximum angles of tow of the tow hook in the two tow levels: 25° and 5°.



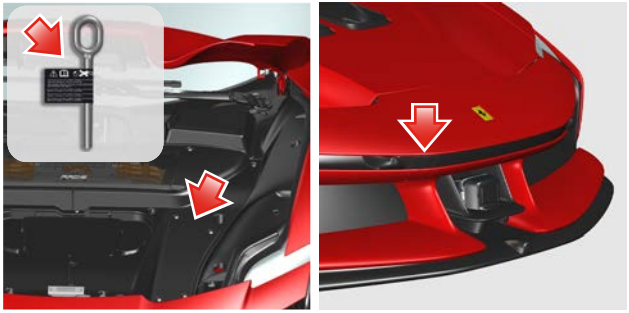
SF90XX Stradale

Important note

To tow the vehicle onto a recovery vehicle, avoid using anchor points that are not designed for the tow hook inserted in the housing on the front bumper.

Proceed as follows:

- select the tow hook from the tool kit in the LH side front compartment;
- tightly screw the tow hook into the housing on the RH side of the front bumper which can be accessed by removing the external protective cap shown by the arrow;
- if it is not engaged before KEY-OFF, release the parking brake (EPB) by pulling the lever on the dashboard and pressing the brake pedal.



Important note

To tow the vehicle onto a recovery vehicle, avoid using anchor points that are not designed for the tow hook inserted in the housing on the front bumper.

Warning

Do not use the levers, suspension and wheel rims but only the tow hook properly fitted in place.

Warning

If there is an electrical system failure, perform the manual emergency release procedure on the Electric Parking Brake (EPB) and Park Lock as described in the respective chapters.

If the electrical system is still working, perform a KEY-OFF before towing.

Only if necessary and if the electrical system is still working, leave the instrument panel on (KEY-ON) to enable the lights to work; when towing the vehicle, do not try and start the engine.

Warning

While towing the vehicle, you must comply with Road Regulations.

Important note

Remember that power steering does not work when the engine is switched off.

Emergency release of the electric parking brake - EPB

This procedure is required when the electric release button cannot open the EPB callipers and a warning light and pop-up appears on the instrument panel with the special symbol and the message "EPB failure. Only manual unlock allowed. See manual."

Warning

The release procedure must only be carried out by specialised workshop technicians.

If the system cannot be released, contact the nearest FERRARI SERVICE CENTRE.

If the vehicle needs to be moved but the EPB cannot be disengaged due to a flat battery or a failure in the electrical system controlling the parking brake, the emergency release procedure must be performed by a FERRARI SERVICE NETWORK centre.

Park Lock emergency release

Warning

The Park Lock must only be released using the special tool after checking that the parking brake has been applied and is an operation that must only be carried out by specialised workshop technicians. We recommend contacting a FERRARI SERVICE CENTRE.

Warning

This should be avoided unless absolutely necessary:

- to tow the vehicle onto a recovery vehicle;

- if there is a Park Lock failure (the following message is shown on the instrument panel: “Only manual unlock gearbox allowed: See manual”.

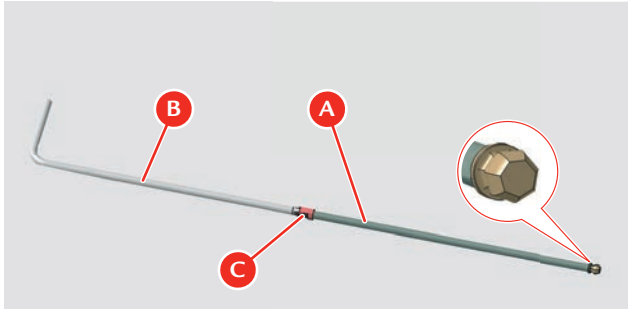
Warning

When the Park Lock safety device is released manually, the vehicle may move unexpectedly. The vehicle is only kept stationary by the parking brake, if applied.

The Park Lock manual emergency release device is located on the gearbox and can be accessed via the opening shown on the trim panel, on the LH rear side of the engine compartment.

To perform the Park Lock emergency release procedure, do the following:

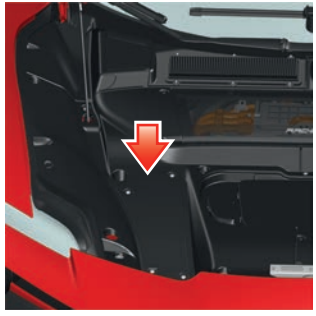
- Take wrench **A** and extension **B** out of the tool kit in the front RH compartment.
- Join the two parts together and fasten with clip **C**.



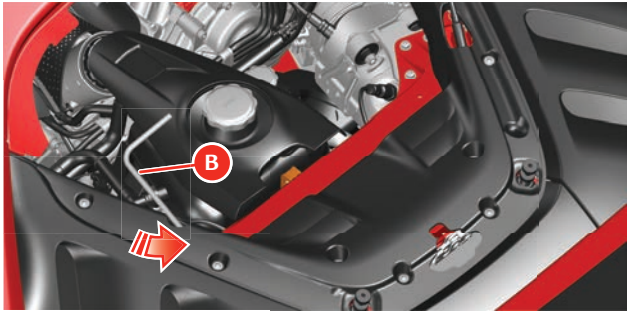
Warning

The tools **A** and **B** may only be used by specialised workshop technicians, as indicated on the label **D** in the tool kit in the front compartment on the RH side.





- Open the engine compartment lid.
- Insert the wrench/extension into the opening on the trim panel in line with the sloped socket and attach the seven-sided end.
- Turn the wrench/extension counterclockwise by one quarter of a turn to release the brake.



If the electrical system allows it, switch on the instrument panel and check that the letter "N" appears together with the message: "Gearbox not in P position". At the same time, an acoustic signal is repeated four times to indicate that the Park Lock has been released.

Lifting the Vehicle

Warning

Given the special shape of the undertray, access to the support points for lifting is not easy: to lift the vehicle, contact the FERRARI SERVICE NETWORK which has suitable equipment to work in complete safety.

If the vehicle has to be lifted following an accident or in order to carry out emergency repair work, we recommend passing on the following information to the people who will be carrying out the work.

Danger - High voltage

Never lift the vehicle by pressing on the bottom of the high voltage battery. There is a risk of serious and even fatal injury.

Warning

To lift the vehicle, use only the support points indicated below.

Failure to comply with the above may pose a risk of serious injury to people working on the vehicle.

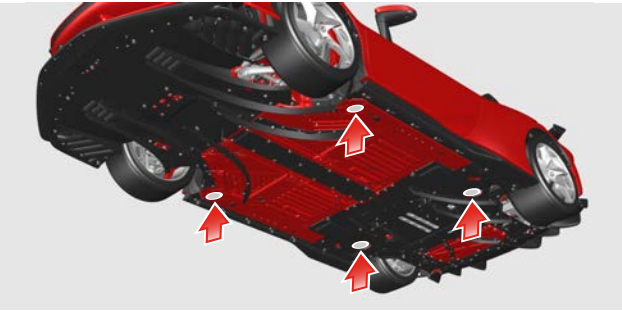
Warning

Be very careful when lifting the vehicle to avoid damaging the parts near the support points.

To lift the vehicle, use the points shown in the figure.

Danger - High voltage

Never lift the vehicle using the support points near the high voltage battery which is in the central rear area.



Loading the vehicle onto the trailer

- Manually release the Park Lock.

Important note

If possible, use the Carwash procedure.

- Release the electric parking brake (EPB).

Warning

Do NOT pull the vehicle onto the trailer using the wheel spokes as anchors to avoid damaging the wheels.

Warning

Do NOT attach the straps to the suspension or parts of the bodyshell.

- Attach the winch cable to the tow hook to pull the vehicle onto the trailer.

Warning

DO NOT attach the winch cable to other parts of the vehicle.

Warning

Do NOT pull the vehicle onto the trailer using only the tow hook but lift it using the special straps.

Warning

Do not use excessive force on the tow hook when lifting and pulling the vehicle onto the trailer.

- The use of ramps or wooden planks may be necessary if there is limited space in front of or behind the vehicle.

Carwash procedure

The Park lock device can be temporarily disabled when the engine is switched off by performing the "Carwash" procedure.

This procedure is necessary when the vehicle has to be moved with the engine off and when washing the vehicle.

Warning

When the Park Lock device is electronically deactivated (Carwash procedure), the vehicle may move. The vehicle is only kept stationary by the parking brake which must be applied.

Carry out the Carwash procedure as follows:

- with the engine running, select the first gear;
- select neutral “N”;
- turn off the engine;
- activate the instrument panel (KEY-ON) within 3 seconds of switching off the engine.

The message “Carwash mode activation” will appear on the left hand TFT display.

Securing the vehicle to the trailer

- Secure the vehicle to the trailer with special straps using the wheels as anchors and the most suitable device for ensuring it is correctly secured.

Warning

Do NOT attach the fastening straps to the suspension or parts of the bodyshell.

Warning

Make sure that the metal parts of the straps do not come into contact with the bodywork.

- Once the vehicle has been secured to the trailer, remove the key.

Storing a hybrid vehicle

To prevent fire, a hybrid vehicle must be stored in a cordoned off part of an outdoor parking area at a suitable distance from other vehicles, buildings and other flammable items. The vehicle must be marked a "Hybrid vehicle" with the special symbol.

Important note

Only specialised technicians with the necessary equipment and PPE required to work safely are allowed to access the area adjoining the stored hybrid vehicle.

Storing a damaged high voltage battery

Store the damaged battery outdoors at a suitable distance from other vehicles, building and other flammable items. A "Danger High Voltage" sign must be placed in the adjoining area.

Important note

Only specialised technicians with the necessary equipment and PPE required to work safely are allowed to access the area adjoining the stored high voltage battery.

On-line technical information and technical support

The documentation required for the maintenance and repair of FERRARI vehicles can be accessed online at **https://www.techinfo.ferrari.com/**.

The repair and maintenance work on FERRARI vehicles contained in the technical information bulletins published on the site must be performed exclusively by independent car repairers who have the necessary expertise and tools and Ferrari S.p.A. shall not be held liable for any work that is performed using these technical information bulletins incorrectly.



INDEX

INDEX

B

Battery charging 28
Before a trip 45

D

Dimensions and weights 56
Doors 21

E

Electronic alarm 19
Emergency release of the electric parking brake - EPB 67
Engine compartment lid 35

F

Front lid 36
Fuel filler neck 38

G

Guide to emergency response on a hybrid vehicle 14

H

High voltage and 12V battery charging socket 34
Hybrid propulsion 11
Hybrid system batteries 17
Hybrid system precautions 13

I

In case of a tyre puncture 62

L

Lifting the Vehicle 69
Loading the vehicle onto the trailer 70

O

On-line technical information and technical support 71

P

Park Lock emergency release 68
Procedure for deactivating the high voltage system 16

R

Reactivating the fuel inertia switch 25
Replacing a wheel 64

S

Securing the vehicle to the trailer 71
Selecting reverse gear - R 53
Starting the vehicle 47, 49
Storing a damaged high voltage battery 71

Storing a hybrid vehicle 71
Switching off the engine and vehicle system 54

T

Towing 65

U

Using the electric parking brake - EPB 45
Using the gearbox 50