



Owner's Manual

F430 SPIDER

Introduction

The aim of this Owner's Manual is to help you get the best value from your vehicle and to provide information on routine maintenance.

We advise you to read it carefully before you drive. The Owner's Manual is an integral part of the vehicle and it must therefore always be kept on board.

This manual refers to vehicles with two types of transmission:

- F1 electronically-controlled gearbox
- mechanical gearbox

therefore, some information may vary depending on the gearbox installed.

Consulting the manual

To facilitate reading and fast consultation, the topics have been divided into sections and chapters. The important parts requiring particular attention are easily identifiable in the sections and chapters.



Extreme caution required: failure to comply with the instructions could cause hazardous situations involving personal and vehicle safety!

Important note: *warning aimed at preventing any damage to the vehicle and thus hazards involving the safety of persons.*

Abbreviations

Some descriptions and terms with particular meanings are to be found in this manual in an abbreviated form:

A.C.	Air Conditioning System
ABS	Anti-lock Braking System
ASR	ANTI-SKID REGULATION during acceleration
EBD	ELECTRONIC BRAKE-FORCE DISTRIBUTION
E-DIFF	Electronic differential
CST	TRACTION STABILITY CONTROL
MSR	Engine torque regulation
ECU	ELECTRONIC CONTROL UNIT
F1	FORMULA 1 - Electronically-controlled gearbox, designed with the same technology as used in the racing sector.
L.C.	LAUNCH CONTROL - strategy for performance standing start.

Service

The information contained in this manual is limited to those instructions and indications that are strictly required for the use and good preservation of the vehicle.

Carefully following the instructions contained herein will help you get the best results and satisfaction from your vehicle.

We also recommend you have all the checks and service carried out at our Dealers or Authorised Workshops as they have the skilled staff and appropriate equipment available.

See the "Sales and Service Organisation" manual for the locations of the **FERRARI** Dealers and **AUTHORISED SERVICE CENTRES**. The **FERRARI** Technical Service Department is at your complete disposal for any information and suggestions.

Updating

The high quality of your vehicle is ensured by constant improvements and there may hence be differences between this manual and your vehicle.

All specifications and illustrations contained in this manual refer to those resulting as of the printing date.

Spare parts

When replacing parts or topping up with lubricants and fluids, we recommend you use original spare parts and the lubricants and fluids recommended by FERRARI.

The FERRARI warranty is voided if ORIGINAL FERRARI SPARE PARTS are not used for repairs.


Chassis

The chassis of this vehicle is entirely constructed of aluminium.


If the chassis is damaged in an accident, have it repaired at the FERRARI SERVICE NETWORK only.

Using non-original spare parts and having inexperienced persons carry out repairs may have serious consequences for the vehicle.

In normal conditions of use, the chassis does not require any maintenance; it is however advisable to contact the **FERRARI SERVICE NETWORK** at the intervals indicated in the Maintenance Schedule in order to have it checked.

 Should emergency repairs be required, it is advisable to have the vehicle checked by the **FERRARI SERVICE NETWORK** as soon as possible.

F1 gearbox

 **Warning:** The vehicle may be fitted with an electro-hydraulically-controlled gearbox system, controlled by the levers on the steering wheel.

Even though the system can be used in “Automatic” mode, it should not be considered an automatic gearbox. Hence, for proper use always follow the instructions given in this manual on page 80.



Introduction

1 - General information

2 - About your vehicle

3 - Driving your vehicle

4 - In an emergency

5 - Maintenance

6 - Technical Information

7 - Table of contents

1 - General information

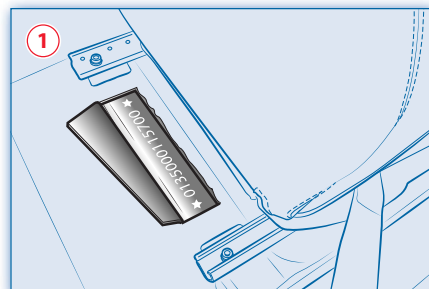
Identification and homologation data	8
Instruction labels	9
Main engine specifications	10
Transmission ratios	10
Performance	10
Consumption and CO2 emissions	11
Dimensions and weights	11
Rims and tyres	12
Electric system	13
Capacities	14



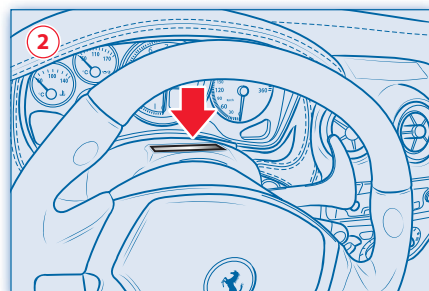
Identification and homologation data

Identification data:

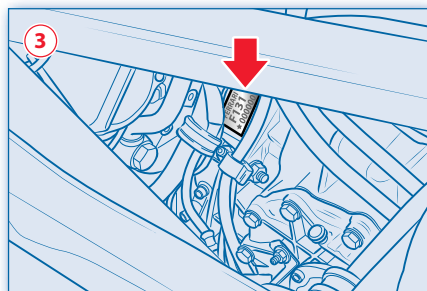
- ① Punched **chassis** number.



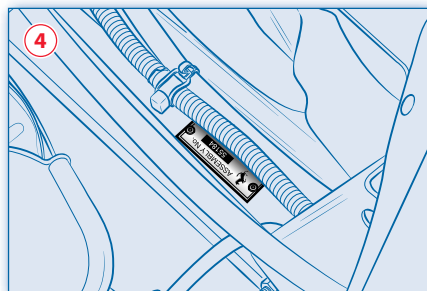
- ② Summary plate with **chassis** type and number.



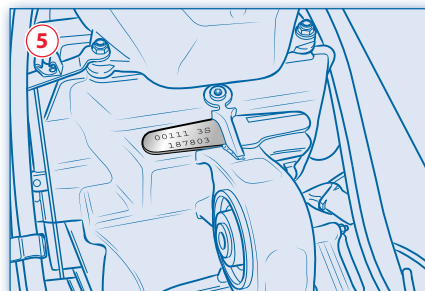
- ③ Punched **engine** type and number.



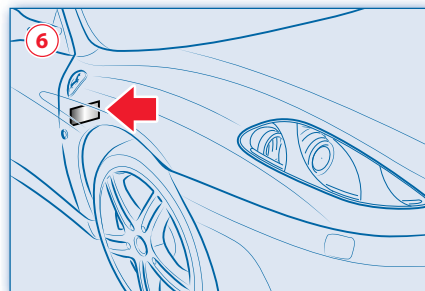
- ④ Assembly number plate.



- ⑤ Punched **gearbox** type and number.



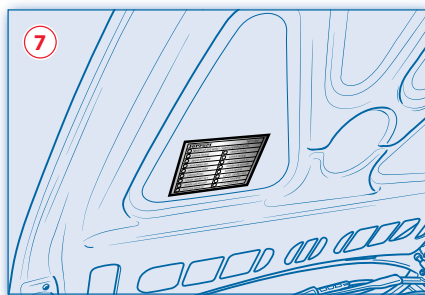
- ⑥ Vehicle identification.



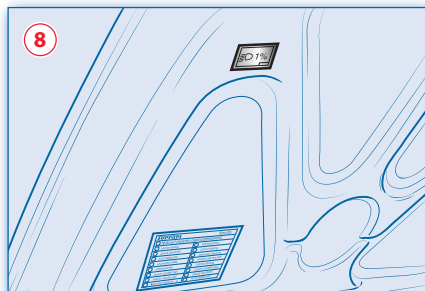
1 - General information

Homologation labels:

⑦ ECE homologation.

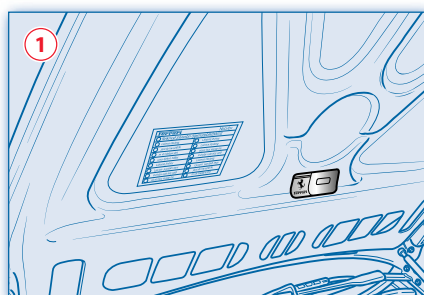


⑧ High beam homologation.

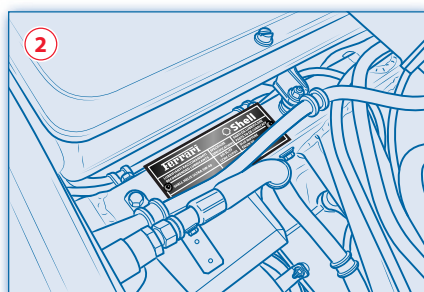


Instruction labels

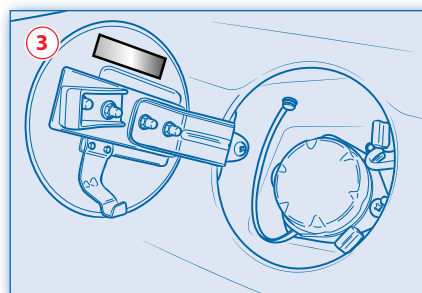
① Paint code label.



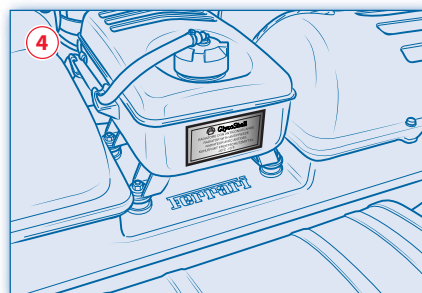
② Lubricants label.



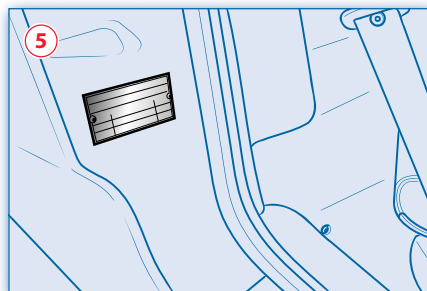
③ Fuel label.



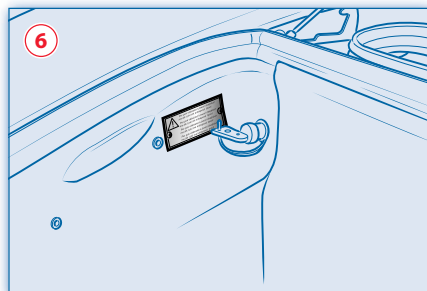
④ Antifreeze label.



⑤ Tyre pressure label.



⑥ Battery master switch label.



Main engine specifications

Type	F 136 E
Number of cylinders	8 - V 90°
Cylinder bore	mm 92
Piston stroke	mm 81
Total displacement	cm ³ 4308
Compression ratio	11.3 : 1
(*) Max power (2002/80B/CE)	kW (HP) 360.3 (490)
Corresponding r.p.m.	RPM 8500
Maximum torque (2002/80B/CE)	Nm 465
Corresponding r.p.m.	RPM 5250

(*) *A slight boosting is attainable at top speed.*

Transmission ratios

Gear ratios	Differential bevel gear pair ratio	Total transmission ratio (engine/wheel revolutions)
1 46 / 14 = 3.29	4.30 (10/43)	1 14.13
2 41 / 19 = 2.16		2 9.28
3 37 / 23 = 1.61		3 6.92
4 33 / 26 = 1.27		4 5.46
5 30 / 29 = 1.03		5 4.45
6 31 / 38 = 0.82		6 3.51
R 41 / 15 = 2.73		R 11.75

Performance

	From 0 to 100 km/h	From 0 to 400 m	From 0 to 1000 m	Max speed
F1 gearbox	4.1 sec.	12.05 sec.	21.80 sec.	over 310 km/h
Mechanical gearbox	4.1 sec.	12.10 sec.	21.85 sec.	over 310 km/h

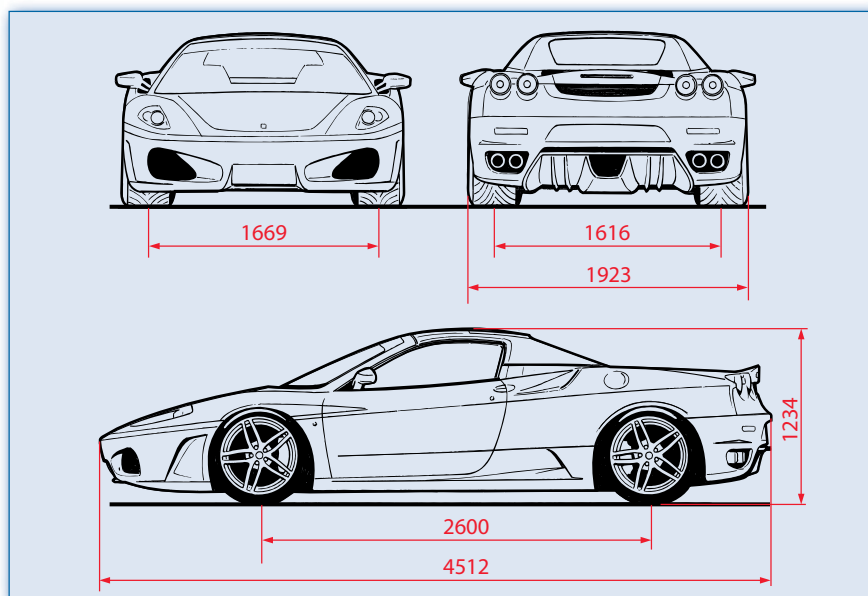
1 - General information

Consumption and CO₂ emissions

<i>Dir. 1999/100 EEC</i>	<i>(g/km)</i>	<i>l/100 km</i>
• City cycle	615	26.9
• Motorway	305	13.3
• Combined cycle	420	18.3

Dimensions and weights

Wheel base	2600 mm
Max. length	4512 mm
Max. width	1923 mm
Max. height	1234 mm
Front track	1669 mm
Rear track	1616 mm
Kerb weight	1520 Kg



F430 SPIDER

Rims and tyres

Wheel rims

<i>Front</i>	<i>Rear</i>	<i>Spare wheel</i>
7.5" J X 19"	10" J X 19"	3.5" J X 19"

Tyres tested by FERRARI (all tyres are without air chamber)

	Inflation pressure (cold)	
	<i>Front</i>	<i>Rear</i>
Pirelli P Zero Rosso	225/35 ZR19"	285/35 ZR19"
Bridgestone Potenza RE050A	225/35 ZR19"	285/35 ZR19"
Michelin Pilot Sport 2	225/35 ZR19"	285/35 ZR19"

Optional tyres (Run Flat)

Goodyear Regol F1 GS-D3 EMT	225/35 ZR19"	285/35 ZR19"	2.5 bar (36.7 psi)	2.5 bar (36.7 psi)
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Snow tyres (max. speed 210 km/h)

Pirelli Winter Sottozero	225/35 ZR19"	285/35 ZR19"
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Replacing a wheel



For the correct procedure, see the notes on page 94.

<i>Stud bolt pre-tightening</i>	<i>Stud bolt final tightening</i>
35÷40 Nm	100 Nm

Spare wheel

<i>Tyre (max. speed 80 km/h)</i>	<i>Inflation pressure (cold)</i>
Pirelli T 115/70 R19"	4.2 Bar (62 psi)

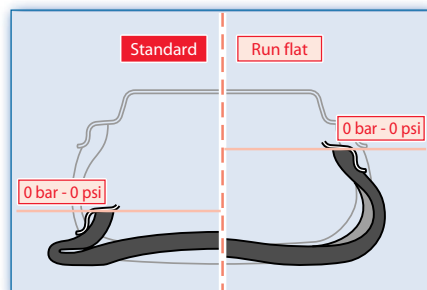
1 - General information

“Run flat” tyres (optional)

The vehicle can be fitted with “Run Flat” tyres”. This type of tyre has reinforced sidewalls which permit the vehicle to continue travelling at a moderate speed (80 km/h) for a set distance, even in the event of a puncture.

Always comply with the specified wheel alignment values, as this is essential to obtain the best performance and the longest life of your tyres.

Further information on these tyres and their pressure monitoring system can be found in the “Carrozzeria Scaglietti” Owner’s Manual.



Electric system

Supply voltage
12 V

Battery
Fiamm ECO FORCE VR760 - 12 v - 65 Ah
- 450 A

Alternator
NIPPONDENSO 150 A

Starter motor
Nippondenso







Key-operated circuits

- Starting
- Windscreen wipers and washer
- Stop lights
- Direction indicators
- Hazard lights
- Rear fog lights
- Reverse lights
- Glove compartment light
- Ignition
- Injection
- Electric fuel pumps
- Air conditioning and heating system
- Instruments
- Motors for water radiator cooling fans
- Rear view mirror defroster
- External rear view mirror adjustment
- Cigarette lighter

- Shock absorber calibration control system
- CST system
- Exhaust temperature control circuit
- Soft top operating system
- Tyre pressure monitoring system (optional)

F430 SPIDER

Capacities

<i>Parts to be refilled</i>	<i>Quantity</i>	<i>Fill with:</i>	<i>Ref. Page</i>
Engine			
Total system capacity	10 l	 Shell HELIX ULTRA SAE 5W-40	111-122
Oil quantity between MIN and MAX	1.5 l		
Oil consumption (depending on driving conditions)	1.0 - 2.0 l / 1,000 km		
Gearbox and differential (including lines)	3.5 l	 Shell TRANSAXLE OIL SAE 75W-90	129
F1 gearbox system - Electronic differential	1.0 l	 Shell DONAX TX	111
Brake and clutch system	1.3 l	 Shell DONAX UB BRAKE FLUID	
		DOT4 Ultra	112
Cooling circuit	17.5 l	GLYCOSHELL	112-123
• Mixture of water and coolant at 50%.			
Hydraulic steering system	1.8 l	 Shell DONAX TX	111
Steering box	100 g	 Shell RETINAX CS00	
Fuel tank	95.0 l	Unleaded fuel 95 N.O.	124
Reserve	20.0 l		
Air conditioning and heating system			131
Compressor	165 cc	DELPHI 7CVC	
Compressor oil	150 cc	DELPHI RL897	
Coolant	800 ± 30 g	"R 134 A"	
Windscreen and headlight washer tank	6.5 l	Mixture of water and glass cleaner	115

N.B.: To clean the windscreen, use one phial of glass-cleaner in summer and two in winter.


2 - About your vehicle

Keys	16
Alarm system	16
Steering wheel controls	21
Instrument panel	29
Warning lights	32
Multi-function display	34
Dashboard controls	36
Controls on the tunnel console	43
Doors	47
Seat controls	48
Interior rear view mirror	50
Safety	51
Seat belts	52
Airbag	55
Passenger compartment accessories	58
Internal lights	61
Hands-free microphone (optional)	61
Engine compartment lid	61
Soft top	63
Soft top emergency closing	67
Air conditioning and heating system	71

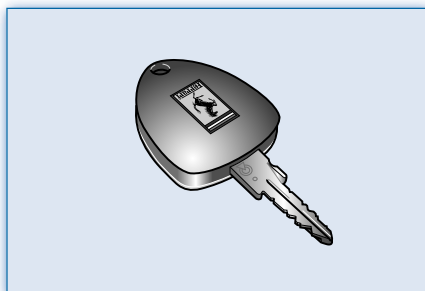


Keys

The vehicle is delivered with two identical keys.

 Write the code number of the key in the space provided in the warranty booklet.


A duplicate of the keys can be requested communicating the identification number to the FERRARI SERVICE NETWORK.




Key codes

A CODE CARD is supplied with the keys. This card indicates the following:

- the electronic code to be used for “Emergency start”;
- the mechanical key code to be communicated to the **FERRARI SERVICE NETWORK** in the case that you request duplicates of the keys.

 The code numbers shown on the CODE CARD should be kept in a safe place.

 You are advised to always keep the CODE CARD number with you, as this is absolutely necessary in the event of an “emergency start”.

In the event of a vehicle ownership transfer, it is essential that the new owner is provided with all the keys and with the CODE CARD.

You are advised to record and keep the codes listed on the tags delivered with the keys and the remote control in a safe place (not in the vehicle) in order to request duplicates if needed.

Alarm system

The FERRARI CODE system

In order to increase protection against attempts at theft, the vehicle is equipped with an electronic engine immobilizer system (FERRARI CODE), which is automatically activated when the ignition key is removed.

Each ignition key contains an electronic device which transmits a code signal to the FERRARI CODE control unit, and engine ignition is enabled only if the key code is acknowledged by the system.

Two keys are supplied with the vehicle.

The key serves to:

- lock/unlock the doors (central door locking);
- deactivate/activate the passenger airbag (not present in Australian and Japanese versions);
- activate/deactivate the alarm system

Operation

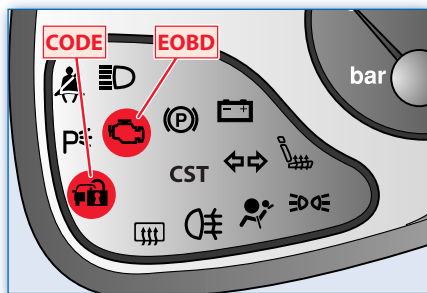
Each time the ignition key is removed from position 0, the protection system activates the engine immobilizer.

- When starting the engine, press the **ENGINE START** button on the steering wheel:

2 - About your vehicle



- 1) If the code is recognised, the **CODE** warning light on the instrument panel goes off within a second, while the **EOBD** warning light goes off after about four seconds once the ECU diagnostic cycle has been completed. In these conditions, the protection system recognises the key code and deactivates the engine immobilizer.



- 2) If the **CODE** warning light stays on and the **EOBD** warning light does not

go off after the four seconds required by the ECU to run a diagnostic cycle, the code has not been recognised. In this case, it is advisable to turn the key back into position 0 then back to II; if the immobilizer stays on, try with the other keys. If you are still unable to start the engine, use the emergency start procedure (see chapter "In an emergency") and contact the **FERRARI SERVICE NETWORK**.

- While driving, with the ignition key in position II:
 - 1) If the **CODE** warning light comes on, it means that the system is running a self-diagnostic cycle. At the first stop, you can test the system: turn off the engine by rotating the ignition key to position 0 then turn the key back to position II: the **CODE** warning light will come on and should go off within one second. If the warning light stays on, repeat the procedure described previously leaving the key at 0 for more than 30 seconds.

If the problem persists, contact the **FERRARI SERVICE NETWORK**.

- 2) If the **CODE** warning light flashes, it means that the vehicle is not protected by the engine immobilizer.

Immediately contact the **FERRARI SERVICE NETWORK** to have all the keys stored in the memory.

Strong impacts can damage the electronic components in the key.

Each key supplied has its own specific code, which must be stored in the memory of the system control unit.

Duplicating the keys

When ordering additional keys, remember that the storage procedure (maximum 7 keys) must be carried out for all the keys, including those already in your possession. Directly contact the **FERRARI SERVICE NETWORK**, bringing with you all the keys in your possession, the CODE CARD for the FERRARI CODE system, a personal ID document and the registration documents proving ownership of the vehicle.

The codes of any keys that are not available when the new storage procedure is carried out will be deleted from the memory, to prevent any lost or stolen keys being used to start the vehicle.

Emergency start

If the FERRARI CODE fails to disable the engine immobilizer, the **CODE** warning light comes on fixed and the **EOBD** warning light goes off after four seconds and then comes on again immediately, and the engine will not start. In this condition, the engine can only be started with the emergency start procedure.

It is recommended to carefully read through the whole procedure before carrying it out. If you make a mistake, turn the key back to

position 0 and repeat the operation from step 1.

- 1) Read the 5-digit electronic code found on the CODE CARD.
- 2) Turn the ignition key to position II: at this point, the CODE and EOBD warning lights stay on.
- 3) Depress and hold down the accelerator pedal. After approximately 8 seconds, the EOBD warning light will go off. Release the accelerator pedal and get ready to count the number of times the EOBD warning light flashes.
- 4) Wait until the number of flashes is equal to the first digit of your CODE CARD, then push and hold down the accelerator pedal until the EOBD warning light goes off after about 4 seconds, then release the accelerator pedal.
- 5) The EOBD warning light starts flashing again. When the number of flashes is equal to the second digit of your CODE CARD, depress and hold down the accelerator pedal.
- 6) Proceed in the same manner for the remaining digits in the code on the CODE CARD.
- 7) When the last digit has been entered, hold the accelerator pedal pushed down. The EOBD warning light comes on for 4 seconds and then goes off; release the accelerator pedal.

8) When the EOBD warning light flashes fast (for about 4 seconds) it confirms that the procedure has been performed correctly.

9) Proceed with starting the engine by pressing the ENGINE START button on the steering wheel.

If the EOBD warning light remains on, turn the key to position 0 and repeat the procedure from step 1.

This procedure can be repeated an unlimited number of times.

After an emergency start, it is advisable to contact the FERRARI SERVICE NETWORK as the emergency start procedure will have to be carried out every time you start the vehicle.

Electronic alarm system

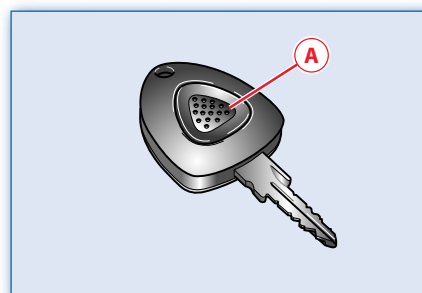
The electronic alarm system performs the following functions:

- remote control for central door locking/unlocking;
- perimeter surveillance, detecting when the doors or lids are opened;
- vehicle movement surveillance.

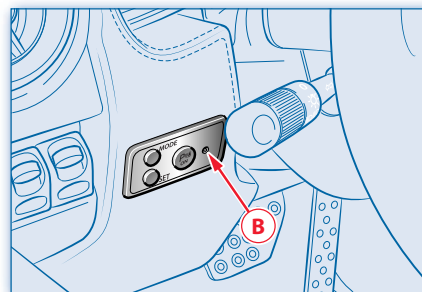
The engine immobilizer function is ensured by the FERRARI CODE system, which is automatically activated when the ignition key is removed from the starter switch.

System activation

Press button A on the key to activate the alarm system:



- the direction indicators flash once;
- the red LED B on the dashboard flashes;



- the central door locking system is activated and the doors are locked.
- After about 25 seconds, the system is active and the alarm will be triggered if:
- a door is opened;
 - the luggage compartment lid is opened;
 - the engine compartment lid is opened;
 - the power is cut;

2 - About your vehicle

- the siren is disconnected;
- the vehicle is moved.

Should the siren beep twice when you activate the alarm system, this means that one of the doors or the luggage/engine compartment lid is not perfectly closed and therefore is not protected by the perimeter surveillance.

Check that the doors and lids are properly closed and close the open door or lid, then reactivate the alarm system.

Deactivation

Press button **A** on the key to deactivate the alarm system:

- the direction indicators flash once;
- the red LED **B** on the dashboard goes off;
- the central door locking system is activated and the doors are unlocked.

The alarm system is off and you can get into the vehicle and start the engine.

If the remote control battery is flat, to access the vehicle, you must use the spare key or replace the battery as described below.

Alarm memory

If the red LED **B** flashes when you have deactivated the system by means of the radio control, it means that the alarm was triggered while you were away. In this case, the system will indicate the reason for the alarm according to the following priority:

- *LED off twice*: lifting sensor alarm;

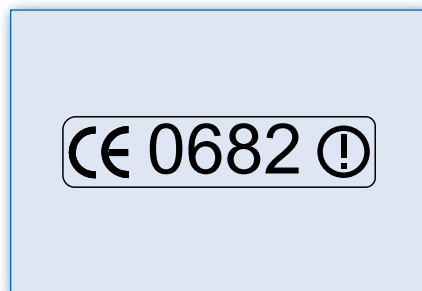
- *3 LED off three times*: door alarm;
- *LED off four times*: engine compartment lid alarm;
- *LED off five times*: ignition key alarm.

The alarm system memory is reset when you turn the ignition key.

Ministerial homologation

The electronic alarm system has been homologated in all the countries where radio frequency legislation is in force.

The homologation number is shown in the figure.

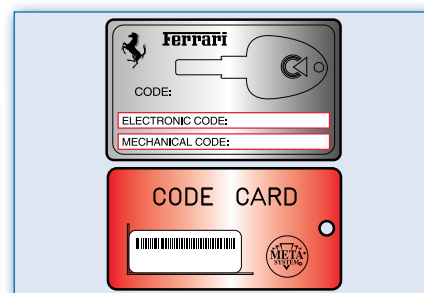


For those markets that require the transmitter and/or receiver marking, the homologation number is found on the component.

Requesting new keys

To purchase new keys with radio control, exclusively contact the **FERRARI SERVICE NETWORK**, bringing with you:

- all the keys with radio control in your possession;
- the CODE CARD for the FERRARI CODE system and the red CODE CARD for the alarm system;



- a personal ID document;
- the registration documents proving ownership of the vehicle.

Keys with remote control that are not provided to the Ferrari Network centre, for the new code storage procedure, will automatically be deactivated. This is to prevent any lost or stolen keys with remote control from being used to deactivate the electronic alarm system.

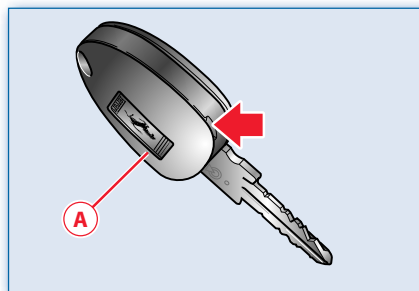
If you accidentally activate the alarm during engine starting, the engine starts normally and the alarm siren will be activated after 30 seconds. To deactivate it, press the remote control button on the key.

Replacing the radio control batteries

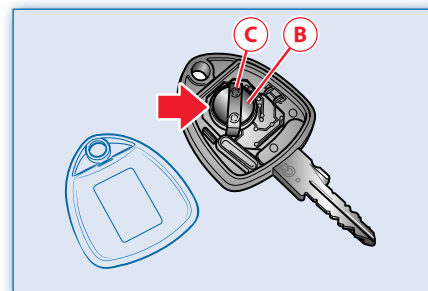
If the corresponding function is not activated when the key remote control button is pressed, first check using another key with remote control that the alarm system functions work. If this is the case, you must replace the key with remote control battery.

To replace the radio control battery:

- detach the key cover **A** prying with a small screwdriver at the point indicated by the arrow;



- remove the battery **B**, by pushing it in the direction indicated by the arrow, in order to remove it from the retaining spring clip **C**;



- fit a new battery of the same type, respecting the polarity indicated;
- close the key cover **A**.

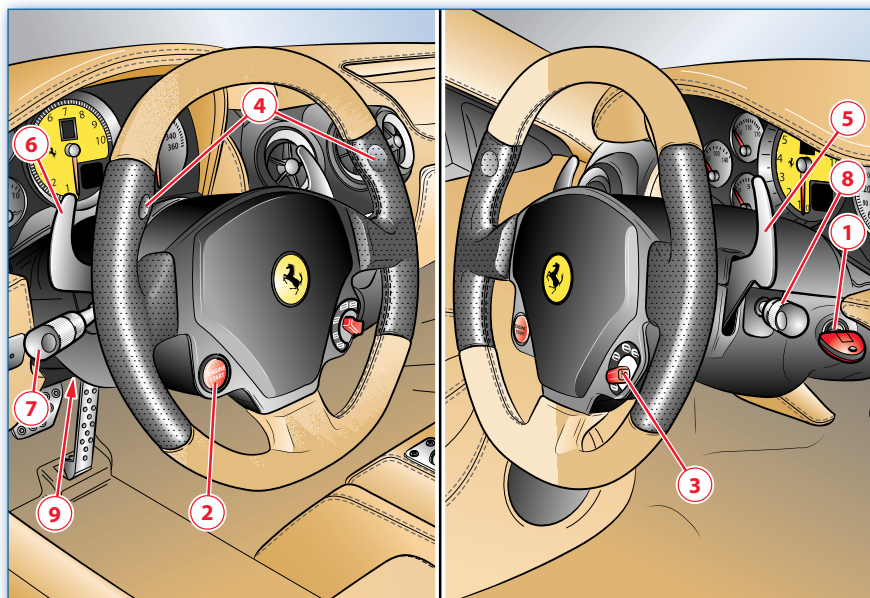
Do not use sharp tools to open the key cover and be extremely careful not to damage the radio control.

2 - About your vehicle

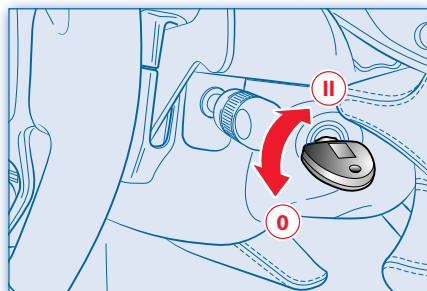
Steering wheel controls

- ① Key switch
- ② Start button
- ③ Driving mode switch
- ④ Horn control
- ⑤ UP gearshift lever (*)
- ⑥ DOWN gearshift lever (*)
- ⑦ Exterior lights and direction indicator control lever
- ⑧ Windscreen and headlight wiper/washer control lever
- ⑨ Steering wheel adjustment lever

(*) for versions with F1 gearbox only



1 - Key switch



The ignition key can be turned to 2 positions:

Position 0 - Stop

Engine off, key removable.

When the key is even only partially extracted, the steering column is locked.

The hazard warning lights and the parking lights can be turned on.

To facilitate steering wheel release, turn the steering wheel slightly in both directions while turning the ignition key.

Position II - Ignition on

When turning the key to this position, the system checks the signals coming from the systems installed on the vehicle. If no faults are found, the words **CHECK OK** light up and the engine can be started.



Never remove the key when the vehicle is moving!

The steering wheel will lock on the first steer.

Always remove the key from the ignition block when you get out of the vehicle!

Never leave children unattended in the vehicle.

2 - Start button

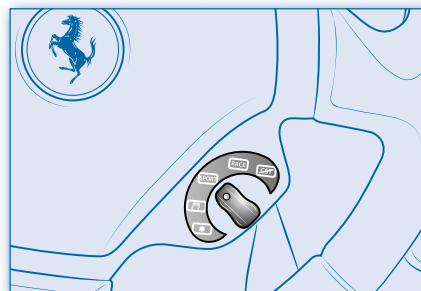
Press the **ENGINE START** button to start the engine. When the engine has started, release the **ENGINE START** button.

Do not hold the **ENGINE START** button down for a long time.

For the starting procedure, see “Starting and driving the vehicle” on page 77 or 82.



3 - Driving mode selection switch



In any case, the type of mode selected does not exempt the driver from complying with the rules of safe driving.

You can select the driving mode to suit the driving style you desire.

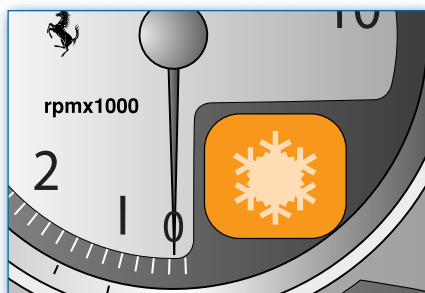
In the event of a failure of one of the onboard systems, signalled by the warning light on the instrument panel display (see page 35), the system moves to a “recovery” position, allowing the vehicle to still be driven. In these cases, contact the FERRARI SERVICE NETWORK.

2 - About your vehicle

“ICE” (❄️) mode

This mode can be used when the road conditions are particularly slippery (e.g., snow, ice).

When this mode is activated, the **ICE** symbol will appear on the multi-function display for a few seconds and an acoustic signal will warn the driver that the driving mode has been changed.

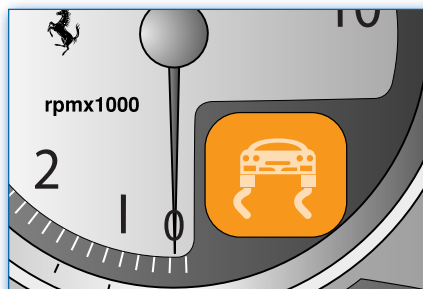


For use, see on [page 89](#).

“Low-grip” (🚗) mode

This can be activated to enhance driving comfort, even when driving in a racing style, assuring stability in low- to medium-grip conditions. It is also recommended for city driving.

When this mode is activated, the **Low grip** symbol appears on the multi-function display for a few seconds and an acoustic signal will warn the driver that the driving mode has been changed.



For use, see on [page 89](#).

SPORT mode

This is the ideal setting for vehicle performance.

Select **SPORT** mode if you wish to drive in racing style in high-grip conditions.

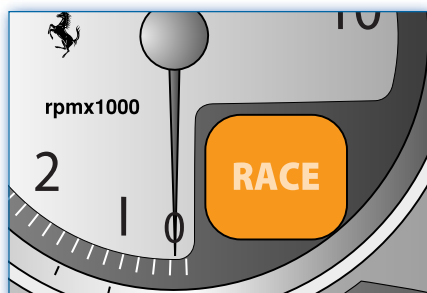
When this mode is activated, the **SPORT** symbol appears on the multi-function display for a few seconds and an acoustic signal will warn the driver that the driving mode has been changed.



For use, see on [page 89](#).


RACE mode

The **RACE** mode further enhances the already racing style performance of the vehicle. When this mode is activated, the **RACE** symbol will appear steady on the multi-function display.



This selection is ideal for the race track.
For use, see on [page 90](#).

Deactivating the CST system ()

Selecting this mode, you can deactivate the CST system (always on upon engine start). When this mode is deactivated, the relevant warning light on the instrument panel comes on and the symbol  appears on the multi-function display.

An acoustic signal will sound at length to warn the driver that the driving mode has been changed.



When the CST system is active, its operation is signalled by the relative warning light on the instrument panel and by the (green) message **CST ACTIVE** on the multi-function display, which flashes for at least 4 seconds.



In low- to medium-grip conditions (e.g., wet, icy, sandy roads), do not deactivate the CST system.

When the CST system is active and the amber warning light comes on, it means that there is a fault in one of the system parts. Contact the **FERRARI SERVICE NETWORK**.

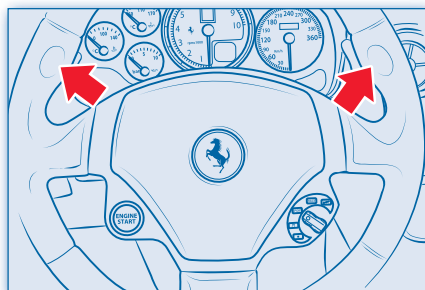
Every time the ignition is turned on, the CST system will reactivate.

For use, see on [page 90](#).

2 - About your vehicle

4 - Horn control

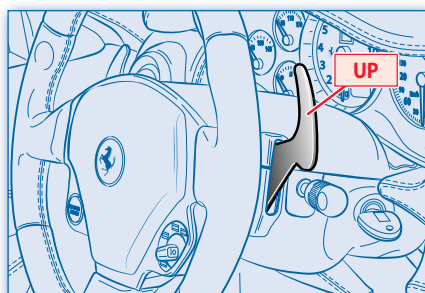
The horn is activated by pressing the sides of the upper spokes on either side of the steering wheel, in position with the horn symbol.



5 - "UP" gearshift lever (vehicles with F1 gearbox)

Pull the right-hand **UP** lever towards the steering wheel to shift up.

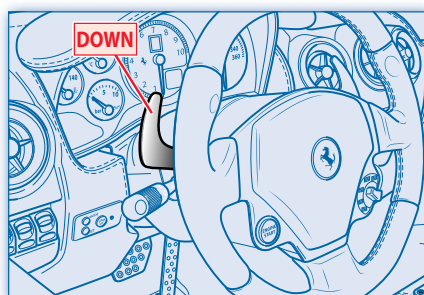
For use, see "Starting and driving the vehicle" on [page 77](#).



6 - "DOWN" gearshift lever (vehicles with F1 gearbox)

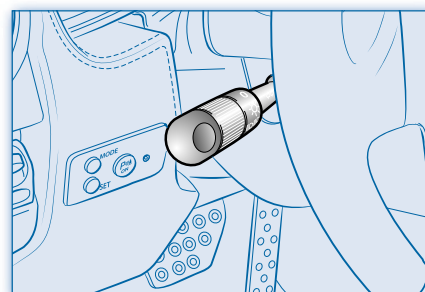
Pull the left-hand **DOWN** towards the steering wheel to shift down.

For use, see "Starting and driving the vehicle" on [page 77](#).



7 - Exterior lights and direction indicator control lever

The exterior lights and the direction indicators only work when the ignition key is in position **II**.



F430 SPIDER

Operate the lever to activate:

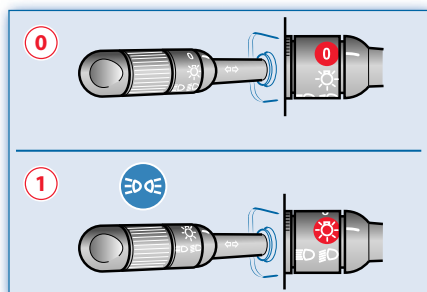
- **the exterior lights:**

Position **0**:

Lights off.

Position **1** (lever turned by one click):

Position lights and number plate lights on (the relevant warning light also illuminates) and the instrument panel is backlit.



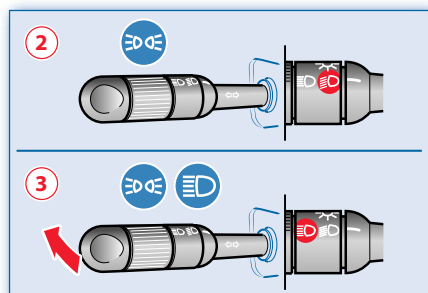
Position **2** (lever turned by two clicks):

Low beams on.

Position **3** (lever pushed forward):

High beams on (the relative warning light also turns on).

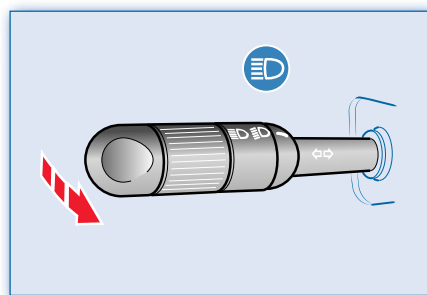
The high beams can only be turned on with the lever in position **2**.



- **headlight flashing:**

with the high beams, it is activated by pulling the lever towards the steering wheel.

The function can be activated with the lever in any position.



2 - About your vehicle

- the direction indicators

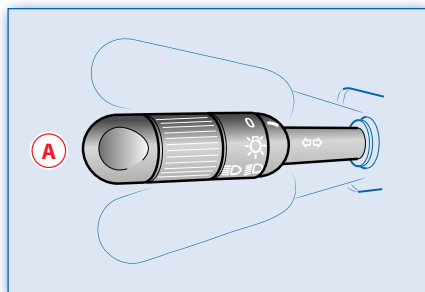
The direction indicators work only when the ignition key is in position II.

The instant the lever is moved, the relevant warning light on the instrument panel also comes on.

The lever returns to its central position when the steering wheel is straightened.

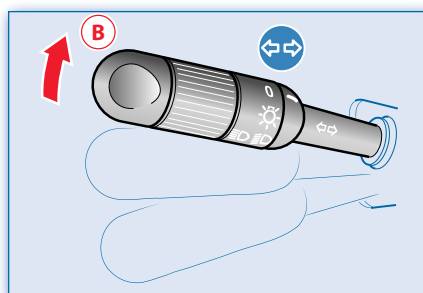
Position **A** (lever in rest position):

Direction indicators off.



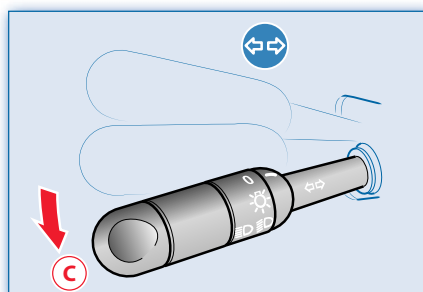
Position **B** (lever up):

Right-hand side indicators.



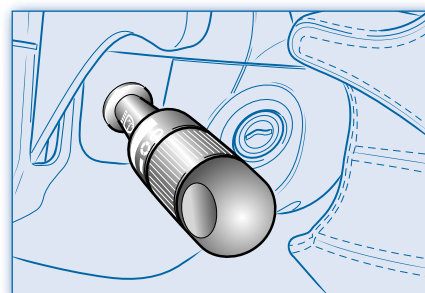
Position **C** (lever down):

Left-hand side indicators.



8 - Windscreen wipers and washer control lever

The windscreen wipers and washer operate only with the ignition key in position II.



Operate the lever to activate:

- the windscreen wipers:

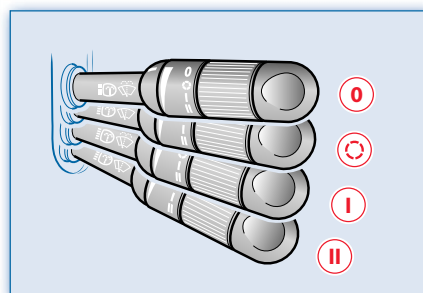
Position **0**:

Windscreen wipers off.


Position **I** (lever lowered by one click):
Adjustable intermittent operation.

Position **II** (lever lowered by two clicks):
Continuous slow operation.

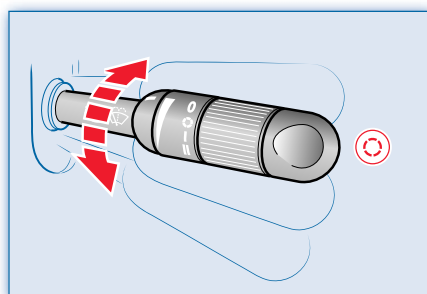
Position **III** (lever lowered by three clicks):
Continuous fast operation.



- to adjust the intermittent speed:

In position , turn the lever to change the intermittent speed:

- **clockwise** = slower intermittent speed;
- **anticlockwise** = faster intermittent speed.



- the windscreen washer:

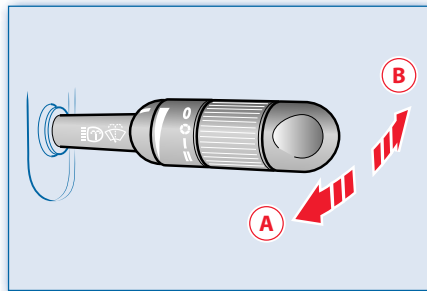
Pull the lever towards the steering wheel **A** to simultaneously activate the windscreen washer and the windscreen wipers.

When the lever is released, the windscreen washer stops while the windscreen wipers continue for a few more strokes.

- the headlight washer:

Push the lever in the opposite direction to the steering wheel **B** to activate the headlight washer. When the lever is released, the spray nozzles go back into their seats.

For better cleaning, use the headlight washers when the vehicle speed is below 130 km/h.

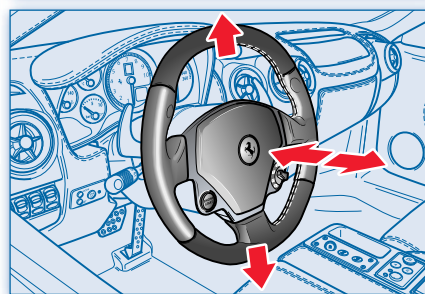
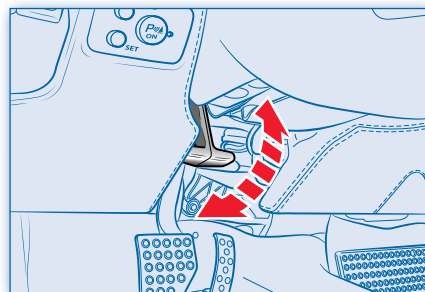


9 - Steering wheel adjustment lever

Both the height and depth of the steering wheel can be adjusted.

- Release the lever by pulling it towards the steering wheel.
- Adjust the steering wheel position.
- Lock the steering wheel by pushing the lever back to its original position.

Do not adjust the steering wheel when the vehicle is moving.

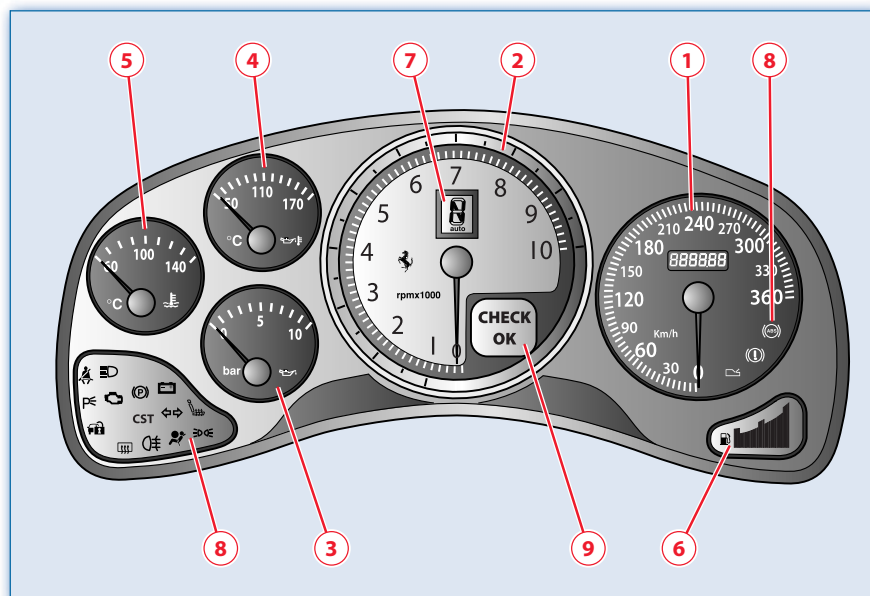


2 - About your vehicle

Instrument panel

- ① Electronic speedometer
- ② Revolution counter
- ③ Oil pressure gauge
- ④ Oil temperature gauge
- ⑤ Water temperature gauge
- ⑥ Fuel level gauge
- ⑦ Gear display (*)
- ⑧ Warning lights display
- ⑨ Multi-function display

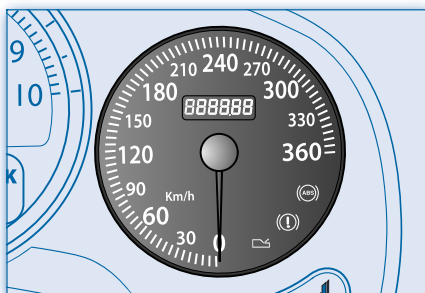
(*) for versions with F1 gearbox only.



F430 SPIDER

1 - Electronic speedometer

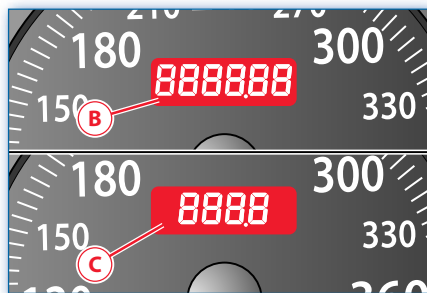
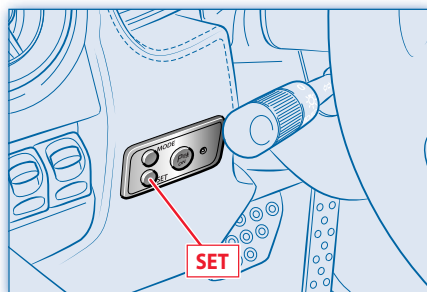
Indicates the vehicle speed.



Odometer:

Briefly press button **SET** to display the total **B** or trip **C** mileage.

To reset the trip odometer, hold button **SET** pressed down for at least 2 seconds.

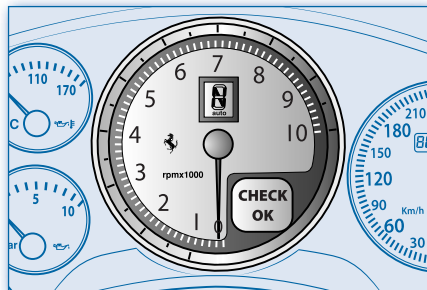


2 - Revolution counter

Indicates the engine RPM.

Avoid engine speeds in the red sector.

If you exceed the RPM, the ignition/injection ECU will temporarily cut off the fuel supply.



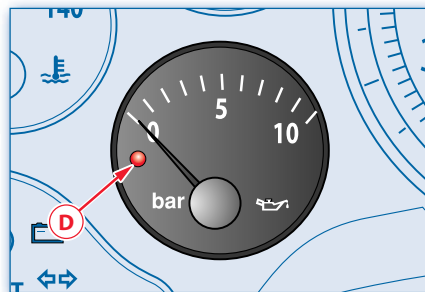
3 - Engine oil pressure gauge

The red warning light **D** indicates low oil pressure.

In normal conditions, this light comes on before starting, in order to run a self-test.

If a failure occurs, it lights up when the engine is running and pressure is low. In this case, turn the engine off immediately and carry out the necessary checks.

If the problem persists, contact the **FERRARI SERVICE NETWORK**.

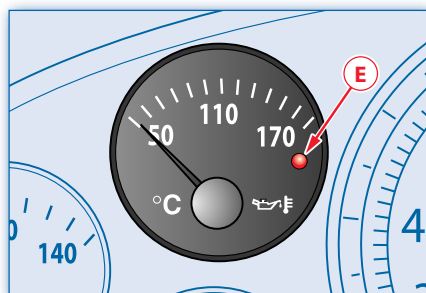


2 - About your vehicle

4 - Engine oil temperature gauge

When the red warning light **E** comes on, it indicates that the water temperature is too high. This occurs when the temperature exceeds 155 °C.

In this case, reduce the engine speed immediately. If the temperature remains high, turn off the engine and contact the **FERRARI SERVICE NETWORK**.

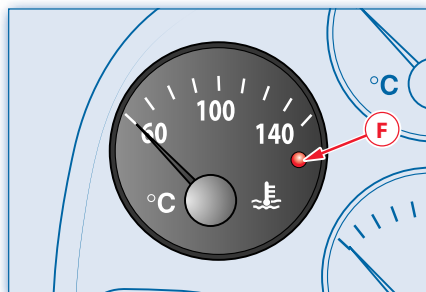


5 - Water temperature gauge

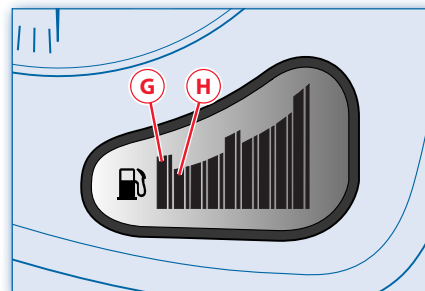
Indicates the coolant temperature.

When the red warning light **F** comes on, it indicates that the temperature is too high. This light comes on when the temperature exceeds 125°C.

In this case, reduce the engine speed immediately. If the temperature remains high, turn off the engine and contact the **FERRARI SERVICE NETWORK**.

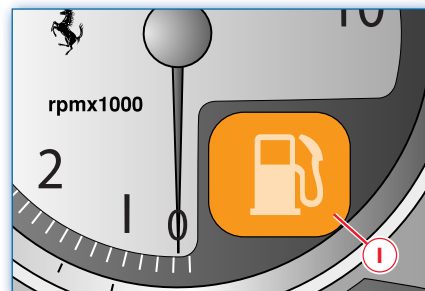


6 - Fuel level gauge



If the last segment **G** on the fuel level gauge flashes and the next to the last segment **H** is on steady, it means that there are 18÷20 litres of fuel left in the tank.

When there are less than 9 litres fuel in the tank, the symbol **I** appears on the multi-function display and the last segment of the gauge goes off.



7 - Gear display (for versions with F1 gearbox only)

Incorporated in the Revolution counter; with the ignition key in position II, it displays the gear engaged.

N - Neutral

R - Reverse gear

1 - 1st gear

2 - 2nd gear

3 - 3rd gear

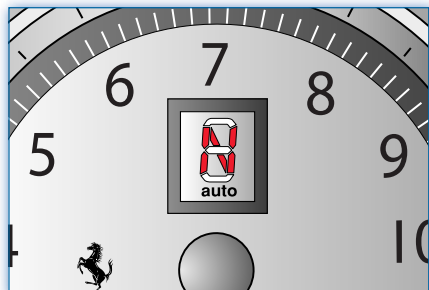
4 - 4th gear

5 - 5th gear

6 - 6th gear

auto - automatic gearshift mode

When the symbol “-” is displayed, it indicates a fault condition in the gearbox. Please contact the **FERRARI SERVICE NETWORK** to have the necessary checks carried out.



Warning lights

8 - Warning lights display

If a failure warning light comes on while driving, have the necessary checks performed by the **FERRARI SERVICE NETWORK**.

In addition to turning on when the self-check is run before starting, the warning lights may illuminate in the following cases:

ABS



While driving, to indicate malfunctioning of the ABS system.

The standard braking system remains functional - contact the FERRARI SERVICE NETWORK.

Brake failure



To indicate low brake/clutch fluid in the tank.

This indicates excessive wear of the front brake pads (and also the rear ones, if the optional CCM system is fitted).

If the warning light comes on while driving, stop the vehicle, check the level of fluid in the tank and contact the FERRARI SERVICE NETWORK.

CST system failure

CST

To signal that the CST system is deactivated or to indicate a failure of one of the systems in the CST.

In this case, contact the FERRARI SERVICE NETWORK.

Moreover, when the warning light flashes it indicates that the CST system has been activated.

Parking brake



When the parking brake is engaged.

Airbag



While driving, to indicate a malfunction in the airbag system and/or in the seat belt pretensioners.

If the warning light does not come on for the self-check or if it comes on while driving, contact the FERRARI SERVICE NETWORK immediately.

Seat belts



With the ignition key turned to position II, when the driver's seat belt is not fastened.

Alternator



If there is a fault in the charging system.

When the battery is insufficiently charged or overcharged (flashing).

2 - About your vehicle

F1 gearbox failure



Warning light constantly lit, emitting a beep: when an F1 gearbox operating error has occurred.

If the failure permits, pull off the road and contact the FERRARI SERVICE NETWORK.

Flashing: low pressure in the system.

Engine control system malfunctioning



While driving, to indicate a malfunction in the emission control system and in the ignition/injection system.

It remains on for a self-check cycle from the moment the ignition key is turned to position **II** until a few seconds following the engine starting.

For further information see [page 116](#).

Direction indicator



When the direction lights are activated.

When the hazard warning lights are turned on.

Position lights/low beams



When the dipped lights or low beam lights are turned on.

High beams



When the high beams are turned on.

When the high beams are used to flash.

Parking lights



When the parking light control button is activated.

Rear fog lights



When the rear fog lights are turned on.

External rear-view mirror defroster



When the button which controls the exterior rear view mirror defroster is operated. These will automatically turn off thirty minutes after they have been activated.

Ferrari CODE system



The vehicle is equipped with an electronic system for immobilizing the engine (FERRARI CODE), which activates automatically when the ignition key is removed.

The keys are equipped with an electronic device that transmits a coded signal to the immobilizer ECU, which allows the engine to be started only if it is recognised.

Seat heating (optional)



When the seat heater is activated (see [page 50](#)).

Failure of all the braking systems and CST



When all the warning lights shown in the figure turn on at the same time:

CST



Caution: Danger of rear wheels locking due to malfunctioning of the electronic brake-force distribution system and possibility of spinning.

Stop the vehicle without braking abruptly. Do not drive any further and immediately contact the FERRARI SERVICE NETWORK.

In any case, the vehicle may still be driven at low speed (max. 40 Km/h), to pull off the road.

Multi-function display

9 - Multi-function display

Incorporated in the instrument panel, it diagnoses and signals any faults. It may have the following colours:

Green = Normal driving conditions

Red = When a fault occurs

Amber = When one of the available systems has been activated

Multi-function display signals

The multi-function display shows symbols relative to fault conditions and the state of the vehicle.

If more than one fault occur at the same time, they are displayed for a length of time depending on their priority.

The signals of the tyre pressure monitoring system (optional) that may appear on the multi-function display are described on page 138.

The following symbols may be displayed:

Check OK



When the ignition key is turned to position **II**, the electronic system runs a diagnostic check of the vehicle and, if no faults are found, the symbol **Check OK** illuminates to indicate that the vehicle can be started.

Fuel tank door open



Indicates that the fuel tank door is open or not properly closed.

Outside temperature



If selected with the relevant button, it displays the outside temperature (see page 40).

Clock



Displays the time. It can be disabled with the multi-function button (see page 41).

If the battery is removed, the exact time will have to be reset using the multi-function buttons (see page 41).

CST active



While driving, it indicates that the CST has been activated.

CST inactive



Indicates a malfunction or that the CST system has been deactivated using the switch on the steering wheel (see page 24).

Low fuel



Indicates that only 18÷20 litres of fuel are left in the tank or that the level gauge is malfunctioning.

Fuel supply cut-off



Indicates that the inertia switch has tripped, in the event of an accident, and that consequently the fuel supply has been cut off.

Suspension system



While driving, it indicates a malfunction in the suspension system.

■ Contact the **FERRARI SERVICE NETWORK**.

Instrument panel lighting



If selected with the relevant button, it adjusts the brightness level of the instrument panel (see page 40).

Slow Down



While driving, it indicates a high temperature in the exhaust system (see page 127).



Indicates temporary malfunctioning of the electronic differential (see page 129).

■ Contact the **FERRARI SERVICE NETWORK**.

Hazard warning lights



If on, it indicates that all the direction indicators are on at the same time.

2 - About your vehicle

Windscreen washer fluid



This signals a low level of washer fluid in the windscreen washer tank.

Soft top operation



Indicates that the soft top is operating or has stopped in an intermediate position with respect to its closed or opened position (see [page 65](#)).

Luggage and engine compartment lids open



Indicates that the luggage and engine compartment lids are open or not properly closed.

Luggage compartment lid open



Indicates that the luggage compartment lid is open or not properly closed.

Engine compartment lid open



Indicates that the engine compartment lid is open or not properly closed.

Left- and right-hand doors open



Indicates that the doors are open or not properly closed.

Left-hand door open



Indicates that the driver-side door is open or not properly closed.

Right-hand door open



Indicates that the passenger-side door is open or not properly closed.

Battery charger connected



With the instrument panel on, it indicates that the battery charger connection is still active.

Vehicle set to ICE mode



When ICE driving mode is selected on the steering wheel switch (see [page 23](#)).

Vehicle set to Low Grip Mode



When Low grip driving mode is selected on the steering wheel switch (see [page 23](#)).

Vehicle set to SPORT mode



When SPORT driving mode is selected on the steering wheel switch (see [page 23](#)).

SPORT mode changes the driving performance of the vehicle.

Vehicle set to RACE mode



When RACE driving mode is selected on the steering wheel switch (see [page 24](#)).

RACE mode changes the driving performance of the vehicle.

Electronic differential



The amber symbol indicates that the E-DIFF clutch is overheating: reduce speed.



The same symbol in red indicates an E-DIFF system failure. In these cases, the vehicle can still be driven, but without the aid of the E-DIFF.

■ [Contact the FERRARI SERVICE NETWORK.](#)

Driving mode switch failure



Indicates a failure of one or more systems that select the driving mode.

■ [Contact the FERRARI SERVICE NETWORK.](#)

Brake Service (only vehicles with CCM braking system)

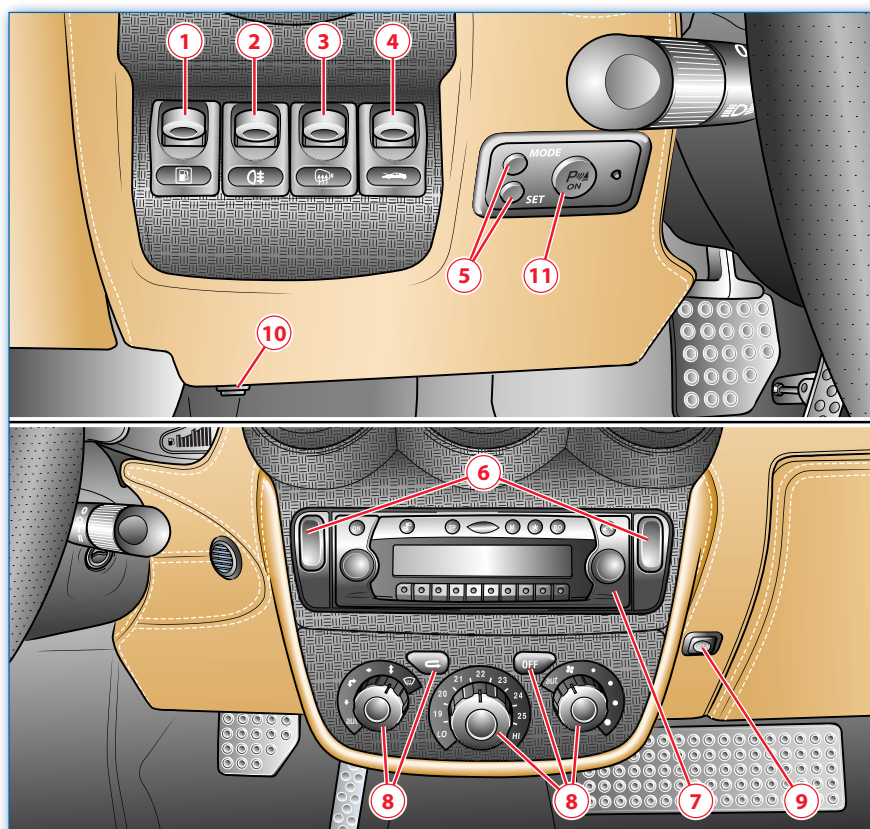


Indicates that the wear limit of the carbon brake discs has been reached.

■ [Contact the FERRARI SERVICE NETWORK.](#)

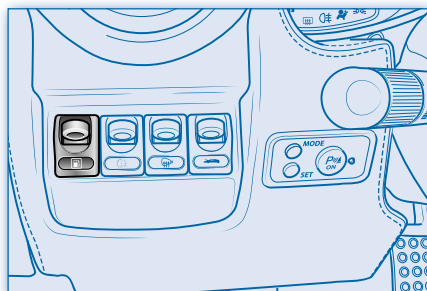
Dashboard controls

- ① Fuel tank door opening button
- ② Rear fog lights button
- ③ External rear-view mirror defroster button
- ④ Luggage compartment lid opening button
- ⑤ Multifunction buttons (MODE, SET)
- ⑥ Power window control
- ⑦ Car stereo system
- ⑧ Air conditioning and heating system controls (for use see on [page 72](#))
- ⑨ Glove compartment opening button (for use see on [page 58](#))
- ⑩ Calibration button for the tyre pressure monitoring system (TPMS), optional (for use see on [page 137](#))
- ⑪ Front parking sensor deactivation button (optional) (for use see [page 83](#))



2 - About your vehicle

1 - Fuel tank door opening button



Opening

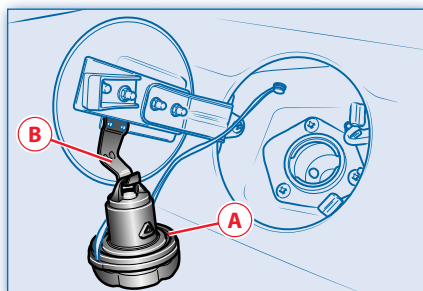
With the key in position 0, push the release button to unlock and open the fuel door, in order to access the fuel filler cap.

Unscrew the cap **A**, turning it anticlockwise and hang it on the hook **B**, provided for this purpose. .

Caution: It is normal if air is released when the cap is unscrewed. The airtight seal of the tank filler neck may cause slight pressure to build-up in the system.

Always turn off the engine during refuelling. Take extreme care when removing the cap.

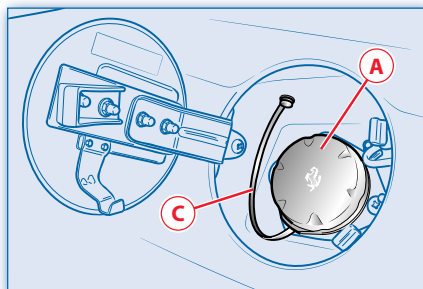
Do not smoke or use open flames when refuelling; furthermore, inhaling vapours can be harmful.



Closing

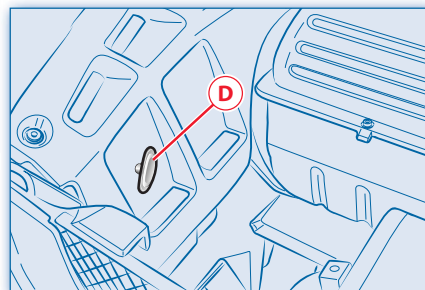
- Screw the cap **A** back on fully and close the compartment by pressing on the door.

Make sure that the cord **C** does not hang out of the fuel door.

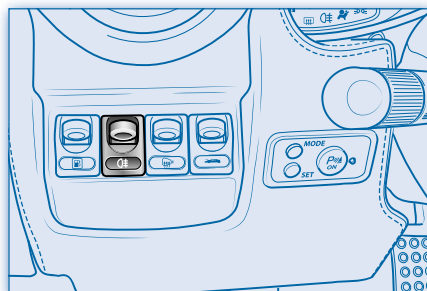


Emergency opening

If the opening button does not work, the door can be opened manually by pulling the lever **D** located on the left-hand side of the engine compartment.



2 - Rear fog lights button

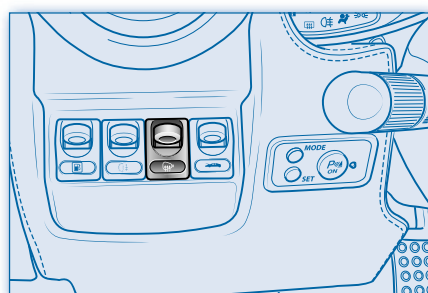


When the button is pressed, the rear fog lights are turned on only if the high beams or low beams are on. The dedicated warning light on the instrument panel comes on to indicate activation.

 The rear fog lights should only be used in poor visibility conditions.

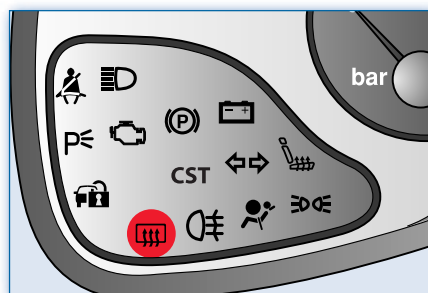


3 - External rear-view mirror defroster button



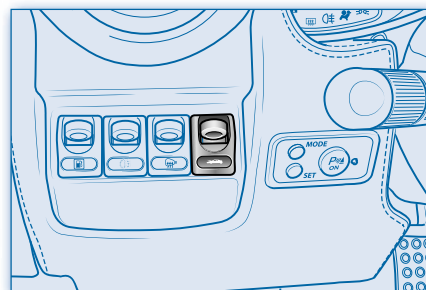
The defroster is activated by pressing the button on the dashboard. The dedicated warning light on the instrument panel comes on to indicate activation.

30 minutes after activation, the control button will automatically be turned off. It is however advisable to switch it off when the demisting or defrosting procedure has been completed.



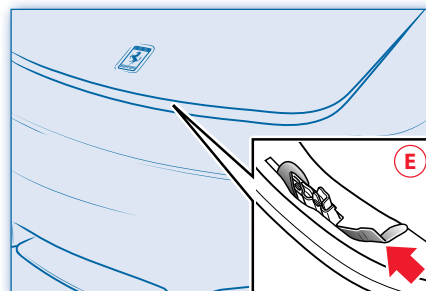
4 - Luggage compartment lid opening button

The lid can also be opened with the ignition key removed.



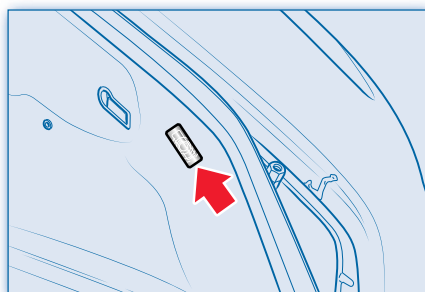
Opening

Push the release button on the dashboard. Stand in front of the vehicle, slightly lift the lid and press on the retaining lever **E** to lift it completely.



2 - About your vehicle

The lid is held open by two gas struts.
The luggage compartment is illuminated by a courtesy light.



Closing

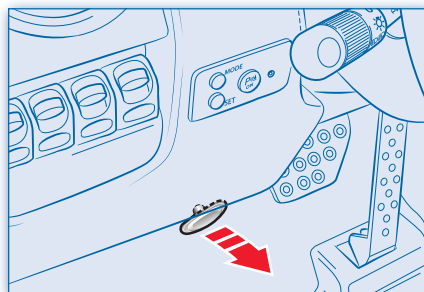
Lower the lid until it is closed and press down near the lock until you hear it click in place.



Always check to ensure that the lid is closed properly, to prevent it from opening while driving.

Emergency opening

If the opening button malfunctions, pull the lever located under the dashboard, on the left-hand side of the steering column.



5 - Multi-function buttons

The multi-function buttons work only when the ignition key is in position **II**.

By default, the time is displayed on the multi-function display.



Briefly press the left-hand button **MODE** (less than 2 seconds) to sequentially switch between the various functions shown on the display:

- outside temperature
- FL - front left-hand tyre pressure (*)
- FR - front right-hand tyre pressure (*)
- RR - rear right-hand tyre pressure (*)
- RL - rear left-hand tyre pressure (*)

(*) This function can be activated only when the tyre pressure monitoring system is fitted (optional)

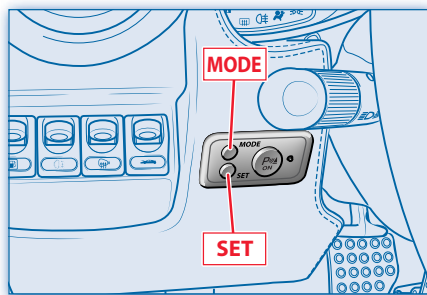
Press the left-hand button **MODE** at length (for longer than 2 seconds) to enter the programming mode, where you can scroll through the options by briefly pressing the same button.

Four options are available:

- adjusting the instrument panel brightness
- turning the clock ON/OFF
- setting the hours
- setting the minutes.

Within each specific area, briefly press the right-hand button **SET** to make the following adjustments:

- increase the instrument panel brightness
- turn the clock ON/OFF
- increase the hours
- increase the minutes.



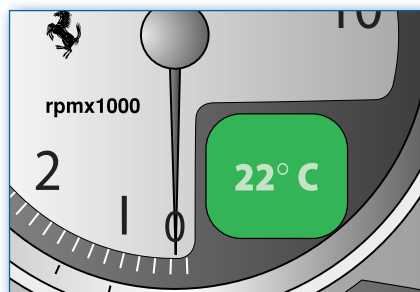
The programming mode is ended if no button is pressed for more than 10 seconds (timeout) or after the left-hand button

MODE has been pressed briefly from the minute-setting option.

Briefly pressing the right-hand button **SET** switches the odometer between trip and total miles, whereas pressing the right-hand button for a longer time resets the trip odometer (see page 30).

Outside temperature display

Briefly press the left-hand button **MODE** to display the outside temperature on the multi-function display.



Instrument panel lighting

Press the left-hand button **MODE** for a longer time to display the symbol on the multi-function display.



Briefly press the right-hand button **SET** to adjust the brightness of the instrument panel to a value between 0 and 30.

Clock

Press the left-hand button **MODE** at length, then press it briefly again and select OFF if you do not wish to display the time. In this case, the time is not displayed even when the ignition key is subsequently turned to position II.

If you wish to display the time again, the procedure described must be repeated, selecting the option ON.

When the battery is disconnected, the clock stops. When the battery is reconnected, the exact time must be reset using the multi-function buttons as described earlier.

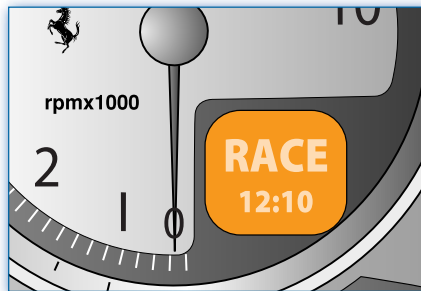
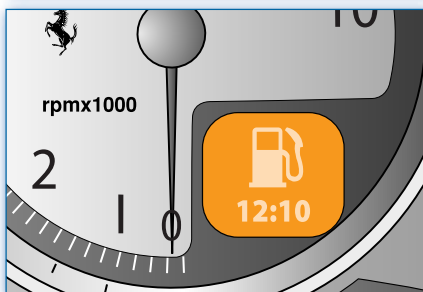
If one or more alarm symbols appear on the multi-function display, the time will not be displayed as long as the alarm is active.

As you can travel long distances with several warnings present, the following may

2 - About your vehicle

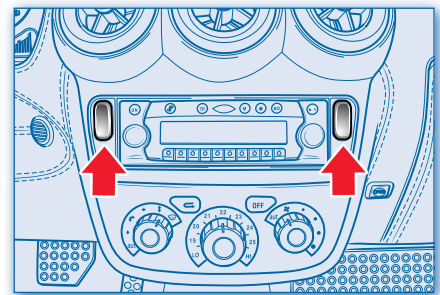
be shown simultaneously on the multi-function display: time and **CST** deactivated symbol, low fuel symbol or **RACE** driving mode.

Any other messages on the multi-function display will be shown according to the display sequence described earlier.



6 - Power window control

The power windows can only be used with the ignition key in position **II**.



Driver-side power window control

It is activated by pressing the button to the left of the car stereo.

This button allows manual operation (partial opening/closing) or automatic operation (complete opening/closing): press the button briefly to activate manual operation; hold the button down for a longer time (more than 0.3 seconds) to activate automatic operation so that the window stops when it reaches the end of its travel, or press the button a second time.

Passenger-side power window control

It is activated by pressing the button to the right of the car stereo.

This button allows only manual operation: when the button is released, the window stops at the position reached.

The window can move up to the “target” position in order to prevent the door from hitting the upper weather strip when it closes.



Improper use of the power windows can be dangerous. Before use, always check that people and objects are a safe distance away.

Pay particular attention during the automatic operation of the driver's side power window.

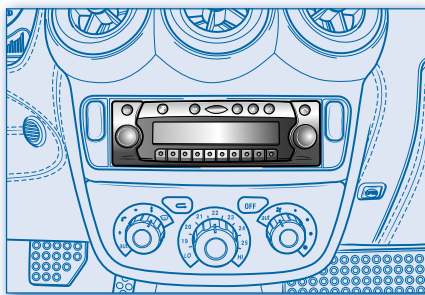
To protect the passengers remaining seated in the vehicle against accidental activation of the power windows, always remove the key from the ignition.

7 - Car stereo system

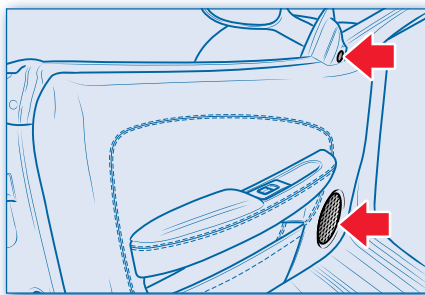
For use, consult the Instruction Handbook contained in the bag on board the vehicle.

The system is made up of the following components:

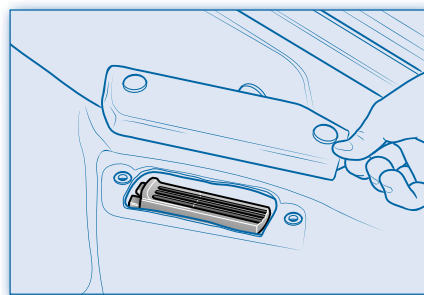
- Car stereo with removable front panel.



- 2 Woofer loudspeakers fitted at the bottom of the door panels.
- 2 Tweeter loudspeakers fitted on the interior fixing plate for the exterior rear view mirrors.



- Antenna incorporated in the windscreen.
- CD-changer on the left-hand side of the luggage compartment (optional).



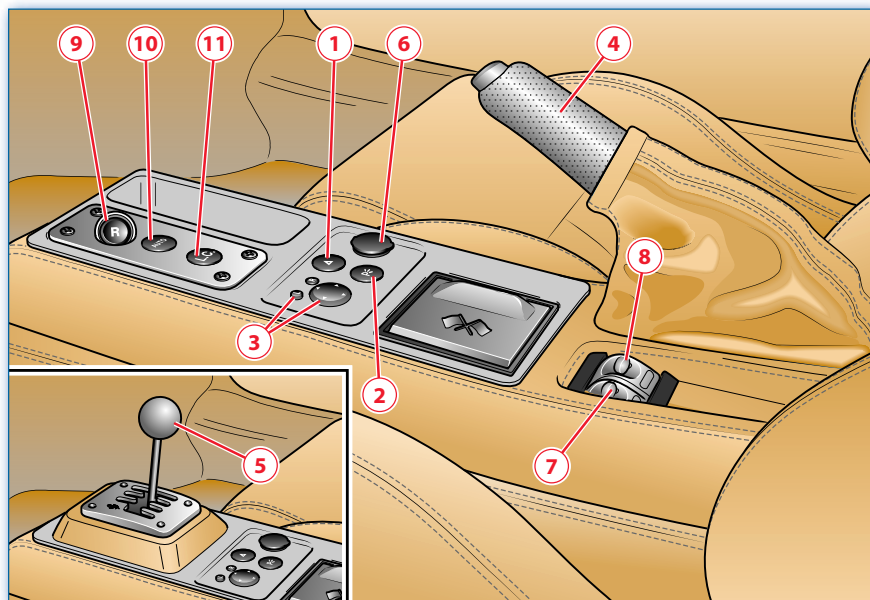
Various optional devices can be installed on the vehicle (e.g., satellite navigator, Bluetooth, powered Hi-Fi, etc.). For their description, see the “Carrozzeria Scaglietti” Owner's Manual.

2 - About your vehicle

Controls on the tunnel console

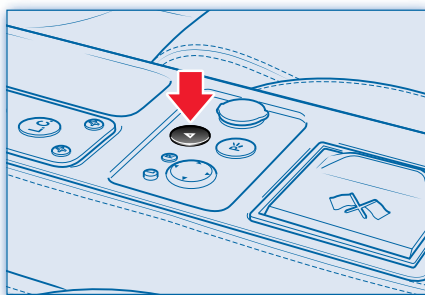
- ① Hazard lights switch
- ② Parking lights switch
- ③ External rear view mirror controls
- ④ Parking brake lever
- ⑤ Mechanical gearbox lever
- ⑥ 12V power socket
- ⑦ Soft top opening/closing button
- ⑧ Rear glove compartment opening button
- ⑨ Reverse gear engagement button (*)
- ⑩ "Automatic gearshift" function switch (*)
- ⑪ L.C. activation button. (*)

(*) for version with F1 gearbox only: for their use, see "Starting and driving the vehicle (F1 gearbox)" on [page 77](#).



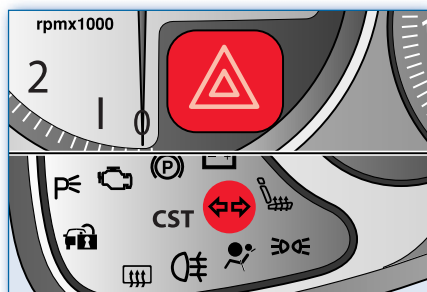
1 - Hazard light switch

Press the switch to turn on the hazard lights.



All the direction indicators will start to blink intermittently at the same time, independently of the ignition key position.

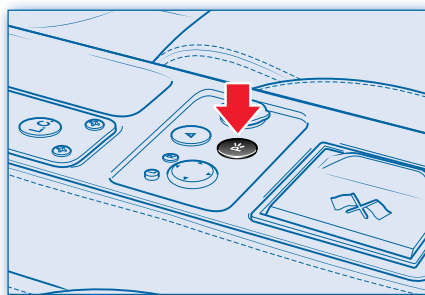
The symbol will be shown on the multi-function display. The warning light on the instrument panel and on the switch itself will flash intermittently to indicate that the hazard lights are on.



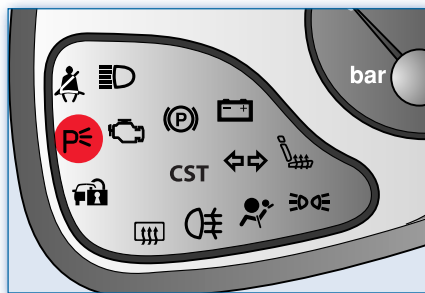
For deactivation, press the switch once again.

2 - Parking light switch

Press the switch to turn on the parking lights.



All the position lights will be turned on, independently of the ignition key position. The warning light on the instrument panel will come on to indicate that they are turned on.



For deactivation, press the switch once again.

2 - About your vehicle

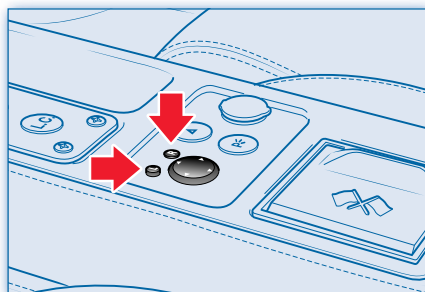
3 - External rear view mirror controls

The rear view mirrors can be adjusted electrically.


They can only be adjusted with the ignition key in position **II**.

To select the mirror you wish to adjust, operate the selector **R** (right-hand mirror) or **L** (left-hand mirror).

To adjust the mirror vertically or horizontally, push the adjustment button.

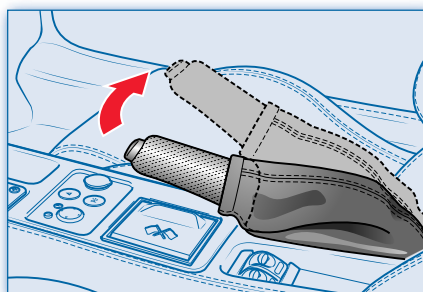


The exterior rear view mirrors can be manually folded towards the front or the rear.

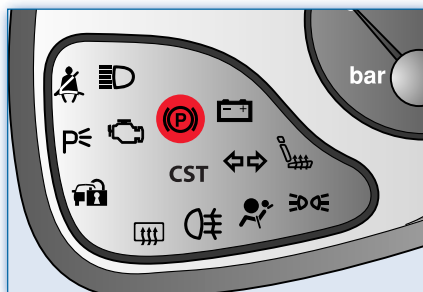
 The mirrors must be always positioned correctly while driving. Do not adjust the mirrors when the vehicle is moving.

4 - Parking brake lever

To engage the parking brake, pull the lever fully upwards thus locking the rear wheels.

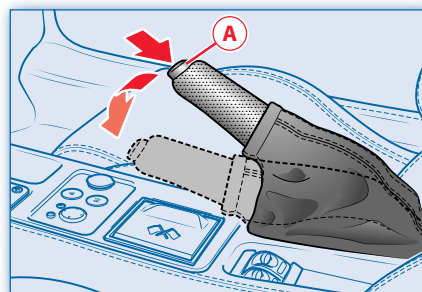


With the ignition key in position **II**, the warning light on the instrument panel comes on to indicate that the parking brake is engaged.




To release the parking brake, pull the lever upwards slightly and press the release button on the end of the lever **A**.

Fully lower the lever keeping the button pressed.



The warning light on the instrument panel will go off when the parking brake has been released completely.

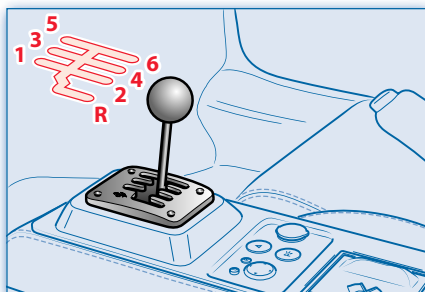
 Always use the handbrake when the vehicle is parked.

For further information see on page 83.

F430 SPIDER

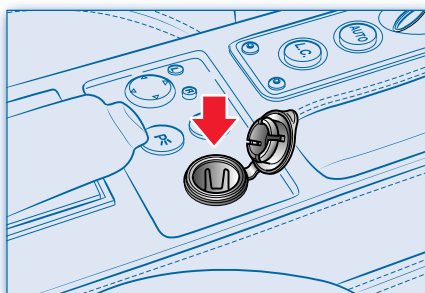
5 - Mechanical gearbox lever

For use of the gearshift lever see “Starting and driving the vehicle (Mechanical gearbox)” on [page 82](#).



6 - 12V power socket

This socket can be used to power small electrical devices such as: cell phones, lights, vacuum cleaner and any other accessory with absorption not higher than 140 Watts and 12 Volts.



Prolonged use of this device may discharge the battery.

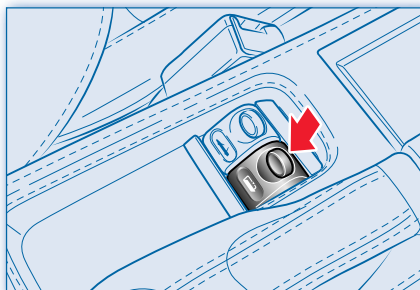
Do not try to insert plugs that are incompatible in size and shape into the power socket.

7 - Soft top opening/closing button

For information about the use of this button, see the “Soft top” section, on [page 63](#).

8 - Rear glove compartment opening button

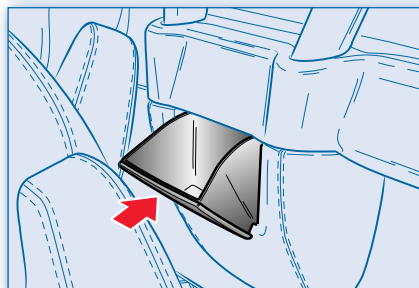
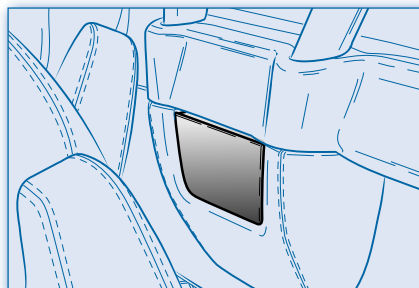
To open the rear glove compartment, located between the two seats, behind the driver and the passenger, press the button on the central console.



For closing the compartment, push it until you hear the lock click.



Keep the glove compartment closed while driving.

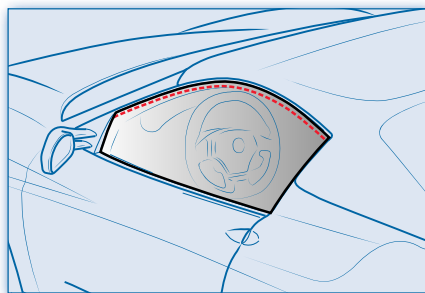


2 - About your vehicle

Doors

When the doors are opened or closed, the windows will automatically move down approximately 2 centimetres and stop (broken line) in order to avoid hitting the door weather strip.

When the door is closed, the window automatically moves up until it meets the weather strip.

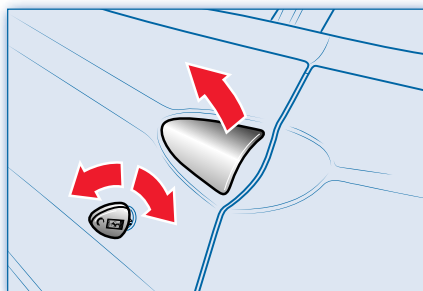


Opening the doors from outside

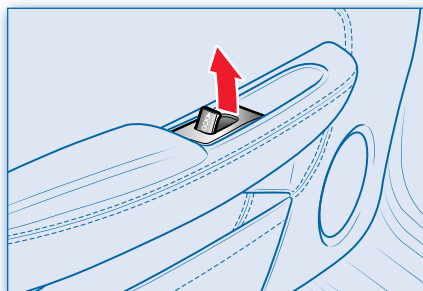
Deactivate the alarm and the central door locking using the radio control; should the latter not work, refer to section "Electronic alarm system" on [page 18](#).

Lift the handle to open the door.

Activate the central locking by turning the key clockwise.



Locking and opening the doors from the inside



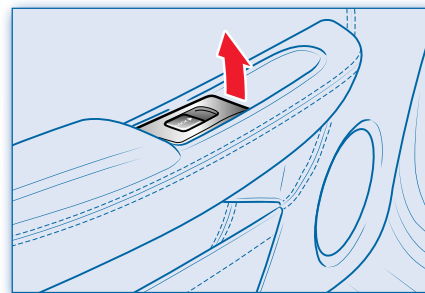
Both doors are locked by operating the small lever **LOCK**.

When using the handle to open the door, the window will move down to its "target" position.

When the door is closed, it will move back up until it meets the "upper ledge".

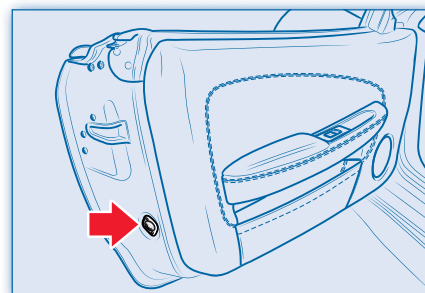
If the handle is operated without opening the door, the window will move down to its

"target position" and stop, and if the door is not opened after 15 seconds, the window will move back up until it meets the "upper ledge". Therefore, the handle must be released and pulled again in order to open the door. When the opening handle is operated, also both doors are unlocked.



Door open indicator

Each door is equipped with a red open door indicator light. This light turns on automatically when the door is opened.



Seat controls

Proper seat adjustment is essential to obtain the best driving comfort and maximum effectiveness of the passive safety systems.

⚠ Never adjust the seat while driving, as you could lose control of the vehicle. The driver's seat must only be adjusted when the vehicle is stationary.

Mechanically adjustable seat

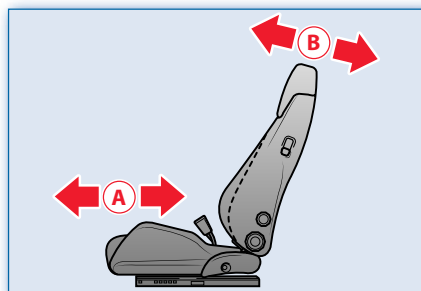
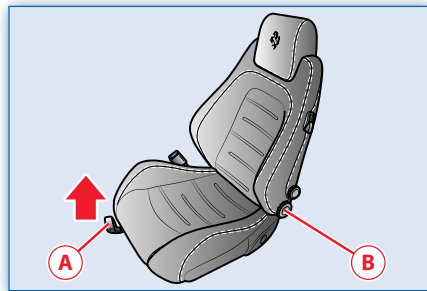
Backward/forward adjustment

Pull lever **A** upward and slide the seat forward or backward to the desired position.

Release the lever and move the seat slightly to ensure that it is locked in place.

Backrest inclination

Turn knob **B** until the desired inclination has been reached.



Lumbar support

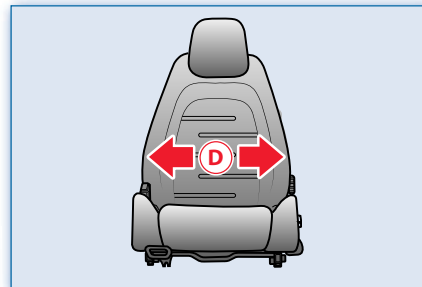
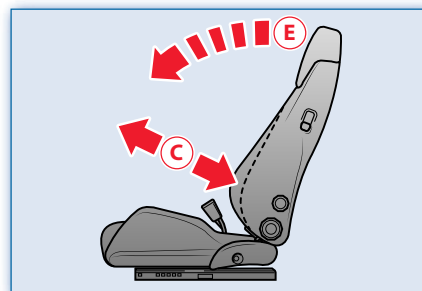
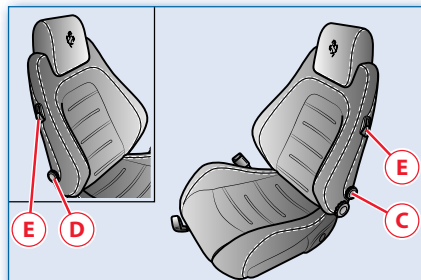
Turn knob **C** until the desired position of the lumbar area has been reached.

Side supports

Turn knob **D** to obtain the desired width of the side supports.

Backrest tilting


Operate lever **E** to tilt the backrest forward.

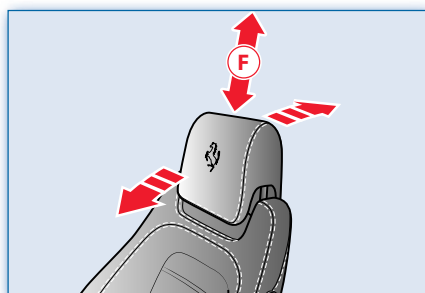


2 - About your vehicle

Adjusting the headrest

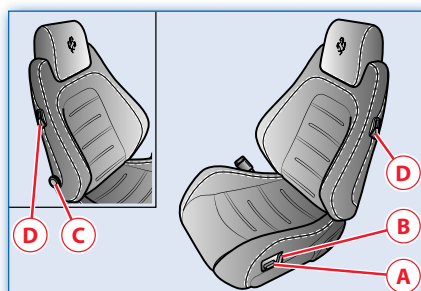
Move the headrest **F** until the desired height has been reached. Once the desired position has been found, the headrest can also be tilted forward and backward.

 **Adjust the headrest to suit your height in such a way that the centre of the headrest is level with the nape and not the neck.**



Electrically adjustable seat

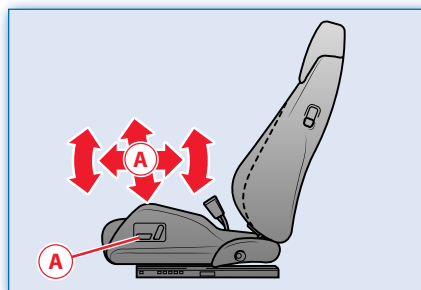
The seats can only be adjusted with the ignition key in position **II**. With the door closed, the position of the seat can be adjusted for about 15 seconds after turning the ignition key to position **0** and subsequently for a further 15 seconds from the last movement.



Backward/forward and height adjustment

Operating control **A** you can:

- slide the seat forward and backward;
- slide the seat up and down;
- adjust the inclination of the seat cushion clockwise or anticlockwise.



Backrest inclination and lumbar support

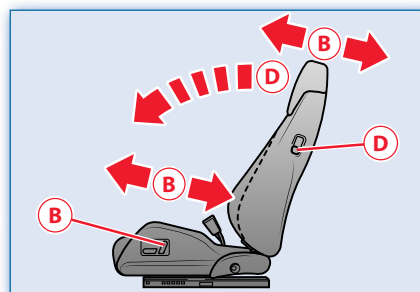
Operate control **B** to incline the backrest to the desired position or to obtain the desired arching of the lumbar area.

Side supports

Turn knob **C** until the desired width of the side supports is reached.


Backrest tilting

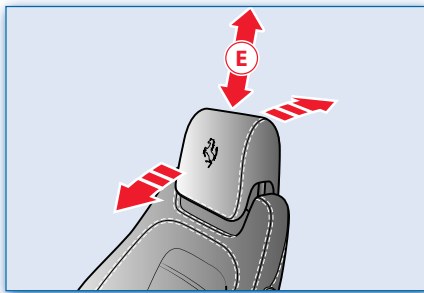
Operate lever **D** to tilt the backrest forward.



Adjusting the headrest

Move the headrests **E** until the desired height has been reached. Once the desired position has been found, the headrest can also be tilted forward and backward.

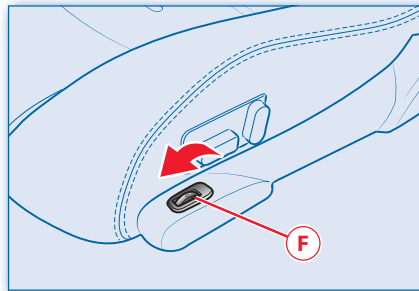
 **Adjust the headrest to suit your height in such a way that the centre of the headrest is level with the nape and not the neck.**



Heating System (optional)

The heating is activated by turning control **F**. Two heating pads are used to heat the seat. When this function is active for one or more seats, the relative warning light illuminates on the instrument panel.

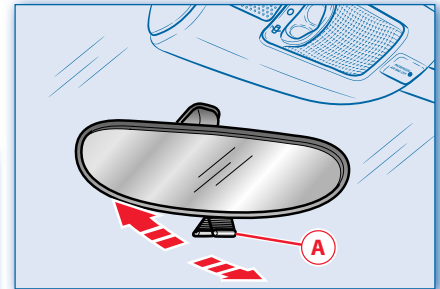
Operating control **F** you can adjust the heating level, choosing from 3 levels identified on the control with the numbers 1, 2 and 3.



Interior rear view mirror

This can be adjusted manually.

To set the mirror in the anti-dazzle position, push lever **A** forward.



2 - About your vehicle

Safety

FERRARI has designed and constructed this vehicle to offer the best possible performance for a road vehicle and ensure maximum safety. Following some simple rules will ensure maximum efficiency of the entire system.

Passive safety

The passive safety system activates in the event of a collision.

In addition to the seats and the headrests, the passive safety system components are:

- seat belts fitted with pretensioners and load limiting devices;
- airbag;
- manual passenger airbag deactivation switch;
- passenger airbag deactivation warning light;
- airbag system failure warning light (see [page 32](#));
- deformable body shell and protective survival cell;
- fuel cut-off inertia switch.

Depending on the impact, the passive safety system operates in different ways by activating the various system components.

In the event of small collisions: in addition to the protective action of the seats, headrest and bodywork of the vehicle, only the seat belts prevent the occupants from being flung from the seat.

In the event of more severe head-on collisions (up to 30° angle): in addition to the seat belts, the pretensioners activate with a restraining action.

In the event of an even more severe head-on collision, up to a 30-degree angle with respect to the longitudinal axis of the vehicle: in addition to the pretensioners, the airbags deploy.

The load limiting devices on the seat belts provide a suitable restraining action for the occupant, so as to prevent serious injury to his/her chest.



The protective action of the airbags is always integrated with the seat belts and the pretensioners. If the seat belts are not fastened, the driver and/or passenger may be seriously injured. In the event of collisions, side impacts or vehicle rollovers, i.e., when the airbags are not activated, it is essential to have the seat belts fastened.

Deformable body

The deformable body shell absorbs shock and distributes it over the entire structure of the vehicle, allowing progressive deceleration.

The passenger compartment structure, on the other hand, has been designed to offer maximum resistance without undergoing deformation, with the aim of ensuring a protective survival cell for the occupants.

Active safety

The active safety system has been designed to prevent collisions.

In addition to the vehicle technical features, such as manoeuvrability, stability and acceleration, the active safety components are the following:

- braking system
- air conditioning and heating system
- external lights
- buzzer and warning lights (flashing).

The braking system comprises the mechanical braking system and the electronic traction stability control system (CST), which prevents the wheels from locking and always provides good manoeuvrability and stability.

Rapid acceleration can, in some cases, get you out of dangerous situations. However, always use the accelerator with extreme caution. During acceleration of the driving wheels, the anti-skid system may help you in certain dangerous situations.

The air conditioning and heating system in the passenger compartment can add to driving comfort and keep you alert so that you can react quickly when necessary.

It is very important to see and be seen clearly, hence it is essential to turn on the external lights when the conditions so require.

Special warnings

This vehicle has been constructed in compliance with the strictest regulations for personal safety and environmental protection.

Nevertheless, a few rules should be followed.

Particular attention must be paid to:

- Overheated components: high temperatures develop in the engine compartment in proximity of the exhaust system.
Do not park the vehicle on paper, grass, dry leaves or other flammable materials. They could catch fire if they come into contact with hot parts of the exhaust system.
Do not fit other heat shields or remove those fitted on the exhaust system.
Do not let flammable substances come into contact with the exhaust system.
- Moving parts on the vehicle, such as fan belts etc. are always protected by appropriate systems.
Do not remove the guards or work on the moving parts without taking the due precautions.
- Pressurised systems on the vehicle, such as: the braking system, air conditioning and heating system, cooling system and lubrication system, which may generate pressure internally.


Do not carry out any operation which may cause gas or liquids to escape risking injury to persons and damage to objects.

- Exhaust gas generated by the running engine may be hazardous, especially in closed spaces. As well as consuming oxygen, the engine discharges carbon dioxide, carbon oxide and other toxic gases.
- Fuel is highly flammable and emits vapours which may be noxious if inhaled. Do not use open flames or create sparks near the open fuel tank, or in any other condition where fuel comes into contact with air.
- The oils used may also be flammable: take the same precautions as adopted for the fuel.
- The fluid contained in the battery is poisonous, corrosive and flammable. Do not let it spill out and come into contact with the skin, eyes or objects. Do not use open flames or create sparks near the battery.

In any case, observe the various warnings contained in this manual.

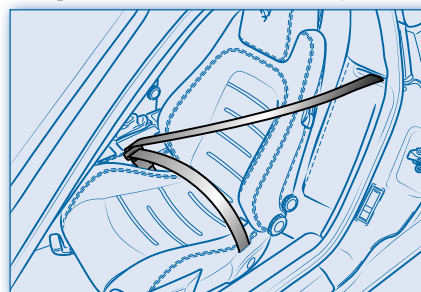
Seat belts

If used correctly, the seat belts, in combination with the pretensioners and the load limiting devices, protect the occupants from all types of impact and firmly secure them to the vehicle structure, thus preventing dangerous jerks against the fixed parts of the passenger compartment.

 **FERRARI recommends you use the seat belts correctly fastened and adjusted at all times!**

Correct use of the seat belts can reduce the risk of serious injury in the event of an accident or if the vehicle overturns.

The standard seat belts are automatic, with 3 attachment points (shoulders, pelvis), and an emergency inertial locking winder fitted with pretensioner and load limiting device.



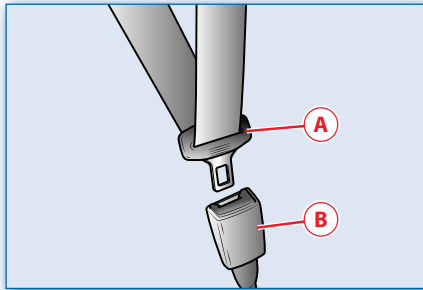
2 - About your vehicle

For maximum protection, keep the backrest in the upright position, rest your back comfortably against it and adjust the seat belt in height so that it fits tightly across your chest and pelvis.

Fastening the seat belts

After properly adjusting the seat and headrest:

- Grip the buckle **A**, slowly pull the belt and insert the hooking tongue into the buckle **B** (if the belt locks while you are pulling it out, let it wind back briefly and pull it out again without jerking).
- Make sure that it has clicked into the locked position.
- Position the seat belt correctly.



If the driver's seat belt is not fastened, when you turn the ignition key to position **II**, the warning light on the instrument panel illuminates and remains lit as long as the seat belt is not fastened.

60 seconds after a speed of 10 km/h is exceeded and up to 25 km/h, a buzzer sounds to warn the driver that the seat belt is not fastened.

When the speed of 25 km/h is exceeded, the buzzer activates immediately and stops after 90 seconds. This acoustic signal is emitted only once, even if the vehicle speed goes above and below the above mentioned limits. The acoustic signal is repeated (when the vehicle speed is in the indicated ranges) only if the seat belt is fastened and unfastened again or, in any case, every time the engine is turned off and then on.

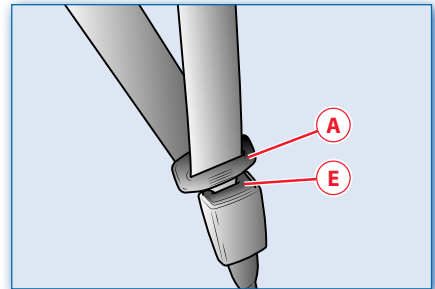


Do not use any objects (spring clips, locks, etc.) that hold the seat belt away from your body.

⚠ Do not allow a child to sit on the passenger's lap with both of them fastened with the passenger's seat belt.

Unfastening the seat belts

- Push the release button **E**.
- Guide the belt hooking tongue **A** back to its rest position.



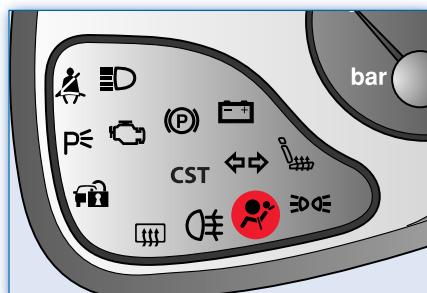
Load limiting devices

In the event of impacts at high speeds, with sharp deceleration, the load limiting device progressively releases the belt when the tension value reaches a predefined threshold. This action reduces the possibility of injury to the chest and shoulders of the occupant.

Pretensioners

The pretensioners are activated in the event of severe head-on collisions. The belt will rewind a few centimetres just before the restraining action begins, thereby ensuring the proper fitting across the body.

Activation of the pretensioners is indicated by a warning light on the instrument panel and by the seat belt locking.



⚠ After activation, the pretensioners no longer function and they cannot be repaired under any circumstances. Contact the FERRARI SERVICE NETWORK to have them replaced.

When the pretensioners are activated, a small amount of smoke is released. This smoke is not harmful and does not indicate the presence of a fire.

Maintenance of the seat belts and pretensioners

- Following a collision of a certain severity, replace the seat belts that were worn at the time, even if they may not appear to be damaged.
 - Periodically check that the screws on the anchoring points are tight and that the belt is intact and slides smoothly.
 - The belt must be kept clean; any dirt on the belt could jeopardise the efficiency of the belt retractor.
 - To clean the seat belt, wash it by hand with mild soap and water and let it dry. Do not use strong detergents, bleach or aggressive solvents, as they can weaken the fibres.
- Do not let the belt retractors get wet: proper functioning is ensured only if they are kept dry.
- The pretensioner requires no maintenance or lubrication.

If immersed in water or mud, the pretensioners must be replaced.

- The pretensioner must be replaced at the intervals specified in the "Warranty Booklet and Maintenance Schedule".

⚠ All work on any part of the safety system components must be carried out by the FERRARI SERVICE NETWORK.

It is not permitted to remove or make modifications of any kind to the seat belts, belt retractors and pretensioners.

Maintenance work involving strong impacts, vibrations or heating of the pretensioner area may activate them. Vibrations caused by road bumps will not have this effect.

Child safety

Because of their size, children are at greater risk than adults. Suitable restraint or safety systems must be used.

All minors whose physical characteristics (i.e. height, weight) fall within the legal limits in force in each country must be protected by approved restraint or safety systems (e.g., child seats, cradles, cushions).

In any case, you are advised to always use homologated child restraint systems bearing the proper test marking.

Always adjust the seat to the most rearward position, in order to ensure that the child is as far away as possible from the dashboard structure.

⚠ Incorrect fastening of a child restraint system increases the risk of injury to the child in the event of a collision.

2 - About your vehicle

- The seat belts in the vehicle have been designed and tested to protect persons weighing at least 36 kg and taller than 1.50 m.
- To properly protect a child outside these limits, specific restraint systems with dedicated belts or accessories capable of adapting the child's position to the vehicle's seatbelts must be fitted.

For installation and use of the child restraint systems, follow the instructions provided by the restraint system manufacturer.

⚠ On vehicles equipped with a passenger airbag deactivation device, do not fit a rearward-facing child seat on the passenger seat if the airbag is active, as the child risks serious injury or death in the event of airbag activation.

In this case, you must deactivate the passenger airbag using the dedicated control and ensure that the LED on the roof's console comes on (see page 57).

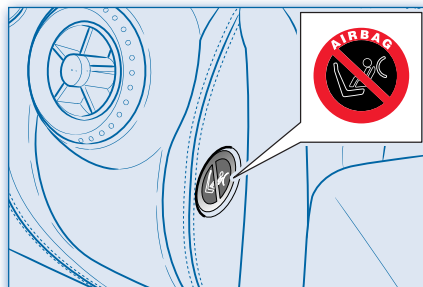
In addition, move the passenger seat as far back as possible in order to prevent the child seat from touching the dashboard.

Do not tamper with the seat belts or child restraint systems.

⚠ As provided for by law (in the European Community), children under 3 years of age may only travel in the vehicle if using suitable restraining systems. Where provided for by law (in the

⚠ European Community), children under 3 years of age who are less than 150 cm tall may not travel on the front seat unless a suitable restraint system is fitted.

The adhesive label applied on the right-hand side of the dashboard on vehicles not equipped with the passenger airbag deactivation device, indicates that it is prohibited to fit a rearward-facing child seat on the passenger seat.



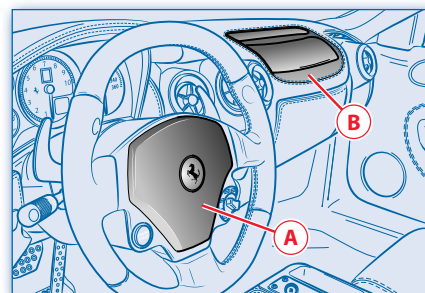
Airbag

⚠ The airbag is not a substitute for the seat belts, but increases their effectiveness. Correct use of the seat belts in combination with the airbag offers maximum protection in the event of a collision.

Airbag system components

The airbag system is composed of two instantly inflatable cushions, one situated on the driver's side **A** in the centre of the steering wheel, and the other on the passenger's side **B**, inside the dashboard.

⚠ When the ignition key is turned to position **II**, the relevant warning light on the instrument panel comes on and, if no faults are found, goes off after 4 seconds. If the warning light does not come on, or if it stays on, or if it comes on while driving, immediately contact the FERRARI SERVICE NETWORK.




Operation

The airbags are controlled by a sensor and an ECU that activates them in the event of a head-on collision with medium or strong impact.


In the event that the impact is so strong that deceleration exceeds the sensor calibration value, the electronic control unit sends an airbag activation signal. The airbags start inflating, opening the covers along the breaking line, until they are fully deployed (in a few tenths of milliseconds) and positioned as protection between the driver's or passenger's body and the vehicle structures which could cause injury.

The airbags deflate immediately afterwards.

 The driver and passenger are both advised not to travel with objects (e.g., cans, bottles etc.), placed on the airbag module covers or near them, as they could be thrown towards the occupants by the inflating bag, with the risk of extremely hot gas leakages.

When the system starts operating, gases are released in the form of fumes together with the gas used for inflating the airbags.

These gases are not harmful.

 Always drive with your hands on the rim of the steering wheel so that, in case of activation, the airbag can inflate without obstruction.

Always keep the backrest in the upright position and sit with your back properly resting against it.

The passenger must always fasten the seat belt and sit in an upright position, as far as possible away from the airbag, in order to have optimal protection in all types of collision.

Do not modify the system components or wiring under any circumstances.


Do not cut or tamper with the connectors of the airbag harness or on the airbag modules.

Do not cover the steering wheel and the padded panel on the dashboard on the passenger's side with adhesive tape or treat it in any way.

Never remove the steering wheel; if necessary, have this done only by the FERRARI SERVICE NETWORK.

All the airbag system components must be replaced after an accident that has caused airbag deployment.

Following an accident not involving airbag deployment, contact the FERRARI SERVICE NETWORK to have the system checked and any system components that may be damaged or malfunctioning replaced.


 Damaged or defective components of the airbag system cannot be repaired and must be replaced.

Improper operations performed on the system components may cause failures or deployment of the airbags with consequent damage.

The airbag system components have been specially designed for this specific vehicle model. Do not attempt to use them on other vehicles, as this could cause serious injuries to occupants in the event of an accident.

If the vehicle is to be scrapped, contact the FERRARI SERVICE NETWORK to have the airbag system deactivated.

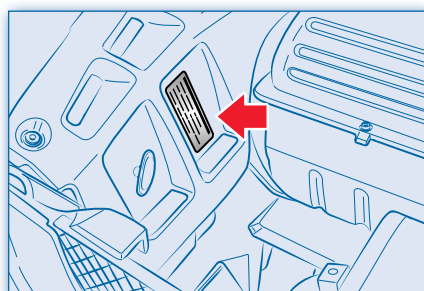
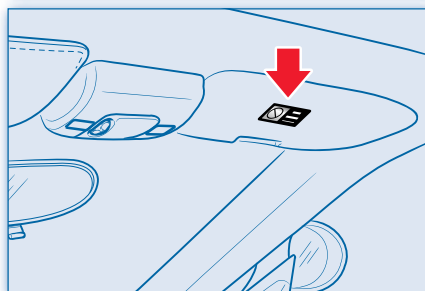
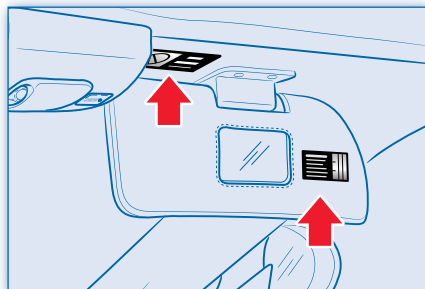
If the vehicle has been stolen or there has been an attempted theft, have the airbag system checked by the FERRARI SERVICE NETWORK.

 The airbag modules must be replaced at the intervals specified in the "Warranty Booklet and Maintenance Schedule", even if the vehicle has not been involved in a collision.

2 - About your vehicle

The label located on the right-hand sun visor, next to the courtesy mirror, shows the expiry date of the airbag system. When this expiry date is approaching, contact the **FERRARI SERVICE NETWORK** in order to have the system replaced.

The labels indicate the presence of the airbag system.



⚠ It is strictly prohibited to transport children in rearward-facing child seats if the passenger airbag is not deactivated. For passenger airbag deactivation on vehicles equipped with this device, see the next chapter.

On vehicles not equipped with the manual airbag deactivation system, children may not be transported in rearward-facing child seats fitted on the passenger seat.

Children under the age of 12 may not travel on the front seats.

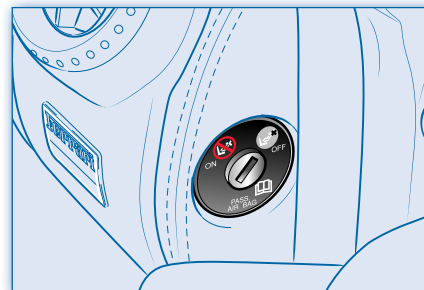
Manual deactivation of the passenger-side airbag

If a child is to be transported in the front passenger seat, always deactivate the passenger-side airbag before fitting the child seat. The device is disabled by operating (with the ignition key) the relevant key switch located on the right-hand side of the dashboard.

The switch is only accessible with the door open.

The key switch has two positions:

- ON: passenger airbag active and LED on the roof's console off; it is strictly prohibited to fit a child seat and transport children on the passenger seat.
- OFF: passenger airbag deactivated and LED on the roof's console on; a child seat can be fitted and children can be transported on the passenger seat.

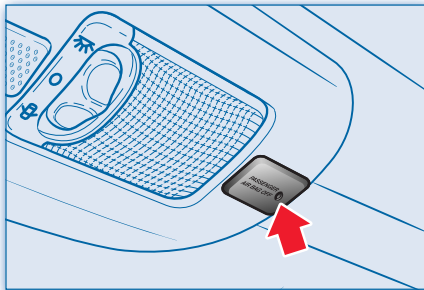


F430 SPIDER

The LED remains on until the passenger airbag is reactivated.

When the passenger door is open, the key can be inserted or removed in both positions.

⚠ Deactivate the passenger airbag only when you need to transport a child in a child seat and reactivate it afterwards. This way, the passenger sitting in the seat previously occupied by a child is protected by the airbag.

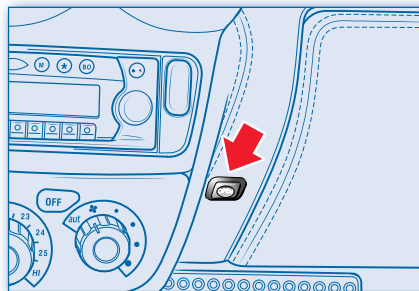


Passenger compartment accessories

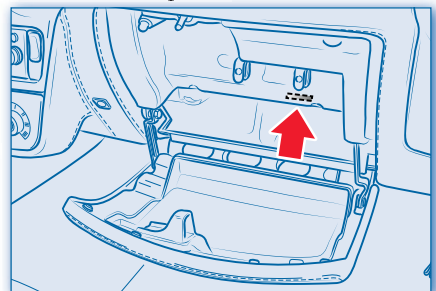
Glove compartment

Located on the dashboard on the passenger's side, it is always accessible with the key in position II.

To access the compartment, press the button.



The compartment is illuminated by an internal light which turns on automatically when the lid is opened.



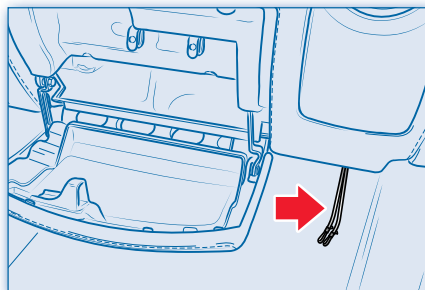
On the inside of the lid, there is a compartment containing the vehicle documents folder and a flashlight for emergency use.

Keep the lid closed while driving.

2 - About your vehicle

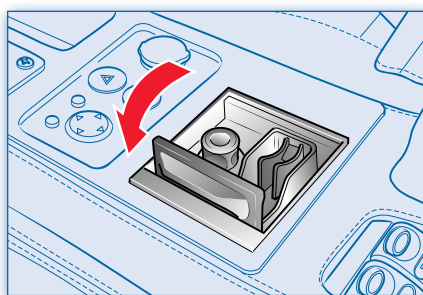
To close the compartment, push the upper end of the lid until you hear the central lock click.

Underneath the dashboard, on the external right-hand side of the glove compartment, there is a cable to manually open the compartment.



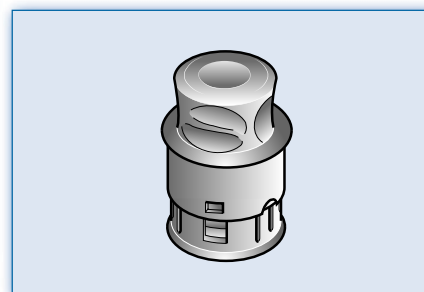
Ashtray/Cigarette lighter

To gain access to the ashtray or to the cigarette lighter, lift the cover.



To clean the ashtray, extract it by pulling it upwards.

The cigarette lighter is turned on by pushing it fully in. After reaching the required temperature, the cigarette lighter is automatically released to its initial position and is ready to be used.



⚠ Do not use the cigarette lighter seat as a power socket for electrical devices, use the dedicated socket only (see page 46).

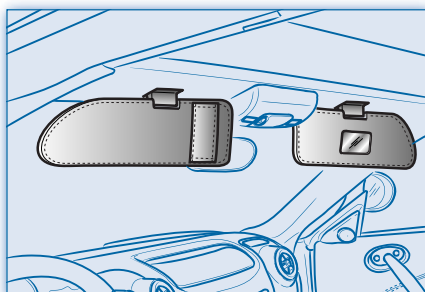
The cigarette lighter reaches very high temperatures. Handle it with care to avoid risk of burns and fire.

F430 SPIDER

Sun visors

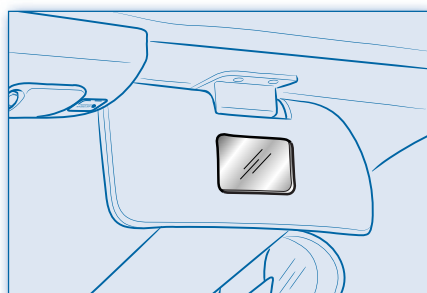
The sun visors can be lowered by moving them downwards.

On the back of the driver-side visor there is a document pocket.



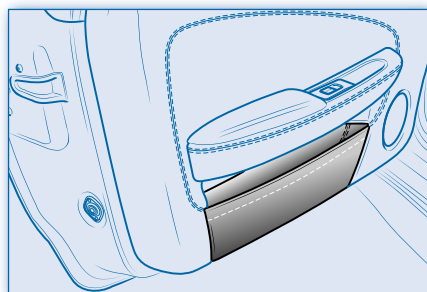
Courtesy mirror

On the back of the passenger-side visor there is a courtesy mirror.

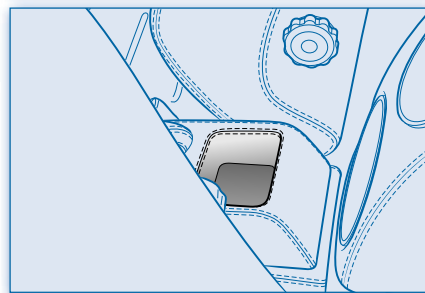
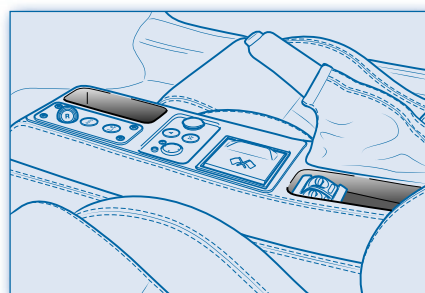


Pocket-change compartments

They are located on the lower side of the doors and on the central console.



The pocket-change compartment on the front of the console is only present on vehicles with F1 gearbox.



Two map pockets are fitted on the back of the seats to hold newspapers, magazines etc.

Do not put bulky and/or sharp objects in the map pockets as this may hinder seat positioning.

2 - About your vehicle

Internal lights

You can select when the dome light should come on with the switch on the roof:



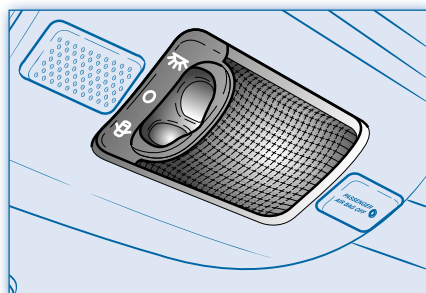
on when the doors are closed.



off.

automatically on when the doors are unlocked for about 10 seconds, and when one of the doors is opened for about 3 minutes.

After closing the doors, the dome light remains on until the engine is started or, in any case, for not longer than 20 seconds.

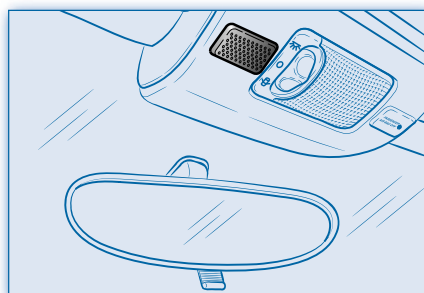


Hands-free microphone (optional)

The hands-free microphone is positioned on the roof, next to the dome light.

It is operational only in vehicles with Bluetooth™, supplied on request.

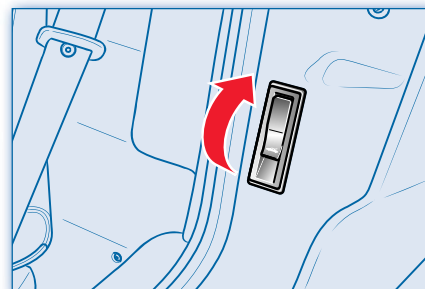
For further information on the device, consult the “Carrozzeria Scaglietti” Owner’s Manual.



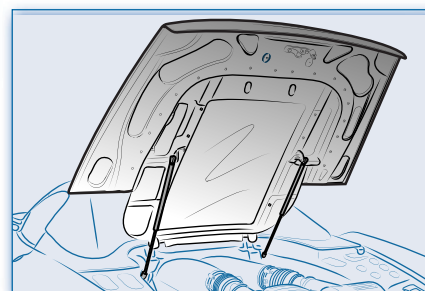
Engine compartment lid

Opening

- Pull the release lever located on the door jamb, on the driver’s side.



- Lift the engine compartment lid. The lid is held in position by two gas struts.



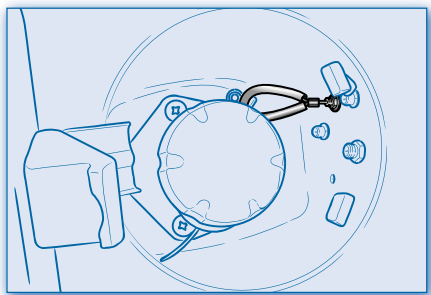
F430 SPIDER

Closing

- Lower the lid until it is about 20 centimetres from closing, then let it drop.
- Always check that it is properly closed.

Emergency opening

If the opening lever malfunctions, pull the cable located in the fuel filler cap compartment (see [page 37](#)).



2 - About your vehicle

Soft top

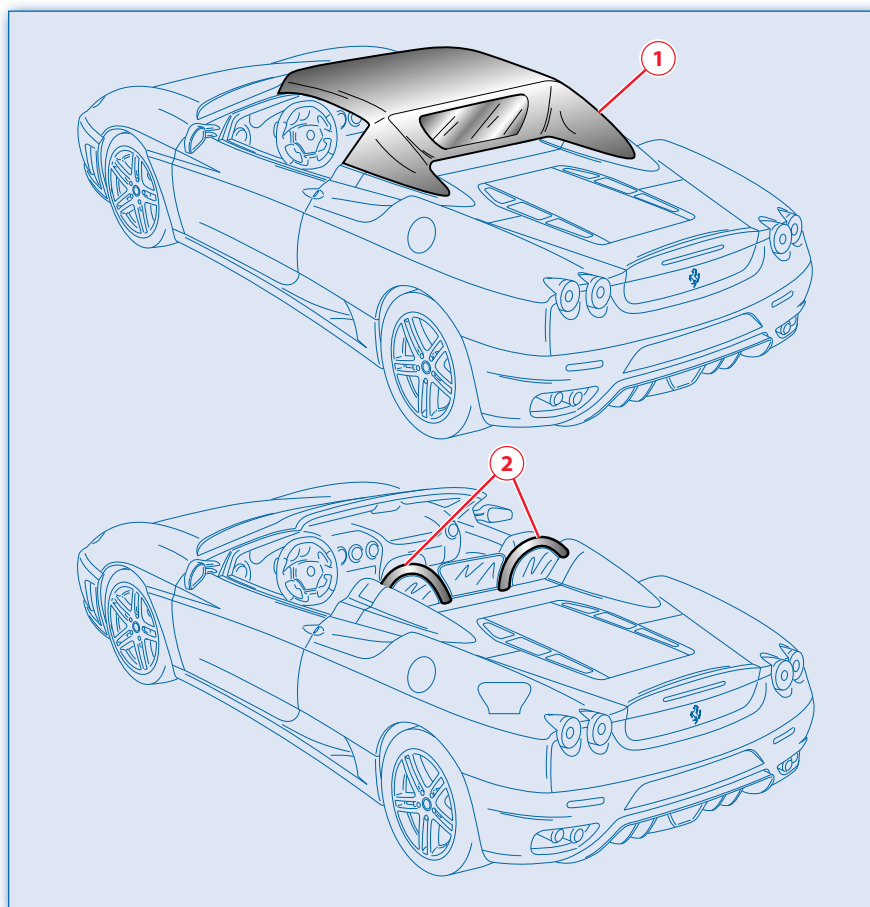
The soft top is operated by means of a hydraulic system, driven by a pump and controlled by a set of sensors that monitor each stage of its movement.

Do not keep the soft top open for long periods of time, especially if the vehicle is new, since the soft top canvas may become permanently creased and closing could become difficult.

Do not open the soft top when it is wet or damp.


Soft top main parts

- ① Soft top
- ② Roll-bars



F430 SPIDER

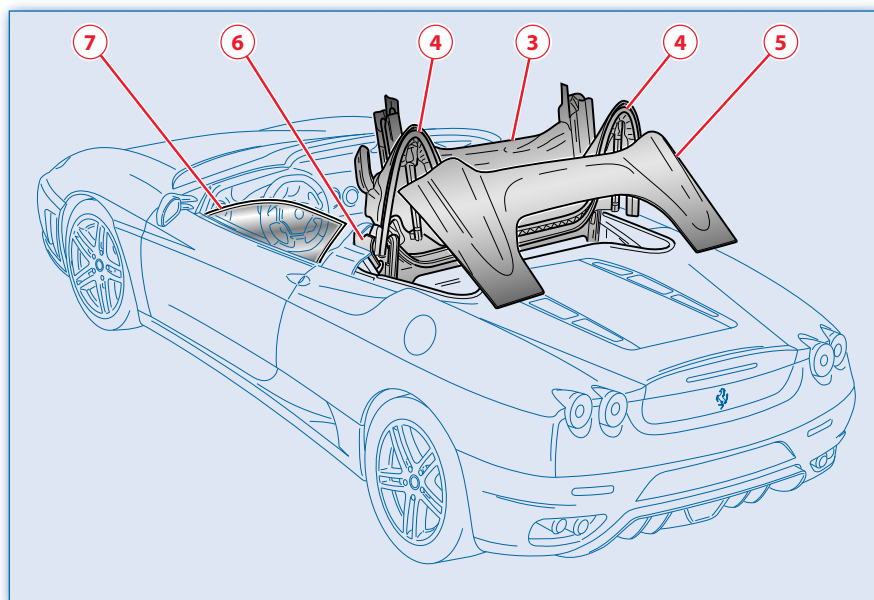
Operating the soft top

 Always make sure, before activation and during motion, that people or things are at a safe distance from the soft top's movable parts.

Never leave children unattended in the vehicle.

Soft top movable parts

- ③ Soft top unit
- ④ Fins
- ⑤ Cover
- ⑥ Flaps
- ⑦ Side windows



2 - About your vehicle

Before opening the soft top, make sure that the rear window is clean, in order to avoid scoring or scratching.

Opening/closing

⚠ This procedure must be performed when you are properly seated in the driver's seat.

To open/close the soft top, the following conditions must be met:

- the ignition key must be in position II;
- the engine compartment lid must be perfectly closed;
- the vehicle should preferably be stationary; if you are driving, the vehicle speed must be less than 5 km/h.

If these conditions are not met, pressing the opening/closing control button will activate an acoustic signal.

This signal is also activated if the battery voltage is low (less than 10.6V) or the temperature of the hydraulic control system's pump is too high (above 95° C).

Using the controls

Press button **A** and keep it pressed until the procedure is completed. If the button is released, the movable parts will stop and an acoustic signal will be activated.

To re-start the operation of the soft top, press button **A** once again and keep it pressed down.

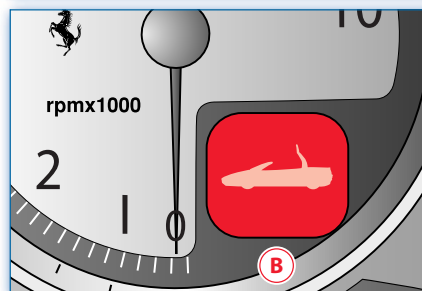
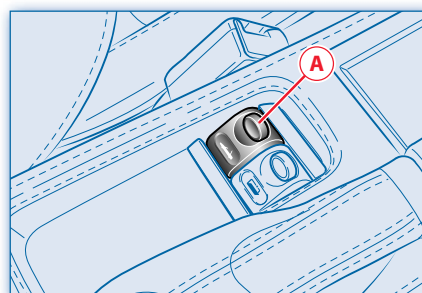
Do not leave the soft top in an intermediate position for more than 3 minutes, in order to avoid deactivating the hydraulic system.

*Any movement of the soft top is indicated by the symbol **B** on the multi-function display.*
Avoid activating the soft top opening/closing when the engine is off.

Automatic opening sequence

By pressing button **A** the movable parts start operating:

- the side windows lower fully (they cannot be operated until the procedure has been completed);
- the hydraulic safety hooks release the soft top's upper part and then close back;
- the flaps open;
- the front side of the soft top and the fins raise;
- the cover opens and the soft top goes back into its housing bay;
- the cover and then the flaps close, the side windows raise. During this last stage, you can release button **A** (an acoustic signal will sound) and the operating sequence can be considered completed.



Automatic closing sequence

By pressing button **A** the movable parts start operating:

- the side windows lower fully (they cannot be operated until the operation has been completed);
- the flaps open;
- the cover opens and the soft top comes out of its housing bay, allowing the cover to close;

- the front part of the soft top is brought forward and the fins are lowered;
- the hydraulic safety hooks latch the soft top's upper part;
- the flaps close, the side windows raise. During this last stage, you can release button **A** and the operating sequence can be considered completed.

Special warnings

The soft top operation is interrupted (**STOP** function) in the following cases:

- when button **A** is released;
- when the speed of 5 km/h is exceeded;
- when the engine compartment lid is opened;
- if the ignition key is removed;
- if the battery voltage is low (below 10.6V);
- when the temperature of the hydraulic system control pump is too high (above 95° C).

The interruption of the soft top movement is signalled, for 10 seconds, by an acoustic signal.

The acoustic signal is also activated if the **STOP** function is active, when the speed of 30 km/h is exceeded.

3 minutes after the interruption of the soft top movement, the system will be deactivated.

In this case, you can resume the opening/closing procedure by pressing button **A**,

only if the soft top is in a position that the system sensors can recognise; in this condition, you must complete the procedure (opening or closing), avoiding reversing the movement and helping the system manually in the starting stage. If this is not possible, you must complete the procedure manually, carefully following the instructions on [page 67](#) or, in the event of difficulties, please contact the **FERRARI SERVICE NETWORK** to have the malfunction corrected.

7 minutes after the soft top movement has been interrupted, it will be possible to activate the power windows.

Remove and reinsert the ignition key, then turn it back to position **II** to reactivate the power windows.

Operate the windows with the utmost care, as they may interfere with some of the soft top levers.

Do not lift the engine compartment lid during the **STOP** stage, as it could interfere with the cover.

Loads and stresses, which vary depending on the use of the vehicle, can cause slight variations in the position of the doors or the soft top frame.

This is why the soft top's sealing, against air or water infiltrations from the windows, cannot be completely guaranteed in all conditions of use.

Slight infiltrations in some sealing areas are, however, normal.

The vehicle should not be cleaned using automatic car wash systems, since the canvas and polycarbonate (rear window) may be damaged by the brushes.

The high jet pressure could cause, in some areas, infiltrations which otherwise would not occur during normal use.

2 - About your vehicle

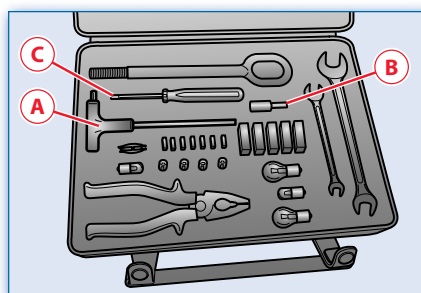
Soft top emergency closing

To close the soft top properly in an emergency situation, two people are required in some stages; as a consequence, and also considering the complexity of this operation, we recommend that you contact a **FERRARI SERVICE CENTRE**. They will identify and correct the problem that does not allow the soft top to close normally using the control button.

⚠ If this is not possible, use the utmost care when performing the emergency closing procedures, as your hands could get trapped in the soft top's movable components. During the closing stages, the soft top must never be operated using the control button. To avoid accidental activation, remove the ignition key before beginning the operations. Park the vehicle in a sufficiently spacious area, at a distance from other vehicles.

To perform the operations, it is necessary to use some of the tools contained in the kit supplied with the vehicle:

- A** T wrench;
- B** square head socket;
- C** cross-head screwdriver.



Even if the images illustrate only one side of the vehicle, they are valid for both sides.

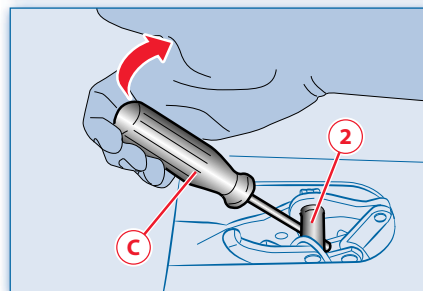
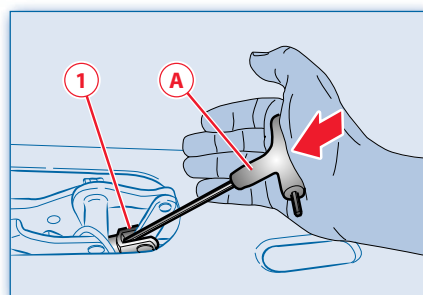
Carefully follow the below procedures, paying attention to the reported sequence:

Operating sequence

- Open the engine compartment lid
- Using the T wrench **A** push the fork **①** towards the front of the piston that moves the cover.

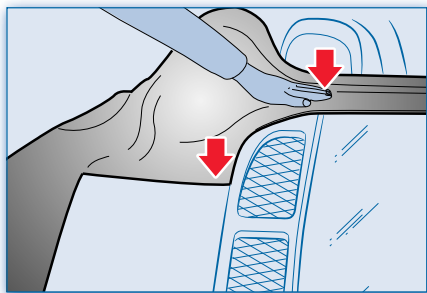
Using the cross-head screwdriver **C**, fully push the fork, using the cover joint pin **②** as a support; perform the same operation on both sides of the vehicle.

⚠ Do not perform the operations with your hands as your fingers could get crushed.

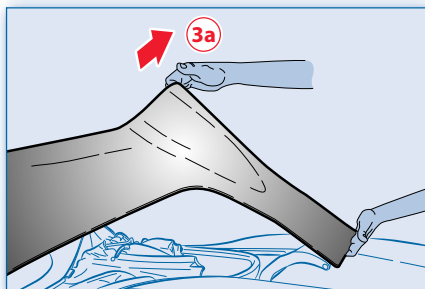
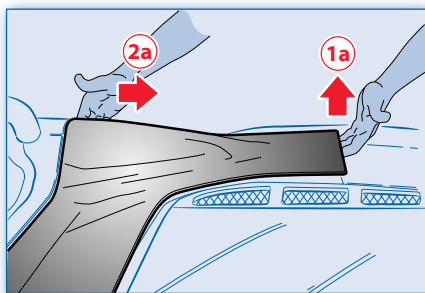


F430 SPIDER

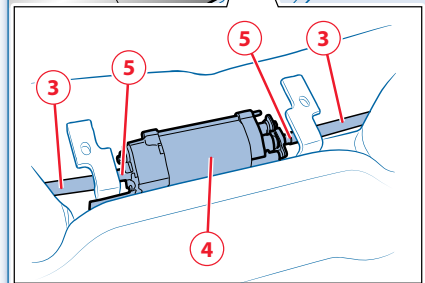
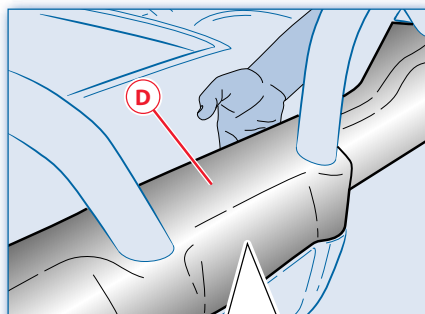
- Keep the cover pressed down on the points marked by the arrows and close the engine compartment lid. Two people are required to carry out the operation, in order to avoid that the cover touches the lid due to uneven pressure.



- Working in pair, stand on the two sides of the vehicle and, using both hands, first lift the rear end of the cover (1^a) then push it (2^a) and lift it towards the rear (3^a), until it has reached the maximum opening position. The toolkit box, adequately protected, may be used to support the cover in this position if you do not have a suitable support.



- Working in the central area behind the roll bar, underneath the covering **D**, follow the cable (3) with your fingers, until you reach the motor (4) that controls the side flaps.
- When you reach the end section of the retaining clip (5), push it upwards to release it from the motor. Perform the same operation on both sides of the motor, remembering to keep the retaining springs.

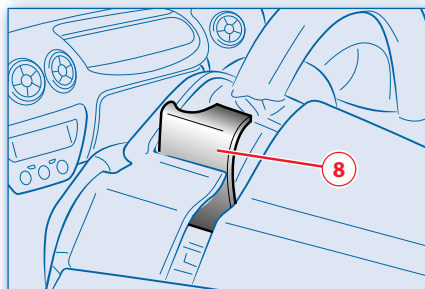
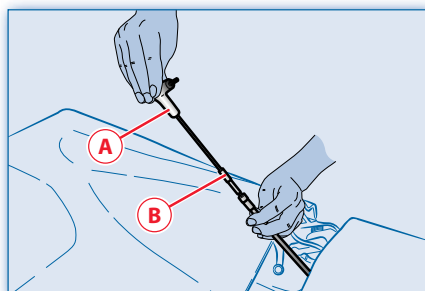


- Detach the two cables from the motor and strongly pull them outwards.

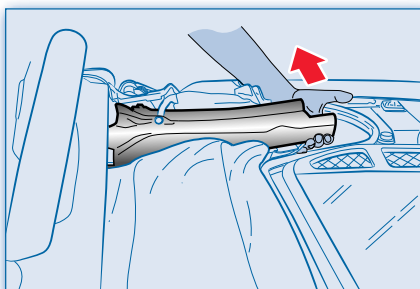
After closing, the cables will remain detached from the control motor, and the vehicle must be taken to a FERRARI SERVICE NETWORK CENTRE to have the controls checked and synchronised.

2 - About your vehicle

- Using the wrench **A** with socket **B** turn the cable inside the flexible shaft for the LH flap control in a clockwise direction, while turning the RH one in an anti-clockwise direction, until the side flaps **8** are completely open.

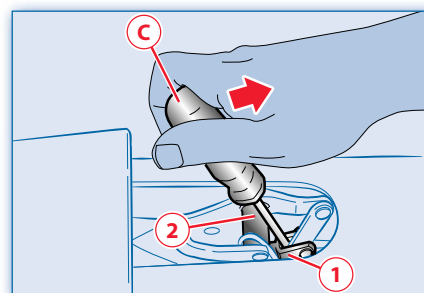


- Working on both sides of the vehicle at the same time, lift the soft top from its housing bay and, holding it as illustrated in the figure, tilt it forwards.

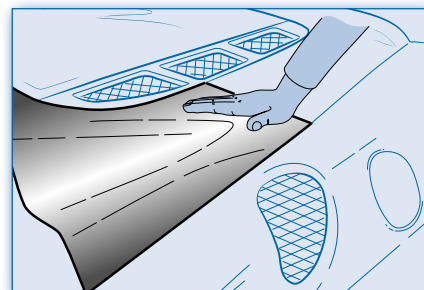


When lifting the soft top, do not use the rear ends of the fins as a resting point as this could damage the kinematic mechanism. Try to synchronise movements on both sides of the soft top, as far as possible, in order to avoid dangerous loads on the kinematic mechanism.

- Remove the cover support and lower it by pushing it as much as possible into the closed position.
Using the cross-head screwdriver **C** and the pin **2** on the cover joint as a resting point, pull the fork-shaped end **1** of the piston moving the cover on both sides towards the rear.

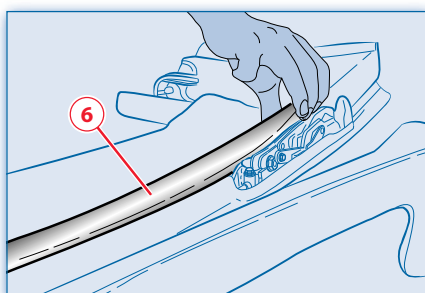


- Keep the cover pushed down in the closed position and lower the engine compartment lid.

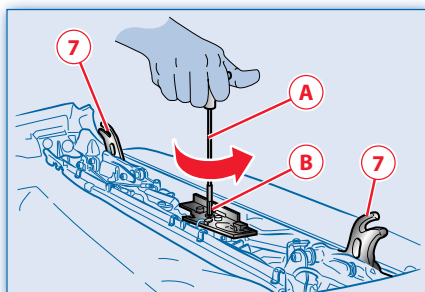


F430 SPIDER

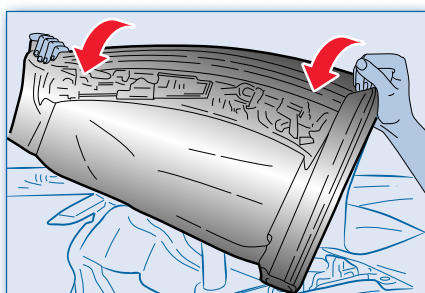
- Remove the internal cover **6** from the soft top frame cross member, taking it out of the retaining clips.



- Fit the T-wrench **A** socket **B** into the device controlling the soft top retaining hooks and, turning the key anticlockwise, open the hooks **7** fully.



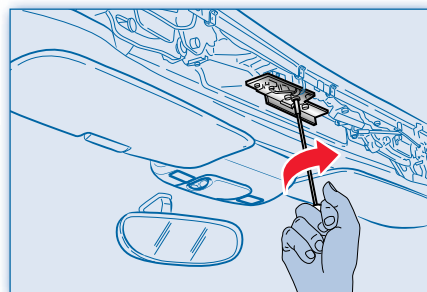
- Fold back the front part of the soft top, and guide it until it reaches the closed position.



- Proceed with closing the hooks **7**, working from inside the vehicle and following the opening sequence in reverse order. Push the soft top on the hooks to facilitate their insertion into the clamps on the windscreen cross-member.

- Finally, refit the internal cover **6** on the front cross member of the soft top frame.

After this operation, leave the soft top closed and go to the nearest FERRARI SERVICE NETWORK CENTRE to have the automatic system repaired so that it is fully functional and safe. Operating the soft top in these conditions, using the control button or manually, may seriously damage the entire mechanism.

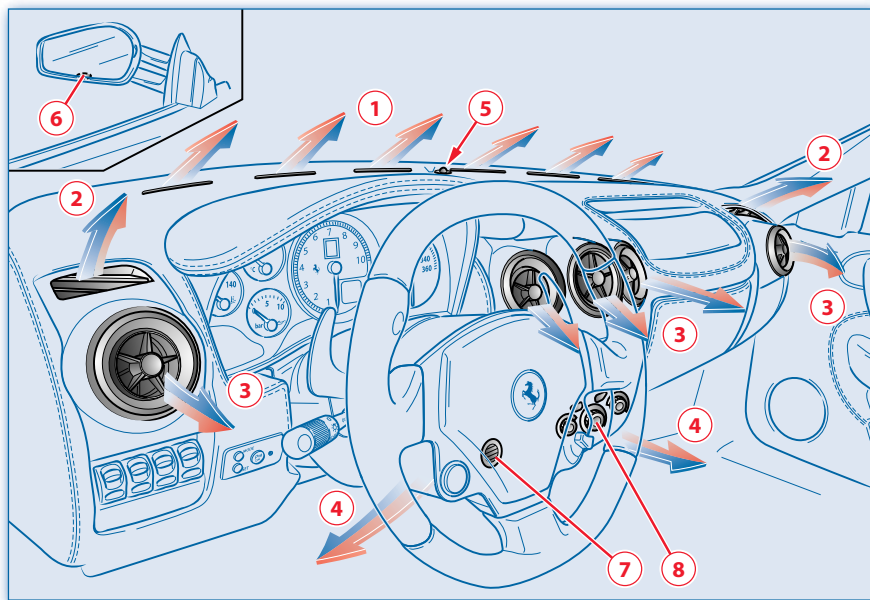


2 - About your vehicle

Air conditioning and heating system

- ① Fixed air vents for windscreen.
- ② Fixed air vents for side windows.
- ③ Adjustable central and side vents.
- ④ Air vents for foot area.
- ⑤ Sun radiation sensor.
- ⑥ Outside temperature sensor.
- ⑦ Passenger compartment temperature sensor.
- ⑧ Air conditioning and heating system controls.

The air conditioning system allows the user to adjust the temperature and humidity in the passenger compartment.



Operating modes

Automatic

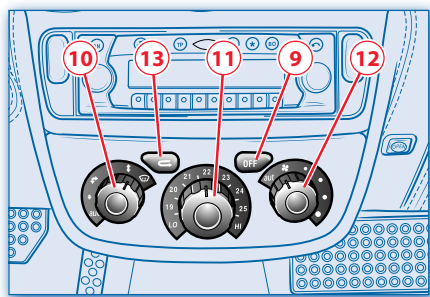
This mode automatically adjusts humidity and ventilation according to the selected temperature.

Manual

This mode allows manual adjustment of the controls.

Functions and controls

- ⑨ Air conditioning control switch.
- ⑩ Air distribution control.
- ⑪ Temperature selection control.
- ⑫ Fan speed control.
- ⑬ Air recirculation switch.



Air conditioning control switch

Released



The air conditioner is on.
The air is cooled and/or only dehumidified according to the selected temperature.

Pressed (stop)



The air conditioner is off.
However, heating is still enabled and will turn on according to the temperature selected.

Air distribution control

It has three functions:

Automatic



The air flow distribution is controlled by the electronic system depending on the ambient conditions and the selected temperature.

Manual



The air flow is directed towards four different areas.

Fast demisting/defrosting



Activates demisting and/or defrosting of the windscreen and the side windows.

Temperature selection control



This is used to set the desired temperature in the passenger compartment.

The end positions activate the functions **LO** and **HI** (minimum and maximum air temperature).

Fan speed control

It has two functions:

Automatic



The air flow is controlled by the electronic system according to the selected temperature to be reached and maintained.

Manual



The position (⚡) turns the air conditioning off and permits only the intake of outside air when the vehicle is moving.



The four positions allow selecting the air flow rate.

2 - About your vehicle

Air recirculation switch

Released



The air flow comes from the outside.

When outside temperatures exceed 25°C, the air recirculation function remains on with a 1-minute pause every twenty minutes, to refresh the air.

Pressed (recirculation)



The air flow comes from inside the passenger compartment.

The recirculation increases air heating or cooling.

Prolonged use is not advisable.

Once the internal temperature has stabilised at the desired level, you are advised not to change the position of the selector unless the external temperature changes drastically.

Changing the position of the temperature selection switch results in a certain difference between the temperature in the passenger compartment and the air flowing from the vents. This difference will gradually decrease as the system stabilises.

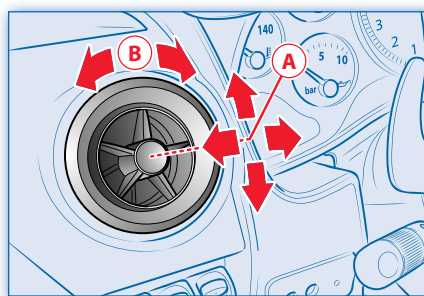
Adjusting the air vents

A Air flow direction adjustment

B Air flow rate.

Turned anti-clockwise: open.

Turned clockwise: closed.



Maintenance

The pollen filter must be replaced every year as indicated in the "Maintenance Schedule".

Sun radiation sensor

The sensor is positioned on the dashboard and optimises ventilation and temperature control in the passenger compartment, depending on the intensity of the sun rays.

3 - Driving your vehicle

Running-in _____	76
Before a trip _____	76
While driving _____	76
Starting and driving the vehicle (F1 gearbox) _____	77
Starting and driving the vehicle (Mechanical gearbox) _____	82
Parking _____	83
Parking manoeuvre _____	83
Safe driving _____	85
Respecting the environment _____	90



Running-in

State-of-the-art production methods allow high precision in the construction and coupling of components. Nonetheless, the moving parts need to be bedded in, especially in the first hours of driving the vehicle.

Engine and transmission

Avoid exceeding 5000 RPM for the first 1000 km.

After starting, do not exceed 4000 RPM until the engine has warmed up sufficiently (water temperature: 65÷70°C).

Do not let the engine run at a constantly high speed for a prolonged time.

Before a trip

Preliminary checks

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


- tyre pressure and conditions
- levels of fluids and lubricants
- state of the windscreen wiper blades
- proper functioning of the warning lights and external lights.

It is in any case advisable to perform these checks at least every 800 km and to always follow the Maintenance Schedule.

It is also advisable to:

- clean the glass covers of the external lights and all the glass surfaces;
- properly adjust the mirrors, steering wheel, seats and seat belts.

Capacities

-  **Use unleaded fuel only!**
Using leaded fuel would permanently damage the catalytic converters.


For specifications and quantities of lubricants and fluids, follow the information reported in the “Capacities” table on [page 14](#).

While driving


Always drive carefully and never exceed the maximum engine speed indicated by the red area on the revolution counter.

In normal conditions, all the red and amber light indicators for the suspension and CST systems on the multi-function display must be off; when on, these LEDs indicate a malfunction in the corresponding system.

Ensure proper functioning of the various devices by checking the relevant control gauges.

-  Continuing to drive when a red warning light is on could cause serious damage to the vehicle and affect performance.

After driving in SPORT or RACE mode, let the engine idle for several minutes before stopping it in order to stabilise the temperatures.

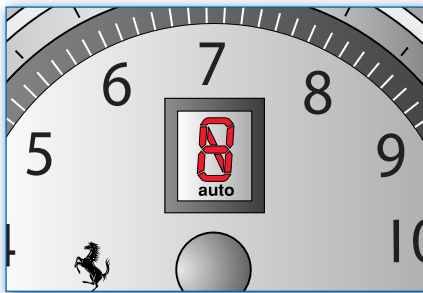
-  Do not coast downhill with the engine off, since the servo brake, without vacuum, does not function and, after braking several times, the system loses nearly all its efficiency.

3 - Driving your vehicle

Starting and driving the vehicle (F1 gearbox)

Turning on the system

When turning the ignition key to position **II** all the segments of the gear display on the instrument panel are activated and lit up, the failure warning light comes on and, if no faults are found, goes off after a few seconds.



The gear currently engaged will remain highlighted on the display.

The pump may also run for a few seconds when the driver's door is opened. This function makes it possible to have the system ready when the ignition key is inserted.

The failure warning light may also flash briefly (10 sec.) and then turn off: the system completes the "start-up" phase and then starts correctly. Avoid giving any commands to the system during this stage.

⚠ If the failure warning light continues flashing without going off, turn off the system and restart. If the failure persists, contact an **AUTHORISED FERRARI SERVICE CENTRE** to have the necessary checks performed.

If the warning light stays on, it means that there is a system failure; this condition will also be signalled by a buzzer when the ignition key is turned to position **II**.

Contact the FERRARI SERVICE NETWORK to have the malfunction identified and repaired.

Operation with the engine off

Once the "System start-up" stage has been completed, the gear engaged will appear on the display:

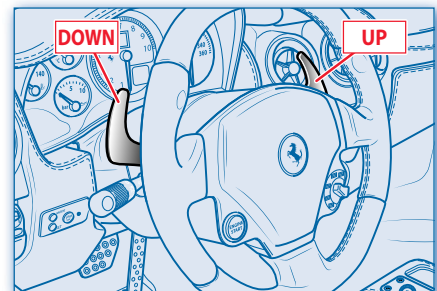
- N** (Neutral)
- R** (Reverse gear)
- 1** (1st gear)
- 2** (2nd gear), etc.

If the indication flashes (may also occur in **N**) it means that the gear is not perfectly engaged or disengaged; therefore, request **N** and then the desired gear.

⚠ If a horizontal dash appears on the display, there is a system failure.

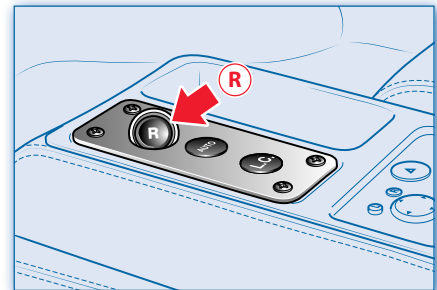
When the engine is off, you can engage **1st**, reverse **R** and neutral **N**. Holding the brake pedal down, you must proceed as follows:

N: pull both the levers located behind the steering wheel.



R: press button **R** on the central console.

⚠ Hold button **R** down, until the letter **R** appears on the display.



1st gear: pull the **UP** lever towards the steering wheel.

Release the **UP** and **DOWN** levers and the button **R** soon after the gear engaged is shown on the display. A prolonged manoeuvre would cause the failure warning light to come on (see page 33) and an acoustic signal to sound.

Do not operate the system with the engine off to prevent discharging the battery.

Avoid needless shifting of gears with the engine off to prevent overheating the pump.

If the engine compartment lid is open or not properly closed, no gear 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.

Starting the engine

- Ensure that the handbrake is engaged and that the doors are closed.
- It is advisable to keep the brake pedal pressed when starting the engine.
- Do not push the accelerator pedal.
- Turn the key to position **II** and wait for the words **Check OK** to appear on the multi-function display. If the words **Check OK** do not appear, turn the key back to position **0**, wait a few seconds and retry.
- Put the gearshift in neutral by pulling both the **UP** and **DOWN** levers towards the steering wheel and check that the gear display shows **N** not flashing.

- Press the **ENGINE START** button and release it as soon as the engine starts.



- After the engine has been started, the words **Check OK** will appear.

Do not hold the **ENGINE START** button pressed down for a long time.

If the engine does not start, turn the key back to position **0** and wait for the gear display to go off before retrying.



Hold the brake pedal down while starting the engine.

The engine can also be started with a gear engaged: turn the key to position **II**, hold the brake pedal pushed down and press the **ENGINE START** button. The system allows the clutch to open and the gear to shift to neutral and only then is the starter motor activated to start the engine. This procedure usually requires one second. With very low temperatures, this procedure could take slightly longer.

If the gearshift is in position **N**, starting is immediate.

If the engine does not start after turning the key to position **0**, wait for the gear display to go off and then repeat the entire procedure.

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

- insufficient starter motor speed (flat battery)
- ignition device faulty
- faulty electrical contacts
- fuel pump fuses blown.

Warming up the engine

Do not run the engine at high speeds until the engine oil temperature has reached at least 65÷70 °C approximately.

Driving the vehicle

With the engine started, the vehicle standing and the brake pedal pushed, pull the right-hand **UP** lever towards the steering wheel in order to engage **1st** gear.



Use 1st gear for parking or uphill starting.

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

3 - Driving your vehicle

With the engine on and the vehicle standing, you can change directly from **1st** to **R** by pressing button **R** on the central console, and from reverse to **1st** gear by pulling the **UP** lever towards the steering wheel.

*When the reverse gear is engaged, an acoustic safety signal beeps intermittently for the entire time that **R** remains engaged.*

If in shifting from **R** to **1st** gear, the system automatically engages **2nd** gear, which may mean that **1st** gear has jammed. This is not a malfunction, but part of the system operating logic. For the same reason, when shifting from **1st** gear to **R**, the system will automatically engage **N** if the gear is jammed.


If the vehicle stands still for long periods of time with the engine running, it is advisable to keep the gearshift in **N**.

*If you allow the vehicle to move forward in **N** (e.g. on downhill stretches), when **UP** is requested, the system will engage a gear in relation to the vehicle speed.*

For safety reasons, the system activates the buzzer and automatically shifts to **N** when you do any of the following with the vehicle standing, the engine running and a gear engaged:

- not push the brake pedal or the accelerator for more than 50 seconds;
- push the brake pedal for more than 10 minutes;

- open the door without pushing the brake pedal or the accelerator;
- open the engine compartment lid.

 **The buzzer may also sound to warn the driver that the clutch is starting to overheat. This may occur when using the accelerator pedal when the vehicle is stopped on a hill or during the “pick-up” manoeuvre.**

In these cases, release the accelerator pedal and use only the brake pedal to stop the vehicle or, where possible, “force” it to move without hesitation.

Important

- When the vehicle is standing with a gear engaged, always hold the brake pedal pushed down until you are ready to leave.
- Do not “rev the engine” using the accelerator pedal when you start off.
- Request reverse only when the vehicle has completely stopped and with the brake pedal pushed down.

If the vehicle is stopped on an uphill stretch, do not use the “pick-up manoeuvre” to keep the vehicle stationary but only the brake, and push the accelerator pedal only when you are ready to leave.

If the accelerator pedal is depressed rapidly with the **CST** system off, the vehicle will do a “performance” start with considerable skidding of the driving wheels, even in good grip conditions.

UPshifting

Operate the right-hand **UP** lever without releasing the accelerator pedal.

An **UP**shift request is not accepted when engagement of the requested gear will force the engine to run at low speed or if an **UP**shift is already in progress due to engine overrevving.

Gearshifting will be increasingly faster as the performance requested by the driver increases, i.e. as both the engine RPM and the travel of the accelerator pedal increase.

In any event, it is advisable to:

- Change gears without releasing the accelerator pedal if it is pressed.
- Wait until one gearshift has been completed before requesting the next one, thereby avoiding multiple requests in rapid succession.

DOWNshifting

Operate the left-hand **DOWN** lever without releasing the accelerator pedal.

A **DOWN**shift request is not accepted if engagement of the requested gear will force the engine beyond a certain speed, depending on the gear requested, or if a **DOWN**shift is already in progress due to a low engine RPM.

In any event, it is advisable to:

- Shift gears without releasing the accelerator pedal if it is pushed.

- If a **DOWN**shift is requested in order to start overtaking where rapid acceleration is required, push the accelerator pedal just before moving the lever.
- Wait until one gearshift has been completed before requesting the next one, thereby avoiding multiple requests in rapid succession.

RPM adjustment during gearshifting

Under racing-style driving conditions (engine over 3000 RPM), the RPM rate is adjusted automatically during gearshifting. This is even more apparent as engine speed increases.

“N” (Neutral) request

If necessary, N can be requested at any speed.

Subsequently, if **UP** shifting is requested, the system will engage the gear most suited to the speed of the vehicle.

Stopping the vehicle

When the vehicle stops, the system automatically engages **1st** gear (unless N has been requested before).

With the vehicle stopped and the engine running, hold the brake pedal down until you are ready to start off again.

Turning off the engine and the system

The engine can be turned off either with the gearshift in N or a gear engaged.

After turning the ignition key from position **II** to position 0, the display will remain on for a few more seconds to display the gear engaged. If the gearshift is in N, a buzzer will sound.



Do not start the vehicle before the display has turned off.

Never leave the vehicle with the gearshift in N but engage a gear (1st or R), check that the display does not flash and always engage the handbrake. Never leave the vehicle with the engine running.

Do not remove the key when the vehicle is moving! The system and the display will remain active, but malfunctioning, until the vehicle stops. In addition, the steering wheel will lock automatically with the first rotation of the steering wheel.

In this case, the failure warning light will illuminate, (see page 33) and before starting off again, the system and the display must be turned off and the “Start-up” procedure repeated.

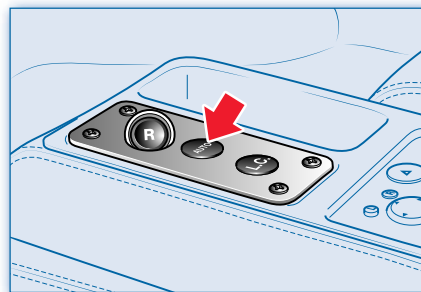
In any event, it is advisable to:

- Turn off the engine and the system holding the brake pedal pushed down.
- Not request a gearshift while the system is turning off.

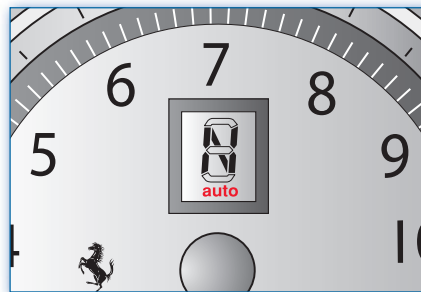
Other system functions

“Automatic gearshift” mode

This mode is activated by pressing the **AUTO** button on the central console.



Activation is signalled by the word **AUTO** appearing on the gear display, on the instrument panel.



The system will automatically shift the gears **UP** and **DOWN** according to the vehicle speed, the engine RPM and the torque/

3 - Driving your vehicle

power requested by the driver.

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

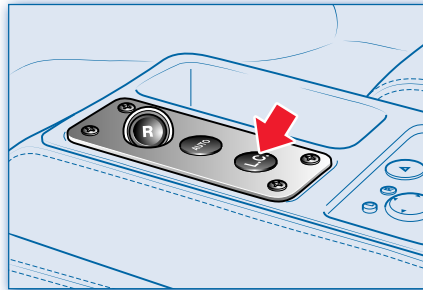
The “Automatic” mode can only be exited by operating the **AUTO** control button.

In the “Automatic” mode, if you operate the **UP** and **DOWN** levers, the system allows shifting gears using the lever, but it will then go back to the “Automatic” mode.

“Launch Control” strategy for performance starting

With the aim of optimising standing starts, under performance conditions, the F1 gearbox system is equipped with a “launch control” system. This strategy is activated when the following conditions are met simultaneously:

- 1st gear engaged
- brake pedal pushed
- ~~CST~~ mode active;
- L.C. button pressed.



In these conditions, the letter **L** will flash on the gear display. The driver can accelerate holding the brake pedal pushed down and the vehicle stationary, until the desired RPM for the standing start is reached (typically the maximum torque RPM). On releasing the brake pedal, the best standing start performance is achieved thanks to a clutch engagement strategy optimised for that RPM.

Push start

In the event that the ignition system malfunctions, you can “push start” the vehicle as follows:

- run the “system start-up” procedure (see [page 77](#));
- as the vehicle picks up speed, request an **UP** shift with the gearshift in **N**.

This procedure should be avoided unless there is an emergency situation!

Restarting the engine

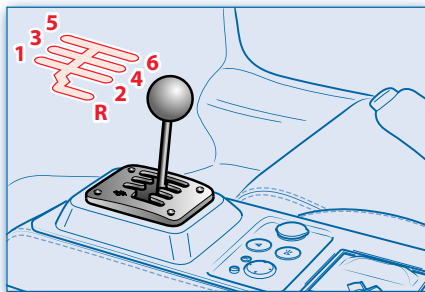
In the event that the engine is turned off accidentally, restart it using the relevant button (see [page 78](#)) turning the key to 0 and then to **II** (On): the engine will start immediately.

Starting and driving the vehicle (Mechanical gearbox)

Starting the engine

Before starting the engine, make sure that the alarm system and all electrical devices with high power absorption are turned off.

- Check that the handbrake is engaged.
- Put the gearshift lever into neutral.



- Fully depress the clutch pedal without pushing the accelerator.
- Turn the key to position **II**: and wait for the words **Check OK** to appear on the multi-function display.
- Press the **ENGINE START** button and release it as soon as the engine starts. Do not hold the **ENGINE START** button down for a long time.



If the engine does not start, turn the key back to position 0 before repeating the procedure.

- After the engine has started, the words **Check OK** will be displayed. If the words **Check OK** do not appear, turn the key back to position 0, wait a few seconds and retry.

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

- insufficient starter motor speed (flat battery)
- ignition device faulty
- faulty electrical contacts
- fuel pump fuses blown.

Warming up the engine

Do not run the engine at speeds higher than 4000 RPM until the engine oil temperature has reached at least 65-70°C.

Driving the vehicle

When the engine has started:

- Fully depress the clutch pedal and put the gearshift lever into **1st** gear.



Use 1st gear for parking and for hill starts.

- Completely release the handbrake.
- Slowly release the clutch pedal while gradually accelerating.
- Then proceed to engage the other gears, fully depressing the clutch pedal and moving the gearshift lever into the next position. When shifting down, be careful not to exceed the maximum permitted engine RPM (indicated on the revolution counter in the red area).
- Engage reverse gear only with the vehicle stationary. Push the gearshift lever down and then move it left and back.

3 - Driving your vehicle

Parking

Engage the handbrake, put the gearshift lever into 1st whether parking uphill or downhill, turn the wheels and turn off the engine (valid for all versions, both with mechanical and FI gearbox).

As the 1st gear is the most reduced, it is more suited to use the engine as a brake.

When parking on a steep slope, use a wedge or rock to block the wheels.

Never leave the ignition key in position II.

Always remove the key when getting out of the vehicle.



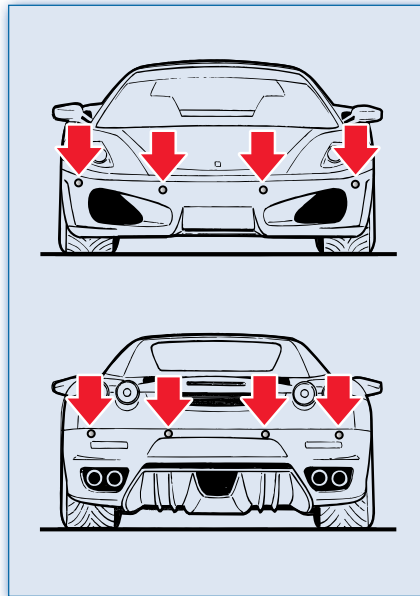
Never leave children unattended in the vehicle.

Do not park the vehicle on flammable materials (e.g., paper, grass, dry leaves, etc.). They could catch fire if they come into contact with hot parts of the exhaust system.

Do not leave the engine running with the vehicle unattended.

Parking manoeuvre

To assist the driver during parking manoeuvres, the vehicle can come equipped with four sensors housed in the front and rear bumper.



For the system to operate correctly, the sensors positioned on the bumpers must be kept clean (remove any mud, dirt, snow or ice).

During parking manoeuvres, the sensors provide the driver with information on the distance between the vehicle and obstacles found in front of or behind it.

The information on the presence and distance of the obstacle is given to the driver by means of a series of beeps, which are emitted with increasing frequency as the obstacle gets closer.

The acoustic warning generated by the system adds to the driver's field of vision, allowing him/her to avoid hitting any obstacles during manoeuvres.



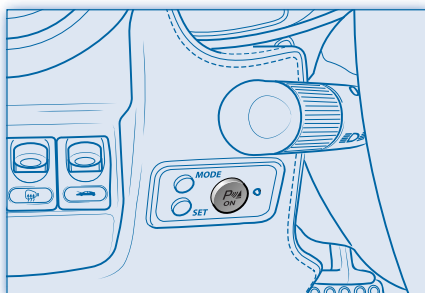
The driver is in any case always responsible for parking and other potentially dangerous manoeuvres. The system has in fact been designed only as aid during parking manoeuvres, since it allows the driver to detect obstacles outside his/her field of vision.

The front and rear sensors of the parking system are automatically activated when the key is turned to position II (On), when reversing.

When reverse gear is engaged, a beep warns the driver that the system is active.

F430 SPIDER

The front sensors can be activated by pressing the button on the panel to the left of the steering wheel; when the front sensors are activated, the LED integrated in the button turns on. To deactivate the sensors, press the button again.



When reverse gear is disengaged, the rear sensors are deactivated while the front sensors remain active until a speed of about 15 km/h is exceeded.

When the sensors are activated, the system begins to beep as soon as an obstacle is detected and the beep frequency increases as the obstacle gets closer.

When the obstacle is at a distance of less than 40 cm from the bumper, a continuous beep is emitted.

The warning beep stops immediately if the distance between the vehicle and the obstacle increases.

Cleaning the sensors

When cleaning the sensors, take the utmost care not to scratch or damage them; therefore, do not use dry, rough or hard cloths.

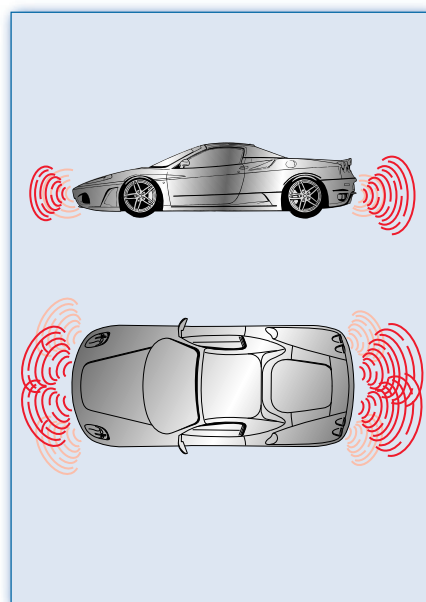
The sensors must be washed with clean water, possibly with car shampoo added. In car-washes which use steam jet or high pressure cleaning machines, keep the nozzle at least 10 cm away from the sensors. Bumper repainting or touching up the paintwork in the sensor areas may exclusively be carried out by the **FERRARI SERVICE NETWORK**. Incorrect paint application could affect the parking sensor operation.

Sensor range

The sensors allow the system to monitor the front and rear of the vehicle; in fact, they are positioned so as to cover the central and lateral areas at the front and rear of the vehicle.

In the event of an obstacle located in a central area, it will be detected at distances of less than 1.50 m, depending on the type of obstacle and its dimensions.

If the obstacle is located in a lateral position, it will be detected at distances of less than 0.8 m.



3 - Driving your vehicle

Fault signals

The system ECU tests all the components each time the ignition key is turned to position **II**.

The sensors and the respective electrical connections are then constantly checked throughout system operation.

In the event of failure of the parking sensor system, the driver is warned with a beep.

In this case, stop the vehicle and turn the ignition key to position 0 (Stop). Then try cleaning the sensors or moving the vehicle away from any possible ultrasound sources (e.g. pneumatic truck brakes or pneumatic hammers) and turn the ignition key back to position **II**. In this way, if the cause of the operating fault has been corrected, the system resumes full operation and the warning beep goes off.

Should this not occur, contact the **FERRARI SERVICE NETWORK** to have the system checked even if it continues working. In fact, if the failure detected by the ECU does not affect operation, the system continues working and the malfunction is stored so that it can be checked by the **FERRARI SERVICE NETWORK** during a subsequent inspection.

During parking manoeuvres, always be extremely careful with obstacles that might be located above or below the sensors. In particular, low-lying (e.g. curbs, stone posts), broken (e.g. wire mesh fences, hedges), thin (e.g. poles, lampposts) or suspended obstacles (e.g. bars/overhead doors) may in certain conditions not be detected by the system and hence damage the vehicle or the obstacles.

The signals transmitted by the sensors can also be altered by damage to the sensors or by dirt, snow or ice on the sensors or even by ultrasound systems (e.g. pneumatic truck brakes or pneumatic hammers) in the vicinity.



The driver is in any case always responsible for parking and other potentially dangerous manoeuvres. During these manoeuvres, always make sure that there are no persons (especially children) or animals in the manoeuvring area. The parking sensors must be considered as an aid to the driver who, in any case, must never take less care during potentially dangerous manoeuvres, even if they are performed at low speeds.

Safe driving

For safe travelling, it is essential that the driver be aware of the best driving techniques suited to various circumstances. To help the driver safely handle stretches with different grip conditions, without excessively reducing driving performance and comfort, the five-position switch on the steering wheel can be used to select the best setting of the vehicle in any condition (see [page 89](#)).

Always try to prevent dangerous situations by driving with caution.

Before you drive

- Adjust the position of the seat, steering wheel and rear view mirrors, in order to obtain the best driving position.
- Adjust the backrest so that the chest is upright and the head is as close to the headrest as possible.
- Carefully adjust the headrest so that the head, and not the neck, is resting against it. Ensure that nothing (e.g., mat covers, etc.) is blocking the pedals.
- Check that the lights and headlights are working properly.
- Check proper functioning of the acoustic and visual warning devices.
- Ensure that any child restraint systems (child seats, cradles etc.) are properly fixed on the passenger seat.
- To prevent objects being thrown forwards in the event of sudden braking, place them in the luggage compartment.
- Your reflexes are quicker if you eat lightly before driving: avoid heavy meals before a trip.
- Do not drink alcoholic drinks before and during the journey.
- Check that the driving mode switch is positioned on the desired driving mode.



If the vehicle was used in the **RACE** or **CST** mode, the **RACE** mode will remain active until the next start, and this may be dangerous under poor grip conditions.

Always fasten the seat belts and adjust them properly. Correct use of the seatbelts can markedly reduce the risk of injury, including serious injury, should an accident occur.

At regular intervals, check the following:

- Tyre inflation pressure and condition.
- Engine oil level.
- Engine coolant level and cooling system condition.
- Brake fluid level.
- Hydraulic steering system fluid level.
- Windscreen washer fluid level.

When travelling

- Caution is the number one rule for safe driving, which also means you should take other people's behaviour into consideration.
- Follow the Road Regulations of the country in which you are driving, and always respect the speed limit.
- Strictly comply with the road signs and road regulations (both national and local) of the country in which you are driving.
- Always check that you and the passenger have your seat belts fastened; children must be seated in the required child seat in vehicles equipped with the device for manual deactivation of the passenger airbag.
- Good physical fitness will allow you to safely travel long distances. In any case, take regular breaks to loosen up your limbs and refresh yourself, and avoid driving for hours on end.

Drunk driving, or driving under the influence of drugs or certain medicines is extremely dangerous for yourself and others.

Taking certain medicines, alcohol, drugs or psychotropic substances is extremely dangerous for yourself and others as it considerably increases the risk of accidents.

Travelling without your seat belt fastened increases the risk of serious injury and

3 - Driving your vehicle

death in the event of a collision. Always fasten the seat belts, including those of the child seats.

Deactivate the passenger airbag (where possible) if transporting a child in a child seat fixed on the passenger seat.

It is strictly prohibited to fit a child seat in vehicles not equipped with the device for manual deactivation of the passenger airbag.

Do not travel with objects lying around on the floor, especially in front of the driver's seat: in the event of braking, these could slide under the pedals, making it impossible to brake or accelerate. Additionally, ensure that any loose floor mats sit correctly.

Water, ice and salt spread on icy roads may deposit on the brake discs and reduce the efficiency of the initial braking.

- Keep a constant air circulation in the passenger compartment.
- Never drive downhill in neutral with the engine off: in these conditions the engine brake, the power steering and the brake servo do not work and therefore, steering will be harder.

Driving at night

When you are travelling at night, follow these fundamental rules:

- Reduce speed, particularly on dark roads.
- Driving conditions are more demanding at night, so take particular care.
- If you start feeling tired or sleepy, stop immediately: to continue driving would be a risk for yourself and for others. Resume your trip only after a good rest.
- At night, it is difficult to judge the speed of vehicles in front of you as you can only see their taillights: keep at a greater safety distance than you would during the day.
- Use the high beams only outside of urban areas and when you are sure that they will not disturb other drivers.
- Turn off the high beams when you see oncoming vehicles and use the low beams.
- Keep the taillights and headlights clean.
- Watch out for animals crossing the road when travelling outside urban areas.

Driving in the rain

Rain and wet roads can cause hazardous situations.

All manoeuvres are more difficult on a wet road as the tyres have significantly less grip on the road. This means that the braking distances increase considerably and road-holding decreases.

Below is some advice for driving in the rain:

- Position the selector on the steering wheel on "Low Grip" mode.
- Keep a greater safety distance between yourself and the other vehicles and reduce your speed.
- When it is raining very hard, visibility is also reduced. In these cases, to make yourself more visible to others, turn on the low beams even during the day.
- Do not drive through puddles at high speeds as you do not know how deep they may be: travelling through a puddle at high speed can result in losing control of the vehicle (aquaplaning): hold the steering wheel firmly.
- Use the ventilation system to defog the windscreen (see [page 72](#)), and to avoid visibility problems.
- Periodically check the conditions of the windscreen wiper blades.

Driving in fog

- Whenever possible, avoid setting off if the fog is thick. If you have to drive in misty conditions, or if there is thick fog or fog banks, follow these rules:
- Position the selector on the steering wheel to "Low Grip" mode.
- Keep a moderate speed.
- Turn on the low beams, even during the day, and use the rear and front fog lights. Avoid using the high beams.

On stretches where visibility is good, turn off the rear fog light as it is very bright and may be annoying for the occupants of the vehicles behind you.

- Remember that fog makes the road damp and therefore all manoeuvres are more difficult and, what is more, braking distances increase.
- Considerably increase the safety distance to the vehicle in front of you.
- As far as possible, avoid suddenly changing speed and direction.
- As far as possible, avoid overtaking.
- Pull off the road and stop only if strictly necessary (because of a breakdown or if you cannot continue owing to poor visibility). Then turn on the hazard lights and, if possible, the low beams. On approaching another vehicle, sound the horn rhythmically.

Driving on mountain roads

- Position the selector on the steering wheel to "Low Grip" or SPORT mode, depending on the grip conditions.
- To prevent the brakes from overheating when driving downhill, use the engine to brake by engaging a lower gear.
- Never coast downhill in neutral or with the engine off, and never with the ignition key removed from the steering column.
- Drive at a moderate speed and do not "cut" corners.
- Remember that overtaking uphill is slower and requires a longer free stretch of road. If you are overtaken when driving uphill, ensure that the other vehicle can pass easily.

Driving on snowy or icy roads

Below is some advice for driving in these conditions:

- Position the selector on the steering wheel to "ICE" mode.
- Keep a very moderate speed.
- Keep a safe distance from the vehicles in front of you.
- Fit snow tyres approved for the vehicle.
- Given the poor grip, use the engine brake as much as possible and avoid sudden braking.
- Avoid sudden acceleration and sharp changes in direction.
- During the winter season, even apparently dry roads can have icy sections. Therefore, be careful when driving along stretches of road in the shade as there may be icy patches.

3 - Driving your vehicle

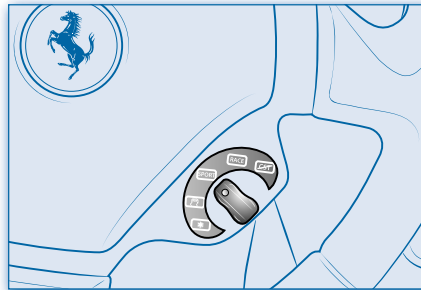
Driving with the “ABS” braking system

The ABS system provides the following advantages:


- It prevents the wheels from locking and skidding during emergency braking, particularly in low-grip conditions.
- It allows braking and changing direction at the same time. This feature is affected by the physical limits and lateral grip of the tyres.
- When the ABS is activated, you will feel a slight pulsing of the brake pedal during emergency braking or in low-grip conditions. Do not release the pedal but continue to push it to give continuity to the braking action.
- The ABS prevents the wheels from locking, but it does not increase the physical limits of grip between the tyres and the road: keep a safe distance from the vehicles ahead and reduce speed before curves.


Driving using the driving mode switch


The driving mode switch on the steering wheel allows the driver to use the vehicle potential in a quick and easy way.



There are five modes available, which correspond to the grip level (from low to high) and consequently to the level of driving assistance required (from high to none).

 In the **ICE** mode, performance is reduced in favour of maximum stability, which is essential for driving on roadways with very low grip (e.g., snow or ice). Traction stability control (**CST**) is at the maximum level (Level 1). The vehicle runs extremely “smoothly”. On vehicles equipped with F1 gearbox, automatic gearshifting is disabled at high engine speeds and wheel-locking is prevented even on ice.

 The “**Low grip**” mode ensures stability on both dry and wet roads. It is advisable to use this mode in low-grip conditions (e.g., rain) or on slippery or particularly uneven roads. In this configuration, unlike the previous one, the driver is left the choice to drive the vehicle using the gearbox as desired. Suspension damping is optimized in order to provide the best possible driving comfort and the **CST** remains set to the previous level.

 The **SPORT** mode is the basic driving mode for the vehicle and provides the best compromise between stability and performance. This position ensures stability only in medium- to high-grip conditions and not in low-grip conditions (in which case it would be better to return to the previous position). In this mode, the vehicle maximum performance can be experienced on open roads. For this reason, the suspension damping level is shifted to a higher one, so as to enhance performance, handling and stability at high speeds. Also the **CST** is shifted to a different level (Level 2), giving the driver greater freedom without excessively reducing engine performance (for this reason, stability is not ensured on low-grip roadways).

RACE The **RACE** mode must only be used on race tracks. On vehicles equipped with F1 gearbox, gearshifting is faster so as to reduce the time involved as much as possible. The CST shifts to Level 3 (engine load will only be limited as far as necessary) and the suspensions stiffen further. In this position, the driver can perceive that he/she has full control of the vehicle, and the operation of all engine control systems will be reduced to a minimum. Stability is not ensured.

CST This is the position where the **CST** is deactivated. The vehicle stability is no longer controlled in any way, but it is completely in the hands of the driver. The only auxiliary systems still active are those that cannot be deactivated, such as the ABS and EBD. Also in this position, the electronic differential has a specific setting, which enhances the dynamic qualities of the vehicle in the absence of stability controls. The gearshift speed (on vehicles with F1 gearbox) and damping control remain the same as in the previous position.

Respecting the environment

We are all responsible for respecting and protecting the environment.

FERRARI has designed and constructed a vehicle using technologies, materials and devices to reduce the harmful impact on the environment to a minimum.

It is important to keep the vehicle perfectly efficient by complying with the "Maintenance Schedule".

As a further contribution towards protecting the environment, drive safely and act responsibly at all times.

4 - In an emergency

Toolkit _____ 92

Replacing the wheels _____ 94

Replacing a bulb _____ 96

Bulbs _____ 100

Replacing a fuse _____ 100

Emergency ignition _____ 106

Towing the vehicle _____ 107

Fuel cut-off inertia switch _____ 108

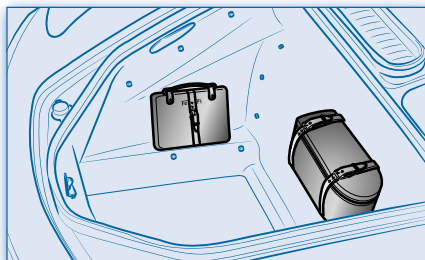


F430 SPIDER

Toolkit

Toolkit bag

This is housed in the luggage compartment.



It contains the necessary tools to allow you to make a first repair in the event of a failure:

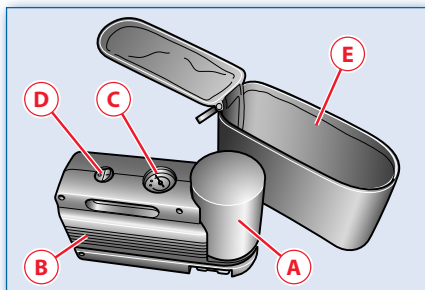
- set of flat wrenches
- insulated cutting pliers
- screwdriver for Phillips/slotted screws
- tow hook
- set of spare bulbs and fuses
- T wrench and square head socket for soft top.



Useful accessories

As well as 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 regulations.

Emergency tyre repair and inflation kit



In the event of a puncture or low pressure of a tyre, the kit can be used to repair and/or inflate the tyre sufficiently to continue the journey safely.

The kit includes a replaceable cartridge **A** containing the puncture repair fluid, an electric compressor **B** equipped with a pressure gauge **C**, a switch **D** and two unions for tyre repair and/or inflation.

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

The kit is to be used to temporarily repair only one tyre punctured by small objects: the kit may not be useful in the case of large punctures or tearing.

⚠ Keep the kit in its box and out of the reach of children. Do not inhale or swallow the fluid contained in the cartridge and avoid contact with the skin and eyes. 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.

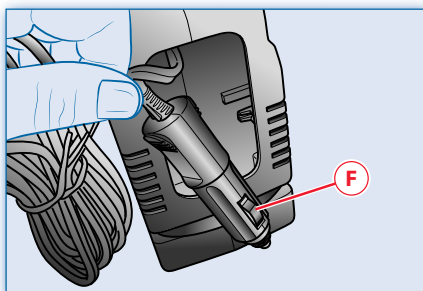
The sealant contained in the cartridge in the tyre repair kit may damage the sensor fitted inside the wheel rim on vehicles equipped with the tyre pressure monitoring system. In these cases, always have the sensor replaced by an authorised **FERRARI SERVICE CENTRE**.

If the vehicle is equipped with a spare wheel, the tyre repair kit will not be provided in the luggage compartment.

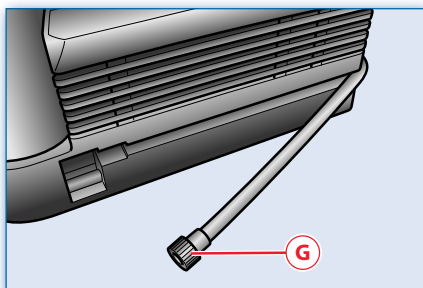
In the event of a tyre puncture, proceed as follows.

- Open the box and take out the compressor; remove the electrical cable with the connector **F** for the power socket.
- Insert connector **F** into the power socket on the central console.

4 - In an emergency

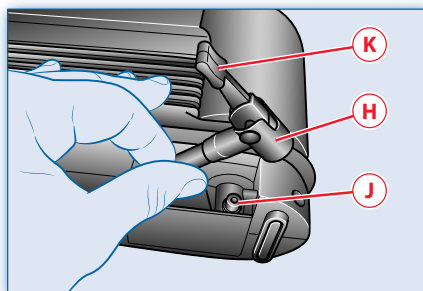


- Unscrew the valve cap of the punctured tyre and screw the union **G** for the transparent tube on the valve.



- Turn the ignition key to **II** so that the socket is powered, then activate the compressor by pressing the switch **D**.

To inflate/repair the tyre successfully, the lever terminal part **H** must be fitted into the relevant union **J**.



- Stop the compressor when the pressure indicated on the pressure gauge **C** reaches the specified pressure for that tyre (see [page 12](#)).

- Remove the union **G** and screw the cap back onto the valve.

We recommend that you check the tyre pressure on the gauge when the compressor is off, in order to have a preciser reading.

Do not activate the compressor for more than 20 minutes: risk of overheating!

The compressor has been designed for inflation of one tyre only; do not use it to inflate mattresses, rubber boats etc.

The kit can also be used only to inflate a tyre using the lever terminal **H**.

- Remove the terminal **H** from the union **J** on the cartridge and insert it in the wheel valve.

- Lower the lever **K** and start the compressor.
- Inflate to the specified pressure (see [page 12](#)).

Replacing the puncture repair fluid cartridge

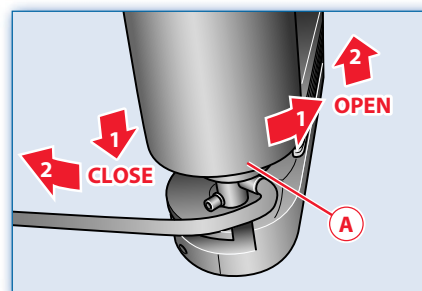
- Remove the terminal **H** from the union **J** on the cartridge and slide out the union **G** for the transparent tube from the compressor.

- Rotate the cartridge **A** anticlockwise and lift it slipping it off the base. Replace it with an original spare part.


- Insert the new cartridge **A** into the base and push it until hearing its fitting click into place in the base.

- Turn it clockwise until it fits snugly into place.

- Place the union **G** into its seat and fit the lever terminal **H** onto the union **J** for the cartridge.



Replacing the wheels

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

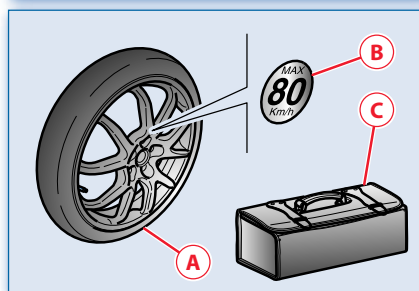
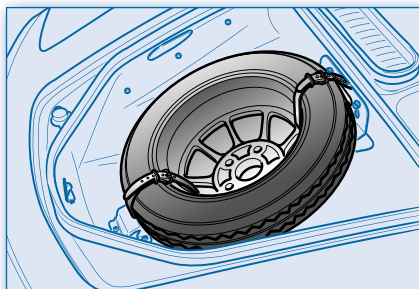
- Replace the stud bolts with damaged thread or cone.
- Carefully clean the stud bolts before fitting.
- Absolutely do not lubricate the contact surfaces between the stud bolt and the wheel rim and between the wheel rim and the brake disk.

In order not to remove the anti-lock treatment, do not clean the wheel rim cones with solvents or aggressive products.

Spare wheel (optional)

On request, the vehicle can be equipped with a kit containing:

- Spare wheel **A** with smaller tyre. The label **B** on the spare wheel indicates the maximum permitted speed of 80 km/h.
- Additional toolkit **C** containing: jack and wrench to fasten the wheel stud bolts.



Warning

- Always keep the spare wheel in perfect working order, periodically checking that the inflation pressure is 4.2 bar.
- It must only be used for short trips, in emergencies.
- When the spare wheel is fitted, never exceed the maximum speed of 80 km/h and drive carefully, especially around bends and when overtaking, avoiding accelerating or braking suddenly.
- Do not exceed the approved weight limits.
- Do not fit snow chains on the spare wheel.
- Never fit more than one spare wheel at a time.

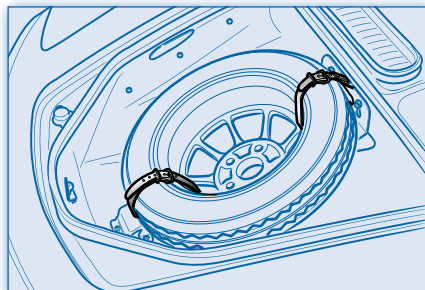
Failure to comply with these instructions could lead to loss of control of the vehicle and consequently damage to the vehicle and injuries to the occupants.

On vehicles equipped with tyre pressure monitoring system, turn off the engine when you have a puncture. Start it again only after having fitted the spare wheel in order to prevent the system from thinking that the spare wheel is a malfunction.

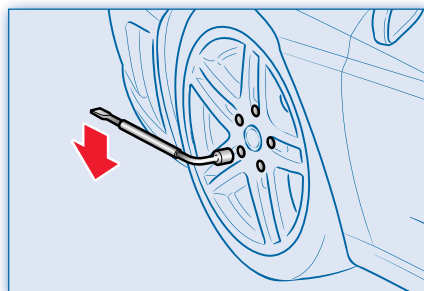
4 - In an emergency

Replacing a wheel

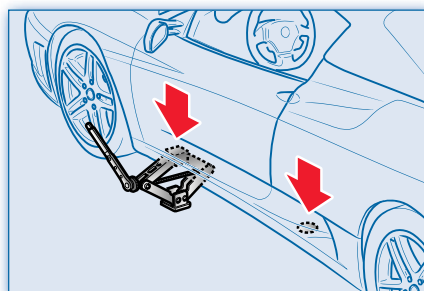
- Position the vehicle on a flat surface, engage 1st gear and lock the rear wheels by engaging the parking brake.
- If necessary, switch on the hazard lights and after having put on the fluorescent safety jacket, position the hazard triangle at the required distance from the vehicle.
- Take the spare wheel and the tools out of the luggage compartment detaching them from the retaining belts.



- Loosen the five wheel fastening stud bolts by approximately half a turn using the wrench supplied.



- Place the base of the jack on flat firm ground, in position with one of the jacking points on the underfloor as indicated in the figure by the arrows.

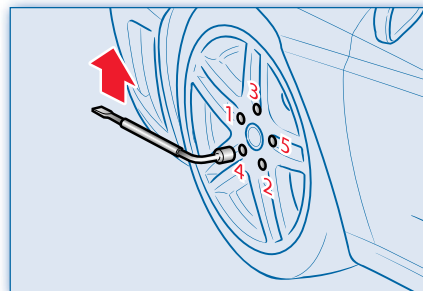


- Carefully jack up the vehicle until the wheel is lifted off the ground.

! If the jack is not positioned correctly, the vehicle could slip off.

The jack supplied must only be used for replacing the wheels.

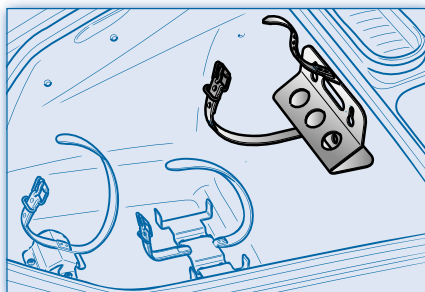
- Completely unscrew the five stud bolts and remove the wheel.
- Fit the spare wheel and screw the five stud bolts back on.
- Lower the vehicle and remove the jack.
- Fully tighten the stud bolts, alternately going from one stud bolt to the diagonally opposite one, in the order shown in the figure.



- As soon as possible, secure the stud bolts with the torque wrench, tightening them to a torque of 100 Nm.

The spare wheel is not fitted with a tyre pressure monitoring sensor (see label on spare wheel bag). Hence, after fitting, the wheel is not monitored by the system, however, it complies with International Regulation ECE R64/01. Once fitted, we recommend you go to the nearest **AUTHORISED FERRARI SERVICE CENTRE**.

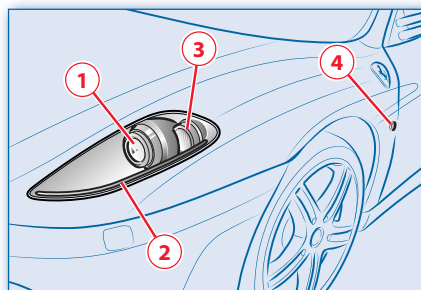
⚠ After removing the spare wheel support, put the tools and the replaced wheel back into the luggage compartment.



Replacing a bulb

Front lights

- ① Low beam/high beam
- ② Position light
- ③ Front direction indicator
- ④ Side direction indicator



Before replacing a bulb, always disconnect the battery (see page 113) and check that the corresponding fuse is intact.

When reconnecting the battery, follow the procedure described on page 113.

Low beams/high beams

The low/high beams have high-voltage bi-xenon light bulbs.

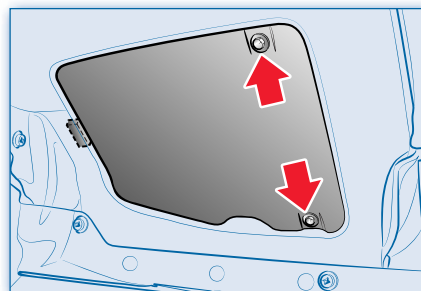
These bulbs have a high voltage power supply. Avoid any operation with the ignition key in position II.

For replacement, contact the **FERRARI SERVICE NETWORK**.

For headlamp beam aiming, contact the **FERRARI SERVICE NETWORK**.

Replacing the front direction indicator and position light bulb

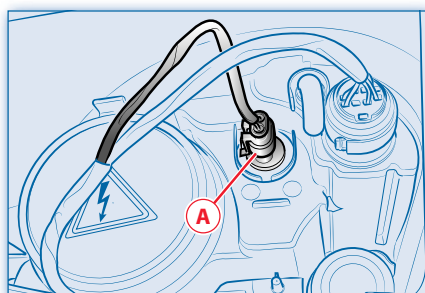
To access the headlight bulbs, turn the wheels completely to the inside and remove the inspection lid positioned on the front part of the wheelhouse.



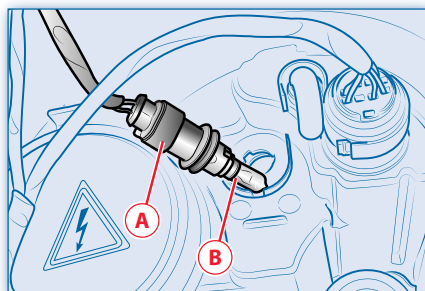
- Disconnect the battery using the battery master switch (see page 113).

4 - In an emergency

- Turn the bulb-holder in an anticlockwise direction **A** and remove it from its seat.

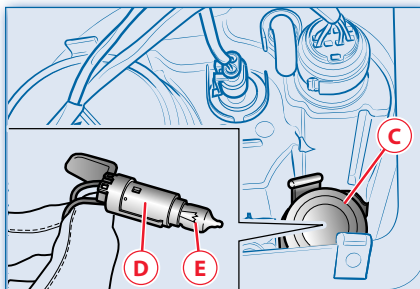


- Remove the bulb **B** by pushing and simultaneously turning it anticlockwise.



- Fit the new bulb by pushing it into place in the bulb holder and turning it clockwise.
- Reposition the bulb holder in its seat and turn it clockwise until it locks.
- To access the position light bulb, remove the protective cap **C**.

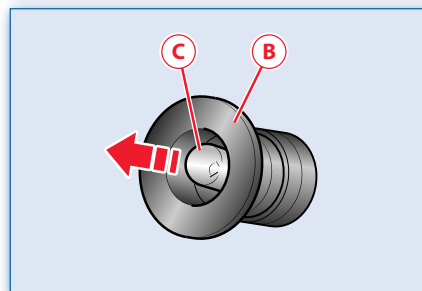
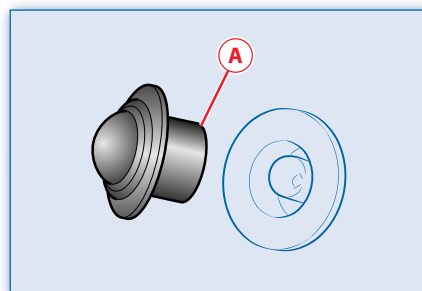
- Remove the bulb holder **D** and remove it from its seat,
- Remove the bulb **E** of the position light and replace it.



- Reposition the bulb holder in its seat and refit the protective cap.
- Reconnect the battery.

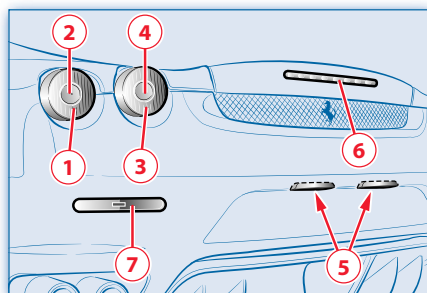
Replacing the side direction indicator bulb

- First remove the indicator transparent cover **A** and then the bulb holder **B**, being careful not to damage the bodywork.
- Remove the bulb **C** taking it out of the bulb holder.
- Replace the bulb and refit the bulb holder and then the plastic cover.



Taillights

- ① Position and stop light
- ② Direction indicator
- ③ Rear fog light
- ④ Reverse light
- ⑤ Number plate light
- ⑥ Auxiliary stop light
- ⑦ Reflector

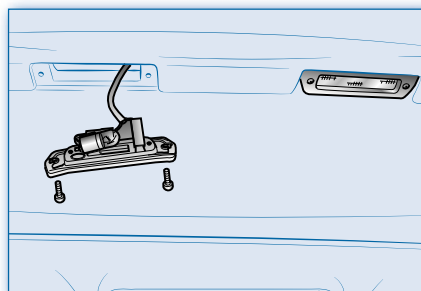


Replacing the taillight bulbs

For replacement, contact the **FERRARI SERVICE NETWORK**.

Replacing the number plate light bulb

- Undo the two fastening screws.
- Remove the bulb holder and replace the bulb.
- Refit the bulb holder and screw down the two retaining screws.



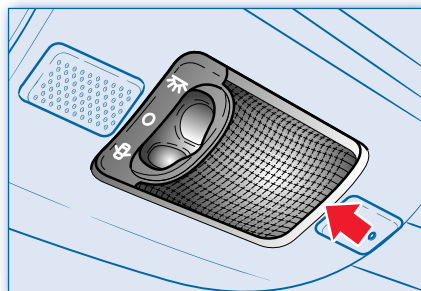
Replacing the auxiliary stop light bulbs

For replacement, contact the **FERRARI SERVICE NETWORK**.

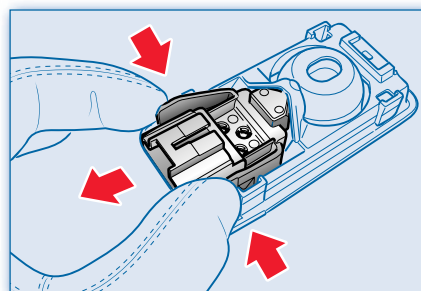
Replacing other light bulbs

Replacing the dome light bulb

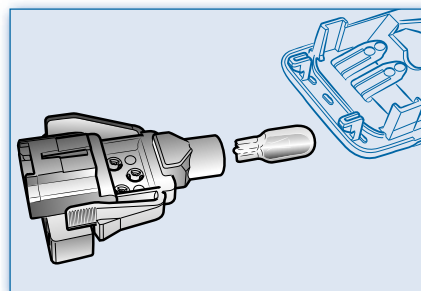
- Use a screwdriver to gently pry at the point indicated and remove the dome light.



- Manually unclip the bulb holder pressing the two side locking tabs.



- Remove the bulb from the bulb holder and replace it.

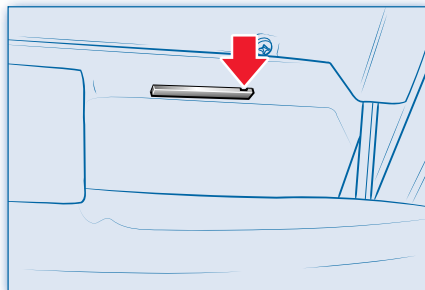


- Refit the dome light.

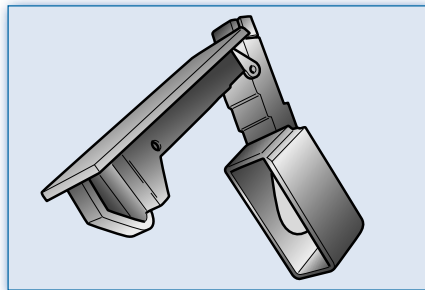
4 - In an emergency

Replacing the glove compartment light bulb

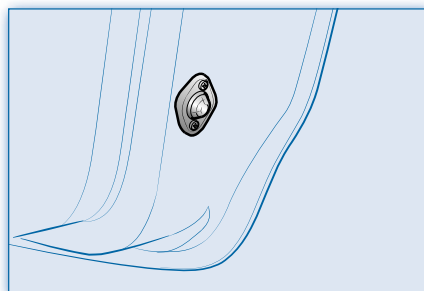
- Using a screwdriver, gently pry at the point indicated by the arrow and remove the bulb holder.



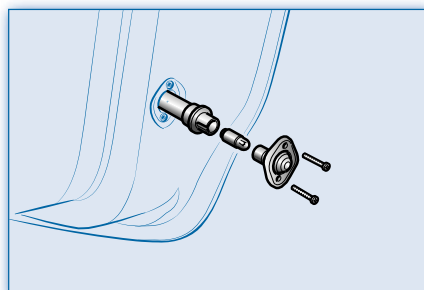
- Replace the bulb and refit the bulb holder.



Replacing the "door open" light bulbs

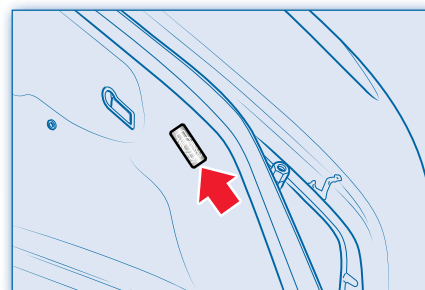


- Undo the two fastening screws.
- Remove the bulb holder, detach the transparent cover and replace the bulb.
- Refit the bulb holder and tighten the two retaining screws.

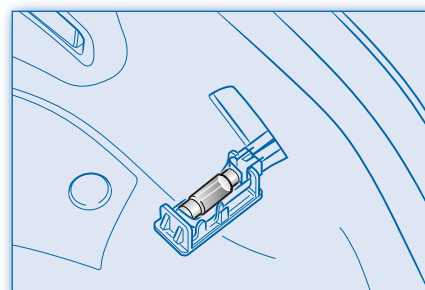


Replacing the luggage compartment light bulb

- Using a screwdriver, gently pry at the point indicated by the arrow and remove the bulb holder.



- Replace the bulb and refit the bulb holder.



Bulbs

(12 V, except for high beam/low beam)

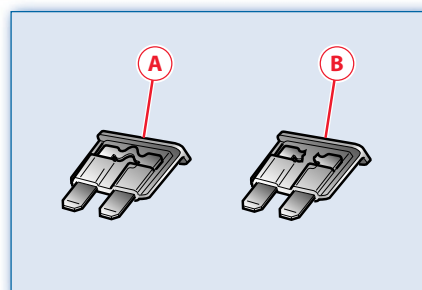
Low beams/high beams	gas-discharge	DAS
Front position lights	incandescent	6 W (H6W)
Front direction indicator lights	incandescent	21W
Side direction indicator lights	incandescent	4W (T4W)
Rear position and stop lights	incandescent	21/5W (P21/5W)
Rear direction indicators/reverse lights	incandescent	6W (H6W)
Rear fog lights	incandescent	21W
Number plate lights	incandescent	5W (R5W)
Central dome light	incandescent	10W
Spot light	incandescent	6W
Glove compartment light	incandescent	5W (W5W)
Door open lights	incandescent	3W
Luggage compartment light	incandescent	5W (W5W)

Replacing a fuse

When an electrical device is not working, check that the corresponding fuse is intact.

A Fuse intact.

B Fuse blown.



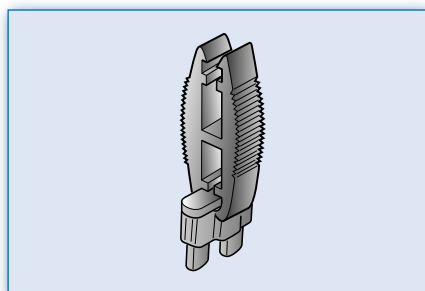
If the fault is repeated, contact the **FERRARI SERVICE NETWORK**.

When replacing a fuse, always use fuses of the same amperage (same colour).

Spare fuses are found in the toolkit.

4 - In an emergency

Use the pliers found in the toolkit to remove the fuses.



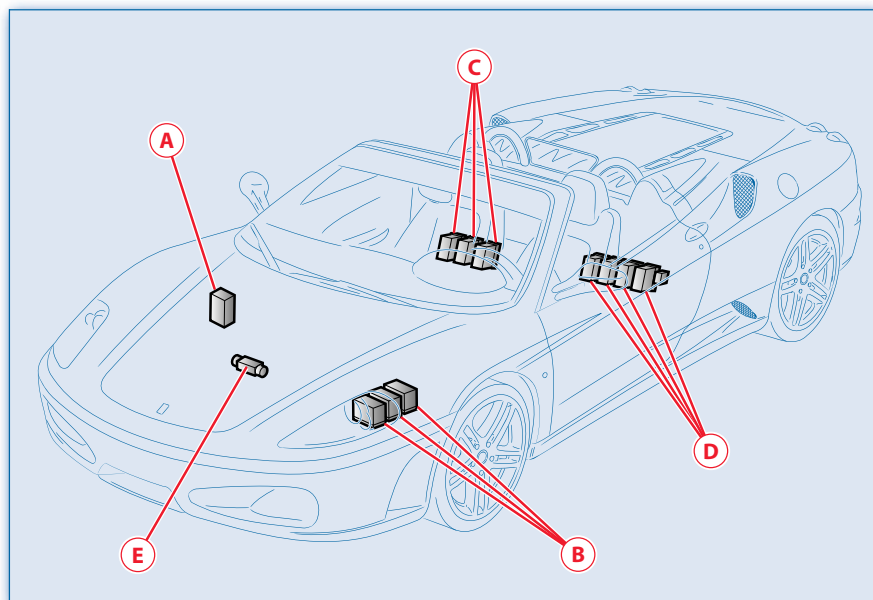
<i>Fuse Colour</i>	<i>Ampere</i>
Dark yellow	A5
Brown	A7.5
Red	A10
Light blue	A15
Yellow	A20
White	A25
Green	A30
<i>Maxi Fuse Colour</i>	<i>Ampere</i>
Yellow	A20
Green	A30
Orange	A40
Red	A50
Blue	A60

Location of the fuse and relay boxes

- A** Power fuses.
- B** Luggage compartment fuses.
- C** Fuses in passenger compartment, RH side (behind RH seat).
- D** Fuses in passenger compartment, LH side (behind LH seat).
- E** Megafuse, (behind the battery).

Symbol legend

- +30 — + permanent battery
- +15 — + key operated

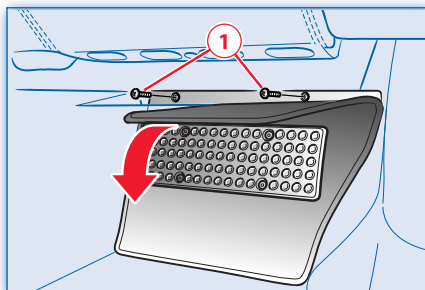


F430 SPIDER

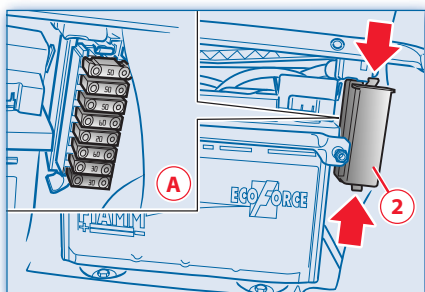
A – Power fuses

Positioned under the passenger footrest, near the battery. To gain access:

- undo the two retaining screws ①, slightly lifting the mat;



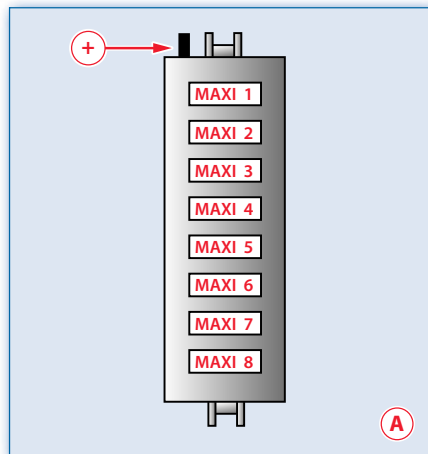
- lower the battery protection panel;
- remove the fuse box cover ②.



Fuses:

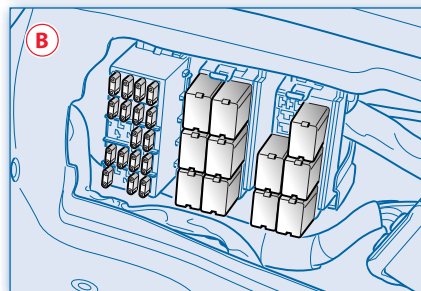
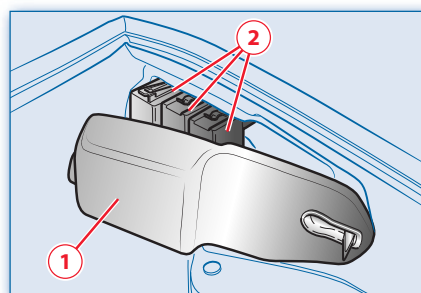
MAXI1	50A	+30 RH Fan
MAXI2	50A	+30 LH Fan
MAXI3	50A	+30 A.C.
MAXI4	60A	+30 front guard
MAXI5	20A	+30 alternator sensing
MAXI6	60A	+30 ABS/ASR/ESP
MAXI7	30A	RH seat
MAXI8	30A	LH seat

If a power fuse has blown, contact the FERRARI SERVICE NETWORK to have the system checked.



B – Luggage compartment fuses and relays

To access these components, remove the protection panel ① and the box covers ②.



Fuses (MINI):

AF1	15A	High beams
AF2	25A	Low beams
AF3	7.5A	RH high beam
AF4	15A	RH low beam
AF5	7.5A	Number plate lights, switch lights

4 - In an emergency

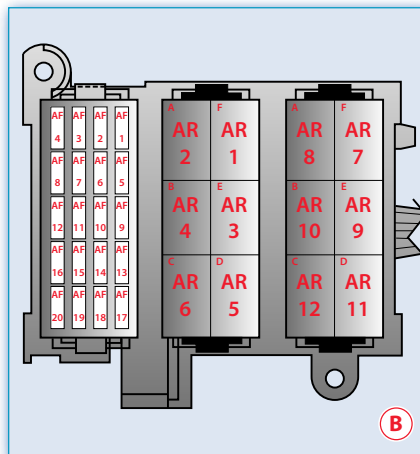
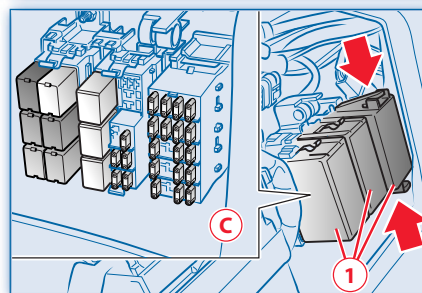
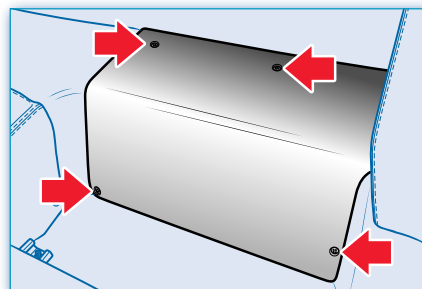
AF6	15A	Taillights
AF7	7.5A	LH high-beam.
AF8	15A	LH low beam
AF9	5A	+30 Instrument panel, Bluetooth ECU
AF10	15A	Horns
AF11	-	Position available
AF12	-	Position available
AF13	30A	Headlight washers
AF14	30A	Front engine compartment lid actuator
AF15	5A	+15 instrument panel, internal light timing ECU, child safety, passenger airbag deactivation
AF16	5A	Front RH and rear LH position lights
AF17	15A	Blinking internal lights, hazard blinking indicators and direction indicators
AF18	15A	Glove compartment
AF19	-	Position available
AF20	5A	Front LH and rear RH position lights

Relays:

AR1	30A	LH Fan
AR2	30A	RH Fan
AR3	30A	Lid opening actuator
AR4	30A	Child safety
AR5	20A	High beams
AR6	20A	Low beams
AR7	20A	Glove compartment
AR8	-	Position available
AR9	20A	Position lights
AR10	20A	Parking lights
AR11	20A	Number plate lights, switch lights
AR12	20A	Horns

C - Right-hand side passenger compartment fuses and relays

To access them, remove the protection panel and box covers ①.



F430 SPIDER

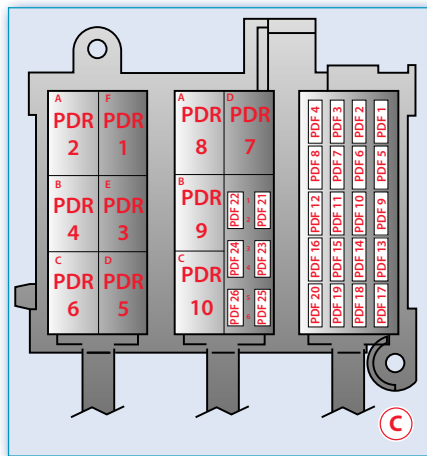
Fuses (MINI):

PDF1	10A	+15 RH Motronic, Pin 86 on PDR8 and PDR9 relays
PDF2	7.5A	Rear fog lights
PDF3	7.5A	External rear view mirror defroster
PDF4	15A	RH oxygen sensors
PDF5	15A	Stop lights
PDF6	25A	+30 Windscreen wipers
PDF7	30A	Heated rear window
PDF8	10A	Positive from main RH relay. (PDR10)
PDF9	20A	+15 Radio, rear view mirror switch, fuel door, direction indicators switch, cigarette lighter, parking sensors
PDF10	30A	+30 radio, radio amplifier, parking sensors
PDF11	-	Position available
PDF12	15A	Air-flow meter, exhaust by-pass valve, anti-evaporation diagnostic pump, anti-evaporation valve, immobilizer relay, intake manifold valve, A.C. relay.
PDF13	5A	+15 Alarm system immobilizer
PDF14	5A	+30 Alarm system immobilizer
PDF15	-	Position available
PDF16	15A	RH ignition coils, RH injectors

PDF17	15A	Windscreen washer/ wipers
PDF18	15A	+30 key
PDF19	-	Position available
PDF20	10A	RH Timing variators
PDF21	7.5A	+30 RH Motronic
PDF22	-	Position available
PDF23	30A	RH Motronic (main)
PDF24	10A	+15 ABS/ASR/ESP
PDF25	15A	+30 fuel pump relay 1 (PDR8) and fuel pump relay 2 (PDR9)
PDF26	10A	+87 Tyre pressure monitoring system (TPMS)

Relays:

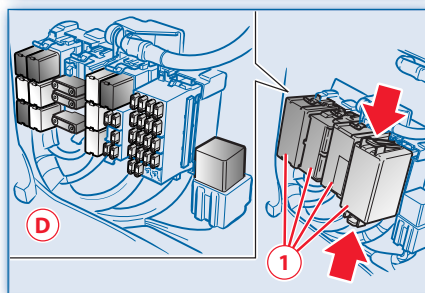
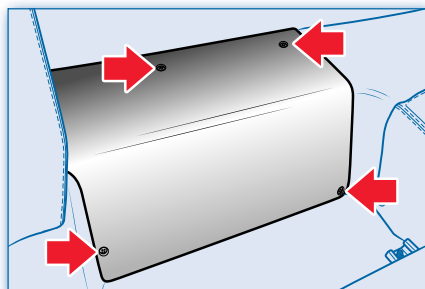
PDR1	Bosch	Immobilizer (spec. BOSCH switch)
PDR2	30A	Key-operated devices
PDR3	30A	Heated rear window/ rear view mirror defroster
PDR4	20A	Rear fog lights
PDR5	30A	+30 Windscreen wipers
PDR6	20A	+15 Windscreen wipers
PDR7	20A	+Heated seats
PDR8	20A	RH fuel pump - speed 1 (BOSCH)
PDR9	20A	RH fuel pump - speed 2 (BOSCH)
PDR10	20A	Main for RH Motronic (BOSCH)



4 - In an emergency

D - Left-hand side passenger compartment fuses and relays

To access them, remove the protection panel and box covers ①.

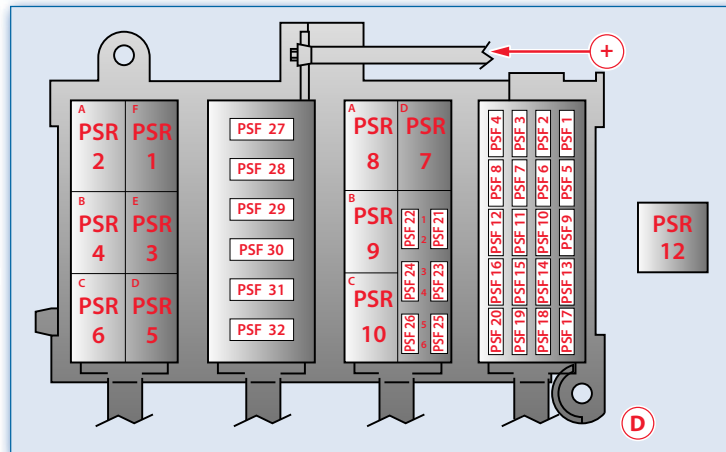


Fuses:

- PSF1 10A +15 LH Motronic, +86 on LH fuel pump relays. (PSR8 and PSR9)
- PSF2 20A F1 ECU
- PSF3 30A +30 RH power window

- PSF4 15A LH oxygen sensor
- PSF5 7.5A +15 shock absorber damping (Skyhook), +15 alternator, +15 electronic differential
- PSF6 15A +30 Door locking system
- PSF7 30A +30 LH power window.
- PSF8 10A Positive from main LH Motronic relay. (PSR10)
- PSF9 10A +15 airbag
- PSF10 15A Battery charger
- PSF11 10A +30 Engine control system (OBD), +30 tyre pressure monitoring system (TPMS), +30 electronic differential

- PSF12 15A Air flow meter, exhaust by-pass valves, anti-evaporation diagnostic pump, anti-evaporation valve
- PSF13 10A +15 Air Conditioning system, +15 recirculation pump
- PSF14 30A Starter motor
- PSF15 15A Dome light, door lights, glove compartment light, parking lights control
- PSF16 15A LH ignition coil LH injectors
- PSF17 45A Soft top
- PSF18 30A Soft top
- PSF19 15A A.C. Compressor
- PSF20 10A LH Timing variator



PSF21 7.5A +30 LH Motronic.
PSF22 10A Reverse light
PSF23 30A LH Motronic (main)
PSF24 15A Power socket
PSF25 15A +30 fuel pump relay 1 (PSR8) and fuel pump relay 2 (PSR9)
PSF26 5A +15 connected devices relay (excluding ignition)
PSF27 20A Heated seats
PSF28 60A +30 rear LH module guard
PSF29 60A +30 rear RH module guard
PSF30 30A Soft top pump
PSF31 30A F1 pump/ E-DIFF pump
PSF32 - Position available

Relays:

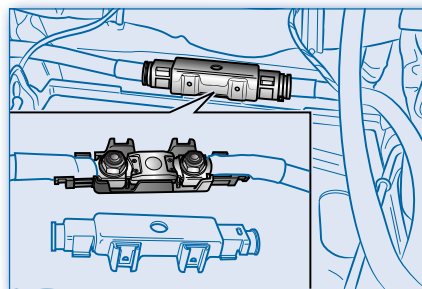
PSR1 20A A.C. Compressor
PSR2 20A Reverse gear switch
PSR3 20A Key-operated devices
PSR4 20A Cutout switch for disabling starting with battery charger (normally closed)
PSR5 20A Connected devices switch (excluding ignition)
PSR6 30A Starter motor
PSR7 20A Ignition anti-repeat
PSR8 20A LH fuel pump - Speed 1 (BOSCH)
PSR9 20A LH fuel pump - Speed 2 (BOSCH)

PSR10 20A Main for LH Motronic (BOSCH)

PSR12 50A F1 Pump

E - Megafuse

Located behind the battery, on the connection cable between the alternator and the battery positive terminal.

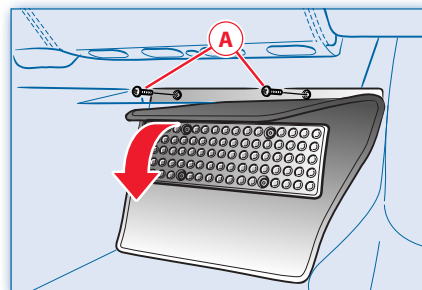


Emergency ignition

Flat battery

Consult the section "Battery" in chapter 5 "Maintenance", to always keep the battery in perfect working order.

To access the battery, undo the two retaining screws **A** and lower the protection panel.



Starting with the auxiliary battery

Use an external 12V battery with the same power or slightly higher than the one provided. A lead acid battery charger of adequate power may be used by qualified persons only.


Use cables with suitable characteristics.

- First connect the terminals of one cable to the positive poles (+), and then the terminals of the other cable to the negative poles (-) of the two batteries.
- Start the engine.


4 - In an emergency

- When the engine has started, first remove the cable from the negative poles and then from the positive ones.

If the engine does not start after a few attempts, contact the **FERRARI SERVICE NETWORK**.

 Take care not to let the positive cable come into contact with the vehicle or the negative cable. Improper manoeuvres may cause damage to the electrical system.

Push start

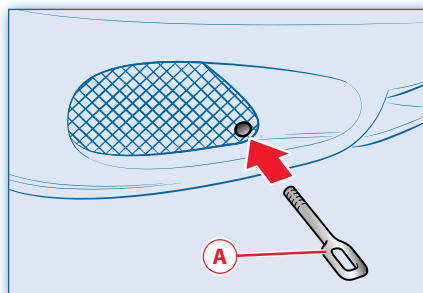
 This is to be avoided as far as possible, since it may cause fuel to flow into the catalytic converters and damage them beyond repair.

Towing the vehicle


Tow hook

When towing the vehicle, avoid attaching the tow hook (provided in the toolkit) to points different from those provided.

- Take the tow hook **A** out of the toolkit bag.
- Screw the hook into place in its seat.



- Position the gearshift lever in neutral (N for vehicles with F1 gearbox).

 The specific driving and road regulations must be followed when the vehicle is being towed.

Do not tow the vehicle using a hook attached to the suspension levers and wheel rims, but only onto the tow hook properly fitted in its seat.

Hold the key in position **II** to allow the lights to work and prevent locking of the steering wheel.

Keep in mind that when the engine is off, the power steering and brake servo are deactivated, therefore, more force is required to turn the steering wheel and push the brake pedal.

Towing the vehicle with the wheel axle lifted

This may only be done by skilled staff.

Always lift the rear wheel axle only. Ensure that the front wheels are in a straight line and that the steering lock is engaged.

Fuel cut-off inertia switch

The fuel system is fitted with an automatic safety switch which is activated in the event of a collision, cutting off the fuel flow and consequently stopping the engine and preventing the fuel from leaking if the lines have been damaged.



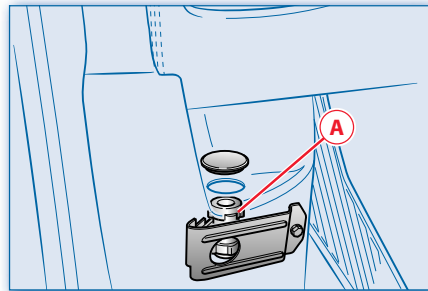
If you smell fuel after a collision or notice any leaks, do not reset the switch in order to prevent the risk of fire.

The inertia switch is positioned on the left-hand side of the passenger compartment, in the lower part of the front door jamb, and is protected by a metal bracket.

Resetting the system

After checking that there are no fuel leaks:

- Remove the cover and press button **A** on the switch.



- Turn the key to position **II**, wait a few seconds and start the engine.
- Check once again that there are no fuel leaks.

5 - Maintenance

Warranty booklet	110
Maintenance	110
Level checks	111
Battery	113
Windscreen wipers	115
Wheels and tyres	115
Headlight adjustment	117
Cleaning the vehicle	117
If the vehicle is stored for long periods	118



It is essential to always keep the vehicle in proper working order. This will help ensure its condition over time and may prevent malfunctioning caused by not following the maintenance schedule or careless use.

All repair work on any component of the safety system must be carried out by the FERRARI SERVICE NETWORK.

Warranty booklet

The vehicle is provided with a “Warranty Booklet and Maintenance Schedule”. This contains the vehicle’s warranty terms and conditions.

The Warranty Booklet also contains specific spaces to be filled in by the AUTHORISED FERRARI SERVICE CENTRES, in order to record the periodic service and maintenance performed according to the Maintenance Schedule.

Maintenance

At each indicated period, the **FERRARI SERVICE CENTRES** must carry out all the tuning operations and relevant checks indicated in the “Warranty Booklet and Maintenance Schedule”.

It is however advisable to immediately report to our **SERVICE CENTRES** any small fault which may occur during use of the vehicle (e.g., small fluid leaks) and not wait until the next service is due to correct the problem.

It is required to have the periodic service performed at least once a year, even if the specified mileage limit has not been reached (see “Yearly Maintenance Service” shown in the “Warranty Booklet and Maintenance Schedule”).

Using the Maintenance Schedule

The schedule contained in the “Warranty Booklet and Maintenance Schedule” also lists, in addition to the specified intervals for the operations indicated, the checks to be performed annually on the vehicle.

If the vehicle is used in particular conditions (e.g., dusty roads, very high temperatures, heavy-duty use, etc.) some operations need to be carried out more frequently (e.g., air filter replacement, etc.).

For the quality of oils to use, see the table “Capacities” on [page 14](#)

Level checks

General notes

The level checks must be carried out at the intervals indicated in the "Maintenance Schedule" or in any case before starting a long journey.

- Open the engine compartment lid (see page 61).

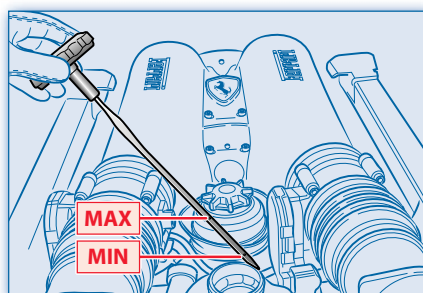
Use only lubricants and/or fluids recommended by FERRARI (see the table "Capacities" on page 14).

Checking the engine oil level

⚠ The level check must be carried out with the engine warm (oil temperature $>70^{\circ}\text{C}$) and the cap resting on the oil separator filler neck.

Proceed as follows:

- With the engine idling, unscrew the filler cap and check that the level is between the **MIN** and **MAX** notches on the dipstick.
- $\text{MAX} - \text{MIN} = 1.5$ litres



- Top up if necessary with the specified oil being careful not to go over the **MAX** level shown on the dipstick.
- Screw the cap back on tightly.

⚠ If the oil is under the **MIN** level, top up anyway and have the system checked by an authorised FERRARI SERVICE CENTRE.

Checking the gearbox and the F1 gearbox system oil level

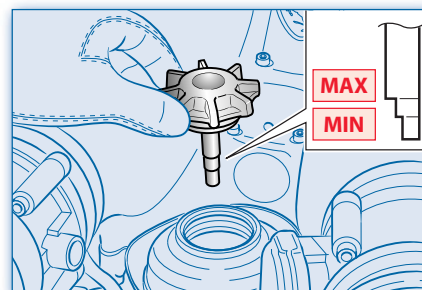
It is recommended to have the oil level check performed by an authorised FERRARI SERVICE CENTRE or by skilled staff.

Checking the oil level in the hydraulic steering system

The level check must be carried out with the engine warm, after having travelled at least 15 Km, and with the vehicle parked on a flat ground.

- Remove the tank cap and check that the level is between the **MIN** and **MAX** notches on the dipstick.

The oil level check must be carried out with the cap resting on the tank.

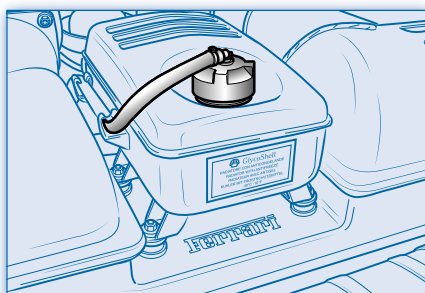


- Top up if necessary with the specified oil up to the **MAX** level.
- Screw the cap back on tightly.

Checking the coolant level

This procedure must always be performed when the engine is cool. Never remove the cap from the expansion tank when the engine is running and/or warm.

- Remove the cap from the expansion tank in the engine compartment and check that the level is about 40 mm from the top of the filler neck.



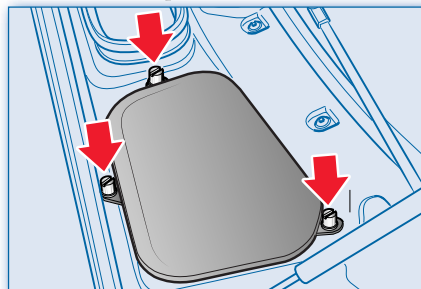
- If the level is low, top it up with the specified fluid.

⚠ If frequent top-ups are required after short trips, have the system checked by the **FERRARI SERVICE NETWORK**.

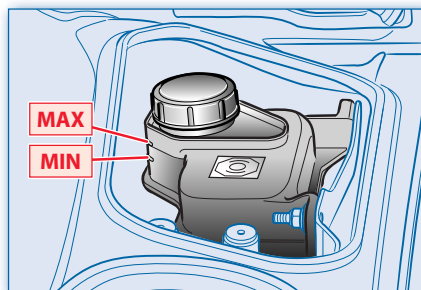
- Screw the cap back on tightly.

Checking the brake/clutch fluid level

- To access the tank, lift the engine compartment lid (see page 38) and remove the inspection cover.



- Check that the fluid in the tank is near the **MAX** level.
- If the level is low, unscrew the filler cap and top up with the specified oil taken from a sealed container.



The oil contained in the brake and clutch systems, besides damaging plastic, rubber and painted parts, is highly dangerous if it comes into contact with the eyes or the skin.

In case of contact, wash the affected area thoroughly with running water.

To avoid any risk, always use protective goggles and gloves.

Keep away from children!

Never dispose of used fluid in the environment!

On vehicles with F1 gearbox, the tank supplies the braking system only.

The symbol shown on the adhesive label on the tank indicates that there is synthetic fluid in the system.



Use of mineral fluids will cause permanent damage to rubber gaskets of the system.

Do not use fluids other than those already contained in the system for topping up.

- After topping up, screw the filler cap back on.
- Refit the inspection cover.

5 - Maintenance

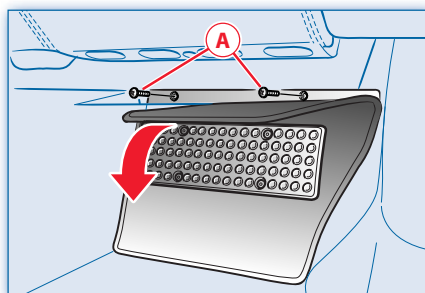
Battery

The battery is positioned in the passenger compartment, behind the passenger footrest.

The vehicle is equipped with a sealed lead acid battery that does not require maintenance.

⚠ The battery does not need refilling with distilled water or sulphuric acid.

- To access the battery, undo the two screws **A**, under the mat at the top of the passenger footrest panel.



- Remove the panel slipping it off the lower pins.

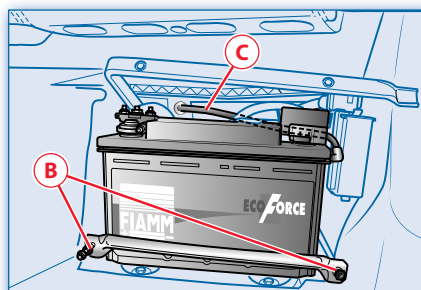
Periodically check that the terminals and pins are clean and firmly secured.

Visually inspect the outer casing for any cracks.

If the battery is overcharged, it will wear out quickly.

Have the electric system of the vehicle checked if the battery tends to discharge easily.

- To remove the battery from the vehicle, disconnect it from the electric system using the battery master switch.
- Detach the terminals from the battery posts.
- Free it from the retaining bracket by undoing the two nuts **B**.
- Detach the breather pipe **C** from the outside of the battery.



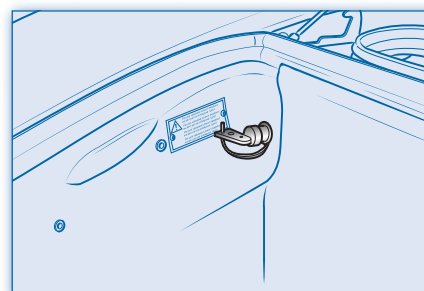
- Remove the battery from the passenger compartment.

⚠ Keep the battery away from sources of heat and do not use open flames or create sparks near it.

Battery master switch

The earth wire of the battery can be disconnected by means of the master switch located in the luggage compartment.

To disconnect the battery, turn the master switch control lever counterclockwise and remove it; it will remain connected to the battery master switch by means of a cable.



It is advisable to disconnect the battery if the vehicle is not used for long periods of time.

Consult the section "If the vehicle is stored for long periods" in this chapter.


After removing the battery from the vehicle or disconnecting it from the electric system by means of the master switch, when reconnecting and before proceeding with starting the engine, wait at least 10 seconds with the ignition key in position **II** to allow the electronic system that controls the motor-driven valves to run the self-learning cycle.

Wait for the vehicle to reach its normal operating temperature, therefore allowing the various systems to perform their self learning functions.

To reconnect the battery to the electric system, insert the control lever into the master switch and turn it clockwise until it stops.

The self-learning cycle for the Motronic ECUs works properly when the intake air temperature is between 5 and 100°C. Therefore, always check that the outside temperature falls within these values before performing this operation.


Recharging the battery

 The battery should be recharged in a well-ventilated area and away from any flammable materials. Batteries can produce combustible gases. Do not smoke, use open flames or create sparks near the battery.

Proceed as follows, using a lead acid battery charger:

- Disconnect the battery using the battery master switch and disconnect the terminals from the battery posts as described earlier.
- Connect the cables of the instrument used to charge the battery to the battery posts.

- When the battery has been recharged, reconnect the terminals to the battery posts, firmly securing the terminal screws, and restore the connection to the electric system by means of the battery master switch.

 Do not use devices that have to be connected through the cigarette lighter.

Suggestions for optimal use of the battery

- If the vehicle is used for less than 1000 km a month or when it is used in urban areas, the battery charge remains sufficient for a maximum of twenty days.
- For longer distances out of urban areas, the charge will remain sufficient for approximately forty days.

Beyond these terms, it is advisable to recharge the battery in order to be able to start the vehicle.

If accessories that absorb power other than those installed by FERRARI are fitted on the vehicle (e.g., cell phones, navigators, satellite alarm systems etc.), the battery may discharge faster and it will have to be recharged more frequently.

Battery charger (optional)

Upon request, the vehicle can be equipped with a special connector to connect a battery charger, in order to keep the battery charged and for emergency charging.

For instructions on the use of the device see the "Carrozzeria Scaglietti" Owner's Manual and the instructions provided with the charger.

5 - Maintenance

Windscreen wipers

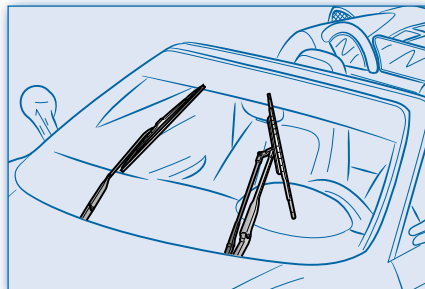
In order not to damage the wiper blades, avoid using them when:

- the windscreen is dry
- the blades are stuck to the windscreen due to freezing temperatures
- there are traces of snow on the windscreen or the wiper arms
- there are deposits on the windscreen.

The wiper blades must be cleaned periodically and checked for wear.

Replacing the wiper blades

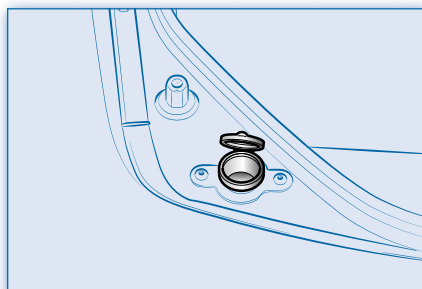
- Turn on the windscreen wipers and stop them (ignition key in position 0) when the blades are in a vertical position.



- Lift the arm, remove the blade and replace it checking that it is properly locked on the arm.

Never lift the windscreen wiper arms from the rest position.

Windscreen wipers and washer fluid



Periodically check that there is fluid in the tank.

The tank for the windscreen wipers and washer fluid can be accessed by lifting the luggage compartment lid.

- Lift the cap and fill the tank with the specified fluid (see the “Capacities” table on [page 14](#)) until it can be seen in the filling tank.
- Close the cap.

Wheels and tyres

To ensure performance, endurance and the best tyre adjustment on the rim, it is important to comply with the following instructions for the first 200-300 km of use of new tyres:

- avoid sudden acceleration
- avoid sharp braking and steering
- drive at moderate speed on straight roads and on curves.

How to use the tyres

For safe driving, it is of major importance that the tyres be constantly maintained in good conditions.

The inflation pressure must correspond to the specified values and the tyres should be checked only when they are cold. Tyre pressure increases as the tyre temperature progressively increases.

Never reduce the pressure if the tyres are hot.

Insufficient tyre pressure can lead to overheating, damage and even destruction of the tyres.

Inflating the tyres to a pressure different from that specified (see table on [page 12](#)) will render the tyre pressure monitoring system inefficient (where fitted).

Violent impact against sidewalks, pot holes in the road and other obstacles of various types, as well driving on rough roads for long periods of time may cause damage to

the tyres which may not always be visible. Check the tyres regularly for any signs of damage (e.g., scratches, cuts, cracks, bulges, etc.).

Sharp objects that have penetrated the tyres may have caused damage, which can only be diagnosed by removing the tyre.

Have any damage inspected by an expert as it may considerably reduce tyre life.

Remember that tyres deteriorate with time even if used little or not at all.

Cracks in the tread and sidewalls, possibly accompanied by bulging, are sure signs of ageing.

Have the tyres changed by an AUTHORISED FERRARI SERVICE CENTRE who have the necessary equipment available in order to prevent damage to the sensor located inside the wheel of vehicles equipped with the tyre pressure monitoring system.


Have a qualified technician decide whether old tyres are suitable for use.

It is recommended to replace the tyres after six years of normal use.

Frequent use in maximum load conditions and high temperatures may accelerate ageing.


Tyres that have been on a vehicle for more than 3 years must be checked by a qualified technician.

Never fit tyres of uncertain origin.

 The tyres are of the “unidirectional” type and there is an arrow on the side indicating the rolling direction or the outside. When changing the tyres, ensure that the rolling direction corresponds to that indicated in order to maintain optimal performance.

Tyres on the same axle must always be replaced in pairs.

Regularly check the tread (minimum acceptable depth 1.7 mm). The less tread depth, the greater the risk of skidding.

 Drive carefully on wet roads to reduce the risk of “aquaplaning”.

Tyre pressure monitoring system (optional)

See the description of the system and the warning messages on [page 138](#).

Wheel balancing

The wheels complete with tyres must be balanced by the **FERRARI SERVICE NETWORK** or by skilled staff.

You are advised to use only self-adhesive weights.

Application instructions

Proceed as follows to fit the counterweights:

- Use heptane to thoroughly clean the part of the rim where the counterweight will be applied.
- Remove the backing paper and apply the weight to the wheel, pressing down evenly to ensure perfect adhesion.

Headlight adjustment

To aim the headlights, contact the **FERRARI SERVICE NETWORK**.

Cleaning the vehicle

Cleaning the exterior

Proper care of the vehicle on the part of the owner is essential for a long life of the vehicle.


Below is a list of the main precautions to be taken.

- Certain parts of the vehicle should not be left wet or dirty for long periods of time, in particular, the passenger and luggage compartment floors must always be kept clean and dry. The drain holes under the doors should be kept unclogged to allow any water to drain.
- The underbody and the lower surfaces of the vehicle should be cleaned regularly, and more frequently (at least once a week) if the vehicle is used on salty or rough roads. It is important to clean every part thoroughly: cleaning that only wets the vehicle, without removing dirt or mud completely can prove damaging to the body.
- The vehicle must be washed regularly with suitable equipment. Do not use very hot water or steam on the paintwork or lower surfaces.

It is advisable to soften any dirt first then remove it with a jet of water at room temperature.

- Do not wash the vehicle in direct sunlight or when the bodywork is still warm.

- Be careful that the jet of water does not hit the paintwork too hard.
- Wash the vehicle with a sponge and a solution of mild soap and water.
- Rinse the vehicle again with a jet of water and dry it with a piece of chamois leather.

 **When the vehicle has been washed, slightly depress the brake pedal at moderate speed before driving at normal speed so that the brake discs and pads can be dried.**

In order to maintain the shine of the paintwork, polish it once or twice a year with the products recommended by **FERRARI**.

- Any areas that are cracked or chipped as a result of stones, scratches or parking manoeuvres, etc. must immediately be treated by an **AUTHORISED FERRARI SERVICE CENTRE**.
- Do not park the vehicle in damp and/or unventilated areas for long periods of time.

Cleaning the interior - Cleaning and care of the leather upholstery

Suitable and regular treatment, at least 3-4 times a year, will ensure that the original quality, natural characteristics and softness of the leather upholstery in your **FERRARI** is maintained unaltered over time.

With this in mind, specific leather care products are also available (cleaner and cream) perfected and tested by FERRARI. These products can be ordered through the **FERRARI SPARE PARTS SERVICE DEPARTMENT**, both individually and as part of the “Care Kit” which includes the complete range of cleaning products for the vehicle.

For instructions on using the “Care Kit” products, see the “Carrozzeria Scaglietti” Owner’s Manual and the instructions included in the kit.

The following products must be avoided when cleaning the leather: harsh detergents, turpentine, liquid stain removers, benzene, solvents and domestic cleaning products. All of these products damage the natural material.

If the vehicle is stored for long periods

If the vehicle is not used for long periods of time, it is advisable to take certain precautions:

- Park the vehicle on a level surface in a covered and well-ventilated area.
- Hold the vehicle in position by engaging a gear and do not use the parking brake.
- Adjust the tyre pressure to 3.0 bar and periodically change the tyre resting point on the ground.
- Disconnect the battery from the electric system using the battery master switch as described in the section “Battery” in this chapter.

If you do not wish to disconnect the battery in order to keep certain devices functioning such as: radio station memory, alarm system, etc., the battery must be recharged at least once a month.

If the vehicle is not used for long periods of time with the battery disconnected, the battery must be recharged at least every three months.

- Protect the vehicle with a breathable fabric cover, avoiding materials that would prevent any dampness on the bodywork from evaporating.

Before using the vehicle again after long periods of inactivity, adjust the tyre pressure to the specified pressure and check the fluid levels of all the systems.

6 - Technical Information

Engine	120
Cooling system	122
Ignition-Injection system	123
Fuel system and fuel vapour emission control system	124
Exhaust system	126
Clutch	128
Gearbox	128
Driving and steering	130
Air conditioning/heating system	131
CST system	132
Braking system	132
Suspensions	135
Chassis - Bodywork	139
Electronic control units	140

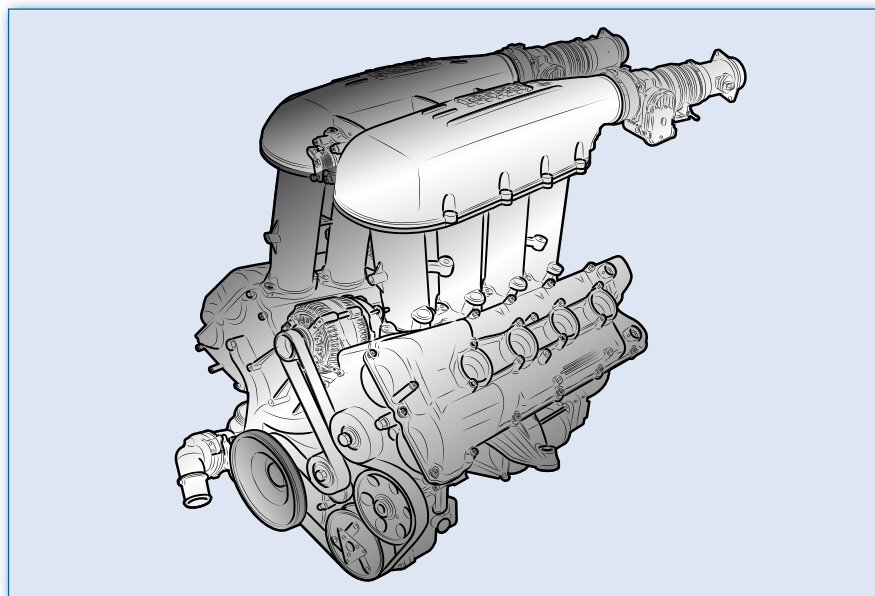


Engine

The vehicle has a normally aspirated 8-cylinder engine with a displacement of 4.3 litres, which produces a power of 490 HP and a torque of 465 Nm.

The engine's high performance is achieved through a number of technical solutions derived, in part, from racing vehicles:

- variable timing with continuous high-pressure timing variator and dedicated pump on each camshaft
- chain-driven timing control (one per bank) with hydraulic tensioners
- four overhead camshafts (two per bank) and four valves per cylinder driven by hydraulic tappets with automatic backlash recovery
- cylinder heads with combustion chamber of high volumetric and thermodynamic efficiency
- aluminium alloy and hardened silicone crankcase with wet Nickasil-coated aluminium liners
- dry sump and oil/water exchanger incorporated in the crankcase, in the centre of the two cylinder banks
- motor-driven accelerator throttle (drive by wire) and integrated Bosch Motronic ME7 ignition/injection system.



6 - Technical Information

Engine lubrication system and gas and oil vapour recirculation

- ① Blow-by system
- ② Gearbox thermistor
- ③ Scavenge and delivery pump
- ④ Suction screen
- ⑤ Pressure regulating valve
- ⑥ Oil filter cartridge
- ⑦ Oil pressure transmitter
- ⑧ Oil/water exchanger
- ⑨ Oil mesh filter

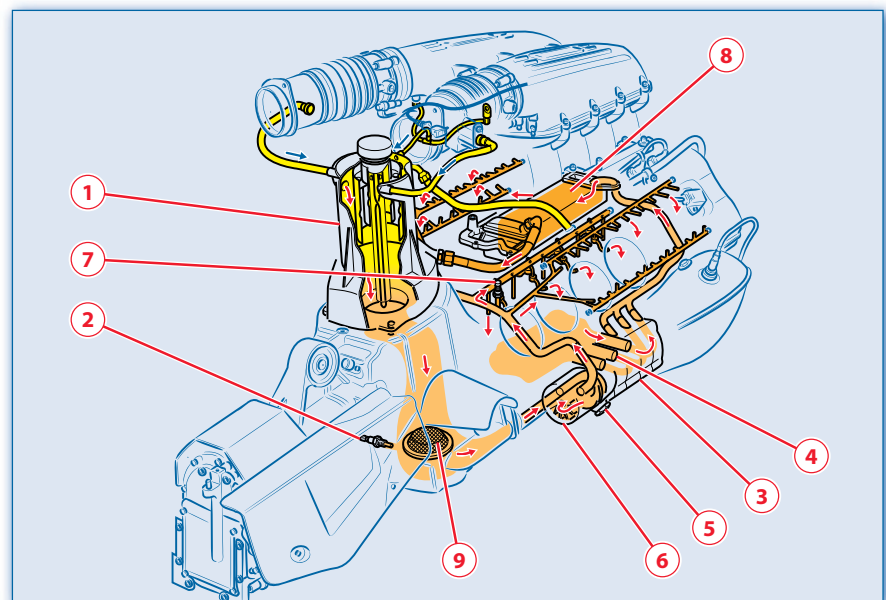
The lubrication system is of the dry sump type, with fixed gear pumps on the right-hand side of the crankcase. The engine is equipped with three scavenge pumps and a delivery pump. The oil pump unit is coupled to the water pump (see [page 122](#)) and is driven by the crankshaft by means of a chain.

The oil tank with suction chamber is cast in the gearbox and has a separator equipped with cylindrical degassing chamber in the upper part with centrifugal cyclone effect. The separator is fitted with an oil filler plug at the end of the filler neck.

The device for oil gas and vapour recirculation is of the closed circuit type. In the event of engine malfunctioning with an abnormal rise in pressure, the oil vapours coming from the heads are conveyed to a pipe connected to the blow-

by system; from here, a part condenses and flows into the oil tank underneath. The remaining gases, thanks to the vacuum generated by the engine, are aspirated through the connection pipes and conveyed to the plenum chambers.

A dedicated pipe in the system releases the pressure that accumulates in the oil tank.



F430 SPIDER

Replacing the engine oil and filter

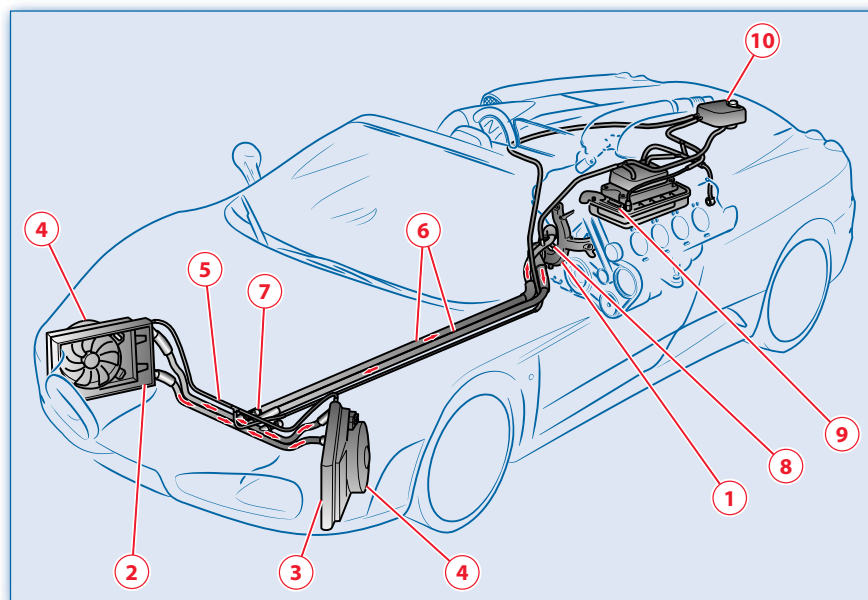
The oil and filter must be replaced, at the intervals shown in the "Maintenance Schedule" by an **AUTHORISED FERRARI SERVICE CENTRE**.



It is recommended to exclusively use lubricants approved by FERRARI.

Cooling system

- | | |
|--|----------------------------------|
| ① Centrifugal pump with thermostatic valve | ⑦ Twin contact fan on/off switch |
| ② Right-hand radiator | ⑧ Water temperature sensor |
| ③ Left-hand radiator | ⑨ Oil/water heat exchanger |
| ④ Electric fan | ⑩ Expansion tank |
| ⑤ Bleeder pipe | |
| ⑥ Underfloor pipes | |



6 - Technical Information

The engine cooling system has a closed-circuit with an expansion tank which compensates the fluid volume and pressure variations due to the engine warming up. A filler neck with plug fitted with a valve calibrated to 0.98 bar is installed at the top of the tank.

Coolant circulation is activated by a centrifugal pump (with bypass incorporated in the thermostatic valve) coupled to the oil pump unit (see [page 121](#)) and driven by the crankshaft by means of a chain.

After cooling the engine, the coolant flows to the thermostatic valve which starts opening when the temperature reaches 85°C, thus sending the coolant to the radiators.

The radiators are positioned on the front of the vehicle in order to improve heat exchange. The right-hand radiator is installed in series with the air conditioning system condenser. The cooling coil for the hydraulic steering system is mounted on the left-hand radiator.

Each radiator is fitted with an electric fan to assist with the heat dissipation. The radiators are connected in parallel and are equipped with a duct that is connected to the expansion tank for self-bleeding of the system.

The pump is connected to the radiators by means of lines running lengthwise under the floor of the vehicle.

A twin contact switch for automatic activation of the electric fan/s is installed on the delivery pipe connecting the two radiators, while the water temperature sensor for the engine ECU is fitted on the water pump upstream of the thermostatic valve.

Replacing the coolant

The coolant must be replaced at the intervals shown in the “Maintenance Schedule” by an **AUTHORISED FERRARI SERVICE CENTRE**.

Ignition-Injection system

The system is composed of the following:

- two electronic control units
- two air flow meters
- engine status sensors (throttle angle, RPM, timing, ignition, etc.);
- engine control and emission actuators (electro-injectors, coils, solenoid valves, etc.);
- peripheral functions connected with engine operation.

The ECU regulates the quantity of fuel to be delivered to the injectors and corrects ignition timing to optimise engine efficiency on the basis of the engine RPM and the quantity of air taken in by the engine.

Each exhaust manifold is fitted with a double linear (front) and non-linear (rear) oxygen sensor.

Electronic accelerator (Drive by Wire system)

Drive by Wire is a system that allows the accelerator pedal to work independently from the throttle.

This system is equipped with a potentiometer connected to the accelerator pedal in the place of the connection cable.

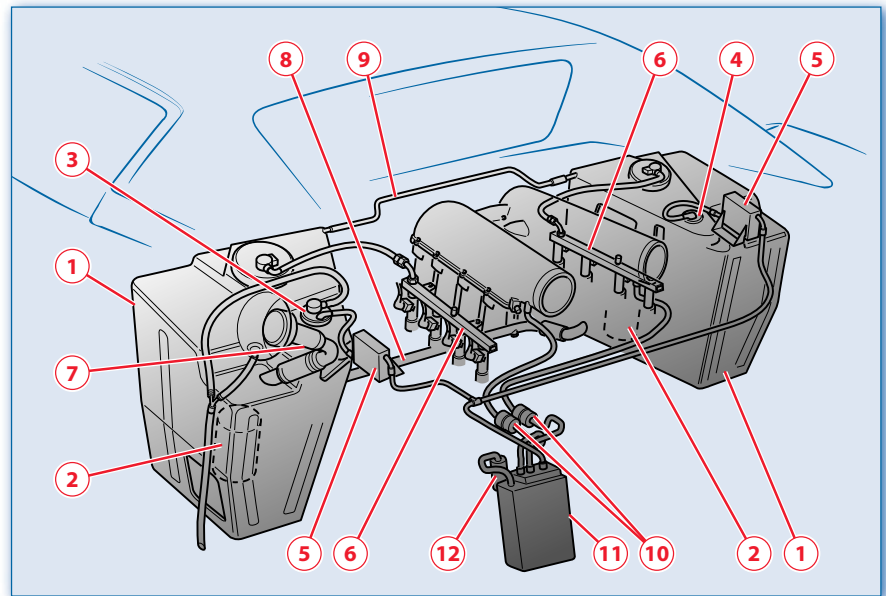
This potentiometer informs the engine ECU of the torque request from the driver.

With the Drive by Wire system, it is possible to:

- obtain optimal traction control by means of the CST system;
- optimise gearshifting thanks to the F1 system integration;
- control warming-up of the power unit.

Fuel system and fuel vapour emission control system

- ① Fuel tank
- ② Electric pump with filter
- ③ Multi-function valve
- ④ Ventilation valve
- ⑤ Separator
- ⑥ Injector rail
- ⑦ Filler neck
- ⑧ Lower tank connection pipe
- ⑨ Upper tank connection pipe
- ⑩ Canister purge solenoid valves
- ⑪ Active carbon filter
- ⑫ Air filter



6 - Technical Information

The fuel is supplied by the two submerged electric pumps in the tank, that are controlled by the ignition-injection ECUs. The fuel pressure in the delivery line is kept constant by a pressure regulator, incorporated in the pump flange.

The tanks are fitted, on the upper section, with ventilation valves (low vapour bleeding type). These valves are connected to a separator which collects and condenses the fuel vapours.

After passing through the filters inside the pumps, the pressurised fuel is sent to the injector rails on the intake manifolds. This is a “returnless” type system, i.e., no fuel is returned to the tank.

The system is fitted with an automatic safety inertia switch positioned in the passenger compartment, which, in the event of a collision, deactivates the fuel pump relays.

The system is designed to prevent atmospheric pollution caused by fuel system evaporation.

The fuel vapours coming from the tank are conveyed to the active carbon filter where they are absorbed and retained.

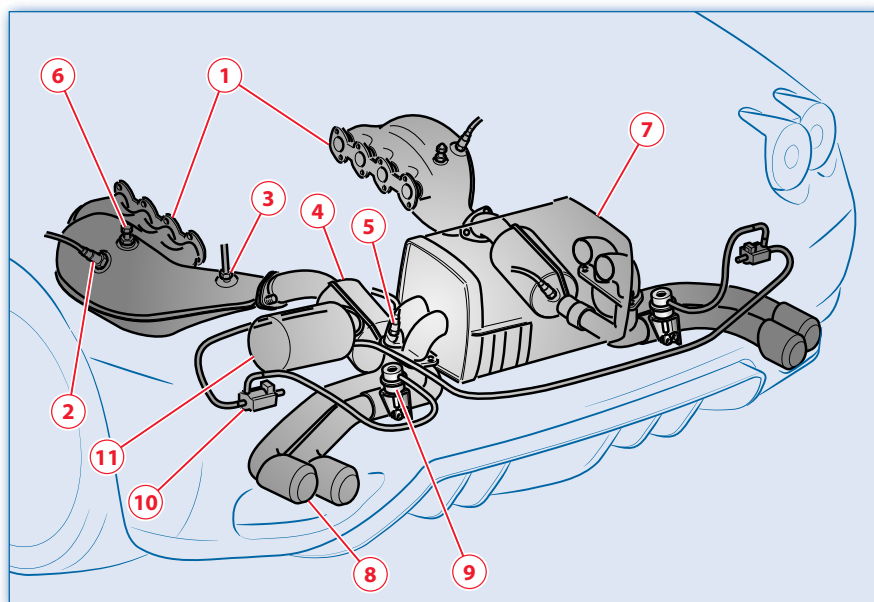
With the engine running and depending on the driving conditions, the Motronic ECUs control the canister purge solenoid valves so that the fuel vapours retained by the carbon filter are drawn in by the intake manifolds through the specific lines.

Ambient air is taken into the active carbon filter through a pipe equipped with a filter that prevents foreign particles from entering the system.

The filler neck is sized in order to allow only unleaded fuel filler nozzles to be inserted.

Exhaust system

- ① Exhaust manifold
- ② Front oxygen sensor
- ③ Thermocouple
- ④ Catalytic converter
- ⑤ Rear oxygen sensor
- ⑥ CO sampling port cap
- ⑦ Muffler
- ⑧ Exhaust tips
- ⑨ Exhaust by-pass pneumatic valve
- ⑩ Exhaust by-pass solenoid valve
- ⑪ Vacuum tank



6 - Technical Information


Metallic-type catalytic converters are utilised on this vehicle.

The system is made up of two pre-catalytic converters and two main catalytic converters.

The catalytic converters reduce the emission of HC, CO and NOx into the atmosphere.

Each exhaust manifold contains a pre-catalytic converter which, thanks to its proximity to the gas outlet from the combustion chamber, assures faster heating and greater efficiency in exhaust emission reduction during the phases immediately following engine start-up.

The front oxygen sensor and the thermocouple are installed on the manifolds, one at the inlet and one at the outlet of the pre-catalytic converter. The rear oxygen sensor is installed at the outlet of the main catalytic converter.

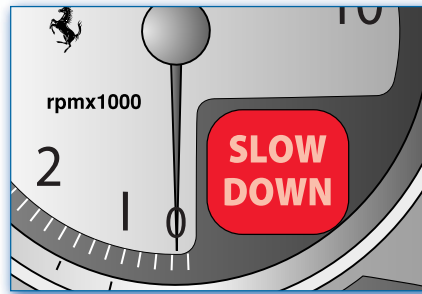
 To prevent serious damage to the catalytic converters, it is essential that only unleaded fuel be used.

Do not park the vehicle over paper, dry grass or leaves, or flammable materials that could catch fire if they come into contact with hot parts of the exhaust system.

Exhaust system overheating alarm devices

If the engine malfunctions with consequent high temperature in the exhaust system, the red warning light on the multi-function display, showing the words **SLOW DOWN** will flash or stay on fixed.

The **SLOW DOWN** symbol activation is controlled by the thermocouple via the Motronic ECU.



If the warning light flashes,
the catalytic converter temperature is too high.
Slow down immediately and go to a workshop to have the malfunction corrected.

If the warning light remains on,
the temperature in the catalytic converters has reached a dangerous level and could damage them. If driving is continued, the injection-ignition system ECU will intervene by cutting off the fuel supply to the injectors.


Stop the vehicle and have it towed to a workshop to have the malfunction repaired.

FERRARI is not liable for any damage to property or personal injury arising from failure to comply with the warnings stated above.

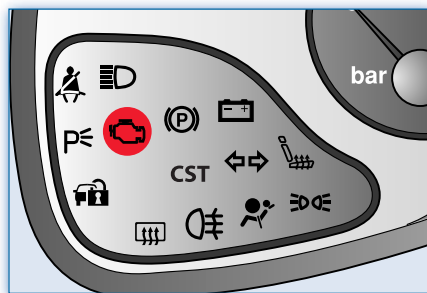
Engine malfunction alarm devices

If the warning light “Engine check system failure” flashes or remains on fixed while the engine is running, it indicates that the engine or the emission control system may be malfunctioning.

The electronic system detects and isolates the error; preventing damage to the engine or the production of noxious emissions.

 When the warning light “Engine check system failure” comes on, engine performance may also considerably be reduced.

Drive carefully, avoiding sudden acceleration and high speeds.

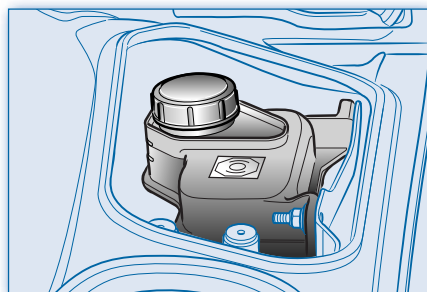


Clutch

The clutch is of the dry double-plate type, with elastic hub and diaphragm spring; its disengagement is controlled by a self-adjusting hydraulic thrust bearing.

Clutch fluid tank

The tank is positioned in the front compartment and is shared with the braking system in the mechanical gearbox version.



Gearbox

The gearbox has 6 synchronised gears plus reverse gear.

The gears are quick-coupling, with reduced stroke.

The synchronisers are of the double and triple cone type.

The gearbox also contains the bevel gear pair and the electronic differential.

Electronic differential (E-DIFF)

The vehicle is equipped with an electronic differential, which works on the rear axle and continually runs a variable check on the locking between the two axle shafts.

The electronic differential system enhances:

- performance
- directional stability of the vehicle
- active safety even at the limit of grip
- driving comfort and handling.

Operation is based on the analysis and forecast of the vehicle performance in all possible conditions. This is done by continually monitoring the pressure of the clutch actuator on the differential.

The input signals are the dynamic parameters of the vehicle, which the control system translates into a torque difference between the two driving wheels.

6 - Technical Information

On a bend, the electronic differential:

- stabilises the vehicle when the accelerator pedal is released, locking the rear axle
- eliminates typical understeering conditions, producing slight oversteering at the grip limit, locking the differential in proportion to the lateral acceleration and the vehicle speed;
- maximises stability and, at the same time, acceleration in a bend, locking the differential in proportion to the lateral acceleration, the speed, the gear engaged and the torque delivered by the engine.

To achieve these results, the electronic differential system interacts with the engine control, F1 gearbox, CST, ABS and shock absorber damping control system.

Alarm devices in the event of electronic differential failure

Any malfunctioning of the electronic differential is shown on the multi-function display of the instrument panel (see [page 34-35](#)).

Gearbox control

There are two types of gearbox control:

- manually-controlled gearbox with lever, selector, gearbox lever housing and Bowden transmission cables
- electronically-controlled F1 gearbox, which uses an electro-hydraulic system controlled by two levers on either side of the steering wheel. These levers substitute the traditional gearshift lever and clutch pedal.

Compared with the manually-controlled gearbox, the electronically-controlled system offers the following advantages as far as gearbox and clutch are concerned:

- faster upshifting and downshifting
- possibility of shifting to the desired gear without taking your hands off the steering wheel
- greater comfort because of elimination of the clutch pedal
- greater safety, as possible driver errors are prevented
- protection against engine overrevving caused by incorrect gearshifting.

Gearbox and differential lubrication

The gearbox and the differential gearings are lubricated by a volumetric concentric gear pump driven by the auxiliary reverse gear.

Gearbox oil cooling circuit

The temperature of the gearbox oil/differential is regulated by an oil/water heat exchanger, located on the engine crankcase, between the banks.

Checking and changing the gearbox/differential oil

The gearbox/differential oil must be checked and changed at the intervals indicated in the "Maintenance Schedule" by an **AUTHORISED FERRARI SERVICE CENTRE**.

Driving and steering

- ① Steering box
- ② Collapsible Cardan transmission
- ③ Steering column with steering angle sensor
- ④ Adjustable steering wheel
- ⑤ Hydraulic steering pump
- ⑥ Oil tank
- ⑦ Steering box delivery pipe
- ⑧ Steering box return pipe
- ⑨ Cooling coil

The vehicle is equipped with electronically-controlled rack-and-pinion type hydraulic steering, which is servo-assisted by a variable-calibration hydraulic circuit. As the speed increases, the aerodynamic load on the vehicle and the pump calibration generate a constant steering load with a sensation of mechanical steering. If steering sharply, this ensures perfect accuracy and handling.

The steering column is articulated, height-adjustable and power-absorbing, with permanently-lubricated joints. The sensor that communicates the steering wheel position to the various onboard systems is positioned on the steering column.

The hydraulic steering system is composed of a belt-driven pump which drives the auxiliary parts of the engine. The fluid flowing from the steering box crosses a coil

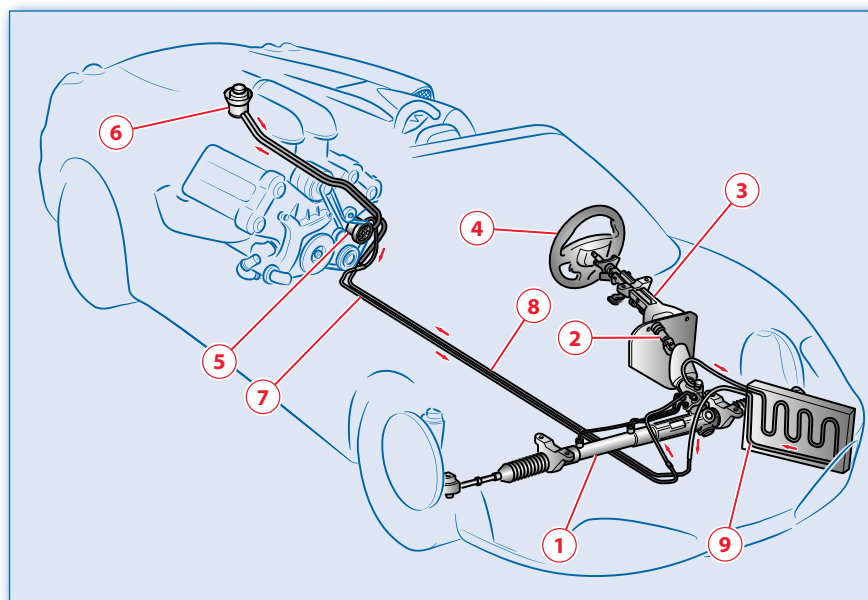
fitted on the front of the left-hand water radiator which cools the fluid before it is returned to the tank.

In the event of a system failure, the vehicle can still be steered even if greater force is required to turn the steering wheel. In this case, it is advisable to stop the vehicle and contact an **AUTHORISED FERRARI SERVICE CENTRE**.

When the engine is off or if the vehicle is towed, it is harder to steer.

Main data

- Lock-to-lock steering wheel turns: 3
- Steering diameter: 10.8 m



6 - Technical Information

Air conditioning/heating system

- ① Compressor
- ② Condenser
- ③ Dehydrator filter
- ④ Pressure switch
- ⑤ Expansion valve
- ⑥ Heater/evaporator
- ⑦ Proportional valve
- ⑧ Water recirculation pump
- ⑨ Freon draining/refilling unions

The air conditioning and heating system is composed of a heater/evaporator driven by a microprocessor-controlled ECU which, in both automatic and manual mode, keeps the temperature in the passenger compartment constant as the ambient conditions change, regulating the air temperature, flow rate and distribution. It also allows the flow of air from the outside or recirculating the air inside the vehicle automatically, regardless of the ambient conditions.

Heater/evaporator

This unit is secured to the partition panel between the passenger compartment and the luggage compartment and it contains the heater and the evaporator in one single assembly. This system allows the user to:

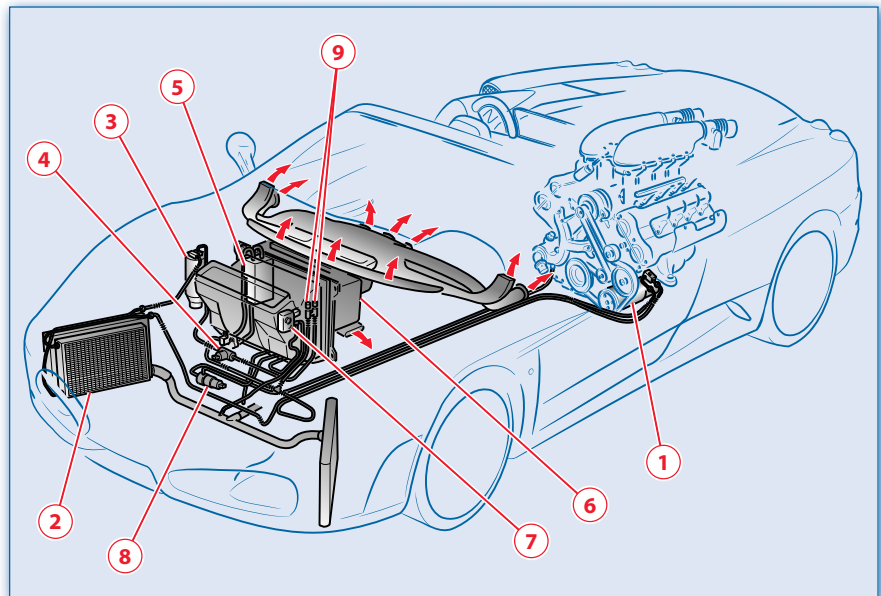
- heat outside or inside air

- cool outside or inside air
- dehumidify and, if desired, heat outside or inside air
- defrost glass surfaces.

Air drawn in from the outside enters the heater/evaporator unit through a pollen filter.

Replace the pollen filter of the A.C. system at the intervals indicated in the "Maintenance Schedule".

The air that comes out of the evaporator flows to a diffuser which distributes it to the vents in the passenger compartment.



CST system

CST is FERRARI's acronym for Stability and Traction Control. The CST is composed of two main systems:

VDC Vehicle Dynamics Control, through the braking system;

ASR Vehicle Dynamics Control, through the engine torque;

as well as the always active secondary systems such as ABS, EBD, etc.

In order to have optimal control in different driving and grip conditions, four different setting levels have been designed.

Level 1: ensures stability and maximum traction on any type of roadway, both in low-grip ("Low Grip" position) and in very low grip (ICE position) conditions, by means of the engine and brake control.

Level 2: ensures stability and maximum traction only in medium- to high-grip conditions (SPORT position), optimising engine and brake control.

Level 3: enhances the racing features of the vehicle, ensuring (but not in all conditions) a good level of stability (RACE position) by reducing engine control to a minimum and making best use of the brake control.

Level 4: CST off (position ~~CST~~)

Stability is not ensured, however, all the other auxiliary systems, such as the EBD and ABS, that are always enabled in the other positions, remain active (see [page 133](#)).

The driver will easily perceive enhanced driving comfort (engine load limiting and torque feedback), driving will be extremely smooth, without jerks which could be annoying and prevent the driver from fully appreciating the potential of the vehicle. Moreover, the several settings available (depending on the level of grip) allow driving at higher speeds, stability and easy control, in any condition.

Braking system

The hydraulically-controlled braking system is composed of ventilated disc brakes on the four wheels, a "tandem" vacuum brake servo and a hydraulic control unit fitted with solenoid valves and scavenge pump, which intervenes, if the wheels lock, by adjusting the caliper pressure (ABS).

The hydraulic circuits have crossed branching and are independent for the front and rear brakes. If one of the circuits is faulty, emergency braking is always possible with one circuit efficient.

The vacuum brake servo supplies the hydraulic ECU with brake fluid at the pressure required for system operation.

In the case of ABS activation, the solenoid valves in the hydraulic ECU will activate, with suitable adjusting cycles, in order to prevent the wheels from locking.

Brake fluid tank

Positioned in the front compartment, it is shared with the clutch system in vehicles with mechanical gearbox.

Free play of the brake pedal

The maximum free play of the brake pedal should be 8÷10 mm.

If it becomes excessive, or if one wheel brakes more than the others, or if the pedal feels spongy with reduced braking efficiency, a complete inspection of the

6 - Technical Information

system should be performed by the **FERRARI SERVICE NETWORK**.

Brake pads

The brake pads are fitted with a wear indicator that is connected to the brake warning light. When this warning light comes on or, in any case, whenever braking no longer appears to be regular, the pad thickness and the condition of the braking surfaces must be checked.

The minimum thickness allowed for the pads is 3 mm (thickness of the friction material only).

The brake failure warning light will come on to indicate excessive wear of the brake pads, which must be replaced immediately.



If you have the brake pads replaced at an unauthorised workshop FERRARI is relieved of all responsibility for damage caused to persons or things.

In order to allow the pads to bed in following replacement, avoid sudden and sharp braking until they have fully adapted (after about 300 km).

ABS and EBD systems

The vehicle is equipped with ABS (Anti-Lock Braking System) and EBD (Electronic Brake-Force Distribution) systems which, by means of the ECU and the ABS sensors, enhance the performance of the braking system.

In the event of an emergency stop or braking on slippery surfaces (e.g., where there is snow, ice, etc.), the ABS together with the conventional braking system allow applying the maximum braking force without the wheels locking and consequently losing control of the vehicle.

The system is based on an electronic control unit that processes the signals coming from 4 sensors integrated in the circuits of the 4 wheels.

When a wheel tends to lock, the sensor warns the ECU which, in its turn, signals to the electro-hydraulic unit to intervene and modulate the pressure on the brake calipers. The driver will perceive a 'pulsing' sensation coming from the brake pedal, which is normal.

In the event of a failure, the system will be deactivated, but this will not affect the efficiency of the conventional braking system.

The failure is indicated by the relative warning light on the instrument panel coming on. In this case it is advisable to contact the nearest workshop of the

FERRARI SERVICE NETWORK who will immediately identify the fault thanks to the self-diagnostic function with which the system is equipped.

The system performance in terms of active safety must not allow the driver to take unnecessary and unjustified risks.

The driving style shall always be suited to weather conditions, range of visibility and road traffic conditions.

The maximum deceleration obtainable is however always dependent on the tyre grip on the road. Obviously, when there is snow or ice on the road, grip is greatly reduced and therefore the braking distance is greater even if the ABS system is active.

The vehicles must be fitted with wheel rims, tyres and brake lining of the type and make approved for this model by the Manufacturer.

Although this device greatly contributes to the vehicle's safety, it is still essential to drive with particular care when the road is wet or there is snow or ice.

The vehicle is equipped with an EBD (Electronic Brake-force Distribution) system.

If the warning light comes on when the engine is running, it indicates a malfunction of the EBD system. In this case, sharp braking could lead to the rear wheels locking too early and the vehicle may skid.

Driving extremely carefully, immediately go to the nearest workshop of the **FERRARI SERVICE NETWORK** to have the system checked.

If only the failure warning light comes on when the engine is running, it normally indicates a malfunction of the ABS system only. In this case, the braking system maintains its efficiency, but the anti-locking device cannot be used.

In these conditions the EBD system may also function less efficiently. Also in this case, immediately go to the nearest workshop of the **FERRARI SERVICE NETWORK** to have the system checked, driving in such a way as to avoid sudden braking.

If the brake fluid warning light comes on, immediately stop the vehicle and check the brake fluid level (see [page 112](#)): if the level is below the minimum level, top up with the specified fluid and immediately contact the **FERRARI SERVICE NETWORK** to have the system checked.

In fact, any fluid leaks from the hydraulic system will jeopardise functioning of both the conventional and the ABS braking systems.

The system's performance, in terms of active safety, must not allow the driver to take unnecessary and unjustified risks.

The driving style shall always be suited to weather conditions, range of visibility and

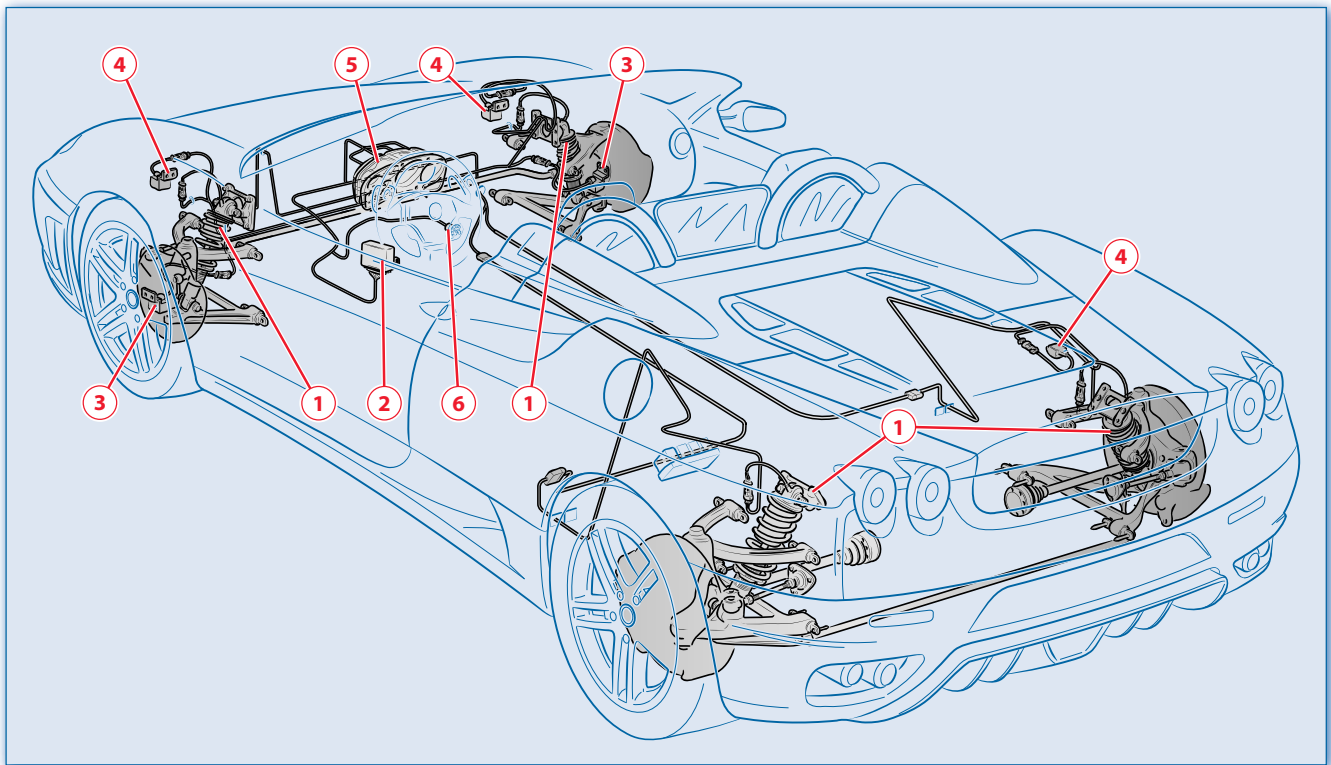
road traffic conditions.

The maximum deceleration obtainable is however always dependent on the tyre grip on the road. Obviously, when there is snow or ice on the road, grip is greatly reduced and therefore the braking distance is greater even if the ABS system is active.

6 - Technical Information

Suspensions

- ① Shock absorbers
- ② Electronic control unit
- ③ Wheel acceleration sensor
- ④ Vertical acceleration sensor
- ⑤ Failure warning light on instrument panel
- ⑥ Driving mode switch



Independent wheels, with upper and lower triangular wishbones.

Double-acting telescopic hydraulic shock absorbers with electronically-controlled calibration variation.

Small kingpin offset to improve braking stability and reduce kickback on the steering wheel to a minimum.

Anti-dive configuration, the upper arm being tilted to reduce front pitching when braking.

Transverse stabiliser bars.

A maintenance-free, one-piece double-row ball bearing is fitted on the wheel hub.

The features of the system with which the vehicle is equipped are varied hydraulically and electronically during use depending on the driving and load conditions.

Electronically-controlled active suspension with continuous damping through the “Skyhook” system.

The suspensions use the “Skyhook” system developed by Mannesmann-Sachs and perfected by FERRARI for continuous automatic damping control via acceleration sensors which record the movements of each wheel and the vehicle body.

Not only does this system always ensure the best compromise between handling and comfort, but it can also slightly enhance other aspects by using specific settings. Three different setting levels are available on this vehicle.

Level 1: slightly more flexible setting, optimised to best absorb road unevenness and ensure better grip on wet road surfaces (ICE and “Low Grip” position).

Level 2: slightly stiffer setting, optimised for racing-style and high-speed driving (in medium- to high-grip conditions) without reducing comfort dramatically (SPORT position).

Level 3: even stiffer setting, optimised for driving on the race track (RACE and ~~SPORT~~ position).

A sensor fitted on the steering column detects the position of the steering wheel (see [page 130](#)).

By processing the sensor output data, the ECU interprets the driving and road conditions and instantly adjusts the shock absorber calibration, ten times faster than any system on the market today.

The system is controlled by an ECU which manages the solenoid valves on each shock absorber in response to the sensor signals, thus adjusting the suspension damping and setting.

These sensors allow the ECU to calculate the vehicle speed, vertical and lateral acceleration, steering angle and instantaneous pressure in the braking system, and therefore to control suspension damping.

Failure indicator on the multi-function display

Every time a system malfunction is detected, the relevant warning light illuminates on the multi-function display on the instrument panel (see [page 34](#)).

If the failure involves a valve, conditions may arise in which one or two of the four shock absorbers may have a fixed calibration (valve locked).

In any case, safe driving of the vehicle is always ensured.

The malfunction detected is stored by the ECU.

The system is (exclusively) designed for connection to the FERRARI SD-3 diagnostic tester, by means of which it is possible to run a diagnostics cycle on the system.

If malfunctioning occurs when the vehicle is being used with consequent activation of the relative warning light, it is best to:

- stop the vehicle
- turn the ignition key to position 0
- restart the engine.

If the malfunction is no longer present (e.g. false contact), the warning light will not come on again and the system will resume normal functioning; otherwise, the system will continue to indicate a malfunction.

In this case, contact the **FERRARI SERVICE NETWORK**.

6 - Technical Information

Tyre pressure monitoring system (optional)

The vehicle can come equipped with a system that monitors the tyre pressure by means of special sensors fitted inside the wheel rims, in position with the inflation valve.

These sensors transmit a signal that is detected by the antennas fitted behind the gravel guards and connected to the ECU.

The system can momentarily experience radio-electric interference emitted by devices using similar frequencies.

The ECU processes this information and, via the CAN line, transmits a series of tyre pressure data and any system errors to the on-board instrument panel.

The signal transmitted by the ECU activates some symbols on the multi-function display with two priority levels: a soft warning, if the pressure decrease with respect to the rated pressure is greater than 0.2 bar, and a hard warning, if it is greater than 0.4 bar or if there is a dynamic decrease over 2.9 psi/min.

The system is equipped with a specific wiring that connects the antennas, the ECU and the calibration button (positioned under the dashboard, on the left-hand side of the steering wheel) to the vehicle electric system.

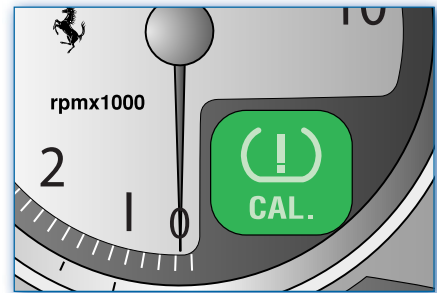
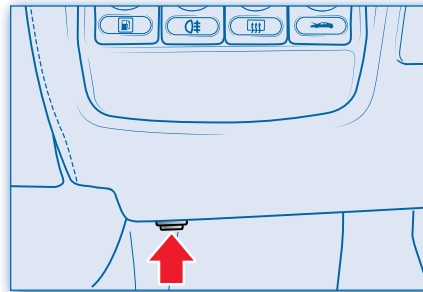
Tyre pressure calibration button

To calibrate the system, with the ignition key in position **II**, press the button located on the left, lower part of the dashboard, holding it for 4-10 seconds: the symbol **CAL** will appear on the multi-function display.

The system will take a maximum of 20 minutes to complete the setting procedure with the vehicle in motion.

If the difference in pressure between the wheels on the same axle exceeds 0.4 bar, the system will not calibrate.

If the system detects a pressure drop during calibration, the relevant symbol will appear on the multi-function display (see [page 138](#)).



The system must be calibrated using the button on the dashboard after tyre replacement or inflation.

⚠ The system warns the driver that there is a drop in tyre pressure, however, this does not exempt the driver from periodically checking that the tyres are inflated to the specified pressure (see [label on page 10](#)).

Moreover, the system does not inform the driver about damage to the tyres caused by external agents.

Messages on the multi-function display

The symbol colour defines the priority:

Green: normal conditions of use

Red: when a fault has been detected

Amber: when the driver is requested to check the system.

The following symbols will appear to identify each wheel, the 'solid' square indicating the tyre involved:

- **FL** front left-hand wheel
- **RL** rear left-hand wheel
- **RR** rear right-hand wheel
- **FR** front right-hand wheel

Pressure indication for each tyre



It can be activated by pressing the button **MODE** (see page 39) to view the pressure of each tyre.

If requested when the data is not available, (e.g., during the calibration procedure) the symbols will be shown with **---** instead of the value.

Tyre pressure check request without indication of the wheel



Activated for a few seconds after the engine has started. It indicates a drop in pressure with respect to the last value stored.

The system ignores which tyre is involved since it has not yet identified the position. Check the pressure of all the tyres.

Tyre pressure check request



Activated for a few seconds after the engine has started, but unlike before, the system indicates which wheel is signalling the fault.

Check the pressure of the tyre indicated.

Puncture without wheel indication



Activated when a puncture occurs, ignoring the tyre involved since the system is not yet calibrated. It remains on until the ignition key is turned to position 0.

Follow the instructions in the section "Replacing the wheels" on page 94, when only one tyre has a puncture.

Puncture with wheel indication



Activated when a puncture occurs, indicating the tyre involved. It remains on until the ignition key is turned to position 0.

Follow the instructions in the section "Replacing the wheels" on page 94, when only one tyre has a puncture.

System calibration request



Activated for a few seconds after turning the ignition key to position II to signal that the system is not calibrated.

Adjust the tyre pressure and calibrate the system (see page 137).

Confirming the calibration procedure



With the ignition key in position II (without starting the engine) the warning light comes on after pressing the calibration button for about 5 seconds.

The warning light goes off when the engine has started.

During calibration, the tyre condition may be displayed partially (pressure not shown) even if the system has already learned the position from the sensors.

System faulty



The system does not respond or is defective.



Have the system repaired by an AUTHORISED FERRARI SERVICE CENTRE.

6 - Technical Information

System temporarily not active



Appears when the system is temporarily unable to function.

This may occur because of external electromagnetic interference or excessive sensor temperature.

The system automatically resets once the normal conditions are restored.

The message appears in the event of system components replacement.

System not active



If the system has been deactivated via the diagnostic tester.

After turning the ignition key to position **II**, the warning light remains on for about 50 seconds and then goes off.

Chassis - Bodywork

In order to reduce the weight of the vehicle, the entire bodywork is made of aluminium parts.

Despite the considerable weight reduction, higher stability and resistance can be achieved than with sheet metal.

The aluminium sub-assemblies are less prone to bending and offer excellent resistance to corrosion.

The overall bodywork structure is based on a space-frame chassis.

The body assembly is completed with external sheets (e.g. mudguards, side panels and roof) which, depending on the model, are joined to the space-frame chassis using different joining techniques.

The moving parts secured with screws, such as the luggage compartment lid, the engine compartment lid and the doors, complete the body.

Repair Instructions

In the event of damage to the aluminium parts, the repair always requires the replacement of the part. Depending on the extent of the damage, whole assemblies can be replaced or just individual parts. It is not permitted to carry out any straightening work on the aluminium bodies, as can be done with normal steel bodies, given that aluminium cannot easily be restored to its original shape.

In the space-frame section, joints are normally made by welding only.

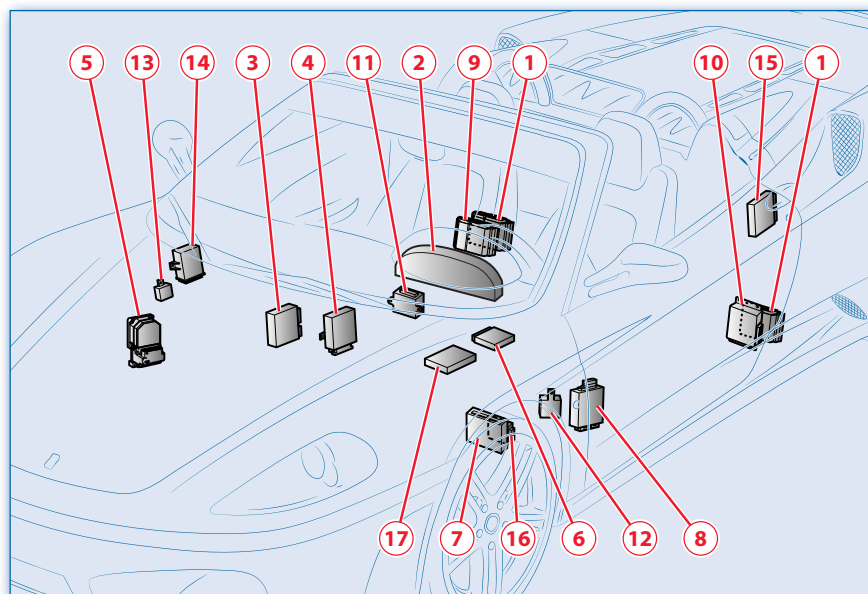
The body parts may be replaced by means of gluing, riveting, bolting and welding. The aluminium bodies cannot be straightened cold, as is the case with steel sheet bodies, but only at temperatures of approximately 200 °C.

All body repair work must be carried out exclusively by expert mechanics certified by the **FERRARI TECHNICAL SERVICE DEPARTMENT**.

Electronic control units

The figure shows the location of all the ECUs installed on the vehicle.

- ① Motronic (one per bank)
- ② Instrument panel
- ③ Air conditioning/heating system
- ④ Shock absorber calibration adjustment
- ⑤ ABS-ASR
- ⑥ Airbag
- ⑦ Alarm system
- ⑧ Power windows
- ⑨ Gearbox F1 (for vehicles with F1 gearbox)
- ⑩ Electronic differential
- ⑪ Immobilizer
- ⑫ Door locking system
- ⑬ Windscreen wipers
- ⑭ Direction and hazard lights
- ⑮ Soft top
- ⑯ Tyre pressure monitoring system (optional)
- ⑰ Bluetooth (optional)



6 - Technical Information

Electronic control units

Each system installed on the vehicle is controlled by an electronic control unit (ECU) equipped with microprocessor for high-speed processing of the data acquired from the sensors and transducers.

The features common to all the ECUs are:

Self-diagnostic functions for the relevant system

Each ECU detects functional faults in the components of the system it controls.

These faults are recorded as errors and promptly signalled to the user through the warning lights on the instrument panel.

Remote diagnostic functions

The ECUs can be connected to the “SD-3 diagnostic system”.

This is an instrument made available to the **FERRARI SERVICE NETWORK** and allows:

- finding the origin of an error recorded by the ECU and guiding the workshop technician through solving the problem
- acquiring the values of the measurements made during vehicle testing
- running an automatic test cycle of the individual systems
- analysing the data acquired by the ECUs
- deleting the errors detected while driving.

Error management

The errors are recorded in an “erasable” memory at the time of system testing and/or repair and also in a non-erasable “historical” memory, thus providing a complete picture of the faults found during the lifetime of the vehicle.

Connection to the CAN line (Controller Area Network)

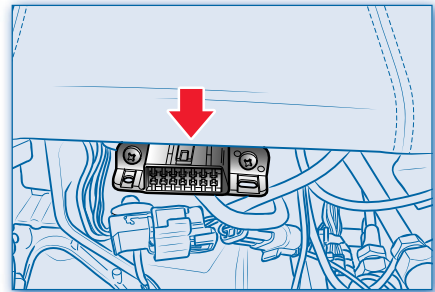
This is a communication line which allows high-speed data transfer between all the ECUs with high resistance to electrical disturbances.

This allows the ECUs to exchange data and signals, thus participating in the vehicle control strategy.

Diagnostic tester socket

The vehicle is equipped with a universal connector located under the lower dashboard covering, in position with the steering column, to connect the SD-3 diagnostic tester.

By means of this plug-in connection, the tester can interface with all the vehicle's systems and perform the diagnosis testing.



7 - Table of contents



12V power socket	46	Consumption and CO ₂ emissions	11	devices	127
Abbreviations	2	Controls on the tunnel console	43	Exterior lights and direction indicator control lever	25
ABS and EBD systems	133	Cooling system	122	External rear view mirror controls	45
Adjustable air vents	73	CST system	132	External rear-view mirror defroster button	38
Air conditioning/heating system	131	Dashboard controls	36	Filler tank door opening button	37
Air conditioning and heating system	71	Diagnostic tester socket	141	Free play of the brake pedal	132
Airbag	55	Dimensions and weights	11	Fuel cut-off inertia switch	108
Alarm system	16	Doors	46	Fuel level gauge	31
Battery	113	"DOWN" gearshift lever	25	Fuel system and fuel vapour emission control system	124
Battery charger	114	Driving and steering	130	Gear display (only for versions with F1 gearbox)	32
Battery master switch	113	Driving mode switch	22	Gearbox	128
Before a trip	76	Driving the vehicle (F1 gearbox)	78	Gearbox and differential lubrication	129
Brake fluid tank	132	Driving the vehicle (Mechanical gearbox)	82	Gearbox control	129
Brake pads	133	Duplicating the keys	17	Gearbox oil cooling circuit	129
Braking system	132	Electric system (data)	13	Gearshifting (F1 gearbox)	79
Capacities	14	Electronic accelerator	123	Glove compartment opening button	46
Car stereo system	42	Electronic alarm system	18	Hands-free microphone	61
Chassis - Bodywork	139	Electronic control units	140	Hazard light switch	44
Checking and changing the gearbox/differential oil	129	Electronic differential (E-DIFF)	128	Headlight adjustment	117
Checking the brake/clutch fluid level	112	Electronic speedometer	30	Horn control	25
Checking the coolant level	112	Electronically-controlled active suspension with continuous damping through the "Skyhook" system.	136	Identification and homologation data	8
Checking the engine oil level	111	Emergency start	17	If the vehicle is stored for long periods	118
Checking the gearbox and the F1 gearbox system oil level	111	Engine	120	Ignition switch	22
Checking the oil level in the hydraulic steering system	111	Engine compartment lid	61	Ignition-Injection System	123
Child safety	54	Engine lubrication system and gas and oil vapour recirculation	121	Instruction labels	9
Cleaning the parking sensor	84	Engine malfunction alarm devices	128	Instrument panel	29
Cleaning the vehicle	117	Engine oil pressure gauge	30	Interior rear-view mirror	50
Clutch	128	Engine oil temperature gauge	31	Internal lights	61
Clutch fluid tank	128	Exhaust system	126	Key-operated circuits	13
Consulting the manual	2	Exhaust system overheating alarm		Keys	16

7 - Table of contents

Level checks _____	111	Replacing the radio control batteries _____	20	Towing the vehicle _____	107
Light bulbs _____	100	Replacing the wheels _____	94	Transmission ratios _____	10
Load limiting devices _____	53	Requesting new keys _____	19	Turning off the engine and the system (F1 gearbox) _____	80
Location of the fuse and relay boxes _____	101	Respecting the environment _____	90	Turning on the system (F1 gearbox) _____	77
Luggage compartment lid opening button _____	38	Restarting the engine (F1 gearbox) _____	81	Tyre pressure calibration button _____	137
Main engine specifications _____	10	Revolution counter _____	30	Tyre pressure monitoring system _____	137
Maintenance _____	110	Rims and tyres (dimensions, type and inflation pressure) _____	12	"UP" gearshift lever _____	25
Maintenance of the seat belts and pretensioners _____	54	"Run Flat" tyres _____	13	Updating _____	2
Manual deactivation of the passenger-side airbag _____	57	Running-in _____	76	Warming up the engine (F1 gearbox) _____	78
Mechanical gearbox lever _____	46	Safe driving _____	85	Warming up the engine (Mechanical gearbox) _____	82
Multi-function buttons _____	39	Safety _____	51	Warning lights _____	32
Multi-function display _____	34	Seat belts _____	52	Warranty booklet _____	110
Operation with the engine off (F1 gearbox) _____	77	Seat controls _____	48	Water temperature gauge _____	31
Other system functions (F1 gearbox) _____	80	Service _____	2	Wheel balancing _____	116
Parking _____	83	Soft top _____	63	Wheels and tyres (instructions for use) _____	115
Parking brake lever _____	45	Soft top emergency closing _____	67	While driving _____	76
Parking light switch _____	44	Soft top opening/closing button _____	46	Windscreen wipers _____	115
Parking manoeuvre _____	83	Spare parts _____	3	Windscreen wipers and washer control lever _____	27
Parking sensor range _____	84	Start button _____	22		
Passenger compartment accessories _____	58	Starting and driving the vehicle (F1 gearbox) _____	77		
Performance _____	10	Starting and driving the vehicle (Mechanical gearbox) _____	82		
Power window control _____	41	Starting the engine (F1 gearbox) _____	78		
Pretensioners _____	54	Starting the engine (Mechanical gearbox) _____	82		
Push start (F1 gearbox) _____	81	Starting with the auxiliary battery _____	106		
Rear fog lights button _____	38	Steering wheel adjustment lever _____	28		
Recharging the battery _____	114	Steering wheel controls _____	21		
Replacing a bulb _____	96	Stopping the vehicle (F1 gearbox) _____	80		
Replacing a fuse _____	100	Sun radiation sensor _____	73		
Replacing the coolant _____	123	Suspensions _____	135		
Replacing the engine oil and filter _____	122	Toolkit _____	92		

F430 SPIDER

Specifications and equipment options of **FERRARI** vehicles may vary because of specific legal and commercial requirements. Information in this publication is therefore not binding in any way.

FERRARI reserves the right to make any modification to the vehicles described in this manual, at any time, for either technical or commercial reasons.

Contact the nearest Authorised Dealer or **FERRARI** for any further information you may require.

For efficiency and safety, as well as for preserving the vehicle's value, it is advisable not to modify the vehicle equipment unless you use parts of the approved type.

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