

Vespa would like to thank you

for choosing one of its products. We have prepared this manual to help you to get the very best from your vehicle. Please read it carefully before riding the vehicle for the first time. It contains information, tips and precautions for using your vehicle. It also describes features, details and devices to assure you that you have made the right choice. We believe that if you follow our suggestions, you will soon get to know your new vehicle well and that it will continue to give you satisfactory service for many years to come. This booklet forms an integral part of the vehicle; should the vehicle be sold, it must be transferred to the new owner.

Vespa Primavera S - Sprint S 125-150



The instructions given in this manual are intended to provide a clear, simple guide to using your vehicle; this booklet also details routine maintenance procedures and regular checks that should be carried out on the vehicle at an **authorised Dealer or Service Centre**. The booklet also contains instructions for simple repairs. Any operations not specifically described in this booklet require the use of special tools and/or particular technical knowledge: to carry out these operations, refer to any **authorised Dealer or Service Centres**.



Personal safety

Failure to completely observe these instructions will result in serious risk of personal injury.



Safeguarding the environment

Sections marked with this symbol indicate the correct use of the vehicle to prevent damaging the environment.



Vehicle intactness

The incomplete or non-observance of these regulations leads to the risk of serious damage to the vehicle and sometimes even the invalidity of the guarantee.

The signs that you see on this page are very important. They are used to highlight parts of the booklet that should be read with particular care. The different symbols are used to make each topic in the manual simple and quick to locate.

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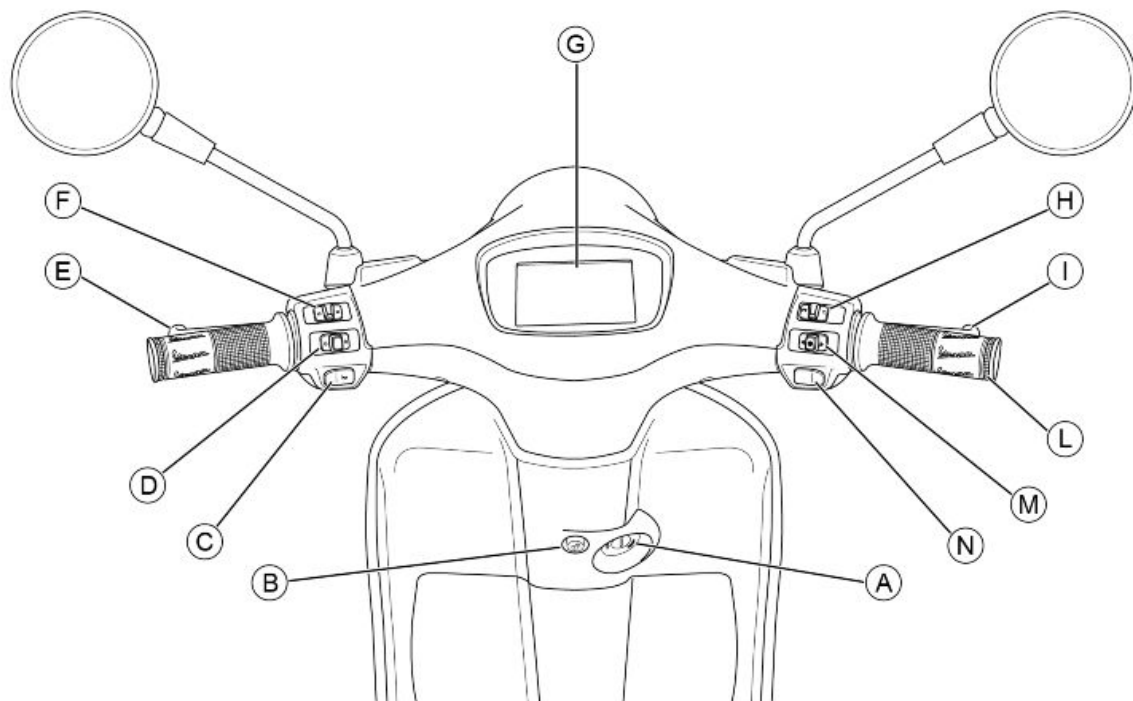
Vespa Primavera S - Sprint S

125-150



Chap. 01
Vehicle

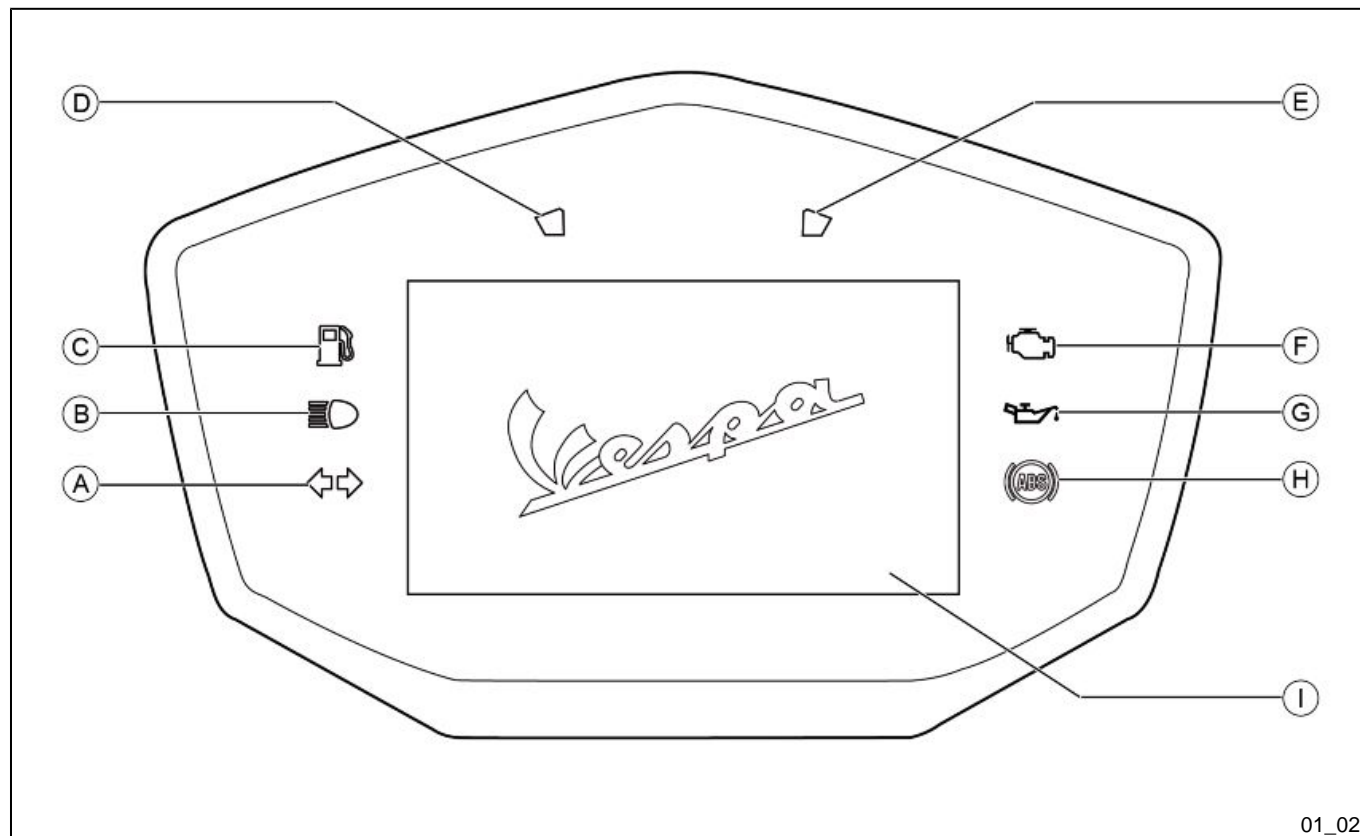
Dashboard (01_01)



01_01

- A** = Ignition switch
- B** = Saddle opening button
- C** = Horn button
- D** = Turn indicator switch
- E** = Rear brake lever
- F** = Light switches
- G** = Instrument panel
- H** = Engine stop switch
- I** = Front brake lever
- L** = Acceleration knob
- M** = MODE button
- N** = Starter button

Analogue instrument panel (01_02)



01_02

Warning and indicator lights key:

A = Turn signal indicator lamp

B = High beam headlight warning light

C = Fuel reserve warning light

D = Immobilizer LED

E = Digital display brightness sensor

F = Engine control tell-tale light

G = Low engine oil pressure warning light

H = ABS warning light

I = Digital display

**Digital lcd display (01_03, 01_04, 01_05, 01_06, 01_07, 01_08,
01_09, 01_10, 01_11, 01_12, 01_13, 01_14, 01_15, 01_16, 01_17,
01_18, 01_19, 01_20, 01_21, 01_22, 01_23, 01_24, 01_25, 01_26,
01_27, 01_28, 01_29, 01_30, 01_31)**



01_03

Key:

A = Maintenance icon

B = VMP (Vespa Multimedia Platform) icons panel

C = Clock

D = Multifunctional panel

E = Ice icon

F = Ambient temperature indicator

G = Fuel gauge

H = Speedometer

I = Battery state of charge icon

L = Graphic panel and infotainment

Turning the ignition switch to the "**ON**" position and then to the "**OFF**" position, the digital display will show a "Welcome" or a "Good bye " message.

Maintenance icon (A)

When the vehicle is started, immediately after the ignition check, if there are less than 300 km until the next scheduled service, the corresponding icon flashes for 5 seconds. Once the service mileage has been reached, the icon remains steadily on until the service is performed.





VMP (Vespa Multimedia Platform) icons panel (B)

A = Icon for the Bluetooth connection to the smartphone device.

B = Icon for the VMP (Vespa Multimedia Platform) application

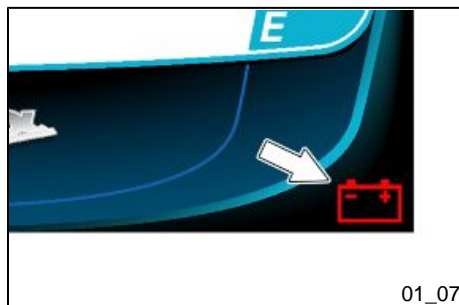
C = Icon for the audio transmission between the smartphone and the Bluetooth headset .

The above mentioned icons will light up green as soon as their specific function becomes active.



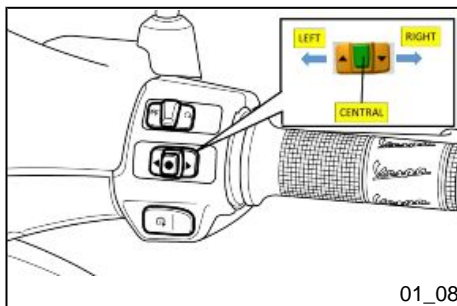
Ice icon (E)

If the ambient temperature is less than 3°C, the digital display indicates by lighting up the appropriate icon the potential presence of ice on the road. In such conditions, it is recommended to drive carefully.



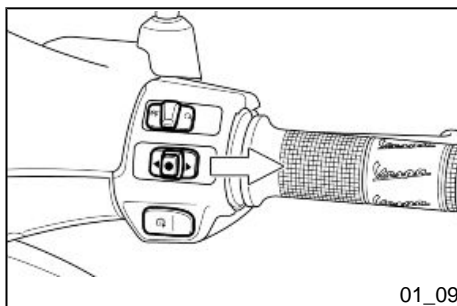
Battery state of charge icon (I)

When the battery's voltage value is close to the minimum operating value, the display indicates this anomaly by lighting up the specific icon. In these circumstances, it is recommended to recharge or replace the battery if necessary.

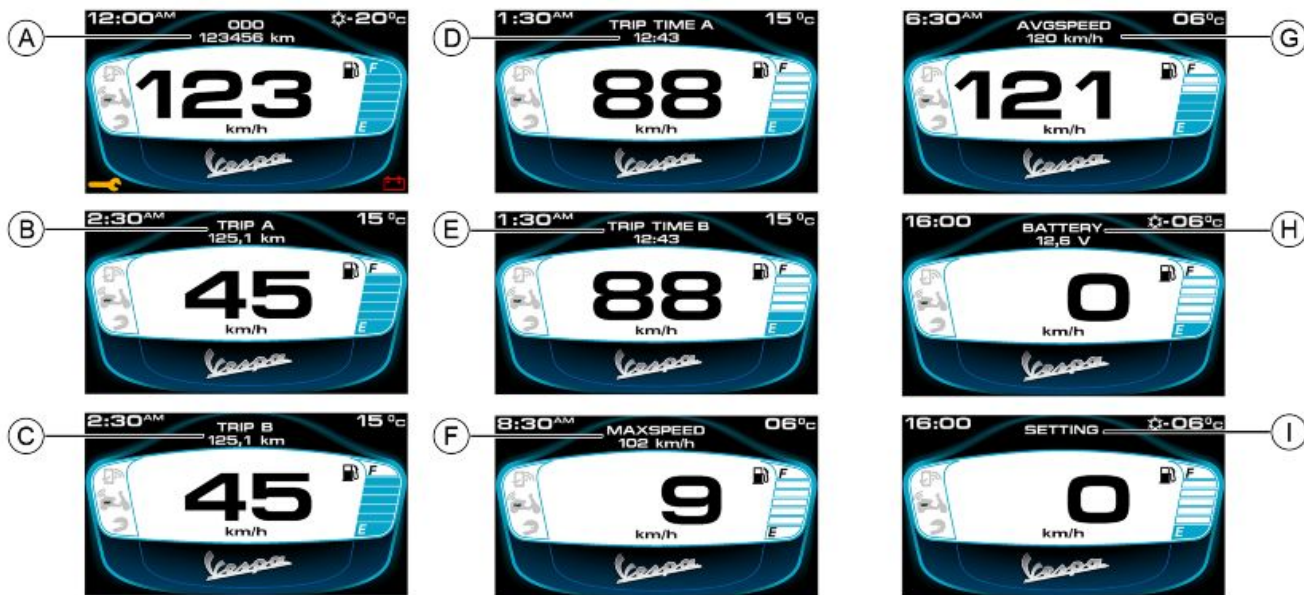


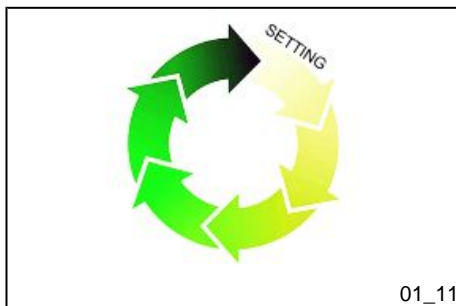
Multifunction panel (D)

The vehicle is provided with the **MODE** button, used to browse the multifunction panel.



By briefly pressing **to the RIGHT** the **MODE** button on the handlebar, this indicator can be used to sequentially display the following functions:





A = ODO (Total odometer)

B = TRIP A (partial odometer A)

C = TRIP TIME A (trip time on the A odometer) - trip time starts when the speed exceeds 5 Km/h

D = TRIP B (partial odometer B)

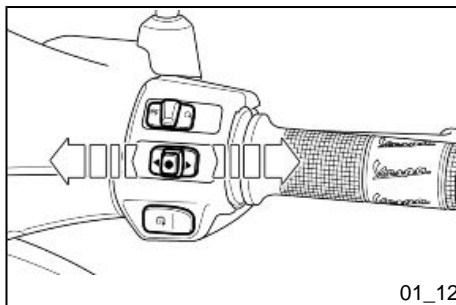
E = TRIP TIME B (trip time on the B odometer) - trip time starts when the speed exceeds 5 Km/h

F = MAX SPEED (maximum speed on the A odometer) - for speeds exceeding 5 Km/h

G = AVG SPEED (average speed on the A odometer)

H = BATTERY (battery voltmeter)

I = SETTING (settings)



By long pressing to the **RIGHT** the **MODE** button, the partial values of the following functions can be reset (while viewing the specific function):

For TRIP A (partial odometer A), the following are automatically reset:

- TRIP A (partial odometer A)
- TRIP TIME A (trip time on the A odometer);
- MAX SPEED (maximum speed on the A odometer);
- AVG SPEED (average speed on the A odometer).

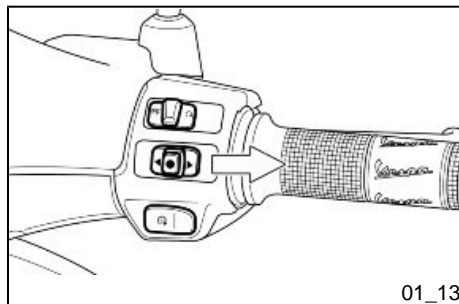
For TRIP B (partial odometer B), the following are automatically reset:

- TRIP B (partial odometer B);
- TRIP TIME B (trip time on the B odometer);

CAUTION**N.B.**

"BRIEF PRESS": PRESSING THE BUTTON FOR LESS THAN 0.5 SECONDS;

"PROLONGED PRESS": PRESSING THE BUTTON FOR MORE THAN 2 SECONDS.



01_13

SETTING function (SETTINGS)

By briefly pressing **to the RIGHT** the **MODE** button on the handlebar, scroll the functions on the multifunctional panel until the "SETTING" function is displayed.

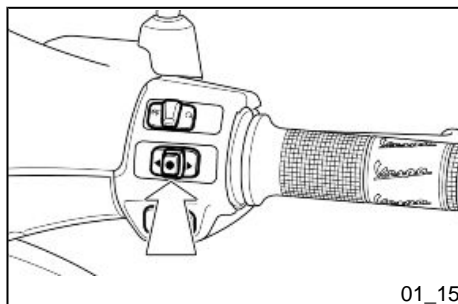


01_14

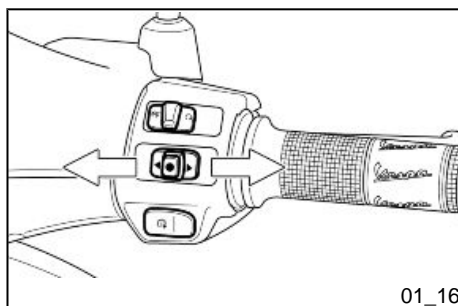
This function is used to access and eventually modify the display viewing settings.

CAUTION**WARNING**

THE SETTING FUNCTION CAN BE ACCESSED ONLY WITH THE VEHICLE AT A STANDSTILL.



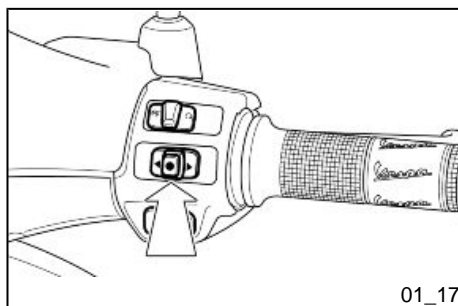
Once the "SETTING" function is displayed, by **long pressing the MODE** button to the **RIGHT**, the sub-menus can be accessed to modify the parameters, if necessary.



The following sub-menus are displayed:

- Language
- Set up
- Back lighting
- Graphics
- Exit

By briefly pressing the **MODE** button **to the RIGHT** or **to the LEFT**, you can scroll the various sub-menus of the "SETTING" function.



Once the desired sub-menu is selected, it will become green; then, by briefly pressing the **CENTRAL** part of the **MODE** button, the desired parameter can be selected:

1. "Language" menu

- Italian: ON-OFF
- English: ON-OFF
- French: ON-OFF
- German: ON-OFF
- Spanish ON-OFF
- Exit

2. "Set up" menu

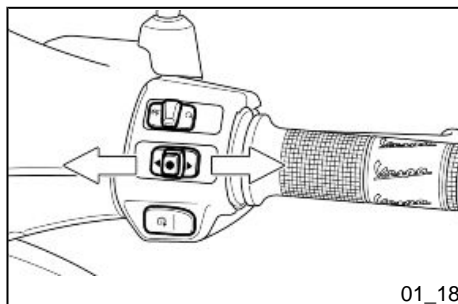
- Clock: Clock setting / 12H: ON-OFF / 24H: ON-OFF / Exit
- Units of measurement
- Speed: Km/h: ON-OFF / Mph: ON-OFF / Exit
- Temperature: °C: ON-OFF / °F: ON-OFF / Exit
- Exit
- Pairing configuration: Pairing
- Exit

3. "Back lighting" menu

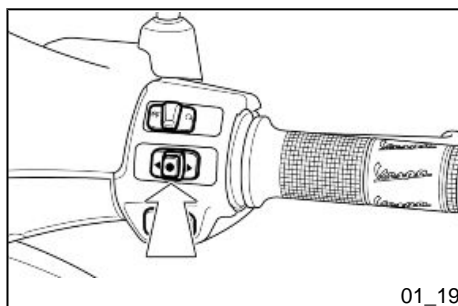
- Set: Day: Numerical value to set / Night: Numerical value to set / Exit
- Automatic: ON-OFF
- Day: ON-OFF
- Night: ON-OFF
- Exit

4. "Graphics" menu

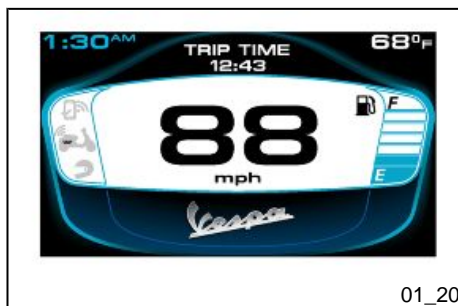
- Vespa: ON-OFF
- Vision: ON-OFF
- Pixel: ON-OFF
- Exit



By briefly pressing the **MODE** button **to the RIGHT** or **to the LEFT**, you can scroll the various sub-menus.



Once the desired sub-menu is selected, it will become green; then, by briefly pressing the **CENTRAL** part of the **MODE** button, you can access the various parameters of the desired sub-menu.



Measurement units conversion

With the "**SETTING**" function highlighted on the digital display, press and hold the MODE button to the RIGHT and enter the menus:

SET UP

- Clock
- **Measurement units (Speed, Temperature, Exit)**
- Pairing configuration
- Exit

By briefly pressing the CENTRAL part of the MODE button, select the parameter:



Speed: ON or OFF for the desired measurement unit **km/h - mph**.

Temperature: ON or OFF for the desired measurement unit in **degrees C° - F°**

Clock setting

With the **"SETTING"** function highlighted on the digital display, press and hold the MODE button to the RIGHT and enter the menus:

SET UP

- **Clock (Hour setting, 12h , 24h)**
- Units of measurement
- Pairing configuration
- Exit

Scroll with the RIGHT or LEFT part of the MODE button and select the desired parameter by briefly pressing the CENTRAL part of the MODE button:

- **Hour setting (hour, minutes, exit)**
- **12 h**
- **24 h**
- **Exit**

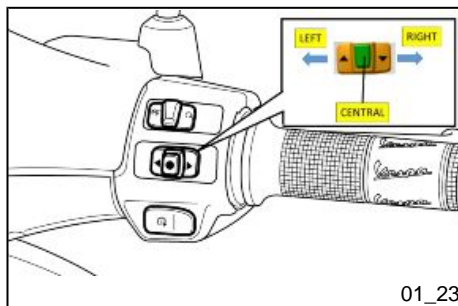


INFOTAINMENT SYSTEM - VMP (Vespa Multimedia Platform)

The vehicle is provided with a VMP (Vespa Multimedia Platform) control unit that communicates through Bluetooth with the connected smartphone to provide the infotainment functionalities and with the specific application installed on the smartphone to exchange vehicle data.

Once the correct connection is established between the control unit and the smartphone device, the following functions can be directly managed from the vehicle's digital display:

- call management;
- music management;
- SMS notifications management.



01_23

Pairing configuration

Turn the ignition key until the digital display is activated.

With the **"SETTING"** function highlighted, press and hold the MODE button to the RIGHT and enter the menus:

SET UP

- Clock (Hour setting, 12h , 24h)
- Units of measurement
- **Pairing configuration (pairing)**
- Exit

In the **"Pairing configuration"** menu, **press the central part of the MODE button** and **press gain on "Pairing"**; the vehicle's display will show a **"Pairing activated"** message and in the smartphone the **"BT-ROUTER"** device will be visible.

PAIRING SMARTPHONE: select BT-ROUTER and then type the numerical code: 0000; press "pair" and the vehicle's display will show the "Pairing finished" message.

Bluetooth HEADSET PAIRING: start the VMP APP, put the headset in "Pairing" mode, according to the specific instructions and after the headset is displayed on the smartphone, press "pair".

At this point, all the VMP APP functions are available for use: listening to music and receiving phone calls; they will be visible with various messages on the vehicle's digital display.



01_24

As soon as the smartphone's Bluetooth connection becomes active, the specific icon on the display will light up green.

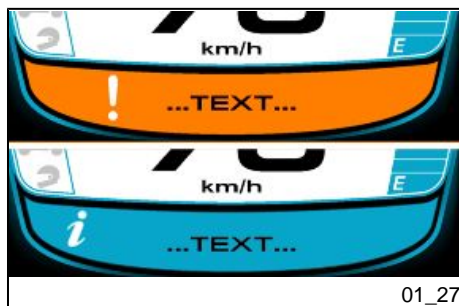


In this status, activating the specific VMP application that was previously installed on the smartphone, the vehicle and trip related information will be available; the specific icon on the display will light up green.



If the VMP application cannot be activated, the following information will appear on the display:

- VMP function error, contact an **Authorised Service Centre**.



- Connection with the smartphone device is NOT active.

N.B.



THE COMMANDS OF THE MODE BUTTON ARE IGNORED IF THERE IS A POP-UP ON THE DISPLAY.

TO RESTORE THE STANDARD USE OF THE MODE BUTTON, YOU HAVE TO REMOVE FIRST THE POP-UP FROM THE DISPLAY.

N.B.

THE FOLLOWING ARE DEFINED WHEN NAVIGATING THE DISPLAY:

- «BRIEF PRESS»: PRESSING THE BUTTON INDICATED FOR LESS THAN HALF A SECOND;
- «PROLONGED PRESS»: PRESSING THE BUTTON INDICATED FOR MORE THAN THREE SECONDS.

CALL MANAGEMENT AND SMS MESSAGE RECEIPT

CAUTION

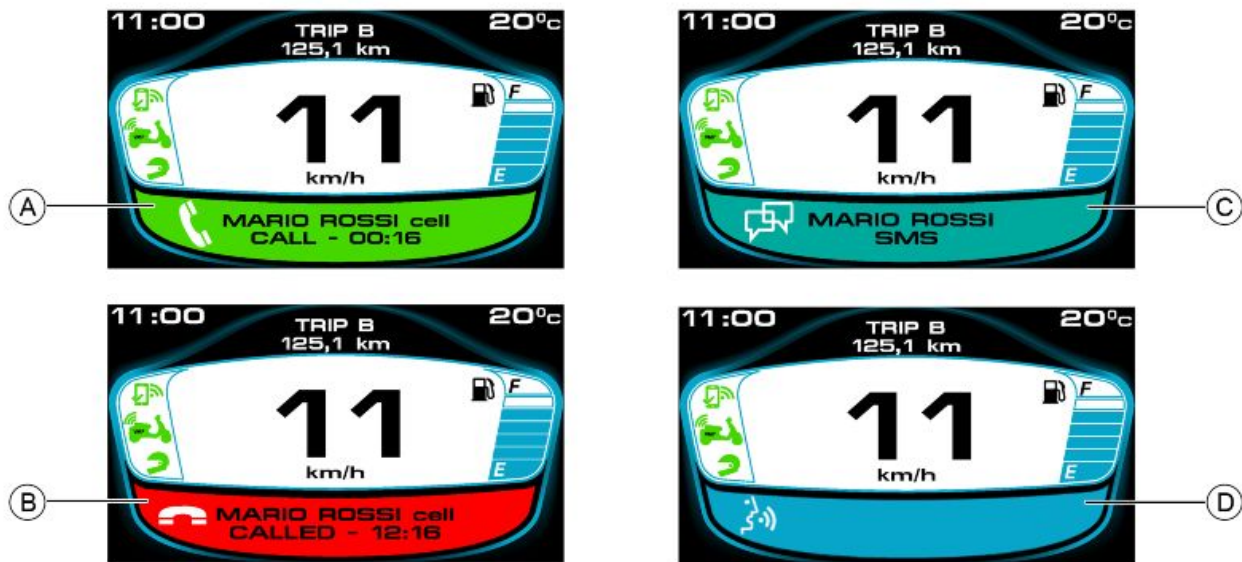
N.B.



WHEN A SMARTPHONE IS CONNECTED TO THE VMP SYSTEM (BT-ROUTER), THE AUDIO FUNCTION IS AUTOMATICALLY DIVERTED TO THE LATTER.

IF THERE IS NO HEADSET CONNECTED AT THE SAME TIME TO THE VMP SYSTEM, YOU WILL NOT BE ABLE TO MANAGE THE AUDIO FUNCTION OF THE PHONE CALLS OR TO LISTEN TO MUSIC.

IF THERE IS NO HEADSET CONNECTED TO THE VMP SYSTEM, YOU WILL NEED TO MANUALLY CHANGE THE AUDIO INPUT AND OUTPUT OF THE MOBILE TELEPHONE TO DIRECT THEM TO THE DESIRED DEVICE (E.G. THE SPEAKER OR MICROPHONE OF THE MOBILE TELEPHONE).



01_28

Key:

A = Incoming call

B = Finished or rejected call

C = SMS message receipt

D = Vocal command running



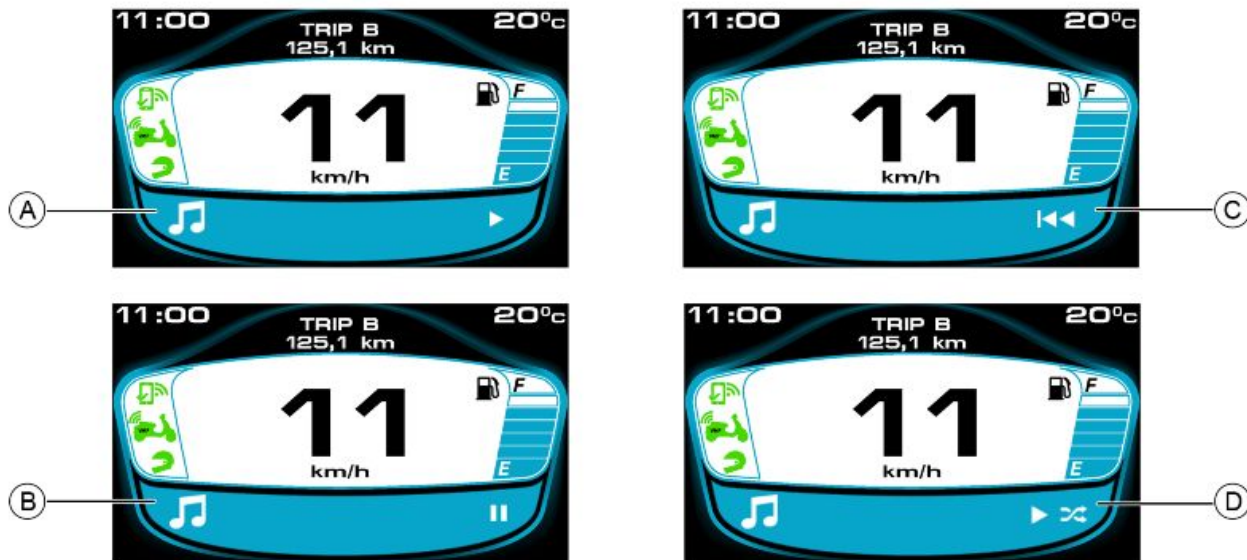
To use the calls function, it is necessary to connect the headset to the smartphone device; when it becomes functional, the specific icon on the display will light up green.

The following are the call management functions of the **MODE** button:

MODE BUTTON CALL MANAGEMENT FUNCTION

Accept an incoming call	BRIEF CENTRAL DEPRESSION
Close an active call	PROLONGED CENTRAL DEPRESSION
Reject an incoming call	PROLONGED CENTRAL DEPRESSION
Interrupt an outgoing call	PROLONGED CENTRAL DEPRESSION

Remove the last missed call pop-up (WITHOUT an ongoing call)	BRIEF CENTRAL DEPRESSION
Reselect the last missed call (WITHOUT an ongoing call)	PROLONGED CENTRAL DEPRESSION
Increase the volume (during a call)	BRIEF DEPRESSION TO THE RIGHT
Decrease the volume (during a call)	BRIEF DEPRESSION TO THE LEFT
Enable/disable the vocal command	LONG DEPRESSION TO THE LEFT



01_30

MUSIC MANAGEMENT

Key:

A = Music playback

B = Pause track

C = Scroll track

D = Random music playback



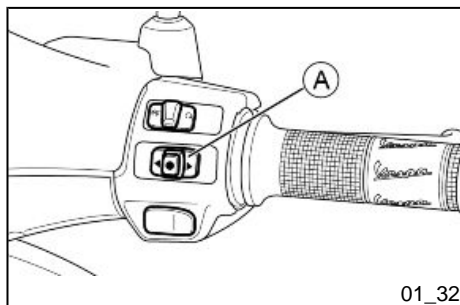
To manage the music function, it is necessary to connect the headset to the smart-phone device; when it becomes functional, the specific icon on the display will light up green.

The following are the track management functions of the **MODE** button:

MODE BUTTON MUSIC MANAGEMENT FUNCTION

Music playback	BRIEF CENTRAL DEPRESSION
Increase the music volume (while listening to music)	BRIEF DEPRESSION TO THE RIGHT
Decrease the music volume (while listening to music)	BRIEF DEPRESSION TO THE LEFT

Next track	LONG DEPRESSION TO THE RIGHT
Previous track	LONG DEPRESSION TO THE LEFT
Music playback / pause / random playback	BRIEF CENTRAL DEPRESSION
Exit music	BRIEF CENTRAL DEPRESSION



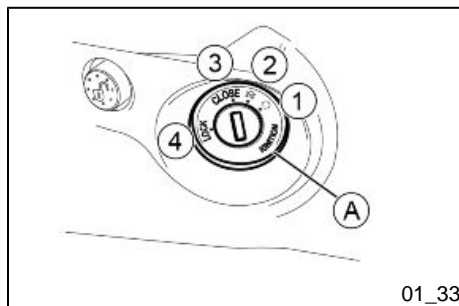
***MODE* button (01_32)**

With the vehicle switched on or the ignition key in the «ON» position, press the MODE button «A» momentarily to scroll through the various digital display functions in order to change the screen or set-up the various parameters.

The MODE button functions will change once the connection between the VMP - Vespa Multimedia Platform control unit and the smart-phone has been established in order to manage the infotainment system.

Keyswitch (01_33)

The ignition switch «A» is located on the front leg shield back plate.



01_33

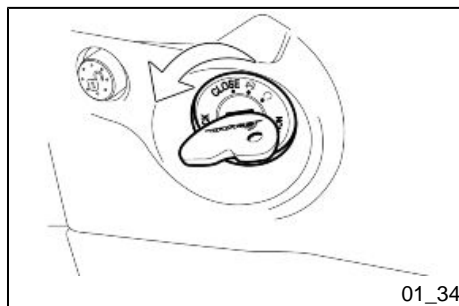
SWITCH POSITIONS

ON «1»: Ready to start position, non-extractable key, mechanical anti-theft device disabled. Saddle opening and case opening possible.

OFF «2»: Ignition disabled, non-extractable key, mechanical anti-theft device disabled. Saddle opening and case opening possible.

CLOSE «3»: Ignition disabled, extractable key, mechanical anti-theft device disabled. Saddle opening and case opening disabled.

LOCK «4»: Ignition disabled, extractable key, mechanical anti-theft device enabled. Saddle opening and case opening disabled.



01_34

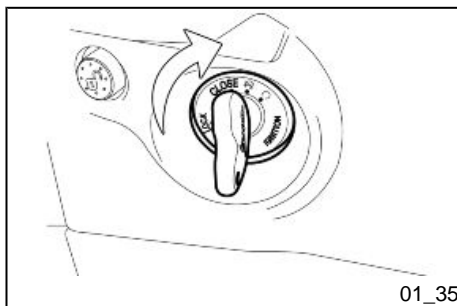
Locking the steering wheel (01_34)

Turn the handlebar to the left (as far as it will go), press the key to «**LOCK**» and remove the key.

CAUTION



NEVER TURN THE KEY TO «LOCK», «CLOSE», OR «OFF» WHILE RIDING.



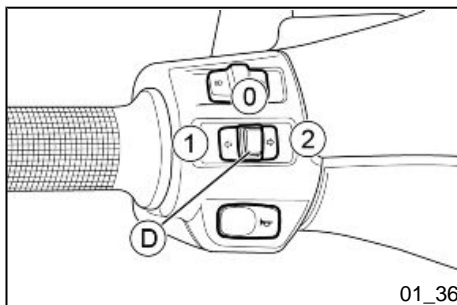
Releasing the steering wheel (01_35)

Insert the key and turn it to the «CLOSE» or «OFF» position.

CAUTION



NEVER TURN THE KEY TO «LOCK», «CLOSE», OR «OFF» WHILE RIDING.



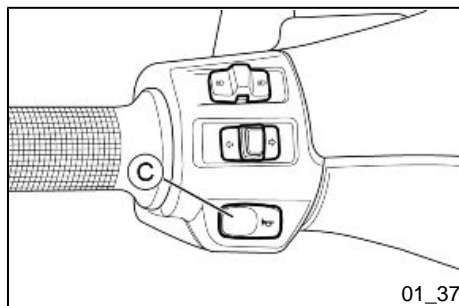
Switch direction indicators (01_36)

The left turn indicators turn on by moving the turn indicator switch «D» to the left, to position «1».

The right turn indicators turn on by moving the switch «D» to the right, to position «2».

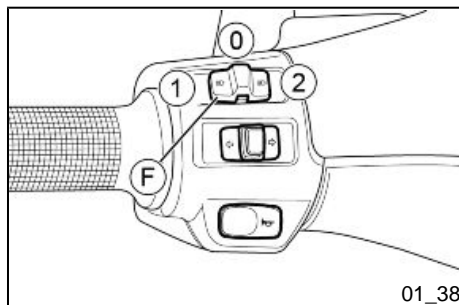
The turn indicator switch «D» turns automatically to position «0», keeping the requested function.

To cancel the request and turn the activated indicators off, press the switch «D».



Horn button (01_37)

Push the «C» button to sound the horn.



Light switch (01_38)

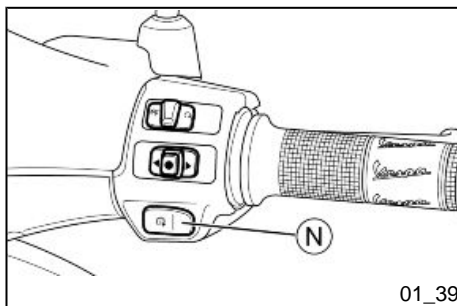
When the light switch «F» is in position «0» the low-beam light is ON; when it is in position «1» the high-beam light is ON.

Moving the light switch to "2" the high beam light flashes.

CAUTION

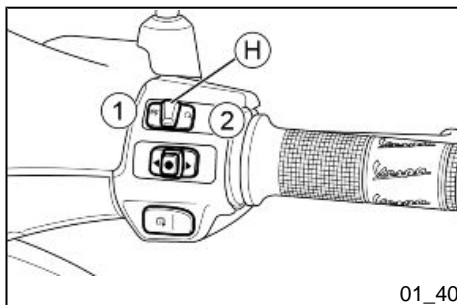


DO NOT REST OR TRANSPORT OBJECTS AND/OR CLOTHING ON TOP OF THE FRONT LIGHT ASSEMBLY WITH THE LIGHT ON OR JUST TURNED OFF. FAILURE TO OBSERVE THIS PRECAUTION MAY CAUSE THE GLASS TO OVERHEAT AND CONSEQUENTLY MELT.



Start-up button (01_39)

To start the engine, press push button «N» after having pulled one of the two brake levers.



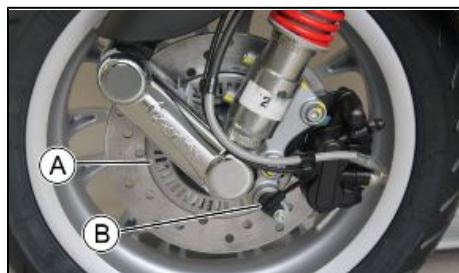
Engine stop button (01_40)

When the emergency cut-off switch «H» is set to «1» **OFF**, the engine cannot be started or it shuts off if already running; set to «2» **RUN** the engine can be started.

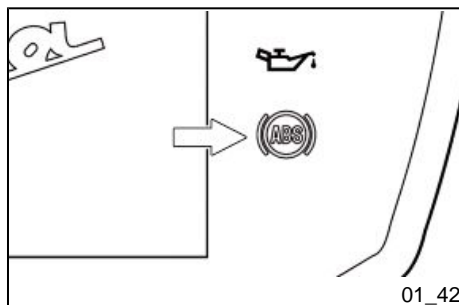
CAUTION



WHILE RIDING OPERATE THE ENGINE STOP SWITCH ONLY IN CASE OF EMERGENCY.



01_41



01_42

System ABS (01_41, 01_42)

The vehicle is equipped with a locking ABS system on the front wheel.

A: Tone wheel

B: Speed sensor

- **ABS:** It is a hydraulic - electronic device that limits the pressure within the braking circuit when a sensor, located on the wheel, detects its tendency to lock. This system prevents the front wheel from locking to avoid the risk of falling.

In case of failure of the ABS system, immediately reported to the rider with ABS warning light on the instrument panel, the vehicle retains the characteristics of a conventional braking system. In case of ABS warning light, reduce speed and go to an Authorised Service Centre for the appropriate checks. The safety provided by the ABS does not, in any case, justify risky manoeuvres. The stopping distance may be greater, compared to a conventional vehicle equipped with traditional braking in the following conditions:

- Riding on rough roads, with gravel or snow
- Riding on roads with holes or bumps

It is therefore recommended to reduce speed in these conditions.

N.B.

THE ABS SYSTEM SENSOR, WHICH IS CAPABLE OF CARRYING OUT PRECISION READINGS ON THE PHONIC WHEEL, MAY GENERATE SPEED INDICATIONS OF A FEW KM/H (MPH) WHEN THE ENGINE IS RUNNING, EVEN IF THE VEHICLE IS STATIONARY.

SUCH BEHAVIOUR IS TO BE CONSIDERED NORMAL AND DOES NOT CREATE MALFUNCTIONS IN THE SYSTEM.



AT VERY LOW SPEEDS (LESS THAN 5 KM/H) THE ABS SYSTEM IS DISABLED.

IT IS RECOMMENDED TO PAY ATTENTION THEREFORE IN CASES OF BRAKING IN LOW GRIP CONDITIONS AT LOW SPEED (FOR EXAMPLE BRAKING ON

GARAGE FLOOR TILES AFTER HAVING RIDDEN ON WET ROADS OR SIMILAR SITUATIONS)

N.B.

THE ABS WARNING LIGHT TURNS ON AND STAYS ON UNTIL REACHING 5 KM/H.

CAUTION



IN THE EVENT OF MALFUNCTION OF THE BATTERY, THE ABS SYSTEM TURNS OFF.

WARNING



ANY FLASHING OF THE ABS WARNING LIGHT DURING DRIVING INDICATES A MALFUNCTION OF THE LOCKING SYSTEM. IMMEDIATELY CONTACT AN AUTHORISED SERVICE CENTRE.

WITH THE VEHICLE AT A STANDSTILL, THE BLINKING ABS WARNING LIGHT INDICATES THE CORRECT OPERATION OF THE SYSTEM.

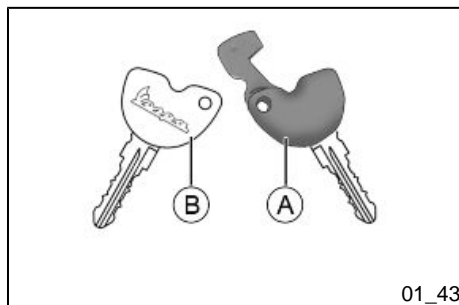
WARNING



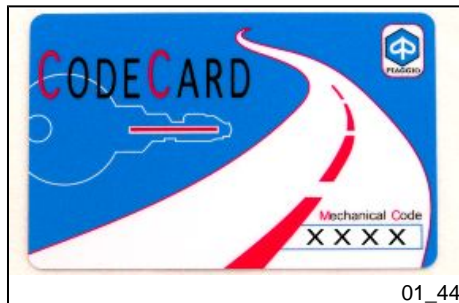
THE ABS BRAKING SYSTEM WITH WHICH THE VEHICLE IS EQUIPPED OPERATES ONLY ON THE FRONT WHEEL. THEREFORE, THE REAR WHEEL MAY BE SUBJECT TO LOCK.

The immobilizer system

In order to enhance theft protection, the vehicle is equipped with a «**PIAGGIO IMMOBILIZER** » electronic engine locking device that is activated automatically when the ignition key is removed. Upon start-up, the «**PIAGGIO IMMOBILIZER**» system checks the starter key, and only if this key is recognised, it allows the vehicle to be started.



01_43



01_44

Keys (01_43, 01_44, 01_45)

The vehicle is supplied with two types of keys. The «**A**» key with a brown grip and the "**MASTER**" key. Just one of these keys is provided and it is necessary for the memorization of the codes of the keys or for operations at the dealer's. For this reason it is recommended that you use it only in exceptional circumstances. The blue key «**B**» (single copy supplied) is used for normal operations and for start-up.

Along with the keys you will receive a **CODE CARD** on which the mechanical code for the keys can be found.

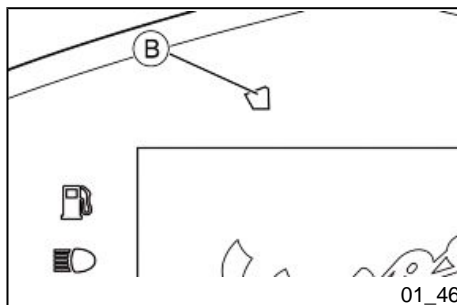
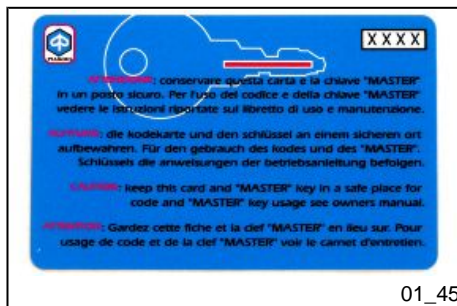
WARNING



THE LOSS OF THE BROWN KEY PREVENTS LATER REPAIRS TO THE "PIAGGIO IMMOBILIZER" SYSTEM AND TO THE ENGINE CONTROL UNIT.

WARNING

IT IS ADVISED THAT THE "CODE CARD" AND THE KEY WITH THE BROWN GRIP BE KEPT IN A SAFE PLACE (NOT ON THE VEHICLE).



Immobilizer device enabled indicator led (01_46)

Activation of the «**PIAGGIO IMMOBILIZER**» system is signalled by a flashing warning light «**B**» (see the "Analogue instrument panel" section).

So the battery does not run down, the signalling led turns off automatically when it has been working for forty-eight hours non-stop.

If there is a fault in the system, the indication led tells the **Authorised Service Centre** what the type of fault is through the type of flashing emitted.

Operation

Each time the ignition key is removed while in the "**CLOSE**" or "**LOCK**" position, the protection system engages the immobiliser. Turning the key to "**ON**" disables the engine lock, provided that the protection system recognises the code transmitted by the key. If the code is not recognised, turn the key first to "**OFF**" and then to "**ON**"; if the lock cannot be disabled, try with the other key supplied (brown). If the engine still cannot be started, an **Authorised Piaggio Service Centre** with the electronic equipment necessary to identify the problem and repair the system must be contacted.

When requesting additional keys, remember that the registration (up to a maximum of 3 keys) must be performed for all the keys, including the new ones and those already in your possession. Take the key with the brown grip and all the blue keys

supplied to an **Authorised Piaggio Service Centre**. The codes of keys not submitted for the new programming procedure are deleted from the memory. Any lost keys will therefore not be enabled to start the engine.

WARNING



EACH KEY HAS ITS OWN AND UNIQUE CODE, WHICH MUST BE STORED IN THE SYSTEM CONTROL UNIT MEMORY.

VIOLENT SHOCKS MAY AFFECT THE ELECTRONIC COMPONENTS OF THE KEY.

SHOULD THE VEHICLE CHANGE OWNER, IT IS ABSOLUTELY NECESSARY THAT THE NEW OWNER GET POSSESSION OF THE KEY WITH THE BROWN GRIP (AS WELL AS ALL OTHER KEYS).

Programming the immobilizer system (01_47)

Below is described the procedure to follow for programming the **PIAGGIO IMMOBILIZER** system and/or for storing other key codes. The programming procedure should be carried out with the engine stop switch set to **"RUN"**.

PROCEDURE START

From the **"CLOSE"** position, insert the **"MASTER"** key and turn it to the **"ON"** position. Leave the key in this position for 1 to 3 seconds, then return it to the **"CLOSE"** position and remove the key.

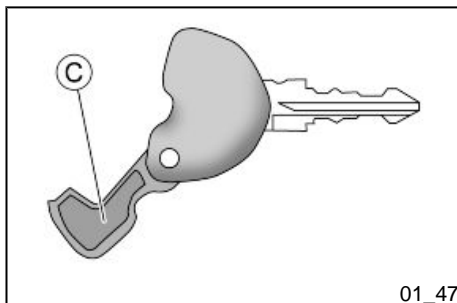
INTERMEDIATE PHASE

After having removed the **"MASTER"** key, insert the secondary key to be programmed within 10 seconds, and immediately turn it to the **"ON"** position. Leave the key in this

position for 1 to 3 seconds, then turn it to the **"CLOSE"** position and remove it. In this way you can program up to 3 keys, by repeating the above operation and respecting the indicated times.

FINAL PHASE

After having removed the key to be programmed, insert the **"MASTER"** key again and turn it to the **"ON"** position (this operation must be completed within 10 seconds of removing the previous key). Leave the key in this position for 1 to 3 seconds, then return it to the **"CLOSE"** position and remove the key.



01_47

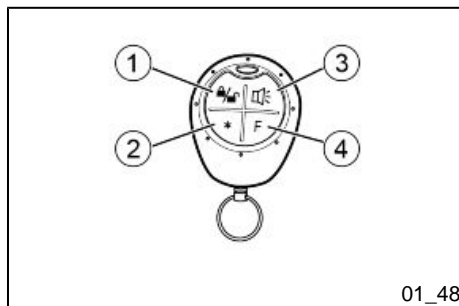
CORRECT PROGRAMMING CHECK PHASE

Insert the **"MASTER"** key, deactivating the transponder **"C"** (by tipping the key cap 90°), and turn the key to the **"ON"** position. Perform the engine starter operation. Ensure that the engine does not start. Insert a programmed key and repeat the start manoeuvre. Check that engine starts.

WARNING



SHOULD YOU START THE ENGINE WITH THE MASTER KEY (WITH TRANSPONDER OFF) OR IN THE EVENT OF WRONG OPERATION DURING PROGRAMMING, REPEAT THE PROCEDURE FROM THE BEGINNING.



Saddle opening remote control (01_48)

The vehicle is equipped with a remote control to open the saddle and for the recognition of the vehicle itself.

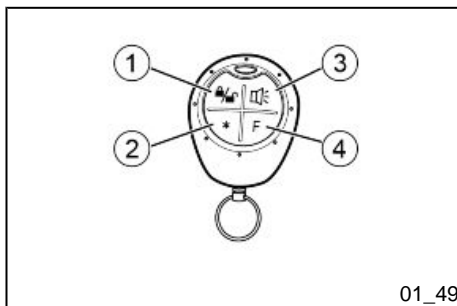
This remote control is supplied together with the keys and it has been programmed to control the opening device control unit at the manufacturing stage. If the remote control is lost, a new one can be requested and programmed.

- By pressing the buttons «1» or «2» of the remote control for about 3 seconds, the «Bike Finder» device will allow the opening at a distance of the saddle and the recognition of the vehicle with an optical signal by flashing the turn indicator. While holding one of the two buttons, the system will continue to repeat the operation described above until the button is released.
- By instead pressing the buttons «3» or «4» of the remote control, the «Bike Finder» device will be only activated for the recognition of the vehicle by emitting quick optical signals through the turn indicator.

The remote control is powered by internal batteries that get discharged after extended use; If the LED turns on when the button is pressed, the remote control is working properly.

You may need to replace the batteries if the remote control fails or if its range of operation is reduced. To separate the two halves of the remote control, insert the blade of a plain slot screwdriver at one point on the edge and slide it all around.

Once the remote control is open, remove the two batteries from the contact terminal. Install the two new **CR2016** batteries with the positive pole facing the contact terminal. Reassemble the remote control by pressing the two clip-on halves gently with your fingers.



01_49

Remote control programming (01_49)

To program the new radio commands, do the following:

1. disconnect the battery of the vehicle;
2. reconnect the battery of the vehicle;
3. within 5 seconds of reconnecting the battery, simultaneously press buttons "1" and "3" on the remote control twice. the «Bike Finder» device will confirm the process with an optical signal by the quick flashing of the turn indicator;
4. the programming of the new radio command generates the end of the procedure and the system is ready for use.

If it is necessary to erase a radio command from the memory of the device, it will be necessary to repeat the programming 4 times even with the same remote control, in order to recover the 4 provided memories.

CAUTION



TO STORE THE OTHER REMOTE CONTROLS TO MEMORY (4 MAXIMUM) YOU NEED TO REPEAT THE WHOLE PROCEDURE AGAIN. FAILURE TO CARRY OUT THESE OPERATIONS WITHIN THE INDICATED TIMES WILL RESULT IN THE AUTOMATIC CANCELLATION OF THE PROCESS FOR PROGRAMMING THE REMOTE-CONTROLLED KEYS. STORING A FIFTH REMOTE CONTROL MAY LEAD TO CANCELLATION OF THE FIRST ONE.

WARNING



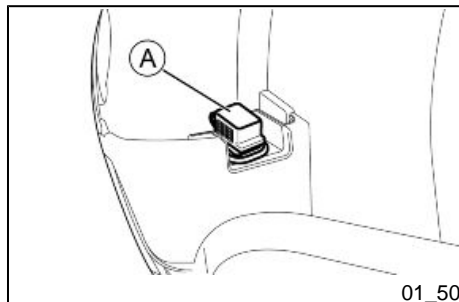
DO NOT KEEP THE REMOTE CONTROL IN PLACES WITH TEMPERATURES EXCEEDING 60° C THE BATTERY WILL RUN DOWN TOO QUICKLY.

CAUTION



TO AVOID BATTERY DISCHARGE, THE SADDLE OPENING REMOTE CONTROL RADIO RECEIVER DEACTIVATES 3 MINUTES AFTER THE LAST RECEIPT. TO

RESTORE FUNCTIONS SIMPLY PRESS THE ACTIVATION BUTTON OF THE REMOTE CONTROL FOR ABOUT 3 SECONDS, AS DESCRIBED ABOVE.



USB socket (01_50, 01_51)

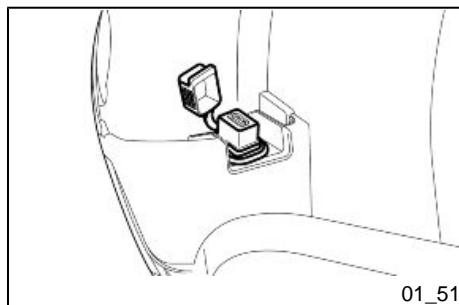
Inside the front glove compartment on the left side, in the versions where available, is a USB port «A».

To use it, remove the protective cap. Cover the socket again with the cap to avoid that water and/or humidity could damage it.

CAUTION



THE SUPPLIED USB PORT IS SUITABLE FOR RECHARGING AND/OR POWERING MOST DEVICES CURRENTLY AVAILABLE ON THE MARKET.



The USB port is active once the key is turned to «ON».

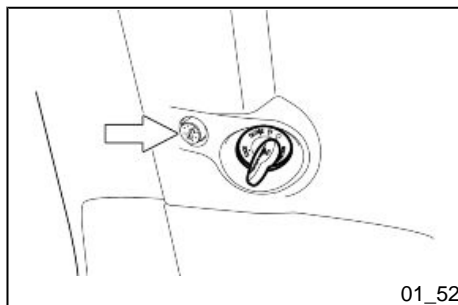
CAUTION

PROLONGED USE OF THE PLUG SOCKET MAY RESULT IN PARTIAL DISCHARGE OF THE BATTERY

USB PORT

USB port

Output voltage	(5.00±0.25) Vdc
Charging current	500mA max

**Opening the saddle (01_52, 01_53)**

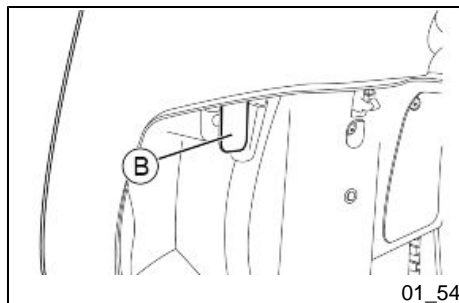
With the engine running, and the key in the «**ON**» or «**OFF**» position, press the indicated button to open the saddle electrically. When the key is in the «**CLOSE**» or «**LOCK**» position, the button is disabled and it is not possible to open the saddle.



01_53

CAUTION

THE INDICATED COMPONENT «C» (TO ACCESS IT, LIFT THE HELMET COMPARTMENT BY REMOVING IT) SHOWS THE ENGINE AIR INTAKE: DO NOT OBSTRUCT EXTERNALLY OR INTERNALLY, WITH ANY OBJECT, THE ENDS UNDER THE SADDLE, IN ORDER TO AVOID SERIOUS ENDANGERING OF THE VEHICLE.



01_54

Opening the saddle to access the helmet compartment in an emergency (01_54)

If the electric opening does not work, use the emergency lever **B** in the front case.

Identification (01_55, 01_56)

Identification registration numbers are made up of a prefix and a number, stamped on the frame and on the engine. The serial number must always be indicated when ordering spare parts. We recommend checking that the frame registration number stamped on the vehicle corresponds with that on the vehicle documentation.

CAUTION

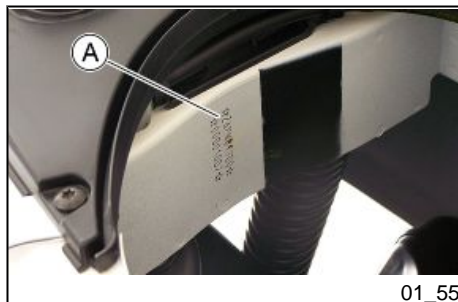
PLEASE REMIND THAT ALTERING IDENTIFICATION REGISTRATION NUMBERS CAN LEAD TO SERIOUS PENAL SANCTIONS (IMPOUNDING OF THE VEHICLE, ETC.).

Frame number

The chassis number «A» is stamped near the fuel tank.

To read it, proceed as follows:

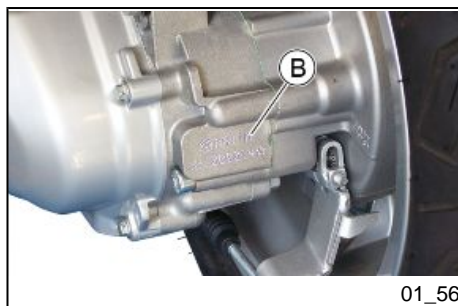
- lift the saddle;
- lift the helmet compartment by removing it.



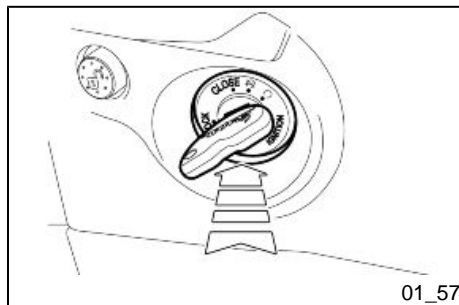
01_55

Engine number

The engine number «B» is stamped near the rear left shock absorber lower support.



01_56



Rear top box opening (01_57)

Put the ignition switch to «OFF» or «ON» and press it. With the ignition switch to «CLOSE» or «LOCK» the case stays locked.



Bag clip (01_58, 01_59)

The bag hook is placed on the saddle end.

To use the hook, slide it off from the front.

CAUTION



Maximum applicable load: 1.5 kg

WARNING



FOR USER SAFETY, THE DIMENSIONS OF THE LOAD SHOULD NOT EXTEND BEYOND THE VEHICLE PERIMETER OR HAMPER RIDING IN ANY WAY.

**CAUTION**

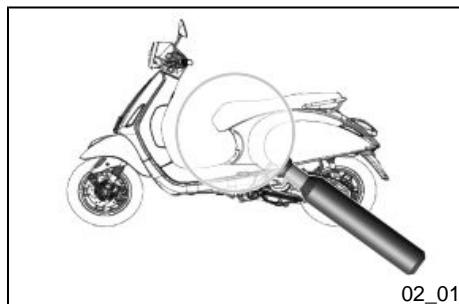
THE INDICATED COMPONENT «C» (TO ACCESS IT, LIFT THE HELMET COMPARTMENT BY REMOVING IT) SHOWS THE ENGINE AIR INTAKE: DO NOT OBSTRUCT EXTERNALLY OR INTERNALLY, WITH ANY OBJECT, THE ENDS UNDER THE SADDLE, IN ORDER TO AVOID SERIOUS ENDANGERING OF THE VEHICLE.

Vespa Primavera S - Sprint S

125-150



Chap. 02
Use



Checks (02_01)

Before using the vehicle, check:

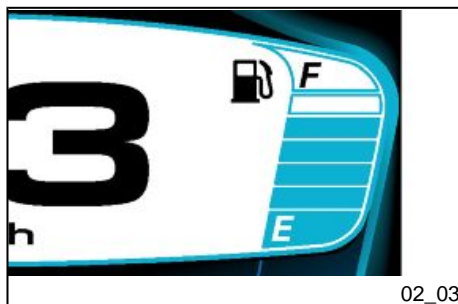
1. That there is enough fuel in the fuel tank.
2. Rear hub oil level.
3. Engine oil level (see the «Engine oil level» section).
4. That the tyres are correctly inflated.
5. The correct functioning of headlights, rear light and turn indicators.
6. The operation of the front and rear brakes.



Refuelling (02_02, 02_03, 02_04)

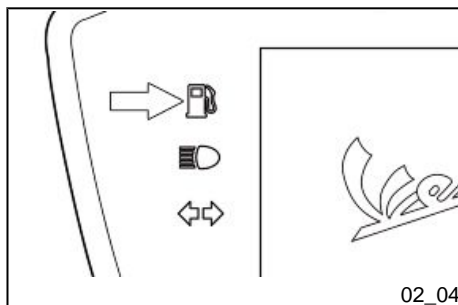
The fuel tank cap «A» is under the saddle. To reach it, tip the saddle forwards.

Fill fuel tank «A» with unleaded petrol (minimum octane rating = 95).



02_03

The fuel level is indicated by the dedicated indicator on the digital display.



02_04

When the fuel reaches the low fuel level, the warning light on the instrument panel lights up.

CAUTION



ALWAYS USE PETROL WITH A MAXIMUM OF 10% BIOETHANOL CONTENT (E10).

DO NOT USE PETROL WITH AN ETHANOL CONTENT HIGHER THAN 10%; THIS USE COULD DAMAGE THE FUEL SYSTEM COMPONENTS AND/OR COMPROMISE ENGINE PERFORMANCE.

CAUTION



SHUT OFF THE ENGINE BEFORE REFUELLING WITH PETROL. PETROL IS HIGHLY INFLAMMABLE. DO NOT LET PETROL SPILL FROM THE TANK OR WHILE REFUELLING.

CAUTION

KEEP NAKED FLAMES OR LIT CIGARETTES AWAY FROM THE TANK FILLER NECK: FIRE HAZARD. ALSO AVOID INHALING HARMFUL VAPOURS.

CAUTION

WHILE REFUELLING, DO NOT USE ELECTRONIC DEVICES AND/OR CELLULAR PHONES THAT COULD CAUSE DAMAGE TO THINGS AND/OR PEOPLE DUE TO GASOLINE VAPOURS.

CAUTION**WARNING**

WHILE REFUELLING, FULLY INSERT THE FUEL GUN IN THE TANK, AFTER THE FIRST CLICK STOP THE SUPPLY AND DO NOT FORCE REFILLING, IN ORDER TO AVOID FUEL LEAKAGES, EVEN IF SUBSEQUENT TO REFUELLING.

CAUTION

DURING REFUELLING AVOID FUEL LEAKAGES, WHICH MAY CAUSE DAMAGE TO THINGS OR PERSONS AND FIRE HAZARD.

N.B.

WITH THE VEHICLE STOPPED AND WARM ENGINE, A SHORT REPEATED NOISE MAY OCCUR AT REGULAR INTERVALS UNTIL THE ENGINE COOLS

DOWN. THIS IS NOT A MALFUNCTIONING, BUT THE NORMAL BEHAVIOUR OF THE VALVES ON THE VEHICLE.

Shock absorbers adjustment (02_05, 02_06)

Spring pre-loading can be regulated on four positions using a special shock absorber wrench, turning the ring nut at the bottom of the shock absorbers.

Position 1: minimum pre-load: rider only

Position 2: medium pre-loading: rider only

Position 3: medium pre-loading: rider and passenger

Position 4: maximum pre-loading: rider, passenger and luggage.

Spring pre-loading increases by turning the ring nut towards «A», but decreases if the ring nut is turned towards «B».

CAUTION

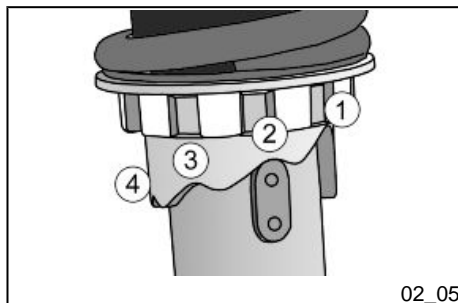


RIDING THE VEHICLE WITH THE SPRING PRE-LOADING NOT CORRECTLY SET FOR THE RIDER AND POSSIBLE PASSENGER, COULD REDUCE THE COMFORT OF THE RIDE AND THE PRECISION OF THE STEERING.

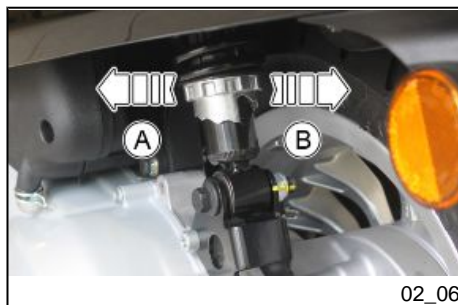
WARNING



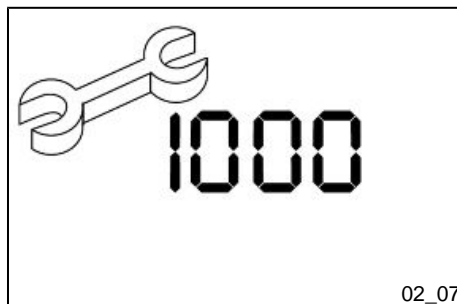
WE RECOMMEND WEARING GLOVES WHILE CARRYING OUT THIS OPERATION IN ORDER TO AVOID INJURIES.



02_05



02_06



02_07

Running in (02_07)

WARNING



DURING THE FIRST 1,000 KM DO NOT RIDE THE VEHICLE OVER 80% OF ITS MAXIMUM SPEED. AVOID TWISTING THE ACCELERATOR KNOB COMPLETELY AND/OR KEEPING A CONSTANT SPEED FOR LONG PERIODS OF TIME. AFTER THE FIRST 1,000 KM, GRADUALLY INCREASE SPEED UNTIL REACHING THE MAXIMUM PERFORMANCE.



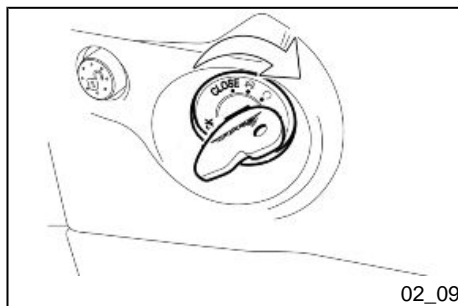
02_08

Starting up the engine (02_08, 02_09, 02_10, 02_11, 02_12)

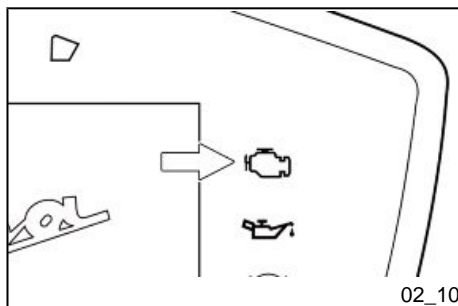
The vehicle is fitted with direct drive automatic transmission. Therefore, always start the engine with the throttle at a minimum; to start-off from stationary position, progressively twist the throttle grip. The vehicle is equipped with an electrical fuel pump that switches on automatically as soon as the engine is started.

To start it up, it is necessary to:

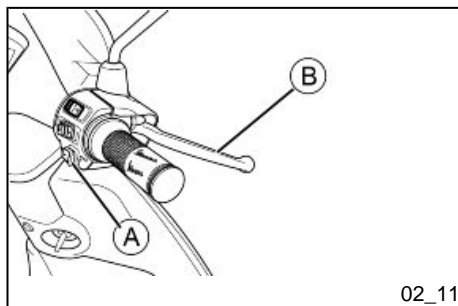
- Rest the vehicle on its centre stand, ensuring the rear wheel is not touching the ground.
- Keep the throttle grip to idle speed.



- Insert the key into the ignition switch and turn it to « **ON** ».



- Wait for the engine control warning light to turn off.

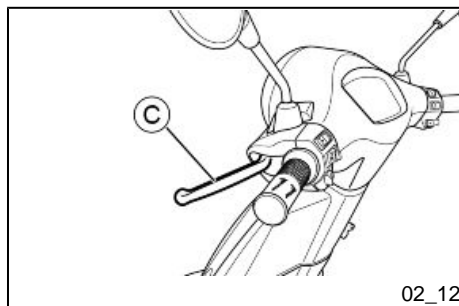


- Push the starter button « **A** » after pulling the front brake lever « **B** » or the rear brake lever « **C** ».

CAUTION



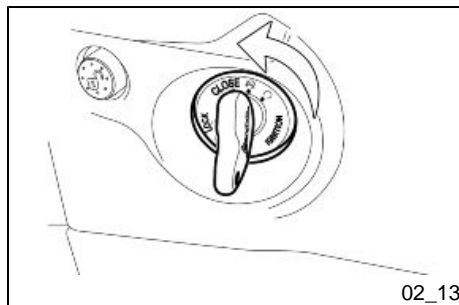
DO NOT CARRY OUT THESE OPERATIONS IN CLOSED AREAS SINCE EXHAUST GASES ARE POISONOUS.

**CAUTION**

DUE TO THE HIGH TEMPERATURES THE CATALYTIC CONVERTER CAN REACH, ALWAYS TAKE CARE, WHEN PARKING THE VEHICLE, THAT THE SILENCER DOES NOT COME INTO CONTACT WITH FLAMMABLE MATERIALS, TO AVOID SERIOUS BURNS.

Difficult start up

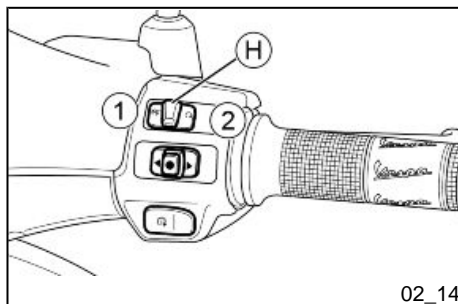
In the rare case of engine flooding, to facilitate start-up, it is possible to try to put the vehicle into action with the gas hand grip partially or completely open. It is however necessary, once the engine is started, to take your vehicle to an **Authorised Service Centre** to determine the cause of this problem and to re-establish the vehicle proper functioning.

**Stopping the engine (02_13, 02_14)**

After stopping the vehicle, with the throttle grip completely closed, turn the key to the «OFF» position (non-removable key) and/or move the engine stop switch «H» to «1» OFF.

CAUTION

DUE TO THE HIGH TEMPERATURES THAT CAN BE REACHED IN THE CATALYTIC CONVERTER, WHEN PARKING THE VEHICLE, PAY ATTENTION TO THE MUFFLER: TO AVOID SERIOUS BURNS OR FIRE, THE MUFFLER SHOULD NEVER COME INTO CONTACT WITH FLAMMABLE MATERIALS.

**CAUTION**

DO NOT SHUT OFF THE ENGINE WHILE THE VEHICLE IS MOVING. UNBURNED FUEL COULD ENTER THE CATALYTIC CONVERTER AND BURN, CAUSING THE CONVERTER TO OVERHEAT AND POSSIBLY DESTROYING IT.

N.B.

AFTER TURNING OFF THE ENGINE, TO AVOID BATTERY DISCHARGE, USE THE DEDICATED SWITCH TO TURN THE IGNITION KEY TO THE «OFF» POSITION (NON-REMOVABLE KEY).

**Catalytic silencer (02_15)****CAUTION**

TAMPERING WITH THE CATALYTIC SILENCER MAY CAUSE SEVERE DAMAGE TO THE ENGINE.

CAUTION

DUE TO THE HIGH TEMPERATURES THAT CAN BE REACHED IN THE CATALYTIC CONVERTER, WHEN PARKING THE VEHICLE, PAY ATTENTION TO THE MUFFLER: TO AVOID SERIOUS BURNS OR FIRE, THE MUFFLER SHOULD NEVER COME INTO CONTACT WITH FLAMMABLE MATERIALS.



02_16

Stand (02_16)

Push with your foot on the centre stand fork while lifting the vehicle backward, using the handlebar.

CAUTION

PARK THE MOTORCYCLE ON SAFE AND LEVEL GROUND.

CAUTION



DUE TO THE HIGH TEMPERATURES THE CATALYTIC CONVERTER CAN REACH, ALWAYS TAKE CARE, WHEN PARKING THE VEHICLE, THAT THE SILENCER DOES NOT COME INTO CONTACT WITH FLAMMABLE MATERIALS, TO AVOID SERIOUS BURNS.

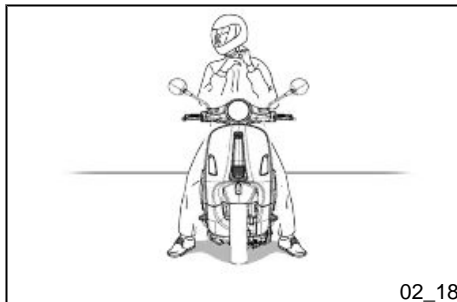


02_17

Automatic transmission (02_17)

To ensure simple, pleasurable riding, the vehicle is equipped with automatic transmission with regulator and centrifugal clutch. The system is designed to give the best possible performance in terms of both acceleration and consumption, on level ground and uphill, thanks to the adjustments made to engine speed and transmitted torque. If you have to stop on an uphill slope (traffic lights, traffic jam, etc.) only use the brake to keep the vehicle still, leaving the motor running at idling speed. Using the motor to keep the vehicle still can cause the clutch to overheat. This problem is due to the friction of the clutch parts on the clutch bell. It is therefore recommended to avoid conditions of prolonged clutch slippage leading to clutch overheating (for example, as well as the situation described above, riding uphill fully laden on steep slopes or starting off on slopes greater than 25%, etc.):

1. Stop using this way.
2. Let the clutch cool down with the motor at idling speed for a few minutes



02_18

Safe driving (02_18)

Some simple tips are provided below that will enable you to use your vehicle on a daily basis in greater safety and peace of mind. Your mechanical knowledge and ability are the foundation for safe driving. For this reason, try out the vehicle somewhere without traffic until you have gained a good familiarity of the vehicle itself.

1. Before riding off, remember to put the helmet on and fasten it correctly.
2. Slow down and drive carefully over bumpy roads.
3. After driving over a long stretch of wet road without using the brakes, braking will not be as efficient the first time/s you use them again. When driving under conditions like this, you should brake periodically.
4. Do not brake hard on wet, unmade or otherwise slippery road surfaces.
5. Do not start off by getting on the vehicle while it is standing on its stand. In any case, the rear wheel should not be turning when it comes into contact with the ground, in order to avoid abrupt departures.
6. If the vehicle is used on roads covered with sand, mud, snow mixed with salt, etc. clean the brake disc frequently with a mild detergent in order to prevent abrasive particles from building up inside the holes, which can result in early brake pad wear.

CAUTION



ALWAYS RIDE WITHIN YOUR LIMITS. RIDING UNDER THE INFLUENCE OF ALCOHOL OR OTHER DRUGS AND CERTAIN MEDICINES IS EXTREMELY DANGEROUS.

CAUTION



ANY ELABORATION THAT MODIFIES THE VEHICLE'S PERFORMANCES, SUCH AS TAMPERING WITH ORIGINAL STRUCTURAL PARTS IS STRICTLY FORBID-

DEN BY LAW, AND RENDERS THE VEHICLE NO LONGER CONFORMING TO THE APPROVED TYPE AND DANGEROUS FOR RIDING.

CAUTION



DO NOT ADJUST THE MIRRORS WHILE DRIVING. THIS COULD CAUSE YOU TO LOOSE CONTROL OF THE VEHICLE.

WARNING



IN ORDER TO PREVENT ANY ACCIDENTS RIDE VERY CAREFULLY AFTER ADDING ACCESSORIES AND WHILE CARRYING LUGGAGE. ADDING ACCESSORIES AND LUGGAGE CAN REDUCE THE VEHICLE'S STABILITY, PERFORMANCE AND SAFETY DURING USE. (SEE THE «SPARE PARTS AND ACCESSORIES» SECTION)



NEVER RIDE THE VEHICLE EQUIPPED WITH ACCESSORIES (PANNIERS, TOP BOX AND/OR WINDSHIELD) AT A SPEED HIGHER THAN 80 km/h.

THE VEHICLE CAN BE RIDDEN AT A HIGHER SPEED WITHOUT THE ACCESSORIES MENTIONED BEFORE WITHIN THE LIMITS ESTABLISHED BY LAW.

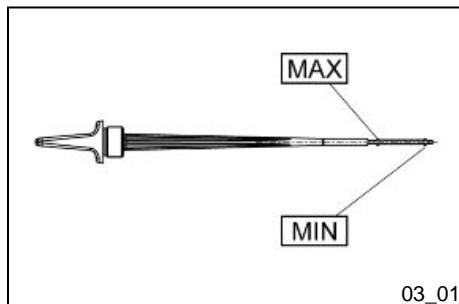
IF THERE ARE ANY NON-PIAGGIO ACCESSORIES INSTALLED, OR AN ABNORMAL LOAD, OR IF THE SCOOTER IS NOT IN A GENERALLY GOOD CONDITION, OR WHENEVER WEATHER CONDITIONS DEMAND IT, SPEED SHOULD BE FURTHER REDUCED.

Vespa Primavera S - Sprint S

125-150



Chap. 03
Maintenance



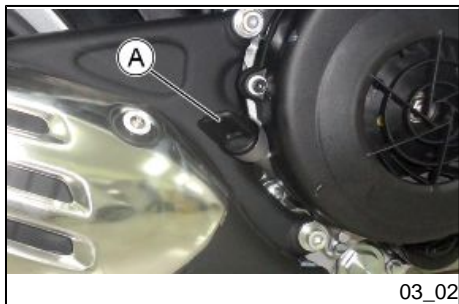
03_01

Engine oil level (03_01)

In four-stroke engines, the engine oil is used to lubricate the timing elements, the bench bearings and the head-engine block-piston assembly. **An insufficient quantity of oil can cause serious damage to the engine.** In all four-stroke engines, a loss of efficiency in oil performance and certain consumption should be considered normal.

Consumption can particularly reflect the conditions of use (e.g.: while riding, the use of the vehicle with the throttle grip mainly open implies higher oil consumption).

In order to avoid problems, it is advisable to control oil level every time the vehicle is used.

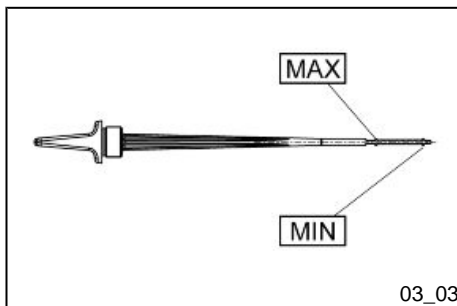


03_02

Engine oil level check (03_02)

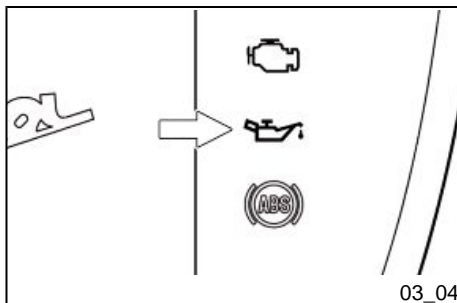
Every time the vehicle is used, visually inspect the level of the engine oil when the engine is cold (after **completely unscrewing** the oil cap/dipstick). The oil level should be somewhere between the MAX and MIN index marks on the level rod; «A»; while the oil is being checked, the vehicle must be resting on its centre stand on an even, horizontal surface.

If the check is carried out after the vehicle has been used, and therefore with a hot engine, the level will be lower; in order to carry out a correct check, wait at least 10 minutes after the engine has been stopped so as to get the correct level.



Engine oil top-up (03_03)

The oil should be topped up after having checked the level and in any case by adding oil **without ever exceeding the MAX. level**. Check and top up engine oil, if needed, according to the scheduled maintenance table at an **Authorised Service Centre**.



Warning light (insufficient oil pressure) (03_04)

The vehicle is equipped with a warning light that comes on when the key is turned to «ON». This warning light will turn off when the engine comes on. **If the light comes on while braking, at idle speed or while turning a corner, it is necessary to check the oil level and top it up if required. If after having topped-up the oil, the warning light still comes on while braking, at idle speed or while turning a corner, it will be necessary to take your vehicle to an Authorised Service Centre.**

Engine oil change

To have the engine and filter oil replaced in accordance with the scheduled maintenance table, contact an **Authorised Service Centre**.

CAUTION

RUNNING THE ENGINE WITH INSUFFICIENT LUBRICATION OR WITH INADEQUATE LUBRICANTS ACCELERATES THE WEAR AND TEAR OF THE MOVING PARTS AND CAN CAUSE IRREPARABLE DAMAGE.

TOPPING UP THE ENGINE WITH AN EXCESSIVE AMOUNT OF OIL MAY CAUSE MALFUNCTION AND/OR A DROP IN PERFORMANCE OF THE VEHICLE.

USING OILS OTHER THAN THOSE RECOMMENDED CAN SHORTEN THE LIFE OF THE ENGINE.

CAUTION

USED OILS CONTAIN SUBSTANCES HARMFUL TO THE ENVIRONMENT. FOR OIL REPLACEMENT, CONTACT ANY AUTHORISED SERVICE CENTRE AS THEY ARE EQUIPPED TO DISPOSE OF USED OILS IN AN ENVIRONMENTALLY FRIENDLY AND LEGAL WAY.

Hub oil level (03_05)

Check the presence of oil in the hub, according to the regular controls shown in the scheduled maintenance table.

WARNING

FOR THE REGULAR CHECK OF THE HUB OIL LEVEL SHOWN IN THE SCHEDULED MAINTENANCE TABLE, CONTACT AN Authorised Service Centre.

FOR THE CONTROLS OF THE HUB OIL LEVEL THAT ARE NOT PREDETERMINED BY THE SCHEDULED MAINTENANCE TABLE, OPERATE AS DESCRIBED.

LEVEL CHECK

- Park the vehicle on level ground and centre stand.
- Undo the screw «A» and by inserting punch, check the presence of oil that must be below the lower edge of the loading hole.
- With a cloth carefully clean the transmission crankcase.

WARNING



THE FUNCTION OF THE HUB WITH INSUFFICIENT HUB LUBRICATION OR WITH CONTAMINATED OR IMPROPER LUBRICANTS ACCELERATES THE WEAR AND TEAR OF THE MOVING PARTS AND CAN CAUSE SERIOUS DAMAGE.

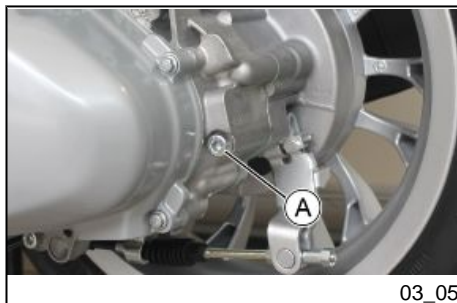
TOP-UP

If necessary carry out the top-up, **DO NOT use the vehicle** and contact an **Authorised Service Centre**.

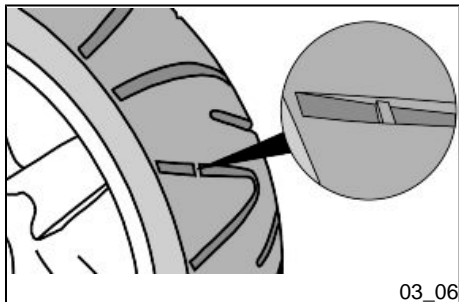
CAUTION



USED OILS CONTAIN SUBSTANCES HARMFUL TO THE ENVIRONMENT. FOR OIL REPLACEMENT, CONTACT ANY AUTHORISED SERVICE CENTRE AS THEY ARE EQUIPPED TO DISPOSE OF USED OILS IN AN ENVIRONMENTALLY FRIENDLY AND LEGAL WAY.



03_05



Tyres (03_06)

Periodically check the inflation pressure of each tyre (when cold).

Tyres are fitted with wear indicators; tyres should be replaced as soon as these indicators become visible on the tyre tread. Also check that the tyres do not show signs of splitting at the sides or irregular tread wear; If this occurs, go to an authorised workshop or at least a workshop adequately equipped to remove and refit tyres.

CAUTION



TYRE PRESSURE SHOULD BE CHECKED WHEN TYRES ARE COLD. INCORRECT TYRE PRESSURE CAUSES ABNORMAL TYRE WEAR AND MAKES RIDING DANGEROUS.

TYRES MUST BE REPLACED WHEN THE TREAD REACHES THE WEAR LIMITS SET FORTH BY LAW.

TYRES

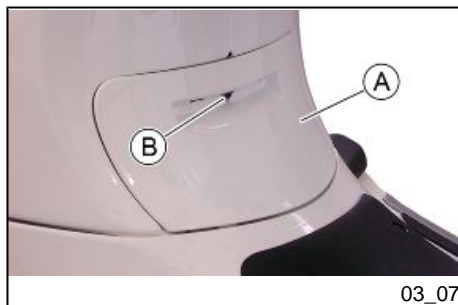
Front tyre	110/70 - 12" M/C 47P
Rear tyre	120/70 - 12" M/C 58P

TIRE INFLATION PRESSURE

Front tyre pressure (with passenger)	1.8 bar (1.8 bar)
--------------------------------------	-------------------

Rear tyre pressure (with passenger)

2.0 bar (2.2 bar)



03_07



03_08

Spark plug dismantlement (03_07, 03_08, 03_09)

Removal

In order to inspect the spark plug, follow the operation described when the engine is cold:

- Slide off the spark plug inspection cover «A» by unscrewing the screw «B».
- Slide off the spark plug tube «C».
- Remove the spark plug with the specific spark plug spanner.

Fitting

- Use the specific spark plug spanner to refit the spark plug in its seat, then tighten it. Care should be taken while installing and fixing it with the correct inclination.
- Insert the spark plug tube «C».
- Place the inspection cover «A» and tighten the screw «B».

CAUTION



FOLLOW THESE PROCEDURES VERY CAREFULLY TO AVOID ANY SEVERE DAMAGE THAT MAY BE CAUSED BY THE VERY POWERFUL IGNITION SYSTEM.

CAUTION



THE SPARK PLUG MUST BE REMOVED WHEN THE ENGINE IS COLD.



03_09

USING IGNITION ELECTRONIC CENTRAL UNITS OR SPARK PLUGS OTHER THAN THE TYPES PRESCRIBED (SEE «TECHNICAL DATA» SECTION) CAN CAUSE SERIOUS DAMAGE TO THE ENGINE.

CAUTION



PROCEED WITH CAUTION.

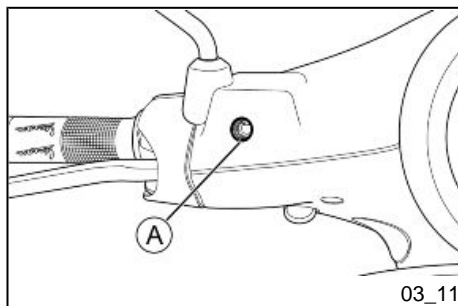
DO NOT DAMAGE THE TABS AND/OR THEIR CORRESPONDING SLOTS. HANDLE THE PLASTIC AND PAINTED COMPONENTS WITH CARE, DO NOT SCRATCH OR IMPAIR THEM.



03_10

Removing the air filter (03_10)

To remove and clean the air filter as instructed in the scheduled maintenance table, contact an **Authorised Service Centre**.



Checking the brake oil level (03_11)

Both front and rear brake fluid tanks are equipped with a warning light «A» of transparent material; the quantity of fluid contained indicates the fluid level in the relative tank.

To control the brake fluid level, proceed as follows:

- Place the bike on the centre stand with the handlebar pointing straight;
- check the liquid level through the relative inspection sight glass «A»:
 - if the window is **full**, the brake liquid is correct.
 - If the brake level approaches the «**MIN**» reference, contact an **Authorized Service Center** to perform the top up.
 - If the brake liquid level is below the «**MIN**» reference, do not use the vehicle and contact an **Authorized Service Center**.

WARNING

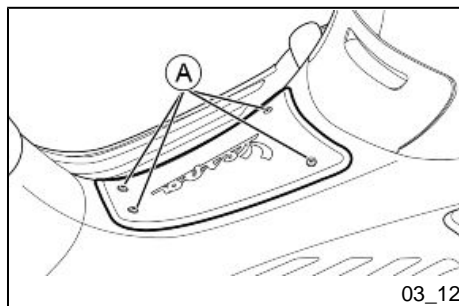


IN NORMAL CLIMATIC CONDITIONS IT IS ADVISABLE TO REPLACE THE ABOVE-MENTIONED FLUID EVERY 2 YEARS. NEVER USE BRAKE FLUID CONTAINED IN CONTAINERS WHICH ARE ALREADY OPEN OR PARTIALLY USED.

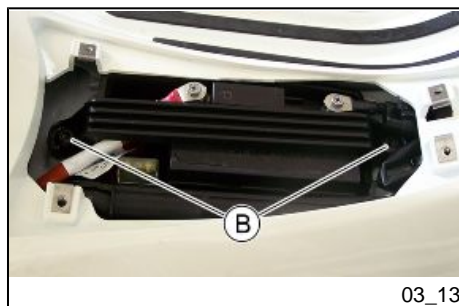
WARNING



ONLY USE DOT 4-CLASSIFIED BRAKE FLUID. BRAKE CIRCUIT FLUID IS HIGHLY CORROSIVE: DO NOT LET IT COME INTO CONTACT WITH PAINTED PARTS.



03_12



03_13

Battery (03_12, 03_13)

To access the battery:

- Unscrew the four screws «A» and remove the rubber cover placed at the centre of the footrest.
- Remove the fixing bracket of the battery by unscrewing the two screws «B».

The battery is the electrical device requiring the closest monitoring and most diligent maintenance.

WARNING



USED BATTERIES ARE HARMFUL FOR THE ENVIRONMENT. COLLECTION AND DISPOSAL SHOULD BE CARRIED OUT IN COMPLIANCE WITH REGULATIONS IN FORCE.

CAUTION

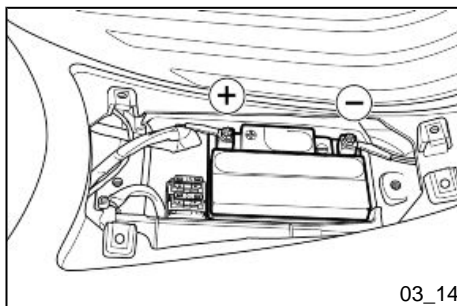


ELECTROLYTE CONTAINS SULPHURIC ACID: AVOID CONTACT WITH EYES, SKIN AND CLOTHES. IN CASE OF ACCIDENTAL CONTACT, RINSE WITH ABUNDANT WATER AND CONSULT A DOCTOR.

CAUTION



IN ORDER TO AVOID DAMAGING THE ELECTRIC SYSTEM, NEVER DISCONNECT THE WIRING WHILE THE ENGINE IS RUNNING. DO NOT TIP THE VEHICLE TOO MUCH IN ORDER TO AVOID DANGEROUS LEAKAGE OF THE BATTERY ELECTROLYTE.



Use of a new battery (03_14)

To install a new battery:

- Place the battery in its housing.
- Connect the positive pole «+» first and then the negative pole «-».
- Position the fixing bracket and the battery cover, operating in reverse order than described in the «Battery» paragraph.

CAUTION



DO NOT REVERSE THE POLARITY: RISK OF SHORT CIRCUIT AND DAMAGE TO THE ELECTRICAL SYSTEM.

WARNING



USED BATTERIES ARE HARMFUL FOR THE ENVIRONMENT. COLLECTION AND DISPOSAL SHOULD BE CARRIED OUT IN COMPLIANCE WITH REGULATIONS IN FORCE.



Long periods of inactivity (03_15)

If the vehicle is not used for a long time, the performance of the battery will deteriorate. This is the result of the natural phenomenon of battery discharging, and may be due to residual absorption by vehicle components with constant power consumption. The deterioration of the battery's performance is also the result of environmental conditions and how clean the terminals are. To avoid any starting difficulties and/or irreparable damage to the battery, you should do the following:

- **At least once a month** start up the engine and turn it over at a speed slightly above idling, for 10-15 minutes. This will enable you to keep all the parts of the engine in working order as well as the battery.
- Take your vehicle to a garage (as indicated in the «Vehicle not used for extended periods» section) to have the battery removed. The battery must be cleaned, fully charged and kept in a dry, well aerated place. Charge the battery **again at least every two months**.

N.B.

THE BATTERY MUST BE CHARGED WITH A CURRENT EQUAL TO 1/10 OF THE RATED CAPACITY OF THE BATTERY AND FOR NOT LONGER THAN 10 HOURS. IN ANY CASE, IT IS PREFERABLE TO PERFORM THIS SERVICE AT AN AUTHORISED SERVICE CENTRE. WHEN REFITTING THE BATTERY MAKE SURE THE LEADS ARE CORRECTLY CONNECTED TO THE TERMINALS.

WARNING



UNDER NO CIRCUMSTANCES MAY YOU DISCONNECT THE BATTERY LEADS WHILE THE ENGINE IS RUNNING; THIS CAN CAUSE IRREPARABLE DAMAGE TO THE VEHICLE'S ELECTRONIC CONTROL UNIT.

WARNING

USED BATTERIES ARE HARMFUL FOR THE ENVIRONMENT. COLLECTION AND DISPOSAL SHOULD BE CARRIED OUT IN COMPLIANCE WITH REGULATIONS IN FORCE.

Fuses (03_16, 03_17, 03_18, 03_19)

The electrical system has 2 main fuses located inside the battery compartment, and 6 secondary fuses located inside the front case.

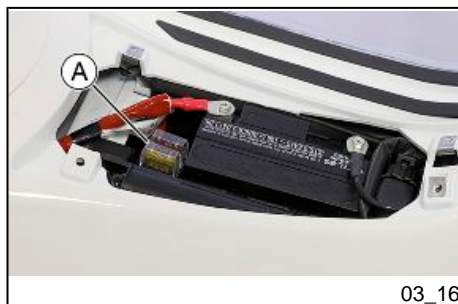
CAUTION

BEFORE REPLACING THE FUSE IT IS NECESSARY TO FIND AND SOLVE THE FAILURE THAT CAUSED IT TO BLOW.

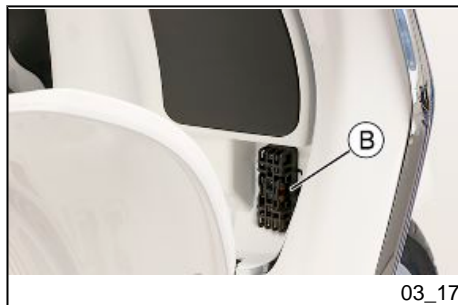
DO NOT REPLACE THE FUSE WITH ANY ALTERNATIVE FORM OF CONDUCTOR.

CAUTION

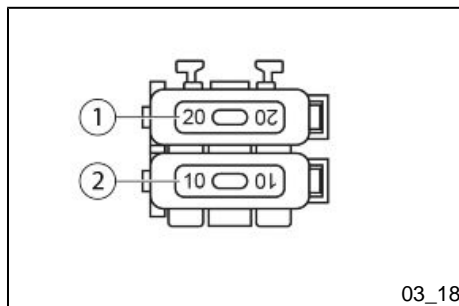
MODIFICATIONS OR REPAIRS TO THE ELECTRICAL SYSTEM, PERFORMED INCORRECTLY OR WITHOUT STRICT ATTENTION TO THE TECHNICAL SPECIFICATIONS OF THE SYSTEM CAN CAUSE MALFUNCTIONING AND RISK OF FIRE.



03_16



03_17

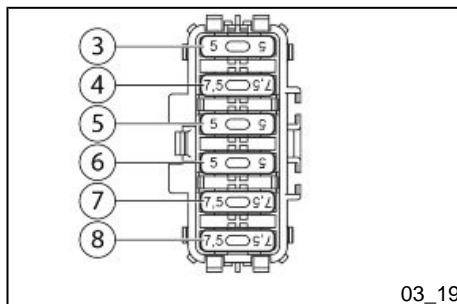


MAIN FUSES

The location and characteristics of the vehicle's 2 main fuses are indicated in the table.

MAIN FUSES TABLE

Fuse No. 1	Capacity: 20A Protected circuits: main. Ignition switched live: fuse Ns. 3, 4, 5 and 6.
Fuse no. 2	Capacity: 10A Protected circuits: battery-powered, ABS control unit.



SECONDARY FUSES

The location and characteristics of the vehicle's 6 secondary fuses are indicated in the table.

SECONDARY FUSES TABLE

Fuse no. 3	Capacity: 5A Protected circuits: low beam light and high beam light ignition switched live.
Fuse 4	Capacity: 7.5 A Protected circuits: ignition switched live high beam light (passing), USB port, position lights, license plate light, bike finder, accessories presetting.
Fuse No. 5	Capacity: 5A Protected circuits: ignition switched live ABS control unit, anti-tipping sensor, engine management control unit.

Fuse No. 6**Capacity:** 5A

Protected circuits: ignition switched live, instrument panel, digital display, hazard lights control device, VMP (Vespa Multimedia Platform) control unit, horn, stop lights, starter relay (coil).

Fuse No. 7**Capacity:** 7.5 A

Protected circuits: power supply from the engine management control unit.

Fuse No. 8**Capacity:** 7.5 A

Protected circuits: power supply from battery, instrument panel, digital display, ignition switch, saddle opening button, pre-installed connections for accessories, bike finder.



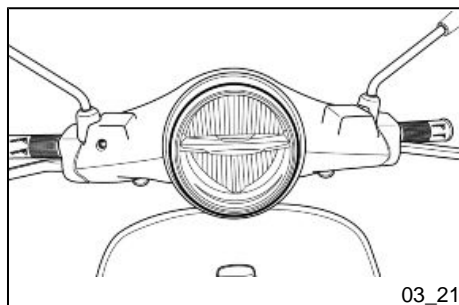
03_20

Lamps (03_20)

In this section are listed the bulb types for the vehicle fitting.

BULBS

High/low beam light bulb	Type: LED Quantity: 2
Front daylight running light bulb	Type: LED Quantity: 2
Stop light bulb	Type: LED Quantity: 1
rear daylight running light bulb	Type: incandescent Power: 12V - 10W Quantity: 1
Licence plate light	Type: incandescent Power: 12V - 5W Quantity: 1
Front indicator light bulb	Type: Halogen, BAZ9s base, amber Power: 12V - 6W Quantity: 1 RH + 1 LH
Rear indicator light bulb	Type: Halogen, BAZ9s base, amber Power: 12V - 6W



Front light group (03_21)

The light assembly has «LED» lights. In the event of malfunction, we recommend contacting an **Authorised Service Centre** for replacement.

N.B.

IF MISTING IS NOTICED ON THE INSIDE OF THE TAIL LIGHT, CHECK THAT IT DISAPPEARS AFTER SOME MINUTES OF IGNITION OF THE TAIL LIGHT. IT IS A COMMON PHENOMENON AND IS ATTRIBUTABLE TO HUMIDITY AND/OR TO LOW TEMPERATURES; DOES NOT SHOW FAILURE.

THE PRESENCE OF DROPS OF WATER, ON THE OTHER HAND, COULD INDICATE THAT WATER IS INFILTRATING. CONTACT AN Authorised Service Centre.

CAUTION



DO NOT REST OR TRANSPORT OBJECTS AND/OR CLOTHING ON TOP OF THE FRONT LIGHT ASSEMBLY WITH THE LIGHT ON OR JUST TURNED OFF. FAILURE TO OBSERVE THIS PRECAUTION MAY CAUSE THE GLASS TO OVERHEAT AND CONSEQUENTLY MELT.

Head light adjustment (03_22, 03_23)

Proceed as follows:

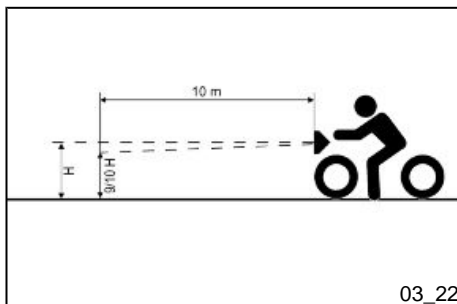
- Position the vehicle in running order and with the tyres inflated to the prescribed pressure, onto a flat surface, 10 m away from a half-lit white screen; ensure that the longitudinal axis of the vehicle is perpendicular to the screen;

- Turn on the headlight and make sure the edge of the light beam projected onto the screen does not exceed $\frac{9}{10}$ of the height of the centre of the light from the ground and that it is not less than $\frac{7}{10}$;

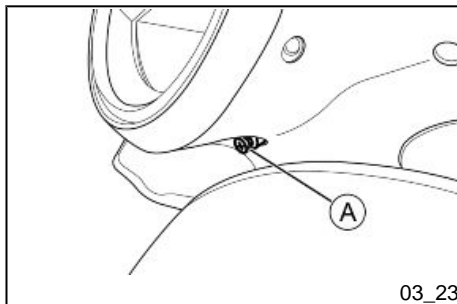
- If this is not the case, adjust the headlight by operating the screw «A».

N.B.

THE PROCEDURE DESCRIBED IS THAT ESTABLISHED BY EUROPEAN STANDARDS FOR THE MAXIMUM AND MINIMUM HEIGHT OF THE LIGHT BEAM. REFER TO THE STATUTORY REGULATIONS IN FORCE IN EVERY COUNTRY WHERE THE VEHICLE IS USED.



03_22

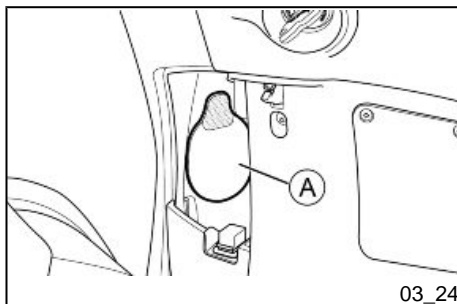


03_23

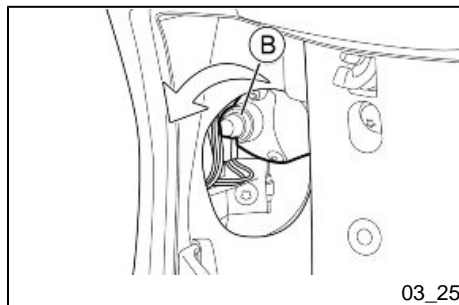
Front direction indicators (03_24, 03_25, 03_26)

To replace the bulbs:

- Open the front case and remove the rubber cap «A».



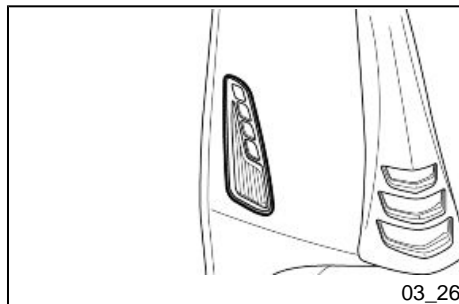
03_24



03_25

- Take out the bulb holder «B» from its fitting by turning it anticlockwise.
- Press the bulb, turn it anticlockwise and then take it out.

To refit, proceed in the reverse order.



03_26

CAUTION



THE DAYLIGHT RUNNING LIGHTS LOCATED ON THE FRONT SHIELD ARE OF "LED" TYPE. IN THE EVENT OF MALFUNCTION, WE RECOMMEND CONTACTING AN AUTHORISED SERVICE CENTRE FOR REPLACEMENT.



03_27

Rear optical unit (03_27, 03_28, 03_29, 03_30)

To replace the taillight bulb:

- Remove the fixing knob screw «A» of the rear light assembly, which can be accessed from the wheel housing on the vehicle left side.
- Slide off the light assembly by pulling it downwards and releasing the two upper seats.

Take out the bulb holder «B» from its fitting by turning it anticlockwise.

Press the bulb, turn it anticlockwise and then take it out.



03_28

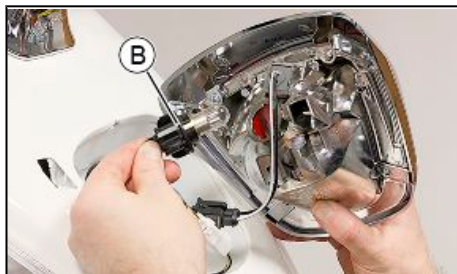
To refit, proceed in the reverse order.

N.B.

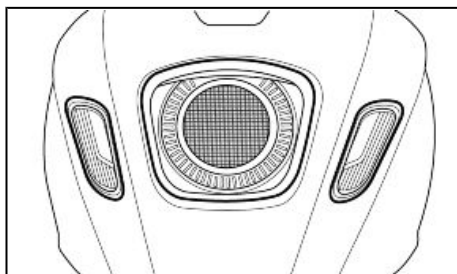
IF MISTING IS NOTICED ON THE INSIDE OF THE HEADLAMP GLASS, THIS DOES NOT INDICATE AN ABNORMALITY AND IS RELATED TO HUMIDITY AND/OR LOW TEMPERATURES.

IT WILL DISAPPEAR QUICKLY WHEN THE HEADLIGHT IS TURNED ON.

IF HOWEVER THERE ARE DROPS OF WATER, IT MIGHT MEAN SEEPAGE AND YOU SHOULD SEE AN AUTHORIZED SERVICE CENTRE.



03_29

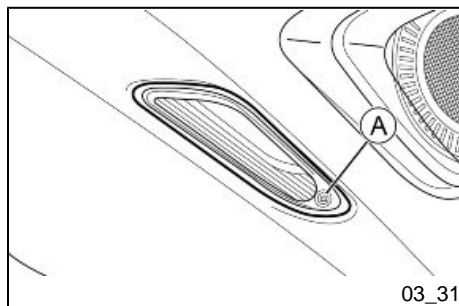


03_30

CAUTION



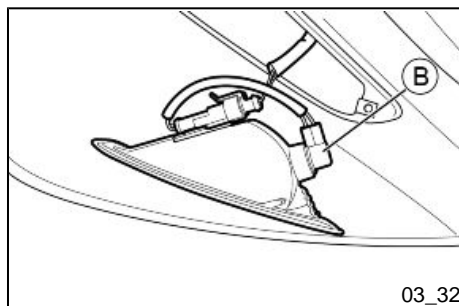
THE STOP LIGHT IS FITTED WITH A "LED" TYPE LAMP. IN THE EVENT OF MALFUNCTION, WE RECOMMEND CONTACTING AN AUTHORISED SERVICE CENTRE FOR REPLACEMENT.



Rear turn indicators (03_31, 03_32)

To replace the bulbs:

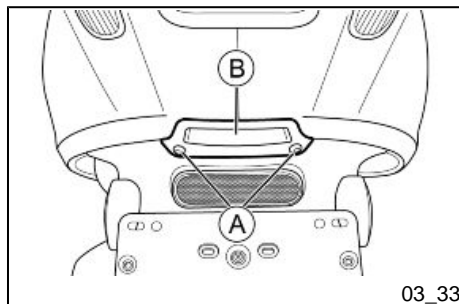
- remove the turn indicator from its seat by undoing the screw «A».



- Take out the bulb holder «B» from its fitting by turning it anticlockwise.

- Press the bulb, turn it anticlockwise and then take it out.

To refit, proceed in the reverse order.



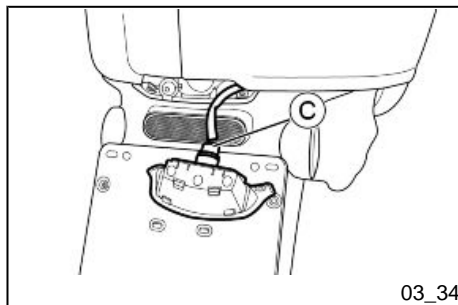
Number plate light (03_33, 03_34)

To remove the licence plate light proceed as follows:

- Undo the two screws «A» and remove the cover «B».

- Slide off the bulb «C» from its own seat.

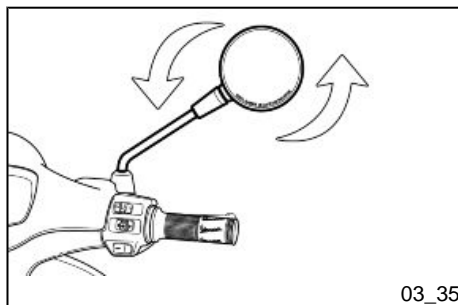
- Slide off the bulb.



03_34

CAUTION

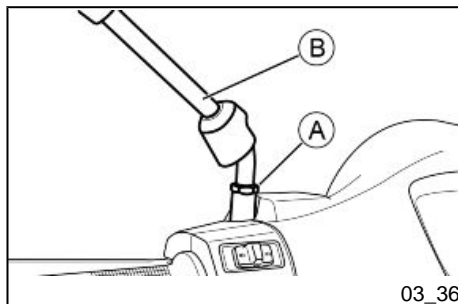
DO NOT PULL THE ELECTRICAL CABLES WHEN TAKING OUT THE BULB HOLDER.



03_35

Rear-view mirrors (03_35, 03_36)

The mirrors can be set to the desired position by adjusting the mirror frame.



03_36

To remove the rear view mirror, lift the rubber protection, unscrew the lock nut «A» slightly to unlock the stem. unscrew the stem «b» to remove it.

CAUTION

DO NOT ADJUST THE MIRRORS WHILE DRIVING. THIS COULD CAUSE YOU TO LOOSE CONTROL OF THE VEHICLE.

CAUTION



PAY ATTENTION TO THE THREAD TYPE OF THE MIRRORS: THE RIGHT MIRROR HAS A CLOCKWISE THREAD, WHILE THE LEFT MIRROR HAS AN ANTI-CLOCKWISE THREAD.



Front disc brake (03_37)

The brake disc and pad wear is automatically compensated, therefore it has no effect on the functioning of the front and rear brakes. For this reason it is not necessary to adjust the brakes. An excessively elastic brake lever stroke may indicate the presence of air in the braking circuit or a failure in the braking system. In this case, especially considering the fundamental role brakes play in your driving safety, it is necessary to take the vehicle to an **Authorised Service Centre**.

CAUTION



BRAKING SHOULD BEGIN AFTER ABOUT 1/3 OF THE BRAKE LEVER STROKE.

CAUTION



HAVE THE BRAKE PADS CHECKED BY THE DEALER ACCORDING TO THE CHECKS SPECIFIED IN THE SCHEDULED MAINTENANCE TABLE. HOWEVER, IN THE EVENT OF NOISES COMING FROM THE FRONT AND/OR REAR BRAKING SYSTEM DURING OPERATION, IT IS ADVISABLE TO HAVE THE BRAKING SYSTEM CHECKED BY AN AUTHORISED SERVICE CENTRE OR DEALER. AFTER REPLACING THE BRAKE PADS, DO NOT USE THE SCOOTER UNTIL YOU HAVE OPERATED THE BRAKE LEVER SEVERAL TIMES IN ORDER TO ALLOW

THE PLUNGERS TO SETTLE AND THE LEVER STROKE TO BE SET TO THE CORRECT POSITION.

CAUTION



THE PRESENCE OF SAND, MUD, SNOW MIXED WITH SALT, ETC. ON THE ROAD, CAN DRASTICALLY REDUCE THE LIFE OF THE BRAKE PADS. IN ORDER TO AVOID THIS, WE RECOMMEND WASHING THE VEHICLE FREQUENTLY WHEN RIDING IN THESE ROAD CONDITIONS.

Rear drum brake (03_38)

Operate adjusting nut «B» and loosen lock nut «A» shown in the figure. Note that when the throttle is in idle **the wheel should rotate free**. After the adjustment, screw lock nut «A».

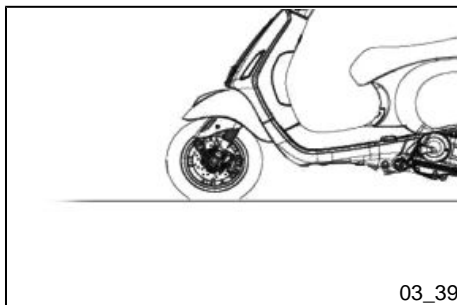
CAUTION



BRAKING SHOULD BEGIN AFTER ABOUT 1/3 OF THE BRAKE LEVER STROKE.



03_38



03_39

Puncture (03_39)

The vehicle is equipped with Tubeless tyres (without inner tube). In the event of a puncture, Tubeless tyres - unlike tyres with inner tubes - go flat very slowly, resulting in a greater steering safety. In the case of puncture, you can make an emergency repair using an inflation canister. For a complete repair job contact an **Authorised Service Centre**. Replacing a tyre means removing the wheel. For these operations, contact an **Authorised Service Centre**.

CAUTION



TO USE THE "INFLATE AND REPAIR" SPRAY CAN PROPERLY, FOLLOW THE INSTRUCTIONS ON THE PACKAGING.



03_40

Inactivity of the vehicle (03_40)

The following operations are recommended:

1. Clean the vehicle thoroughly and then cover it with a canvas;
2. With the engine off, remove the spark plug and pour 1 to 2 of oil through the spark plug hole (larger quantities will cause engine damage). Operate the starter button 1-2 times for roughly 1 second to turn the engine over slowly, then insert the spark plug again;
3. Drain all the fuel from the vehicle; spread anti-rust grease on the uncoated metal parts; keep the wheels off the ground resting the frame on two wooden blocks;
4. As far as regards the battery, follow the instructions in paragraph «Battery»

Cleaning the vehicle (03_41, 03_42)

Use a low pressure jet of water to soften the caked dirt and mud deposited on the painted surfaces. Once softened, sponge off mud and dirt using a car body sponge soaked in a car body shampoo and water solution (2-4% of car shampoo in water). Then rinse with abundant water, and dry with a chamois cloth. For the engine exterior, use petrol, a brush and clean cloths. Petrol can damage paintwork.

WARNING



IN ORDER TO AVOID RISE OF OXIDATION, WASH THE VEHICLE EVERY TIME IT IS USED IN AREAS OR SPECIAL CONDITIONS OF:

- **ENVIRONMENTAL / SEASONAL CONDITIONS: USE OF SALT, ANTI-ICE CHEMICALS ON ROADS DURING WINTER.**
- **AIR POLLUTION: CITIES AND/OR INDUSTRIAL AREAS.**
- **SALINITY AND HUMIDITY: SEASHORE AREAS, HOT AND HUMID CLIMATE.**

WARNING



- **PREVENT DEPOSITS FROM REMAINING ON THE BODYWORK, INDUSTRIAL AND POLLUTANT RESIDUAL DUST, TAR SPOTS, DEAD INSECTS, BIRD DROPPINGS, ETC.**
- **AVOID PARKING THE VEHICLE UNDER TREES. IN SOME SEASONS, IN FACT, RESIDUES, RESINS, FRUITS OR LEAVES MAY FALL FROM THE TREES, CONTAINING CHEMICALS THAT ARE HARMFUL TO THE PAINTWORK.**

CAUTION

DETERGENTS CAN POLLUTE WATER. THE VEHICLE MUST BE WASHED AT A WASH STATION EQUIPPED WITH A SPECIAL WATER PURIFICATION SYSTEM.

CAUTION

DO NOT USE A HIGH-PRESSURE WATER JET MACHINE TO CLEAN THE ENGINE AND/OR VEHICLE; HOWEVER, IF NO OTHER MEANS ARE AVAILABLE, IT IS THEN NECESSARY TO:

- **ONLY USE A FAN-LIKE SPRAY JET.**
- **DO NOT PLACE THE NOZZLE CLOSER THAN 60 CM.**
- **DO NOT USE WATER AT TEMPERATURES OVER 40°C.**
- **DO NOT USE HIGH-PRESSURE WATER JETS.**
- **DO NOT STEAM WASH.**
- **DO NOT AIM THE JET AT: THE ENGINE, THE WIRING, THE COOLING SLITS ON THE TRANSMISSION OR SCROLL COVERS.**

CAUTION

NEVER WASH THE SCOOTER IN DIRECT SUNLIGHT, ESPECIALLY IN SUMMER WHEN THE BODYWORK IS STILL HOT AS THE SHAMPOO COULD DAMAGE THE PAINTWORK IF IT DRIES BEFORE BEING RINSED OFF. NEVER USE CLOTHS SOAKED IN ALCOHOL, PETROL, DIESEL OIL OR KEROSENE FOR CLEANING THE PAINTED OR PLASTIC SURFACES, IN ORDER NOT TO DAMAGE THE LUSTRE FINISH OR ALTER THEIR MECHANICAL PROPERTIES. USING SILICONE-BASED WAX CAN DAMAGE THE PAINTED SURFACES, DEPENDING ON THE VEHICLE COLOUR (SATIN COLOURS). FOR FURTHER

INFORMATION ON THIS MATTER, CONTACT AN AUTHORISED SERVICE CENTRE.

WARNING



CLEAN YOUR SCOOTER FREQUENTLY SO AS TO AVOID POSSIBLE DIRT OR MUD DEPOSITS THAT COULD CAUSE MALFUNCTIONING IN THE THROTTLE GRIP TRANSMISSION AND/OR OTHER COMPONENTS.

CAUTION



DURING VEHICLE CLEANING, WITH WATER JET UNDER PRESSURE, KEEP THE SADDLE CLOSED, AVOIDING TO DIRECT THE JET IN THE HELMET COMPARTMENT.



In order to maintain the **satín-finish** characteristics, please follow these precautions:

CAUTION



AVOID ROLLS FROM CAR WASH AND PRESSURE WASHERS;

DO NOT USE GRINDING PASTE FOR THE REMOVAL OF SCRATCHES;

AVOID THE USE OF DRY CLOTHS FOR THE REMOVAL OF DUST OR FOR MANUAL DRYING AFTER CLEANING;

DO NOT USE SILICON WAX OR POLISHING AGENTS;

DO NOT USE ALCOHOL FOR CLEANING;

IT IS STRONGLY RECOMMENDED TO MANUALLY WASH WITH SPONGE AND NEUTRAL SHAMPOO, AVOIDING EXCESSIVE RUBBING THAT COULD AFFECT THE HAZE DEGREE OF THE PAINTING;

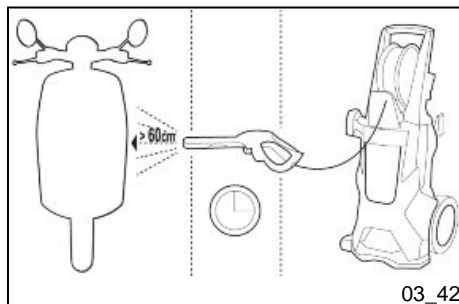
DO NOT USE ABRASIVE CLEANERS;

FAILURE TO FOLLOW THE ABOVE GIVEN ADVICE, COMPROMISES THE HAZE OF THE PAINTING;

DO NOT APPLY ADHESIVE ELEMENTS TO THE BODYWORK;

DO NOT POLISH OTHER VEHICLES CLOSE TO THE ONE WITH SATIN-FINISHING;

AVOID CONTACT AND/OR RUBBING OF CLOTHING WITH BUTTONS, BUCKLES, RINGS AND/OR NECKLACES ON SATIN-FINISHED SURFACES SINCE THIS MAY INDUCE DAMAGE AND/OR CHANGES IN HAZE OF SATIN-FINISHED PAINT;



WARNING



WHEN CLEANING THE VEHICLE WITH A PRESSURE CLEANER, DO NOT DIRECT THE WATER JET ON ANY PART OF THE ENGINE OR BODYWORK FOR PROLONGED PERIODS.

Troubleshooting

STARTING FAILURE

Fuse blown	Replace the damaged fuse and have the vehicle checked at an Authorised Service Centre
------------	--

DIFFICULTY STARTING (SEE THE «DIFFICULT STARTING» SECTION)

Lack of fuel in tank	Refuelling
Injection system fault	Contact an Authorised Service Centre .
Fuel pump fault	Contact an Authorised Service Centre .
Flat battery	Recharge the battery

**** IMPORTANT: DO NOT USE THE SCOOTER TO THE COMPLETE EXHAUSTION OF FUEL; SHOULD THIS OCCUR, DO NOT ATTEMPT TO START THE ENGINE. TURN THE IGNITION SWITCH TO «OFF» AND TOP-UP THE FUEL TANK AS SOON AS POSSIBLE. FAILURE TO FOLLOW THESE GUIDELINES COULD DAMAGE THE FUEL PUMP.***

IGNITION PROBLEMS

Faulty spark plug	Contact an Authorised Service Centre .
-------------------	---

Ignition/ injection control unit defective. Due to the presence of high voltage, this check should only be carried out by an expert

Contact an **Authorised Service Centre**.

LACK OF COMPRESSION

Loose spark plug

Screw in the spark plug tightly

Cylinder head loose, piston gas rings worn

Contact an **Authorised Service Centre**.

Valve stuck

Contact an **Authorised Service Centre**.

HIGH FUEL CONSUMPTION AND BAD PERFORMANCE

Clogged or dirty air filter

Try to blow out with compressed air, otherwise replace the filter

INSUFFICIENT BRAKING

Disc greasiness. Worn brake pads. Faulty braking system. Air in the front and rear brake circuits

Contact an **Authorised Service Centre**.

INEFFICIENT SUSPENSION

Shock absorber fault, oil leak, end buffers damaged; shock absorbers badly regulated in the pre-loading stage	Contact an Authorised Service Centre .
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AUTOMATIC TRANSMISSION PROBLEMS

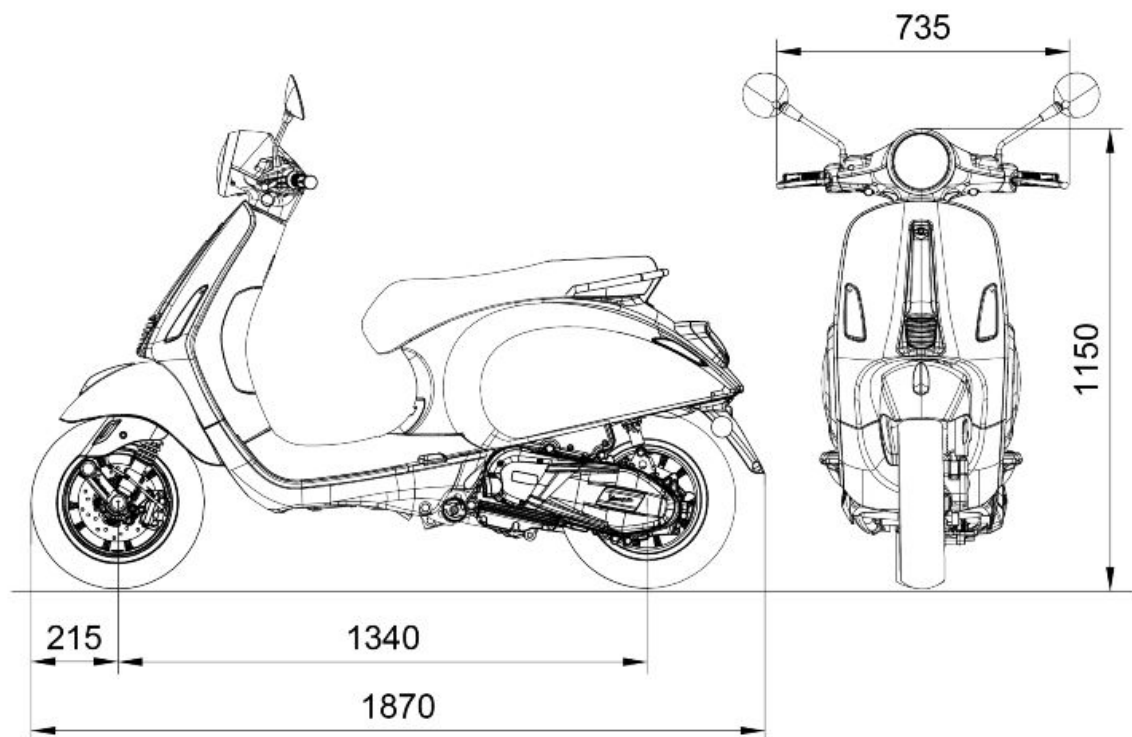
CVT rollers and/or drive belt damaged	Contact an Authorised Service Centre .
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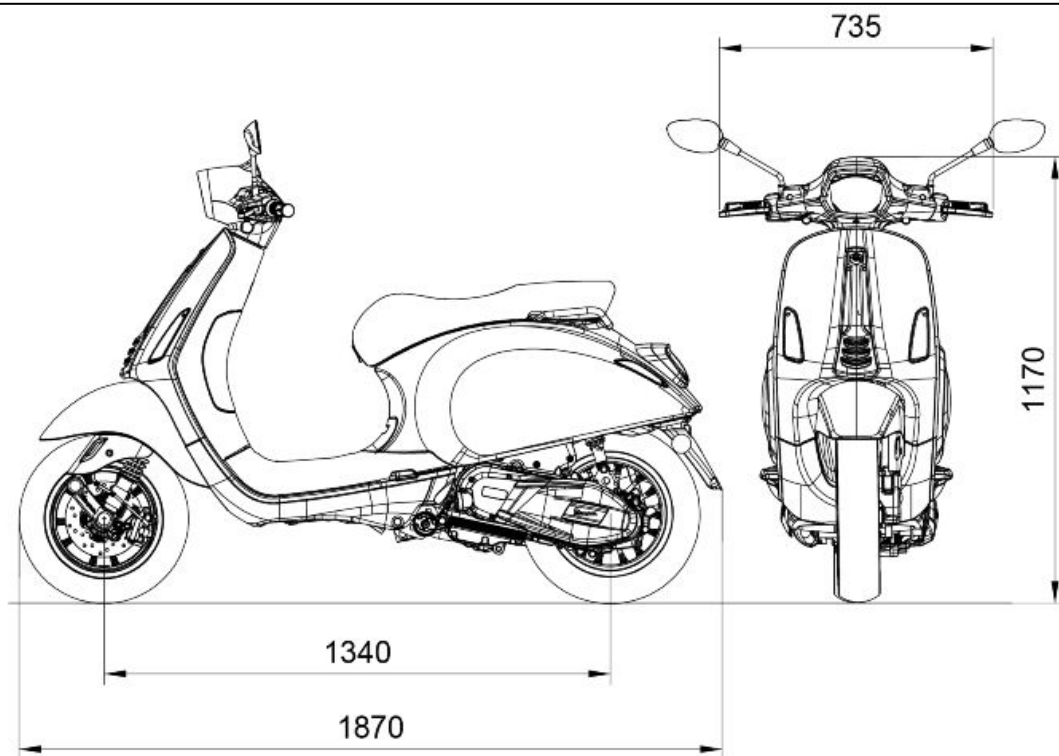
Vespa Primavera S - Sprint S

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Chap. 04
Technical data





04_02

VEHICLE TECHNICAL DATA

Chassis	Stamped plate body with welded structural reinforcements.
Front suspension	Single arm with helical spring and single double-acting hydraulic shock absorber.
Rear suspension	Double-acting shock absorber, adjustable to four positions at pre-loading.
Front brake	Ø 200 mm hydraulically operated disc brake controlled from RH handlebar lever; braking assisted by ABS system.
Rear brake	Ø 140-mm drum brake with mechanical control controlled from LH handlebar lever.
Wheel rim type	Light alloy.
Front wheel	12"x 3.00"
Rear wheel	12"x 3.00"
Front tyre	110/70 - 12" M/C 47P
Rear tyre	120/70 - 12" M/C 58P
Front tyre pressure (with passenger)	1.8 bar (1.8 bar)
Rear tyre pressure (with passenger)	2.0 bar (2.2 bar)
Kerb weight	126 kg
Maximum weight limit	305 kg

Battery	Sealed, 12 V / 6 Ah
---------	---------------------

SPECIFICATIONS - 125 ENGINES

Engine	Single-cylinder, 4-stroke Piaggio i-Get
Engine capacity	124 cm ³
Bore per stroke	52 x 58.6 mm
Max. power	7.9 kW at 7,700 rpm
MAX torque	10.4 Nm at 6,000 rpm
Compression ratio	10.5 ± 0.5: 1
Timing system	3 valves, single overhead camshaft, chain-driven.
Valve clearance (cold engine)	Intake: 0.08 mm Exhaust: 0.08 mm
Spark plug	NGK CR8EB
Fuel supply	Electronic injection with Ø 26 mm throttle body, single injector.
Cooling	Forced-air circulation cooling.
Lubrication	Wet sump
Start-up	Electric
Gearbox	Continuously variable transmission with torque server
Clutch	Automatic centrifugal dry clutch

Fuel	Unleaded petrol max E10 (95 RON)
Exhaust silencer	Absorption-type exhaust muffler with catalytic converter.
Emissions compliance	EURO 4

SPECIFICATIONS - 150 ENGINES

Engine	Single-cylinder, 4-stroke Piaggio i-Get
Engine capacity	155 cm ³
Bore per stroke	58 x 58.6 mm
Max. power	9.5 kW at 7,750 rpm
MAX torque	12.8 Nm at 6,500 rpm
Compression ratio	10.5 ± 0.5: 1
Timing system	3 valves, single overhead camshaft, chain-driven.
Valve clearance (cold engine)	Intake: 0.08 mm Exhaust: 0.08 mm
Spark plug	NGK CR8EB
Fuel supply	Electronic injection with Ø28 mm throttle body, single injector.
Cooling	Forced-air circulation cooling.
Lubrication	Wet sump
Start-up	Electric

Gearbox	Continuously variable transmission with torque server
Clutch	Automatic centrifugal dry clutch
Fuel	Unleaded petrol max E10 (95 RON)
Exhaust silencer	Absorption-type exhaust muffler with catalytic converter.
Emissions compliance	EURO 4

CAPACITY

Engine oil	1,340 cm ³ (of which 120 cm ³ in the filtering cartridge)
Hub oil	270 cm ³
Fuel tank capacity	8 ± 0.1 l

UNIT OF MEASURE - CONVERSION - ENGLISH SYSTEM TO INTERNATIONAL SYSTEM (IS).

1 Inch (in)	25.4 Millimetres (mm)
1 Foot (ft)	0.305 Metre (m)
1 Mile (mi)	1.609 Kilometre (km)
1 US Gallon (US gal)	3.785 Litre (l)
1 Pound (lb)	0.454 Kilogramme (kg)

1 Cubic inch (in ³)	16.4 Cubic centimetres (cm ³)
1 Foot pound (lb ft)	1.356 Newton metre (Nm)
1 Miles per hour (mi/h)	1.602 kilometres per hour (Km/h)
1 Pound per square inch (PSI)	0.069 (bar)
1 Fahrenheit (°F)	32+(9/5) Celsius (°C)

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Chap. 05
Spare parts and
accessories



Warnings (05_01)

WARNING



IT IS RECOMMENDED THAT "ORIGINAL PIAGGIO SPARE PARTS" BE USED, AS THESE ARE THE ONLY ONES OFFERING YOU THE SAME QUALITY ASSURANCE AS THOSE INITIALLY FITTED ON THE VEHICLE.

IT SHOULD BE REMEMBERED THAT USING NON-ORIGINAL SPARE PARTS CAUSES YOUR WARRANTY RIGHTS TO EXPIRE.

WARNING



PIAGGIO MARKETS ITS OWN LINE OF ACCESSORIES THAT ARE RECOGNISED AND GUARANTEED FOR USE. IT IS THEREFORE ESSENTIAL TO CONTACT AN AUTHORISED SERVICE CENTRE IN ORDER TO CHOOSE AND FIT ACCESSORIES CORRECTLY. THE USE OF NON-ORIGINAL ACCESSORIES MAY AFFECT THE STABILITY AND OPERATION OF YOUR VEHICLE AND REDUCE SAFETY LEVELS WITH POSSIBLE RISKS FOR THE RIDER.

WARNING



TO PREVENT ACCIDENTS AND TO GUARANTEE PROPER STABILITY, PERFORMANCE AND SAFETY, RIDE THE VEHICLE VERY CAREFULLY WHEN IT IS FITTED WITH ACCESSORIES OR WITH UNUSUAL LOADS.



NEVER RIDE THE VEHICLE EQUIPPED WITH ACCESSORIES (PANNIERS, TOP BOX AND/OR WINDSHIELD) AT A SPEED HIGHER THAN 80 km/h.

THE VEHICLE CAN BE RIDDEN AT A HIGHER SPEED WITHOUT THE ACCESSORIES MENTIONED BEFORE WITHIN THE LIMITS ESTABLISHED BY LAW.

IF THERE ARE ANY NON-PIAGGIO ACCESSORIES INSTALLED, OR AN ABNORMAL LOAD, OR IF THE SCOOTER IS NOT IN A GENERALLY GOOD CONDITION, OR WHENEVER WEATHER CONDITIONS DEMAND IT, SPEED SHOULD BE FURTHER REDUCED.

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Chap. 06
Scheduled
maintenance



06_01

Scheduled servicing table (06_01)

Adequate maintenance is fundamental to ensure long-lasting, optimum operation and performance of your vehicle.

For this reason a series of checks and maintenance services has been prepared, available for purchase separately, listed together in the chart on the following page. It is a good idea to report small performance anomalies right away to an **Authorised Service Centre**, without waiting for the next scheduled service, so they can be repaired immediately.

It is necessary to have your vehicle serviced to the prescribed intervals of time, even if you have not reached the predicted mileage. Services must be performed punctually at the correct intervals to maintain the validity of the warranty. For any additional information concerning Warranty procedures and 'Scheduled Maintenance', please consult the 'Warranty Conditions'.

SCHEDULED MAINTENANCE TABLE

km x 1,000	1	5	10	15	20	25	30	EVERY 12 MONTH S	EVERY 24 MONTH S
Safety fasteners	I		I		I		I		
Spark plug			I		R		I		
Centre stand		L	L	L	L	L	L	L	L
Drive belt			R		R		R		
Throttle control	I		I		I		I	I	I
Rollers housing			I		I		I		
Diagnosis by tool	I	I	I	I	I	I	I	I	I

km x 1,000	1	5	10	15	20	25	30	EVERY 12 MONTH S	EVERY 24 MONTH S
Air filter			R		R		R		
Engine oil filter	R		R		R		R	R	R
Valve clearance	A		A		A		A		
Clutch assembly					I				
Electrical system and battery	I	I	I	I	I	I	I		
Braking system	I		I		I		I	I	I
Cylinder cooling system						I		I	I
Brake fluid	I	I	I	I	I	I	I	I	R
Engine oil*	R	I	R	I	R	I	R	R	R
Hub oil			I		I		I	I	I
Headlight direction adjustment			I		I		I		
Brake pads	I	I	I	I	I	I	I	I	I
Sliding shoes / CVT rollers			I		R		I		
Engine oil pre-filter	C		C		C		C		
Tyre pressure and wear	I	I	I	I	I	I	I	I	I
Vehicle road test	I	I	I	I	I	I	I	I	I
Driven pulley - roller casings			I		L		I		
Suspensions			I		I		I	I	I
Steering	A		A		A		A	I	I

km x 1,000	1	5	10	15	20	25	30	EVERY 12 MONTH S	EVERY 24 MONTH S
Transmission			L		L		L	I	I

I: CHECK AND CLEAN, ADJUST, LUBRICATE OR REPLACE, IF NECESSARY **C:** CLEAN; **R:** REPLACE; **A:** ADJUST; **L:** LUBRICATE

* Check level every 2,500 km



Recommended products (06_02)

Piaggio Group recommends the products of its "Castrol Official Partner" for the scheduled maintenance of its vehicles. Use lubricants and liquids having specifications that are equivalent, or superior, to the recommended products. These indications also apply when topping up fluid levels.

TABLE OF RECOMMENDED PRODUCTS

Product	Description	Specifications
Engine oil 5W -40	Synthetic-based lubricant for four-stroke engines.	SAE 5W-40; JASO MA, MA2; API SL; ACEA A3
Transmission oil 80W-90	Lubricant for gearboxes and transmissions	SAE 80W-90; API GL-4
Brake fluid DOT 4	Synthetic brake fluid.	SAE J 1703; FMVSS 116; ISO 4925; CUNA NC 956 DOT4

Product	Description	Specifications
Lithium-based grease	Lithium-based grease, suitable for various uses.	Yellow grease ISO L-X-BCHA 3 - DIN 51 825 K3K -20
Water repellent spray grease	Water repellent pouring calcium spray grease.	R.I.D./A.D.R. 2 10°b) 2 R.I.Na. 2.42 - I.A.T.A. 2 - I.M.D.G. class 2 UN 1950 Page 9022 EM 25-89

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Chap. 07
Special fittings



07_01

Luggage rack (07_01, 07_02, 07_03)

The «Primavera» version is equipped with rear luggage carrier handle «1» shown in the picture.



07_02

The «Primavera Touring» version is equipped with rear luggage carrier «2» shown in the picture.

During use of the vehicle without a load on the rear luggage carriers, it is recommended to position the retainer hook «A» as shown in photo.

WARNING



Rear luggage carrier maximum admissible load: 4 kg



07_03

The «Primavera Touring» » version is also equipped with front luggage carriers «3», as well as the rear ones «2» indicated above.

WARNING

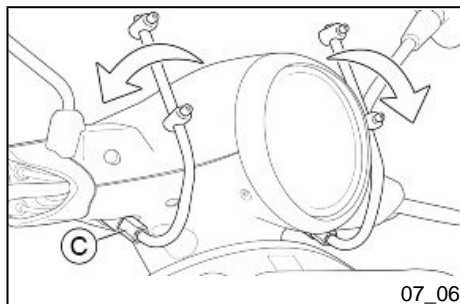
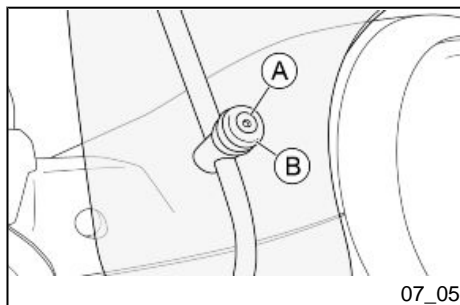
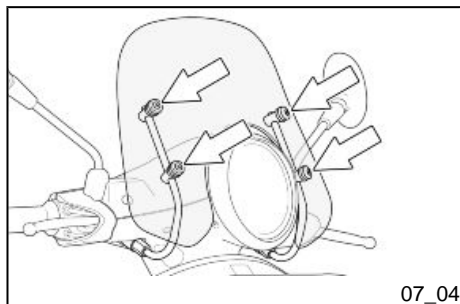


Front luggage carrier maximum admissible load: 4 kg

Windshield (07_04, 07_05, 07_06)

The «Primavera Touring» version is equipped with a windshield, for its removal proceed as follows:

- Undo the four screws «A» and remove them together with their bushings «B».
- Remove the windshield plate.



- Loosen the nut «C» on both sides.
- Turn the windshield brackets 90° as indicated in the figure, then remove them.

To refit, proceed in the reverse order.

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