

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 GTS Supertech 300 hpe



The instructions given in this manual are intended to provide a clear, simple guide to using your vehicle; details are also given of routine maintenance procedures and regular checks that should be carried out on the vehicle at an **Authorised PIAGGIO 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 PIAGGIO Dealer or Service Centre**.



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 GTS Supertech 300 hpe



Chap. 01
General rules

Information on the noise and exhaust gas emission control system

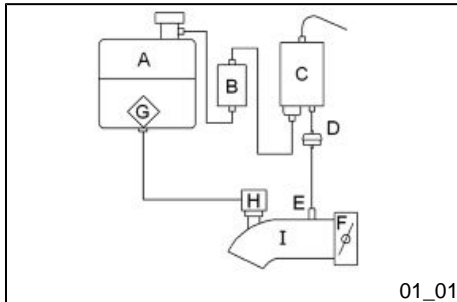
Evaporative emission control system (01_01)

CAUTION



THE FOLLOWING INDICATIONS REFER TO THE VERSIONS FOR THE JAPAN AND TAIWAN MARKETS.

The vehicle is equipped with a canister system, compliant with the current standards, for the control of evaporative emissions.



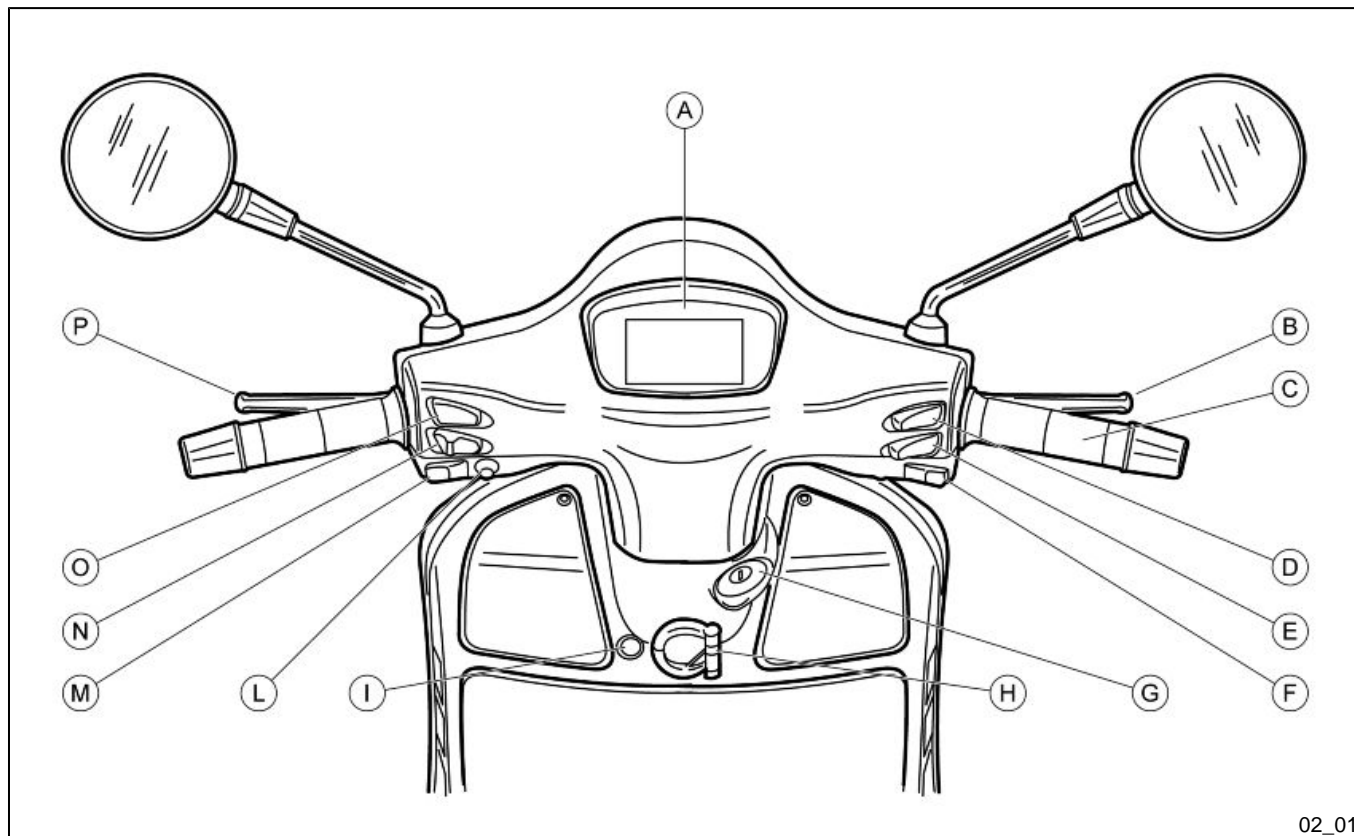
- A) Fuel tank
- B) Roll-over valve
- C) Canister
- D) Safety valve
- E) Vacuum socket
- F) Throttle body
- G) Fuel pump
- H) Injector
- I) Induction pipe

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**Chap. 02
Vehicle**

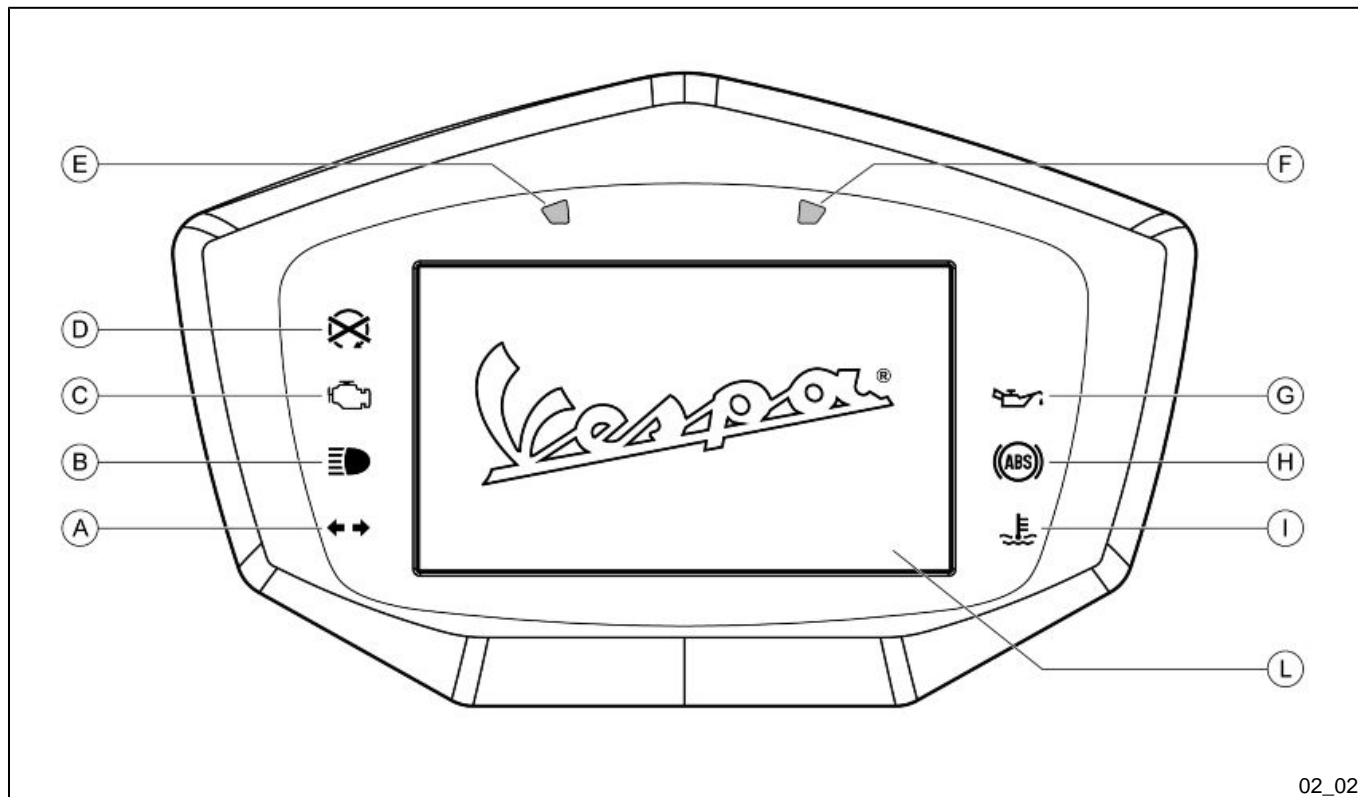
Dashboard (02_01)



02_01

- A** = Instrument panel
- B** = Front brake lever
- C** = Throttle grip
- D** = ASR button
- E** = Engine stop switch
- F** = Starter button
- G** = Ignition switch
- H** = Bag hook
- I** = Saddle opening button
- L** = Joystick **MODE**
- M** = Horn button
- N** = Turn indicator control
- O** = Light switch
- P** = Rear brake lever

Analogue instrument panel (02_02)



A = Turn signal indicator light;

B = High beam indicator light

C = Engine control warning light

D = Engine stop indicator light

E = Immobilizer indicator light

F = Digital display light sensor

G = Low engine oil pressure warning light

H = ABS warning light

I = Coolant temperature high warning light

L = Digital display

**Digital lcd display (02_03, 02_04, 02_05, 02_06, 02_07, 02_08,
02_09, 02_10, 02_11, 02_12, 02_13, 02_14, 02_15, 02_16, 02_17,
02_18, 02_19, 02_20, 02_21, 02_22, 02_23, 02_24, 02_25, 02_26,
02_27, 02_28, 02_29, 02_30, 02_31, 02_32, 02_33, 02_34, 02_35,
02_36, 02_37, 02_38, 02_39, 02_40, 02_41, 02_42, 02_43, 02_44,
02_45, 02_46, 02_47, 02_48, 02_49, 02_50, 02_51, 02_52, 02_53,
02_54, 02_55, 02_56, 02_57, 02_58)**



02_03

Key:

A = Speedometer

B = Ambient temperature indicator

C = Ice hazard icon

D = Multifunctional panel

E = "Vespa MIA" icon panel

F = Graphics ad infotainment panel

G = Maintenance icon

H = ASR warning light

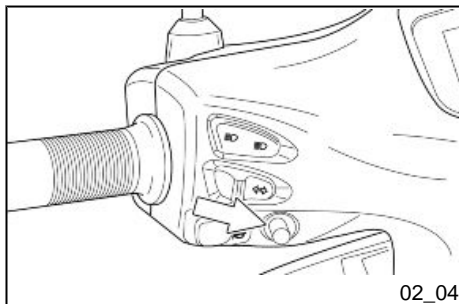
I = Reserve fuel tank warning light

L = Fuel gauge

M = Clock (12h or 24h)

N = Speed limit indicator via navigation system

By turning the ignition switch to "ON" position and then to "OFF" position, the digital display will show a "Welcome" and "Good bye".



The **MODE** joystick allows the cyclic display of the information shown on the multi-function panel of the digital display. It also allows navigation in the «**settings**» menu and setting various parameters.

This is possible by pressing or moving the joystick in the four directions with short or long presses.

N.B.



"PRESS BRIEFLY AND RELEASE": PRESS THE BUTTON AND RELEASE WITHIN 0.5 SECONDS;



"PRESS AND HOLD": PRESS THE BUTTON AND HOLD FOR AT LEAST 2 SECONDS.

MAINTENANCE ICON

This function indicates the scheduled maintenance interventions. For each time the key is turned to "ON", once the instrument panel has performed the initial check, if the value of the remaining kilometres until the next intervention is less than 300 Km (186.41 mi), the indicated icon will flash for 5 seconds. Once the service intervention mileage is reached, each time the key is turned to "ON", the icon remains lit until the service intervention is carried out. To perform the maintenance operations, contact an **Authorised Service Centre**.



AMBIENT TEMPERATURE INDICATION

Each time the key is turned to "ON", the digital display will show the ambient temperature in °C or in °F.

If the ambient temperature is less than 3°C (37.4°F), the digital display indicates with the specific symbol the potential presence of ice on the road. In such conditions, it is recommended to drive carefully. To select the desired unit of measurement, enter the «**settings**» menu as described below.



02_07

MULTIFUNCTIONAL PANEL

The multifunctional panel displays the following information cyclically, by briefly pressing the MODE joystick upward or downward:

N.B.



"PRESS BRIEFLY AND RELEASE": PRESS THE BUTTON AND RELEASE WITHIN 0.5 SECONDS;

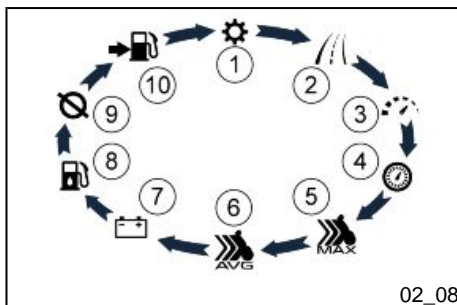
"PRESS AND HOLD": PRESS THE BUTTON AND HOLD FOR AT LEAST 2 SECONDS.

1. Settings
2. Total odometer
3. Trip odometer
4. Trip time
5. Maximum speed
6. Average speed
7. Battery charge state
8. Current consumption
9. average consumption
10. Range

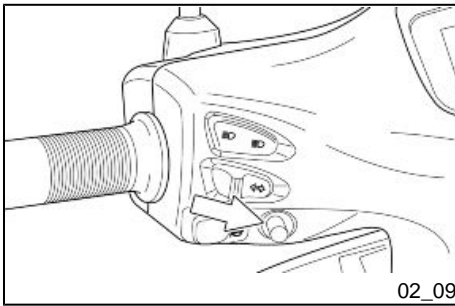
WARNING



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



02_08



While displaying one of the following functions:

- partial odometer
- trip time
- maximum speed
- average speed
- average consumption

by holding the MODE joystick pressed toward the **CENTRE**, all values are reset.



SETTINGS MENU

When the vehicle is at a standstill, briefly press the joystick up or down several times to display the «**settings**» function at the centre of the multifunctional panel. The «**settings**» menu can be accessed with a prolonged press on the central button of the joystick .



Briefly press the joystick up or down to highlight the desired function, with a short press on the central button of the joystick, you can select:

- Language
- Configuration
- Backlight
- Graphic



LANGUAGE SETTING

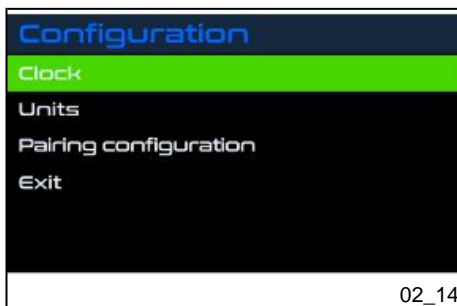
Briefly press the joystick up or down to highlight the desired function. Select the desired language via a short press on the central button of the joystick. The selection excludes the others.



CONFIGURATION MENU

Highlight the «**Configuration**» function via a short press on the central button of the joystick; enter the menu where it is possible to configure:

- Clock
- Measurement Units (Units)
- Pairing configuration



CLOCK SETTING (CLOCK)

Highlight the "**Clock**" function via a short press on the central button of the joystick and enter the menu.

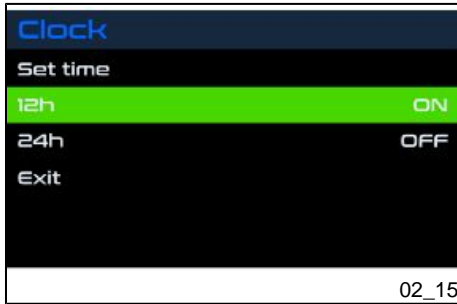
CAUTION



FOR SAFETY, THE CLOCK SETTING FUNCTION IS ONLY AVAILABLE AT A VEHICLE SPEED OF 0 KM/H.

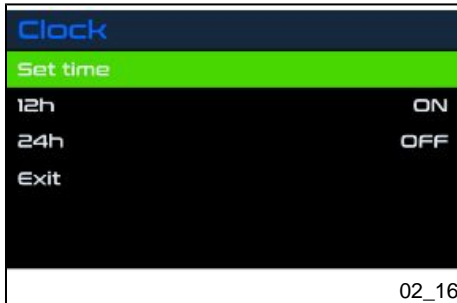
WARNING

DISCONNECTING THE BATTERY CABLES WILL RESULT IN A RESET OF THE CLOCK



Select the desired format between 12h or 24h.

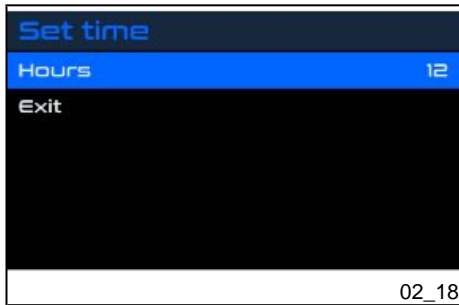
The selection excludes the others.



Highlight the "**Set time**" function via a short press on the central button of the joystick and enter the menu.



Highlight the "**Hour**" function. Via a short press on the central button of the joystick, enter the menu.



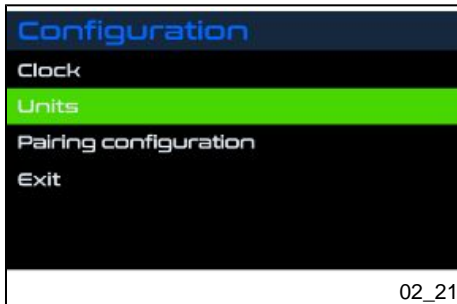
Briefly press the joystick up or down to set the correct hour. Briefly press the joystick central button to confirm. The green bar confirms the selection.



Highlight the "**Minutes**" function. Via a short press on the central button of the joystick, enter the menu.



Briefly press the joystick up or down to set the correct minutes. Briefly press the joystick central button to confirm. The green bar confirms the selection.



MEASUREMENT UNITS MENU (UNITS)

Highlight the "**Units**" function via a short press on the central button of the joystick and enter the menu where it is possible to configure:

- Speed
- Temperature



SETTING THE SPEED UNIT OF MEASUREMENT (SPEED)

Highlight the "**Speed**" function. Via a short press on the central button of the joystick, enter the menu.

Select the desired format between Km/h or mph. The selection excludes the others.

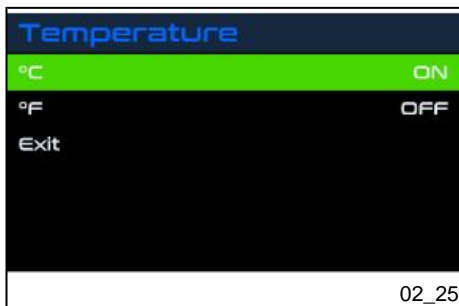


SETTING THE TEMPERATURE UNIT OF MEASUREMENT (TEMPERATURE)

Highlight the "**Temperature**" function. Via a short press on the central button of the joystick, enter the menu.



Select the desired format between °C or °F. The selection excludes the others.





02_26

VMP MULTIMEDIA SYSTEM - VESPA MIA

Download and install on your smartphone the specific "**Vespa**" app from Play Store or Apple Store.



02_27

PAIRING CONFIG. MENU (PAIRING CONFIGURATION)

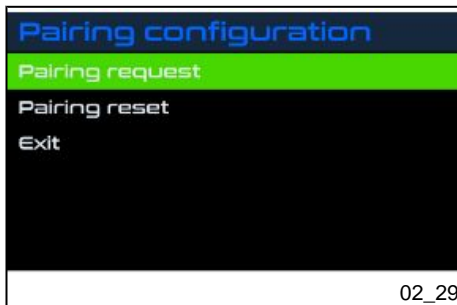
The vehicle is equipped with the "**Vespa MIA**" control unit that communicates with the smartphone via Bluetooth. Using the specific "**Vespa**" application installed on the smartphone, it is possible to exchange data with the vehicle and manage multimedia contents. Once a connection is established correctly between the control unit and the smartphone, the following functions can be directly managed by the digital display of the vehicle:

- manage phone calls;
- manage audio playback;
- SMS notifications management;
- GPS navigation.



02_28

Highlight the "**Pairing configuration**" function. Via a short press on the central button of the joystick, enter the menu.



Highlight the "Pairing request" function and briefly press the central button of the joystick.



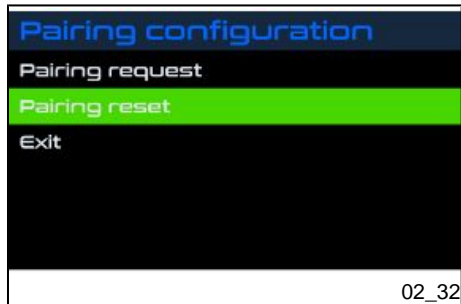
The digital display shows the message confirming that pairing with the smartphone is enabled. Enable the bluetooth search on your smartphone, select the "BT-ROUTER" device, and, if required, type the password "0000" and press on pair.



The smartphone will display the "BT-ROUTER" device in the associated devices list. Wait for the digital display to automatically connect the smartphone. **Do NOT force the connection from the telephone.** The smartphone icon on the display indicates active communication. **When requested, allow phone book and notifications sharing. These authorizations are required to display the caller's name and the SMS reception notification on the display.**

N.B.

UPON THE FIRST PAIRING BETWEEN THE DISPLAY AND SMARTPHONE, MORE TIME MAY BE REQUIRED FOR THE SYNCHRONIZATION OF THE PHONE BOOK.



THE SUCCESSFUL CONNECTION BETWEEN THE SMARTPHONE AND VEHICLE WILL BE INDICATED BY THE SMARTPHONE ICON LIGHTING UP ON THE DISPLAY.

If the association between the smartphone and the vehicle is not successful, proceed as follows:

- restart the smartphone;
- turn the ignition key to "OFF" and then to "ON"; wait until the animation on the display ends.

If the smartphone icon on the display has not lit after about 1 minute, select the "Pairing reset" function and briefly press the central button of the joystick.

All stored Bluetooth devices are deleted from the "Vespa MIA" system.

The display shows the message confirming the deletion. The smartphone pairing procedure can be repeated.

N.B.

PLEASE NOTE THAT TO CONNECT THE APP TO THE VEHICLE AGAIN, THE FOLLOWING WILL BE NECESSARY:

- **ON iOS, DELETE THE PREVIOUSLY INSTALLED APP AND REINSTALL IT.**
- **ON ANDROID IT WILL NECESSARY AND SUFFICIENT TO DELETE THE APPLICATION DATA FROM THE APP MANAGEMENT MENU (THIS WILL RESET THE APPLICATION TO DEFAULT SETTINGS AND IT WILL BE NECESSARY TO PERFORM THE LOGIN AND THE FIRST CONNECTION TO THE VEHICLE AGAIN).**
- **IN CASE OF CONNECTION TO A NEW VEHICLE, IT IS NECESSARY TO REMOVE THE PREVIOUS BT-ROUTER FROM THE ASSOCIATED DEVICES.**

N.B.

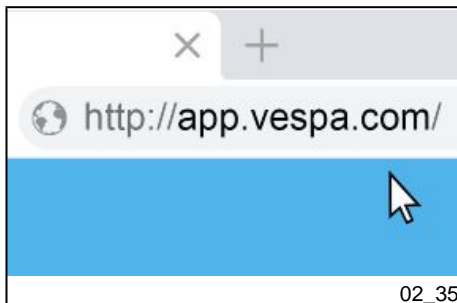
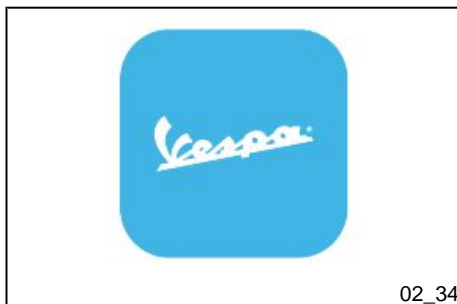
IT IS RECOMMENDED TO ASSOCIATE MAXIMUM N. 2 SMARTPHONES AND 1 HEADSET TO THE SAME VEHICLE, TO OPTIMIZE THE SYSTEM OPERATION.

IF TWO SMARTPHONES ARE PAIRED, THE CONNECTION OF THE FIRST SMARTPHONE PAIRED WITH THE "BT-ROUTER" COULD REQUIRE MORE THAN 30 SECONDS.

ONCE THE SMARTPHONE IS CONNECTED TO THE "BT-ROUTER", THE OPERATING SYSTEM REQUIRES ACCESS TO THE PHONE BOOK AND NOTIFICATIONS; ACCEPT TO BE ABLE TO VIEW THE NAME OF THE CALLERS AND THE SMS RECEIPT NOTIFICATIONS ON THE DISPLAY.

CONNECTION BETWEEN THE APPLICATION AND THE DIGITAL DISPLAY

Search for the "**Vespa**" application in Play Store or App Store and install it. Register your account by following the instructions. Select "**allow**" for the location and notification requests.



For specific information about the pairing of the "Vespa MIA" system and for any differences in the procedure depending on the type of smartphone used, please refer to the user manual included in the "Vespa" app.

Please note that the installation and connection of the app are **ESSENTIAL** for using the system.

The app manual with specific information for using the system is available by visiting the site

<http://app.vespa.com/>



Open the "**Vespa**" application on the smartphone and access your account. On the application's main page select "**Connect**". Select your vehicle model; the digital display will show the icon of the "**Vespa**" app, confirming the successful activation of the communication between the app and Vespa.

BLUETOOTH HEADSET PAIRING

The multimedia functions can be used with the MODE joystick, by pairing a bluetooth headset with the digital display via the "**Vespa**" application. After pairing, it will be possible to answer or reject calls, activate voice commands and manage the music on the smartphone.



Activate the "**pairing**" mode of the bluetooth headset to be paired (refer to the instructions of the device). Press the Bluetooth icon on the main screen of the "**Vespa**" application and search for new devices until the headset is displayed. Select the bluetooth headset, check the "**Hands-free / Driver headset**" option and press "**Pair**". The successful pairing is indicated by the headset icon displayed on the digital display.

If the pairing is not successful, perform a new search.

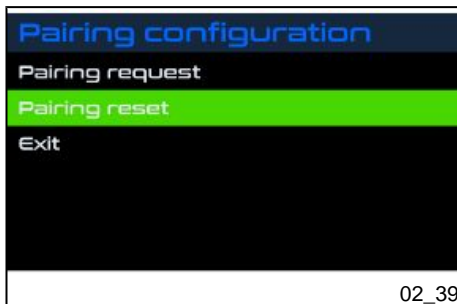


No multimedia function can be managed from the handlebar of the vehicle if there is no bluetooth headset, or if the headset is directly connected to the smartphone. **The bluetooth headset can be associated to the vehicle only via the "Vespa" application and it must be connected to the vehicle in order to correctly use the multimedia functions of the system. For this reason, the headsets that automatically connects to the smartphone are not compatible (Ex: Apple Airpod).**

Required operation for iOS 10.0 versions or higher

If the "BT-ROUTER" does not automatically require access to notifications, it will be necessary to proceed as follows:

- Enter the menu: "Settings" > "Bluetooth" > "Telephone devices";
- select "**BT-ROUTER**", select "Info", enable the options manually;
- for iOS systems, the SMS notifications will be enabled starting from the moment in which the ignition key is turned to "**ON**", **AFTER** the one in which the options have been manually enabled.



If it is necessary to disconnect the smartphone, proceed as follows. Highlight the '**Pairing reset**' function and briefly press the central button of the joystick.

N.B.

THIS OPERATION IS NECESSARY WHEN THE SMARTPHONE IS REPLACED.



All stored Bluetooth devices are deleted from the "Vespa MIA" system. The display shows the message confirming the deletion. The pairing procedure can be repeated for a new smartphone.



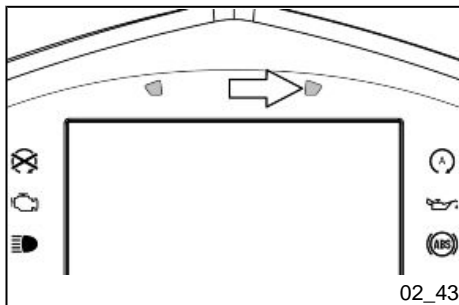
BACKLIGHT MENU (BACKLIGHT)

Highlight the "Backlight" function via a short press on the central button of the joystick and enter the menu where it is possible to configure:

- Backlight mode: Automatic, Day, Night
- Brightness level (Settings)



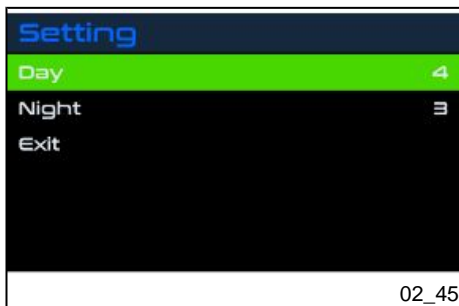
Briefly press the joystick up or down to highlight the desired function. Confirm the selected option with a short press of the central button of the joystick. The selection excludes the others.



The "**Automatic**" option allows automatic switching between the day and night graphics depending on the light detected by the brightness sensor located on the instrument panel.



Highlight the "**Setting**" function. Via a short press on the central button of the joystick, enter the menu.

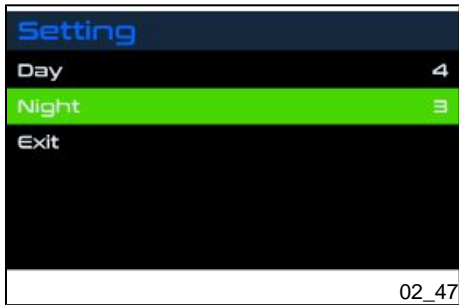


Highlight the "**Day**" function. Via a short press on the central button of the joystick, enter the menu.

The default value is 4.

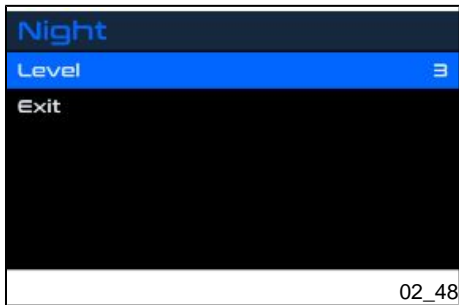


Briefly press the joystick up or down to set the desired brightness level. Briefly press the joystick central button to confirm. The green bar confirms the selection.



Highlight the "**Night**" function. Via a short press on the central button of the joystick, enter the menu.

The default value is 3.



Briefly press the joystick up or down to set the desired brightness level. Briefly press the joystick central button to confirm. The green bar confirms the selection.



GRAPHIC MENU (GRAPHIC)

Highlight the "**Graphic**" function with a short press of the central button of the joystick. Via a short press on the central button of the joystick, enter the menu.



Various background graphics can be selected for the digital display. Briefly press the joystick up or down to highlight the desired function. Confirm the selected option with a short press of the central button of the joystick. The selection excludes the others.



"VESPA MIA" SYSTEM MESSAGES

The "**Vespa MIA**" system communicates with the user by means of messages displayed on the graphic panel of the digital display. Depending on the message type, the graphic panel shows the icon, colours and the specific message. The image on the side shows:

- Text alarms, contact an **Authorised Service Centre**;
- Caution messages;
- Information messages.



N.B.



JOYSTICK COMMANDS ARE IGNORED WHEN A POPUP WINDOW IS ACTIVE ON THE DISPLAY.

THE POPUP WINDOW MUST BE CLEARED FROM THE DISPLAY TO RESTORE NORMAL OPERATION WITH A PROLONGED PRESS ON THE CENTRAL BUTTON OF THE JOYSTICK.

PHONE CALLS AND SMS MESSAGES MANAGEMENT

To use phone features, view caller notifications and identifiers, it is necessary to:

- pair the smartphone with the "**Vespa MIA**" system via bluetooth, as previously described;
- install and access your "**Vespa**" application account on the smartphone;
- pair a bluetooth headset with the «**Vespa MIA**» system using the "**Vespa**" application;
- allow the address book and notifications sharing during the Bluetooth pairing of the smartphone with the "**Vespa MIA**" system.

The corresponding three icons are shown on the digital display. Please note that on iOS systems the message notifications will be displayed **ONLY** at the second connection of the smartphone to the vehicle.

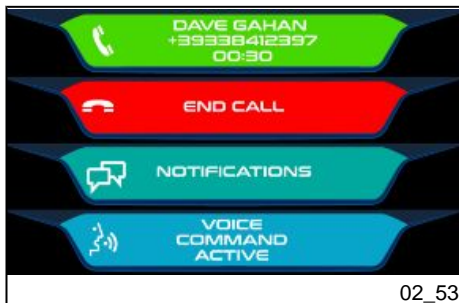
N.B.



WHEN A SMARTPHONE CONNECTS WITH THE VESPA MIA SYSTEM (BT-ROUTER), AUDIO IS AUTOMATICALLY ROUTED TO THE VESPA MIA SYSTEM.

IF THERE IS NO HEADSET CONNECTED TO THE "VESPA MIA" SYSTEM, THE AUDIO FUNCTION OR MUSIC PLAYBACK CANNOT BE MANAGED, THERE-

FORE THE SMARTPHONE AUDIO MUST BE MANUALLY ROUTED TO THE DESIRED DEVICE (e.g. SPEAKERS/TELEPHONE MICROPHONE).



The following information appears on the digital display:

- call in progress;
- call ended;
- SMS, email, generic notification;
- active vocal management.

Use the MODE joystick for phone call management, as indicated in the table:

MODE JOYSTICK FUNCTIONS FOR PHONE CALL MANAGEMENT

| | |
|----------------------|----------------------------|
| Accept incoming call | CENTRAL BUTTON BRIEF PRESS |
| End an active call | CENTRAL BUTTON LONG PRESS |
| Reject incoming call | CENTRAL BUTTON LONG PRESS |
| Cancel outgoing call | CENTRAL BUTTON LONG PRESS |

| | |
|--|----------------------------|
| Clear most recent missed call popup (with NO call in progress) | CENTRAL BUTTON BRIEF PRESS |
| Redial last missed call number (with NO call in progress) | CENTRAL BUTTON LONG PRESS |
| Increase volume (with call in progress) | BRIEF UPWARD PRESS |
| Lower volume (with call in progress) | BRIEF DOWNWARD PRESS |
| Enable/disable voice command | SHORT DOUBLE CENTRAL PRESS |



MUSIC PLAYBACK MANAGEMENT

To use the functions of the music player, the following must be performed:

- pair the smartphone with the "**Vespa MIA**" system via bluetooth, as previously described;
- install and access your "**Vespa**" application account on the smartphone;
- pair a bluetooth headset with the «**Vespa MIA**» system using the "**Vespa**" application.

The corresponding three icons are shown on the digital display.

N.B.



WHEN A SMARTPHONE CONNECTS WITH THE VESPA MIA SYSTEM (BT-ROUTER), AUDIO IS AUTOMATICALLY ROUTED TO THE VESPA MIA SYSTEM.

IF THERE IS NO HEADSET CONNECTED TO THE "VESPA MIA" SYSTEM, THE AUDIO FUNCTION OR MUSIC PLAYBACK CANNOT BE MANAGED, THERE-

FOR THE SMARTPHONE AUDIO MUST BE MANUALLY ROUTED TO THE DESIRED DEVICE (e.g. SPEAKERS/TELEPHONE MICROPHONE).



The following information appears on the digital display:

- track playback;
- playback paused;
- playback suspended;
- forward (or reverse) track scrolling.

WARNING



A PLAYLIST MUST BE OPENED FROM THE SMARTPHONE BEFORE STARTING YOUR TRIP OR THROUGH VOCAL COMMANDS IF YOU ARE TRAVELLING.

Use the MODE joystick for music playback management, as indicated in the table:

MODE JOYSTICK FUNCTIONS FOR MUSIC MANAGEMENT

| | |
|---|----------------------------|
| Music playback/pause | CENTRAL BUTTON BRIEF PRESS |
| Increase audio volume (with audio playback in progress) | BRIEF PRESS UPWARD |

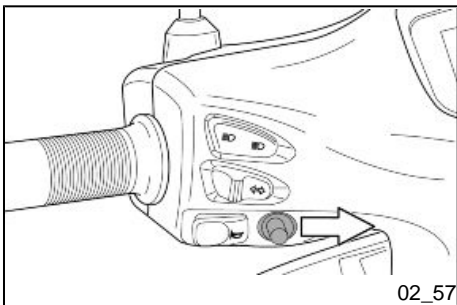
| | |
|--|-------------------------------------|
| Lower audio volume (with audio playback in progress) | BRIEF PRESS DOWNWARD |
| Next music track | PRESS SELECTOR BRIEFLY TO THE RIGHT |
| Previous audio track | PRESS SELECTOR BRIEFLY TO THE LEFT |
| Exit audio playback mode | CENTRAL BUTTON LONG PRESS |



GPS NAVIGATION

Combined with the "Vespa" application, the "Vespa MIA" system allows the display of GPS indications on the digital display. By means of pictograms, distance and travel time data, the desired destination can be reached.

Refer to the navigation guide by accessing the "Vespa" application with your account. After setting the destination address and navigation is started, the navigation icon is shown on the digital display..



By holding the MODE joystick pressed to the RIGHT, the GPS indications screen in accessed.

During navigation, you can return to the instrument panel home screen at any time (and vice versa) while keeping the navigation active.

N.B.

BY SETTING THE DESTINATION ADDRESS VIA THE "VESPA" APPLICATION, THE DIGITAL DISPLAY AUTOMATICALLY DISPLAYS THE INDICATION SCREEN.

N.B.



"PRESS BRIEFLY AND RELEASE": PRESS THE BUTTON AND RELEASE WITHIN 0.5 SECONDS;

"PRESS AND HOLD": PRESS THE BUTTON AND HOLD FOR AT LEAST 2 SECONDS.

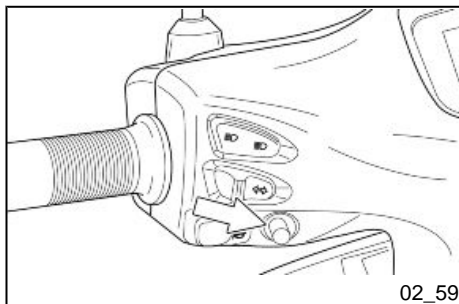


02_58

NAVIGATION SCREEN KEY

A = destination or next turn address;

- B** = indication following the next manoeuvre;
- C** = distance to the next manoeuvre;
- D** = remaining time until reaching the destination;
- E** = remaining distance until reaching the destination;
- F** = next manoeuvre indication;
- G** = distance related to indication "F";
- H** = exit number to follow at a roundabout;
- I** = indication regarding the speed limit on the road travelled;
- L** = indication regarding the current speed (tachometer).



***MODE* button (02_59)**

The **MODE** joystick allows the cyclic display of the information shown on the multi-function panel of the digital display. It also allows navigation in the «**settings**» menu and setting various parameters.

This is possible by pressing or moving the joystick in the four directions with short or long presses.

N.B.



"PRESS BRIEFLY AND RELEASE": PRESS THE BUTTON AND RELEASE WITHIN 0.5 SECONDS;

"PRESS AND HOLD": PRESS THE BUTTON AND HOLD FOR AT LEAST 2 SECONDS.

Starter switch (02_60)

The ignition switch is located on the front leg shield back plate near the bag hook.



02_60

SWITCH POSITIONS

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

OFF «2»: Starting disabled, key locked in barrel, mechanical antitheft device disabled. Saddle opening and case opening possible.

CLOSE «3»: Starting disabled, key removable from barrel, mechanical antitheft device disabled. Saddle opening and case opening disabled.

LOCK «4»: Starting disabled, key removable from barrel, mechanical antitheft device enabled. Saddle opening and case opening disabled.



02_61

Locking the steering wheel (02_61)

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

CAUTION



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



02_62

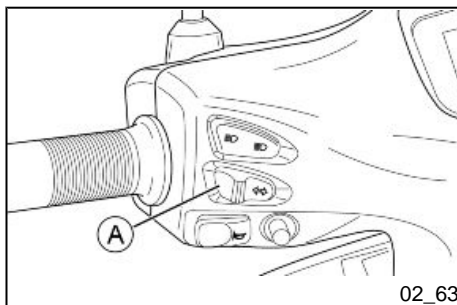
Releasing the steering wheel (02_62)

Reinsert the key and turn it to «OFF».

CAUTION



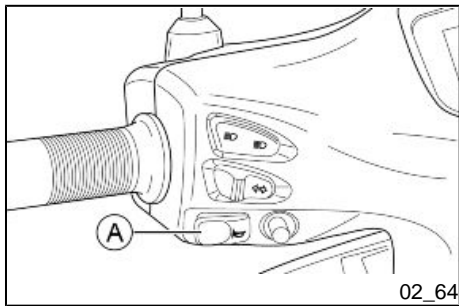
NEVER TURN THE KEY TO «LOCK» OR «OFF» WHILE RIDING.



02_63

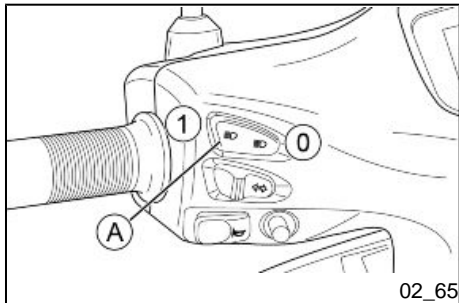
Switch direction indicators (02_63)

Move the switch «A» towards the left to indicate a left turn; move the switch «A» towards the right to indicate a right turn;. Push in the switch «A» in the centre to deactivate the turn signal indicators.



Horn button (02_64)

Press button «A» to operate the horn.



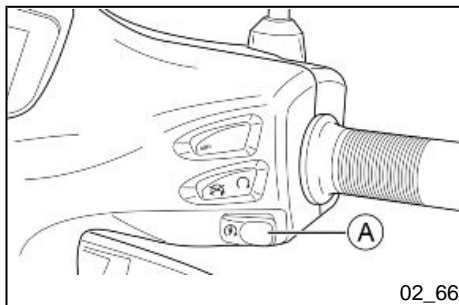
Light switch (02_65)

The low beam headlamp is lit when the light selector switch **A** is turned to **0**. Turning the switch to **1** turns on the high beam headlamp.

CAUTION

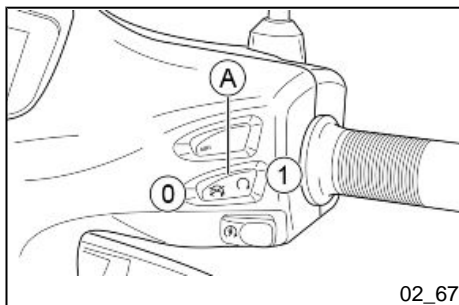


DO NOT REST OR TRANSPORT OBJECTS AND/OR CLOTHING ON TOP OF THE FRONT LIGHT ASSEMBLY WITH THE LIGHT ON OR JUST TURNED OFF. FAILURE TO OBSERVE THIS PRECAUTION MAY CAUSE THE GLASS TO OVERHEAT AND CONSEQUENTLY MELT.



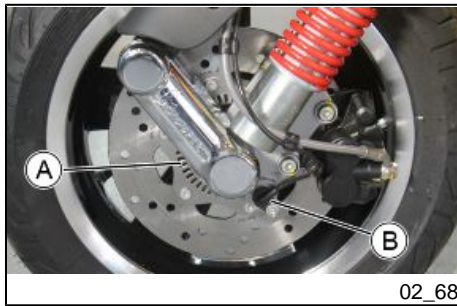
Start-up button (02_66)

Starter button «A». To start the vehicle see the "starting the engine" section.



Engine stop button (02_67)

With the emergency stop switch «A» in position «1» **RUN** it is possible to start the engine; if the emergency stop switch «A» is in position «0» **OFF** it is not possible to start the engine, and if it is running, it will stop.



System ABS (02_68, 02_69, 02_70)

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

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 wheels 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 cluster, 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:

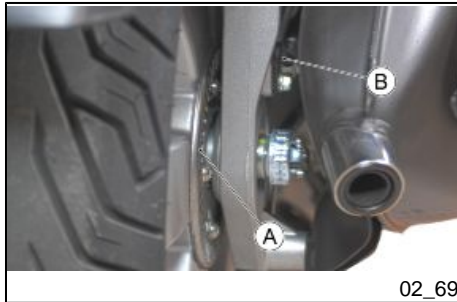
- Riding on rough roads, with gravel or snow
- Riding on roads with holes or bumps

It is therefore recommended to reduce speed in these conditions.



AT VERY LOW SPEEDS, LESS THAN 5 km/h (3 mph) 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)



CAUTION

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

When switching the key to «**ON**», the ABS control unit performs a control of the system, during which the ABS warning light flashes. This phase ends when exceeding 5 Km/h of speed with the switching off of the warning light.

In case of error of the system, the ABS warning light remains fixed. The braking system keeps the characteristics of a traditional system.

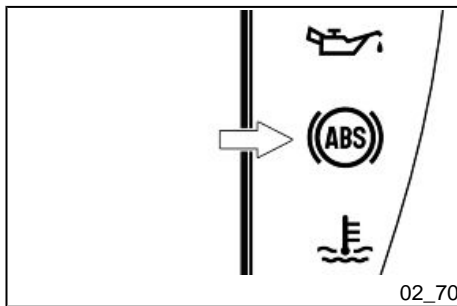
In this case, reduce speed and go to an **Authorised Service Centre** for the appropriate checks.

WARNING

IF THE WARNING LIGHT IS FLASHING, THE ABS SYSTEM IS NOT ACTIVE.

System ASR (02_71, 02_72)**ASR SYSTEM**

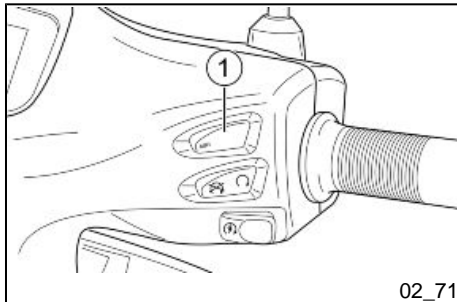
The ASR system is a driving aid that assists the driver in acceleration manoeuvres, particularly on low-grip surfaces or under conditions that can cause sudden back-wheel slippage. The ASR in these situations automatically intervenes by reducing engine output within the limit imposed by the grip conditions, contributing significantly to the maintenance of stability the vehicle.



WARNING

THE ASR SYSTEM IS BASED ON THE RECOGNITION OF SPEED DIFFERENCES BETWEEN FRONT AND REAR WHEEL. FOR THE SYSTEM TO PERFORM CORRECTLY IN ALL CONDITIONS, THE PROCEDURE MUST BE PERFORMED EACH TIME A TYRE IS REPLACED EVEN IF ONLY ONE OF THE TYRES IS REPLACED.

FOR THE CALIBRATION OF THE ASR SYSTEM PERFORM THE PROCEDURE BELOW.



ASR BUTTON 1: activation / deactivation.



ASR ICON 2: ASR status indicator icon.

ASR ICON FLASHING MODE:

- Frequency of 5 flashes per second (5Hz), with vehicle running: The system is functioning correctly and is active (poor grip conditions, engine power limiting in effect); ride with extreme care, as the grip limit has been exceeded; restore the vehicle safety conditions by gently reducing the throttle opening.

- Frequency of 1 flash per second (1 Hz), with the key in "ON" position and the vehicle at a standstill: The system is active and the calibration is performed. The corresponding icon will switch off as soon as the ABS system becomes operational.

- Frequency of 1 flash every 2 seconds (0.5 Hz), with the key in "ON" position and the vehicle at a standstill: the system calibration is in progress.

- Switched on steady can have three meanings:

1. calibration procedure performed incorrectly. Perform a new calibration;
 2. the ASR system is not operating and will not intervene in case of loss of grip;
 3. the ASR system has been willingly disabled.
- If the deactivation was voluntary (by pressing the appropriate button "1" for 1 second with the engine running) it is recommended to reactivate the system as soon as possible.
 - If the system was NOT deactivated voluntarily, this indicates a failure of the ASR system: in this case you must contact an **Authorised Service Centre** for the diagnosis and the reactivation of the system.

To ensure maximum safety of the vehicle it is advisable to keep the system active. Deactivation may be necessary only in case of starting with very low grip surfaces (mud, snow) on which the operation of the ASR could actually prevent the movement of the vehicle.

N.B.

UPON KEY "ON", THE ASR ICON FLASHES AT THE SAME FREQUENCY AS THE ABS INDICATOR LIGHT TO INDICATE THAT SYSTEM DIAGNOSIS IS IN PROGRESS. IF NO ERRORS ARE FOUND, THE ASR ICON AND THE ABS INDICATOR LIGHT SWITCH OFF AT THE SAME TIME ONCE THE VEHICLE SPEED EXCEEDS 5 Km/h (3 mph).

IF THE ICON AND INDICATOR LAMP DO NOT FLASH WHEN THE ENGINE IS STARTED, THE SYSTEM MAY NOT BE WORKING. CONTACT AN AUTHORISED SERVICE CENTRE.

WARNING



THE ASR SYSTEM IS ACTIVATED AT EVERY "ON" POSITIONING OF THE IGNITION SWITCH.

IF DISABLED BY THE USER, THE ASR SYSTEM KEEPS THE STATE OF INACTIVITY ONLY IF THE VEHICLE IS OFF, BY USING THE ENGINE STOP SWITCH; AT THE NEXT KEY ON THE ASR SYSTEM IS ENABLED AUTOMATICALLY.

CAUTION



IT IS EMPHASISED THAT THE RIDING AUXILIARY SYSTEM CANNOT CHANGE THE PHYSICAL LIMITS OF GRIP AND IS NOT A SUBSTITUTE FOR PROPER MANAGEMENT OF POWER, BOTH ON STRAIGHT STRETCHES AND IN TURNS. THEREFORE, IT IS RECOMMENDED TO ALWAYS USE THE VEHICLE WITH THE UTMOST CARE AND IN ACCORDANCE WITH THE REGULATIONS IN FORCE.

CAUTION



AT LOW SPEED, LESS THAN 5 Km/h (3 mph), THE ASR SYSTEM IS NOT OPERATIONAL.

IT IS RECOMMENDED TO PAY PARTICULAR ATTENTION IN THE EVENT OF ACCELERATION FROM STANDSTILL IN CONDITIONS OF LOW GRIP, ESPECIALLY IN THE FIRST METRES.

N.B.

IN CASE OF ROAD DISCONNECTIONS THERE COULD BE SHORT ACTIVATIONS OF THE ASR SYSTEM. SUCH EVENT APPEARS UNDER NORMAL OPERATION CONDITIONS OF THE VEHICLE.

WARNING



THE ASR SYSTEM PREVENTS THE APPLICATION OF HIGH SPEED ROTATION ON THE REAR WHEEL WITH THE VEHICLE ON THE CENTRE STAND.

IT IS RECOMMENDED TO NOT INSIST WITH THE THROTTLE GRIP IN THIS SPECIFIC SITUATION, BECAUSE THIS MAY CAUSE ABNORMAL STOPS AND/OR DAMAGE TO THE CATALYSTS.

CAUTION



A POOR STATE OF MAINTENANCE OF THE TYRES CAN RESULT IN ABNORMAL OPERATION OF THE ASR SYSTEM.

IN CASE OF REPEATED INTERVENTIONS OF THE ASR, EVEN ON ROAD SURFACES WITH GOOD GRIP OR SMALL THROTTLE OPENINGS, IT IS NECESSARY TO CHECK FOR WEAR AND/OR THE STATE OF INFLATION OF TYRES FIRST. IF THE PROBLEM PERSISTS, CONTACT AN AUTHORISED SERVICE CENTRE.

CAUTION



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

ASR SYSTEM CALIBRATION PROCEDURE

In order to maintain the efficiency of the ASR system when one or both tires are replaced, a calibration procedure of the system must be performed as follows on a straight flat stretch of road.

After turning the key to '**ON**', the ABS indicator light and the ASR icon '**2**' flash at the same frequency (fast flashing).

1. Start the vehicle and ride a short distance of more than 5 km/h (3 mph) and wait for the flashing of the ASR warning light and of the ABS icon to stop.
2. Stop the vehicle and leave the engine running at idle speed for at least 3 seconds.
3. Turn the ASR system off by pressing the specific button "1" on the handlebar and check that the ASR disabling icon "2" stays on steady.
4. Press at the same time the engine starter button and the ASR on/off button "1" for at least 4 seconds (**pulling the LH brake lever has no effect**).
5. The activation of the procedure will be confirmed by the ASR icon "2" switching on with slow flashing (1 flash every 2 seconds).
6. Accelerate to a constant speed of 30 km/h (18.7 mph) and maintain it for at least to 10 seconds.
7. The end of the procedure will be indicated by the switched off ASR icon "2".
8. Once the procedure is complete, it is necessary to turn the ignition switch to "**OFF**" and wait at least 30 seconds for the next key "**ON**".
9. In case of failure to complete the procedure within 2 minutes the ASR symbol «**2**» will stay on steady and the ASR will remain off until the next key «**OFF**».
10. To restart the ASR, it is necessary to turn the key to "**ON**" and repeat the procedure until achieving positive result.

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 will the Immobiliser system allow the vehicle to be started.

Keys (02_73)

The vehicle is supplied with two types of keys. The «A» key with a brown grip and the "MASTER" key. Only a single copy of this key is supplied, which is necessary to program all the other keys and for the dealer to perform some maintenance operations. 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.

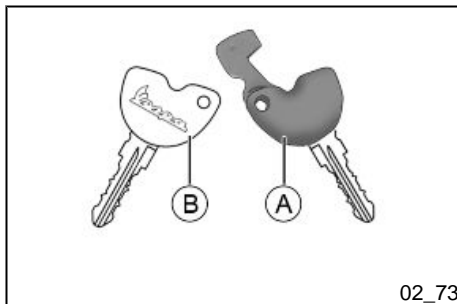
WARNING



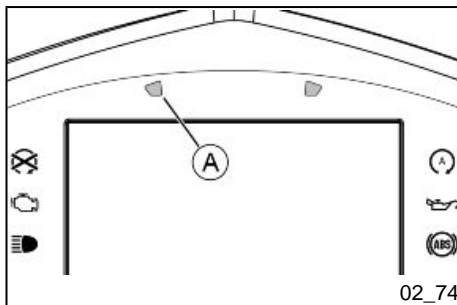
THE LOSS OF THE BROWN KEY PREVENTS LATER REPAIRS TO THE "PIAGGIO IMMOBILIZER" SYSTEM AND TO THE ENGINE CONTROL UNIT.

Immobilizer device enabled indicator led (02_74)

Activation of the "PIAGGIO IMMOBILIZER" system is signalled by a flashing «A» indicator. In order to reduce battery discharge, the indicator LED turns off automatically after 48 hours of uninterrupted functioning. 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.



02_73



02_74

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 (02_75)

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

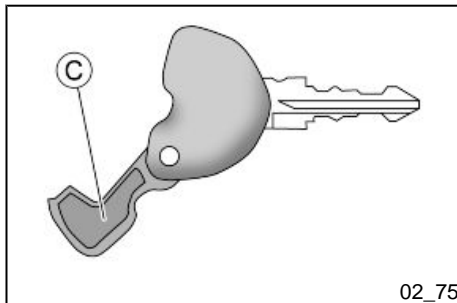
After having removed the "**MASTER**" key, insert the secondary key to be programmed within 10 seconds, and immediately turn it to the "**ON**" position. Leave the key in this position for 1 to 3 seconds, then turn it to the "**CLOSE**" position and remove it. In this way you can program up to 3 keys, 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.

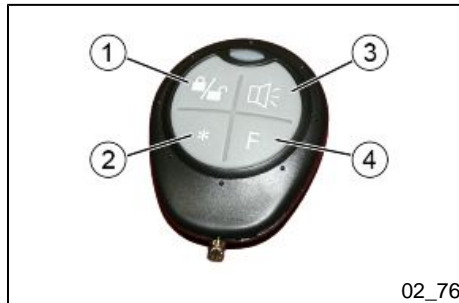
CORRECT PROGRAMMING CHECK PHASE

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 motor 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.

**Remote control (02_76)**

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.

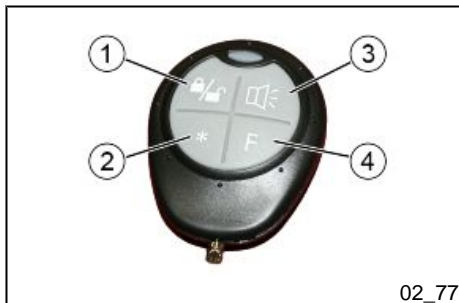
- By pressing the buttons «1» or «2» of the remote control for about 3 seconds, the «Bike Finder» device will allow the opening at a distance of the saddle and the recognition of the vehicle with an optical signal by flashing the turn indicator. While holding one of the two buttons, the system will continue 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.



Remote control programming (02_77)

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 REMOTE-CONTROL UNIT KEY PROGRAMMING PROCEDURE BEING ABANDONED AUTOMATICALLY. 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.



02_78

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 ON THE REMOTE CONTROL FOR ABOUT 3 SECONDS, AS DESCRIBED ABOVE.

USB port (02_78)

On vehicles with this feature, a USB port **A** is situated inside the glove compartment, on the left hand side.

To use it, remove the protective cap. Refit the cap on the USB port to prevent damage caused by water or moisture.

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

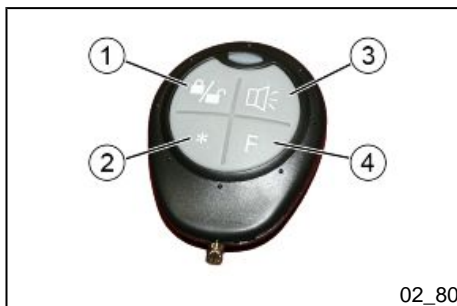
| | |
|------------------|-----------------|
| Output voltage | (5.00±0.25) Vdc |
| Charging current | 500mA max |



02_79

OBD port (02_79)

The vehicle is equipped with an OBD (On-Board Diagnostics) port to monitor its correct operation at an **Authorised Service Centre**.



02_80

Opening the saddle to access the helmet compartment by remote control (02_80)

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

- 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.

Opening the saddle (02_81, 02_82)

With the key set to «OFF» or «ON», or with engine on, it is possible to electrically open the saddle by pressing button «C». If the electric opening does not work, use the emergency lever "A". When the key is set to «LOCK» the saddle cannot be opened.



Rear top box opening (02_83)

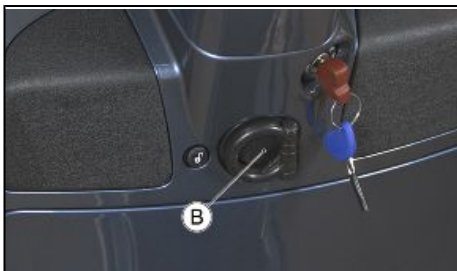
Insert the key in the ignition switch and press down until the storage compartment opens. If the switch is set to "LOCK", turn the key to "OFF" or "ON" before pressing it down.



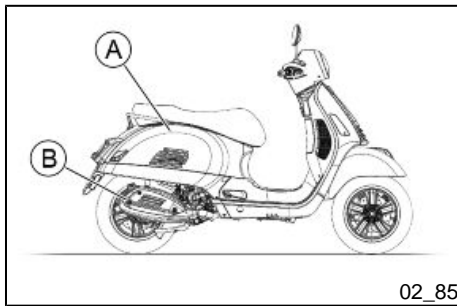
02_83

Bag clip (02_84)

To use the retractable bag hook «B» mounted on the leg shield back plate, pull it slightly towards the back of the vehicle.



02_84



02_85

Identification (02_85, 02_86, 02_87, 02_88)

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.

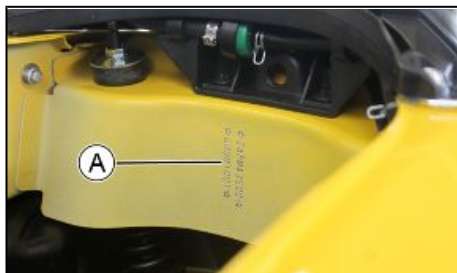
To read it, proceed as follows:

- lift the saddle;



02_86

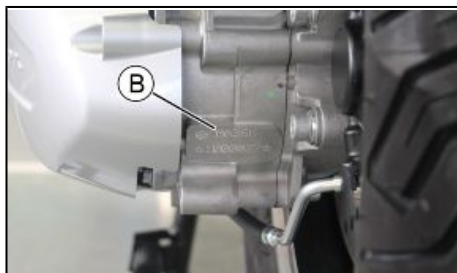
- lift the helmet compartment by removing it.



02_87

Engine number

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



02_88

Vespa GTS Supertech 300 hpe



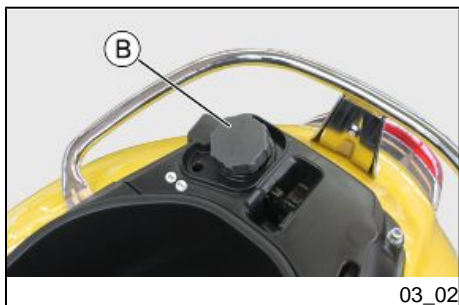
Chap. 03
Use



Checks (03_01)

To preserve the safety of the people and the vehicle's efficiency, the Client has the responsibility to perform the following checks each time before using the vehicle:

1. The operation of the front and rear brakes;
2. The correct sliding of the accelerator lever during opening and release;
3. The fuel level in the tank; if necessary, refuel;
4. The brake fluid level;
5. The transmission oil level;
6. The engine oil level;
7. The coolant level (if available);
8. The pressure and wear of the tyres;
9. The operation of the electrical system (horn, position lights, headlamp light, turn indicators, brake light, licence plate lighting);
10. The operation of the central and side stand (if available).



Refuelling (03_02, 03_03, 03_04, 03_05, 03_06, 03_07)

Lift the saddle and unscrew the cap «B».

Prescribed fuel: Minimum 95 octane unleaded petrol.

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.

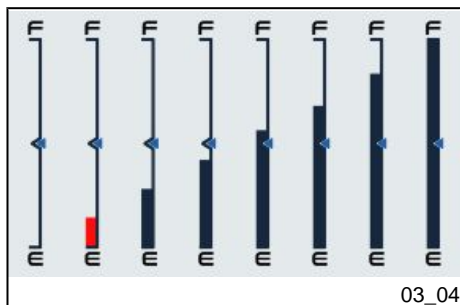
CAUTION**WARNING**

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.

The fuel level in the tank is indicated by the coloured bar shown on the digital display with seven icons.



03_03



03_04



When the specific warning lamp lights up on the digital display, together with the red indication of the side bar, it means that the fuel reserve level has been reached and you must immediately refill the tank.

WARNING



SHUT OFF THE ENGINE BEFORE REFUELLING WITH PETROL.

PETROL IS HIGHLY INFLAMMABLE.

DO NOT SMOKE AND KEEP NAKED FLAMES AT A DISTANCE: FIRE HAZARD.

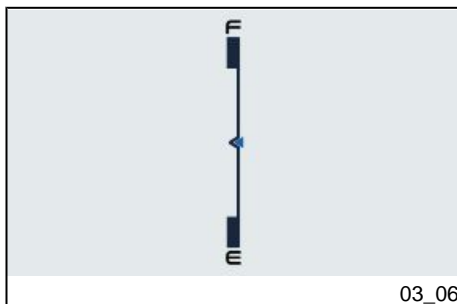
DO NOT INHALE FUEL FUMES.

DO NOT ALLOW PETROL TO COME INTO CONTACT WITH HOT ENGINE OR ANY PLASTIC PARTS.

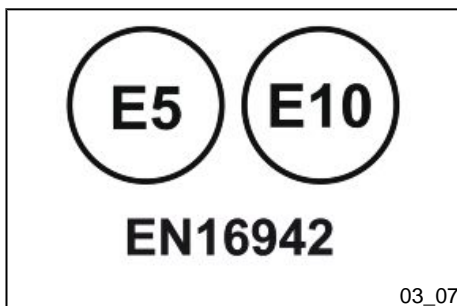
CAUTION



DO NOT USE THE MOTORCYCLE TO THE COMPLETE EXHAUSTION OF THE FUEL; IF THIS SHOULD HAPPEN, DO NOT CONTINUALLY TRY TO START THE MACHINE, MOVE THE IGNITION SWITCH TO «OFF» AND REFILL THE TANK WITH GASOLINE AS SOON AS POSSIBLE. IF YOU DO NOT DO THIS, YOU COULD DAMAGE THE FUEL PUMP AND/OR THE CATALYTIC CONVERTER.



The bar shown in the image indicates a potential failure of the fuel level detection. Contact an **Authorised Service Centre**.



The European standard **EN 16942** prescribes the identification of the vehicle compatibility with the fuel type, by means of a graphic symbol for consumer information. The symbols shown on the side make facilitate the recognition of the correct fuel type to be used on your vehicle. Before refuelling, check the symbols located near the filler neck and compare them with the symbol shown on the filling pump.

E5: unleaded gasoline with 5% maximum Ethanol percent.

E10: unleaded gasoline with 10% maximum Ethanol percent.

The label on each pump dispenser shows only one value; if for example it shows E5 it means that the petrol supplied is unleaded, with 5% ethanol.

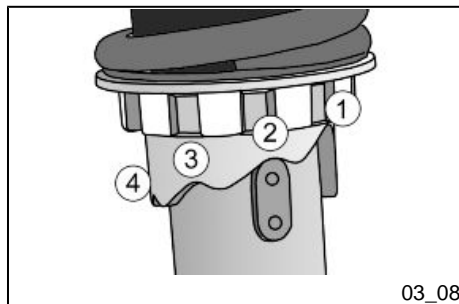
The label on the vehicle can instead show several values . If, for example, it shows both E5 and E10 values, it means that the vehicle is compatible with petrol containing up to a maximum 10% ethanol, and thus it is possible to refuel the vehicle either from a E5 dispenser or from a E10 dispenser (but not from one showing E85).

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.



Shock absorbers adjustment (03_08, 03_09)

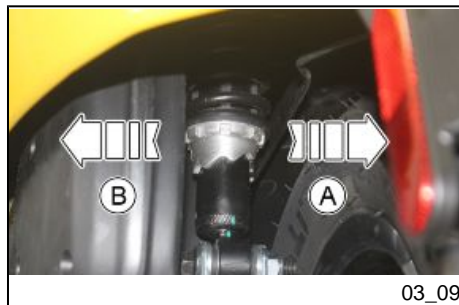
Spring pre-loading can be regulated on four positions using a special shock absorber wrench, turning the ring nut at the bottom of the shock absorbers.

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



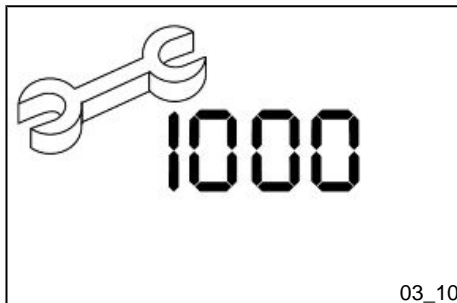
WE RECOMMEND WEARING GLOVES WHILE CARRYING OUT THIS OPERATION IN ORDER TO AVOID INJURIES.

WARNING

IT IS ABSOLUTELY FORBIDDEN TO ADJUST THE PRE-LOAD DIFFERENTLY ON THE TWO SHOCK ABSORBERS

Running in (03_10)**WARNING**

DURING THE FIRST 1000 km (621.3 mi) 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.



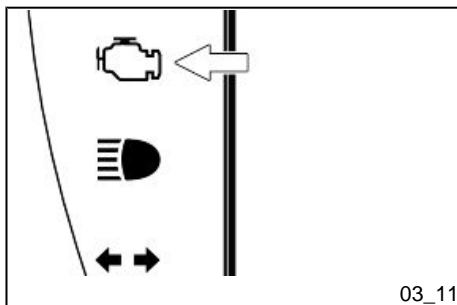
03_10

Starting up the engine (03_11, 03_12)

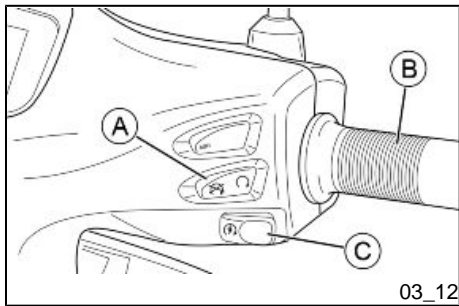
The vehicle is equipped with a system connected to the side stand which inhibits engine starting when the side stand is extended. The engine cannot be started if the side stand is extended, and stops if the side stand is extended while the engine itself is running.

To start the engine, place the vehicle on the centre stand, ensuring the rear wheel is not touching the ground.

Turn the ignition switch to "ON" the engine management indication light will switch on.



03_11



Ensure that the engine stop switch **A** is turned to **RUN** and that the side stand is raised.

Pull the front brake lever or the rear brake lever while simultaneously keeping the throttle hand grip **B** in the fully closed position.

Press the starter button **C** ; the engine management indication light will switch off.

WARNING



FOR SAFETY REASONS, ENGINE STARTING IS INHIBITED IF THE SIDE STAND IS EXTENDED.

WARNING



THE AUTOMATIC TRANSMISSION MAKES THE REAR WHEEL TURN EVEN WHEN THE THROTTLE IS SLIGHTLY TWISTED. RELEASE THE BRAKE CAREFULLY AFTER STARTING, AND THEN ACCELERATE GRADUALLY.

CAUTION



DO NOT START-UP THE ENGINE IN CLOSED AREAS BECAUSE EXHAUST GASES ARE TOXIC.

Precautions

CAUTION



NEVER STRESS THE ENGINE AT LOW TEMPERATURES IN ORDER TO AVOID POSSIBLE DAMAGE. BE CAREFUL NEVER TO EXCEED THE MAXIMUM SPEED WHILE RUNNING DOWNHILL, IN ORDER TO AVOID DAMAGING THE ENGINE. IN ANY CASE, IN ORDER TO PRESERVE THE ENGINE FROM PROLONGED OVER-REVING, THE REVOLUTION LIMITER WILL BE ACTIVATED IF THE ENGINE SPEED EXCEEDS THE ESTABLISHED THRESHOLD.

WARNING



AFTER A LONG DISTANCE COVERED AT THE MAXIMUM SPEED, DO NOT STOP THE ENGINE IMMEDIATELY, BUT LET IT RUN AT IDLE FOR A FEW SECONDS.

Difficult start up

Strictly observe the procedure described in section «**Engine starter**».

WARNING



THE THROTTLE GRIP MUST REMAIN IN THE MINIMUM POSITION BECAUSE ANY OTHER POSITION INHIBITS THE VEHICLE STARTER.

CAUTION



IF NECESSARY, CONTACT AN AUTHORISED SERVICE CENTRE.

Stopping the engine (03_13, 03_14)

Close the throttle grip completely then turn the ignition switch **A** to **OFF**, or turn the engine stop switch **B** to **0**.

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.

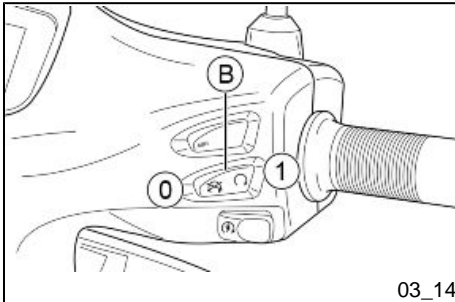
CAUTION



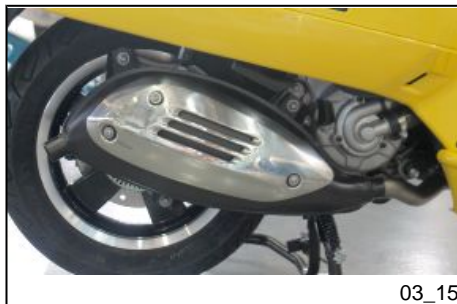
DO NOT SHUT OFF THE ENGINE WHILE THE VEHICLE IS MOVING. UNBURNED FUEL COULD ENTER THE CATALYTIC CONVERTER AND BURN, CAUSING THE CONVERTER TO OVERHEAT AND POSSIBLY DESTROYING IT.



03_13



03_14



03_15

Catalytic silencer (03_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.



03_16

Stand (03_16, 03_17)

CENTRE STAND

Push with your foot on the centre stand's fork "F" while lifting the vehicle backward, holding onto the handlebar.

SIDE STAND

With your foot push the projection of the stand «L » in order to open it and at the same time lean the vehicle on you.

WARNING



FOR SAFETY REASONS, ENGINE STARTING IS INHIBITED IF THE SIDE STAND IS EXTENDED.

WARNING

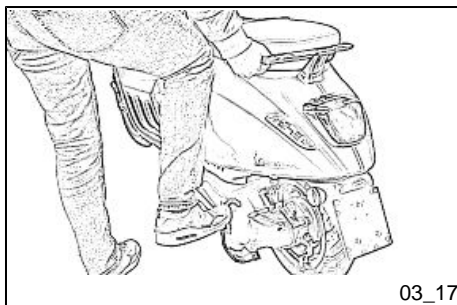


THE SIDE STAND CAUSES THE ENGINE TO TURN ITSELF OFF WHENEVER IT IS LOWERED.

TAMPERING MAY CAUSE SERIOUS VEHICLE MALFUNCTION.

CAUTION

PARK THE MOTORCYCLE ON SAFE AND LEVEL GROUND.



Automatic transmission (03_18)

To ensure simple, pleasurable riding, the vehicle is equipped with automatic transmission with regulator and centrifugal clutch. The system has been designed to provide the best performance possible (acceleration and fuel consumption) whether on the flat or travelling uphill.

If you stop on while travelling uphill (traffic lights, traffic tailback etc.), **only use the brake to keep the vehicle still and let the engine idle. Using the engine to keep the vehicle still can cause the clutch to overheat, due to the friction of the clutch mechanism itself against the capstan.**

It is therefore recommended to avoid conditions of prolonged clutch slippage (other than those previously indicated) such as driving uphill fully laden on steep slopes, or starting off with driver and passenger at slopes greater than 25%.

Take the following precautions if the clutch overheats:

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

Safe driving (03_19, 03_20, 03_21, 03_22)

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.



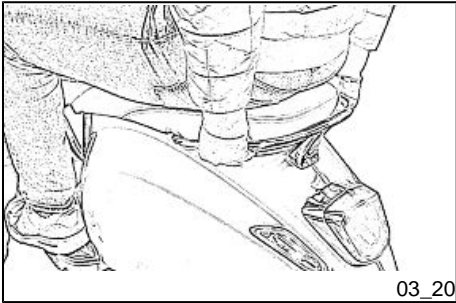
03_18



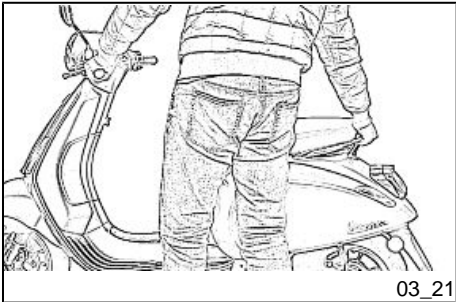
03_19

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.

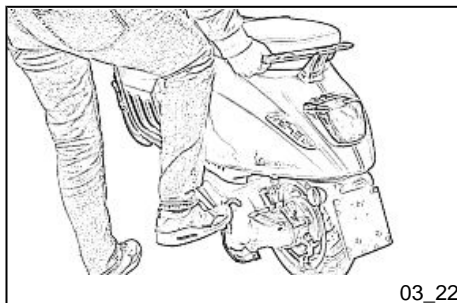
6. If the vehicle is used on roads covered with sand, mud, snow mixed with salt, etc. clean the brake disc frequently with a mild detergent in order to prevent abrasive particles from building up inside the holes, which can result in early brake pad wear.



7. If there is a passenger, to guarantee the safety and comfort for the rider as well, it is recommended for the passenger to hold the specific rear handlebar with his/her hands during the ride.



8. Move the vehicle with the engine not started, supporting it with one hand on the handlebar and the other on the rear handlebar.



03_22

9. To place the vehicle on the central stand, press the stand's protrusion with your foot and lift the vehicle backward at the same time, operating the rear handlebar.

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 FORBIDDEN 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 LOSE CONTROL OF THE VEHICLE.

WARNING

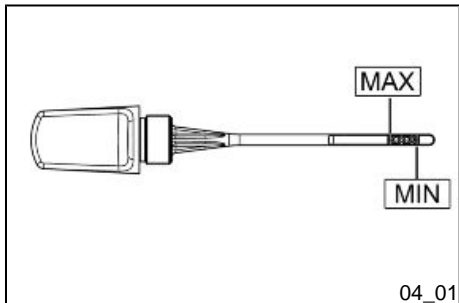


IN ORDER TO PREVENT ANY ACCIDENTS RIDE VERY CAREFULLY AFTER ADDING ACCESSORIES AND WHILE CARRYING LUGGAGE. ADDING ACCESSORIES AND LUGGAGE CAN REDUCE THE VEHICLE'S STABILITY, PERFORMANCE AND SAFETY DURING USE. (SEE THE "SPARE PARTS AND ACCESSORIES" SECTION)

Vespa GTS Supertech 300 hpe

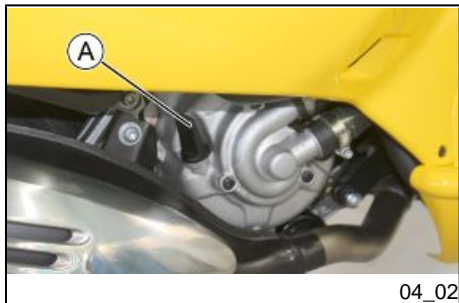


**Chap. 04
Maintenance**



Engine oil level (04_01)

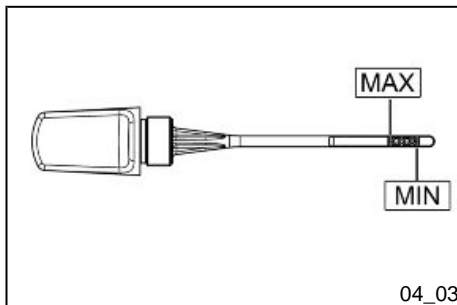
Four stroke engine oil is used in the engines in order to lubricate the timing bodies, the bench bearings and the head-engine block-piston assembly. **An insufficient quantity of oil can seriously damage the engine.** In all four-stroke engines, a loss of efficiency in oil performance and certain consumption should be considered normal. Consumption can particularly reflect the conditions of use (i.e: when driving at 'full acceleration' all the time, oil consumption increases). The replacement intervals provided for by the maintenance programme are defined depending on the total content of oil in the engine and the average consumption measured following standardised methods. **In order to prevent any problems, we recommend checking oil level more frequently than indicated in the Scheduled Maintenance table or before setting off on long journeys. The vehicle is, however, equipped with an oil pressure warning light on the instrument cluster.**



Engine oil level check (04_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.

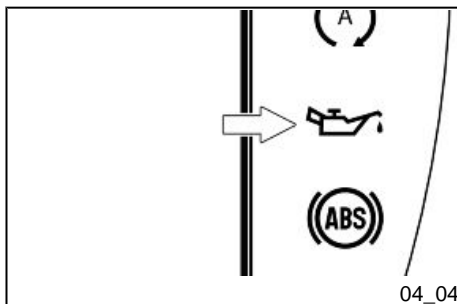
If the check is carried out after the vehicle has been used, and therefore with a hot engine, the level will be lower; in order to carry out a correct check, wait at least 10 minutes after the engine has been stopped so as to get the correct level.



04_03

Engine oil top-up (04_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**.



04_04

Warning light (insufficient oil pressure) (04_04)

The vehicle is equipped with a warning light that comes on when the key is turned to «ON». However, this light should come off once the engine has been started. **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

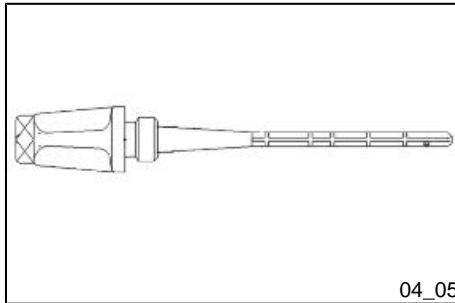
RUNNING THE ENGINE WITH INSUFFICIENT LUBRICATION OR WITH INADEQUATE LUBRICANTS ACCELERATES THE WEAR AND TEAR OF THE MOVING PARTS AND CAN CAUSE IRREPARABLE DAMAGE.

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 (04_05, 04_06, 04_07, 04_08)**

Check that the oil level in the hub is correct at the intervals specified in the scheduled maintenance table.

WARNING

THE PERIODIC HUB OIL LEVEL INSPECTIONS SPECIFIED IN THE SCHEDULED MAINTENANCE TABLE MUST BE CARRIED OUT BY 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

To check the hub oil level, proceed as follows:

- rest the vehicle on its centre stand on level ground;
- unscrew and remove the oil dipstick **A**, wipe it clean with a clean cloth and then fit it back into place, **tightening fully**;
- unscrew and remove the dipstick again and check that the oil level reaches the **1st notch on the dipstick from the bottom end**;
- refit the dipstick in its seat and tighten fully.

WARNING

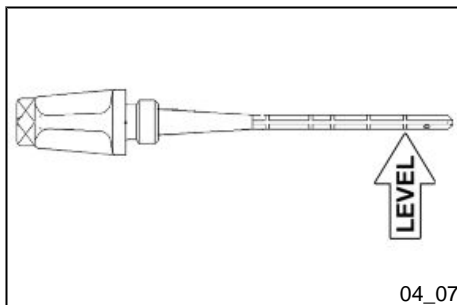
THE FUNCTION OF THE HUB WITH INSUFFICIENT HUB LUBRICATION OR WITH CONTAMINATED OR IMPROPER LUBRICANTS ACCELERATES THE WEAR AND TEAR OF THE MOVING PARTS AND CAN CAUSE SERIOUS DAMAGE.

N.B.

THE OTHER NOTCHES ON THE HUB OIL DIPSTICK ARE APPLICABLE FOR OTHER MODELS AND HAVE NO FUNCTION ON THIS VEHICLE.



04_06



04_07



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.

CAUTION

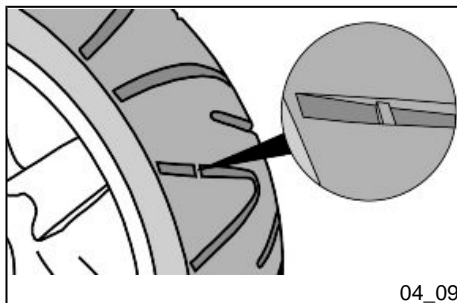


AN EXCESSIVE QUANTITY OF OIL CAN LEAD TO SPILL OVER, WHICH MAY CAUSE THE ENGINE AND THE WHEEL TO GET DIRTY.

CAUTION



WHEN REPLACING THE HUB OIL DO NOT LET THE OIL COME INTO CONTACT WITH THE REAR BRAKE DISC.



Tyres (04_09)

Check tyre pressure and wear periodically as indicated in the scheduled maintenance table. Tyres feature wear indicators; replace tyres 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 to a workshop equipped to replace 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.

CAUTION

AS THE WHEELS ARE FITTED WITH ABS TONE WHEELS, TYRES MUST ONLY BE REPLACED BY AN AUTHORISED SERVICE NETWORK CENTRE.

WARNING



TO KEEP THE EFFICIENCY OF THE ASR SYSTEM AFTER REPLACING ONE OR BOTH TIRES, THE CALIBRATION OF THE SYSTEM MUST BE PERFORMED ACCORDING TO THE METHODS DESCRIBED IN THE APPROPRIATE CHAPTER.

TYRES

Front tyre

120/70 - 12 M - 60029 58P

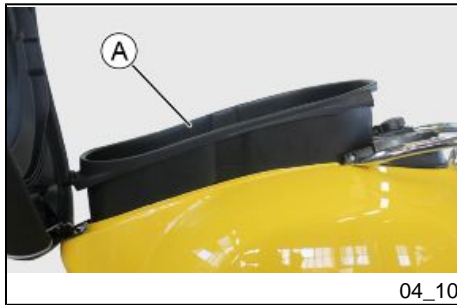
Rear tire

130/70 - 12 M - 60029 62P

TYRE INFLATION PRESSURE

| | |
|--------------------------------------|-------------------|
| Front tire pressure (with passenger) | 2.0 bar (2.0 bar) |
|--------------------------------------|-------------------|

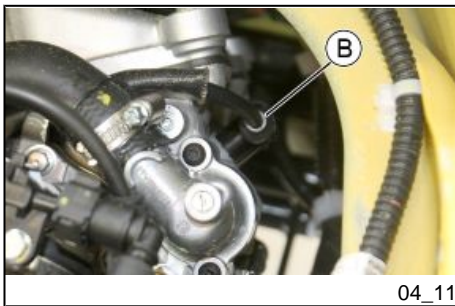
| | |
|-------------------------------------|-------------------|
| Rear tire pressure (with passenger) | 2.3 bar (2.6 bar) |
|-------------------------------------|-------------------|



Spark plug dismantlement (04_10, 04_11)

To remove the spark plug, proceed as follows:

- Lift the seat and extract the helmet compartment «**A**» so as to access the spark plug by inserting the hand.



04_11

- Disconnect the hood «**B**» of the spark plug's high voltage cable;
- Undo the spark plug using the specific spark plug spanner.

- When reassembly, insert the spark plug at the proper inclination, hand tightening it until snug.
- Only use the wrench to lock spark plugs in place.
- Fit the cap on the spark plug as far as it will go.

CAUTION



THE SPARK PLUGS MUST BE DISMANTLED WHEN THE ENGINE IS COLD. SPARK PLUG MAINTENANCE IS DESCRIBED IN THE SCHEDULED MAINTENANCE TABLE. THE USE OF NON-CONFORMING ELECTRONIC CONTROL UNITS AND ELECTRONIC IGNITIONS AND SPARK PLUGS OTHER THAN THOSE RECOMMENDED MAY SERIOUSLY DAMAGE THE ENGINE.

.

N.B.

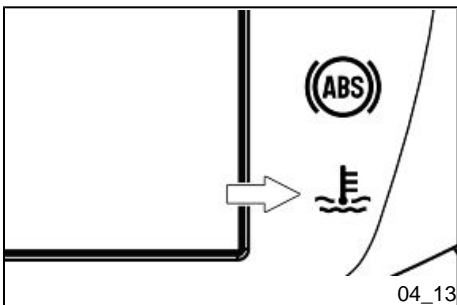
USING SPARK PLUGS OTHER THAN THE INDICATED TYPE OR SHIELD-LESS SPARK PLUG CAPS CAN CAUSE ELECTRICAL SYSTEM FAILURES.



04_12

Removing the air filter (04_12)

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



04_13

Cooling fluid level (04_13, 04_14, 04_15, 04_16)

The cooling of the engine operates by forced circulation of liquid. The cooling circuit contains a coolant, made up of a mixture of 50% purified water and 50% glycoethylene antifreeze with corrosion inhibitors. The liquid that is found in the container is already mixed and ready to use.

With engine on, in case of excessive engine temperature, the corresponding warning light on the instrument panel turns on; let the engine cool down and check the fluid level; if it is as it should be, go to an **Authorized Service Centre**.

N.B.

IF THE ENGINE COOLANT WARNING LAMP ILLUMINATES WHILE RIDING, TURN THE ENGINE OFF IMMEDIATELY AND LEAVE IT TO COOL. THEN CHECK THE COOLANT LEVEL; IF THE LEVEL IS INCORRECT, CONTACT AN AUTHORISED SERVICE CENTRE.



NEVER REMOVE THE EXPANSION TANK CAP WHILE THE ENGINE IS HOT.



04_14

check the fluid when the engine is cold, according to the scheduled maintenance table, in the way shown below:

1. Rest the vehicle upright on the stand and remove the screw «A» of the expansion tank cap shown in the photograph.
2. Check the fluid level that should always be between the «MIN» and «MAX» level «B» on the tank.
4. If necessary, perform the top up, with the engine cold, in the case that you find the liquid is too close to the minimum level.

If the coolant needs to be topped up frequently or the expansion chamber is completely dry, check the cooling system to find the cause of the problem. It is essential to have the cooling system checked at an **Authorized Service Centre**. Replace coolant as indicated in the scheduled maintenance table. This operation must be carried out at an **Authorized Service Centre**.

WARNING



TO AVOID THE RISK OF SCALDING, DO NOT UNSCREW THE EXPANSION TANK COVER WHILE THE ENGINE IS STILL HOT.

WARNING

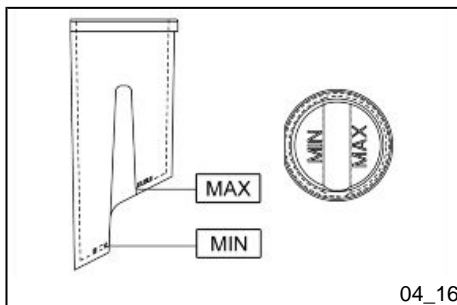


TO PREVENT AVOID HARMFUL FLUID LEAKAGE WHILE RIDING, ENSURE THAT THE LEVEL NEVER EXCEEDS THE MAXIMUM VALUE.

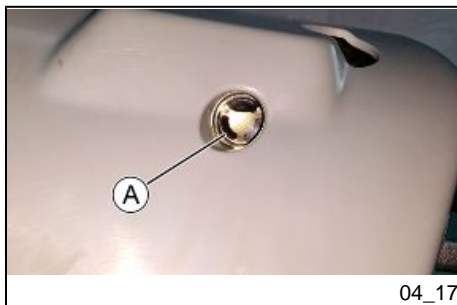
TO ENSURE CORRECT ENGINE OPERATION, KEEP THE RADIATOR GRILLE CLEAN.



04_15



04_16



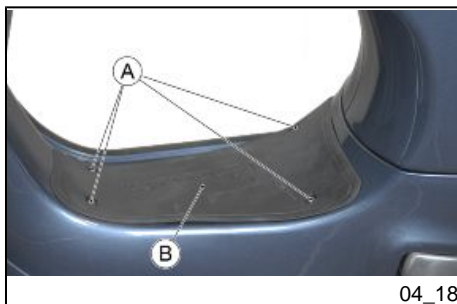
04_17

Checking the brake oil level (04_17)

The front and rear brake fluid reservoirs are both positioned on the handlebar. Proceed as follows:

- Rest the vehicle on its centre stand with the handlebars perfectly horizontal;
- Check the fluid level through the sight glass «A».

A certain lowering of the level is caused by wear on the brake pads. Should the level appear to be below the minimum mark, please contact an **Authorised Service Centre or Dealer** in order to have a thorough inspection of the braking system carried out.



04_18

Battery (04_18, 04_19)

To reach the battery «D», proceed as follows:

1. rest the scooter on its centre stand;
2. unscrew the 4 screws «A», remove the footrest «B».
3. remove the two battery fixing screws «C».

WARNING



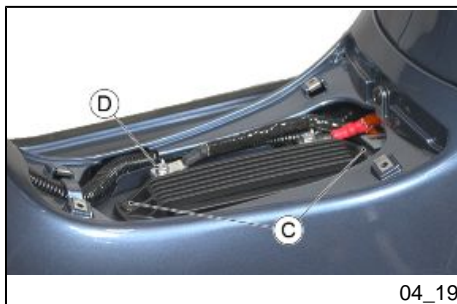
IN ORDER TO AVOID DAMAGING THE ELECTRIC SYSTEM, NEVER DISCONNECT THE WIRING WHILE THE ENGINE IS RUNNING.

CAUTION

UPON CONNECTING THE BATTERY TERMINALS, AVOID CONTACT WITH THE METAL BODY

WARNING

DO NOT TRY TO REMOVE THE BATTERY SEAL. THE ELECTROLYTE IN THE BATTERY CONTAINS SULPHURIC ACID: AVOID CONTACT WITH EYES, SKIN



04_19

AND CLOTHES. IN THE CASE OF ACCIDENTAL CONTACT, RINSE WITH ABUNDANT OF WATER AND CONSULT A DOCTOR.

WARNING



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

Use of a new battery

Ensure that the terminals are connected correctly and check voltage.

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.



04_20

Long periods of inactivity (04_20)

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

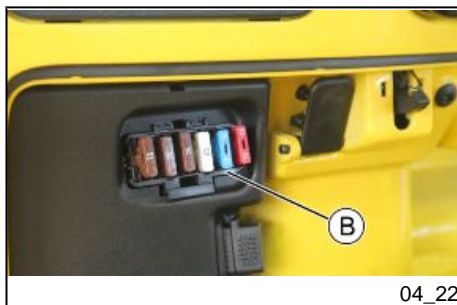
USED BATTERIES ARE HARMFUL FOR THE ENVIRONMENT. COLLECTION AND DISPOSAL SHOULD BE CARRIED OUT IN COMPLIANCE WITH REGULATIONS IN FORCE.

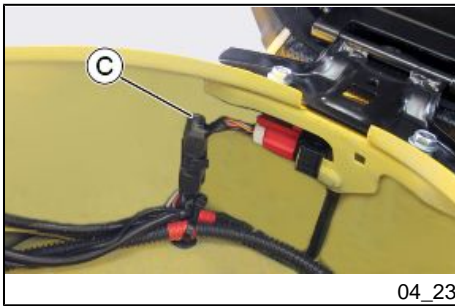
Fuses (04_21, 04_22, 04_23, 04_24, 04_25, 04_26)

The electrical system is equipped with:

1. one fuse «**A**», located in the battery compartment;

2. six protection fuses «**B**» located in the glove compartment to the left;





04_23

3. one fuse «C» located under the seat, accessible by extracting the helmet compartment.

The tables show the position and characteristics of the fuses on the vehicle.

CAUTION

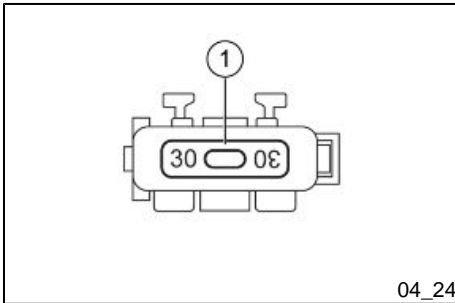


BEFORE REPLACING THE BLOWN FUSE, TRY TO ELIMINATE THE FAULT THAT HAS CAUSED IT TO BLOW. NEVER TRY TO REPLACE A FUSE USING DIFFERENT MATERIAL (FOR EXAMPLE A PIECE OF ELECTRIC WIRE).

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.

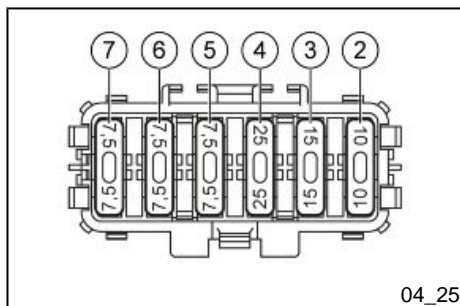


04_24

Fuse «A».

FUSE «A»

Fuse no. 1

Capacity: 30 A**Protected circuits:** System general.

Fuse «B».

FUSE «B»

Fuse no. 2

Capacity: 10A**Protected circuits:** battery-powered, engine control unit, injection load relay, heater.

Fuse no. 3

Capacity: 15A**Protected circuits:** battery powered, electric fan relay (contacts), 5A fuse, instrument

cluster, lights relay, provision for accessories, bike finder.

Key-powered: Saddle opening actuator.

Fuse no. 4

Capacity: 25A

Protected circuits: battery-powered, ABS control unit.

Fuse no. 5

Capacity: 7.5 A

Protected circuits: key-on power for ABS ECU, immobilizer antenna, engine management ECU, injection load relay (coil).

Fuse no. 6

Capacity: 7.5 A

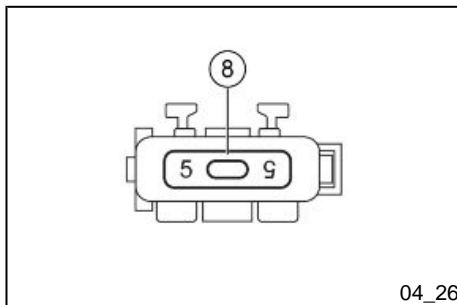
Protected circuits: key powered, horn, taillight, USB socket, lights relay, turn signal flasher unit, provision for accessories, bike finder.

Fuse no. 7

Capacity: 7.5 A

Protected circuits: key powered, front indicators, «Vespa MIA» device, diagnostics socket, rear position light.

Fuse «C».



04_26

FUSE «C»

Fuse no. 8

Capacity: 5A

Protected circuits: 15A fuse powered, diagnostics socket.



04_27

Lamps (04_27)

This section lists the bulb types required for the vehicle's equipment.

BULBS

| | |
|---------------------------|--------------------|
| High beam / low beam bulb | Type: LED |
| | Quantity: 2 |

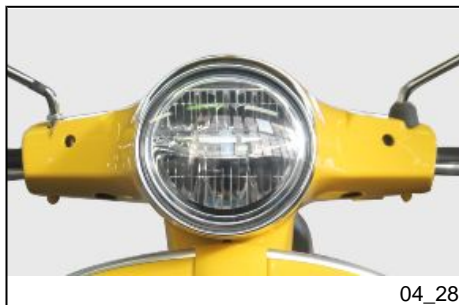
| | |
|-------------------------------|--------------------|
| Front daylight running lights | Type: LED |
| | Quantity: 2 |

| | |
|-------------------------------------|------------------------|
| Front and rear turn indicator bulbs | Type: All glass |
| | Power: 12V - 6W |
| | Quantity: 4 |

| | |
|----------------------|--------------------|
| Rear tail light bulb | Type: LED |
| | Quantity: 2 |

| | |
|-----------------|--------------------|
| Stop light bulb | Type: LED |
| | Quantity: 1 |

| | |
|--------------------------|--------------------|
| Licence plate light bulb | Type: LED |
| | Quantity: 2 |



04_28

Front light group (04_28)

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

N.B.

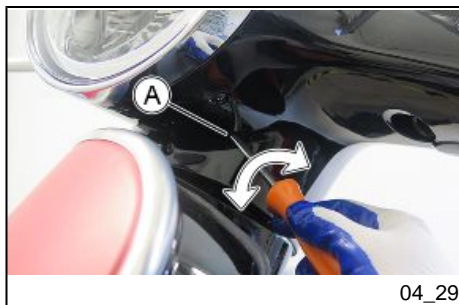
IF MISTING IS NOTICED ON THE INSIDE OF THE TAIL LIGHT, CHECK THAT IT DISAPPEARS AFTER SOME MINUTES OF IGNITION OF THE TAIL LIGHT. IT IS A COMMON PHENOMENON AND IS ATTRIBUTABLE TO HUMIDITY AND/OR TO LOW TEMPERATURES; DOES NOT SHOW FAILURE.

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.

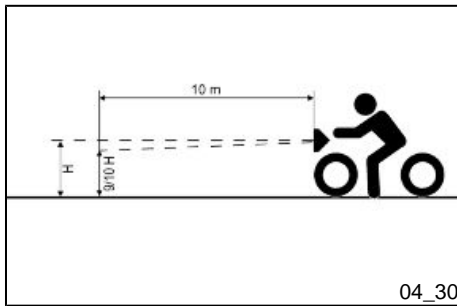


04_29

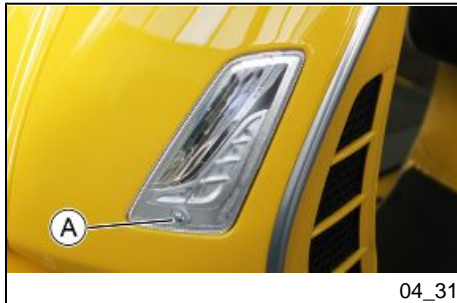
Head light adjustment (04_29, 04_30)

Proceed as follows:

1. 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;
2. Turn on the headlight and check that the boundary of the light beam projected onto the screen is not higher than 9/10 or lower than 7/10 of the distance between the centre of the headlight and the ground;
3. Otherwise, adjust the right headlight with screw «A».

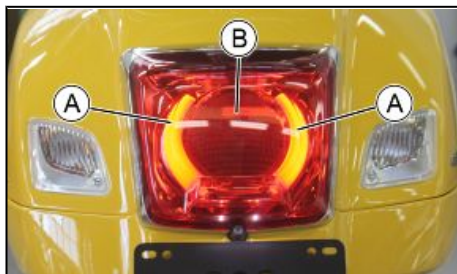
**N.B.**

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.

**Front direction indicators (04_31)**

To replace the front turn indicator bulbs, remove the tail light taking out the retaining screw "A", remove the bulb holder from its fitting; gently turn the bulb around 30° and remove it. Follow the process in reverse order to refit.

Integrated in the front turn indicators are the daylight running lights of «LED» type. In the event of malfunction, we recommend contacting an **Authorised Service Centre** for replacement.



04_32

Rear optical unit (04_32)

Both the parking light bulbs «A» and the brake lights «B» are «LED» type.

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 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.



04_33

Rear turn indicators (04_33)

To gain access to the turn indicator bulbs, remove the fastening screws «E».

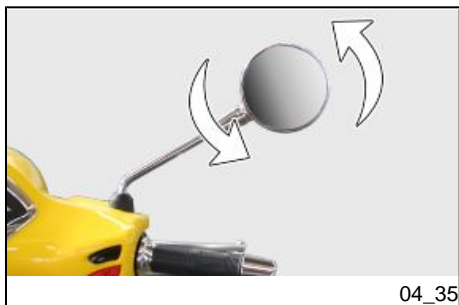
The bulbs have a bayonet coupling, to remove them press gently and twist anticlockwise about 30°. To refit follow the same steps but in reverse order.



Number plate light (04_34)

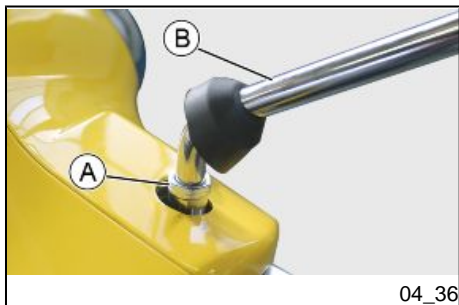
The license plate lights are "LED" type.

In the event of malfunction, we recommend contacting an **Authorised Service Centre** for replacement.



Rear-view mirrors (04_35, 04_36)

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



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 LOSE 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 and rear disc brake (04_37, 04_38)

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 or Dealer**.

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



04_37



04_38

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

CAUTION

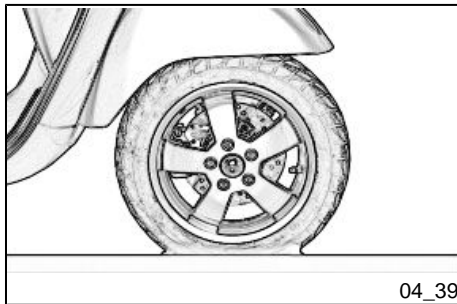


THE PRESENCE OF SAND, MUD, SNOW MIXED WITH SALT, ETC. ON THE ROAD, CAN DRASTICALLY REDUCE THE LIFE OF THE BRAKE PADS. IN ORDER TO AVOID THIS, WE RECOMMEND WASHING THE VEHICLE FREQUENTLY WHEN RIDING IN THESE ROAD CONDITIONS.

CAUTION



AS THE WHEELS ARE FITTED WITH ABS TONE WHEELS, TYRES MUST ONLY BE REPLACED BY AN AUTHORISED SERVICE NETWORK CENTRE.



04_39

Puncture (04_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 permanent repairs contact an **Authorised Service Centre or Dealer**. Replacing a tyre means removing the wheel. For these operations, contact an **Authorised Service Centre or Dealer**.

CAUTION

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

WARNING

THE WHEELS, COMPLETE WITH TYRES MUST ALWAYS BE BALANCED. RIDING THE VEHICLE WITH VERY LOW TYRE PRESSURE OR WITH INCORRECTLY BALANCED TYRES CAN LEAD TO DANGEROUS STEERING VIBRATIONS.

Inactivity of the vehicle (04_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 - 2 cm³ of oil through its hole. Operate the starter button 1-2 times for roughly 1 second to turn the engine over slowly, then insert the spark plug again;
3. Make sure **you have at least half a tank of gasoline (in such a way to assure total immersion of the gasoline pump)**; 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 (04_41, 04_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.

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;

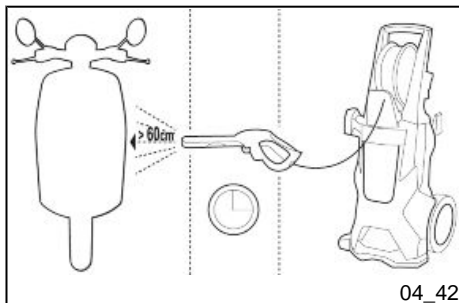
DO NOT USE ABRASIVE CLEANERS;

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

| | |
|---------------------------|---|
| Emergency switch in «OFF» | Set the switch back to « ON » |
| Fuse blown | Replace the damaged fuse and have the vehicle checked at an Authorised Service Centre. |

IGNITION PROBLEMS

| | |
|--|--|
| Faulty spark plug | Contact an Authorised Service Centre. |
| Ignition/ injection control unit defective. | Contact an Authorised Service Centre. |
| Faulty coil. 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

Air filter blocked or dirty

Contact an **Authorised Service Centre**.

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**.

AUTOMATIC TRANSMISSION PROBLEMS

CVT rollers and/or drive belt damaged

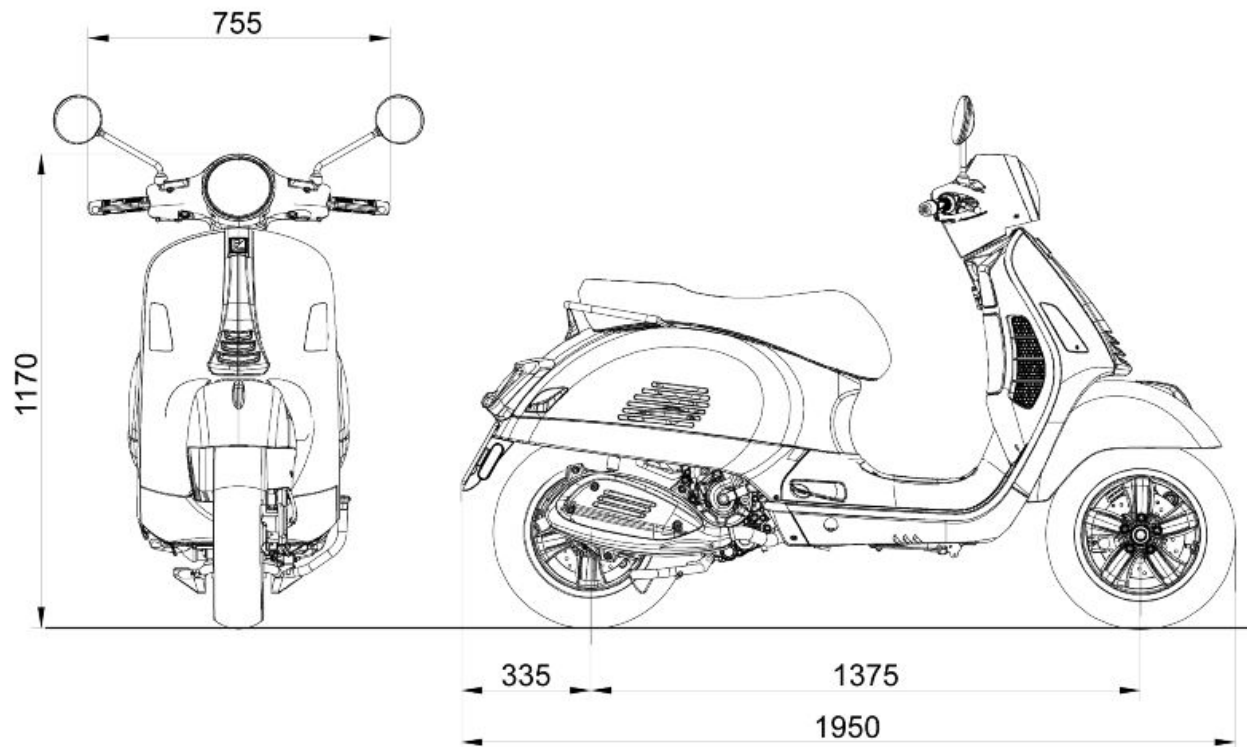
Contact an **Authorised Service Centre**.

Vespa GTS Supertech 300 hpe

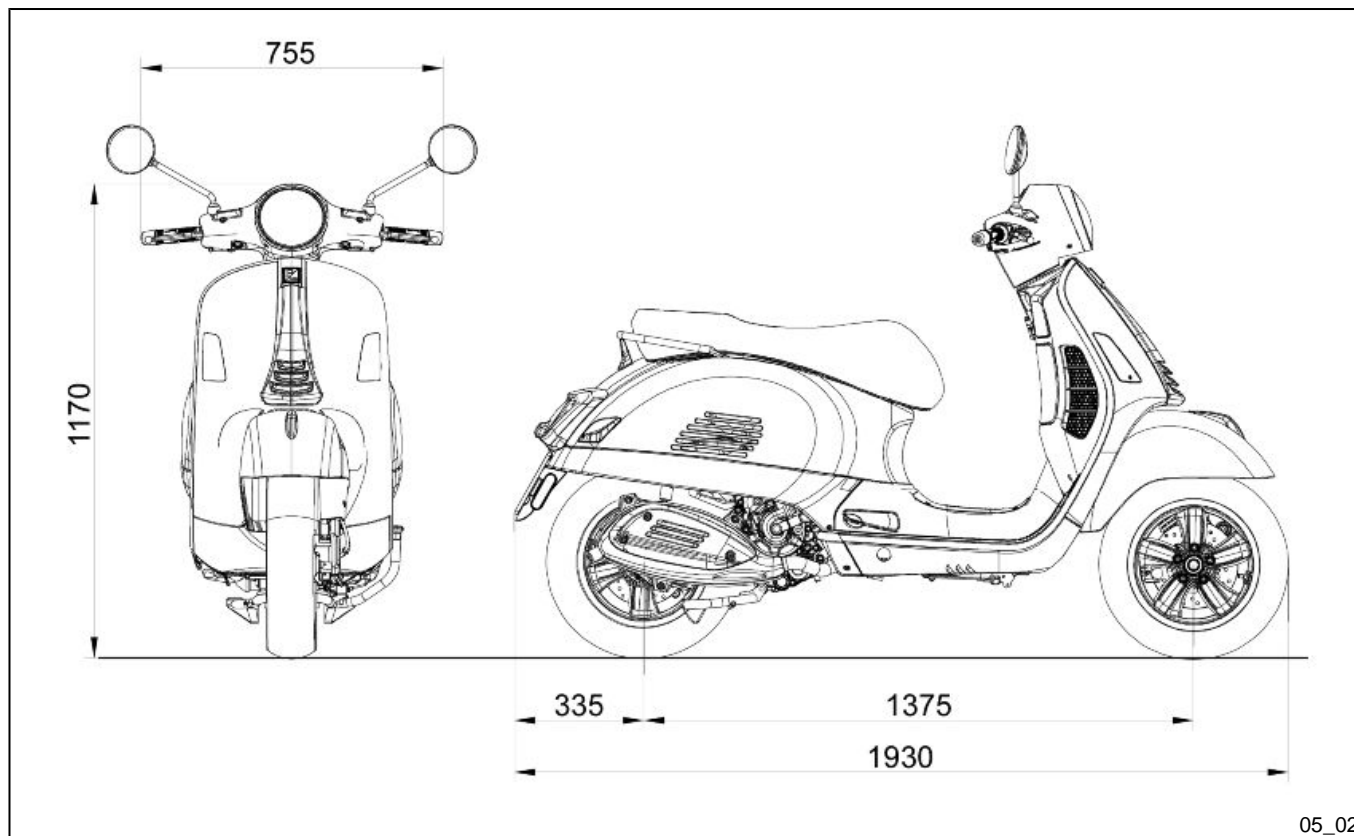
Vespa®



Chap. 05
Technical data



05_01



05_02

VEHICLE DATA

| | |
|--------------------------------------|---|
| Frame | Stamped plate supporting body. |
| Front suspension | Single arm suspension (cantilever wheel) fitted with a dual-chamber hydraulic shock absorber with coaxial spring. |
| Rear suspension | Two double-acting shock absorbers, adjustable to four positions at pre-loading. |
| Front brake | Ø 220 mm hydraulically operated disc brake controlled from RH handlebar lever; braking assisted by ABS system. |
| Rear brake | Ø 220 mm hydraulically operated disc brake controlled from LH handlebar lever; braking assisted by ABS system. |
| Wheel rims type | Light alloy. |
| Front rim | 12" x 3.00 |
| Rear rim | 12" x 3.00 |
| Front tire | 120/70 - 12 M - 60029 58P |
| Rear tire | 130/70 - 12 M - 60029 62P |
| Front tire pressure (with passenger) | 2.0 bar (2.0 bar) |
| Rear tire pressure (with passenger) | 2.3 bar (2.6 bar) |
| Kerb mass | 160 kg |

| | |
|--|----------|
| Maximum technically permissible weight at full load | 310 kg |
| Maximum technically permissible weight at full load (Japan market) | 340 kg |
| Battery | 12V-10Ah |

ENGINE SPECIFICATIONS

| | |
|--|---|
| Type | Single cylinder 4-stroke |
| Engine capacity | 278 cm ³ |
| Engine capacity (Indonesia-Vietnam market) | 278.3 cm ³ |
| Bore x Stroke | 75x63 mm |
| Compression ratio | 11 ± 0.5: 1 |
| Idle engine speed | 1,700 ± 100 rpm |
| Timing system | 4 valves, single overhead camshaft, chain-driven. |
| Valve clearance (cold engine) | Intake: 0.10 ± 0.02 mm Exhaust: 0.10 ± 0.02 mm |
| Maximum power | 17.5 kW at 8250 rpm |
| Maximum power (M45TM) | 17.0 kW at 8.500 rpm |
| Maximum torque | 26.0 Nm at 5250 rpm |
| Maximum torque (M45TM) | 25.5 Nm at 5.500 rpm |

| | |
|---|--|
| Transmission | CVT expandable pulley continuously variable transmission with torque server, V-belt, self-ventilating dry automatic centrifugal clutch and transmission housing with forced-circulation air cooling. |
| Final drive reduction gear | Gear reduction unit in oil bath. |
| Lubrication | Engine lubrication with lobe pump (inside crankcase), chain-driven, with double filter: mesh and paper. |
| Cooling | Forced coolant circulation system. |
| Starting | Electric |
| Ignition | Electronic inductive discharge ignition, high efficiency, with separate HV coil. |
| Ignition advance | α/N three-dimensional map managed by control unit |
| Spark plug | NGK MR7BI-8 |
| Power supply | Electronic injection with \varnothing 32-mm throttle body and electric fuel pump. |
| Fuel | Unleaded gasoline E10 (95 R.O.N.) |
| Exhaust silencer | Absorption-type exhaust silencer with a 3-way catalytic converter and lambda probe. |
| Emissions compliance | EURO 3 |
| Emissions compliance (Thailand, Japan and Taiwan markets) | EURO 4 |

CAPACITY

| | |
|----------------------|---------------------|
| Engine oil | 1.3 l |
| Transmission oil | 250 cm ³ |
| Cooling system fluid | ~ 2 l |
| Fuel tank | 8.5 ± 0.5 litres |

**MEASUREMENT UNITS CONVERSION - FROM THE
ANGLO-SAXON SYSTEM TO THE INTERNATIONAL SYSTEM (I.S.).**

| | |
|---------------------------------|---|
| 1 Inch (in) | 25.4 Millimetres (mm) |
| 1 Foot (ft) | 0.305 Metres (m) |
| 1 Mile (mi) | 1.609 Kilometres (km) |
| 1 US gallon (gal US) | 3.785 Litres (l) |
| 1 Pound (lb) | 0.454 Kilograms (Kg) |
| 1 Cubic inch (in ³) | 16.4 Cubic centimetres (cm ³) |
| 1 Pound per foot (lb ft) | 1.356 Newton metres (N m) |
| 1 Mile per hour (mi/h) | 1.602 Kilometres per hour (km/h) |
| 1 Pound per square foot (PSI) | 0.069 (bar) |
| 1 Fahrenheit (°F) | 32+(9/5) Celsius (°C) |

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Chap. 06
Spare parts and
accessories



06_01



06_02

Warnings (06_01, 06_02)

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.

WARNING



IT IS ALSO RECOMMENDED THAT ORIGINAL PIAGGIO SPARE PARTS BE USED, AS THESE ARE THE ONLY ONES OFFERING YOU THE SAME QUALITY GUARANTEE 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

NEVER RIDE THE SCOOTER EQUIPPED WITH ACCESSORIES (TOP BOX AND/OR WINDSCREEN) AT A SPEED HIGHER THAN 100 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.

WARNING

BE EXTREMELY CAREFUL WHEN INSTALLING AND REMOVING THE MECHANICAL ANTI-THEFT DEVICE ON THE VEHICLE (U-SHAPED PADLOCK, DISC BLOCK, ETC.).

MAINLY NEAR THE BRAKE PIPES, TRANSMISSIONS AND/OR ELECTRIC CABLES, AN INCORRECT INSTALLATION OR REMOVAL OF THE ANTI-THEFT DEVICE AS WELL AS LEAVING IT ON BEFORE STARTING THE VEHICLE CAN SERIOUSLY DAMAGE ITS COMPONENTS, COMPROMISE THE CORRECT FUNCTIONING OF THE VEHICLE AND USERS' SAFETY.

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Chap. 07
Scheduled
maintenance



07_01

Scheduled servicing table (07_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 or (months) maximum | 1 (1) | 5 (5) | 10 (10) | 20 (20) | 30 (30) | 40 (40) | 50 (50) | 60 (60) |
|--------------------------------|-------|-------|---------|---------|---------|---------|---------|---------|
| Safety blocks | I | | I | | I | | I | I |
| Spark plug | | | | R | | R | | R |
| Centre stand | | | L | L | L | L | L | L |
| Drive belt | | | R | R | R | R | R | R |
| Throttle control | I | | I | I | I | I | I | I |
| Complete roller housing | | | I | I | I | I | I | I |
| Diagnosis by tool | I | | I | I | I | I | I | I |
| Air filter | | | R | R | R | R | R | R |
| CVT Filter | | | I | I | I | I | I | I |

| Km x 1.000 or (months) maximum | 1 (1) | 5 (5) | 10 (10) | 20 (20) | 30 (30) | 40 (40) | 50 (50) | 60 (60) |
|---------------------------------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Engine oil filter | R | | R | R | R | R | R | R |
| Valve clearance | | | A | A | A | A | A | A |
| Electrical system and battery | I | | I | I | I | I | I | I |
| Braking system | I | | I | I | I | I | I | I |
| Coolant (*) | I | | I | I | I | I | I | I |
| Brake fluid (*) | I | | I | I | I | I | I | I |
| Engine oil | R | I | R | R | R | R | R | R |
| Hub oil | R | | I | R | I | R | I | R |
| Headlight direction adjustment | | | I | I | I | I | I | I |
| Brake pads | | | I | I | I | I | I | I |
| Sliding shoes / CVT rollers | | | R | R | R | R | R | R |
| Tire pressure and wear | I | | I | I | I | I | I | I |
| Vehicle road test | I | | I | I | I | I | I | I |
| Suspensions | | | I | I | I | I | I | I |
| Steering | I | | I | I | I | I | I | I |

I: CHECK AND CLEAN, ADJUST, LUBRICATE OR REPLACE IF NECESSARY.

C: CLEAN, R: REPLACE, A: ADJUST, L: LUBRICATE.

(*) Replace every 2 years

N.B.

AT EACH SCHEDULED MAINTENANCE MUST BE VERIFIED WITH THE DIAGNOSTIC TOOL IF THERE ARE ERRORS AND THE IF THE PARAMETERS ARE CORRECT.

ENSURE THAT THE VEHICLE CALIBRATION IS UP TO DATE AFTER UPDATING THE DIAGNOSTIC TOOL.

CAUTION

AFTER THE SCHEDULED MAINTENANCE PROGRAM IS FINISHED YOU ARE TOLD TO PROCEED WITH THE MAINTENANCE OF THE VEHICLE STARTING FROM THE SERVICE COUPON OF 10,000 km (6,213 miles) OR 10 MONTHS.

**Recommended products (07_02)**

Piaggio Group recommends the use of products from its Castrol official partner for the scheduled maintenance of its vehicles.

Only use lubricants and fluids which meet or exceed the performance characteristics specified. This also applies when topping up only.

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 |

| Product | Description | Specifications |
|--|---|---|
| Anti-freeze liquid, ready to use, colour red | Ethylene glycol antifreeze liquid with organic inhibition additives. Red, ready to use. | ASTM D 3306 - ASTM D 4656 - ASTM D 4985 - CUNA NC 956-16 |
| DOT 4 brake fluid | Synthetic brake fluid. | SAE J 1703; FMVSS 116; ISO 4925; CUNA NC 956 DOT4 |
| Water repellent spray grease | Water repellent pouring calcium spray grease. | White, soap base spray grease with NLGI 2 Calcium complex; ISO-L-XBCIB2 |

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Chap. 08
Special fittings



08_01

Luggage rack (08_01, 08_02, 08_03)

The "GTS Super" and "GTS SuperSport" versions are equipped with a grab handle "1", as shown in the photo.



08_02

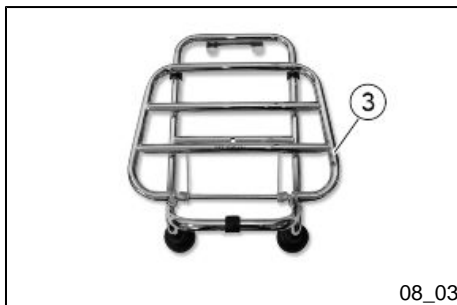
The "GTS" and "GTS Touring" versions are equipped with rear luggage carriers "2", as shown in the photo.

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



Maximum admissible load: 6 kg



08_03

The "GTS Touring" version is equipped with front luggage carriers "3", as well as the rear luggage carriers "2" indicated above.

WARNING



Front luggage carrier maximum admissible load: 4 kg

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Not all versions/models shown in this publication are available in all countries. The availability of single models should be checked at the official Piaggio sales network.

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