

PIAGGIO 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.

MP3 530 hpe



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



Personal safety

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



Safeguarding the environment

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



Vehicle intactness

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

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

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MP3 530 hpe



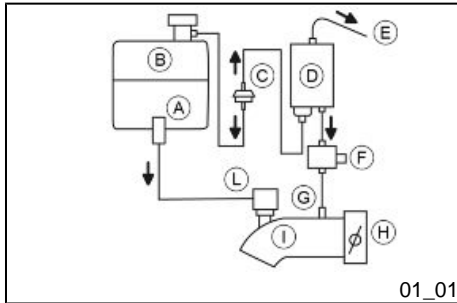
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Chap. 01
General rules

General rules (01_01)

The vehicle is equipped with the "Canister", main component of the system for the control of evaporative emissions, compliant with the current standards.



- A. Fuel pump
- B. Fuel tank
- C. Two-way fuel vapour ventilation valve
- D.Canister
- E.Air purge pipe into atmosphere
- F.One-way electronic fuel vapour purge control valve (controlled by ECU)
- G. Vacuum fitting
- H. Throttle body
- I. Air induction fitting
- L. Injector

MP3 530 hpe

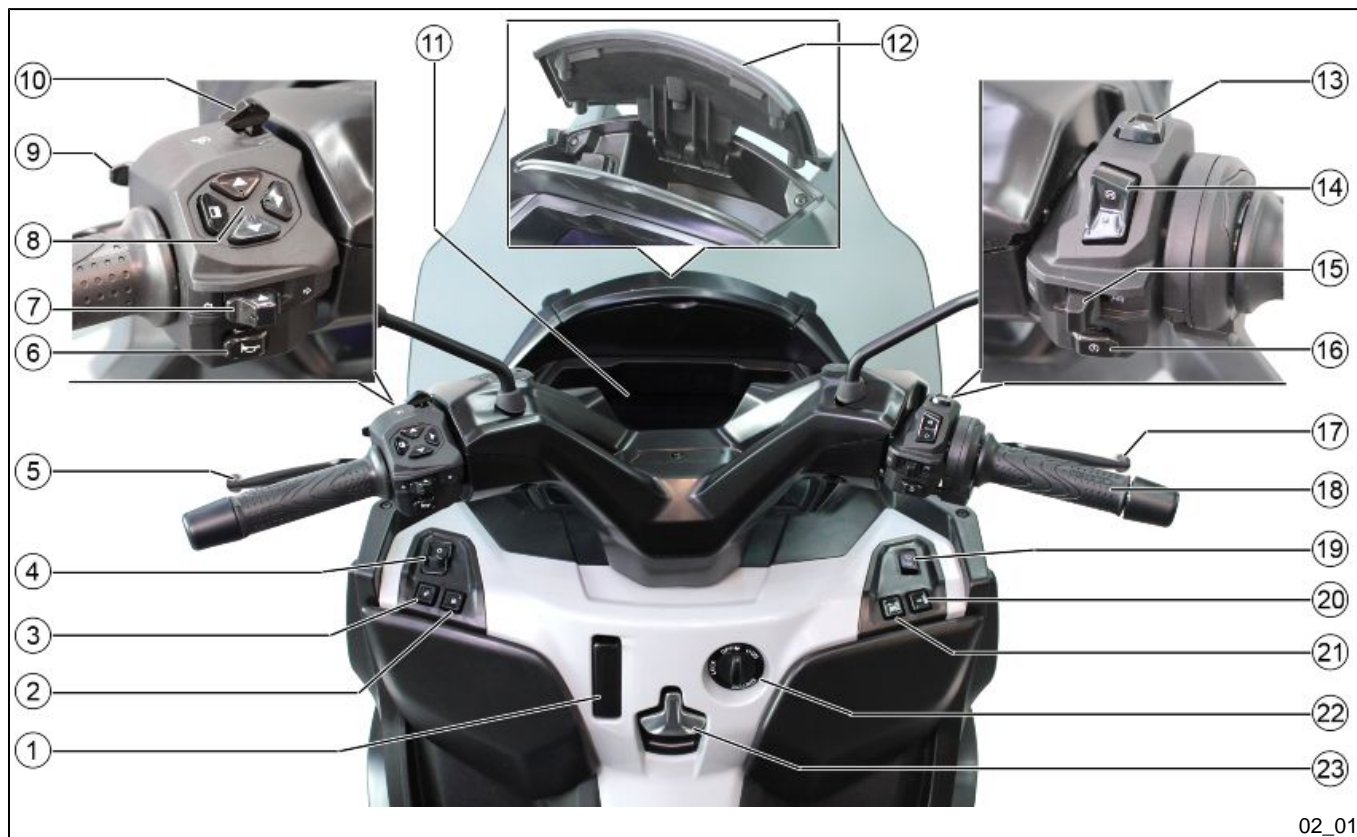


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Chap. 02
Vehicle

Dashboard (02_01, 02_02, 02_03)



02_01

**Key:**

- 1 = Bag hook
- 2 = Fuel tank cap hatch opening button
- 3= Saddle lock release button
- 4 = Drive / Reverse Mode Selector
- 5 = Rear brake lever
- 6 = Horn button
- 7 = Turn indicator switch
- 8 = Control buttons on digital display
- 9 = Light switch
- 10 = Cruise Control Selector
- 11 = Instrument panel
- 12 = Storage box with USB port
- 13 = Hazard warning lights button
- 14 = Emergency stop switch (RUN/OFF)
- 15 = Front suspension lock/unlock switch
- 16 = Starter button / Riding mode selection / Reverse drive engagement



17 = Front brake lever

18 = Throttle grip

19 = D.R.L. switch (Daytime Running Light) / position lights

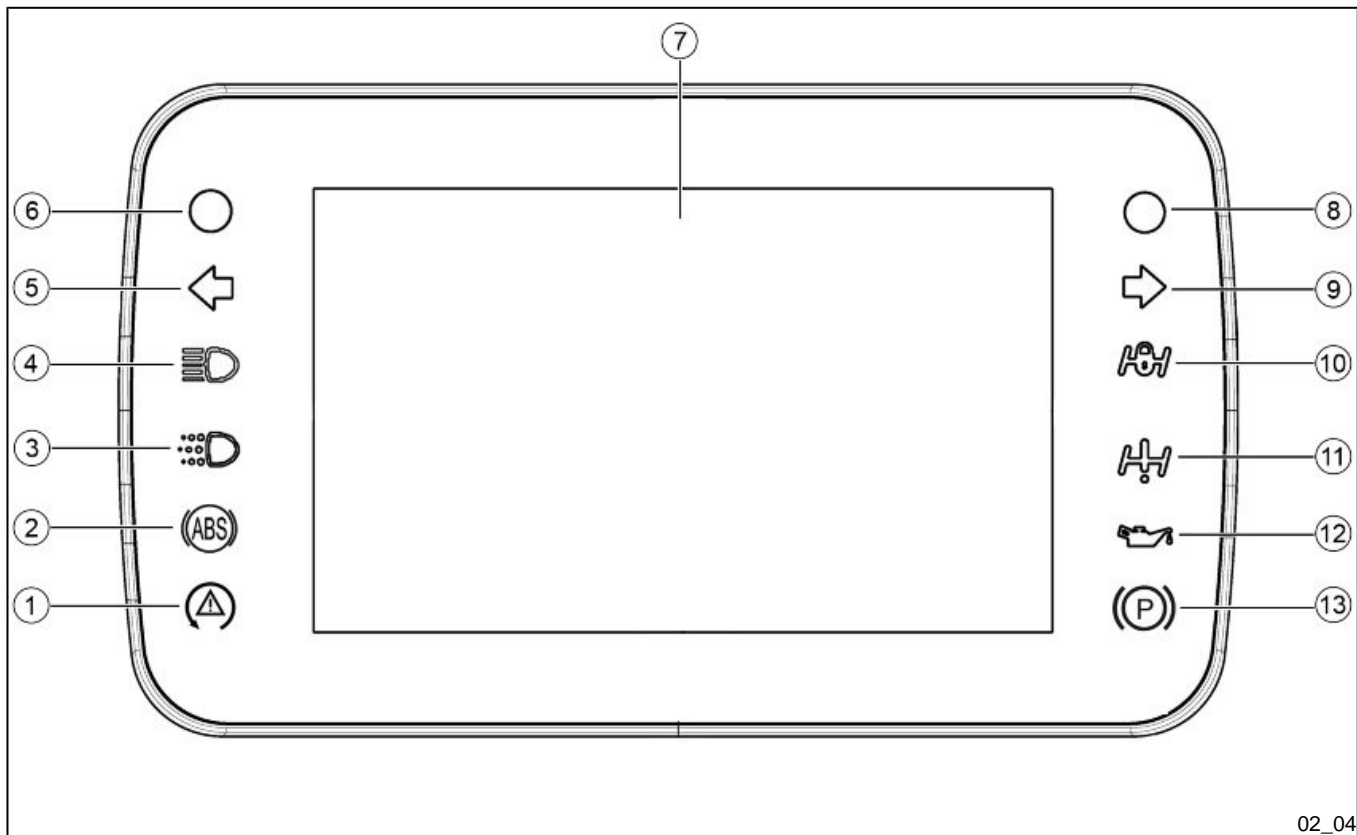
20 = Heated hand grip activation button (optional)

21 = ASR button

22 = Starter switch

23 = Parking brake

Instruments (02_04)

**Key:**

1 = ASR warning light

2 = ABS warning light

3 = D.R.L. (Daytime Running Lights) warning light on

4 = High beam warning light on

5 = Left turn signal indicator lamp

6 = Digital display light sensor

7 = Digital display

8 = Immobilizer LED

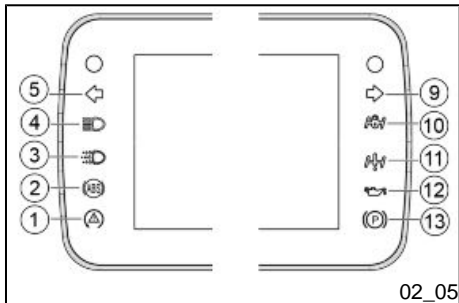
9 = Right turn signal indicator lamp

10 = Front suspension lock system warning light active

11 = Front suspension lock system malfunction warning light

12 = Low engine oil pressure warning lamp

13 = Parking brake indicator light



Indicator unit (02_05, 02_06)

The main warning lights on the analogue instrument panel are described below.

WARNING LIGHTS TABLE

Indicat or light	Description	Colour	Indication
1	ASR warning light	Amber	ASR control (see page "ASR system")
2	ABS warning light	Amber	ABS control (see page "ABS system")
3	DRL lights warning light.	Green	Daylight running light activation
4	High beam warning light	Blue	High-beam light activation
5 - 9	Turn signal indicator lamp	Green	Turn indicators activation
10	Front suspension lock system warning light	Amber	Front suspension lock system control (see page "Front suspension lock system")
11	Front suspension lock system malfunction warning light	Red	Front suspension lock system malfunction indication
12	Insufficient engine oil pressure warning light	Red	Required level check and top up
13	Parking brake warning light	Red	Parking brake activation



02_06

MIL - Injection system failure warning light

This warning light will light if a fault occurs in the engine electronic control system during vehicle operation.

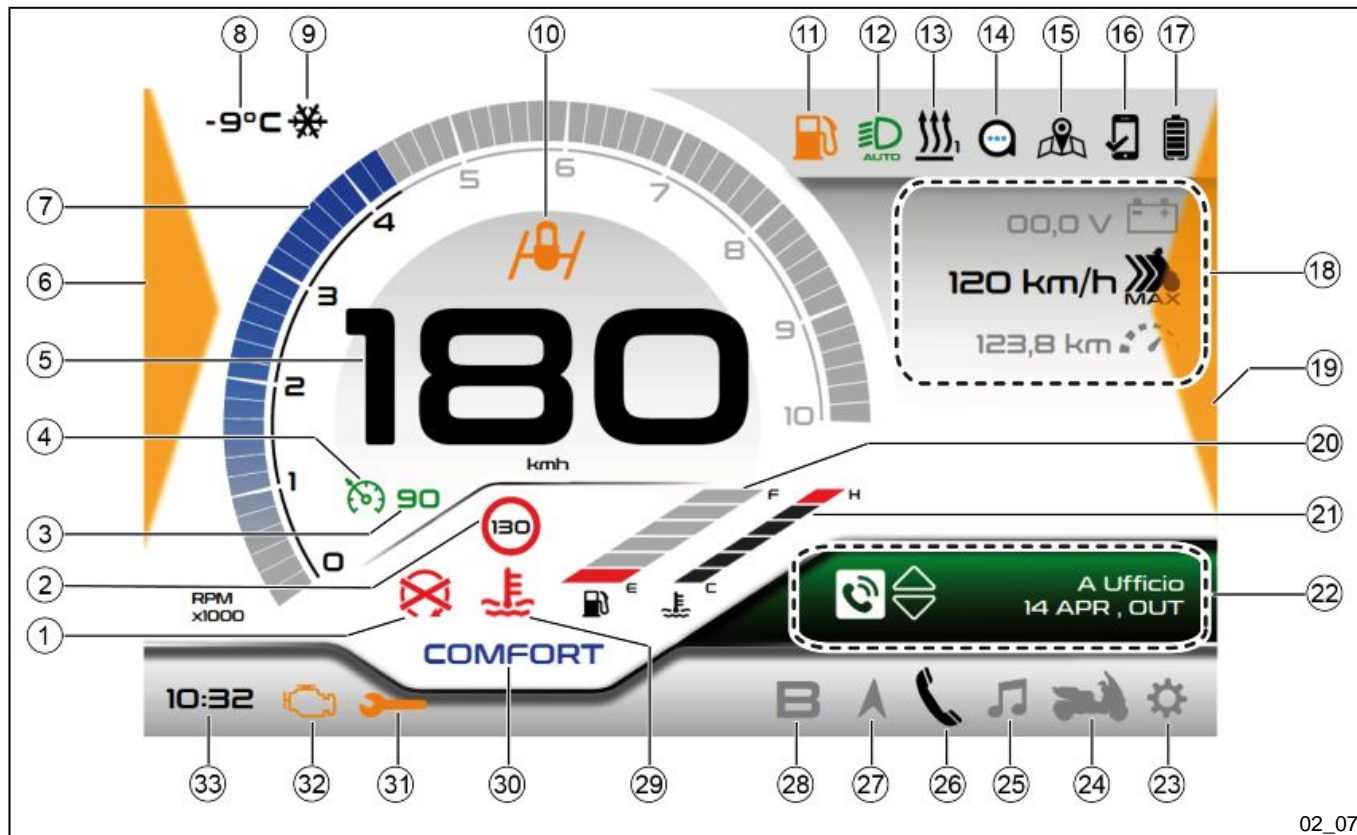
WARNING

STEADY LIT MIL WARNING LIGHT: YOU CAN CONTINUE DRIVING, AVOIDING SEVERE ENGINE EFFORTS OR HIGH SPEED. CONTACT AN AUTHORISED

SERVICE CENTRE AS SOON AS POSSIBLE TO PERFORM THE APPROPRIATE CHECKS.

FLASHING MIL WARNING LIGHT: USING THE VEHICLE FOR A LONG TIME WITH THE MIL WARNING LIGHT FLASHING MAY DAMAGE THE CATALYST, THE ENGINE OR THE VEHICLE. CONTACT AN AUTHORISED SERVICE CENTRE AS SOON AS POSSIBLE TO PERFORM THE APPROPRIATE CHECKS.

Digital lcd display (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_59, 02_60, 02_61, 02_62, 02_63, 02_64, 02_65, 02_66, 02_67, 02_68, 02_69, 02_70, 02_71)



02_07



02_08

Key:

- 1 = Engine start inhibited icon
- 2 = Speed limit indicator via the navigation system
- 3 = Set cruise control speed indicator
- 4 = Cruise control active icon
- 5 = Tachometer (digital or analogue)
- 6 = Left side L.C.D.A.S. hazard indicator (L.C.D.A.S. - Lane Change Decision Aid System)
- 7 = Rpm indicator
- 8 = Ambient temperature indicator
- 9 = Ice hazard icon
- 10 = Active front suspension lock system warning light
- 11 = Fuel reserve icon
- 12 = Automatic D.R.L. lights (Daytime Running Lights) icon
- 13 = Heater accessory icon preparation and heating level management (optional)
- 14 = Icon for connection between the PIAGGIO App on the smartphone and PMP3 control unit on the vehicle
 - if steady, the application communicates with the control unit;
 - if flashing, the pairing between smartphone and PMP3 control unit is in progress.
- 15 = GPS navigation active on smartphone icon
- 16 = Bluetooth connection with smartphone active icon
- 17 = Smartphone battery level icon



02_09

18 = Multifunctional panel

19 = Right side L.C.D.A.S. hazard indicator (L.C.D.A.S. - Lane Change Decision Aid System)

20 = Fuel gauge

21 = Coolant temperature gauge

22 = Pop-Up Alarm Panel - Information - Multimedia System Management (PMP - PIAGGIO MIA)

23 = Digital display and vehicle settings icon

24 = Vehicle configuration icon

25 = Music information icon

26 = Phone information icon

27 = GPS navigation management icon

28 = Trip information management (trip) icon

29 = High coolant temperature icon

30 = Riding mode icon

31 = Scheduled service to be performed icon

32 = Engine management system warning lamp (M.I.L. - Injection system failure)

33 = Clock





Once the ignition switch has been enabled (see the "Remote control" paragraph), press it and, as shown on the digital display, turn it to the "ON" position; a "Welcome" message will be displayed.

The message "Goodbye" will be displayed when the ignition switch is turned to "OFF".



For some faults detected by the control unit on the vehicle, the digital display will illuminate the red box with the general warning light with a different text depending on the cause.

Take the vehicle to an **Authorised Service Centre** as soon as possible.



Navigation inside the digital display is done using the control buttons on the left-hand side of the handlebar.

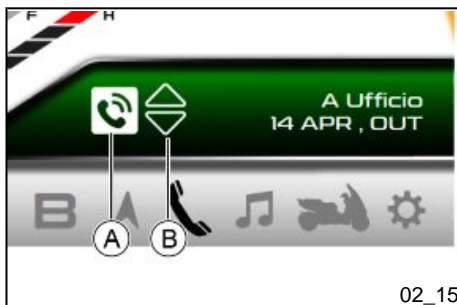
It is possible to scroll through all the settings menus for various parameters and vehicle configuration, as well as view the trip log information, and, if the smartphone is connected to the Piaggio Multimedia Platform (PMP) ECU, also phone, music and media information.



02_14

The navigation buttons are as follows:

- **SET** (select / confirm / press and hold to reset)
- **UP**
- **DOWN**
- **RIGHT**



02_15

There are two types of symbols that can appear on the Pop-up panel:

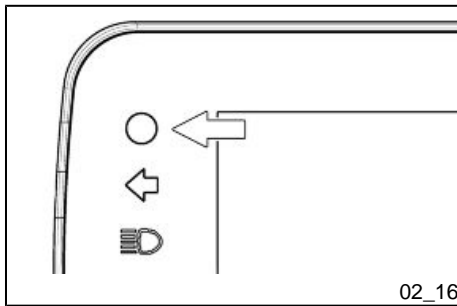
- symbol "A": where shown as a "solid" shape, the symbol indicates that it is necessary to press and hold.
- symbol "B": where shown as an "outline", the symbol indicates that it is necessary to press briefly.

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.



DIGITAL DISPLAY BACK-LIGHT COLOUR CHANGE

The instrument panel has a sensor that automatically changes the back-light of the digital display to suit the exterior brightness (day - night).



However, it is also possible to change the back-light colour manually by entering the **SETTINGS** function and, with a short press of the "**UP**" or "**DOWN**" keys, scroll and enter the **BACK-LIGHT** menu by pressing the "**SET**" key briefly.

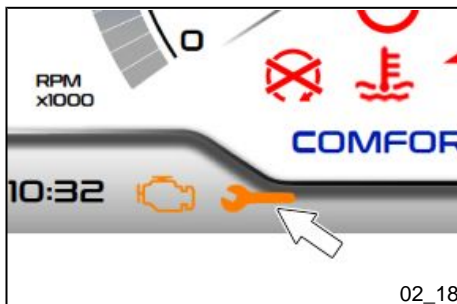
Shortly press the "**UP**" or "**DOWN**" keys to select the desired parameter and modify it by briefly pressing the "**SET**":

- Setting: Day mode: Numeric value to set / Night: Numeric value to set
- Automatic: ON-OFF
- Day mode: ON-OFF
- Night mode: ON-OFF

CAUTION



FOR SAFETY REASONS, THE BACK-LIGHT COLOUR ON THE DIGITAL DISPLAY CAN BE MANUALLY CHANGED ONLY WITH THE VEHICLE AT A STANDSTILL.

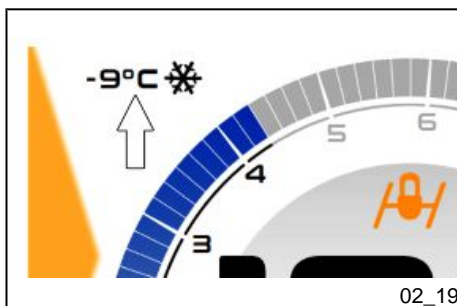


02_18

MAINTENANCE ICON

This function indicates the scheduled maintenance interventions. For each time the ignition key is turned to "ON", once the instrument panel has performed the initial check, if the value of the remaining kilometres until the next scheduled service is less than 300 Km (186.41 mi), the indicated icon will flash for 10 seconds.

Once the scheduled service mileage is reached, each time the key is turned to "ON", the icon remains solidly lit until the scheduled service is carried out. To perform the maintenance operations, contact an **Authorised Service Centre**.



02_19

AMBIENT TEMPERATURE INDICATION WITH ICE HAZARD ICON

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

If the ambient temperature is less than 5°C (41°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.



02_20

TRIP INFORMATION (TRIP)

Press the "RIGHT" button briefly to select the trip information icon. Select the trip log by pressing the "SET" key briefly; There are three different trip logs (A, B, or C) available.



For each of the selected trip logs, the multifunction panel will display the following information:

- TOTAL ODOMETER
- PARTIAL ODOMETER
- TRAVELLING TIME
- MAXIMUM SPEED
- AVERAGE SPEED
- BATTERY CHARGE STATE
- AVERAGE FUEL CONSUMPTION
- INSTANT FUEL CONSUMPTION
- REMAINING MILEAGE

Briefly press on the "UP" or "DOWN" keys to scroll through the various information displayed. In some information (PARTIAL ODOMETER, TRAVEL TIME, MAXIMUM SPEED, AVERAGE SPEED, AVERAGE FUEL CONSUMPTION) a long press of the **SET** button resets all the indications stored in the active trip log of trips A and B; in trip C, this information is automatically reset for stops longer than 2 hours.



RIDING MODE

The vehicle has an electronic control unit that can have 3 different riding modes depending on the use.

The selected riding mode is shown on the digital display:

- **ECO**: reduced engine power and light response to the gas throttle. Traction control (ASR) setting suitable for driving on all types of road surfaces, including low grip conditions.
- **COMFORT**: full engine power and progressive response to the gas throttle. Traction control (ASR) setting identical to "ECO" configuration: suitable for all types of road surfaces, including low grip conditions.
- **SPORT**: full engine power and quicker response to the gas throttle. Traction Control (ASR) setting optimized to provide maximum performance on surfaces with optimum grip. When used on low grip surfaces, more noticeable rear wheel slips may occur, resulting in loss of vehicle stability.

CAUTION

FOR THE "SPORT" RIDING MODE A DEDICATED ASR TYPE IS PROVIDED; IN LOW GRIP ROAD CONDITIONS, IT IS RECOMMENDED THAT "COMFORT" OR "ECO" MODES BE USED WHICH PROVIDE A LOWER ASR LEVEL.

THE STATUS AND TYPE OF THE ASR SYSTEM ASSOCIATED WITH THE SELECTED RIDING MODE CAN BE DISPLAYED IN THE VEHICLE "CONFIGURATION" MENU.

N.B.

TO CHANGE THE DIGITAL DISPLAY GRAPHICS FOR EACH OF THE RIDING MODES, REFER TO THE PARAGRAPH "TACHOMETER AND RPM INDICATOR DISPLAY/COLOUR SET-UP" IN THIS CHAPTER.

To activate one of the modes, make sure that the Drive/Reverse mode selector is in the "D" (Drive) position.



02_23



02_24

Briefly press the start button; the riding modes will be displayed cyclically.

Release the button after having chosen the desired mode.

N.B.

THE RIDING MODES ARE ALSO ACTIVATED WITH THE VEHICLE RUNNING BUT WITH THE ACCELERATOR LEVER RELEASED.



02_25

MULTIMEDIA SYSTEM PMP-PIAGGIO MIA

The vehicle is equipped with a **PMP-PIAGGIO MIA (Piaggio Multimedia Platform)** control unit which communicates via Bluetooth with the smartphone for data exchange with the vehicle and multimedia content management.

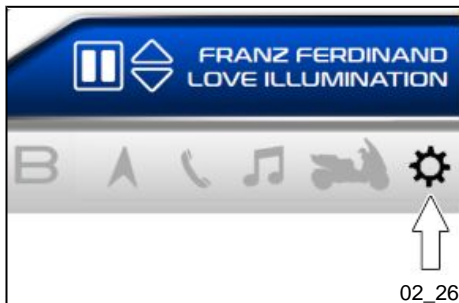
Download and install the specific «**PIAGGIO**» app from the Play Store or Apple Store on your smartphone. Once a connection is established correctly between the control unit and the smartphone, the following functions can be directly managed by the digital display of the vehicle:

- call handling
- manage audio playback
- GPS navigation

PAIRING PROCEDURE Smartphone - Multimedia System PMP-PIAGGIO MIA

To enable the functions of the multimedia system, it is necessary to pair the device on the vehicle with the smartphone performing the following procedure.

Press the "**RIGHT**" button briefly to select the settings icon. Confirm your selection by pressing "**SET**" key briefly.



By briefly pressing the "**UP**" or "**DOWN**" keys, enter the "**Configuration**" > "**Pairing conf.**" > "**Pairing request**" menu.

Confirm your selection by pressing "**SET**" key briefly. The activation of the procedure will be confirmed by the flashing of the **PIAGGIO** app icon on the digital display.

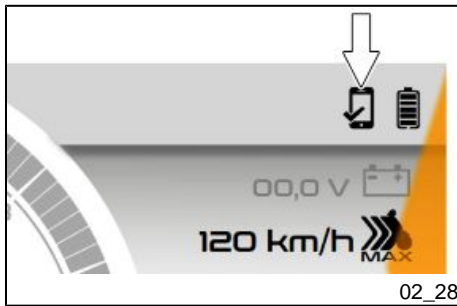
Enable the Bluetooth search on your smartphone, select the "**PMP3-XXXX**" device and, if required, enter the password "**0000**" and press on "**pair**".

The digital display will show the message "**PAIRING COMPLETE**", confirming that pairing with the smartphone is completed.



N.B.

WHEN USING DEVICES WITH ANDROID OPERATING SYSTEM, THE SYSTEM WILL BE DETECTED TWICE. BE SURE TO PAIR ONLY THE ONE WITH THE HEADSET SYMBOL. IF THE SECOND DEVICE IS PAIRED, THE SYSTEM WILL NOT WORK PROPERLY. IF THERE IS AN ERROR IN PERFORMING THE PROCEDURE, CANCEL THE PAIRING OF ALL PAIRED DEVICES WITH THE VEHICLE'S INSTRUMENT PANEL SWITCHED OFF AND REPEAT THE OPERATION.



The "PMP3-xxxx" device will be visible in the list of associated devices on the smartphone. Wait for the digital display to automatically connect the smartphone. **Do NOT force the connection from the telephone.**

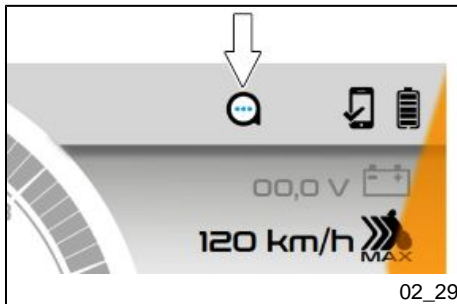
The smartphone icon on the display indicates active communication. Allow contacts and notification sharing when requested. These enabling operations are necessary to display the caller's name on the display.

N.B.

UPON THE FIRST PAIRING BETWEEN THE DISPLAY AND SMARTPHONE, MORE TIME MAY BE REQUIRED FOR THE SYNCHRONIZATION OF THE PHONE BOOK. THE CONNECTION BETWEEN THE SMARTPHONE AND VEHICLE WILL BE SIGNALLLED BY THE LIGHTING OF THE SMARTPHONE ICON ON THE DISPLAY.

N.B.

THE PIAGGIO MIA SYSTEM IS ONLY COMPATIBLE WITH ANDROID DEVICES WITH AN OPERATING SYSTEM ABOVE 10 AND IOS ABOVE 14.



CONNECTION BETWEEN THE "PIAGGIO" APPLICATION AND THE DIGITAL DISPLAY

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

For specific information about the pairing of the "PMP-Piaggio 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 "PIAGGIO" 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

www.app.piaggio.com



If pairing between Smartphone and Vehicle is not successful, proceed as follows:

- restart the smartphone;
- turn the ignition switch to "**OFF**" and then to "**ON**"; wait for the animation on the display to end.

If the smartphone icon on the display is not illuminated after approximately 1 minute, proceed as follows:

- Turn off your phone's Bluetooth;
- Select the "**reset pairing**" item on the digital display configuration menu (**CAUTION**: the operation will delete all previously paired devices);
- Turn on your phone's Bluetooth and unpair all "**PMP3-XXX**" devices in the paired devices list;
- Repeat the pairing process, taking care to restart the device search from the phone's Bluetooth menu as well.

N.B.

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

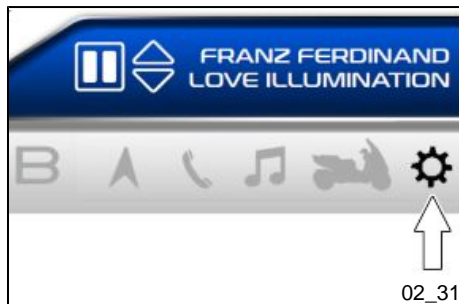
- **ON iOS, DELETE THE PREVIOUSLY INSTALLED APP AND REINSTALL IT.**
- **ON ANDROID, SIMPLY DELETE THE APPLICATION DATA FROM THE APP MANAGEMENT MENU (THIS WILL RETURN THE APPLICATION TO THE INITIAL CONDITION AND THE LOGIN AND FIRST CONNECTION TO THE VEHICLE MUST BE PERFORMED AGAIN).**
- **IN CASE OF CONNECTION TO A NEW VEHICLE, IT IS NECESSARY TO REMOVE THE PREVIOUS "PMP3-XXXX" FROM THE ASSOCIATED DEVICES.**

N.B.

IT IS RECOMMENDED TO PAIR A MAXIMUM OF 2 SMARTPHONES TO OPTIMIZE SYSTEM OPERATION. WHEN CONNECTING THE SECOND SMARTPHONE, PLEASE NOTE THAT THE NEXT ONE WILL REQUIRE A LONGER TIME (MORE THAN 30 SECONDS) TO CONNECT TO THE "PMP3- XXXX". HOWEVER, THE SYSTEM DOES NOT MANAGE THE SIMULTANEOUS CONNECTION OF MORE THAN ONE DEVICE AND, IN ORDER TO GUARANTEE THE CONNECTION WITH THE DESIRED DEVICE, IT WILL BE NECESSARY TO TEMPORARILY DISABLE THE BLUETOOTH OF ANY SECOND PHONE THAT WAS PREVIOUSLY CONNECTED WITH THE SYSTEM.

Mandatory operation on iOS systems to ensure audio routing to any Bluetooth headset connected to the phone:

- Enter the menu: "**Settings**" > "**Accessibility**" > "**Touch**" > "**Call routing**";
- select "**Bluetooth headset**".



If it is necessary to disconnect the smartphone, proceed as follows:

Once the **SETTINGS** function has been entered, briefly press the "**UP**" or "**DOWN**" buttons and enter the "**Configuration**" > "**Paring Config.**" > "**Pairing reset**".

Confirm your selection by pressing "**SET**" key briefly.

All stored Bluetooth devices will be deleted from the "**PMP-PIAGGIO MIA**" system. The display shows the message confirming the deletion. The pairing procedure can be repeated for a new smartphone.

N.B.

THIS OPERATION IS NECESSARY WHEN THE SMARTPHONE IS REPLACED.



02_32

GPS NAVIGATION

The "PMP-PIAGGIO MIA" system, paired with the "PIAGGIO" application, allows GPS indications to be shown on the digital display. By means of pictograms, distance and travel time data, the desired destination can be reached.

Press the "RIGHT" button briefly to select the GPS navigation icon. Confirm your selection by pressing and holding the "SET".

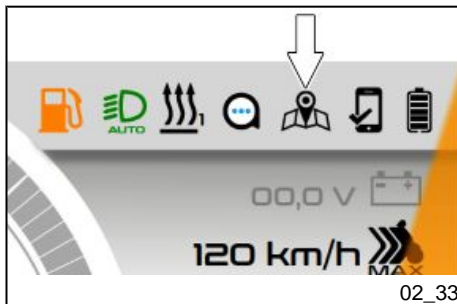
During navigation, you can return to the digital display home screen at any time (and vice versa) while keeping the navigation active.

N.B.

BY SETTING THE DESTINATION ADDRESS VIA THE "PIAGGIO" APPLICATION, THE DIGITAL DISPLAY AUTOMATICALLY DISPLAYS THE DRIVING DIRECTIONS SCREEN.

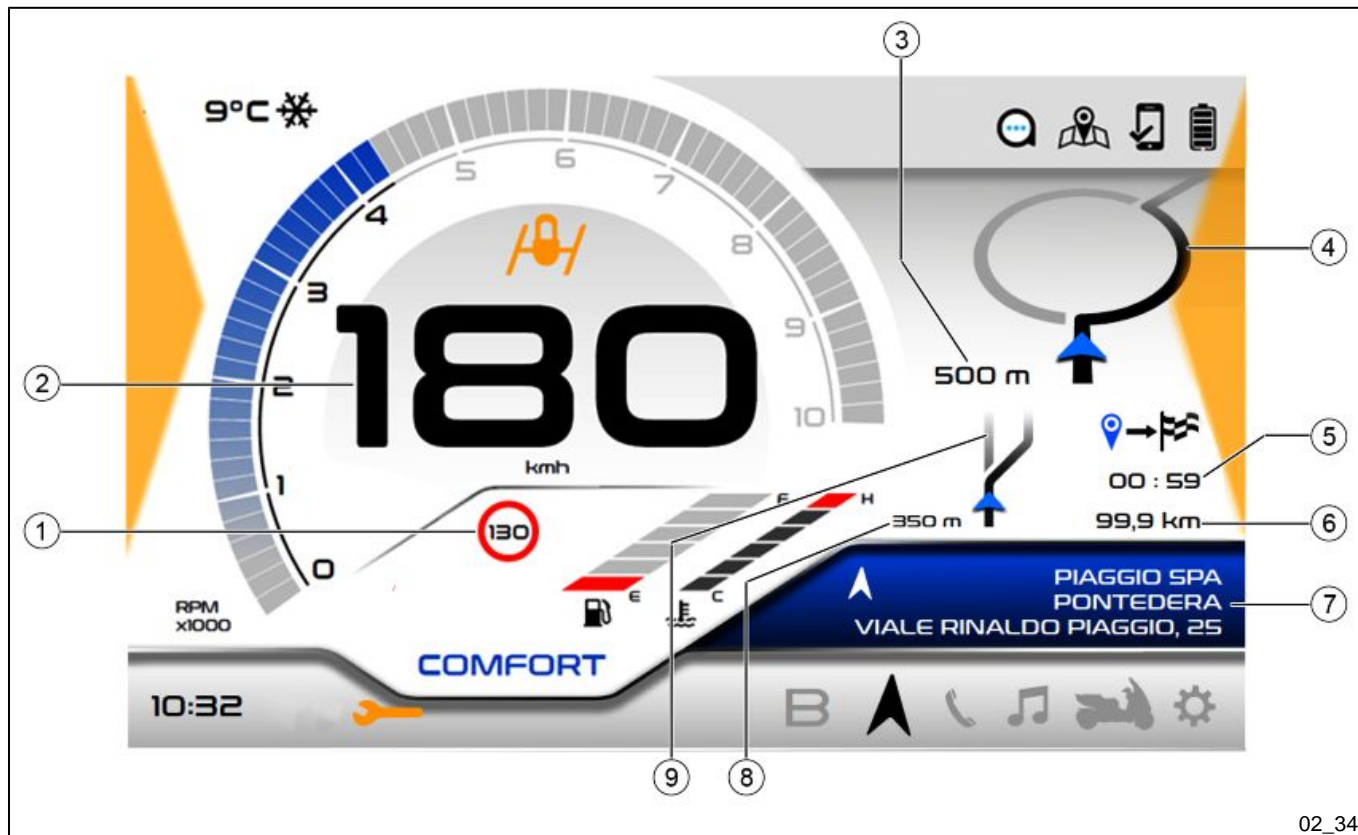
N.B.

TO MANAGE THE NAVIGATION FUNCTION, THE APP MUST ALWAYS BE CONNECTED TO THE VEHICLE AND THE NAVIGATION PAGE MUST HAVE BEEN OPENED AT LEAST ONCE IN THE APP. THE ACTUAL AVAILABILITY OF THE FUNCTION IS CONFIRMED BY THE ILLUMINATION OF THE NAVIGATION ICON ON THE DIGITAL DISPLAY.



02_33

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



02_34

GPS navigation screen key:

1 = Indication regarding the speed limit applicable on the current road

2 = Indication regarding the current speed (tachometer)

3 = distance to impending manoeuvre

4 = imminent manoeuvre indication

5 = time remaining to arrival at destination

6 = distance remaining to arrival at destination

7 = destination or next turn address

8 = distance to the next manoeuvre

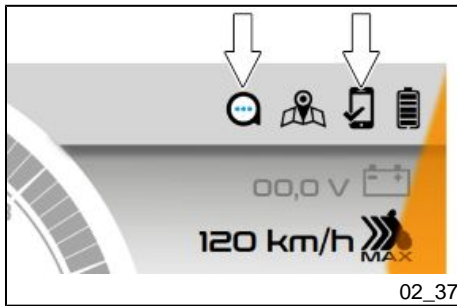
9 = indication following the next manoeuvre

PHONE INFORMATION

Press the "RIGHT" button briefly to select the phone information icon. Confirm your selection by pressing and holding the "SET".



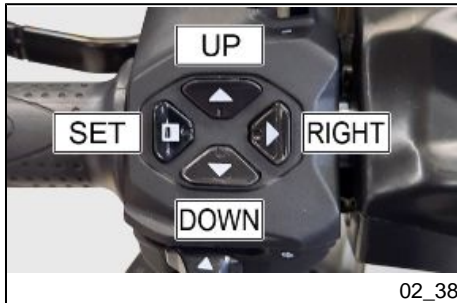
The «PMP-PIAGGIO MIA » system communicates with the user through messages that can be viewed on the pop-up panel of the digital display. Depending on the message type, the graphic panel shows the icon, colours and the specific message.



Call handling

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

- pair the smartphone with the "PMP-PIAGGIO MIA" system via Bluetooth;
- install and log in to the "PIAGGIO" application with your account on the smartphone;
- pair a Bluetooth headset with the "PMP-PIAGGIO MIA" system using the "PIAGGIO" application;
- allow the address book and notifications sharing during the Bluetooth pairing of the smartphone with the "PMP-PIAGGIO MIA" system.



The following information is shown in the relative area on the digital display:

- Call in progress
- Incoming call
- Outgoing call
- Call ended
- Voice control active
- Call log
- SMS messages

Briefly press on the "DOWN" and "UP" buttons to scroll through the call history (missed calls, dialled calls, unanswered calls). After having selected the desired item, press and hold the **SET** button to initiate the call.

CALL HANDLING FEATURES

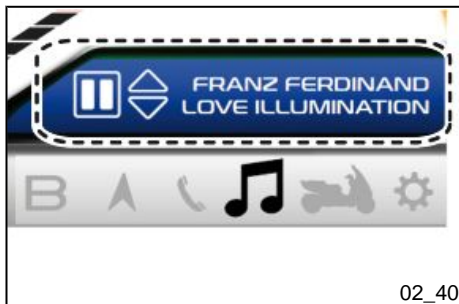
Accept incoming call	BRIEF SET BUTTON PRESS
End an active call	LONG SET BUTTON PRESS
Reject incoming call	LONG SET BUTTON PRESS
Cancel outgoing call	LONG SET BUTTON PRESS

Activate volume control (with call in progress)	LONG UP BUTTON OR DOWN BUTTON PRESS
Increase volume (with call in progress)	SHORT UP BUTTON PRESS
Lower volume (with call in progress)	SHORT DOWN BUTTON PRESS

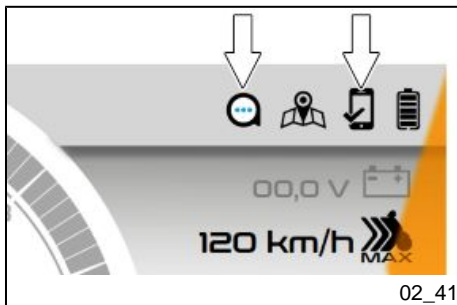


MUSIC INFORMATION

Press the "RIGHT" button briefly to select the music information icon. Confirm your selection by pressing and holding the "SET".



The «PMP-PIAGGIO MIA » system communicates with the user through messages that can be viewed on the pop-up panel of the digital display. Depending on the message type, the graphic panel shows the icon, colours and the specific message.



Music playback management

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

- pair the smartphone with the "**PMP-PIAGGIO MIA**" system via Bluetooth;
- install and log in to the "**PIAGGIO**" application with your account on the smartphone;
- pair a Bluetooth headset with the "**PMP-PIAGGIO MIA**" system using the "**PIAGGIO**" application.



The following information is shown in the relative area on the digital display:

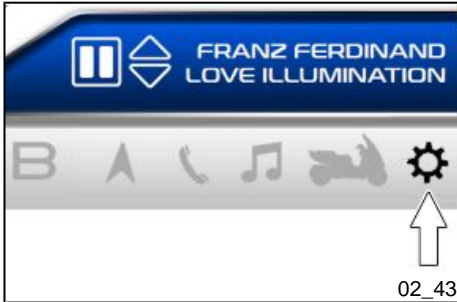
- Track playing
- Playback paused

Use the control buttons to manage audio playback as shown in the table.

MUSIC HANDLING FEATURES

Play track	SHORT SET BUTTON PRESS
Volume control enable (with music playing)	LONG UP BUTTON OR DOWN BUTTON PRESS
Volume increase (with music playing)	SHORT UP BUTTON PRESS
Volume decrease (with music playing)	SHORT DOWN BUTTON PRESS

Next music track (with music playing)	SHORT UP BUTTON PRESS
Previous music track (with music playing)	SHORT DOWN BUTTON PRESS



DIGITAL DISPLAY AND VEHICLE SETTINGS ICON

Press the "**RIGHT**" button briefly to select the digital display and vehicle settings icon.

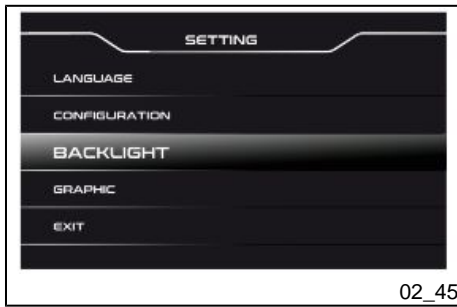
Confirm your selection by pressing and holding the "**SET**" button and access the **SETTINGS** menu.

N.B.

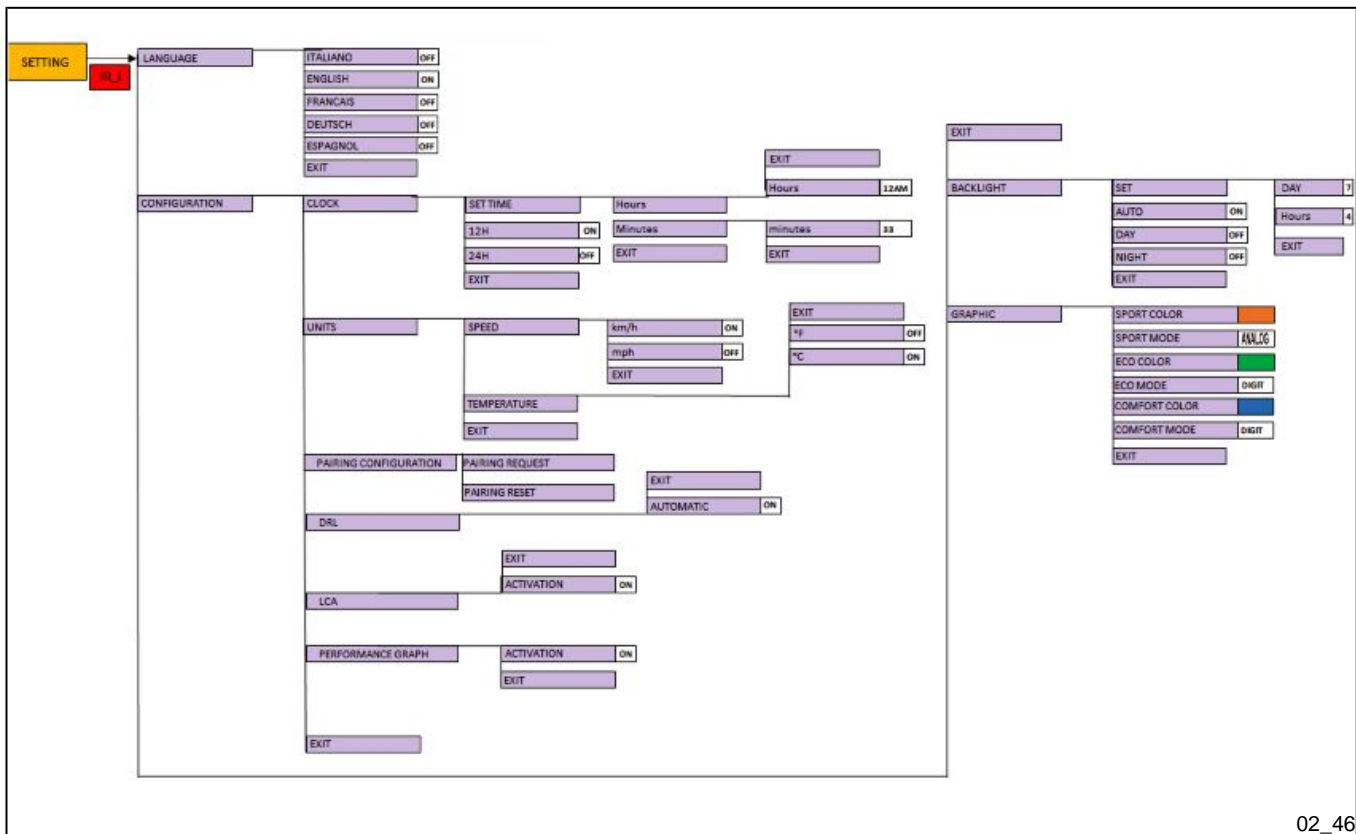
THE SETTINGS FUNCTION IS ONLY ACCESSIBLE WITH THE VEHICLE AT A STANDSTILL.



After having accessed the **SETTINGS** function, briefly press the "**UP**" or "**DOWN**" keys to scroll through the various sub-menus; Confirm your selection by briefly pressing the "**SET**" key to enter the desired sub-menu.



Once the sub-menu is chosen, it will be highlighted with a light bar; The desired parameter can then be modified by a further brief press of the "SET" key:



02_46

1 - "Language" menu

- Italian: ON-OFF
- English: ON-OFF

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

2 - "Configuration" menu

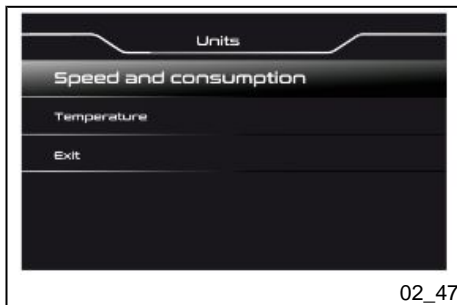
- Clock: Set time; 12h, 24h / ON, OFF / Exit
- Units of measurement:
- Speed and consumption: Km/h / mph mpg ENG / mph mpg USA / ON, OFF / Exit
- Temperature: °C: ON-OFF / °F: ON-OFF / Exit
- Pairing config.: Pairing request / Pairing reset / Exit
- DRL: automatic ON-OFF
- LCA: automatic ON-OFF
- Performance chart: ON-OFF
- Exit

3 - "Back-light" menu

- Setting: Day mode: Numeric value to set / Night: Numeric value to set
- Automatic: ON-OFF
- Day mode: ON-OFF
- Night mode: ON-OFF
- Exit

4 - "Graphics" menu

- Sport colour: set the colour
- Sport mode: Analogue / Digital
- Eco colour: set the colour
- Eco mode: Analogue / Digital
- Comfort colour: set the colour
- Comfort mode: Analogue / Digital
- Exit



02_47

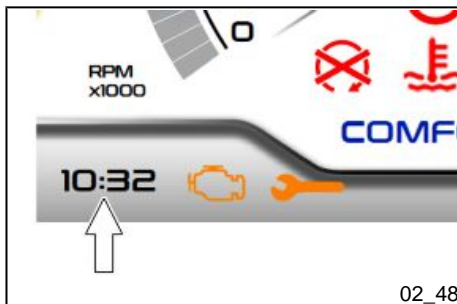
Measurement unit change

Once the **SETTINGS** function has been entered, briefly press the "**UP**" or "**DOWN**" keys to scroll through and enter the **CONFIGURATION** menu by briefly pressing the "**SET**" key.

Shortly press the "**UP**" or "**DOWN**" keys to select the parameter:

- Speed: select the required unit of measurement, choosing from the following options: Km/h, mph mpg ENG / mph mpg USA / ON, OFF.
- Temperature: select the required unit of measurement, choosing from the following options: degrees°C, °F / ON, OFF.

Change the desired parameter by briefly pressing the "**SET**" key.



02_48

Setting the clock

Once the **SETTINGS** function has been entered, briefly press the "**UP**" or "**DOWN**" keys to scroll through and enter the **CONFIGURATION** menu by briefly pressing the "**SET**" key.

Shortly press the "**UP**" or "**DOWN**" keys to select the desired parameter:

- Set time (hours, minutes, exit)
- 12h
- 24h
- Exit

Change the desired parameter by briefly pressing the "**SET**" key.



Tachometer and rpm indicator display/colour set-up

The display and colour of the tachometer "A" and of the rpm indicator "B" on the digital display can be set in the following two configurations, for each of the riding modes:

- analogue
- digital

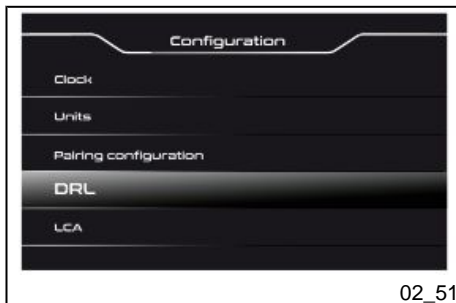


Once the **SETTINGS** function has been entered, briefly press the "UP" or "DOWN" keys to scroll through and enter the **GRAPHICS** menu by briefly pressing the "SET" key.

Shortly press the "UP" or "DOWN" keys to select the desired parameter:

- Sport colour: set the colour
- Sport mode: Analogue / Digital
- Eco colour: set the colour
- Eco mode: Analogue / Digital
- Comfort colour: set the colour
- Comfort mode: Analogue / Digital

Change the desired parameter by briefly pressing the "SET" key.



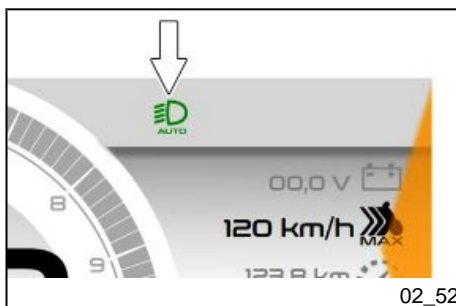
Automatic D.R.L. (Daytime Running Lights) (where applicable)

Once the **SETTINGS** function has been entered, briefly press the "**UP**" or "**DOWN**" keys to scroll through and enter the **CONFIGURATION** menu by briefly pressing the "**SET**" key.

Shortly press the "**UP**" or "**DOWN**" keys to select the desired parameter:

- DRL: automatic ON-OFF

Change the desired parameter by briefly pressing the "**SET**" key.



With the D.R.L. lights set to automatic mode, the appropriate icon on the digital display will illuminate.

In this mode, depending on the exterior light (day - night) that the light sensor on the instrument panel detects, switching to the position/low beam lights will be automatic.



N.B.

THE VEHICLE LIGHTING SWITCH MUST BE IN THE "D.R.L." POSITION TO ACTIVATE THE AUTOMATIC POSITION/LOW BEAM LIGHTS SWITCHING (SEE THE "LIGHTS SWITCH" PARAGRAPH).



02_54

Performance graphs display setting

Once the **SETTINGS** function has been entered, briefly press the **"UP"** or **"DOWN"** keys to scroll through and enter the **CONFIGURATION** menu by briefly pressing the **"SET"** key.

Shortly press the **"UP"** or **"DOWN"** keys to select the desired parameter:

- Performance chart: ON-OFF

Change the desired parameter by briefly pressing the **"SET"** key.

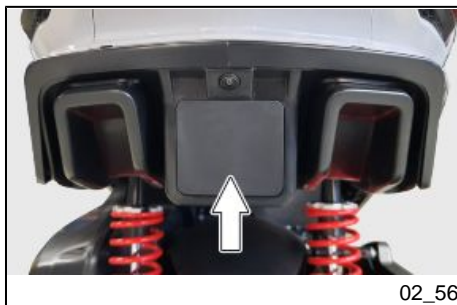


02_55

The following graphs will be displayed on the multifunction panel:

- Torque curve (instantaneous operating point)
- Consumption histogram (trip A, B or C)
- Average speed histogram (trip A, B or C)

Press and hold the **"UP"** or **"DOWN"** keys to scroll through the various graphs.



02_56

L.C.D.A.S. SYSTEM - Lane Change Decision Aid System

The vehicle is equipped with a rear radar which, when activated, can detect vehicles in the blind corners of the rear view mirrors or that are moving rapidly toward the right and left of the vehicle, providing alerts on the digital display to improve driver perception when changing lanes.

CAUTION



THE DRIVER OF A VEHICLE IS RESPONSIBLE FOR DRIVING AND MANOEUVRING EVEN IF THERE ARE INTELLIGENT DRIVING AID SYSTEMS ON THE

VEHICLE, SUCH AS THE L.C.D.A.S. SYSTEM. (LANE CHANGE DECISION AID SYSTEM) AND CRUISE CONTROL, WHICH MUST ALWAYS BE CHECKED OR CORRECTED BY THE DRIVER. THESE SYSTEMS ARE ONLY DESIGNED TO ASSIST THE DRIVER DURING DRIVING AND TO IMPROVE THE DRIVING CONDITION.

THE DRIVER IS ALWAYS RESPONSIBLE FOR THE CHOICE OF DRIVING BEHAVIOUR AND FOR THE ADOPTION OF THE LEVEL OF CAUTION AND ATTENTION REQUIRED BY THE SPECIFIC ENVIRONMENTAL CONTEXT.

CAUTION

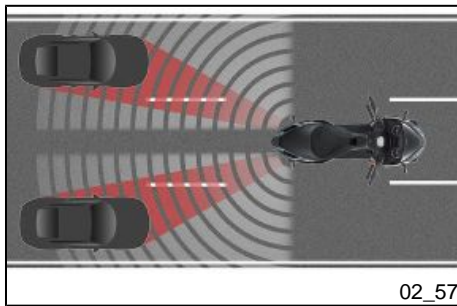


ROAD SAFETY IS ALWAYS THE RESPONSIBILITY OF THE DRIVER.

THE SYSTEM DOES NOT REPLACE THE REAR VIEW MIRRORS AND IS NOT INTENDED TO PREVENT COLLISIONS, BUT TO PROVIDE VISUAL INFORMATION THAT THE DRIVER CAN USE TO PREVENT THEM, IF POSSIBLE. THEREFORE, THE DRIVER MUST NOT RELY EXCLUSIVELY OR UNWISELY ON THE "CAPABILITIES" OF THE SYSTEM TO UNDERSTAND THE ENVIRONMENT: THE SHAPE OF CERTAIN OBJECTS, THEIR SURFACE, THEIR STATIC/DYNAMIC POSITION, THE MANNER IN WHICH THEY ENTER THE RADAR'S VISUAL SPACE MAY NOT BE ENOUGH FOR THE SYSTEM TO UNDERSTAND SAID CONTEXT AND CAUSE THE DRIVER TO RECEIVE INCORRECT INFORMATION.

N.B.

THE PERFORMANCE OF THE L.C.D.A.S. SYSTEM. IS NOT AFFECTED BY AMBIENT LIGHTING BUT MAY VARY DEPENDING ON WEATHER OR ROAD CONDITIONS. IN PARTICULAR, SNOW, HEAVY RAIN OR WATER STAGNATION MAY REDUCE THE CAPACITY OF THE SYSTEM OR, IN GENERAL, LEAD TO INCORRECT INDICATIONS.



The radar detects the presence of vehicles coming from the side areas immediately behind the vehicle. It is therefore used to avoid changing directions even while remaining on the lane, if there is another vehicle that cannot be easily identified.

CAUTION



IF ACTIVATED, THE REAR RADAR DOES NOT DETECT VEHICLES THAT FOLLOW YOUR VEHICLE IN A ROW, BUT ONLY THOSE COMING FROM THE ADJACENT ROADWAYS.

N.B.

THE DISTANCE AT WHICH THE VEHICLES COMING Laterally can be detected by the rear radar depends on the shape and type of the vehicle itself.



With the L.C.D.A.S. system activated, the possible danger signal following a change of direction will automatically appear as a visual alarm on the digital display by means of yellow triangles.

The side indicators, right or left, will illuminate depending on the side of the hazard and will be visible in two possible modes:

- FLASHING light: if the relevant turn indicator has been engaged;
- FIXED light: if the relevant turn indicator has NOT been engaged.

CAUTION



IT IS RECOMMENDED THAT YOU NEVER COVER THE RADAR WITH ANY TYPE OF OBJECT (STICKERS, CLOTHING, ...) AND TO KEEP IT CLEAN ALWAYS FOR PROPER OPERATION.

IF AN OBJECT COVERS THE RADAR FOR MORE THAN 30 SECONDS, THE RADAR WILL TURN OFF AND THE DIGITAL DISPLAY WILL DISPLAY A WARNING MESSAGE.

CAUTION



IF ACTIVATED, THE REAR RADAR WILL OPERATE AT A SPEED OF AT LEAST 30 KM/H AND FOR A VEHICLE LEAN ANGLE OF MAXIMUM 25°.

THE OPTIMUM OPERATION OF THE SYSTEM IS STILL ENSURED ON A STRAIGHT ROAD.

N.B.

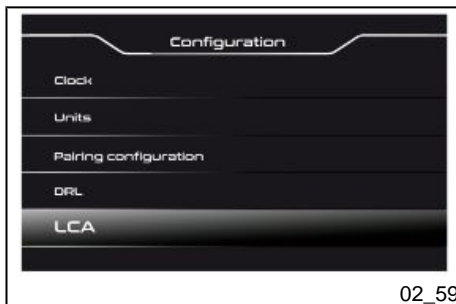
IF THE REAR WHEEL IS ACCELERATED WITH THE VEHICLE ON A STAND, THE L.C.D.A.S. SYSTEM IS TEMPORARILY DEACTIVATED AS WHEEL SPEEDS ARE NOT CONSIDERED CONSISTENT.

To activate the L.C.D.A.S. system, once the **SETTINGS** function has been entered, briefly press the "**UP**" or "**DOWN**" keys to scroll through and enter the **CONFIGURATION** menu by briefly pressing the "**SET**" key.

Shortly press the "**UP**" or "**DOWN**" keys to select the desired parameter:

- LCA: automatic ON-OFF

Change the desired parameter by briefly pressing the "**SET**" key.





VEHICLE CONFIGURATION

Press the "RIGHT" button briefly to select the vehicle configuration icon.

Confirm the selection by pressing and holding the "SET" button and enter the vehicle **CONFIGURATION** parameters display.

N.B.

THE CONFIGURATION FUNCTION IS ONLY ACCESSIBLE WITH THE VEHICLE AT A STANDSTILL.

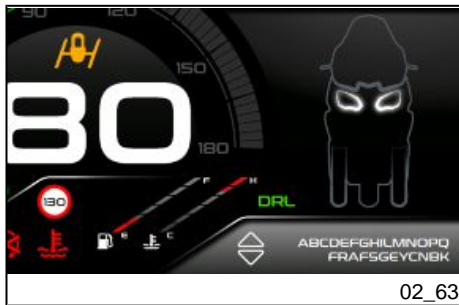


The multifunction panel the following vehicle configuration parameters will be shown cyclically:

- ASR: displays the status and type of ASR system associated with the chosen riding mode.



- LCA: ON-OFF



- DRL: automatic ON-OFF (where applicable)



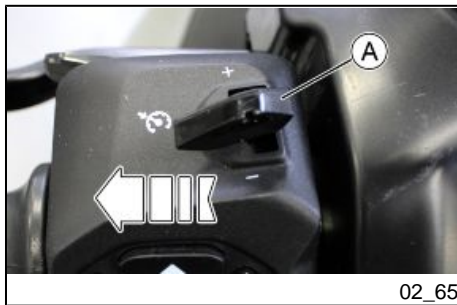
Briefly press on the "UP" or "DOWN" keys to scroll through the various information.

For each function (with the exception of the ASR system), pressing and holding the "SET" allows changing the set parameter with consequent variation of the graphic representation.

N.B.

THE FUNCTIONS IN THE VEHICLE CONFIGURATION MENU ARE THE SAME AS THOSE DISPLAYED IN THE SETTINGS MENU, BUT IN A QUICK FORM (REFER TO THE ABOVE PARAGRAPHS FOR OPERATION).

THE CHANGED PARAMETERS IN ONE MENU WILL ALSO BE VISIBLE IN THE OTHER IN A REDUNDANT MANNER.



CRUISE CONTROL

Cruise control is an electronic system that keeps the vehicle at a constant speed selected by the rider.

To start the system, move the Cruise control selector "A" to the left (more than 1 second).

CAUTION



THE DRIVER OF A VEHICLE IS RESPONSIBLE FOR DRIVING AND MANOEUVRING EVEN IF THERE ARE INTELLIGENT DRIVING AID SYSTEMS ON THE VEHICLE, SUCH AS THE L.C.D.A.S. SYSTEM. (LANE CHANGE DECISION AID SYSTEM) AND CRUISE CONTROL, WHICH MUST ALWAYS BE CHECKED OR CORRECTED BY THE DRIVER. THESE SYSTEMS ARE ONLY DESIGNED TO ASSIST THE DRIVER DURING DRIVING AND TO IMPROVE THE DRIVING CONDITION.

THE DRIVER IS ALWAYS RESPONSIBLE FOR THE CHOICE OF DRIVING BEHAVIOUR AND FOR THE ADOPTION OF THE LEVEL OF CAUTION AND ATTENTION REQUIRED BY THE SPECIFIC ENVIRONMENTAL CONTEXT.

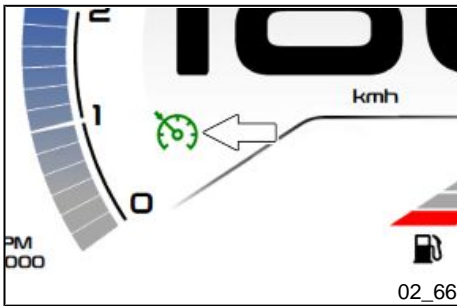
WARNING



ALWAYS SWITCH OFF THE CRUISE CONTROL SYSTEM BEFORE CHANGING THE RIDING MODE.

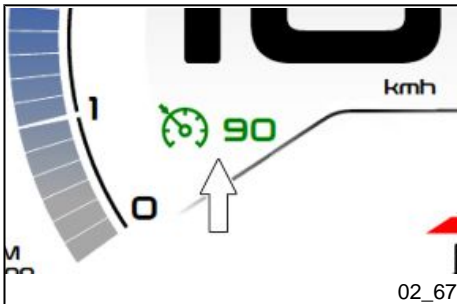
N.B.

IF THERE IS AN ANTI-THEFT SYSTEM, IT SHOULD BE UNLOCKED TO ALLOW THE SYSTEM TO BE ACTIVATED.



When the system is started, the relevant icon on the digital display will light up in flashing mode.

The system can also be switched from "OFF" to "ON" when the engine is stopped, provided the engine stop switch is in the "RUN" position.



When the desired speed is reached, the system can be activated by briefly pressing the cruise control selector "A", to the left (less than 1 second), provided that the brakes are not applied.

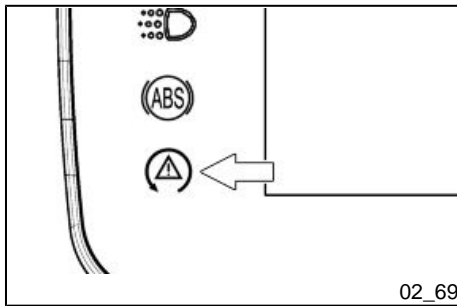
The activation of the system will be highlighted by the icon on the digital display solidly lit and the set speed indication.



The rider may now release the throttle grip, as the system will automatically maintain the set speed.

The set speed can be increased or decreased by pressing the Cruise control selector up or down:

- brief press (less than 1 second): speed increase/decrease by 1 km/h;
- press and hold: constant speed increase/decrease.



The system will be disabled if any of the following conditions are fulfilled:

- by operating the front/rear brake;
- by briefly moving the selector to the left;
- if the ASR system engages for at least 2 seconds;
- when driving on particularly steep slopes or descents.



The system can be reactivated, also in accordance with the conditions described above, by pressing and holding the Cruise control selector upward (more than 1 second) if you wish to reconfirm the last set speed, or by briefly moving the selector to the left to set the current driving speed.



The system will shut down completely and then the stored speed will be lost and the relevant icon on the digital display will turn off if any of the following conditions occur:

- Keeping the cruise control selector moved to the left (for more than 1 second);
- Engine stop switch (RUN-OFF) to "OFF";
- engine stop;
- Failure, malfunction of a component involved in speed control (tone wheels sensors, control units, etc.).

Starter switch (02_72, 02_73, 02_74)

The starter switch "A" is situated on the front leg shield back plate near the bag hook.

Before using it, the starter switch must be enabled following the procedure described in the section "Remote control".



02_72



02_73

SWITCH POSITIONS

LOCK «1»: Ignition disabled, mechanical anti-theft device enabled.

OFF «2»: Ignition disabled, mechanical anti-theft device disabled.

ON «3»: Ready to start position, mechanical anti-theft device disabled.



02_74

Operating the switch, make sure to turn it correctly to the "LOCK" and "OFF" positions: the knob must be released at the end of the stroke in "LOCK" position or must be perfectly aligned to the "OFF" position.

WARNING



IF THE KNOB OF THE SWITCH IS RELEASED IN AN INTERMEDIATE POSITION, THE RETAINING MECHANISM THAT PREVENTS THE UNAUTHORISED ROTOR ROTATION WILL NOT WORK.

THEREFORE, AN UNAUTHORISED PERSON COULD TURN THE SWITCH AND EXIT THE ENGAGED STEERING LOCK POSITION (IF THE KNOB WAS SET TO THE "LOCK" AND "OFF" POSITION), OR TURN THE KNOB TO "ON" (IF THE KNOB WAS SET TO THE "OFF" AND "ON" POSITION).

Locking the steering wheel (02_75, 02_76)

Turn the handlebar to the left (end stop).



Turn the starter switch to the "LOCK" position.

CAUTION



DO NOT TURN THE SWITCH TO THE "LOCK" OR "OFF" POSITION WHILE RUNNING.





02_77

Releasing the steering wheel (02_77)

Turn the starter switch to the "OFF" position.

CAUTION



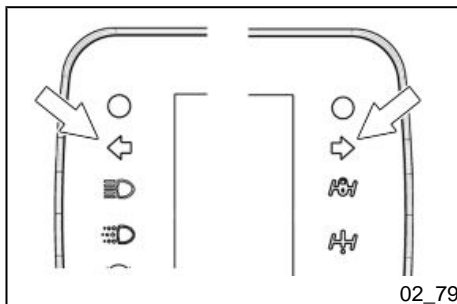
DO NOT TURN THE SWITCH TO THE "LOCK" OR "OFF" POSITION WHILE RUNNING.



02_78

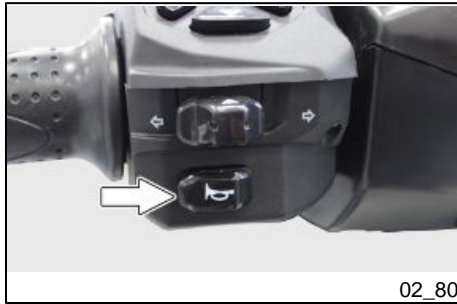
Switch direction indicators (02_78, 02_79)

Move the switch "A" to the left to position "1", to indicate a left turn; Move the switch "A" to the right to position "2", to indicate a right turn. Press the switch "A" in the centre to position «0» to deactivate the turn indicators.



02_79

When the turn indicators are activated, the corresponding indicator lamp will light up on the instrument cluster, depending on the chosen direction.



Horn button (02_80)

Press the button to sound the horn.



Light ON/OFF switch (02_81, 02_82)

With the light switch in the "0" position, the front position light and the and high beam/low beam lights are active.

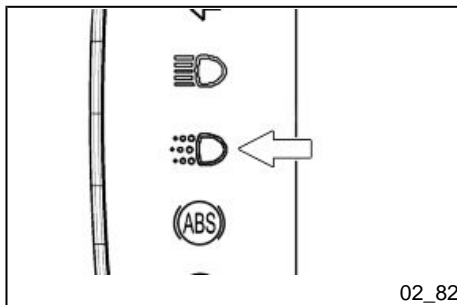
In position "1" only the daytime running light (D.R.L.) is active, **to be used exclusively during the day, except for tunnels or wherever there is fog, snow, rain or poor visibility.**

N.B.

WHEN ALLOWED BY THE ABOVE CONDITIONS, USING THE DAYLIGHT RUNNING LIGHT ALLOWS EXTENDING THE LIFE OF THE LOW BEAM LIGHT AND REDUCING THE CURRENT CONSUMPTION, THUS PRESERVING THE BATTERY BETTER AND CONSEQUENTLY REDUCING FUEL CONSUMPTION.

N.B.

TO ACTIVATE THE CHANGEOVER TO AUTOMATIC LOW BEAM/POSITION LIGHTS FROM THE DIGITAL DISPLAY (SEE SECTION "DIGITAL DISPLAY"), THE LIGHT SWITCH ON THE VEHICLE MUST BE IN THE "D.R.L." POSITION.



02_82

With the D.R.L. daylight running lights on, the corresponding indicator lamp will light up on the instrument cluster.



02_83

Light switch (02_83, 02_84)

The position "0" of the switch corresponds to the selection of the low beam light.

Lifting the switch to position "1" activates the high beam light.

The position «2» activates the high beam flashing; The switch returns automatically to «0». The flashing control also releases the safety light function, can be activated in case of failure of high beam light fuse.

N.B.

IN CASE OF LIGHTS SWITCH IN DAYLIGHT RUNNING LIGHT POSITION D.R.L. ON, ONLY THE FLASHING OF THE HIGH BEAM LIGHT WILL BE POSSIBLE.

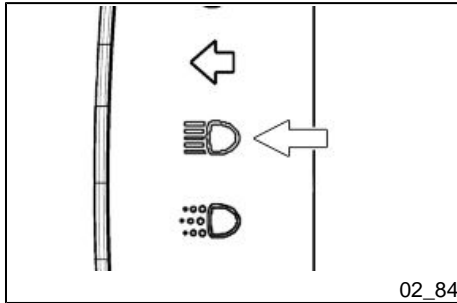
WARNING



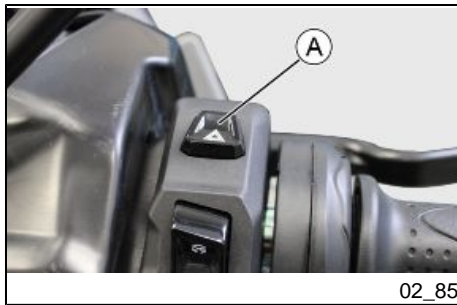
DO NOT PLACE, TRANSPORT OBJECTS AND/OR CLOTHING ON THE LIGHT CLUSTERS OR TURN INDICATORS SO AS NOT TO COVER THE LIGHT BEAM OR TO AVOID DAMAGE TO THE VEHICLE.

WARNING

DO NOT PLACE, TRANSPORT OBJECTS AND/OR CLOTHING ON TOP OF THE TURN INDICATORS, BOTH IF ON OR JUST OFF. FAILURE TO OBSERVE THIS PRECAUTION MAY CAUSE THE GLASS TO OVERHEAT AND CONSEQUENTLY MELT.

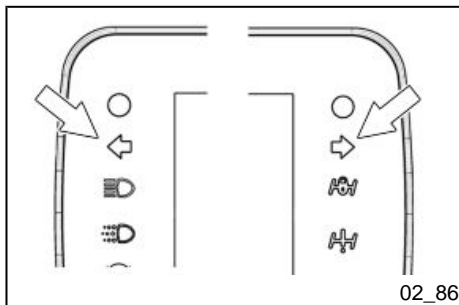


With the high beam lights on, the corresponding indicator lamp will light up on the instrument cluster.

**Emergency flashing light button (02_85, 02_86)**

Causes all four turn signals to flash simultaneously. The control "A" can be enabled only with the starter switch set to "ON", but once enabled, it keeps functioning even if the starter switch is set to "OFF" or "LOCK".

To disable this function, simply turn the switch to "ON".



With the hazard warning lights on, the turn indicator lights on the instrument panel will light up simultaneously.



Start-up button (02_87, 02_88, 02_89, 02_90)

The start button has three functions:

1. Engine starter
2. Driving mode selection (**ECO - COMFORT - SPORT**)
3. Reverse drive engagement



With the engine stop switch to "RUN" position, to start the engine, press the start push button after having pulled one of the two brake levers.

WARNING



WITH THE FRONT SUSPENSION LOCKED, THE ENGINE WILL NOT GO UP IF THE DRIVER IS NOT SEATED PROPERLY ON THE SADDLE IN DRIVING POSITION.



With the drive/reverse mode selector in the "R" (rear) position, the start button will engage the reverse gear. The reverse gear selection is highlighted by the rear camera image on the digital display.



With the vehicle at engine idle and the Drive/Reverse mode selector in the "D" (Drive) position, the Start button selects the preselected drive mode.

For more information on driving modes, refer to the "Digital Display" paragraph.



Drive/reverse mode selector. (02_91, 02_92)

The Drive/Reverse mode selector has two positions:

- position "D": used to select the normal forward gear;
- position "R": used to select the normal reverse gear.

N.B.

WITH THE VEHICLE RUNNING, BY ACCIDENTALLY SELECTING THE REVERSE MODE WITH THE SELECTOR IN "R". THE ACTUAL ENGAGEMENT OF THE RE-

VERSE GEAR WILL BE PERFORMED WHEN THE VEHICLE IS AT A STAND-STILL.

The engagement of the reverse gear is indicated by switching on the rear view camera on the digital display.

For information on the use of the reverse gear, refer to the "**reverse gear**" paragraph in the "**use**" chapter.



Engine stop switch (02_93, 02_94)

With the emergency stop switch in position "**RUN**" the engine functioning is enabled (start).

The position "**OFF**" allows to turn off the engine in case of emergency and also inhibits the restart.





If starting is inhibited, the relative icon will also light up on the digital display.



Front suspension unlock-lock switch (02_95)

The switch activates and deactivates the lock of the front suspension.

As the topic is so complex, find the instructions for using this control in the "Use" chapter.



02_96

System ABS (02_96, 02_97, 02_98)

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.

WARNING

THE VEHICLE IS EQUIPPED WITH SERVO ASSISTED BRAKES.

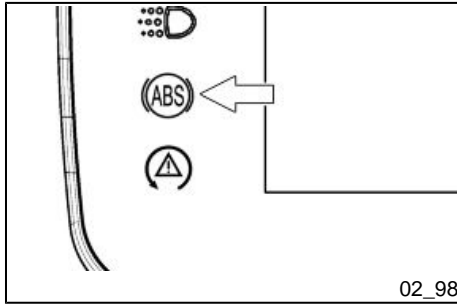


AT VERY LOW SPEEDS, LESS THAN 5 km/h (3 mph) THE ABS SYSTEM IS DISABLED.

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)



02_97

**CAUTION**

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

Each time the starter switch is turned to the "ON" position, the ABS control unit checks the system, which is indicated by the flashing ABS warning light. 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.



02_99

System ASR (02_99, 02_100, 02_101, 02_102, 02_103, 02_104, 02_105, 02_106, 02_107)

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. IN ORDER FOR THE SYSTEM TO MAINTAIN MAXIMUM EFFICIENCY IN ALL CONDITIONS, THE CALIBRATION PROCEDURE MUST BE PERFORMED EVERY TIME, EVEN IN CASE OF REPLACEMENT OF JUST ONE TIRE.

FOR THE CALIBRATION OF THE CONTROL UNIT PERFORM THE PROCEDURE BELOW.



02_100

- **ASR BUTTON 1:** activation / deactivation.
- **ASR WARNING LIGHT «2»:** operating indication warning light.

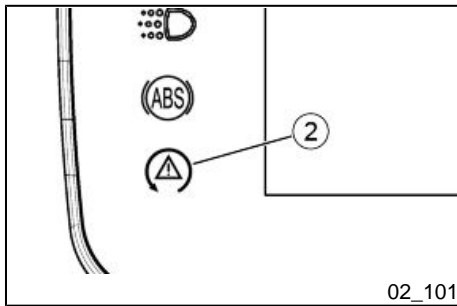
Warning light flashing mode:

- Off with the vehicle in gear: the system is working, but is not active (normal condition).

- Flashing quickly with moving vehicle: 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 to safety conditions by gently reducing the throttle opening.

- Lit with moving vehicle: the system is disabled and will not intervene in case of loss of grip.

- If the deactivation was voluntary (by pressing the appropriate button "1" for 1 second) it is recommended to reactivate the system as soon as possible.



02_101

- If the deactivation was NOT voluntary, there is an ASR failure: 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.

AT VEHICLE START-UP THE ASR WARNING LIGHT FLASHES AT THE SAME FREQUENCY AS THE ABS WARNING LIGHT, INDICATING A DIAGNOSTIC PHASE OF THE SYSTEM. IN THE ABSENCE OF ERRORS, BOTH WARNING LIGHTS TURN OFF AT THE SAME TIME WHEN EXCEEDING 5 km/h.

IF THERE IS NO FLASHING UPON START-UP, THE SYSTEM MAY NOT BE OPERATIONAL, PLEASE CONTACT AN AUTHORISED SERVICE CENTRE.

WARNING



THE ASR SYSTEM IS ACTIVATED EVERY TIME, THE STARTER SWITCH IS TURNED TO THE "ON" POSITION.

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; THE NEXT TIME THE STARTER SWITCH IS TURNED, THE ASR SYSTEM IS AUTOMATICALLY ENABLED.

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.



The status of the ASR system (on / off) is also shown on the digital display by selecting the vehicle CONFIGURATION menu (see paragraph "Digital display").

ASR INDICATOR LIGHT OPERATING MODE

ASR SYSTEM STATUS	ASR INDICATOR LIGHT WITH THE ENGINE SWITCHED OFF OR THE KEY TO "ON"	ASR INDICATOR LIGHT WITH THE ENGINE SWITCHED ON AND THE VEHICLE RUNNING	ASR RUNNING WHILE DRIVING (LOW GRIP CONDITIONS)
ASR ACTIVE and calibrated	"ASR" icon: 1 Hz slow flashing	"ASR" icon: Off	"ASR" icon: 5 Hz fast flashing
ASR ACTIVE not calibrated	-	"ASR" icon: on steady	"ASR" icon: 5 Hz fast flashing
ASR voluntarily deactivated	"ASR" icon: on steady	"ASR" icon: on steady	-
ASR system not working (fault)	"ASR" icon: on steady	"ASR" icon: on steady	-

ASR SYSTEM STATUS	ASR INDICATOR LIGHT WITH THE ENGINE SWITCHED OFF OR THE KEY TO "ON"	ASR INDICATOR LIGHT WITH THE ENGINE SWITCHED ON AND THE VEHICLE RUNNING	ASR RUNNING WHILE DRIVING (LOW GRIP CONDITIONS)
ASR programming phase (successful)	-	"ASR" icon: 1 Hz slow flashing; at the next engine start, the icon is off if the programming failed.	-
ASR programming phase (failed)	-	"ASR" icon: switched on steady at the next engine start if the programming has failed.	-



ASR SYSTEM CALIBRATION PROCEDURE

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 following methods:

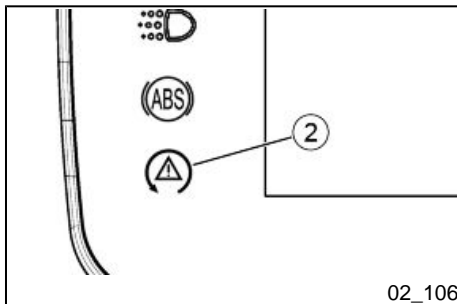
- Wait until the diagnostic phase of the ASR and ABS systems is complete;



- **Start the engine and drive a short straight stretch of flat road above 5 km / h (3.1 mph) and wait for the flashing of the two ABS and ASR indicator lights to switch off;**
- **Stop and allow the engine to run in idle for at least 5 seconds;**



- Press the ASR button "1" and keep one of the brake levers pulled for at least 7 seconds.



- The activation of the wheel radius learning procedure or of the ASR calibration procedure will be confirmed by the ASR indicator light "2" with slow flashing.
- Accelerate to a constant speed of 30-40 km/h (18.6-24.8 mph) and maintain it for at least 8 seconds. The permanence of the vehicle speed in the correct range for the completion of the procedure is confirmed by the fast flashing of the ASR warning light «2».



- The completion of the procedure will be indicated by the ASR indicator light "2" and now the ASR system is functional.
- To memorize the procedure, switch off the engine, turn the ignition switch to "OFF" and wait for at least 60 seconds before turning again to "ON" and engaging a gear.

- **Complete the procedure within 5 minutes;** if the **ASR indicator light "2" stays on steady**, it means that the **ASR procedure has failed**.

Therefore, it is necessary to repeat the ASR calibration procedure until it is successfully completed.

Regarding the ASR indicator light after programming:

- **Procedure OK: ASR indicator light OFF** and the system active. The next time the ignition switch is turned "**ON**", the new wheel radius will be stored.
- **Procedure failed: The ASR indicator light STEADILY ON** and the system active (for safety purposes) with the previously memorized or the default wheel radius (if it has never been programmed).

CAUTION



IF NECESSARY, CONTACT AN AUTHORISED SERVICE CENTRE.

N.B.

HOWEVER, THE SYSTEM CAN PERFORM AUTOMATIC CALIBRATION AFTER TIRE REPLACEMENT.

The immobilizer system (02_108)

In order to enhance theft protection, the vehicle is equipped with a "**PIAGGIO IMMOBILIZER**" electronic engine locking device.

By pressing and releasing the starter switch, the "**PIAGGIO IMMOBILIZER**" system will check the remote control.

Only if the protection system recognizes the remote control will it be possible to turn the starter switch to "**ON**" to start the engine.





Keys (02_109)

In addition to the remote control "A", the vehicle is also equipped with a "MASTER" key "B".

The "MASTER" key is supplied in a single copy and is used to program other remote controls and to open the saddle in an emergency (low battery).

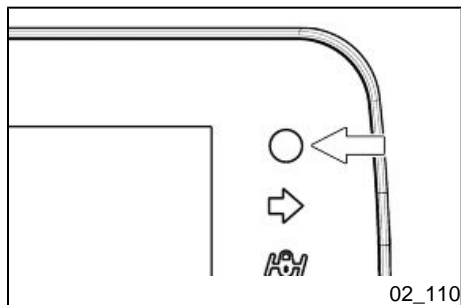
To duplicate an additional remote control, contact the **Authorised Service Centre**, equipped with the "MASTER" key and all the remote controls in possession.

WARNING



STORE THE MASTER KEY CAREFULLY.

LOSS OF IT IMPLIES THE REPLACEMENT OF ALL COMPONENTS OF THE "PIAGGIO KEYLESS" SYSTEM.



Immobilizer device enabled indicator led (02_110, 02_111, 02_112)

The operation of the "PIAGGIO IMMOBILIZER" system is indicated by the flashing of the specific indicator light.

After authentication and engine start-up, after about 50 meters running, the presence of the remote control is checked; if the user no longer carries the remote control, this will be indicated by flashing of the IMMOBILIZER light on the instrument cluster.

However, this does not affect the operation of the vehicle.



02_111

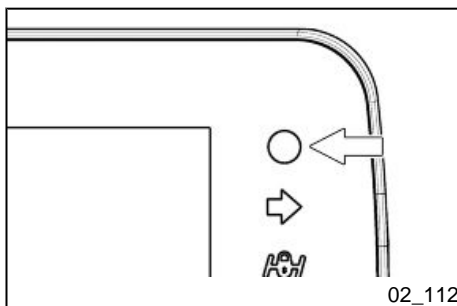
Then, once the vehicle is stopped, by turning the starter switch to "OFF" position, the IMMOBILIZER indicator light and the turn indicators will flash for 20 seconds indicating that the remote control is lost.

CAUTION



WHEN THE IMMOBILIZER INDICATOR LIGHT AND THE TURN INDICATORS FLASH, IT WILL BE POSSIBLE TO TURN THE STARTER SWITCH AGAIN TO "ON" FOR THE LAST TIME.

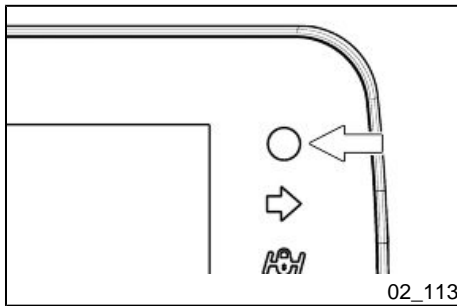
FOR FURTHER START-UPS, IT WILL BE NECESSARY TO RETRIEVE THE REMOTE CONTROL.



02_112

To avoid battery discharge, the signalling led turns off automatically after approximately 9 days of continuous operation.

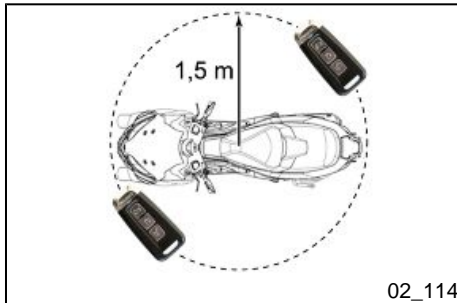
If there is a fault in the system, the indication led tells the **Authorised Service Centre** what the type of fault is through the type of flashing emitted.



Operation (02_113, 02_114, 02_115, 02_116)

In order to enhance theft protection, the vehicle is equipped with a "**PIAGGIO IMMOBILIZER**" electronic engine locking device that is activated automatically when the remote control moves away from the vehicle.

The remote control has an integrated electronic device that enables communication between the IMMOBILIZER control unit and the engine management control unit to allow the engine to be started.



Whenever, with the starter switch in the "**OFF**" or "**LOCK**" position, the user moves away from the vehicle by more than 1.5 meters, holding the previously activated and authenticated remote control, the protection system activates the switch (and engine) locking.



By pressing and releasing the starter switch, the "**PIAGGIO IMMOBILIZER**" system will check the remote control.

Only if the protection system recognizes the remote control will it be possible to turn the starter switch to "**ON**" to start the engine.

For the activation and authentication procedure of the remote control, refer to the information in the section "Remote control".



If the remote control is not recognised, it is advisable to repeat the activation and authentication procedure; if the locking persists, try again with passive recognition.

If, after performing the activation and authentication procedure, it is not possible to start the engine, an **Authorised Service Centre** must be contacted, which has the electronic equipment required to identify and repair the system.

When requesting additional remote controls, remember that the registration must be performed for all the controls, including the new ones and those already in your possession. Take the MASTER key and all remote controls directly to an **Authorised Service Centre**. The codes of the remote controls not submitted for the new programming procedure are deleted from the memory. Any lost remote controls will therefore not be enabled to start the engine.

N.B.



EACH REMOTE CONTROL HAS ITS OWN AND UNIQUE CODE, WHICH MUST BE STORED IN THE SYSTEM CONTROL UNIT MEMORY. SHOULD THE VEHICLE CHANGE OWNER, IT IS ABSOLUTELY NECESSARY THAT THE NEW OWNER GET POSSESSION OF THE KEYS WITH THE MASTER GRIP (AS WELL AS ALL OTHER REMOTE CONTROLS).

WARNING



VIOLENT SHOCKS MAY DAMAGE THE ELECTRONIC COMPONENTS OF THE REMOTE CONTROL. TO ENSURE THE PERFECT EFFICIENCY OF SUCH INTERNAL ELECTRONIC DEVICES, DO NOT LEAVE THE REMOTE CONTROL EXPOSED TO DIRECT SUNLIGHT. AVOID DROPPING THE REMOTE CONTROL OR THE CONTACT WITH WATER OR OTHER LIQUIDS.



02_117

Remote control (02_117, 02_118, 02_119, 02_120, 02_121, 02_122, 02_123, 02_124, 02_125, 02_126, 02_127, 02_128, 02_129, 02_130, 02_131, 02_132, 02_133)

The vehicle is equipped with a remote control for using the "**Piaggio Keyless**" system, which allows to enable the starter switch without having to insert a mechanical key into the appropriate key cylinder.

The system performs an authentication between the vehicle and the remote control to verify that it is a correctly registered electronic key.

The remote control is supplied together with a MASTER key and coupled, in factory, to the electronic control unit of the system situated inside the front case.

The following functions are available from the remote control:

- vehicle recognition by flashing the turn indicators (Bike Finder);
- opening of the fuel tank cap hatch;
- saddle opening.

These functions are permanently active as long as the remote control is correctly paired.

WARNING



THE "PIAGGIO KEYLESS" SYSTEM USES RADIO WAVES. THEREFORE THE RANGE OF OPERATION MAY VARY OR IT MAY NOT FUNCTION PROPERLY UNDER THE FOLLOWING CONDITIONS:

- **WHEN THE REMOTE CONTROL BATTERY IS LOW;**
- **NEAR STRUCTURES THAT GENERATE NOISE OR INTENSE RADIO WAVES SUCH AS TV ANTENNAS, POWER PLANTS, RADIO STATIONS OR AIRPORTS;**
- **WHEN THE REMOTE CONTROL IS NEAR A NOTEBOOK/PC OR OTHER WIRELESS COMMUNICATION DEVICES, SUCH AS A RADIO OR MOBILE PHONE;**
- **WHEN THE REMOTE CONTROL COMES IN CONTACT OR IS COVERED BY METALLIC OBJECTS.**

- WHEN THE REMOTE CONTROL IS NEAR THE ENGINE, DUE TO THE ELECTROMAGNETIC WAVES GENERATED BY THE IGNITION SYSTEM.
- WHEN ELECTRICAL/ELECTRONIC ACCESSORIES NOT AUTHORISED/ SUPPLIED BY PIAGGIO ARE USED ON THE VEHICLE (E.G.: heated gloves).

N.B.

THE THREE FUNCTIONS OF THE REMOTE CONTROL ARE DEACTIVATED AFTER 9 DAYS OF VEHICLE INACTIVITY. TO RESUME THESE FUNCTIONS, THE REMOTE CONTROL MUST BE AUTHENTICATED AGAIN.

VEHICLE RECOGNITION - BIKE FINDER

Pressing the button "1", will enable the remote vehicle recognition function (Bike Finder): the turn indicators flash twice.



OPENING OF THE FUEL TANK CAP HATCH

Pressing the button "2" for more than 1.5 seconds with the starter switch in "OFF" or "LOCK" position, the fuel tank plug cover will open.



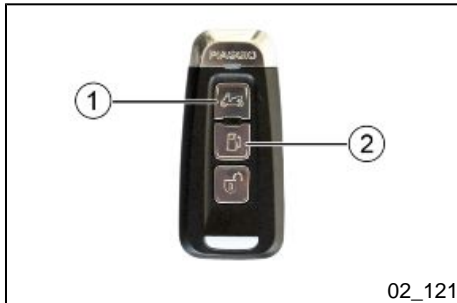


SADDLE OPENING

Pressing the button "3" for more than 1.5 seconds with the starter switch in "OFF" or "LOCK" position, the saddle will open.

N.B.

THE REMOTE CONTROL CAN BE USED AT A DISTANCE LESS THAN 50 METERS FROM THE VEHICLE.



REMOTE CONTROL ACTIVATION

To activate / deactivate the remote control, press the Bike Finder button "1" and, within 5 seconds, also press the fuel hatch opening button "2" until the colour of the LED on the remote control changes.

When the LED on the remote control turns green, it will be possible to authenticate the "Piaggio Keyless" system. Authentication cannot be performed when the red LED is on.



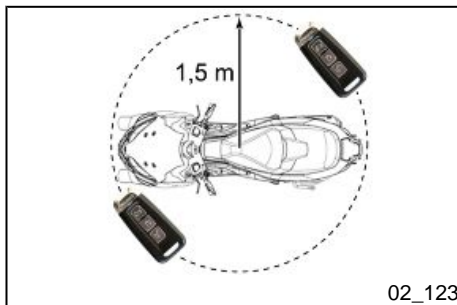
Then, to check the state of the "Piaggio Keyless" system, slightly press on one of the three keys of the remote control.

The LED will show the state with a colour:

- **Green** (activated): the authentication can be performed;
- **Red** (deactivated): the authentication cannot be performed. Activate the remote control again.

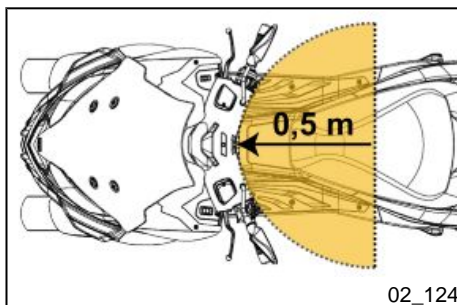
N.B.

THE BUTTONS USED TO OPEN THE SADDLE AND THE FUEL PLUG COVER ARE PERMANENTLY FUNCTIONAL REGARDLESS OF THE LED COLOUR.



AUTHENTICATION BETWEEN REMOTE CONTROL AND THE "Piaggio Keyless" SYSTEM

For the authentication procedure, the remote control must be within an area of about 1.5 meters from the receiving control unit.

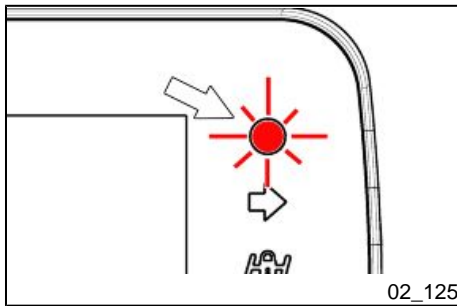


The performance and characteristics described above are in consideration of ideal conditions, with no external interference at the operating frequency (434 MHz) of the remote control which may interfere with the radio communication functions of the Piaggio Keyless System.

Note that during normal usage of the vehicle, the range of the remote control may be significantly less (as low as 0.5 m).

Once the vehicle is started, the system periodically verifies that the remote control is in range. If the remote control is not detected, the vehicle will continue to operate normally, but the IMMOBILIZER warning lamp will flash to notify the rider of the situation.

This function warns the user if they leave the key behind after starting the vehicle.



The **IMMOBILIZER** warning lamp on the dashboard flashes to warn the user that the **Keyless system is not working correctly**. This may be due to the following:

- **Remote control not in range;**
- **Remote control shielded by metal object;**
- **Remote control battery drained;**
- **Radio interference reducing the range of the remote control or impeding transmission.**

For the reasons described above, **preferably keep the remote control in a front pocket, away from other electronic devices (e.g. smartphone, tablet, remote control for garage door etc.) as close as possible to the system electronic control unit located on the left side of the vehicle.**

WARNING



DO NOT LEAVE THE REMOTE CONTROL IN THE STORAGE COMPARTMENT OR UNDER THE VEHICLE SADDLE WHILE USING THE VEHICLE.



For the authentication procedure, proceed as follows:

- **press and release** the starter switch in order to start communication between the control unit and the remote control.



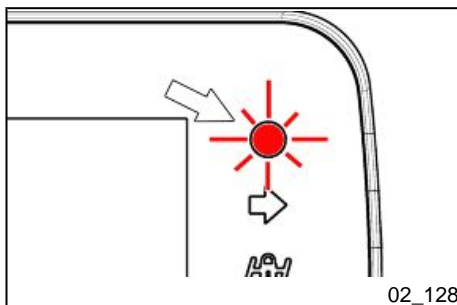
02_127

Once recognition has been performed, the starter switch is unlocked and can be turned to the "ON" position, as indicated by the message on the digital display.

The digital display will turn on and the vehicle can be started.

N.B.

THE STARTER SWITCH MUST BE TURNED TO "ON" WITHIN 20 SECONDS AFTER THE MESSAGE IS SHOWN ON THE DISPLAY, OTHERWISE THE BACKLIGHTING ON THE DISPLAY TURNS OFF AND THE SWITCH IS LOCKED. THE SWITCH MUST BE PRESSED AGAIN, ALWAYS WITHIN 1.5m FROM THE VEHICLE.



02_128

N.B.

AFTER APPROXIMATELY 50 METERS OF VEHICLE RUNNING, THE SYSTEM CHECKS THE PRESENCE OF THE REMOTE CONTROL; IF THE REMOTE CONTROL IS NO LONGER WITH THE USER, THIS WILL BE INDICATED BY THE BLINKING OF THE IMMOBILIZER LIGHT ON THE INSTRUMENT CLUSTER.



02_129

The remote control is powered by internal batteries that get discharged after extended use.

When the remote control battery is partially discharged (but still able to operate) the IMMOBILIZER indicator light on the instrument cluster and the red LED on the remote control will start flashing.



PASSIVE RECOGNITION OF THE REMOTE CONTROL

If the remote control battery is completely discharged or if there are external radio interferences, the remote control will not be recognised.

The system is equipped with passive recognition used to start the vehicle; proceed as follows:

- Place the remote control in the remote control compartment under the saddle on the left side of the vehicle, near the "Keyless" system control unit;



N.B.

PASSIVE RECOGNITION FOR STARTING THE VEHICLE IS ALSO POSSIBLE USING THE MECHANICAL MASTER KEY, WHICH IS ALSO LOCATED IN THE APPROPRIATE COMPARTMENT UNDER THE SADDLE, ON THE LEFT-HAND SIDE.



- with the remote control in position (or, if necessary with the mechanical MASTER key), press and release the starter switch to activate the communication between the control unit and the remote control;



- After a few seconds, the digital display will turn on and the IMMOBILIZER led will start to flash;
- Once the recognition has been completed, the IMMOBILIZER led will turn off and it will be possible to remove the remote control from the position above the top case; As indicated by the message on the digital display, turn the ignition switch to the "ON" position.

Remote control programming (02_134)

To purchase and program new remote controls or if they are lost, contact an **Authorised Service Centre**.



Remote control battery replacement (02_135, 02_136, 02_137, 02_138, 02_139)

When the remote control LED flashes in green or red, the remote control battery level is low. The battery must be replaced as soon as possible.





The battery is a 3 Volt **CR2032** button type battery.

Proceed as follows:

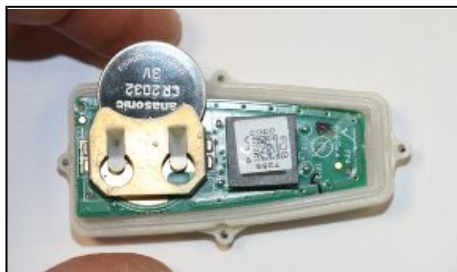
open the lower part of the remote control, inserting a tool with plastic arm in the slot. Press the tool in the slot and slide it downward.



Disengage the two halves of the remote control along the entire side slot using a **plastic lever tool kit** to avoid scratching the surface.



Remove the buttons and unscrew the fixing screws.



02_139

Extract the circuit from the lower half case and replace the battery.

Place the new battery with the positive pole (where the battery symbol is present) facing the contact strips.

Refit the remote control carrying out the removal procedure in reverse order, by pressing the lower part and the two clip-on halves gently with your fingers.



02_140

USB port (02_140, 02_141)

Above the dashboard, inside the glove-box is a USB socket.

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

CAUTION



THE GLOVE BOX IS NOT WATERTIGHT.

DO NOT STORE OBJECTS THAT COULD BE AFFECTED BY HUMIDITY OR ANY SUBSTANCES Poured ON THE BOX DOOR, EVEN WHEN CLOSED.

CAUTION



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



The USB socket is active when the starter switch is turned to the "ON" position.

CAUTION

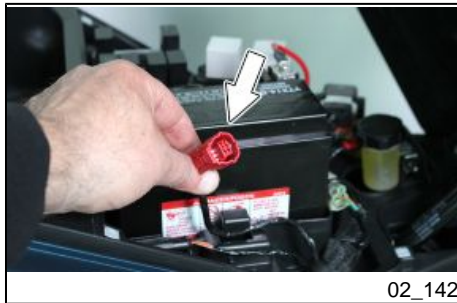


PROLONGED USE OF THE PLUG SOCKET MAY RESULT IN PARTIAL DISCHARGE OF THE BATTERY

USB PORT

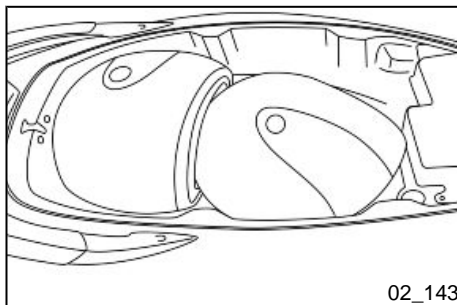
Output voltage: (5.00±0.25) Vdc

Charge current 500mA max



OBD port (02_142)

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



02_143

The saddle (02_143)

In the helmet compartment there is a space for two full-face helmets, if correctly positioned as indicated in the figure:



02_144

Saddle opening. (02_144, 02_145, 02_146)

With the starter switch in "OFF" or "LOCK" position, it is possible to open the saddle with the remote control pressing the button "3" for at least 1.5 seconds..

N.B.

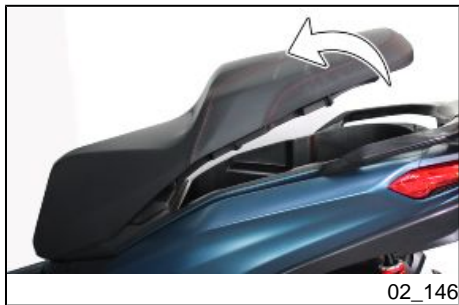
THE REMOTE CONTROL CAN BE USED AT A DISTANCE LESS THAN 50 METERS FROM THE VEHICLE.



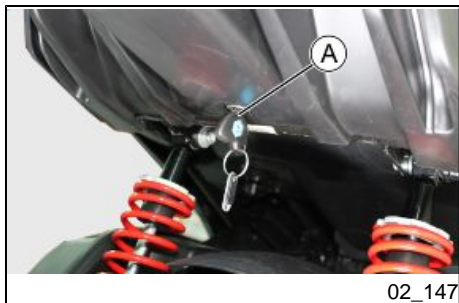
02_145

The saddle can also be opened electrically by pressing the corresponding button on the handlebar, with the starter switch in the "OFF" or "LOCK" position.

With the starter switch in the "ON" position or with the engine running, the vehicle must be at a standstill to open the saddle.



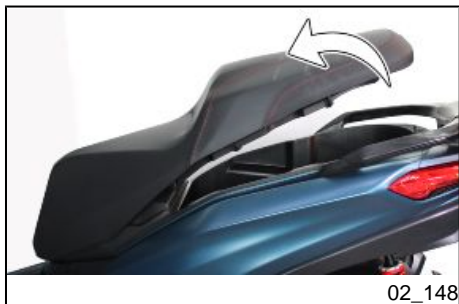
Lift the saddle and tip it forwards.



Saddle opening for emergency access (02_147, 02_148)

In the event of a power failure from the vehicle battery, it is possible to open the saddle and access the helmet compartment by operating as follows:

insert the mechanical key in the emergency lock "A" situated in the rear part of the vehicle and turn it anticlockwise;



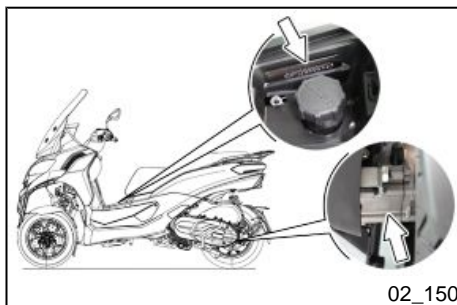
Lift the saddle and tip it forwards.



02_149

Bag clip (02_149)

To use the bag hook which is mounted on the fairing, it is necessary to rotate it towards the rear part of the vehicle, pressing where the arrow indicates.



02_150

Identification (02_150, 02_151, 02_152)

The identification registration number consists of a prefix followed by a number stamped on both the chassis and the engine. These numbers must always be quoted in the spare parts requests. We recommend checking that the frame registration number stamped on the vehicle corresponds with that on the vehicle documentation.

CAUTION

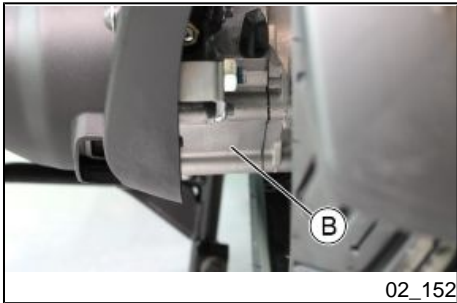


NOTE THAT ALTERING SERIAL NUMBERS MAY BE PUNISHABLE WITH SEVERE LEGAL PENALTIES (IMPOUNDING OF VEHICLE, ETC.).



Frame number

To read the frame number "A", open the fuel tank cap access door and lift the flap of the fuel tank.



Engine number

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

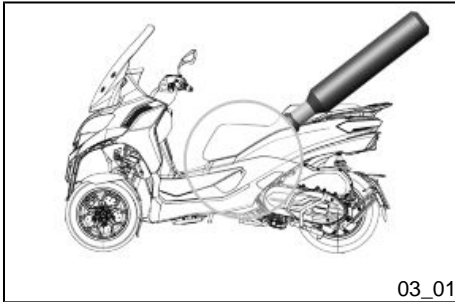
MP3 530 hpe



PIAGGIO



Chap. 03
Use



Checks (03_01)

To ensure the safety of the occupants of the vehicle and that the vehicle itself works correctly, the customer is responsible for carrying out the following checks and tests before each use of 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, 03_08)

Pressing the button "2" for more than 1.5 seconds with the ignition switch in "OFF" or "LOCK" position, it is possible to open the fuel tank cap with the remote control.

N.B.

THE REMOTE CONTROL CAN BE USED AT A DISTANCE LESS THAN 50 METERS FROM THE VEHICLE.



03_03

It is also possible to electrically open the fuel tank cap hatch by pressing the corresponding button on the handlebar, with the starter switch in the "OFF" or "LOCK" position.

With the starter switch in the "ON" position or with the engine running, the vehicle must be at a standstill to open the fuel tank cap.



03_04

Turn the tab anticlockwise and remove the cap. Fill the fuel tank with unleaded petrol/gasoline.

CAUTION



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

CAUTION



WHEN REFUELLING MAKE SURE THE NOZZLE IS FULLY INSERTED INTO THE TANK FILLER NECK TO AVOID FUEL LEAKAGE WHICH COULD DAMAGE THE PLASTIC ELEMENTS AND COME INTO CONTACT WITH HOT PARTS ON THE VEHICLE.

CAUTION

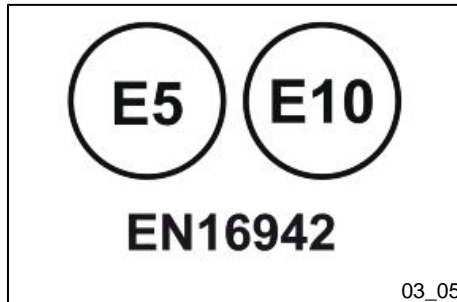
KEEP NAKED FLAMES OR LIT CIGARETTES AWAY FROM THE TANK FILLER NECK: FIRE HAZARD. ALSO AVOID INHALING HARMFUL VAPOURS.

CAUTION

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

CAUTION**WARNING**

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



03_05

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.

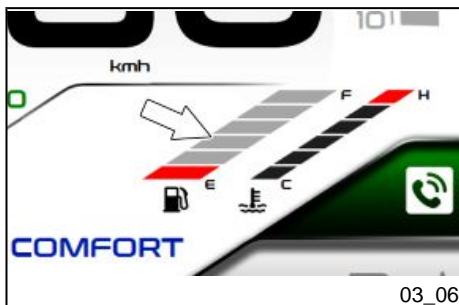
The label on the vehicle can instead show several values. If, for example, it shows both E5 and E10 values, it means that the vehicle is compatible with petrol containing up to a maximum 10% ethanol, and thus it is possible to refuel the vehicle either from a E5 dispenser or from a E10 dispenser (but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

CAUTION

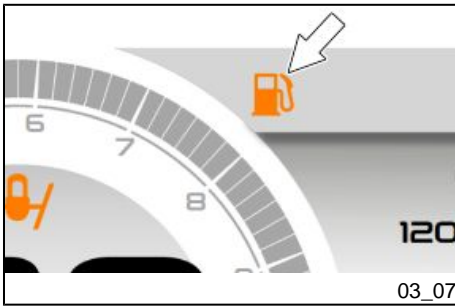


ALWAYS USE PETROL WITH A MAXIMUM OF 10% BIOETHANOL CONTENT (E10).

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



The fuel level in the tank is indicated by the fuel gauge on the digital display.



When the level reaches the fuel reserve, the specific icon on the digital will turn on.

WARNING



THE WARNING LIGHT TURNS ON TO INDICATE THAT THE RESERVE FUEL LEVEL HAS BEEN REACHED, REFUEL AS SOON AS POSSIBLE.

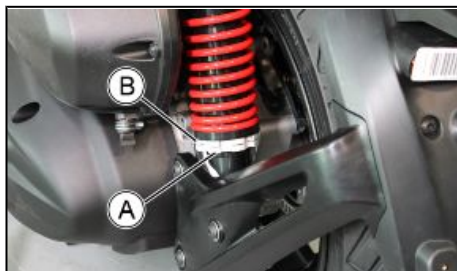
WARNING



NEVER ALLOW THE FUEL TANK TO RUN COMPLETELY DRY. WHEN THE TANK IS REFILLED FROM COMPLETELY EMPTY, THE ENGINE MAY NOT RUN CORRECTLY FOR A FEW SECONDS.



The digital display will also indicate the need to refuel by illuminating an orange box with a specific warning and fuel reserve icon.



03_09

Shock absorbers adjustment (03_09, 03_10)

To adjust the rear gas shock absorbers pre-load proceed as follows:

1. Use the specific wrench for adjusting shock absorbers, inserting it from the bottom and connecting two teeth of the ring nut.
2. Unscrew the lower ring nut «A» spacing it a few millimetres from the top ring nut.
3. Turn the adjusting ring nut «B» until reaching the specified values.
4. Tighten the lower ring nut «A» bringing it in contact with the top ring nut and tighten it.

Specified values «x»

Position 1 minimum pre-load; rider only: **100 - 105 mm**

Position 2 maximum pre-load; rider, passenger and luggage: **119 mm**

CAUTION

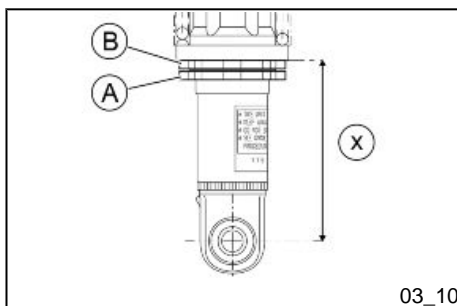


RIDING THE VEHICLE WITH THE SPRING PRE-LOADING NOT CORRECTLY SET FOR THE RIDER AND POSSIBLE PASSENGER, COULD REDUCE THE COMFORT OF THE RIDE AND THE PRECISION OF THE STEERING.

WARNING



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



03_10

WARNING

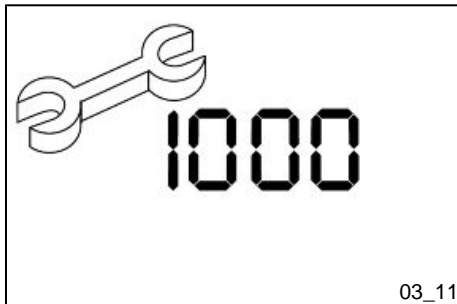
IT IS ABSOLUTELY FORBIDDEN TO ADJUST THE PRE-LOAD DIFFERENTLY ON THE TWO SHOCK ABSORBERS

CAUTION

CARRY OUT THE ADJUSTMENT WITH THE SILENCER COLD AND USING SUITABLE GLOVES AND PROTECTIVE CLOTHING.

N.B.

THE TWO TEETH ON THE WRENCH ALLOW YOU TO USE IT FOR EACH POSITION INDICATED IN THE FIGURE, IN BOTH DIRECTIONS.

**Running in (03_11)**

DURING THE FIRST 1000 KM. DO NOT USE THE VEHICLE AT OVER 80% OF ITS MAXIMUM SPEED. AVOID COMPLETELY ENGAGING THE ACCELERATOR AND KEEPING THE VEHICLE AT A CONSTANT SPEED FOR LONG PERIODS OF TIME. AFTER THE FIRST 1000 KM. PROGRESSIVELY INCREASE THE SPEED, WHERE ALLOWED, UNTIL YOU REACH THE MAXIMUM VEHICLE SPEED PERFORMANCE.

CAUTION



TO AVOID DAMAGING THE VEHICLE, PAY ATTENTION TO THE RECOMMENDATIONS ABOVE

Starting up the engine (03_12, 03_13, 03_14, 03_15, 03_16, 03_17)

To start it up, it is necessary to:

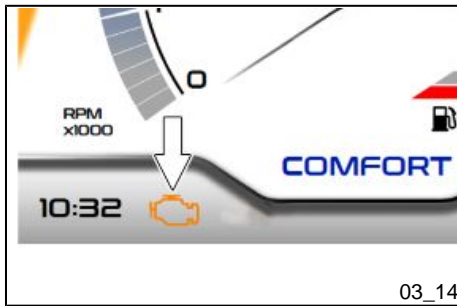
- Rest the vehicle on its centre stand, ensuring the rear wheel is not touching the ground.
 - Keep the throttle grip to idle speed.
 - Ensure that the emergency stop switch is in the "RUN" position.
-
- Perform the activation and recognition procedure of the remote control, operating according to the indications in the "remote control" paragraph; the starter switch is unlocked.
 - Follow the instructions shown in the message on the digital display and turn the start switch to the position "ON".



03_12



03_13



- The MIL - Injection System Failure light will light up on the instrument cluster.



- To start the engine, pull either one of the two brake levers and press the starter button.

With the engine started, the MIL - Injection system failure warning lamp will switch off. If the MIL - Injection system failure warning lamp remains steadily lit even when the engine is running, the vehicle must be taken to an **Authorised Service Centre** to have the fault diagnosed.

WARNING



AFTER STARTING WITH A COLD ENGINE, IT IS ADVISABLE TO WAIT A FEW MINUTES BEFORE GRADUALLY TURNING THE THROTTLE GRIP.

CAUTION



WITH ENGINE ON AND FRONT SUSPENSION LOCKED, WHEN THE RIDER GOES IN DRIVING POSITION ON THE SADDLE, THE INJECTION SYSTEM PROVIDES A TIME OF ABOUT HALF A SECOND BEFORE RESPONDING TO THE OPENING OF THE THROTTLE GRIP.

TO ENSURE THE MAXIMUM RIDING SAFETY AND TO AVOID ABRUPT AND DANGEROUS STARTS, DO NOT OPEN THE THROTTLE GRIP DURING THIS SHORT PERIOD OF TIME.

CAUTION



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

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.

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.

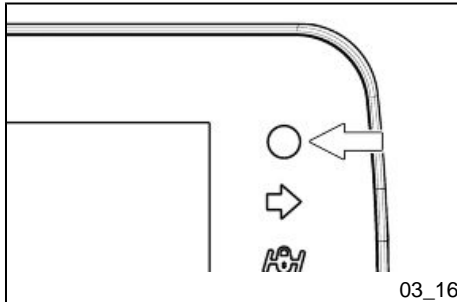
CAUTION



WITH EMPTY FUEL TANK AVOID SWITCHING TO «ON» AND DO NOT TRY STARTING. IF YOU DO NOT DO THIS, YOU COULD DAMAGE THE FUEL PUMP.

WARNING

DO NOT ATTEMPT TO START THE ENGINE WITH THE THROTTLE TWIST GRIP IN THE OPEN POSITION. THIS CAN LEAD TO RUNAWAY, WITH UPSET, AND SUBSEQUENT SERIOUS INJURY, OR EVEN DEATH.

**N.B.**

AFTER APPROXIMATELY 50 METERS OF VEHICLE RUNNING, THE SYSTEM CHECKS THE PRESENCE OF THE REMOTE CONTROL; IF THE REMOTE CONTROL IS NO LONGER WITH THE USER, THIS WILL BE INDICATED BY THE BLINKING OF THE IMMOBILIZER LIGHT ON THE INSTRUMENT CLUSTER.



With the Drive/Reverse gear mode selector in position "D" (Drive), select the desired riding mode by briefly pressing the starter button (refer to the "Digital Display" section).

Precautions

CAUTION



THE INJECTION SYSTEM PROVIDES THE INTERVENTION OF THE REVOLUTION LIMITER IF THE ENGINE SPEED EXCEEDS THE ESTABLISHED THRESHOLD. IN ANY CASE, TO ENSURE THE MAXIMUM RELIABILITY OF THE ENGINE AVOID UNNECESSARY STRESSES WHEN THE ENGINE IS STILL COLD. IN ADDITION, WHEN TRAVELLING DOWNHILL, DO NOT EXCEED THE SPEED FOR MORE THAN THE MAXIMUM OBTAINABLE VALUE DURING NORMAL DRIVING ON LEVEL GROUND.

WARNING



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

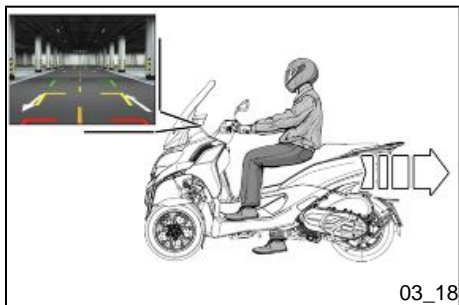
Difficult start up

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.

Reverse (03_18, 03_19, 03_20, 03_21, 03_22, 03_23, 03_24)

The vehicle is equipped with a reverse system that facilitates manoeuvrability from a standstill position.

The reverse gear allows a maximum speed on straight road of about 2 km / h (1.2 mph) and travelling a maximum gradient of approximately 18% only with the driver and of approximately 15% with a passenger as well (of approximately 70 kg).

CAUTION

THE USE OF THE REVERSE GEAR MUST BE CONSIDERED EXCLUSIVE FOR SHORT MANOEUVRES FROM A STANDSTILL POSITION. ANY OTHER TYPE OF USE OTHER THAN THIS IS TO BE CONSIDERED IMPROPER, AND MAY CAUSE THE BATTERY TO BE DAMAGED SOONER THAN NORMAL.



03_19

To use the reverse gear:

1. Keep the vehicle at a standstill with the engine at idle speed;
2. Move the Drive/Reverse selector to position "R";

N.B.

WITH THE VEHICLE RUNNING, BY ACCIDENTALLY SELECTING THE REVERSE MODE WITH THE "R" SELECTOR, THE ACTUAL ENGAGEMENT OF THE REVERSE GEAR WILL BE PERFORMED WHEN THE VEHICLE IS AT A STANDSTILL.



03_20

3. Reverse gear enable is confirmed by the rear view camera being switched on.



03_21

The images captured by the camera will be directly visible on the digital display.

CAUTION



FOR PROPER OPERATION, THE CAMERA MUST ALWAYS BE CLEAN OF MUD, DIRT, SNOW OR ICE. WHEN CLEANING THE CAMERA, BE VERY CAREFUL NOT TO SCRATCH OR DAMAGE THE CAMERA; AVOID USING DRY, ROUGH OR HARD CLOTHS. THE CAMERA SHOULD BE WASHED WITH CLEAN WATER, IF POSSIBLE BY ADDING CAR SHAMPOO. AVOID USING HIGH PRESSURE OR

STEAM JET CLEANERS. ALSO, DO NOT APPLY STICKERS ON THE CAMERA OR ANY OBJECTS THAT MIGHT COVER IT.

CAUTION



THE DRIVER IS ALWAYS RESPONSIBLE FOR PARKING AND OTHER POTENTIALLY DANGEROUS MANOEUVRES. WHEN CARRYING OUT THESE MANOEUVRES, ALWAYS ENSURE THAT THERE ARE NO PERSONS (ESPECIALLY CHILDREN) OR ANIMALS IN THE MANOEUVRING SPACE. THE CAMERA HELPS THE DRIVER, BUT THE DRIVER MUST NEVER REDUCE HIS/HER ATTENTION DURING POTENTIALLY DANGEROUS MANOEUVRES, EVEN WHEN CARRIED OUT AT LOW SPEEDS.

WARNING



DO NOT SUBJECT THE CAMERA TO SEVERE SHOCK OR VIBRATIONS, AS THIS MAY CAUSE DAMAGE OR MALFUNCTION.

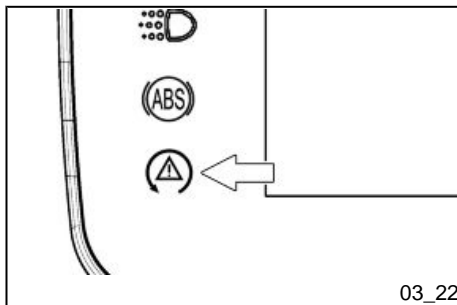
N.B.

THE REAR VIEW CAMERA IS ONLY AN AID FOR REVERSING MANOEUVRES; PLEASE NOTE THAT IT DOES NOT RECORD OR SAVE THE VIDEOS PLAYED ON THE DIGITAL DISPLAY.

WARNING



THE REFERENCE LINES IN THE CAMERA IMAGES ARE STATIC AND ONLY FOR REFERENCE. PAY ATTENTION TO THE REVERSING MANOEUVRE WHEN THERE ARE REAR TOP CASES FITTED ON THE VEHICLE.



03_22

N.B.

WHEN THE REVERSE GEAR IS ENGAGED, THE GAS THROTTLE IS INHIBITED AND THE ENGINE IS MAINTAINED AT IDLE SPEED.

IN ADDITION, IN REVERSE CONDITIONS, THE ASR INDICATOR LIGHT IS SWITCHED ON STEADY TO INDICATE THE ASR STRATEGY DEACTIVATION (NOT REQUIRED FOR THE REVERSE PARKING MANOEUVRES).

ONCE THE REVERSE GEAR IS DISENGAGED, THE ASR SYSTEM IS AUTOMATICALLY RE-ENABLED AND THE ASR INDICATOR LIGHT IS SWITCHED OFF.



03_23

4. Press the start button to engage the reverse gear.

N.B.

THE MAXIMUM TIME OF REVERSE GEAR CONTINUOUS USE IS LIMITED (APPROXIMATELY 20 seconds).

IN SPECIFIC REVERSE GEAR USE CONDITIONS (FOR EXAMPLE TRAVELLING ON HIGH GRADIENTS), TO AVOID OVERLOADING THE BATTERY EXCESSIVELY, THE SYSTEM REDUCES THE PERMISSIBLE OPERATION TIME (A FEW SECONDS).

AFTER THIS TIME, THE REVERSE GEAR IS TEMPORARILY DISENGAGED (APPROXIMATELY 20 seconds): IN THIS CONDITION THE REAR CAMERA TURNS OFF AND IT IS NOT ALLOWED TO DRIVE IN ANY DIRECTION.

BY LEAVING THE SELECTOR IN THE "R" POSITION, THE REVERSE FUNCTIONALITY IS AUTOMATICALLY ENABLED AGAIN AFTER A SHORT DISABLING TIME (APPROXIMATELY 20 seconds) WITH CONSEQUENTLY TURNING ON THE REAR CAMERA.

BY MOVING THE SELECTOR TO POSITION "D" IT IS ALWAYS POSSIBLE TO SELECT THE FORWARD GEAR AND THE VEHICLE WILL REMAIN IN THIS CONDITION UNTIL THE DISABLING TIME EXPIRES EVEN WITH THE SELECTOR IN POSITION "R".

IN ANY CASE, A NEW ACTIVATION OF THE REVERSE FUNCTION WILL BE INDICATED BY THE TURNING ON OF THE REAR CAMERA.

WARNING



THE REVERSE GEAR CAN BE OPERATED REGARDLESS OF THE PRESENCE OF THE DRIVER ON THE VEHICLE OR OF THE FRONT SUSPENSION LOCK SYSTEM ENGAGEMENT.

CAUTION



IMPROPER USE OF THE REVERSE GEAR ADVERSELY AFFECTS THE BATTERY CHARGE LEVEL.



Once the manoeuvre is complete, move the Drive / Reverse selector to position "D" to restore the normal forward travel mode; the rear camera will switch off.

Engine stop (03_25, 03_26)

Close the throttle grip completely; press and release the starter switch in order to start communication between the control unit and the remote control.



03_25



03_26

Follow the instructions in the message on the digital display and turn the start switch to the position "OFF".

N.B.

WITHIN 20 SECONDS IT WILL BE POSSIBLE TO TURN THE STARTER SWITCH BACK TO THE "ON" POSITION WITHOUT THE NEED FOR A NEW REMOTE CONTROL RECOGNITION.

CAUTION



TO ENSURE THE MAXIMUM RIDING SAFETY, DO NOT TURN OFF THE ENGINE WHILE THE VEHICLE IS MOVING.



03_27

Catalytic silencer (03_27)

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_28

Stand (03_28, 03_29)

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



03_29

CAUTION

PARK THE MOTORCYCLE ON SAFE AND LEVEL GROUND.



03_30

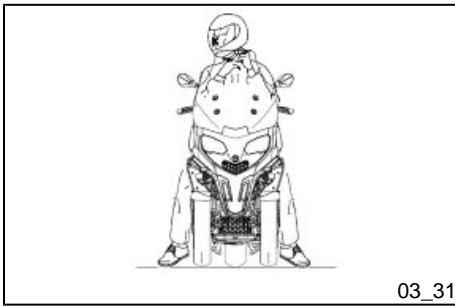
Automatic transmission (03_30)

To make driving as simple and pleasant as possible, the vehicle has an automatic transmission with speed adjuster 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 could in fact cause the clutch to overheat because of the rubbing of the clutch masses on the transmission bell housing. Additionally, avoid accelerating with the parking brake engaged.** It is therefore advisable to avoid prolonged sliding of the clutch, (beyond that which is previously indicated) such as uphill travel fully laden on steep slopes or starts with the pilot and passenger on slopes of more 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.

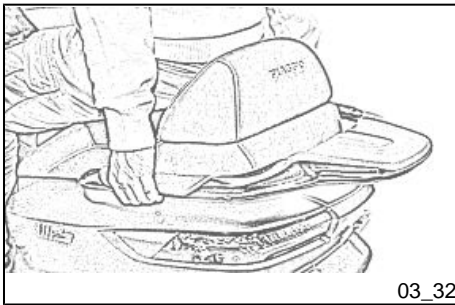


03_31

Safe driving (03_31, 03_32, 03_33, 03_34)

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 riding. We recommend trying out the vehicle in traffic-free zones to familiarise with it.

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 riding 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 riding under conditions like this, you should brake periodically.
4. Do not brake hard on a wet, unsurfaced or slippery road.
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. We also recommend to replace and/or clean the filter element of the purifier box more frequently.
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.



03_32



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



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



WITH ENGINE ON AND FRONT SUSPENSION LOCKED, WHEN THE RIDER GOES IN DRIVING POSITION ON THE SADDLE, THE INJECTION SYSTEM PROVIDES A TIME OF ABOUT HALF A SECOND BEFORE RESPONDING TO THE OPENING OF THE THROTTLE GRIP.

TO ENSURE THE MAXIMUM RIDING SAFETY AND TO AVOID ABRUPT AND DANGEROUS STARTS, DO NOT OPEN THE THROTTLE GRIP DURING THIS SHORT PERIOD OF TIME.

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)

WARNING

WHEN RIDING THE SCOOTER EQUIPPED WITH ACCESSORIES (CASE AND/OR WINDSHIELD), REDUCE THE SPEED. 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.

CAUTION

DO NOT ADJUST THE MIRRORS WHILE RIDING. THIS COULD CAUSE YOU TO LOSE CONTROL OF THE VEHICLE.

CAUTION

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

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

Suspension roll block system (03_35, 03_36, 03_37, 03_38, 03_39)

The front suspension block system allows the simple blockage of rolling of the vehicle by moving the corresponding switch. The vehicle can be stopped without your feet touching the ground.

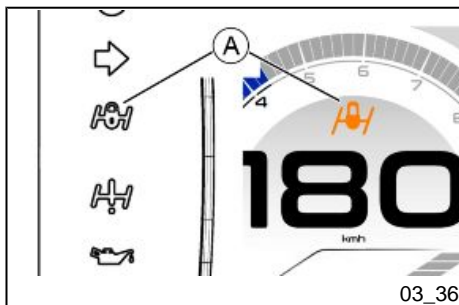
Turning the starter switch to "ON", the warning light "A" (on the instrument cluster as well as on the digital display) starts blinking, if the lock is deactivated. This means that the system is enabled for activation.

Moving the switch to "1", a continuous sound alarm signals that the locking system is engaged and, at the same time, the warning light "A" turns steadily on.

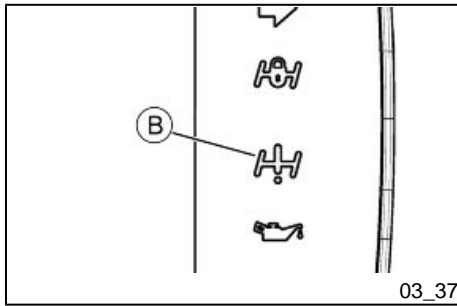
Moving the switch to "2" an intermittent sound alarm signals that the locking system is disengaged and, at the same time, the warning light "A" starts flashing again. The light "A" will turn off when you go into gear. This means that the lock is not enabled.



03_35



03_36



Engaging roll lock is possible only if the following conditions occur at the same time:

- Accelerator completely disengaged.
- RPM of the engine at less than 2,500 rpm.
- Vehicle speed below 10 km/h.
- Block system WARNING light "B" off (the system is correctly functioning)

If any of these conditions are not met the light "A" will remain off and it will not be possible to engage the lock (under normal conditions the light "A" is off).

With engine on, system locked (warning light "A" on) and if the rider is properly seated in riding position, the suspension locking system is disengaged automatically and the warning light "A" turns off when the throttle grip is twisted to start the ride.

For increased rider safety, the vehicle is provided with a **driver presence sensor** placed inside the saddle which allows the system to inhibit vehicle movement and suspension block (when engaged), when the rider is not seated in the correct riding position: in this case the WARNING light "B" will light up.

CAUTION



WITH ENGINE ON AND FRONT SUSPENSION LOCKED, WHEN THE RIDER GOES IN DRIVING POSITION ON THE SADDLE, THE INJECTION SYSTEM PROVIDES A TIME OF ABOUT HALF A SECOND BEFORE RESPONDING TO THE OPENING OF THE THROTTLE GRIP.

TO ENSURE THE MAXIMUM RIDING SAFETY AND TO AVOID ABRUPT AND DANGEROUS STARTS, DO NOT OPEN THE THROTTLE GRIP DURING THIS SHORT PERIOD OF TIME.

CAUTION

THE DRIVER PRESENCE SENSOR IS LOCATED IN THE FRONT PART OF THE SEAT. FOR THIS REASONS AVOID INADVERTENTLY PLACING BAGS OR OTHER HEAVY OBJECTS ON THE SEAT.

NOT OBSERVING THIS RULE MAY MOVE THE VEHICLE FORWARD AND RELEASE THE SUSPENSION LOCKING SYSTEM EVEN IF THE RIDER IS NOT SEATED, BY SIMPLY TWISTING THE THROTTLE GRIP. THE VEHICLE COULD FALL ACCIDENTALLY AS A CONSEQUENCE.

WARNING

DURING THE STOP, IF THE FEET ARE NOT TOUCHING THE GROUND TO KEEP THE VEHICLE IN BALANCE, MAKE SURE THAT THE FRONT SUSPENSION LOCKING SYSTEM IS ENGAGED.

WARNING

WHEN THE FRONT SUSPENSION IS LOCKED AND ESPECIALLY ON ROUGH ROADS AND/OR IF THERE ARE OBSTACLES (E.G. BOLLARDS, PLATFORMS, ETC.), AVOID MOVING THE VEHICLE. WHEN THE LOCK IS ACTIVE THE VEHICLE MOVEMENT IS STILL INHIBITED BY THE SYSTEM.

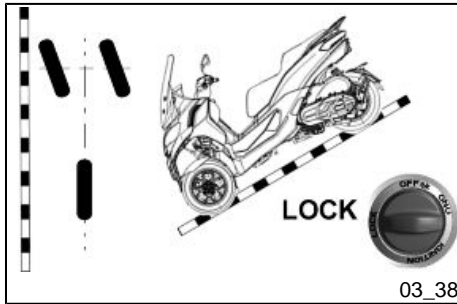
IN CASE OF ENGINE FAILURE (DISCHARGED BATTERY) AVOID PULLING THE VEHICLE WITH THE LOCKING SYSTEM ENGAGED.

WITH THE LOCKING SYSTEM ENGAGED AND THE ENGINE OFF, AVOID MOVING THE VEHICLE AT SPEEDS ABOVE 5 km/h.

CAUTION



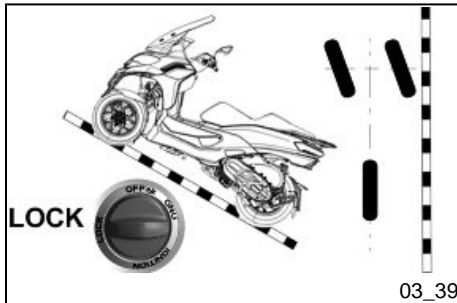
DO NOT GO DOWNHILL WHEN THE LOCK SYSTEM IS ENGAGED AND THE STARTER SWITCH IS TURNED TO THE "OFF" POSITION.



In the case that the WARNING light "B" lights up (flashing), it means that there is a problem with the front suspension block system, and it is necessary to contact an **Authorised Service Centre**. If the front suspension is locked, it can be unlocked by quickly operating the switch twice to the unlocking position "2". Once the suspension is unblocked, the vehicle can be used normally, with the exception of the block system, which will remain deactivated.

For some cases of failure, the vehicle speed is auto-limited to 30 Km/h. This automatic procedure is activated to enhance safety until the failure is eliminated.

In any case you should contact an **Authorised Service Centre**.



If the continuous sound alarm is activated when the WARNING light "B" turns on (steadily), try to unlock the system by operating the switch twice quickly on the unlocking position "2". If it does not unblock, immediately contact an **Authorised Service Centre**.

Parking brake (03_40, 03_41, 03_42, 03_43)

With the vehicle at a standstill and the suspension locking system engaged, it is possible to get off the vehicle without using the stand.

For safety, it is mandatory to engage the parking brake by acting on the lever "A" shown in the figure.

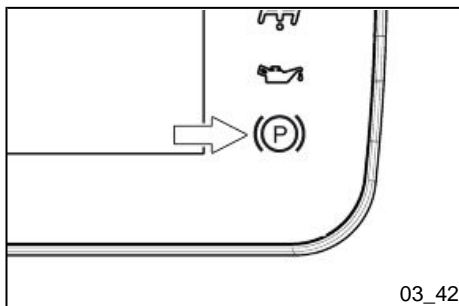


03_40



03_41

To engage the parking brake, the lever must be lifted from position "A" to position "B".



03_42

With the parking brake engaged, in position "B", the special warning light on the instrument cluster comes on.



03_43

When the parking brake is engaged in position "B" and the starter switch is turned to "LOCK" the security system is activated, which disallows the disengagement of the parking brake.

To disengage it, turn the starter switch to position "OFF" or "ON". If the switch is set to position "LOCK" it is still possible to engage the parking brake.

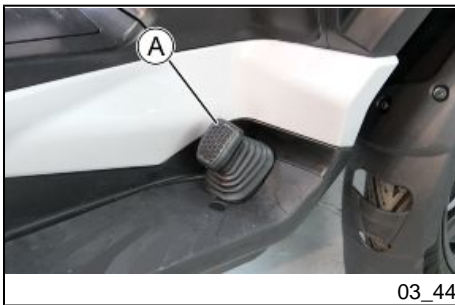
WARNING



WHEN THE VEHICLE STOPS UPHILL ON A STEEP ROAD, IT IS ADVISABLE TO USE THE STAND.

IF THE STEEP ROAD IS INSTEAD A SIDE SLOPE, THE STAND CANNOT BE USED AND THE SUSPENSION LOCK RESOLVES THE PROBLEM.

IT IS IMPORTANT TO USE NORMAL PRECAUTIONS WHEN ONE STOPS ON A STEEP ROAD: TURN THE WHEELS SO THAT IF THE VEHICLE SHOULD MOVE, THE WHEELS WILL TOUCH THE SIDEWALK. WITH THE STEERING LOCK ON, THE SIDEWALK SHOULD BE TO THE RIGHT OF THE VEHICLE WHEN UPHILL AND TO THE LEFT WHEN PARKED DOWNHILL.



03_44

Integral pedal braking system (03_44)

The vehicle is equipped with an integral, pedal-operated braking system «A» mounted on the right-hand foot rest platform. When the rider presses this pedal it produces an integral type braking effect that acts on both the front and rear brake discs.

Vehicle deceleration may be governed either by the pedal-operated braking system or the combined action of the two manual controls. Maximum braking performance is obtained by using the manual controls.

CAUTION

SINCE THE INTEGRAL BRAKING SYSTEM IS IN COMMUNICATION WITH THE TRADITIONAL BRAKE PUMPS, THE RIDER MAY NOTICE A SLIGHT MOVEMENT OF THE LEVERS ON THE HANDLEBARS WHEN OPERATING THE BRAKE PEDAL, AND VICE VERSA.

THIS EFFECT IS ENTIRELY NORMAL.

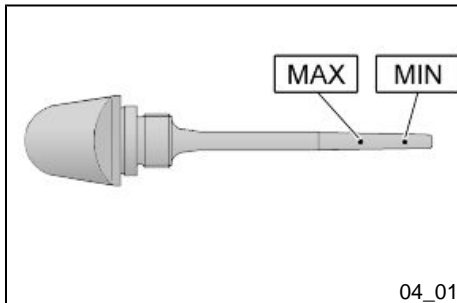
MP3 530 hpe



PIAGGIO®



Chap. 04
Maintenance



04_01

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. In any case, the vehicle is fitted with a minimum oil pressure warning light in the instruments.**

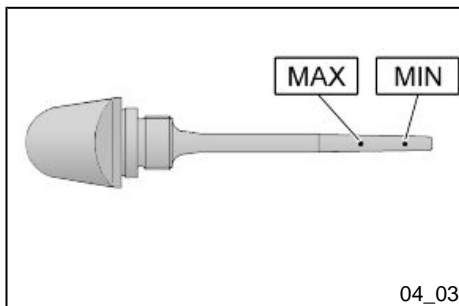


04_02

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.

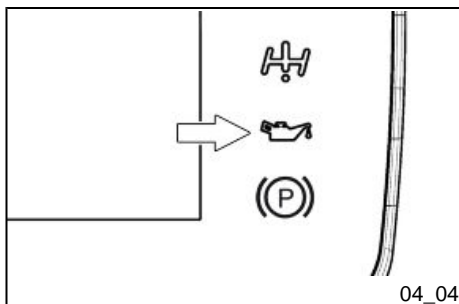
If the check is carried out after the vehicle has been used, and therefore with a hot engine, the level will be lower; in order to carry out a correct check, wait at least 10 minutes after the engine has been stopped so as to get the correct level.



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**. Take your vehicle to an **Authorised Service Centre** to have the engine oil checked and if necessary, topped-up as indicated in the scheduled maintenance table.



04_04

Warning light (insufficient oil pressure) (04_04)

The vehicle is equipped with a warning light which turns on when the starter switch is turned to the "ON" position. 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.**



04_05

Engine oil change (04_05)

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.

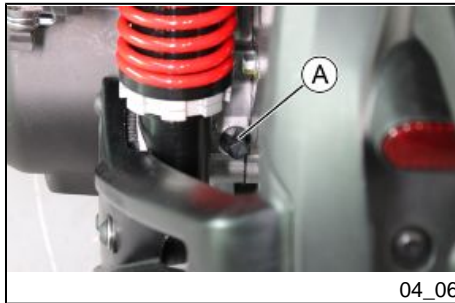
TOPPING UP THE ENGINE WITH AN EXCESSIVE AMOUNT OF OIL MAY CAUSE MALFUNCTION AND/OR A DROP IN PERFORMANCE OF THE VEHICLE.

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.

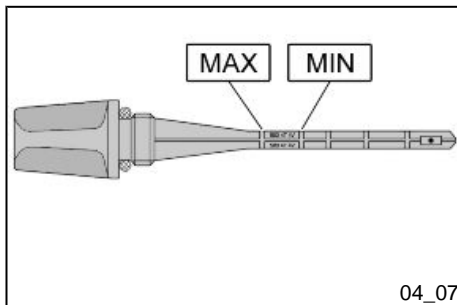


Hub oil level (04_06, 04_07, 04_08)

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

Do the following in order to check the hub oil level:

- 1) Stand the vehicle on its stand on flat ground.
- 2) Unscrew the hub oil dipstick «**A**», dry it with a clean cloth and then reinsert it, **and screw it right down.**
- 3) Extract the dipstick and check that the oil level is between the MIN and MAX marks, as indicated in the figure; This level is the proper level, and should remain constant.



04_07

4) Screw back the dipstick, and make sure it is locked in place.

CAUTION

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

CAUTION

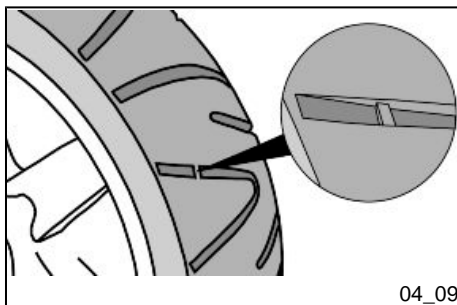
USED OIL IS HARMFUL TO THE ENVIRONMENT. COLLECTION AND DISPOSAL SHOULD BE CARRIED OUT IN COMPLIANCE WITH REGULATIONS IN FORCE.

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.



CAUTION



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

TOP-UP

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

Tyres (04_09)

Regularly check (about every 500 km) the pressure and wear of the tyres. Tyres feature wear indicators; replace tyres as soon as these indicators become visible on the tyre tread. Also, check that the tyres do not have cuts on the sides or an irregular tyre tread wear; if this occurs contact an **Authorised Service Centre**.

CAUTION



FOR THE REPLACEMENT OF THE TYRES CONTACT AN AUTHORISED SERVICE CENTRE.

CAUTION

THE TYRE PRESSURE MUST BE CHECKED WHEN THE TYRES ARE COLD. AN INCORRECT PRESSURE CAUSES ABNORMAL TYRE WEAR AND RENDERS DRIVING DANGEROUS.

THE TYRE MUST BE REPLACED WHEN THE TYRE TREAD REACHES THE WEAR LIMIT SPECIFIED BY THE LEGISLATION IN FORCE.

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.

TYRES

Front tyres	Tubeless 110/70 - 13" 48S
Rear tire	Tubeless 140/70 - 14" 68S

TYRE INFLATING PRESSURE

Front tyre pressure	2 bar
Rear tire pressure (with passenger)	2.4 (2.6) bar



04_10



04_11

Spark plug dismantlement (04_10, 04_11)

This engine has two spark plugs.

Remove the door located in the right side panel, unscrewing the screw **A**, and using a small screwdriver in the rear hollow. Then proceed as follows:

1. Disconnect the caps «**B**» of the HV cables of the spark plugs;
2. Undo the spark plugs with the specific spark plug spanner.
3. When reassembling, place the spark plugs in their hole with the correct inclination and screw it in completely by hand;
4. Use a wrench only to secure it;
5. Insert the caps «**B**» on the spark plugs all the way to the bottom;
6. Reattach the door, paying attention to the insertion of the rear hook.

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, observe the instructions in the scheduled maintenance table, contact an **Authorised Service Centre**.



04_13

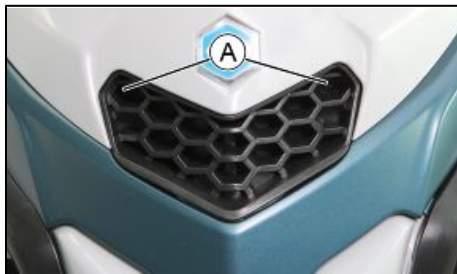
Cooling fluid level (04_13, 04_14, 04_15, 04_16)

Engine cooling is forced liquid circulation. The coolant is composed of a mix of 50% de-mineralised water and an ethylene glycol-based antifreeze with corrosion prevention components. The coolant included with the scooter is already mixed and ready for use.

For proper functioning of the engine, ensure that the temperature of the coolant is maintained at about 90°C.

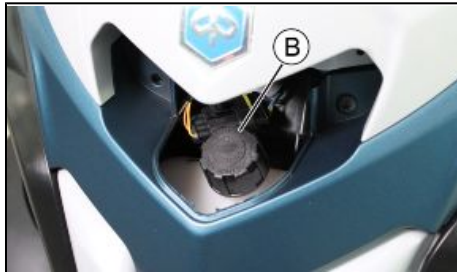
If the coolant temperature icon lights up on the digital display, stop the engine immediately, allow it to cool and check the coolant level; If it is as it should be contact an **Authorised Service Centre**.

Check the fluid with cold engine according to the scheduled maintenance table, in the way shown below.



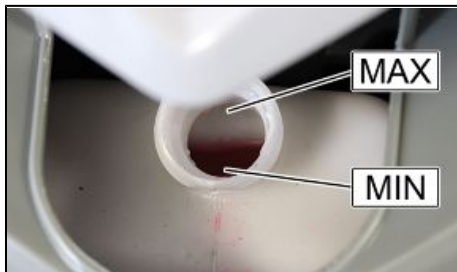
04_14

Place the vehicle on the stand and remove the front grille by unscrewing the two fixing screws "A".



04_15

Remove the expansion chamber cap «B» rotating it anticlockwise.



04_16

Look inside the expansion tank and make sure the liquid level is always visible and below the "MAX" level.

If the coolant level is not visible or is close to the minimum line, wait for the engine to cool and top it up.

If the coolant needs to be topped up frequently or the coolant reservoir is completely dry, check the cooling system to determine the cause of the problem. In this case, the cooling system must be checked by an **Authorized Service Centre**.

Change coolant according to 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

YOU MUST MAKE SURE THE FLUID NEVER EXCEEDS THE MAXIMUM LEVEL INDICATED SO AS TO AVOID IT OVERFLOWING AND CAUSING DAMAGE WHILE THE SCOOTER IS MOVING.

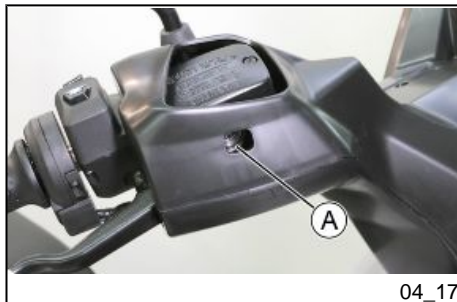
TO ENSURE CORRECT ENGINE OPERATION, KEEP THE RADIATOR GRILLE CLEAN.

Checking the brake oil level (04_17, 04_18, 04_19, 04_20, 04_21)

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

To control the brake fluid level, do the following:

- Place the bike on the centre stand with the handlebar pointing straight;
- check the liquid level through the related inspection windows «A»:
 - if the window is **full**, the brake fluid is correct.
 - If the brake fluid level approaches the «**MIN**» reference, contact an **Authorised Service Centre** for the corresponding checks.
 - If the brake fluid level is below the «**MIN**» reference, do not use the vehicle and contact an **Authorised Service Centre**.



04_17

CAUTION



IT IS MANDATORY TO REPLACE THE BRAKE FLUID EVERY 2 YEARS, FOR THIS OPERATION PLEASE CONTACT AN AUTHORIZED SERVICE POINT.

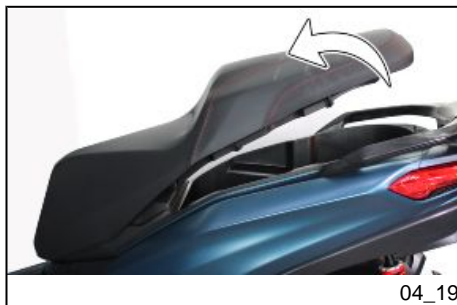
WARNING



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



To check the fluid level of the integral braking system, proceed as follows:



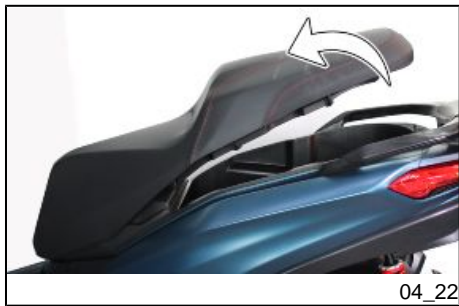
- lift the saddle;



- check the fluid level in the tank through the slot in the battery cover;



If the fluid level of the integral braking system is below the "MIN" reference indicated on the tank, do not use the vehicle and contact an **Authorised Service Centre**.



Battery (04_22, 04_23, 04_24, 04_25)

To access the battery, proceed as follows:

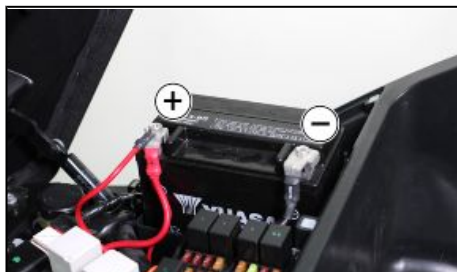
- place the vehicle on its centre stand and lift the saddle as indicated above;



- unscrew the battery cover's fastening screws "A";



- remove the battery cover paying attention to the front tabs.



04_25

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

The main maintenance operations to be carried out are the following:

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 TO THE ENVIRONMENT. COLLECTION AND DISPOSAL SHOULD BE CARRIED OUT IN COMPLIANCE WITH REGULATIONS IN FORCE.

Use of a new battery (04_26, 04_27, 04_28, 04_29)

To remove the empty battery, proceed as follows:

access the battery as described in the section "Battery".

Unscrew the screw of the negative terminal "-".



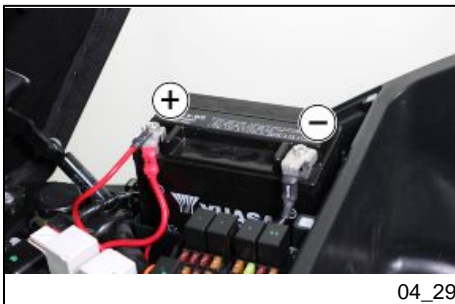
04_26



Undo the positive pole screw "+".



Remove the battery.



Place the new battery and proceed in reverse order of the removal.

Ensure that the terminals are connected correctly and check voltage.

CAUTION



IT IS IMPORTANT TO OBSERVE THE INDICATED CONNECTION SEQUENCE OF THE CABLES AT THE BATTERY TO AVOID SHORT-CIRCUITS. WHEN FITTING THE NEW BATTERY, FIRST CONNECT THE POSITIVE CABLE «+» AND THEN THE NEGATIVE CABLE «-».

CAUTION

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

Long periods of inactivity (04_30)

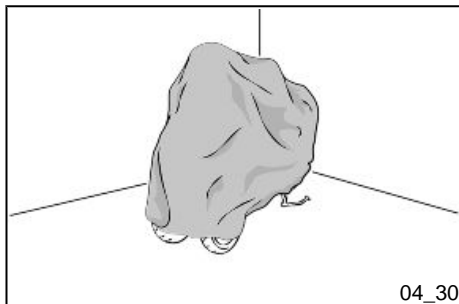
If the vehicle is not used for a long time, the performance of the battery will deteriorate. This is the result of the natural phenomenon of battery discharging, and may be due to residual absorption by vehicle components with constant power consumption. The deterioration of the battery's performance 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:

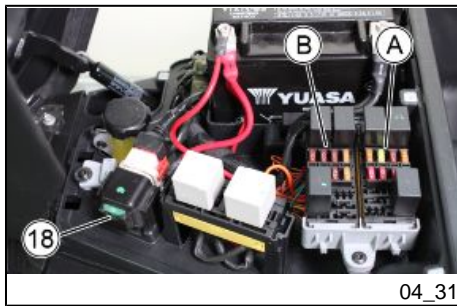
- **At least once a month** start up the engine and turn it over at a speed slightly above idling, for 10-15 minutes. This will enable you to keep all the parts of the engine in working order as well as the battery.

- 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**.

CAUTION

BATTERY CHARGING MUST BE DONE WITH A CURRENT EQUAL TO 1/10 THE RATED CAPACITY OF THE BATTERY ITSELF FOR NOT MORE THAN 8 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.





04_31

Fuses (04_31, 04_32, 04_33, 04_34, 04_35, 04_36, 04_37, 04_38)

The electrical system is equipped with 16 main protection fuses, divided into two fuse boxes "A" and "B", and with a general fuse "18", located near the battery.

To access the fuses, it is necessary to lift the saddle and remove the battery cover as described in the section "**Battery**".

CAUTION

BEFORE REPLACING A BLOWN FUSE, FIND AND SOLVE THE FAILURE THAT CAUSED IT TO BLOW. NEVER TRY TO REPLACE A BLOWN FUSE WITH A FUSE OF A DIFFERENT RATING THAN THAT SPECIFIED OR USING OTHER MATERIAL (FOR EXAMPLE, A PIECE OF ELECTRICAL 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.

WARNING



IN ORDER TO AVOID DAMAGING THE ELECTRICAL SYSTEM, NEVER DISCONNECT THE BATTERY CABLE WHILE THE ENGINE IS RUNNING.



04_32

MAIN FUSE

The location and characteristics of the main fuses on the vehicle are indicated in the table.

MAIN FUSE TABLE

Fuse No. 18

Capacity: 30 A

Fuel system: from battery

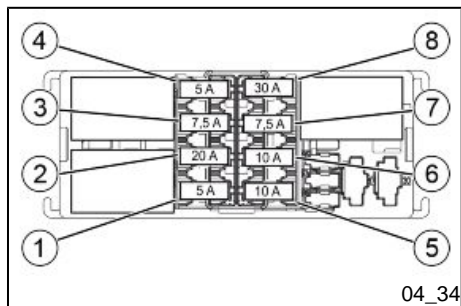
Protected circuits (under starter switch): fuses no 1, 2, 3, 4, 5, 6, 7 and 8 (fuse box "B").



04_33

FUSE BOX "A"

The locations and positions of the main fuses on the vehicle, situated in the fuse box "A", are indicated in the table.



FUSE BOX "A" TABLE

Fuse No. 1	<p>Capacity: 5 A</p> <p>Protected circuits: powered from fuse no. 1 (fuse box "B"); Low/high beam light switch.</p>
Fuse No. 2	<p>Capacity: 20 A</p> <p>Protected circuits: Battery-powered; Parking electronic control unit.</p>
Fuse No. 3	<p>Capacity: 7.5 A</p> <p>Protected circuits: Battery-powered; provision for anti-theft system, provision for heated grips, diagnostic socket.</p>
Fuse No. 4	<p>Capacity: 5 A</p>

Protected circuits: Battery-powered; instrument panel.

Fuse No. 5

Capacity: 10 A

Protected circuits: Battery-powered; Electric fan relay, electric fan.

Fuse No. 6

Capacity: 10 A

Protected circuits: Battery-powered; injection load relay, engine control unit.

Fuse No. 7

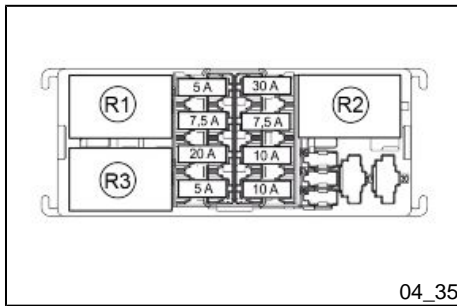
Capacity: 7.5 A

Protected circuits: Battery-powered; helmet compartment lighting, provision for anti-theft system, turn indicators control device (blinker), PMP3 (Piaggio Multimedia Platform) control unit, "Keyless" control unit, provision for electric case.

Fuse No 8

Capacity: 30 A

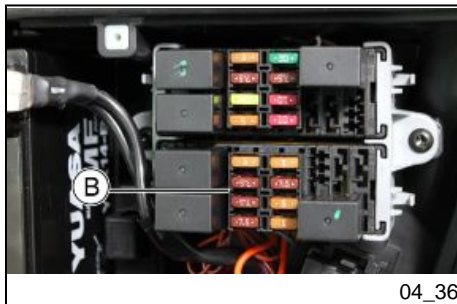
Protected circuits: Battery-powered; ABS control unit.



The locations and positions of the fuses situated in the fuse box "A", are indicated in the table.

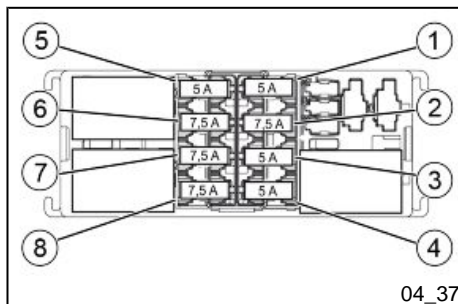
RELAY BOX "A" TABLE

Relay no. 1	Circuits: main.
Relay no. 2	Circuits: electric fan.
Relay no. 3	Circuits: Fuel pump.



FUSE BOX "B"

The locations and positions of the main fuses on the vehicle, situated in the fuse box "B", are indicated in the table.



04_37

FUSE BOX "B" TABLE

Fuse No. 1

Capacity: 5 A**Protected circuits:** powered from starter switch; USB port.

Fuse No. 2

Capacity: 7.5 A**Protected circuits:** powered from starter switch; provision for anti-theft system, provision for heated grips, diagnostic socket.

Fuse No. 3

Capacity: 5 A**Protected circuits:** powered from starter switch; turn indicators control device (blinker), turn indicator switch, PMP3 (Piaggio Multimedia Platform) control unit, provision for electric case.

Fuse No. 4

Capacity: 5 A

Protected circuits: powered from starter switch; D.R.L. daylight running lights switch, D.R.L. daylight running lights relay, instrument cluster.

Fuse No. 5

Capacity: 5 A

Protected circuits: powered from starter switch; relay for brake light, rear brake light, starter relay coil.

Fuse No. 6

Capacity: 7.5 A

Protected circuits: powered from starter switch; Parking electronic control unit.

Fuse No. 7

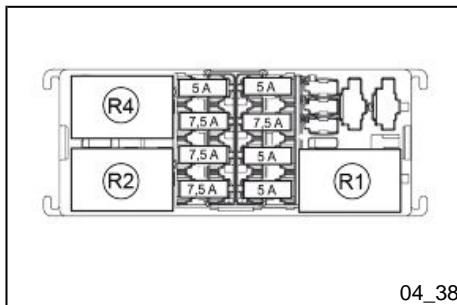
Capacity: 7.5 A

Protected circuits: powered from starter switch; "Keyless" control unit, ABS control unit, engine control unit.

Fuse No. 8

Capacity: 7.5 A

Protected circuits: powered from starter switch; horn button, horn, rear radar, front position lights and daylight running lights D.R.L., rear position lights, licence plate light, rear camera, instrument cluster.



The locations and positions of the fuses situated in the fuse box "B", are indicated in the table.

RELAY BOX "B" TABLE

Relay no. 1	Circuits: D.R.L.. daylight running lights switch.
Relay no. 2	Circuits: Reverse gear enable.
Relay no. 4	Circuits: stop lights.



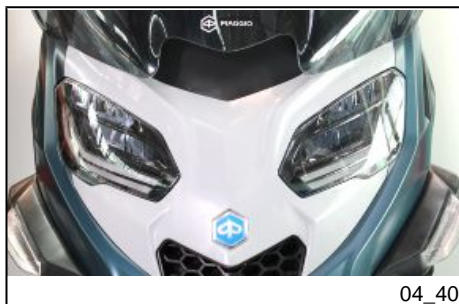
Lamps (04_39)

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

BULB TABLE

Low beam light bulb	Type: LED Quantity: 1 RH - 1 LH
High beam light bulb	Type: LED Quantity: 1 RH - 1 LH
front position lights / DRL lights bulb.	Type: LED Quantity: 1 RH - 1 LH
Front indicator light bulb	Type: LED Quantity: 1 RH - 1 LH
Rear tail light bulb	Type: LED Quantity: 1
Rear indicator light bulb	Type: LED Quantity: 1 RH - 1 LH
Stop light bulb	Type: LED Quantity: 1
Licence plate light bulb	Type: LED Quantity: 1
Courtesy light bulb, saddle compartment	Type: TORPEDO TYPE Power: 12V - 5W

Quantity: 1



04_40

Front light group (04_40)

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; AND IS NOT A DEFECT.

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_41

Head light adjustment (04_41)

To adjust the light beam of the front light assembly, it is recommended to contact an **Authorised Service Centre**.



04_42

Front direction indicators (04_42)

WARNING



INDICATOR BULBS ARE "LED". IN CASE OF MALFUNCTION, BECAUSE DIS-ASSEMBLY IS PARTICULARLY DIFFICULT, WE RECOMMEND SEEING AN AU-THORISED SERVICE CENTRE FOR REPLACEMENT.



04_43

Rear optical unit (04_43)

WARNING



THE STOP AND PARKING LIGHTS IN THE REAR LIGHT ASSEMBLY ARE «LED» TYPE. IN CASE OF MALFUNCTION, BECAUSE DISASSEMBLY IS PARTICULARLY DIFFICULT, WE RECOMMEND SEEING AN AUTHORISED SERVICE CENTRE FOR REPLACEMENT.



04_44

Rear turn indicators (04_44)

WARNING



INDICATOR BULBS ARE "LED". IN CASE OF MALFUNCTION, BECAUSE DISASSEMBLY IS PARTICULARLY DIFFICULT, WE RECOMMEND SEEING AN AUTHORISED SERVICE CENTRE FOR REPLACEMENT.



04_45

Number plate light (04_45)

The bulb of the licence plate light is of «LED» type.

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



04_46

Helmet compartment lighting bulb (04_46)

To replace the lamp of the helmet compartment lighting, it is necessary to open the saddle and, using a small flathead screwdriver inserted in the appropriate upper side hollow, extract the snap-on glass.



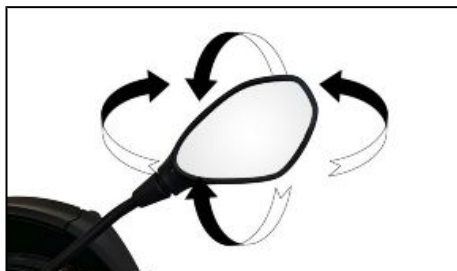
04_47

Brake light (04_47)

WARNING



THE STOP AND PARKING LIGHTS IN THE REAR LIGHT ASSEMBLY ARE «LED» TYPE. IN CASE OF MALFUNCTION, BECAUSE DISASSEMBLY IS PARTICULARLY DIFFICULT, WE RECOMMEND SEEING AN AUTHORISED SERVICE CENTRE FOR REPLACEMENT.



04_48

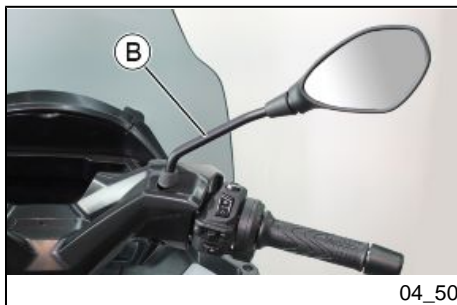
Rear-view mirrors (04_48, 04_49, 04_50)

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



04_49

To remove the rear-view mirror slightly unscrew the lock nut «A», located in the lower part of the handlebar, to unlock the stem.



04_50

unscrew the stem «b» to remove it.

CAUTION

DO NOT ADJUST THE MIRRORS WHILE RIDING. THIS COULD CAUSE YOU TO LOSE CONTROL OF THE VEHICLE.



04_51

Front and rear disc brake (04_51, 04_52)

Brake disc and pad wear are automatically compensated, and have no effect on the function and performance of the brakes. Adjusting the brakes is therefore unnecessary. 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. AF-



04_52

TER REPLACING THE BRAKE PADS, DO NOT USE THE VEHICLE UNTIL YOU HAVE OPERATED THE BRAKE LEVER SEVERAL TIMES IN ORDER TO ALLOW THE PLUNGERS TO SETTLE AND THE LEVER STROKE TO BE SET TO THE CORRECT POSITION.

CAUTION



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

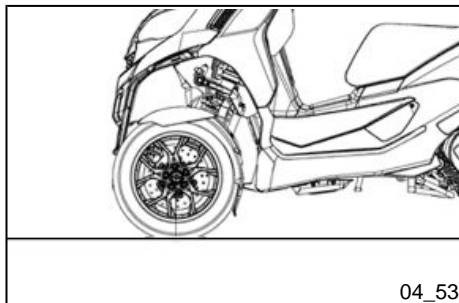
Puncture (04_53)

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 event of a puncture, you can make an emergency repair using an "inflate and repair" spray can. For a complete repair job contact an **Authorised Service Centre**. Replacing a tyre means removing the wheel. For these operations, contact an **Authorised Service Centre**.

WARNING



ALWAYS PERFORM THE CALIBRATION OF THE «ASR» SYSTEM AFTER A PUNCTURE OR THE REPLACEMENT OF ONE OR MORE TIRES.



04_53

CAUTION

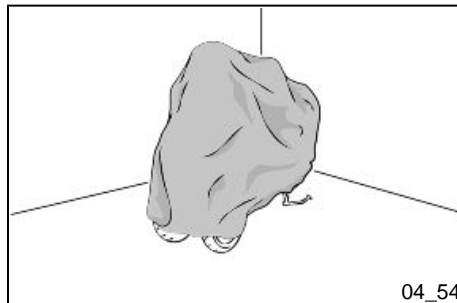
TO USE THE "INFLATE AND REPAIR" SPRAY CAN PROPERLY, FOLLOW THE INSTRUCTIONS ON THE PACKAGING.

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.

CAUTION**WARNING**

CARRY OUT THE DEFINITIVE REPAIRS AT AN AUTHORISED SERVICE CENTRE.

**Inactivity of the vehicle (04_54)**

The following operations are recommended:

1. Clean the vehicle thoroughly and then cover it with a canvas;
2. Take care to place the vehicle on the centre stand, deactivating the front suspension lock;
3. With the engine off and the piston at bottom dead centre, remove the spark plug, add 1 to 2 cm³ of oil through the spark plug hole (larger quantities may cause engine

damage), then refit the spark plug and turn the engine over slowly by a few revolutions by pressing the starter button briefly;

4. Remove all fuel from the vehicle; spread anti-rust grease on the uncoated metal parts; keep the wheels off the ground resting the frame on two wooden blocks;
5. As far as regards the battery, follow the instructions in paragraph «Battery».

Cleaning the vehicle (04_55, 04_56)

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**



04_55

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 VEHICLE 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 DAM-

AGE 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 VEHICLE 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;

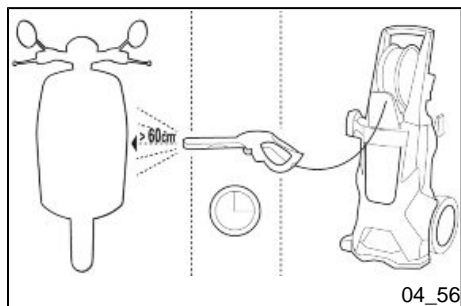
DO NOT USE ABRASIVE CLEANERS;

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



APPLY LOCTITE FORTE 263 ON THE SCREW FIXING THE PISTON COOLING NOZZLE.

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.
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INSUFFICIENT BRAKING

Disc greasiness. Worn brake pads. Faulty braking system. Air in the front and rear brake circuits	Contact an Authorised Service Centre.
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INEFFICIENT SUSPENSION

Shock absorber fault, oil leak, end buffers damaged; shock absorbers	Contact an Authorised Service Centre.
--	--

badly regulated in the pre-loading stage

AUTOMATIC TRANSMISSION PROBLEMS

CVT rollers and/or drive belt damaged

Contact an **Authorised Service Centre.**

STAND DOES NOT RETURN TO POSITION

Presence of dirt

Clean and grease

MP3 530 hpe

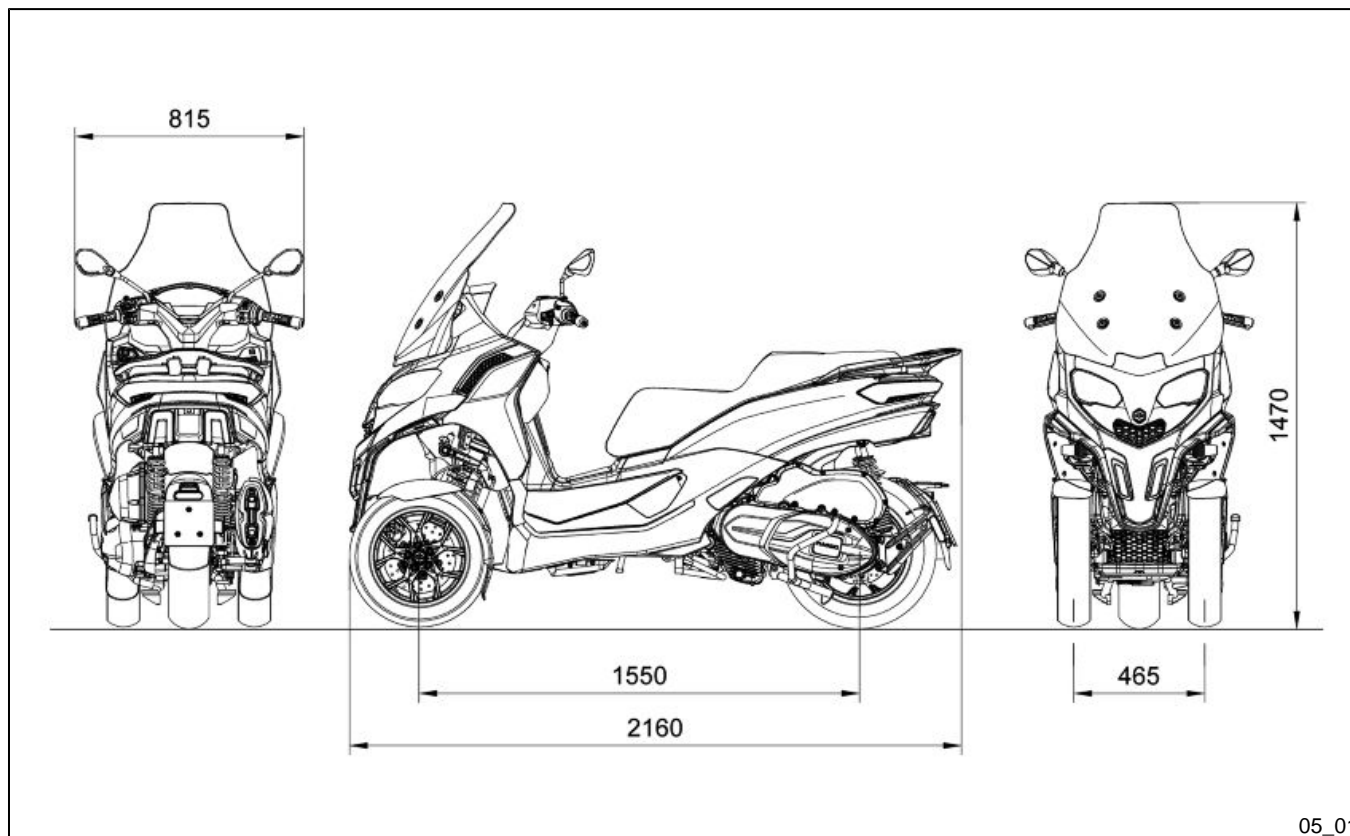


PIAGGIO®



Chap. 05
Technical data

Data (05_01, 05_02)



05_01

VEHICLE SPECIFICATIONS

Chassis	In tubes and steel sheet metal
Front suspension	Rolling system composed of a universal joint composed of aluminium rods and of two side tubes and shock absorbers with a hydraulic lock system
Rear suspension	Two gas shock absorbers with pre-load adjustment.
Front brake	Dual 258 mm hydraulically operated disc brakes controlled from RH handlebar lever; braking assisted by ABS system.
Rear brake	Ø 240 mm hydraulically operated disc brake controlled from LH handlebar lever; braking assisted by ABS system.
Integral braking system	A hydraulic system allowing the rider to operate all three brake discs simultaneously from the pedal on the foot board; braking assisted by ABS system.
Wheel rims type	Light alloy.
Front wheel rims	13" x 3.00
Rear rim	14" x 4.50
Front tyres	Tubeless 110/70 - 13" 48S
Rear tire	Tubeless 140/70 - 14" 68S

Front tyre pressure	2 bar
Rear tyre pressure (with passenger)	2.4 (2.6) bar
Kerb mass	280 kg
Maximum technically permissible weight at full load	460 kg
Battery	12V - 12Ah

ENGINE DATA

Type	Single cylinder 4-stroke
Engine capacity	530 cm ³
Bore x Stroke	97.5 x 71 mm
Compression ratio	11,5 ± 0,5 : 1
Idle engine speed	1,600 ± 100 rpm
Timing	Four valves, single overhead camshaft, chain-driven.
Valve clearance (cold engine)	Intake: 0.15 mm Exhaust: 0.15 mm
Max. power	32.5 kW at 7.250 rpm
MAX torque	50.0 Nm at 5.250 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.

Electrically operated reverse gear.

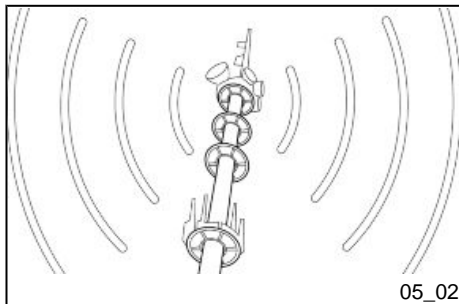
Final drive reduction gear	Gear reduction unit in oil bath.
Lubrication	Engine lubrication with lobe pump (inside crankcase), chain-driven, with double filter: mesh and paper.
Cooling	Forced coolant circulation system.
Starting	Electric
Ignition	High efficiency inductive electronics integrated with injection, variable advance, separate H.V. coil and double spark plug.
Ignition advance	Three-dimensional map managed by control unit
Spark plug	NGK MR7BI-8 / MR8BI-8
Electrode gap	0.7-0.9 mm
Fuel system	Electronic injection with electric fuel pump.
Fuel	Unleaded gasoline E10 (95 R.O.N.)
Exhaust silencer	Absorption type with catalytic converter and lambda probe.
Emissions compliance	EURO 5

CAPACITY

Engine oil	1.7 l
Transmission oil	250 cm ³
Cooling system liquid - replacement	~ 1.8 l
Fuel tank	13.7 ± 0.5 l

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)

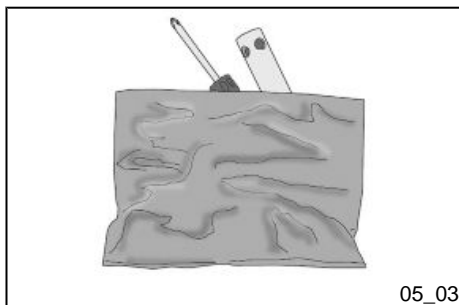


RED DIRECTIVE 2014/53/EU

All the radio frequency devices installed on this vehicle by the constructor are compliant with EU Directive 2014/53/EU (also known as the RED directive).

The relative homologation documents are available at the following web address:

redhomologation.piaggiogroup.com



Tool kit (05_03)

The toolkit comprises:

- one rear shock absorber pre-load adjusting wrench;
- One fuse puller.

The tools are stored in the under-saddle compartment.

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Chap. 06
Spare parts and
accessories



06_01



06_02

Warnings (06_01, 06_02)

WARNING



PIAGGIO MARKETS ITS OWN LINE OF ACCESSORIES, WHICH ARE APPROVED FOR USE WITH PIAGGIO VEHICLES AND COVERED BY A PIAGGIO WARRANTY. IT IS THEREFORE ESSENTIAL TO CONTACT AN AUTHORISED SERVICE CENTRE IN ORDER TO CHOOSE AND FIT ACCESSORIES CORRECTLY. USING NON-ORIGINAL ACCESSORIES MAY AFFECT THE STABILITY AND FUNCTIONS OF YOUR VEHICLE, COMPROMISING THE SAFETY OF THE VEHICLE AND EXPOSING THE RIDER TO DANGER.

WARNING



ONLY USE ORIGINAL PIAGGIO ACCESSORIES AND DEVICES AS INDICATED IN THE SECTION «VEHICLE/PRE-INSTALLATION FOR ACCESSORY INSTALLATION».

THE USE OF NON-ORIGINAL ACCESSORIES WILL VOID THE GUARANTEE.

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

WHEN RIDING THE SCOOTER EQUIPPED WITH ACCESSORIES (CASE AND/OR WINDSHIELD), REDUCE THE SPEED. 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.

MP3 530 hpe



PIAGGIO



**Chap. 07
Scheduled
maintenance**



07_01

Scheduled servicing table (07_01)

Proper maintenance is a crucial factor in prolonging the durability of the vehicle and keeping it in perfect working order.

To ensure that maintenance is carried out correctly, the constructor has defined the schedule of checks and services (performed at the owner's expense) summarised in the table given in 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. See the "Warranty Conditions" for all other information concerning the applicability of the Warranty and on performing "Scheduled Maintenance" correctly.

SCHEDULED MAINTENANCE TABLE

Km x 1000 (mi x 1000)	1 (0.6)	10 (6.2)	20 (12.4)	30 (18.6)	40 (24.9)	50 (31.1)	Every 12 months	Every 24 months
Safety fasteners	I	I		I		I		
Spark plugs		R	R	R	R	R		
Centre stand		L	L	L	L	L	L	L
Roll lock calliper control cable		A	A	A	A	A		
Drive belt		R	R	R	R	R		
Diagnosis by tool	I	I	I	I	I	I	I	I
Air filter and gaskets		R	R	R	R	R		
Engine oil filter	R	R	R	R	R	R	R	R

Km x 1000 (mi x 1000)	1 (0.6)	10 (6.2)	20 (12.4)	30 (18.6)	40 (24.9)	50 (31.1)	Every 12 months	Every 24 months
Valve clearance			A		A			
Clutch assembly		I	I	I	I	I		
Sliding shoes / CVT rollers		R	R	R	R	R		
Driven pulley - roller casings		I	I	I	I	I		
Electrical system and battery	I	I	I	I	I	I		
Brake system	I	I	I	I	I	I		
Coolant	I	I	I	I	I	I	I	R
Brake fluid	I	I	I	I	I	I	I	R
Engine oil	R	R	R	R	R	R	R	R
Hub oil	R	I	R	I	R	I	I	I
Headlight direction adjustment		I		I		I		
Brake pads	I	I	I	I	I	I	I	I
Tire pressure and wear	I	I	I	I	I	I	I	I
Test drive	I	I	I	I	I	I	I	I
Suspension		I	I	I	I	I	I	I
Centre and side steering	A	A	A	A	A	A	I	I
Transmission		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

N.B.

AT EACH SCHEDULED SERVICE, USE THE DIAGNOSTIC TOOL TO CHECK FOR ERRORS AND CHECK THAT ALL PARAMETERS ARE CORRECT.

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

**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 75W-140	Synthetic lubricant for gearboxes and transmissions.	SAE 75W-140, API GL-5
DOT 4 brake fluid	Synthetic brake fluid.	SAE J 1703; FMVSS 116; ISO 4925; CUNA NC 956 DOT4

Product	Description	Specifications
Anti-freeze liquid, ready to use, colour red	Glycol ethylene based antifreeze liquid with organic additive technology corrosion inhibitor. Colour red, ready to use.	ASTM D 3306 - ASTM D 4656 - ASTM D 4985 - CUNA NC 956-16
Lubricant grease	Lithium and medium fibre yellow brown coloured grease suitable for various uses.	ISO L-X-BCHA 3 - DIN 51 825 K3K -20
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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