PIAGGIO WOULD LIKE TO THANK YOU

for choosing one of its products. We have prepared this booklet to help you to get the very best from your scooter. Please read it carefully before riding the scooter for the first time. It contains information, tips and precautions for using your scooter. 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 and it will serve you well for a long time to come. This booklet forms an integral part of the scooter; should the scooter be sold, it must be transferred to the new owner.

X9 Evolution 125 - 250

PIAGGIO

The instructions given in this manual are intended to provide a clear, simple guide to using your scooter; 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 manual require the use of special tools and/or particular technical knowledge: to carry out these operations refer to any **authorised Dealer of 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 those parts of the booklet that should be read with particular care. As you can see, each sign consists of a different graphic symbol, making it quick and easy to locate the various topics.

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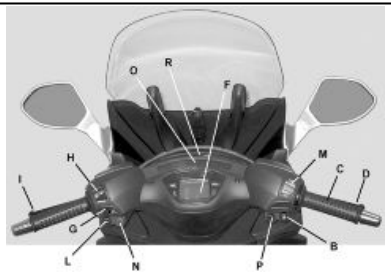
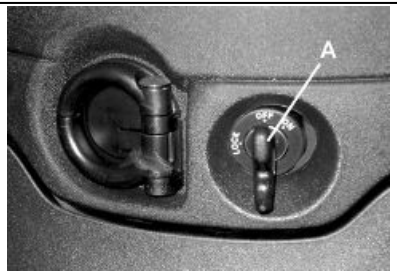
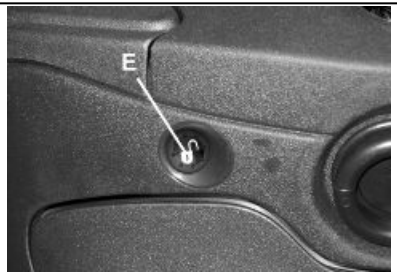
Vehicle



01_01



01_02



01_03

Dashboard (01_01, 01_02, 01_03)

A = Key switch

B = Start-up button

C = Accelerator control

D = Front brake control

E = Saddle electric opening button

F = Digital instrument panel

G = Direction indicator switch

H = Light switch

I = Combined braking control (front and rear)

L = Horn button

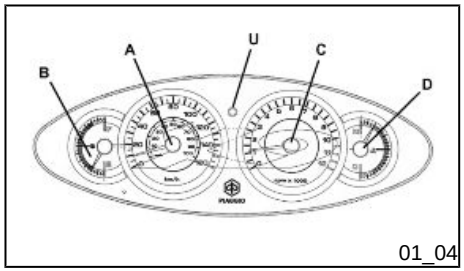
M = Engine lock RUN-OFF switch

N = Emergency flashing light start button (4 direction indicators)

O = Indicator unir

P = Button fitting

R = Analogue instrument unit



01_04

Analogue instrument panel (01_04)

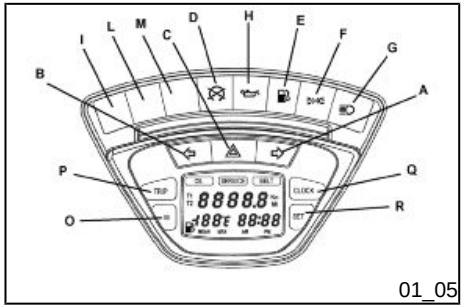
A = Tachometer

B = Fuel level indicator

C = Rpm counter

D = Cooling fluid temperature indicator

U = Alarm led



01_05

Instruments (01_05)

A = RH direction indicator

B = LH direction indicator

C = Emergency flashing light indicator (4 direction indicators)

D = RUN-OFF (engine stop)/side stand open indicator

E = Fuel reverse indicator

F = Light indicator

G = Upper beam indicator

H = Low oil pressure indicator

I = Fitting for indicator light

L = Fitting for indicator light

M = Fitting for indicator light

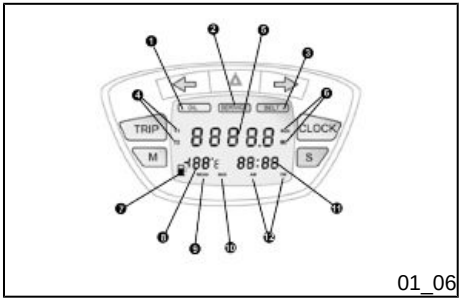
N = LCD display

O = "**Mode**" button

P = "**Trip**" button

Q = "**Clock**" button

R = "**Set**" button



01_06

Digital lcd display (01_06)

1 = Maintenance icon «**OIL**»;

2 = Maintenance icon «**SERVICE**»;

3 = Maintenance icon «**BELT**»;

4 = Trip odometer display symbols «**T1**» or «**T2**»;

5 = Five-digit display for kilometres/miles covered;

6 = Display mode symbols «**Km**» or «**Mi**»;

7 = Kilometres/miles covered in reserve symbol;

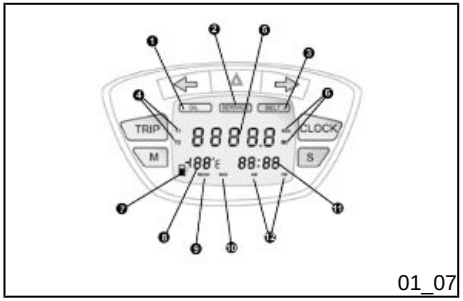
8 = 2-digit display with symbols **«-»** temperature display, mean speed, maximum speed; kilometres/mph covered in reserve;

9 = Mean speed mode display symbol «**MEAN**»;

10 = Maximum speed mode display symbol «**MAX**»;

11 = 4-digit display of clock, chronometer and date functions;

12 = Time indication symbols «**AM**» or «**PM**»



01_07

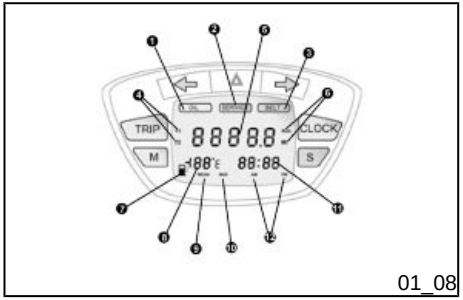
Maintenance icons (01_07)

The icons warn the user when the scheduled maintenance interventions are required.

The «**OIL**» icon flashes when 1,000 Km are reached, after that every 3,000 Km. The «**SERVICE**» icon flashes the first time at 1,000 Km or after 1 year, after that every 6,000 Km or after 1 year. The «**BELT**» icon flashes every 12,000 Km.

WARNING

REFER TO THE «SCHEDULED MAINTENANCE TABLE» FOR FURTHER MAINTENANCE OPERATIONS

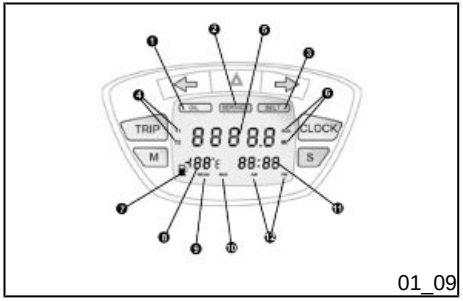


01_08

Setting the total and trip odometers (01_08)

The «**TRIP**» button displays partial distances «**T1**» and «**T2**» and the total distance, if pressed repeatedly for less than 1 second.

Press it for over 3 seconds to reset the trip odometer. Press «**TRIP**» again to return to the total odometer «**5**».



01_09

Setting the outside temperature display (01_09)

The temperature value «**8**» updates automatically at every variation of ± 1 °C. When the external temperature reaches +3 °C, the display flashes for 40 seconds; the same occurs at every decrease of temperature.

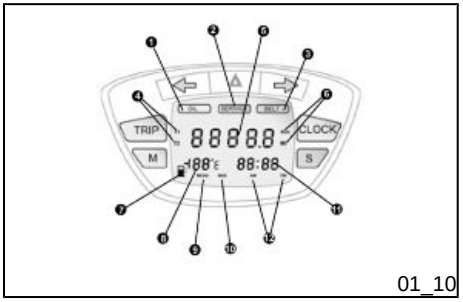
Press «**M**» to display the mean speed, identified by symbol «**MEAN**», which updates automatically every 30 seconds even if the key is set to «**OFF**». Press «**M**» to display the maximum speed reached by the vehicle and identified by the symbol «**MAX**», press again to display the kilometres traveled in reserve; the value is stored also with key set to «**OFF**». Press «**M**» again to return to the outside temperature display. Keep

«**M**» pressed for more than 3 seconds to reset the selected function, except the temperature.

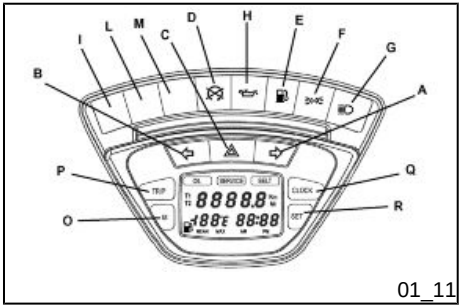
WARNING

WARNING

THE FLASHING FUNCTION WHEN A TEMPERATURE OF +3 °C AND LESS IS REACHED HAS PRIORITY ON THE MEAN AND MAX SPEED INDICATION, SO IT IS AUTOMATICALLY DISPLAYED. HOWEVER, YOU CAN PRESS BUTTON «M» TO DISPLAY THE SPEED AND DISTANCE COVERED IN RESERVE VALUES.



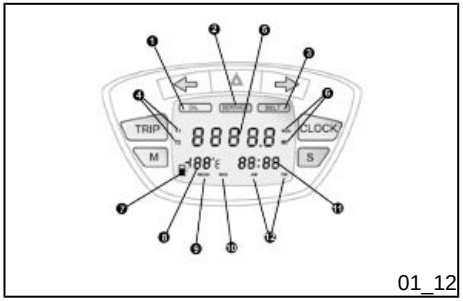
01_10



01_11

Kilometres/miles covered in reserve symbol (01_10, 01_11)

The symbol is automatically displayed when the fuel reserve light indicator «**E**» turns on, along with indicator «**8**» of the kilometres/mph covered in reserve. This function has the utmost priority over the previous three ones, so when the vehicle is in reserve, icon «**7**» is automatically displayed along with the kilometres being covered in reserve are displayed. Press «**M**» to return to the other information.

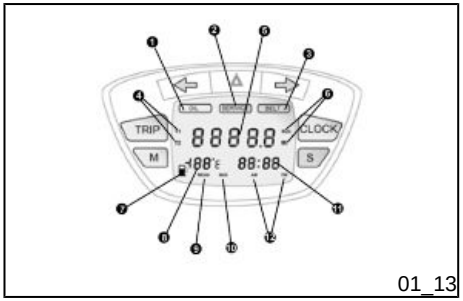


01_12

Clock/date display (01_12)

Press «**CLOCK**» to display the date (day/month). Press «**CLOCK**» to display the chronometer.

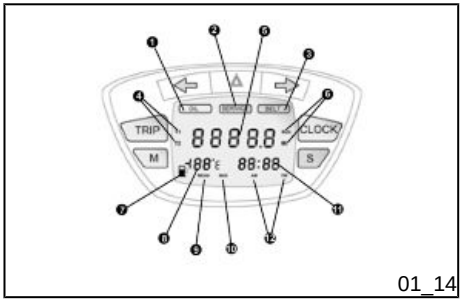
Press «**CLOCK**» to return to the clock display «**12**».



01_13

Setting the hour/minutes function (01_13)

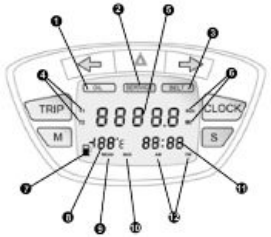
Press «**CLOCK**» for more than 3 seconds and set the time by button «**S**». Wait until the minutes begin flashing and set by button «**S**». Wait approx. 8 seconds or press «**CLOCK**» to return to the updated hours/minutes function.



01_14

Setting the date function (01_14)

Press «**CLOCK**» for more than 3 seconds and set the day by button «**S**». Wait until the month begins flashing and set by button «**S**». Wait until the year begins flashing and set by button «**S**». Wait approx. 3 seconds or press «**CLOCK**» to return to the date function.



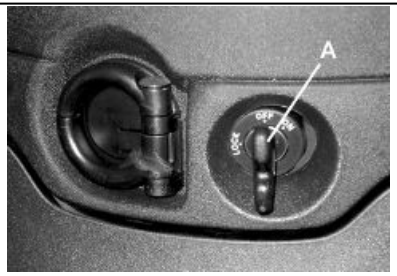
01_15

Setting the chronometer function (01_15)

Press «**S**» to enable and stop the chronometer. Press «**CLOCK**» and «**S**» together to reset the chronometer.

CAUTION

IT IS STRONGLY ADVISED NOT TO USE THE FUNCTIONS OF THE DIGITAL DISPLAY PANEL WHILE THE VEHICLE IS MOVING.



01_16

Key switch (01_16)

LOCK= Ignition barred, key can be removed, mechanical antitheft device activated.

OFF= Ignition barred, key can be removed, mechanical antitheft device deactivated.

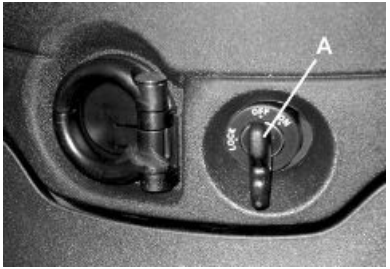
ON= Prestarting position, key cannot be removed, mechanical antitheft device deactivated.

Locking the steering wheel

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

CAUTION

DO NOT TURN THE KEY TO «LOCK» OR «OFF» WHILE RIDING.



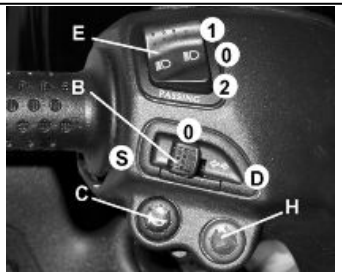
01_17

Releasing the steering wheel (01_17)

Reinsert the key and turn it to «**OFF**».

CAUTION

DO NOT TURN THE KEY TO «LOCK» OR «OFF» WHILE RIDING.



01_18

Switch direction indicators (01_18)

Lever to «**S**» = left direction indicators on;

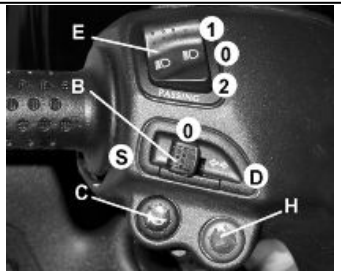
Lever to «**D**» = right direction indicators on;

The lever automatically returns to position «**0**» and the indicators «**B**» remain on; press the lever to turn them off.

WARNING

WARNING

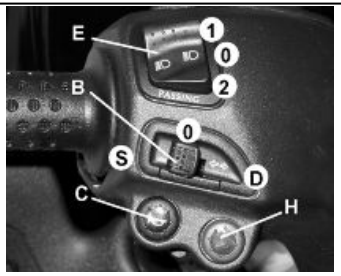
THE ONBOARD COMPUTER DISABLES THE FLASHING LIGHTS AFTER 1 KM.



01_19

Horn button (01_19)

Push the «**C**» button to sound the horn.



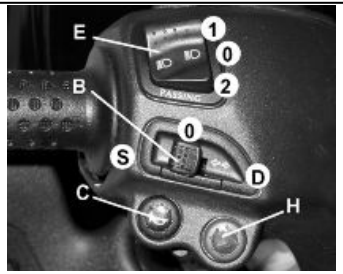
01_20

Light switch (01_20)

0 = Low-beam light

1 = High beam light

2 = Passing (flashing)

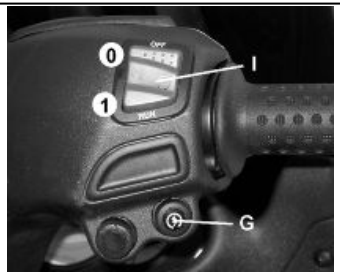


01_21

Emergency flashing light button (01_21)

It starts the 4 direction indicators at the same time. The control «**H**» can only be enabled with key set to «**ON**», but once it has been enabled it remains on with key set to «**OFF**» and «**LOCK**» as well.

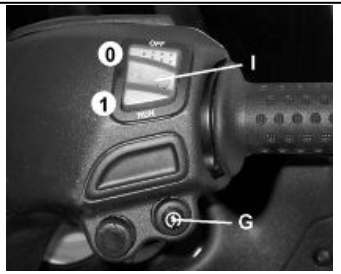
This function can only be disabled with key switch set to «**ON**».



01_22

Start-up button (01_22)

Starter button "**G**"



01_23

Engine stop button (01_23)

0 = OFF

1 = RUN

The immobilizer system

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

01_24

Keys (01_24, 01_25, 01_26)

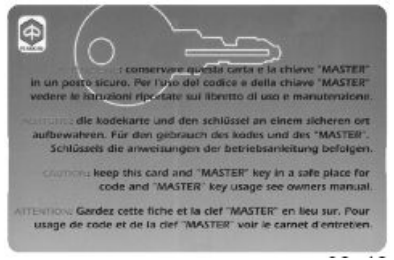
Two types of keys come with the vehicle. The red-handgrip key "**A**" is the **"MASTER**" key. Only a single copy of this key is supplied, which is necessary to program all your other keys and for your dealer to perform some maintenance operations. For this reason it is advised that it be used only in exceptional circumstances. The black key "**B**" (single copy supplied) is used for normal operations such as:

- engine start up

- glove-box opening

Together with the keys comes a CODE CARD which is imprinted with the mechanical code of the keys.

01_25



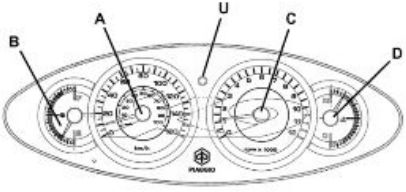
01_26

WARNING

LOSING THE RED KEY PREVENTS ANY REPAIRS OF THE 'PIAGGIO IMMOBILIZER' SYSTEM AND THE ENGINE CONTROL UNIT.

WARNING

KEEP THE 'CODE CARD' AND THE RED HANDGRIP KEY IN A SAFE PLACE (NOT ON YOUR VEHICLE).



01_27

Immobilizerdevice enabled indicator led (01_27)

The enabling of the «**PIAGGIO IMMOBILIZER**» system is indicated by the flashing of a special led «**U**», (see «Analogue instrument panel»).

To prevent discharging the battery, the led automatically turns off after about 48 hours of continuous operation.

In the event of system failure, the indicator led informs the **Authorised Piaggio Service Centre** of the nature of the failure, based on the type of flashes emitted.

Operation

Every time the starter key is removed in the "**OFF**" or "**LOCK**" position, the safety system activates the immobilizer system. Turning the key to "**ON**" disables the engine lock, provided that the safety system recognises the code transmitted by the key. If the code is not recognised, turn the key first to "**OFF**" and then to "**ON**"; if the lock cannot be disabled, try with the other key supplied (red-coloured). If the engine cannot be started, contact an **Authorised Piaggio Service Centre**, which is provided with the electronic equipment required to detect and repair the system. The immobiliser is also activated in the engine is switched off with the RUN OFF switch. This happens even if the starter key is in position "**ON**".

When additional keys are required, please note that data storage (up to 3 keys max.) must be done on all keys, both new ones and existing ones. Take the key with the red grip and all the black keys supplied to an **Authorised Piaggio Service Centre**. The codes of keys not submitted for the new storage procedure are deleted from the memory. Any lost keys will therefore not be enabled to start the engine.

WARNING

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

VIOLENT SHOCKS MAY AFFECT THE ELECTRONIC COMPONENTS OF THE KEY.

IF OWNERSHIP OF THE VEHICLE IS TRANSFERRED, THE RED-HANDGRIP KEY (AS WELL AS THE OTHER KEYS) AND THE "CODE CARD" MUST ALSO BE TRANSFERRED TO THE NEW OWNER.

Programming the immobilizer system

In the following is described the procedure to follow to program the "**PIAGGIO IMMOBILIZER**" system and/or enter other keys in the memory.

Procedure start - red key

Insert the red-handgrip key in the switch key (in "**OFF**" position) and turn it to "**ON**". After 1 - 3 seconds, turn the key to "**OFF**" again and pull it out.

Intermediate step - black key

After pulling out the red key, insert the black key within 10 seconds and promptly turn it to "**ON**". After 1-3 seconds, turn the key to "**OFF**" again and pull it out. In this way, a maximum of 3 black keys can be programmed by repeating the above procedure keeping the indicated times.

Final step - red key

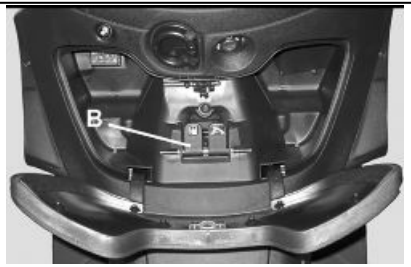
After pulling out the last black key, insert the red key again and turn it to "**ON**" (this operation should be performed within 10 seconds of pulling out the previous key). Leave it in this position for 1 to 3 seconds and return it to the «**OFF**» position.

Proper programming check

Insert the red key disabling the transponder (i.e., tilt the key cap by 90°) and turn the key to "**ON**". Perform the engine start-up operation. Ensure that the engine does not start. Insert the black key and repeat the start-up operation. Check that engine starts.

WARNING

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



01_28

01_29

Accessing the fuel tank (01_28, 01_29)

Insert the key into the switch and press down until the glove box opens. In the event that the key switch is in «**LOCK**», turn the key to «**OFF**» or «**ON**» before pressing down. Press lever «**B**» and open the cover over the fuel tank cap «**C**».

01_30

Power supply socket (01_30)

There is a plug socket "**D**" inside the helmet compartment.

The plug socket may be used for external consumers (mobile phone, inspection light, etc.).

CAUTION

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

Electric characteristic

Plug socket

12 V - 180 W MAX

Maximum power

180 W

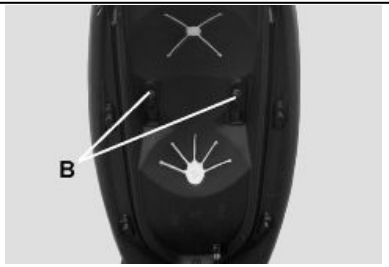
01_31

The saddle (01_31, 01_32, 01_33, 01_34, 01_35)

The saddle is provided with a back that can be moved forward or backward for your comfort. To move the back, raise the saddle by button «**C**» or push lever «**A**», and adjust the position of screws «**B**». The saddle is provided with a protective covering that may be used, for example, in case of rain. To use the covering, raise the saddle and pull it out. Fit it onto the saddle without pulling too much to prevent breakage, then close the saddle.

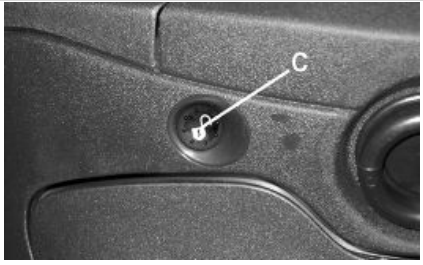
CAUTION

DO NOT USE THE VEHICLE WITHOUT THE PROTECTION COVER.



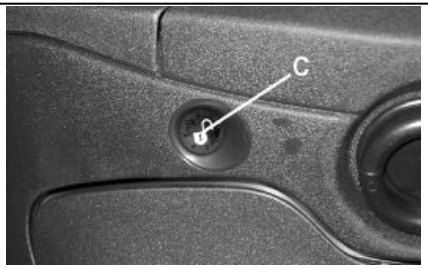
01_32

01_33



01_34

01_35



01_36

01_37

Opening the saddle (01_36, 01_37)

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

01_38

01_39

Identification (01_38, 01_39)

The identification registration numbers consist of a prefix stamped on the chassis and engine "**B**" respectively, followed by a number. These numbers must always be indicated on spare parts requests. To read the chassis number, remove the relevant port "**A**" in the helmet compartment placed under mat. We recommend checking that the chassis registration number stamped on the scooter corresponds with that on the scooter's documents.

CAUTION

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

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PIAGGIO

Chap. 02
Use

Checks

Before using the vehicle, check:

1. That the fuel tank is full.

2. Front and rear brake fluid level

3. That the tyres are properly inflated.

4. The functioning of the tail lights, the headlight, and the turn indicators.

5. The functioning of the front and rear brakes.

6. The oil level in the gearcase.

7. The engine oil level.

8. The coolant level.

02_01

Refuelling (02_01, 02_02)

Fuel: Open the flap as described in the section "Access to the fuel tank" and unscrew the cap **"A"**.

Recommended fuel:

Unleaded petrol, min octane rating of 95.

Fuel level is indicated on the digital instrument panel **«B»**.

WARNING

SWITCH OFF THE ENGINE BEFORE REFUELLING WITH PETROL.

PETROL IS HIGHLY INFLAMMABLE.

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

02_02

DO NOT INHALE FUEL FUMES.

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

CAUTION

PETROL DAMAGES THE PLASTIC PARTS OF THE BODYWORK.

Characteristic

Fuel tank capacity

14,5 l (approx.)

Reserve

2.5 l

02_03

Shock absorbers adjustment (02_03)

The preloading of the springs can be adjusted to 4 positions using the ring nut located in the lower part of the shock absorbers and the specific spanner supplied.

Position 1: minimum preload: driver only

Position 2 medium preloading: driver only

Position 3 medium preloading: rider and passenger

Position 4: maximum preloading: driver, passenger, and luggage.

In order to carry out this operation you will need to use the specific spanner in the kit.

CAUTION

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

WARNING

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

WARNING

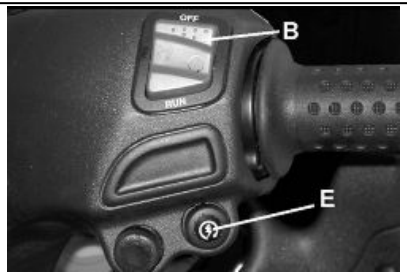
WE STRONGLY RECOMMEND NOT TO ADJUST BOTH SHOCK ABSORBERS WITH DIFFERENT PRELOADING

02_04

Running in (02_04)

WARNING

DURING THE FIRST 1000 KM DO NOT RIDE THE VEHICLE OVER 80% OF ITS MAXIMUM SPEED. AVOID TWISTING THE THROTTLE GRIP FULLY OR KEEPING A CONSTANT SPEED ALONG LONG SECTIONS OF ROAD. AFTER THE FIRST 1000 KM, GRADUALLY INCREASE SPEED UNTIL REACHING THE MAXIMUM PERFORMANCE.



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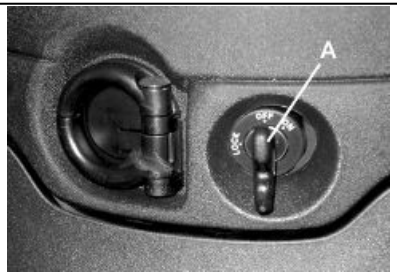


02_06

02_07

Starting up the engine (02_05, 02_06, 02_07)

The vehicle is provided with an ignition exclusion system controlled by the side stand. The engine cannot be started if the side stand is not raised. If the engine is on, it stops when the side stand is lowered. This condition is indicated by the special indicator on the digital instrument panel «**D**». The vehicle has a direct drive automatic transmission, so the gas control handgrip must be set to idle during start-up; accelerate gradually to start. The vehicle has a vacuum pump and a starter device that automatically start as the engine is started. In order to start up the engine by the starter button «**E**», pull and hold the front «**G**» or the combined «**D**» brake lever, which acts on a specific start-up enable switch.

1. Rest the vehicle on the central stand «**F**», making sure that the rear wheel is raised from the ground.

2. Keep the acceleration command hand-grip «**C**» at minimum.

3. Insert the key into switch «**A**» and turn it to the "**ON**" position.

4. Make sure that the switch «**B**» «**RUN OFF**» is set to «**RUN**» and that the side stand «**L**» is in closed position.

5. Pull lever «**G**» of the front brake or «**D**» of the combined brake, then press the starter button «**E**».

WARNING

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

CAUTION

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

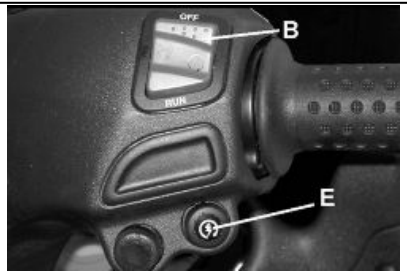
Precautions

CAUTION

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

WARNING

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



02_08

Difficult start up (02_08)

In case of difficulties, proceed as follows:

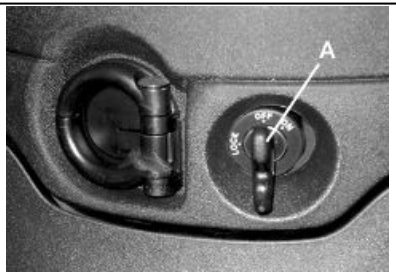
1. In case of flooded engine. Perform the same operations listed above. Accelerate thoroughly and press the starter button «**E**» alternating approx. 5 seconds of rotation and 5 seconds of stop keeping the accelerator control to maximum, since the opening and closing causes a further fuel injection in the cylinder. After a few unsuccessful attempts, let the engine stand for a few minutes and then repeat the above operations. In any case, do not insist too much on the motor. As last operation, remove the spark plug and actuate the engine start-up to eject the excess of fuel; then, replace the spark plug and repeat the operations of 1.

2. If you run out of fuel. After refuelling the vehicle, actuate the start-.up button «**E**» and keep the accelerator control to minimum to give vacuum to the fuel pump.

3. In case of hot engine. Perform the same operations keeping the gas control slightly open.

However, once the engine has been started, it will be necessary to turn to an **Authorized Piaggio Service Centre** in order to check the causes and restore the correct function.

A new start-up system interlocked with an automatic valve lifter has allowed improving the working conditions of the electric starter motor.



02_09

Stopping the engine (02_09)

Fully untwist the throttle grip, then rotate the key in the switch «**A** » to «**KEY OFF**» (extractable key).

CAUTION

DUE TO THE HIGH TEMPERATURES THE CATALYTIC CONVERTER CAN REACH, ALWAYS TAKE CARE, WHEN PARKING THE SCOOTER, THAT THE

EXHAUST DOES NOT COME INTO CONTACT WITH FLAMMABLE MATERIALS, TO AVOID SERIOUS BURNS.

CAUTION

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

WARNING

TO START AFTER A LONG STATIONARY PERIOD, OR IN SEVERE WEATHER CONDITIONS, FULLY TWIST THE THROTTLE 2÷3 TIMES BEFORE PRESSING THE STARTER BUTTON.

Stand (02_10)

CENTRE STAND

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

02_10

SIDE

Push with your foot on the fork of the stand "**L**" to bring it into the open position while lifting the scooter at the same time.

CAUTION

TAMPERING MAY CAUSE SERIOUS ENGINE MALFUNCTION.

WARNING

THE SIDE STAND CAUSES THE ENGINE TO CUT OUT EVERY TIME THAT IT IS LOWERED; THIS CONDITION IS INDICATED BY THE RESPECTIVE WARNING LIGHT ON THE INSTRUMENT PANEL.

02_11

Automatic transmission (02_11)

To ensure simple, pleasurable riding, the vehicle is equipped with automatic transmission with regulator and centrifugal clutch. The system is designed to provide the best performance (acceleration and consumption) while riding on both flat roads and uphill.

If you have to stop on an uphill slope (traffic lights, traffic jam, etc.) **use only the brake to keep the vehicle still, leaving the engine running at idle speed. Using the engine to keep the vehicle still can cause the clutch to overheat, due to the friction of the clutch mechanism itself against the clutch bell.**

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

Observe the following precautions if the clutch overheats:

1. Do not continue riding in such conditions.

2. Let the clutch cool down with the engine at idle speed for a few minutes.


02_12

Safe driving (02_12)

Some simple tips are provided below that will enable you to use your scooter on a daily basis in greater safety and peace of mind. Your skill and your mechanical knowledge are the basis of a safe ride. We recommend trying out the vehicle in traffic - free zones, in order to acquire a good knowledge of the vehicle it self.
1. Before riding off, remember to put on your helmet and fasten it correctly.

2.Reduce speed on rough roads and drive with care.

3. After driving on a long stretch of wet road without using the brakes, the braking effect is initially lower. In these conditions, it is a good idea to apply the brakes from time to time.

4. Do not brake hard on wet, unsurfaced or slippery road surfaces.

5. Avoid riding off by mounting the scooter when resting on the support. In any case, the rear wheel should not be turning when in comes into contact with the ground, in order to avoid abrupt departures.

6. If driving over roads affected by sand, mud, snow mixed with salt, etc. We advise you to frequently clean the brake disc with a mild detergent to prevent the accumulation of abrasive elements inside the eyelets leading to premature wear on the brake pads.

CAUTION

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

CAUTION

ANY CHANGES TO THE VEHICLE PERFORMANCE AS WELL AS ALTERATIONS TO ORIGINAL STRUCTURAL PARTS IS STRICTLY FORBIDDEN BY LAW, AND RENDERS THE VEHICLE NO LONGER CONFORMING TO THE APPROVED TYPE AND DANGEROUS FOR RIDING.

CAUTION

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

WARNING

IN ORDER TO PREVENT ANY ACCIDENTS RIDE VERY CAREFULLY AFTER ADDING ACCESSORIES AND WHILE CARRYING LUGGAGE. THE ADDITION OF ACCESSORIES AND LUGGAGE CAN REDUCE YOUR SCOOTER STABILITY AND PERFORMANCE, AS WELL AS THE LEVEL OF SAFETY DURING USE. NEVER DRIVE THE SCOOTER EQUIPPED WITH ACCESSORIES AT A SPEED HIGHER THAN 100 km/h (see section "SPARE PARTS AND ACCESSORIES")

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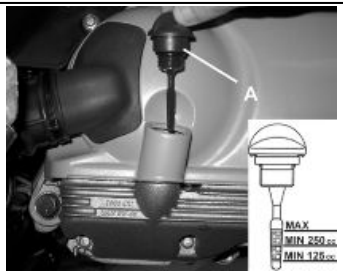
Chap. 03
Maintenance

Engine oil level

In 4T engines, the engine oil is used to lubricate the distribution elements, the bench bearings and the thermal group. **An insufficient quantity of oil can cause serious damage to the engine.** In all four-stroke engines, a loss of efficiency in oil performance and 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). **In order to prevent any problems, we recommend checking the oil level any time you use the vehicle. The scooter is, however, equipped with an oil pressure warning light on the instrument panel.**



03_01

Engine oil level check (03_01)

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**»; during the oil check, 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 line 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.

Characteristic

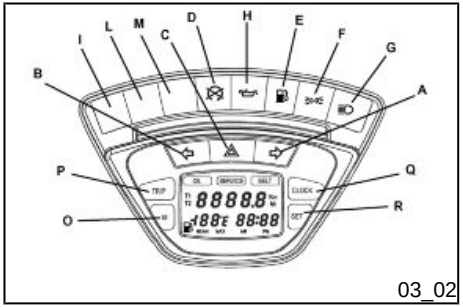
Engine oil (oil and oil filters change)

Capacity: 1.0 l

Engine oil top-up

Any topping up with oil must be carried out after the oil level check by adding oil, but **never exceeding the MAX level**. The topping up of the level between **MIN** and **MAX** requires approx**. 200** cc of oil. Every 5000 km, however, the engine oil level

should be checked and topped up, if necessary, at an **Authorised Piaggio Service Centre**.



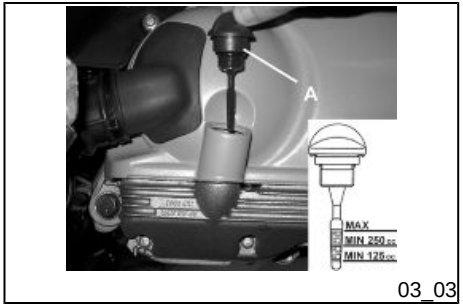
03_02

Warning light (insufficient oil pressure) (03_02)

The scooter is equipped with a warning light «**H**» that lights up when the key is turned to «**ON**».

However, this light should switch 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 keeps on turning on while braking, at idling speed or while turning a corner, it will be necessary to take your vehicle to an Authorised Piaggio Service Centre.



03_03

Engine oil change (03_03, 03_04)

The oil and cartridge filter «**C**» should be replaced every 6,000 km (125 cc) or 12,000 Km (250 cc) at an **Authorized Piaggio Service Centre**. The engine should be emptied by draining the oil from the filter drainage tap «**B**» on the flywheel side. In order to facilitate the oil drainage, loosen the cap/bar. Since a certain quantity of oil remains in the circuit still, the fill-up should be carried out with around 600 ÷ 650 cc of oil from cap «**A**». Then start up the vehicle, leave it running for a few minutes and switch it off: after around 5 minutes, check the level and top up if necessary **without ever exceeding the MAX level**. The cartridge filter should be replaced every time the oil is changed. For top ups and replacements use new oil of the recommended type.

WARNING

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

03_04

WARNING

EXCESSIVE OIL LEVEL AT TOP-UPS CAN LEAD TO SCALE FORMATION AND VEHICLE MALFUNCTION.

CAUTION

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

CAUTION

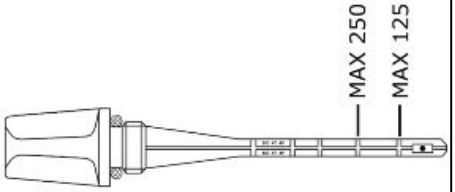
USING OILS OTHER THAN THOSE RECOMMENDED CAN SHORTEN THE LIFE OF THE ENGINE.

Recommended products

AGIP CITY HI TEC 4T

Engine oil
SAE 5W-40, API SL, ACEA A3, JASO MA Synthetic oil

03_05



03_06

Hub oil level (03_05, 03_06)

Check that there is oil in the rear hub.

Proceed as follows in order to check the hub oil level:

1) Take the vehicle to a flat area and rest it on the support.

2) Unscrew the oil bar «**A**», dry it with a clean cloth and reinsert it, **screwing it in completely**.

3) Extract the bar and check that the oil level reaches the first notch from the bottom.

4) Screw the bar back in, checking that it is tightly in place.

N.B.

THE REFERENCE MARKS ON THE HUB OIL LEVEL DIPSTICK, EXCEPT FOR THE ONE INDICATING THE "MAX" LEVEL, REFER TO OTHER MODELS BY THE MANUFACTURER AND HAVE NO SPECIFIC FUNCTION FOR THIS MODEL.

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

CAUTION

UPON REPLACING HUB OIL, AVOID THE OIL COMING INTO CONTACT WITH THE REAR BRAKE DISC.

Recommended products

AGIP ROTRA 80W-90

Rear hub oil
SAE 80W/90 Oil that exceeds the requirements of API GL3 specifications

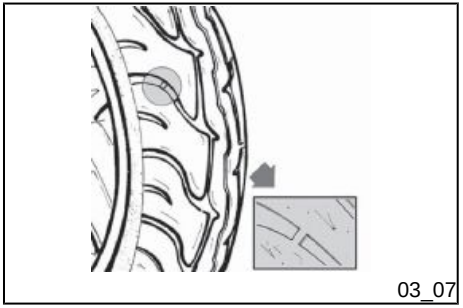
Characteristic

Rear hub oil (125)

~ 150 cc

Rear hub oil (250)

~ 250 cc


03_07

Tyres (03_07)

Check periodically (about every 500 km) the tyre pressure. The tyres are equipped with wear indicators; the tyres should be replaced as soon as these indicators become visible on the tyre tread. Also check that the tyres do not show signs of splitting at the side or irregular tread wear; if this occurs, go to an authorised workshop or at least to a workshop equipped to perform the replacement.

CAUTION

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

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

Characteristic

Tyre pressure (front wheel)

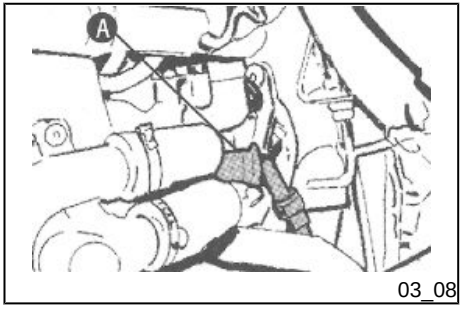
Front wheel: 2.1 bar

Tyre pressure (rear wheel)

Rear wheel: 2.3 bar

Tyre pressure (rear wheel with rider and passenger)

Rear wheel (rider and passenger) 2.5 bar



03_08

Spark plug dismantlement (03_08)

Proceed as follows:

1. Remove the spark-plug access door, on the RHS fairing, and use your hand to reach out for the spark-plug;

2. Detach the spark-plug cap, «**A**»;

3. Use the supplied box-spanner to loosen the spark-plug;

4. Refit the spark-plug by screwing it in by hand, with the correct inclination;

5. The box-spanner should only be used to tighten the spark-plug;

6. Carefully refit the spark-plug cap, «**A**».

N.B.

THE USE OF SPARK PLUGS OTHER THAN THE INDICATED TYPE OR OF SHIELDLESS SPARK PLUG CAPS CAN CAUSE ELECTRICAL SYSTEM FAILURES.

WARNING

THE SPARK PLUG MUST BE REMOVED WHEN THE ENGINE IS COLD. THE SPARK PLUG SHOULD BE CHECKED EVERY 6,000 KM AND CHANGED EVERY 12,000 KM. THE USE OF ELECTRONIC CENTRAL UNITS OR ELECTRONIC IGNITIONS DIFFERING FROM THOSE RECOMMENDED CAN SERIOUSLY DAMAGE THE ENGINE. IF THE REMOVAL OF THE SPARK PLUG IS ATTEMPTED AFTER FLOODING THE ENGINE (EXPULSION OF EXCESS FUEL IN THE SECTION «SAFE RIDING»), IT IS RECOMMENDED THAT THE SMALL PIPE TO THE SPARK PLUG IS KEPT CONNECTED AND THE LATTER IS IN CONTACT WITH A GROUND FAR FROM THE SPARK PLUG HOLE ITSELF IN ORDER TO AVOID THE EXPELLED FUEL CATCHING ON FIRE.

Characteristic

Recommended spark plugs 125cc

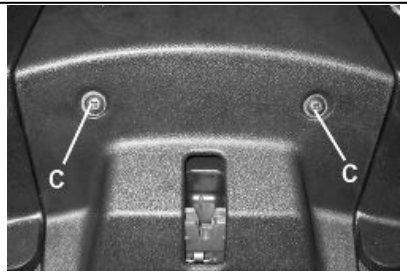
NGK CR8EB

Recommended spark plug 250cc

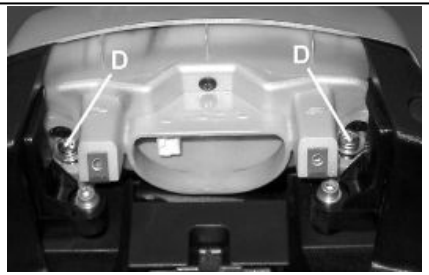
CHAMPION RG4HC

Electrode gap

0.7-0.8 mm



03_09



03_10

03_11

Removing the sides (03_09, 03_10, 03_11, 03_12, 03_13)

Proceed as follows:

1. Loosen the two fixing screws «**C**» and then remove the seat lock cap;

2. Loosen the two fixing screws «**D**» and then remove the stop light support;

3. Undo the two upper screws «**D**» and the two lower unions with the side fairings.

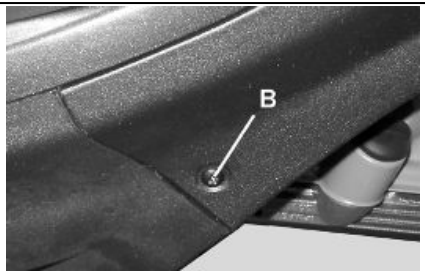
4. Undo the screw «**A**» on the fairing rear side;

5. Remove the screw «**B**» on the fairing lower side;

6. To remove the fairing, slide it towards the vehicle rear part so as to release the fixing tongues.

The figure shows the removal of the LHS fairing; the RHS can be removed following the same procedure.

03_12



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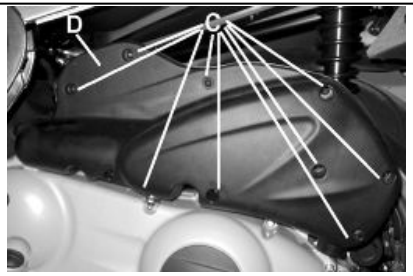


03_14

Removing the air filter (03_14)

Proceed as follows:

1. Remove the LHS fairing;

2. Remove retaining screws "**C**" and remove the cover "**D**" of the air filter.

Air filter cleaning

1. Wash the sponge with water and neutral soap.

2. Dry it with a clean cloth and small blasts of compressed air.

3. Impregnate the sponge with a mixture of 50% petrol and 50% specified oil.

4. Gently squeeze the filter element, let it drip and then refit it.

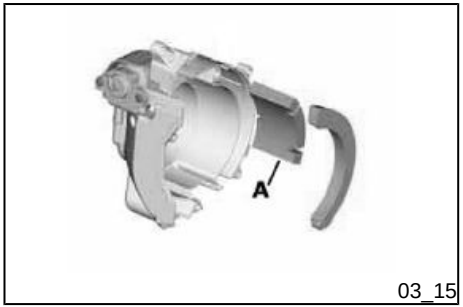
CAUTION

IF THE VEHICLE IS USED ON DUSTY ROADS, IT IS NECESSARY TO SERVICE THE AIR FILTER MORE OFTEN TO AVOID DAMAGING THE ENGINE.

Recommended products

AGIP FILTER OIL

Oil for air filter sponge
Mineral oil with specific additives for increased adhesiveness



03_15

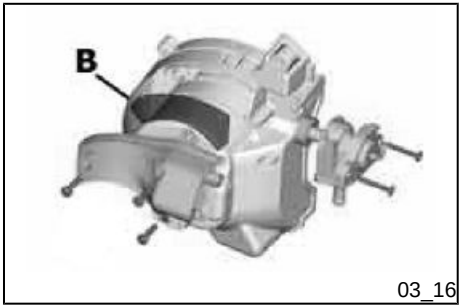
Secondary air system (03_15, 03_16, 03_17)

In order to reduce polluting emissions, the vehicle is equipped with a catalytic converter.

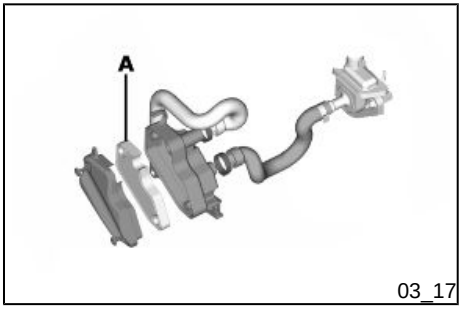
The catalysis is aided by the admission of fresh air, depurated through the Secondary Air System (SAS), inside the exhaust duct directly on the cylinder head.

Such system provides an addition of oxygen to the unburnt gases before entering the catalytic converter, thus allowing for improved process effectiveness.

Irregular noises are prevented, by the presence of a control valve which by-passes the SAS while the vehicle is decelerating.



03_16



03_17

In order to preserve the SAS, so to ensure its efficiency, the following maintenance procedures should be carried out by and **Authorised Piaggio Service Station**:

125cc Engine - For this engine, the system consists of an internal, «**A**» and an external filter, «**B**». These should be cleaned every two years.

250cc Engine - This system features a single filter, «**A**» positioned inside the plastic box, externally mounted onto the transmission cover. Cleaning is scheduled for every 12,000 Km.

The sponge filters should be cleaned with water and soap, and then dried with a clean cloth and light jets of compressed air.

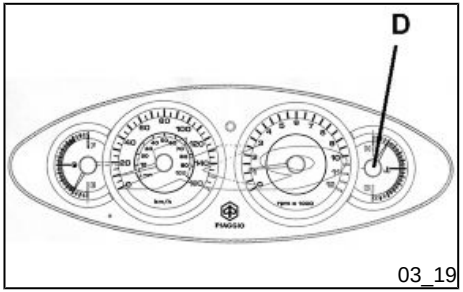
03_18

Cooling fluid level (03_18, 03_19)

The engine cooling system is of the forced liquid circulation type. The coolant circuit contains approx. 1.8 litres of coolant consisting of a mixture of 50% demineralised water and glycol ethylene-based antifreeze solution with corrosion inhibitors.

The liquid supplied with the scooter is already mixed and ready for use.

For the engine to work properly, coolant temperature must range between a minimum value of 60 °C and a maximum value of 105 °C, as indicated by coloured references on the indicator «**D**» on the analogue instrument panel. If the needle of the gauge



enters the red zone, switch off the engine, allow to cool down and check the coolant level; if the result is normal, turn to an **Authorised Piaggio Service Centre**.

The fluid inspection should be carried out every 6,000 km when the engine is cold, following the methods indicated below.

a) Place the scooter in a vertical position on the stand.

b) Remove the expansion tank cover "**A**", turning in anticlockwise direction.

c) Look inside the expansion tank; a mark on the plastic part indicates the maximum and minimum reference of the expansion tank.

d) Top up, if necessary, if the fluid level is below the MIN level on the scale inside the expansion tank.

The fluid level must always be between MIN and MAX level

If the fluid is near the minimum level, proceed with the top-up operation to be carried out when the engine is cold. If it is necessary to top up the coolant frequently, or if the expansion tank is completely dry, you should look for the cause in the cooling system. It is therefore indispensable to have the cooling system checked at an **Authorised Piaggio Service Centre**.

The coolant should be replaced every 2 years. For this operation, please contact an **Authorised Piaggio Service Centre.**

N.B.

IF DURING A NON-DEMANDING RIDE THE COOLANT WARNING LIGHT COMES ON, SHUT OFF THE ENGINE AND ALLOW IT TO COOL DOWN. THEN CHECK THE COOLANT LEVEL; IF THE LEVEL IS NOT CORRECT, CONTACT AN AUTHORISED SERVICE CENTRE.

WARNING

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

WARNING

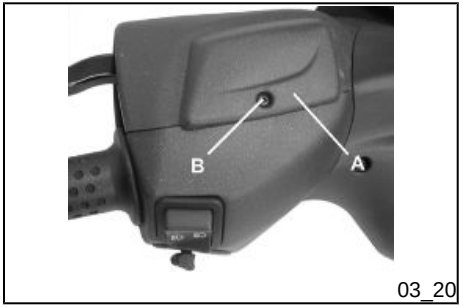
IN ORDER TO AVOID HARMFUL FLUID LEAKS WHILE RIDING, IT IS IMPORTANT TO MAKE SURE THAT THE LEVEL NEVER EXCEEDS THE MAXIMUM VALUE.

IN ORDER TO GUARANTEE THE PROPER FUNCTION OF THE ENGINE, IT IS NECESSARY TO KEEP THE RADIATOR GRILLE CLEAN.

Recommended products

AGIP PERMANENT SPEZIAL

coolant
Monoethylene glycol-based antifreeze fluid, CUNA NC 956-16



03_20

Checking the brake oil level (03_20, 03_21)

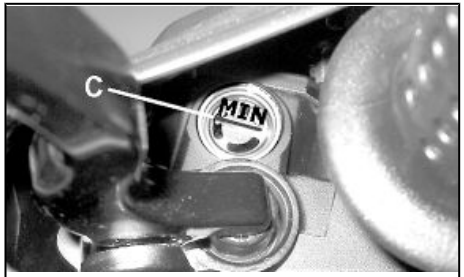
The brake fluid tanks of the front and rear brakes are located on the pumps under the covers on the handlebar. Proceed as follows:

1. Place the scooter on its centre stand and make sure the handlebar is centred;

2. Remove cover "**A**" by removing the respective retaining screw "**B**";

3. Check the fluid level through the respective sight glass "**C**".

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



03_21

Braking system fluid top up

Proceed as follows:
Remove tank covers "**A**" and loosen the two screws and top up the brake fluid level using only the prescribed brake fluid and without exceeding the maximum level.

Under normal climatic conditions, the brake fluid must be replaced every 20,000 km or every two years, whichever comes first. This operation must be carried out by trained technicians; please contact your nearest **PIAGGIO Dealer or Authorised Service Centre**.

WARNING

ONLY USE DOT 4 CLASS BRAKE FLUIDS. COOLING SYSTEM FLUIDS ARE HIGHLY CORROSIVE. MAKE SURE THAT IT DOES NOT COME INTO CONTACT WITH THE PAINTWORK

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CAUTION

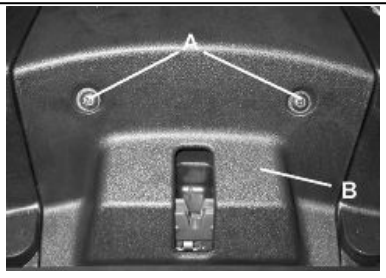
AVOID CONTACT OF BRAKE FLUID WITH EYES, SKIN, AND CLOTHING. IN CASE OF CONTACT, RINSE WITH WATER. THE BRAKING CIRCUIT FLUID IS

HYGROSCOPIC, THAT IS, IT ABSORBS HUMIDITY FROM THE SURROUNDING AIR. IF THE HUMIDITY IN THE BRAKING FLUID EXCEEDS A CERTAIN VALUE, IT WILL LEAD TO INEFFICIENT BRAKING. NEVER USE BRAKING FLUID KEPT IN CONTAINERS THAT HAVE ALREADY BEEN OPENED, OR PARTIALLY USED.

Recommended products

AGIP BRAKE 4

Brake fluid
FMVSS DOT 4 Synthetic fluid



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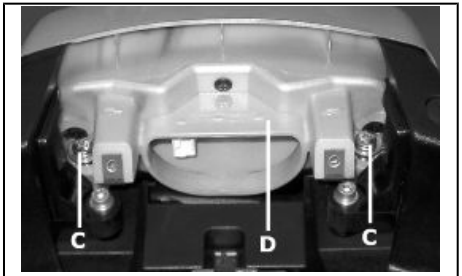

03_23

Battery (03_22, 03_23, 03_24)

To access to the battery, proceed as follows:

1. Rest the vehicle on the central support;

2. Open the saddle as described above, see section «Opening the saddle to access the helmet compartment»;

3. Remove the fasteners «**A**» and the small cover «**B**». Remove screws «**C**», raise the stop light support «**D**».

4. Release the elastic band.

The battery is the electric device that requires the most assiduous surveillance and the most diligent maintenance. The main maintenance regulations to be carried out are as follows:

CAUTION

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

03_24

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Use of a new battery

Make sure that the terminals are connected correctly.

CAUTION

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

WARNING

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

Checking the electrolyte level

The electrolyte level, which should be checked regularly, must always be at the maximum level. To reach this level, use only distilled water. Should it become necessary

to top up the battery with water too frequently, check the scooter's electrical system because the battery is being overloaded, causing it to lose power quickly.

CAUTION

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

Long periods of inactivity

Battery performance will decrease if the vehicle is not used for a long time. This is the result of the natural phenomenon of battery discharging plus residual absorption by vehicle components with constant power consumption. Poor battery performance may also be due to environmental conditions and the cleanness of the poles. In order to avoid difficult starts and/or irreversible damage to the battery, follow any of these steps:

- At least once a month start the engine and run it slightly above idle speed for 10-15 minutes. This keeps all the engine components, as well as the battery, in good working order.

- Take your vehicle to a garage (as indicated in the "Vehicle not used for extended periods" section) to have the battery removed. Have the battery cleaned, charged fully and stored in a dry, ventilated place. Recharge **at least once every two months**.

N.B.

THE BATTERY MUST BE CHARGED WITH A CURRENT EQUAL TO 1/10 OF THE RATED CAPACITY OF THE BATTERY AND FOR NOT LONGER THAN 10 HOURS. CONTACT AN AUTHORISED SERVICE CENTRE TO CARRY OUT THIS OPERATION SAFELY. WHEN REFITTING THE BATTERY MAKE SURE THE LEADS ARE CORRECTLY CONNECTED TO THE TERMINALS.

WARNING

DO NOT DISCONNECT THE BATTERY CABLES WITH THE ENGINE RUNNING, THIS CAN CAUSE PERMANENT DAMAGE TO THE VEHICLE ELECTRONIC CONTROL UNIT.

WARNING

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

03_25

Fuses (03_25, 03_26)

The electrical system is equipped with:

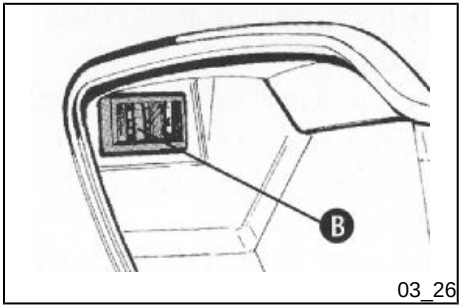
1. Four protection fuses «**A**» inside the helmet compartment.

2. Four protection fuses «**B**» for the various circuits of the electrical system, located inside the front glove-box to the left.

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

CAUTION

BEFORE REPLACING A BLOWN FUSE, FIND AND SOLVE THE FAILURE THAT CAUSED IT TO BLOW. NEVER TRY TO REPLACE THE FUSE WITH ANY OTHER MATERIAL (E.G., A PIECE OF ELECTRIC WIRE).



03_26

FUSES TABLE

Fuse No. 1	**Position on fuse holder:**1 **Capacity:** 15A **Protected circuits:** 12V-180W Socket for electrical equipment - Helmet compartment light - Electrical saddle opening - Antitheft device pre-installation **Location:**helmet compartment
Fuse no. 2	**Position on fuse holder:** 2 **Rating:** 15A **Protected circuits:** Radiator electric fan - Battery recharging circuit - Vehicle's lights - Antitheft system pre-wiring voltage supply - Electrical lines protected by fuses 4, 5, 6, 7, and 8

	Location: Helmet compartment
Fuse No. 3	**Position on fuse holder: 3** **Capacity:** 10 A **Protected circuits:** High- and low-beam lights - Front and rear tail lights - License plate bulb **Location:**helmet compartment
Fuse No. 4	**Position on fuse holder: 4** **Capacity:** 7.5 A **Protected circuits:** Power for radio/intercom control unit pre-installation - Analogue indicator **Location:**helmet compartment
Fuse No. 5	**Position on fuse holder: 5** **Capacity:** 7.5 A **Protected circuits:** Headlight warning light - Front and rear tail lights - License plate light **Location:** front case
Fuse No. 6	**Position on fuse holder: 6** **Capacity:** 10 A **Protected circuits:** Digital instrument panel - Immobilizer LED **Location:** front case

Fuse No. 7	**Position on fuse holder: 7** **Capacity:** 10 A **Protected circuits:** High-beam bulb and warning light in "passing" - Horn - Power for accessories pre-installation **Location:** front case
Fuse No. 8	**Position on fuse holder: 8** **Capacity:** 7.5 A **Protected circuits:** Stop lights - Vehicle start-up enabling button - Power for radio/intercom control unit pre-installation and antitheft device installation **Location:** front case

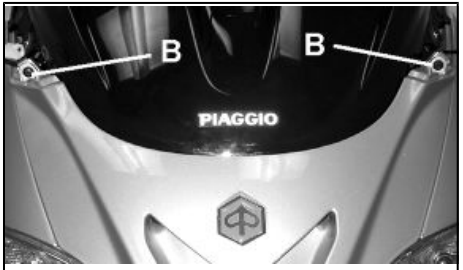
LIGHT BULBS TABLE

High-beam light bulb	**Type:** HALOGEN (H7) **Power:** 12V - 55W **Quantity:** 1
Low-beam bulb	**Type:** HALOGEN (H1) **Power:** 12V - 55W

	Quantity: 1
Front tail light bulb	**Type:** ALL GLASS **Power:** 12V - 5W **Quantity:** 2
Instrument panel bulb	**Type:** ALL GLASS **Power:** 12V - 2W **Quantity:** 5
Front turn indicator bulb	**Type:** Spherical **Power:** 12V - 10W **Quantity:** 1 RHS + 1 LHS
Helmet compartment light bulb	**Type:** CYLINDRIC **Power:** 12V - 5W **Quantity:** 1
Rear turn indicator light bulb	**Type:** Spherical **Power:** 12V - 10W **Quantity:** 1 RHS + 1 LHS
Stop light bulb	**Type:** ALL GLASS **Power:** 12V - 2.3W **Quantity:** 5
Rear tail light bulb	**Type:** SPHERICAL **Power:** 12V - 5W

	Quantity: 2
License plate light bulb	**Type:** ALL GLASS **Power:** 12V - 5W **Quantity:** 1

03_27



03_28

Front light group (03_27, 03_28, 03_29, 03_30, 03_31)

To remove the rear light assembly, proceed as follows:

1. Remove both rear-view mirrors by removing the relative caps corresponding to the screws «**A**» and by undoing the 2 screws «**A**» on the right and left hand side, disconnect the electrical connections of the turn indicators.

2. Remove the two screws «**B**».

3. Remove the two screws «**C**».

4. Remove the screw «**D**».

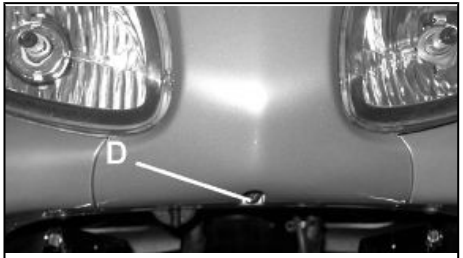
5. Extract the headlight assembly from its housing by removing the three screws «**E**»;

To reassemble, repeat the operation in the reverse order.

WARNING

HIGH AND LOW BEAM LIGHT ARE OF THE HALOGEN TYPE: DO NOT TOUCH WITH YOUR FINGERS TO AVOID DAMAGING THEIR FUNCTION.

03_29



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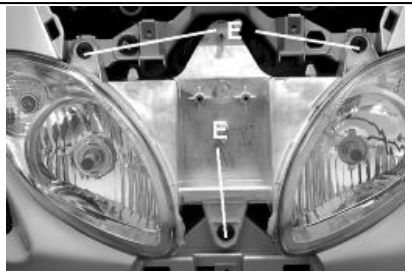
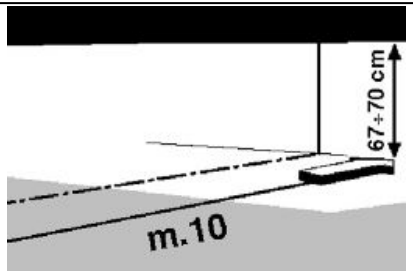


03_31

03_32



03_33

Headlight adjustment (03_32, 03_33)

Proceed as follows:

1. Place the scooter in riding condition, unloaded, with the tyres correctly inflated, on a flat piece of ground at a distance of 10 m from a white screen situated in a shaded area, making sure that the scooter is perpendicular to the screen;

2. Draw a horizontal line on the screen at a height of 67 to 70 cm from the ground;

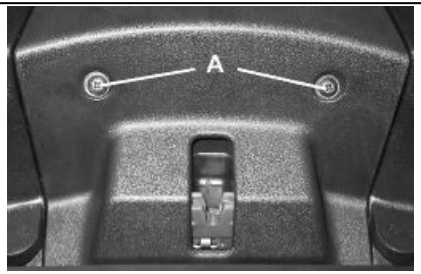
3. Switch on the headlight at low beam and check that the horizontal borderline of the projected light beam between the dark and light area is not higher than the horizontal line drawn on the screen;

4. Otherwise, adjust the headlight with the screw on the front shield, that can be reached after removing the Piaggio clip-on badge «**A**».

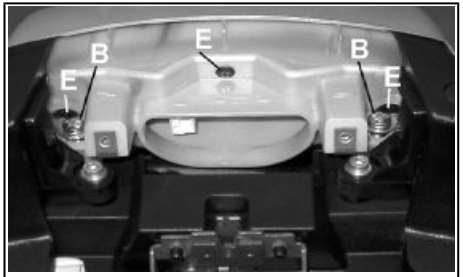
03_34

Front direction indicators (03_34)

To replace a burnt out bulb remove the right and left screw «**F**».



03_35



03_36

03_37

Rear optical unit (03_35, 03_36, 03_37)

To remove the rear light assembly, proceed as follows:

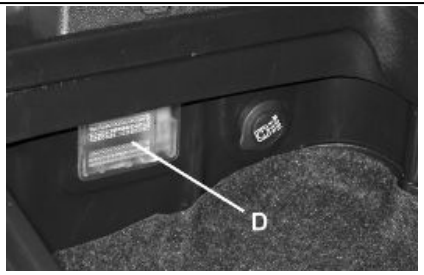
1. Open the saddle and remove the saddle lock cap by undoing the two screws «**A**»

2. Loosen the two fixing screws «**B**» and then remove the stop light support;

3. Remove the screw «**C**» of the light assembly being tested as shown in the figure. Now the tail headlight bulbs or the turn indicator bulbs can be reached. Release the fixing tongues to remove the assembly bulb holder.

Number plate light

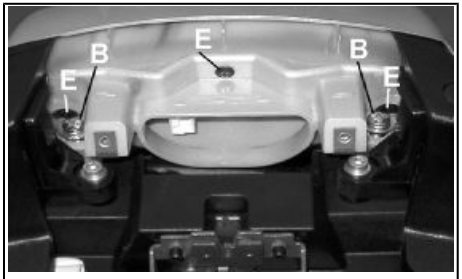
Remove the snap-on bulb holder by working from below the rear mudguard.



03_38

Helmet compartment lighting bulb (03_38)

Open the helmet compartment, take out the pressure mounted transparent cover "**D**" and replace the bulb.



03_39

Brake light (03_39)

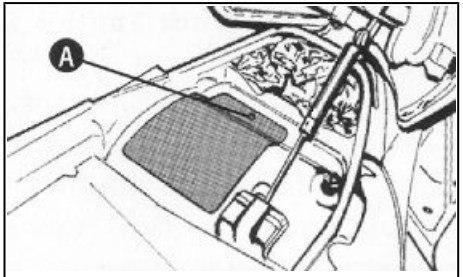
In order to slide off the whole assembly, open the helmet compartment, remove the saddle lock cap as described above and remove the 3 screws «**E**» (one top and the other 2 side screws). Burnt out bulbs can be replaced by turning the bulb holder 30° anticlockwise.

03_40

03_41

Rear-view mirrors (03_40, 03_41)

Adjust the mirrors by applying slight pressure to the side of the mirror to move it to the desired position. The rear-view mirrors fold in when hit for enhanced safety. To set the mirror back to its position, operate manually as indicated.



03_42

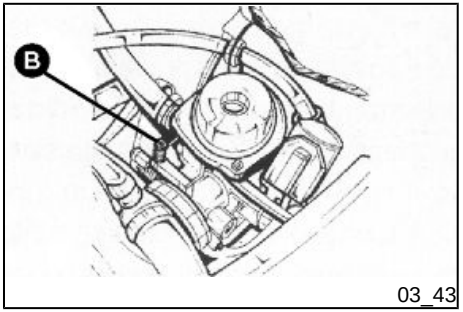
Idle adjustment (03_42, 03_43)

Proceed as follows:

1. Rest the vehicle on the side stand and open the saddle (as described in section "Opening the saddle to access the helmet compartment").

2. Remove the fastening screw «**A**» and the carburettor access port.

3. Start up the motor, then screw in or unscrew screw «**B**» for the idling speed ad justment, until obtaining the prescribed idling speed without the rear wheel being rotated by the engine.



03_43

If you have problems with the adjustment, refer to an **Authorized Piaggio Service Centre** for **C.M.** adjustment at idling speed.

WARNING

IDLE SPEED MUST BE ADJUSTED WHEN THE ENGINE IS VERY HOT. BEFORE THIS OPERATION, MAKE SURE THAT THE THROTTLE GRIP HAS THE RECOMMENDED BACKLASH. IF BACKLASH IN THE THROTTLE CONTROL TRANSMISSION NEEDS ADJUSTING TAKE YOUR SCOOTER TO A PIAGGIO DEALER OR AUTHORISED SERVICE CENTRE

Characteristic

Idling

around 1650±50 revs/min.

Front and rear disc brake

The brake disc and pad wear is automatically compensated, therefore it has no effect on the functioning of the front and rear brakes. For this reason it is not necessary to adjust the brakes. An excessively elastic brake lever stroke may indicate the presence of air in the braking circuit or a failure in the braking system. In this case, mainly due to the importance of brakes to guarantee safe riding conditions, the vehicle should be taken to an **Authorised Service Centre or Dealer.**

CAUTION

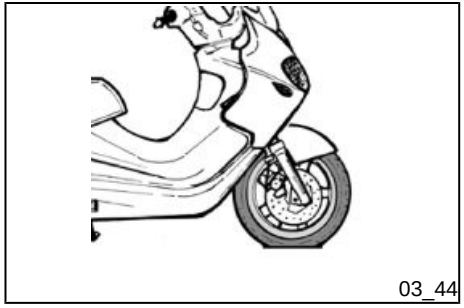
THE BRAKING ACTION SHOULD BEGIN AFTER ABOUT 1/3 OF THE BRAKE LEVER STROKE.

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 BRAKE SYSTEM DURING OPERATION, IT IS ADVISABLE TO HAVE THE BRAKE SYSTEM CHECKED BY A PIAGGIO DEALER OR AUTHORISED SERVICE CENTRE. AFTER REPLACING THE BRAKE PADS, DO NOT USE THE SCOOTER BEFORE HAVING USED THE BRAKE LEVER SEVERAL TIMES IN ORDER TO ALLOW THE PISTONS 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 DURATION OF THE BRAKE PADS. IN ORDER TO AVOID THIS, WE RECOMMEND WASHING THE VEHICLE FREQUENTLY WHEN RIDING IN THESE ROAD CONDITIONS.



03_44

Puncture (03_44)

The vehicle is equipped with Tubeless tyres (without inner tube). In the event of a puncture, contrary to the situation with a tyre with inner tube, the tyre deflates more slowly, resulting in a greater steering safety. In the event of a puncture, it is admissible to make an emergency repair using an "inflate and repair" spray can. For a final repair, take your vehicle to an **Authorised Service Centre or Dealer.** The replacement of a tyre involves removing the wheel in question. Take your vehicle to an **Authorised Service Centre or Dealer** for these operations.

CAUTION

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

WARNING

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

03_45

Periods of inactivity (03_45)

We recommend carrying out the following operations:

1. Clean the scooter thoroughly and then cover it with a canvas;

2. With engine off and piston at the bottom dead centre, remove the spark plug, fill with 1÷2 cm^3 of oil (adding more than this quantity is dangerous for the engine). Operate the starter button 1-2 times for roughly 1 second to turn the engine over slowly, then insert the spark plug again;

3. Drain all the fuel from the scooter; spread antirust grease on the unpainted metal parts; keep the wheels lifted above the ground by resting the chassis on two wooden wedges;

4. As regards the battery, follow the instructions in the «Battery» section.

Recommended products

AGIP CITY HI TEC 4T

Oil to lubricate flexible transmissions (throttle control)

Cleaning the vehicle

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 abundantly with water, and dry with a shammy cloth. For the outside of the engine, use petroleum, a brush and clean cloths. Petrol can damage paintwork. Remember that any polishing with silicone wax must always be preceded by washing.

CAUTION

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

WARNING

THE USE OF A HIGH-PRESSURE WATER JET IS STRONGLY DISCOURAGED FOR ANY ENGINE CLEANING OPERATION; HOWEVER, IF NO OTHER MEANS ARE AVAILABLE, IT IS THEN NECESSARY TO:

- **ONLY USE THE FAN JET.**
- **DO NOT PLACE THE NOZZLE CLOSER THAN 60 CM.**
- **DO NOT USE WATER AT TEMPERATURES OVER 40ºC.**
- **DO NOT USE HIGH-PRESSURE WATER JETS.**
- **DO NOT STEAM WASH.**

• DO NOT DIRECT THE JET AT: THE CARBURETTOR, THE ELECTRIC CABLES, THE SLOT DIFFUSERS IN THE TRANSMISSION COVER AND THE SCROLL COVER.

CAUTION

NEVER WASH THE SCOOTER IN DIRECT SUNLIGHT, ESPECIALLY IN SUMMER WHEN THE BODYWORK IS STILL HOT AS THE SHAMPOO COULD DAMAGE THE PAINTWORK IF IT DRIES BEFORE BEING RINSED OFF. NEVER USE CLOTHS SOAKED IN ALCOHOL, PETROL, DIESEL OIL OR KEROSENE FOR CLEANING THE PAINTED OR PLASTIC SURFACES, IN ORDER NOT TO DAMAGE THE LUSTRE FINISH OR ALTER THE 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 .

DIFFICULT STARTING

No fuel in tank	Refuelling
Filters, carburettor jets dirty or clogged, fuel filter, fuel pipes clogged, fuel pump damaged	Contact an **Authorised Piaggio Service Centre**
Battery flat	Recharge the battery.

IGNITION PROBLEM

No spark from spark plug. Due to the presence of high voltage, this element should only be checked by an expert.	Contact an **Authorised Piaggio Service Centre**

LACK OF COMPRESSION

Spark plug loose. Loose cylinder head, worn piston retaining rings. Incorrect valve clearance	Screw the spark plug. Contact an **Authorised Piaggio Service Centre**

HIGH CONSUMPTION AND LOW PERFORMANCE

Air filter blocked or dirty.	Clean with water and shampoo and impregnate with petrol and specific oil (section «Removing the air filter»)

INSUFFICIENT BRAKING

Greasy disc. Worn pads	Contact an **Authorised Piaggio Service Centre**

Air in the front and rear brake circuits	Contact an **Authorised Piaggio Service Centre**

INEFFICIENT SUSPENSIONS

Inefficient shock absorbers, oil leakage, deteriorated end of stroke buffers.	Contact an **Authorised Service Centre**

IRREGULAR AUTOMATIC TRANSMISSION

Deteriorated variable speed rollers and/or driving belt and/or clutch	Contact an **Authorised Service Centre**

EXHAUST NOISE

Depression tube damaged/ disconnected or secondary valve damaged	Contact an **Authorised Service Centre**

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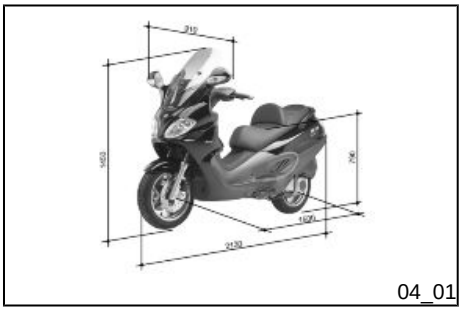
PIAGGIO

Chap. 04
Technical data



04_01

DATA 125

Version	125
Engine	single-cylinder, four-stroke
Bore x stroke	57 x 48.6 mm
Cubic capacity	124 cm³
Compression ratio	12 :1
ignition advance (before TDC)	10° at 2000 rpm - 34° at 6000 rpm
Walbro carburettor	WVF 7G* Ø 29
Carburettor Keihin	CVEK-30
Spark plug	NGK CR 8EB
Maximum speed	105 km/h
valve clearance	intake: 0.10 mm - discharge: 0.15 mm

**** The identification letter can vary every time the carburettor is updated.***

DATA 250

Version	250
Engine	Single-cylinder, four-stroke
Bore x stroke	72 x 60 mm
Cubic capacity	244.29 cm³
Compression ratio	10.5 - 11.5 : 1
ignition advance (before TDC)	10° ± 1° at 2000 rpm - 32° ± 1° at 6500 rpm
Walbro carburettor	WVF 7G* Ø 29
Carburettor Keihin	CVEK-30
Spark plug	CHAMPION RG4HC
Max speed	124 Km/h
Valve clearance	intake: 0.10 mm discharge: 0.15 mm

**** The identification letter can vary every time the carburettor is updated.***

TECHNICAL DATA X9 125 250

Overall width	910 mm
Overall length	2130 mm
Overall height	1450 mm
Wheelbase	1500 mm
Saddle height	790 mm
Fuel supply	with unleaded petrol; carburettor and vacuum pump.
Exhaust muffler	absorption-type exhaust muffler with catalytic converter.
Electronic ignition	capacitative, with variable timing and separate HV coil
Lubrication	Engine lubrication with lobe pump (inside crankcase) controlled by a chain with double filter: mesh and paper.
Cooling	Forced liquid circulation cooling.
Transmission	With automatic expandable pulley variator with torque server, V belt, self-ventilating automatic centrifugal dry clutch, gear reduction unit and transmission housing with forced air circulation cooling.
Front brake	Disc brake Ø 240 (vehicle RH side), with idraulic command activated from handlebars with right-hand lever.

Combined brake	With dual disc brake, Ø 240 (front LH and rear) with hydraulic command activated from handlebars with left-hand lever. The system is interlocked with a pressure distribution valve.
Front wheel	alloy rim: 14" x 3.50
Rear wheel	alloy rim: 14" x 3.50
Front tyre	Without inner tube: 120/70-14" 55P
Rear tyre	Without air chamber: 140/60-14"
Front suspension	Hydraulic telescopic fork with Ø 35 mm stem
Rear suspension	Single arm with two double-acting hydraulic shock absorbers and preloading adjustable to 4 positions.
Chassis	Tubular and sheet steel.
Empty weight	173 Kg
Maximum load	180 kg.
Fuel tank capacity	14,5 l (approx.)
Reserve	2.5 l
Engine oil (oil and oil filters change)	Capacity: 1.0 l
Engine oil (empty)	Capacity: 1.1 lt.
Rear oil hub (version 250)	Capacity: ~ 250 cc.
Rear oil hub (version 125)	Capacity: ~ 150 cc.

Kit equipment

One box spanner; one lever for box spanner; one twin screwdriver; one hexagonal wrench (mm 6); one special wrench for adjusting the rear shock absorbers. The tools are stored in the helmet compartment.

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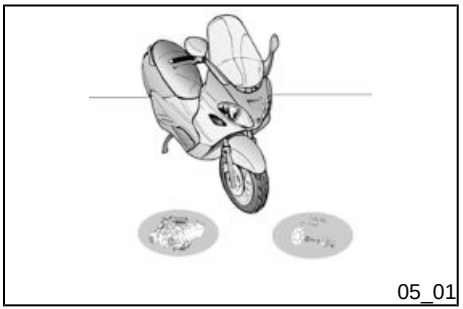
Chap. 05
Spare parts and accessories



05_01

Warnings (05_01)

WARNING

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

WARNING

IT IS ALSO RECOMMENDED THAT "ORIGINAL PIAGGIO SPARE PARTS" BE USED, AS THESE ARE THE ONLY ONES OFFERING YOU THE SAME QUALITY GUARANTEE AS THOSE INITIALLY FITTED ON THE SCOOTER. THE USE OF NON-ORIGINAL SPARE PARTS RENDERS THE WARRANTY VOID.

WARNING

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

WARNING

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

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

IF THERE SHOULD BE 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 REDUCED FURTHER.

WARNING

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

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

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PIAGGIO

Chap. 06
Programmed maintenance

Scheduled maintenance table

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

To this end, a series of checks and maintenance operations (at the owner's expense) have been suggested, which are included in the summary table on the following page. Any minor faults should be reported without delay to an **Authorised Service Centre or Dealer** without waiting until the next scheduled service to solve it.

All scheduled maintenance services must be carried out at the specified intervals, even if the stated mileage has not yet been reached. Punctual scooter servicing is essential to ensure your warranty remains valid. For any further information concerning Warranty procedures and "Scheduled Maintenance", please refer to the "Warranty Booklet".

EVERY 2 YEARS

Coolant - change
Brake fluid - change
Secondary air filter (external/internal) - cleaning (125)

EVERY 3,000 KM

Engine oil - level check/ top-up

AT 1000 KM OR 4 MONTHS

Engine oil - replacement
Hub oil - change
Engine oil - change
Idle speed (*) - adjustment
Throttle lever - adjustment
Steering - adjustment
Brake control levers - greasing
Brake pads - check condition and wear
Brake fluid level - check
Safety locks - check
Electrical system and battery - check
Tyre pressure and wear - check
Vehicle and brake test - road test

(*) See rules in the «Adjusting the engine idle» section

AT 6000 KM OR 12 MONTHS

engine oil- change(125)
Hub oil level - check
Spark plug/ electrode gap - check

Air filter - clean
oil filter - change(125)
valve clearance 125 - check
Sliding blocks / variable speed rollers - check
Driving belt - checking
Coolant level - check
Brake pads - check condition and wear
Brake fluid level - check
Electrical system and battery - check
Tyre pressure and wear - check
Vehicle and brake test - road test

AT 12000 KM OR 24 MONTHS AND AT 60000 KM

Engine oil - replacement
Hub oil level - check
Spark plug / electrode gap - check / replacement
Air filter - clean
Engine oil - change
Idle speed (*) - adjustment
Sliding block / variable speed rollers - change
Throttle lever - adjustment

Coolant level - check
Steering - adjustment
Brake control levers - greasing
Brake pads - check condition and wear
Brake fluid level - check
Transmission elements - lubrication
Safety locks - check
Suspensions - check
Electrical system and battery - check
Headlight - adjustment
Tyre pressure and wear - check
Vehicle and brake test - road test
Transmission Belt (125 cc) - Replacement
Transmission Belt - Check (250)

(*) See rules in the «Adjusting the engine idle» section

AT 18000 KM AND AT 54000 KM

engine oil- change(125)
Hub oil level - check
Spark plug/ electrode gap - check
Air filter - clean

oil filter - change(125)
valve clearance 125 - check
250 cc Valve Play - Check
Sliding blocks / variable speed rollers - check
Coolant level - check
Radiator - external cleaning/ check
Brake pads - check condition and wear
Brake fluid level - check
Electrical system and battery - check
Tyre pressure and wear - check
Vehicle and brake test - road test
Secondary air filter (250) - Cleaning
Transmission Belt - Replacement (250)
Transmission Belt (125 cc) - Replacement

AT 24000 KM AND AT 48000 KM

Engine oil - replacement
Hub oil - change
Spark plug / electrode gap - check / replacement
Air filter - clean
Engine oil - change

Idle speed (*) - adjustment
Sliding block / variable speed rollers - change
Throttle lever - adjustment
Coolant level - check
Steering - adjustment
Brake control levers - greasing
Brake pads - check condition and wear
Brake fluid level - check
Transmission elements - lubrication
Safety locks - check
Suspensions - check
Electrical system and battery - check
Headlight - adjustment
Tyre pressure and wear - check
Vehicle and brake test - road test
Transmission Belt - Check (250)
Transmission Belt (125 cc) - Replacement

(*) See rules in the «Adjusting the engine idle» section

AT 30000 KM, AT 42000 KM AND AT 66000 KM

Hub oil level - check

Spark plug/ electrode gap - check
Air filter - clean
Variable speed rollers - check or replacement
Driving belt - checking
Coolant level - check
Brake pads - check condition and wear
Brake fluid level - check
Electrical system and battery - check
Tyre pressure and wear - check
Vehicle and brake test - road test
engine oil- change(125)
oil filter - change(125)

AT 36000 KM

Engine oil - replacement
Hub oil level - check
Spark plug / electrode gap - check / replacement
Air filter - clean
Engine oil - change
valve clearance 125 - check
250 cc Valve Play - Check

Idle speed (*) - adjustment
Sliding block / variable speed rollers - change
Throttle lever - adjustment
Driving belt - replacement
Coolant level - check
Radiator - external cleaning/ check
Steering - adjustment
Brake control levers - greasing
Brake pads - check condition and wear
Brake fluid hoses - replacement
Brake fluid level - check
Transmission elements - lubrication
Safety locks - check
Suspensions - check
Electrical system and battery - check
Headlight - adjustment
Tyre pressure and wear - check
Secondary air filter (250) - Cleaning
Vehicle and brake test - road test

(*) See rules in the «Adjusting the engine idle» section

AT 72000 KM

Engine oil - replacement
Hub oil - change
Spark plug / electrode gap - check / replacement
Air filter - clean
Engine oil - change
valve clearance 125 - check
250 cc Valve Play - Check
Idle speed (*) - adjustment
Sliding block / variable speed rollers - change
Throttle lever - adjustment
Driving belt - replacement
Coolant level - check
Radiator - external cleaning/ check
Steering - adjustment
Brake control levers - greasing
Brake pads - check condition and wear
Brake fluid hoses - replacement
Brake fluid level - check
Transmission elements - lubrication
Safety locks - check
Suspensions - check

Electrical system and battery - check
Headlight - adjustment
Tyre pressure and wear - check
Secondary air filter (250) - Cleaning
Vehicle and brake test - road test

(*) See rules in the «Adjusting the engine idle» section

RECOMMENDED PRODUCTS TABLE

Product	Description	Specifications
AGIP ROTRA 80W-90	Rear hub oil	SAE 80W/90 Oil that exceeds the requirements of API GL3 specifications
AGIP CITY HI TEC 4T	Oil to lubricate flexible transmissions (throttle control)	Oil for 4-stroke engines
AGIP FILTER OIL	Oil for air filter sponge	Mineral oil with specific additives for increased adhesiveness
AGIP GP 330	Calcium complex soap-based grease with NLGI 2; ISO-L-XBCIB2	Grease (brake control levers, throttle grip)
AGIP CITY HI TEC 4T	Engine oil	SAE 5W-40, API SL, ACEA A3, JASO MA Synthetic oil
AGIP BRAKE 4	Brake fluid	FMVSS DOT 4 Synthetic fluid
AGIP PERMANENT SPEZIAL	coolant	Monoethylene glycol-based antifreeze fluid, CUNA NC 956-16

TABLE OF CONTENTS

The descriptions and illustrations given in this publication are not binding. While the basic specifications as described and illustrated in this manual remain unchanged, PIAGGIO-GILERA reserves the right, at any time and without being required to update this publication beforehand, to make any changes to components, parts or accessories, which it considers necessary to improve the product or which are required for manufacturing or construction reasons.

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

PIAGGIO & C. S.p.A. - After-Sales

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