

Vespa would like to thank you

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

Vespa S 50 4T 2V



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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**Chap. 01
Vehicle**

Dashboard (01_01)

A = Ignition key-switch

B = Bag hook

C = Horn button

D = Turn indicator switch

E = Rear brake lever

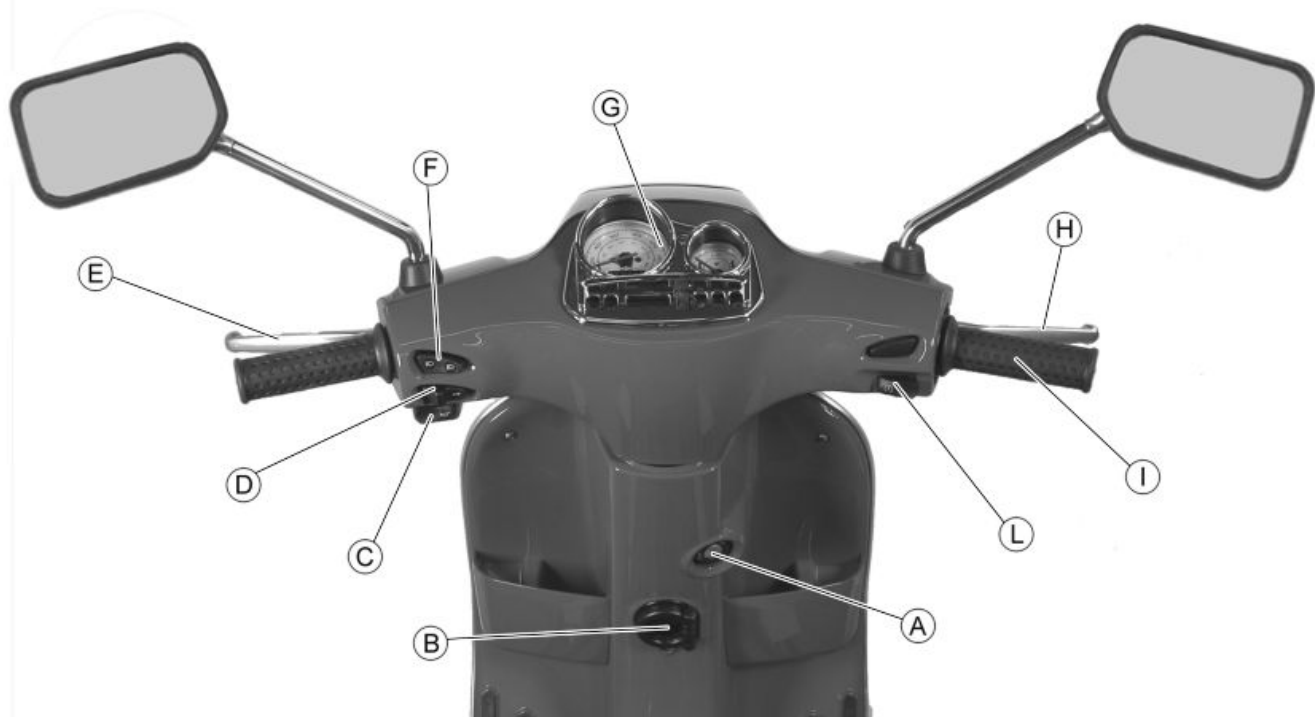
F = Headlight switch

G = Analogue instrument panel

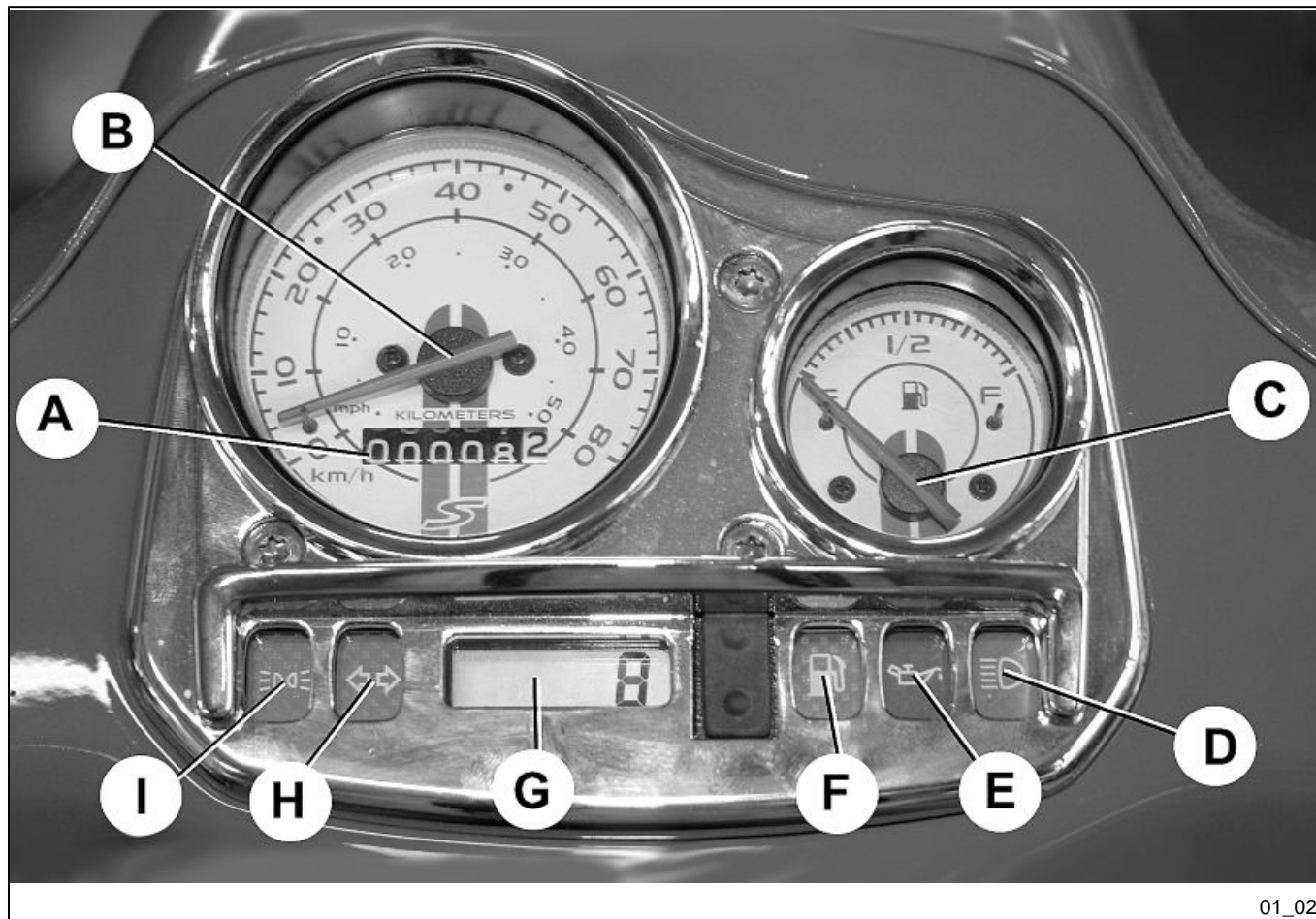
H = Front brake lever

I = Throttle grip

L = Starter button



01_01



Analogueinstrumentpanel (01_02)

A = Odometer

B = Speedometer

C = Fuel gauge

D = High-beam warning light

E = Not used

F = Fuel level warning light

G = Digital clock

H = Turn indicator warning light

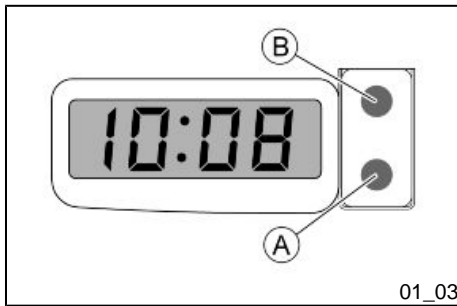
I = Headlight warning light

Clock (01_03)

Located in the instrument panel, it displays hours and minutes with 1 to 12-hour time, AM or PM.

Operate the function selection button «**B**» and month, day and seconds are also displayed besides hours and minutes.

To adjust the different functions, select the desired function with button «**A**» and adjust with button «**B**». The time counter can be reset by pressing button «**A**» with the clock in the seconds function.



01_03

The digital clock is powered by a battery (battery life is about 2 years); lift the whole instrument panel to replace the battery. It is advisable to take your vehicle to an **Authorised Service Centre** for this operation.

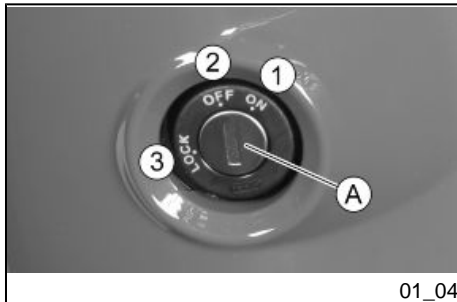
WARNING



DEAD BATTERIES ARE HARMFUL TO THE ENVIRONMENT. THEY MUST BE DISPOSED OF IN SUITABLE CONTAINERS AS PRESCRIBED BY THE REGULATIONS IN FORCE.

Keyswitch (01_04)

Ignition key «A» is located on the front leg shield back plate near the bag hook.



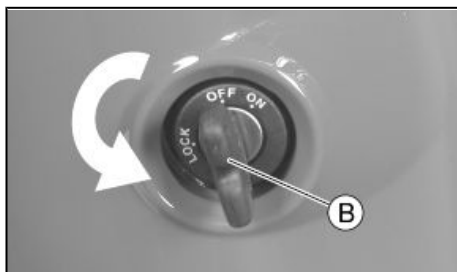
01_04

SWITCH POSITIONS

ON «1»: Ready to start position, non-extractable key, mechanical antitheft device disabled.

OFF «2»: Ignition disabled, extractable key, mechanical antitheft device disabled.

LOCK «3»: Ignition disabled, extractable key, mechanical antitheft device enabled.



01_05

Locking the steering wheel (01_05)

Turn the handlebar to the left as far as it will go; turn the key «B» to «LOCK» and remove it.

CAUTION



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

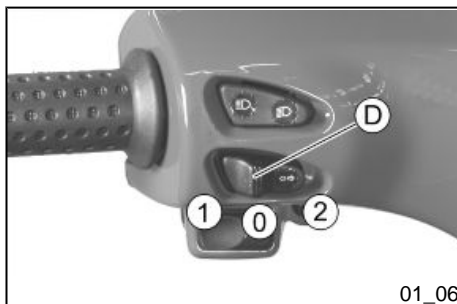
Releasing the steering wheel

Reinsert the key «B» and turn it to «KEY OFF».

CAUTION



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



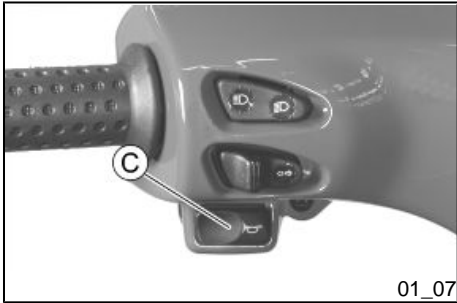
01_06

Switching direction indicators (01_06)

Lever «D» towards «1» = left turn indicators switched on;

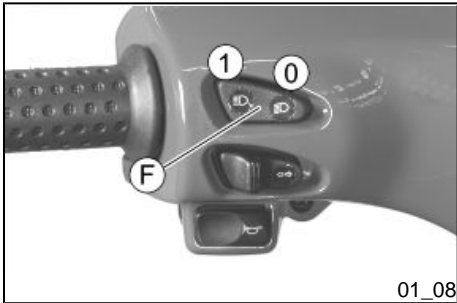
Lever «D» towards «2» = right turn indicators switched on;

The lever «D» automatically goes back to «0» and the turn indicators remain on; push the lever «D» to turn them off.



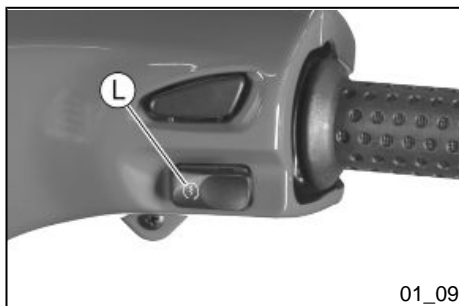
Hornbutton (01_07)

Push the «C» button to sound the horn.



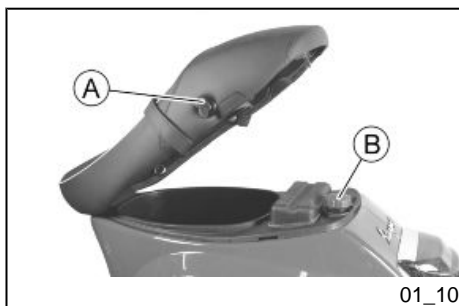
Lightswitch (01_08)

When the light switch «F» is set to «0», the low-beam light is on. When set to «1», the high-beam light is activated.



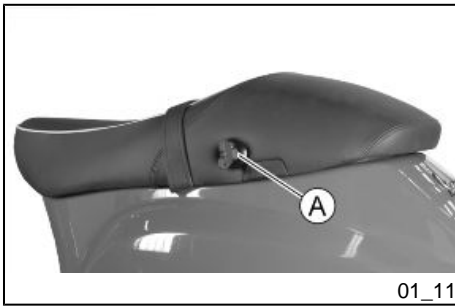
Start-upbutton (01_09)

To start the engine, pull either of the two brake levers and then push the button «L».



Fueltank (01_10)

The fuel tank cap «B» is under the saddle. To reach it, insert the key into lock «A», turn it anticlockwise and tip the saddle forwards.



Openingthesaddle (01_11)

Insert the key into the saddle lock «A», turn it anticlockwise and tip the saddle forward.



Keys (01_12)

The vehicle is supplied with two keys (one spare) which serve to start the engine and unlock the saddle compartment. The keys are accompanied by a tag marked with the identification code to be quoted when ordering duplicates.

WARNING

WE RECOMMEND KEEPING THE DUPLICATE KEY TOGETHER WITH ITS CODE IN A SAFE PLACE AND NOT ON THE VEHICLE

Identification (01_13, 01_14)

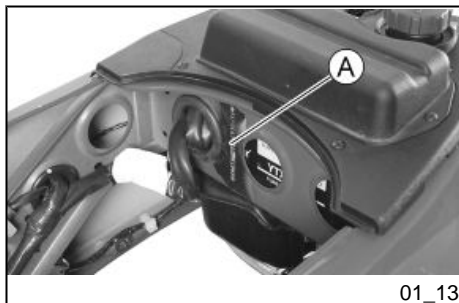
Identification registration numbers are made up of a prefix and a number, stamped on the chassis and on the engine. These numbers must always be quoted when ordering spare parts. We recommend checking that the chassis registration number stamped on the vehicle corresponds with that on the vehicle documentation.

CAUTION

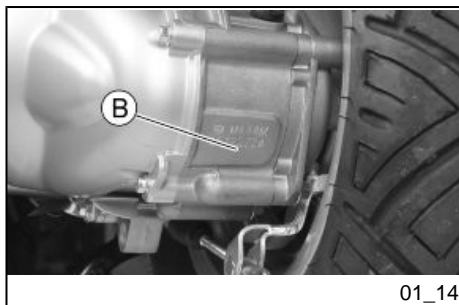
PLEASE REMIND THAT ALTERING IDENTIFICATION REGISTRATION NUMBERS CAN LEAD TO SERIOUS PENAL SANCTIONS (IMPOUNDING OF THE VEHICLE, ETC.).

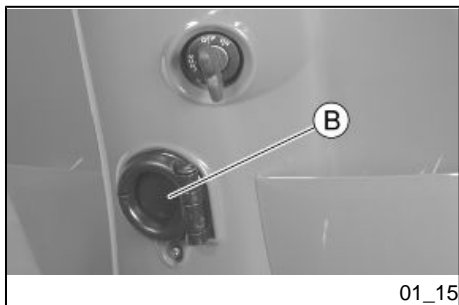
Chassis number

The number «A» is stamped near the battery compartment. Remove the helmet compartment to read it.

**Engine number**

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





Bagclip (01_15)

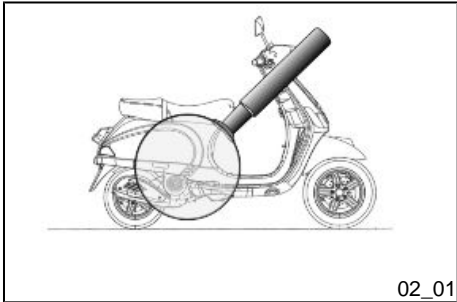
To use the retractable bag hook «B» mounted on the leg shield back plate, pull it slightly towards the back of the vehicle.

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Chap. 02
Use



Checks (02_01)

Before using the vehicle, check:

1. That the fuel tank is full.
2. The oil level in the rear hub.
3. Engine oil level (see section «Engine oil level»).
4. That tyres are properly inflated.
5. Correct functioning of headlights, rear taillight and turn indicators.
6. The correct functioning of the front and rear brakes.



Refuelling (02_02)

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

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

CAUTION



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

CAUTION



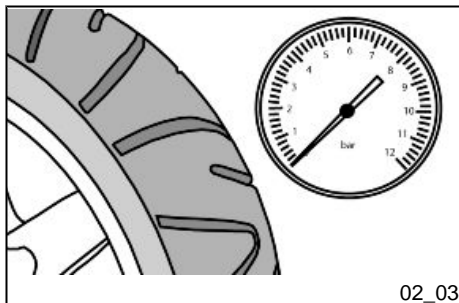
DO NOT BRING NAKED FLAMES OR CIGARETTES NEAR THE MOUTH OF THE FUEL TANK: FIRE HAZARD. ALSO AVOID INHALING HARMFUL VAPOURS.

CAUTION

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

Characteristic**Fuel tank capacity**

~ 8.5 l (2 l of which is reserve)

**Tyrepressure (02_03)**

Check tyre pressure as indicated in the scheduled maintenance table.

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.

TYRE INFLATION PRESSURE

Front tyre pressure (with passenger)

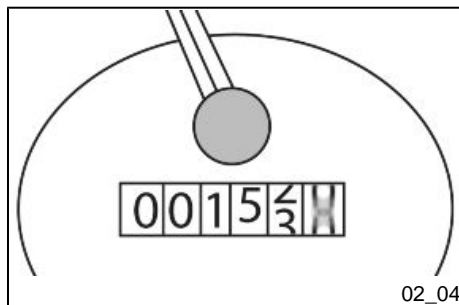
1.6 bar (1.6 bar)

Rear tyre pressure (with passenger)	2.0 bar (2.3 bar)
-------------------------------------	-------------------

TYRES

Front tyre	Tubeless, 110/70 - 11" 45L
------------	----------------------------

Rear tyre	Tubeless, 120/70 - 10" 54L
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Runningin (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.



02_05

Starting the engine (02_05, 02_06, 02_07, 02_08)

The vehicle is fitted with automatic transmission with a regulator and centrifugal clutch. Therefore always start the engine with the throttle at idle speed; to start-off from stationary position, progressively twist the throttle grip.

The vehicle is equipped with a fuel valve and a starter which switch on automatically as soon as the engine is started.

To start it up, it is necessary to:

1. Place the scooter on its stand «E»; check that the rear wheel is off the ground.
2. Keep the throttle grip to idle speed.
3. Insert the key into the switch «D» and turn it to «ON».
4. Pull the rear brake lever «B» or the front brake lever «C» and then press the starter button «A».

CAUTION

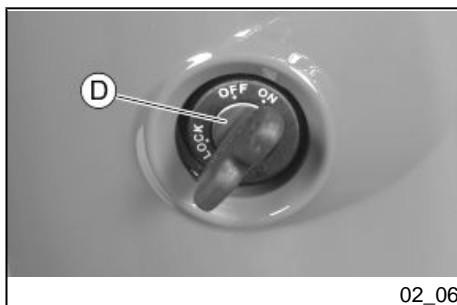


DO NOT CARRY OUT THESE OPERATIONS IN CLOSED AREAS SINCE EXHAUST GASES ARE TOXIC.

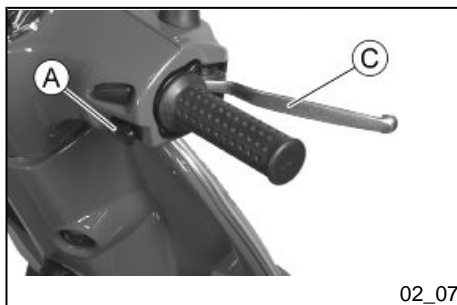
CAUTION



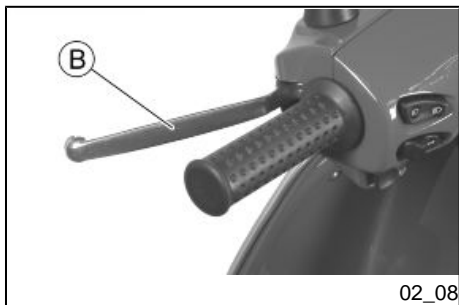
DUE TO THE HIGH TEMPERATURES THE CATALYTIC CONVERTER CAN REACH, ALWAYS TAKE CARE, WHEN PARKING THE VEHICLE, THAT THE EXHAUST DOES NOT COME INTO CONTACT WITH FLAMMABLE MATERIALS, TO AVOID SERIOUS BURNS.



02_06



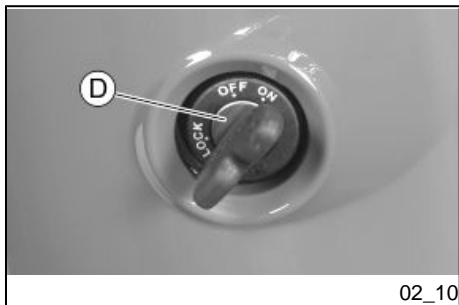
02_07



02_08



02_09



02_10

Difficultstartup (02_09, 02_10, 02_11)

If there is a problem you can follow the instructions below:

1. Engine flooded. Place the vehicle on its centre stand and check that the rear wheel is off the ground. Open the throttle fully and press the starter button for five seconds, let the engine sit for a few minutes and then repeat the above operations. In any case do not operate the starter motor longer than 20" in an attempt to start the engine.

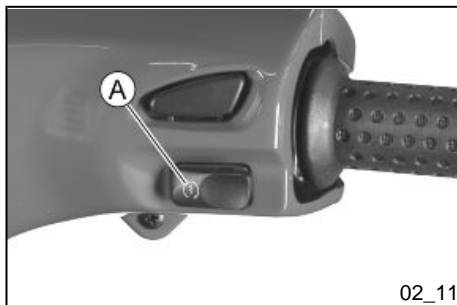
2. Battery or starter motor inefficiency. Put the scooter on its stand "E"; make sure that the rear wheel is off the ground, turn the key switch «D» to «ON» and use the kick-starter «F».

3. Empty fuel tank. After refuelling the scooter, start the engine by pressing the starter button «A» with the throttle at a minimum to provide maximum aspiration for the tap. If the vehicle fails to start even after carrying out the steps described above, contact an **Authorised Service Centre**.

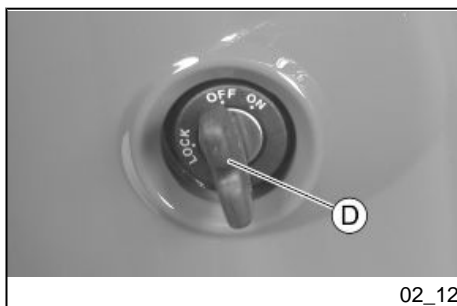
CAUTION



ALWAYS PLACE THE VEHICLE ON ITS STAND BEFORE KICK STARTING.



02_11

WARNING**TAMPERING MAY CAUSE SERIOUS ENGINE MALFUNCTION.**

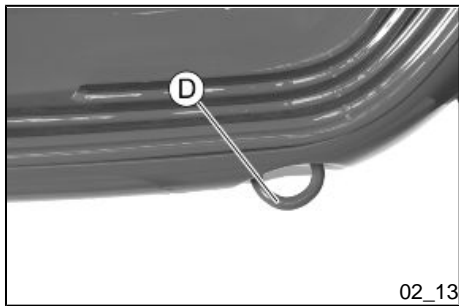
02_12

Stoppingtheengine (02_12)

Stop acceleration, then turn the key switch «D» to «OFF » to stop the engine (extractable key).

CAUTION

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



Anti-theft ring (02_13)

The «D» ring on the right side of the vehicle is used to fasten the vehicle to an object using a scooter chain. Do not use the ring for other purposes.

WARNING



THIS ACCESSORY IS NOT A THEFT PREVENTION GUARANTEE, IT IS ONLY A DETERRENT.

Catalytic silencer

CAUTION



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

CAUTION



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

CAUTION

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

Stand (02_14)

Lower the centre stand «F» by kicking the bracket while pulling the vehicle backward, holding onto the handlebar.

**Automatictransmission (02_15)**

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



well as the situation described above, riding uphill fully laden on steep slopes or starting off on slopes greater than 25%, etc.):

1. Do not continue riding in such conditions.
2. Let the clutch cool down with the motor at idling speed for a few minutes



Safedriving (02_16)

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 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 the helmet on and fasten it correctly.
2. Reduce speed on rough roads and ride with care.
3. After riding on a long stretch of wet road without using the brakes, braking can be poor at the beginning. 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 roads.
5. Avoid riding off by mounting the scooter when it is resting on its support. In any case, in order to avoid abrupt departures, the rear wheel should not be turning when it comes into contact with the ground.
6. If the vehicle is used on roads covered with sand, mud, snow mixed with salt, etc., clean the brake disc frequently with a mild detergent in order to prevent abrasive particles from building up inside the holes, which can result in early brake pad wear.

CAUTION



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

CAUTION

ANY ELABORATION THAT MODIFIES THE VEHICLE'S PERFORMANCES, SUCH AS TAMPERING WITH ORIGINAL STRUCTURAL PARTS IS STRICTLY 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. (SEE THE «SPARE PARTS AND ACCESSORIES» SECTION)

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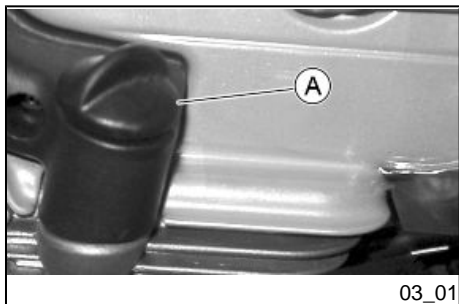


**Chap. 03
Maintenance**

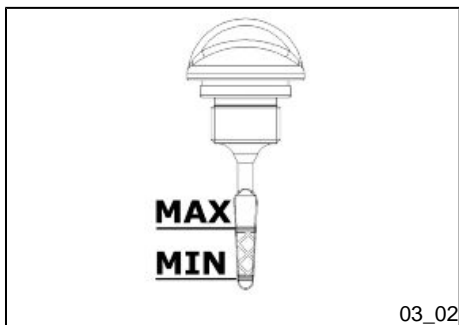
Engineoillevel

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 seriously damage the engine.** In all 4T engines the decay of oil characteristics as well as some consumption is 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 avoid problems, it is advisable to control oil level every time the vehicle is used.



03_01



03_02

Engineoillevelcheck (03_01, 03_02)

Check oil level every time the vehicle is used, with the engine cold. The level should be between the MAX and MIN marks on the oil level dipstick «A » shown in the figure; the stand should be firm on an even surface during the check.

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.

Check by pushing the dipstick all the way into the hole.

CAUTION



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

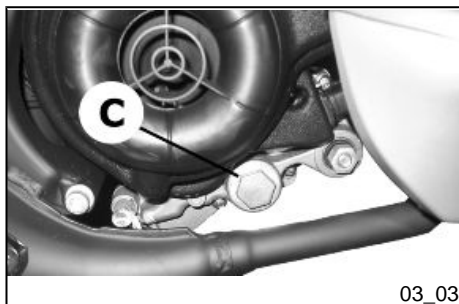
Characteristic

Engine oil

Capacity: ~ 850 cm³

Engineoiltop-up

Always check oil level before carrying out top-ups and add oil **without exceeding the MAX level**. An engine oil check-up and top-up should be carried out every 3,000 km at an **Authorised Piaggio Service Centre**.



03_03

Engineoilchange (03_03)

Change oil and clean the filter after every 6,000 km at an **Authorised Service Centre**. Empty the engine by draining the oil through drainage cap «C» with a cold engine. First unscrew the cap-dipstick used to check engine oil level, then cap «C» and take out the mesh filter. After cleaning and mounting again the mesh filter, screw cap «C» and fill with oil the hole of the cap-dipstick used to check engine oil level. Then start the vehicle, leave it running for a few minutes and switch it off: 5 minutes later check oil level and, if necessary, add oil **without exceeding the MAX level**. Only use new oil of the recommend type for oil top-ups and change.

CAUTION

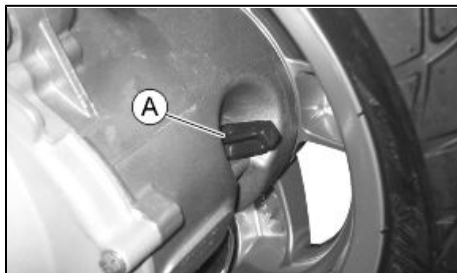


USED OILS CONTAIN SUBSTANCES HARMFUL TO THE ENVIRONMENT. FOR OIL CHANGE, CONTACT AN AUTHORISED SERVICE CENTRE WHICH IS EQUIPPED TO DISPOSE OF USED OILS IN AN ENVIRONMENTALLY FRIENDLY AND LEGAL WAY.

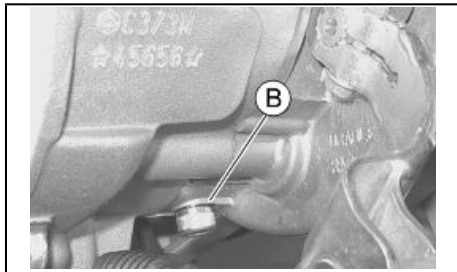
Recommended products

eni i-Ride PG 5W-40

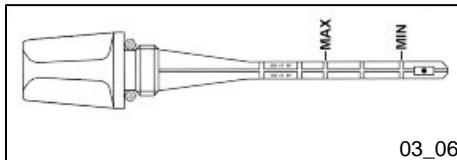
Synthetic based lubricant for high-performance four-stroke engines.
JASO MA, MA2 - API SL - ACEA A3



03_04



03_05



03_06

Huboillevel (03_04, 03_05, 03_06)

To check the hub oil level, proceed as follows:

1. Place the vehicle on its stand on a level surface;
2. Unscrew the oil dipstick «A», dry it with a clean rag and then reinsert it, **screwing it tightly into place**;
3. Unscrew the dipstick again and check that the oil level barely reaches the **2nd notch from the bottom**;
4. Screw the dipstick back into place completely.

The screw «B» is the hub oil drainage plug.

CAUTION



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

N.B.

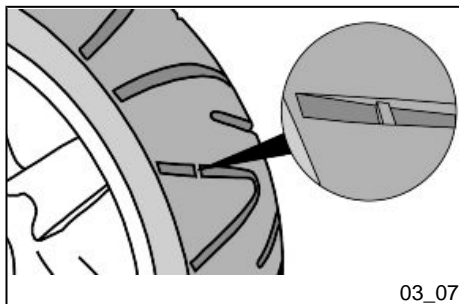
THE NOTCHES ON THE HUB OIL LEVEL DIPSTICK, EXCEPT THE ONE INDICATING THE MAXIMUM AND MINIMUM LEVEL, REFER TO OTHER MODELS BY THE MANUFACTURER AND HAVE NO SPECIFIC FUNCTION FOR THIS MODEL.

Recommended products

AGIP GEAR SAE 80W-90

Lubricant for gearboxes and transmissions.

API GL-4

Characteristic**Transmission oil**80 cm³**Tyres (03_07)**

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

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

CAUTION

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

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

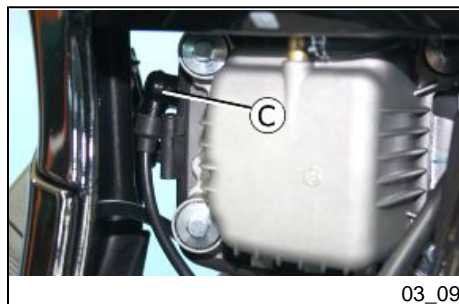
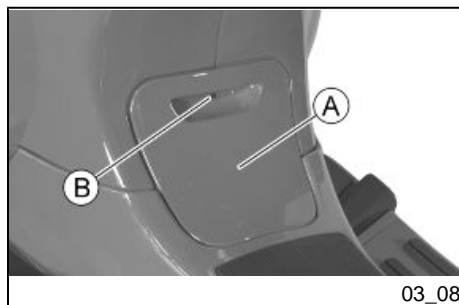
TYRES

Front tyre	Tubeless, 110/70 - 11" 45L
Rear tyre	Tubeless, 120/70 - 10" 54L

TYRE INFLATION PRESSURE

Front tyre pressure (with passenger)	1.6 bar (1.6 bar)
--------------------------------------	-------------------

Rear tyre pressure (with passenger)	2.0 bar (2.3 bar)
-------------------------------------	-------------------



Sparkplugdismantlement (03_08, 03_09, 03_10)

To make this operation easier, remove the helmet compartment.

Remove the access door «A» after undoing the corresponding screw «B». Detach the spark plug shielded cap «C» and remove the plug with the box-spanner supplied shown on the picture. When refitting the plug, tighten it manually, being sure to insert it at the right angle. Carefully reinsert the shielded cap «C». To reassemble the cover follow the steps in reverse order, making sure to insert the pins in the lower part of the body.

CAUTION



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

CAUTION



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



03_10

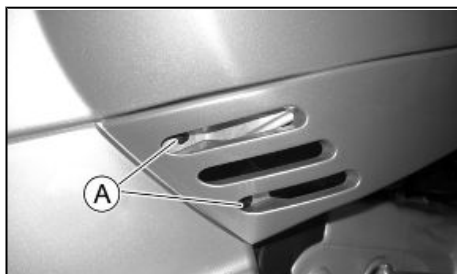
Characteristic

Electrode gap

0.7 to 0.8 mm

Spark plug

NGK CR8EB



03_11

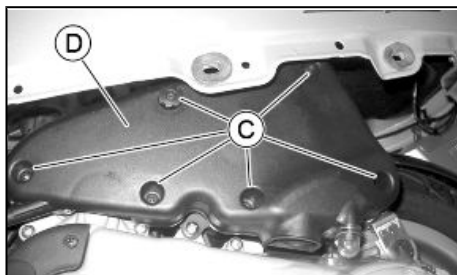
Removing the air filter (03_11, 03_12)

Remove the side fairing unscrewing the 2 screws **A**. Take off air cleaner cover «**D**» after having unscrewed the 6 fixing screws «**C**», then take out the filter. Clean with water and car shampoo, afterwards dry with compressed air and submerge in a recommended oil and petrol mixture in ratio of 50%. Afterwards squeeze it, leave it to dry and mount it again.

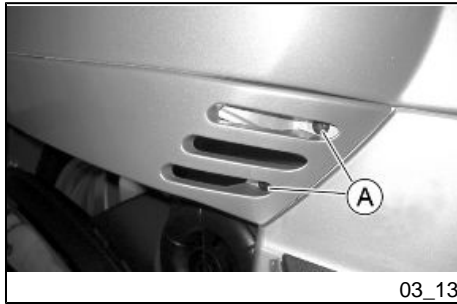
CAUTION



IN CASE OF RIDING ON DUSTY ROADS IT IS ADVISABLE TO CLEAN THE AIR FILTER MORE FREQUENTLY THAN INDICATED IN THE RELEVANT CHAPTER ON SCHEDULED MAINTENANCE.



03_12



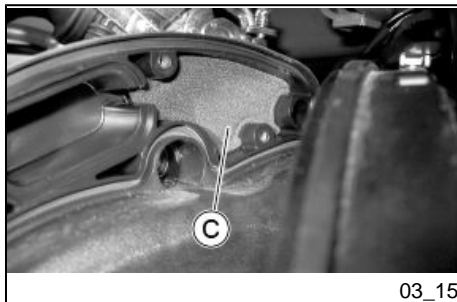
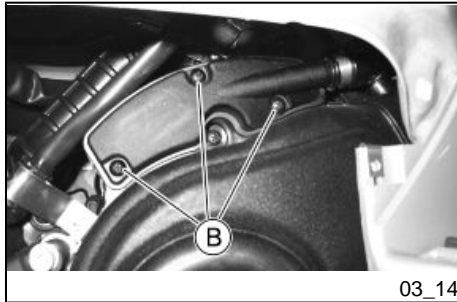
Secondaryairsystem (03_13, 03_14, 03_15, 03_16)

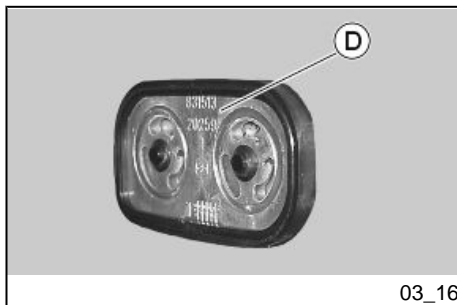
Undo the two screws «A» of the side fairing and remove the fairing. Undo the three screws «B» and remove the housing cover of the secondary air system. Detach the housing cover and remove the filtering element «C» made of sponge. Wash the sponge with water and neutral soap, then dry with a clean cloth and short blasts of compressed air. While cleaning the filter, check the condition of the reed valve «D», and fit it back in place on the housing.

Before closing the cover of the SAS housing, check the good condition of the sealing O-ring; replace it if damaged or deformed.

N.B.

The reed valve can be inserted in only one direction on the SAS housing





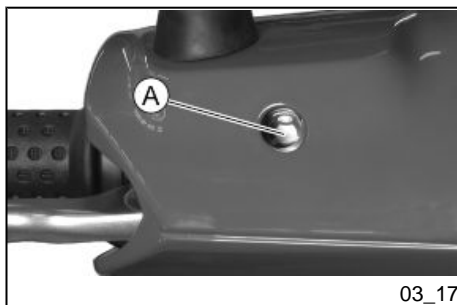
03_16

Checking the brake oil level (03_17)

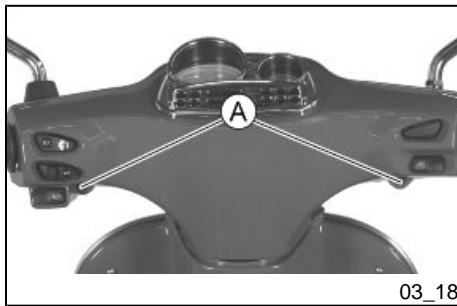
The brake fluid reservoir is equipped with a sight glass «A» made of transparent material; the quantity of liquid contained in the sight glass indicates the level of liquid in the reservoir.

When the sight glass «A» is full, the level inside the reservoir exceeds the MIN level; when it is partially full, the level drops to the MIN level; when it is fully empty, the level of fluid in the reservoir is below the MIN level.

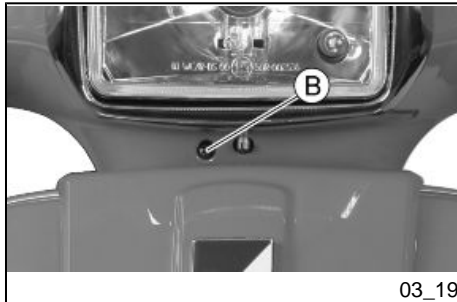
The brake fluid level may fall due to wear on the brake pads. In case the pad wear is below the minimum mark, contact an **Authorised Service Centre** to have the braking system thoroughly checked.



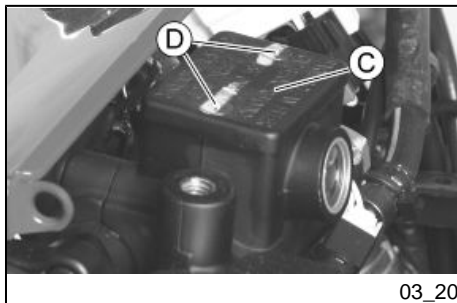
03_17



03_18



03_19



03_20

Braking system fluid topup (03_18, 03_19, 03_20)

Proceed as follows:

1. Remove the rear-view mirrors.
2. Undo the two screws «A».
3. Undo the screw «B» and remove the front handlebar cover.
4. Remove the reservoir cover «C» by loosening the two fixing screws «D» and refill with the prescribed brake fluid type only and without exceeding the maximum level.

Under standard climatic conditions, replace fluid as indicated in the scheduled maintenance table. This operation must be carried out by trained technicians; take your scooter to an **authorised Service Centre or Dealer**.

WARNING



ONLY USE DOT 4-CLASSIFIED BRAKE FLUID. BRAKE CIRCUIT FLUID IS VERY CORROSIVE; MAKE SURE THAT IT DOES NOT COME INTO CONTACT WITH THE PAINTWORK.

CAUTION



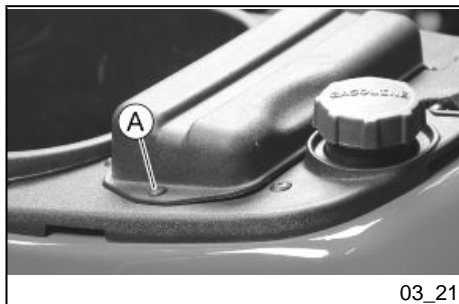
AVOID CONTACT OF BRAKE FLUID WITH EYES, SKIN, AND CLOTHING. IN CASE OF CONTACT, RINSE WITH WATER. THE BRAKING CIRCUIT FLUID IS HYGROSCOPIC, THAT IS, IT ABSORBS HUMIDITY FROM THE SURROUNDING AIR. IF THE HUMIDITY IN THE BRAKING FLUID EXCEEDS A CERTAIN VALUE, IT WILL LEAD TO INEFFICIENT BRAKING. NEVER USE BRAKING FLUID KEPT IN CONTAINERS THAT HAVE ALREADY BEEN OPENED, OR PARTIALLY USED.

Recommended products

AGIP BRAKE 4

Brake fluid.

Synthetic fluid SAE J 1703 -FMVSS 116 - DOT 3/4 - ISO 4925 - CUNA NC 956 DOT 4



Battery (03_21)

To access the battery, tilt the saddle forwards, then remove the battery compartment access door by unscrewing the star-shaped screw "A" shown in the figure.

The battery is the electrical device that requires the most frequent attention and the most thorough maintenance.

WARNING



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

CAUTION

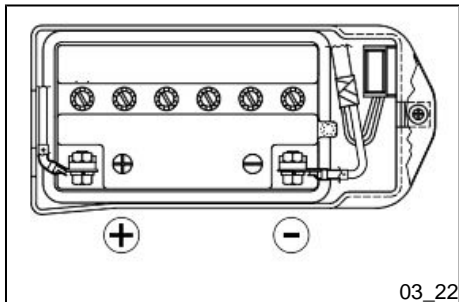


ELECTROLYTE CONTAINS SULPHURIC ACID: AVOID CONTACT WITH EYES, SKIN AND CLOTHES. IN CASE OF ACCIDENTAL CONTACT, RINSE WITH ABUNDANT WATER AND CONSULT A DOCTOR.

CAUTION



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



Use of a new battery (03_22)

To install a new battery:

1. Place the battery in its housing.
2. Connect the positive pole «+» first and then the negative pole «-».
3. Place the battery cover.

CAUTION



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

WARNING



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

Characteristic

Battery

12V-9Ah

Long periods of inactivity

Battery performance will be poor if the vehicle is not used for a long time. 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. Poor battery performance may also be due to environmental conditions and the cleanliness 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

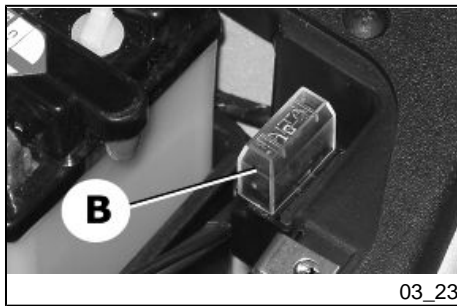


DO NOT DISCONNECT THE BATTERY CABLES WITH THE ENGINE RUNNING, THIS CAN CAUSE IRREPARABLE DAMAGE TO THE VEHICLE'S ELECTRONIC CONTROL UNIT.

WARNING



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



Fuses (03_23)

The electrical system is protected by a 10A fuse valve «B» located next to the battery. Before replacing a blown fuse, find and solve the problem that caused it to blow. Do not replace the fuse with any alternative form of conductor

CAUTION



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

BULBS

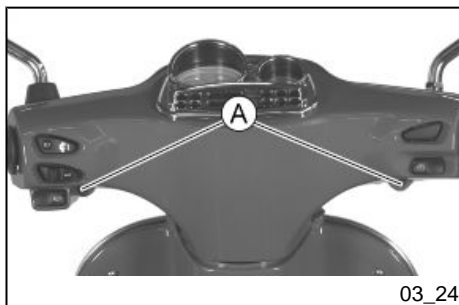
High/low beam light bulb	<p>Type: Halogen</p> <p>Power: 12V 35/35W</p> <p>Quantity: 1</p>
Front side light bulb	<p>Type: All glass</p> <p>Power: 12V 5W</p> <p>Quantity: 1</p>
Front turn indicator light bulb	<p>Type: Spherical</p> <p>Power: 12V - 10W</p> <p>Quantity: 1 RHS + 1 LHS</p>

Rear turn indicator light bulb
Type: Spherical
Power: 12V - 10W
Quantity: 1 RHS + 1 LHS

Stop and tail light bulb
Type: Spherical
Power: 12V 21/5W
Quantity: 1

Instrument panel lighting bulbs
Type: All glass
Power: 12V 1.2W
Quantity: 3

Warning light bulbs: turn indicators, low-beam lights, high-beam lights, low fuel
Type: All glass
Power: 12V - 1.2W
Quantity: 4



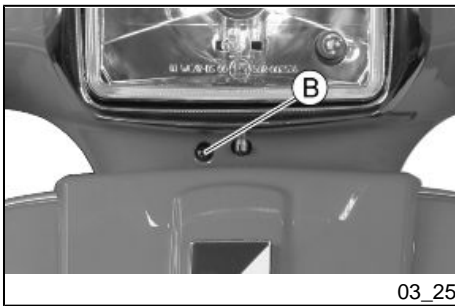
Frontlightgroup (03_24, 03_25, 03_26, 03_27)

To access the headlight bulbs, remove the front of the handlebar cover, as follows:

1. Remove the rear-view mirrors.
2. Unscrew the 3 screws holding the handlebar cover. The front central screw «**B**» and the 2 rear screws «**A**». Once this is done, the handlebar cover can be removed.

To replace the high-/low-beam headlight bulb:

1. Disconnect the power contacts and remove the rubber protection «**C**».
2. Remove the retaining clip «**D**» and slide off the bulb.



03_25

To replace the tail light bulb:

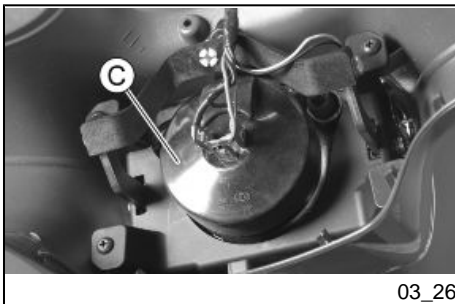
1. Slide off the rubber bulb holder «E» from its fitting.
2. Hold and slide off the bulb.

N.B.

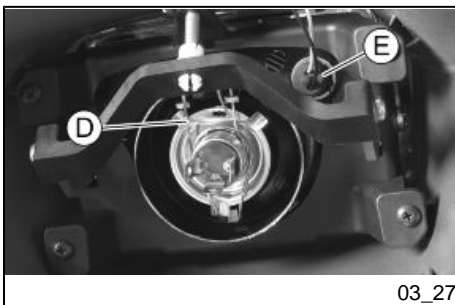
IF MISTING IS NOTICED ON THE INSIDE OF THE HEADLAMP GLASS, THIS DOES NOT INDICATE A FAULT AND IS ATTRIBUTABLE TO HUMIDITY AND/OR TO LOW TEMPERATURES.

THE PHENOMENON SHOULD QUICKLY DISAPPEAR WHEN THE LIGHT IS SWITCHED ON.

THE PRESENCE OF DROPS OF WATER, ON THE OTHER HAND, COULD INDICATE THAT WATER IS INFILTRATING. CONTACT THE AFTER-SALES SERVICE NETWORK.



03_26



03_27

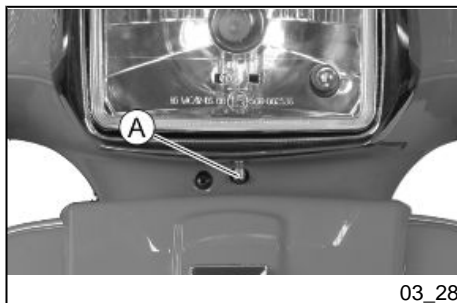
Headlightadjustment (03_28, 03_29)

Proceed as follows:

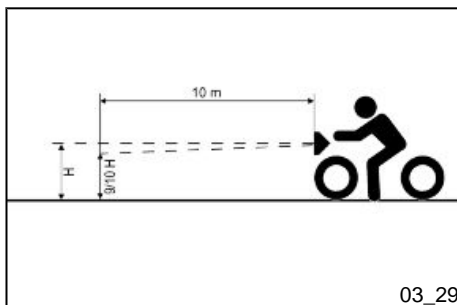
1. Place the vehicle in running order and with the tyres inflated to the prescribed pressure, on a flat surface 10 m away from a white screen situated in a shaded area, making sure that the longitudinal axis of the vehicle is perpendicular to the screen;
2. Turn on the headlight and check that the borderline of the projected light beam on the screen is no higher than $9/10$ or lower than $7/10$ of the distance from the ground to the centre of the vehicle's headlamp;
3. If otherwise, adjust the right headlight with screw «A».

N.B.

THE ABOVE PROCEDURE COMPLIES WITH THE EUROPEAN STANDARDS REGARDING MAXIMUM AND MINIMUM HEIGHT OF LIGHT BEAMS. REFER TO THE STATUTORY REGULATIONS IN FORCE IN EVERY COUNTRY WHERE THE VEHICLE IS USED.



03_28



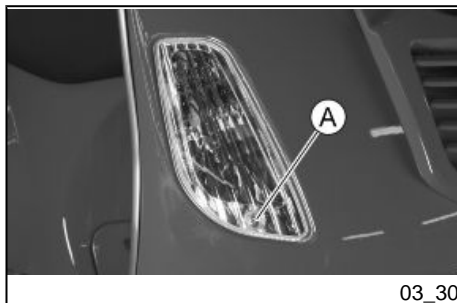
03_29

Frontdirectionindicators (03_30, 03_31)

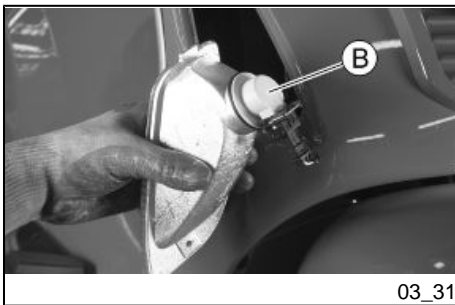
To replace the bulbs:

1. Remove the turn indicator from its fitting by undoing the screw «A».
2. Take out the bulb holder «B» from its fitting by turning it anticlockwise.
3. Press the bulb, turn it anticlockwise and then take it out.

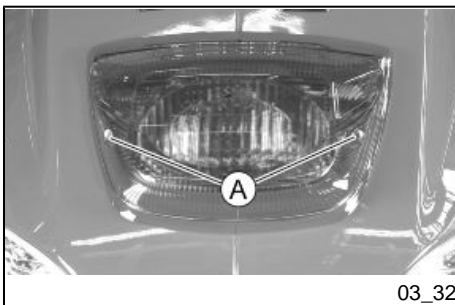
To refit, proceed in reverse order.



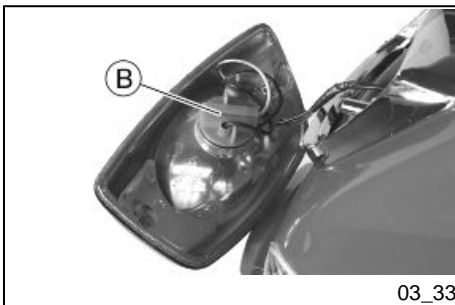
03_30



03_31



03_32



03_33

Rearopticalunit (03_32, 03_33)

To replace the taillight bulb:

1. Remove the two screws «A».
2. Take out the bulb holder «B» from its fitting by turning it anticlockwise.
3. Press the bulb, turn it anticlockwise and then take it out.

To refit, proceed in reverse order.

N.B.

IF MISTING IS NOTICED ON THE INSIDE OF THE HEADLAMP GLASS, THIS DOES NOT INDICATE A FAULT AND IS ATTRIBUTABLE TO HUMIDITY AND/OR TO LOW TEMPERATURES.

THE PHENOMENON SHOULD QUICKLY DISAPPEAR WHEN THE LIGHT IS SWITCHED ON.

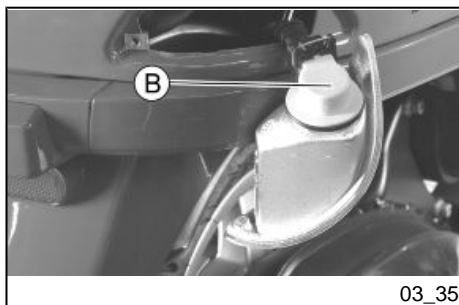
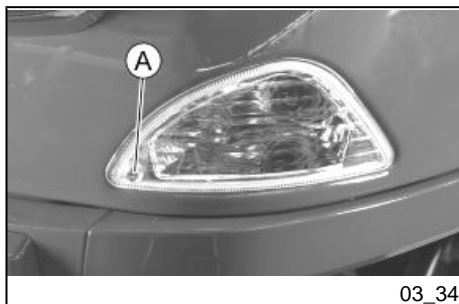
THE PRESENCE OF DROPS OF WATER, ON THE OTHER HAND, COULD INDICATE THAT WATER IS INFILTRATING. CONTACT THE AFTER-SALES SERVICE NETWORK.

Rear turn indicators (03_34, 03_35)

To replace the bulbs:

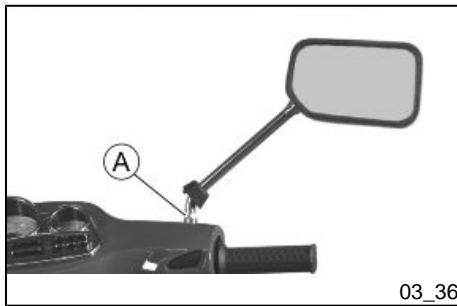
1. Remove the turn indicator from its fitting by undoing the screw «A».
2. Take out the bulb holder «B» from its fitting by turning it anticlockwise.
3. Press the bulb, turn it anticlockwise and then take it out.

To refit, proceed in reverse order.



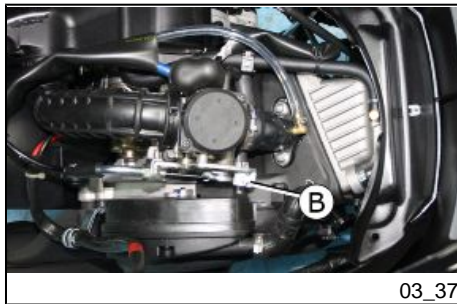
Rear-view mirrors (03_36)

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



03_36

To remove the rear view mirror unscrew the nut «A» and turn the rear-view mirror supporting stem anticlockwise.



03_37

Idle adjustment (03_37)

Proceed as follows:

1. Rest the vehicle on its centre stand and lift the saddle (as described in the «Saddle opening» section).
2. Remove the helmet compartment.
3. To adjust the idle speed, start the engine, then loose or tighten the screw «B» until you reach the recommended idle speed taking care the engine does not make the rear wheel move.

If it is difficult to adjust idle speed, take your vehicle to an **Authorised Dealer or Service Centre**.

WARNING



ADJUST IDLE SPEED WHEN THE ENGINE IS FAIRLY HOT AND HAS BEEN RUNNING FOR AT LEAST FIVE MINUTES. 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 AN AUTHORISED DEALER OR SERVICE CENTRE.

Characteristic

Engine idle speed

1600 ÷ 1800 rpm.

Frontdiscbrake (03_38)

The brake disc and pad wear is automatically compensated, therefore it has no effect on the functioning of the front and rear brakes. For this reason it is not necessary to adjust the brakes. An excessively elastic brake lever stroke may indicate the presence of air in the braking circuit or a failure in the braking system. In this case, 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



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

CAUTION



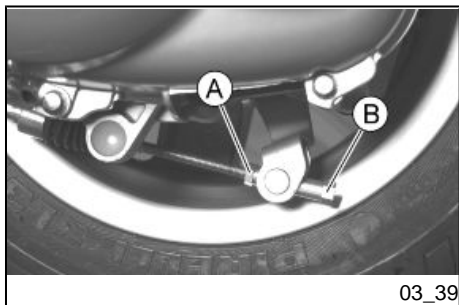
HAVE THE BRAKE PADS CHECKED BY THE DEALER ACCORDING TO THE CHECKS SPECIFIED IN THE SCHEDULED MAINTENANCE TABLE. HOWEVER, IN THE EVENT OF NOISES COMING FROM THE FRONT AND/OR REAR BRAKING SYSTEM DURING OPERATION, IT IS ADVISABLE TO HAVE THE BRAKING SYSTEM CHECKED BY AN AUTHORISED SERVICE CENTRE OR DEALER.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



03_38

CAUTION

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

**Rear drum brake (03_39)**

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

CAUTION

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

Puncture

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, an emergency repair can be carried out 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 CAN 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.

delveicolo (03_40)

We recommend carrying out the following operations:

1. General cleaning of the vehicle.
2. With the engine off and the piston at the bottom dead centre position, **remove the spark plug**, and pour 1-2 cm³ of recommended oil through its hole. Press the engine start pedal 3 or 4 times letting the engine perform a few revolutions slowly, then replace the spark plug.
3. Drain up all the vehicle fuel; spread antirust grease on the uncoated metal parts; keep the wheels off the ground, by resting the chassis on two wooden wedges.
4. For the battery, follow the procedures described in the «Battery» section.
5. Drain the petrol from the carburettor float chamber through the bleed cap.

Recommended products**eni i-Ride PG 5W-40**

Synthetic based lubricant for high-performance four-stroke engines.



03_40

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

WARNING



To avoid the appearance of oxidations, wash the vehicle every time it is used in certain areas or in special conditions of:

- **Environmental / seasonal conditions: use of salt, de-icer chemical products on the road in winter.**
- **Air pollution: city and/or industrial areas.**
- **Salinity and humidity of the atmosphere: marine areas, hot and wet weather.**

WARNING



- **Prevent deposits from remaining on the bodywork, industrial and pollutant residual dust, tar spots, dead insects, bird droppings, etc.**
- **Do not park the vehicle under the trees. In some seasons, in fact, residues, resins, fruits or leaves may fall from the trees, containing chemicals that are harmful to the paintwork.**

CAUTION

DETERGENTS POLLUTE WATER. THEREFORE THE VEHICLE SHOULD BE WASHED IN AN AREA EQUIPPED FOR THE COLLECTION AND PURIFICATION OF THE LIQUIDS USED.

WARNING

NEVER WASH THE VEHICLE UNDER DIRECT SUNLIGHT, ESPECIALLY IN SUMMER WHEN THE BODYWORK IS STILL HOT, AS THE CAR SHAMPOO MAY DRY BEFORE BEING RINSED OFF, AND COULD DAMAGE THE PAINTWORK. NEVER USE RAGS SOAKED IN PETROL OR DIESEL OIL TO CLEAN THE PAINTED OR PLASTIC SURFACES, IN ORDER TO PREVENT THEM LOSING THEIR SHINE AND MECHANICAL CHARACTERISTICS.

WARNING

WHEN WASHING THE ENGINE WITH A HIGH-PRESSURE WATER JET:

- ONLY USE FAN SPRAY JETS.
- DO NOT PLACE THE NOZZLE CLOSER THAN 60 CM.
- DO NOT USE WATER AT TEMPERATURES OVER 40° C.
- DO NOT DIRECT THE JETS DIRECTLY TO CARBURETTOR, WIRINGS, SLOT DIFFUSERS ON THE TRANSMISSION COVER AND SCROLL COVER.

DIFFICULT STARTING

No fuel in tank	Refuel
Filters, jets or carburettor body dirty or clogged.	Contact an Authorised Service Centre .
Insufficient battery charge	Kick-start. Recharge the battery.

IGNITION PROBLEMS

No spark from spark plug. Due to the presence of high voltage, this check should only be carried out by an expert.	Make sure the electrodes are properly adjusted. Check that they are (clean with pure petrol and a metal brush or with emery cloth). Check the spark plug insulator: Replace the spark plug if the insulator is cracked or broken. If the spark plug is in good conditions, contact an Authorised Service Centre .
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LACK OF COMPRESSION

Spark plug loose. Loose cylinder head, worn piston retaining rings.	Contact an Authorised Service Centre .
---	---

HIGH CONSUMPTION AND LOW PERFORMANCE

Air filter blocked or dirty.	Clean with water and shampoo and impregnate with petrol and specific oil («Air filter removal» section)
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INEFFICIENT BRAKING

Oil on drum or disc. Worn Pads/ Shoes	Contact an Authorised Service Centre
incorrect rear brake adjustment	Adjust

INEFFICIENT SUSPENSION

Oil leak; worn limit switch bumpers; worn shock absorber attachment points	Contact an Authorised Service Centre
--	---

AUTOMATIC TRANSMISSION PROBLEMS

Deteriorated roller housing or belt.	Contact an Authorised Service Centre.
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INCREASED EXHAUST NOISE

Deterioration of the SAS system
and/or of the tab

Contact an **Authorised Service
Centre.**

STAND DOES NOT RETURN TO POSITION

Presence of dirt

Clean and grease

STARTER LEVER DOES NOT RETURN TO CORRECT POSITION

Presence of dirt

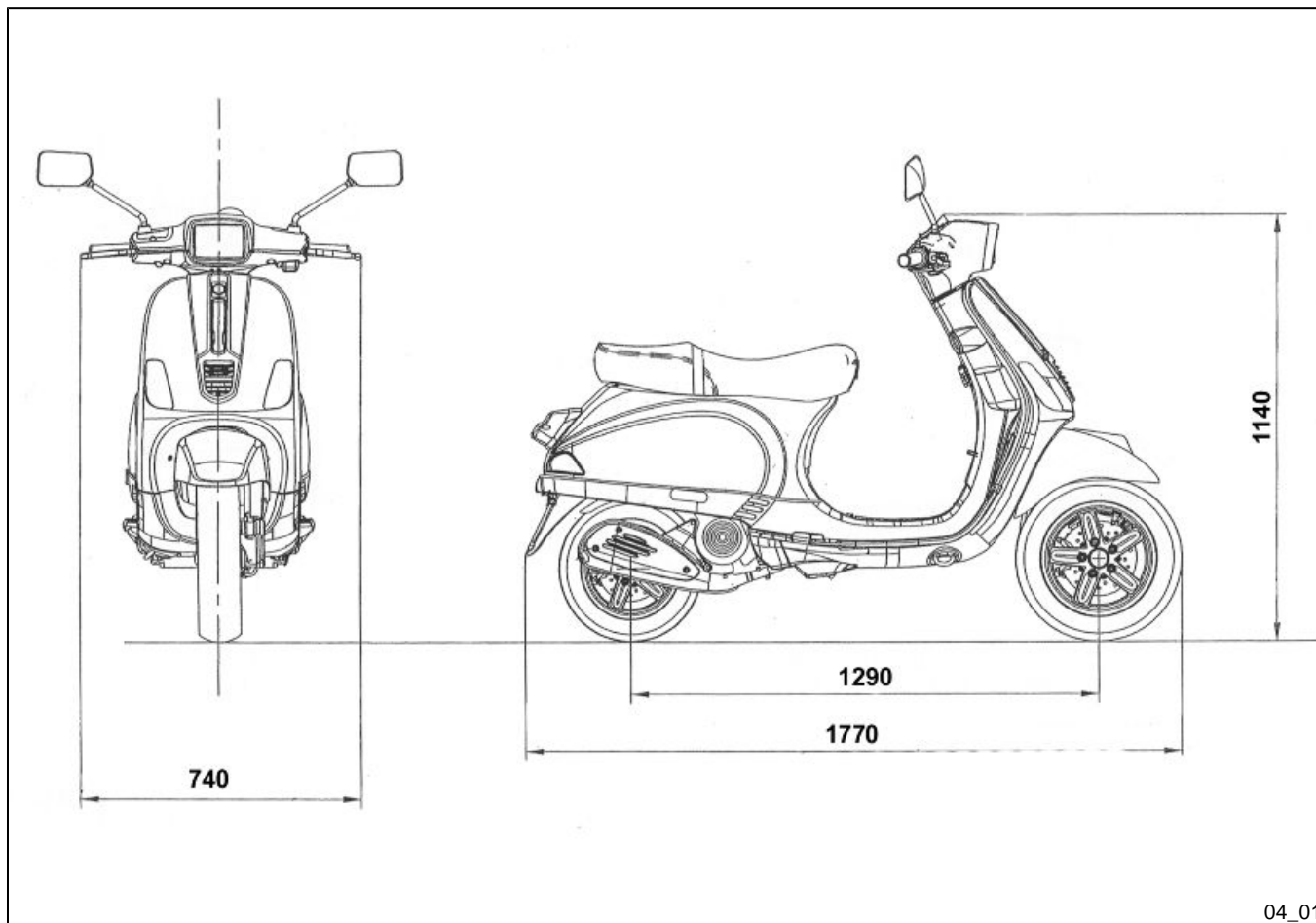
Clean and grease

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Chap. 04
Technicaldata



ENGINE TECHNICAL DATA

Engine type	Single cylinder, 4-stroke, Piaggio Hi-PER4
Engine capacity	49.9 cc
Bore x stroke	39 X 41.8 mm
Compression ratio	11.5: 1
Timing system	single overhead camshaft, driven by a chain to the left side.
Fuel system	Gravity feed, with unleaded petrol (with a minimum octane rating of 95) with carburettor.
Cooling	Forced air by a centrifugal fan.
LUBRICATION	engine lubrication with lobe pump (in the crankcase), chain-driven. Mesh pre-filter and centrifugal filter on the crankshaft
Transmission	Automatic expandable pulley variator with torque server, V-belt, dry centrifugal automatic clutch, gear reduction unit in oil bath and transmission compartment with forced air cooling system.
Electronic ignition	Consisting of a capacitor discharge ignition microprocessor with a built-in AT coil and variable advance
Ignition advance (before TDC)	8° at 1800 to 2000 rpm

	24° at 5000 to 6000 rpm
Spark plug	NGK CR8EB
Idle speed	about 1800/2000 rpm
Engine oil	~ 850 cc
Exhaust silencer	Absorption-type exhaust muffler with catalytic converter.
Engine idle speed	1600 ÷ 1800 rpm.

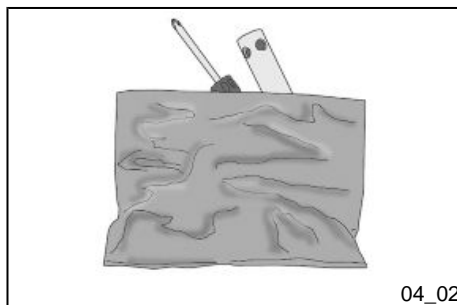
VEHICLE TECHNICAL DATA

Chassis	Stamped plate body with welded structural reinforcements.
Front suspension	Single arm with helical spring and single double-acting hydraulic shock absorber.
Rear suspension	Single-chamber shock absorber.
Front brake	Ø 200-mm disc brake with hydraulic control activated by handlebar right-side lever.
Rear brake	Ø 110-mm drum brake with mechanical control activated by handlebar left-side lever.
Wheel rim type	Light alloy wheel rims.
Front wheel rim	11" x 2.50
Rear wheel rim	10" x 3.00
Front tyre	Tubeless, 110/70 - 11" 45L

Rear tyre	Tubeless, 120/70 - 10" 54L
Front tyre pressure (with passenger)	1.6 bar (1.6 bar)
Rear tyre pressure (with passenger)	2.0 bar (2.3 bar)
Kerb weight	102 ± 5 kg
Maximum weight allowed	290 kg
Battery	12V/9 Ah

CAPACITY

Engine oil	~ 850 cm ³
Transmission oil	80 cm ³
Fuel tank (reserve)	~ 8.5 l (2 l)



Toolkit (04_02)

The toolkit comprises:

- One box-spanner.
- One twin screwdriver.

The tools are stored under the saddle.

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**Chap. 05
Spareparts and
accessories**



Warnings (05_01)

WARNING



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

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

WARNING



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

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**Chap. 06
Scheduled maintenance**



Scheduled servicing table (06_01)

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.

It is indispensable to have your vehicle serviced to the prescribed intervals of time, even if you have not reached the predicted mileage. Punctual vehicle servicing is necessary for the correct use of the guarantee. For any further information concerning Warranty procedures and 'Scheduled Maintenance', please refer to the 'Warranty Booklet'.

SCHEDULED MAINTENANCE TABLE

Km x 1000	1	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60		
Safety fasteners	I				I				I				I				I					I	
Spark plug			R		R		R		R		R		R		R		R		R		R		R
Drive belt			I		R		I		R		I		R		I		R		I		R		R
Throttle control	A				A				A				A				A						A
Tyre condition and wear					I				I				I				I						I
Air filter					C				C				C				C						C
Oil filter (mesh)			C		C		C		C		C		C		C		C		C		C		C
Solenoid filter			C		C		C		C		C		C		C		C		C		C		C
Valve clearance	I				I				I				I				I						I

Km x 1000	1	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
Electrical system and battery	I		I		I		I		I		I		I		I		I		I		I
Cylinder ventilation system									I								I				
Brake levers	L				L				L				L				L				L
Brake oil level (*)	I		I		I		I		I		I		I		I		I		I		I
Hub oil level	R		I		R		I		R		I		R		I		R		I		R
Engine oil	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R
Brake Pads/Shoes	I		I		I		I		I		I		I		I		I		I		I
Tyre pressure	I		I		I		I		I		I		I		I		I		I		I
Headlight					A				A				A				A				A
Vehicle road test	I		I		I		I		I		I		I		I		I		I		I
Idle speed	A				A				A				A				A				A
Odometer gear					L				L				L				L				L
CVT rollers			I		R		I		R		I		R		I		R		I		R
Suspension					I				I				I				I				I
Steering	A				A				A				A				A				A
Transmission					L				L				L				L				L

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

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

* Replace every 2 years

RECOMMENDED PRODUCTS TABLE

Product	Description	Specifications
AGIP GEAR SAE 80W-90	Lubricant for gearboxes and transmissions.	API GL-4
AGIP BRAKE 4	Brake fluid.	Synthetic fluid SAE J 1703 - FMVSS 116 - DOT 3/4 - ISO 4925 - CUNA NC 956 DOT 4
eni i-Ride PG 5W-40	Synthetic based lubricant for high-performance four-stroke engines.	JASO MA, MA2 - API SL - ACEA A3
AGIP FILTER OIL	Special product for the treatment of foam filters.	-
AGIP GREASE MU3	Yellow-brown, lithium-base, medium-fibre multipurpose grease.	ISO L-X-BCHA 3 - DIN 51 825 K3K -20
AGIP GP 330	Water repellent stringy calcium spray grease.	R.I.D./A.D.R. 2 10°b) 2 R.I.Na. 2.42 - I.A.T.A. 2 - I.M.D.G. class 2 UN 1950 Page 9022 EM 25-89

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