

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 2T



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

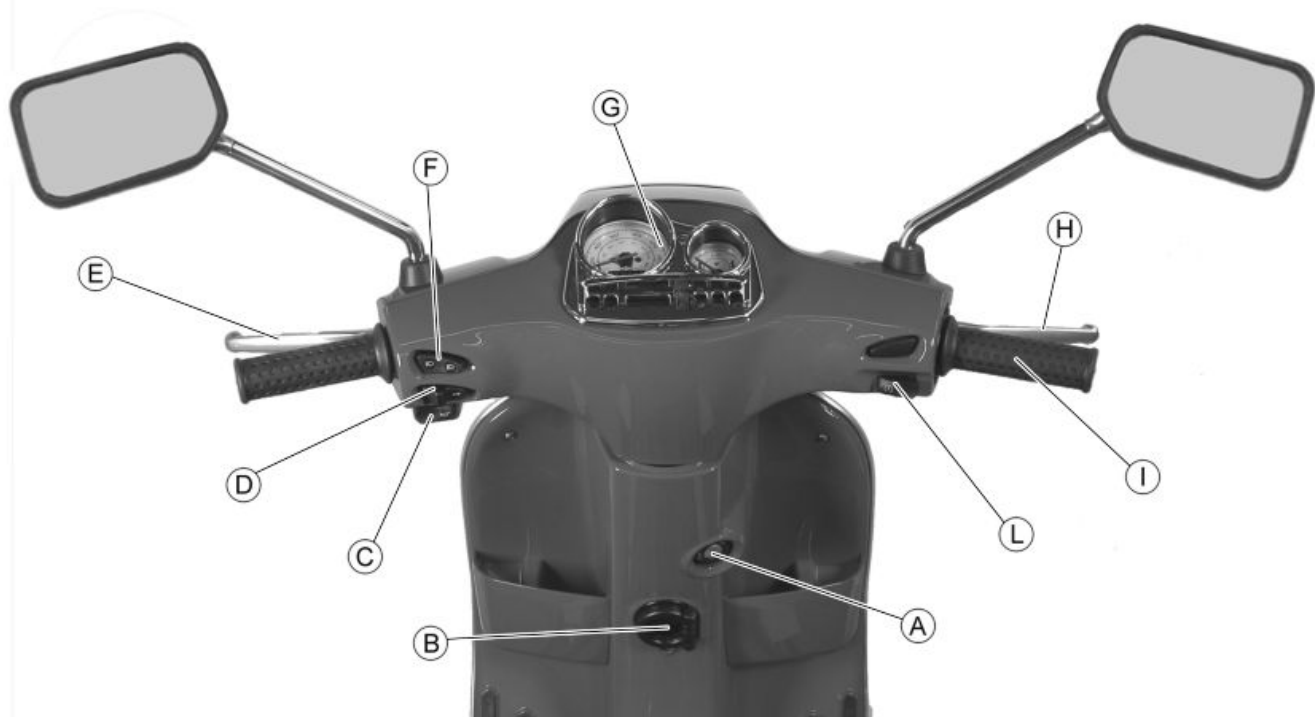
F = Headlight switch

G = Analogue instrument panel

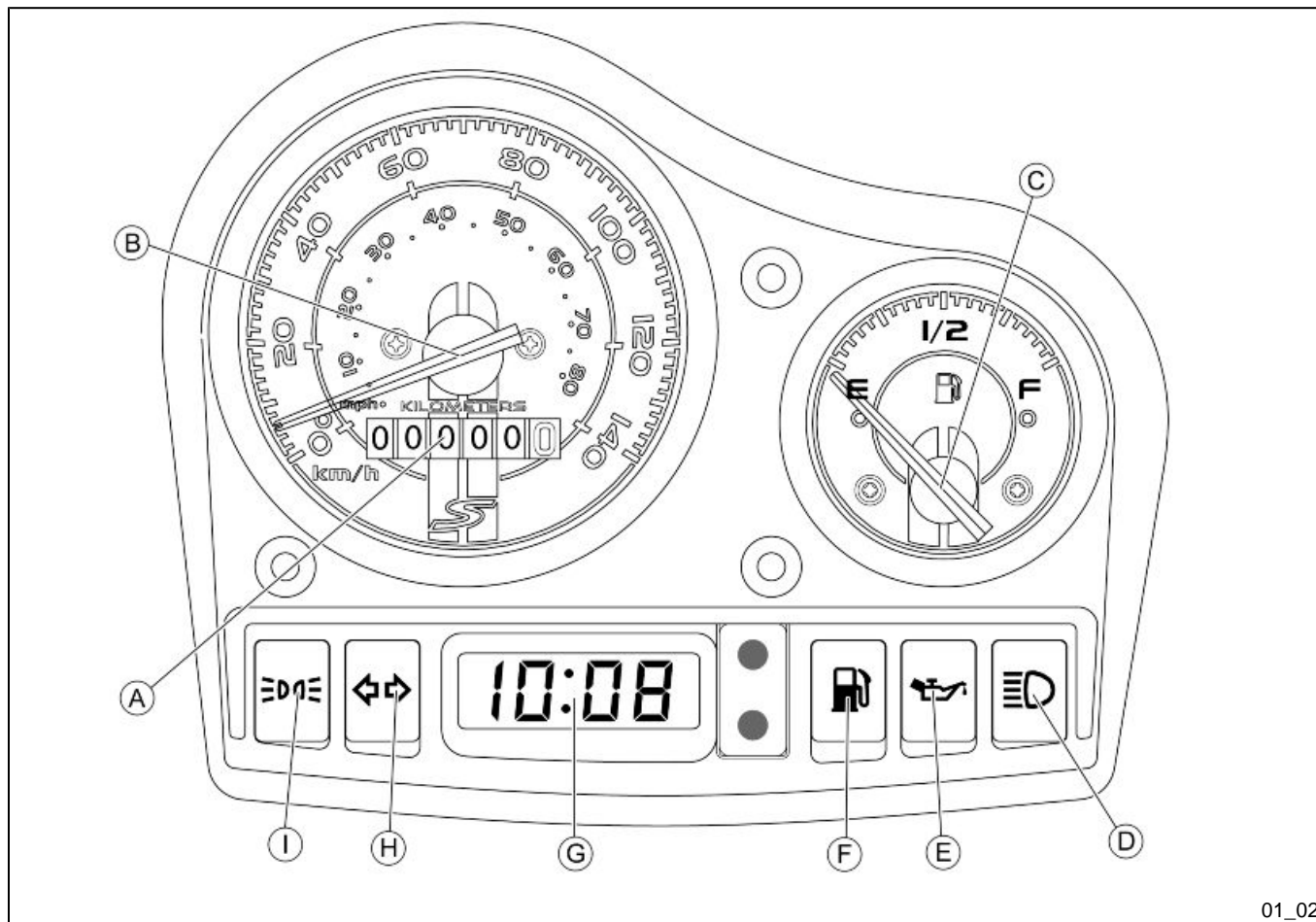
H = Front brake lever

I = Throttle grip

L = Starter button



01_01



Analogueinstrumentpanel (01_02)

A = Odometer

B = Speedometer

C = Fuel gauge

D = High-beam warning light

E = Oil level warning light

F = Fuel level warning light

G = Digital clock

H = Turn indicator warning light

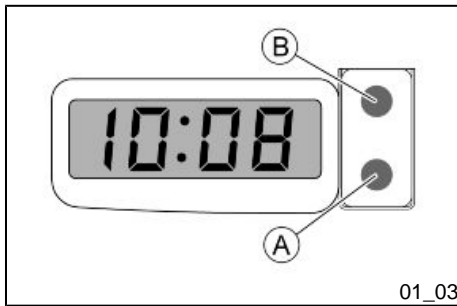
I = Headlight warning light

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.

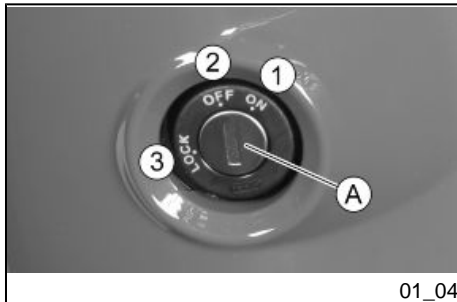
WARNING



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.



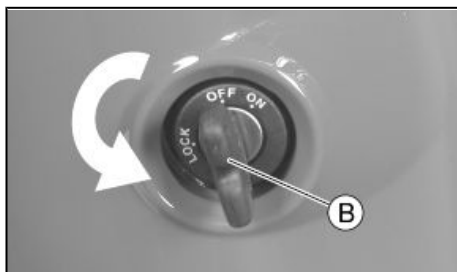
01_04

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.

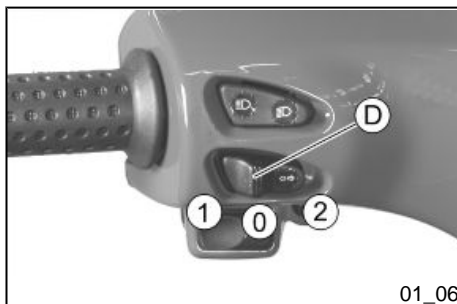
Releasing the steering wheel

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

CAUTION



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



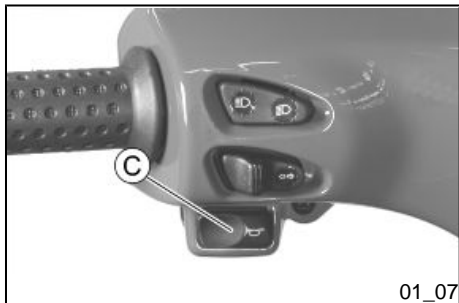
01_06

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.

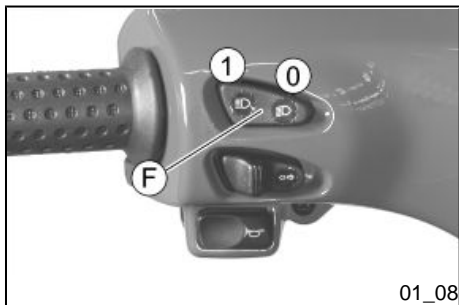


Hornbutton (01_07)

Push the «C» button to sound the horn.

Lightswitch (01_08)

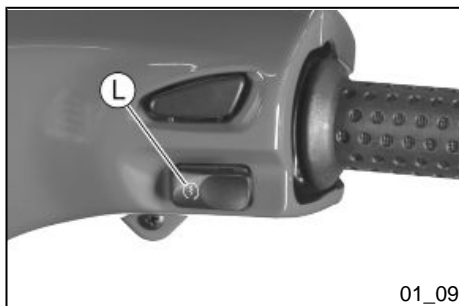
When the light switch «F» is set to «0», the low-beam light is on. When set to «1», the high-beam light is activated.



CAUTION



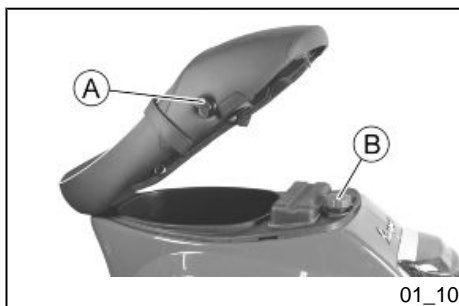
DO NOT PLACE, TRANSPORT OBJECTS AND/OR CLOTHES OVER THE FRONT HEADLIGHT ASSEMBLY, WHEN THE HEADLIGHT IS TURNED ON OR OFF. FAILURE TO FOLLOW THIS PRECAUTION MAY CAUSE OVERHEATING AND THE SUBSEQUENT FUSION OF THE GLASS.



01_09

Start-upbutton (01_09)

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



01_10

Fueltank (01_10)

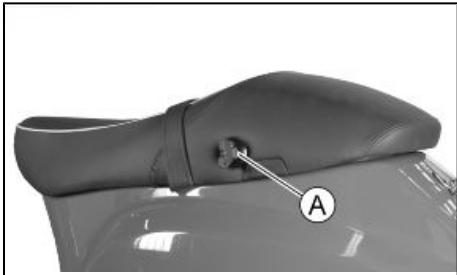
The fuel tank cap «B» is under the saddle. To reach it, insert the key into lock «A», turn it anticlockwise and tip the saddle forwards.



01_11

Mixture oil reservoir (01_11)

The mixer oil reservoir cap «C» is under the saddle. To reach it, insert the key into the saddle lock, turn it anticlockwise and tip the saddle forward.



01_12

Opening the saddle (01_12)

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

Keys (01_13)

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



01_13

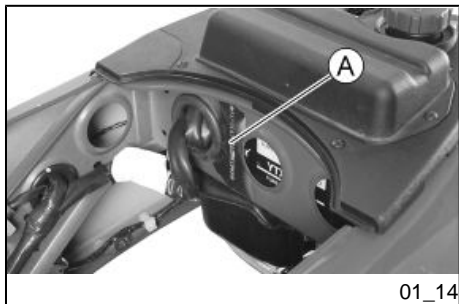
Identification (01_14, 01_15)

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

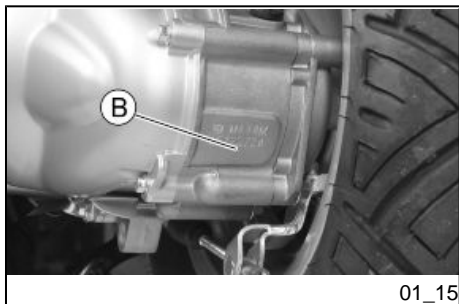


PLEASE REMIND THAT ALTERING IDENTIFICATION REGISTRATION NUMBERS CAN LEAD TO SERIOUS PENAL SANCTIONS (IMPOUNDING OF THE VEHICLE, ETC.).



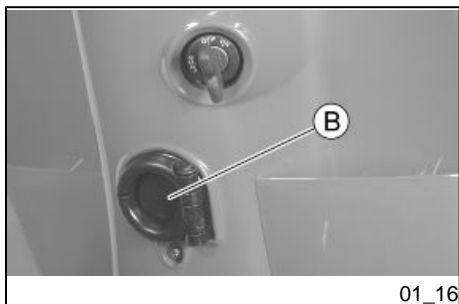
Chassis number

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.



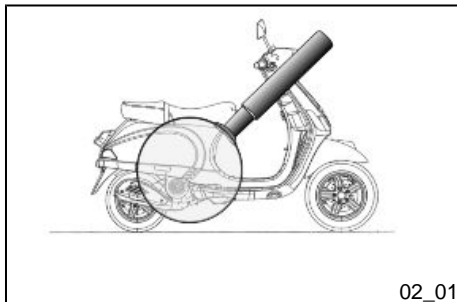
Bagclip (01_16)

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

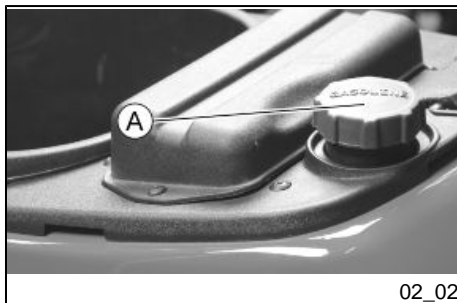


02_01

Checks (02_01)

Before using the vehicle, check:

1. That the petrol tank and the oil reservoir are full.
2. Rear hub oil level.
3. That the tyres are properly inflated.
4. The correct functioning of headlights, rear light and turn indicators.
5. The correct functioning of front and rear brakes.
6. The fluid level in the brake pump reservoir.



02_02

Refuelling (02_02, 02_03)

Fill the fuel tank «**A**» with unleaded petrol with a minimum octane rating of 95.

The low fuel warning light on the instrument panel turns on to signal low fuel (see the "Instrument Panel" section).

Top up oil tank «**B**» using recommended oil. The oil warning light on the instrument panel turns on to signal oil minimum level (see the "Instrument Panel" section).

Should this warning light turn on, the oil tank should be topped-up at the following refuelling and in any case before travelling another 150 km.

When turning the key to «**ON**», the oil warning light turns on for a few seconds indicating the correct functioning of the bulb and oil reserve circuit.

If the warning light fails to come on, it is faulty. Should this happen, contact an **Authorised Service Centre**.

CAUTION



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



02_03

CAUTION



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



IMPORTANT: NEVER EMPTY THE MIXER OIL RESERVOIR.

CAUTION



THE USE OF OILS AND SPARK PLUGS OTHER THAN THOSE RECOMMENDED CAN SHORTEN THE LIFE OF THE ENGINE.

Recommended products

eni i-Ride PG 5W-40

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

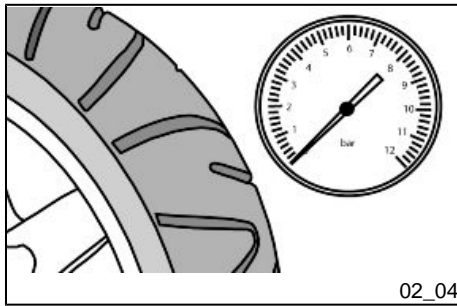
Characteristic

Fuel tank (reserve)

~ 8.5 l (2 l)

Mixer oil reservoir (reserve)

~ 1.5 l (0.5 l)



Tyrepressure (02_04)

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.

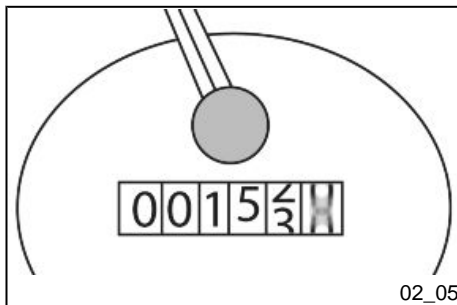
TYRES MUST BE REPLACED WHEN THE TREAD REACHES THE WEAR LIMITS SET FORTH BY LAW.

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



Runningin (02_05)

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.



Startinguptheengine (02_06, 02_07, 02_08, 02_09)

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.

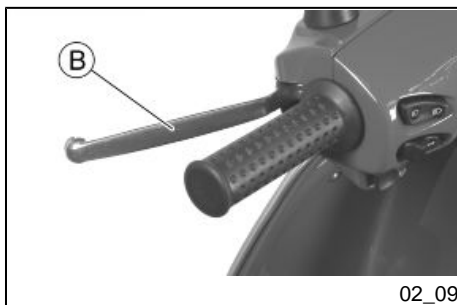
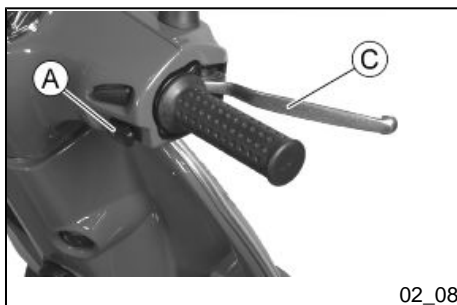
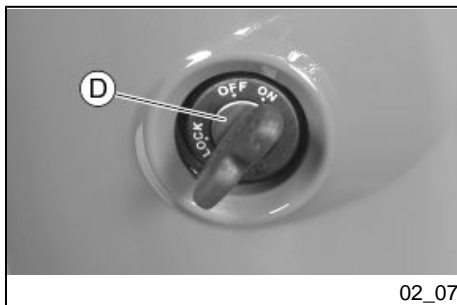
To start it up, it is necessary to:

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_10

Difficultstartup (02_10, 02_11, 02_12)

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 and then stop for five seconds. If the engine does not start after a few attempts, 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. Place 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». If the engine is flooded, twist the throttle grip fully open while operating the kick-starter.

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

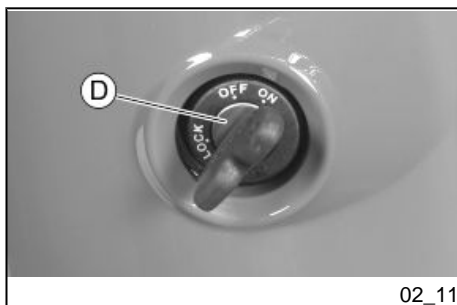


ALWAYS PLACE THE VEHICLE ON ITS STAND BEFORE KICK STARTING.

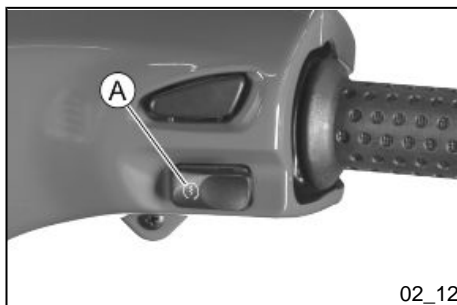
WARNING



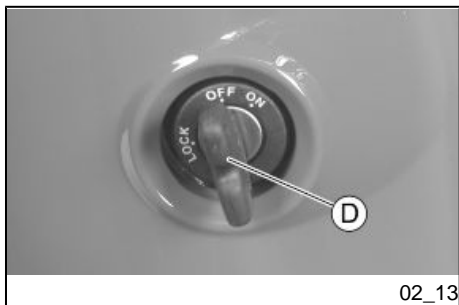
TAMPERING MAY CAUSE SERIOUS ENGINE MALFUNCTION.



02_11



02_12



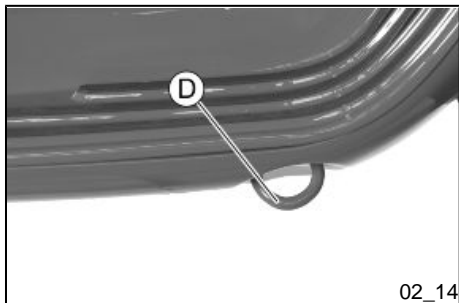
Stopping the engine (02_13)

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_14)

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.

Catalyticsilencer

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.



02_15

Stand (02_15)

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



02_16

Automatictransmission (02_16)

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



02_17

Safedriving (02_17)

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 in 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.

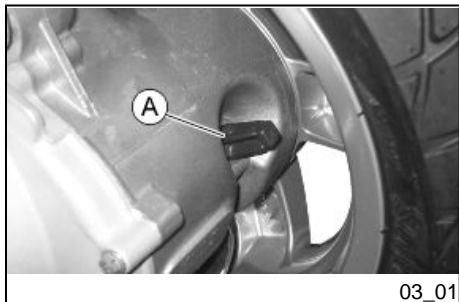
WARNING

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)

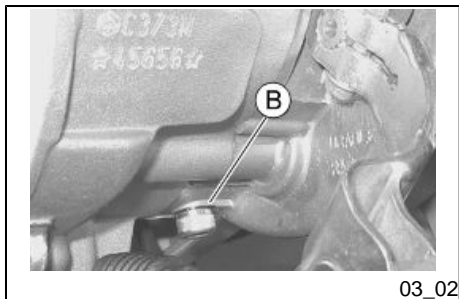
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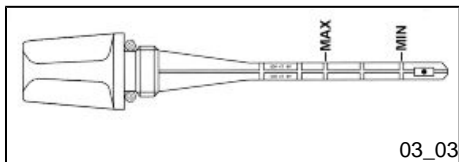
Chap. 03
Maintenance



03_01



03_02



03_03

Huboillevel (03_01, 03_02, 03_03)

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_04)

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.

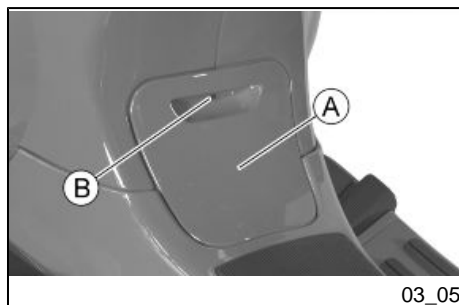
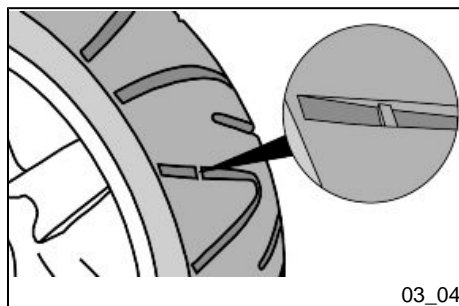
TYRES

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

TYRE INFLATION PRESSURE

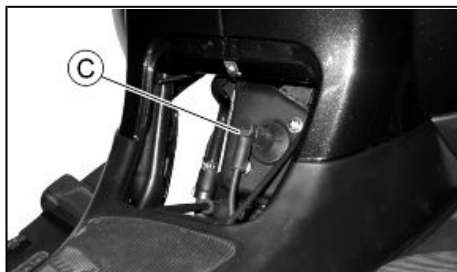
Front tyre pressure (with passenger)	1.6 bar (1.6 bar)
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Rear tyre pressure (with passenger)	2.0 bar (2.3 bar)
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Sparkplugdismantlement (03_05, 03_06)

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. When refitting the plug, tighten it manually, being sure to insert it at the right angle; use the spanner only to fasten it. 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.



03_06

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.

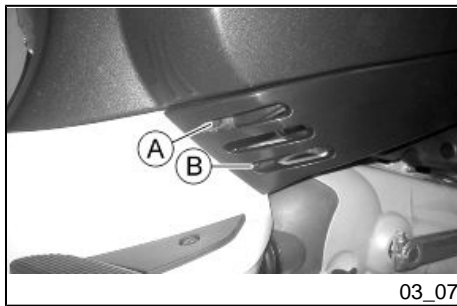
Characteristic

Spark plug

CHAMPION RN3C

Electrode gap

0.6 ÷ 0.7 mm



Removing the air filter (03_07, 03_08)

Remove the side fairing by undoing the screw «A» and the smaller screw «B». Take off air cleaner cover «D» after having unscrewed the 5 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

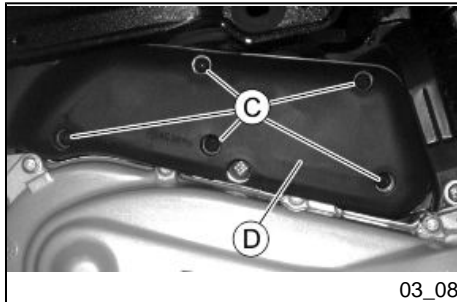


IN CASE OF RIDING ON DUSTY ROADS IT IS ADVISABLE TO CLEAN THE AIR FILTER MORE FREQUENTLY THAN INDICATED IN THE RELEVANT CHAPTER ON SCHEDULED MAINTENANCE.

Recommended products

AGIP FILTER OIL

Special product for the treatment of foam filters.

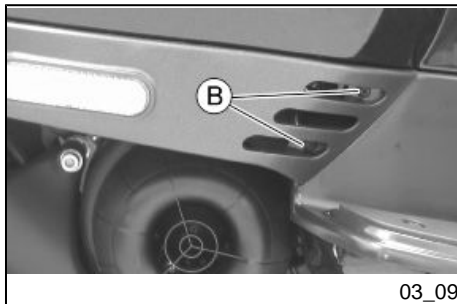


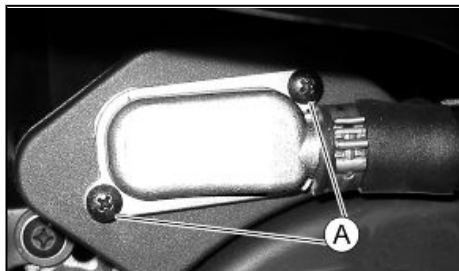
Secondary air system (03_09, 03_10)

Remove the right side fairing by undoing the 2 screws marked «B» indicated in the figure.

Remove the two screws «A» from the aluminium SAS cover. Release the metal tube from the rubber housing on the cover without extracting the tube from the cover/sleeve. Remove the tab and plastic cover, extract the sponge and wash it in water and soap.

Dry it with compressed air before refitting it, making sure to correctly fit the tab in the housing on the two plastic and aluminium covers. Every time you disassemble the filter, replace the O-ring seal located in the cover.





03_10



03_11

Intakeplug (03_11)

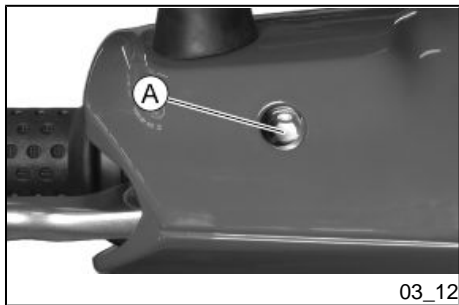
Remove the cap of the transmission cover operating on the corresponding release slots with a plain slot screwdriver. Wash the sponge in water and soap without removing it from its seat.

Dry it with compressed air before refitting it taking care to do so at the correct angle.

CAUTION

WARNING!

SHOULD THERE BE ANY PROBLEMS WHEN ADJUSTING IDLE SPEED, IT MAY BE NECESSARY TO ADJUST EXHAUST GASES (CO) TOO. TURN TO AN AUTHORISED PIAGGIO SERVICE CENTRE TO CARRY OUT THESE OPERATIONS.



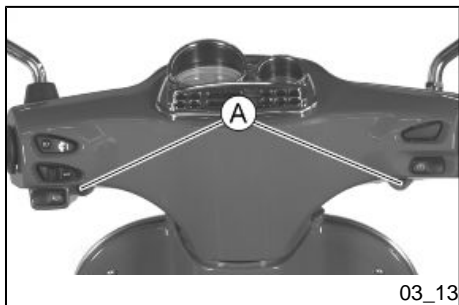
03_12

Checking the brake oil level (03_12)

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_13

Braking system fluid topup (03_13, 03_14, 03_15)

Proceed as follows:

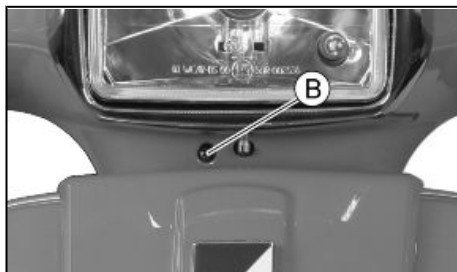
1. Remove the rear-view mirrors.
2. Undo the two screws «A».
3. Undo the screw «B» and remove the front handlebar cover.
4. Remove the reservoir cover «C» by loosening the two fixing screws «D» and refill with the prescribed brake fluid type only and without exceeding the maximum level.

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.



03_14

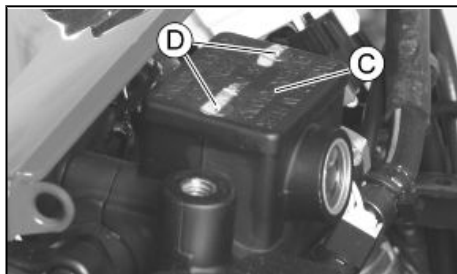
CAUTION

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.

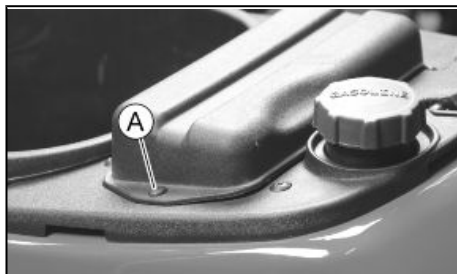
Recommended products**AGIP BRAKE 4**

Brake fluid.

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



03_15



03_16

Battery (03_16)

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

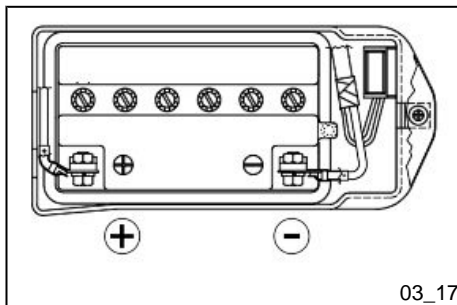


ELECTROLYTE CONTAINS SULPHURIC ACID: AVOID CONTACT WITH EYES, SKIN AND CLOTHES. IN CASE OF ACCIDENTAL CONTACT, RINSE WITH ABUNDANT WATER AND CONSULT A DOCTOR.

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_17)

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

Checkingtheelectrolytelevel

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 vehicle'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 CASE OF ACCIDENTAL CONTACT, RINSE WITH ABUNDANT WATER AND CONSULT A DOCTOR.

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.

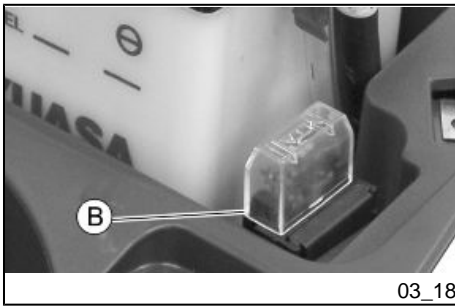
THE BATTERY MUST BE CHARGED WITH A CURRENT EQUAL TO 1/10 OF THE RATED CAPACITY OF THE BATTERY AND FOR NOT LONGER THAN 10 HOURS. CONTACT AN AUTHORISED SERVICE CENTRE TO CARRY OUT THIS OPERATION SAFELY. WHEN REFITTING THE BATTERY MAKE SURE THE LEADS ARE CORRECTLY CONNECTED TO THE TERMINALS.

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.



03_18

Fuses (03_18)

The electrical system is protected by a plug fuse «B» located to the left of the battery compartment. The ignition system, headlight and the rear light are not fuse-protected. 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.

Electric characteristic

Fuse

7.5 A

BULBS

High/low beam light bulb	<p>Type: Spherical</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>

Quantity: 1

Front turn indicator light bulb

Type: Spherical**Power:** 12V - 10W**Quantity:** 1 RHS + 1 LHS

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

Warning light bulbs: turn indicators, low-beam lights, high-beam lights, low fuel, low oil

Type: All glass**Power:** 12V - 1.2W**Quantity:** 5

Instrument panel lighting bulbs

Type: All glass**Power:** 12V 1.2W**Quantity:** 3**Frontlightgroup (03_19, 03_20, 03_21, 03_22)**

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.

To replace the tail light bulb:

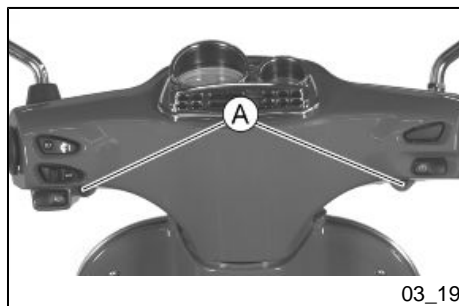
1. Slide off the rubber bulb holder «E» from its fitting.
2. Hold and slide off the bulb.

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.

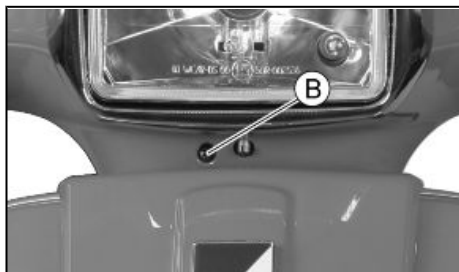
THE PRESENCE OF DROPS OF WATER, ON THE OTHER HAND, COULD INDICATE THAT WATER IS INFILTRATING. CONTACT THE AFTER-SALES SERVICE NETWORK.



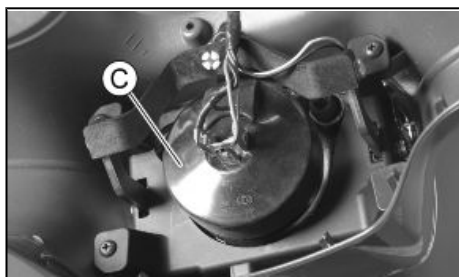
CAUTION



DO NOT PLACE, TRANSPORT OBJECTS AND/OR CLOTHES OVER THE FRONT HEADLIGHT ASSEMBLY, WHEN THE HEADLIGHT IS TURNED ON OR OFF. FAILURE TO FOLLOW THIS PRECAUTION MAY CAUSE OVERHEATING AND THE SUBSEQUENT FUSION OF THE GLASS.



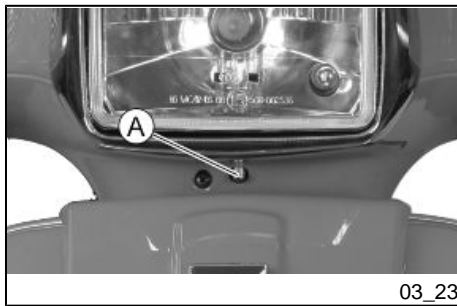
03_20



03_21



03_22



03_23

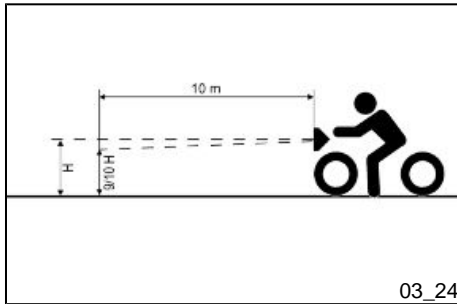
Headlightadjustment (03_23, 03_24)

Proceed as follows:

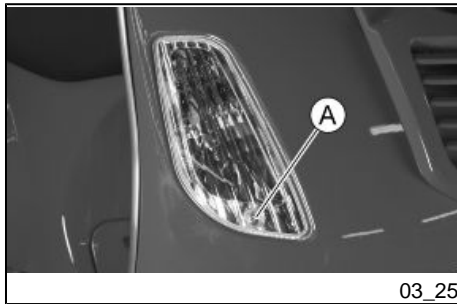
1. Place the vehicle in running order and with the tyres inflated to the prescribed pressure, on a flat surface 10 m away from a white screen situated in a shaded area, making sure that the longitudinal axis of the vehicle is perpendicular to the screen;
2. Turn on the headlight and check that the borderline 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_24



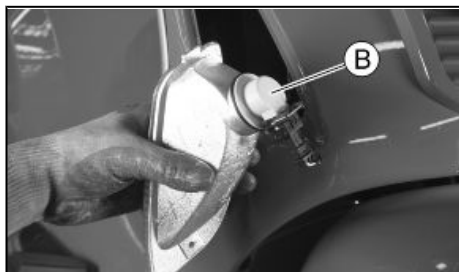
03_25

Frontdirectionindicators (03_25, 03_26)

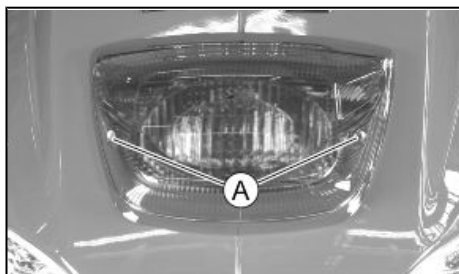
To replace the bulbs:

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.

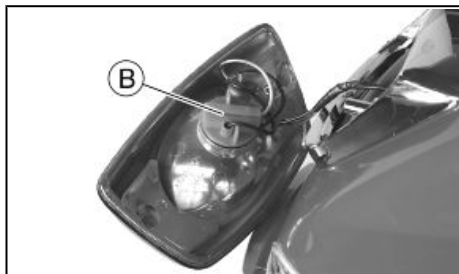
To refit, proceed in reverse order.



03_26



03_27



03_28

Rearopticalunit (03_27, 03_28)

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.

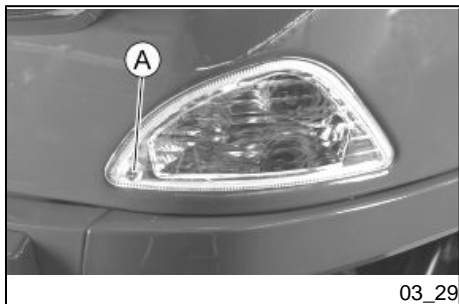
To refit, proceed in reverse order.

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.

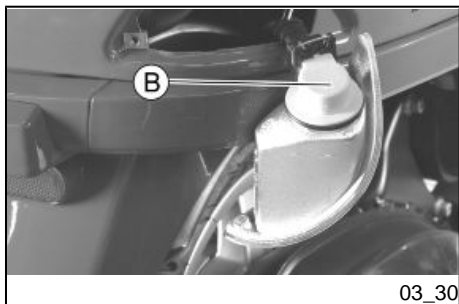


Rear turn indicators (03_29, 03_30)

To replace the bulbs:

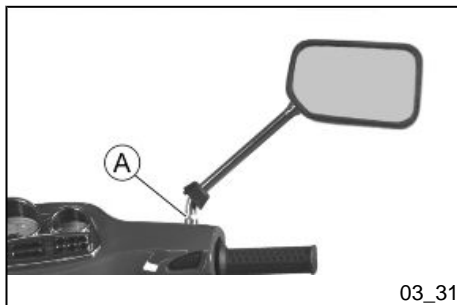
1. Remove the turn indicator from its fitting by undoing the screw «A».
2. Take out the bulb holder «B» from its fitting by turning it anticlockwise.
3. Press the bulb, turn it anticlockwise and then take it out.

To refit, proceed in reverse order.



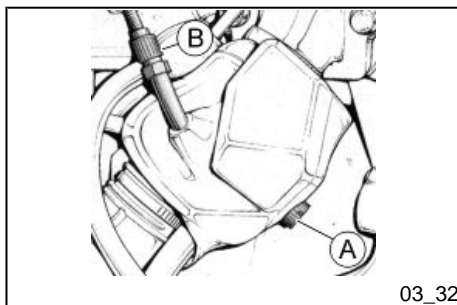
Rear-view mirrors (03_31)

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



03_31

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



03_32

Idle adjustment (03_32)

The idle speed is adjusted by means of the idle speed adjuster screw «A» located on the carburettor.

To do this, proceed as shown in the diagram. Turn the set screw for clearance adjustment of the throttle control transmission «B», then replace the rubber protection cap.

Adjust idle speed with the rear wheel off the ground (vehicle on stand) and with a warm engine. Screw or unscrew the knob-type head screw until the engine idles smoothly, **i.e. without the rear wheel being moved by the engine.**

If the adjustment in these conditions is difficult, contact an **Authorised Service Centre**.

CAUTION



WHEN ADJUSTING IDLE SPEED, BE CAREFUL NOT TO TOUCH HOT PARTS OF THE ENGINE TO AVOID BURNS.

Characteristic

Engine idle speed

1,800 ± 100 rpm



Frontdiscbrake (03_33)

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.

CAUTION

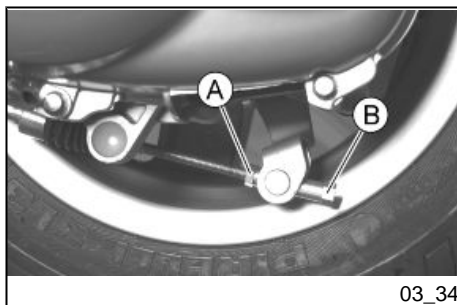
THE PRESENCE OF SAND, MUD, SNOW MIXED WITH SALT, ETC. ON THE ROAD, CAN DRASTICALLY REDUCE THE LIFE OF THE BRAKE PADS. IN ORDER TO AVOID THIS, WE RECOMMEND WASHING THE VEHICLE FREQUENTLY WHEN RIDING IN THESE ROAD CONDITIONS.

Rear drum brake (03_34)

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_35)**

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.

JASO MA, MA2 - API SL - ACEA A3

Cleaningthevehicle

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
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insulator is cracked or broken. If the spark plug is in good conditions, contact an **Authorised Service Centre**.

LACK OF COMPRESSION

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

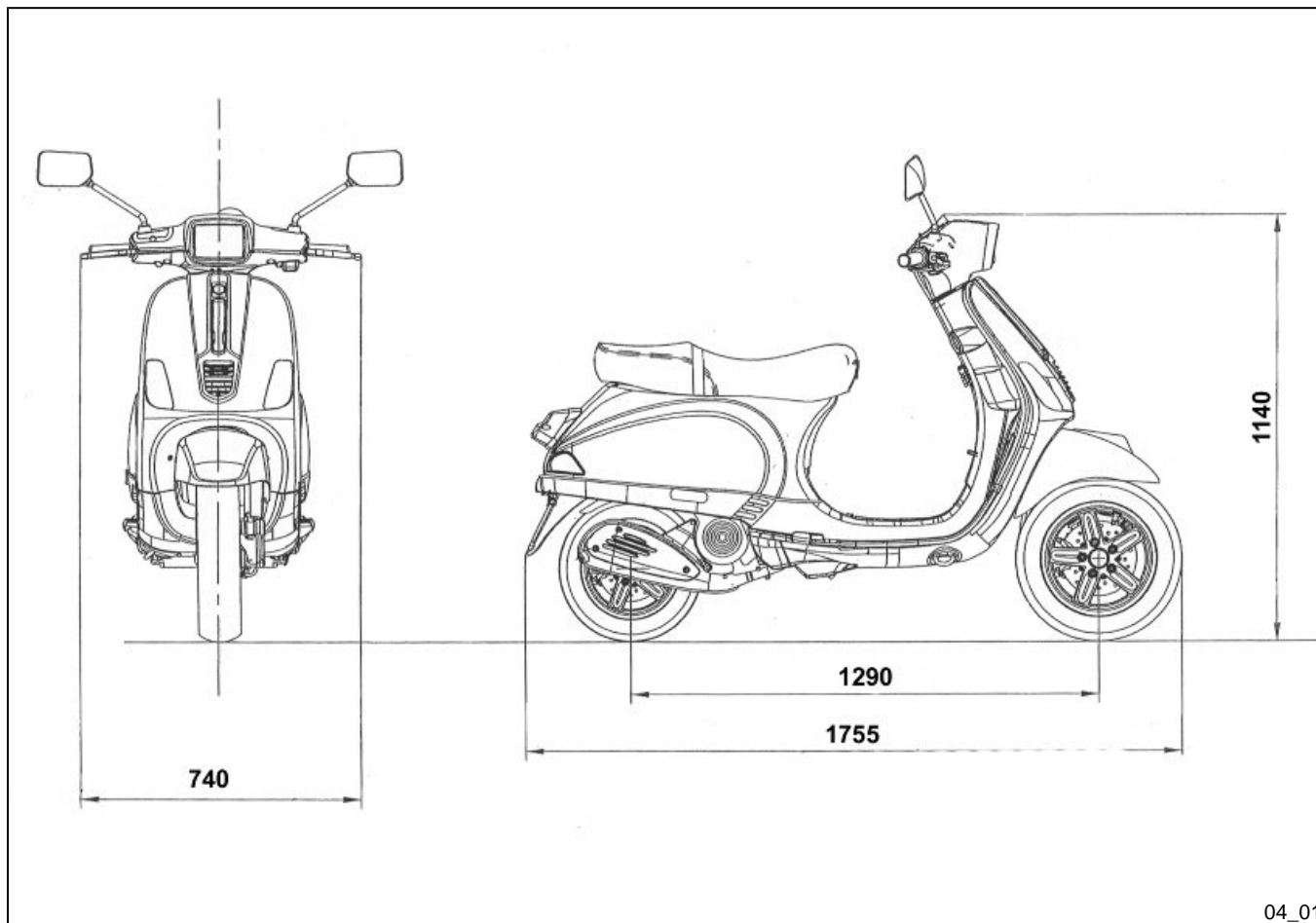
STARTER LEVER DOES NOT RETURN TO CORRECT POSITION

Presence of dirt	Clean and grease
------------------	------------------

Vespa S 50 2T



Chap. 04
Technicaldata



ENGINE TECHNICAL DATA

Type	single-cylinder, two-stroke
Engine capacity	49 cm ³
Bore x stroke	40 X 39.3 mm
Compression ratio	9.9 ± 0.5 : 1
Engine idle speed	1,800 ± 100 rpm
Timing system	-
Valve clearance	-
Max. Power	3.2 kW at 7,500 rpm
MAX. torque	4.4 Nm at 6,500 rpm
Transmission	Automatic expandable pulley variator with torque server, V-belt, automatic centrifugal dry clutch.
Final reduction gear	Gear reduction unit in oil bath.
LUBRICATION	Engine lubrication carried out by fuel mixture oil.
Cooling	Forced-air circulation cooling.
Electric	Starter and kick starter
Ignition	Capacitive discharge ignition, with variable advance and separate HV coil.
Ignition advance	17° at 4,000 rpm
Spark plug	CHAMPION RN3C

Alternative spark plug	-
Fuel supply	Carburettor: DELL'ORTO PHVA 17.5 RD
Fuel	Unleaded petrol (95 RON) and oil.
Exhaust silencer	Absorption-type exhaust muffler with catalytic converter.
Emissions	EURO 2

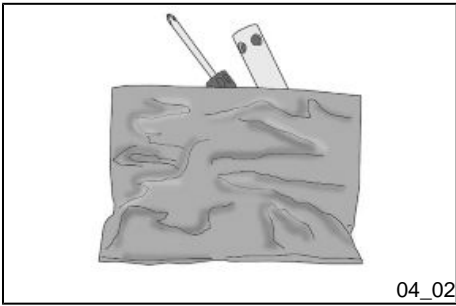
VEHICLE TECHNICAL DATA

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	96 ± 4 kg
Maximum weight allowed	290 kg
Battery	12V/9 Ah

CAPACITY

Transmission oil	80 cm ³
Cooling system fluid	-
Fuel tank (reserve)	~ 8.5 l (2 l)
Mixer oil reservoir (reserve)	~ 1.5 l (0.5 l)



Toolkit (04_02)

The toolkit comprises:

- One box-spanner.
- One twin screwdriver.
- One special spanner for adjusting rear shock absorbers.

The tools are stored in the helmet compartment.

Vespa S 50 2T



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.

Vespa S 50 2T



Chap. 06
Scheduled maintenance



06_01

Scheduledservicingtable (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'.

MAINTENANCE TABLE

km x 1,000	1	5	10	15	20	25	30	35	40	45	50	55	60
Safety fasteners	I		I		I		I		I		I		I
Spark plug		I	R	I	R	I	R	I	R	I	R	I	R
Drive belt			I	R	I		R		I	R	I		R
Mixer belt					R				R				R
Throttle control - mixer	A	A	A	A	A	A	A	A	A	A	A	A	A
Air filter		C	C	C	C	C	C	C	C	C	C	C	C
SAS filter			I	C	I		C		I	C	I		C
Electrical system and battery	I	I	I	I	I	I	I	I	I	I	I	I	I
Cylinder ventilation system					I				I				
Brake levers	L	L	L	L	L	L	L	L	L	L	L	L	L

km x 1,000	1	5	10	15	20	25	30	35	40	45	50	55	60
Brake fluid **	I	I	I	I	I	I	I	I	I	I	I	I	I
Mixer	I	I	I	I	I	I	I	I	I	I	I	I	I
Mixer oil*	I	I	I	I	I	I	I	I	I	I	I	I	I
Hub oil	R	I	R	I	R	I	R	I	R	I	R	I	R
Headlight direction adjustment			A		A		A		A		A		A
Brake Pads/Shoes	I	I	I	I	I	I	I	I	I	I	I	I	I
Sliding shoes / CVT rollers			R		R		R		R		R		R
Tyre pressure and wear	I	I	I	I	I	I	I	I	I	I	I	I	I
Vehicle road test	I	I	I	I	I	I	I	I	I	I	I	I	I
Idle speed	A		A		A		A		A		A		A
Odometer gear	L		L		L		L		L		L		L
Suspension			I		I		I		I		I		I
Steering	A		I		I		I		I		I		I
Transmission			L		L		L		L		L		L
Mixer oil pipes	I		I		I		I		I		I		I

I: INSPECT AND CLEAN, ADJUST, LUBRICATE OR REPLACE, IF NECESSARY

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

Clean the SAS air filter every 2 years

** Check level every 500 km*

*** 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.	-
eni i-Ride PG 2t	Synthetic based lubricant for low smoke 2-stroke engines and additives.	API TC - JASO FC - ISO-L-EGD
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

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

1 Inch (in)	25.4 Millimetres (mm)
1 Foot (ft)	0.305 Meter (m)
1 Mile (mi)	1.609 Kilometre (km)
1 US Gallon (USgal)	3.785 Litre (l)
1 Pound (lb)	0.454 Kilogram (kg)
1 Cubic inch (in ³)	16.4 Cubic centimetres (cm ³)
1 Foot pound (lb ft)	1,356 Newton meter (Nm)

1 Miles per hour (mi/h)	1.602 Kilometres per hour (km/h)
1 Pound per square inch (PSI)	0.069 (bar)
1 Fahrenheit (°F)	$32 + (9/5)$ Celsius (°C)

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