

Vespa would like to thank you

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

Vespa Sprint 125ie 150ie 3Valvole ABS



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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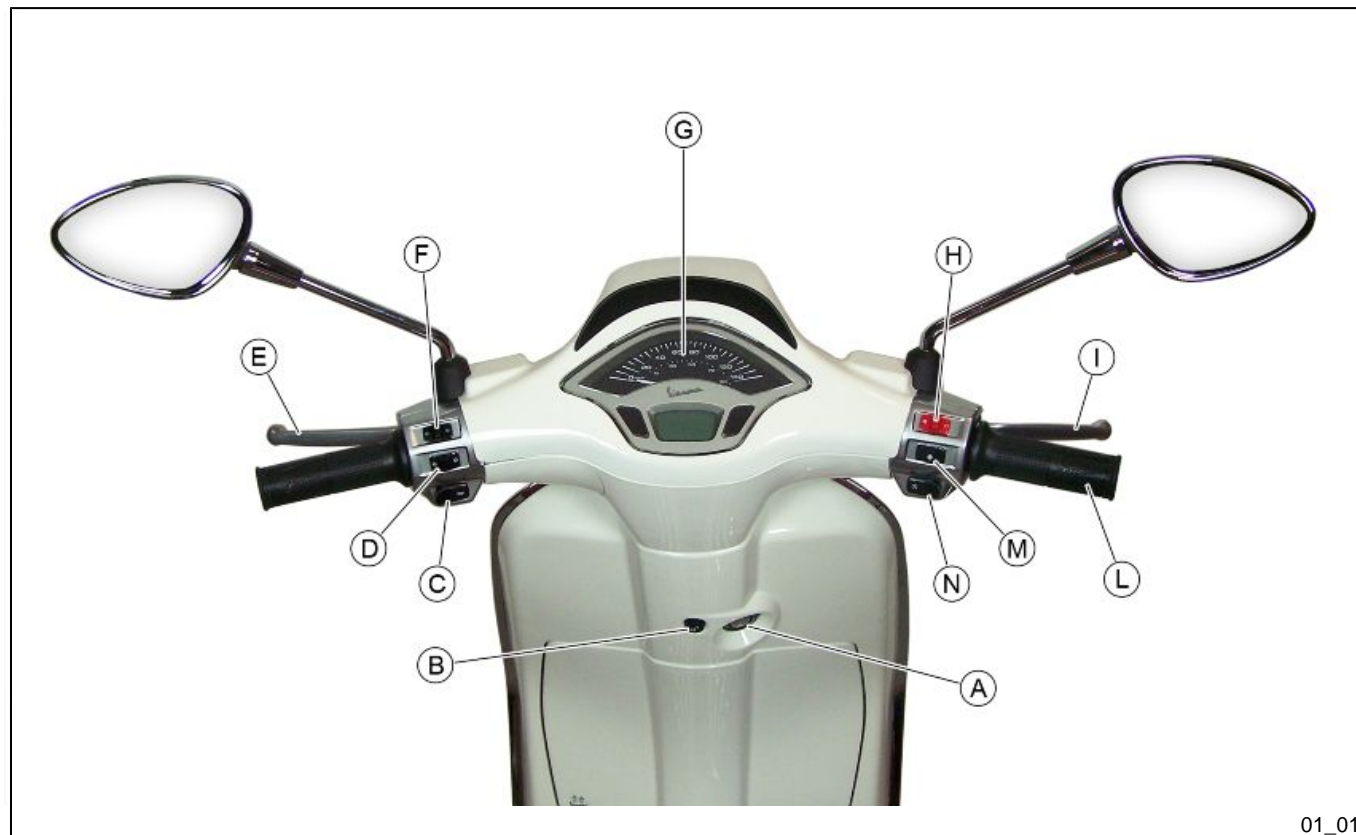
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Vespa Sprint 125ie 150ie 3Valvole ABS



**Chap. 01
Vehicle**

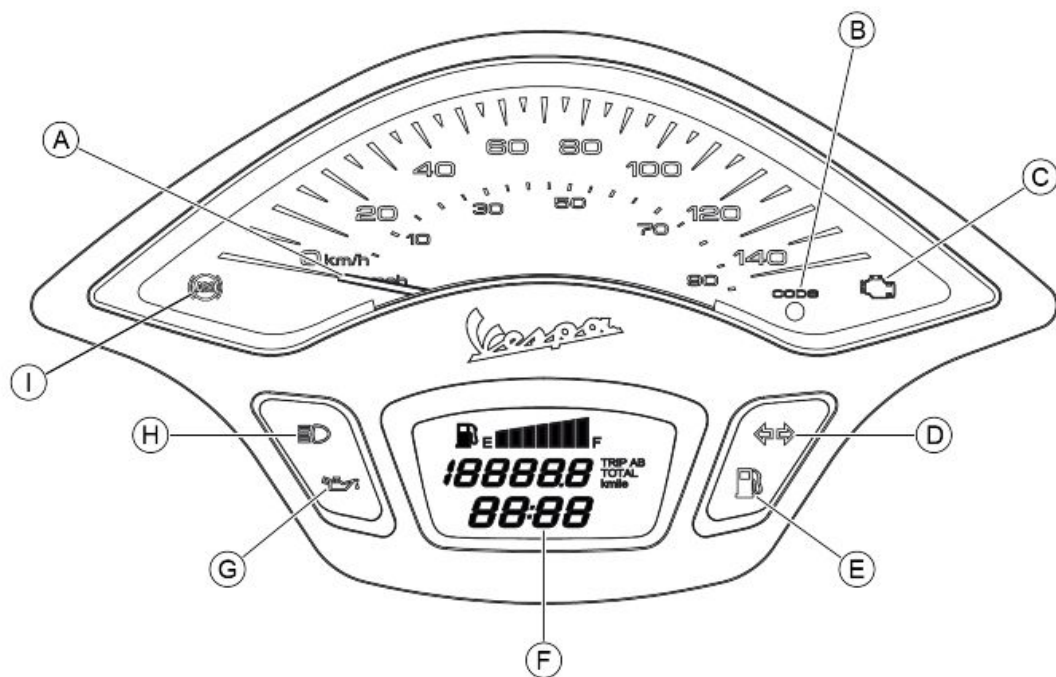
Dashboard (01_01)



01_01

- A** = Ignition switch
- B** = Saddle opening button
- C** = Horn button
- D** = Turn indicator switch
- E** = Rear brake lever
- F** = Light switches
- G** = Instrument panel
- H** = Engine stop switch
- I** = Front brake lever
- L** = Acceleration knob
- M** = MODE button
- N** = Starter button

Analogue instrument panel (01_02)



01_02

A = Speedometer

B = Immobilizer LED

C = Engine control warning light

D = Turn indicator warning light

E = Low fuel warning light

F = Digital display;

G = Low engine oil pressure warning light

H = High-beam headlight warning light

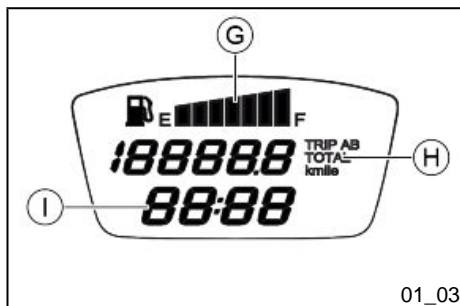
I = ABS warning light

Digital lcd display (01_03)

G = Fuel gauge with petrol symbol

H = Total and partial odometer

I = Clock



By turning the ignition key to the «**ON**» position all the digital display functions will light up for a few seconds.

TOTAL AND PARTIAL ODOMETER «H»

Acting on the MODE button this indicator displays the following functions in sequence:

- Total odometer (TOTAL)
- Partial odometer A (TRIP A)
- Partial odometer B (TRIP B)

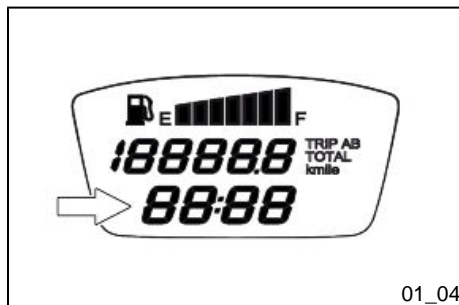
The unit of measurement can be changed (from Km to Miles) with the following procedure:

- turn the key to the «**OFF**» position;
- press the MODE button:
- Holding in the MODE button, turn the key to the «**ON**» position;
- after about 2 seconds release the MODE button.

N.B.

THE NAVIGATION OF THE DISPLAY DEFINES:

- «**SHORT PRESS**»: PRESSING THE BUTTON INDICATED FOR LESS THAN TWO SECONDS;
- «**LONG PRESS**»: PRESSING THE BUTTON INDICATED FOR MORE THAN TWO SECONDS.



Setting the hour/minutes function (01_04)

To set or adjust the clock, with vehicle running or with key inserted in «**ON**» position, proceed as follows:

- short press the MODE button in sequence until the total odometer appears on the display;
- long press to enter the hour display;
- adjust the hour by short pressing the MODE button;
- with a long press, the set value is confirmed (or present value if not modified) and it goes on to the minutes display.
- adjust the minutes by short pressing the MODE button;
- with a long press, the set value is confirmed (or present value if not modified) and the set or changed time will be displayed.

WARNING

FOR SAFETY REASONS THE TIME SETTING IS ONLY POSSIBLE WITH THE VEHICLE AT A STANDSTILL.

WARNING

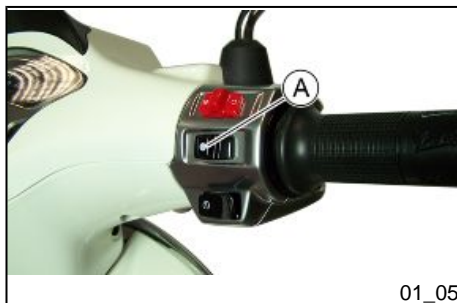
DETACHING THE BATTERY CABLES IMPLIES RESETTING THE CLOCK, WHICH WILL SHOW «12:00» UNTIL IT IS ADJUSTED AGAIN.

***MODE* button (01_05)**

With the vehicle on or with the key in the «ON» position, short press the MODE button «A», to change the odometer display (TOTAL, TRIP A, TRIP B).

With a long press of the MODE button, the following is possible:

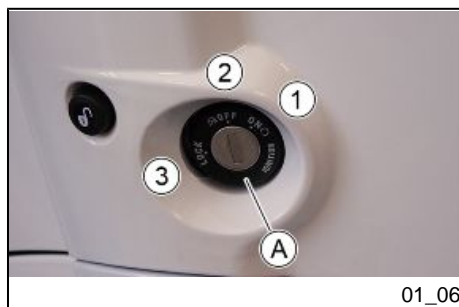
- on the TOTAL screen page, proceed with clock adjustment;
- on the TRIP A or TRIP B screen page, reset the relative counter.



01_05

Keyswitch (01_06)

The key switch «A» is located on the knee-guard panel.



01_06

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_07

Locking the steering wheel (01_07)

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

CAUTION



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



01_08

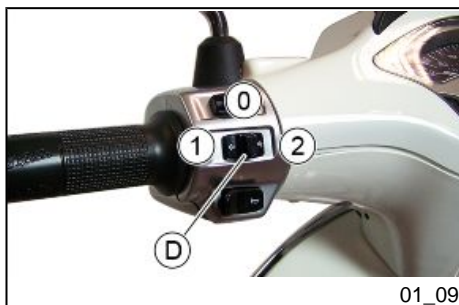
Releasing the steering wheel (01_08)

Insert the key and turn to «**OFF**».

CAUTION



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



Switch direction indicators (01_09)

The left turn indicators turn on by moving the turn indicator switch «D» to the left, to position «1».

The right turn indicators turn on by moving the switch «D» to the right, to position «2».

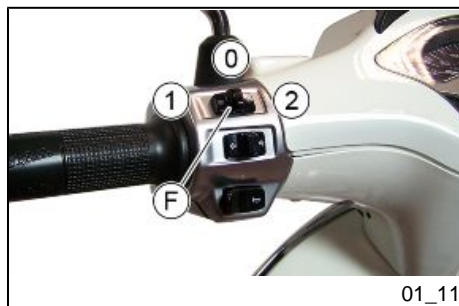
The turn indicator switch «D» turns automatically to position «0», keeping the requested function.

To cancel the request and turn the activated indicators off, press the switch «D».



Horn button (01_10)

Push the «C» button to sound the horn.



01_11

Light switch (01_11)

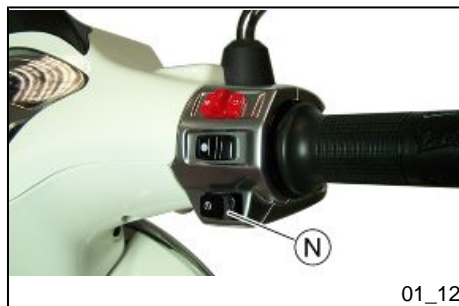
When the light switch «F» is in position «0» the low-beam light is ON; when it is in position «1» the high-beam light is ON.

Moving the switch to "2", the high beam light flashes.

CAUTION



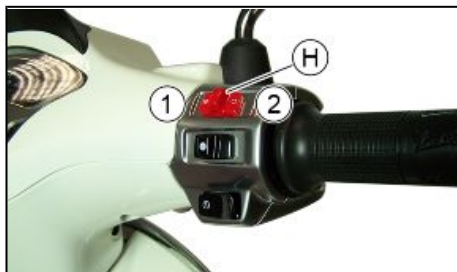
DO NOT PLACE, TRANSPORT OBJECTS AND/OR CLOTHES OVER THE FRONT HEADLIGHT ASSEMBLY, WHEN THE HEADLIGHT IS TURNED ON OR OFF. FAILURE TO FOLLOW THIS PRECAUTION MAY CAUSE OVERHEATING AND THE SUBSEQUENT FUSION OF THE GLASS.



01_12

Start-up button (01_12)

To start the engine, pull either brake lever and press the button «N».



01_13

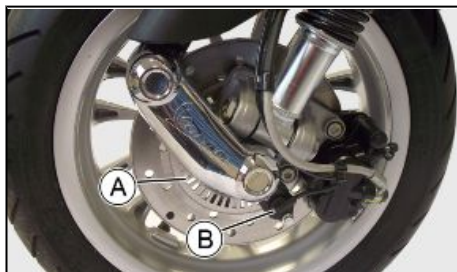
Engine stop button (01_13)

When the emergency cut-off switch «H» is set to «1» **OFF**, the engine cannot be started or it shuts off if already running; set to «2» **RUN** the engine can be started.

CAUTION



WHILE RIDING OPERATE THE ENGINE STOP SWITCH ONLY IN CASE OF EMERGENCY.



01_14

System ABS (01_14, 01_15)

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

A: Tone wheel

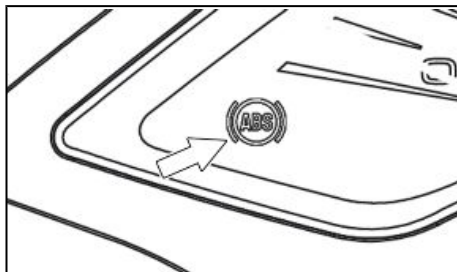
B: Speed sensor

- **ABS:** It is a hydraulic - electronic device that limits the pressure within the braking circuit when a sensor, located on the wheel, detects its tendency to lock. This system prevents the front wheel from locking to avoid the risk of falling.

In case of failure of the ABS system, immediately reported to the rider with ABS warning light on the instrument panel, the vehicle retains the characteristics of a conventional braking system. In case of ABS warning light, reduce speed and go to an Authorised Service Centre for the appropriate checks. The safety provided by the ABS does not, in any case, justify risky manoeuvres. The stopping distance may be greater, compared to a conventional vehicle equipped with traditional braking in the following conditions:

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

It is therefore recommended to reduce speed in these conditions.



01_15



AT VERY LOW SPEEDS (LESS THAN 5 KM/H) THE ABS SYSTEM IS DISABLED.

IT IS RECOMMENDED TO PAY ATTENTION THEREFORE IN CASES OF BRAKING IN LOW GRIP CONDITIONS AT LOW SPEED (FOR EXAMPLE BRAKING ON GARAGE FLOOR TILES AFTER HAVING RIDDEN ON WET ROADS OR SIMILAR SITUATIONS)

N.B.

THE ABS WARNING LIGHT TURNS ON AND STAYS ON UNTIL REACHING 5 KM/H.

CAUTION



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

WARNING



ANY FLASHING OF THE ABS WARNING LIGHT DURING DRIVING INDICATES A MALFUNCTION OF THE LOCKING SYSTEM. CONTACT IMMEDIATELY AN AUTHORISED SERVICE CENTRE (WITH THE VEHICLE STOPPED, THE FLASHING OF THE ABS WARNING LIGHT INDICATES A CORRECT OPERATION OF THE SYSTEM).

WARNING

THE ABS BRAKING SYSTEM WITH WHICH THE VEHICLE IS EQUIPPED OPERATES ONLY ON THE FRONT WHEEL. THEREFORE, THE REAR WHEEL MAY BE SUBJECT TO LOCK.

The immobilizer system

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

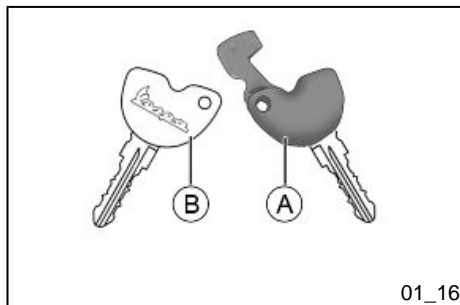
Keys (01_16, 01_17, 01_18)

The vehicle is supplied with two types of keys. The «**A**» key with a brown grip and the "**MASTER**" key. Only a single copy of this key is supplied, which is necessary to program all your other keys and for your dealer to perform some maintenance operations. We therefore recommend that it be used only under exceptional circumstances. The blue key «**B**» (single copy supplied) is used for normal operations and for start-up.

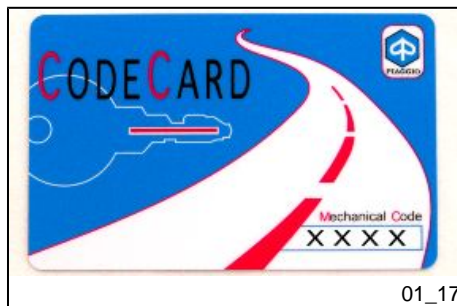
Together with the keys comes a CODE CARD which is imprinted with the mechanical code of the keys.

WARNING

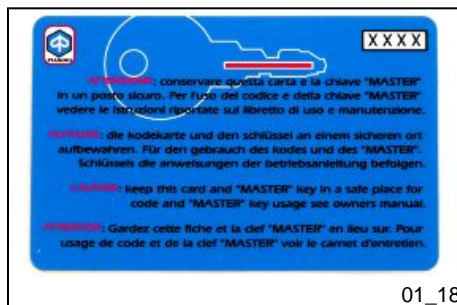
THE LOSS OF THE BROWN KEY PREVENTS LATER REPAIRS TO THE "PIAGGIO IMMOBILIZER" SYSTEM AND TO THE ENGINE CONTROL UNIT.



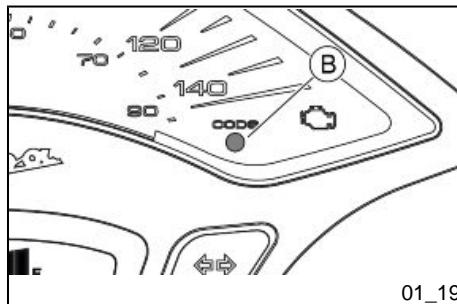
01_16



01_17



01_18



01_19

WARNING

IT IS ADVISED THAT THE "CODE CARD" AND THE KEY WITH THE BROWN GRIP BE KEPT IN A SAFE PLACE (NOT ON THE VEHICLE).

Immobilizer device enabled indicator led (01_19)

Activation of the «**PIAGGIO IMMOBILIZER**» system is signalled by a flashing warning light «**B**» (see the "Analogue instrument panel" section).

In order to reduce battery discharge, the indicator LED turns off automatically after 48 hours of uninterrupted functioning.

Should the system fail, different LED flashing patterns will provide the **Authorised Service Centre** with information on the type of fault detected.

Operation

Every time the ignition key is removed in the "OFF" or "LOCK" position, the safety system activates the immobilizer system. Turning the key to "ON" disables the engine lock, provided that the safety system recognises the code transmitted by the key. If the code is not recognised (indicated by the immobilizer warning light permanently on, with panel on) turn the key first to "OFF" and then to "ON"; if the lock cannot be disabled, try with the other key supplied (brown). If the engine cannot be started, contact an **Authorised Service Centre**, which is provided with the electronic equipment required to detect and repair the system.

The Immobilizer is also activated by switching off the engine with the engine stop switch. This happens even if the starter key is in «ON».

When supplementary keys are required, remember that the programming (up to a maximum of three keys) must be performed on all the keys whether they are new or already in your possession. Take the key with the brown grip and all the blue keys supplied to an **Authorised Service Centre**. The codes of keys not submitted for the new programming procedure are deleted from the memory. Any lost keys will therefore not be enabled to start the engine.

WARNING



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

VIOLENT SHOCKS MAY AFFECT THE ELECTRONIC COMPONENTS OF THE KEY.

SHOULD THE VEHICLE CHANGE OWNERS, IT IS ABSOLUTELY NECESSARY THAT THE NEW OWNER GET POSSESSION OF THE KEY WITH THE BROWN HANDGRIP (AS WELL AS ALL OTHER KEYS) AND WITH THE «CODE CARD».

Programming the immobilizer system

Below is described the procedure to follow for programming the **PIAGGIO IMMOBILISER** system and/or for storing other key codes.

Procedure start-brown key

Insert the brown key into the ignition switch (in the «**OFF**» position), turning it to the «**ON**» position. After 1 - 3 seconds, turn the key to «**OFF** » again and pull it out.

Intermediate step-blu key

After extracting the brown key, insert the blue key within 10 seconds and promptly turn it to «**ON**». After 1 - 3 seconds, turn the key to «**OFF**» again and pull it out.

In this way, a maximum of 3 blue keys can be programmed by repeating the above procedure and keeping the indicated times.

Final step-brown key

After extracting the last blue key, insert the brown key again and turn it to «**ON**» (carry out this operation within 10 seconds after extracting the previous key). Leave it in this position for 1 to 3 seconds and return it to «**OFF**».

Proper programming check

Insert the brown key, disabling the transponder (i.e., by tilting the key hood by 90°), and turn the key to the «**ON**» position. Perform the engine starter operation. Ensure that the engine does not start. Insert the blue key and repeat the start-up operation. Check that engine starts.

WARNING

IF THE ENGINE STARTS WITH THE BROWN KEY (AND WITH A DISABLED TRANSPONDER) OR IF DURING THE PROGRAMMING A WRONG STEP HAS BEEN CARRIED OUT, IT IS NECESSARY TO REPEAT THE PROCESS FROM THE BEGINNING.

Fuel tank (01_20)

The fuel tank cap «A» is under the saddle. To reach it, tip the saddle forwards.

CAUTION

WHILE REFUELLING, AVOID USING ELECTRONIC DEVICES AND/OR MOBILE PHONES WHICH, DUE TO PETROL VAPOURS MAY CAUSE DAMAGE TO THINGS AND/OR PERSONS.

CAUTION**WARNING**

DURING REFUELLING INSERT THE NOZZLE ALL THE WAY INTO THE TANK. AT THE FIRST STOP INTERRUPT FUELLING AND DO NOT CONTINUE FILLING IN ORDER TO PREVENT FUEL SPILLS WHICH MAY OCCUR EVEN AFTER REFUELLING.

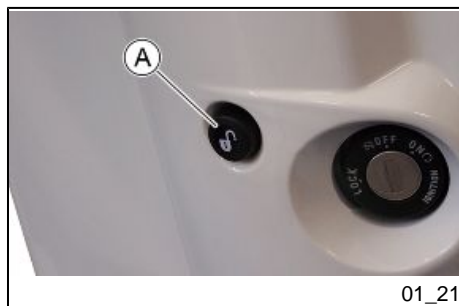


CAUTION

DURING REFUELLING AVOID FUEL LEAKAGES, WHICH MAY CAUSE DAMAGE TO THINGS OR PERSONS AND FIRE HAZARD.

N.B.

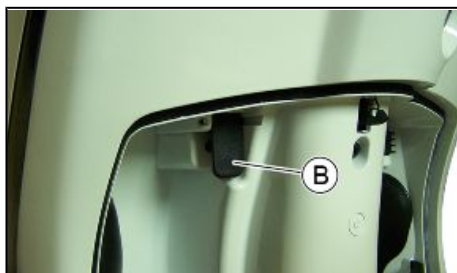
WITH THE VEHICLE AT A STANDSTILL WITH WARM ENGINE, THERE CAN BE A SHORT NOISE REPEATED AT REGULAR INTERVALS UNTIL THE ENGINE IS COOLED DOWN. THIS IS NOT A MALFUNCTION, BUT THE NORMAL PERFORMANCE OF THE VALVES IN THE VEHICLE.

**Opening the saddle (01_21, 01_22, 01_23)**

With the key in «OFF» position, «ON» or with the engine ON, the saddle can be electrically open by pressing button «A».

When lifting the saddle, you access the:

- fuel tank cap,
- helmet compartment.



01_22

If the electric opening does not work, use the emergency lever **B** in the front case.



01_23

CAUTION



THE INDICATED COMPONENT «C» (TO ACCESS IT, LIFT THE HELMET COMPARTMENT BY REMOVING IT) SHOWS THE ENGINE AIR INTAKE: DO NOT OBSTRUCT EXTERNALLY OR INTERNALLY, WITH ANY OBJECT, THE ENDS UNDER THE SADDLE, IN ORDER TO AVOID SERIOUS ENDANGERING OF THE VEHICLE.



01_24

Opening the side panels (01_24, 01_25, 01_26)

To remove the front cover, proceed as follows:

- remove the clip-on badge, paying attention to the vehicle bodyworks.



01_25

- Undo the fixing screw.
- Turn the handlebar until the end of one side.
- Remove the front cover downwards, releasing the housing tongues.



01_26

Identification (01_27, 01_28)

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

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

Chassis number

The chassis number «A» is stamped near the fuel tank.

To read it, proceed as follows:

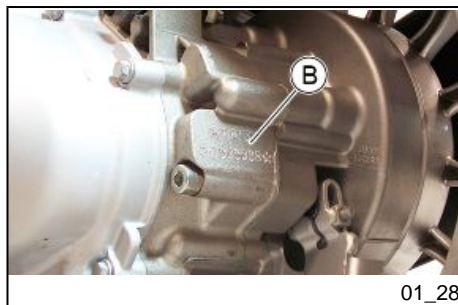
- lift the saddle;
- lift the helmet compartment by removing it.



01_27

Engine number

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



01_28



Rear top box opening (01_29)

With the key in position «**OFF**» or «**ON**», press it to open the case. When the key is set to «**LOCK**», the glove-box is locked.



Bag clip (01_30, 01_31)

The bag hook is placed on the saddle end.

To use the hook, slide it off from the front.



Maximum applicable load: 1.5 kg



FOR THE USER SAFETY, THE DIMENSIONS OF THE LOAD SHOULD NOT BE EXCEEDED BY THE PERIMETER OF THE VEHICLE OR PREVENT AT ALL THE RIDING.



01_31

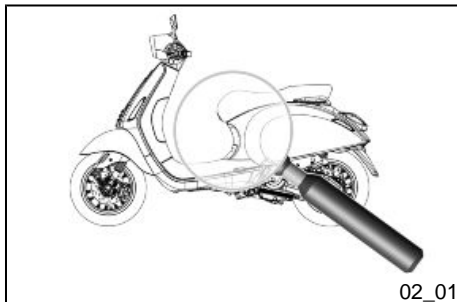
CAUTION

THE INDICATED COMPONENT «C» (TO ACCESS IT, LIFT THE HELMET COMPARTMENT BY REMOVING IT) SHOWS THE ENGINE AIR INTAKE: DO NOT OBSTRUCT EXTERNALLY OR INTERNALLY, WITH ANY OBJECT, THE ENDS UNDER THE SADDLE, IN ORDER TO AVOID SERIOUS ENDANGERING OF THE VEHICLE.

Vespa Sprint 125ie 150ie 3Valvole ABS



Chap. 02
Use



Checks (02_01)

Before using the vehicle, check:

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



Refuelling (02_02)

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

When the fuel reaches the low fuel level, the warning light 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

WHILE REFUELLING, AVOID USING ELECTRONIC DEVICES AND/OR MOBILE PHONES WHICH, DUE TO PETROL VAPOURS MAY CAUSE DAMAGE TO THINGS AND/OR PERSONS.

CAUTION**WARNING**

DURING REFUELLING INSERT THE NOZZLE ALL THE WAY INTO THE TANK. AT THE FIRST STOP INTERRUPT FUELLING AND DO NOT CONTINUE FILLING IN ORDER TO PREVENT FUEL SPILLS WHICH MAY OCCUR EVEN AFTER REFUELLING.

CAUTION

DURING REFUELLING AVOID FUEL LEAKAGES, WHICH MAY CAUSE DAMAGE TO THINGS OR PERSONS AND FIRE HAZARD.

Characteristic

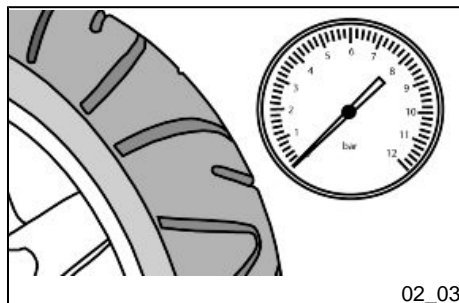
Fuel tank capacity

8 ± 0.1 l

N.B.

WITH THE VEHICLE AT A STANDSTILL WITH WARM ENGINE, THERE CAN BE A SHORT NOISE REPEATED AT REGULAR INTERVALS UNTIL THE ENGINE IS

COOLED DOWN. THIS IS NOT A MALFUNCTION, BUT THE NORMAL PERFORMANCE OF THE VALVES IN THE VEHICLE.



Tyre pressure (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.

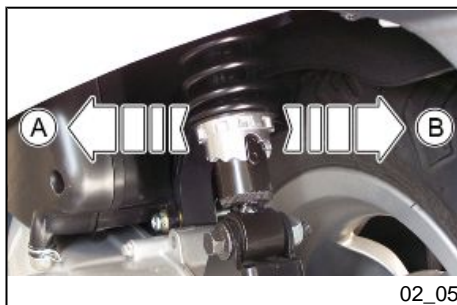
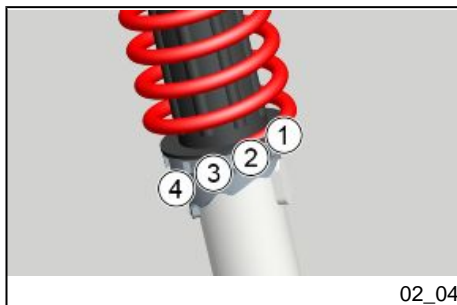
TYRES MUST BE REPLACED WHEN THE TREAD REACHES THE WEAR LIMITS SET FORTH BY LAW.

TYRE INFLATION PRESSURE

Front tyre pressure	1.8 bar
Rear tyre pressure	2.0 bar

TYRES

Front tyre	Tubeless 110/70 - 12" 47P
Rear tyre	Tubeless 120/70 - 12" 58P



Shock absorbers adjustment (02_04, 02_05)

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

Position 1: minimum preload: rider only

Position 2 medium preloading: rider only

Position 3 medium preloading: rider and passenger

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

In order to carry out this operation you will need to use the specific spanner in the kit. Spring preloading increases by turning the ring nut towards «**A**», but decreases if the ring nut is turned towards «**B**».

CAUTION



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

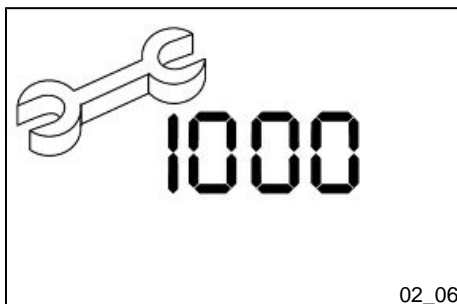
WARNING



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

N.B.

ACCORDING TO THE EQUIPMENT, THE VEHICLE MAY BE FITTED WITH REAR SHOCK ABSORBERS WITH 3 POSITIONS FOR PRELOAD ADJUSTMENT.



02_06

Running in (02_06)

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.



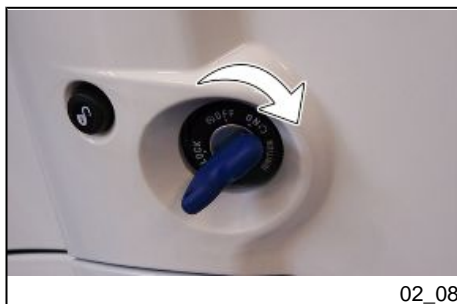
02_07

Starting up the engine (02_07, 02_08, 02_09, 02_10, 02_11)

The vehicle is equipped with automatic transmission with direct drive, so that starting is effected by turning the throttle grip to idle speed; to start-off from stationary position, progressively twist the throttle grip. The vehicle is equipped with an electrical fuel pump that switches on automatically as soon as the engine is started.

To start it up, it is necessary to:

- Rest the vehicle on its centre stand, ensuring the rear wheel is not touching the ground.
- Keep the throttle grip to idle speed.
- Insert the key into the ignition key and turn it to « **ON** ».
- Wait for the engine control telltale light to turn off.
- Push the starter button « **A** » after pulling the front brake lever « **B** » or the rear brake lever « **C** ».



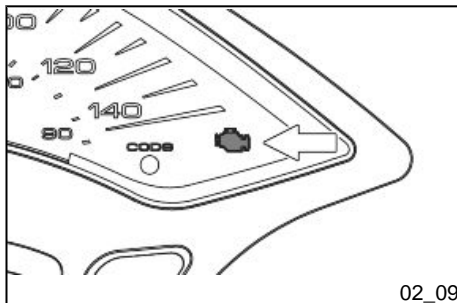
02_08

CAUTION

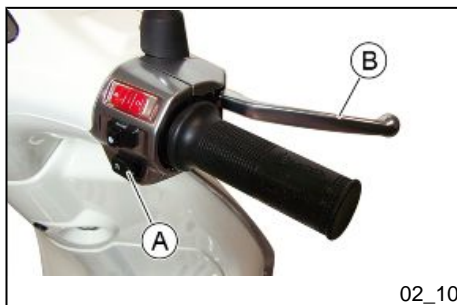
DO NOT CARRY OUT THESE OPERATIONS IN CLOSED AREAS SINCE EXHAUST GASES ARE TOXIC.

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_09



02_10



02_11

Difficult start up

In the rare case of engine flooding, to facilitate start-up, it is possible to try to put the vehicle into action with the gas hand grip partially or completely open. It is however necessary, once the engine is started, to take your vehicle to an **Authorised Service Centre** to determine the cause of this problem and to re-establish the vehicle proper functioning.



02_12

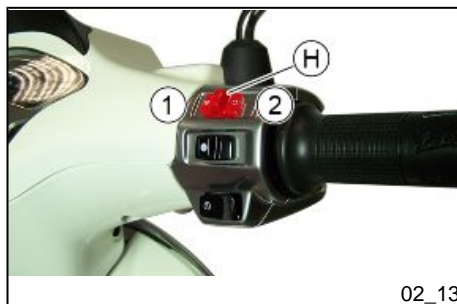
Stopping the engine (02_12, 02_13)

After the vehicle has been stopped, with the throttle grip fully closed, turn the key to «OFF» (extractable key) and/or place the engine stop switch «H» to «1» **OFF**.

CAUTION



DUE TO THE HIGH TEMPERATURES THAT CAN BE REACHED IN THE CATALYTIC CONVERTER, WHEN PARKING THE VEHICLE, PAY ATTENTION TO THE MUFFLER: TO AVOID SERIOUS BURNS OR FIRE, THE MUFFLER SHOULD NEVER COME INTO CONTACT WITH FLAMMABLE MATERIALS.

**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.

N.B.

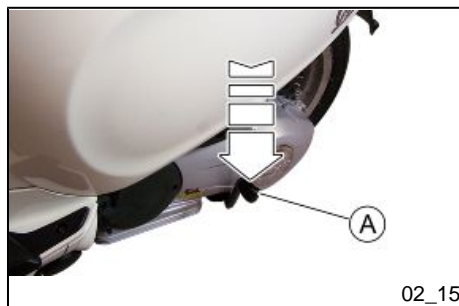
AFTER THE ENGINE HAS BEEN STOPPED WITH THE DEDICATED SWITCH, TO PREVENT THAT THE BATTERY DISCHARGES, TURN THE IGNITION KEY, IN POSITION «OFF» (EXTRACTABLE KEY).

**Catalytic silencer (02_14)****CAUTION**

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

CAUTION

DUE TO THE HIGH TEMPERATURES THAT CAN BE REACHED IN THE CATALYTIC CONVERTER, WHEN PARKING THE VEHICLE, PAY ATTENTION TO THE MUFFLER: TO AVOID SERIOUS BURNS OR FIRE, THE MUFFLER SHOULD NEVER COME INTO CONTACT WITH FLAMMABLE MATERIALS.



Stand (02_15)

Centre stand

Push with your foot on the centre stand's fork "A" while lifting the vehicle backward, using the handlebar.

CAUTION

PARK THE MOTORCYCLE ON SAFE AND LEVEL GROUND.

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.

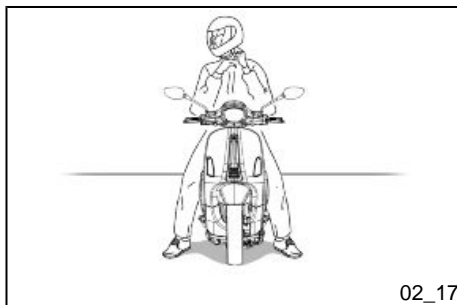


02_16

Automatic transmission (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

Safe driving (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 itself.

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 pads 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)



NEVER OPERATE THE VEHICLE WITH ACCESSORIES (BAGS, TOP BOX AND/OR WINDSHIELD) AT A SPEED HIGHER THAN 80 kph.

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

IF THERE ARE ANY NON-PIAGGIO ACCESSORIES INSTALLED, OR AN ABNORMAL LOAD, OR IF THE SCOOTER IS NOT IN A GENERALLY GOOD CONDITION, OR WHENEVER WEATHER CONDITIONS DEMAND IT, SPEED SHOULD BE FURTHER REDUCED.

Vespa Sprint 125ie 150ie 3Valvole ABS



Chap. 03
Maintenance

Engine oil level

In four stroke engines, the engine oil is used to lubricate the timing elements, the bench bearings and the thermal group. **An insufficient quantity of oil can cause serious damage to the engine.** In all four-stroke engines, a loss of efficiency in oil performance and consumption should be considered normal.

Consumption can particularly reflect the conditions of use (i.e while riding the use of the vehicle with the accelerator predominantly open results in greater oil consumption).

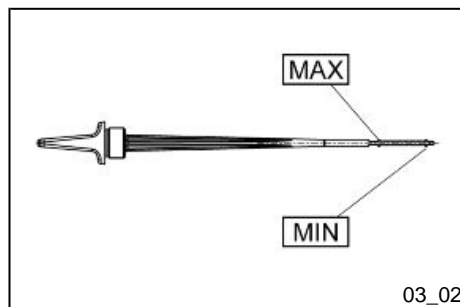
In order to avoid problems, it is advisable to control oil level every time the vehicle is used.



Engine oil level check (03_01, 03_02)

Every time the vehicle is used, visually inspect the level of the engine oil when the engine is cold (after **completely unscrewing** the oil cap/dipstick). The oil level should be somewhere between the MAX and MIN index marks on the level rod; «A»; while the oil is being checked, the vehicle must be resting on its centre stand on an even, horizontal surface.

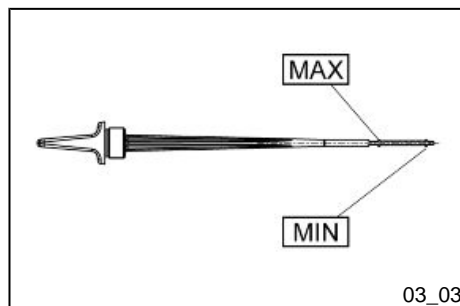
If the check is carried out after the vehicle has been used, and therefore with a hot engine, the level will be lower; in order to carry out a correct check, wait at least 10 minutes after the engine has been stopped so as to get the correct level.



03_02

ENGINE OIL CAPACITY

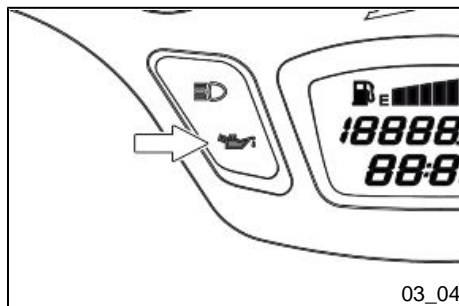
Engine oil

1,340 cm³ (of which 120 cm³ in the filtering cartridge)

03_03

Engine oil top-up (03_03)

The oil should be topped up after having checked the level and in any case by adding oil **without ever exceeding the MAX. level**. Take your vehicle to an **Authorised Service Centre** to have the engine oil checked and if necessary, topped-up as indicated in the scheduled maintenance table.



03_04

Warning light (insufficient oil pressure) (03_04)

The vehicle is equipped with a warning light that comes on when the key is turned to «ON». However, this light should switch off once the engine has been started. **If the light comes on while braking, at idle speed or while turning a corner, it is necessary to check the oil level and top it up if required. If after having topped-up the oil, the warning light still comes on while braking, at idle speed or while turning a corner, it will be necessary to take your vehicle to an Authorised Service Centre.**

Engine oil change

To change the engine oil and the oil filter, as indicated in the scheduled maintenance table, contact an **Authorised Service Centre**.

CAUTION



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

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

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

CAUTION



USED OILS CONTAIN SUBSTANCES HARMFUL TO THE ENVIRONMENT. FOR OIL CHANGE, CONTACT AN AUTHORISED SERVICE CENTRE WHICH IS EQUIP-

PED 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

Characteristic

Engine oil quantity

1,340 cm³ (of which 120 cm³ in the filtering cartridge)

Hub oil level (03_05)

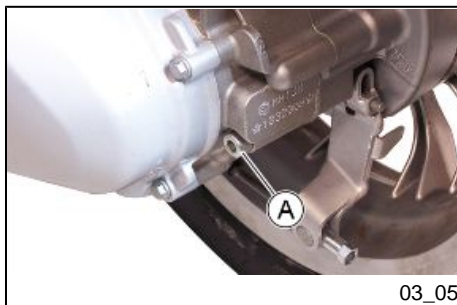
Check the presence of oil in the hub, according to the regular controls shown in the table of the scheduled maintenance.

WARNING



FOR THE REGULAR CHECK OF THE HUB OIL LEVEL SHOWN IN THE SCHEDULED MAINTENANCE TABLE, CONTACT AN Authorised Service Centre.

FOR THE CONTROLS OF THE HUB OIL LEVEL THAT ARE NOT PREDETERMINED BY THE SCHEDULED MAINTENANCE TABLE, OPERATE AS DESCRIBED.



LEVEL CHECK

- Park the vehicle on level ground and centre stand.
- Undo the screw «A» and by inserting punch, check the presence of oil that must be below the lower edge of the loading hole.
- With a cloth carefully clean the transmission crankcase.

WARNING



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

Characteristic

Hub oil

270 cm³

TOP-UP

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

CAUTION



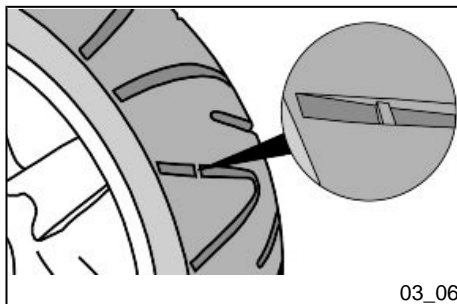
USED OILS CONTAIN SUBSTANCES HARMFUL TO THE ENVIRONMENT. FOR OIL CHANGE, CONTACT AN AUTHORISED SERVICE CENTRE WHICH IS EQUIPPED TO DISPOSE OF USED OILS IN AN ENVIRONMENTALLY FRIENDLY AND LEGAL WAY.

Recommended products

Lubricant for gearboxes and transmissions

Lubricant for gearboxes and transmissions.

SAE 80W/90, API GL4 - API GL5



Tyres (03_06)

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 sidewalls 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.

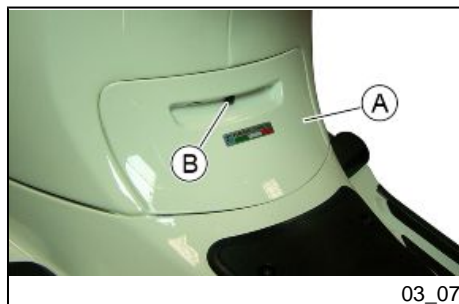
TYRES MUST BE REPLACED WHEN THE TREAD REACHES THE WEAR LIMITS SET FORTH BY LAW.

TYRES

Front tyre	Tubeless 110/70 - 12" 47P
Rear tyre	Tubeless 120/70 - 12" 58P

TYRE INFLATION PRESSURE

Front tyre pressure	1.8 bar
Rear tyre pressure	2.0 bar



Spark plug dismantlement (03_07, 03_08)

Removal

In order to inspect the spark plug, follow the operation described when the engine is cold:

- Slide off the spark plug inspection cover «A» by unscrewing the screw «B».
- Slide off the spark plug tube «C».
- Remove the spark plug using the box-spanner supplied.

Fitting

- Use the box-spanner to refit the spark plug in its saddle, then tighten it. Care should be taken while installing and fixing it with the correct inclination.
- Insert the spark plug tube «C».
- Place the inspection cover «A» and tighten the screw «B».

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.

CAUTION

PROCEED WITH CAUTION.

DO NOT DAMAGE THE TONGUES OR THEIR SEATS. HANDLE THE PAINTED AND PLASTIC COMPONENTS CAREFULLY. DO NOT SCRATCH OR DAMAGE THEM.

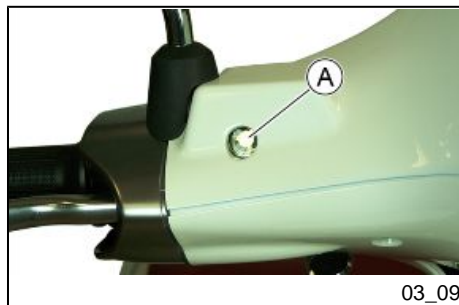
Characteristic

Spark plug

NGK CR8EB

Removing the air filter

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



03_09

Checking the brake oil level (03_09)

The tank of the brake fluid is placed on the right side of the handlebar, under the handlebar cover.

To control the brake fluid level, proceed as follows:

- rest the vehicle on its centre stand and with the handlebars perfectly horizontal;
- control the level with the relative inspection sight glass «A», visible on the right front side of the handlebar cover:
 - if the sight glass is **full**, the brake fluid level is correct.
 - If the brake fluid level is certified to the reference «**MIN**», go to an **Authorised Service Centre** or carry out the top-up as indicated.
 - If the brake fluid level is lower than the reference «**MIN**», do not use the vehicle and contact an **Authorised Service Centre**.

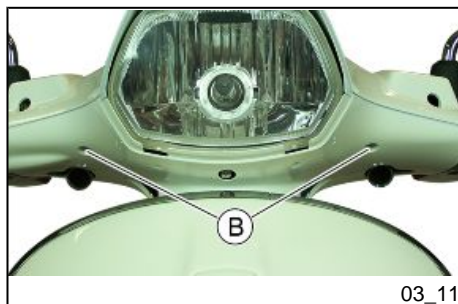


03_10

Braking system fluid top up (03_10, 03_11, 03_12, 03_13)

To access the brake fluid tank, remove the upper handlebar cover and proceed as follows:

- Remove on both sides of the vehicle the screw «A» fixing the surround of the headlight assembly.
- Remove the surround of the headlight assembly by releasing it from the upper fixing.

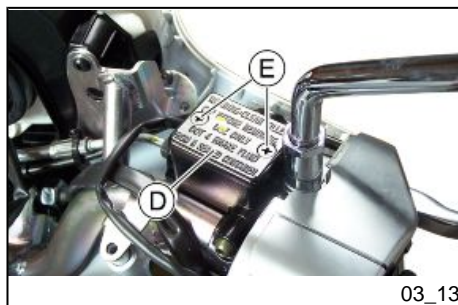


- Remove the two screws «B».



- Remove the two screws «C».

- Detach the upper handlebar cover, complete with instrument panel, from the lower one, supporting it on the leg shield back plate and paying attention to the instrument panel connector.



- Remove the tank cover «D» after sliding off the two fixing screws «E».

- Refill with the prescribed brake fluid type only, paying attention not to exceed the maximum allowed level and indicated by the inspection sight glass.

Under standard climatic conditions, replace fluid as indicated in the scheduled maintenance table. This operation must be carried out by trained technicians, please contact your nearest **Dealer or Authorised Service Centre**.

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 ACCIDENTAL CONTACT, RINSE WITH WATER. THE FLUID IN THE BRAKING CIRCUIT IS HYGROSCOPIC, THAT IS, IT ABSORBS MOISTURE FROM THE SURROUNDING AIR. IF MOISTURE CONTAINED IN THE BRAKE FLUID EXCEEDS A CERTAIN VALUE, THIS WILL RESULT IN INEFFICIENT BRAKING. NEVER USE BRAKE LIQUID IN OPEN OR PARTIALLY USED CONTAINERS.

Recommended products**AGIP BRAKE 4**

Brake fluid.

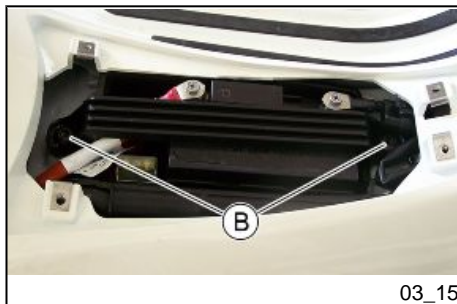
SAE J 1703 -FMVSS 116 - DOT 3/4 - ISO 4925 - CUNA NC 956 DOT 4 synthetic fluid

FITTING

To fit the removed components to access the brake fluid tank, work in reverse order what is described in the instructions of this paragraph.



03_14



03_15

Battery (03_14, 03_15)

To access the battery, it is necessary to proceed as follows:

- Undo the four screws «A» and remove the rubber cover at the centre of the footrest.
- Remove the battery fixing bracket by unscrewing the two screws «B».

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 ELECTRIC 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_16)

To install a new battery:

- Place the battery in its housing.
- Connect the positive pole «+» first and then the negative pole «-».
- Place the fixing bracket and the battery cover, working in reverse order what is described in the instructions of the «Battery» paragraph.

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

Sealed, 12 V / 6 Ah



03_17

Long periods of inactivity (03_17)

Battery performance will decrease if the vehicle is not used for a long time. This is the result of the natural phenomenon of battery discharging, 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.

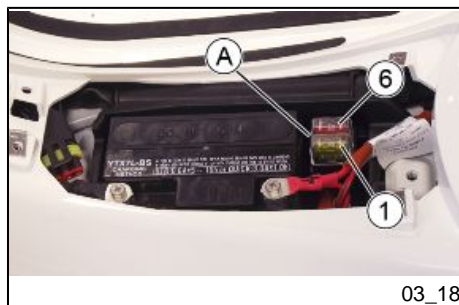
WARNING



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.



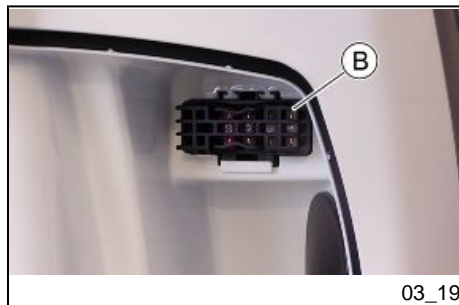
Fuses (03_18, 03_19, 03_20)

The electrical system is protected by a main fuse and five secondary fuses, positioned as:

MAIN FUSEBOX «A»: battery compartment.

Access to the main fuse «1» and secondary fuse «6»:

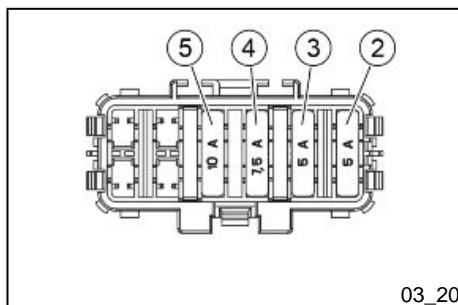
- Remove the battery compartment cover as described in the "Battery" paragraph.
- Open the fusebox.



SECONDARY FUSES «B»: in the front case.

Access to secondary fuses:

- Open the front case.
- Open the fuse holders.



FUSE CHART

Fuse no. 1

Capacity: 20 A

Protected circuits: battery recharge circuit, fuses No. 2 and 3 (live), fuses No. 4 and 5.

Fuse no. 2

Capacity: 5 A

Protected circuits: ignition switched live instrument panel, indicators, antitheft device pre-installation, stop lights, starter circuit, headlight relay, horn, daylight running lights, digital display.

Fuse No. 3

Capacity: 5 A

Protected circuits: ignition switched live tilting sensor, control unit, ABS control unit.

Fuse No. 4

Capacity: 7.5 A**Protected circuits:** battery-powered control unit.

Fuse No. 5

Capacity: 10 A**Protected circuits:** battery-powered instrument panel, antitheft device pre-installation, headlight, digital display, immobilizer; ignition switched live saddle opener actuator.

Fuse No. 6

Capacity: 10 A**Protected circuits:** battery-powered, ABS control unit.**CAUTION**

BEFORE REPLACING THE FUSE IT IS NECESSARY TO FIND AND SOLVE THE FAILURE THAT CAUSED IT TO BLOW.

DO NOT REPLACE THE FUSE WITH ANY ALTERNATIVE FORM OF CONDUCTOR.

CAUTION

IN ORDER TO AVOID DAMAGING THE ELECTRIC 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.

CAUTION



MODIFICATIONS OR REPAIRS TO THE ELECTRICAL SYSTEM, PERFORMED INCORRECTLY OR WITHOUT STRICT ATTENTION TO THE TECHNICAL SPECIFICATIONS OF THE SYSTEM CAN CAUSE MALFUNCTIONING AND RISK OF FIRE.

CAUTION



PROCEED WITH CAUTION.

DO NOT DAMAGE THE TONGUES OR THEIR SEATS. HANDLE THE PAINTED AND PLASTIC COMPONENTS CAREFULLY. DO NOT SCRATCH OR DAMAGE THEM.

Lamps (03_21)

In this section are listed the bulb types for the vehicle fitting.



BULBS

High/low beam light bulb	Type: Halogen (HS1) Power: 12V - 35/35W Quantity: 1
Front side light bulb	Type: LED Quantity: 2
Stop light bulb	Type: LED Quantity: 1
rear daylight running light bulb	Type: Incandescent Power: 12V - 10W Quantity: 1
License plate light bulb	Type: Incandescent Power: 12V - 5W Quantity: 1
Front turn indicator light bulb	Type: Halogen, BAZ9s base, amber Power: 12V - 6W Quantity: 1 RHS + 1 LHS
Rear turn indicator light bulb	Type: Halogen, BAZ9s base, amber Power: 12V - 6W

Quantity: 1 RHS + 1 LHS

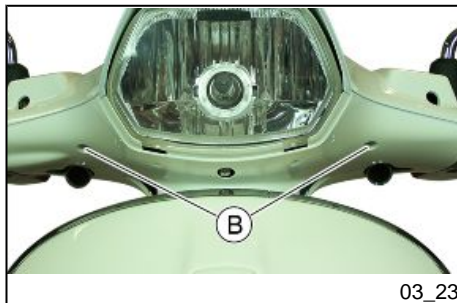
Front light group (03_22, 03_23, 03_24, 03_25, 03_26)

To access the bulb of the front headlight assembly, remove the upper handlebar cover and proceed as follows:

- Remove on both sides of the vehicle the screw «**A**» fixing the surround of the headlight assembly.
- Remove the surround of the headlight assembly by releasing it from the upper fixing.



- Remove the two screws «**B**».

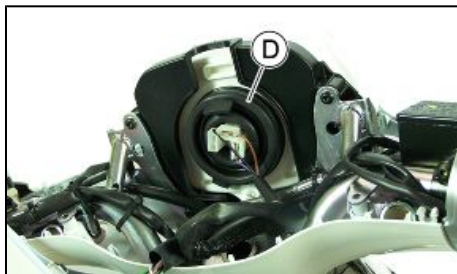




03_24

- Remove the two screws «C».

- Detach the upper handlebar cover, complete with instrument panel, from the lower one, supporting it on the leg shield back plate and paying attention to the instrument panel connector.

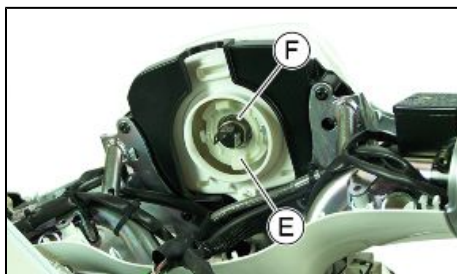


03_25

HIGH/LOW BEAM LIGHT BULB

- Disconnect, by sliding the electric connector off.

- Remove the rubber protection «D».



03_26

- Turn it anticlockwise, remove the ring nut «E».

- Slide off the bulb «F» and replace it with one of the same electric characteristics.

- When refitting, pay attention to the correct positioning of the rubber protection.

CAUTION

DO NOT PULL THE ELECTRICAL CABLES WHEN TAKING OUT THE BULB ELECTRICAL CONNECTOR.

N.B.

IF MISTING IS NOTICED ON THE INSIDE OF THE TAIL LIGHT, CHECK THAT IT DISAPPEARS AFTER SOME MINUTES OF IGNITION OF THE TAIL LIGHT. IT IS

A COMMON PHENOMENON AND IS ATTRIBUTABLE TO HUMIDITY AND/OR TO LOW TEMPERATURES; DOES NOT SHOW FAILURE.

THE PRESENCE OF DROPS OF WATER, ON THE OTHER HAND, COULD INDICATE THAT WATER IS INFILTRATING. CONTACT AN AUTHORISED SERVICE CENTRE.

CAUTION



DO NOT 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.

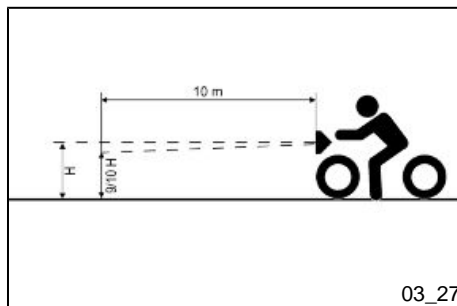
FRONT HEADLIGHT ASSEMBLY BULBS

High/low beam light bulb

Type: Halogen (HS1)

Power: 12V - 35/35W

Quantity: 1



03_27

Head light adjustment (03_27, 03_28)

Proceed as follows:

- Position the vehicle in running order and with the tyres inflated to the prescribed pressure, onto a flat surface, 10 m away from a half-lit white screen; ensure that the longitudinal axis of the vehicle is perpendicular to the screen;
- Turn on the headlight and check that the borderline of the projected light beam on the screen is not higher than 9/10 or lower than 7/10 of the distance from the ground to the centre of the vehicle headlamp;
- If this is not the case, adjust the headlight by operating the 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.

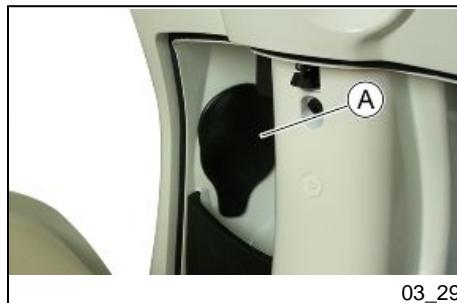


03_28

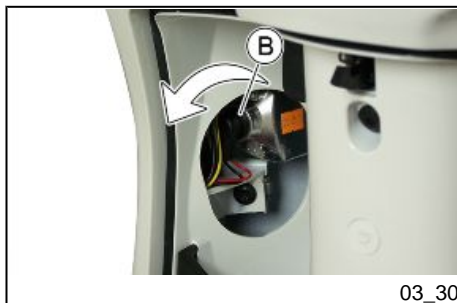
Front direction indicators (03_29, 03_30, 03_31)

To replace the bulbs:

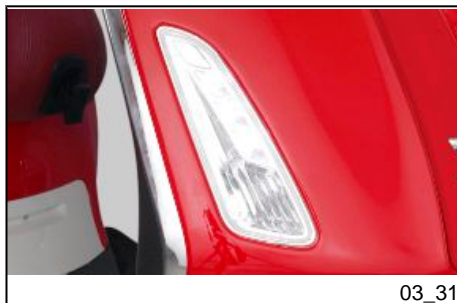
- Open the front case and remove the rubber cap «A».



03_29



- Take out the bulb holder «B» from its fitting by turning it anticlockwise.
 - Press the bulb, turn it anticlockwise and then take it out.
- To refit, proceed in reverse order.



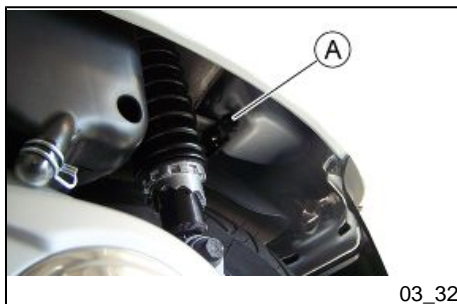
CAUTION



THE DAYLIGHT RUNNING LIGHTS LOCATED ON THE FRONT SHIELD ARE OF "LED" TYPE. IN THE EVENT OF MALFUNCTION, WE RECOMMEND CONTACTING AN AUTHORISED SERVICE CENTRE FOR REPLACEMENT.

TURN INDICATOR BULBS - FRONT POSITION

Front turn indicator light bulb	Type: Halogen, BAZ9s base, amber Power: 12V - 6W Quantity: 1 RHS + 1 LHS
Front side light bulb	Type: LED



Rear optical unit (03_32, 03_33, 03_34)

To replace the taillight bulb:

- Remove the knob-type head «A» fixing the rear headlight assembly, that can be reached from the wheel housing on the left side of the vehicle.
- Slide off the headlight assembly by pulling it downwards and releasing the two upper fixings.
- Take out the bulb holder «B» from its seat by turning it anticlockwise.
- Press the bulb, turn it anticlockwise and then take it out.

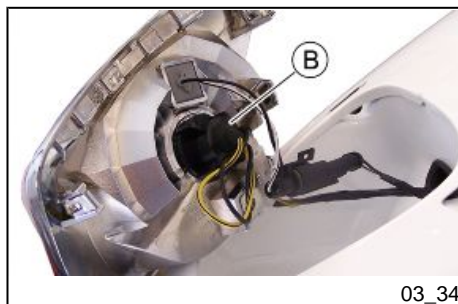
To refit, proceed in reverse order.

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.

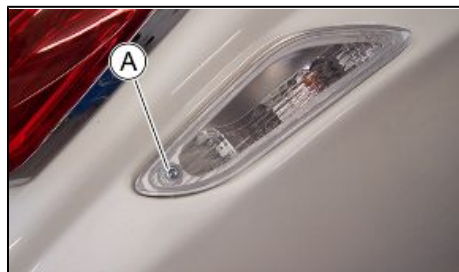
**CAUTION**

THE STOP LIGHT BULB IS OF «LED» TYPE. IN THE EVENT OF MALFUNCTION, WE RECOMMEND CONTACTING AN AUTHORISED SERVICE CENTRE FOR REPLACEMENT.

REAR LIGHT UNIT BULBS

rear daylight running light bulb	Type: Incandescent Power: 12V - 10W Quantity: 1
----------------------------------	--

Stop light bulb	Type: LED Quantity: 1
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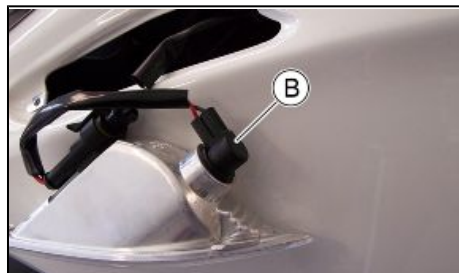


03_35

Rear turn indicators (03_35, 03_36)

To replace the bulbs:

- remove the turn indicator from its seat by undoing the screw «A».



03_36

- Take out the bulb holder «B» from its fitting by turning it anticlockwise.

- Press the bulb, turn it anticlockwise and then take it out.

To refit, proceed in reverse order.

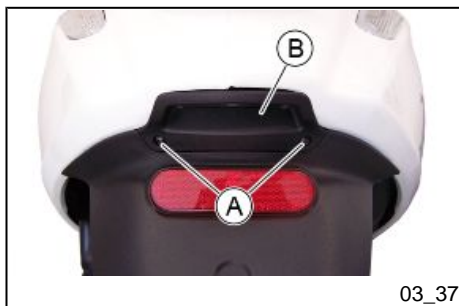
REAR TURN INDICATOR BULBS

Rear turn indicator light bulb

Type: Halogen, BAZ9s base, amber

Power: 12V - 6W

Quantity: 1 RHS + 1 LHS



03_37

Number plate light (03_37, 03_38)

To remove the license plate bulb proceed as follows:

- Undo the two screws «A» and remove the cover «B».
- Slide off the bulb holder «C» from its seat.
- Slide off the bulb.

CAUTION



DO NOT PULL THE ELECTRICAL CABLES WHEN TAKING OUT THE BULB HOLDER.



03_38

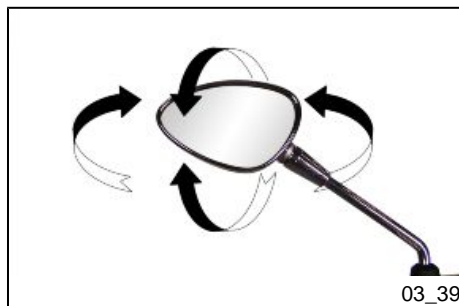
LICENSE PLATE LIGHT BULB

License plate light bulb

Type: Incandescent

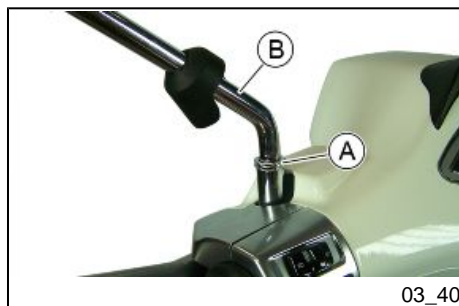
Power: 12V - 5W

Quantity: 1



Rear-view mirrors (03_39, 03_40)

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



To remove the rear view mirror, lift the rubber protection, unscrew the lock nut «A» slightly to unlock the stem. Unscrew the stem «B» until removing it.

CAUTION



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

CAUTION



PAY ATTENTION TO THE MIRROR THREADING TYPE: THE RIGHT MIRROR HAS A RIGHT-HANDED THREAD WHILE THE LEFT MIRROR HAS A LEFT-HANDED THREAD.



03_41

Front disc brake (03_41)

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.



03_42

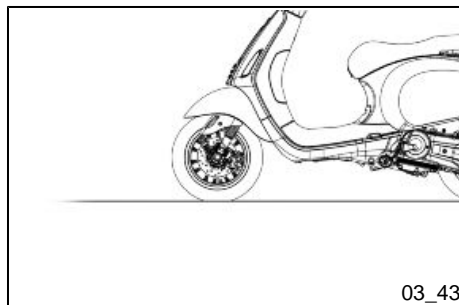
Rear drum brake (03_42)

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.



03_43

Puncture (03_43)

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.



Inactivity of the vehicle (03_44)

The following operations are recommended:

1. Clean the scooter thoroughly and then cover it with a canvas;
2. With the engine off, remove the spark plug and pour 1 - 2 cm³ of oil through its hole (greater quantities are harmful to the integrity of the engine itself). Operate the starter button 1-2 times for roughly 1 second to turn the engine over slowly, then insert the spark plug again;
3. Drain all the fuel from the scooter; spread anti rust grease on the uncoated metal parts; keep the wheels lifted above the ground by resting the chassis on two wooden wedges;
4. As regards the battery, follow the instructions in the «Battery» section.

Recommended products

eni i-Ride PG 5W-40

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

JASO MA, MA2 - API SL - ACEA A3

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.

CAUTION

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

CAUTION

DO NOT USE A HIGH-PRESSURE WATER JET MACHINE TO CLEAN THE ENGINE AND/OR VEHICLE; HOWEVER, IF NO OTHER MEANS ARE AVAILABLE, IT IS THEN NECESSARY TO:

- **ONLY USE A FANLIKE SPRAY JET.**
- **DO NOT PLACE THE NOZZLE CLOSER THAN 60 CM.**
- **DO NOT USE WATER AT TEMPERATURES OVER 40°C.**
- **DO NOT USE HIGH-PRESSURE WATER JETS.**
- **DO NOT STEAM WASH.**
- **DO NOT AIM THE JET AT: THE ENGINE, THE WIRING, THE COOLING SLITS ON THE TRANSMISSION OR SCROLL COVERS.**

CAUTION

NEVER WASH THE SCOOTER IN DIRECT SUNLIGHT, ESPECIALLY IN SUMMER WHEN THE BODYWORK IS STILL HOT AS THE SHAMPOO COULD DAMAGE THE PAINTWORK IF IT DRIES BEFORE BEING RINSED OFF. NEVER USE CLOTHS SOAKED IN ALCOHOL, PETROL, DIESEL OIL OR KEROSENE FOR CLEANING THE PAINTED OR PLASTIC SURFACES, IN ORDER NOT TO DAMAGE THE LUSTRE FINISH OR ALTER THEIR MECHANICAL PROPERTIES. USING SILICONE-BASED WAX CAN DAMAGE THE PAINTED SURFACES, DEPENDING ON THE VEHICLE COLOUR (SATIN COLOURS). FOR FURTHER

INFORMATION ON THIS MATTER, CONTACT AN AUTHORISED SERVICE CENTRE.

WARNING



CLEAN YOUR SCOOTER FREQUENTLY SO AS TO AVOID POSSIBLE DIRT OR MUD DEPOSITS THAT COULD CAUSE MALFUNCTIONING IN THE THROTTLE GRIP TRANSMISSION AND/OR OTHER COMPONENTS.

Troubleshooting

STARTING FAILURE

Fuse blown	Replace the blown fuse and have the vehicle checked by an Authorised Service Centre .
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STARTING DIFFICULTIES (SEE «STARTER PROBLEMS» SECTION)

Lack of fuel in tank	Refuelling
Injection system fault	Contact an Authorised Service Centre

Fuel pump fault	Contact an Authorised Service Centre
Flat battery	Recharge the battery

**** IMPORTANT: DO NOT USE THE SCOOTER TO THE COMPLETE EXHAUSTION OF FUEL; SHOULD THIS OCCUR, DO NOT ATTEMPT TO START THE ENGINE. TURN THE IGNITION SWITCH TO «OFF» AND TOP-UP THE FUEL TANK AS SOON AS POSSIBLE. FAILURE TO FOLLOW THESE GUIDELINES COULD DAMAGE THE FUEL PUMP .***

IGNITION PROBLEMS

Faulty spark plug	Contact an Authorised Service Centre.
Faulty ignition / injection control unit. Due to the presence of high voltage, this check should only be carried out by an expert.	Contact an Authorised Service Centre

LACK OF COMPRESSION

Loose spark plug	Screw in the spark plug tightly
Cylinder head loose, piston gas rings worn	Contact an Authorised Service Centre.
Valve stuck	Contact an Authorised Service Centre.

HIGH CONSUMPTION AND LOW PERFORMANCE

Clogged or dirty air filter	Try to blow out with compressed air, otherwise replace the filter
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INSUFFICIENT BRAKING

Greasy disc. Worn pads. Faulty braking system. Presence of air in the front and rear brake circuit.	Contact an Authorised Service Centre .
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INEFFICIENT SUSPENSION

Shock absorber fault, oil leak, end buffers damaged; shock absorber preloading incorrectly set	Contact an Authorised Service Centre .
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AUTOMATIC TRANSMISSION PROBLEMS

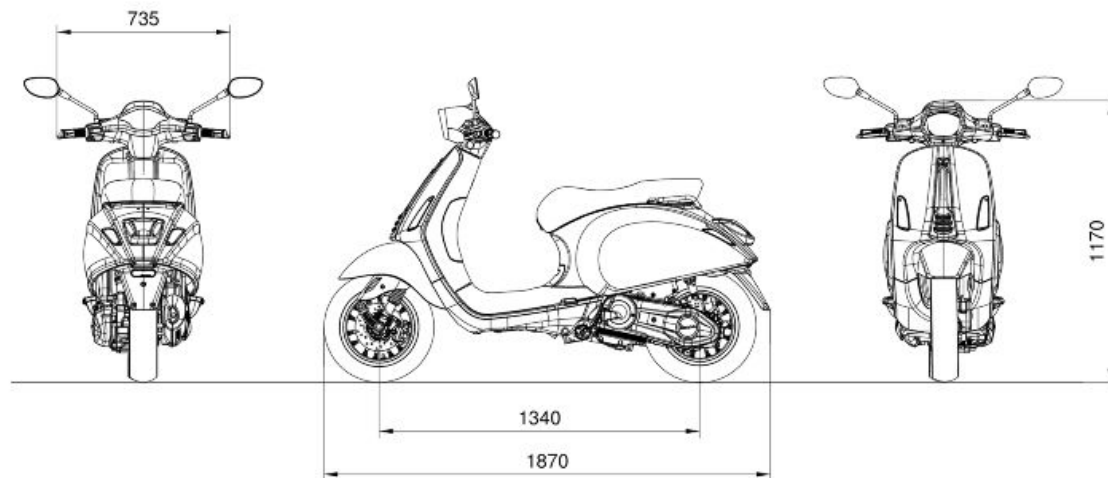
CVT rollers and/or drive belt damaged	Contact an Authorised Service Centre .
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Vespa Sprint 125ie 150ie 3Valvole ABS



Chap. 04
Technical data

Data (04_01)



04_01

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	Double-acting shock absorber, adjustable to four positions at preloading.
Front brake	Ø 200 mm disc brake with hydraulic control activated by handlebar right-side lever; braking assisted by ABS system.
Rear brake	Ø 140-mm drum brake with mechanical control activated by handlebar left-side lever.
Wheel rim type	Light alloy.
Front wheel rim	12" x 3.00
Rear wheel rim	12" x 3.00
Front tyre	Tubeless 110/70 - 12" 47P
Rear tyre	Tubeless 120/70 - 12" 58P
Front tyre pressure	1.8 bar
Rear tyre pressure	2.0 bar
Kerb weight	118 ± 5 kg
Maximum weight limit	305 kg
Battery	Sealed, 12 V / 6 Ah

125 cm³ ENGINE SPECIFICATIONS

Type	Single-cylinder, 4-stroke
Engine capacity	124 cm ³
Bore x stroke	52.0 x 58.6 mm
Max. power	7.9 kW at 7,700 rpm
MAX. torque	10.4 Nm at 6,000 rpm
Idle speed	(1,750±100) rpm
Valve clearance (when cold)	intake: 0.08 mm exhaust: 0.08 mm
Timing system	3 valves (2 intake, 1 drainage). single overhead camshaft chain-driven.
Transmission	CVT expandable pulley variator with torque server, V-belt, self- ventilating dry automatic centrifugal clutch and transmission housing with forced-circulation air cooling.
Final reduction	with gear reduction unit in oil bath.
Lubrication	Engine lubrication with lobe pump (inside crankcase), chain-driven, with double filter: mesh and paper.
Cooling	Forced-air circulation cooling.
Electric	Electric starter

Ignition	Electronic capacitive discharge ignition, with variable advance and separate H.V. coil.
Ignition advance	Three-dimensional map managed by control unit
Spark plug (125 cm ³)	NGK CR8EB
Electrode gap	0.7 - 0.8 mm
Fuel system	Electronic injection with Ø 26 mm throttle body, single injector
Fuel	Unleaded petrol (95 RON)
Exhaust silencer	Absorption-type exhaust muffler with catalytic converter.
Emissions compliance	EURO 3

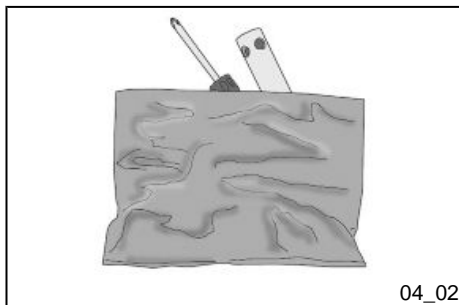
150 cm³ ENGINE SPECIFICATIONS

Type	Single-cylinder, 4-stroke
Engine capacity	155 cm ³
Bore x stroke	58.0 x 58.6 mm
Max. power	9.5 kW at 7,750 rpm
MAX. torque	12.8 Nm at 6,500 rpm
Idle speed	(1,750±100) rpm
Valve clearance (when cold)	intake: 0.08 mm exhaust: 0.08 mm

Timing system	3 valves (2 intake, 1 drainage). single overhead camshaft chain-driven.
Transmission	CVT expandable pulley variator with torque server, V-belt, self-ventilating dry automatic centrifugal clutch and transmission housing with forced-circulation air cooling.
Final reduction	with gear reduction unit in oil bath.
Lubrication	Engine lubrication with lobe pump (inside crankcase), chain-driven, with double filter: mesh and paper.
Cooling	Forced-air circulation cooling.
Electric	Electric starter
Ignition	Electronic capacitive discharge ignition, with variable advance and separate H.V. coil.
Ignition advance	Three-dimensional map managed by control unit
Spark plug (150 cm ³)	NGK CR8EB
Electrode gap	0.7 - 0.8 mm
Fuel system	Electronic injection with Ø 28 mm throttle body, single injector
Fuel	Unleaded petrol (95 RON)
Exhaust silencer	Absorption-type exhaust muffler with catalytic converter.
Emissions compliance	EURO 3

CAPACITIES

Engine oil	1,340 cm ³ (of which 120 cm ³ in the filtering cartridge)
Hub oil	270 cm ³
Fuel tank capacity	8 ± 0.1 l

**Tool kit (04_02)**

The toolkit comprises:

- one box-spanner;
- one twin screwdriver;
- one special spanner for adjusting the rear shock absorbers;
- one fuse puller;
- one torx wrench.

The tools are stored in the helmet compartment.

Vespa Sprint 125ie 150ie 3Valvole ABS



Chap. 05
Spare parts 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.

WARNING



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



NEVER OPERATE THE VEHICLE WITH ACCESSORIES (BAGS, TOP BOX AND/OR WINDSHIELD) AT A SPEED HIGHER THAN 80 kph.

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

IF THERE ARE ANY NON-PIAGGIO ACCESSORIES INSTALLED, OR AN ABNORMAL LOAD, OR IF THE SCOOTER IS NOT IN A GENERALLY GOOD CONDITION, OR WHENEVER WEATHER CONDITIONS DEMAND IT, SPEED SHOULD BE FURTHER REDUCED.

Vespa Sprint 125ie 150ie 3Valvole ABS



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 necessary to have your vehicle serviced to the prescribed intervals of time, even if you have not reached the predicted mileage. Carrying out scheduled services on time is essential for the validity of your warranty. For any further information concerning Warranty procedures and 'Scheduled Maintenance', please refer to the 'Warranty Booklet'.

SCHEDULED MAINTENANCE TABLE

km x 1,000	1	5	10	15	20	25	30
Safety fasteners	I		I		I		I
Spark plug			I		R		I
Air filter element			R		R		R
Centre stand		L	L	L	L	L	L
Drive belt			R		R		R
Throttle control	A		A		A		A
Roller housing			I		I		I
Throttle body			C		C		C
Engine oil filter	R		R		R		R
Valve clearance	A		A		A		A

km x 1,000	1	5	10	15	20	25	30
Electrical system and battery	I	I	I	I	I	I	I
Cylinder cooling system							I
Brake levers	L		L		L		L
Brake fluid **	I	I	I	I	I	I	I
Engine oil*	R	I	R	I	R	I	R
Hub oil			I		I		I
Headlight aiming adjustment			A		A		A
Brake pads	I	I	I	I	I	I	I
Tyre pressure and wear	I	I	I	I	I	I	I
Vehicle road test	I	I	I	I	I	I	I
Suspension			I		I		I
Steering	A		A		A		A
Transmission			L		L		L

I: CHECK AND CLEAN, ADJUST, LUBRICATE OR REPLACE, IF NECESSARY C: CLEAN; R: REPLACE; A: ADJUST; L: LUBRICATE

** Check level every 2,500 km*

*** Replace every 2 years*



06_02

Table of recommended products (06_02)

Piaggio & C. S.p.A. recommends **eni** products for scheduled maintenance of its vehicles.

RECOMMENDED PRODUCTS TABLE

Product	Description	Specifications
AGIP GEAR SAE 80W-90	Lubricant for gearboxes and transmissions.	API GL-4
AGIP BRAKE 4	Brake fluid.	SAE J 1703 -FMVSS 116 - DOT 3/4 - ISO 4925 - CUNA NC 956 DOT 4 synthetic fluid
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

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

1 Inch (in)	25.4 Millimetres (mm)
1 Foot (ft)	0.305 Metres (m)
1 Mile (mi)	1.609 Kilometres (km)
1 US gallon (USgal)	3.785 Litres (l)
1 Pound (lb)	0.454 Kilograms (kg)
1 Cubic inch (in ³)	16.4 Cubic centimetres (cm ³)
1 Foot pound (lb ft)	1,356 Newton metres (Nm)
1 Mile 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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