

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 GTS Super 125 i.e.



The instructions given in this booklet are intended to provide a clear, simple guide to using your scooter; details are also given of routine maintenance procedures and regular checks that should be carried out on the vehicle at and **Authorized PIAGGIO 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 **authorized PIAGGIO Dealer or Service Centre**.



### **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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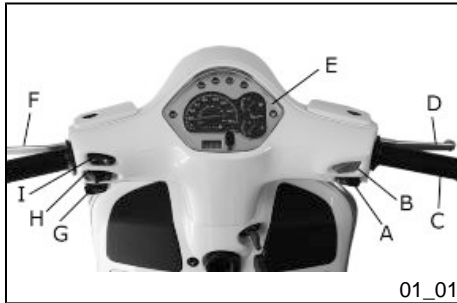
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# Vespa GTS Super 125 i.e.

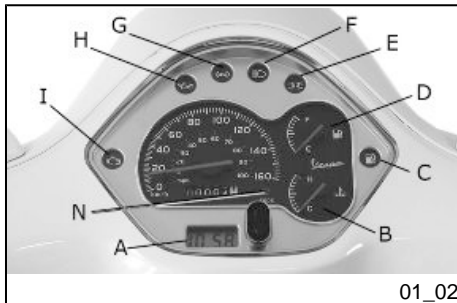


**Chap. 01  
Vehicle**



## Dashboard (01\_01)

- A = Starter button
- B = Engine block Run-Off switch
- C = Throttle grip
- D = Front brake lever
- E = Instrument panel
- F = Rear brake lever
- G = Horn button
- H = Turn indicator switch
- I = Light switch



## Analogueinstrumentpanel (01\_02)

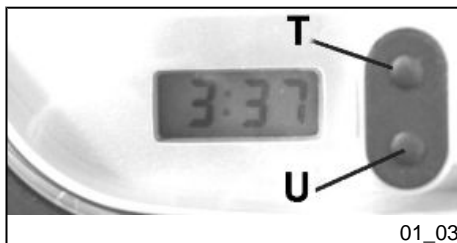
- A = Digital clock with calendar
- B = Cooling liquid temperature gauge
- C = Fuel reserve warning light
- D = Fuel gauge
- E = Headlight warning light
- F = High-beam warning light
- G = Turn signal indicator light
- H = Low oil pressure warning light
- I = Engine - injection system fault warning light
- N = Immobilizer LED





**THE ENGINE - INJECTION SYSTEM FAULT WARNING LIGHT "I" LIGHTS IN TWO DIFFERENT MODES:**

- **FLASHING: ENGINE COOLANT TEMPERATURE TOO HIGH. STOP THE ENGINE IMMEDIATELY AND CONTACT AN AUTHORISED SERVICE CENTRE FOR ASSISTANCE.**
- **LIT CONSTANTLY: OTHER ENGINE - INJECTION SYSTEM FAULTS. CONTACT AN AUTHORISED SERVICE CENTRE FOR ASSISTANCE.**



### **Clock (01\_03)**

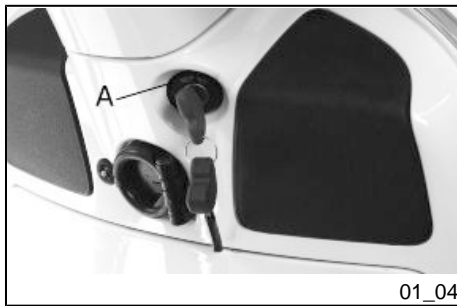
Hours and minutes are displayed in a 1 to 12, AM or PM, format on the instrument panel.

Operating the function selection switch «**T**» month, day and seconds can be seen besides hours and minutes. In order to adjust the above mentioned functions, operate button «**U**». 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 DISPOSED OF IN SUITABLE CONTAINERS AS PRESCRIBED BY THE REGULATIONS IN FORCE.**



## Keyswitch (01\_04)

**LOCK** = ignition disabled, extractable key, mechanical antitheft device enabled.

**OFF** = ignition disabled, extractable key, mechanical antitheft device disabled.

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

## Locking the steering wheel

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

### CAUTION



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

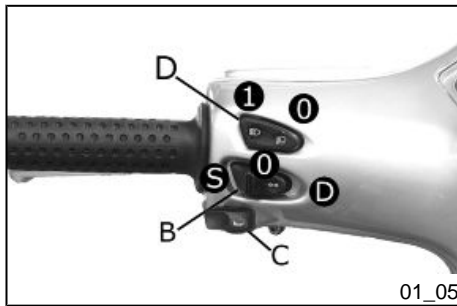
## Releasing the steering wheel

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

### CAUTION



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

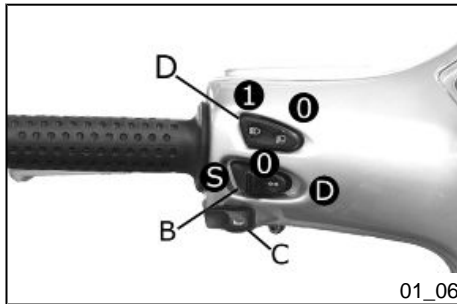


### Switch direction indicators (01\_05)

Lever towards "S" = Left turn indicator is switched on;

Lever towards "D" = Right turn indicator is switched on;

The lever returns automatically to position "0" and the turn indicator "B" remains on; press the lever to turn them off.



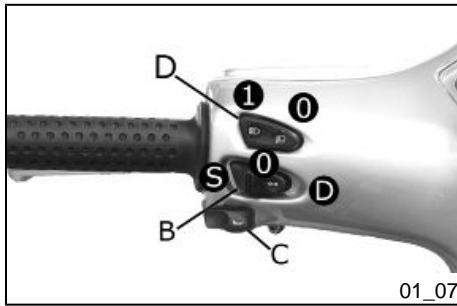
### Horn button (01\_06)

Push the «C» button to sound the horn.

### Lightswitch (01\_07)

0 = Low-beam and tail light

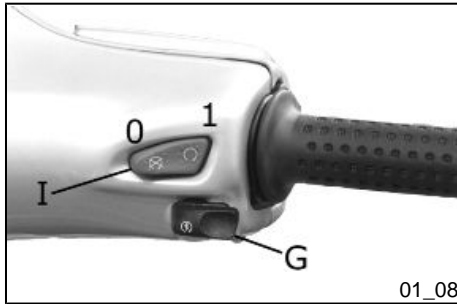
1 = High-beam and tail light



**CAUTION**

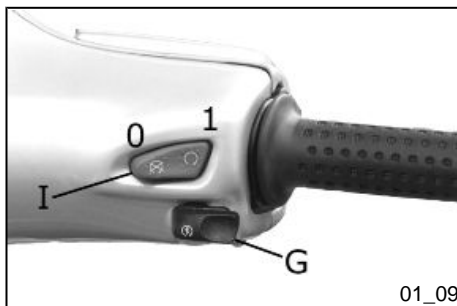


**DO NOT PLACE, TRANSPORT OBJECTS AND/OR CLOTHES OVER THE FRONT HEADLIGHT ASSEMBLY, WHEN THE HEADLIGHT IS TURNED ON OR OFF. FAILURE TO FOLLOW THIS PRECAUTION MAY CAUSE OVERHEATING AND THE SUBSEQUENT FUSION OF THE GLASS.**



**Start-upbutton (01\_08)**

Starter button "G"



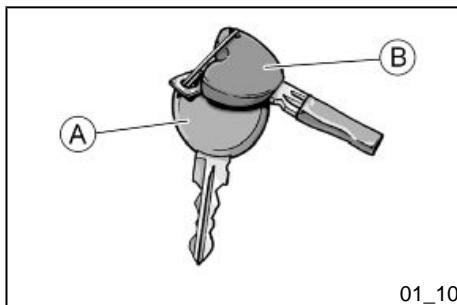
## Enginestopbutton (01\_09)

0 = OFF

1 = RUN

## The immobilizersystem

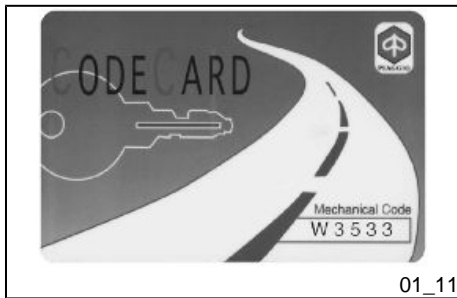
In order to enhance theft protection, the vehicle is equipped with a «**PIAGGIO IMMOBILIZER**» electronic engine locking device that is activated automatically when the ignition switch is removed. Upon start-up, the «**PIAGGIO IMMOBILIZER**» system checks the starter key, and only if this key is recognised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



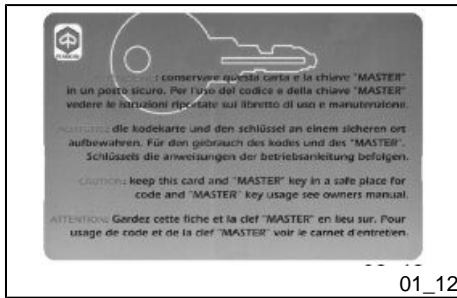
## Keys (01\_10, 01\_11, 01\_12)

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

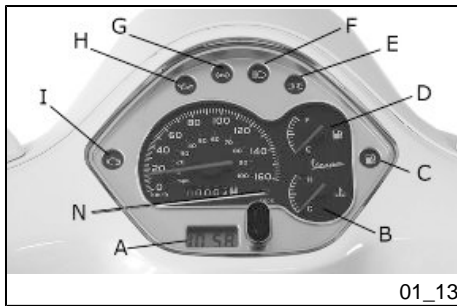
Together with the keys comes a CODE CARD which is imprinted with the mechanical code of the keys.



01\_11



01\_12



01\_13

**WARNING**

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

**WARNING**

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

**Immobilizerdeviceenabledindicatorled (01\_13)**

Activation of the «**PIAGGIO IMMOBILIZER**» system is signalled by a flashing warning light «**N**» (see «**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 be provided by an **Authorised Piaggio-Gilera Service Centre** with information on the type of fault detected.

## Operation

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

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

**IF OWNERSHIP OF THE VEHICLE IS TRANSFERRED TO ANOTHER PERSON, THE KEY WITH THE RED GRIP (AS WELL AS THE OTHER KEYS) AND THE "CODE CARD" MUST BE ALSO TRANSFERRED TO THE NEW OWNER.**

## Programmingtheimmobilizersystem

Below is described the procedure to follow for programming the **PIAGGIO IMMOBILISER** system and/or for storing other key codes. The programming procedure should be carried out with the engine stop switch set to «RUN».

## Procedurestart-redkey

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

## Intermediatestep-blukey

Within ten seconds after pulling out the red key, insert the black key 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.

## Finalstep-redkey

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

## Properprogrammingcheck

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

### **WARNING**

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



## Accessing the fuel tank (01\_14, 01\_15, 01\_16)

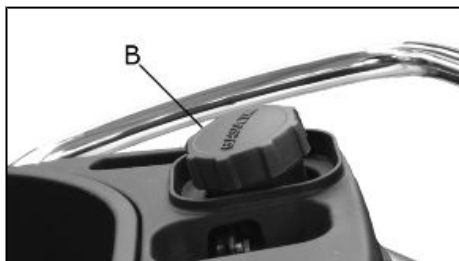
With the key set to «OFF» or «ON», or with engine on, it is possible to electrically open the saddle by pressing the button «C». If the saddle opening system does not work, operate the emergency lever «A». Then, unscrew cap «B» and the fuel tank can be reached.



01\_14



01\_15

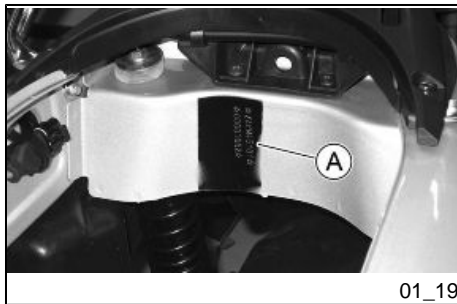
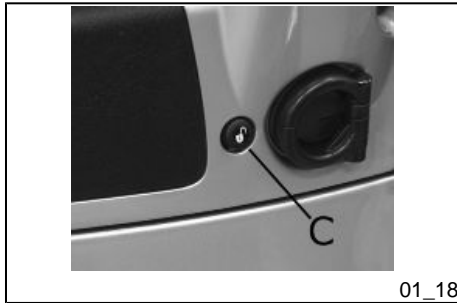


01\_16



### Opening the saddle (01\_17, 01\_18)

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

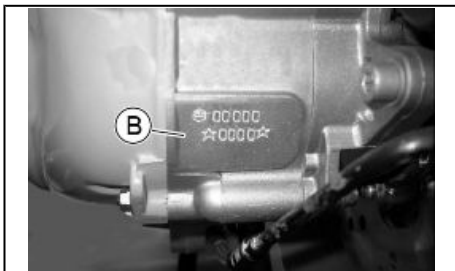


### Identification (01\_19, 01\_20, 01\_21)

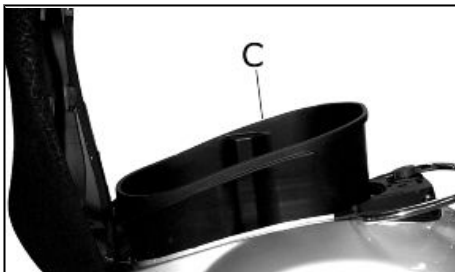
The identification registration numbers consist of a prefix followed by a number stamped on both the chassis «A» and the engine «B». These numbers must always be indicated on spare parts requests. To read the chassis number, lift the saddle and remove the helmet compartment «C». We recommend checking 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.).



01\_20



01\_21

**Rear top box opening (01\_22)**

Insert the key into the switch and press down until the glove compartment opens. If the switch is set to "**LOCK**", turn the key to "**OFF**" or "**ON**" before pressing it down.



01\_22



# Vespa GTS Super 125 i.e.

**Vespa®**

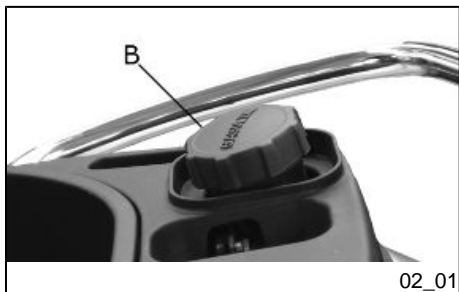


**Chap. 02**  
**Use**

## Checks

Before using the vehicle, check:

1. That there is enough fuel in the fuel tank.
2. That the fluid level for front and rear brakes is correct.
3. That tyres are properly inflated.
4. The correct functioning of daylight running lights, headlamp, turn indicators, stop light and license plate light.
5. The correct functioning of front and rear brakes.
6. The oil level in the gearcase.
7. Engine oil level.
8. The coolant level.



## Refuelling (02\_01, 02\_02)

Fuel: lift the saddle and unscrew the cap «**B**». Recommended fuel: Unleaded petrol, min 95 octane. The warning light «**C**» lights to indicate that the fuel level is in reserve.

### WARNING



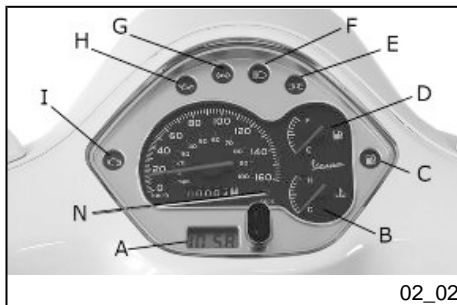
**SWITCH OFF THE ENGINE BEFORE REFUELLING WITH PETROL.**

**PETROL IS HIGHLY INFLAMMABLE.**

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

**DO NOT INHALE FUEL FUMES.**

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



02\_02

#### CAUTION



PETROL DAMAGES THE PLASTIC PARTS OF THE BODYWORK.



TO PREVENT FUEL SPILLAGE ONTO THE HOT ENGINE AND PLASTIC COMPONENTS, ENSURE THAT THE FUELLING NOZZLE IS INSERTED FULLY INTO THE MOUTH OF THE FUEL TANK.

#### CAUTION



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

#### CAUTION

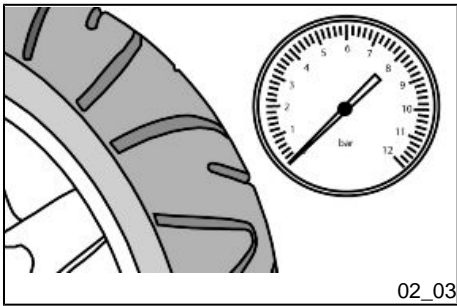


DO NOT USE THE VEHICLE TO THE COMPLETE EXHAUSTION OF THE FUEL; SHOULD THIS OCCUR, DO NOT ATTEMPT TO START THE ENGINE. TURN THE IGNITION SWITCH TO «OFF» AND TOP-UP THE TANK AS SOON AS POSSIBLE. FAILURE TO FOLLOW THESE GUIDELINES COULD DAMAGE THE FUEL PUMP AND/OR THE CATALYTIC CONVERTER.

#### Characteristic

Fuel tank capacity

~ 9.2 litres



02\_03

## Tyrepressure (02\_03)

Check tyre pressure and wear periodically (roughly every 500 km). Tyres feature wear indicators; replace tyres 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 to a workshop equipped to replace 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.**

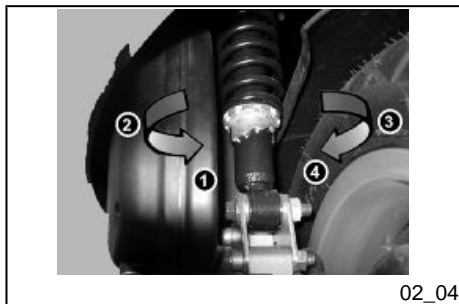
## TYRES

Front tyre	120/70 - 12" 51P Tubeless
Rear tyre	Tubeless 130/70 12" 62P

## TYRE INFLATION PRESSURE

Front tyre pressure (with passenger)	1.8 bar (-)
Rear tyre pressure (with passenger)	2.0 bar (2.2)





## Shockabsorbersadjustment (02\_04)

The preloading of the springs can be adjusted to 4 positions acting on the ring nut located in the lower part of the shock absorbers with 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.

### CAUTION



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

### WARNING



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

### WARNING



**IT IS ABSOLUTELY FORBIDDEN TO ADJUST THE PRELOAD DIFFERENTLY ON THE TWO SHOCK ABSORBERS**



02\_05

## 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.**



02\_06

## Startinguptheengine (02\_06, 02\_07)

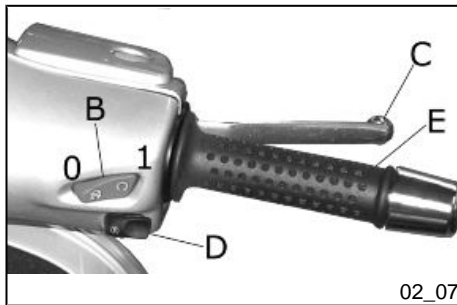
To start the engine it is necessary, before pressing the starter button, to pull and keep pulled the front or rear brake lever, which activates the appropriate switch allowing start-up.

1. Rest the vehicle on its centre stand, ensuring the rear wheel is not touching the ground.
2. Hold the throttle grip «E» in the idle position.
3. insert key into ignition switch «A» and turn it to "ON".
4. Ensure that the "OFF-ON" switch «B» is set to ON.
5. Pull and hold the front «C» or rear brake lever, then press the electric starter button «D».

### WARNING



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



#### CAUTION



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

#### Precautions

#### WARNING



**NEVER STRESS THE ENGINE AT LOW TEMPERATURES IN ORDER TO AVOID POSSIBLE DAMAGE. BE CAREFUL NEVER TO EXCEED THE MAXIMUM SPEED WHILE RUNNING DOWNHILL, IN ORDER TO AVOID DAMAGING THE ENGINE. IN ANY CASE, IN ORDER TO PRESERVE THE ENGINE FROM PROLONGED OVERREVVING, THE REVOLUTION LIMITER WILL BE ACTIVATED IF THE ENGINE SPEED EXCEEDS THE ESTABLISHED THRESHOLD. DO NOT ACTIVATE THE REVOLUTION LIMITER RECURRENTLY SO AS TO AVOID DAMAGING THE CATALYTIC CONVERTER.**

#### WARNING



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

## Difficult startup

In the rare case of a flooded engine, and in order to facilitate starting, try putting the vehicle into motion with the throttle slightly 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.



## Stopping the engine (02\_08, 02\_09)

Fully untwist the throttle grip and then turn the switch «A» to "OFF" (extractable key), or turn switch «B» to "OFF".

### CAUTION

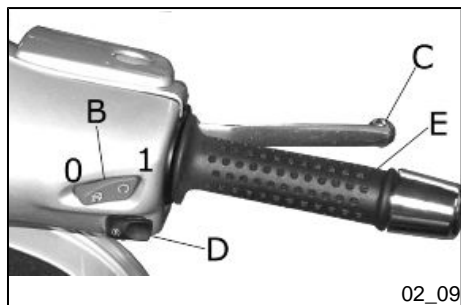


**DUE TO THE HIGH TEMPERATURES THE CATALYTIC CONVERTER CAN REACH, ALWAYS TAKE CARE, WHEN PARKING THE VEHICLE, THAT THE EXHAUST DOES NOT COME INTO CONTACT WITH FLAMMABLE MATERIALS, TO AVOID SERIOUS BURNS.**

### CAUTION



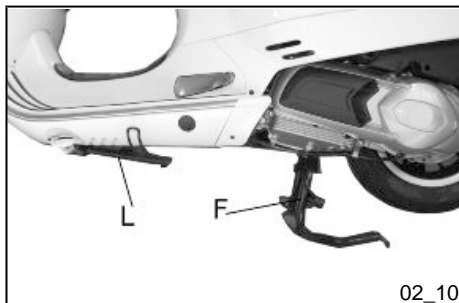
**DO NOT SHUT OFF THE ENGINE WHILE THE VEHICLE IS MOVING. UNBURNED FUEL COULD ENTER THE CATALYTIC CONVERTER AND BURN, CAUSING THE CONVERTER TO OVERHEAT AND POSSIBLY DESTROYING IT.**



## Stand (02\_10)

### CENTRE STAND

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



### SIDE STAND

With your foot push the projection of the stand «L » in order to open it and at the same time lean the vehicle on you.



## Automatictransmission (02\_11)

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

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

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

Take the following precautions if the clutch overheats:

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

## Safedriving

Some simple tips are provided below that will enable you to use your vehicle on a daily basis, confidently and safely. Your skill and your mechanical knowledge are the basis of safe riding. 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 on the helmet 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 you use the scooter on roads covered with sand, mud, snow mixed with salt, etc., we recommend that you clean the brake disc frequently with a non-aggressive detergent in order to avoid the formation of abrasive build-ups in the holes, which could result in early wear of the brake pads.

### 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. NEVER DRIVE THE SCOOTER EQUIPPED WITH ACCESSORIES AT A SPEED HIGHER THAN 100 km/h (see section "SPARE PARTS AND ACCESSORIES")**





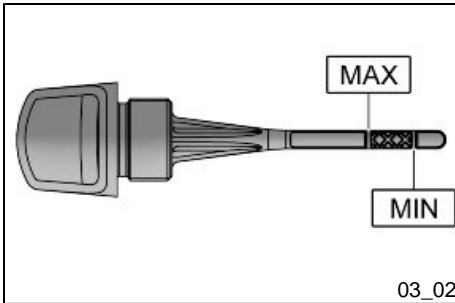
# Vespa GTS Super 125 i.e.



**Chap. 03  
Maintenance**



03\_01



03\_02



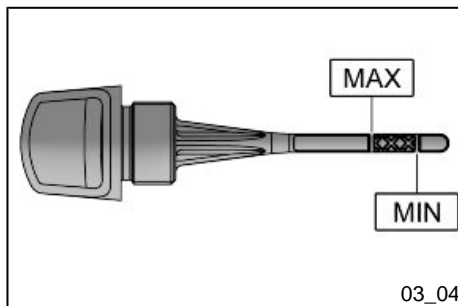
03\_03

## Engineoillevel (03\_01, 03\_02)

Four stroke engine oil is used in the engines in order to lubricate the timing bodies, the bench bearings and the thermal group. **An insufficient quantity of oil can seriously damage the engine.** In all four-stroke engines, a loss of efficiency in oil performance and certain consumption should be considered normal. Consumption can particularly reflect the conditions of use (i.e. when driving at 'full acceleration' all the time, oil consumption increases). The replacement intervals provided for by the maintenance programme are defined depending on the total content of oil in the engine and the average consumption measured following standardised methods. **In order to prevent any problems, we recommend checking oil level more frequently than indicated in the Scheduled Maintenance table or before setting off on long journeys. The vehicle is, however, equipped with an oil pressure warning light on the instrument panel.**

## Engineoillevelcheck (03\_03, 03\_04)

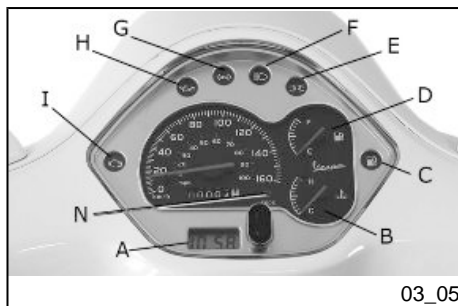
Every time the scooter is used, a visual check should be made on the level of the engine oil when the engine is cold. The oil level should be somewhere between the **MAX** and **MIN** index marks on the level bar; the check must be made with the scooter upright, resting on the centre stand. If the check is carried out after the vehicle has been used, and therefore with a hot engine, the level line will be lower; in order to carry out a correct check, wait at least 10 minutes after the engine has been stopped so as to get the correct level.



03\_04

### Engine oil top-up

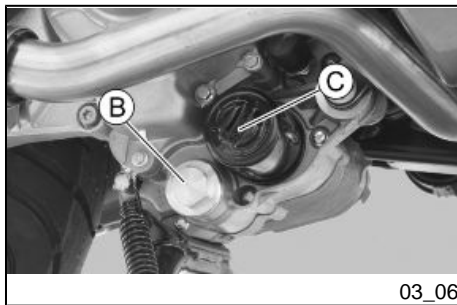
Always check the oil level before topping up, and add oil **without exceeding the MAX** level. Getting an oil level between the **MIN** and **MAX** levels requires ~ 400 cm<sup>3</sup> of oil. Take your vehicle to an **Authorised Service Centre** to have the oil checked and if necessary, topped-up as indicated in the scheduled maintenance table.



03\_05

### Warning light (insufficient oil pressure) (03\_05)

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



## Engineoilchange (03\_06)

Have oil changed and the cartridge filter «C» replaced as indicated in the scheduled maintenance table at an **Authorised Service Centre**. The engine should be emptied by draining the oil through drainage plug «B » of the mesh filter on the flywheel side. In order to facilitate the oil drainage, loosen the cap/dipstick. Since a certain quantity of oil still remains in the circuit, add approx.  $950 \div 1000 \text{ cm}^3$  of oil through the cap «A. Then start the engine, leave it running for a few minutes and shut it off: after 5 minutes, check the level and if necessary, top-up **without exceeding the MAX level**. The cartridge filter must be replaced at every oil change. For top-ups and changes, use new oil of the recommended type.

### WARNING



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

### WARNING



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

### CAUTION



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

**CAUTION**

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

**Recommended products**

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

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

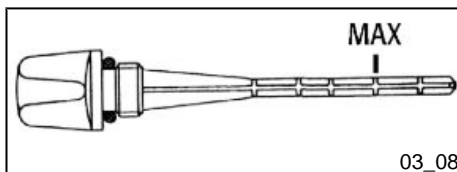
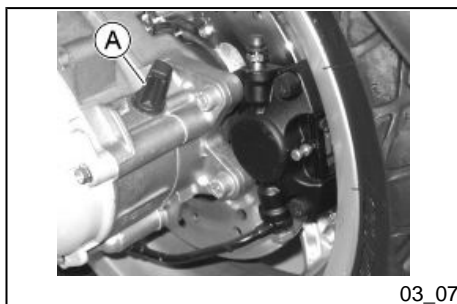
**Huboillevel (03\_07, 03\_08)**

Check the oil in the rear hub. To check the rear hub oil level, proceed as follows:

- 1) Park the scooter on level ground and rest it on its stand.
- 2) Unscrew dipstick «A», wipe it clean with a cloth, reinsert it and **tighten completely**.
- 3) Pull out the dipstick and check that the oil level is above the first notch from the bottom.
- 4) Reinsert the dipstick and ensure that it is tightened correctly.

**N.B.**

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



**CAUTION**



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

**CAUTION**



**USED OIL CAN HARM THE ENVIRONMENT. COLLECTION AND DISPOSAL SHOULD BE CARRIED OUT IN COMPLIANCE WITH REGULATIONS IN FORCE.**

**CAUTION**



**AN EXCESSIVE QUANTITY OF OIL CAN LEAD TO SPILL OVER, WHICH MAY CAUSE THE ENGINE AND THE WHEEL TO GET DIRTY.**

**CAUTION**



**WHEN REPLACING THE HUB OIL DO NOT LET THE OIL COME INTO CONTACT WITH THE REAR BRAKE DISC.**

**CAUTION**



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

## Recommended products

### **AGIP GEAR SAE 80W-90**

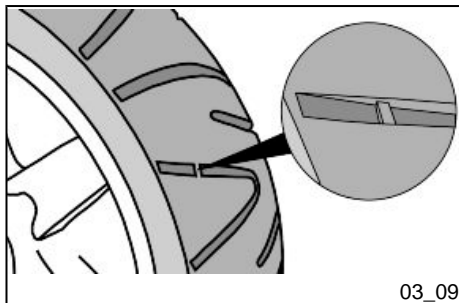
*Lubricant for gearboxes and transmissions.*

API GL-4

## Characteristic

### **Rear hub oil**

250 cc



## **Tyres (03\_09)**

Check tyre pressure and wear periodically (roughly every 500 km). Tyres feature wear indicators; replace tyres 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 to a workshop equipped to replace tyres.

### **CAUTION**



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

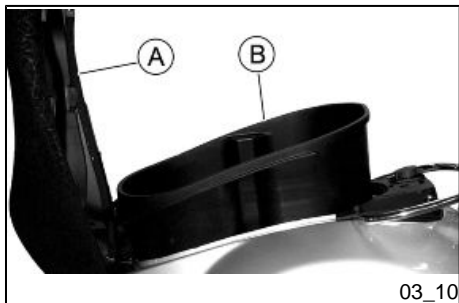
**TYRES MUST BE REPLACED WHEN THE TREAD REACHES THE WEAR LIMITS SET FORTH BY LAW.**

## TYRES

Front tyre	120/70 - 12" 51P Tubeless
Rear tyre	Tubeless 130/70 12" 62P

## TYRE INFLATION PRESSURE

Front tyre pressure (with passenger)	1.8 bar (-)
Rear tyre pressure (with passenger)	2.0 bar (2.2)



### **Sparkplugdismantlement (03\_10, 03\_11, 03\_12, 03\_13)**

Proceed as follows:

1. lift the saddle «A»
2. lift the helmet compartment «B» and reach into the spark plug with your hand;
3. Disconnect spark plug HV wire cap «C», turning it to release from the retainer, and remove from its seat;
4. unscrew the spark plug using the spark plug spanners «D» supplied;
5. When refitting, place the spark plug in the hole at the due inclination and screw it by hand until it is finger tight;
6. use the box-spanner «D» supplied only for locking;
7. push the cap «C» fully onto the spark plug, turning and fitting into its retainer.





03\_11

**CAUTION**

THE SPARK PLUG MUST BE REMOVED WHEN THE ENGINE IS COLD. THE SPARK PLUG SHOULD BE CHECKED EVERY 6,000 KM AND REPLACED EVERY 12,000 KM. THE USE OF NON-CONFORMING IGNITION CONTROL UNITS AND SPARK PLUGS OTHER THAN THOSE PRESCRIBED CAN SERIOUSLY DAMAGE THE ENGINE

**CAUTION**

THE USE OF SPARK PLUGS OTHER THAN THOSE RECOMMENDED OR A SHIELDLESS SPARK PLUG CAP COULD CAUSE DISTURBANCES TO THE SYSTEM.

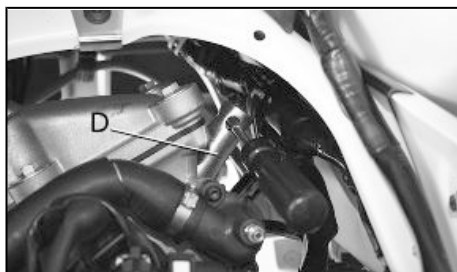
**Electric characteristic**

spark plug

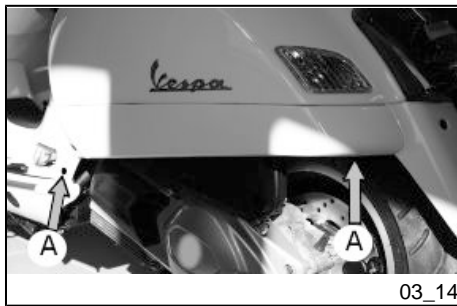
NGK CR8EKB



03\_12



03\_13



03\_14



03\_15



03\_16

## Removing the air filter (03\_14, 03\_15, 03\_16, 03\_17)

Proceed as follows:

1. undo the fixing screws «A» and remove the left side fairing;
2. remove the helmet compartment;
3. unscrew the fixing screws «B» that can be reached after removing the helmet compartment;
4. unscrew the screws «C» and remove the air filter cover.

Remove the filtering element and clean it with water and shampoo; then dry it with a clean cloth and short blasts of compressed air. Finally, immerse it in a mixture containing 50% oil of the recommended type and 50% petrol. Then gently squeeze the filter element between your hands, allow it to drip and then refit it. Possible oil or water deposits can be eliminated by removing the two rubber caps «D».

### CAUTION



**IF THE VEHICLE IS USED ON DUSTY ROADS IT IS NECESSARY TO CARRY OUT MAINTENANCE CHECKS OF THE AIR FILTER MORE OFTEN TO AVOID DAMAGING THE ENGINE.**

### CAUTION



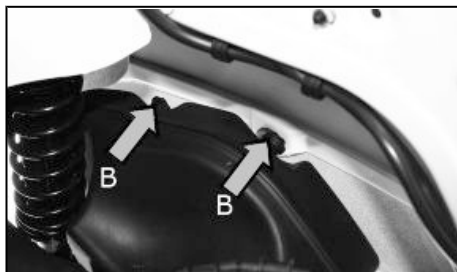
**IN ORDER NOT TO DAMAGE THE VEHICLE PLASTIC COVERS CONTACT AN AUTHORISED SERVICE CENTRE TO HAVE THE AIR FILTER CLEANED.**

### Recommended products

**AGIP FILTER OIL**

*Special product for the treatment of foam filters.*

-



03\_17



03\_18

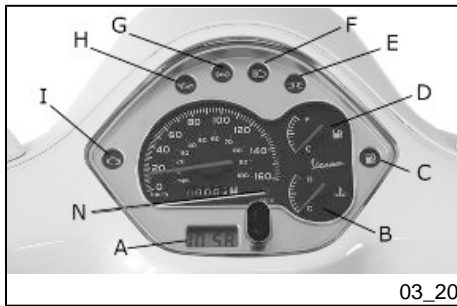


03\_19

### Coolingfluidlevel (03\_18, 03\_19, 03\_20)

Engine cooling is carried out by a forced-circulation coolant system. The cooling circuit holds approx. 2.100 ÷ 2.150 l of coolant consisting of a mixture of 50% de-ionised water and 50% glycol ethylene-based antifreeze solution with corrosion inhibitors. The recommended coolant, supplied with the scooter, is already mixed and ready for use. For proper functioning of the engine, ensure that the pointer of the coolant temperature gauge remains in the middle area of the scale. If the needle enters the red zone on the dial or the engine - injection system warning light "I" starts flashing, stop the engine, allow it to cool down and check the coolant level; if level is OK, take your scooter to an **Authorised Piaggio Service Centre**. Should the coolant level exceed the above values during a non-demanding ride, shut off the engine and let it cool down. Then check the coolant level; if level is OK, take your scooter to an **Authorised Piaggio Service Centre**. Check coolant when the engine is cold at the intervals indicated in the scheduled maintenance table, following the steps below.

- a) Place the scooter in a vertical position on the stand.
- b) Unscrew the fixing screw «A» and remove the cover.
- c) Check the fluid level according to the two marks- MIN and MAX «B» on the reservoir
- d) Top up if the fluid level is below the MIN level on the scale inside the expansion tank. The fluid level must always be between the MIN and MAX levels.



If the fluid is near the minimum level, top-up only when the engine is cold. If it is necessary to top up the coolant frequently, or if the expansion tank is completely dry, you should look for the cause in the cooling system. It is therefore indispensable to have the cooling system checked at an **Authorised Piaggio Service Centre**. Change coolant at the intervals indicated in the scheduled maintenance table. For this operation, please contact an **Authorised Piaggio Service Centre**.

#### WARNING



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

#### WARNING



**TO PREVENT AVOID HARMFUL FLUID LEAKAGE WHILE RIDING, ENSURE THAT THE LEVEL NEVER EXCEEDS THE MAXIMUM VALUE.**

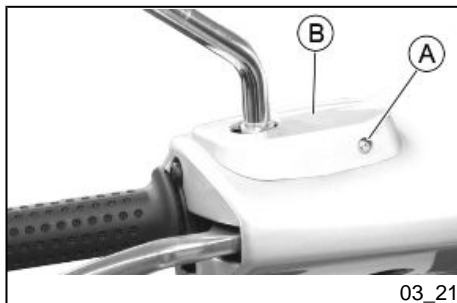
**TO ENSURE CORRECT ENGINE OPERATION, KEEP THE RADIATOR GRILLE CLEAN.**

### Recommended products

#### **AGIP PERMANENT SPEZIAL**

*Ethylene glycol-based antifreeze fluid with organic inhibition additives. Red, ready to use.*

ASTM D 3306 - ASTM D 4656 - ASTM D 4985 - CUNA NC 956-16



03\_21

### Checking the brake oil level (03\_21, 03\_22)

The brake fluid reservoirs are located on the pumps under the front handlebar cover (front on the right-hand side, rear on the left-hand side). The procedures to checking the brake fluid level for the front and rear brakes are identical.

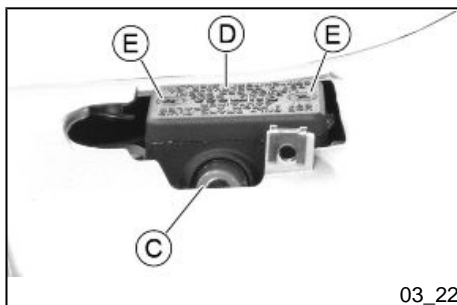
Proceed as follows:

1. rest the scooter on its centre stand and make sure the handlebar is centred;
2. loosen screw "A" and remove cover "B";
3. check the fluid level through the respective sight glass "C".

A certain lowering of the level is caused by wear on the pads. Should the level appear to be below the minimum mark, please contact your nearest **Authorised PIAGGIO Dealer or Service Centre** in order to have braking system thoroughly inspected. Proceed as follows:

Remove reservoir cover «D» and loosen the two screws «E» and top-up the brake fluid level using only the prescribed brake fluid and without exceeding the maximum level.

Under normal climatic conditions, the brake fluid should be replaced every 2 years. This operation must be carried out by trained technicians; take your scooter to a **PIAGGIO Dealer or authorised Service Centre**.



03\_22

#### WARNING



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

#### CAUTION



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

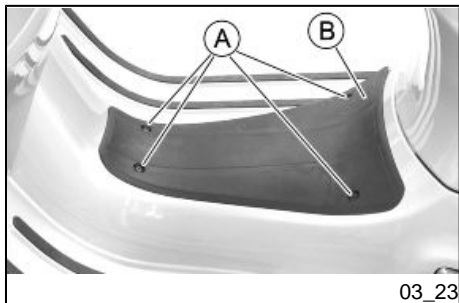
**HYGROSCOPIC, THAT IS, IT ABSORBS HUMIDITY FROM THE SURROUNDING AIR. IF THE HUMIDITY IN THE BRAKING FLUID EXCEEDS A CERTAIN VALUE, IT WILL LEAD TO INEFFICIENT BRAKING. NEVER USE BRAKING FLUID KEPT IN CONTAINERS THAT HAVE ALREADY BEEN OPENED, OR PARTIALLY USED.**

### **Recommended products**

#### **AGIP BRAKE 4**

*Brake fluid.*

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



03\_23

### **Battery (03\_23, 03\_24)**

To reach the battery «D », proceed as follows:

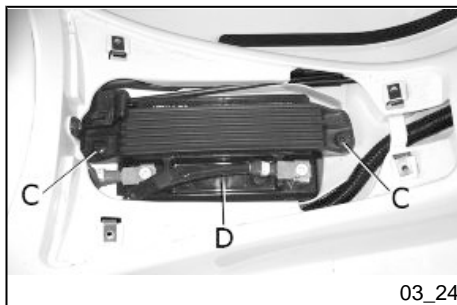
1. rest the scooter on its centre stand;
2. unscrew the 4 screws «A», remove the footrest «B».
3. remove the two battery fixing screws «C».

The battery is the electrical device that requires the most frequent inspections and diligent maintenance. The main points of maintenance to be observed are as follows:

#### **WARNING**



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

**WARNING**

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

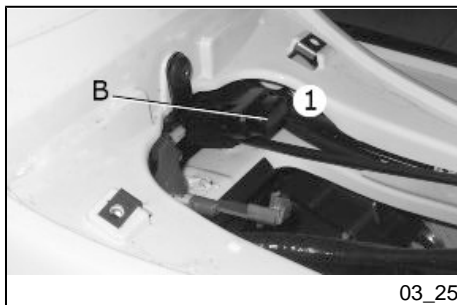
**Long periods of inactivity**

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

- **At least once a month** start the engine and run it slightly above idle speed for 10-15 minutes. This keeps all the engine components, as well as the battery, in good working order.
- Take your vehicle to a garage (as indicated in the «Vehicle not used for extended periods» section) to have the battery removed. Have the battery cleaned, charged fully and stored in a dry, ventilated place. Recharge **at least once every two months**.

**N.B.**

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

**WARNING**

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

**WARNING**

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

**Fuses (03\_25, 03\_26)**

The electrical system is equipped with:

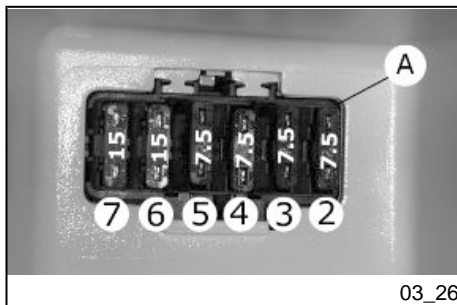
1. six protection fuses «A» located in the glove compartment to the left
2. of a 30A fuse «B», located in the battery compartment.

The chart shows the position and specifications of the fuses in the vehicle.

**CAUTION**

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





03\_26

**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.

**FUSES**

Fuse 1	<p><b>Current rating:</b> 30 A</p> <p><b>Protected circuits:</b> Vehicle main fuse</p>
Fuse 2	<p><b>Current rating:</b> 7.5A</p> <p><b>Protected circuits:</b> Running lights and instrument panel illumination power</p>
Fuse 3	<p><b>Current rating:</b> 7.5A</p> <p><b>Protected circuits:</b> Live services circuit</p>
Fuse 4	<p><b>Current rating:</b> 7.5A</p> <p><b>Protected circuits:</b> Live injection ECU</p>

Fuse 5	<p><b>Current rating:</b> 7.5A</p> <p><b>Protected circuits:</b> Battery power for accessories and instrument panel</p>
Fuse 6	<p><b>Current rating:</b> 15A</p> <p><b>Protected circuits:</b> Battery power for headlight and saddle release system.</p>
Fuse 7	<p><b>Current rating:</b> 15A</p> <p><b>Protected circuits:</b> Injection load power supply.</p>

### **BULBS**

Low-/high-beam light bulb	<p><b>Type:</b> HALOGEN (H4)</p> <p><b>Power:</b> 12V - 55/60W</p> <p><b>Quantity:</b> 1</p>
Front tail light bulb	<p><b>Type:</b> ALL GLASS</p> <p><b>Power:</b> 12V - 5W</p> <p><b>Quantity:</b> 2</p>
Licence plate light bulb	<p><b>Type:</b> ALL GLASS</p> <p><b>Power:</b> 12V - 5W</p>

	<b>Quantity: 1</b>
Front turn indicator bulb	<b>Type:</b> SPHERICAL (AMBER) <b>Power:</b> 12V - 5W <b>Quantity:</b> 2+2
Rear turn indicator bulb	<b>Type:</b> SPHERICAL (AMBER) <b>Power:</b> 12V - 10W <b>Quantity:</b> 2
Rear tail light bulb	<b>Type:</b> ALL GLASS <b>Power:</b> 12V - 5W <b>Quantity:</b> 1
Stop light bulb	<b>Type:</b> ALL GLASS <b>Power:</b> 12V - 16W <b>Quantity:</b> 1
Tail light warning light bulb	<b>Type:</b> ALL GLASS <b>Power:</b> 12V - 2W <b>Quantity:</b> 1
High-beam warning light bulb	<b>Type:</b> ALL GLASS <b>Power:</b> 12V - 1.2W <b>Quantity:</b> 1
Low fuel warning light bulb	<b>Type:</b> ALL GLASS <b>Power:</b> 12V - 2W

**Quantity: 1**

Oil pressure warning light bulb

**Type:** ALL GLASS

**Power:** 12V - 1.2W

**Quantity:** 1

(Right and left) turn indicator  
warning light bulbs

**Type:** ALL GLASS

**Power:** 12V - 1.2 W

**Quantity:** 1

Panel lighting bulb

**Type:** ALL GLASS

**Power:** 12V - 2W

**Quantity:** 3

Injection system - engine fault  
warning lamp

**Type:** ALL GLASS

**Power:** 12V - 2W

**Quantity:** 1

### **Frontlightgroup (03\_27, 03\_28, 03\_29, 03\_30)**

To remove the front headlight assembly, proceed as follows:

- 1: remove rear-view mirrors.
- 2: Remove the screws «**A**» of the front shield grille.
- 3: Remove the fixing screws «**B**» of the front handlebar cover.
- 4: Remove the fixing screws «**C**» of the rear handlebar cover

5: Remove the front handlebar cover.

So there is access to the bulbs. Open the clip and take out the high-/low-beam light bulb «D». To change the tail light take out the rubber light socket from the seat. To reassemble, repeat the operation in the reverse order.

#### WARNING

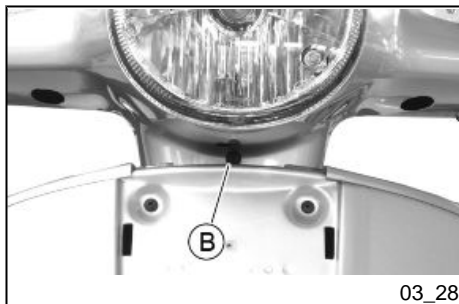


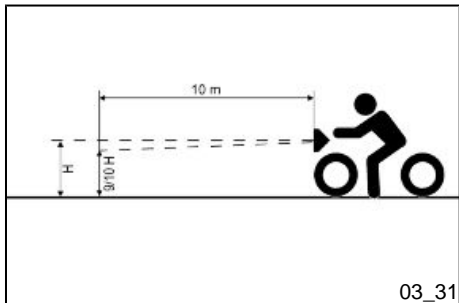
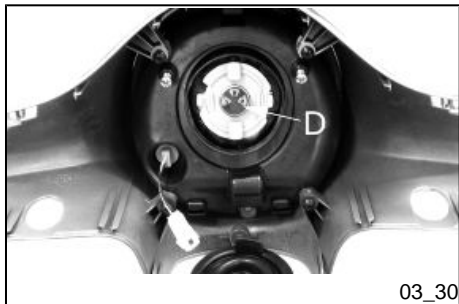
**THE TWIN-FILAMENT (HIGH-BEAM AND LOW-BEAM) BULB IS HALOGEN: DO NOT TOUCH THE BULB WITH YOUR FINGERS TO AVOID COMPROMISING ITS FUNCTIONING**

#### 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.**

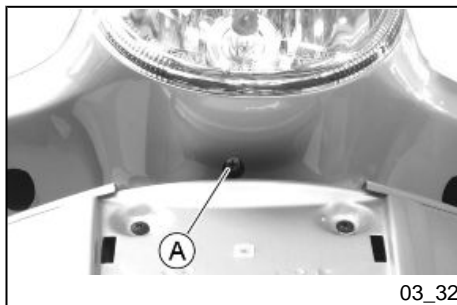




### Headlight adjustment (03\_31, 03\_32)

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».

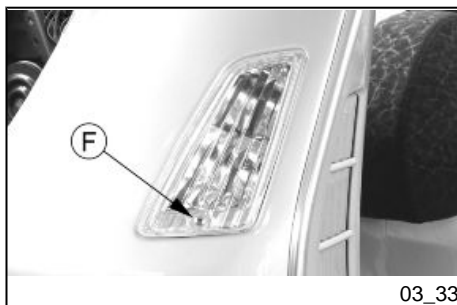


**N.B.**

**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.**

### **Frontdirectionindicators (03\_33)**

To replace the burnt bulb, remove the screws «F»





### Rearopticalunit (03\_34)

Remove screw «A» to remove the rear headlight assembly.

Access to taillight bulbs, stop light bulb and license plate bulb.

To reassemble, repeat the operation but 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.**



### Rearturnindicators (03\_35)

To gain access to the turn indicator bulbs, remove the fastening screws «E».

The bulbs have a bayonet coupling, to remove them press gently and twist anticlockwise about 30°. To refit follow the same steps but in reverse order.



## Rear-viewmirrors

Adjust the mirrors by applying slight pressure to the side of the mirror to move it to the desired position.

## Frontandreardiscbrake (03\_36, 03\_37)

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

### CAUTION



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

### CAUTION



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



03\_36



03\_37

**CAUTION**

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

**Puncture**

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.**



03\_38

### **delveicolo (03\_38)**

We recommend carrying out the following operations:

1. Clean the scooter thoroughly and then cover it with a canvas;
2. With engine off and piston at the bottom dead centre, remove the spark plug, add 1÷2 cm<sup>3</sup> of oil through its hole (larger amounts are dangerous for 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 antirust 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

### **Cleaningthevehicle**

Use a low pressure water jet in order to soften the dirt and mud deposited on painted surfaces. Once softened, mud and dirt must be removed with a soft sponge for body-work soaked with water and shampoo (2-4% of shampoo in water). Then rinse abundantly with water, and dry with a shammy cloth. Any polishing with silicon wax must always be preceded by washing

**WARNING**

IF THE SCOOTER IS USED ON DUSTY ROADS IT IS NECESSARY TO SERVICE THE TRANSMISSION COVER FILTER SPONGE MORE FREQUENTLY.

**CAUTION**

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

**WARNING**

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

- ONLY USE FAN SPRAY JETS.
- KEEP NOZZLE AT LEAST 60 CM AWAY FROM THE VEHICLE.
- DO NOT USE WATER AT TEMPERATURES ABOVE 40°C.
- DO NOT USE HIGH-PRESSURE WATER JETS.
- DO NOT STEAM WASH.
- DO NOT DIRECT THE JET STRAIGHT TO THE WIRING AND COOLING SLIT ON THE TRANSMISSION COVER.

**WARNING**

NEVER WASH THE SCOOTER IN DIRECT SUNLIGHT, ESPECIALLY DURING SUMMER WHEN THE BODYWORK IS STILL HOT, AS THE SHAMPOO CAN DAMAGE THE PAINTWORK IF IT DRIES BEFORE BEING RINSED OFF. NEVER USE

**CLOTHS SOAKED IN PETROL, DIESEL OIL OR KEROSENE FOR CLEANING THE PAINTED OR PLASTIC SURFACES SO AS NOT TO DAMAGE THE LUSTRE FINISH OR ALTER THE MECHANICAL PROPERTIES.**

**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.

## STARTING FAILURE

Emergency switch in «OFF»	Set the switch back to « <b>ON</b> »
Fuse blown	Replace the blown fuse and have the vehicle checked by an <b>Authorised Service Centre.</b>

## IGNITION PROBLEMS

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

## LACK OF COMPRESSION

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

## **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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## **INSUFFICIENT BRAKING**

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

Shock absorber fault, oil leak, end buffers damaged; shock absorber preloading incorrectly set	Contact an <b>Authorised Service Centre</b> .
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## **AUTOMATIC TRANSMISSION PROBLEMS**

CVT rollers and/or drive belt damaged	Contact an <b>Authorised Service Centre</b> .
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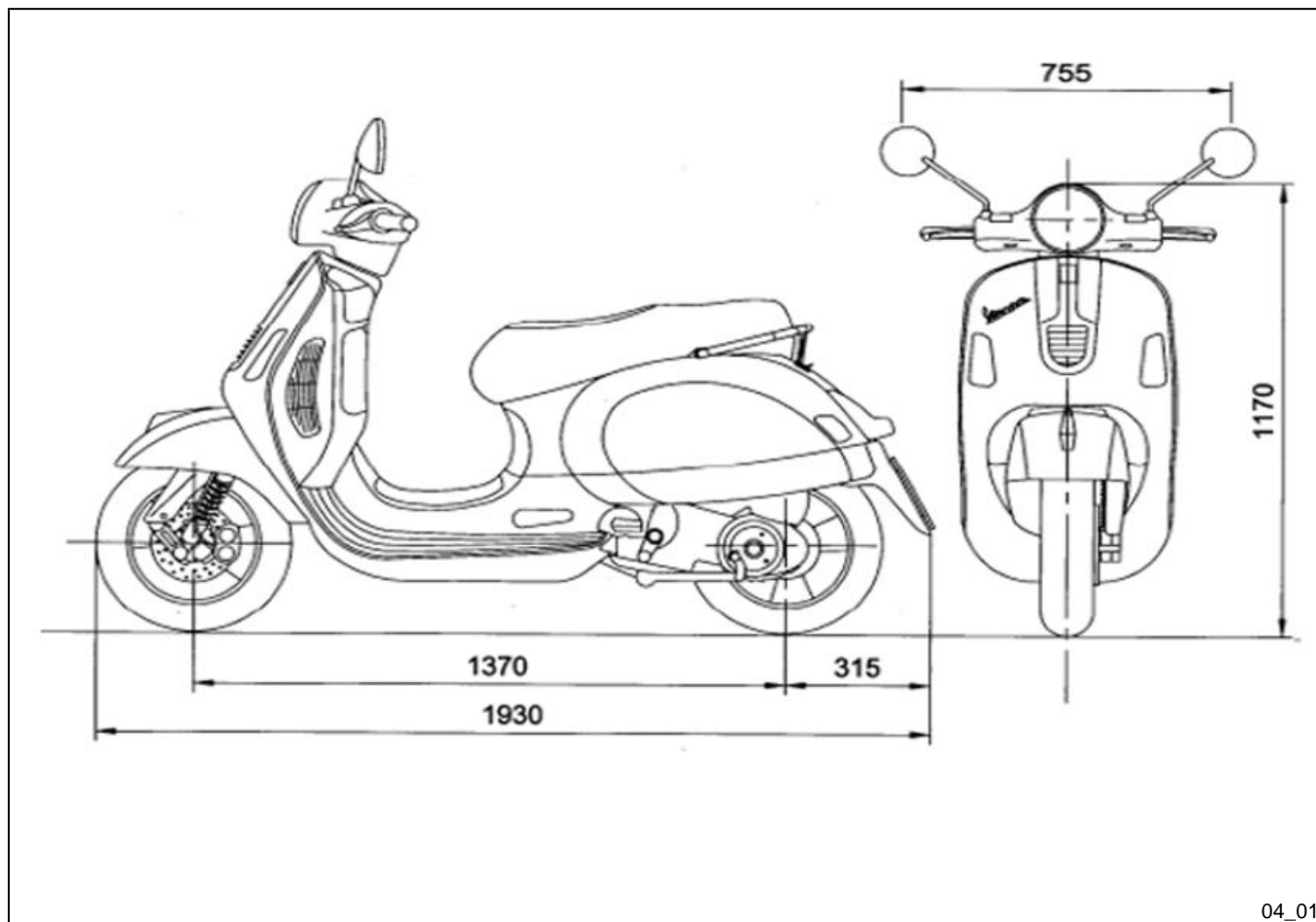




# Vespa GTS Super 125 i.e.



**Chap. 04**  
**Technicaldata**



**ENGINE TECHNICAL DATA**

Type	Single-cylinder, 4-stroke
Cubic capacity	124 cm <sup>3</sup>
Bore x stroke	57 x 48.6 mm
Compression ratio	12 ± 0.5: 1
Engine idle speed	1,750 ± 50 rpm
Timing system	4 valves, single overhead camshaft, chain-driven.
Valve clearance	Intake: 0.10 mm Exhaust: 0.15 mm
Max. power	11 kW at 9750 rpm
MAX. torque	12 Nm at 7500 rpm
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 gear	Gear reduction unit in oil bath.
Lubrication	Engine lubrication with lobe pump (inside crankcase), chain-driven, with double filter: mesh and paper.
Cooling	Forced coolant circulation system.
Starter	Electric

Ignition	Electronic inductive discharge ignition, high efficiency, with separate HV coil.
Ignition advance	$\alpha/N$ three-dimensional map managed by control unit
Spark plug	NGK CR8EKB
Alternative spark plug	-
Fuel system	Electronic injection with $\varnothing$ 32-mm throttle body and electric fuel pump.
Fuel	Unleaded petrol (95 RON)
Exhaust silencer	Absorption-type exhaust silencer with a 3-way catalytic converter and lambda probe.
Emissions compliance	EURO 3

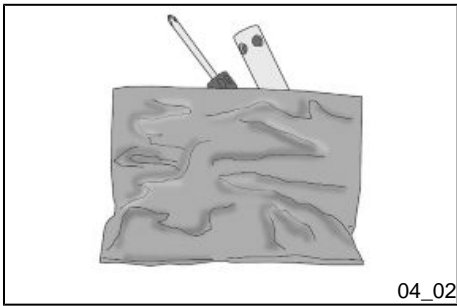
### **VEHICLE TECHNICAL DATA**

Chassis	Stamped plate supporting body.
Front suspension	Single arm suspension (cantilever wheel) fitted with a dual-chamber hydraulic shock absorber with coaxial spring.
Rear suspension	Two double-acting shock absorbers, adjustable to four positions at preloading.
Front brake	$\varnothing$ 220 mm disc with calliper with counteracting pistons.

Rear brake	disc brake, diameter 220 mm, with hydraulic servo operated from the handlebar with the left-hand lever.
Wheel rim type	Light alloy wheel rims.
Front wheel rim	12" x 3.00
Rear wheel rim	12" x 3.00
Front tyre	120/70 - 12" 51P Tubeless
Rear tyre	Tubeless 130/70 12" 62P
Front tyre pressure (with passenger)	1.8 bar (-)
Rear tyre pressure (with passenger)	2.0 bar (2.2)
Kerb weight	151 ± 5 kg
Maximum weight allowed	340 kg
Battery	12V-12Ah

### **CAPACITIES**

Engine oil	1.3 l
Transmission oil	250 cm <sup>3</sup>
Cooling system fluid	~ 2 l
Fuel tank capacity	~ 9.2 litres



### Toolkit (04\_02)

One box-spanner for spark plugs; one twin screwdriver; one special wrench for adjusting the rear shock absorber and one TORX wrench. The tools are arranged in the front case.

# Vespa GTS Super 125 i.e.



**Chap. 05**  
**Spareparts and**  
**accessories**



05\_01

## Warnings (05\_01)

### WARNING



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

### WARNING



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

### WARNING



PIAGGIO MARKETS ITS OWN LINE OF ACCESSORIES THAT ARE RECOGNISED AND GUARANTEED FOR USE. IT IS THEREFORE ESSENTIAL 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**

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

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

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

**WARNING**

**BE EXTREMELY CAREFUL WHEN INSTALLING AND REMOVING THE MECHANICAL ANTITHEFT DEVICE ON THE VEHICLE (U-SHAPED PADLOCK, DISC BLOCK, ETC.).**

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



# Vespa GTS Super 125 i.e.



**Chap. 06**  
**Scheduled maintenance**



06\_01

## Scheduled servicing table (06\_01)

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

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

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

### SCHEDULED MAINTENANCE TABLE

Km x 1,000	1	5	10	15	20	25	30	35	40	45	50	55	60
Roller bearing - Driven pulley			L		L		L		L		L		L
Safety fasteners	I		I				I				I		I
Spark plug			R		R		R		R		R		R
Drive belt			I	R	I		R		I	R	I		R
Throttle control	A		A		A		A		A		A		A
Air filter			C		C		C		C		C		C
Oil filter	R		R		R		R		R		R		R
CVT Filter			C		C		C		C		C		C
Valve clearance			A				A				A		
Electrical system and battery	I		I		I		I		I		I		I

Km x 1,000	1	5	10	15	20	25	30	35	40	45	50	55	60
Brake levers	L		L		L		L		L		L		L
Brake fluid *	I		I		I		I		I		I		I
Coolant *	I		I		I		I		I		I		I
Engine oil	R	I	R	I	R	I	R	I	R	I	R	I	R
Hub oil	R		I		R		I		R		I		R
Headlight direction adjustment				A			A			A			A
Brake pads	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
Vehicle road test	I		I		I		I		I		I		I
Radiator (external cleaning)				I			I			I			I
Suspension	I		I		I		I		I		I		I
Steering	A		A		A		A		A		A		A
Transmission				L			L			L			L

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

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

\* Replace every 2 years

**CAUTION**

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

**RECOMMENDED PRODUCTS TABLE**

<b>Product</b>	<b>Description</b>	<b>Specifications</b>
AGIP GEAR SAE 80W-90	Lubricant for gearboxes and transmissions.	API GL-4
eni i-Ride PG 5W-40	Synthetic based lubricant for high-performance four-stroke engines.	JASO MA, MA2 - API SL - ACEA A3
AGIP FILTER OIL	Special product for the treatment of foam filters.	-
AGIP GP 330	Water repellent springy calcium spray grease.	R.I.D./A.D.R. 2 10 <sup>b</sup> ) 2 R.I.Na. 2.42 - I.A.T.A. 2 - I.M.D.G. class 2 UN 1950 Pag. 9022 EM 25-89
eni i-Ride PG 5W-40	Synthetic based lubricant for high-performance four-stroke engines.	JASO MA, MA2 - API SL - ACEA A3
AGIP BRAKE 4	Brake fluid.	Synthetic fluid SAE J 1703-FMVSS 116 - DOT 3/4 - ISO 4925 - CUNA NC 956 DOT 4
AGIP PERMANENT SPEZIAL	Ethylene glycol-based antifreeze fluid with organic inhibition additives. Red, ready to use.	ASTM D 3306 - ASTM D 4656 - ASTM D 4985 - CUNA NC 956-16

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