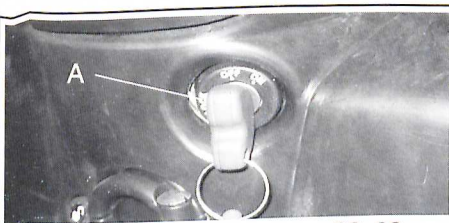


Granturismo 200L

OWNER'S MANUAL





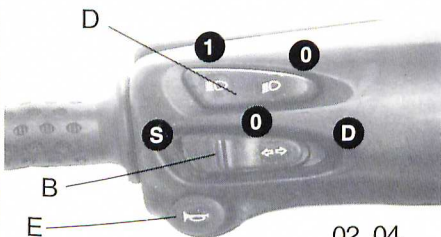
02_03

2.2.1 KEY SWITCH «A» (02_03)

LOCK = Ignition disabled, extractable key, mechanical anti-theft device enabled

OFF = Ignition disabled, extractable key, mechanical anti-theft device disabled.

ON = Ready to start, non-extractable key, mechanical anti-theft device disabled lights on.



02_04

2.2.2 LOCKING THE STEERING WHEEL

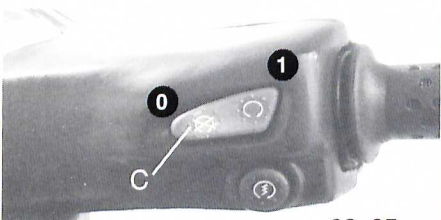
Turn the steering wheel leftwards (to the end of the stroke), turn the key to «LOCK» and remove it.

2.2.3 RELEASING THE STEERING WHEEL

Insert the key and turn it to «OFF».

2.2.4 SWITCH DIRECTION INDICATORS «B» (02_04)

lever to «S» = left direction indicators on; lever to «D» = right direction indicators on; the lever automatically returns to «0» and the indicators stay on; press the lever to switch them off.



02_05

2.2.5 HORN BUTTON «E» (02_04)

Press to honk the horn.

2.2.6 LIGHT SWITCH «D» (02_04)

0 = Dipped beam/tail light

1 = Upper beam/tail light

2.2.7 START-UP BUTTON «F» (02_05)

2.2.8 ENGINE STOP BUTTON «C»

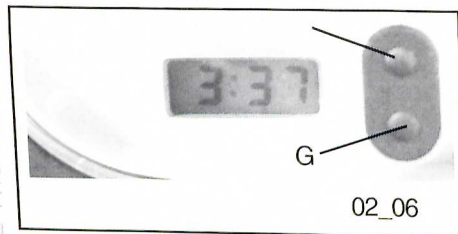
0 = OFF

1 = ON



WARNING

Do not turn the key to the «LOCK» position while riding. This will inevitably lead to an upset, with subsequent serious accident, and serious injury or even death. Leave the key in the on position while riding. Do not attempt to turn it until the scooter has stopped.



2.2.9 DIGITAL CLOCK

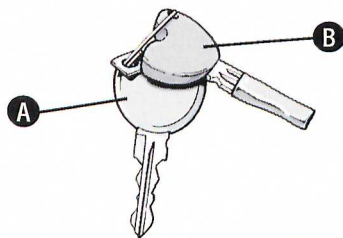
It is located on the dashboard (02_02), and it directly displays hours and minutes counting 1 to 12, AM or PM.

Press the function selection button «H» to display month, day and seconds besides hours and minutes.

To adjust the above functions, press button «G». The digital clock is battery-powered (the battery life is about 2 years). To replace the battery, raise the instrument unit. We recommend having an **Authorized Vespa Service Centre** perform this operation.



Used batteries are harmful for the environment. Take used batteries to your nearest collection point for disposal as prescribed by law.



02_07

To increase the safety of your new vehicle against the risk of theft, we have installed an electronic engine immobilizer which is armed when the ignition key is extracted. When you insert the key to start the engine, the “**PIAGGIO IMMOBILIZER**” system checks the key code and only allows the engine to be started when the code has been accepted.

2.3.1 KEYS

Two different types of keys are supplied with the motorscooter (02_07).

WARNING

If you lose the red key, it will be impossible to carry out repairs to the “**PIAGGIO IMMOBILIZER**” system and the engine control unit.

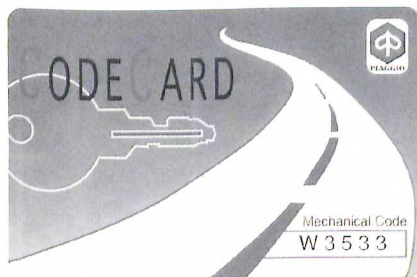
Key «**A**» with the red plastic grip is the “**MASTER**” key. Only one master key is supplied with the motorscooter. This key is used to store the code in the engine control unit and in the other black keys or for Dealer/Service Center interventions. Keep the master key in a safe place and only use it when absolutely necessary. Key «**B**» (single copy supplied) with the black plastic grip is the regular motor-scooter key and is used for:

- start-up
- unlocking the helmet compartment
- unlocking the glove box

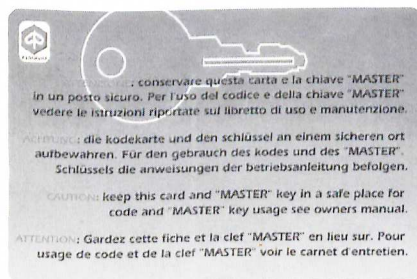
Together with the keys, you should have a CODE CARD (02_08 - 02_09) showing the key code.

WARNING

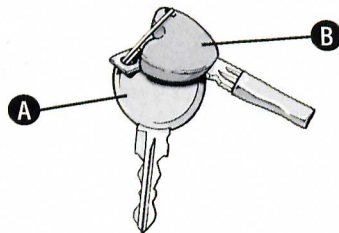
Keep the CODE CARD and the red key in a safe place (do not keep them on your motorscooter).



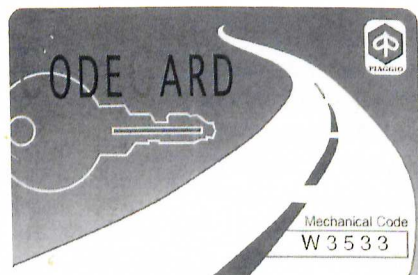
02_08



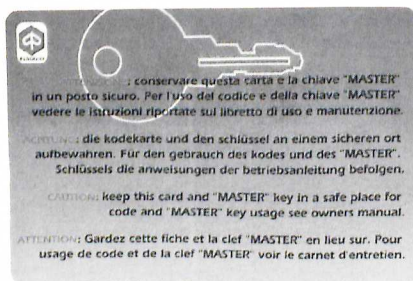
02_09



02_07



02_08



02_09

2.3.2 IMMOBILIZER SYSTEM CONNECTION LED OUTPUT

Operation on the «**PIAGGIO IMMOBILIZER**» system is signaled by the «**U**» warning light; see paragraph 2.1.

To prevent the battery from running down, the LED turns off automatically after 48 hours of continuous flashing.

If the system fails, the indicator LED flashes a code, which allows an **Authorized Vespa Service Center** to immediately identify the cause of the problem.

2.3.3 OPERATION

Whenever you remove the ignition key when in the **OFF** or **LOCK** positions, your motorscooter is protected by the immobilizer system.

When you turn the key to **ON** the engine immobilizer is disarmed only if the protection system recognizes the code transmitted by the key.

If the engine does not start when you press the starter pushbutton, turn the key back to **OFF** and then to **ON** again; if the engine still fails to start, use the red key.

If you are still unable to start the engine, seek assistance from an Authorized Piaggio-Vespa Service Center who have the necessary electronic equipment to find the cause of the problem and remedy it.

NOTE

If it is necessary to start the engine with a partially or completely discharged battery, or when the battery is not installed, the Piaggio immobilizer system allows for engine starting.

NOTE

Each key has a unique code which must be stored into the immobilizer system control unit.

When ordering extra keys remember that the code storage procedure must be carried out for all keys (max. 3), i.e. the new ones and the ones you have already received.

If necessary, seek assistance from an **Authorized Vespa Service Center**, taking with you the red key plus the black keys as well.

The codes of all keys that are not entered during the code storage procedure will be erased from the memory. This means that lost or stolen keys can be easily rendered inoperative.

WARNING

Protect the keys from impacts-risk of damaging the electronic components inside the grip.

NOTE

If the vehicle is sold, the new owner must be provided with the red master key (and the other keys) and the **"CODE CARD"**.

2.3.4 PROGRAMMING THE IMMOBILIZER SYSTEM

The following instructions cover the procedure for programming the **PIAGGIO IMMOBILIZER** system and/or storing additional keys in the memory.

2.3.5 STEP ONE - RED KEY

Insert the red key into the key switch (on **OFF** position) and turn it clock-wise to **ON**, leave the key in this position for between 1 and 3 seconds and then turn it back to **OFF** and remove it.

2.3.6 STEP TWO - BLACK KEY

Insert the black key within 10 seconds of having extracted the red key and immediately turn it to **ON**. Leave the key in this position for between, 1 and 3 seconds and then turn it back to **OFF** and remove it. You can repeat this step for up to 3 black keys.

2.3.7 STEP THREE - RED KEY

After removing the last black key insert the red key again and turn it to **ON** (no more than 10 seconds after you extracted the black key). Keep it in this position for between 1 and 3 seconds and then turn back to **OFF**.

2.3.8 STEP FOUR - CHECKING

Insert the red key and flip open the hinged section of the key grip (this prevents the key from transmitting the code information to the immobilizer system). Now turn the key to **ON** and press the starter button. The engine should not start. Insert one of the programmed black keys and repeat the engine start procedure. The engine should now start.

NOTE

If the engine starts with the red key (when the hinged section of the grip is open) or if you have made any mistakes during the key programming sequence, repeat the entire procedure from the beginning.

NOTE

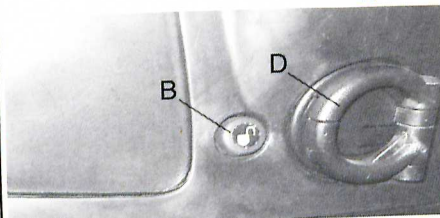
The use of non-original spark plugs or an unshielded plug cap can cause interference with the system.



02_10



02_11



02_12



02_13

2.4.1 OPENING THE TRUNK COMPARTMENT (02_10)

Insert the key into the switch and press until the glove-box door opens.

If the switch is in the “LOCK” position, turn the key to the “OFF” or “ON” position before pressing down.

2.4.2 OPENING SADDLE FOR ACCESS TO HELMET COMPARTMENT

It is possible to open the saddle electrically by pressing button «B» (02_12) with the key in the “OFF” or “ON” position, or with the engine running.

If the electric opening system does not work, activate the emergency lever «A» (02_11).

It is only impossible to open the saddle if the key is in the “LOCK” position.

2.4.3 ACCESS TO THE FUEL TANK (02_11) - (02_12)

Repeat the operations described in the previous section for opening the saddle. The fuel tank can then be accessed by unscrewing cap «C» (02_13), in an anti-clockwise direction.

2.4.4 BAG HOLDER

To use the bag holder «D» (02_12), turn the ring counter clockwise and orientate it towards the saddle. Apply a slight pressure on the upper side of the ring to use the bag holder.

2.5.1 IDENTIFICATION

The VIN, vehicle identification No. and engine No., consist of a prefix stamped on the chassis «**A**» (02_14) and engine «**B**» (02_15) respectively, followed by a number.

These should always be indicated were ordering spare parts.

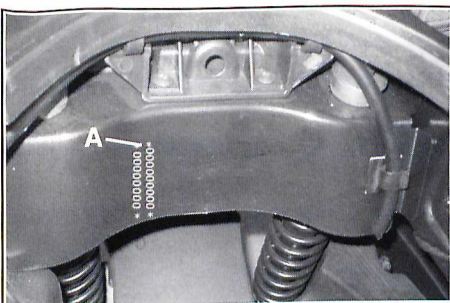
In order to read the VIN, it is necessary to lift up the saddle and remove the helmet compartment «**C**» (02_16).

We recommend checking that the vehicle identification number stamped on the vehicle, corresponds with that on the vehicle's documentation.

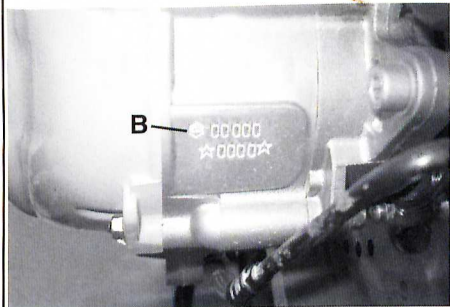


CAUTION

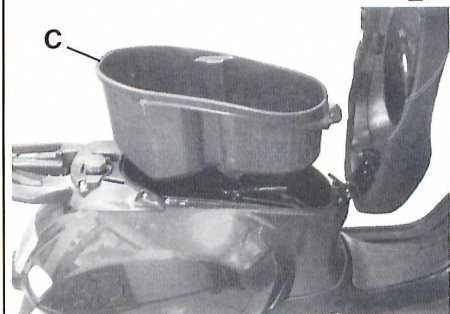
In all states and countries, it is against the law to alter the Vehicle Identification Number (VIN) and can result in severe penalties. This will immediately invalidate your warranty.



02_14



02_15

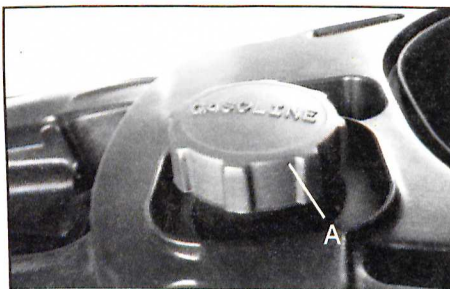


02_16

Granturismo 200L



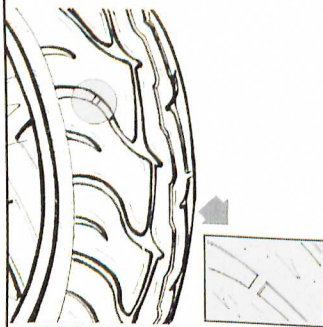
CHAP. 03 **USE**



03_01



03_02



03_03

3.1.1 CHECKS

Before using the vehicle, check:

1. That the fuel tank is full.
2. The front and rear brake fluid level.
3. That the tires are correctly inflated.
4. That the taillight, the headlight and the direction indicators, stop-light and number plate light are in good working order.
5. That the front and rear brakes are in good working order.
6. The oil level in the gearbox.
7. The engine oil level.
8. The cooling fluid level.

3.1.2 TIRE PRESSURE

Check the tire pressure and wear (03_03) periodically (approx. every 300 mi).



The tire pressure should be checked when the tires are cold. Incorrect tire pressure causes abnormal tire wear and makes driving dangerous.

The tires are equipped with a wear indicator and should be replaced as soon as these indicators become visible on the tread.

Also check that there are no cuts on the sides of the tires or irregular tread wear; in this case refer to authorized garages or those equipped to replace the tires.

Front wheel: 26.1 PSI (1.8 bar)

Rear wheel: 29.0 PSI (2.0 bar) only rider, 32.0 PSI (2.2 bar) with passenger.

3.1.3 REFUELLING

Fuel: lift up the saddle and unscrew the cap «A» (03_01).

PRESCRIBED FUEL

Fill fuel tank with unleaded gasoline.
Minimum octane rating (M+R)/2 METH-
OD 90.

The warning light «B» (03_02) indicates
when the fuel tank reserve has been
reached.



WARNING

Before refuelling, stop the engine. Gasoline is highly flammable. Keep it away from hot engine parts. Failure to heed this warning can lead to a serious fire.



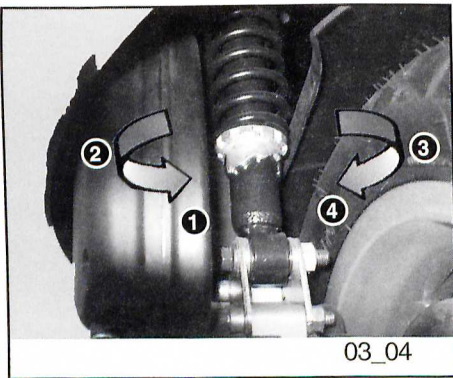
WARNING

Fire hazard: keep open flames, lighted cigarettes etc. well clear of the fuel tank filler opening. Gasoline vapor is harmful if inhaled. Keep your face clear of the fuel tank filler opening.



WARNING

Gasoline damages the plastic bodywork.



3.2.1 SHOCK ABSORBER ADJUSTMENT

The preloading of the springs can be adjusted in 4 positions by working on the ring nut located in the lower part of the shock absorbers (03_04), using the specific spanner supplied.

Position 1 minimum preloading: driver only.

Position 2 medium preloading: driver only.

Position 3 medium preloading: driver and passenger.

Position 4 maximum preloading: driver, passenger and luggage.

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



WARNING

Use of the vehicle with the preloading spring not correctly suited to the weight of the rider and possible passenger can reduce the comfort and precision of riding.



WARNING

Gloves should be worn to avoid abrasions during the operation.



WARNING

It is totally unrecommended to adjust the preloading differently on the two shock absorbers.

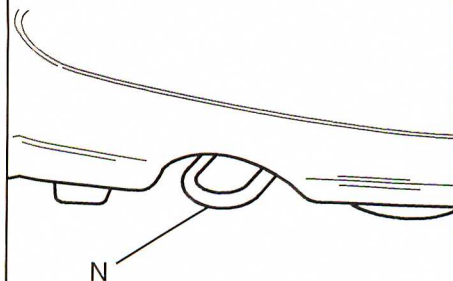
3.3.1 ANTITHEFT

The ring «N» located on the right hand side of the motorscooter is to be used only to chain your motorscooter to a fixed object. Do not use it for any other purpose.

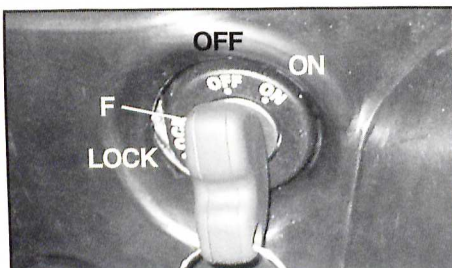
N.B.: "This accessory is not intended as an absolute guarantee against vehicle theft, it acts as an extra deterrent".



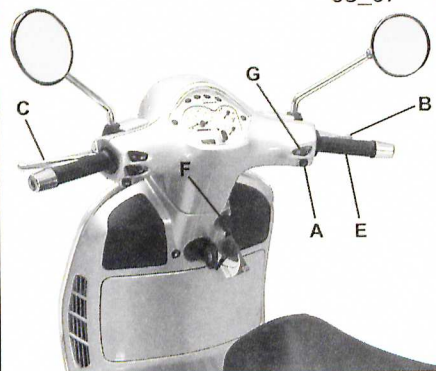
03_05



03_06



03_07



03_08



03_09

3.4.1 STARTING THE ENGINE

The vehicle is equipped with an automatic transmission with a direct choke. Always start the engine with the gas control at minimum and gradually accelerate to pull away. The vehicle is equipped with a relief pressure pump and starter device which operate automatically, when the engine is turned on.

Your scooter is equipped with a newly designed starting system which is connected to an automatic valve lifter, which reduces wear and tear on the electric starter.

To start the engine first pull either the front «B» or rear «C» brake lever. This will engage a safety switch thus allowing the engine to start. Keep pulling the lever while pressing the start button «A».

1. Place the vehicle on its central kickstand «D», and check that the rear tire is not touching the ground.
2. Keep the throttle «E» at idle speed.
3. Insert the key into «F» and turn to «ON».
4. Check that the «G» “Run-Off” is in “Run”.
5. Pull the front «B» or rear «C» brake lever and then press starter button «A».

3.4.2 STOPPING THE ENGINE

Close the throttle, turn the key switch «F» to «OFF» (key can be removed).



To start the engine after prolonged inactivity or in harsh climates twist the throttle 2 or 3 times before pressing the starter button.

3.4.3 DIFFICULT START

In case of difficult start:

1. Flooded engine.

Carry out the same sequence as above. Twist the throttle to the fullest and press the starter button «A» for 5 seconds, then release the throttle for 5 seconds and repeat the opening and closing operation will give more fuel injection to the cylinder. If after a few attempts the engine does not start, let it rest a few minutes and repeat. Do not insist at length with the starter motor to try and start the engine. As a last operation remove the spark plug and crank the engine to expel excess fuel; refit it and repeat the operation from point 1.

2. Fuel tank empty

Refuel. Start the engine, pressing the starter button «A» while keeping the throttle closed to generate maximum suction on the fuel line.

3. Engine too hot

Follow the standard engine start procedure above, but keep the throttle slightly open.



CAUTION

Never force the engine when cold, in order to avoid possible damage. Be careful not to exceed the maximum speed when riding downhill to avoid damage to the engine. In any case to safeguard the integrity of the engine from prolonged runaway speed rates the rpm limiting device should be used whenever the operation of the engine exceeds the normal threshold.



After a long journey at maximum speed do not turn off the engine immediately. Let it turn idle for a few seconds.

3.4.4 CENTRAL KICKSTAND

«D»

Press on the projection of the kickstand with foot and momentarily lift the vehicle backwards, pressing on the grid parcel.

**WARNING**

Never attempt to start your engine with the throttle in the open position. This can lead to runaway, with upset, and subsequent serious injury, or even death.

**WARNING**

Use the engine stop switch «A» only if the engine runs away. It is for emergency use only. Once the switch is activated, your motorscooter will slow very abruptly. Only in case of emergency the engine stop switch should be used while the motorscooter is running.

**WARNING**

Never attempt to place the ignition switch in the locked («**LOCK**») position while the motorscooter is moving. This will cause loss of control of the motorscooter with possible subsequent accident, serious injury or even death.

**WARNING**

Do not place anything inside the front part of the fairing between the handlebar and the dashboard. Any object placed in this area could jam the steering column, and also could restrict visibility of the dashboard.

**WARNING**

Never take your hands off the hand grips or your feet off the footrest while you are riding. Failure to do this could upset the stability of the vehicle. Before riding away, make sure that the stand is completely up. Failure to follow these warnings may cause an accident with consequent risk of serious injury or even death.

To ride away:

- Allow the throttle to return to idle, apply the rear brake, then remove the vehicle from the stand.
- Get on the vehicle, keeping at least one foot on the ground in order not to lose balance.
- Before driving, be sure that the rear view mirrors are correctly adjusted.

**CAUTION**

When the vehicle is new to you, practice looking in the rear view mirrors. Only experience will allow you to correctly determine the exact location of other vehicles and objects behind you.

- To begin, release the brake lever and accelerate by gently rotating the throttle grip; the vehicle will start moving.
- Ride at reduced speed for the first few miles in order to warm up the engine.

**CAUTION**

Never ride away abruptly with a cold engine. To reduce the emission of polluting substances and the consumption of fuel, warm up the engine by proceeding at low speed for the first few miles.

**WARNING**

When braking, reduce the throttle and apply both brakes simultaneously in order to obtain the best brake performance. By applying only the front brake or only the rear brake, you reduce the braking efficiency considerably, and run the risk of locking up one wheel. This can cause an upset and subsequent serious injury or even death.

Do not attempt to maintain your position on a hill by running the engine. This will very quickly destroy the transmission, and overheat the engine.

Before entering a turn, slow the motor-scooter using the brakes, to a constant speed and then accelerate slightly through the turn. Avoid braking at the last moment. This can cause you to lose control of your vehicle. If the brakes are operated continuously on downhill grades, the discs and pads will overheat, reducing the braking efficiency. Use the brakes as little as possible to maintain a safe speed. Never coast downhill with the engine off.

**WARNING**

On roads that are wet or covered with snow, ice or mud, ride very slowly, avoiding braking or accelerating or maneuvering quickly. Hold the handlebar firmly.

Failure to heed these warnings can cause an upset with subsequent serious injury or death.

Pay very close attention to any obstacles or variations of the road surface. Uneven roads, rails, manhole covers, painted traffic stripes, traffic dots all become slippery when wet. Avoid particularly steel plates which are sometimes used during road maintenance. They become more slippery than ice once they are wet by rain. If you must ride on such surfaces, decrease your speed and operate the throttle, brakes and steering very gently.

Always use the turn signals any time you intend to change lanes or change direction, and avoid sudden or abrupt turning.

Switch off the direction indicators as soon as you have changed direction.

Overtake and pass with care, especially in rainy weather. A water cloud created by larger vehicles will reduce visibility and the slip stream could cause you to lose control of your vehicle.

**WARNING**

Exhaust fumes are noxious: do not start the engine in an enclosed place.

3.5.1 AUTOMATIC TRANSMISSION

For easy and comfortable riding, your new vehicle has automatic transmission with a centrifugal clutch. This system is designed to provide optimal fuel consumption and acceleration by adjusting the transmission ratio in relation to torque demands and engine speed. If you need to stop on a hill gradient (traffic lights, stop signs etc.) restrain the vehicle with the brakes alone (engine should be idling). Using the engine to hold the vehicle can cause the clutch to over heat. Overheating is caused by prolonged slipping of the centrifugal clutch. Apart from the example above, the clutch will tend to slip when tackling very steep gradients with a heavily laden vehicle. When carrying a passenger (in countries where this is permitted by law) the maximum gradient the scooter can handle is 25%.

1. Limit the duration of extreme conditions such as the above
2. Allow the engine to idle for a few minutes to give the clutch time to cool down.



WARNING

Failure to follow these simple recommendations can damage your motorscooter, and lead to an acci-

dent, with subsequent serious injury, or even death. The life of your motorscooter, and your enjoyment of it, will be greatly enhanced if you avoid situations in which the motorscooter will be abused by attempting to carry too heavy a load, or starting on too steep a hill.

Your riding skill and a thorough knowledge of your vehicle are the basic ingredients of road safety. Practice riding in a traffic-free area until you are fully in control under various different conditions.



WARNING

Never ride under the influence of alcohol or drugs as this is dangerous for yourself and others.



03_10

3.5.2 BE SURE TO RIDE SAFELY, DEFENSIVELY AND WITH IN THE LIMITS OF THE LAW AND YOUR ABILITIES.

- Before starting, put on an approved helmet and secure the straps correctly.
- Reduce speed on unsurfaced roads or uneven ground and exercise the maximum caution.
- Riding in the rain or on wet roads can cause the brakes of your motorscooter to become wet. When this happens, their effectiveness will be greatly reduced. In these conditions, gently activate the brakes regularly, to dry the brakes, and so that you may check the braking action.
- Use extreme caution when braking on wet roads, unsurfaced roads or any other slippery surface.
- Always use both brakes simultaneously to distribute braking force over both wheels.
- Do not start off by mounting the motorscooter when it is on the stand. Before taking the vehicle off the stand, make sure the rear wheel is not spinning.
- When your motorscooter is used on sandy, muddy, salty, or snow covered roads, periodically clean the brake disc with a gentle cleaning agent. This

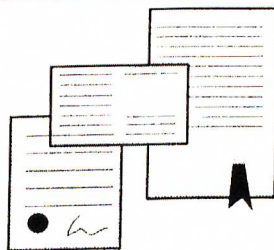
will avoid the buildup of abrasive materials in the slots in the disc, which will cause early and uneven brake pad wear.

- Do not modify your motorscooter in any way. This motorscooter is carefully engineered to provide optimum performance and safety. You will only reduce its utility and your enjoyment of the motorscooter by modifying it.



WARNING

Over-braking on a slippery surface will lead to upset, an accident, and subsequent injury or possibly even death.



03_11



03_12

The instructions given below cover normal operation of your motorscooter and must be carefully observed. By following these rules you will enhance your own safety and the safety of others. You will also maximize the life and utility of your motorscooter.

Motorscooters obviously cannot offer some of the protection provided by automobiles, therefore it is essential that you wear appropriate protective clothing. Never operate your motorscooter without wearing a helmet, gloves, eye protection, a heavy jacket, sturdy footwear, and sturdy full length pants.

However, do not assume that even the best clothing and helmet will protect you in the event of an upset or a crash with another vehicle. At best, this gear provides some protection from scrapes and scratches, but very little, if any, impact protection.

Be sure that you meet all the requirements prescribed by local law, including driver's license, minimum age, training, insurance, taxes, motorcycle registration, license plate, etc.

When you first receive your motorscooter, practice by riding in areas where there is no traffic. Do not attempt to ride in heavy traffic until you are thoroughly experienced and riding your motorscooter

has become second nature to you.

Most states prohibit the operation of this size motorscooter on freeways or expressways. Be sure that it is legal to use your motorscooter before you take any particular road.

A new motorscooter must be carefully broken in.

Before starting the engine, make sure that the brakes, transmission and throttle controls function properly and that the fuel and oil supply is adequate.

The exhaust system, brakes, and some other parts of the motorscooter become very hot during operation. Do not touch any of these parts.

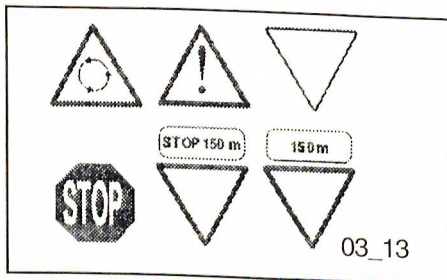
Some medicines or drugs, illegal or prescription, and alcohol significantly increase the risk of accidents.

Do not ride while you are under the influence of alcohol or drugs, whether they are illegal or prescription. Make sure you are in good physical condition and not ill before riding your motorscooter. Do not ride your motorscooter when you are particularly tired. Alcohol, drugs and fatigue are leading causes of motorscooter accidents.

Many accidents are caused by the rider's inexperience and lack of training.



03_14



Do not ride your motorscooter until you have received training from a recognized training organization such as the Motorcycle Safety Foundation.

Remember that riding a motorscooter, though easy and fun, is quite different from driving a car. Do not assume that you can operate your motorscooter safely just because you are a competent automobile driver. Never lend your motorscooter to others unless you are sure that they are competent and properly licensed motorcycle operators. If the throttle sticks open, it may cause a collision with another vehicle or an upset. If the throttle sticks, turn off the engine with the engine stop switch located on the right hand side of the handlebar. Do not attempt to restart the engine until the throttle has been repaired and works perfectly. Failure to obey this warning can lead to a run away with serious injuries or even death.



WARNING

In case of emergency always use the engine stop switch located on the right hand side of the handlebar. Do not ride the motorscooter if the throttle does not automatically return to idle. Contact your **Authorized Vespa Service Center** who will provide for the necessary repairs.

It is very important to your safety that you give full attention to the riding task. Watch what you are doing, do not allow yourself to be distracted by other cars, people or things on the roadside, etc. Never smoke, eat, drink, read, etc. while riding your motorscooter.

If you must consult a map, pull over when it can be done safely.

Use only your motorscooter's specific fuels and lubricants indicated in the "LUBRICANT CHART" see paragraph 7.2; check the oil, fuel and coolant levels regularly.

If you and your motorscooter are involved in an accident, ensure that there has been no damage to the control levers, tubes, wires, braking system and other vital parts. If your motorscooter is involved in an accident, take it immediately to your **Authorized Vespa Service Center** who has the equipment and knowledge to check for damage which may compromise your safety. Your Vespa Dealer is qualified to help you with any safety problems that you might have, but of course it is necessary for you to report any malfunctions to your mechanic in order for him to help you.

Do not use your motorscooter if it is dam-

aged.

A damaged motorscooter may become unstable or present other problems which can increase the risk of accident, and therefore serious injury or even death.

Do not attempt to modify the position, angle or color of your license plate. Do not cover it with even a clear plastic covering. Do not modify any of the safety equipment of your motorscooter, especially such safety related items as directional indicators, rear view mirrors, lights or horn.

Any modification to your motorscooter will invalidate the warranty. Do not modify your engine in an attempt to increase the horsepower. This can result in irreparable damage to the engine, as well as degradation of the performance and handling of your motorscooter which could lead to an upset, and serious injury or even death.

Have your motorscooter repaired only with original parts, and use only original Vespa accessories.

The use of aftermarket accessories and parts can seriously compromise the safety of your motorscooter as well as affect its performance, stability and serviceability. Any modification which affects performance or safety voids your warranty

completely.

For the reasons stated above, tampering with the exhaust emission or noise control systems of your motorscooter can lead to large fines. Also, in some jurisdictions, helmets are required by law, and in all jurisdictions, you must maintain your motorcycle in current registration (License plate up-to-date). Also, many jurisdictions require a special motorcycle license, and you must not ride your motorscooter without having first obtained this license.

This motorscooter was not designed to be equipped with a sidecar or to be used to tow trailers, motorcycles, motorscooters or bicycles.

Piaggio does not manufacture side cars or trailers and therefore cannot predict the effects of such accessories on the maneuverability or stability of your motorscooter: it can only warn that such effects may be negative and that any damage to the motorscooter components caused by the use of such accessories will not be covered by the warranty.

Never race other motorscooters or motorcycles with your motorscooter. Brake with both the front and rear brakes. The use of one brake only for sudden

braking may cause the motorscooter to skid or make the rider lose control of the motorscooter itself.

Always ride at a safe speed and avoid unnecessary sudden accelerations.

This also reduces fuel consumption and increases the life of the motorscooter. If you must ride your motorscooter in rainy weather, or on loose surfaces, remember that traction is greatly reduced. Under these conditions, all handling of the motorscooter must be done gradually and smoothly. Sudden acceleration, braking or turning may cause you to lose control of your motorscooter. When traction is reduced, accelerate gradually and when slowing down release throttle and use your motorscooter engine braking in as much as possible, instead of braking abruptly.

Avoid rapid, harsh application of the brakes.

Gradually open and close the throttle, to avoid spinning or skidding the rear wheel. On rough road surfaces, slow down and ride with particular care.

Avoid wide open throttle accelerations, unless they are necessary for overtaking.

Remember that excessively aggressive cornering can cause your motorscooter's

tires to lose traction, which can result in an upset and serious injury or even death.

Always observe posted and statutory speed limits, but do not assume that you can ride as fast as the speed limit allows under all road conditions. Slowing down a little can greatly increase your safety under all road conditions.

Do not ride your motorscooter off road.

Do not tamper with the muffler system or the emission control system of your motorscooter. This is not only bad for the environment, it can subject you to serious penalties.

3.5.3 CLOTHING

Before riding your motorscooter, ensure that your riding gear is in good condition. Your helmet must fit properly, and the visor or other eye protection must be clean. Both research and experience have shown that drivers of other motorvehicles often do not see motorcycles riders. In order to make yourself more conspicuous to these drivers, wear bright reflective clothing, such as a reflective vest, or clothing with reflective sections sewn into the jacket, pants and gloves. Be particularly aware of approaching automobiles and trucks that might be trying to turn left in front of you.

Many motorcycle accidents are caused by an opposing automobile driver making a left turn without warning in front of the motorscooter.

Inevitably, the driver will look right at you, and yet swear that they did not see you before they turned directly into your path. Stay alert! Wear protective clothing, preferably in light and/ or reflecting colors. In this way you will make yourself more visible to the other drivers, thus notably reducing the risk of being hit, and you will be more protected in case of such an incident.

Always wear your helmet. Many accidents are fatal because of injuries to the head.

An open-face helmet offers some protection, but a full-face helmet offers more. Regardless of the style, look for a DOT (Department of Transportation) sticker in any helmet you buy (USA only), and always wear a face shield or goggles to protect your eyes and help your vision.

3.5.4 ADDITIONAL RIDING GEAR

In addition to a helmet and eye protection, we also recommend:

- Sturdy boots with non-slip soles to help protect your feet and ankles.
- Leather gloves to keep your hands warm and help prevent blisters, cuts, burns and bruises.
- A motorscooter riding suit or jacket for comfort as well as protection. Bright-colored and reflective clothing can help make you more noticeable in traffic. Be sure to avoid loose clothes that could get caught on any part of your motorscooter.

Clothing should be very tight-fitting and fastened at the wrists and ankles. Strings, belts and ties should not be hanging loose; prevent these and other objects from interfering with driving by getting entangled with moving parts or driving mechanisms.

Do not carry sharp objects in your pockets that could be dangerous in case of an upset. For example, pens or mechanical pencils, etc. Also, make sure that your passengers follow this recommendation.

3.5.5 ACCESSORIES

The owner of the motorscooter is responsible for the choice, installation and use of any accessory.

The installation of inappropriate accessories or the overloading of the motorscooter may result in the instability of the motorscooter itself and cause accidents with consequent risk of serious injuries or even death. Windshields, in particular, can be dangerous, as they can break and injure the rider or passenger in case of an accident. If you have any doubt with regard to any accessory you would like to install, or any load you would like to carry, consult your local Vespa Dealer beforehand. Avoid installing accessories that cover horns or lights, or that could impair their functions. Don't install accessories that limit the suspension travel or the steering angle, that interfere with the operations of the controls, or that reduce the scooter's lean angle in turns. Also, don't install accessories that could hamper your access to the various controls, since this could prolong reaction time during an emergency. Fairings and windshields, or any other accessory that presents a considerable cross section, may produce aerodynamic forces that will affect the stability of

the motorscooter, particularly at high speeds or in cross winds.

Make sure that anything carried on your motorscooter is securely attached, and cannot come loose and jam the wheels, steering column, etc.

Do not install any electrical accessories, and do not modify the electrical system of your motorscooter. Anything that could cause an electrical overload or other fault could cause the motorscooter to suddenly stop, the lights to dim or fail, or the horn and other safety accessories not to work. Use only Piaggio - Vespa genuine accessories.

3.5.6 LOAD

Do not overload your motorscooter. Attach luggage or packages as closely possible to the center of your motorscooter as and distribute the load from side to side as evenly as possible, to keep imbalance to a minimum. Remember that loads tend to loosen with riding, so frequently check the security of your load. Do not hang anything from your motorscooter handlebar, fenders, or steering column, because this will upset the handling of your motorscooter, and could prevent you from avoiding an accident.

Failure to heed this warning can lead to an upset with subsequent serious injury or even death. Do not ride with your crash helmet hung from the strap because it could easily become entangled with the wheels, fenders, or steering column, causing an upset and subsequent serious injury or even death. When carrying a passenger, remember that your motorscooter's handling is degraded, that the brakes are less efficient, and the center of gravity is higher and further to the rear. This makes it more likely that the front wheel will come up off the ground, especially on acceleration. Therefore, you should avoid hard acceleration and hard braking. Many accidents are caused by inexperienced rider carrying passengers. Remember that allowance must be made for the extra weight of the passenger for all driving maneuvers. Avoid abrupt and excessive acceleration.

Always slow down in time and calculate longer stopping and maneuvering distances. Noncompliance with these instructions may lead to the overturning of the motorscooter or to other accidents with consequent serious injuries or even death. Never carry loosely packaged items and make sure that everything that you carry on your motorscooter is carefully secured.

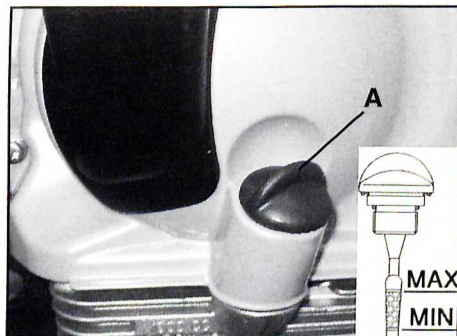
Do not carry packages which protrude from the luggage rack or which cover any of the signal lights, the headlight, or the horn.

Children or animals must not be carried anywhere on your motorscooter. Overloading your motorscooter seriously reduces its stability and maneuverability and can lead to an upset with subsequent serious injury or death.

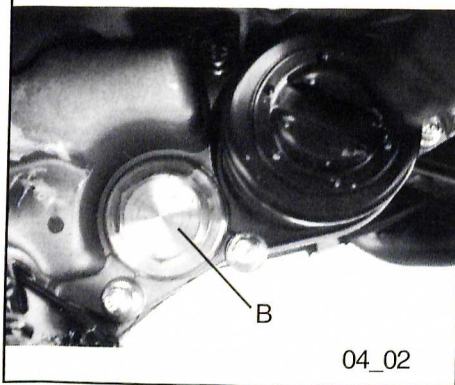
Granturismo 200L



CHAP. 04 MAINTENANCE



04_01



04_02

4.1.1 MAINTENANCE SAFETY

This section includes instructions on some important maintenance tasks. You can perform some of these tasks with the tools provided if you have basic mechanical skills.

Other tasks that are more difficult and require special tools are best performed by professionals.

Removing the wheels should normally be handled only by a technician or other qualified mechanic; instructions are included in this manual only to assist in emergency service.

Some of the most important safety precautions follow. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

4.1.2 ENGINE OIL LEVEL

In 4-stroke engines the engine oil is used to lubricate the timing components, bench supports and cylinder-piston-head assy. An insufficient amount of oil can cause serious damage to the engine itself. In all 4-stroke engines the degradation of the oil characteristics, like a certain amount of consumption, are to be considered normal. Consumption can, in particular, be effected by the conditions of use (eg. always driving on "full throttle" increases the use of oil).

In order to prevent any inconvenience the oil level should be checked more often than indicated in the scheduled maintenance plan. The vehicle is in any case equipped with an oil pressure warning light placed onto the instrument panel.

4.1.3 CHECK LEVEL

Each time the vehicle is used with a cold engine, the engine oil level must be checked (after having removed the plug/dipstick from the completely screwed on position) and must be between the MAX and MIN marks as in fig. 1 on dipstick «A». During the vehicle check, the vehicle must be placed on its center stand and resting on a horizontal surface. The reference MAX level indicates a quantity about 1000 cc (33,8 oz) of oil in the engine. If the check occurs after having used the vehicle, with the engine hot, the level will be lower; to carry out a correct verification wait at least 10 mins after the engine is off.

Oil topping up

The oil must be topped up after verifying the level. it **must never exceed the MAX mark**.

Resetting the level between **MIN** and **MAX** implies a quantity about 400 cc (13,5 oz) of oil.

In any case a check and top up of oil must be carried out every 3000 km (1875 miles) at an **Authorized Vespa service centre**.

4.1.4 SIGNALLING WARNING LIGHT (INSUFFICIENT OIL PRESSURE)

The vehicle is equipped with a signaling warning light which turns on when the key is turned to «ON». It should switch off once the engine is running.

If the light should come on when braking at idle speed or on a bend it will be necessary to check the level and top up. If the light should switch on after this on braking, at idle speed or on a bend, contact an **Authorized Vespa service center**.

4.1.5 OIL SUBSTITUTION

The oil and filter must be changed every 6,000 km (3750 miles) and also during the first service inspection by an **Authorized Vespa service center**. The engine oil must be drained from the oil drain plug «B» (04_02) of the net filter on the flywheel side. To aid the oil removal loosen the plug/dipstick (04_01). Fill with 600-650cc of oil from plug «A» (04_01) as a certain amount of oil remains in the circuit: Start the vehicle, let it idle for a few minutes and switch it off: after 5 minutes check the mark and if necessary top up without ever exceeding the Max mark. The cartridge filter must be changed at every oil change. To top up and replace use fresh Selenia HI Scooter 4 Tech oil.



OIL CHANGE CAUTION

Have your local Vespa Dealer replace the engine oil every 3,750 miles (6,000 km). For oil changes and top-ups only use fresh **SELENIA HI SCOOTER 4 Tech oil**.



CAUTION

Running the engine with insufficient or unsuitable oil causes rapid wear of moving parts and can result in irreparable damage.



Used oil is harmful for the environment. We recommend taking the motorcycle to an **Authorized Vespa Service Center** for oil changes. Our service centers are properly equipped for the disposal of used oil respecting the environment and is in compliance with the law.



WARNING

Excessive resetting of the oil level gives rise to incrustations and vehicle malfunction.

**LUBRICANTS
WARNING**

Proper vehicle lubrication is critical to safe operation. Failure to maintain proper lubricant levels or to use the proper type of clean, new lubricant, can lead to an engine or transmission seizure with subsequent accident, serious injury or death.

**WARNING**

Use latex gloves for the maintenance operations that require contact with used oil. Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is advisable to thoroughly wash your hands with soap and water after handling used oil.

Keep oil away from children. Dispose of oil properly.

**CAUTION**

Avoid spilling oil when putting it in your vehicle.

Clean up any oil spilled immediately as oil can damage the finish of your vehicle. Additionally, oil on the tires creates an extremely slippery, and therefore, dangerous situation.

**CAUTION**

In case of oil leakage do not ride your vehicle. Before using the vehicle, have it repaired by your local Vespa Dealer or Vespa Authorized Service Center.

**ENGINE OIL
WARNING**

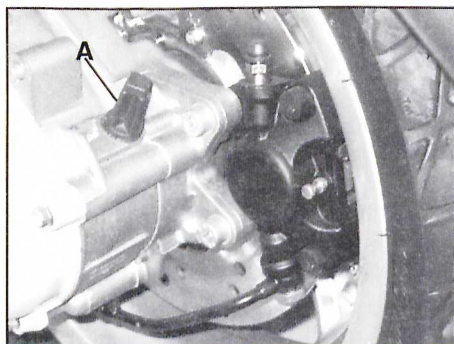
If the engine oil pressure warning light remains on (when the engine is running), or if it comes on during the normal running of the engine, this means that the oil system is not developing sufficient pressure. In this case, immediately stop the engine and contact your local Vespa Dealer or Authorized Vespa Service Center. Failure to heed this warning can lead to engine seizure, upset, and cause serious injury or even death.

**CAUTION**

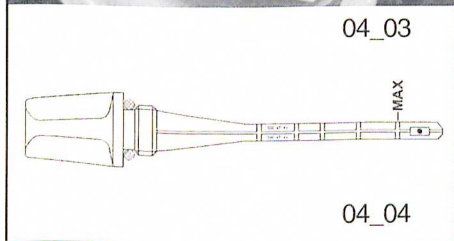
Perform these maintenance operations at one-half of the specified intervals, if your vehicle is used often in rainy or very dusty conditions, or on unpaved roads. Check the engine oil level every 312 miles (500 km) see previous pages (checking the engine oil level and topping up).

**WARNING**

Use only the recommended types of oil. See paragraph 7.2. Use of inferior oil will lead to reduced engine life, and can lead to an engine seizure, with subsequent upset, serious accident, and serious injury, or even death.



04_03



04_04

Check there is oil in the rear hub (quantity of oil ~ 150 cc (5 oz)). To check the hub oil level:

- 1) Place the vehicle on its kickstand on a flat surface.
- 2) Unscrew the dipstick «A», dry it with a clean rag and **screw it in completely**.
- 3) Remove the dipstick and check that the oil level reaches the lower notch.
- 4) Rescrew the dipstick and check it is blocked.

The notches shown on the hub oil level dipstick, with exception of that indicating MAX level, refer to the other models and have no specific function on this vehicle.

Oil used:

TUTELA ZC 90.



Used oil is harmful for the environment. We recommend taking the scooter to an **Authorized Vespa Service Center** for oil changes. Our service centers are properly equipped for the disposal of used oil respecting the environment and in compliance with the law.

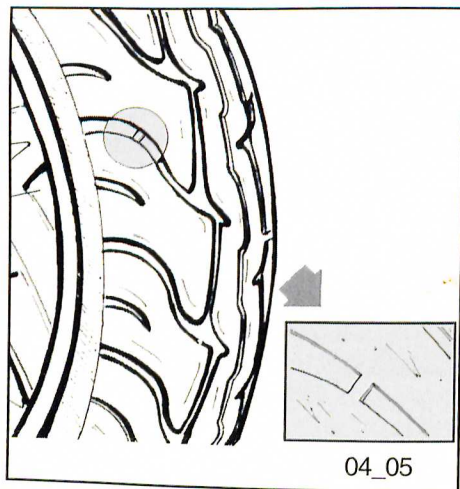


TRANSMISSION CAUTION

To check the oil level and to change the oil, contact your local Vespa Dealer.

Have your local Vespa Dealer check the transmission oil level as shown in the maintenance table (paragraph 7.1).

It is necessary to have your local Vespa Dealer change the transmission oil as shown in the maintenance table (paragraph 7.1).



Periodically check the inflation pressure of the front and rear tires.

The tires have tread wear indicators and must be replaced as soon as the indicators are visible on the tread (04_05). Check also for cuts on the tire walls and uneven tread wear. Tires must be changed by your **Local Vespa Dealer or by an Authorized Vespa Service Center.**

4.3.2 THE REPAIR

If a tire is punctured or damaged, you should replace it not repair it. As discussed below, a tire that is repaired, either temporarily or permanently, will have lower speed and performance limits than a new tire.

A temporary repair, such as an external tubeless tire plug, may not be safe for normal speeds and riding conditions. If a temporary or emergency repair is made to a tire, you should ride slowly and cautiously to a Service Center and have the tire replaced.

If possible, you should not carry a passenger or cargo until a new tire is installed.

Even when a tire is professionally repaired with a permanent internal patch plug, it will not be as good as a new tire.

In addition, you may not be able to safe-

TIRE PRESSURE

Driver Only

Front tire: 26.1 PSI (1.8 bar) Rear tire: 29.0 PSI (2.0 bar)

With Passenger

Front tire: 26.1 PSI (1.8 bar) Rear tire: 32.0 PSI (2.2 bar)

ly carry as much weight as with a new tire. Therefore, we strongly recommend that you replace a damaged tire. If you choose to have a tire repaired, be sure the wheel is balanced before you ride.

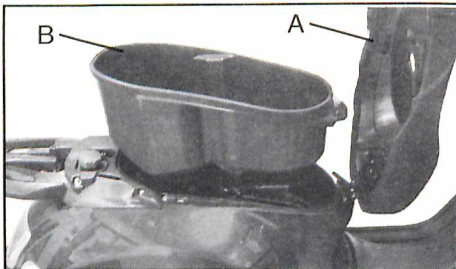
**WARNING**

Using tires that are excessively worn or improperly inflated can cause an accident in which you can be seriously hurt or killed. Follow all instructions in this owner's manual regarding tire inflation and maintenance. Piaggio recommends you always use original tires as replacement.

**WARNING**

Incorrect tire inflation pressure causes uneven tread wear and will make your scooter unstable and potentially dangerous. You must never ride a scooter on a tire with a tread depth of less than 0.078 in (2 mm). Do not use the scooter if the tire wear indicators show that the tire is worn out.

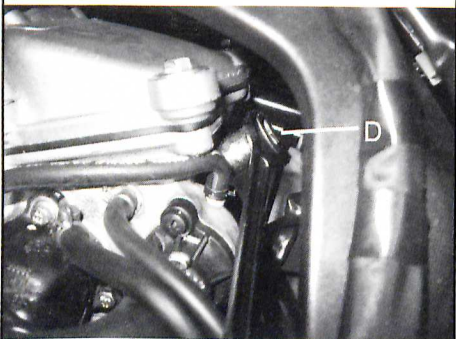
There are several kinds of treadwear indicators. For information on how to check the wear, see your Vespa dealer. However, if the tires appear to you to be worn out, they certainly are, and should be changed.



04_06



04_07



04_08

4.4.1 REMOVING SPARK PLUG

Proceed as follows:

1. lift up the saddle «A»
2. lift up the helmet compartment «B» and access the spark plug by inserting your hand;
3. disconnect the cap «C» from the spark plug HT wire;
4. unscrew the spark plug, using the supplied tool «D»;
5. upon reassembly, insert the spark plug at the correct angle, screwing it in tightly by hand;
6. only use the tube spanner «D» supplied for the final tightening work;
7. insert the cap «C» over the spark plug.

Recommended spark plugs:

CHAMPION RG6YC (200 cc)



The spark plug should be removed when the engine is cold.

The spark plug should be checked every 3700 miles (6000 Km) and changed every 7500 miles (12.000 km). The use of non-conforming electronic control units and ignition and different spark plugs than those prescribed can cause serious damage to the engine.



Whenever the spark plug is removed following an engine flooding (expulsion of excessive fuel pg.45) it is recommended to keep the spark plug cap connected to the spark plug and the latter safely grounded at a reasonable distance from the spark plug hole to avoid igniting the expelled gasoline.



CAUTION

The spark plug should be removed only when the engine is cold and wearing protective gloves.

The use of spark plugs with a heat range other than the prescribed type (see pr.5) or with incorrect thread size can result in serious damage to the engine, refit the cover, taking care to engage the interlocking tabs in the lower part of the body panel and secure with the screw.



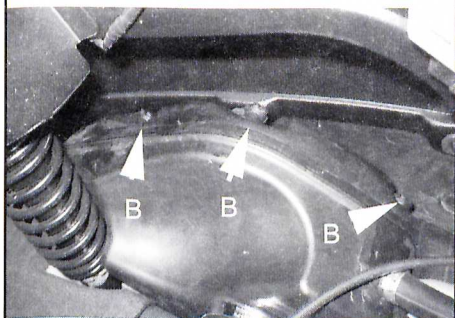
CAUTION

Danger of damage to the "Piaggio immobilizer" system; be sure to use the prescribed type of spark plug.

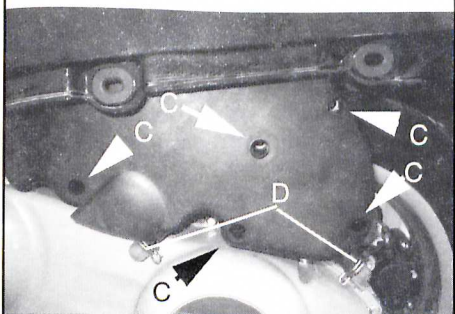
The spark plug must be connected to the high tension (H.T.) lead by means of the shielded cap.



04_09



04_11



04_12

4.5.1 AIR FILTER DISMANTLEMENT

Proceed as follows:

1. unscrew the fixing screws «A» and remove the left-hand side fairing;
2. remove the helmet compartment (04_09);
3. unscrew the fixing screws «B» (04_10) that can be reached once the helmet compartment has been removed;
4. unscrew the screws «C» (04_11) and remove the air filter cover.



04_10

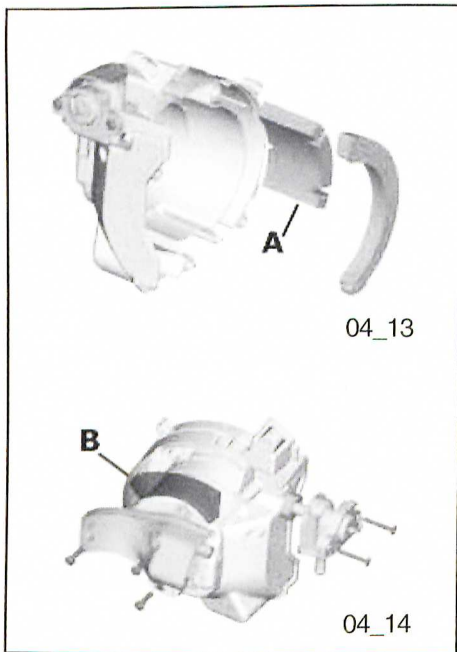
Extract the filter element and clean it with water and shampoo, then dry it with a clean cloth and small jets of compressed air and immerge it in a 50% ratio mixture of Selenia Air Filter Oil and gasoline. Then press it between your hands without wringing it, leave it to drip and replace it. Any oil and water deposits in the filter box can be eliminated by removing the two rubber hoods «D» (04_11).



To avoid damaging the plastic covers of the vehicle have the air filter cleaned by an **Authorized Vespa Service Center**



Using the vehicle on dusty roads it is necessary to intensify the maintenance interventions to avoid damaging the engine and transmission.



4.6.1 SECONDARY AIR SYSTEM

In order to reduce the emission of pollutants, the vehicle is equipped with a catalytic converter. In order to support the catalysis, a further quantity of oxygen is modified by the secondary air system (SAS). The aforementioned system enables oxygen to be supplied to the unburnt gases before the catalytic converter, thereby encouraging a better reaction in the catalytic converter itself. The air is introduced into the exhaust conduit on the head, opportunely purified by 2 filters, internal «A» and external «B». The system is provided with a control valve that excludes the function in deceleration, in order to prevent abnormal noise. In order to preserve the function of the SAS system as well as possible, the filters should be cleaned every 2 years, at an **Authorized Vespa Service Centre** (paragraph 7.1 Programmed Maintenance Operations). The cleaning consists in washing the sponges with water and neutral soap, then drying them with a clean cloth and small jets of compressed air.

4.7.1 ENGINE COOLING FLUID

The engine cooling is of the forced fluid circulation type. The cooling circuit contains coolant consisting of 50% mixture of demineralized water and an anti-freeze solution based on ethylene glycol and corrosion inhibitors. Recommended coolant: **PARAFLO MOTO RIDER** or similar brand of coolant see par.7.2, supplied with pre-mixed fluid ready for use. For a proper operation of the engine, the coolant temperature must be between a minimum value of 140° F and a maximum of 221° F.

If the coolant temperature gauge reaches the red zone, stop the engine. Let it cool down and check the level of the coolant; if regular contact an **Authorized Vespa Service Center**. **If during an easy journey the coolant temperature warning light comes on**, stop the engine and let it cool down. Check the level: **if it is normal contact an Authorized Vespa Service Center**.

The coolant must be checked with the engine off every 3.700 miles (6.000 km) as indicated below.

- Place the vehicle in a vertical position on the support.
- Unscrew the fixing screws «A» and remove the cover.

- Check the fluid level, referring to the MIN and MAX indicators «B» displayed onto the tank.
- Top up the cooling fluid if the fluid level is below the minimum level margin inside the expansion vessel.

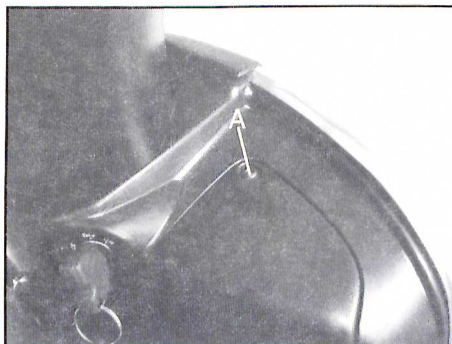
The fluid level should always be between the min. level and max. level.



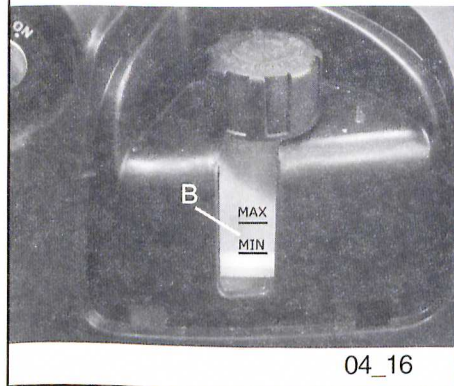
WARNING

Coolant is poisonous! Do not ingest coolant under any circumstance. Should you get coolant in your mouth, rinse with cool water and immediately seek medical attention. Coolant is also very dangerous to your skin and eyes. Should you accidentally get coolant on your clothing or skin, change clothes immediately. Wash coolant from your skin with hot water and soap.

Should you get coolant in your eyes, flush with plenty of cool water and seek professional medical help at once. Should someone swallow coolant accidentally, induce vomiting, rinse mouth with water, and immediately seek professional medical attention.



04_15



04_16

**WARNING**

Dispose of the coolant properly. Be sure to keep the drained coolant away from children and pets. It is sweet tasting, as well as extremely poisonous, and is very attractive to children and pets.

Use extra caution not to spill the coolant on any hot parts of the engine. It is flammable, and can emit invisible, noxious fumes.

Always wear rubber or latex gloves when servicing the cooling system.

**WARNING**

The coolant is very hot. Do not remove the filler cap when the engine is hot since the coolant is under pressure and it will splash out violently.

If it gets in contact with the skin or with your clothing, it may cause severe burns.

**WARNING**

DO NOT USE YOUR FINGERS OR ANY OTHER OBJECT TO CHECK IF THERE IS ENOUGH COOLANT.

CHECKING AND TOPPING UP**WARNING**

Be aware of the risk of burns from the coolant.

Check the coolant level and top up the expansion tank only after the engine has thoroughly cooled.

To avoid dangerous spills while riding make sure the coolant never exceeds the maximum level.

If the coolant is near the Minimum level top it up. This must be carried out on a cold engine. If the coolant needs to be filled up frequently or if the expansion chamber is completely dry, the cooling system needs to be checked.

It is therefore essential to have the cooling system checked by an **Authorized Vespa Service Center**.

The coolant needs to be replaced every two years.

Contact an Authorized **Vespa Service Center**.



To guarantee correct operation of the engine it is necessary to keep the radiator grill clean.

4.8.1 LEVEL CHECK

The brake fluid tanks are located on the pumps placed onto the handlebar (front on the right-hand side, rear on the left-hand side).

The oil level inspection procedures for the front and rear braking system are identical. Proceed as follows:

1. rest the vehicle on the central support with the handlebars in a central position;
2. unscrew the screws «A» and remove the cover «B»;
3. check the fluid level through the relevant inspection light «C» (04_17).

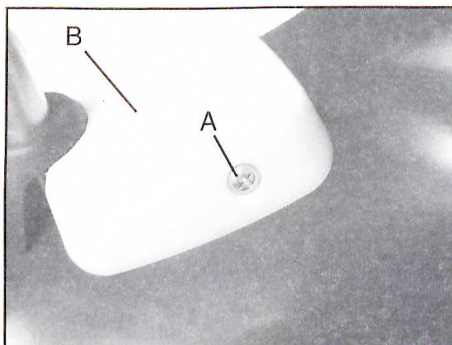
The level will go down to a certain extent due to lining wear.

If the level is below minimum, turn to an **Authorized Vespa Service Centre** in order to carry out an accurate inspection of the braking system.

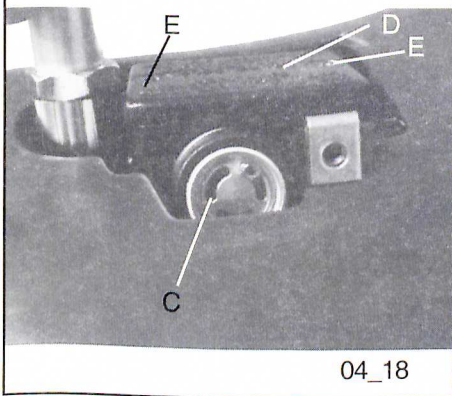
Prescribed fluid: **TUTELA TOP 4**

Proceed as follows:

remove the tank cap «D» by loosening the two relative screws «E» and top up the level, only using the prescribed fluid without exceeding the maximum level.



04_17



04_18



CAUTION

When topping up brake fluid use exclusively DOT 4 class products. Recommended brake fluid is **TUTELA TOP 4**.



CAUTION

Brake fluid is highly corrosive. If it comes into contact with painted parts of the motorscooter, wash off immediately with clean water.



CAUTION

Brake fluid tends to absorb moisture from the air. If the brake fluid in the circuit contains excess moisture, braking efficiency will be impaired.



CAUTION

In temperate climates, brake fluid should be changed every two years.

Do not use fluid from previously opened or part-empty containers.

**CAUTION**

Always use synthetic brake fluid (identified by the marking (O) on the container).

Mineral type brake fluid will damage the rubber seals on the brake circuit and must not be used on any account.

In normal temperatures the brake fluid must be replaced every 12.500 miles (20.000 km) or at least every 2 years.

The operation requires specialized personnel, it is essential to contact a **Local Vespa Dealer or Authorized Service Center**.

**BRAKES
WARNING**

Do not ride your vehicle with worn or malfunctioning brakes! The brakes are the most important safety system of your vehicle. Using the motor-scooter with brakes that are anything less than perfect is very likely to lead to a collision or upset, with consequent risk of serious injury or death.

Check the brake pad wear, as shown on par. 4.4 (checking the brake pad wear). Have your brakes serviced by your Local Vespa Dealer.

**WARNING**

Wet conditions seriously degrade the performance of your brakes. When the road is wet from rain, you should plan to use double the normal stopping distances since both the brakes themselves and the traction of the tires on the road are reduced by the presence of water.

Water on the brakes from washing your vehicle, or splashed up from wet roads, or crossing puddles or ditches, can wet the brakes sufficiently to greatly reduce their effectiveness. Whenever the brakes have become wet, always dry them by gently applying the brakes, repeatedly, until the heat causes the brakes to dry, and full brake function is restored. Failure to follow this procedure can lead to loss of brake effectiveness and a serious accident.

**WARNING**

The brakes are extremely important for your safety. Do not use the vehicle if the brakes do not work perfectly.

Always check the brake efficiency before riding.

**WARNING**

If the "feel" or position of the brake lever changes, this may be due to some problem in the hydraulic brake system. If you have any doubt regarding the perfect functioning of your brake system, or if the normal pre-ride checks indicate any discrepancy, contact your **Local Vespa Dealer or Authorized Vespa Service Center** before riding.

**WARNING**

Pay special attention to the brake disc and friction material, making sure that they are neither dirty or oily, especially after maintenance operations or inspections.

Check the brake line, make sure that it is not twisted, crimped, or leaking.

Keep away from children.

Dispose of used brake fluid properly. See the general warnings on paragraph 1.2 (brake fluid).

4.9.1 BATTERY

In order to gain access to the battery «D», proceed as follows:

1. rest the vehicle on the central stand;
2. unscrew the 4 screws «A», remove the footboard «B».
3. remove the two battery fixing screws «C».



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 leakages from the battery electrolyte.

The battery is an electronic device which requires regular inspection and servicing. The main points regarding servicing are listed below.

4.9.2 BREAKING IN A NEW BATTERY

Check the correct connection of the terminals and check voltage.

4.9.3 LONG INACTIVITY

In the event of long inactivity of the vehicle, the battery must be periodically recharged, considering that in ~ 3 months the battery would tend to discharge.

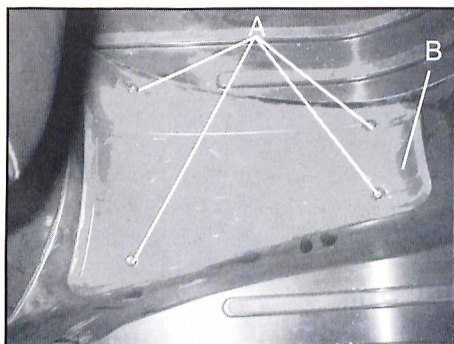
If the battery is removed, make sure that the electrical cables are properly connected upon replacement (+ and -): inverting the cables may cause faults of the electrical devices.

Recharge the battery with current equal to approximately 1/10 of the rated capacity (~1A) and for not more than 8 hours at a time.

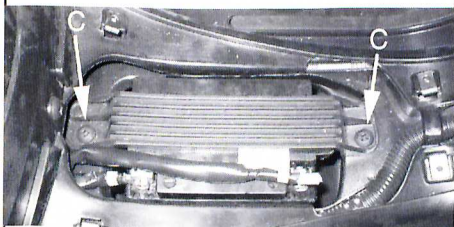
For this operation, we recommend contacting an **Authorized Vespa Service Center**.

4.9.4 HERMETIC BATTERY

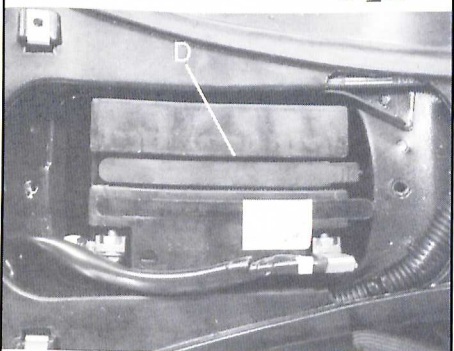
If the vehicle is equipped with a hermetic battery, the only required maintenance is to check the charge and recharge, if needed, using a current not exceeding 1/10 of the rated capacity. These operations must be carried out after a long period of inactivity (~3 months) and preferably at an **“Authorized Vespa Service Center”**.



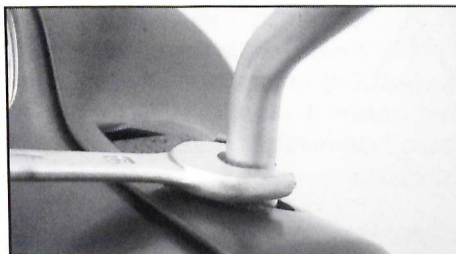
04_19



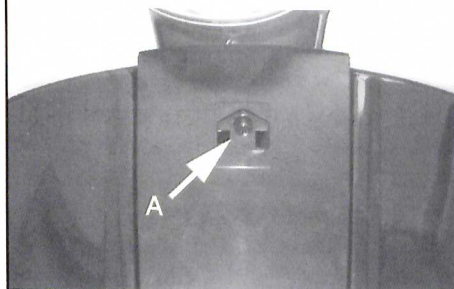
04_20



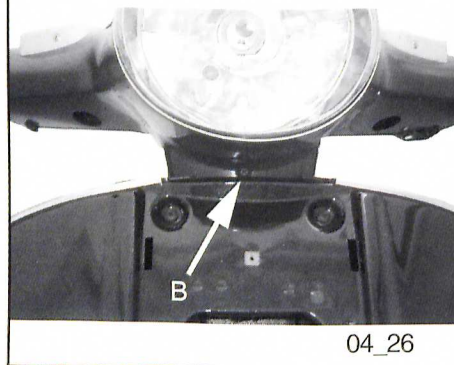
04_21



04_24



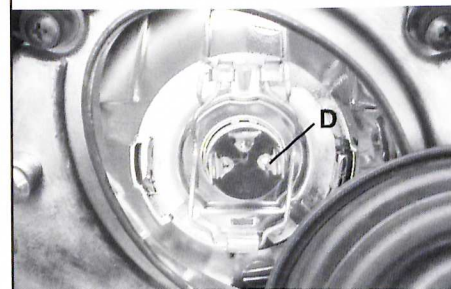
04_25



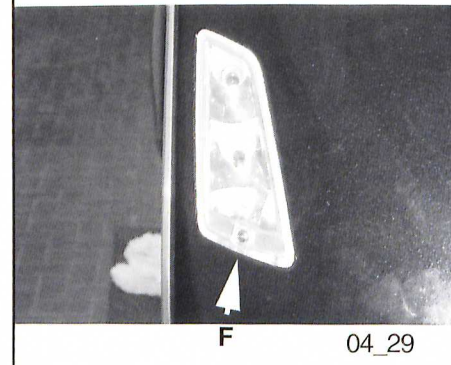
04_26



04_27



04_28



04_29

4.11.1 FRONT LIGHT GROUP

In order to remove the headlight assy proceed as follows:

- 1: remove the rear-view mirrors (04_23).
- 2: remove the screws «A» from the front shield radiator grill.
- 3: remove the fixing screws «B» from the front handlebars cover.
- 4: remove the fixing screws «C» from the rear handlebars cover.
- 7: move the front handlebars cover aside.

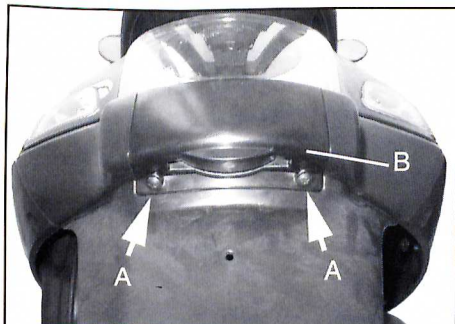
You will now have access to the bulbs. Unhook the clip and extract the bulb from the full/dipped headlight «D». In order to replace the sidelight it is necessary to extract the rubber bulb socket from its position. Repeat the operations in reverse order during reassembly.



Halogen bulbs are used for the high and low beams; do not touch with fingers to compromise their working order.

4.11.2 FRONT DIRECTION INDICATORS

It is necessary to remove the screws «F» (04_28) in order to replace the burnt light bulb.



04_30



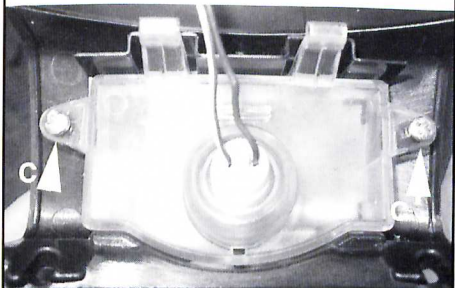
04_33

4.11.3 NUMBER PLATE LIGHT

In order to remove the number plate light bulb, proceed as follows:

- 1: remove the two screws «A» and remove the plastic cover «B».
- 2: remove the two screws «C» in order to remove the bulb socket from the lens; at this point it is possible to remove the number plate light bulb.

Repeat the operations in reverse order for reassembly.



04_31



04_32

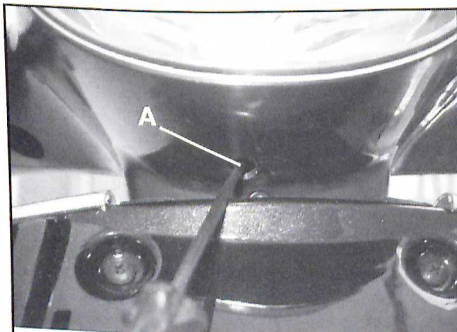
4.11.4 REAR LIGHT GROUP AND DIRECTION INDICATORS

In order to remove the taillight assy, proceed as follows:

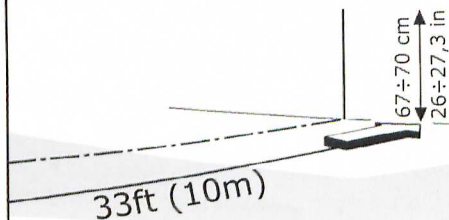
- 1: remove the two screws «A» and remove the plastic cover «B».
- 2: remove the screws «D» and remove the taillight from its housing.
- 3: you will now have access to the taillight bulbs and the stop light bulb.

Repeat the operations in reverse order for reassembly.

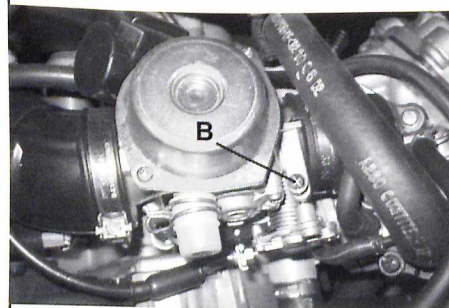
For the replacement of the rear turn signal bulb, proceed as follows: remove the screws «E» and extract the turn signal light assy. Remove the lens and replace the light bulb.



04_34



04_35



04_36

4.12.1 FRONT HEADLIGHT ADJUSTMENT

Proceed as follows:

1. put the vehicle in use conditions, with no load, with tires inflated at the prescribed pressure on flat ground at 33 ft (10 m) from a white screen placed in dim light (04_34), making sure that the vehicle's axle is perpendicular to the screen;
2. trace a horizontal line on the screen at $26 \div 27,3$ in ($67 \div 70$) above ground level;
3. switch the headlight on, insert the luminous full headlight strip and check that the horizontal demarcation line between the dark zone and the illuminated zone does not fall above the horizontal line traced on the screen;
4. If this is not the case, adjust the headlight by working on screw «A» (04_33), after having removed the front radiator grill (04_24).


4.12.2 REARVIEW MIRROR ADJUSTMENT

The mirrors can be positioned by exercising a light pressure on the edges of the mirror itself in order to reach the desired orientation.

4.13.1 IDLING SPEED ADJUSTMENT

Proceed as follows:

1. rest the vehicle on its center stand, lift the saddle and remove the helmet compartment.
2. start up the motor, then tighten or loosen screw «B» (04_35) for the idling speed adjustment, until obtaining the prescribed idling speed (around 1650 ± 50 revs/min.) without the rear wheel being rotated by the engine.

 The idle adjustment must be carried out on a hot engine. Before proceeding check that the throttle has the required play. In case of need to adjust the play on the throttle transmission it is recommended to contact a Dealer or **Authorized Vespa Service Center**.

If the adjustment is difficult contact a **Dealer or Vespa Service Center** to adjust the CO to a minimum.



CAUTION

When adjusting the idle, do not touch the silencer to prevent burns.



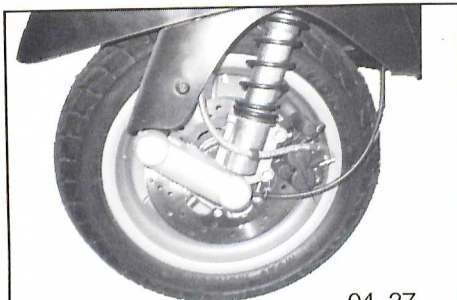
WARNING

In case of problems adjusting idle, it may be necessary to adjust exhaust emissions (CO). Such operation must be carried out by an **Authorised Vespa service center**.



WARNING

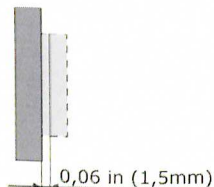
Danger of burns. Take care not to touch hot engine parts while adjusting idle speed.



04_37



04_38



04_39

4.14.1 FRONT AND REAR DISC BRAKE

The brake disc and lining wear is automatically compensated, therefore it has no effect on the function of the brakes. For this reason it is not necessary to adjust the brakes.

If, when activating the brake lever, you notice excessive elasticity, this is most probably due to the presence of air in the circuit or to the irregular functioning of the brake itself.

In this case, given the fundamental role that the brakes play in your driving safety, it is necessary to take the vehicle to an **Authorized Vespa Dealer or Service Centre**.



WARNING

The brakes are the parts that most ensure your safety and for this reason they must always be in perfect working order.

If in doubt regarding the perfect functioning of the braking system and in case you are not able to carry out the usual checking operations, contact your Local Vespa Dealer.



The braking action must begin when the brake lever is at approx. 1/3 of the travel, starting from rest.



WARNING

Check the brake pads after the first 600 miles (1.000 km) and every 3.125 miles (5.000 km) thereafter. If the thickness of one or both pads is in the region of 0.06 in (1.5 mm), both pads must be changed.

This operation should be carried out by an **Authorized Vespa Service Center**. Fit only genuine original Vespa replacement pads.

Non genuine pads might not work perfectly, resulting in brake failures and a serious risk of injuries or even death.



Sandy, muddy, salty or snow-covered roads can drastically reduce the life of the pads. To avoid this, wash the vehicle frequently in the presence of such road conditions.



WARNING

After fitting new brake pads do not use the motorscooter until you have activated the brake lever repeatedly to bed in the brakes and restore the lever to its correct position.



WARNING

Be careful not to burn yourself while carrying out the following operations.