GILERA WOULD LIKE TO THANK YOU

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

NEXUS 300 i.e.



The instructions given in this manual are intended to provide a clear, simple guide to using your scooter; this booklet also details routine maintenance procedures and regular checks that should be carried out on the vehicle at an **authorised Dealer or Service Centre**. The booklet also contains instructions for simple repairs. Any operations not specifically described in this manual require the use of special tools and/or particular technical knowledge: to carry out these operations refer to any **authorised Dealer of Service Centres**.



Personal safety

Failure to completely observe these instructions will result in serious risk of personal injury.



Safeguarding the environment

Sections marked with this symbol indicate the correct use of the vehicle to prevent damaging the environment.



Vehicle intactness

The incomplete or non-observance of these regulations leads to the risk of serious damage to the vehicle and sometimes even the invalidity of the guarantee.

The signs that you see on this page are very important. They are used to highlight those parts of the booklet that should be read with particular care. As you can see, each sign consists of a different graphic symbol, making it quick and easy to locate the various topics.

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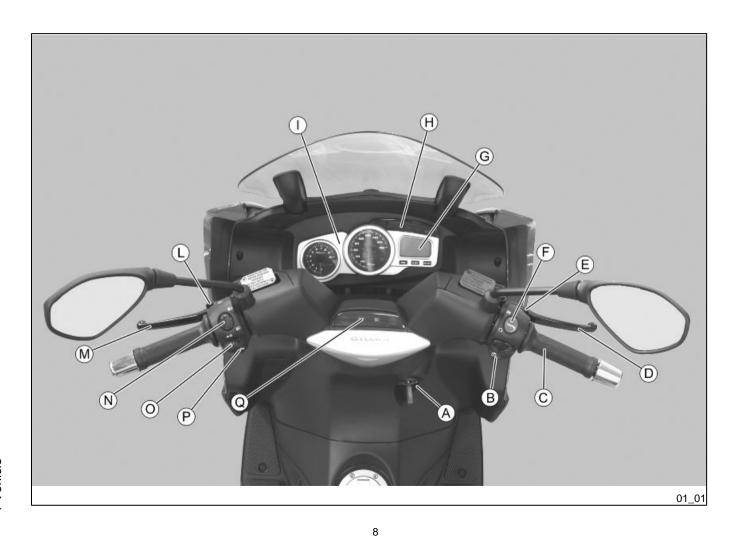
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Chap. 01 Vehicle



Dashboard (01_01)

A = Ignition key-switch

B = Starter button

C = Throttle grip

D = Front brake lever

E = **«Mode»** remote switch

F = Emergency cut-off switch

G= Digital instrument panel

H = Warning light unit on digital instrument panel

I = Analogue instrument panel

L = Passing

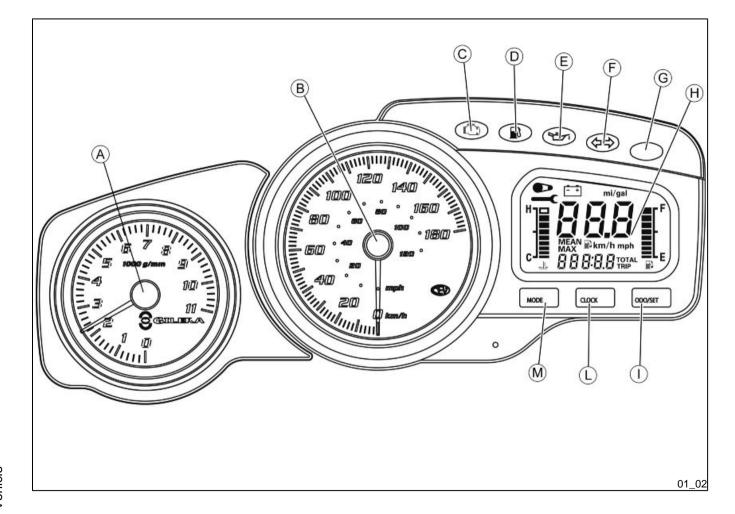
M = Rear brake lever

N = Light switch

O = Turn indicator switch

P = Horn button

Q = Warning light unit



Instruments (01_02)

A = Rpm indicator

B = Speedometer with twin scale (km/h and mph)

C = Engine control warning light

D = Low fuel warning light

M = Low oil pressure warning light

F = Turn indicator warning light

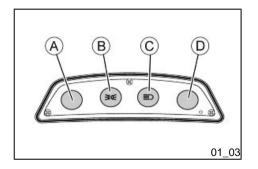
G = Antitheft device LED

H = LCD Display

I = «Odo/Set» button

L = «Clock» button

M = «Mode» button



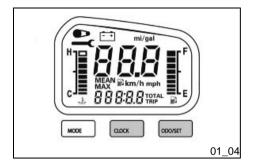
Indicator unir (01_03)

A = Warning light pre-installation

B = Headlight warning light

C = High-beam warning light

D = Warning light pre-installation



Clock (01_04)

Pressing the button «CLOCK» less than 1 second displays the following sequence:

- TIME
- DATE
- TOTAL/PARTIAL

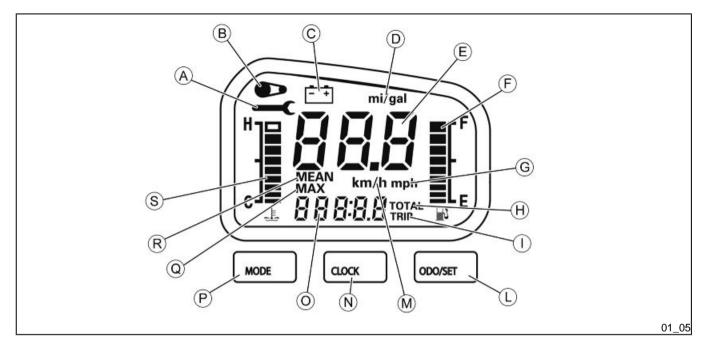
To set the clock push and hold the **«CLOCK»** button for longer than 3 seconds.

The numbers showing the hours will begin flashing.

Set the hours with the **«ODO/SET»** button. Push the **«CLOCK»** button again and the minutes numbers start flashing.

Set the minutes with the **«ODO/SET»** button. Press the **«CLOCK»** button again to start the clock moving normally.

During the reset process, not pressing any buttons longer than 8 seconds ends the process automatically and the display shows the modified time.



Digital lcd display (01_05)

A = «SERVICE» maintenance icon

B = **«BELT»** maintenance icon

C = Battery Icon

D = Miles/gallons icon (Not used)

E = 3-digit display

F = Fuel gauge

G = Miles per hour icon

H = Total odometer indicator

I = Partial odometer indicator

L = «ODO/SET» button

M = Km/h gauge

N = «CLOCK» button

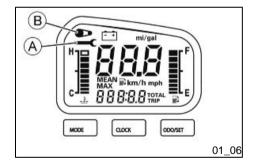
O = 5-digit display

P = «MODE» button

Q = Maximum speed indicator

R = Mean speed

S = Water temperature gauge



Maintenance icons (01 06)

The icons signal the user that scheduled maintenance operations should be carried out.

The flashing «A» SERVICE or «B» BELT icons signal the need to carry out the scheduled maintenance service, according to the intervals specified in the Scheduled Maintenance Table.

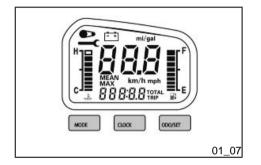
In any case, vehicle maintenance must be carried out at the service intervals recommended in the Scheduled Maintenance.

WARNING

REFER TO THE «SCHEDULED MAINTENANCE TABLE» FOR FURTHER MAINTENANCE OPERATIONS

Setting the total and trip odometers

By pressing the button «L» ODO/SET, the display shifts from total to trip odometer. Hold down the button «L» ODO/SET for more than 3 seconds to reset the trip odometer, mean speed and maximum speed gauges.



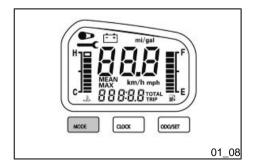
Setting the date function (01_07)

Set ****OATE*** with the ****CLOCK*** button. Hold down the ****CLOCK*** button longer than 3 seconds and the year numbers start flashing. Set the year with the ****CLOCK**** button. Push the ****CLOCK**** button again and the month numbers **@** start flashing. Set the month with the ****CLOCK**** button. Push the ****CLOCK**** button again and the day numbers **@** start flashing. Set the day with the ****CDO/SET**** button.

CAUTION



IT IS STRONGLY ADVISED NOT TO USE THE FUNCTIONS OF THE DIGITAL DISPLAY PANEL WHILE THE VEHICLE IS MOVING.



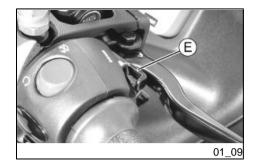
MODE button (01_08, 01_09)

Hold down the **«MODE»** button or the remote switch **«E» « MODE»** for less than one second to start the following sequence of functions:

- MEAN SPEED the word «MEAN» and km/h or mph is displayed. The value is reset by resetting the trip odometer.
- MAXIMUM SPEED The words «MAX» and km/h or mph are displayed. The value is reset by resetting the trip odometer.
- BATTERY VOLTAGE The battery icon is displayed. Should voltage be abnormal, the icon is displayed and flashes for 60 seconds.

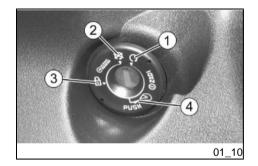
Hold down the **«MODE»** button or the remote switch **«E» «MODE»** for more than 3 seconds to go back to the **«1» MEAN SPEED** function.





N.B.

- MEAN SPEED IS CALCULATED JUST BY TURNING THE KEY TO «ON» AND THE ENGINE HAS TO BE OVER 800 RPM.
- TO SHIFT FROM km/h TO mp/h: HOLD DOWN THE «MODE» AND «CLOCK» BUTTONS SIMULTANEOUSLY, WITH THE KEY SET TO «OFF». THEN TURN THE KEY TO «ON» HOLDING DOWN BOTH BUTTONS FOR MORE THAN 3 SECONDS. WHEN THE WORD «SET» IS DISPLAYED THE UNIT OF MEASUREMENT HAS BEEN CHANGED.



Key switch (01_10)

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

SWITCH POSITIONS

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

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

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

SADDLE OPENING «4»: Set this position by pressing the key set to **OFF** and turning it clockwise.

Locking the steering wheel

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

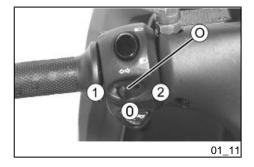
Releasing the steering wheel

Reinsert the key and turn it to «OFF».

CAUTION



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



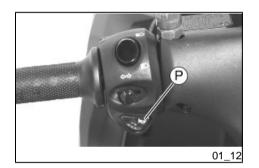
1 Vehicle

Switch direction indicators (01_11)

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

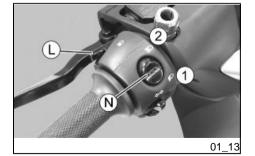
Lever **«O»** towards **«2»** = right turn indicators switched on;

The lever **«O»** automatically goes back to its **«O»** position and the indicators remain on; push the lever **«O»** to turn them off.



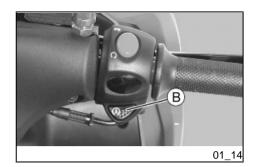
Horn button (01_12)

Push the button «P» to honk the horn.



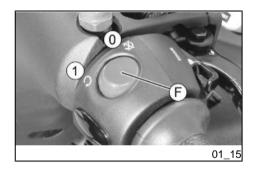
Light switch (01_13)

When the light switch «N» is set to «1», the low-beam light is on. When set to «2», the high-beam light is activated. Push the button «L» and the high-beam light is flashed.



Start-up button (01_14)

To start the engine, pull either one of the two brake levers and press the starter button **«B»**.

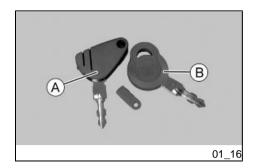


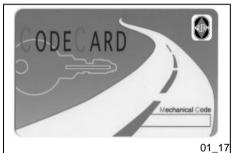
Engine stop button (01_15)

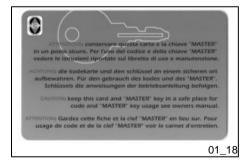
The engine can be started when the emergency cut-off switch ${}^{\diamond}F^{\diamond}$ is set to ${}^{\diamond}1^{\diamond}$ **RUN**; if the emergency cut-off switch ${}^{\diamond}F^{\diamond}$ is set to ${}^{\diamond}0^{\diamond}F^{\diamond}$, the engine cannot be started, or it shuts off if it is already running.

The immobilizer system

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







Keys (01_16, 01_17, 01_18)

Two types of keys are supplied together with the vehicle. Key **«A»** is the **«MASTER»** key. Only a single copy of this key is supplied, which is necessary to program the codes for all your other keys and for your dealer to perform some maintenance operations. We therefore recommend that it be used only under exceptional circumstances.

Key «B» (single copy supplied) is used for regular operations such as:

- start-up
- unlocking the fuel tank cover

Together with the two keys, you will be given a **CODE CARD** bearing the mechanical code of the keys.

WARNING

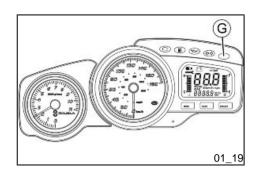


LOSING THE RED KEY PREVENTS ANY REPAIRS OF THE 'PIAGGIO IMMOBILIZER' SYSTEM AND THE ENGINE CONTROL UNIT.

WARNING



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



Immobilizerdevice enabled indicator led (01_19)

Activation of the **«PIAGGIO IMMOBILIZER»** system is signalled by a flashing **«G»** warning light. In order to reduce battery discharge, the indicator LED turns off automatically after 48 hours of uninterrupted functioning. Should the system fail, different LED flashing patterns will provide the **Authorised Service Centre** with information on the type of fault detected.

Operation

Every time the starter key is extracted from either the **«OFF»** or **«LOCK»** position, the protection system activates the engine lock. Turning the key to **«ON»**, with the emergency cut-off switch set to **«ON»** and the side stand up, 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 Service Centre**, which is provided with the electronic equipment required to detect and repair the system. The immobilizer is also activated when the emergency cut-off switch stops the engine or the side stand is lowered. This happens even if the starter key is in **«ON»**. When additional keys are required, please note that data storage (up to 7 keys max.) must be done on all keys, both new and existing ones. Take the red-handgrip key and all the black keys supplied to an **Authorised Service Centre**. The codes of keys not submitted for the new storage 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 BY THE SYSTEM CONTROL UNIT.

VIOLENT SHOCKS MAY AFFECT THE ELECTRONIC COMPONENTS OF THE KEY.

IF OWNERSHIP OF THE VEHICLE IS TRANSFERRED, THE RED-HANDGRIP KEY (AS WELL AS THE OTHER KEYS) AND THE "CODE CARD" MUST ALSO BE TRANSFERRED TO THE NEW OWNER.

Programming the immobilizer system

The procedure for programming the «PIAGGIO IMMOBILIZER» system and/or for storing other key codes is described below.

Procedure start - red key

Make sure that the emergency cut-off switch is set to **«ON»** and the side stand is up. Insert the red-handgrip key into the key switch (in **«OFF»** position) and turn it to **«ON»**. After 1-3 seconds, turn the key to **«OFF»** again and pull it out.

Intermediate step - black key

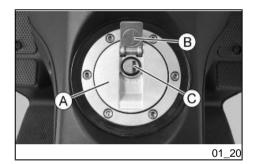
After pulling out the red key, insert the black key within 10 seconds and promptly turn it to "**ON**". After 1-3 seconds, turn the key to "**OFF**" again and pull it out. In this way, a maximum of 7 black keys can be programmed by repeating the above procedure keeping the indicated times.

Proper programming check

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 black key and repeat the start-up operation. Check that engine starts.

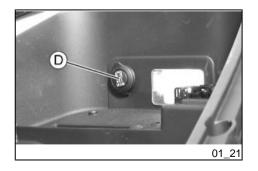
WARNING

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_20)

To remove the fuel tank cover «A» lift tab «B» and insert the key in lock «C».



Power supply socket (01 21)

There is a plug socket «**D**» inside the helmet compartment.

The plug socket may be used for external consumers (mobile phone, inspection light, etc.).

CAUTION



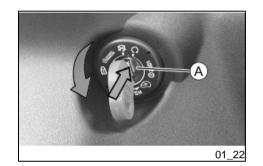
PROLONGED USE OF THE PLUG SOCKET MAY RESULT IN PARTIAL DISCHARGE OF THE BATTERY

Vehicle

Electric characteristic

Plug socket

12 V - 180 W MAX



The saddle (01_22)

To lift the saddle and get access to the helmet compartment, insert the key in the key switch "A". With the key set to "OFF", push it and turn it anticlockwise to the "SADDLE OPENING" position.

CAUTION



OBJECTS INAPPROPRIATELY PLACED INSIDE THE HELMET COMPARTMENT MAY DEFORM THE SADDLE AND PREVENT THE COURTESY LIGHT FROM TURNING OFF, WHICH MAY RESULT IN BATTERY DISCHARGE.

N.B.

PAY SPECIAL ATTENTION WHEN PLACING OBJECTS ON THE SADDLE AS THE AUTOMATIC OPENING OF THE SADDLE CAN CAUSE THEM TO FALL.

Identification (01_23, 01_24)

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

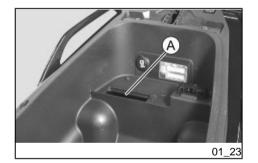
CAUTION



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

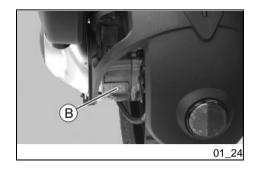
Chassis number

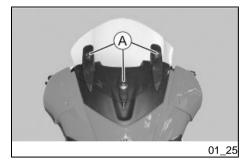
To read the chassis number, remove the lid «A» in the helmet compartment.

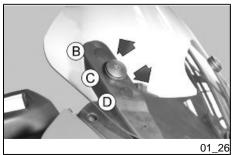


Engine number

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







Adjusting the windscreen (01_25, 01_26)

The windshield can be adjusted to 3 positions **«B»**, **«C»** and **«D»** according to the rider's needs. Unscrew the 3 screws **«A»**, remove the windshield upper part and set it in the desired position. Tighten the 3 fixing screws again.

WARNING



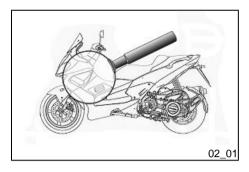
CARRY OUT THIS OPERATION WITH EXTREME CARE SO AS NOT TO SCRATCH THE WINDSHIELD. PREVENT WINDSHIELD DETACHMENT WHILE RIDING BY TIGHTENING THE FIXING SCREWS WELL.

NEXUS 300 i.e.





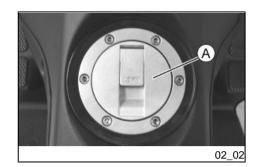
Chap. 02 Use



Checks (02_01)

Before using the vehicle, check:

- 1. That the fuel tank is full.
- 2. Front and rear brake fluid level
- 3. That the tyres are properly inflated.
- **4.** The correct functioning of the tail lights, the headlamp, the turn indicators, the stop light and the license plate light.
- **5**. The correct functioning of the front and rear brakes.
- 6. The oil level in the gearcase.
- **7**. The engine oil level.
- 8. The coolant level.



Refuelling (02 02)

Reach the fuel tank and unscrew the cap «A».

Use premium unleaded petrol, with minimum octane rating of 95.

A specific gauge on the instrument panel indicates the fuel level.

WARNING



SWITCH OFF THE ENGINE BEFORE REFUELLING WITH PETROL.

PETROL IS HIGHLY INFLAMMABLE.

DO NOT SMOKE AND KEEP OPEN 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.

CAUTION



PETROL DAMAGES THE PLASTIC PARTS OF THE BODYWORK.

Characteristic

Fuel tank (reserve)

approx.15.00 I (approx. 2.80 I)

Tyre pressure (02_03)

Check tyre pressure frequently. 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 perform the replacement.

CAUTION



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

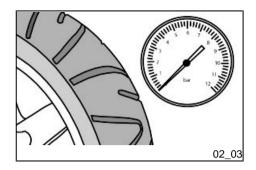
TYRES MUST BE REPLACED WHEN THE TREAD REACHES THE WEAR LIMITS SET FORTH BY LAW.

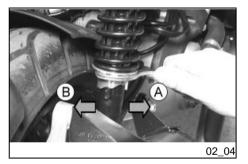
TYRES

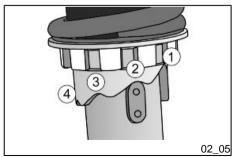
Front tyre	Tubeless, 120/70 - 15" 56P
Rear tyre	Tubeless, 140/60 - 14" 64P

TYRE INFLATION PRESSURE

Front tyre pressure (with passenger)	2.3 bar (2.3)
Rear tyre pressure (with passenger)	2.3 bar (2.5)







Shock absorbers adjustment (02_04, 02_05)

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

Position 1: minimum preload: driver only

Position 2 medium preloading: driver only

Position 3 medium preloading: rider 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. Spring preloading increases by turning the ring nut towards $^{\diamond}$ A $^{\diamond}$, but decreases if the ring nut is turned towards $^{\diamond}$ B $^{\diamond}$.

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

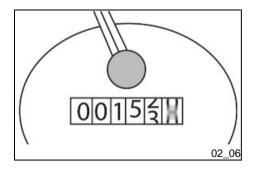


WE RECOMMEND WEARING GLOVES WHILE CARRYING OUT THIS OPERATION IN ORDER TO AVOID INJURIES.

WARNING



WE STRONGLY RECOMMEND NOT TO ADJUST BOTH SHOCK ABSORBERS WITH DIFFERENT PRELOADING

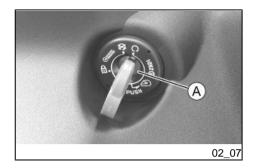


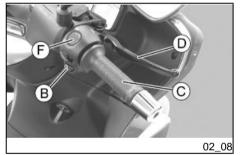
Running in (02 06)

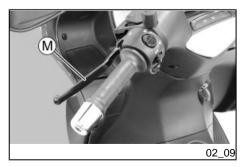
WARNING



DURING THE FIRST 1000 KM DO NOT RIDE THE VEHICLE OVER 80% OF ITS MAXIMUM SPEED. AVOID TWISTING THE THROTTLE GRIP FULLY OR KEEPING A CONSTANT SPEED ALONG LONG SECTIONS OF ROAD. AFTER THE FIRST 1000 KM, GRADUALLY INCREASE SPEED UNTIL REACHING THE MAXIMUM PERFORMANCE.







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

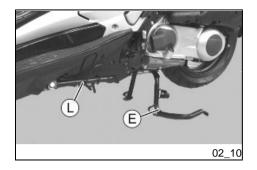
The vehicle is fitted with an ignition disabling system controlled by the emergency cutoff switch "**F**" and the side stand switch. The engine cannot start if the side stand is down or if the **RUN/OFF** switch is set to **OFF** If the engine is running, it shuts off when the side stand is lowered or the **RUN/OFF** switch is pressed when set to **OFF**. The scooter is equipped with automatic transmission with direct drive, so that starting is effected by turning the throttle grip to idle speed; to start-off from still, progressively twist the throttle grip. The vehicle is equipped with an electric pump and a starter that switch on automatically as soon as the engine is started. In order to start the engine and before pressing the starter button "**B**", pull and hold the front brake lever "**D**" or the rear brake lever "**M**" to actuate the specific start-up enabling switch

- 1. Rest the scooter on the centre stand **«E»**, making sure the rear wheel does not touch the ground.
- 2. Keep the throttle grip «C» completely untwisted.
- 3. Insert the key into the switch «A» and turn to «ON».
- **4.** Make sure that the switch **«F» «RUN/OFF»** is set to **«RUN»** and that the side stand **«L»** is folded up.
- **5.** Pull the front brake lever **«D»** or the rear brake lever **«M»** to activate the starter button **«B»**.

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

CAUTION



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 EXCESSIVE REVOLUTIONS, THE REVOLUTION LIMITER WILL BE ACTIVATED IF THE ENGINE SPEED EXCEEDS THE ESTABLISHED THRESHOLD.

WARNING

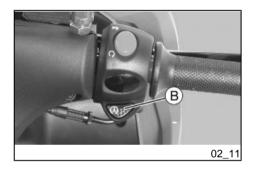


AFTER A LONG DISTANCE COVERED AT THE MAXIMUM SPEED, DO NOT STOP THE ENGINE IMMEDIATELY, BUT LET IT RUN AT IDLE FOR A FEW SECONDS.

WARNING



TAMPERING MAY CAUSE SERIOUS ENGINE MALFUNCTION.

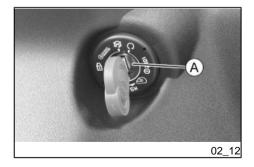


Difficult start up (02_11)

Should there be any problem, proceed as follows:

- 1. Check that the spark plug is working properly;
- 2. Check that there is enough fuel in the fuel tank; when there is no more fuel left, refill the tank and start the vehicle by pressing button «B» and keeping the throttle grip slightly twisted.

If the vehicle fails to start, take it to an Authorised Service Centre.



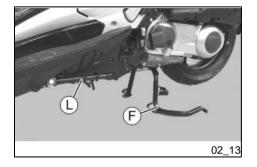
Stopping the engine (02_12)

Fully untwist the throttle grip, then rotate the key in the switch **«A »** to **«KEY OFF»** (extractable key).

Stand (02_13)

CENTRE STAND

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



SIDE STAND

Push with your foot on the fork of the stand "L" to bring it into the open position while lifting the scooter at the same time.

CAUTION



TAMPERING MAY CAUSE SERIOUS ENGINE MALFUNCTION.

WARNING



THE SIDE STAND CAUSES THE ENGINE TO TURN ITSELF OFF WHENEVER IT IS LOWERED.



Automatic transmission (02_14)

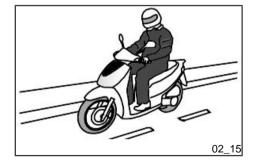
To ensure simple, pleasurable riding, the vehicle is equipped with automatic transmission with regulator and centrifugal clutch. The system is designed to provide the best performance (acceleration and consumption) while riding on both flat roads and uphill.

If you have to stop on an uphill slope (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 clutch bell.

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 with steepness greater than 25%.

Observe 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.



Safe driving (02_15)

Some simple tips are provided below that will enable you to use your vehicle on a daily basis in greater safety and peace of mind. Your skill and your mechanical knowledge are the basis of safe riding. We recommend trying out the vehicle in traffic-free zones in order to acquire a good knowledge of the vehicle it self.

- 1. Before riding off, remember to put on your helmet and fasten it correctly.
- 2. Reduce speed on rough roads and drive with care.
- **3.** After riding on a long stretch of wet road without using the brakes, braking can be poor at the beginning. Given these conditions, it is a good idea to operate the brakes from time to time.
- 4. Do not brake hard on wet, dirt or slippery road surfaces.

- **5**. Avoid riding off by mounting the scooter when resting on the support. In any case, the rear wheel should not be turning when it comes into contact with the ground, in order to avoid abrupt departures.
- **6.** When riding along roads covered by sand, mud, snow mixed with salt, etc. We advise you to frequently clean the brake disc with a mild detergent to prevent the accumulation of abrasive elements inside the eyelets, leading to premature wear of brake pads.

CAUTION



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



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 RIDE FASTER THAN 100 km/h WITH A SCOOTER WITH ADDED ACCESSORIES. WITHOUT THESE ACCESSORIES THE VEHICLE MAY BE DRIVEN AT A HIGHER SPEED WITHIN THE LEGAL LIMITS. IF THERE ARE NOT-PIAGGO ACCESSORIES FITTED, OR AN ABNORMAL LOAD, OR IF THE VEHICLE IS NOT IN A GENERALLY GOOD CONDITION, OR WHENEVER WEATHER CONDITIONS DEMAND IT, SPEED SHOULD BE FURTHER REDUCED.

CAUTION



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

CAUTION



ANY CHANGES TO THE VEHICLE PERFORMANCE AS WELL AS ALTERATIONS TO ORIGINAL STRUCTURAL PARTS IS STRICTLY FORBIDDEN BY LAW, AND RENDERS THE VEHICLE NO LONGER CONFORMING TO THE APPROVED TYPE AND DANGEROUS FOR RIDING.

NEXUS 300 i.e.



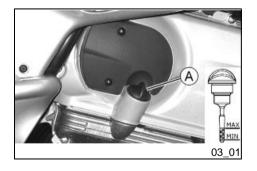


Chap. 03 Maintenance

Engine oil level

In 4-stroke engines, engine oil is used to lubricate the distribution elements, the bushes and the thermal group. An insufficient quantity of oil can cause serious damage to the engine. In all four-stroke engines, a loss of efficiency in oil performance and consumption should be considered normal. Consumption can particularly reflect the conditions of use (i.e. when driving at "full acceleration" all the time, oil consumption increases). The replacement frequencies provided for by the maintenance programme are defined, depending on the total contents of oil in the engine and 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 scooter is, however, equipped with an oil pressure warning light on the instrument panel.



Engine oil level check (03 01)

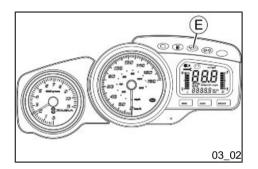
This operation **must be carried out with the engine cold** and following the procedure below:

- 1) Rest the vehicle on the central stand and on a flat ground.
- 2) Make sure the rear suspension is set to the minimum preloading position.
- 3) Screw off cap/dipstick «A», dry it off with a clean cloth and reinsert it, screwing down completely.
- 4) Remove the cap/dipstick **«A»** again and check that the level is between the MAX and MIN marks: top-up if required.

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.

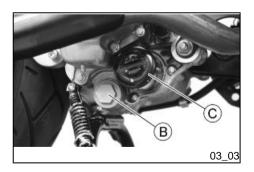
Engine oil top-up

Always check 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 cm³ of oil. Take your vehicle to an Authorised Service Centre to have the engine oil checked and topped-up, if required, as indicated in the scheduled maintenance tables.



Warning light (insufficient oil pressure) (03_02)

The vehicle is fitted with a warning light «E» that is turned on when the key is turned to «ON». This warning must go off once the engine starts. If the light comes on during braking, at idle speed or while turning a corner, it is necessary to check the oil level and top-up if required. If after having topped up the oil, the warning light still turns on while braking, at idle speed or while turning a corner, it will be necessary to turn to an Authorised Service Centre.



Engine oil change (03 03)

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 INADE-QUATE 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 PIAGGIO SERVICE CENTRE, AS THEY ARE EQUIPPED TO DISPOSE OF USED OILS IN AN ENVIRONMENTALLY FRIENDLY AND LEGAL WAY.

CAUTION

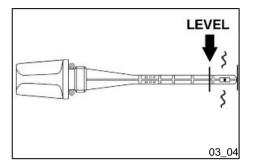


USING OILS OTHER THAN THOSE RECOMMENDED CAN SHORTEN THE LIFE OF THE ENGINE.

Recommended products

AGIP CITY HI TEC 4T

Engine oil SAE 5W-40, API SL, ACEA A3, JASO MA Synthetic oil





Hub oil level (03_04, 03_05)

Make sure there is oil in the rear hub according to the intervals specified in the scheduled maintenance table. To check the rear hub oil level, proceed as follows:

- 1) Rest the vehicle onto its centre stand, on level ground.
- 2) Unscrew the dipstick «A», dry it with a clean cloth and then reinsert it screwing it fully into place.
- 3) Pull out the dipstick to control that the oil level reaches the second notch from the bottom, as indicated by the arrow in figure, this is the correct level and must remain constant at all times.
- 4) Screw the dipstick back in, checking that it is correctly locked in place.

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 CURRENT REGULATIONS.

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 ROTRA 80W-90

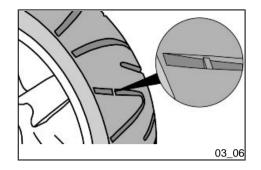
Rear hub oil

SAE 80W/90 Oil that exceeds the requirements of API GL3 specifications

Characteristic

Transmission oil

250 cm³



Tyres (03 06)

Check tyre pressure and wear frequently.

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, take your vehicle to an Authorised Service Centre or workshop equipped to perform the replacement.

CAUTION



TYRE PRESSURE SHOULD BE CHECKED WHEN TYRES ARE COLD.INCOR-RECT TYRE PRESSURE CAUSES ABNORMAL TYRE WEAR AND MAKES RID-ING DANGEROUS.

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

CAUTION



THE USE OF TYRES OTHER THAN THOSE INDICATED MAY CAUSE INSTABILITY. IT IS HIGHLY ADVISABLE TO USE ORIGINAL PIAGGIO TYRES.

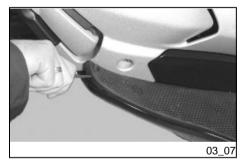
TYRES

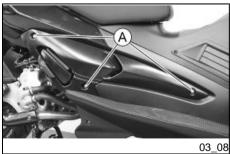
Front tyre	Tubeless, 120/70 - 15" 56P
Rear tyre	Tubeless, 140/60 - 14" 64P

3 Maintenance

TYRE INFLATION PRESSURE

Front tyre pressure (with passenger)	2.3 bar (2.3)
Rear tyre pressure (with passenger)	2.3 bar (2.5)





Spark plug dismantlement (03_07, 03_08, 03_09)

Proceed as follows:

- 1. Lift the rubber mat;
- 2. Remove the right side cover by unscrewing the three screws «A»;
- 3. Disconnect spark plug HV wire cap «B»;
- 4. Unscrew the spark plug using the wrench supplied;
- **5**. Upon refitting, place the spark plug in the hole at the due inclination and finger tighten it;
- 6. Only use the wrench to lock it in place;
- 7. Place cap «B» fully over the spark plug.

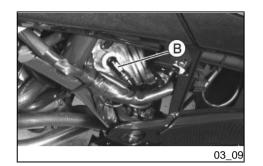
WARNING

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

CAUTION



SPARK PLUG MUST BE REMOVED WHEN THE ENGINE IS COLD. REPLACE SPARK PLUGS AS INDICATED IN THE SCHEDULED MAINTENANCE TABLE.



USING NON-COMPLYING ELECTRONIC IGNITIONS OR SPARK PLUGS OTHER THAN THOSE PRESCRIBED MAY SERIOUSLY DAMAGE THE ENGINE.

Characteristic

Spark plug

NGK CR8EKB

Electric characteristic

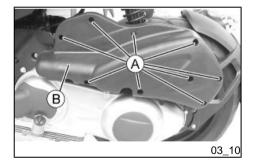
Electrode gap

 $0.7 \div 0.8 \text{ mm}$

Locking torques (N*m)

Spark plug

12 ÷ 14



Removing the air filter (03_10)

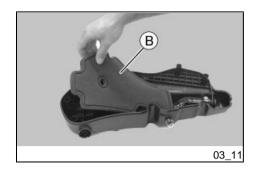
Proceed as follows:

- 1. Unscrew the 9 fixing screws «A»;
- 2. Remove the cover «B» in order to take out the sponge.

CAUTION



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



Air filter cleaning (03_11)

- 1. Wash the sponge with water and neutral soap.
- 2. Dry it with a clean cloth and small blasts of compressed air.
- 3. Impregnate the sponge with a mixture of 50% petrol and 50% specified oil.
- 4. Gently squeeze the filter element, let it drip and then refit it.

CAUTION

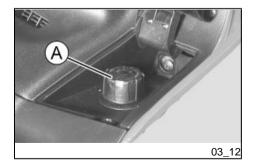


IF THE VEHICLE IS USED ON DUSTY ROADS, IT IS NECESSARY TO SERVICE THE AIR FILTER MORE OFTEN TO AVOID DAMAGING THE ENGINE.

Recommended products

AGIP FILTER OIL

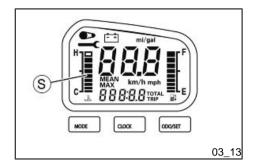
Oil for air filter sponge
Mineral oil with specific additives for increased adhesiveness



Cooling fluid level (03_12, 03_13, 03_14)

The engine is cooled by a forced-circulation coolant system. The cooling circuit holds approx. 1.8 litres of coolant consisting of a mixture of 50% de-ionised water and 50% glycol ethylene-based antifreeze solution with corrosion inhibitors. Recommended coolant: supplied with the vehicle, already mixed and ready for use. For proper engine functioning, coolant temperature must be between the 4th and 7th lit segment, as indicated by the specific gauge indicator **«S»** on the digital instrument panel. When the 9th segment lights up, the icon and all the segments start flashing; stop the engine, let it cool down and check the fluid level; if the level is OK, contact an **Authorised Service Centre**.

Check coolant when the engine is cold as indicated in the scheduled maintenance table, following the steps below.





- a) Place the scooter in a vertical position on the stand.
- b) Remove the expansion tank cover «A», turning in anticlockwise.
- c) Look inside the expansion tank: reference «C» shows the adequate coolant level.
- d) If the coolant level is below reference **«C»**, proceed to top-up when the engine is cold.

If the coolant needs to be topped up frequently or the expansion tank is completely dry, check the cooling system to find the cause of the problem. It is therefore essential to have the cooling system checked at an **Authorised Service Centre**. Replace coolant as indicated in the scheduled maintenance table. Take your vehicle to an **Authorised Service Centre** for this operation.

N.B.

SHOULD THE 9th SEGMENT OF THE COOLANT TEMPERATURE INDICATOR COME ON DURING A NON-DEMANDING RIDE, SHUT OFF THE ENGINE AND LET IT COOL DOWN. THEN CHECK THE COOLANT LEVEL; IF THE LEVEL IS OK, CONTACT AN AUTHORISED SERVICE CENTRE.

WARNING



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

WARNING



IN ORDER TO AVOID HARMFUL FLUID LEAKS WHILE RIDING, IT IS IMPORTANT TO MAKE SURE THAT THE LEVEL NEVER EXCEEDS THE MAXIMUM VALUE.

IN ORDER TO GUARANTEE THE PROPER FUNCTION OF THE ENGINE, IT IS NECESSARY TO KEEP THE RADIATOR GRILLE CLEAN.

Recommended products

AGIP PERMANENT SPEZIAL

coolant

Monoethylene glycol-based antifreeze fluid, CUNA NC 956-16

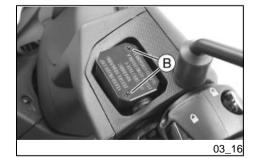


Checking the brake oil level (03 15)

The front and rear brake fluid reservoirs are both positioned on the handlebars. Proceed as follows:

- 1. Rest the scooter on its centre-stand with the handlebars perfectly horizontal;
- 2. Check fluid level through the related warning light «A».

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 an **Authorised Service Centre or Dealer** in order to have a thorough inspection of the braking system carried out.



Braking system fluid top up (03 16)

Proceed as follows: Unscrew the two screws **«B»**, remove the fuel tank cap and the intermediate rubber membrane, and top-up the brake fluid level using only the recommend brake fluid type and without exceeding the maximum level.

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

WARNING



ONLY USE DOT 4 CLASS BRAKE FLUIDS. COOLING SYSTEM FLUIDS ARE HIGHLY CORROSIVE. MAKE SURE THAT IT DOES NOT COME INTO CONTACT WITH THE PAINTWORK

.

CAUTION

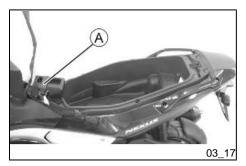


AVOID CONTACT OF BRAKE FLUID WITH EYES, SKIN, AND CLOTHING. IN CASE OF CONTACT, RINSE WITH WATER. THE BRAKING CIRCUIT FLUID IS HYGROSCOPIC, THAT IS, IT ABSORBS HUMIDITY FROM THE SURROUNDING AIR. IF THE HUMIDITY IN THE BRAKING FLUID EXCEEDS A CERTAIN VALUE, IT WILL LEAD TO INEFFICIENT BRAKING. NEVER USE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

Recommended products

AGIP BRAKE 4

Brake fluid FMVSS DOT 4 Synthetic fluid





Battery (03_17, 03_18)

To access the battery, proceed as follows:

- 1. Place the vehicle on its centre stand;
- 2. Open the saddle following the above instructions, see the «Saddle» section;
- 3. Remove the piston ring «A» and take out the battery cover.

The battery is the electrical device that requires the most frequent inspections. The most relevant maintenance rules to be observed are as follows:

Characteristic

Battery

12V/14 Ah, sealed battery

Use of a new battery

Make sure that the terminals are connected correctly. When a new battery is installed, the correct time and date must be reset on the digital instrument panel.

CAUTION



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



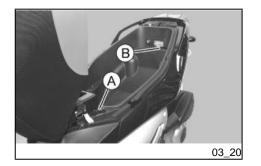
Long periods of inactivity (03_19)

Battery performance will decrease if the vehicle is not used for a long time. This is the result of the natural phenomenon of battery discharging plus residual absorption by vehicle components with constant power consumption. Poor battery performance may also be due to environmental conditions and the cleanness 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**.

CAUTION

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.



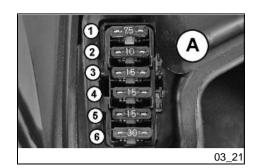
Fuses (03 20, 03 21, 03 22)

The electric system is fitted with 2 fuse boxes:

- 1. **Fuse box «A»** 6 fuses located in the helmet compartment near the battery.
- Fuse box «B» 6 fuses located in the helmet compartment near the plug socket.

Replace fuses using adequate pliers supplied in the tool kit.

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



CAUTION

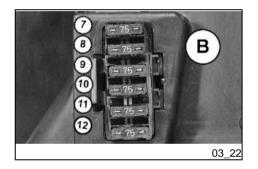


BEFORE REPLACING A BLOWN FUSE, FIND AND SOLVE THE FAILURE THAT CAUSED IT TO BLOW. NEVER TRY TO REPLACE THE FUSE WITH ANY OTHER MATERIAL (E.G., A PIECE OF ELECTRIC WIRE).

FUSE BOX A

I OOL BOX A	
Fuse No. 1	Capacity:7.5 A
	Protected circuits: Injection ECU supply
Fuse No. 2	Capacity:10 A
	Protected circuits:HV coil - Fuel injector - Fuel pump
Fuse No. 3	Capacity: 15A
	Protected circuits: Lines protected by fuses No. 9; 10; 11; 12.
Fuse No. 4	Capacity:15A
	Protected circuits: Radiator electric fan

Fuse No. 5	Capacity:15A
	Protected circuits: Lines protected by fuses No. 7 and 8; 12V 180W Socket, Helmet compartment bulb
Fuse No. 6	Capacity:30 A
	Protected circuits: Recharge circuit



FUSE BOX B

Fuse No. 7	Capacity:7.5 A
	Protected circuits: Digital instrument panel, Turn indicator bulbs, Radiator electric fan remote control, ECU remote control, Immobilizer, Antitheft device preinstallation

Fuse No. 8	Capacity: 7.5 A
	Protected circuits: Digital instrument panel, Antitheft device pre-installation
Fuse No. 9	Capacity: 7.5 A
	Protected circuits: Analogue rpm indicator and digital instrument panel, tail lights, instrument panel lights
Fuse No. 10	Capacity: 7.5 A
	Protected circuits: Stop bulb, Engine start-up circuit, Horn
Fuse No. 11	Capacity: 7.5 A
	Protected circuits: High-beam light bulb, High-beam remote control, High-beam warning light
Fuse No. 12	Capacity:7.5 A
	Protected circuits: Low-beam light bulb

BULBS

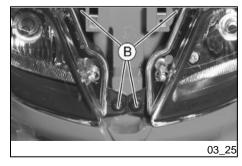
High/low beam light bulb **Type**: Halogen (H7)

	Power : 12V - 55W
	Quantity: 2
Front headlights bulb	Type: Incandescent (W2.1 x 9.5 D)
	Power: 12V - 5W
	Quantity: 2
Rear turn indicator bulbs	Type: Incandescent (BAU 155)
	Power: 12V-10W
	Quantity: 2
Front turn indicator bulbs	Type: Incandescent (BAU 155)
	Power: 12V-10W
	Quantity: 2
Tail light and stop light bulb	Type: Incandescent (W2.1 x 9.5 D)
	Power : 12V - 21/5W
	Quantity: 1
License plate light bulb	Type: Incandescent (W2.1 x 9.5 D)
	Power: 12V - 5W
	Quantity: 1
Helmet compartment light bulb	Type: Incandescent (SV 8.5)
	Power: 12V - 5W
	Quantity: 1









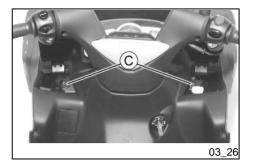
Front light group (03_23, 03_24, 03_25, 03_26, 03_27)

To access the bulbs, proceed as follows:

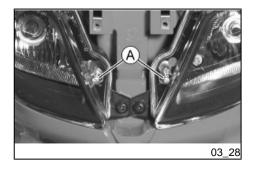
- 1. Remove the Gilera badge with a plain slot screwdriver.
- 2. Remove the front shield connection unscrewing the two screws «A».
- 3. Remove the four screws "B".
- 4. Remove the screws $\mbox{\ensuremath{\mbox{\tt \textit{C}}}}\mbox{\ensuremath{\mbox{\tt \textit{o}}}}$ on the expansion tank compartment cover and the glovebox compartment.
- 5. Take the headlight assembly off its housing.

To reassemble, repeat the operation in the reverse order.

Remove the rubber protection to take out the high/low-beam bulbs.



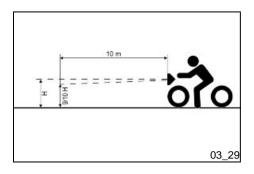




Headlight adjustment (03_28, 03_29)

Proceed as follows:

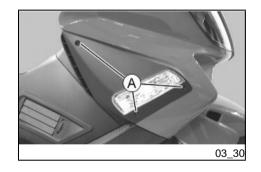
- 1. Place the vehicle in riding condition and with the tyres correctly inflated on a flat piece of ground at a distance of 10 m from a white screen situated in a shaded area, making sure that the scooter is perpendicular to the screen;
- 2. Turn on the headlight and check that the edge of the beam projected on the screen is not higher than 9/10 or lower than 7/10 of the height of the centre of the headlight from the ground;
- 3. Otherwise, adjust the right headlight by turning the screw **«A»** that can be reached after removing the front shield union.



N.B.

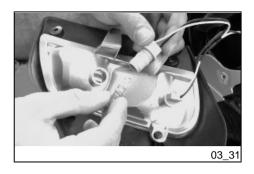
THE ABOVE PROCEDURE COMPLIES WITH THE EUROPEAN STANDARDS REGARDING MAXIMUM AND MINIMUM HEIGHT OF LIGHT BEAMS. REFER TO THE STATUTORY REGULATIONS IN FORCE IN EVERY COUNTRY WHERE THE vehicle IS USED.

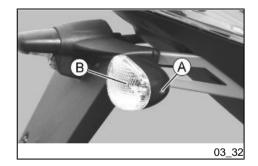
Turn the screw **«A»** clockwise to lower the light beam, turn the set screw **«A»** anticlockwise to raise the light beam.



Front direction indicators (03_30, 03_31)

To replace the burnt out bulb remove the 3 screws **«A»** shown in the figure, and then take the rubber holder off its socket;

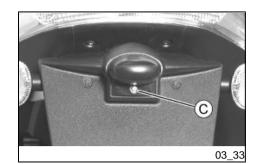




Rear turn indicators (03_32)

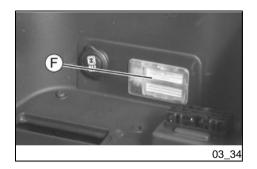
Undo the screw «A», then remove the glass «B».





Number plate light (03_33)

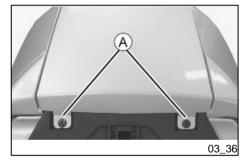
Remove the screw «C», then take out the bulb holder.



Helmet compartment lighting bulb (03_34)

Open the helmet compartment, take out the pressure mounted glass cover $\mbox{\tt \it wF}\mbox{\tt \it w}$ and replace the bulb.



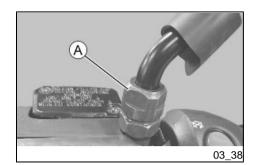


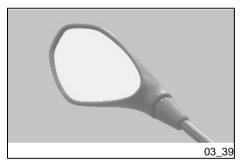


Brake light (03_35, 03_36, 03_37)

To remove the Stop Light and Tail Light bulb, proceed as follows:

- 1. Open the saddle and remove the rear cover by unscrewing the two screws «A»
- 2. Remove the stop light glass cover unscrewing the four screws «B».
- 3. To remove the red bulb cover, push it at its sides, and take out the bulb by pulling it slightly and turning it anticlockwise.





Rear-view mirrors (03_38, 03_39)

To adjust mirrors, loosen the lock nut **«A»**, place the mirror stem adequately and tighten the lock nut. The rear-view mirror is assembled on a stem with a ball 'joint'. The mirror can be adjusted to the desired position manually.



Front and rear disc brake (03_40)

The brake disc and pad wear is automatically compensated, therefore it does not have any effect on brake functioning. 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 brake 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



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

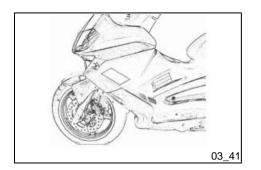


HAVE THE BRAKE PADS CHECKED BY THE DEALER ACCORDING TO THE CHECKS SPECIFIED IN THE SCHEDULED MAINTENANCE TABLE. HOWEVER, IN THE EVENT OF NOISES COMING FROM THE FRONT AND/OR REAR BRAKING SYSTEM DURING OPERATION, IT IS ADVISABLE TO HAVE THE BRAKING SYSTEM CHECKED BY AN AUTHORISED SERVICE CENTRE OR DEALER.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

CAUTION



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



Puncture (03_41)

The vehicle is equipped with Tubeless tyres (without inner tubes). In the event of a puncture, contrary to the situation with a tyre with inner tube, the tyre deflates more slowly, resulting in a greater steering safety. A flat tyre can be repaired with an emergency «inflate and repair» spray. For a final repair, take your vehicle to an **Authorised Service Centre or Dealer**. The replacement of a type involves removing the wheel in question. Take your vehicle to an **Authorised Service Centre or Dealer** for these operations.

CAUTION

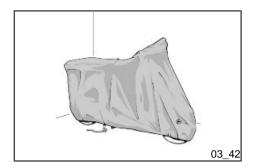


TO USE THE "INFLATE AND REPAIR" SPRAY PROPERLY FOLLOW THE INSTRUCTIONS ON THE PACKAGING.

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.



Periods of inactivity (03_42)

We recommend carrying out the following operations:

- 1. Clean the scooter thoroughly and then cover it with a canvas;
- 2. With the engine off and the piston in the bottom dead centre position, remove the spark plug, and pour into its hole 1 to 2 cc of the recommended oil. Operate the starter button 1-2 times for roughly 1 second to turn the engine over slowly, then insert the spark plug again;
- 3. Ensure that the fuel tank is at least half full (in order to ensure the total immersion of the fuel pump); spread antirust grease on the unpainted 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

AGIP CITY HI TEC 4T

Oil to lubricate flexible transmissions (throttle control) Oil for 4-stroke engines

Cleaning the vehicle

In order to soften the dirt and mud deposited on the painted surfaces, use a low pressure jet of water. Once softened, mud and dirt should be removed with a soft sponge for bodywork soaked in water and "shampoo" (2-4% of shampoo in water). Then rinse abundantly with water, and dry with a shammy cloth. For the outside of the engine, use petroleum, a brush and clean cloths. Petroleum can damage paintwork. Remember that any polishing with silicon wax must always be preceded by washing

CAUTION



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



IF YOU WASH THE ENGINE WITH A HIGH-PRESSURE WATER JET MACHINE:

- ONLY USE THE FAN JET.
- DO NOT PLACE THE WATER JET NOZZLE CLOSER THAN 60 CM.
- NOT USE WATER AT A TEMPERATURE OF OVER 40°C.
- DO NOT USE THE JET AT HIGH PRESSURE.
- DO NOT STEAM CLEAN.
- DO NOT DIRECT THE JET AT: WIRING AND SLOT DIFFUSER ON THE TRANSMISSION COVER.

CAUTION



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

STARTING FAILURE

Emergency switch in «OFF»	Set the switch back to «ON»
Side stand down	Lift stand
Fuse blown	Replace the blown fuse and have the scooter checked by an Authorised Service Centre.

STARTING DIFFICULTIES (SEE SECTION «START-UP PROBLEMS»)

Lack of fuel in tank.	Refuelling
Fuel pump fault	Contact an Authorised Service Centre
Battery flat	Recharge the battery.

^{*} IMPORTANT: DO NOT USE THE SCOOTER TO THE COMPLETE EXHAUSTION OF THE FUEL; IN THE EVENT THAT THIS SHOULD OCCUR, DO NOT ATTEMPT TO START THE ENGINE. TURN THE KEY SWITCH TO "OFF" AND TOP-UP THE TANK AS SOON AS POSSIBLE. THE FAILURE TO FOLLOW THESE GUIDELINES COULD CAUSE DAMAGE TO THE FUEL PUMP AND/OR THE CATALYTIC CONVERTER.

3 Maintenance

IGNITION PROBLEMS

Faulty spark plug	Contact an Authorised Service Centre

LACK OF COMPRESSION

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

HIGH CONSUMPTION AND LOW PERFORMANCE

Air filter blocked or dirty.	Try to blow out with compressed
	air, otherwise replace the filter

INSUFFICIENT BRAKING

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

INEFFICIENT SUSPENSIONS

Shock absorber fault, oil leak, end Contact an Authorised Service buffer damaged; shock absorber preloading incorrectly set

Centre

IRREGULAR AUTOMATIC TRANSMISSION

Variators and/or transmission belt Contact an Authorised Service damaged Centre

STAND DOES NOT RETURN TO POSITION

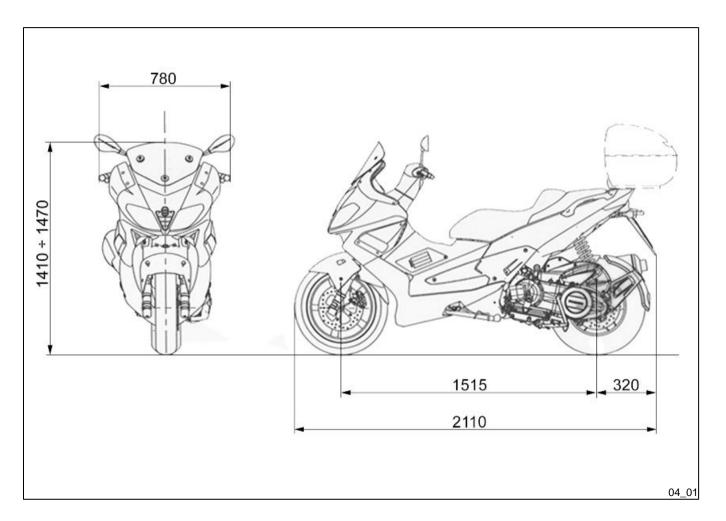
Presence of dirt Clean and grease

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Chap. 04 Technical data



ENGINE TECHNICAL DATA

Туре	Single-cylinder, 4-stroke
Cubic capacity	278 cm ³
Bore x Stroke	75x63 mm
Compression ratio	11 ± 0.5 : 1
Idle speed	1700 ± 100 rpm
Timing system	4 valves, single overhead camshaft, chain-driven.
Valve clearance	Inlet: 0.10 mm Outlet: 0.15 mm
Max. power	16.1 kW at 7,250 rpm
Max. torque	23 Nm at 6,000 rpm
Main drive	Automatic expandable pulley variator with torque server, V-belt, automatic self-ventilating centrifugal dry clutch
Final reduction	Gear reduction unit in oil bath.
Lubrication	Engine lubrication with lobe pump (inside crankcase) controlled by a chain with double filter: mesh and paper.
Cooling	Forced-circulation coolant system.
Electric start-up	Oil-coated freewheel and torque limiter.

Electronic inductive discharge ignition, high efficiency, with separate HV coil.
α/N three-dimensional map managed by control unit
NGK CR8EKB
Electronic injection with electric fuel pump
Unleaded petrol (95 RON)
absorption-type exhaust muffler with catalytic converter.
EURO 3

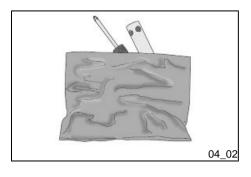
VEHICLE TECHNICAL DATA

Chassis	Tubular and sheet steel.
Front suspension	Hydraulic telescopic fork with Ø 35 mm stem
Rear suspension	Two double-acting shock absorbers, adjustable to four positions at preloading.
Front brake	Ø 260-mm disc brake with hydraulic control activated by handlebar right-side lever.
Rear brake	Ø 240-mm disc brake with hydraulic control activated by the handlebar left-side lever.

Wheel rim type	Light alloy rims.
Front rim	15" x 3.00
Rear rim	14" x 3.50
Front tyre	Tubeless, 120/70 - 15" 56P
Rear tyre	Tubeless, 140/60 - 14" 64P
Front tyre pressure (with passenger)	2.3 bar (2.3)
Rear tyre pressure (with passenger)	2.3 bar (2.5)
Kerb weight	174 ± 5 kg
Maximum weight allowed	370 Kg
Battery	12V/14 Ah, sealed battery

CAPACITY

Engine oil	1.31
Transmission oil	250 cm ³
Cooling system fluid	~ 1.8
Fuel tank (reserve)	approx.15.00 l (approx. 2.80 l)



Kit equipment (04_02)

- 16 mm box-spanner; Twin screwdriver;

- A pair of pliers to extract fuses.
 Wrench for adjusting shock absorbers.

The tools are stored in the helmet compartment.

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Chap. 05
Spare parts and accessories



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, IN ORDER TO CHOOSE AND MOUNT THE ACCESSORIES CORRECTLY, TO CONTACT AN AUTHORISED DEALER OR SERVICE CENTRE. 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 SHOULD BE 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 REDUCED FURTHER.

WARNING



BE EXTREMELY CAREFUL WHEN INSTALLING AND REMOVING THE MECHANICAL ANTI-THEFT DEVICE ON THE VEHICLE (U-SHAPED PADLOCK, DISK BLOCK, ETC.).

MAINLY NEAR THE BRAKE PIPES, TRANSMISSIONS AND/OR ELECTRIC CABLES, AN INCORRECT INSTALLATION OR REMOVAL OF THE ANTI-THEFT 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.

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Chap. 06 Programmed maintenance



Scheduled maintenance table (06_01)

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

For this purpose, PIAGGIO offers a set of checks and maintenance services (for payment), which are included in the summary table shown 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.

All scheduled maintenance services must be carried out at the specified intervals, even if the stated mileage has not yet been reached. Punctual scooter servicing is essential to ensure your warranty remains valid. 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
Safety locks	1		1				I				I		1
Spark plug			R		R		R		R		R		R

km x 1,000	1	5	10	15	20	25	30	35	40	45	50	55	60
Driving belt				R			R			R			R
Throttle control	Α		Α		Α		Α		Α		Α		Α
Air filter			С		С		С		С		С		С
Belt compartment air filter			1		ı		ı		ı		ı		ı
Oil filter	R		R		R		R		R		R		R
Oil filter (mesh)	С												
Valve clearance					Α				Α				Α
Electrical system and battery	I		I		I		ı		ı		ı		ı
Brake fluid *	ı		ı		I		I		I		ı		ı
Coolant *	ı		ı		ı		ı		ı		ı		ı
Engine oil	R	I	R	I	R	ı	R	I	R	ı	R	ı	R
Hub oil	R		I		R		I		R		ı		R
Brake pads	I	I	I	I	I	I	I	I	I	I	I	I	I
Sliding blocks / variable speed rollers			R		R		R		R		R		R
Tyre pressure and wear	ı		ı		I		I		I		I		ı
Vehicle road test	ı		I		I		I		I		I		ı
Suspensions			I		I		I		I		I		I
Steering	Α		Α		Α		Α		Α		Α		Α
Centre stand			L								L		

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

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

RECOMMENDED PRODUCTS TABLE

Product	Description	Specifications					
AGIP GEAR 80W-90	Oil for speed gearbox	SAE 80W-90, API GL-4 mineral multigrade o					
AGIP CITY HI TEC 4T	Oil to lubricate flexible transmissions (throttle control)	Oil for 4-stroke engines					
AGIP GP 330	Grease for brake levers, throttle	White calcium complex soap-based spray grease with NLGI 2; ISO-L-XBCIB2					
AGIP CITY HI TEC 4T	Engine oil	SAE 5W-40, API SL, ACEA A3, JASO MA Synthetic oil					
AGIP BRAKE 4	Brake fluid	FMVSS DOT 4 Synthetic fluid					
AGIP PERMANENT SPEZIAL	coolant	Monoethylene glycol-based antifreeze fluid, CUNA NC 956-16					
AUTOSOL METAL POLISH	Muffler cleaning paste	special product for cleaning and polishing stainless steel muffler					
AGIP GREASE PV2	Grease for the steering bearings, pin seats and swinging arm	Soap-based lithium and zinc oxide grease containing NLGI 2; ISO-L-XBCIB2 of the swinging arm					
AGIP GREASE SM 2	Grease for the tone wheel revolving ring	Soap-based lithium grease containing NLGI 2 Molybdenum disulphide; ISO-L-XBCHB2, DIN KF2K-20					

^{*} Replace every 2 years

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The descriptions and illustrations given in this publication are not binding. While the basic specifications as described and illustrated in this manual remain unchanged, PIAGGIO-GILERA reserves the right, at any time and without being required to update this publication beforehand, to make any changes to components, parts or accessories, which it considers necessary to improve the product or which are required for manufacturing or construction reasons.

Not all versions/models shown in this publication are available in all countries. The availability of single versions should be checked at the official Piaggio sales network.

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PIAGGIO & C. S.p.A. - After-Sales

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