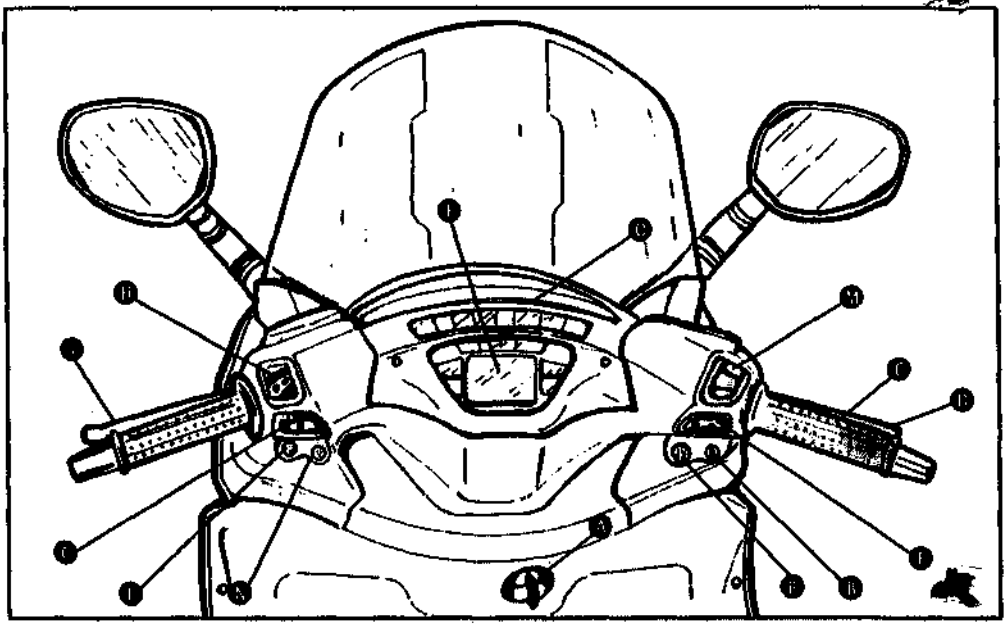
SUMMARY



CONTROLS

A = Ignition switch

B = Start button

C = Throttle twistgrip

D = Front brake lever

E = Lights selector

F = Digital instrument panel

G = Turn indicator selector

H = Dipped/full beam selector

I = Combined braking control (front and rear)

L = Horn button

M = Run-Off switch emergency stop

N = Emergency flashers control button (4 indicators)

O = Analogue instrument panel

P = Available for additional button

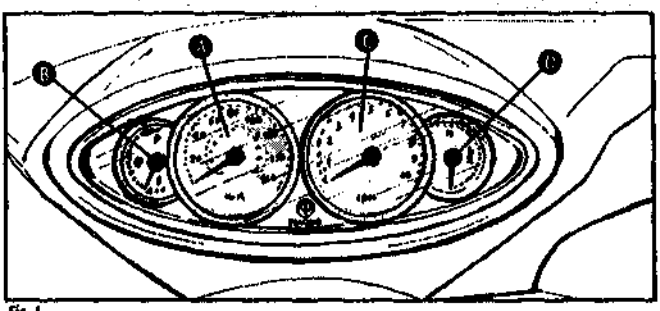
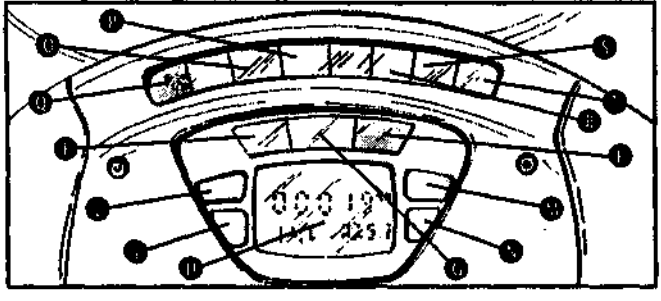


Fig. 1

Fig. 2



ANALOGUE INSTRUMENT PANEL

(figura 1)

A = Speedometer

B = Fuel gauge

C = Tachometer

D = Coolant temperature gauge

INSTRUMENTS

(figure 2)

E = Right-hand turn indicator telltale light

F = Left-hand turn indicator telltale light

G = Hazard warning lights

H = LCD display

I = «**Mode**» button

L = «**Trip**» button

M = «**Clock**» button

N = «**Set**» button

O = Rear brake light check malfunction

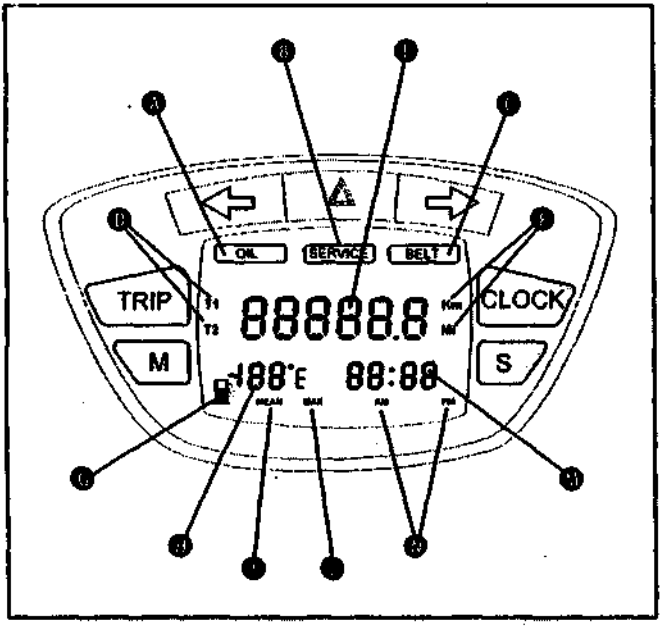
P = Engine Run-Off (stop) / side stand down indicator light

Q = Available indicator light

R = Fuel warning light

S = Lights-on indicator light

T = Full beam indicator light


OIL
SERVICE
BELT
TRIP
T1
T2
88888.8
CLOCK
M
S
188°E
88:88

LCD DIGITAL DISPLAY

A = «**OIL**» maintenance icon

B = «**SERVICE**» maintenance icon

C = «**BELT**» maintenance icon

D = «**T1**» or «**T2**» trip counter display symbols

E = Five-digit display of kilometres/miles covered

F = «**Km**» or «**MI**» display mode symbols

G = Symbol indicating kilometres/miles covered on reserve fuel

H = Two-digit display with symbols «–» display of temperature, average speed, top speed, kilometres/miles covered on reserve fuel

I = «**MEAN**» symbol denoting average speed mode

L = «**MAX**» symbol denoting top speed mode

M = Four-digit display for the clock, stopwatch and date functions

N = «**AM**»/«**PM**» time symbols

MAINTENANCE ICONS

These icons alert the user to the need to carry out scheduled maintenance operations.

The «**OIL**» icon blinks after the first 1,000 km, and subsequently every 3,000 km.

The «**SERVICE**» icon blinks after the first 1,000 km or 1 year, and subsequently at 6,000 km or after 1 year.

The «**BELT**» icon blinks after 18,000 km.

NOTE

FOR OTHER MAINTENANCE OPERATIONS, REFER TO THE «MAINTENANCE TABLE».

SETTING THE TOTAL AND TRIP COUNTERS «E»

Pressing the «TRIP» button repeatedly for less than 1 second cycles through the «T1» and «T2» trip counters and the total counter.

The button resets the selected trip counter if depressed for longer than 3 seconds.

Press the «TRIP» button again to return to the total counter.

SETTING THE OUTSIDE TEMPERATURE DISPLAY «H»

The temperature reading is automatically updated every time the temperature changes by ±1°C. When the outside temperature reaches +3°C, the displays blinks for 40 seconds. Then, it resumes blinking every time the temperature lowers by one more degree.

Press the «M» button to display the average speed identified by the «MEAN» symbol. The reading is automatically updated every 30 seconds, even when the ignition key is in the «OFF» position. Press the «M» button to display the top speed reached by the vehicle, identified by the «MAX» symbol. The registered value is retained in memory even when the ignition key is in the «OFF» position.

Press the «M» button again to return to the outside temperature indication.

Pressing the «M» button for longer than 3 seconds resets the selected function, excepting the temperature.

NOTE

THE BLINKING FUNCTION ACTIVATED UPON REACHING +3°C AND LOWER TEMPERATURES OVERRIDES AND IS AUTOMATICALLY DISPLAYED IN PLACE OF THE AVERAGE AND TOP SPEED INDICATIONS. HOWEVER, SPEED INFORMATION CAN ALWAYS BE DISPLAYED BY PRESSING THE «M» BUTTON.

SYMBOL OF KILOMETRES/MILES COVERED ON RESERVE FUEL «G»

When reserve fuel warning light «R» (page 12) comes on, the symbol is automatically displayed along with the indication «N» (page 14) of the kilometres/miles covered on reserve fuel.

This function has top priority over the previous three so that, when the vehicle begins running on reserve fuel, icon «G» (page 14) is automatically displayed, and so are the kilometres/miles covered on reserve fuel.

Press the «M» button to return to the other information.

SETTING THE CLOCK «M»

Press the «**CLOCK**» button to display the date (day/month).

Press the «**CLOCK**» button to display the stopwatch.

Press the «**CLOCK**» button to display the time again.

SETTING THE HOURS/MINUTES FUNCTION

Press the «**CLOCK**» button for longer than 3 seconds and then set the hours by means of button «S».

Wait for the minute digits to blink and then set the minutes using button «S».

Wait for about 3 seconds or press the «**CLOCK**» button to display the updated hours/minutes.

SETTING THE DATE FUNCTION

Press the «**CLOCK**» button for longer than 3 seconds and then set the day using button «S».

Wait for the month digits to blink and then set the month using button «S».

Wait for the year digits to blink and then set the year using button «S».

Wait for about 3 seconds or press the «**CLOCK**» button to return to the date function.

SETTING THE STOPWATCH FUNCTION

Press button «S» to start/stop the stopwatch.

Press the «**CLOCK**» and «S» buttons simultaneously to reset the stopwatch.

L'UTILIZZO DELLE FUNZIONI DEL PANNELLO DIGITALE È FORTEMENTE SCONSIGLIATO CON IL VEICOLO IN MARCIA.

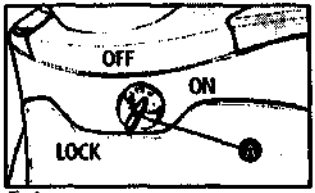


Fig. 1

Fig. 2

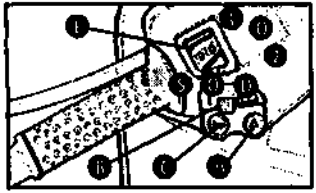
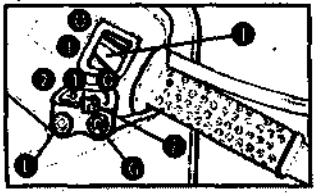


Fig. 3



IGNITION SWITCH «A» (figure 1)

LOCK = Ignition off, key can be removed, steering locked.

OFF = Ignition off, key can be removed, steering unlocked.

ON = Ready to start engine, steering unlocked, key cannot be extracted.

LOCKING THE STEERING:
turn the handlebars completely to the left and then turn the key to the **«LOCK»** position and extract it.

UNLOCKING THE STEERING:
insert the key and turn it to **«OFF»**.

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

TURN INDICATOR SELECTOR «B»
selector towards «S» = left hand turn indicators on;
selector towards «D» = right hand turn indicators on;
the selector lever automatically returns to position «0» when released and the turn indicators remain activated;
to switch off the indicators press the selector.

HORN BUTTON «C» (figure 2)
Press to sound the horn.

DIPPED/FULL BEAM SELECTOR «E» (figure 2)
0 = Dipped beam
1 = Full beam
2 = Full beam flasher

LIGHTS SELECTOR «F» (figure 3)
0 = Lights off;
1 = Side lights, speedometer dial light;
2 = Dipped beam; side lights, speedometer dial light.

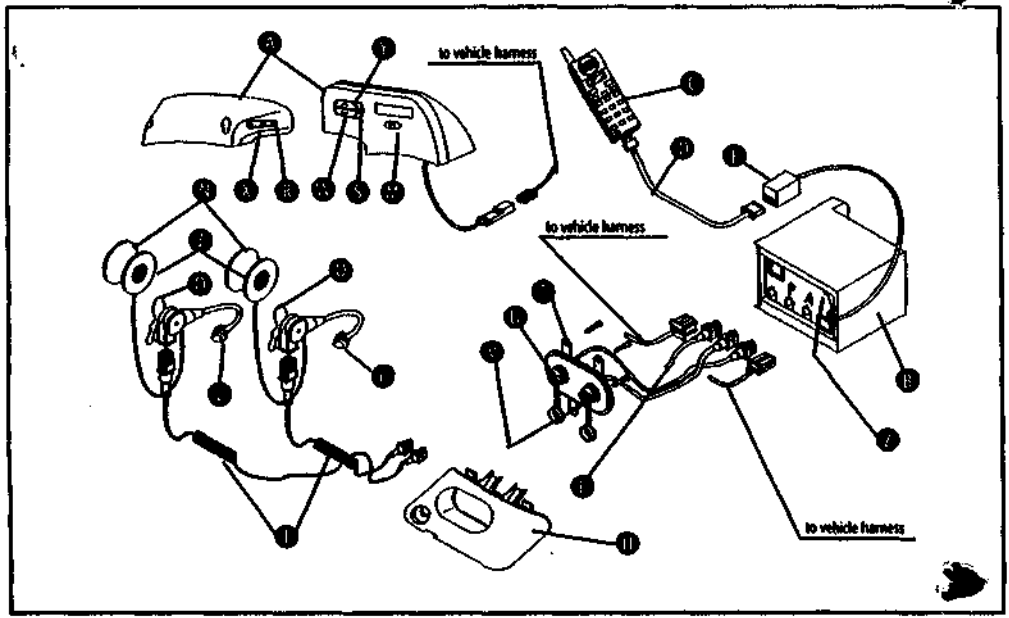
START BUTTON «G» (figure 3)

BUTTON «H»
(figure 2)
Activates the four turn indicators simultaneously (hazard warning lights).
Activation is only possible when the ignition key is in the «ON» position.
However, once activated the warning lights continue to operate even with the key in the «OFF» or «LOCK» position.

ENGINE STOP SWITCH «I»
(figure 3)
0 = Off
1 = Run

BUTTON «L»
Available for the installation of accessories.

NOTE
THE TRIP COMPUTER SWITCHES OFF THE TURN SIGNALS AFTER 1 KILO-


to vehicle harness
to vehicle harness
to vehicle harness

LEGEND

- **A** = Satellite
- **B** = Control unit
- **C** = Cellular telephone
- **D** = Cellular telephone cord
- **E** = External diffusers (optional)
- **F** = Telephone connector
- **H** = Spark plug inspection door
- **I** = Spiral headset cable
- **J** = Speaker
- **L** = Microphone
- **M** = **MODE** button
- **N** = Velcro speaker
- **O** = Clip fastener to helmet
- **R** = **Volume (-)** button
- **S** = Selection button
- **T** = Cable support plate
- **U** = Pilot connection
- **V** = Passenger connection
- **W** = Button **DOWN**
- **X** = **Volume (+)** button
- **Y** = **UP** button
- **Z** = Outside source input

INTRODUCTION

The PICS X9 (B) control unit encompasses in a single product the traditional intercom function for motorcyclists with the speakerphone kit for cellular telephones and RDS radios.

The intercom is designed to be inserted either manually or automatically. Automatic insertion takes place via vocal activation, adjustable to two levels (HIGH/LOW). This eliminates wind induced sound interference. The intercom has been designed for use with full-face helmets. To obtain the best results, it is important to correctly position the microphone and use the protective sponge headset. When there is no passenger, the control unit can be used by the pilot only as a telephone speakerphone and/or for listening to the radio or an outside audio source.

The telephone conversation is set automatically upon detecting a telephone call signal towards the pilot, but it is possible to redirect it to the passenger and/or vice versa by using the special (Y) button on the satellite.

The receiving volume can be adjusted manually using the (R) and (X) buttons for the two speakers. This adjustment separately regulates the level of audio reception for the radio, intercom, and telephone.

The control unit is furnished with a special auxiliary audio jack for connecting to a portable CD player or audio cassette player.

During telephone conversations, the external source is disconnected from the channel in conversation to be restored at the end.

The control unit can be easily adapted to any type of cellular phone by means of the telephone cable (D) (provided separately).

N.B.: The interface cable between the cellular phone and the control unit is available for most of the telephones sold on the market. Go to your telephone dealer to verify the availability of the interface cable for the cellular telephone that you use.

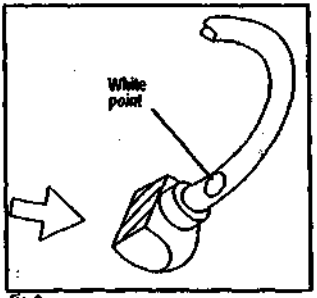


Fig. 2

INSTALLATION OF THE MICROPHONE/SPEAKER

The stem of the microphone has an elastic metallic clip for attaching it to the lower rim of the helmet on the right side.
The speaker (J) will be attached inside the helmet, at the position of the ear, with the Velcro fastener (N).

To optimise the quality of the intercom communications, it is important:

- For full-face head helmets, to bend the stem of the microphone so that the capsule is completely housed inside the helmet with the identifying white point (see figure 2) directed towards the mouth.

- For open *front* helmets, to bend the stem of the microphone so that the sensitive part of the capsule is as close as possible to the mouth, with the aid of the identifying white point (see figure 2).

IMPORTANT: never remove the foam rubber protection from the microphone capsule.

• GENERAL USE AND FUNCTIONS
Insert both the headsets into their respective connectors; the pilot's headset is in front, while the passenger's is in the rear.
Bring the ignition key to the ON position and the intercom will automatically begin to function, with the least sensitive activation level (LOW); it is also possible to insert the intercom manually.
Regulate the volume desired by means of the (X) and (R) buttons.
The vocal activation level can be changed over on two levels (high/low).
In the automatic mode, the intercom will be automatically activated if the pilot or the passenger begins to speak, and the intercom mode will be active for a period of approximately 20 seconds from the end of s[illegible]ng (be careful about the level set).

To change it to a higher sensitivity level (HIGH), first press the (M) button and then the (S) button when the radio function is visualised.

SPEAKERPHONE KIT AND SPECIAL FUNCTIONS

A cellular telephone can be connected to the device by means of the special cable (D) (see the Piaggio accessories). When a telephone call is received, an audio tone will be heard by both parties (passenger and pilot), at the end of which, the conversation will be redirected to the pilot who will have the possibility to pass it to the passenger by pressing the (Y) button.
It is also possible to temporarily interrupt the telephone conversation by pressing the (W) button which will direct it to the intercom. By pressing the button again, the conversation will be picked up again.
In any event, when a call is received, the control unit emits a brief audio warning signal over both speakers, possibly accompanied by the telephone ringer, if the cellular phone model has this function.
If there is a telephone call in progress when the vehicle is turned off, the control unit will remain active until the phone call has been completed.
It is necessary to set the automatic response function on the cellular telephone, thereby avoiding the need to press any key to get a dial tone.
For the models where this function is not active: in order to facilitate the response, the response option can be set with any button.

The volume of the telephone conversation can be set only by the user's cellular telephone.
We recommend that the volume of the cellular telephone be set at the maximum level.
It is possible to connect diffusers (2.5W max) by means of the jack for external diffusers (see figure 1). In addition to the radio function, intercom and speakerphone kit, there is also the possibility to connect a Walkman radio or portable CD player to the control unit, by using a cable with a 3.5 mm stereo jack end. Adjust the volume of the outside source so that it is comfortably audible without the need to further adjust the volume of the intercom.
During the conversation in the intercom mode, the sound coming from the radio or other external source will be in the background at a lower volume.

N.B.: Always refer to the instructions manual provided with your cellular telephone in order to set the functions mentioned above.

N.B.: the users who have MOTOROLA 8700, STARTAC 130 CD930 and BOSCH M-com 506 must connect their cellular telephone to the control unit with the telephone OFF: the activation of the phone will occur automatically.

TURNING ON (using the vehicle starting key)

STATUS	DISPLAY	AVAILABLE FUNCTIONS
No helmet inserted	Logo	Tuner - source - speakerphone in listening mode with external diffusers
Pilot's headset inserted	Pilot/passenger helmet - Passenger crossed outo	Tuner - source - speakerphone
Passenger's headset inserted	Pilot/passenger helmet - Pilot crossed out	Tuner - source - speakerphone
Pilot's and passenger's headsets inserted	Pilot and passenger helmet	Tuner - source - speakerphone - intercom

N.B.: At every rotation in "ON" of the key switch, the display of the PICS system carries out a check on all the icons available. For the icons description see pag. 20.

TURNING THE DEVICE ON AND OFF (vehicle operating)

FUNCTION	BUTTONS	DURATION OF BUTTON PRESSURE
Turning off	M	> 4 seconds
Turning on	M	> 4 seconds

N.B.: If the device has not previously been turned off, when the vehicle is turned on the icon check will be visualised. At the end of this phase, it will return to the previous position (OFF). To turn it back on, press "M" and keep it pressed for more than 4 seconds.

MANUAL INTERCOM

FUNCTION	BUTTONS	DURATION OF BUTTON PRESSURE
Turning off	M twice	BRIEF
Turning on	M twice	BRIEF

N.B.: After manual deactivation, the intercom passes into the automatic mode at the least sensitive activation level (LOW).

TUNER/SOURCE

FUNCTION	BUTTONS	DURATION OF BUTTON PRESSURE
Turning on radio	S	BRIEF
Turning off radio	S	BRIEF
Turning on source	M ⇓ S	BRIEF > 2 seconds
Turning off source	M ⇓ S	BRIEF > 2 seconds
Manual tuning UP	M ⇓ ^	BRIEF CONTINUOUS
Manual tuning DOWN	M ⇓ v	BRIEF CONTINUOUS
Automatic tuning UP	M ⇓ ^	BRIEF BRIEF
Automatic tuning DOWN	M ⇓ v	BRIEF BRIEF

FUNCTION	BUTTONS	DURATION OF BUTTON PRESSURE
Memory scanning UP	∧	BRIEF
Memory scanning DOWN	∨	BRIEF
AUTOSTORE memorisation	∧	> 2 seconds
RDS	M ⇓ Vol + (AF - TA - PTY)	BRIEF BRIEF
PTY Functions (selectable after PTY activation)	Vol -	BRIEF
Manual station memorisation	Choose the station * ⇓ S ** ⇓ ∧ o ∨ (choose the channel) ⇓ S (to confirm)	 > 4 seconds BRIEF BRIEF

N.B. The buttons should be pressed sequentially and not simultaneously.
* By automatic or manual tuning described above. ** Press the button until the display starts blinking.

RDS RADIO DATA SYSTEM
The functions and services offered are many, however, very few of these are actually applied or applied in the correct way. So, basic functions such as AF (alternative frequencies) that would allow the user to follow a certain radio station over the large part of the territory during travel, are not always correctly attributed, creating more disservices than benefits. The same thing holds in the use of information regarding the traffic situation.

AF ALTERNATIVE FREQUENCIES
This function enables the receiver to tune automatically on an alternative frequency stronger than the one currently being listened to, relative to the same broadcaster.

PTY PROGRAM TYPE
Allows the user to identify various musical programmes, to hear news briefs, and so forth. We will have: News, Affairs, Info, Sport, etc.

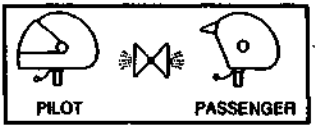
TA TRAFFIC ANNOUNCEMENT IDENTIFICATION
The function is enabled at the very instant in which the traffic programme is broadcast. This normally interrupts the reception of any other different audio sources in order to give precedence to the bulletin. It is however, necessary to tune into the station from where the traffic bulletin is being broadcast.

TELEPHONE AND SPEAKERPHONE

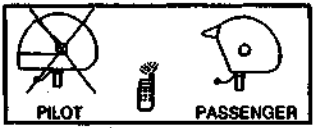
FUNCTION	BUTTON	DURATION OF BUTTON PRESS
Redirection of the conversation pilot/passenger	∧	BRIEF
Redirection intercom/telephone	∨	BRIEF

ICON DESCRIPTION

Volume adjustment icon

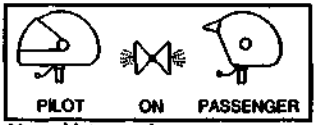


Intercom enabled icon

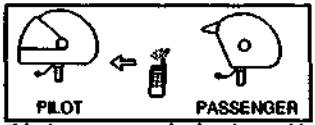


Receiving call icon with passenger's headset only inserted

Headsets inserted icon



Manual intercom icon

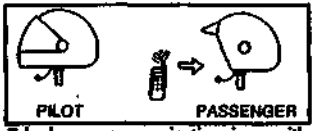


Telephone communication icon with pilot in progress

ICONS DESCRIPTION

Passenger headset not inserted

Receiving call icon



Telephone communication icon with passenger in progress

Pilot headset not inserted

Receiving call icon with pilot's headset only inserted

Intercom icon in telephone conversation

SPECIFICATIONS

• Input:	10,5V ÷ 16V	1,4 A max
• Key:	10,5V ÷ 16	1,5 mA max
• Max output power	500 mW per channel	
• Electrical input	engine off stand-by full power	≈ 0 mA ≈ 280 mA ≈ 500 mA
• Frequency response	audio 200 Hz ÷ 20 kHz ± 3 dB intercom 200 Hz ÷ 5 kHz ± 3 dB	
• Microphones	-69 dB ± 3 db unidirectional	
• Frequency response	8 Ω ÷ 0,5 mW	

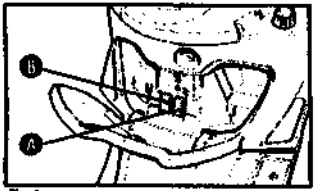


Fig. 1

Fig. 2

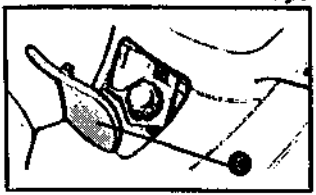
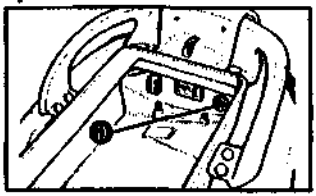


Fig. 3



KEYS

The vehicle is supplied with an ignition key and its duplicate.

A plate is also provided bearing the identification code to be mentioned when requesting duplicates.

Keep the key duplicate and the identification code in a safe place (not on the vehicle).

HELMET COMPARTMENT (figure 1)

Insert the key into the ignition switch and press it fully to open the glove compartment. If the ignition switch is in the «**LOCK**» position, rotate it to the «**OFF**» or «**ON**» position before pushing it. Operate lever «**A**» (see figure).

ACCESSING THE FUEL FILLER CAP (figure 2)

Repeat the procedure described in the previous paragraph. Subsequently operate lever «**B**» (see figure) to open fuel access door «**C**».

POWER SOCKET

The helmet compartment contains a 12V electrical socket «**D**» (figure 3), to which you can connect appliances with maximum power consumption of 180 W (cell phone, task light, etc.).

THE PROLONGED USE OF THE SOCKET WITH THE ENGINE OFF MAY CAUSE THE BATTERY PARTIAL DISCHARGING.

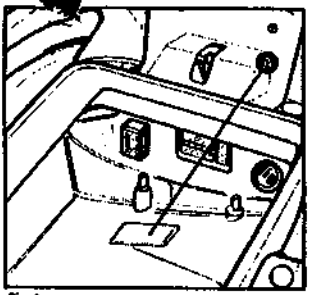


Fig. 1

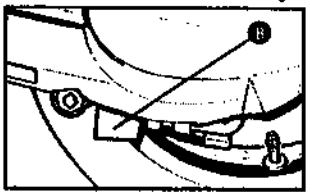


Fig. 2

The serial numbers are made up of a code with letters and numbers followed by an all-number code punched into the frame «A» and the engine «B».
Always quote the serial numbers when ordering spare parts.
To expose the frame number, remove cover «A» from under the mat in the helmet compartment.

Check that the frame number on the scooter is identical to the number shown here in the handbook.

DEFACING FACTORY SERIAL NUMBERS IS A SERIOUS CRIMINAL OFFENCE AND CAN LEAD TO CONFISCATION OF THE VEHICLE OR OTHER PENALTIES.

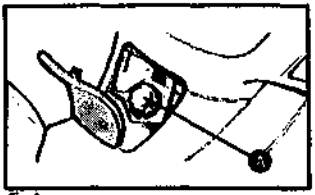


Fig. 1

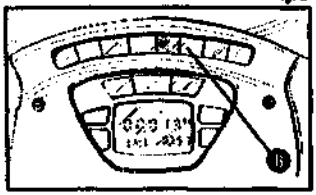


Fig. 2

CHECKS

Before using the scooter check:

1. Fuel tank adequately filled.
2. Brakes fluid level (front and rear).
3. Tyre inflation pressure.
4. Lights and turn indicators.
5. Front and rear brakes.
6. Gearbox oil level.
7. Engine oil level.

TYRE PRESSURE:

Front: 2.0 bar

Rear: 2.2 bar - rider only

2.5 bar - rider and pillion

⚠ CHECK INFLATION PRESSURE WITH TYRES COLD.

SUPPLIES

Fuel: open the door as directed on page 32 and unscrew tank cap «A» (figure 1).

Tank capacity: approx. 14.5 L

Fuel type:

95 octane unleaded petrol.

When fuel is low fuel warning light «B» (figure 2) will switch on.

⚠ BEFORE REFUELLING, STOP THE ENGINE. PETROL IS HIGHLY INFLAMMABLE. KEEP NAKED FLAMES, LIGHTED CIGARETTES, ETC. WELL CLEAR OF THE PETROL TANK.

FIRE HAZARD AVOID INHALING PETROL FUMES.

KEEP PETROL AWAY FROM HOT ENGINE PARTS AND PLASTIC PARTS.

THE USE OF DIFFERENT TYPES OF OIL TO THE RECOMMENDED TYPE CAN NEGATIVELY EFFECT THE LIFETIME OF THE ENGINE.

PETROL WILL DAMAGE PLASTIC FAIRINGS.

SADDLE

The saddle has a four-position screw-adjustable backrest (see figure).

A saddle canvas cover is contained in the helmet compartment (see figure).

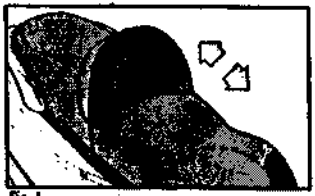


Fig. 1

Fig. 2

Fig. 3

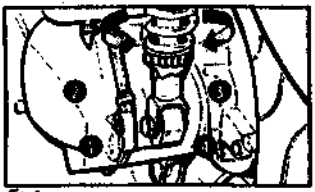


Fig. 1

The spring preload of each shock absorber can be adjusted to one of 4 positions by turning the ring in the lower part of the shock absorber (see figure) with the special spanner provided.

Position 1: rider only
Position 2: rider only
Position 3: rider and pillion
Position 4: rider, pillion and luggage.

To carry out the operation, combine the shock absorber spanner with the tommy-bar of the ignition spanner.

⚠ RIDING THE SCOOTER WITH INCORRECTLY ADJUSTED SUSPENSION IN RELATION TO THE WEIGHT OF THE RIDER (AND PILLION IF PRESENT) WILL REDUCE COMFORT LEVELS AND NEGATIVELY AFFECT STEERING PRECISION.

⚠ WEAR GLOVES WHEN ADJUSTING THE DAMPER TO PROTECT THE HANDS.

⚠ AVOID TRYING DIFFERENT PRELOAD ADJUSTMENTS ON THE TWO SHOCK ABSORBERS.

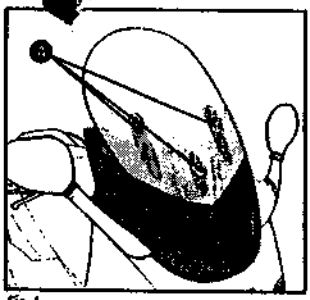


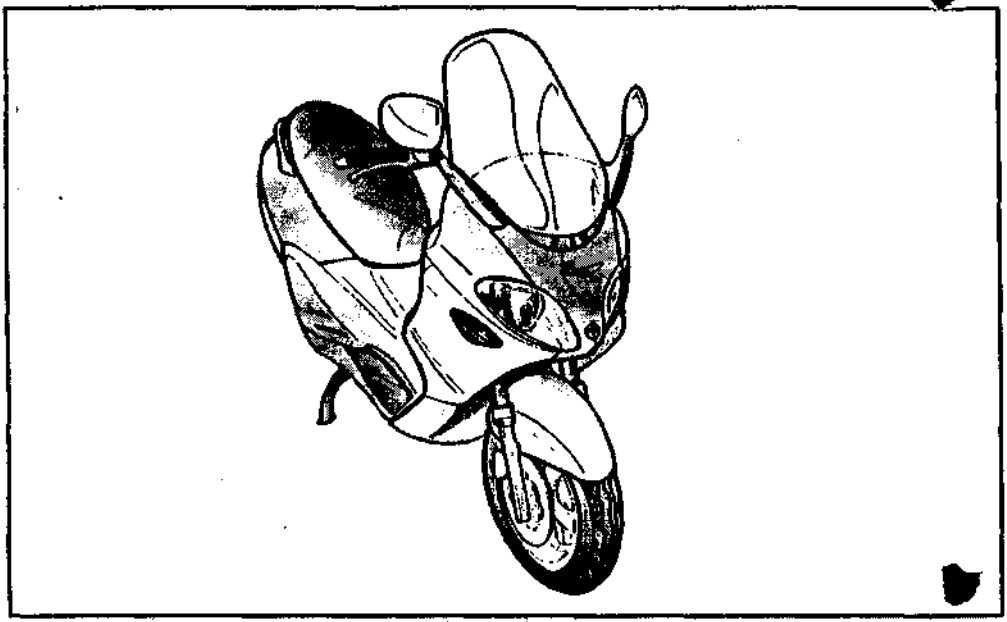
Fig. 1

WINDSCREEN ADJUSTMENT

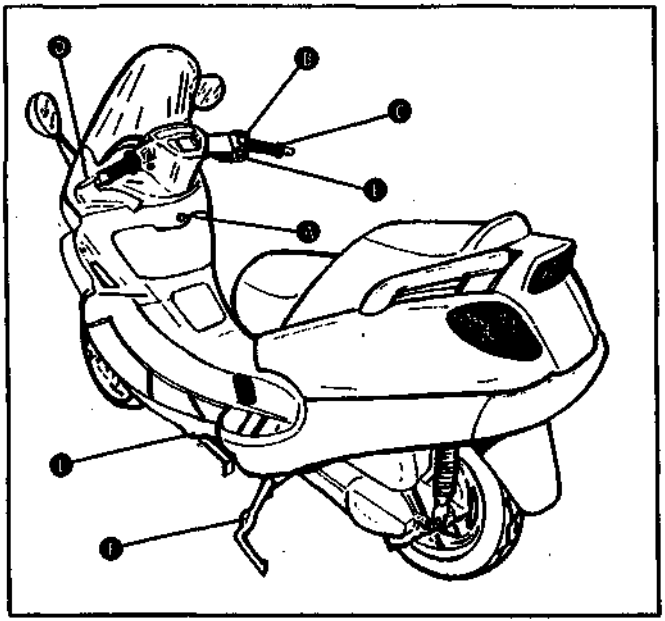
The windscreen can be adjusted to 3 positions depending on the driver's requirements. Unloose the 3 screws «A» fig. 1, remove the top part of the windscreen and put it in the desired position. Tighten the 3 fixing screws again.

IT IS RECOMMENDABLE TO PERFORM THIS OPERATION GENTLY TO AVOID SCRATCHING THE WINDSCREEN.

TIGHTEN THE FIXING SCREWS PROPERLY TO AVOID THE WINDSCREEN DETACHING WHILE RUNNING THE VEHICLE.



DURING THE FIRST 600 MILES KEEP TO WITHIN 80% OF TOP SPEED.
AVOID RUNNING THE ENGINE AT FULL THROTTLE. DO NOT KEEP
A CONSTANT SPEED OVER LONG DISTANCES.
AFTER THE FIRST 600 MILES YOU CAN GRADUALLY START
INCREASING
SPEED UP TO MAXIMUM (WITHIN THE LIMITS OF THE LAW AND
IN ACCORDANCE WITH ROAD AND TRAFFIC CONDITIONS).



STARTING THE ENGINE

The vehicle is equipped with an ignition disabling system controlled by the sidestand and the emergency stop switch.

The engine cannot be started if the sidestand is down or the emergency stop switch is in the **"OFF"** position. If the engine is running, it shuts off as soon as the sidestand is lowered or the emergency stop switch is switched from **"RUN"** to **"OFF"**.

This condition is indicated by the relevant warning light on the digital instrument panel.

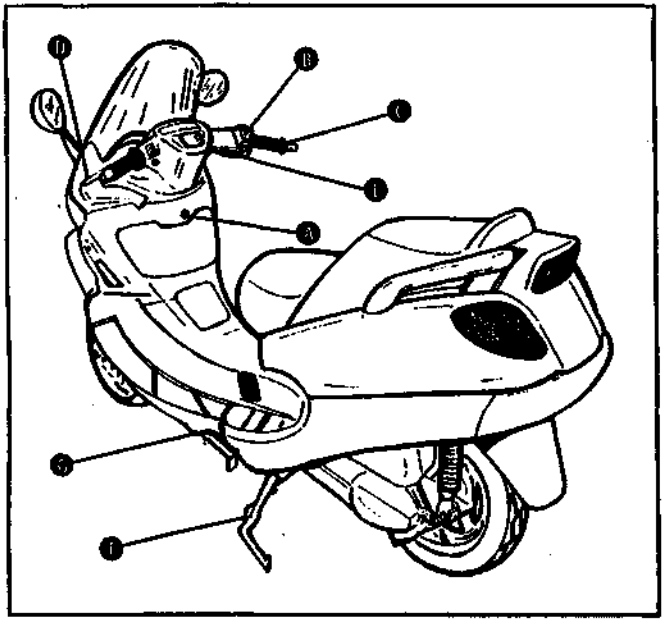
Before pressing the start button, pull either the front or rear brake lever and hold it in this position. This action generates a signal that enables the engine to start.

⚠ THE CONSTANTLY VARIABLE TRANSMISSION SYSTEM WILL DRIVE THE REAR WHEEL AS SOON AS YOU TURN THE THROTTLE TWIST-GRIP.
ONCE THE ENGINE HAS STARTED RELEASE THE BRAKE CAREFULLY AND GRADUALLY INCREASE REVS TO PULL AWAY.

1. Put the scooter on the centre-stand «F»; and make sure that the rear tyre is not touching the ground.
2. Keep the throttle twistgrip «C» on the idling position.
3. Insert the ignition key into ignition switch «A» and turn it to «ON».
4. Ensure that "Run-Off" switch «B» is in the "Run" position and that the sidestand is up.
5. Pull front or rear brake lever «D» and then press start button «E».

STOPPING THE ENGINE
Bring the throttle twist-grip to the idling position and turn the key in the ignition switch «A» to «OFF» (key can be extracted).

⚠ EXHAUST FUMES ARE TOXIC: DO NOT START THE ENGINE IN A CLOSED PLACE.



ENGINE STARTING DIFFICULTIES
Possible causes and suggested action:

Engine is flooded
Carry out the previously described engine starting procedure; open the throttle twist grip 1/8-1/4 of a turn and press start button «E» 5-6 times. In any case, do not persist in operating the starter motor.

FUEL HAS RUN OUT
After refuelling, start the engine by pressing start button «E».

PRECAUTIONS

LIMIT LOAD AND REVS WHEN THE ENGINE IS COLD.
WHEN RIDING DOWNHILL DO NOT EXCEED TOP SPEED OR THE ENGINE COULD BE DAMAGED BY PROLONGED OVERREVING.

AFTER A LONG JOURNEY ALLOW THE ENGINE TO RUN AT IDLE SPEED FOR A FEW SECONDS BEFORE SWITCHING OFF.

CENTRE-STAND «F»
Press the projecting part of the stand down with your foot and simultaneously, using the pillion grab handles, pull the scooter backwards and onto the stand.

SIDE-STAND «G»
Press the end of the stand with your foot until it clicks into the fully open position before leaning the scooter on it. When you return the scooter to an upright position the side-stand will automatically spring back to the riding position.

NOTE
THE ENGINE IS STOPPED EVERY TIME THE SIDE STAND IS LOWERED. THIS CONDITION IS INDICATED BY THE RELEVANT WARNING LIGHT ON THE INSTRUMENT PANEL.

Fig. 1

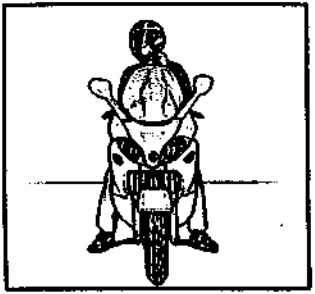


Fig. 2

AUTOMATIC TRANSMISSION

For the maximum ease of use, your new Hexagon has automatic stepless v-belt transmission with a centrifugal clutch. The system is designed to give the best performance in terms of fuel consumption and acceleration when riding on the flat and on hills.

If you need to stop on an uphill gradient (traffic lights, tailbacks, etc.) **restrain the scooter with the brakes alone (engine should be idling). Using the engine to hold the scooter will cause the clutch to overheat.** Overheating is caused by prolonged slipping of the centrifugal clutch. Apart from the above example, the clutch will tend to slip when tackling very steep gradients or starting up on gradients greater than 25% with a pillion or otherwise heavily laden scooter.

If the clutch overheats:

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.

RIDER SAFETY

Follow the following simple recommendations to ride your new scooter in conditions of total safety.

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

1. Before starting, put on an approved type helmet and secure the straps correctly.
2. Reduce speed on unsurfaced roads or uneven ground and exercise the maximum caution.
3. After long runs on wet roads without having used the brakes, braking force is reduced initially. In these conditions, activate the brakes gently from time to time to dry them and check braking action.
4. Exert caution when applying the brakes on wet roads, unsurfaced roads or any other slippery surfaces.
5. Do not start off by mounting the scooter when it is on the stand. Before taking the scooter off the stand make sure the rear wheel is not spinning.
6. In the case that the vehicle is run on sandy, muddy, salt and snow-covered roads, periodically clean the brake disc with a non-aggressive agent as to avoid abrasive lumps from forming inside the slots, which would cause the brake pads early wear.

ALWAYS RIDE SAFELY, DEFENSIVELY AND WITHIN THE LIMITS OF THE LAW AND YOUR ABILITIES.

NEVER RIDE UNDER THE INFLUENCE OF ALCOHOL OR DRUGS AS THIS IS DANGEROUS FOR YOURSELF AND OTHERS.

IF YOU MAKE MODIFICATIONS THAT ALTER THE FEATURES OF THE VEHICLE AND/OR MAKE ALTERATIONS TO ORIGINAL STRUCTURAL PARTS, IT WILL NO LONGER CORRESPOND TO THE ORIGINAL APPROVED TYPE AND OVERALL SAFETY LEVELS MAY BE SERIOUSLY REDUCED.

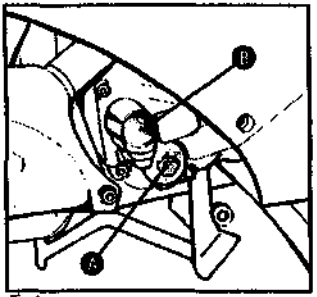


Fig. 1

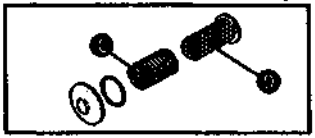


Fig. 2

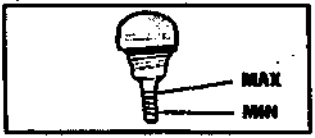


Fig. 3

ENGINE OIL LEVEL

In four-stroke engines the engine oil is used to lubricate the valve gear, the main bearings and the cylinder/piston assembly. **Insufficient lubrication can result in irreparable damage to the engine.** Deterioration of the oil quality and slight oil consumption are perfectly normal in all four-stroke engines. Oil consumption will vary depending on the way the vehicle is used (e.g. high revving and high speed riding will result in increased oil consumption).

The oil change intervals defined in the maintenance schedule are calculated on the basis of the total quality of oil in the engine and average consumption values based on standardized parameters.

To prevent possible problems, always check the oil level before using the vehicle.

LEVEL CHECK

Visually check the engine oil level every time the vehicle is used, when the engine is still cold. The level on the dipstick must be between the MAX and MIN marks as shown in figure 3.
To check the oil level, follow these steps:

1) Put the vehicle on the centre stand on level ground.
2) Unscrew cap/dipstick «B» and wipe it with a dry cloth.
3) Reinsert cap/dipstick «B» into the oil filler hole and screw it tight.
4) Remove cap/dipstick «B» again and check the engine oil level.

After completing the check, reinsert the cap/dipstick «B» into the oil filler hole and ensure that it is locked in position.
The level is lower if it is checked after using the vehicle, i.e. while the engine is still hot. To properly measure the oil level, wait at least 10 minutes after switching off the engine.

TOPPING UP

Top up with oil after checking the level, if necessary. Make sure you **do not exceed the MAX level mark.**

OIL CHANGE

The oil must be renewed every 3,000 km. Carry out the operation while the engine is hot taking care not to touch the engine to avoid burns. Remove the oil filler cap from the right-hand crankcase cover. Place a container under the crankcase and remove drain plug «A».

WARNING

SPRING «C» AND OIL GAUZE STRAINER «D» COME OUT WHEN THE DRAIN PLUG IS REMOVED.

Clean the gauze strainer. Check that the gauze strainer, the seal rubber and the drain plug seal ring are in good condition.
Fit the gauze strainer, the spring and the drain plug.

Pour approximately 850 cc of the recommended oil type into the engine and then reinsert cap/dipstick «B» into the filler hole and tighten it.
Start the engine and let it idle for approximately 2-3 minutes.
Stop the engine and, with the vehicle in an upright position on level ground, check that the oil reaches the maximum level mark on the dipstick. Ensure that there are no leakages.

Oil capacity: 1.1 litres.
Top up and renew using fresh oil of the **Selenia M Scooter 4T** type.

RUNNING THE ENGINE WITH INSUFFICIENT OR UNSUITABLE OIL CAUSES RAPID WEAR OF MOVING PARTS AND CAN RESULT IN IRREPARABLE DAMAGE.

USED OIL CAN HARM THE ENVIRONMENT. WE RECOMMEND TAKING THE VEHICLE TO AN **AUTHORISED PIAGGIO SERVICE CENTRE** FOR OIL CHANGES. OUR SERVICE CENTRES ARE PROPERLY EQUIPPED FOR THE DISPOSAL OF USED OIL WITHOUT HARMING THE ENVIRONMENT AND IN COMPLIANCE WITH THE LAW.

DO NOT OVERTIGHTEN THE OIL DRAIN PLUG - RISK OF SERIOUS DAMAGE TO THE S[illegible]

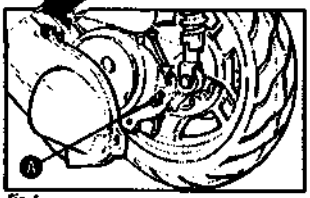


Fig. 1

Follow these steps:

1. Place the vehicle on its stand.
2. Remove the screws fixing the drive guard. Rotate the guard as shown in figure 1 to expose level plug «A».
3. Unscrew plug «A» and check that the oil level reaches the filler hole.
4. Carefully retighten plug «A».

Oil contents: 0.16 lt
Oil type:
TUTELA ZC 90.

RUNNING THE SCOOTER WITH INSUFFICIENT, DIRTY OR UNSUITABLE HUB OIL WILL CAUSE RAPID WEAR OF MOVING PARTS AND CAN RESULT IN IRREPARABLE DAMAGE.

OVERFILLING THE REAR HUB CAN CAUSE OIL SPILLAGE WITH CONSEQUENT CONTAMINATION OF THE ENGINE AND REAR WHEEL.

Take the scooter to your **Dealer or an Authorized Piaggio Service Centre for oil changes..**

USED OIL CAN HARM THE ENVIRONMENT AND MUST THEREFORE BE DISPOSED OF IN ACCORDANCE WITH THE LAW.

REMOVING THE SPARK PLUG

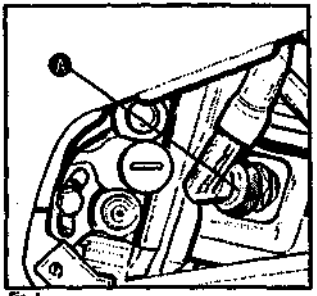


Fig. 1

Follow these steps:

1. After removing the fixing screw, open the door on the left side of the vehicle by levering in the recess in the lower part of the door.
2. Detach H.T. lead cap «A» from spark plug.
3. Unscrew the spark plug using the supplied box spanner.
4. When refitting, be sure to engage the threads properly by holding the spark plug at the correct angle and screwing it in initially by hand.
5. Use the spanner only for final tightening.
6. Refit cap «A» and press it fully down.

THE SPARK PLUG SHOULD BE REMOVED ONLY WHEN THE ENGINE IS COLD.

CHANGE THE SPARK PLUG EVERY 6,000 KM.

THE USE OF ELECTRONIC IGNITION UNITS, H.T. COILS OR SPARK PLUGS OTHER THAN THE PRESCRIBED TYPES CAN CAUSE SERIOUS DAMAGE TO THE ENGINE.

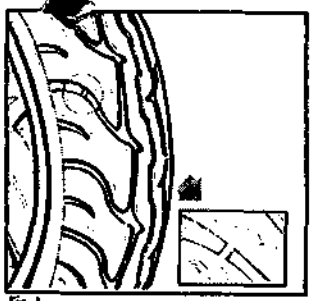


Fig. 1

Check tyre pressure periodically (about every 300 miles).

ALWAYS CHECK INFLATION PRESSURE WITH THE TYRES COLD.
INCORRECT TYRE INFLATION PRESSURE WILL CAUSE UNEVEN TREAD WEAR AND WILL MAKE THE SCOOTER UNSTABLE AND POTENTIALLY DANGEROUS.

The tyres have tread wear indicators and must be replaced as soon as the indicators are visible on the tread.
Check also for cuts on the tyre walls and uneven tread wear. Tyres must be changed at an authorized and properly equipped tyre shop.

THE LEGAL LIMIT FOR TREAD DEPTH IS 1 MM.

TYRE PRESSURE

FRONT: **2.0** bar - ***REAR:*** **2.2** bar

(with pillion) 2.5 bar

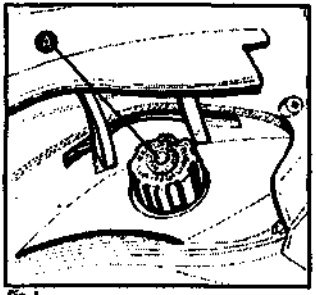


Fig. 1

Your new scooter has a liquid cooling system. The cooling circuit contains about 1.0 l of coolant comprising a 50% mixture of demineralised water and antifreeze (containing ethylene glycol and corrosion inhibitors).

We recommend **PARAFLU 11 FE (diluted)** which is supplied already mixed for use.

To ensure proper engine operation, the temperature of the coolant should range from a minimum of 60°C to a maximum 105°C. These limits are represented by two coloured marks on the related instrument on the analogue panel (item «D», figure 1, page 12). If the needle enters the red zone, stop the engine, let it cool down and check the coolant level.

If the coolant level is correct, take the scooter to an **Authorised Piaggio Service Centre** and have the cooling system checked over.

Following the procedure described below, check the coolant level when the engine is cold every 6,000 km. (3,600 miles).

a) Put the scooter on the stand.

b) Remove expansion tank filler cap «A» by turning it anti-clockwise (see figure opposite).

WARNING! DANGER OF BURNS.
DO NOT REMOVE THE FILLER CAP WHEN THE ENGINE IS STILL HOT.

c) Top up if the coolant level is below the min. level rims inside cap «A».

The coolant must always be between the min. and max. levels.

NEVER FILL OVER THE MAXIMUM MARK WHEN TOPPING UP THE COOLANT LEVEL SINCE THIS MAY CAUSE LEAKAGE WHEN RIDING.

If the coolant level is close to minimum, top up when the engine is cold. If you have to top up the coolant too frequently or if the expansion tank is completely empty, there may be a leak in the circuit. In this case take your scooter to your local **Authorised Piaggio Service Centre** and have the cooling circuit checked over. The coolant must be changed once every two years. This operation must only be carried out by skilled technical personnel at an **Authorised Piaggio Service Centre.**

TO ENSURE PROPER ENGINE OPERATION, ALWAYS KEEP THE RADIATOR GRILLE CLEAN

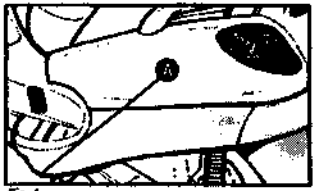


Fig. 1

Fig. 2

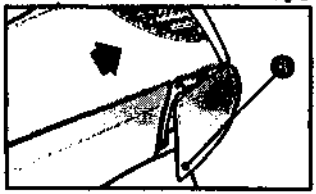
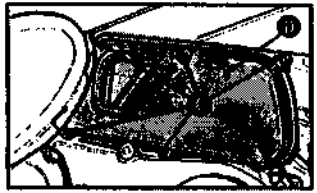


Fig. 3



REMOVING THE SIDE FAIRINGS

Procedure:

1. Loosen screw «A» (figure 1) in the lower part of the side panel.
2. Remove screw «B» and the screw below it (figure 2).
3. Slide the side panel forward to disengage it from the retaining tabs, and then remove it.

The figures refer to the left-hand side fairing; the procedure is identical for the right-hand side.

REMOVING THE AIR FILTER

Procedure:

1. Remove the left-hand side fairing.
2. Unscrew 6 fixing screws «B» (figure 3) and remove air filter cover «C».

Remove the filtering element and blow with compressed air if necessary.

WHEN THE SCOOTER IS USED IN PARTICULARLY DUSTY CONDITIONS THE FILTERS WILL REQUIRE CLEANING MORE FREQUENTLY TO PROTECT THE ENGINE AND TRANSMISSION.

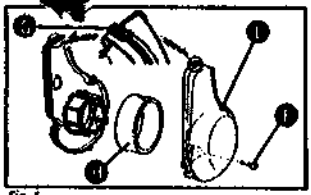


Fig. 1

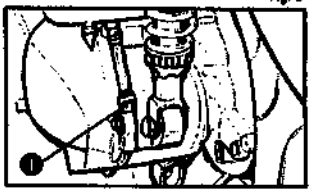


Fig. 2

REMOVING THE TRANSMISSION AIR FILTER

Follow these steps:

1. Remove the left-hand side panel.
2. Unscrew bolts «F» and remove transmission air filter cover «E».
3. Release tab «G» and separate the filter assembly.
4. Wash filter «H» with water and shampoo and then let it dry out.

DRAINING THE AIR FILTER

Follow these steps:

1. Remove crankcase drain pipe plug «I» and drain the accumulated liquids into a suitable container.
2. Refit plug «I».

FREQUENTLY INSPECT THE DRAIN PIPE IF THE VEHICLE IS MAINLY USED IN THE RAIN.

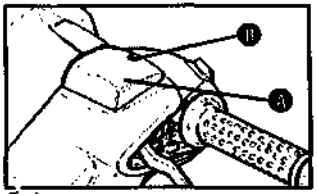


Fig. 1

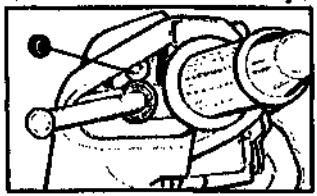


Fig. 2

CHECKING THE BRAKE FLUID LEVEL

The front and rear brake fluid reservoirs are positioned on the pumps located under the caps on the handlebar cover.

Procedure:

1. Put the scooter on the centre-stand with the handlebars straight.
2. Remove cover «A» after unscrewing the fixing screw «B» (figure 1).
3. Check the brake fluid level through sight glass «C» (figure 2).

The brake fluid level will fall slightly due to wear of the brake pads.
If the level is below the minimum, take the scooter to an **Authorized Piaggio Service Centre or Dealer** to have the braking system checked.

TOPPING UP THE BRAKE FLUID

USE EXCLUSIVELY DOT 4 CLASS BRAKE FLUID.

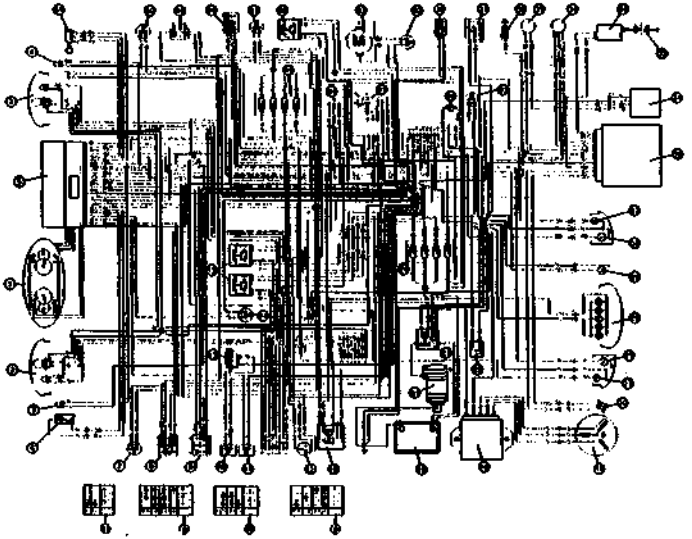
Recommended brake fluid:
TUTELA TOP 4
Procedure:
After removing caps «A» as described on page 56, loosen the two fastening screws and remove the reservoir cap. Top up using fluid of the prescribed type without exceeding the maximum level.

AVOID BRINGING THE BRAKE FLUID INTO CONTACT WITH THE EYES, SKIN AND CLOTHES. IN CASE OF ACCIDENTAL CONTACT, RINSE THE AFFECTED PART WITH WATER.

BRAKE FLUID IS HIGHLY CORROSIVE AND MUST NOT BE ALLOWED TO COME INTO CONTACT WITH PAINTED PARTS OF THE SCOOTER.

BRAKE FLUID TENDS TO ABSORB MOISTURE FROM THE AIR. IF THE BRAKE FLUID IN THE CIRCUIT CONTAINS EXCESS MOISTURE, BRAKING EFFICIENCY WILL BE IMPAIRED.
DO NOT USE FLUID FROM PREVIOUSLY OPENED OR PART-EMPTY CONTAINERS.

In normal climates brake fluid should be completely changed every 12,000 miles or every 2 years.
This is a skilled operation and must be carried out by an **Authorized Piaggio Service Centre or Dealer.**



WIRE COLOUR CODING: B=White · Bl=Blue · G=Yellow · Br=Brown · N=Black · BlY=White-Green · GN=Yellow-Black · Gr=Grey · R=Pink · O=Red · V=Purple · V=Green · V=O[illegible] ·
BlN=White-Black · GrN=Grey-Black · RN=Red-Black · BlBl=White-Blue · BlR=White-Red · GV=Yellow-Green · GrBl=Grey-Blue · A=Light Blue · Ar=Orange · BlN=Blue-Black

ELECTRICAL DEVICES

1. Analogue instrument panel assembly
2. Headlight, 2 x 12V-35/35W bulbs, 2 x 12V/3W bulbs
3. Left-hand front turn indicator, 12V-10W bulbs
4. Right-hand front turn indicator, 12V-10W bulbs
5. Digital instrument panel assembly
6. Outside temperature sensor
7. Rear brake light button
8. Lights switch
9. Turn indicators switch
10. Horn button
11. Emergency button
12. Side stand switch
13. Horn
14. Headlight relay switch
15. Reset button
16. Switch relay
17. 12V-12Ah battery
18. Regulator
19. Flywheel magneto
20. Pick-up
21. Starter motor
22. 12V electrical socket
23. Starting relay switch
24. Fuse holder (2 x 15A, 1 x 20A, 1 x 7.5A)
25. Left-hand rear turn indicator
26. Right-hand rear turn indicator
27. Rear light (2 x 12V-5W bulbs)
28. Brake lights (5 x 12V-2.3W bulbs)
29. Number plate light (12V-5W)
30. Electronic control unit
31. Fuel pump
32. Spark plug
33. HV coil
34. Throttle sensor
35. Automatic starting device
36. Thermistor
37. Fuel level transmitter
38. Radiator temperature sensor
39. Helmet compartment lighting button
40. Helmet compartment lamp
41. Ignition switch
42. Thermal switch
43. Electric fan
44. Available for accessories
45. Fuse box (1 x 15A, 1 x 10A, 2 x 7.5A)
46. Main relay switch
47. Start button
48. Lights on/off switch
49. Engine stop button
50. Front brake light button
51. Wheel revolution sensor

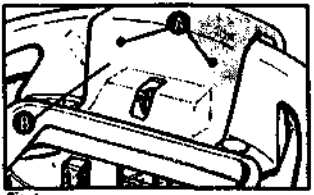


Fig. 1

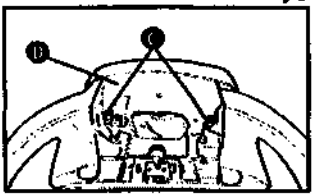


Fig. 2

BATTERY

To access the battery:

1. Rest the vehicle on the central stand.
2. Open the saddle as previously described (page 32).
3. Remove fastenings «A» and cover «B». Remove screws «C» and then lift rear cover «D».
4. Disengage the elastic band.

ELECTROLYTE CONTAINS SULPHURIC ACID: AVOID CONTACT WITH THE SKIN, THE EYES AND CLOTHING. IN CASE OF CONTACT WITH THE SKIN OR THE EYES RINSE THE AFFECTED AREA WITH PLENTY OF WATER AND CONSULT A DOCTOR.

RISK OF DAMAGE TO THE ELECTRICAL SYSTEM: NEVER DISCONNECT THE BATTERY WHEN THE ENGINE IS RUNNING.

DO NOT LEAN THE SCOOTER OVER TOO FAR OR ELECTROLYTE MAY SPILL FROM THE BATTERY.

BATTERIES CONTAIN ENVIRONMENTALLY TOXIC SUBSTANCES. USED BATTERIES MUST BE DISPOSED OFF IN COMPLIANCE WITH THE LAW.

The battery must be inspected and serviced regularly.
Principal battery maintenance operations:

INSTALLING A NEW BATTERY
Ensure the battery leads are connected correctly.

DO NOT INVERT BATTERY POLARITY: DANGER OF SHORT CIRCUITS AND DAMAGE TO ELECTRICAL EQUIPMENT.

ELECTROLYTE LEVEL CHECK
Check regularly that the electrolyte is at the maximum level.
Top up **exclusively with distilled water**.
If the battery requires topping up too frequently, check the electrical system - the battery is probably working in overload conditions (which will lead to rapid deterioration).

PROLONGED DISUSE
If the scooter is not to be used for long periods the battery must be charged periodically (when not in use, the battery will discharge over a period of about three months).
If the battery is removed, when reinstalling it, be sure to properly reconnect the terminals and the breather pipe.

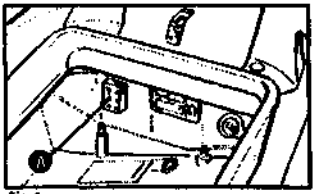


Fig. 1

FUSES

The electrical equipment is protected by:

1. Five fuses «A» in the helmet compartment (figure 1) protecting the electrical socket.
2. Four fuses «B» protecting the various circuits, located behind the door in the rear part of the front shield, on the left (figure 2, page 63).

The tables show the positions and specifications of the fuses installed on the vehicle.

FUSE	PROTECTED (ISSUE)
N. 1 30A	General
N. 1 20A	Helmet compartment, 12V socket
N. 2 10A	Headlight
N. 1 7,5A	Digital instrument panel

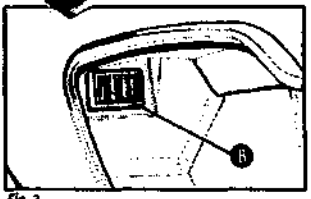


Fig. 2

BEFORE CHANGING A BURNT-OUT FUSE, FIND AND REMEDY THE SITUATION THAT CAUSED IT TO BLOW.
DO NOT SUBSTITUTE FUSES WITH ANY OTHER ALTERNATIVE CONDUCTOR.

FUSES	PROTECTED CIRCUITS
N. 1 10A	Ignition
N. 1 7,5A	Horn, parking lights, digital/analogue instrument panel
N. 1 7,5A	Brake light, side stand switch
N. 1 15A	Accessories

Fig. 1

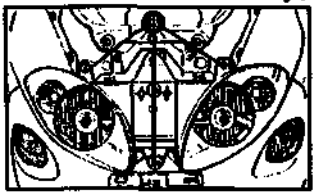


Fig. 2

HEADLIGHT INSERT

To remove the headlight insert, follow these steps:

1. Remove screws «A» (figure 1) from the front panel and from underneath the rearview mirror hoods.
2. Remove screws «B» and extract the lamp cluster from its housing.
3. Remove the snap-on rubber hood, detach the electrical connections, release the spring and extract the low/high beam bulb. To replace the parking light bulbs, first extract the rubber bulb holder and then the bulbs.

To reassemble, follow the same steps in reverse order.

FRONT TURN INDICATORS

To replace a burnt-out bulb, remove screws «C» shown in figure 1.

DO NOT TOUCH THE GLASS PART OF HALOGEN BULBS WITH YOUR FINGERS.

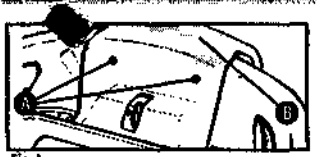
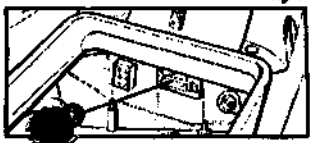


Fig. 1

Fig. 2

Fig. 3

Fig. 4



REAR LAMP CLUSTER AND REAR TURN INDICATORS

To remove the rear lamp cluster, follow these steps:

1. Open the saddle and remove screws «A» fixing cover «B».
2. Remove screws «C» fixing the stop assembly (battery cover).
3. To gain access to the rear light bulb and turn indicator bulbs, remove screw «D» fixing the above-mentioned assembly as shown in the figure. To remove the bulb holder, disengage the tabs.

NUMBER PLATE LIGHT

Remove the snap-on bulb holder from under the rear mudguard.

HELMET COMPARTMENT LAMP

Open the helmet compartment. Remove snap-on lens «E» (figure 4) and replace the bulb.

BRAKE LIGHT

Open the helmet compartment and remove the rear cover after loosening the three screws «F», one of which is shown in figure 2.

Remove the brake light fixing screws and replace the burnt-out bulbs.

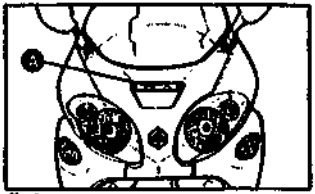


Fig. 1

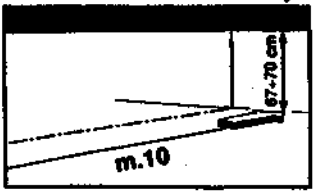


Fig. 2

HEADLIGHT

Procedure:

1. set the unladen scooter on level, even ground, with the tyres correctly inflated, at a distance of 10 m from a flat, white wall or screen that is sufficiently darkened to be able to see the headlight beam (figure 2). Make sure that the scooter axis is at right angles to the screen;
2. mark the screen with a horizontal line 67 - 70 cm from the ground;
3. switch on the headlight dipped beam and check that the boundary between the brightly illuminated area and the surrounding area is no higher than the line you have drawn;
4. if necessary adjust the headlight by means of screw «A» (figure 1) in the front shield.

REAR-VIEW MIRRORS

You can adjust the position of the mirrors by pressing lightly on the edges in the direction require.

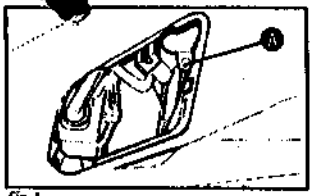


Fig. 1

THE IDLE SPEED MUST BE TUNED UP WHEN THE ENGINE IS HOT.
BEFORE PROCEEDING, CHECK THAT THE THROTTLE CONTROL HAS THE PRESCRIBED PLAY.
IF THE PLAY OF THE THROTTLE TRANSMISSION NEEDS ADJUSTING, CONTACT AN AUTHORIZED PIAGGIO DEALER OR SERVICE POINT.

Follow these steps:

1. Place the vehicle on the central stand and remove the door on the left side as described on page 50.
2. start the engine and tighten or loosen idle speed adjuster screw «A» (figure 1) until the engine is idling evenly (between 1500 ± 100 rpm) without driving the rear wheel.

If the above condition proves impossible to obtain, take the scooter to an **Authorized Piaggio Service Centre or Dealer** to adjust **CO** at idle speed.

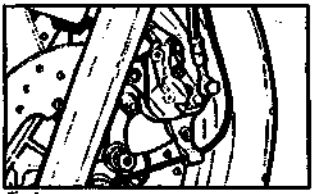


Fig. 1

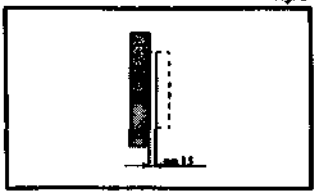


Fig. 2

FRONT AND REAR DISC BRAKE

Wear of the disc and pads is automatically corrected so there will be no effect on braking efficiency. The brake therefore does not require adjustment.

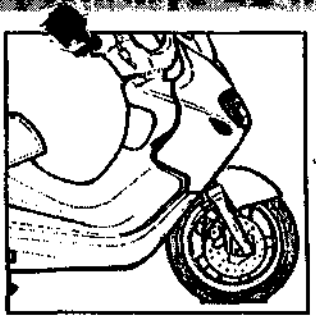
A spongy feel when you pull the lever probably means you have air in the circuit or the brake is malfunctioning. In this case, bearing in mind the importance of your brakes in terms of road safety, take the scooter to an **Authorized Piaggio Service Centre or Dealer.**

BRAKING ACTION MUST START AT THE BEGINNING OF BRAKE LEVER STROKE.

CHECK THE BRAKE PADS REGULARLY (FIGURE 2). IF THE THICKNESS OF ONE OR BOTH PADS HAS WORN TO WITHIN THE REGION OF 1.5 MM BOTH PADS MUST BE CHANGED. THIS OPERATION SHOULD BE CARRIED OUT BY A AUTHORIZED PIAGGIO SERVICE CENTRE OR DEALER.

AFTER FITTING NEW BRAKE PADS ACTIVATE THE BRAKE LEVER TO BED IN THE BRAKES AND RESTORE THE LEVER TO ITS CORRECT POSITION BEFORE RIDING THE SCOOTER.

THE PRESENCE OF SAND, MUD, SNOW AND SALT ON THE ROADS WILL SIGNIFICANTLY REDUCE THE LIFE OF BRAKE PADS. THIS PROBLEM CAN BE PARTIALLY ELIMINATED BY WASHING THE SCOOTER AFTER RIDING IN [illegible]D CONDITIONS OF THIS KIND.



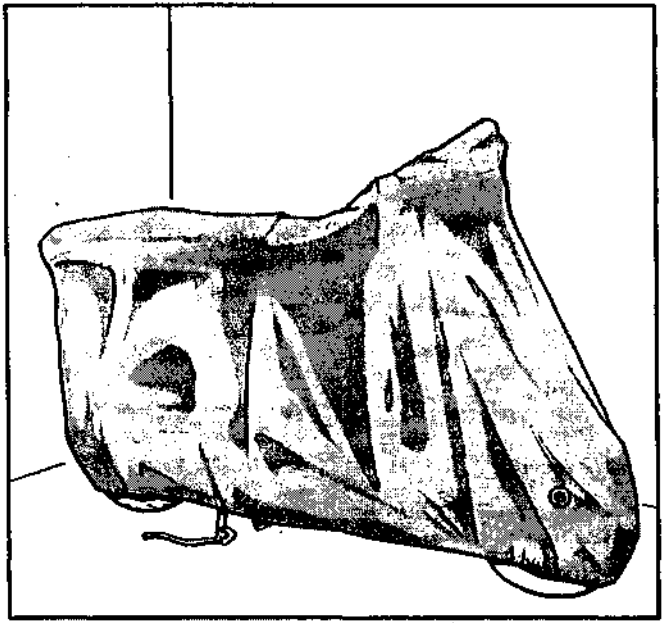
Your new scooter has tubeless tyres which, unlike tyres with an inner tube, tend to deflate slowly when punctured so road safety is improved.
If the tyre has a slow puncture you can make a temporary repair using a pressurized repair/inflate canister.

WHEN USING THIS TYPE OF PRODUCT FOLLOW THE MANUFACTURER'S INSTRUCTIONS ON THE CANISTER OR PACK.

Have the tyre repaired professionally as soon as possible by an **Authorized Piaggio Service Centre or Dealer.**

To repair a tyre the relative wheel must be removed from the scooter. This job should be done by an **Authorized Piaggio Service Centre or Dealer.**

THE FRONT WHEEL, COMPLETE WITH TYRE, MUST BE PROPERLY BALANCED. DO NOT RIDE THE SCOOTER WITH A PARTIALLY DEFLATED FRONT TYRE OR INCORRECTLY BALANCED WHEEL - THE STEERING WILL BE UNSTABLE AND TEND TO WOBBLE.



Prepare the scooter as follows:

1. Wash the scooter and cover it with a sheet (not plastic);

2. With the engine off and the piston at the bottom dead centre, remove the spark plug and pour in 1-2 cc of **SELENIA Hi Scooter 4 T** into the spark plug hole (a larger quantity could damage the engine). Press the starting button 1 + 2 times for about 1 second, allow the engine to run at idle speed and then refit the spark plug;

3. Drain the fuel tank and coat unpainted metal parts with protective grease; rest the frame on wooden blocks so that the tyres are not touching the ground;

4. For the battery, follow the procedures described in chapter 3.9.

To soften up dirt and mud on the painted parts of the scooter, use a low pressure hose. You can now clean the bodywork with a car wash sponge, plenty of water and car shampoo (2 - 4% concentration in water). Rinse off with plenty of water and dry with a chamois leather. Clean the exterior of the engine with paraffin, a clean paintbrush and clean rags. Take care - paraffin can damage the paintwork. Always wash the bodywork thoroughly before applying wax polishes.

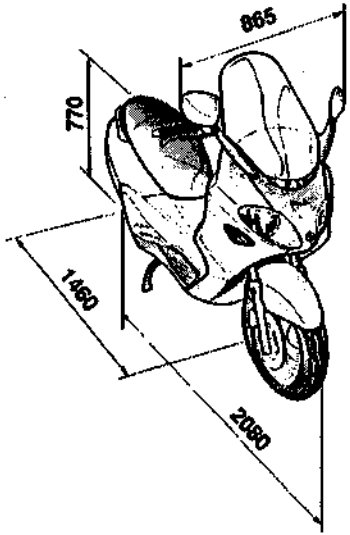
DETERGENTS CAN POLLUTE RIVERS, STREAMS AND THE SOIL. DO NOT WASH THE SCOOTER IN THE ROAD. RESPECT THE ENVIRONMENT (LIMIT THE AMOUNT OF SHAMPOO YOU USE).

DO NOT WASH THE SCOOTER IN THE SUN - ESPECIALLY IN WARM WEATHER WHEN THE BODYWORK HEATS UP. IN THESE CONDITIONS THE DETERGENT WILL DRY BEFORE THE BODYWORK CAN BE RINSED AND CAN DAMAGE THE PAINTWORK. DO NOT USE RAGS SOAKED IN PETROL OR DIESEL TO CLEAN PAINTED SURFACES OR PLASTIC PARTS OF THE SCOOTER OR DAMAGE TO THE FINISH OR MECHANICAL CHARACTERISTICS OF THE MATERIAL MAY RESULT.

WHEN WASHING THE ENGINE WITH A WATER CLEANER:

- ONLY USE A FAN-SHAPED JET
- KEEP THE NOZZLE AT A DISTANCE OF AT LEAST 60CM
- DO NOT USE WATER AT TEMPERATURE IN EXCESS OF 40°C
- DO NOT DIRECT THE JET TOWARDS: THE CARBURETTOR, ELECTRIC CABLES, COOLING SLITS OF THE TRANSMISSION COVER AND THE SPIRAL CASING.

SYMPTOM	POSSIBLE CAUSE	ACTION
Difficulty starting	Fuel tank empty.	Refuel.
	Filters, carburettor jets or body dirty or obstructed, fuel filter or feed pipes clogged, fuel pump damaged.	Contact an Authorised Piaggio Service centre.
	Flat battery.	Charge the battery.
Irregular firing	No spark on spark plug.	Contact an Authorised Piaggio Service centre
	⚠ Danger: high voltage. This inspection should be carried out by a skilled mechanic.	
Poor compression	Spark plug bore thread damaged; head bolts insufficiently torqued; worn piston rings.Valves out of play.	Tighten the spark plug. Contact an Authorised Piaggio Service centre.
High fuel consumption and poor performance	Dirty air filter.	Blow with compressed air (page 54).
Poor braking action	Oil on brake disc. Worn brake pads.	Contact an Authorised Piaggio Service centre.
	⚠ Presence of air in the front and rear brake circuit.	Adjust. Contact an Authorised Piaggio Service centre.
Poor suspension	Oil leak; worn stroke end bumpers; worn shock absorber attachment points.	Contact an Authorised Piaggio Service centre.
Irregular operation of automatic transmission	Worn roller case or drive belt.	Contact an Authorised Piaggio Service centre.


865
770
1460
2080

5 SPECIFICATIONS

ENGINE	SINGLE CYLINDER 4-STROKE
BORE x STROKE	72.7 x 60.0 mm
DISPLACEMENT	249 cm³
COMPRESSION RATIO	10.5 : 1
IGNITION ADVANCE (BEFORE T.D.C.)	variable
CARBURETTOR	VE38D
SPARK PLUG	NGK DPR7EA-9 DENSO X22EPR-U9

FUEL SYSTEM
By carburettor, with electric fuel pump.

EXHAUST SYSTEM
Noise suppression system.

ELECTRONIC IGNITION
Capacitive discharge, variable spark advance and separate high voltage coil.

LUBRICATION
Engine lubrication by chain-driven lobe pump (in crankcase) and gauze strainer.

COOLING
Liquid cooled, forced circulation.

TRANSMISSION
Automatic variator with expanding pulleys, V-belt, automatic centrifugal dry-disc clutch and gear reduction unit.

BRAKES
Front: disc Ø 240 (right side of vehicle) with hydraulic control operated by right-hand lever on handlebar.
Combined: dual disc Ø 240 (front left and rear) with hydraulic control operated by left-hand lever on handlebar. The system is slave to a pressure-distributing valve.

WHEELS
Lightweight alloy:
front 14"x3.50;
rear [illegible]x3.50.

TYRES
Tubeless;
front 120/70-14"
rear 140/60-13".

SUSPENSION
Front: hydraulic telescopic fork with Ø 35 mm rod.
Rear: single swing arm, two double-acting hydraulic shock absorbers with four-position spring preload adjustment.

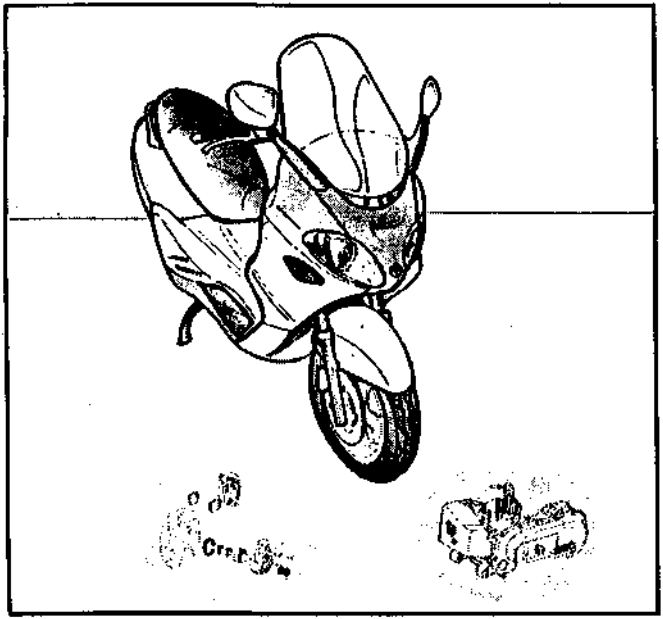
FRAME
Welded steel tube with pressed steel reinforcements.

TOOLKIT
16 mm box spanner; tommy bar for box spanner; double screwdriver; special wrench for rear damper adjustment.
The tools are stored in the helmet compartment.

DRY WEIGHT
162 Kg.

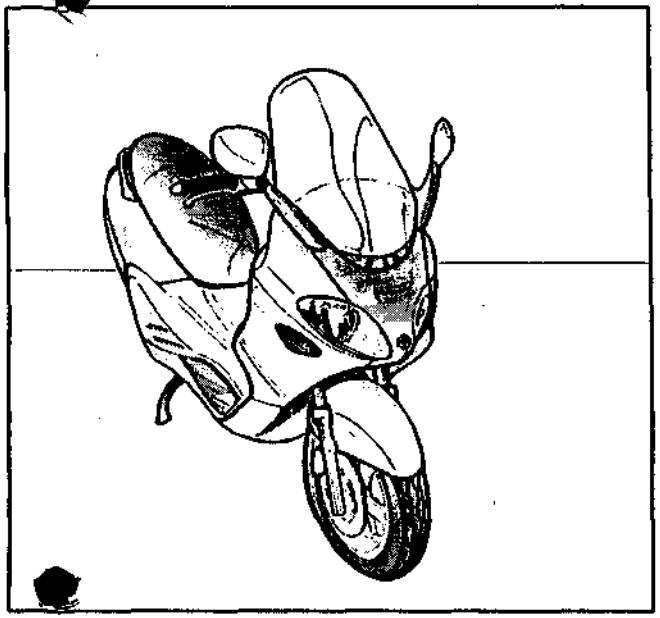
CARRYING CAPACITY
Maximun carrying capacity 180 Kg.

REFUELING
Petrol
Total capacity: ~14.5 l (approximate value).
Reserve: ~2.5 l (approximate value).
Engine oil
Capacity 1.1 l.
Rear hub oil
Capacity ~ 0.16 l.



USE ONLY "ORIGINAL PIAGGIO SPARE PARTS". THESE ARE THE ONLY COMPONENTS THAT CARRY THE SAME GUARANTEE OF HIGH QUALITY AS THE COMPONENTS ON THE NEW VEHICLE.

NOTE THAT THE USE OF NON-ORIGINAL SPARE PARTS AUTOMATICALLY INVALIDATES THE GUARANTEE.



YOU CAN CHOOSE ACCESSORIES FROM THE RANGE OFFERED BY PIAGGIO. ONLY PIAGGIO ACCESSORIES ARE RECOGNISED BY THE MANUFACTURER AND GUARANTEED IN RELATION TO THEIR USE. TO CHOOSE ANY ACCESSORIES YOU MAY REQUIRE AND ENSURE THAT THEY ARE CORRECTLY INSTALLED, CONSULT AN AUTHORISED PIAGGIO SERVICE CENTRE OR DEALER.

THE USE OF NON-ORIGINAL ACCESSORIES MAY AFFECT THE STABILITY OF THE VEHICLE AND REDUCE SAFETY LEVELS WITH CONSEQUENT RISKS FOR THE RIDER AND OTHERS.

7 SCHEDULED MAINTENANCE

Proper servicing of your new scooter will increase its lifetime and keep performance at optimal levels.
PIAGGIO has therefore set down a series of inspections and maintenance tasks as summarized in the following service checksheet.
All minor problems or faults should be communicated without delay to an **Authorized Piaggio Service Centre or dealer**. Don't wait until the next scheduled service.

Service the scooter at the prescribed times, even if you have not yet covered the specified mileage.
The warranty will not apply unless the Scheduled Services, specified for the guarantee period you choose, are carried out. Failure to carry out scheduled services automatically invalidates the warranty. For more information regarding warranty conditions and Scheduled Maintenance requirements, refer to the "Warranty Booklet".

Check																	
Engine oil	Renew	◆	EVERY 3,000 km					EVERY 3,000 km				EVERY 3,000 km					
Hub oil level	Check/Renew	CHECK EVERY 12,000 km - RENEW EVERY 2 YEARS															
Spark/Spark gap	Replace		●		●		●		●		●		●		●		●
Air filter	Replace				●				●				●				●
Transmission box air filter	Clean	■	■		■		■		■		■		■		■		■
Oil filter	Clean				■		■				■				■		■
Play of valves	Check	■			■		■		■		■		■		■		■
Idle speed/Carburetion	Tune up	■	■		■		■		■		■		■		■		■
Throttle control	Adjust	■			■		■		■		■		■		■		■
Crankcase breather	Check	■	■		■		■		■		■		■		■		■
Drive belt	Check/Replace				■		●		■		●		■		●		■
Roller container	Check		■		■		■		■		■		■		■		■
Coolant	Renew	EVERY 2 YEARS						EVERY 2 YEARS				EVERY 2 YEARS					
Steering	Adjust	■			■		■				■				■		■
Brake levers	Grease	■			■		■				■				■		■
Brake pads	Check condition/wear	EVERY 3,000 km						EVERY 3,000 km				EVERY 3,000 km					
Brake lines/Pressure hose	Replace								●								●
Brake fluid level	Check	■	■		■		■		■		■		■		■		■
Brake fluid	Renew	EVERY 2 YEARS						EVERY 2 YEARS				EVERY 2 YEARS					
Transmissions	Lubricate				■		■		■		■		■		■		■
Safety locks	Check	■			■		■		■		■		■		■		■
Suspensions	Check				■		■		■		■		■		■		■
Electrical equipment and battery	Check	■	■		■		■		■		■		■		■		■
Headlight	Check/Adjust				■		■		■		■		■		■		■
Tyr[illegible]	Check condition/wear		■		■		■		■		■		■		■		■
Tyre [illegible]es	Check	■	■		■		■		■		■		■		■		■
Vehicle and braking system	Road test	■	■		■		■		■		■		■		■		■

RECOMMENDED PRODUCTS

USE	CHARACTERISTICS	RECOMMENDED PRODUCT
Rear hub	SAE 80W/90 API GL3 specifications or higher	TUTELA ZC 90
Control cables (brakes, throttle, speedometer)	For-stroke engine oil	SELENIA HI Scooter 4T
Brake levers, throttle twistgrip	Calcium complex soap grease NLGI 1-2	SYSTEM TW 249 AREXONS
Engine oil	SAE 5W/40 synthetic oil exceeding API SG specifications	SELENIA HI Scooter 4T
Brake fluid	Synthetic SAE J1703, NHTSA 116 DOT 4, ISO 4925	TUTELA TOP 4
Coolant	Monoethylene glycol-based antifreezer, CUNA NC 956-16	PARAFLU 11 FE (diluted)