

# OPERATION AND MAINTENANCE

## **VESPA 125 primavera**



**PIAGGIO**





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## INTRODUCTION

The **PIAGGIO CO.** wishes to welcome you into the family of Vespa owners and take this opportunity of thanking you for your preference. We feel sure that this scooter will give you complete satisfaction.

Because of its characteristics (comfort, limited consumption, easy driving, quiet running, clean lines, etc.) the Vespa has a wide range of uses for practical operation, pleasure trips. Lengthy journeys on the Vespa will not fatigue you and you will no doubt be quick to appreciate its excellent performance.

This booklet, with its **simple instructions** on operation and maintenance will furnish you all the information necessary for gaining a complete working knowledge of your vehicle.

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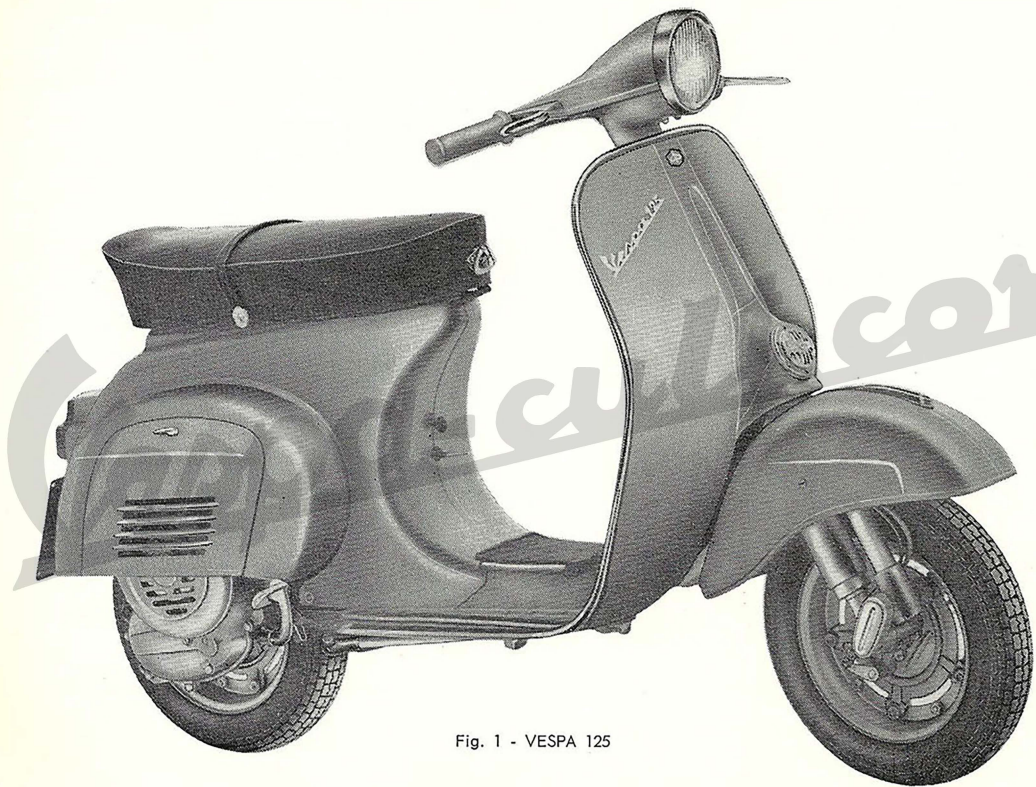


Fig. 1 - VESPA 125

## NOTICE

To maintain your Vespa in perfect running order and not to invalidate the guarantee offered by the contract, it is advisable to consult your dealer or Service Station, recognisable by the mark shown here regarding repairs.

**Demand exclusively original Piaggio spares.**

All PIAGGIO spare parts are produced from the same specific materials, have been subjected to the same machining operations and inspection as the component parts of your machine. This is guarantee for durability, performance and your personal safety.



**MANUFACTURERS  
OF VESPA SCOOTERS  
SERVICE**



1. Clutch control (lever) and gear change (twist grip) -  
 2. Front brake lever - 3. Throttle twist grip - 4. Main switch  
 unit - 5. Front brake shoes - 6. Rear brake pedal - 7. Kick-  
 starter - 8. Gear selector and gear control adjusting screws -  
 9. Rear brake shoes - 10. Clutch - 11. Carburettor and air  
 cleaner - 12. Choke control - 13. Fuel tap - 14. Lever securing  
 dual seat - 15. Lever for removing engine flap.

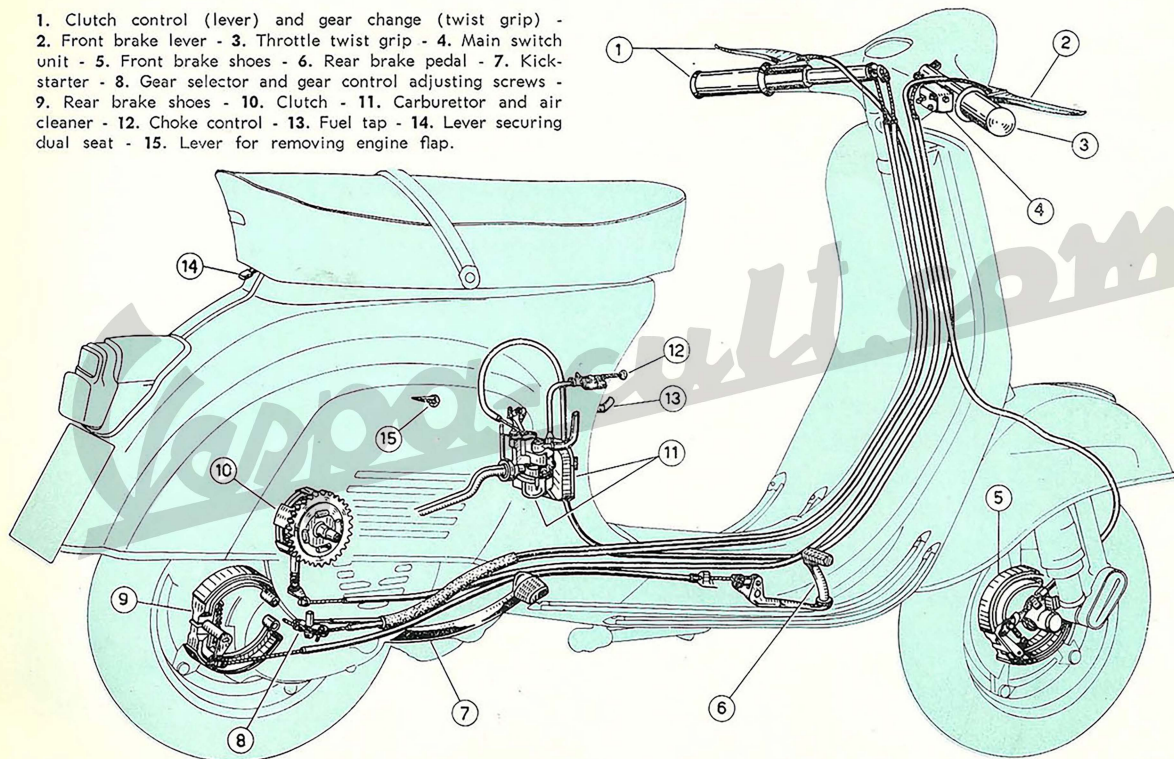


Fig. 2 - Installation of controls and transmissions

## PERFORMANCE AND SPECIFICATIONS

**Consumption** (accord to CUNA Standard):  
2 lt/100 Km. (118 mls/U.S. gal.; 142  
mls/imp. gal.), **gasoline - oil mixture i. e.**  
**2% oil.**

**Max. speed** (CUNA Standards) 85 Km/h  
52.8 mph.).

**Carrying capacity** . . . . . 2 persons  
and 10 Kg. (22 lbs) of luggage.

**Range** . . . . . 280 Km (174 mls)

**Max fuel capacity:** 5.6 lt. (1.48 U.S. galls  
or 1.23 imp., galls (incl. 1 lt. - 0,26 U. S.  
galls or 0.21 imp. galls - of **reserve**).

**Wheel base** . . . . . 1180 mm (46".5 )

**Handlebar width** . . . . . 670 mm (26".4 )

**Total length** . . . . . 1665 mm (65".6 )

**Max height** . . . . . 1015 mm (40".0 )

**Min. ground clearance** 225 mm ( 8".86)

**Turning radius** . . . . . 1650 mm (64".96)

**Total dry weight** . . . . . 73 Kg. (160 lbs)

**ENGINE:** Single horizontal cylinder two stro-  
ke rotary distribution: i. e., carbured mix-  
ture is regulated by the crankshaft rotation.

Displacement 121.17 cc. - 7.39 cu. in.

Bore 55 mm - 2".16.

Stroke 51 mm - 2".01.

Compression ratio: 1:8.2.

Outer H.T. coil **ignition.**

**Spark advance:**  $25^{\circ} \pm 1^{\circ}$  before T.D.C.

**Sparking plug:** Bosch W 240 T 1; Cham-  
pion L 86; AC 42 F; Marelli CW 240 N.



1. Steering column and front suspension - 2. Engine - 3. Crank-case clutch side with swinging arm pivoted to frame - 4. Rear suspension spring and hydraulic damper assy. - 5. Screw securing carburettor - 6. Bolt securing damper of rear suspension - 7. Bolt securing engine

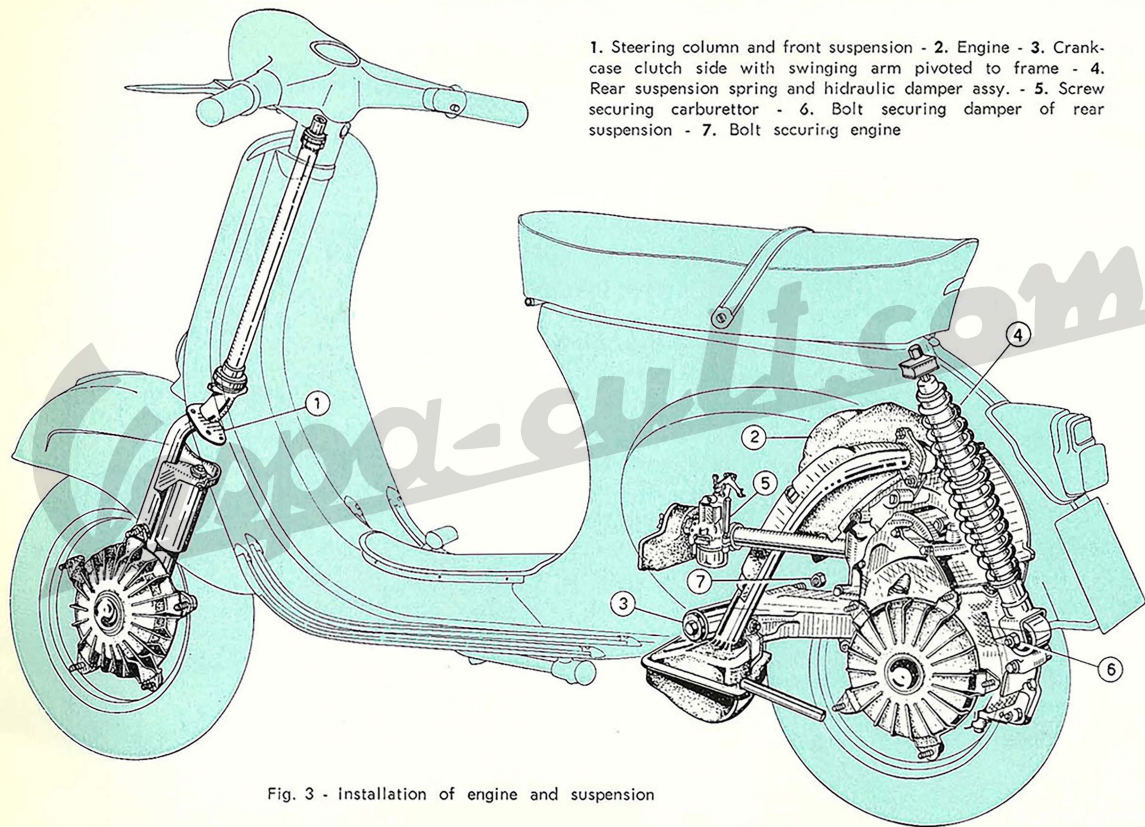


Fig. 3 - Installation of engine and suspension

## OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS	NOTES
<b>STEERING LOCK</b> a) Locking the handlebars	<p>To lock the vehicle, turn the handlebars anticlockwise up to the limit stop; <b>rotate the key and push inwards</b>, so that it thrusts the sliding bar against the steering column. To ease the insertion of the sliding bar into the hole of the steering column, slightly turn the handlebars from the limit stop clockwise.</p> <p>When the handlebars are locked the key will now spring back to its original position and can then be withdrawn.</p> <p>To release the handlebars, insert the key in <b>the lock</b>, turn it <b>to the left and pull it back</b>; then turn the handlebars in the normal position.</p>	<p>The key can be extracted from the lock even if the handlebars are free.</p>
<b>TOOL BOX LOCK</b> (left hand side of vehicle)	<p>Security lock on the steering column and tool box lock are both actioned by a single key.</p>	<p>The steering lock should <b>not</b> be lubricated.</p>



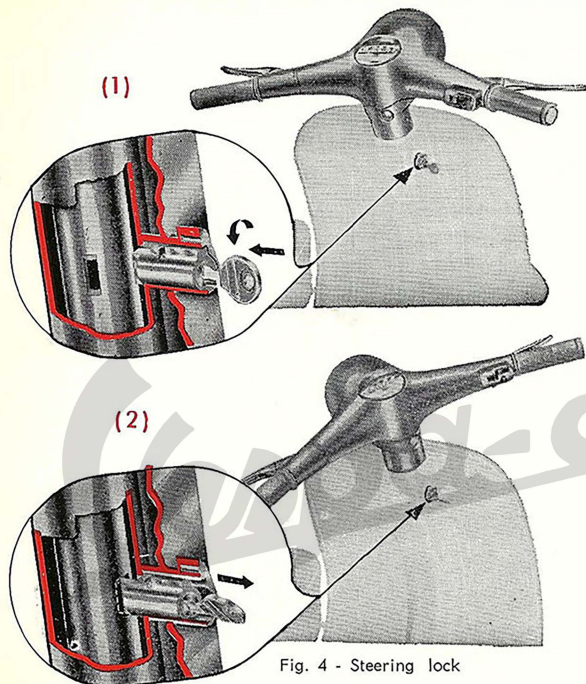


Fig. 4 - Steering lock

1. Normal position - 2. Locked position

**Note** - The arrows indicate the operation to be carried out for locking (1) and for unlocking (2).



Fig. 5 - « A ». Dual saddle (for pivoting the seat on its forward edge push the lever indicated by arrow) and « B » pillion seat. Act on the devices indicated by arrow.

## OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS	NOTES
<b>FUEL SUPPLY</b>	Use a mixture of oil and petrol i. e. 2% Pure Mineral Oil SAE 30 (i. e. about 1/4 pint of oil per 1½ gals of petrol): ESSO 2 T Motor Oil; Shell Golden Motor Oil; Shell X - 100 2 T.	Ensure that the fuel tank breather is always clean.
<b>ACCESSING TO FUEL TANK AND TO TOOL BOX</b>	<p>The fuel tank is provided with a hinged plug located under the saddle.</p> <p>For access to fuel tank and to tool box, fig. 5 «A», when the dual saddle is mounted, pivot the saddle on its forward edge, after having released the rear attachment as shown at fig. 5.</p> <p>When the pillion seat (accessory) is mounted the fuel tank plug is yet free and the seat has to be pivoted on its forward edge only for accessing to tool box or to the parts located in the interior of the chassis.</p>	



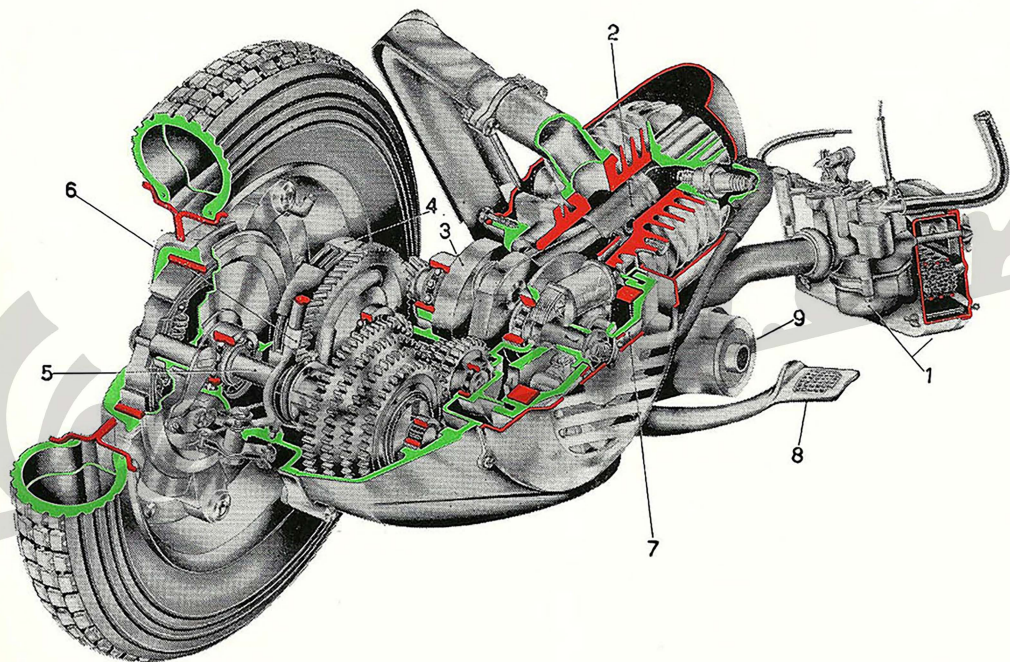


Fig. 6 - Engine section

1. Group carburettor air cleaner - 2. Piston - 3. Crankshaft - 4. Clutch - 5. Mainshaft and gear pinion assy. - 6. Gear shifter - 7. Flywheel magneto - 8. Kickstarter - 9. Crankcase swinging arm clutch side (pivoted to the frame).

## OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS	NOTES
<b>BEFORE OPERATING THE VEHICLE</b>	<p>Unscrew the plug on the gear box marked « OLIO » (fig. 11) and check that the oil is on a level with the hole when the vehicle is standing upright.</p>	
<b>RUNNING - IN PERIOD</b>	<p><b>For running - in the first 1000 Km. (600 mls), do not maintain the throttle fully open for long periods.</b></p> <p>After first 1000 Km. (600 mls) change oil in gear box (see fig. 11) and check that all nuts and bolts are not slack.</p>	
<b>TYRE PRESSURE</b>	<p><b>Front</b> 1.25 Kg/cm<sup>2</sup> (17 p.s.i.): <b>Rear</b> 1.6 Kg/cm<sup>2</sup> (22.7 p.s.i.) with one up; <b>Rear</b> 2.3 ÷ 2.5 Kg/cm<sup>2</sup> (32.7 ÷ 35.5 p.s.i.): with two up.</p>	

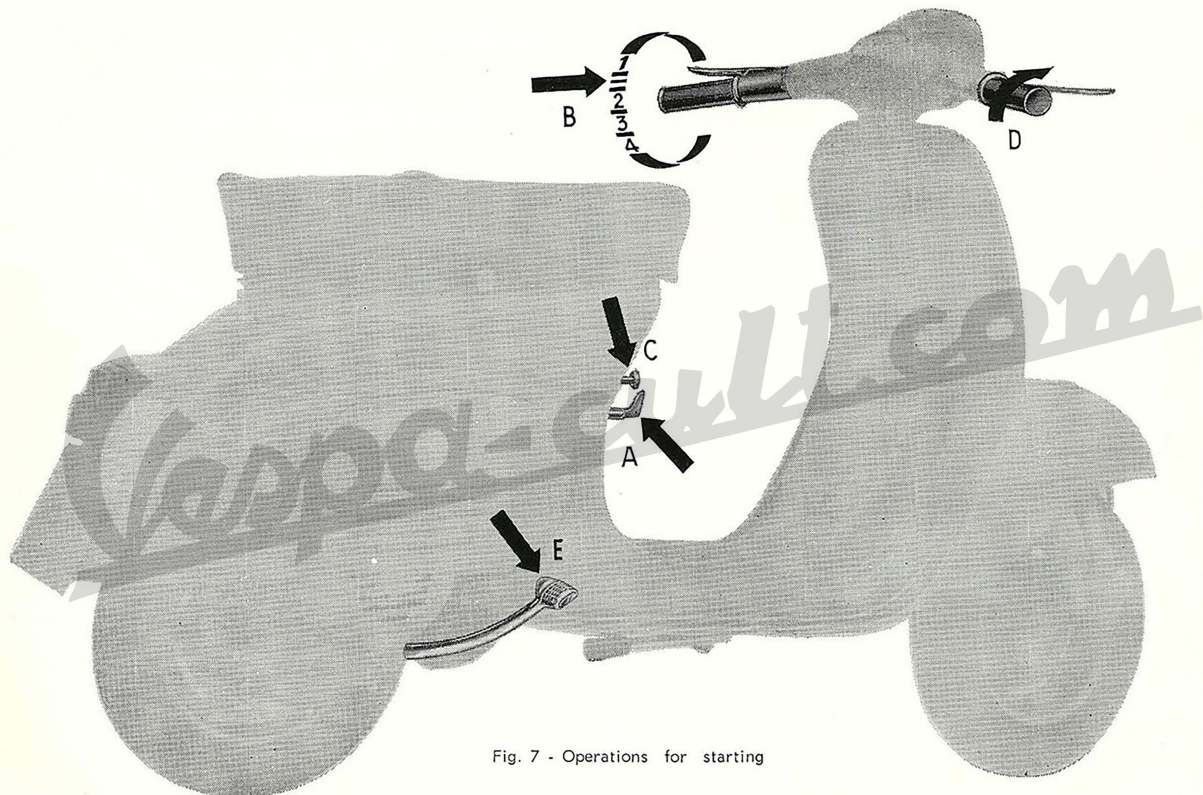


Fig. 7 - Operations for starting

A: Open the fuel tap - B: Selector in neutral - C: Pull out the choke control (with cold engine) - D: Bring throttle twist grip to idling position - E: Operate kickstarter.



## OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS	NOTES
<b>STARTING</b>	<ul style="list-style-type: none"> <li>— Carry out the operations indicated on fig. 7. Do not use the choke when the engine is warm; <b>as soon as the engine is running smoothly bring the choke control back to its normal position.</b></li> </ul>	In case of hard starting see page 16.
<b>SETTING THE SCOOTER IN MOTION</b>	<ul style="list-style-type: none"> <li>— With the engine running at idling speed declutch and rotate the gear change twist grip to the position of first gear (fig. 7). For setting the vehicle in motion slowly let in the clutch and gradually open the throttle.</li> </ul>	Do not attempt to ride the vehicle unless the key is inserted and the handlebars rotate freely.
<b>GEAR CHANGE</b>	<ul style="list-style-type: none"> <li>— Close the throttle, declutch and rotate the gear change grip to a higher or lower gear, as the case may be (fig. 8).</li> </ul>	When it is necessary to decelerate do not hesitate in changing down.
<b>STOPPING THE ENGINE</b>	<ul style="list-style-type: none"> <li>— Before stopping the engine change to « neutral » and then switch off the ignition.</li> </ul>	

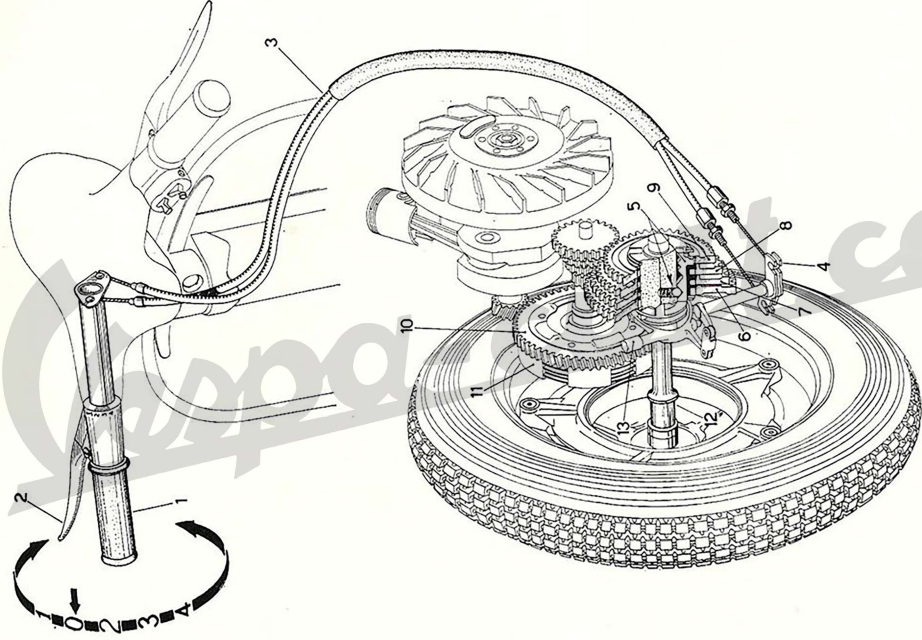


Fig. 8 - Gear transmission

1. Gear change twist grip - 2. Clutch control lever - 3. Gear change cables - 4. Gear shifter - 5. Selector group - 6. 1st gear - 7. 2nd gear - 8. 3rd gear - 9. Top gear - 10. Spring gear - 11. Clutch - 12. Drive shaft - 13. Stirrup for gear change.

N. B. - The positions 1 - 2 - 3 - 4 on the gear change twist grip correspond respectively to bottom, 2nd, 3rd and top gear; the « 0 » indicates neutral.

## OPERATING AND MAINTENANCE: COMMON OPERATIONS TO CARRY OUT

### ADJUSTMENTS ON CARBURETTOR

**For adjusting the idling** turn the slow running adjuster screw (fig. 9 n. 2).

- On the carburettor body a set screw (« B » fig. 12) is provided for adjusting the throttle cable play; this screw is to be reset **only if necessary** or on dismantling and reassembly operations.
- On the air cleaner case, there is a spring loaded screw for adjusting the volume of mixture from idling jet (fig. 9, n. 3 and fig. 12, « C »).

To avoid carburation troubles we recommend that this adjustment is carried out by a Vespa dealer.

### STARTING UP when the engine is flooded:

In the case of difficulties caused by flooding (presence of unvaporised mixture in the cylinder), the following methods can be used:

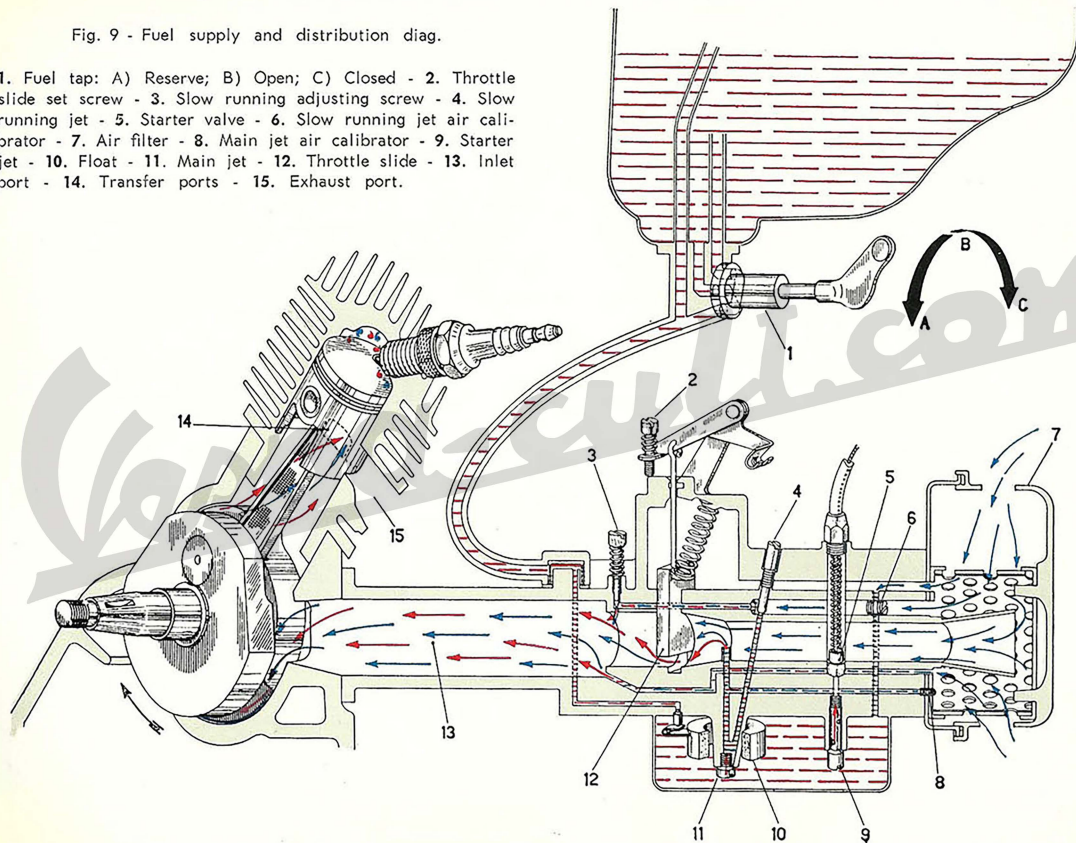
- Attempt push starting: engage the 2nd gear, declutch, push the vehicle to a certain speed, sharply release the clutch and when the engine starts declutch.
- Close the fuel tap (« A », fig. 7), remove the sparking plug (fig. 10) and clean; then kick over the engine several times.

Screw in the sparking plug securely, open the fuel tap and start the engine.



Fig. 9 - Fuel supply and distribution diag.

1. Fuel tap: A) Reserve; B) Open; C) Closed - 2. Throttle slide set screw - 3. Slow running adjusting screw - 4. Slow running jet - 5. Starter valve - 6. Slow running jet air calibrator - 7. Air filter - 8. Main jet air calibrator - 9. Starter jet - 10. Float - 11. Main jet - 12. Throttle slide - 13. Inlet port - 14. Transfer ports - 15. Exhaust port.



## OPERATING AND MAINTENANCE: COMMON OPERATIONS TO CARRY OUT

OPERATION	INSTRUCTIONS	NOTES
<b>SPARKPLUG REMOVAL</b>	<ul style="list-style-type: none"> <li>— For removing the spark-plug access panel, rotate the knob (fig. 2, Nr. 15) and strip off the panel; disconnect the H.T. lead and extract the spark-plug using the box wrench (fig. 10).</li> </ul>	<p>On reassembling the spark-plug ensure that it is into the threaded hole at the correct inclination.</p>
<b>CHANGING OIL IN GEAR CASE</b>	<ul style="list-style-type: none"> <li>— Drain off through hole (fig. 11).</li> <li>— Introduce a small quantity of flushing oil, run the engine a few minutes to ensure thorough circulation and cleaning and drain off again.</li> </ul>	
<b>DISMANTLING AIR FILTER</b>	<ul style="list-style-type: none"> <li>— Refill gear case with about 250 grs. of new oil (up to level of filling hole).</li> <li>— For dismantling the air filter, pivot the seat forwards (fig. 5), remove the tool box and the choke control cable (the cable end ring can be seen on Fig. 12, « D » then dismount the fuel tap rod (see Fig. 12 « E »); next unscrew the two tee head bolts (Fig. 12 « F ») securing the air filter case and extract it.</li> </ul>	<p>This operation of changing oil should be carried out with warm engine.</p>



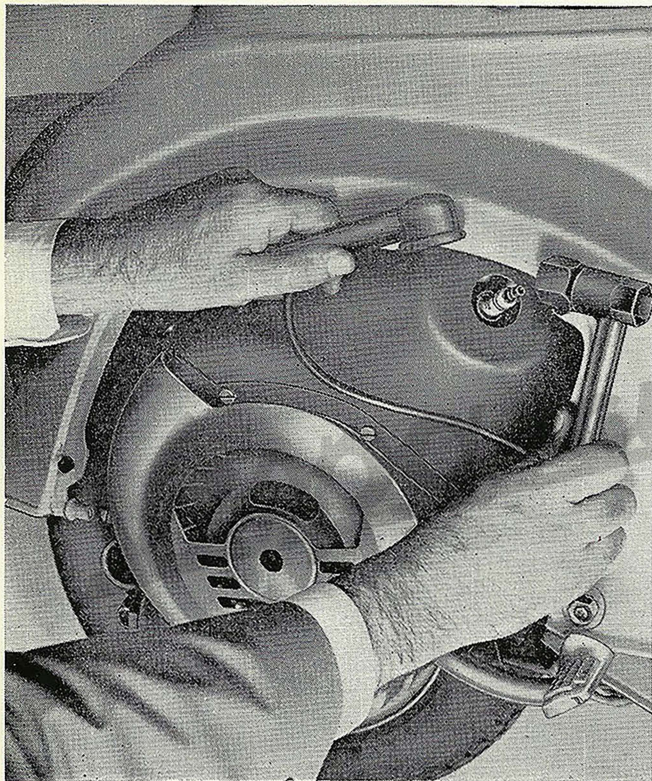


Fig. 10 - Dismantling spark - plug

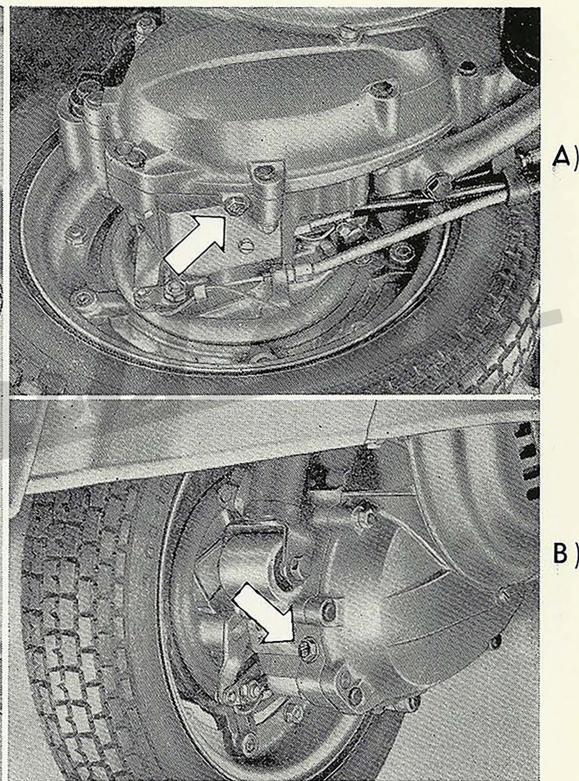


Fig. 11 - « A » oil draining hole; « B » oil filler hole.



## OPERATING AND MAINTENANCE: COMMON OPERATIONS TO CARRY OUT

OPERATION	INSTRUCTIONS	NOTES
<b>DISMANTLING COOLING HOOD AND CYLINDER HEAD</b>  <b>CHANGING WHEELS AND TYRES</b>  <b>BRAKE ADJUSTMENT</b>	<p>About the necessary operations (see on the column « Note ») we recommend that they are carried out by a Vespa dealer.</p> <p>— For dismantling the wheels from the vehicle remove the nuts as indicated in fig. 13. On reassembly tighten said nuts alternately and progressively.</p> <p>— When a tyre has to be removed, first deflate and then remove the nuts joining the two wheel rims (Fig. 15). <b>Notice:</b> The front and rear wheel are interchangeable one with another providing the pressures are readjusted (page 12).</p> <p>— Rotate the adjusting screws indicated in fig. 14, <b>so that the wheel is completely free to rotate</b> when the lever and brake pedal are in the resting position.</p>	<p>In order to remove the cylinder head, dismantle the carburettor unit (screw Nr. 5, fig. 3) the rear wheel, the muffler, release the rear damper unit (Nr. 6, fig. 3), then rotate the engine downwards thus releasing the « cooling hood ».</p> <p>The braking action should commence immediately the respective controls are operated.</p>

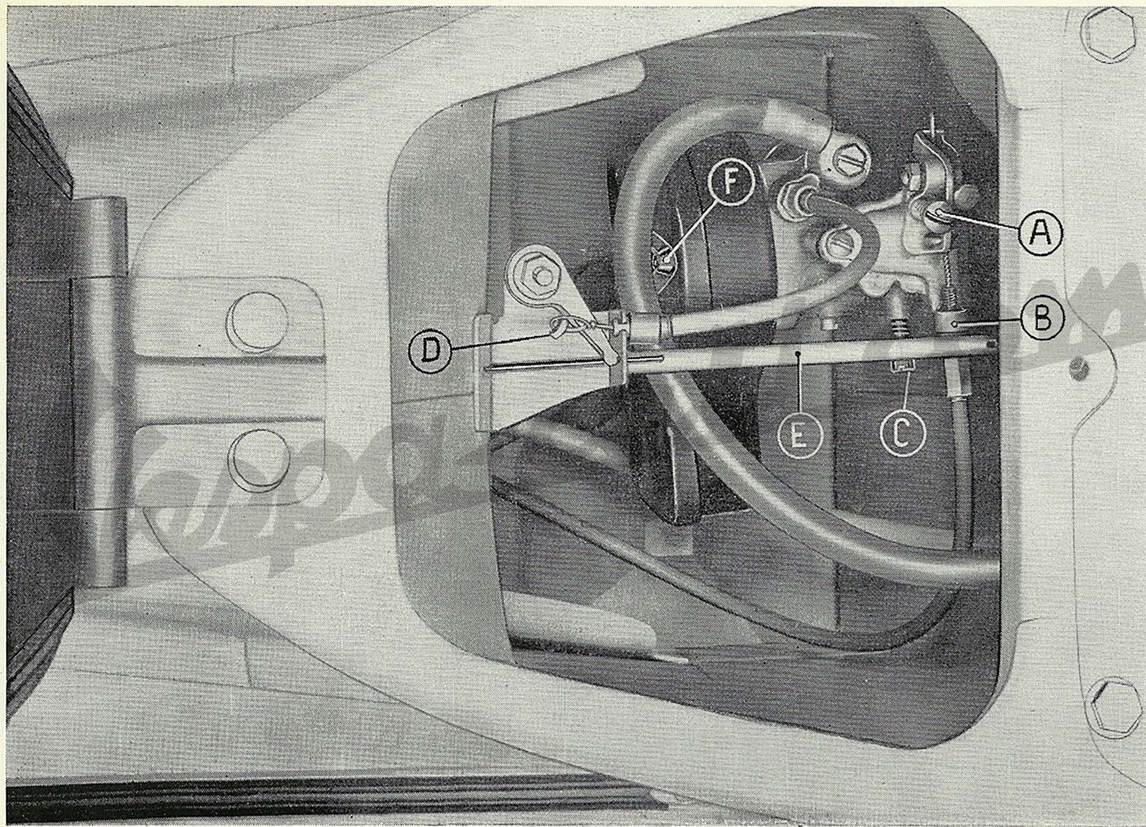


Fig. 12 - To approach the carburettor and air cleaner assy. (For the details indicated on the figure, see pag. 16 - 18).

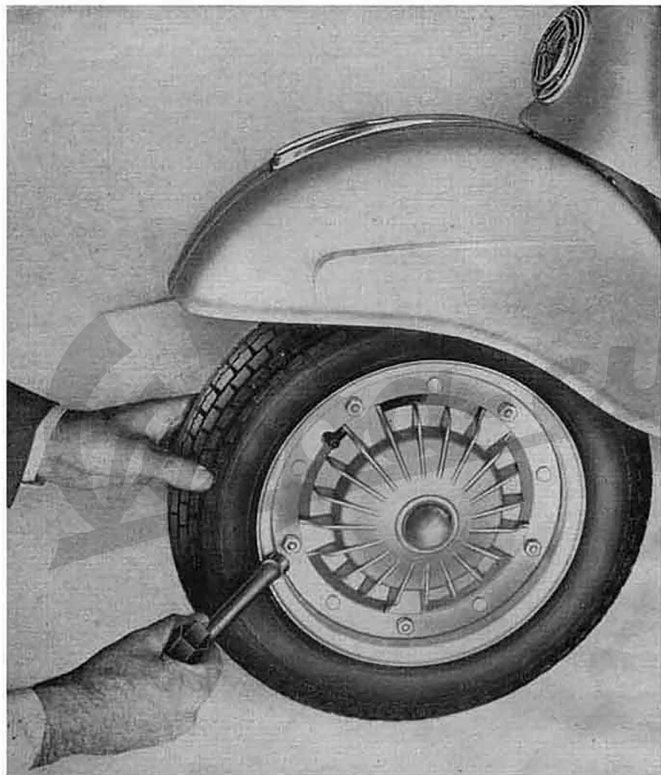


Fig. 13 - Removing wheel from vehicle

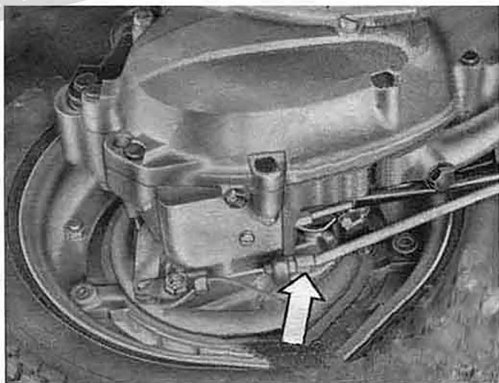
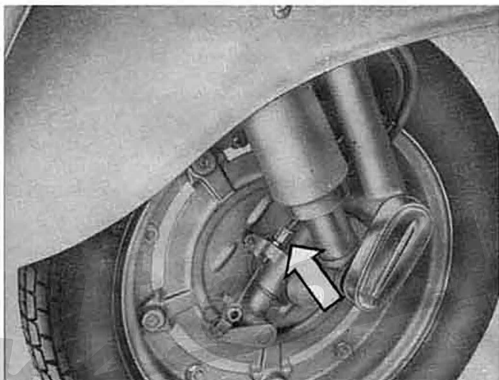


Fig. 14 - Brake radius mechanism



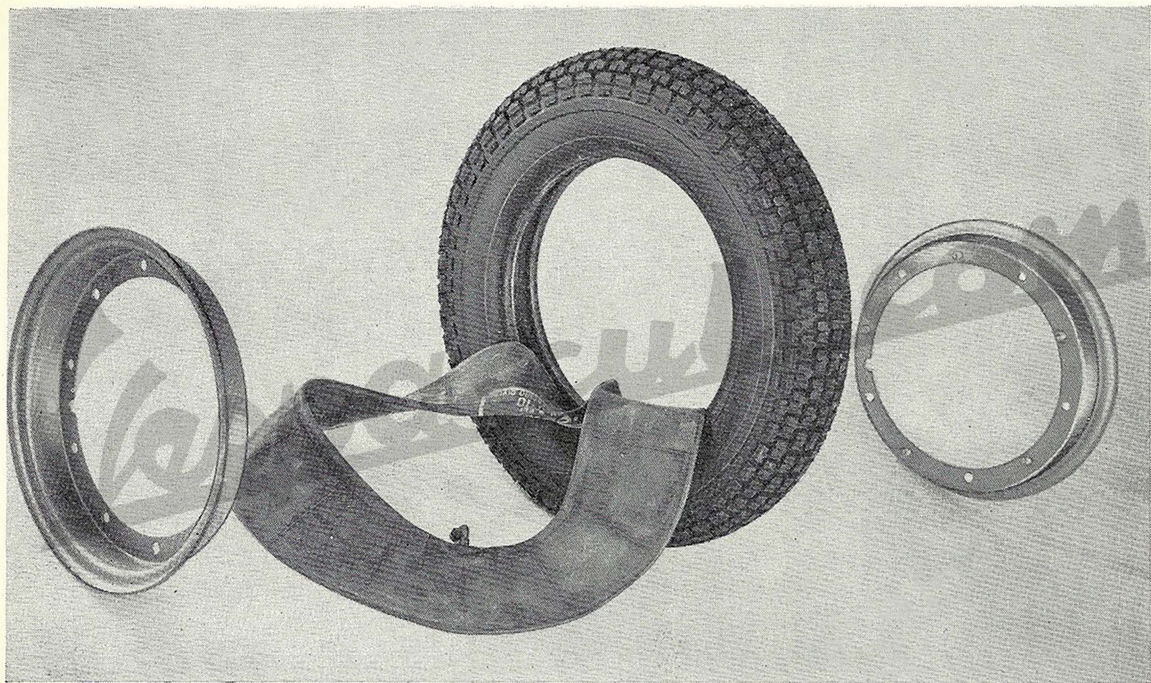


Fig. 15 - Tyre removal

## OPERATING AND MAINTENANCE : COMMON OPERATIONS TO CARRY OUT

OPERATION	INSTRUCTIONS	NOTES
<p><b>CHECKING AND SETTING THE FLYWHEEL MAGNETIC TIMING</b></p>	<ol style="list-style-type: none"> <li>1) Selector in neutral, take off the rubber plug located on the rotor and rotate it by hand until the contact breaker unit (fig. 16) is seen through the hole of the flywheel rotor.</li> <li>2) At the position indicated in the figure the contact breaker points « A » should start to open, i. e. when the extremity of the coil is at a distance of <math>2 \div 4</math> mm. (<math>0.078'' \div 0.15</math>) from the respective pole shoe.</li> <li>3) By rotating again the rotor by hand, <b>the max. opening</b> should be between the limits <b>0.3 to 0.5 mm. (<math>0.011''</math> to <math>0.019''</math>)</b>.</li> <li>4) If the conditions as per points 2) - 3) are not obtained, unscrew the screw « B » and rotate the cam « c » until fo-resaid conditions are obtained.</li> </ol>	<p>In order not to disturb ignition timing, <b>do not slacken the stator plate or coil securing screws.</b></p> <p>If necessary to adjust the spark advance, <b>consult the Service Station.</b></p> <p>Ensure screw « B » is tightened after having finished the operation.</p>



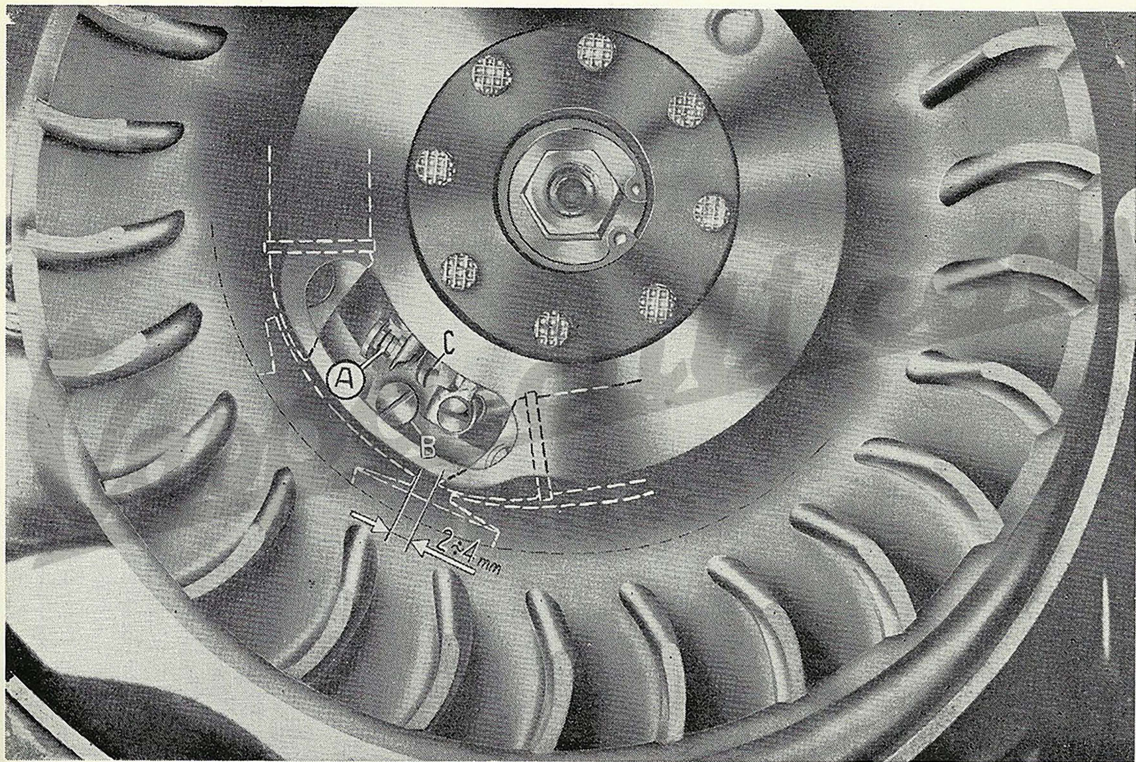


Fig. 16 - Operations for checking the «magnetic» timing of the flywheel.

## OPERATING AND MAINTENANCE : COMMON OPERATIONS TO CARRY OUT

OPERATION	INSTRUCTIONS	NOTES
<p><b>SUBSTITUTING BULBS</b></p> <p><b>SETTING THE HEADLAMP</b></p>	<p>Should one of the headlamp bulbs fail, before fitting a replacement, check the rear light bulb for serviceability and vice versa.</p> <p>The correct setting of the main beam can be obtained both horizontally and vertically as follows:</p> <p>Check that both front and rear tyres are inflated to correct pressures; i. e. 1.25 and 2.5 Kg/cm<sup>2</sup> (17 and 35.5 p.s.i.). Place the scooter on a level floor in front of a white wall as seen in Fig. 17. Start the engine, hold the throttle control twist grip at about 1/3 and set the switch on « main beam ».</p> <p>With two persons on the Vespa, slacken the two screws securing the headlamp, then move the latter as required, in order that the beam axis coincides with point « 0 » on the wall. Tighten the screw firmly.</p>	<p>Before switching on the new light bulbs, check (on assy.), that the socket contact points are efficient.</p> <p>This operation can be carried out also with the driver only sitting on the saddle. In this case, of course, the beam alignment should be altered whenever the scooter is being ridden by both driver and passenger.</p>



## SETTING THE HEADLAMP

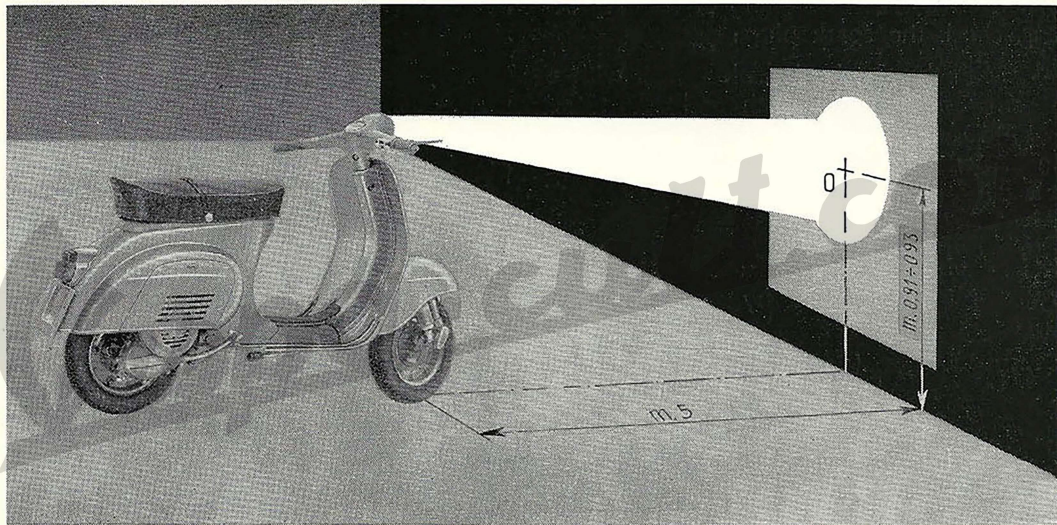


Fig. 17 - Setting the headlamp

N. B. - The point « 0 » is valid for setting with one or two persons mounted.

Note: m. 5 = 16 FT approx.;  $m. 0.91 \div 0.93 = 3$  FT approx.

## MAINTENANCE

When difficulties of starting or running occur, check the spark plug:

— Clean the spark plug electrodes with a steel wire or emery cloth and adjust the gap 0,6 mm. (0".023). Check porcelain insulation: if cracked or broken change the plug.

Clean in neat gasoline.

**It is advisable not to change the type of spark plug prescribed by factory.**

### **Every 4000 Km (2400 mls):**

- 1) - Check oil level in gear case.
- 2) - Clean the exhaust pipe using a hooked steel wire.
- 3) - De-coke the engine (see pag. 20) cylinder head, piston crown and cylinder ports). Ensure that not residual carbon deposits remain inside the cylinder.

4) - Lubricate the brake lever fulcrum points and the gear shifter.

5) - Remove air cleaner (see pag. 18) and wash it, in neat gasoline, air blast dry.

6) - Clean and grease the nipple of the front suspension (first detail, R. H. on fig. 18); remove the rubber plug of said suspension (fig. 18) and refill with grease the concerning housing.

### **Every 8000 Km (4800 mls):**

- 1) - Change oil in gear case (see pag. 18).
- 2) - Grease control cables and lubricate the felt lubricating pad on flywheel.
- 3) - Clean, and if necessary, register the contact breaker points (fig. 16). To avoid a faulty ignition or some other defects, **consult your Service - Station for this operation.**

## LAYING UP

We recommend that the following operations be carried out:

- 1) - Clean down the vehicle.
- 2) - With the engine stationary, piston at the lower dead center position, **remove the spark plug**, next, introduce through the

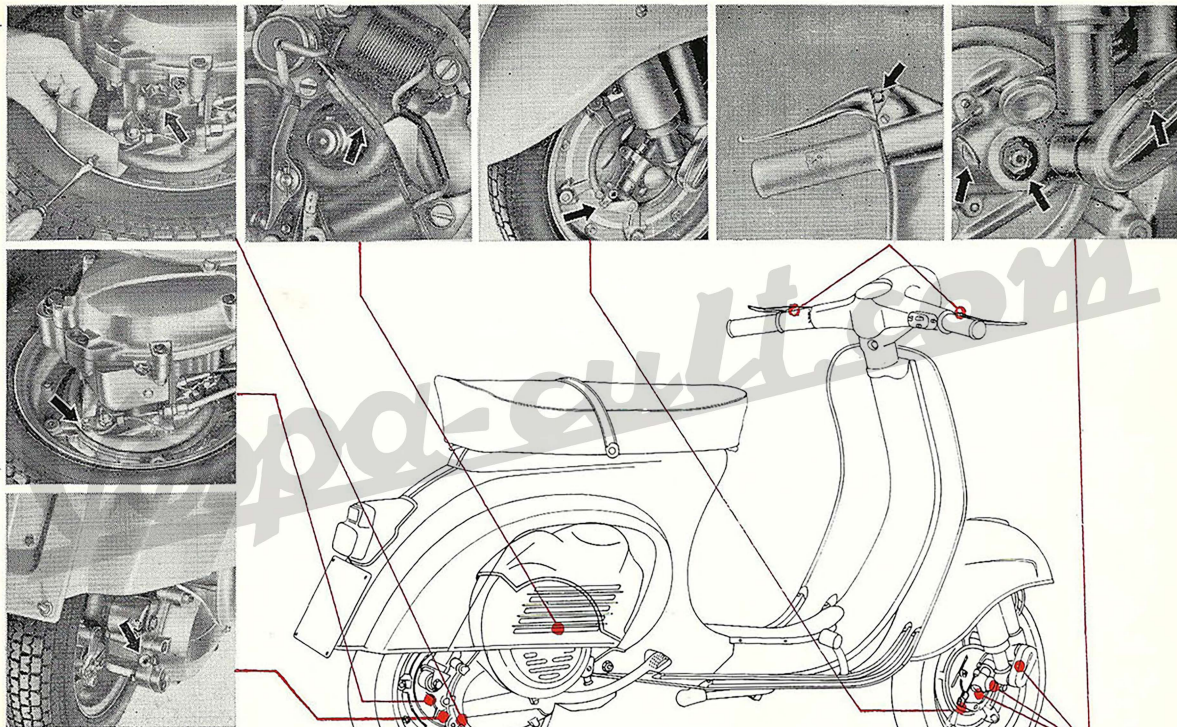
threaded hole of the latter 10 to 15 cc. of oil SAE 30. After said operation act on the kickstarter three or four times.

- 3) - Drain off all fuel contained in the fuel tank; then grease over all unpainted metallic parts; next raise the wheel off the ground by placing wooden chocks under the footrest.



## SUMMARY OF INSTRUCTIONS FOR MAINTENANCE AND LUBRICATION

PRINCIPAL OPERATIONS TO CARRY OUT		Lubricants	Notes
4000 Km. (2400 mls)	Every 8000 Km. (4800 mls)		
<b>Gear box</b> (top up)  Fulcrum points of <b>brake lever</b> and pedal <b>Speedo</b> drive and transmission <b>Gear selector</b> <b>Front suspension</b>  Decoking <b>silencer</b> Decoking <b>cylinder head and piston</b> ★  Cleaning and adjusting sparking <b>plug electrodes</b>	<b>Gear box</b> (Change oil)  Greasing <b>control cables</b> ★  Cleaning <b>air filter</b> (in petrol).  <b>Felt lubric. pad</b> on flywheel ★  Cleaning and adjusting <b>contact breaker points</b> (check timing ★)	Oil SAE 30.  } Esso Beacon 3 } Shell Retinax A } Mobilgrease MP   2% by volume Pure mineral oil SAE 30. (°)  Esso Univis J 43 - Shell Tellus Oil 13 - Mobilfluid 62.	★ Consult your Service Station.         (°) e. g.: Esso 2 - T Motor Oil; Shell Golden Motor Oil; Shell X - 100 2 T.
Engine: At each refilling (lubricated by oil in fuel).			
Front and rear dampers (only if defective ★)			



OIL SAE 30

Fig. 18 - Lubrication scheme

Notice - For other lubricants see at page 30.

## CLEANING THE VEHICLE

### Notice :

**Washing and polishing operations** should not be carried out in the sun, particularly during the summer when the bodywork is warm.

**Under no circumstances should petrol or Diesel oil** be used for washing painted surfaces or plastic material as they will deteriorate.

Always wash the scooter before polishing.

### 1) Engine

For cleaning the exposed surface of the engine use paraffin, a brush and clean rags.

### 2) Bodywork.

#### — Washing.

Painted parts should be washed down using a low pressure hose. Do not use a high pressure system as grit may be forced into the paint.

When the dirt and grime becomes soft, sponge off using one of the « car type » shampoos available (use a product of the type Rolene and Teepol, which are employed in aqueous solution,  $3 \div 5\%$  by weight). First, lightly wash the painted surface of the scooter, in order to avoid scratching. Thoroughly rinse with plenty of water. Dry off using a clean chamois leather to eliminate water marks.

#### — Spots.

To remove spots caused by tar, grease, in-



sects, etc., rub gently with a soft cloth dipped in oil or turpentine. More persistent marks can be removed with a solution of warm water and car shampoo.

Carry out this procedure periodically, to eliminate permanent paintwork damage.

#### — **Polishing.**

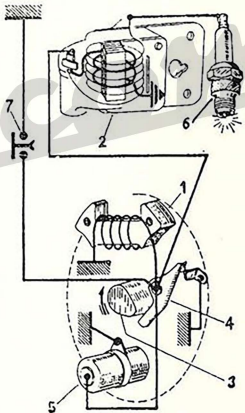
If after washing, as previously described, the original condition is not restored, apply evenly a thin coat of good quality wax polish and shine with a soft cloth, rubbing gently in a side to side manner.

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## FAULT FINDING

When the machine does not run properly, inspect and rectify as explained below.

If the suggested remedies are not sufficient in eliminating the trouble, consult your Dealer.

Fault finding	Remedies	Notes
<p><b>HARD STARTING</b></p> <p><b>1. - Fuel system - Carburation - Ignition.</b></p> <p>Lack of fuel.</p> <p>Filter, jets, fuel tap, carburettor body clogged or dirty.</p> <p>Engine flooding.</p> <p>Air cleaner choked or dirty.</p> <p>Spark plug dirty - Porcelain of sparking plug cracked.</p> <p>Breaker points dirty, worn or pitted; gap between points incorrect.</p>	<p>Turn to Reserve and refill as soon as possible.</p> <p>Remove, wash in petrol and blow dry.</p> <p>See page 16.</p> <p>See page 18, fig. 12.</p> <p>Disconnect the plug lead. Check if sparking occurs between lead and crankcase when the kickstarter is operated.</p> <p>Consult your Dealer.</p>	 <p>Fig. 19 - Ignition circuit</p> <p>1. Flywheel coil - 2. H. T. coil - 3. - Flywheel cam - 4. Contact breaker - 5. Condenser - 6. Sparking plug - 7. Engine cut-out.</p>

Fault finding	Remedies	Notes
<p><b>VARIOUS RUNNING DEFECTS</b></p> <p><b>1. - Lack of power - High fuel consumption.</b></p> <p>Spark plug misfiring (see fig. 19).</p> <p>Silencer (or engine) choked.</p> <p>Spark plug loose in the cyl. head.</p> <p>Cylinder head loose.</p> <p>Air filter choked or dirty or choke control incorrectly set.</p> <p><b>2. - Defective electrical equipment.</b></p> <p>Wire terminals disconnected or carelessly connected.</p> <p>Headlight beam incorrectly set.</p> <p>Defective bulbs.</p>	<p>Clean or substitute. Clean the contact breaker - Check the electrode gap of the sparking plug; check the flywheel timing (see page 24 - 25).</p> <p>Clean (see page 28).</p> <p>Screw down with a wrench.</p> <p>Set head accurately and tighten nuts.</p> <p>Wash in neat petrol, air blast dry. Check choke control mechanism.</p> <p>Carefully check and connect.</p> <p>Adjust (see page 26).</p> <p>See page 26 for substituting.</p>	<p><b>Notice:</b> When the carburettor is defective, the engine is lack in compression, noisy engine, defective suspension and brakes, general mechanical failures, consult your Dealer.</p>



## GENERAL SPECIFICATION

**Engine** (see fig. 6, performance and specifications at pag. 6): The engine is pivoted to the chassis of the vehicle through the crankcase swinging arm (clutch side).

The rear wheel is fitted on the outer side of the drive shaft.

**Lubrication** of engine components (piston, cylinder, crankshaft, main bearing - flywheel side) is effected by the oil in the fuel mixture.

The clutch, the main bearing - clutch side - and gear box function in an oil bath.

**Fuel supply** (see fig. 9): gravity feed with mixture of oil and gasoline.

Three way tap (« closed », « open », « reserve »).

Carburettor provided with a throttle slide and starter device; air intake located inside the frame.

**Clutch** (see fig. 6): multiplate on the layshaft. The unit is operated by apposite lever located on L. H. handlebars and adjustable cable.

**Gear box** (see fig. 8): four speed drive with mesh gears. Operated by the twist grip on L. H. handlebar which functions in conjunction with the **clutch** control lever.

Transmission ratio engine to driving wheels:

Bottom gear	. . . . .	1 : 14.74
2nd gear	. . . . .	1 : 9.80
3rd gear	. . . . .	1 : 7.06
Top gear	. . . . .	1 : 5.31

**Starting** (see fig. 7): by means of a kick-starter on the R. H. side of the vehicle.

**Cooling**: at all speeds by means of a centrifugal fan.

**Integral chassis** (see fig. 1): of pressed sheet steel with streamlined monocoque type structure.

**Handlebars:** Light alloy casting comprising **speedometer**. All transmission cables and various controls are concealed therein.

**Suspensions:** front and rear suspensions with helical spring and hydraulic damper.

**Wheels:** Interchangeable and made up of 2.10" dia. pressed steel flanges, onto which are mounted 3.00 - 10" tyres.

**Saddle:** dual saddle (optionally single saddle and luggage rack). The dual saddle is provided with a clip.

**Brakes:** cable operated expanding type. Front brake is operated by hand-lever (R. H. handlebars); the rear brake is pedal operated on R. H. footboard.

**Parking stand:** a two legged stand with a central return spring.

**Steering lock:** the locking device operates by mean of a sliding bar acting on the steering column (fig. 4).

## STANDARD TOOL KIT

**Wrenches:** 1 box wrench (11-17-21 mm.), 2 single open - ended wrenches (7 - 8 mm.).

**Screwdriver:** 1 item.

These tools are contained in a canvas roll together with this booklet which is placed in a tool box located under the saddle.

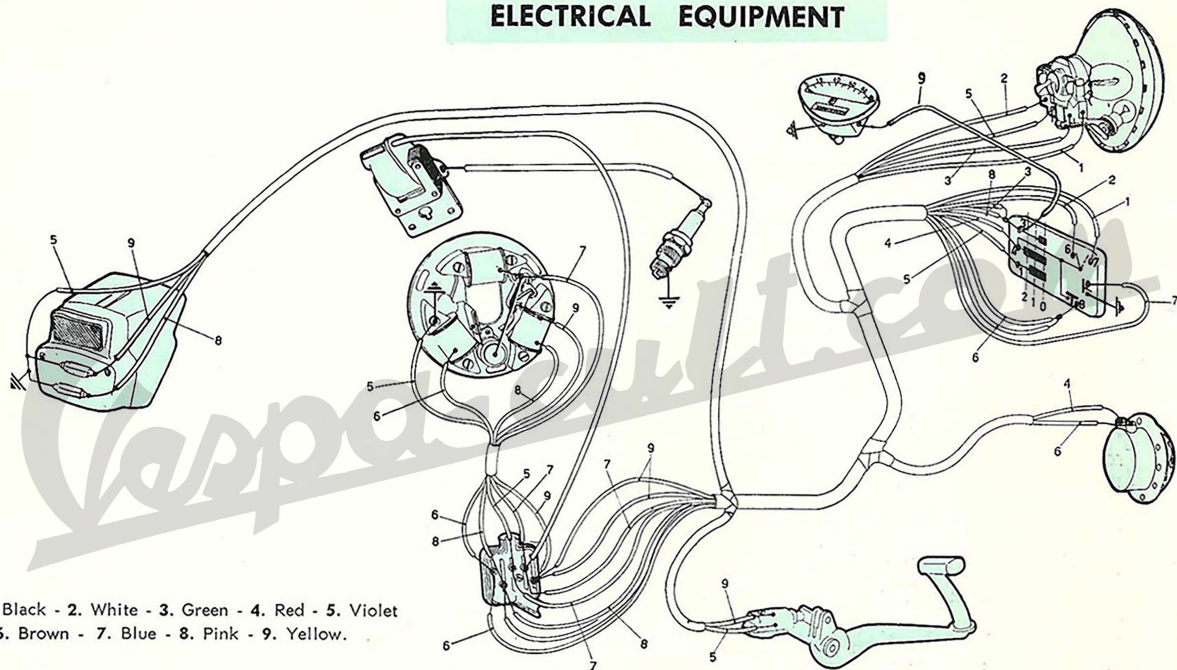
## A C C E S S O R I E S

On request the vehicle can be furnished with a **foam rubber pillion seat**, which is to be applied over the luggage rack; with **spare wheel and bracket**, which can be secured to the vehicle a **windscreen**.

### Notice

For assembling said accessories we suggest to consult your Dealer.

## ELECTRICAL EQUIPMENT



1. Black - 2. White - 3. Green - 4. Red - 5. Violet  
 - 6. Brown - 7. Blue - 8. Pink - 9. Yellow.

**The electrical equipment** is fed by alternating current, nominal voltage 6 V. This equipment consists of the following lighting and signalling devices: **The headlamp**, dia. 115 mm., 6 V - 25/25 W bulb (main and dipped beam); **front pilot light and light for registration plate** 6 V - 5 W; **Stop light** 6 V - 10 W; **Horn** 6 V a. c.; **Speedometer bulb** 6V - 0,6 W.



## ELECTRICAL EQUIPMENT

Fig. 20 - 21 - Installation of electrical equipment - see Fig. at page 38 and electrical connections - see Fig. at the present page.

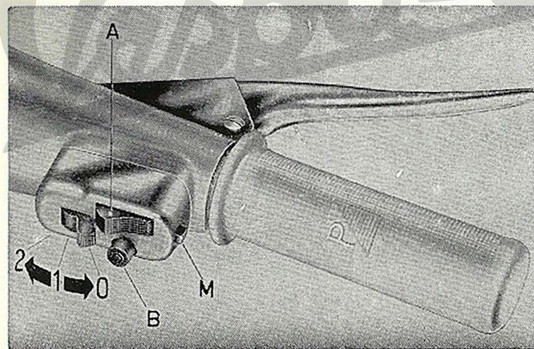
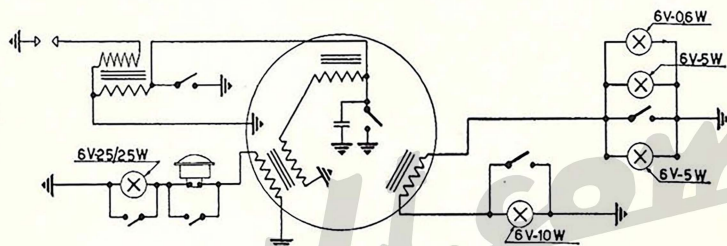


Fig. 22 - Light and dip switch

0 - 1 - 2: Switching lever positions. - 0. Lights off. - 1. Pilot light and tail lamp on. - 2. Head light and tail lamp on - A: Main and dipped beam switch - B: Horn button - M: Engine cut-out.

## IDENTIFICATION DATA

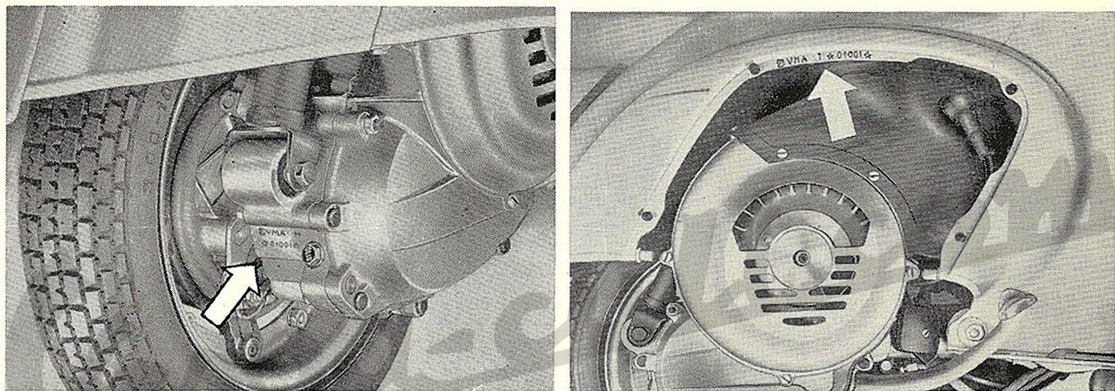


Fig. 23 - Serial number stamped on engine VMA 2 M..... and serial number stamped on frame VMA 2 T ..... with the respective progressive numbers.

**Notice** - These numbers should be quoted when ordering Spare Parts.

The descriptions and illustrations in this booklet are not to be taken as binding on the Manufacturer. The essential features of the model described and illustrated herein remaining unaltered, the PIAGGIO Firm reserves therefore the right to carry out at any moment, without being obliged to bring this booklet up-to-date in due course, modification that may occur concerning machine units and parts, or delivery of accessories, that the Firm deems to be convenient on improvement purposes of for what may concern manufacturing or commercial requirements.



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