OPERATION AND MAINTENANCE

VESPA 125 primavera

PIAGGIO

Vespa

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.

CONTENTS

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.

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.

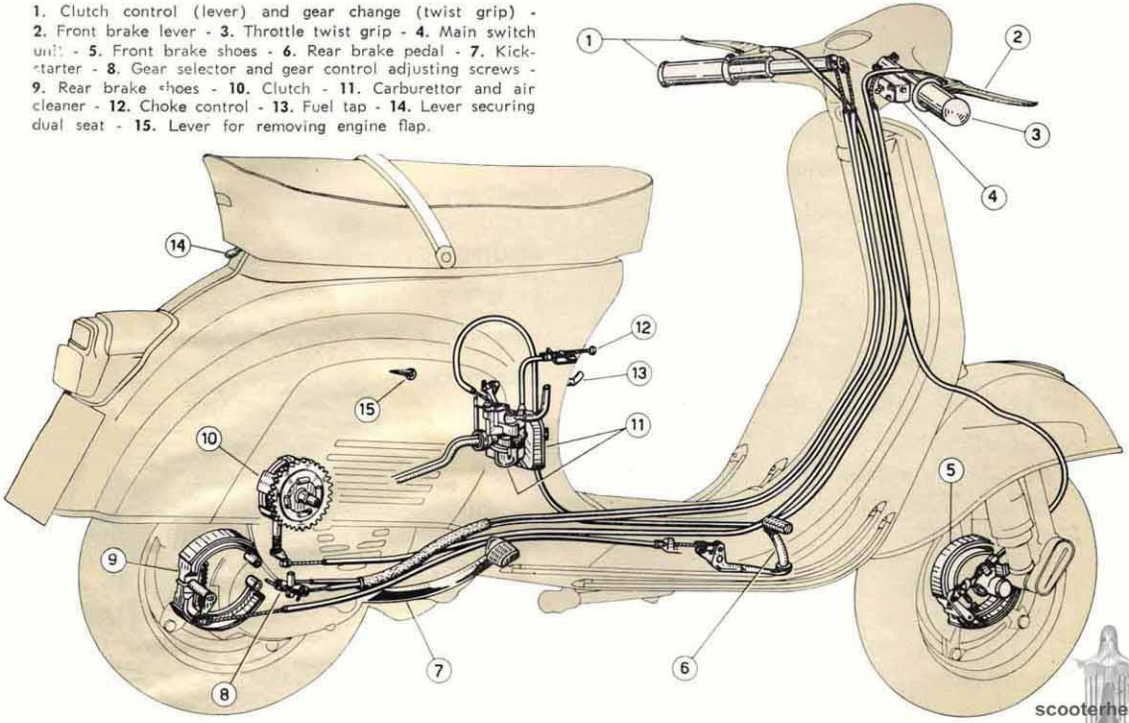


Fig. 2 - Installation of controls and transmission.

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 heigth . . . 1015 mm (40".0)

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

Turning radius . . . 1650 mm (64".9)

Total dry weight . . 73 Kg. (.

ENGINE: Single horizontal cylinder two ke rotary distribution: i. e., carburated mix ture is regulated by the crankshaft rotat

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° ± .

Sparking plug: Be pion L 86; AC 42 F;

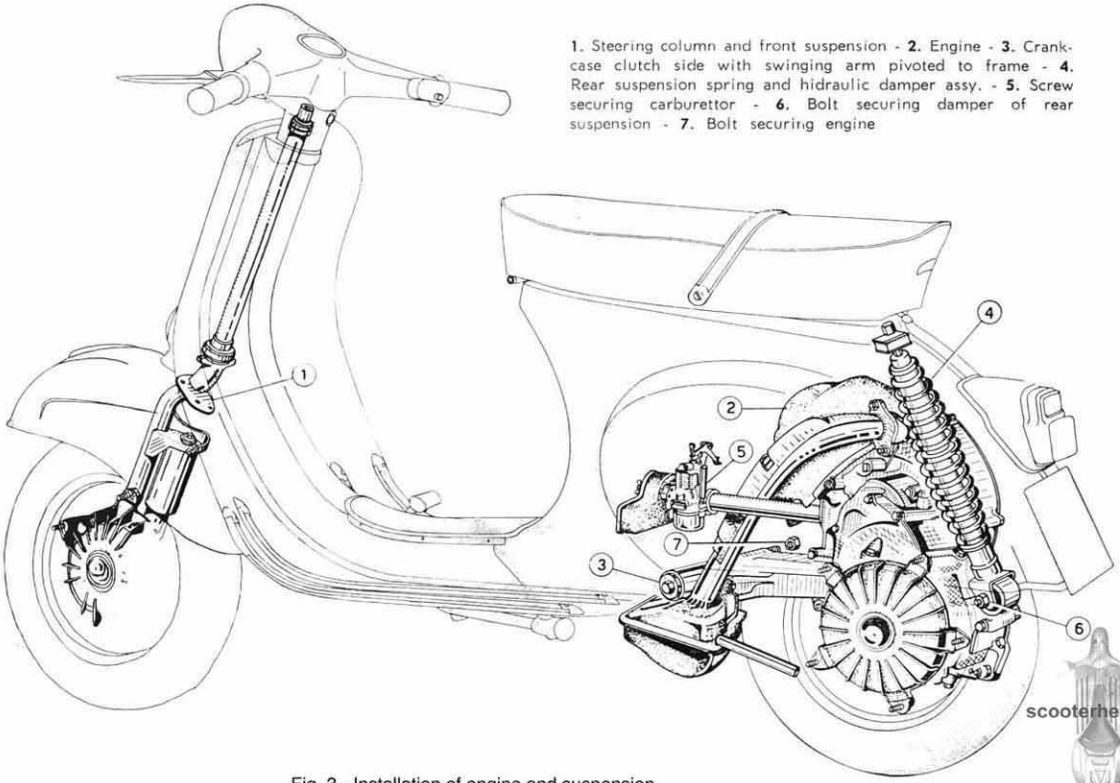


Fig. 3 - Installation of engine and suspension.

OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS	NOTES
STEERING LOCK a) Locking the handlebars	To lock the vehicle, turn the handlebars anticlockwise up to the limit stop; **rotate the key and push inwards,** 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. When the handlebars are locked the key will now spring back to its original position and can then be withdrawn.	The key can be extracted from the lock even if the handlebars are free.
b) Unlocking the handlebars	To release the handlebars, insert the key in **the lock,** turn it **to the left and pull it back;** then turn the handlebars in the normal position.	
TOOL BOX LOCK (left hand side of vehicle)	Security lock on the steering column and tool box lock are both actioned by a single key.	

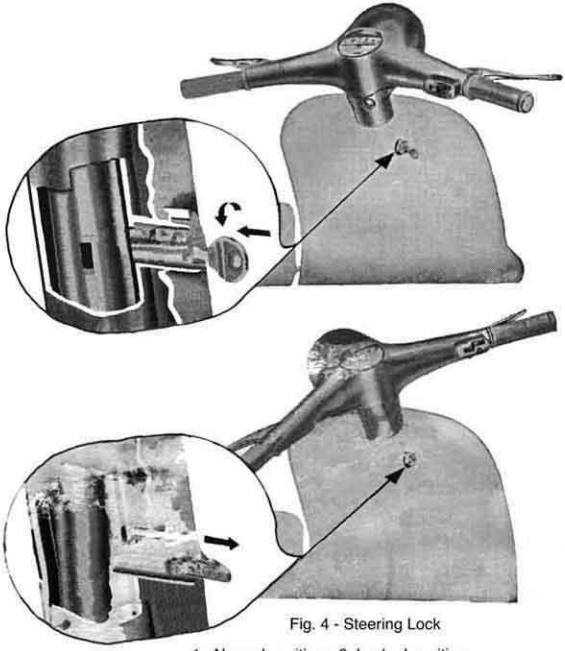
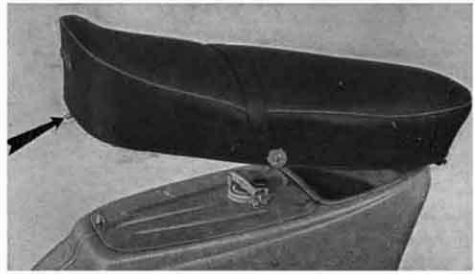
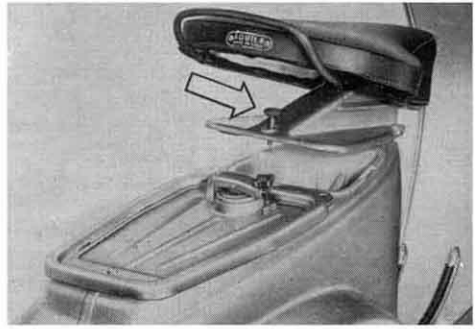


Fig. 4 - Steering Lock

1. Normal position - 2. Locked position
NOTE - The arrows indicate teh operation to be carried out for locking (1) and for unlocking (2).



A)



B)

Fig. 5 - < A >. Dual Saddle (for pivoting the seat on its forward edgepush lever indicated by arrow).
< B > Pillion seat. Act on the devices indicated by arrow.

OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS	NOTES
FUEL SUPPLY	**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; Total 2 T**	Ensure that the fuel tank breather is always clean.
ACCESSING TO FUEL TANK AND TO TOOL BOX	The fuel tank is provided with a hinged plug located under the saddle. 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. Whem 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.	

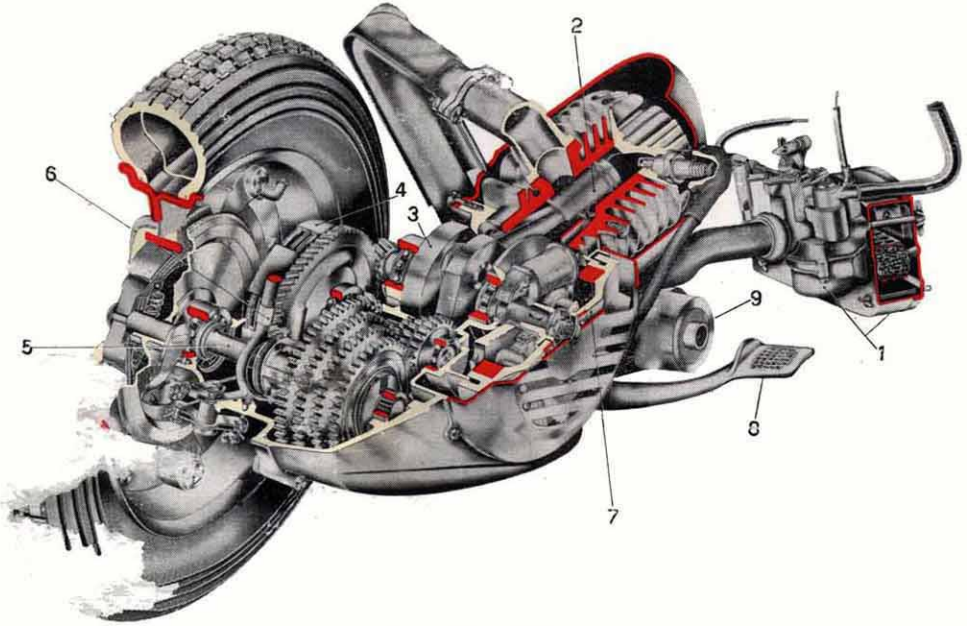


Fig. 6 - Engine section

1. Group Carburator 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
BEFORE OPERATING THE VEHICLE	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.	
RUNNING - IN PERIOD	**For running - in the first 1000 Km. (600 mls), do not maintain the throttle fully open for long periods.** After first 1000 Km. (600 mls) change oil in gear box (see fig. 11) and check that all nuts and bolts are not slack.	
TYRE PRESSURE	**Front** 1.25 Kg/cm² (17 p.s.i.): **Rear** 1.6 Kg/cm² (22.7 p.s.i.) with one up; **Rear** 2.3 ÷ 2.5 Kg/cm² (32.7 ÷ 35.5 p.s.i.): with two up.	

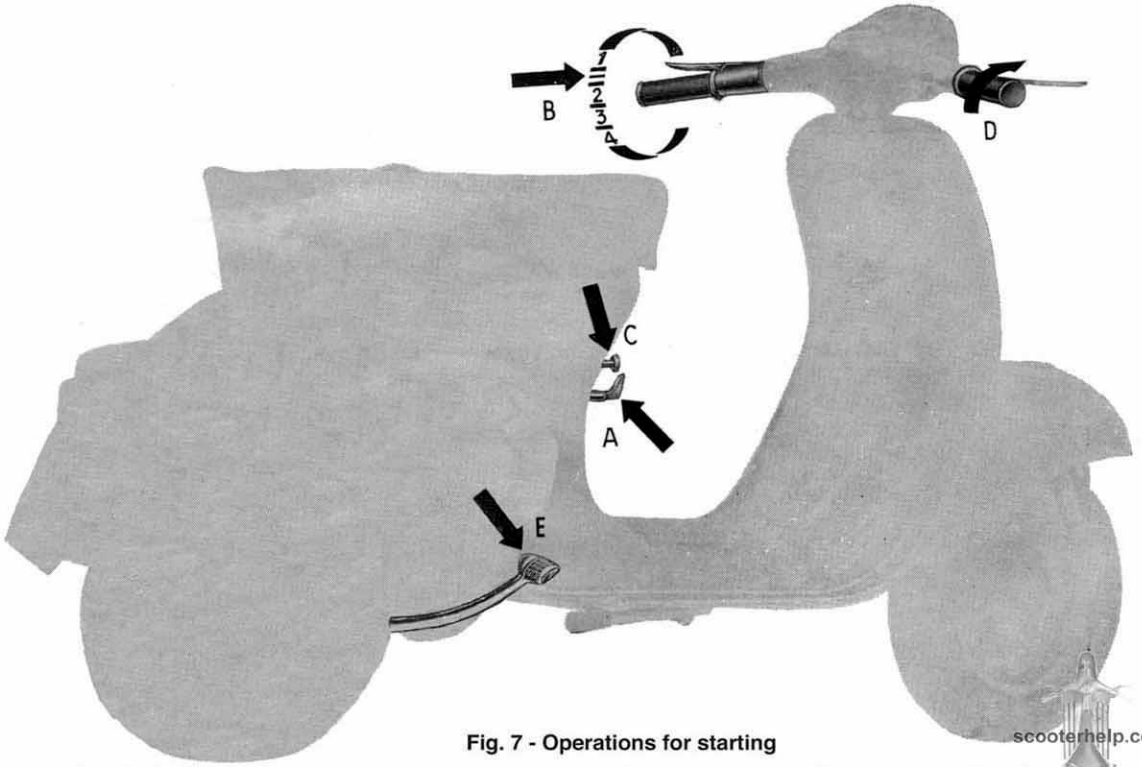


Fig. 7 - Operations for starting

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
STARTING	— Carry out the operations indicated on fig. 7. Do not use the choke when the engine is warm; **as soon as the engine is running smoothly bring the choke control back to its normal position.**	In case of hard starting see page 16.
SETTING THE SCOOTER IN MOTION	— 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.	Do not attempt to ride the vehicel unless the key is inserted and the handlebars rotate freely.
GEAR CHANGE	— Close the throttle, declutch and rotate the gear change grip to a higher or lower gear, as the case may be (fig. 8).	When a gear change is necessary to decelerate do not hesitate in changing down
STOPPING THE ENGINE	— Before stopping the engine change to « neutral » and then switch off the ignition.	

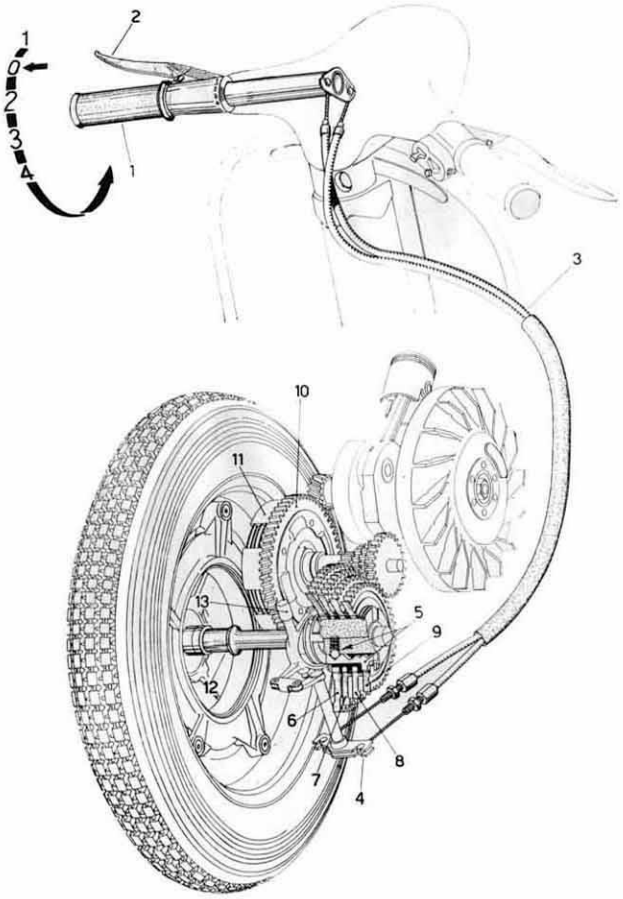


Fig. 8 - Gear transmission

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

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 TO CARBURATTOR

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 adjustement 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:

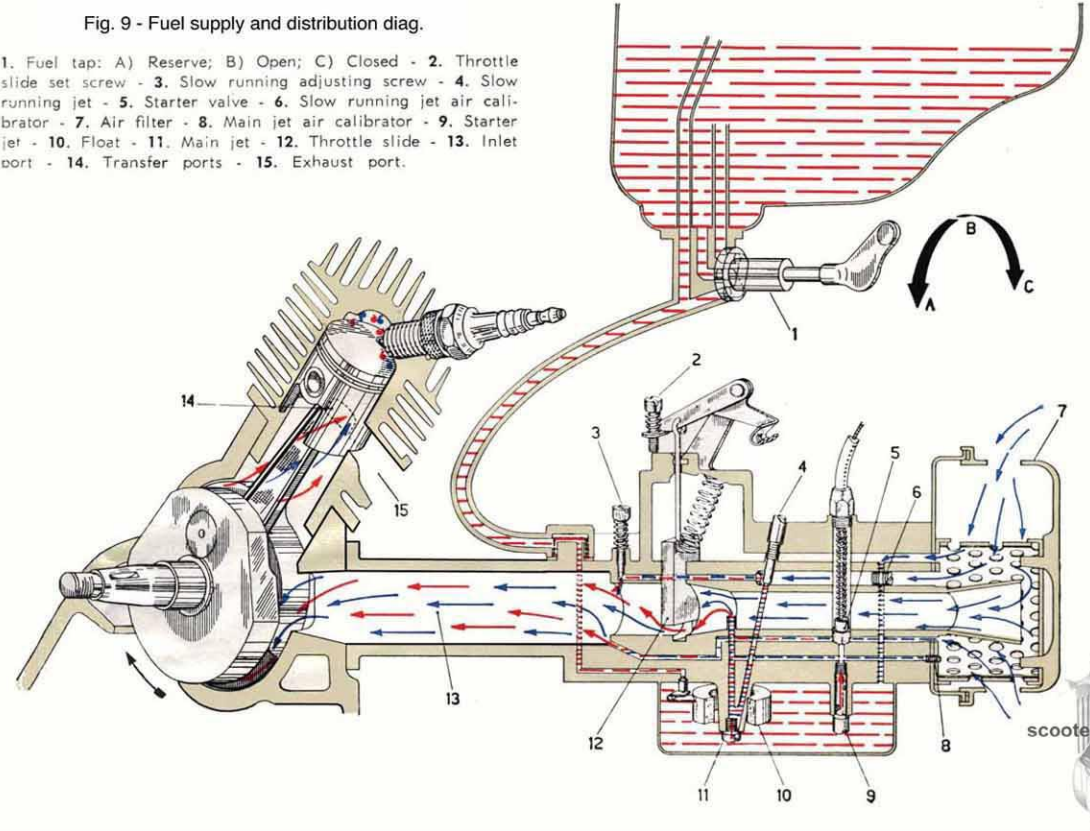
— Attempt push starting: engage the gear, declutch, push the vehicle to a certain speed, sharply release the clutch and when the engine starts declutch.

— Close the fuel tap, remove the sparking plug, clean; then kick over the engine several times.

Screw in the sparking plug, open the fuel tap and

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
SPARKPLUG REMOVAL	— 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).	On reassembling the spark-plug ensure that it is into the threaded hole at the correct inclination.
CHANGING OIL IN GEAR CASE	— Drain off through hole (fig. 11). — Introduce a small quantity of flushing oil, run the engine a few minutes to ensure thorough circulation and cleaning and drain off again. — Refill gear case with about 250 grs. of new oil (up to level of filling hole).	This operation of changing oil should be carryed out with warm engine.
DISMANTLING AIR FILTER	— 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.	

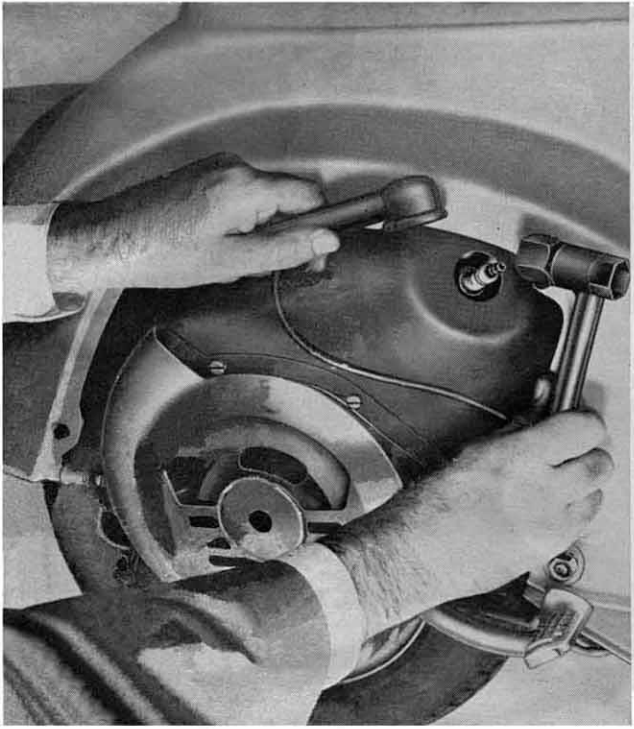


Fig. 10 - Dismantling spark - plug

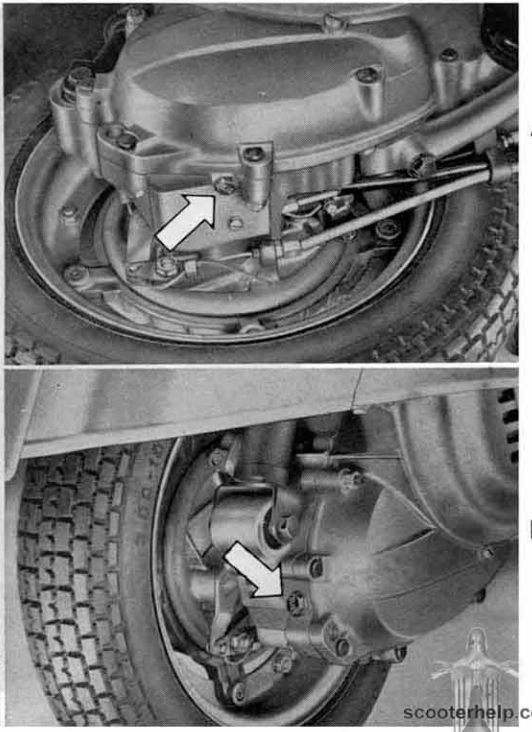


Fig. 11 - < A > oil draining hole; < B > oil filler hole

OPERATING AND MAINTENANCE: COMMON OPERATIONS TO CARRY OUT

OPERATION	INSTRUCTIONS	NOTES
DISMANTLING COOLING HOOD AND CYLINDER HEAD **CHANGING WHEELS AND TYRES**	About the necessary operations (see on the column « Note ») we recommend that they are carried out by a Vespa dealer. — For dismantling the wheels from the vehicle remove the nuts as indicated in fig. 13. On reassembly tighten said nuts alternately and progressively. — When a tyre has to be removed, first deflate and then remove the nuts joining the two wheel rims (Fig. 15). **Notice:** The front and rear wheel are interchangeable one with another providing the pressures are readiusted (page 12).	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 ».
BRAKE ADJUSTMENT	— Rotate the adjusting screws indicated in fig. 14, so **that the wheel is completely free to rotate** when the lever and brake pedal are in the resting position.	The braking action should commence inmediately the respective controls are operated.

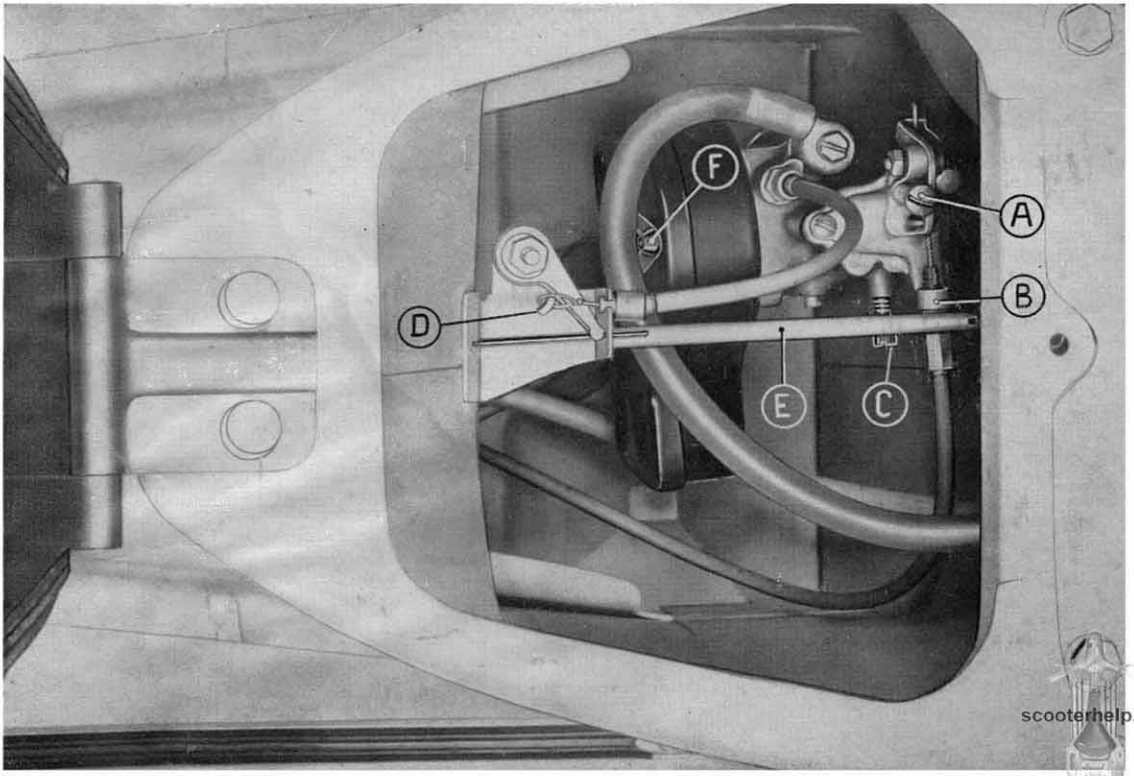


Fig. 12 - To approach the carburator and air cleaner assy. (For details indicated on the figure, see pag. 16 - 18).

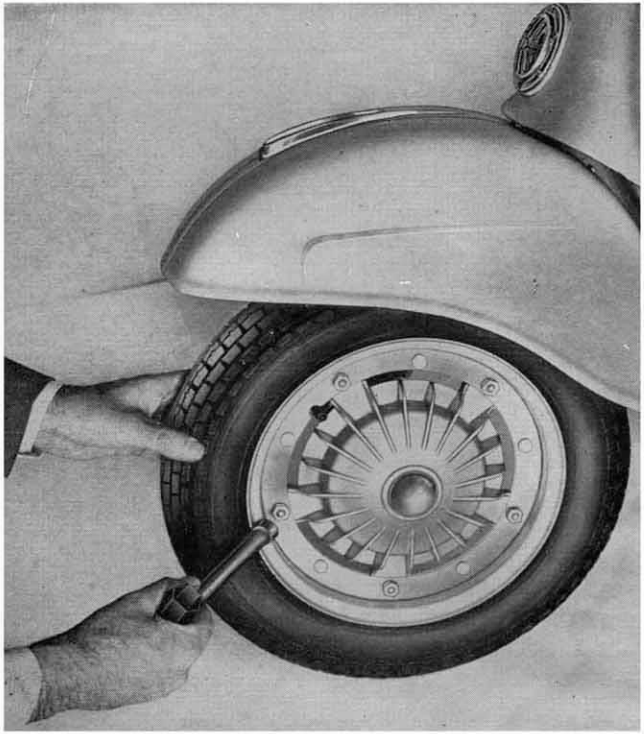
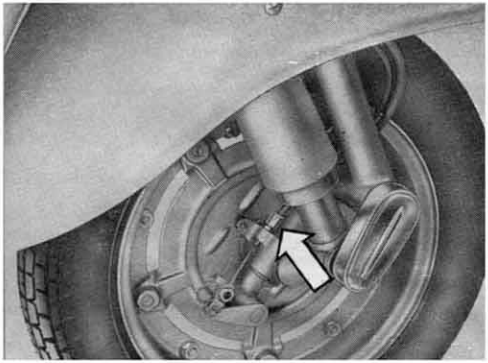


Fig. 13 - Removing wheel from vehicle



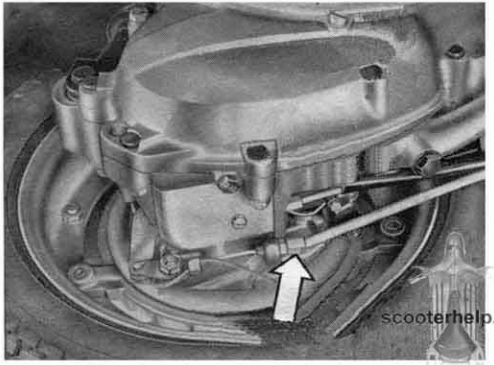


Fig. 14 - Brake radius mechanism

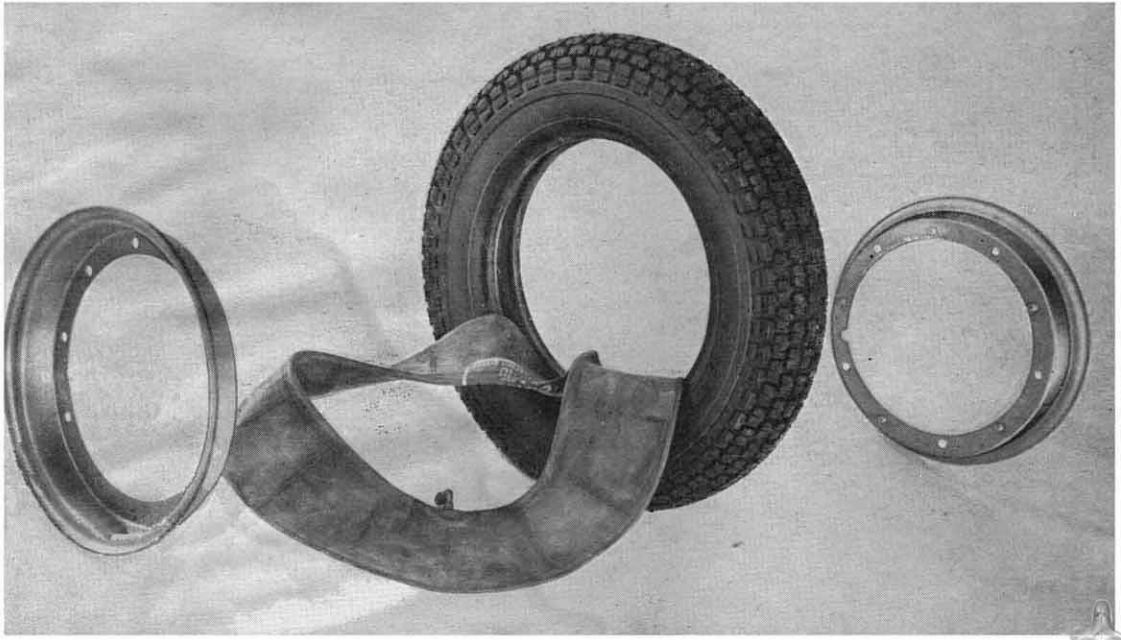


Fig. 15 - Tyre removal

OPERATION	INSTRUCTIONS	NOTES
CHECKING AND SETTING THE FLYWHEEL MAGNETIC TIMING	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. 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 2 ÷ 4 mm. (0.078" ÷ 0.15) from the respective pole shoe. 3) By rotating again the rotor by hand, **the max. opening** should be between the limits **0.3** to **0.5 mm. (0.011"** to **0.019").** 4) If the conditions as per points 2) - 3) are not obtained, unscrew the screw « B » and rotate the cam « c » until foresaid conditions are obtained.	In order not to disturb ignition timing, **do not slacken the stator plate or coil securing screws.** If necessary to adjust the spark advance, **consult the Service Station.** Ensure screw is tightened having finished the operation.

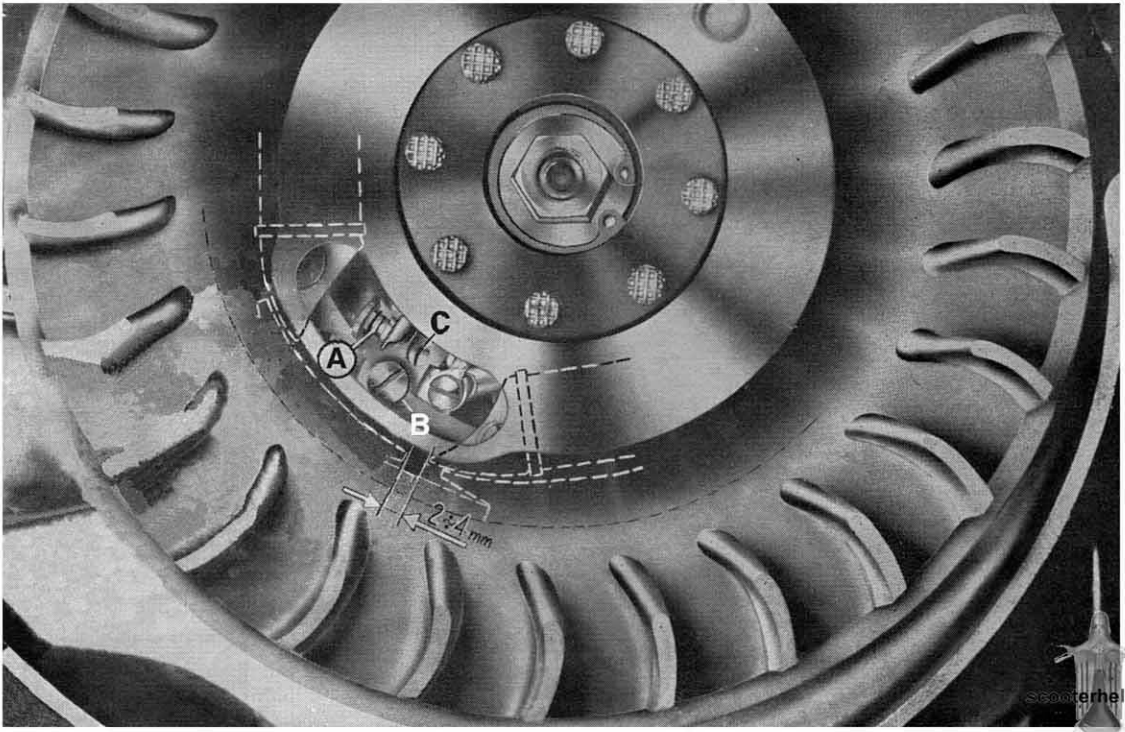


Fig. 16 - Operations for checking the <magnetic> timing of the wheel.

OPERATING AND MAINTENANCE: COMMON OPERATIONS TO CARRY OUT

OPERATION	INSTRUCTIONS	NOTES
SUBSTITUTING BULBS	Should one of the headlamp bulbs fail, before fitting a replacement, check the rear light bulb for serviceability and vice versa.	Before switching on the new light bulbs, check (on assy.), that the socket contact points are efficient.
SETTING THE HEADLAMP	The correct setting of the main beam can be obtained both horizontally and vertically as follows:	
	Check that both front and rear tyres are inflated to correct pressures; i. e. 1.25 and 2.5 Kg/cm² (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 ».	This operation can be carried out also with the driver only sitting on the saddle. In this case, of course, the beam alignement should be altered whenever the scooter is beeing ridden by both driver and passenger.
	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.	

SETTING THE HEADLAMP

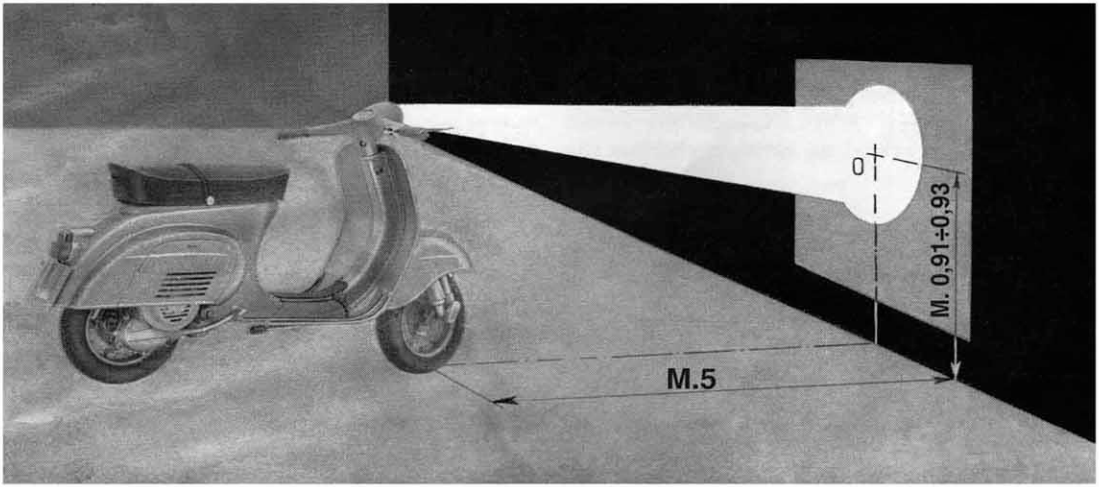


Fig. 17 - Setting the headlamp

N. B. - The point < 0 > is valid for setting with one or two persons mounted.
Note: m. 5 = 16 FT approx.; m. 0.91 ÷ 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 porcellain insulation: if craked 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 mechanism.

2) - Grease control cable and grease the felt lubricating pad in flywheel.

3) - Clean, and if necessary, register the contact breaker point (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.

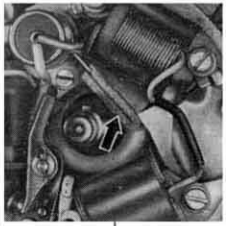
3) - Drain off all fuel contained in the fuel tank; then grease over all unpainted metallic parts; next raise the wheel off the ground by placing wooden chocks under the footrest.

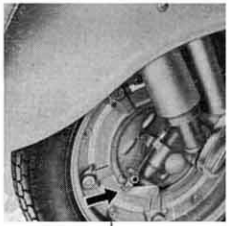
SUMMARY OF INSTRUCTIONS FOR MAINTENANCE AND LUBRICATION

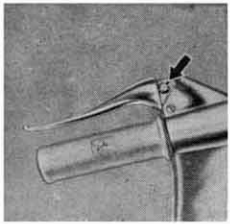
PRINCIPAL OPERATIONS TO CARRY OUT		Lubricants	Notes
4000 Km. (2400 mls)	Every 8000 Km. (4800 mls)		
Gear box (top up)	**Gear box** (Change oil)	Oil SAE 30.	★ Consult your Service Station.
Fulcrum points of **brake lever** and pedal **Speedo** drive and transmission **Gear selector** **Front suspension**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

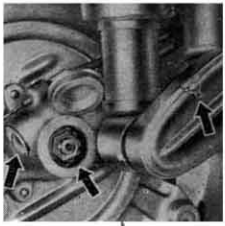
ESSO BEACON 3

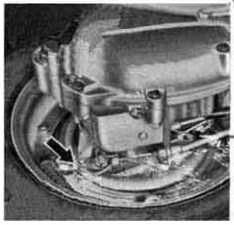
ESSO BEACON 3

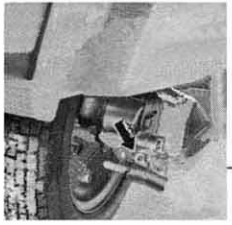












OIL SAE 30

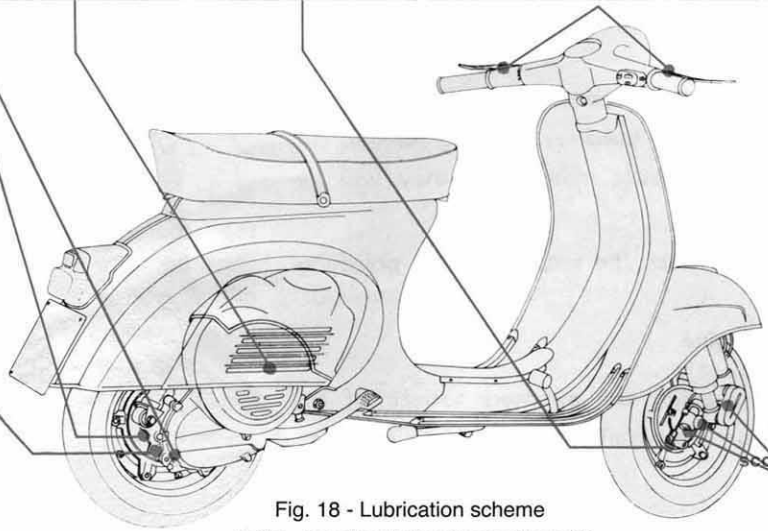


Fig. 18 - Lubrication scheme

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 used in aqueous solution, 3 ÷ 5% by weight).

First, lightly wash the painted surface of the scooter, in order to avoid

Thoroughly rinse with plenty of water and dry off using a clean chamois leather to avoid water marks.

— **Spots.**

To remove spots caused by tar, grease,

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.**

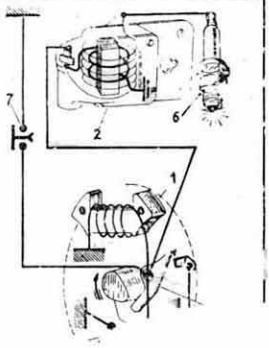
If after washing, as previously described, the original condition is not restored, apply evenly a thin coat of good quality wax polish and shine with a soft cloth, rubbing gently in a side to side manner.

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
HARD STARTING		
1. - Fuel system - Carburation - Ignition.		
Lack of fuel.	Turn to Reserve and refil as soon as possible.	
Filter, jets, fuel tap, carburettor body clogged or dirty.	Remove, wash in petrol and blow dry.	
Engine flooding.	See page 16.	
Air cleaner choked or dirty.	See page 18, fig. 12.	
Sparking plug dirty - Porcelain of sparking plug cracked.	Disconnect the plug lead. Check if sparking occurs between lead and crankcase when the kickstarter is operated.	
Breaker points dirty, worn or pitted; gap between points incorrect.	Consult your Dealer.	



1. Flywh
3. - Fi
breaker
kinc

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

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 trifugal fan.

Integral chassis (see fig sheet steel with streamlir pe 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 mounted 3.00 - 10" tyres.

Saddle: dual saddle (optionally single saddle and luggage rack). The dual saddle 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 (11-13-21 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.

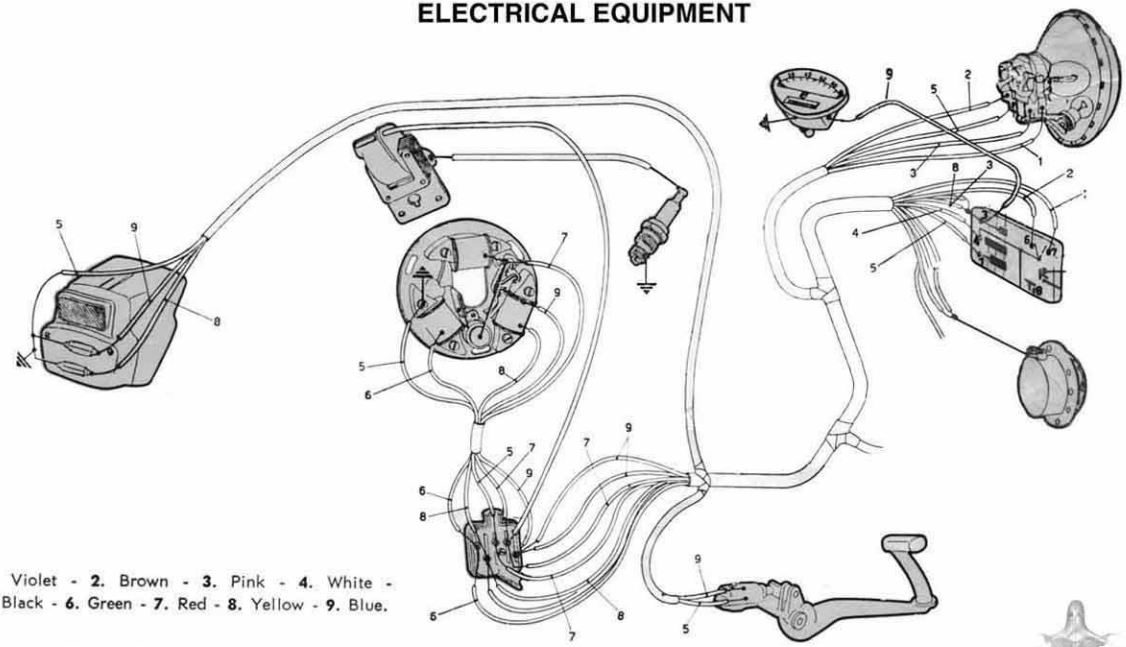
ACCESSORIES

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.

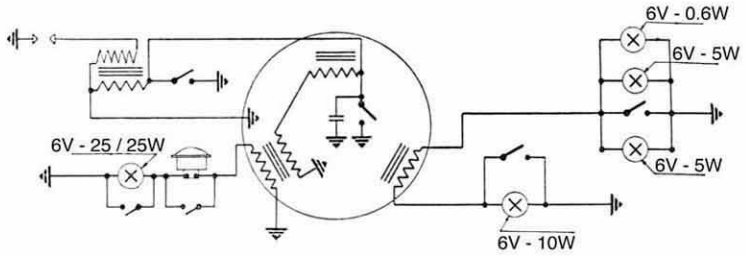
ELECTRICAL EQUIPMENT



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

The electrical equipment is feed 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 c.; **Speedometer bulb** 6V - 0,6 W. **Horne** 6 V

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



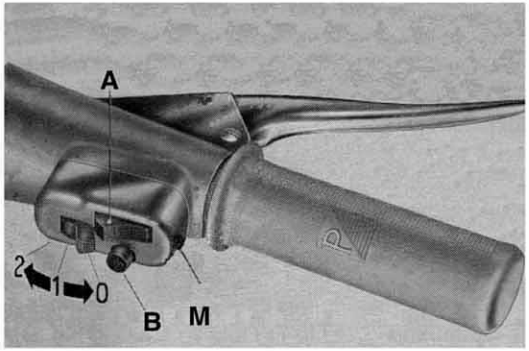


Fig. 22 - Light and dip switch

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

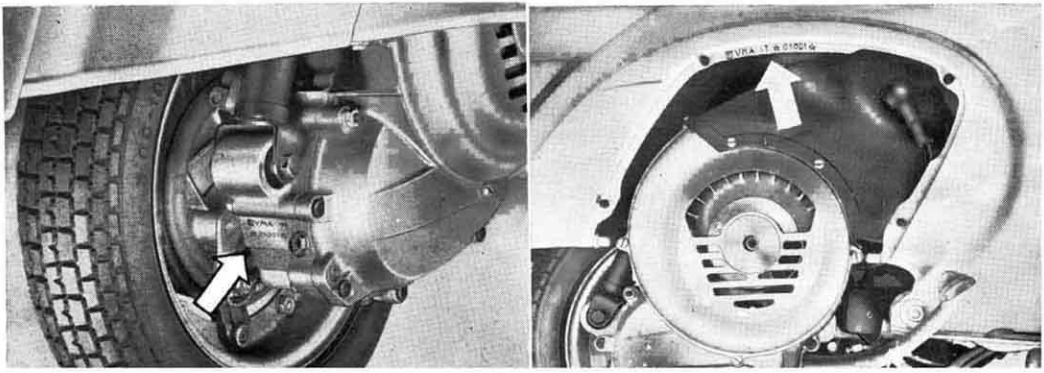


Fig. 23 - Serial number stamped on engine VMA 2 M..... and serial number stamped on frame VMA 2 T .... the respective progressive numbers.

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. sential features of the model described and illustrated herein remaining unaltered, the PIAGGIO reserves refore the right to carry out at any moment, without being obliged to bring this booklet up to course, modification that may occur concerning machine units and parts, or delivery of accessories deems to be convenient on improvement purposes of for what may concern manufacturing or com

Your vehicle differs from that one illustrated on the booklet « Operation and Maintenance » mainly because it is endowed with an electrical equipment with front and rear turn signal lamps (see electrical diagram).

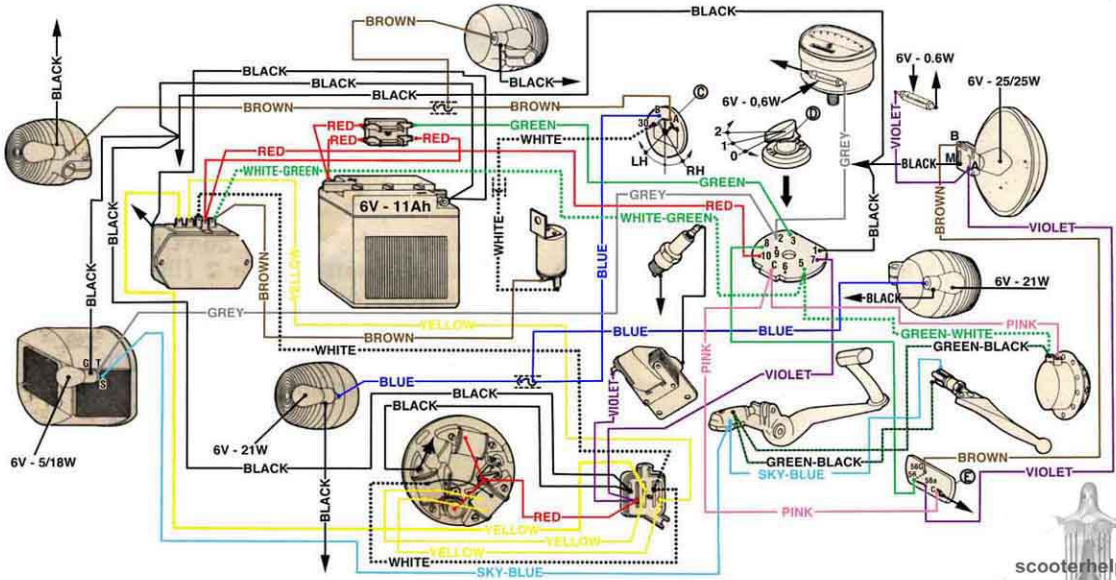
We point out that the engine ignition is of the type with flywheel magneto; the battery feeds the lighting and signalling devices. The battery charge current, supplied by the alternator flywheel, is controlled by a proper electronic regulator, but it does not work if the battery is quite discharged.

In order to avoid a possible cause of discharge of the battery **don't let never a long time the key of the switch « D » on the position 1 or 2** (inserted key) with the engine cut-out. If the battery is quite discharged, disconnect it from the circuit and recharge from the outside.

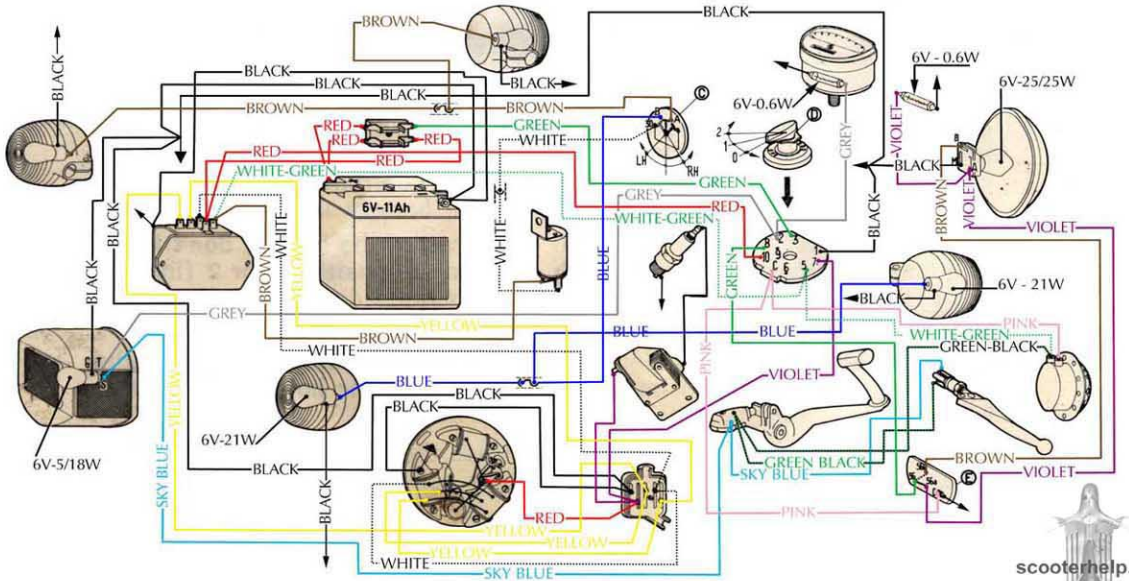
When the battery is re-installed on the vehicle take care that **the breather tube of battery vapours is introduced into the proper hole on the bottom of the cowl.**

Except for the cases of emergency, don't use the vehicle when the battery is disconnected as the electronic regulator can be damaged.

Wiring diagram Vespa 90 and 125 Primavera (Safety Standards 1973).



Wiring Diagram Vespa Super and Sprint - Veloce {Safety Standards 1973}



Turn signal lamps switch « C » LH: Turn signal lamps (left hand) — **R. H.:** turn signal lamps (right hand).

Ignition key switch « D » 0: Engine cut-out, ignition to ground (contacts 1, 7 units out circuit) — **1:** Engine running, direct current to horn, Stop light, and turn signal lamps; (contacts 10 (a), 5) — **2:** Engine running, direct current to horn, Stop light, turn signal lamps, headlamp, main beam warning light, speedometer and licence plate (contacts 10 (a), 5 and 2, 3, 8).

Switch « E » — Endowed with lever for switching headlamp lights, and horn push-button.

VESPA

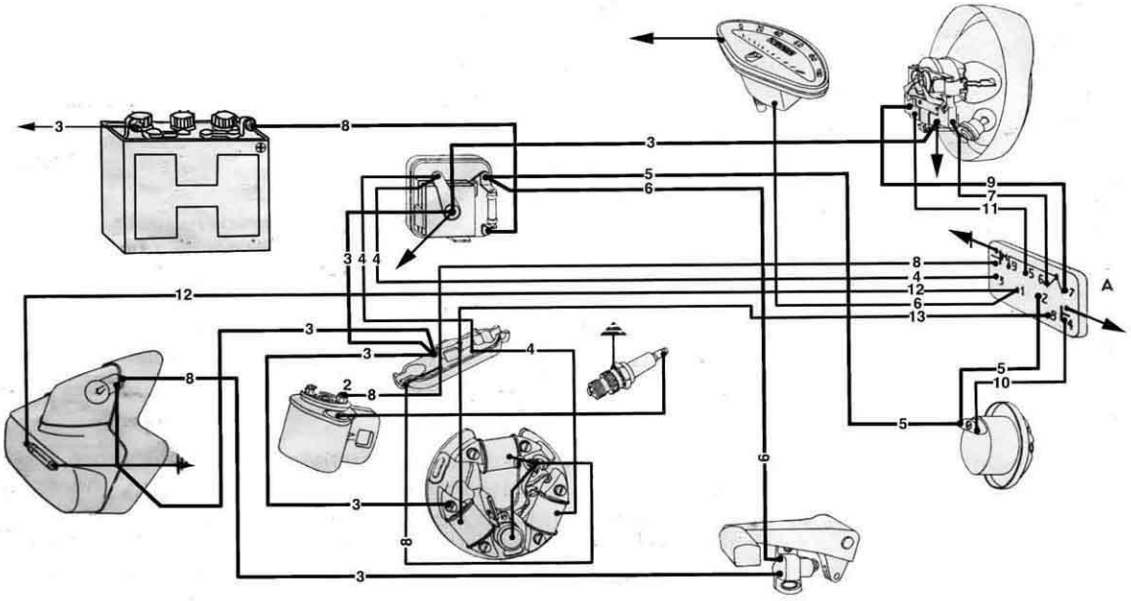
NOTICE

Sur ce véhicule l'installation électrique présente de meilleures caractéristiques par rapport à celles illustrées dans le livret « Emploi et Entretien », étant donné que l'avertisseur, le feu Stop, le feu de position AV. sont alimentés en courant continu (batterie 6V - 7 Ah) au lieu d'être alimentés en courant alternatif ; le feu AR. et le feu du compteur - kilométrique sont alimentés en courant alternatif ou bien en courant continu selon que soient allumés le projecteur ou bien les feux de position (voir le schéma de l'installation dans les deux figures de cette page).

On this vehicles the electrical plant has improved charactaristics respect to those illustrated in the booklet «Operation and Maintenance», insomuch as, the horn, the stop light, front pilot light are fed by a d. c. (6V - 7 Ah battery) instead of an a. c.; the rear light and that of the speedometer dial are fed in a. c. or d. c. depending on as to whether the headlamp or the pilot light are on (see electrical plant and wiring diags).

PIAGGIO

Vespa



Ampoules
Bulbs
Birnen
Bombillas

6V - 25 25 W : phare AV. - Headlamp - Scheinwerfer - Faro delantero.
6 V - 3 W : feux position AV. et AR. - Front and rear lights - Vordere und hintere Standlichter - Luz de posición delant. y trasera.
6 V - 0,6 W : Compteur Kms (pas montee sur le mod. 125) - Kilometerzahlerbeleuchtung (nicht auf der 125 montiert) - Illuminación cuentakm. (no montada en la Vespa 125).
6 V - 10 W : feu stop - Stop light - Stoplicht - Luz de pare. (For the English Markt the bulb is 6 V - 21 W)

A : Plaque à bornes du commutateur - déviateur - **2** : Bornes br ext - **3** : Noir
5 : Vert - **6** : Bleu - ciel - **7** : Marron - **8** : Rouge - **9** : Violet - 1 . Rose - **12** :

A : Switch board - **2** : External ignition coil clamping nuts - **3** : Black - **4** : Yellow - **5** :
7 : Brown - **8** : Red - **9** : Violet - **10** : White - **11** : Pink - **12** : Grey - 13 : Yellow blac

A : Umschalterplatte - **2** : Zündspulenklemmen - **3** : Schwarz - **4** : Gelb - **5** : Grün : Hellblau - **7** : Braun
8 : Rot - **9** : Violett - **10** : Weiß - **11** : Rosa - **12** : Grau - **13** : Schwarz - gelb.

A : Placa de bornes del conmutador - desviador - **2** : Bornes de la bobina A. T. exterior - Negro
4 : Amarillo - **5** : Verde - **6** : Azul - **7** : Marrón - **8** : Rojo - **9** : Morado - **10** : Blanco - **11** : Rosa - **12** : Gris
13 : Negro - amarillo.

N. B. - Sur les Vespa 125 la bobine H. T. est constituée par la même bobine d'allumage placée dans le volant magnétique.

N. B. - On the Vespa 125, the H. T. coil is constituted from the same ignition coil mounted on the fly wheel magneto.

N. B. - Auf der Vespa 125 ist die Hochspannungsspule die im Schwungradmagnetzünder angebrachte Zünd spule selbst.

N. B. - En las Vespas 125 la bobina es la misma bobina de encendido situada en el volante.

ANMERKUNG

Die elektrische Anlage auf diesem Fahrzeug weist bessere Eigenschaften auf als jene im Büchlein « Bedienungsanleitung » illustrierte, denn die Hupe, das Stoplicht, das vordere Standlicht sind anstatt mit Wechselstrom mit Gleichstrom gespeist (6V - 7Ah Batterie) ; die Schlußleuchte und Kilometerzählerbeleuchtung sind durch Wechsel- oder Gleichstrom gespeist, je nachdem ob der Scheinwerfer oder das Standlicht eingeschaltet sind (siehe das Schema der elektrischen Anlage auf den beiden Abbildungen dieses Zettels).

ADVERTENCIA

Sobre este vehiculo la instalacion electrica presenta mejores caracteristicas con respecto a las ilustradas en el folleto « Empleo y Entretenimiento », pues el claxon, la luz de pare, la luz de posición delantera son alimentadas en corriente continua (bateria 6V - 7 Ah) en lugar de corriente alterna ; la luz trasera y la luz del cuentakilómetros son alimentadas en corriente alterna o bien en corriente continua según esten prendidos el faro o las luces de posición (ver el esquema de la instalacion en las figuras de esta página).

ANWEISUNGEN ZUR INBETRIEBSETZUNG DER TITANO BATTERIE TYP 3 P 3 6V - 7 Ah (TROCKENLADUNG) IN 20 STUNDEN.

Diese Batterie ist mit Trockenladungsplatten hergestellt, das heißt sie kann mit einer sehr reduzierten Ladungszeit gebrauchsfertig gemacht werden. Die Batterie muß mit 31 Bè (1270) Schwefelsäure bis zur Zwischenplatte gefüllt werden. Für 2 Stunden ruhen lassen und dann mit derselben Säure den Stand wiederherstellen.

Ladungsstrom 0,7 ÷ 1 Amp. für 6-8 Stunden einhalten. Kontrollieren, daß die Batterie 45°C nicht überschreitet. Ist dies der Fall, so muß der Strom auf die Hälfte oder auf ¼ verringert werden, indem die Ladungszeit dementsprechend verlängert wird. Sollte das nicht genügen, dann muß der Strom für einige Stunden ausgeschaltet und mit niedrigen Stromwerten wieder begonnen werden.

Während der letzten Ladungsstunde überprüfen, daß die Spannung ungefähr 2,7 Volt pro Zelle erreicht und sich für mindestens 2 Kontrollen, die in Abständen von ungefähr ½ Stunde ausgeführt werden, konstant hält. Ist das nicht der Fall, die Ladung für einige Stunden verlängern. Wenn nötig während der Ladung den Elektrolytstand mit destilliertem Wasser (bis zur gelöcherten Zwischenplatte) wiederherstellen.

Wenn nötig die überschüssige Säure beseitigen.

ANWEISUNGEN ZUR WARTUNG DER BATTERIE

Die Batterie stets bei niedriger Polarität aufladen, indem man das Positiv der Batterie (+) an das Positiv (+) der Leitung anschließt.

Die Entlüfter-Pfropfen während der Ladung lockern und nach erfolgter Ladung wieder festmachen.

Die entladene Batterie mit Ladungsstrom 0,7 ÷ 1 Amp. wiederaufladen bis zur konstanten Spannung von 2,6-2,7 Volt pro Zelle (gewöhnlich genügen 12 Stunden); dabei kontrollieren, daß 45°C nie überschritten werden.

Jeden Monat mit destilliertem Wasser den Stand bis zur Zwischenplatte wiederherstellen.

Die Deckel trocken halten und die Polklemmen mit Vaseline einfetten.

Bei langer Nichtbenutzung 3 Stunden monatlich mit 0,7 ÷ 1 Amp. aufladen.

INSTRUCTIONS FOR THE INITIAL CHARGE OF THE BATTERY TITANO MOD. 3 P 3 (DRY CHARGED) 6V - 7 Ah IN 20 HOURS.

This battery is constructed with dry charged plates, that is to say the initial charging time is considerably reduced. The battery must be filled with sulphuric acid, density 31 Bè (1270) up to the level of the perforated separator plates. Let the battery stand for two hours, and if necessary after this period top up with the same acid.

Start charging with a current intensity of 0,7 ÷ 1 A for a period of 6 to 8 hrs.

Check that the temperature of the battery does not exceed 45°C. If this results, decrease the charging current to a ½ or a ¼ of its value and prolong the charging time in proportion to the new intensity. If this is still not sufficient, cease charging for some hours; then restart with a further reduction of intensity.

During the final hour of charging check that the tension in each cell reaches 2,7 V, and remains constant for the following two inspections, carried out at intervals of ½ hr. If this is not the case, prolong the charge for some hours. During the charging, if necessary, top up the electrolyte level (up to that of the perforated spacer plates) with distilled water. If necessary eliminate excessive acid.

INSTRUCTIONS FOR MAINTENANCE OF THE BATTERY

Ensure that on charging, the positive (+) pole of the battery is connected to the (+) cable.

Loosen the breather caps during the charging operation and retighten on completion of charge.

Recharge the discharged battery, at a current intensity of 0,7 ÷ 1 A until a constant tension of 2,6 to 2,7 V per element is obtained (normally only 12 hours are necessary), check that the temperature does not exceed 45°C. Top up each month with distilled water so as to keep the level up to perforated separator plates.

Carefully dry the cell caps and coat the terminals with vaseline. During long periods of storage charge for a period of three hours per month at 0,7 ÷ 1 Amps.

NORMAS PARA LA PUESTA EN SERVICIO DE LA BATERIA TITANO TIPO 3 P 3 (CARGADA SECA) DE 6V - 7 Ah EN 20 HORAS

Esta batería está construida con chapas cargadas- secas, es decir puede ponerse en servicio, con una carga muy reducida. Por lo tanto es suficiente llenar la batería con ácido sulfórico de densidad 31 Bé (1270) hasta la chapa agujereada. Dejar descansar durante 2 horas y restablecer el nivel con el mismo ácido. Cargar con 0,7 ÷ 1 A por 6 ÷ 8 horas.

Verificar que la temperatura de la batería no sobrepase los 45°C. Si así fuera reducir a la mitad o a ¼ la intensidad aumentando en proporción el tiempo de carga. Si esto no fuera suficiente interrumpir durante unas horas la carga y luego cargar a régimen reducido.

En la última hora de carga verificar que la tensión de cada elemento sea aproximadamente 2,7 V y quede constante por lo menos durante 2 lecturas efectuadas cada ½ hora. Si así no fuera aumentar el tiempo de carga durante unas horas.

Durante la carga, de ser necesario restablecer con agua destilada el nivel del electrolito (hasta la chapa agujereada).

Terminada la carga, el nivel debe quedar a hilo de la chapa: quitando, de ser necesario el ácido excedente.

NORMAS PARA LA MANUTENCION DE LA BATERIA

Cargar siempre la batería con la correcta polaridad conectando el positivo (+) de la linea con el positivo (+) de la batería.

Destornillar los tapones durante la carga y atornillarlos apretándolos después de la carga.

Recargar la batería descargada con 0,7 ÷ 1 A de intensidad hasta la tensión constante de 2,6 ÷ 2,7 V por cada elemento; (normalmente son suficientes 12 horas), verificar que la temperatura no sobrepase nunca de los 45°C.

Añadir cada mes agua destilada hasta el nivel de la chapa agujereada. Mantener cuidadosamente secos los tapones y engrasar con vaselina los bornes. Durante un largo período de inactividad, cargar por tres horas cada més a 0,7 ÷ 1 Amp.

INSTRUCTIONS POUR LA MISE EN SERVICE DE LA BATTERIE TITANO MOD. 3 P 3 (CHARGEE SECHE) DE 6V - 7Ah EN 20 HEURES.

Cette batterie est construite avec des plaques chargées-sèches, c'est-à-dire qu'elle peut être mise en service avec une charge très réduite. C'est pourquoi il suffit de remplir la batterie d'acide sulfurique d'une densité de 31 Bè (1270) jusqu'à la plaque perforée.

Mettre en charge à l'intensité de 0,7 ÷ 1 A pendant 6 à 8 heures.

Contrôler que la température de la batterie ne dépasse pas 45°C. Si cela se produisait réduire l'intensité de moitié ou à ¼, en prolongeant le temps de charge proportionnellement. Au cas où cela ne suffirait pas, interrompre la charge pendant quelques heures puis rétablir la charge à régime réduit.

Pendant la dernière heure de charge vérifier que la tension de chaque élément atteigne environ 2,7 V, et reste constante au moins pendant deux contrôles effectués à intervalles d'une ½ heure.

Au cas où cela ne se vérifierait pas, prolonger la charge pendant quelques heures.

Pendant la charge, si cela est nécessaire rétablir le niveau de l'électrolyte (jusqu'à la plaque perforée) avec de l'eau distillée, une fois la charge terminée éliminer, s'il le faut l'acide en surplus.

INSTRUCTIONS POUR L'ENTRETIEN DE LA BATTERIE

Charger toujours la batterie à la polarité juste en reliant le pôle positif (+) de la batterie au câble positif (+).

Dévisser les bouchons pendant la charge.

Recharger la batterie déchargée à l'intensité de 0,7 ÷ 1 Amp. jusqu'à une tension constante de 2,6 à 2,7 Volts par élément (normalement 12 heures suffisent), en contrôlant que la température ne dépasse jamais 45°C.

Rétablir le niveau de l'électrolyte chaque mois au moyen d'eau distillée. Essuyer soigneusement les couvercles et enduire les bornes de vaseline. Pendant un long emmagasinage charger pendant trois heures par mois à 0,7 ÷ 1 Amp.

Dis. n. 93989

VMA 2 - Dis. 91902 - 3.a Ed./R