

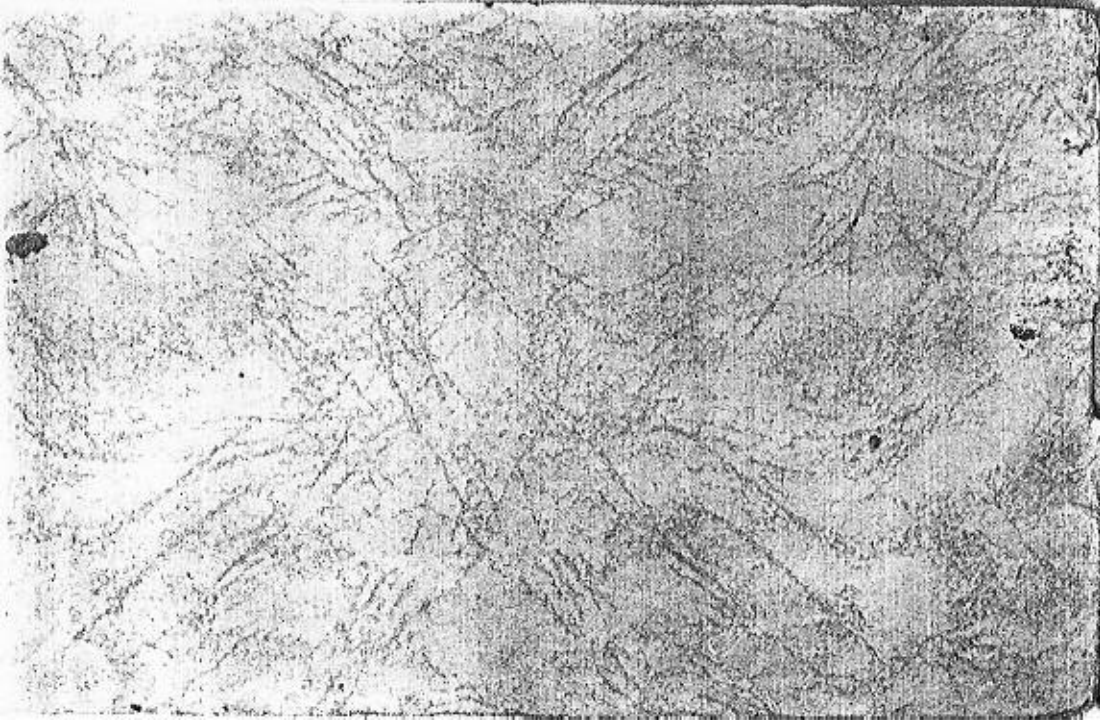
OPERATION AND MAINTENANCE

Ciao



PIAGGIO





OPERATION AND MAINTENANCE

Ciao



PIAGGIO



CONGRATULATIONS !

Today, Piaggio has consigned to you personally, a highly efficient, reliable vehicle which is a veritable small masterpiece of mechanics where the perfection of its mechanism rigorously matches the simplicity of its design.

Congratulations, you have made a good choice, the best possible !

The **Ciao** is a moped in which Piaggio has condensed all its know how: in fact under the charm of its clean and elegant lines there is hidden a rugged structure and generous engine requiring minimum maintenance for maximum efficiency.

In this booklet you will find some simple instructions, please, read them carefully and your **Ciao** will enjoy good health for many years.



NOTICE

To keep your Moped in perfect running conditions and not to invalidate the guarantee offered by the contract, it is advisable to consult your dealer or Service Station, recognisable by apposite mark, 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 Moped. This is guarantee for durability, performance and your personal safety.



**MANUFACTURERS
OF VESPA SCOOTERS
SERVICE**

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MODELS AND TYPES OF THE MOPED « Ciao »

The moped « Ciao » is produced in the following models:

C7: equipped with 2 - 17" wheels.

C9: equipped with 2 - 19" wheels.

These models are produced in three different types equipped with the same frame and engine but characterised by following specifications:

Type « **N1** »:

Front suspension with rigid forks and front brake with blocks.

Type « **E1** »:

Front suspension with sprung forks

(helical springs) and front brake with powerful internal expanding jaws.

Type « **V1** »:

Front suspension with sprung forks front brake with powerful internal expanding jaws and **automatic** centrifugal speed governor. This device allows the machine to automatically select the engine - wheel ratio most suited to road and traffic conditions according to engine revolutions.

The symbols indicating the type and

model of vehicle are carried on the following summary :

	Marks on vehicl. with :	
	17" wheels	19" wheels
Front suspension with rigid forks	C7N1T	C9N1T
Front suspension with sprung forks	C7E1T	<u>C9E1T</u>
Suspension with sprung forks and speed governor	C7V1T	C9V1T

These symbols are located on the R. H. side of the frame by the rear wheel, before the specific frame number.

ACCESSORIES FOR THE MOPED «Ciao»

A full range of accessories (pump, lateral glove compartments, etc.) can be supplied and fitted by your dealer.

1GM5321611
C9E1T ★ 198268 ★ FRAME No

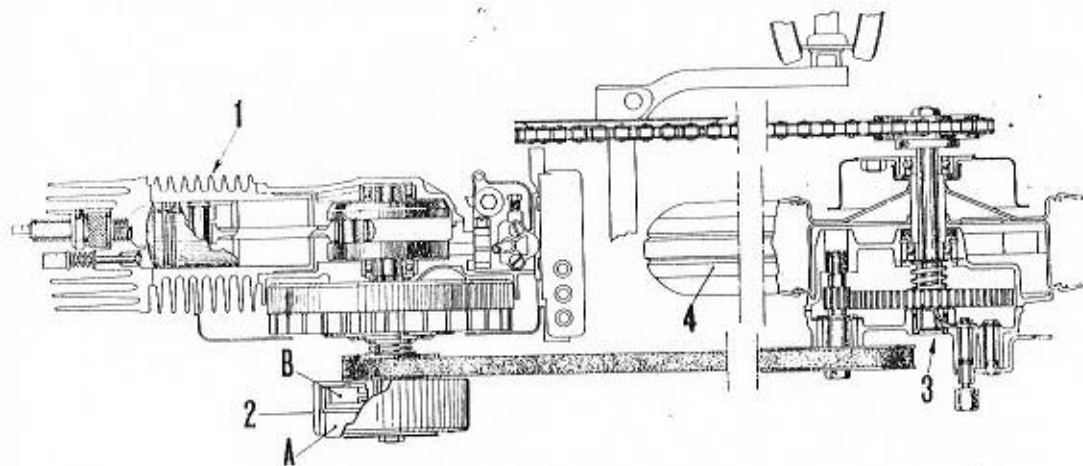


Fig. 2 a - Engine and transmission diagram for mopeds Mod. C7N1 - C7E1 - C9N1 - C9E1.

1. Engine group - 2. Automatic clutch group: A) Centrifugal weights for transmission motion from engine; B) Centrifugal weights for starting - 3. Rear hub and reduction gear unit - 4. Rear drive wheel.

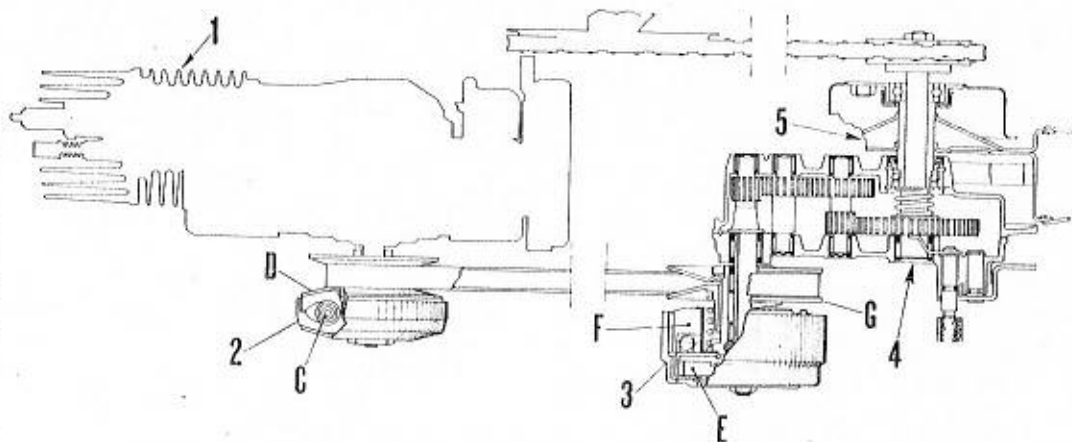


Fig. 2 b - Modification to transmission diagram for mopeds Mod. C7V1 - C9V1.

1 - 5. - Engine and wheel groups like those of fig. 2 a - 2. Automatic speed governor: C) Centrifugal weights of the governor; D) Expanding type pulley - 3. Automatic clutches group: E) Centrifugal weights for starting - F) Centrifugal weights for transmission motion from engine; G) Expanding type pulley - 4. Rear hub and reduction gear unit.

PERFORMANCE AND MAIN SPECIFICATIONS

The vehicle runs with (petrol) gasoline-oil mixture, i. e. 2% oil.

Consumption (according CUNA Standard): 1.4 lt/100 Km. (202 mls/imp. gal.; 168 mls/U.S. gals).

Max speed: according to the Road Traffic Regulation in force.

Range: approx. 200 Km. (125 mls).

Max fuel capacity: 2.8 lt. (0.62 imp. gals; 0.75 U.S. gals).

Wheels: 2 - 17" or 2 - 19", according to the model.

Total dry weight: 33.5 ÷ 37.5 Kg. (74 ÷ 85.5 lbs) as per Model and Type of the moped.

Wheel base: 1000 mm. (39".37).

Handlebars width: 630 mm. (24".8).

Total length:

Wheel of 17": 1570 mm. (61".8)

Wheel of 19": 1615 mm. (64".0)

Max height:

with wheels of 17", as per types:
995 ÷ 1015 mm. (39".2 ÷ 39".96).

with wheels of 19", as per types:
1020 ÷ 1040 mm. (40".15 ÷ 40".95)

ENGINE: Single cylinder two stroke rotary distribution: i. e., carburated mixture is regulated by the crankshaft rotation.

Bore: 38.4 mm. (1".51).
Stroke: 43 mm. (1".69).
Displacement: 49.77 cc. (3.03 cu. in.)
Compression ratio: 8.
Spark advance: 20°.

Spark plug: Marelli CW 125 N-T
or Bosch W 175 T 1.

Transmission from engine to rear wheel by means of automatic clutch and trapezoidal shaped belt, fixed belt pulleys and reduction gear unit for mopeds C7N1 - C7E1 - C9N1 - C9E1.

Transmission ratio engine to driving wheel: 1/13.04 for types C7N1, C7E1; 1/14.53 for types C9N1, C9E1.

On the contrary the transmission engine to driving wheel is controlled by

means of automatic centrifugal speed governor, expanding type pulley, trapezoidal shaped belt, automatic clutch and reduction gear unit for C7V1, C9V1 (see figs. « 2a » and « 2b »).

In this case the transmission ratio engine to driving wheel is:

$$\frac{1}{12.5} \div \frac{1}{18.75} \text{ for vehicles C7V1.}$$

$$\frac{1}{13.88} \div \frac{1}{20.83} \text{ for vehicles C9V1.}$$

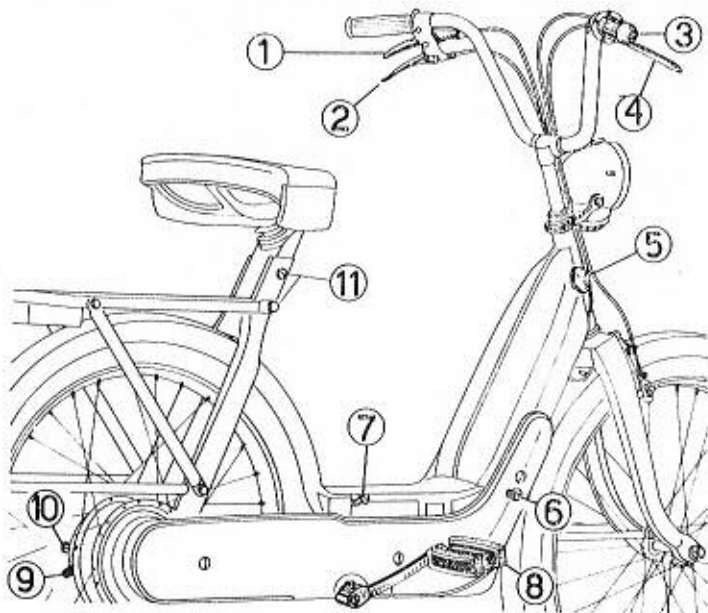
The vehicle (all models and types) is also provided with ancillary transmission composed of pedals, sprocket with crank, roller chain, free wheel sprocket, ratio 28/18.

OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS
Fuel supply	<p>Use a mixture of (petrol) gasoline and pure mineral Oil SAE 30 at 2% (i. e. about 1/4 pint of oil per 1½ gals of gasoline: ESSO 2-T Motor Oil; Shell Golden Motor Oil; Shell X-100 2-T). Do not use detergent oils.</p> <p>Notice - Ensure that the fuel tank breather is always clean (it is visible from the upper side of the plug).</p>
Running - in period	<p>For running - in the first 500 Km. (310.7 mls) do not maintain the throttle fully open for long periods.</p> <p>Between the first 500 ÷ 1000 Km (310 ÷ 620 mls) check all nuts and bolts (especially the engine - chassis securing one) and register belt tension (see at page 18).</p>
Tyre pressure	<p>Front wheel: 1.4 Kg/cm² (19.9 p.s.i.); Rear wheel: 2.5 Kg/cm² (35.5 p.s.i.).</p>

Fig. 3 - Installation of controls and transmissions

1. Rear brake control - 2. Decompression valve control - 3. Throttle twist grip - 4. Front brake control - 5. Fuel plug - 6. Fuel tap - 7. Starter control lever - 8. Pedal - 9. - 10. Control of the connection rear wheel to transmission - 11. Bolt for saddle setting.



OPERATING INSTRUCTIONS

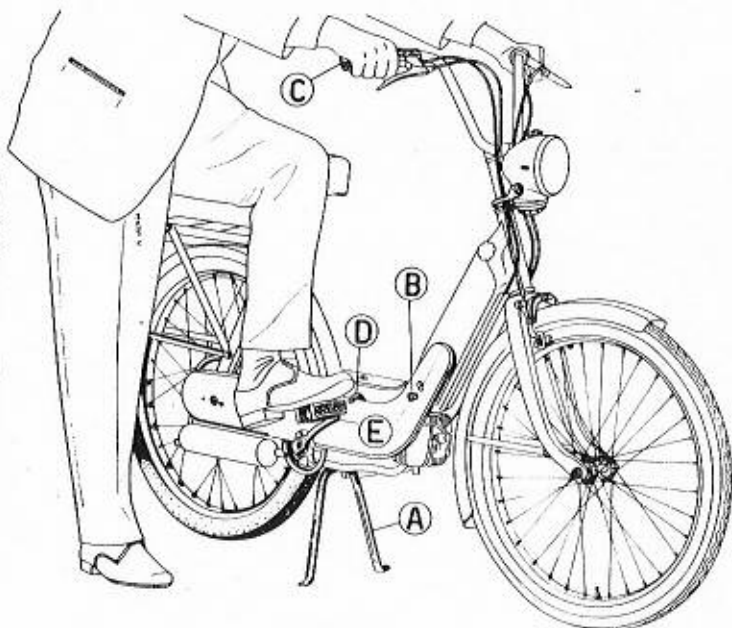
OPERATION	INSTRUCTIONS
Rear hub oil level	Before putting the vehicle into service check the oil level in the rear hub ((quantity about 60 g.). The oil must be on a level with the hole when vehicle is standing upright (see fig. 14 - A »). Use ESSO GEAR OIL 90.
Starting	Carry out the operation indicated on fig. 4. The vehicle may be started also with the driver pedalling the machine for some meters and then when in reasonable motion releasing the decompression valve control lever (fig. 3, No. 2) and opening the throttle.
Setting the vehicle in motion	Act on the throttle twist grip, which allows to regulate the vehicle speed.

Fig. 4 - Operations for starting

A. Put the vehicle on stand, the rear wheel must be off the ground - **B.** Open fuel tap (rotate the knob anticlockwise) - **C.** Throttle twist grip at idling speed. - **D.** Pull down the starter control lever (with cold engine) - **E.** Act on the pedale.

Notice: Also for the starting with vehicle on stand, it is advisable to act the decompression valve control lever (Fig. 3, No. 2) when acting on pedal.

As soon as the engine is running and the throttle «fully open» the starter lever «D» comes automatically back to its normal position.



OPERATING INSTRUCTIONS

OPERATION	INSTRUCTIONS
Stopping the vehicle with running eng.	For instance at traffic lights: with the engine running at idling speed (fig. 3, No. 3) the vehicle can stop even with running engine.
Stopping the engine	Close the throttle and act on the decompressor control lever (fig. 3, No. 2).
Using the vehicle as a cycle	Push the knob (fig. 5) for disconnecting the rear wheel from the engine transmission. For connecting the wheel to the transmission act on the lever, fig. 6, which lets the knob come automatically back into its normal position. These operations have to be carried out with the engine not functioning.

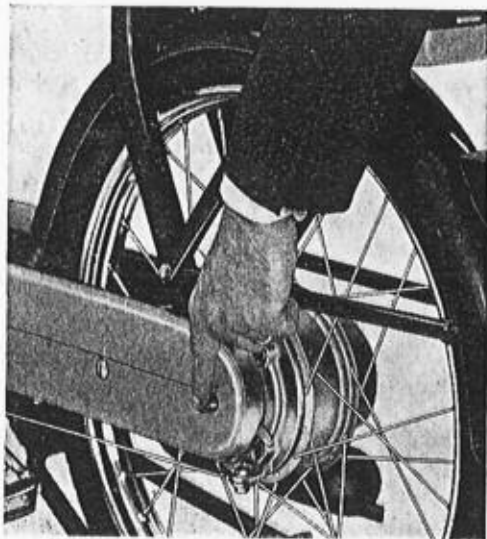


Fig. 5 - Acting on the disconnecting knob of the rear wheel from the engine.

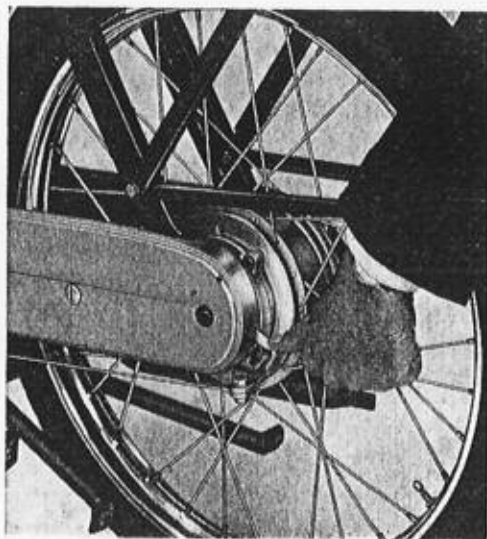
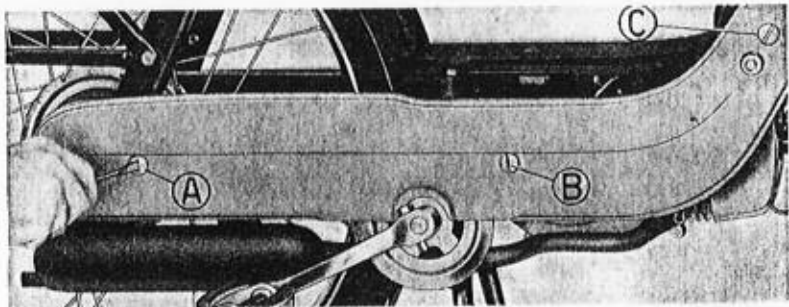


Fig. 6 - Acting on the connecting lever of the rear wheel to engine.

ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

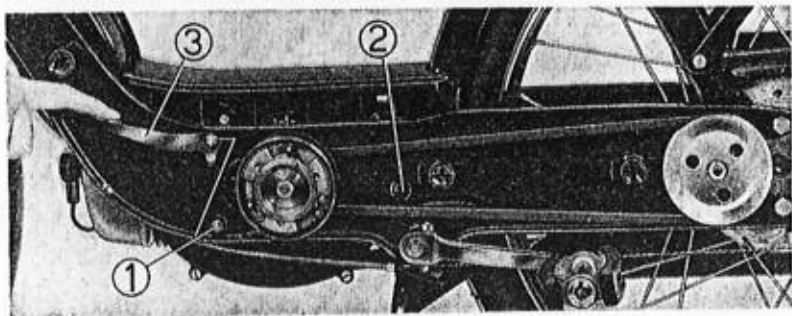
OPERATION	INSTRUCTIONS
Adjusting belt (for vehicles without auto- matic speed governor) and chain	<p>Take off the covers of the belt case (left hand) or chain case (right hand), by removing the screw and spring fastening (fig. 7: fastenings A, B, C).</p> <p>For adjusting the chain release the bolts fastening the engine and silencer to the chassis (fig. 8: fastenings 1 - 2; fig. 9: fastening 1) and act on the lever No. 3 of fig. 8 which allows to pull the belt taut: the latter has to be pulled taut but not excessively (for controlling, see at page 33).</p> <p>Tighten, then, the engine and silencer securing nuts. For adjusting chain tension unscrew the chain tensioner</p>

Fig. 7 - Dismantling
the lateral case covers.



BEDFORD VAN FAN BELT

Fig. 8 - Adjusting belt
tension.



ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

OPERATION	INSTRUCTIONS
	sprocket securing nut (fig. 9); shift the latter and secure it when the chain is pulled sufficiently taut. Notice - The tools for dismantling and adjusting operations (1 screwdriver and 2 single open-ended wrenches 7 - 10 and 10 - 13 mm, 1 box wrench) are contained in a special box located under the luggage rack.
Spark plug removal	Carry out the operation indicated on fig. 10 «A». The electrodes may be cleaned with a steel wire or emery cloth and adjust the gap 0.5 mm. (0".019).
Dismantling air filter	Take off the engine case upper cover by unscrewing the securing screw located in the middle of the cover (fig. 10 - «B») and the air filter securing screw (fig. 11 - «A»). Lift the air filter.

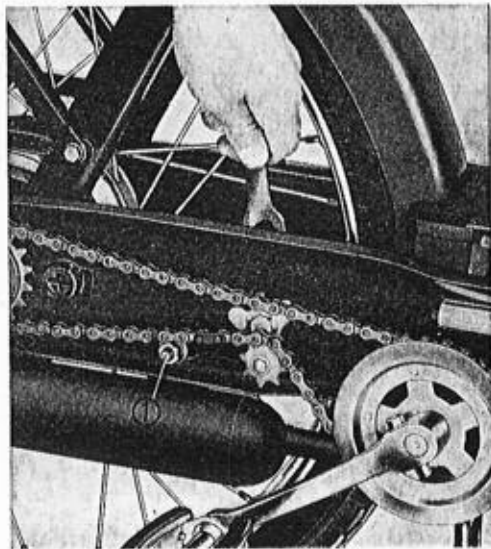


Fig. 9 - Adjusting chain tension.

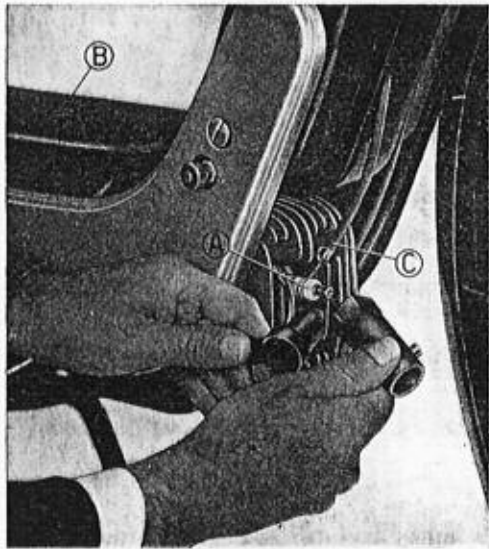


Fig. 10 - Dismantling spark plug cylinder head and engine cover.

ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

OPERATION	INSTRUCTIONS
Adjustments on carburettor	<p>Acting on the device « B » of fig. 11 the throttle cable play can be adjusted by inserting a screwdriver through the hole « C » and turning « D » until the required idling speed is obtained.</p> <p>The slow running adjusting has to be carried out with the rear wheel off the ground (vehicle on stand) and in neutral gear.</p>
Dismantling carburettor	<p>If the carburettor is to be dismantled in its components (for instance for cleaning), take off the air cleaner (page 20), release the screws « E » illustrated on the fig. 11 and dismantle the cover; then remove the engine support « F » (after releasing the nuts « G ») and slacken the screw « H » of the collar securing the carburettor to</p>

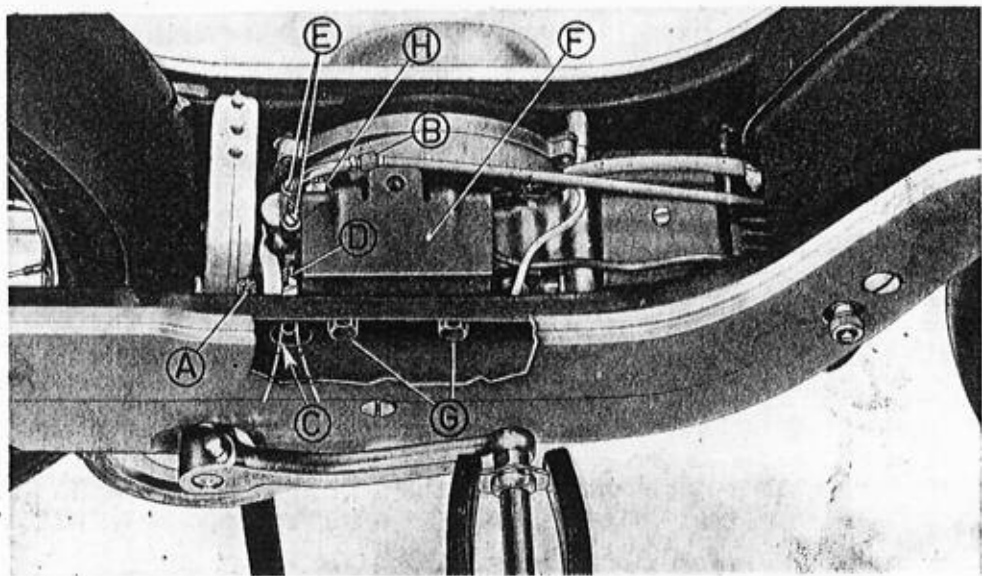


Fig. 11 - Operations concerning the air cleaner and carburettor.

ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

OPERATION	INSTRUCTIONS
	<p data-bbox="476 231 1439 319">engine. The carburettor can be extracted by rotating slightly and alternately the carburettor assembly.</p> <p data-bbox="471 334 1439 495">On cleaning, wash the parts in neat gasoline and air blast dry; under no condition should the jets or calibrator holes be cleared using steel wire or similar devices which could easily damage them.</p> <p data-bbox="471 521 1439 650">Notice - Check always, after assembly and overhauling operation, that the throttle control sheath is properly inserted into the terminal « B », if that is not the case the throttle control (and engine) will not function regularly.</p>

ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

OPERATION	INSTRUCTIONS
Dismantling cylinder head	In order to remove the cylinder head it is necessary to use a 11 mm. box wrench for unscrewing the three securing nuts, then disconnect the valve control cable of the decompressor from the spring arm (fig. 10 « C »).
Substituting bulbs	<p>For substituting the bulb of tail lamp, unscrew the glass securing screw.</p> <p>The headlamp bulb can be removed by releasing the reflector group from the headlamp holder, and acting in the meantime on the push - buttons sidewise on the holder.</p>
Brake adjustment	For adjusting the position of the levers on the handlebars when the bracking action commences, act on the devices « A » fig. 12 so that the wheel is completely free to rotate when the levers are in the resting position.

ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

OPERATION	INSTRUCTIONS
Setting the saddle, handlebars, headlamp	<p>For setting the position of saddle, slacken the bolts securing it to frame support (fig. 13), and secure as required. A like procedure is to be followed for setting the handlebars, after having released the securing bolt located on the middle of the handlebars.</p> <p>The correct setting of the headlamp can be obtained after having slackened the two lateral screws securing the headlamp.</p>
Dismantling the wheel	<p>For dismantling the front wheel use a 15 mm. single open ended wrench, by means of it release the two securing nuts to the fork. For the front wheel provided with brake drum, the brake cable should be also released.</p>

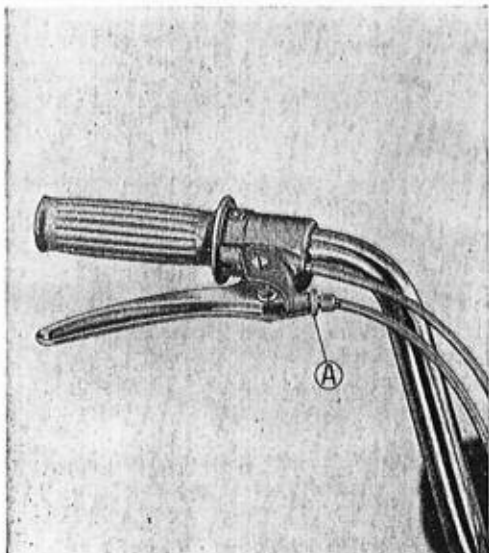


Fig. 12 - Brake adjustment.

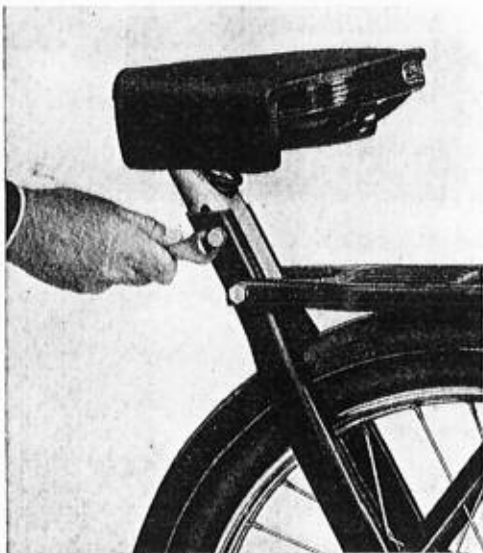


Fig. 13 - Setting the position of the saddle.

ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

OPERATION	INSTRUCTIONS
	<p>For dismantling the rear wheel remove the lateral case cover (fig. 7), release the brake cable (fig. 14 « B »), dismantle the rear pulley (nut « C ») and the group free wheel sprocket (on the opposite side as illustrated on the fig. 14); then remove the four securing bolts (two are visible on the fig. 14 « D »; the other two are on the opposite side).</p> <p>For acting on the group free wheel sprocket use a 21 mm. single open ended wrench.</p> <p>Notice - The repair or replacement of the inner tubes is carried out as for bicycles.</p> <ul style="list-style-type: none">- When the rear wheel is re - assembled besides checking the adjustment of the rear brake (page 25) control also the belt tension and chain (page 18). In the same way check also the adjustment of the front brake with drum when re - assembling the front wheel.

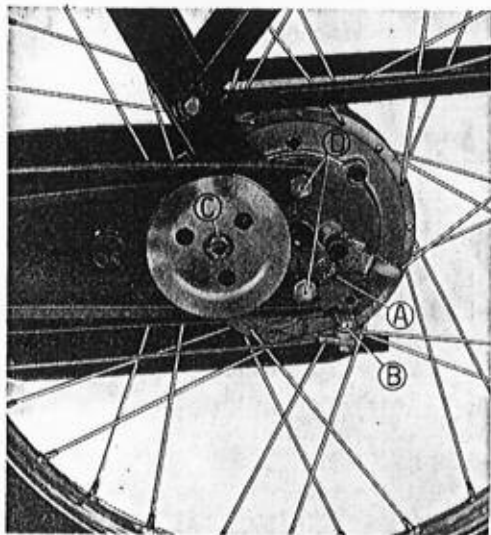


Fig. 14 - Refilling oil in the rear hub «A». Operations for dismantling the wheel.

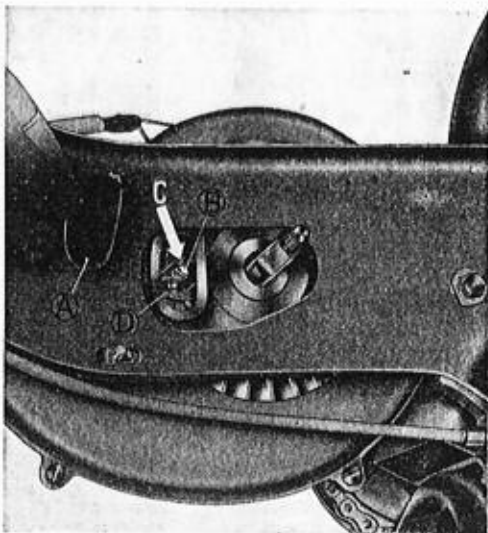


Fig. 15 - Checking gap of contact breaker points

ADJUSTMENT, CONTROLS, DISMANTLING COMMONLY ACHIEVABLE

OPERATION	INSTRUCTIONS
Flywheel magneto: checking gap of contact breaker points	<p>The operations of checking and setting of the contact breaker points, in case of faulty ignition, can be carried out also with assembled clutch (on the fig. 15, the clutch has been removed for better showing the contact breaker and its components).</p> <p>Remove plug « A » by means of a screwdriver, slacken the screw « B » and act with the screwdriver into the notch « C » until the opening of points « D » is 0.4 mm. (0.015") (if possible check with a feeler).</p> <p>Tighten the screw « B » when the setting operation is finished.</p>

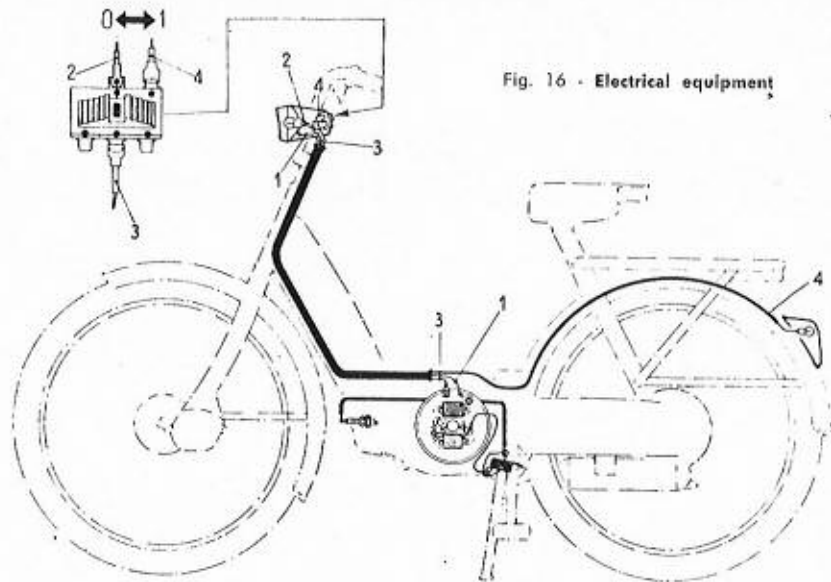


Fig. 16 - Electrical equipment

- Headlamp, with bulb 6 V - 15 W - Tail lamp 6 V - 3 W.
- Switching lever position: 0: Lights off; 1: Lights on - Flywheel magneto with H. T. and L. T. coils - Engine ignition by means of an external H. T. coil.
- **Cable colours:** 1. Black - 2. Violet - 3. Red - 4. Green.

GENERAL MAINTENANCE

Faulty ignition: check sparking plug and wash in neat petrol (see also at page 20) when the porcelain is cracked or electrodes are worn replace the sparking plug. Use, when possible, the sparking plug type recommended by the Firm. The electrodes gap must be 0.5 mm. If the suggested remedies are not sufficient in eliminating the trouble, check, clean and set also the contact breaker (page 30).

Every 4000 Km. (2400 mls): De-coke exhaust pipe using a hooked steel wire, cylinder head (page 25), piston

crown, cylinder exhaust port (dismantling exhaust pipe and cleaning the silencer). Dismantle and wash in neat gasoline air filter (page 20).

Every 8000 Km. (4800 mls). Check oil level into the rear wheel hub (ESSO GEAR OIL 90: see page 14 and fig. 14).

On vehicles provided with automatic speed governor (Mod. C7V1 - C9V1) fill up with grease ESSO BEACON 3 or FIAT JOTA 3 the roller housing container (see fig. 2 - « C »).

Now and then, lubricate as for normal.

bicycles, the chain and pedal and wheel connections; check belt tension (see following instructions) and chain tension (page 18). Clean carburettor.

CONTROL OF THE BELT FUNCTIONING

For ensuring that no slipping of the belt occurs by the transmission of the motion to the wheel (on vehicles without automatic speed governor) follows this procedure:

- Put the vehicle on the stand: rear wheel off the ground.
- Start the engine and open the throttle.
- Pull the rear brake lever and jam the wheel: the belt must remain stationary, without slipping, when

the engine is turning. When this is not the case set the belt tension (page 18) or, if faulty or worn replace it with an original one.

Laying up

Carry out the following operations: Remove sparking plug and then feed through the threaded hole of the latter a small quantity of Oil SAE 30 (carry out this operation with raised front wheel); turn the engine over for a few revolutions by using the foot pedals, subsequently replacing the sparking plug. Clean down the vehicle and carry out the normal lubrication; drain off all fuel and raise the wheel off the ground.

FAULT FINDING - REMEDIES

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

a) The engine does not start or suddenly stops (fuel system, carburation and ignition faults).

1) **Lack of fuel**: Refill the fuel tank. It is advisable to check always the level of fuel before starting the engine.

2) **Fuel tap closed**: Open it.

3) **Spark plug dirty (or faulty) or electrodes gap incorrect**: Clean (or replace) the sparking plug (see at pages 20 and 31) and adjust the electrodes gap at 0.5 mm.

Notice - When the vehicle is prevaillingly employed with full throttle for long periods, it is advisable to use the sparking-plug Bosch W 225 T 1 or Marelli CW 225 N-T.

4) **On winter time** let the engine run at idling speed for a certain time before starting.

If the suggested remedies are not sufficient in eliminating the trouble check that:

- 5) **Carburettor body is not clogged or dirty** (jet and fuel line): Remove and clean (see at page 22).
- 6) **Breaker points are not dirty, worn or pitted; gap between points is not incorrect**: Clean (or if necessary replace) the contact breaker; adjust the gap between points at 0.4 mm. (page 30).
- 7) **Spark plug cable is not earthed**: Insulate temporarily by means of adhesive tape; replace as soon as possible.

b) General « mechanical » failures:

- 1) **Spark plug and engine misfiring. Irregular functioning of the engine**: Clean the sparking plug and de-coke silencer, cylinder head, piston crown and exhaust port (see at page 32). Clean carburettor and air cleaner (see at page 5).
- 2) **Lack of power**: Check that sparking plug and cylinder head are tight.

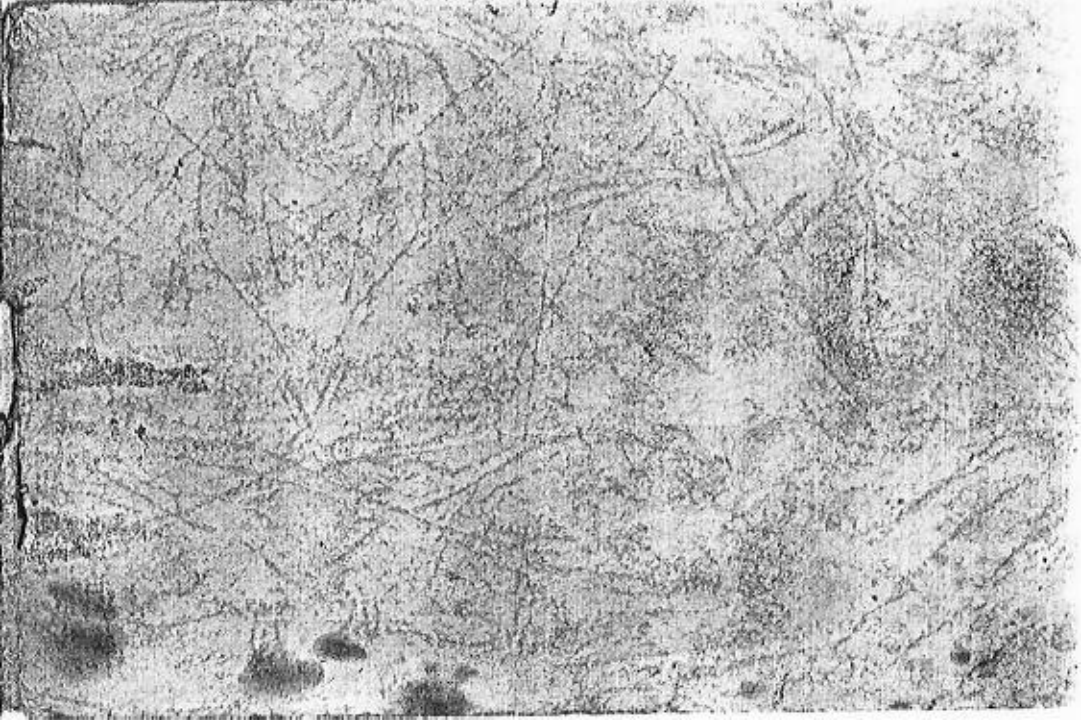
- 3) **« Slipping » of the transmission:** Check as per instructions given at page 33 and carry out as required the necessary adjustment and replacements.

Examine the surfaces of the clutch components and, if faulty or worn, replace them.

On vehicles provided with automatic centrifugal speed governor check if the roller housing is filled with grease (see at page 32).

- 4) **Defective braking of rear wheel:** Check that no oil leakage of the rear hub occurs on the brake.

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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Tip. MORI

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