

MO - PED

GARELLI

automatic

Gearbox, with full automatic
gear and clutch operation



instruction
booklet

meccanica **GARELLI** s.p.a. - sesto s. giovanni - milan - italy

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PART I IDENTIFICATION

Fig. 1 illustrates the location of model and serial numbers on the frame, while fig. 2 shows the location of the engine serial number. When ordering spare parts it is necessary to state the correct model and serial number of the frame (fig. 1) and the engine serial number (fig. 2).

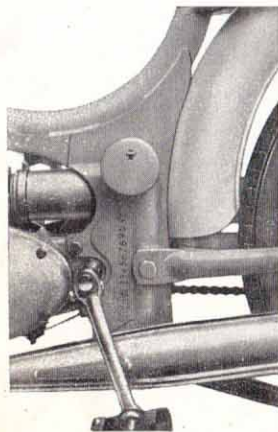


Fig. 1

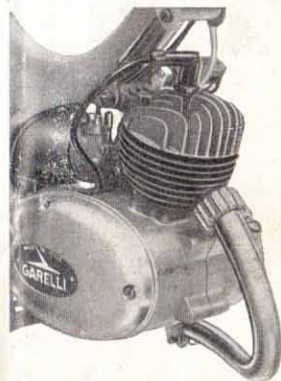


Fig. 2

TECHNICAL DATA

Single cylinder, two-stroke engine:

Capacity 49 cc
 Bore 40 mm
 Stroke 39 mm
 Compression ratio 7 to 1
 Max. b.h.p. 2,2 at 5250 r.p.m.

Ignition by flywheel magneto producing 18 W-6 V current

Spark plug fires at 23° before TDC, corresponding to .083" before TDC

Two speed with progressive automatic clutch.

Primary drive by gear

Final drive by roller-chain 1/2" x 3/16" with 5/16" dia. rollers

Drive ratio: 1st gear 11,5 to 1 - 2nd gear 6,6 to 1

Frame of steel tube, welded

Front suspension: telescopic fork

Rear suspension: swing arm

Wire wheels with chromed steel rims

Tyres 2" x 18"

Fuel tank: one Imp. gallon (4.5 litres)

Electrical system 6 volt

Head lamp antigrare 15 W
 (in head lamp) 15 W, torpedo-shaped bulb

Position lamp

Tail lamp 3 W, torpedo-shaped bulb

Electric horn

Light switch with horn button on handlebar

Weight (dry) 101 pounds

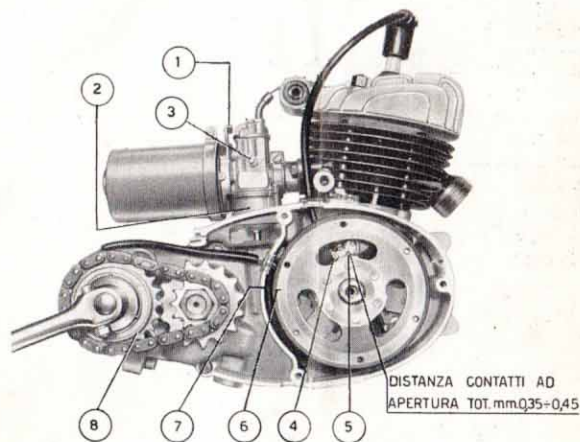


Fig. 3 - ENGINE, SIDE VIEW SHOWING FLYWHEEL MAGNETO

1. Starting lever. - 2. Jet. - 3. Slowrunning adjustment screw. - 4. Locking screw for contact breaker point adjustment. - 5. Notch for contact point adjustment. - 6. Timing mark on magneto flywheel. - 7. Timing mark con on crankcase housing. - 8. Sprocket for starting.

Carburettor (fig. 3)

Dell'Orto type SHA 14/12
Diffuser
Jet

type T 4 - 10 S 1
12 mm
48

Flywheel Magneto (fig. 3)

Located on the right-hand side of the engine and accessible for adjustment of contact breaker points and timing by removal of cover.

Spacing of the contact points may be accomplished with the aid of a screwdriver applied in the special notch of the contact breaker support, the locking screw having first been loosened. Once proper spacing is obtained, be sure to securely retighten the locking screw.

The proper spacing of the contact points, in position of maximum opening, is .014" to .018 (0.35 to 0.45 mm.).

The timing is correct when the contact points begin to open just as the reference mark on the flywheel comes into alignment with the mark on the crankcase housing, or as the piston reaches .083" below TDC.

Spark plug

It is recommended to use a sparking plug having thermal value 150 (Bosch Scale), 14 mm. dia. x 12.5 mm. wall x 12.5 mm. long threaded shank. The electrode gap spacing should be adjusted to .020" to .024". To clean the points, use a sharp-edged steel scraper and wire brush, or better yet, use a sand-blast type of sparking plug cleaner as generally installed at most garages.

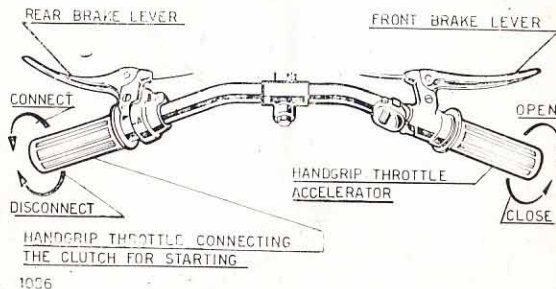
Clutch

The clutch is located in the crankcase housing on the left side of the engine, is automatic and operates in an oil bath.

This automatic clutch - expansion type - is formed by a ring of special rubber having particular characteristics in order to avoid any noise and increase its duration. No adjustments are required also after a long use.

Arrangement of controls

All of the operating controls will be found on the handlebars as illustrated in the figure N. 4.



Electrical system diagram

This diagram indicates only the colour code of the wiring and the terminal markings, not the lamp characteristics.

ELECTRICAL SYSTEM DIAGRAM

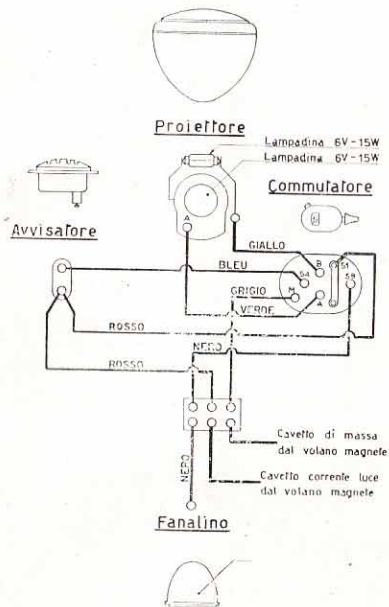


Fig. 5

PART II

OPERATING INSTRUCTIONS

Fuel mixture

For the preparation of the fuel mixture, it is advisable to use **normal petrol and oil of viscosity SAE 30** (Mobiloil A). Do not use "Ethyl" or petrols containing a tetra-ethyl of lead additive. The use of fuel mixtures prepared with «regenerated» oil, or with poor quality oil, may endanger the performance and life of the engine.

Running-in procedure

— First 600 miles:

use a 7% fuel mixture (1 quart of oil to every 3½ gallons of petrol or just about 3/5ths of a pint per gallon of petrol).

do not exceed 20 m.p.h.

do not run the engine at high speeds for long periods of time and do not open throttle all the way while climbing hills.

— After the first 600 miles, use a fuel mixture of 5% oil (1 quart of oil to every 5 gallons of petrol or 2/5ths of a pint to every gallon of petrol).

Lubrication of clutch and primary gears

The moped is normally delivered with about 4/5 of a pint of viscosity SAE 30 (Mobiloil A) oil. To check the oil level, unscrew the filler plug at the left of the engine and observe the high mark of the oil on the dip stick attached to the bottom of the filler plug.

To start the engine

Starting of the engine may be accomplished while standing still or while in motion by pedalling:

(A) Starting while at rest (fig. 6):

1. Lower the support stand (13), thereby raising the rear wheel from the ground.
2. Open the fuel cock (14).
3. Rotate the throttle to about 1/3 open.
4. Push in the carburettor starting lever (fig. 3 n. 1).
5. Push on energetically the pedal (17) and when the rear wheel begins to rotate, rotate the handgrip (18) in the direction shown by the arrow F moving as far as possible the mark I towards A while continuing to pump the pedal.
6. Release the handgrip (18). To place the engine in motion after the engine is started raise the support stand, mount the seat and accelerate the engine to cause the expansion of the rubber ring which will transmit motion to the mo-ped.

The adjustment of the starting assembly is done by regulating the screw and lock nut mounted on the handgrip. The adjustment is right when, in the position shown on the fig. 6, there is a distance of 6-7 mm. between the marks A and I.

(B) Starting by pedalling:

1. Open the fuel cock and push in the starting lever (fig. 3 n. 1).
2. Mount the seat and set the mo-ped in motion by pedalling. After gaining sufficient speed, pull on lever (18) and at the same

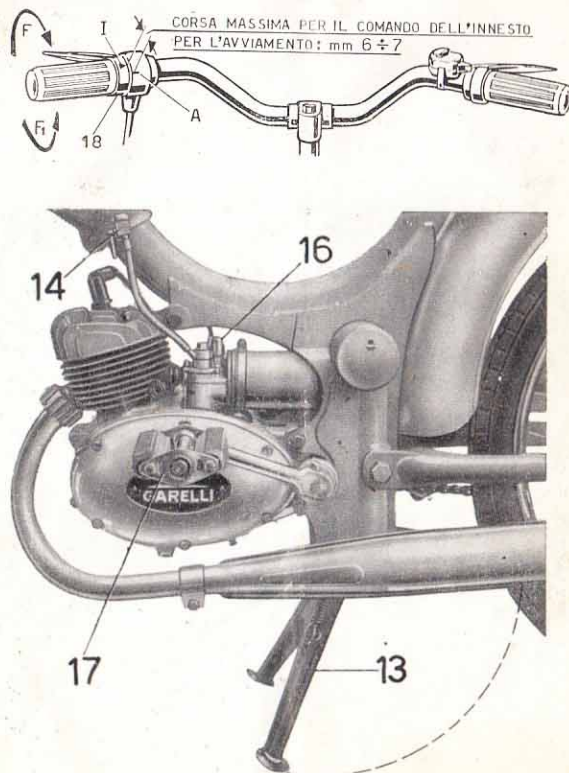


Fig. 6

time open the throttle; as the engine starts release lever (18) and regulate the speed of the mo-ped solely by the use of the throttle (15). For making brief halts (traffic signals, intersections, etc.) it is sufficient to close the throttle and allow the engine to run slowly as this will disengage the clutch and allow the mo-ped to remain stationary while the engine continues to tick over. To resume motion it is only necessary to open the throttle again.

To stop the engine

Close the throttle and push on the ground-button. If the engine is to remain idle for more than a brief halt, it is advisable to close the fuel cock.

PART III MAINTENANCE

The simplest of the following operations may be performed by the owner, provided he has sufficient experience and the necessary tools. All other operations should be entrusted to an authorized **Garelli** agency. The mileages indicated for the maintenance schedule are to be taken as average.

Upon delivery:

Check the oil level in the crankcase by use of the dip stick attached to the filler plug on the left side of the engine.

Check the air pressure of the tyres; front, 21 pounds, rear, 35 pounds.

After the first 300 miles:

- Check the tightness of all screws and nuts, particularly the cylinder head nuts.
- Check the exhaust pipe flange nut for tightness.
- Check and adjust the play in the starting assembly (fig. 6).
- Drain the oil from the crankcase and refill with new oil of grade SAE 30 (Mobiloil).
- Clean the fuel line filter on the carburettor.
- Adjust idling speed by means of the carburettor regulating screw.
- Remove and inspect the sparking plug; if necessary, clean and adjust the electrode gap to .020" to .024".
- Grease the rear swing arm pivot with a grease gun.

Every 1000 miles:

- Repeat operations outlined in the preceeding paragraph.
- Have an authorized Garelli agency check the timing and set the contact breaker points of the magneto at .014" to .018" gap spacing. Also have the lighting winding checked.
- Inspect and adjust the brake cable tension by means of the tensioning screw at the brake end of the cable.
- Clean and grease (moderately) the chain and, if necessary, increase the tension by means of the adjuster at the rear axle.

Every 2500 miles:

- Remove the cylinder head, exhaust pipe and silencer.

— Carefully remove any carbon deposited on:

1. the inside of the cylinder head,
2. the top of the piston,
3. the inlet and exhaust ports,

When scraping the top of the piston, which is made of light alloy, take care not to scratch or damage it. To clean the exhaust port, run the piston down to its lowest point so the port opening will be completely accessible.

When remounting the cylinder head the nuts must be tightened down gradually, shifting back and forth in the form of a cross between nuts on opposite sides of the head.

— Clean the exhaust silencer (fig. 7) in the following manner:

(a) Remove the screw (19).

(b) Take out the internal tube (20) with the aid of a pin (21) introduced in the two opposing holes at the extreme end of this tube. Tap the pin with a mallet and at the same time rotate tube (20) back and forth as indicated in figure 5.

(c) Remove the carbon deposits in and on tube (20) by using a torch flame and wire brush.

(d) Remove carbon in rear of baffle (22), **but not with use of flame**, by means of the pointed pin (23) applied as illustrated in the figure.

— Clean the carburettor (fuel filter screen, float chamber, air filter, etc.).

— Check the starter chain and, if needed, adjust the tension by rotating the eccentric on the pe-

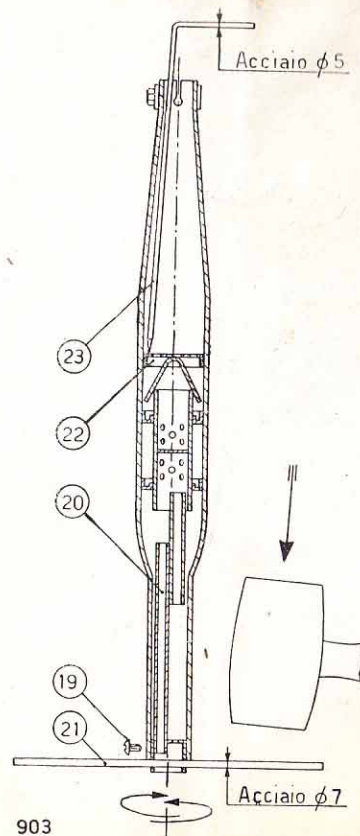


Fig 7

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dal shaft. Also lubricate this chain lightly with grease and put a few drops of oil in the free-wheel unit on the pedal shaft.

- Check, and when necessary, adjust the lateral alignment of the wheel by means of the rear swing arm adjustment screw located at the extreme ends of the forks. To obtain proper alignment, loosen the outside axle locking nuts and regulate the adjustment screw nut.
- Check, and if required, adjust the play of the front and rear wheel axles.

PART IV

TROUBLES Causes and cure

(A) Engine fails to start or stops while running:

1. **The fuel cock is turned off or the tank is empty.** Open the fuel cock, or refill the tank with the proper petrol and oil mixture.
2. **The engine is "flooded".** Shut the fuel cock, open the throttle all the way and push on pedal repeatedly until engine starts. If this is not successful, push the mo-ped forward as rapidly as possible. Again failing, the sparking plug must be removed, dried and cleaned. Before replacing it, turn the engine over several times to expell the excess fuel.

3. **The fuel line is blocked or the filter is dirty.**

Remove the fuel line and filter, then clean. Before replacing, make sure the fuel is flowing by opening the cock for a moment.

4. **The sparking plug is dirty.**

Clean and adjust as previously indicated. When replacing be sure the gasket is in place and take care to screw the plug in straight (one should be able to screw it in by hand).

(B) Engine does not pull or fails to reach normal speed.

1. **Exhaust noise is weaker. The engine tends to "4-stroke".**

Excess carbon deposits, ports partially blocked or exhaust silencer is dirty. Decoke (see « Maintenance » under « Every 2500 miles »).

2. **Intermittent functioning of the engine. Engine misses and carburettor backfires.**

Defective sparking plug or contact breaker points wich fail to open all the way. Have them checked and adjusted. May also be caused by a defective coil or condenser.

3. **The engine tends to stop when the throttle is opened wider.**

Dirty high speed jet, remove and clean. Or the carburettor mixture is too lean. Substitute a larger sized jet after first having checked the following:

(a) That the pet is not partially dirty, oxidized, etc.;

- (b) That the sparking plug is not defective or dirty;
- (c) That the carburettor is clean inside (by dismantling the float chamber);
- (d) That fuel flows steadily to the carburettor and that no air leak exists in the connections between the carburettor and the cylinder and the crankcase. See that all nuts are tight and that all gaskets are sound, including the cylinder head gasket.

4. Engine exhaust is irregular. Exhaust noise is smooth and constant only when accelerating or climbing.

Fuel mixture is too rich. Change to lower numbered jets until operation is smooth and regular. This condition can also be caused by dirt in the fuel supply which lodges between the float needle point and its seat in the float chamber cover (this is a valve which maintains the fuel level in the carburettor). Another possible cause is the improper seating of the float needle point on its seat due to excess wear on the needle point. In this case the needle must be replaced.

G U A R A N T E E

(taken from the General Sale Conditions)

The mo-ped Garelli automatic is guaranteed for six months from the date of delivery against any defects in materials or workmanship.

On the basis of this guarantee all parts which are defective will be repaired or replaced free of charge, provided they have not been subject to abuse and provided that the mo-ped has not been put to uses other than those for which it was designed. The costs of transportation, of assembling and disassembling, and of any fuel or lubricants used will be defrayed by the owner.

Any request for parts replacement on the basis of this guarantee must be made through GARELLI dealers and representatives giving engine serial number), and must be accompanied by the parts which are held to be defective. The guarantee is void whenever:

parts other than original have been used;

the unit shows signs of abuse on the part of incompetent persons or gives evidence of repairs which have not been properly performed;

the unit has been used for racing or in competition;

the oil or lubricant used was not of the prescribed quality, quantity and grade;

the running-in instructions have not been followed.

With regard to parts not manufactured by Meccanica Garelli (for example: ball bearings, cables, electrical equipment, tyres, etc.) the guarantee applies only to the same extent that the manufacturers of these parts have already assumed obligations for them.

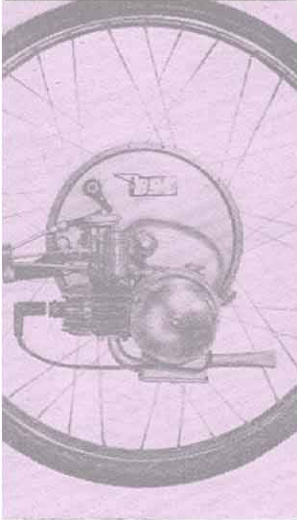


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L. G. E.

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