MO - PEDS

Single speed - automatic clutch
Two speed - automatic clutch
Three speed - hand gearchange

GARELLI 50 cc

BIMATIC
CONCORDE Matic
CONCORDE 3 V
GULP Matic
GULP Flex

GARELLI

INSTRUCTION BOOKLET

Garelli industriale agricola - GARELLI motocicletto brianza (como) - Italy

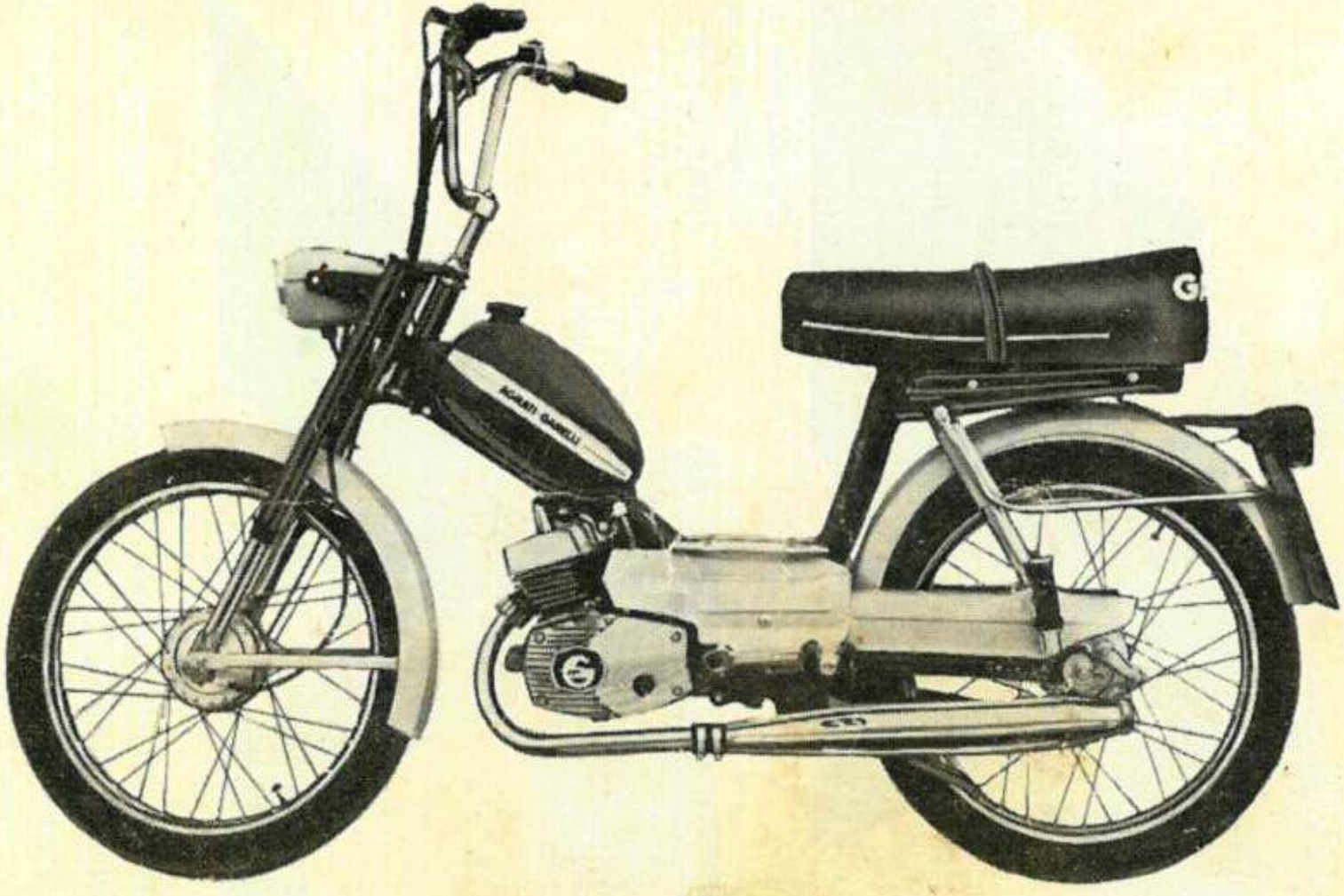
WARNING:

The handlebar stem should protrude 50 - 60 mm. max up the head set locking nut. Therefore it is to be inserted at least 80 mm. inside the front fork tube

In your 2-stroke engine use

MOTO 2T

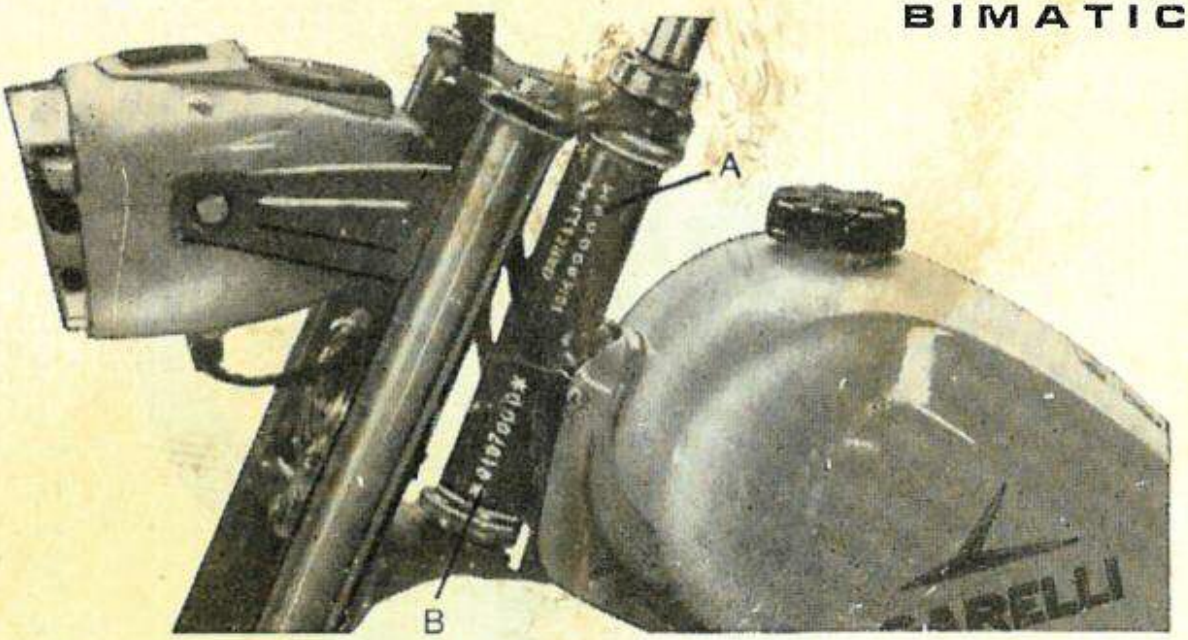
especially formulated for you by Fiat



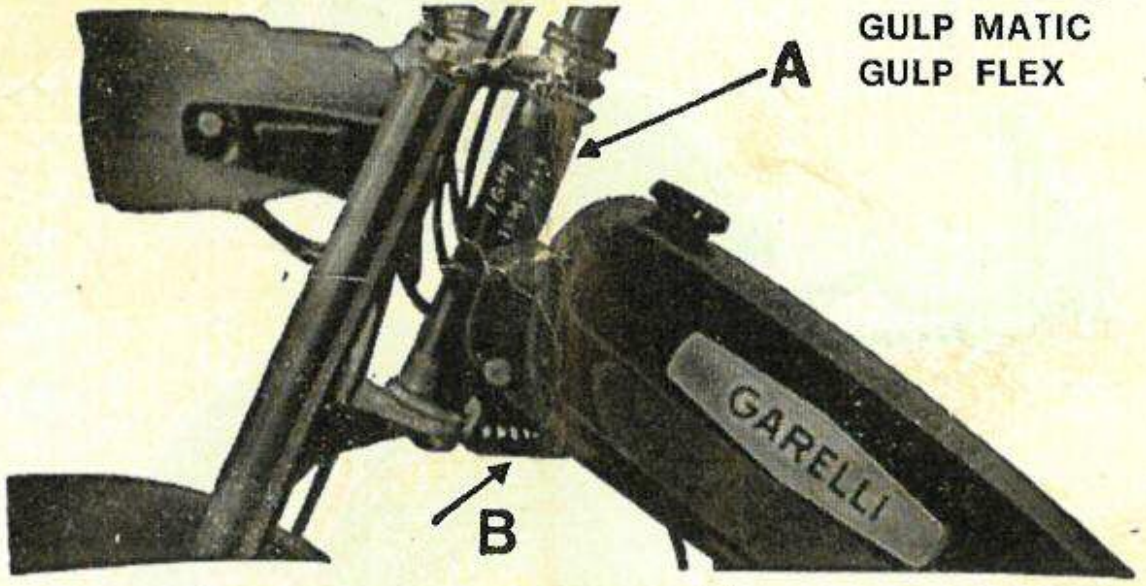
GARELLI BIMATIC

Part 1 IDENTIFICATION

BIMATIC



CONCORDE MATIC
CONCORDE 3 V
GULP MATIC
GULP FLEX



The Pict. 1 illustrate the serial and homologation numbers on the left side (A-B).

When ordering spare parts it is necessary to state the correct model and serial number of the frame.

TECHNICAL DATA

Engine

– Single cylinder, two stroke, air cooled	
– Capacity	cc 49
– Bore	mm 40
– Stroke	mm 39
– Compression ratio	1 : 8
– Power output	1,5 at 5000 r.p.m.

Ignition

– Ignition by flyweel magneto with inside H. T. coil, suitable to feed 6V - 24W (Concorde Matic - 3 V - Bimatic) 6 V - 18 W (Gulp Flex - Matic) electrical equipment.

– Sparking plug fire at 23° before TDC corresponding to .074" (1,9 mm.) before TDC. Heat value 175 (Bosch scale).

Carburetter

Dell'Orto type SHA 14/12 Jet 50.

Engine with single speed automatic clutch (Gulp Flex)

Engine with two speed automatic clutch

(Concorde Matic - Bimatic - Gulp Matic)

Three speed hand gearchange (Concorde 3 V)

Primary drive by gear

Final drive by roller chain 1/1" x 4.9 diam. ⌀ 7,8

Front suspensions telescopic fork

Rear suspensions by swinging arm, and telescopic suspensions units

Wheels with chromed steel rims

Tyres 2¼x16" (Concorde Matic - Gulp Flex - Gulp Matic 3 V) 2¼x17" (Bimatic)

Fuel Tank: 1 Imp. gallon (4.5 litres) Bimatic
0,70 Imp. gallon (3,200 litres) Concorde Matic 3 V - Gulp Matic - Gulp Flex

Starting: by pedals

Headlamp 6V-20W Concorde Matic - Bimatic - 3 V
Headlamp 6V-15W Gulp Flex - Matic
Tail lamp 6V-6/21W Concorde - 3 V - Bimatic
Tail lamp 6V-5W Gulp Matic - Gulp Flex

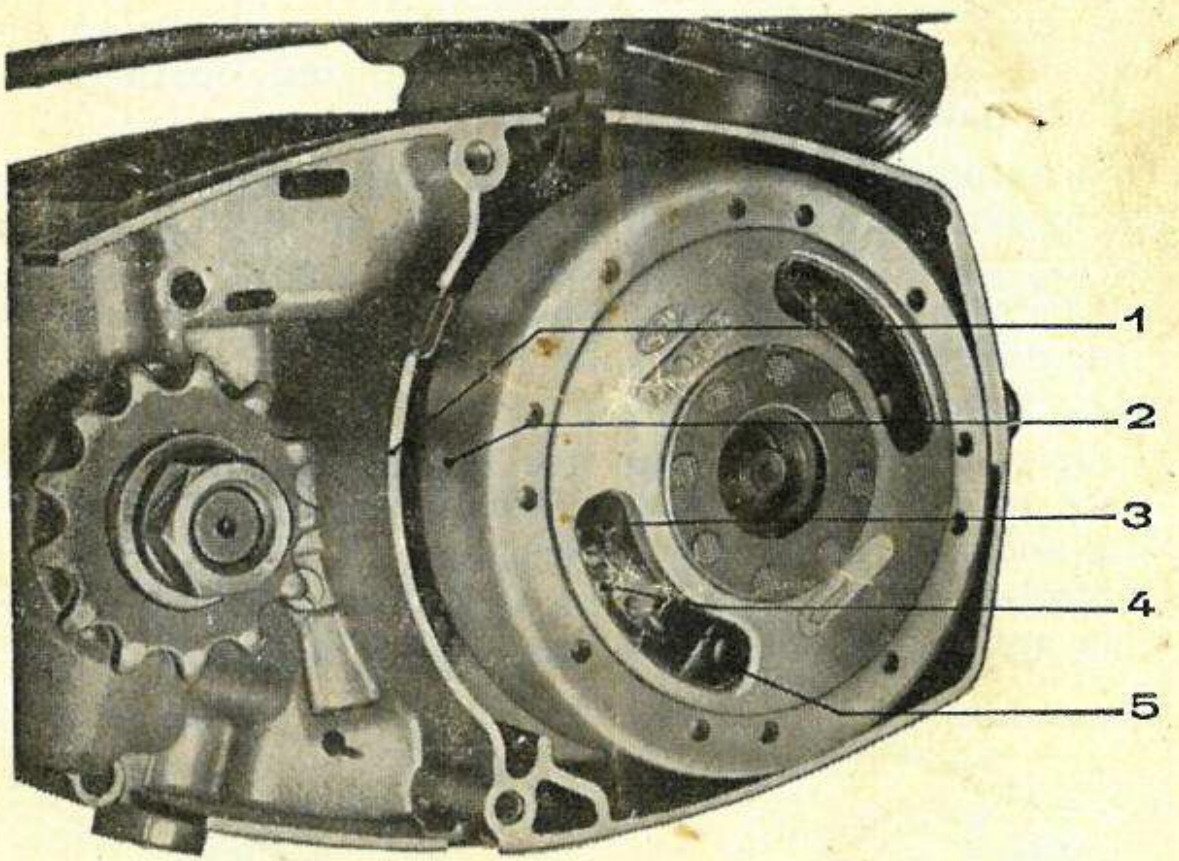
Starting sprocket	13-T	Concorde Matic - Gulp Matic
Starting sprocket	12-T	Concorde 3 V
Starting sprocket	13-T	Bimatic
Starting sprocket	17-T	Gulp Flex
Rear sprocket	22-T	Gulp Flex
Rear sprocket	30-T	Concorde Matic - Gulp Matic
Rear sprocket	34-T	Concorde 3 V
Rear sprocket	32-T	Bimatic

Tyres pressure:

- front	26 P. S. I.	Concorde 3 V Concorde Matic Bimatic
- rear	34 P. S. I.	
- front	14 P. S. I.	Gulp Matic
- rear	29 P. S. I.	Gulp Flex

Flywheel magneto (pict. 2)

Spacing of the contact points may be accomplished with 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



Pict. 2 - Engine, side view showing flywheel magneto

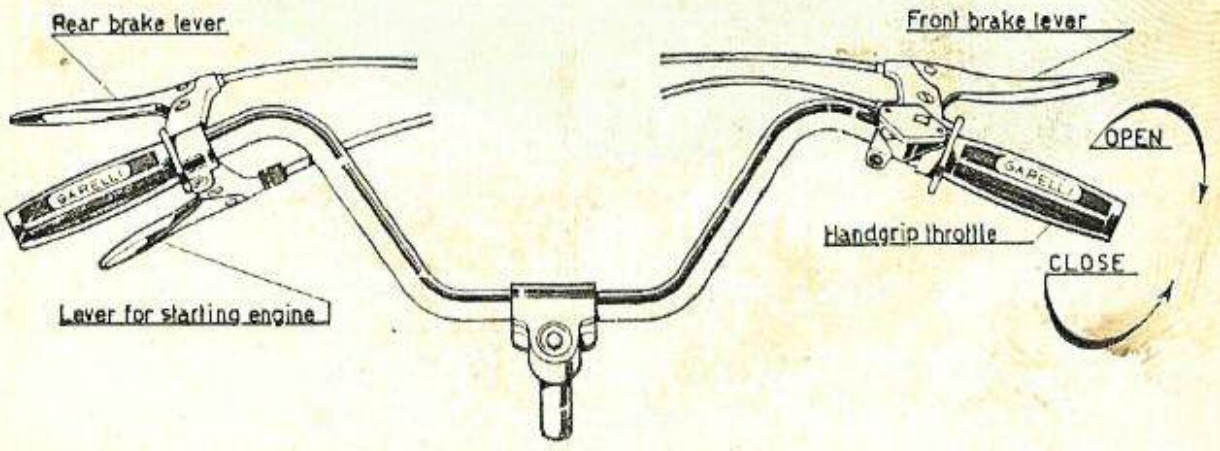
1. Timing mark on crankcase housing - **2.** Timing mark on magneto flywheel - **3.** Contact breaker gap .014" -: 018" - **4.** Contact adjusting screw - **5.** Notch

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 .074" below crankcase housing, or as the piston reaches TDC.
It is advisable to check the contact breaker gap after the first 300 miles and thereafter at intervals of 1.500 miles.

Clutch (Matic - Bimatic - Flex)
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 consist of 1 ring (Gulp Flex) 2 ring (Matic - Bimatic) of special rubber having particular features in order to avoid any noise and increase ist lite. No adjustments are required even after a long use.

Matic Bimatic
If the starting, after some use proves difficult, fit the space part number 214.826,00 between the 2nd. speed ring and the relative shoulder.
Controls (Matic - Bimatic - Flex) all the operation controls are on the handlebar as shown in pict 3.



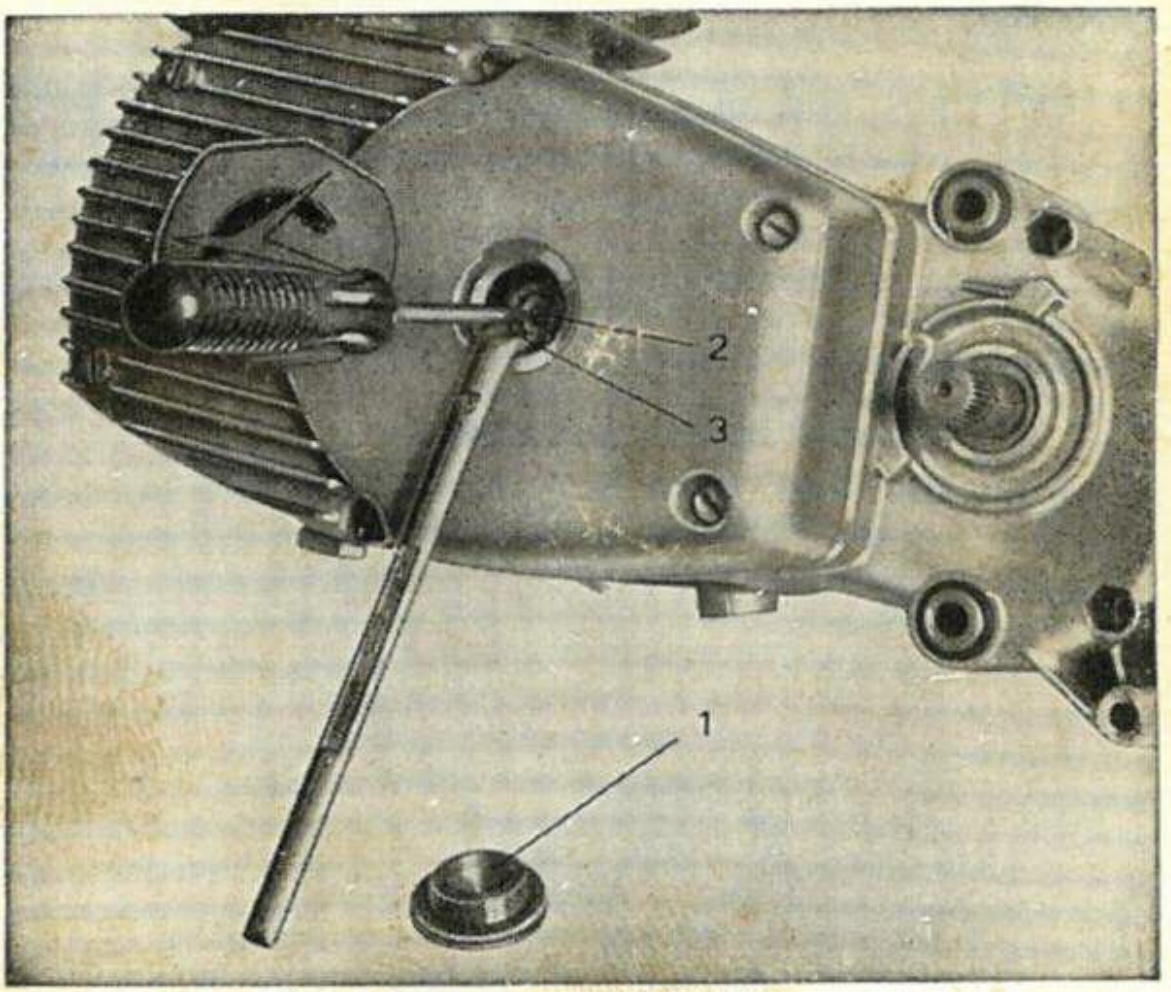
Pict 3

Clutch (Concorde 3 V)

The clutch is located in the left crankcase half and operates in oil bath.

For access to the clutch, remove the plug situated on the left cover.

The play of the clutch pin is regulated with the screw (2) and the locknut (3).



Pict. 4 - Clutch view

1. Oil plug - **2.** Clutch adjusting screw - **3.** Locknut.

Gear-Box 3 V

Of « cascade » design with gears in constant mesh.

The primary shaft and its three gears are in one piece.

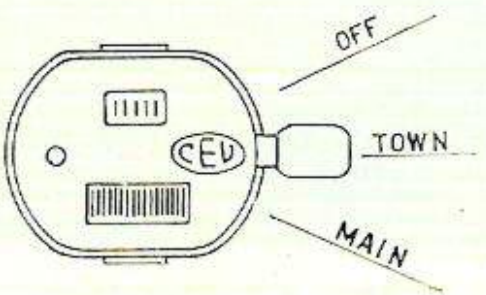
The three mating gears on the secondary shaft are free and are alternately locked solidly with the shaft by a sprags (camme): their shifting is fulfilled by a concentric nut, which is at the internal side of the secondary shaft.

At the right end of the secondary shaft is a keyed sprocket which drives the rear wheel by means of a chain.

Lubrication is by oil which automatically circulates through the gearbox and clutch chamber.

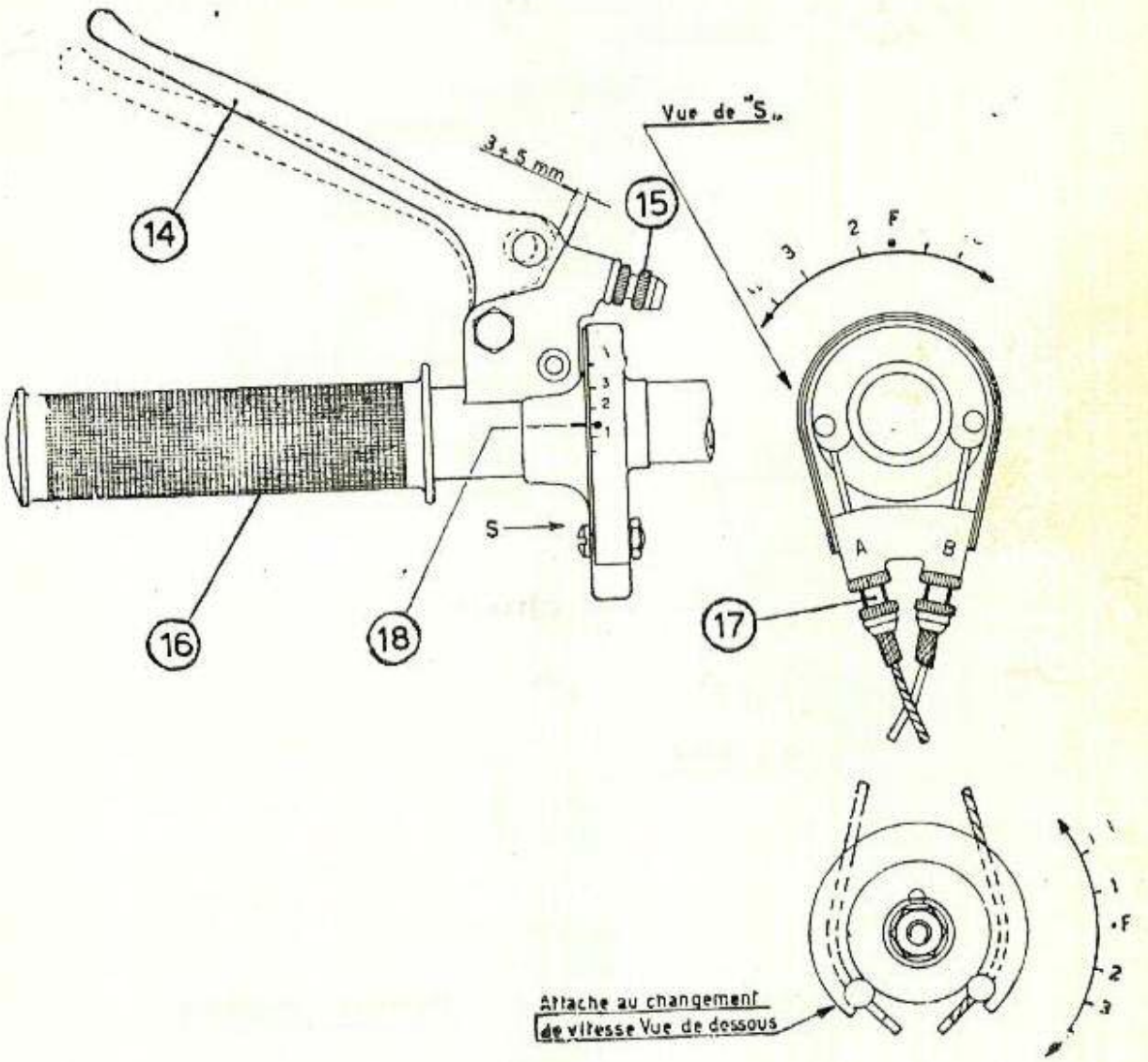
The gear change has 4 positions:
1st, neutral, 2nd, 3rd

SWITCH GB



HANDLEBAR CONTROLS 3 V

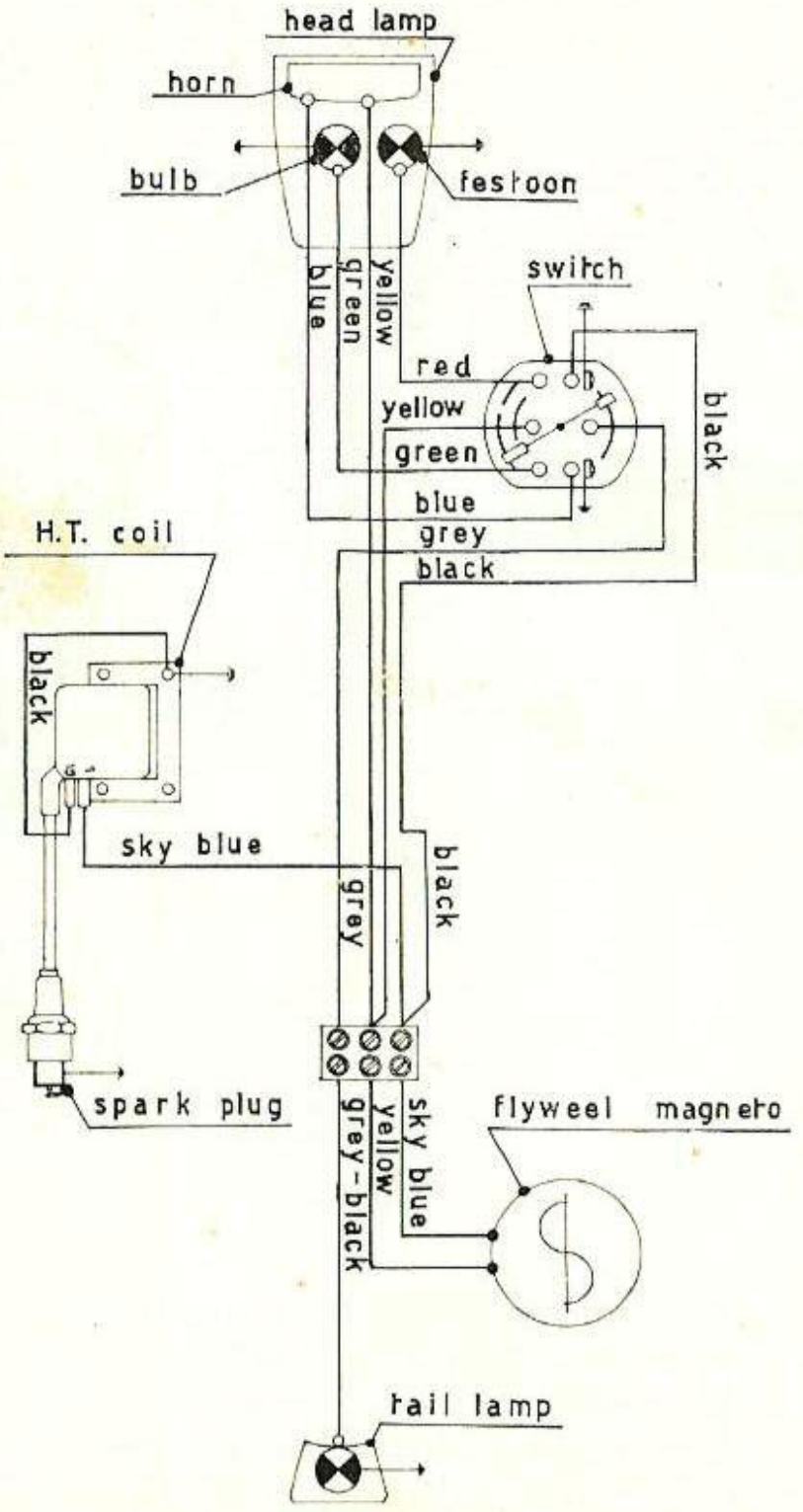
Left side: Clutch lever - Gear twistgrip
Right side: Front brake lever - Throttle twistgrip.



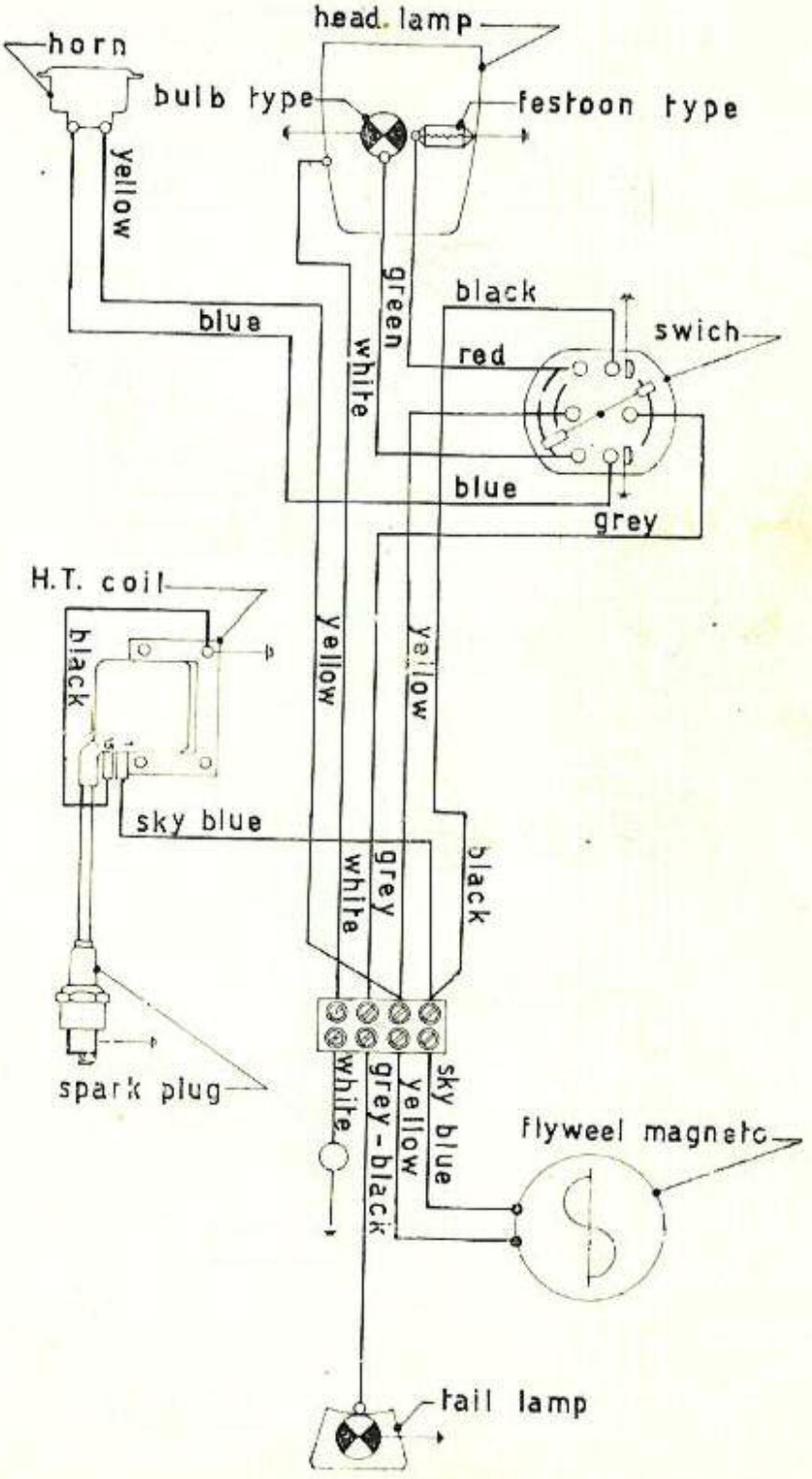
Pict. 5

14 = Clutch lever
15 = Adjusting screw for clutch lever
16 = Hand throttle twist grip
17 = Adjusting screws for gear
18 = Timing marks for gear positions

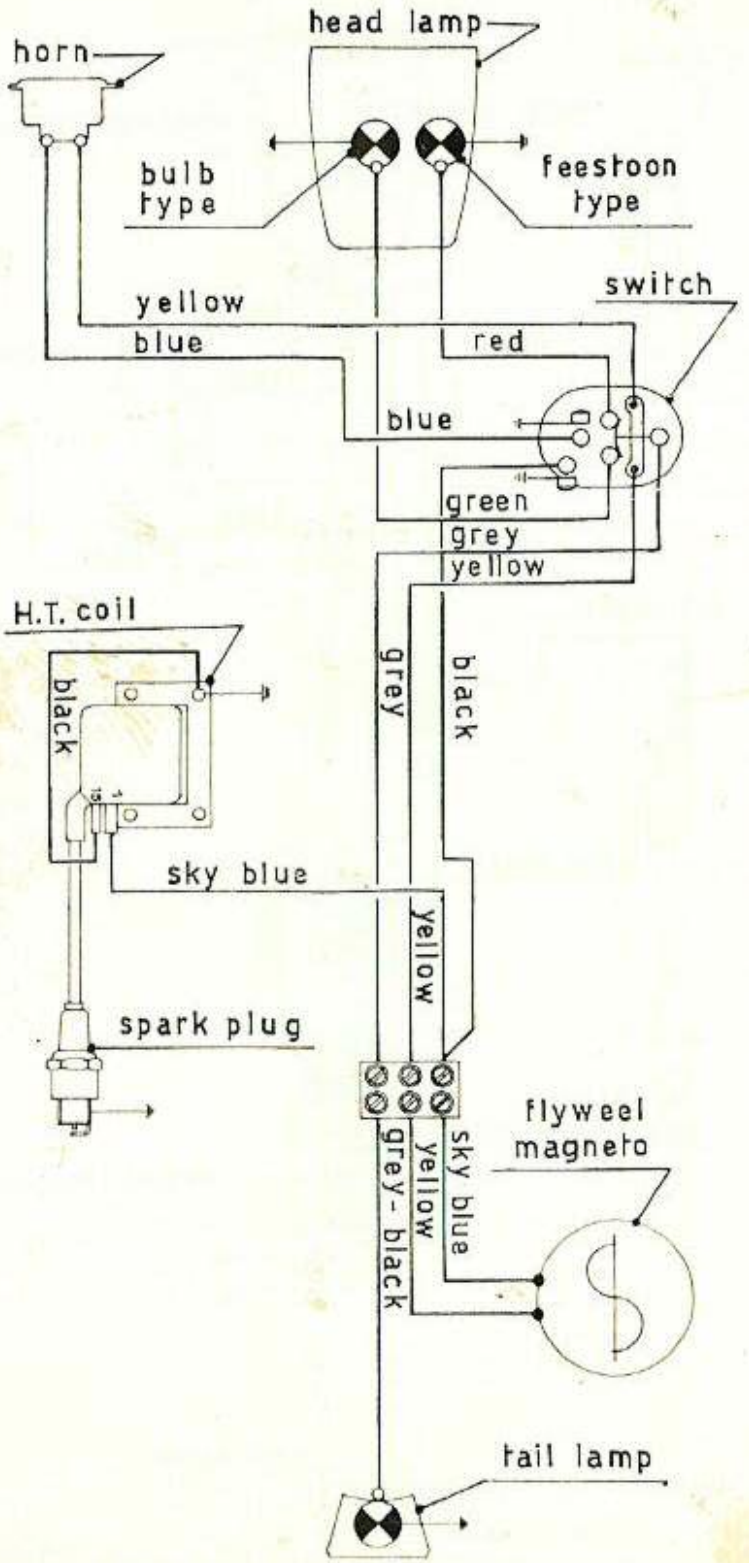
SCHEMATIC LAYOUT OF ELECTRIC WIRING
(Concorde Matic - Concorde 3 V)



SCHEMATIC LAYOUT OF ELECTRIC WIRING
(Bimatic)



SCHEMATIC LAYOUT OF ELECTRIC WIRING WITH OUTER COIL (Gulp Flex - Gulp Matic)



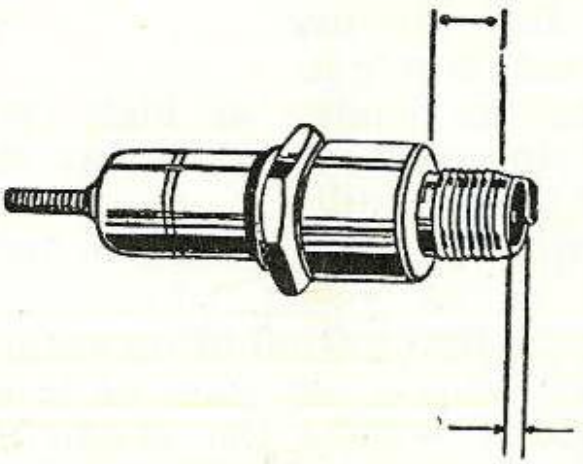
Spark plug

The spark plug is a very important part and it should therefore receive regular attention.

Every 750 to 1000 miles it must be cleaned by using a sharp-edged steel scraper and wire brush or better yet, a sand blast type of spark plug cleaner as generally installed at most garages.

Reset the electrode gap .020" to .024". (0,5 ÷ 0,6 mm.)

When refitting, don't forget the sealing washer and don't overtighten it. Check HT lead and plug cover for proper connection.



Pict. 9

To check the plug spark, act as follows:

1. take the plug off
2. re-connect the lead
3. put the plug on the cylinder head
4. start the engine as usual

a powerful, blue spark should jump the gap; if not, the spark plug should be replaced.

The plug heat value greatly depends on how the engine is employed: under certain conditions the most situable heat value may be other than the suggested one.

Always remenber to have the plug spanner and a clean spare plug in your tool bag.

Part II
OPERATING INSTRUCTIONS

For the preparation of the fuel mixture, it is advisable to use **normal petrol and** FIAT MOTO 2 T oil at 3 % (SAE 30).

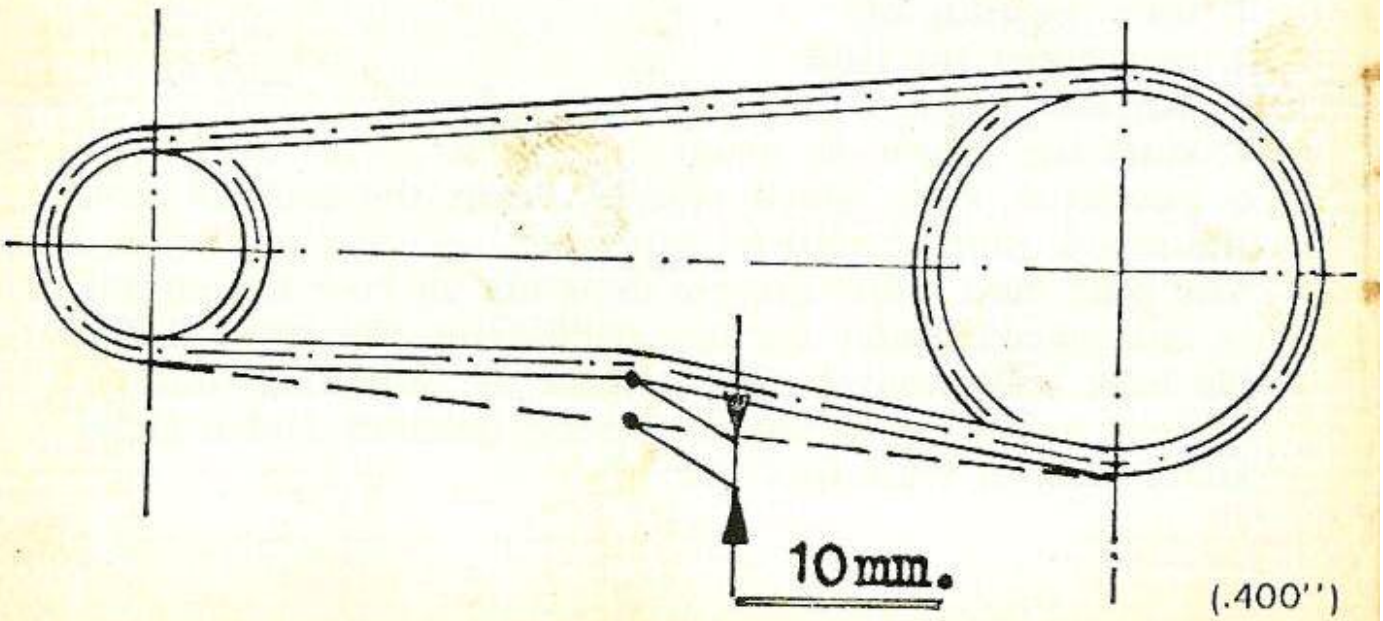
Do not use "Ethyl" or petrols containing a tetra-ethyl of lead additive. The use of fuel mixtures prepared with « regenerated » oil, or with poor quality oil, may endanger the performance and life of the engine.

Running-in procedure

— First 600 miles:
— Use a 4 % fuel mixture
— 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 3% oil.

Note During the first period of operation take care to adjust the chain tension as soon as it appears loose. With fully loaded vehicle the chain bottom section should have about 10 mm. (.400") swinging.

Thereafter, keep checking the tension and avoid using the vehicle with a loose chain.



Lubrication of clutch and primary gears

The mo-ped is normally delivered with about 400 cc of FIAT VS+ 30 oil (SAE 30).

Check the oil level: unscrew the filler plug on the left engine cover and observe it through the hole. It is right when the oil reaches bottom hedge.

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** (Bimatic - Matic - Flex)

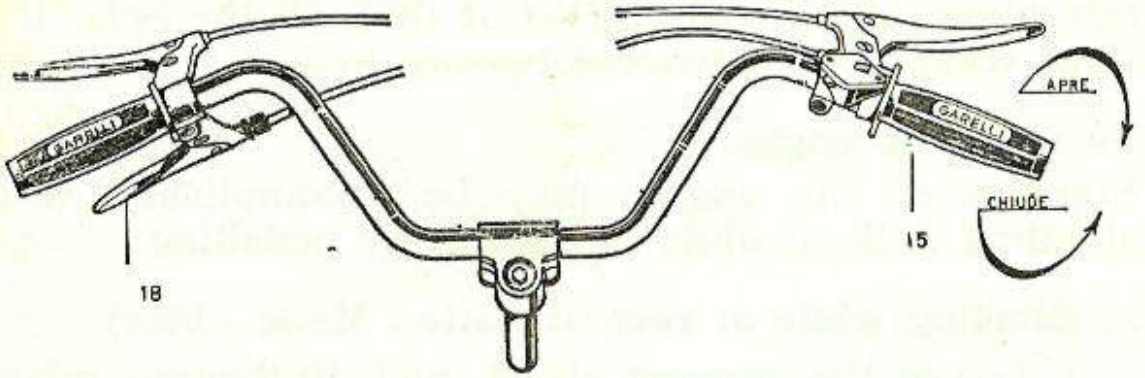
1. Lower the support stand, pict. 10 thereby raising the rear wheel from the ground.
2. Open the fuel cock.
3. Rotate the throttle 15 to about 1/3 open. (see pag. 18)
4. Depress the choke lever.
5. Push on the pedal 14 energically, and when the rear wheel begins to rotate, raise lever 18 while continuing action on pedal.
6. Release lever 18.
7. After the engine is running, to place moped in motion: raise the support stand mount the seat and accelerate the engine sufficiently to cause the automatic clutch to expand and begin to transmit motion to the outer drum.

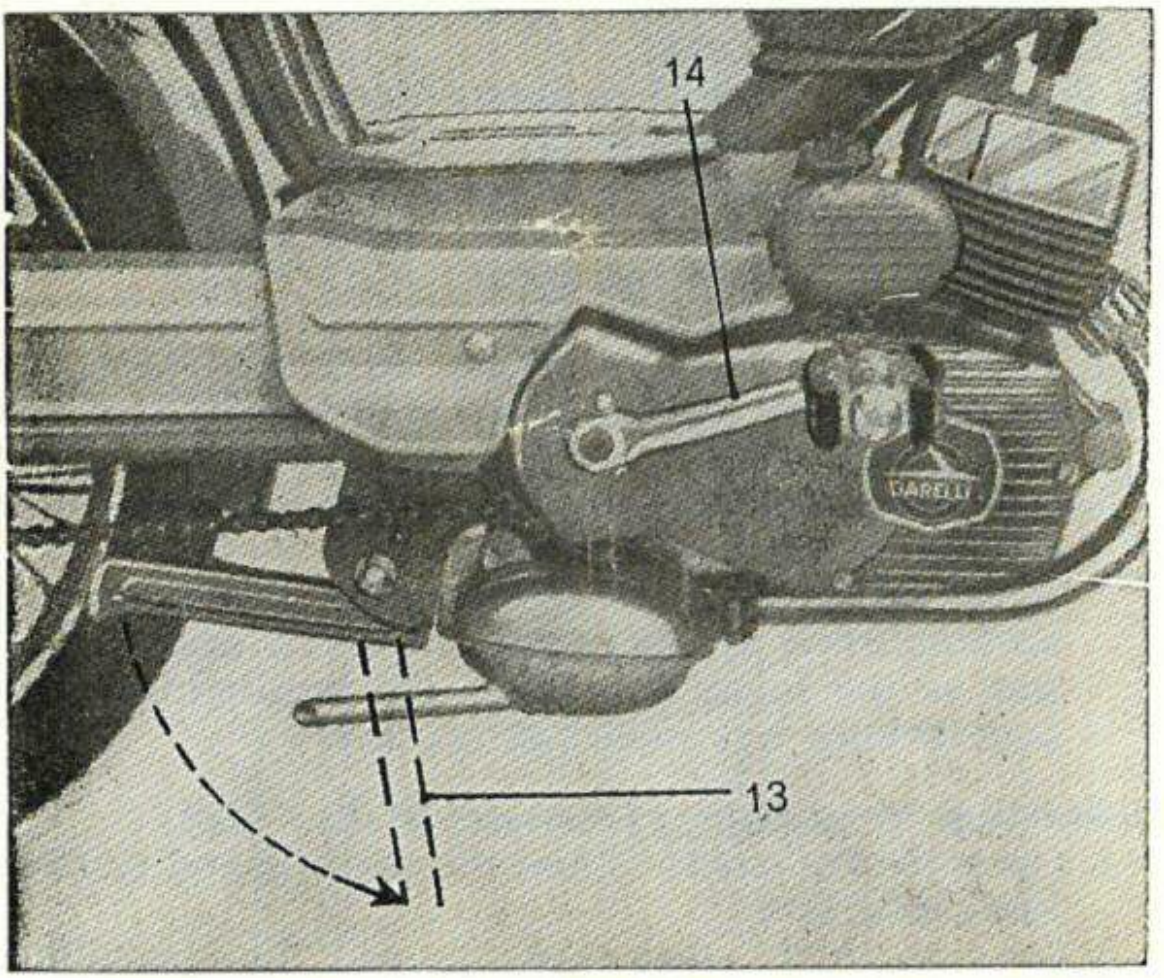
   Note Adjustment of the starting lever may be accomplished by regulating the screw and locking nut at the hand lever orby the regulating screw and locking nut mounted on lever.

b) **Starting by pedaling: (Bimatic - Matic - Flex)**

1. Open the fuel cock, adjust the throttle and depress the choke lever.
2. Get on and start the mo-ped by pedalling. After gaining sufficient speed, pulle lever and

at the same time open the throttle; as the engine starts release lever and regulate the speed of the mo-ped only by the use of the throttle. For effecting brief halts (traffic signals,





Pict 10

intersections, etc.) it is sufficient to close the throttle and allow the engine to run slowly as this will disengage the clutch from the drum 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 stop it is advisable to close the fuel cock.

(CONCORDE 3- V)

A) Starting on the stand

— Open the fuel cock
— Rotate the throttle (15) to about 1/3 open
— Depress the choke lever
- Rotate the gearchange handgrip (pict 5) to line the notch 18 with the neutral position. To make the engagement easier it is advised to move the moped a bit when twisting the handgrip.
— Start the engine by pushing down on the pedals energically.

B) To operate clutch and gear change:

After the engine has been starter, to depart proceed as follows:

a) Pull on the clutch lever, accelerate the engine slightl and turn the gear change handgrip to the point where the figure 1 lines up with the notch, thus engaging 1st gear (fig. 5).
b) Again accelerate the engine and gradually release the clutch lever.

To effect gear change:

— To change up (from 1st to 2nd and from 2nd to 3rd), close the throttle and as before, pull gently on the clutch lever, rotate the gear change to

engage the desired gear, then re-accelerate while releasing the clutch lever.

— To change down (from 3rd to 2nd and from 2nd to 1st), pull on the clutch lever, rotate the gear change while accelerating lightly at the same time and release clutch lever.

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 shou d be entrusted to an authorized **Agrati - 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; (see page 6)

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 clutch lever and the gear change cables.

— Drain the oil from the crankcase and refill with new FIAT VS+ 30 oil (SAE 30).

— Clean the fuel pipe filter on the carburettor.

— Adjust idling speed by means of the regulating screw located on the carburettor near the jet retaining plug.

— Remove and inspect the sparking plug; if necessary, clean and adjust the electrode gap to .020" ÷ .024".

Every 1000 miles:

— Repeat operations outlined in the preceeding paragraph.

— Have an authorized **Agrati - Garelli** agency check the timing and set the contact breaker points of the magneto to .014" ÷ .018" gap spacing.

— Inspect and adjust the brake cables tension by means of the cable adjusters cam type.

— 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 screping 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 refitting the cylinder head the nuts must be tightened down gradually, passing from one nut to the other diametrically opposite in turn, untill all are tight.

— Clean the exhaust silencer.

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

— Check, and when necessary, adjust the lateral alignment of the wheel. To obtain proper alignment, loosen the outside axle locking nuts and regulate the adjustment nut located inside the fork arms.

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".	Turn off the fuel cock, open the throttle all the way and push on pedal repeatedly until the 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 petrol pipe is clogged or the filter is dirty.	Remove petrol pipe and filter then clean. Before replacement of the pipe 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 lacks power or fails to reach its normal speed:

1. Exhaust noise is weak. 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 running of the engine. Engine misses and carburettor backfires out.	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 open wider	Dirty main 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 jet is not partially dirty, oxidized, etc.;

(b) That the sparking plug is not defective or dirty;

(c) That the carburettor is clean inside (by dismounting 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.

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 lod- 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 ist seat due to excess wear on the needle point. In this case the needle and the float chamber cover must be replaced.

GUARANTEE

(taken from the General Sale Conditions)

The mo-peds BIMATIC - CONCORDE MATIC - CONCORDE 3V **GULP FLEX**- GULP MATIC are guaranteed for six month from the date of delivery against any defects in materials or workmanship.

Under the terms of this guarantee, all the parts which are proved to be defective will be repaired or replaced free of charges, provided they have not been subject to abuse and provided the moped has not been employed for other purposes than those for which it was intended. By the manufacturer as indicated in his catalogue. The cost of transportation, of assembling and disassembling and of any fuels and lubricants used will be to the owner's ch[illegible]

The guarantee is a void whenever:

— non original parts have been employed;

— the engine unit shows signs of abuse by incompetent people or gives evidence of repairs not properly performed;

— the machine has been used in races of competitions;

— the oil and lubricant as used were not of the perschibed quality, quantity and grade;

— the running-in instructions have not been followed.

With respect to the parts no manufactured by Gruppo Industriale Agrati-Garelli S.p.A. (such as: ball bearings, cables electrical equipment, tyres, etc.) the guarantee applies only to the same extent as the manufacturers of such parts assume obligations for them.

AGENT FOR

AGRATI SALES (U. K.) LTD.

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Ratio 30-1

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Pour

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30-1 tank

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