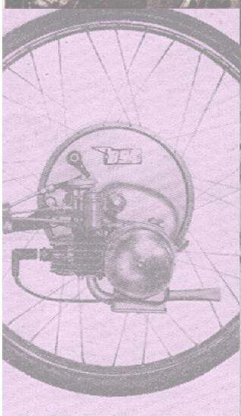
IceniCAM Information Service

The Iceni CAM Magazine

Cyclemotor Autocycle C Moped



Gruppo Industriale Agrati-Garelli Monticello Brianza (Como) - Italy

MO - PEDS

double and three speed - automatic clutch and gear operation

GARELLI 50 cc

BIMATIC

CONCORDE Matic

CONCORDE 3 M

INSTRUCTION BOOKLET

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 CASE OF NEED OUR AGENT IS ALWAYS AT YOUR DISPOSAL. DO NOT FORGET IT!

gruppo industriale *agrati* - GARELLI monticello brianza (como) - Italy

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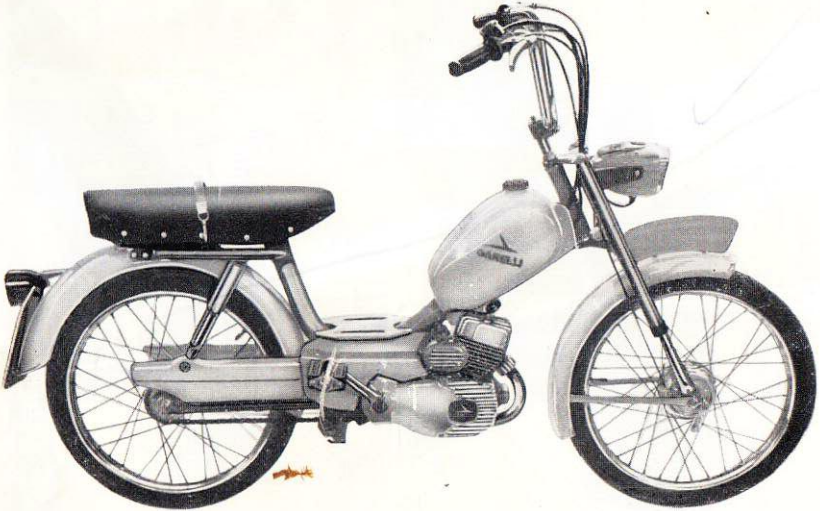
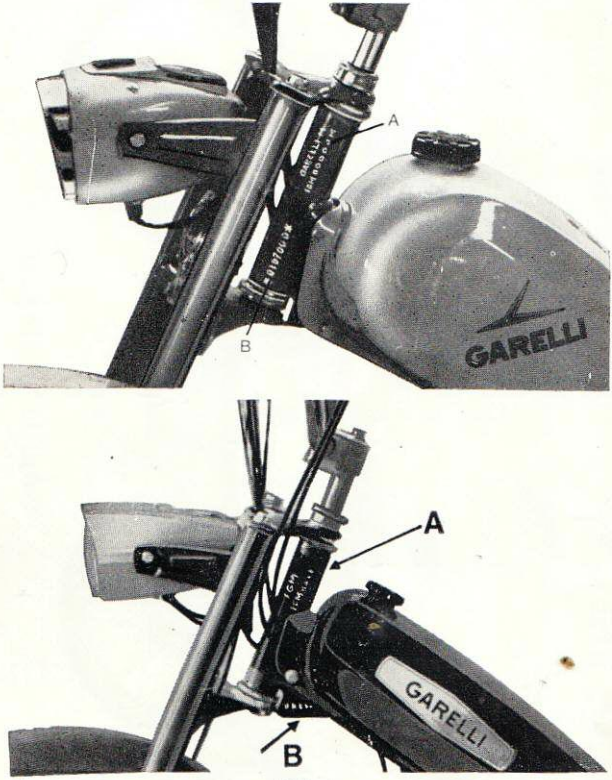
Ciclomotore Matic - Concorde 3 M



GARELLI BIMATIC

Part 1
IDENTIFICATION



Pict. 1

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 : 7
-- Power output	1,4 at 5000 r.p.m.

Ignition

-- Ignition by flywheel magneto with inside H.T. coil, suitable to feed 6V-18W electrical equipment.

-- Sparking plug fire at 23° before TDC corresponding to 0,83" before TDC. Heat value 225 (Bosch scale).

Carburetter

— Dell'Orto type SHA 14/12 Jet 50.

Engine with full automatic gear (Concorde Matic - Bimatic)

Three speed hand gearchange (Concorde 3 M)

Primary drive by gear

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

Front suspension telescopic fork

Rear suspensions by swinging arm, and telescopic suspensions units

Whire wheels with cromed steel rims

Tyres 2¼x16" (Concorde Matic - 3 M) 2¼x17" (Bimatic)

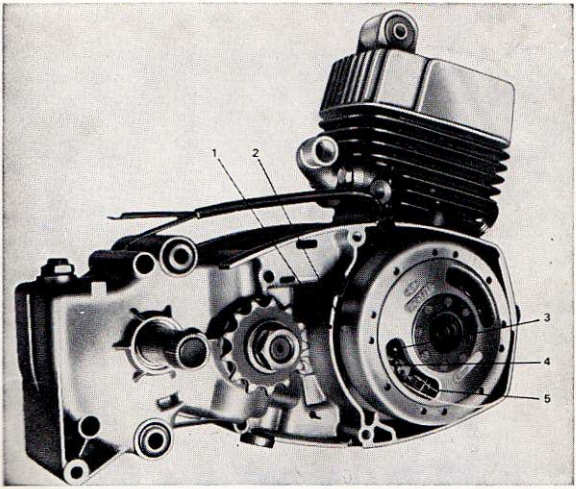
Fuel tank: one Imp. gallon (4.5 litres)

Starting: by pedals

Tail lamp 6V-5/18W		(Concorde - 3 M - Bimatic)
Starting sprocket	13-T	Concorde Matic
Starting sprocket	12-T	Concorde 3 M
Starting sprocket	13-T	Bimatic
Rear sprocket	30-T	Concorde Matic
Rear sprocket	34-T	Concorde 3 M
Rear sprocket	32-T	Bimatic

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 in 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 0,14''÷0,18'' - **4.** Contact adjusting screw - **5.** Notch

The proper spacing of the contact points, in position of maximum opening is 0.14" to 0.18 (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 0.83" below crankcase housing, or as the piston reaches TDC.

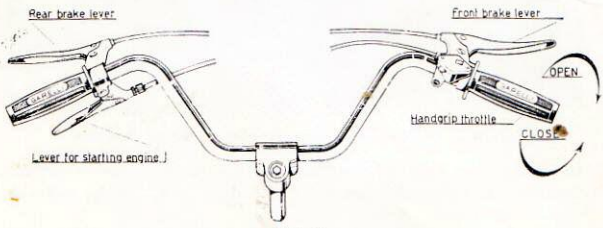
It is advisable to check the contact breaker gap after the first 300 miles and the reafter at intervals of 1.500 miles.

Clutch (Matic - Bimatic) 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 two ring of special rubber having particular caracteristics in order to avoid any noise and increase its duration. No adjustment are required also after along use.

If the starting, after a while, begung difficult, fitt in the spacer part number 214.826.00 between the 2nd. speed ring and the relative shoulder.

Arrangement of controls (Matic - Bimatic)

All of the operating controls will be found on the handelbar as illustrated in the fig. n. 3.



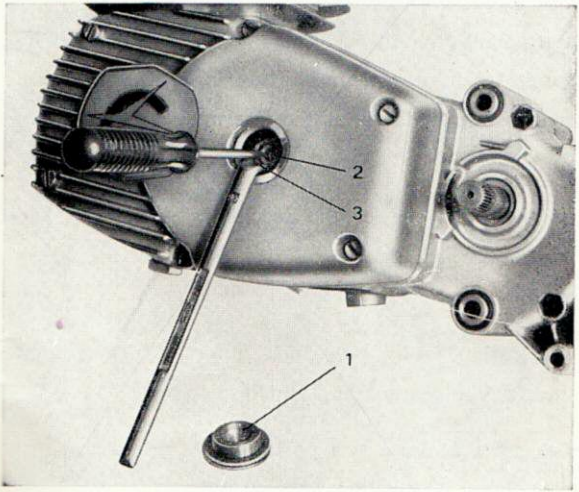
Pict 3

Clutch (Concorde 3 M)

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 M

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.

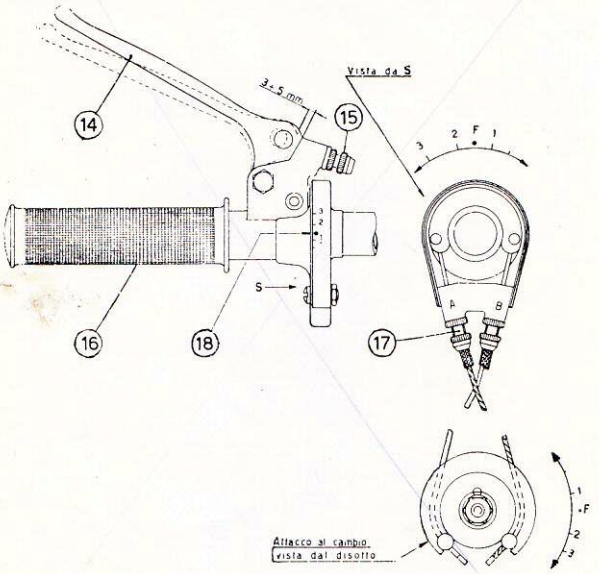
Lubrication is by oil which automatically circulates through the gearbox and clutch chamber.

The gear change has 4 positions:

1st, neutral, 2nd, 3rd

HANDLEBAR CONTROLS M 3

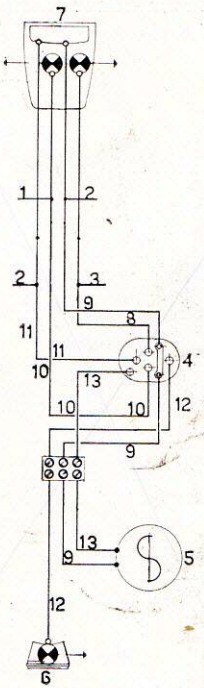
Left side: Clutch lever - Gear twistgrip
Right side: Front brake lever - Throttle twistgrip.



Pict. 5

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

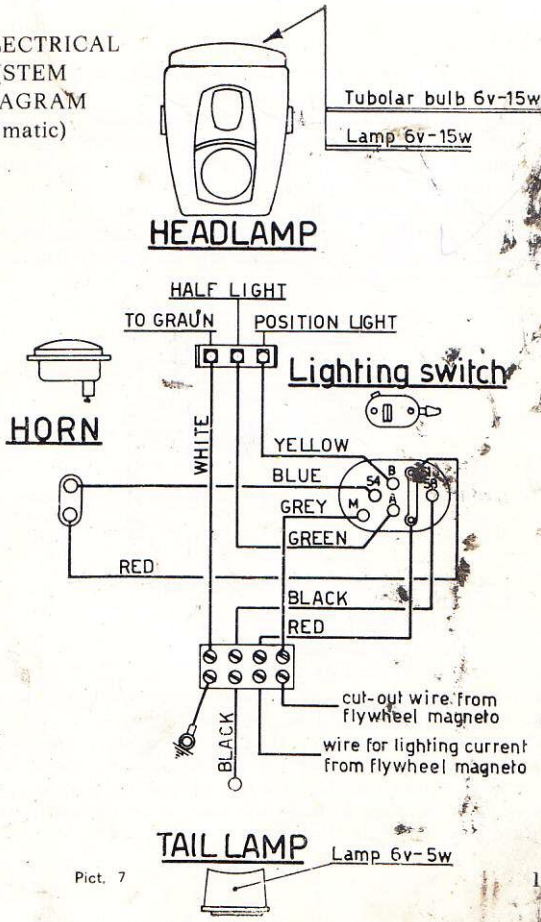
ELECTRICAL SYSTEM DIAGRAM (Concorde Matic) (Concorde 3 M)



Pict. 6

1. Antidaggle - **2.** Horn - **3.** Position light - **4.** Switch - **5.** Flywheel - **6.** Tail lamp - **7.** Headlamp with horn - **8.** Yellow - **9.** Red - **10.** Green - **11.** Blu - **12.** Black - **13.** Grey.

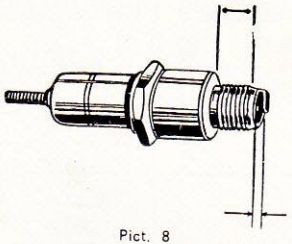
ELECTRICAL SYSTEM DIAGRAM (Bimatic)



Pict. 7

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 at 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. 8

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 suitable heat value may be other than the suggested one.
Always remember 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 oil of viscosity 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 proceedure

— First 600 miles:
— Use a 5% 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 4% oil.

Lubrication of clutch and primary gears

The mo-ped is normally delivered with about 4/5 of a pint of «OLEOBLITZ» check 800 GL 4 corresponding to mineral pure oil SAE 30
Check the oil level, unscrew the filler plug at the left of the engine and observe the groove on the filler plug dipstich.

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**

1. Lower the support stand, pict. 9 thereby raising the rear wheel from the ground.

2. Open the fuel cock.
3. Rotate the throttle 15 to about 1/3 open.
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.

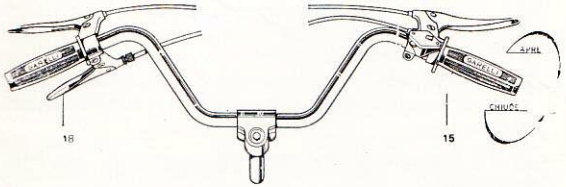
Note Adjustment of the starting lever may be accomplished by regulating the screw and locking nut at the hand lever orby the regulating screw and locking nut mounted on lever.

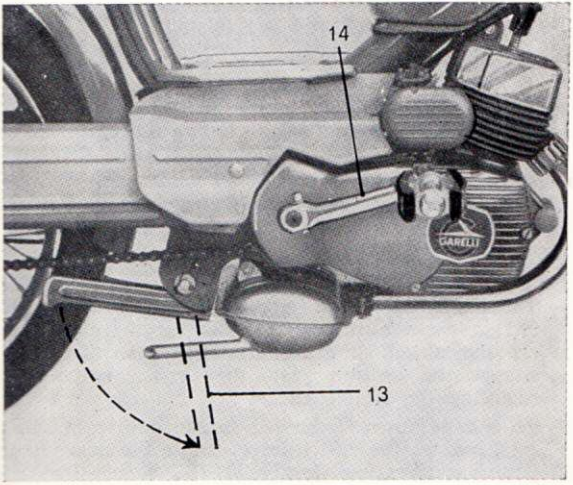
b) **Starting by pedaling:**

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, raise 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, 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 halt, it is advisable to close the fuel cock.





Pict. 9

(CONCORDE 3-M)

A) Starting on the stand

— Open the fuel cock

— Rotate the throttle (15) to about 1/3 open

— Depress the choke lever

— Rotate the gear change handgrip « Free-Folle » on the gearbox position indicator is lined up with the notch. (fig. 5)

— 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 shouid 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; 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 clutch lever and the gear change cables.
- Drain the oil from the crankcase and refill with new oil (see lubrication clutch page 15.)
- 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".
- Grease the rear swing arm pivot with a grease gun.

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 replace, 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 opened 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 or climbing. accelerating is smooth and constant only when exhaust is irregular.

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 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-ped BIMATIC - CONCORDE MATIC - CONCORDE 3 M 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 charge.

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 or competitions;

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

— the running-in instructions have not been followed.

With respect to the parts not 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.

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