

48

M/VAL

**Operation and Maintenance
handbook**

48 cc. single speed



METALMECCANICA
ITALIANA
VALTROMPIA

48 cu. cm.
single speed.

CERTIFICATE OF GUARANTEE

The machine is guaranteed under the usual terms for a period of 6 months from date of putting into service.

Engine No.....

Frame No.....

Supplied to

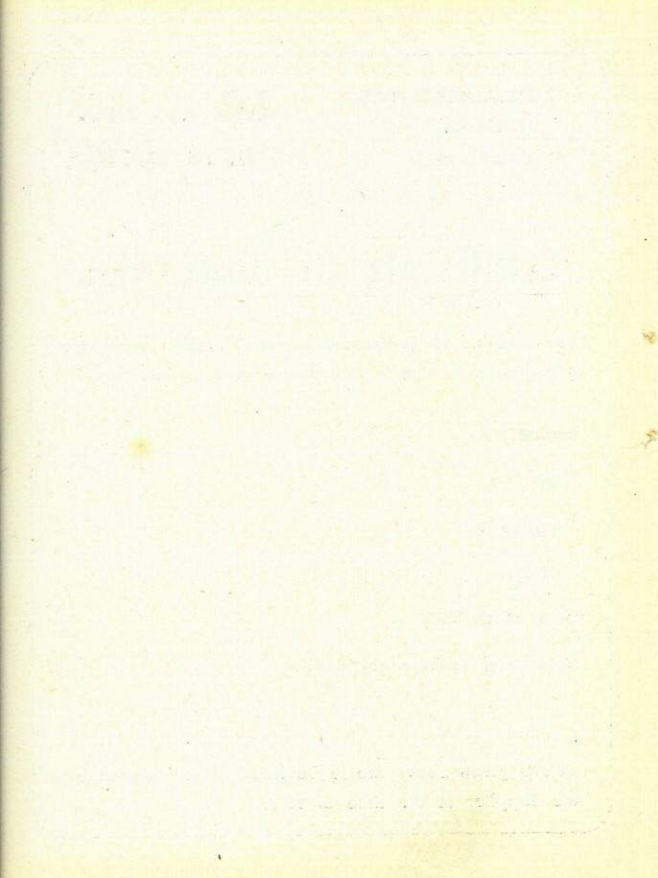
Address

Date of delivery

Name and address of Supplier

.....

Details given above are to be filled in and signed by the Supplier at the time of sale.



Technical data of the 48 cc. single speed MI-VAL engine

Type	single cylinder two stroke
Bore	38 mm.
Stroke	42 mm.
Capacity	47.6 cc.
Compression Ratio	6.5 : 1
Brake Horse Power	1.5
R. P. M.	5,700
Ignition	Flywheel magneto
Lighting	6 v. 18 w.
Sparking Plug	225 Bosch scale
Carburettor	« Dell'Orto » 179 D
Transmission	Ground helical gears
Clutch	Multiple disc type on secondary shaft. Running in oil bath
Fuel consumption	150 - 180 miles per gallon
Maximum speed	25 mile per hour
Petrol-oil ratio	20 : 1



General operating instructions

STARTING :

It is advisable to have the machine on its stand. The operations to be carried out are:

Close the strangler on the carburettor by lifting small disc on the air cleaner to position « C » by means of the lever provided.

Turn the throttle on the handlebar to about $1/8$ to $1/4$ open.

Prime the carburettor by use of the tickler on the float chamber, lift the pedal to the top of its stroke and push it down smartly forward, the engine should then start. Do not open the throttle above that mentioned, or the engine will race.

After the engine has been running for half a minute, put the strangler lever back to open position.

SPECIAL NOTE :

The above instructions are given for starting the engine COLD. When it is warm, or hot after a previous run, the strangler will not be needed.

Now withdraw clutch and set this in the disengaged position, by use of the small trigger lever provided in the main clutch lever. Now with the clutch still disengaged, remove the machine from the stand. Sitting astride the machine it is now ready to be driven off.

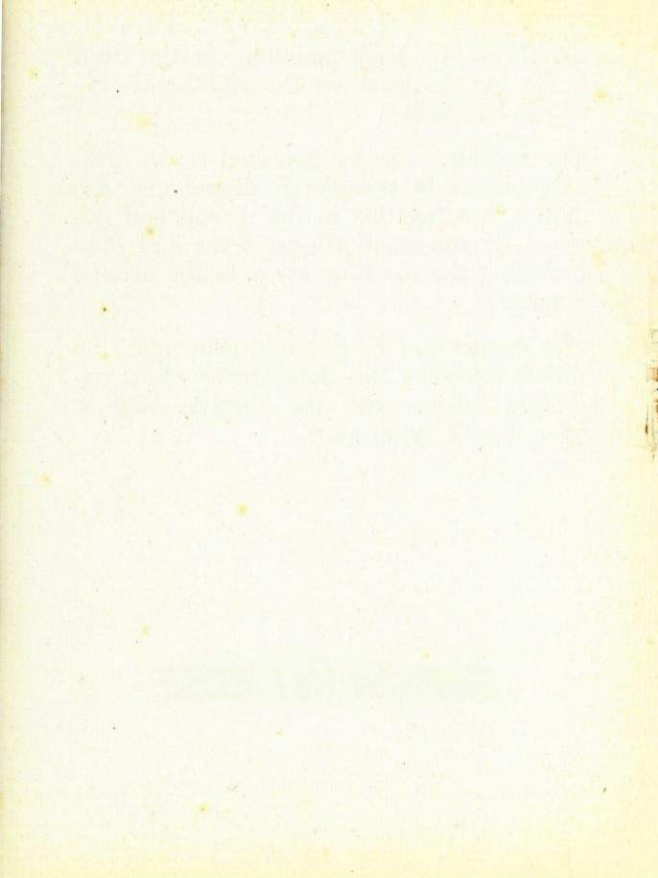
With the fingers of the lefthand operate the trigger lever to disengage this from the ratchet and gradually release the main clutch lever and at the same time opening very slightly the throttle which is operated by twist grip on the righthand side of the handlebar. The machine will now move off smoothly and without jerking. The speed of the machine is controlled now entirely by the throttle. To come to rest, close or nearly close the throttle twistgrip, withdraw the clutch lever completely and hold this by its trigger lever and apply the

rear brake by back pedalling or the front brake by the lever on the righthand side of the handlebar.

The machine can be pedalled as an ordinary bicycle by completely disengaging the clutch, holding this in the disengaged position by the small trigger lever and then pedalling the machine away in the normal manner.

The engine can be put into gear again by slowly releasing the clutch lever whilst pedalling when, with the throttle slightly open it will again start.





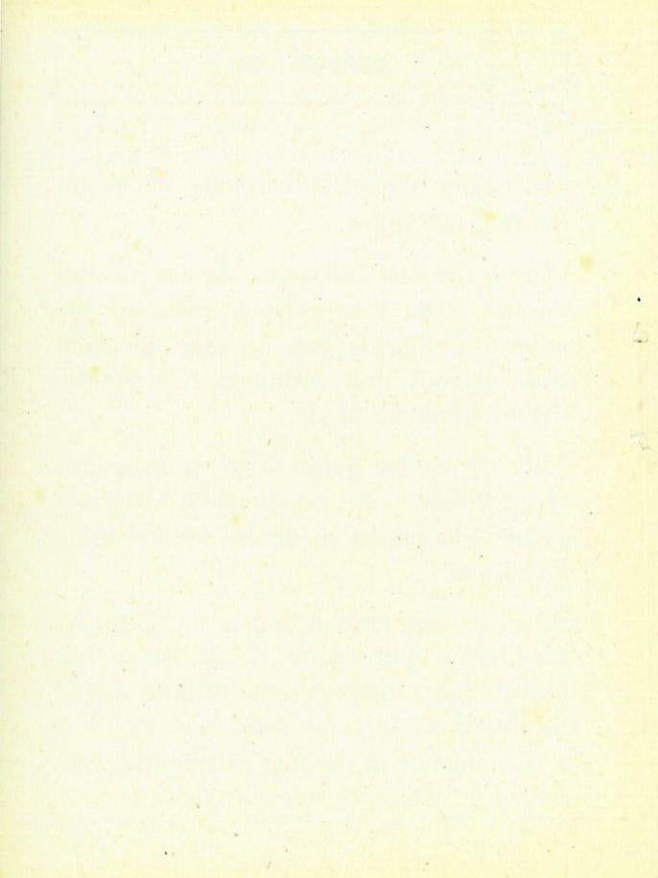
RUNNING - IN

The engine should be carefully run in for the first 500 miles.

During the first 300 miles, do not use full throttle. After this, between 300 and 500 miles full throttle can be used for very short periods, but sustained full throttle should never be used.

After the engine is run in the primary drive gearcase and countershaft bearings should be drained of oil and refilled using SAE30 oil.

When the engine is fully run in, it can be used over quite long distances at full throttle but at intervals the throttle should be closed slightly for short periods. It is a bad practice to drive at full throttle continuously over very long distances.



**Maintenance of the MI-VAL 48 cc.
Single Speed Engine**

1. CLEANING OF THE CARBURETTOR:

This should be carried out at intervals. Special care must be paid to the throttle and its housing as well as the float chamber which can be reached by detaching the top cap.

2. CLEANING THE JET:

The jet which is visible from outside the carburettor can be unscrewed and cleaned by an air blast or sucking or blowing by the mouth. It can be cleaned by a soft brush bristle, but never use a needle or wire.

**3. CLEANING THE CONTACT BREAKER
POINTS:**

To clean the magneto contact breaker points use a clean rag soaked in petrol and

wipe dry by a clean rag. The contact breaker gap should be adjusted to between 15 and 18 thous. of an inch.

4. DECARBONIZING

After the engine has been in use for between 1-2000 miles it will need decarbonizing. This is undertaken by removing the cylinder head, unscrewing the nuts holding this in place, the cylinder head should then be removed and have any carbon deposit scraped from the combustion chamber. The engine should be turned by hand to bring the piston to the top of its stroke and any carbon on the piston head scraped off. Only use a blunt scraper for this purpose. The piston should then be brought to the bottom of its stroke and after removing the exhaust pipe from the cylinder any carbon which is in evidence in the exhaust port on the cylinder should be scraped away.

It is advisable to have the decarbonizing of the engine undertaken by a Workshop which is equipped for this class of work.

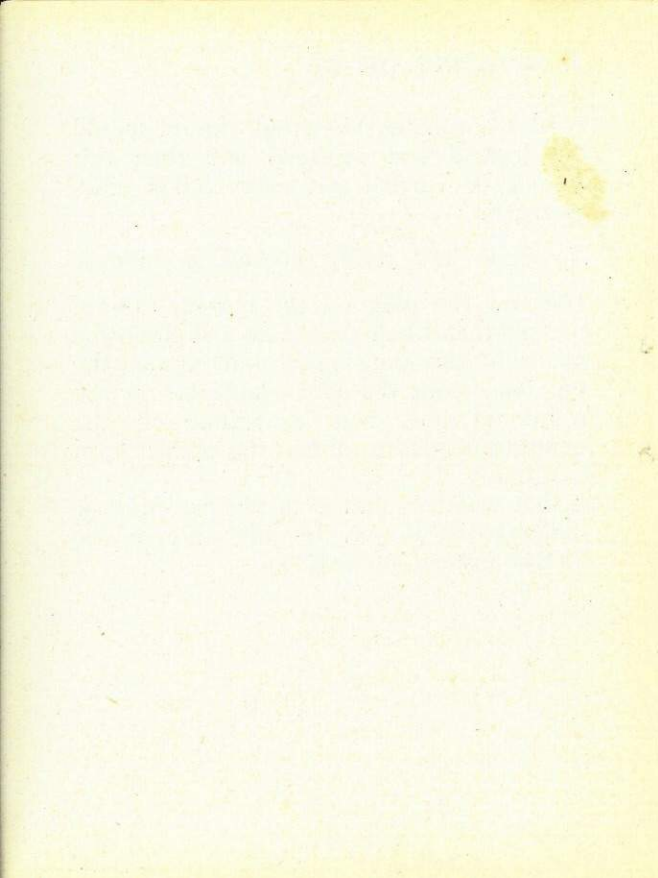
5. REPLACING THE OIL.

After the running in period, the oil should be drained and replaced and then this should be carried out every 2,000 miles thereafter.

To drain and refill, proceed as follows.

Unscrew the plug on the bottom face of the righthand half crankcase and drain the oil. Refit this plug again and remove the top one, from the half crankcase on the righthand side. Pour in SAE30 oil, the quantity needed to obtain the correct level is 9 ozs.

In hot weather, that is to say hot summer temperature, it may be advisable to use SAE40 instead of SAE30.



IMPORTANT GENERAL INSTRUCTIONS

AFTER THE FIRST 300 MILES :

Replace the oil in the engine.

EVERY 300 MILES :

Go over the engine and check that all nuts and screws are tight. Pay special attention to the cylinder head nuts. Clean and adjust the magneto contact breaker points.

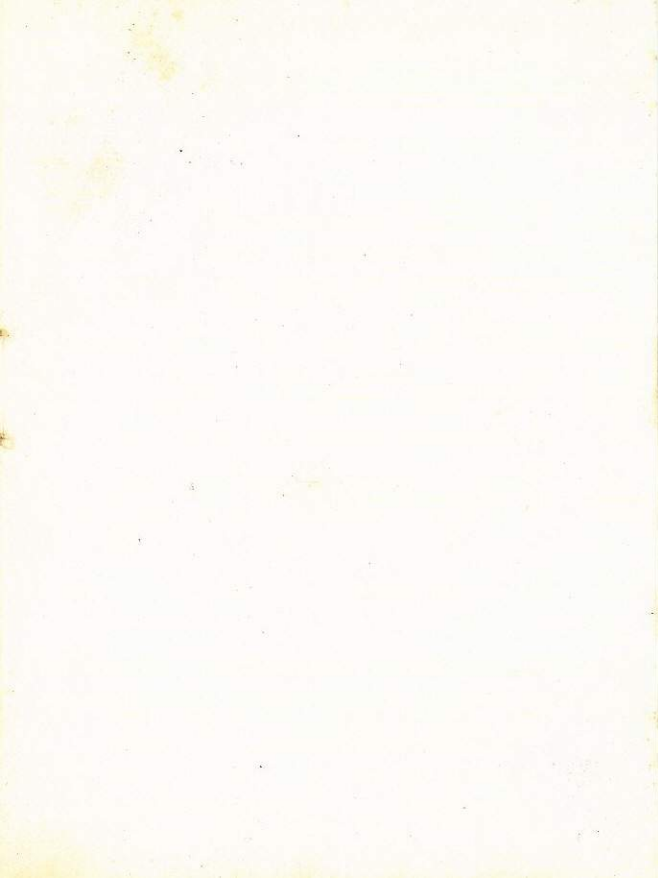
EVERY 600 MILES :

Check oil level by unscrewing the nut on the top face of the righthand half crankcase, check the level by use of the dip stick provided. If necessary top up using SAE30 oil. Slightly moisten with grease the felt pad on the contact breaker half. Adjust the clutch if necessary. Clean the carburettor. Clean the carburettor jet.

EVERY 2000 MILES :

Replace the oil.

Finally: always take care of your engine, follow closely the instructions given since these have been written to help you obtain the greatest efficiency and the longest of life from the unit.



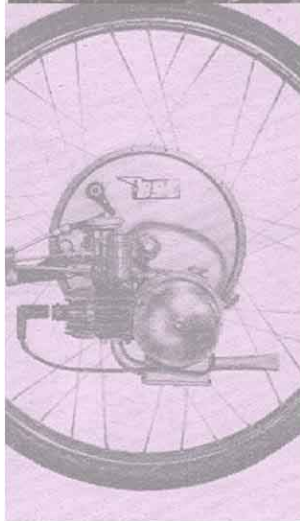


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Gardone V. T. (Brescia)

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