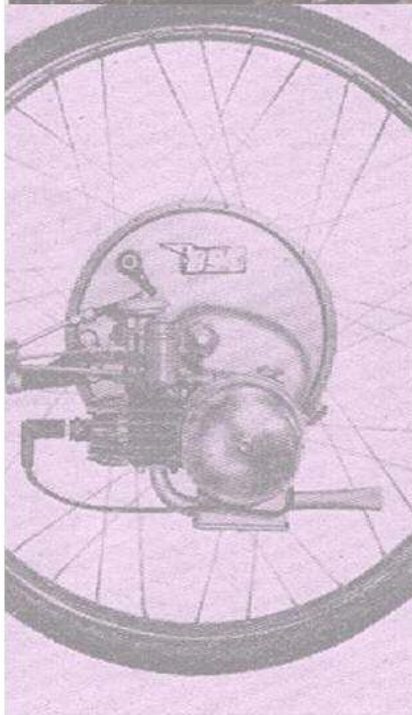


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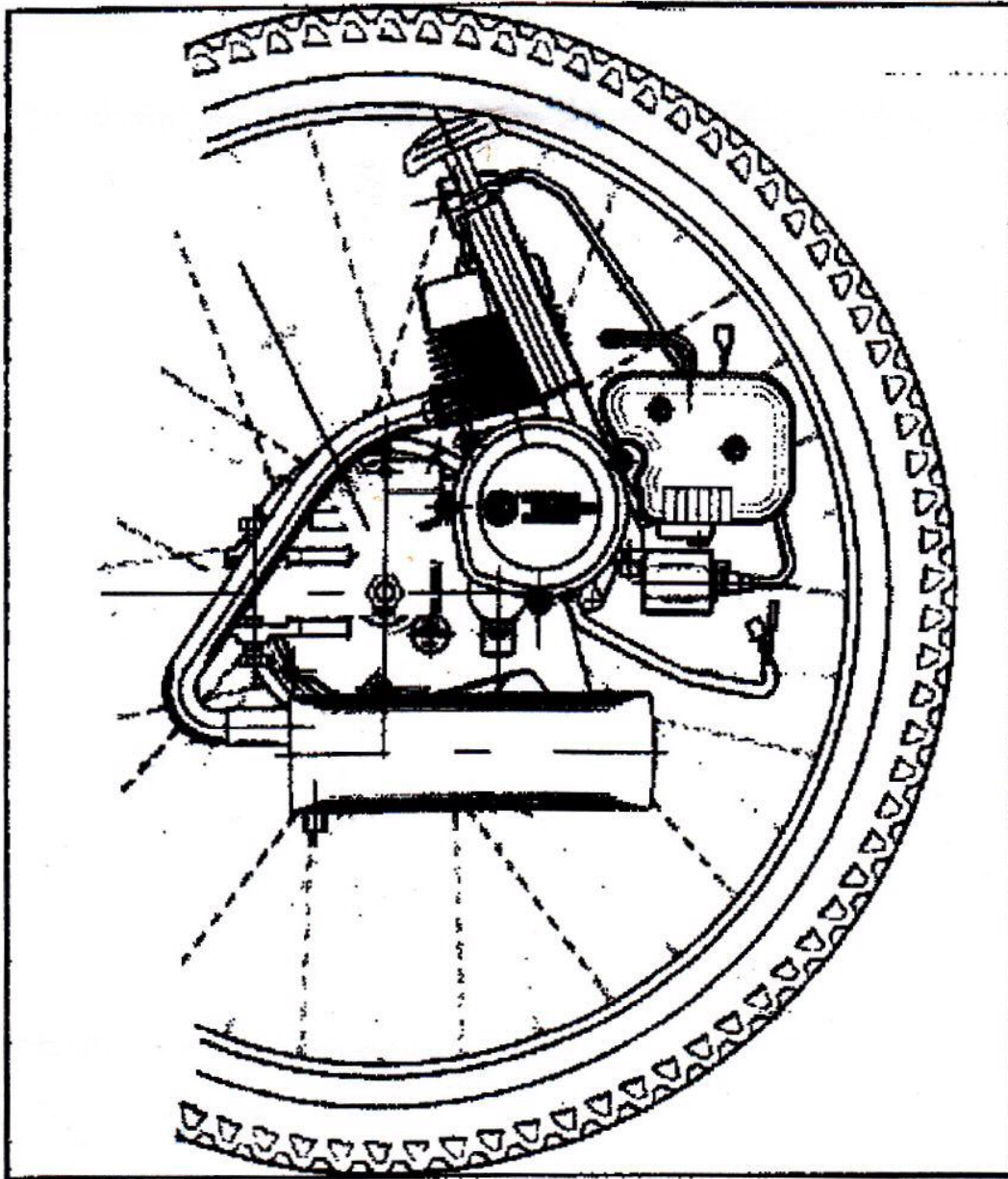
128



**MORINI
FRANCO
MOTORI**

ENGINE WORKSHOP MANUAL

Bicycle Engine Type "128"



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Up-to-date 07/02/96

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ENGINE SPECIFICATIONS

NUMBER OF CYLINDERS1
CYCLE2 - stroke
BORING BY STROKE32 x 35 mm.
PISTON DISPLACEMENT28.1 c.c.

INTAKE VALVEReed valve with intake into
crankcase
COMPRESSION RATIO1 : 7.5
STARTING SYSTEMPuli-starter with self-rewinding rope
CARBURETTOROil/fuel mixture at 2%

CARBURETTOR

Type

Dallorto SHA 12-7 with filter case

PRIMARY DRIVE

Gear drive, gear ratio.....1 : 27.69

CLUTCH

Centrifugal, automatic, wet

IGNITION

Type

Ignition advance

Spark plug

Electronic flywheel with outer H.T. transducer

20° B.T.D.C.

Bosch W7-AC

WEIGHTS

Engine

Exhaust pipe

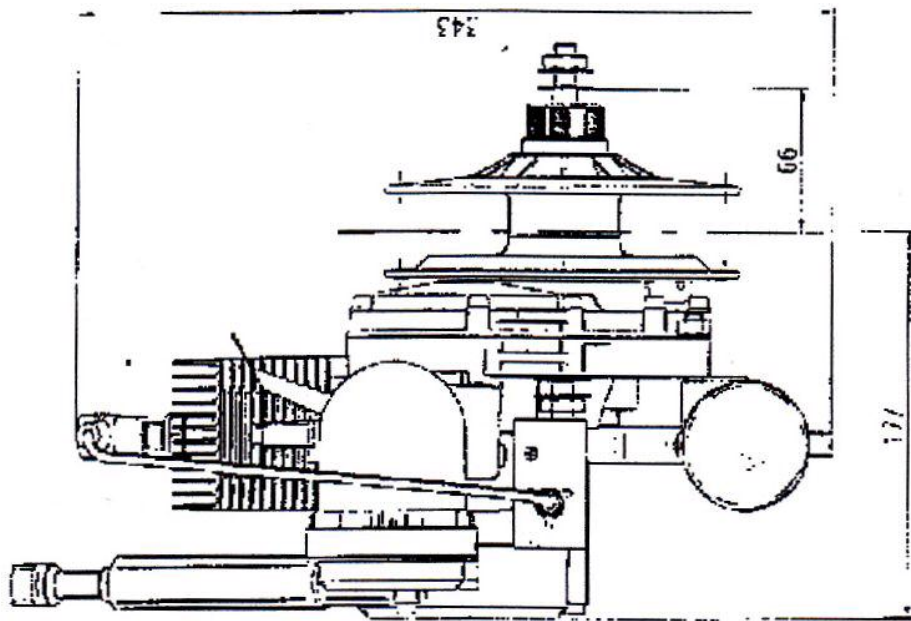
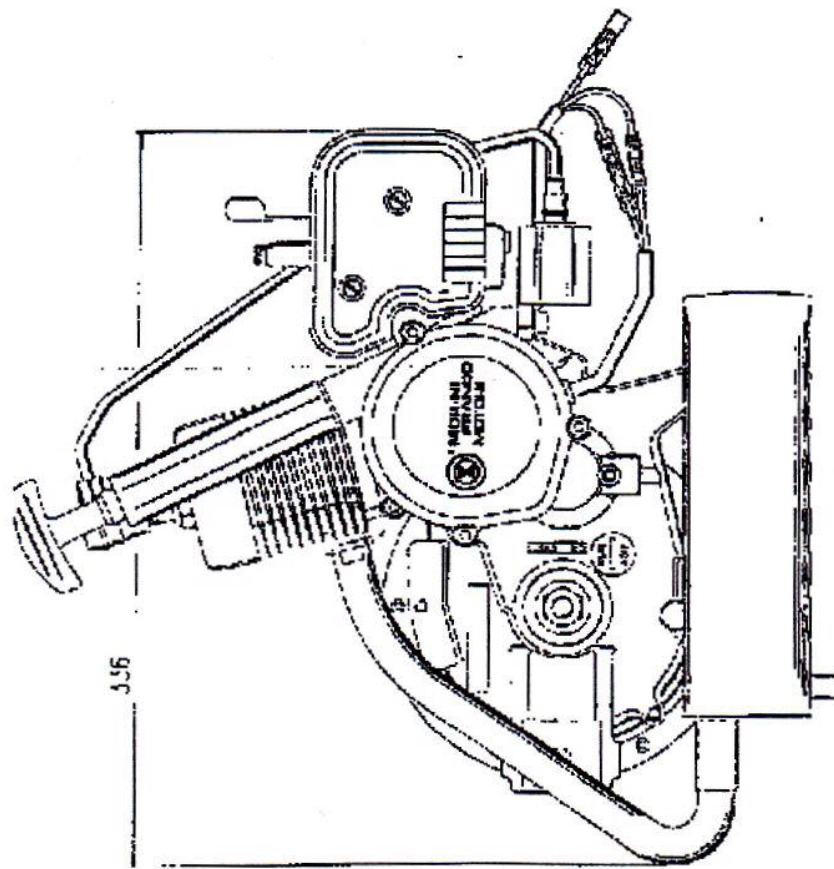
Wheel hub

4.900 kg.

0.800 kg.

1.250 kg.

ENGINE OVERALL DIMENSIONS



CONDITION WHEN SUPPLIED

When supplied, the engine is stripped down as follows:

- Engine
- Exhaust pipe (with seal)
- Wheel hub

see Fig. 1

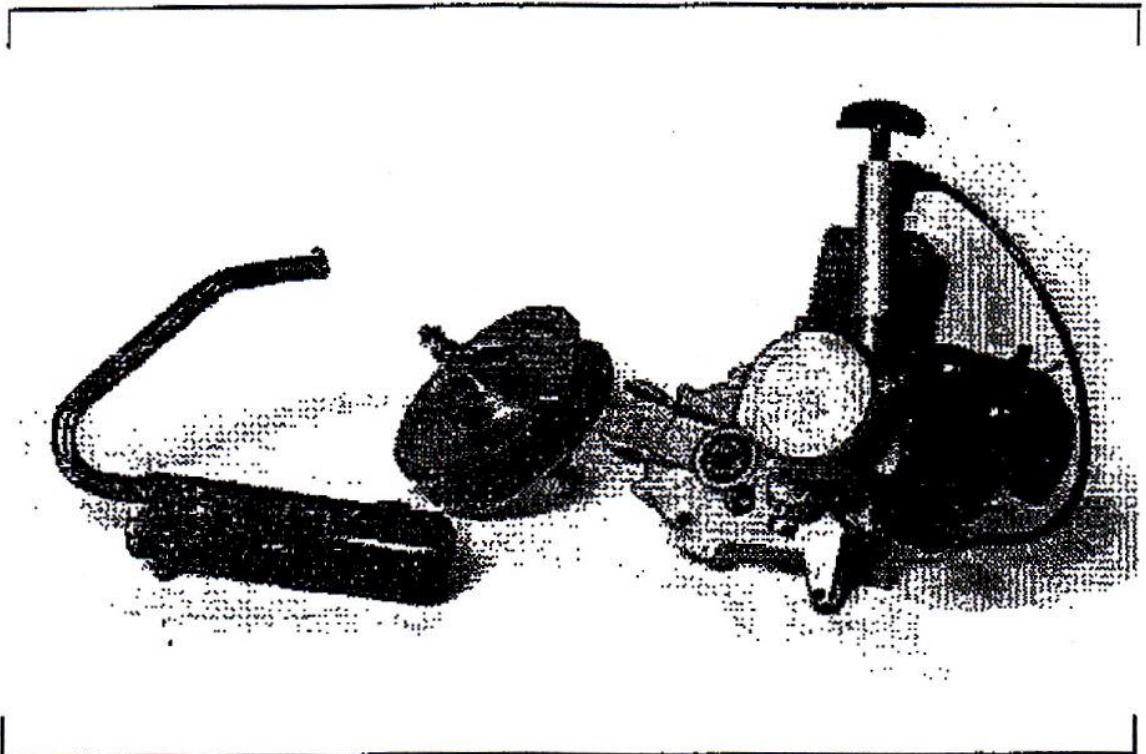


Fig. 1

PREPARING THE ENGINE FOR INSTALLATION TO BICYCLE

Screw "A" and "B" are not included

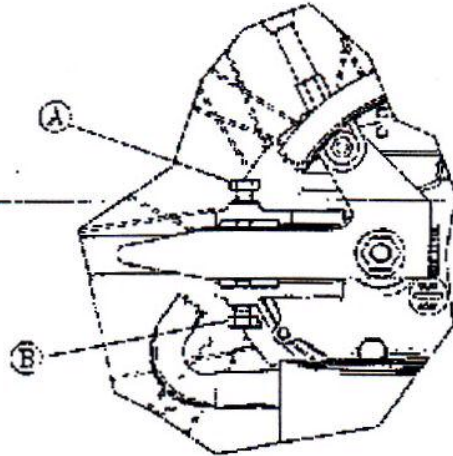


Fig. 1/b

**To determine the position of screws "A" and "B", proceed as follows:
install the engine complete with hub on the bicycle, and lock the shaft
nuts (see Fig. 2)**

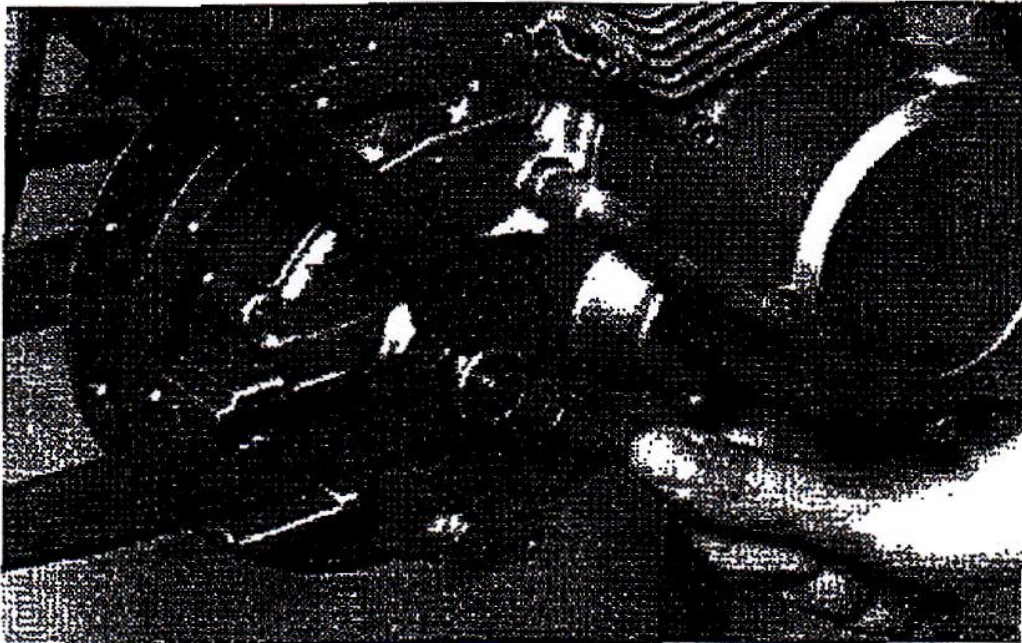


Fig. 2

Determine fork centre to engine connections (see Fig. 3)



Fig. 3

Remove engine and hub from frame, and cut two tapped holes M8 or equivalent (see Fig. 4)

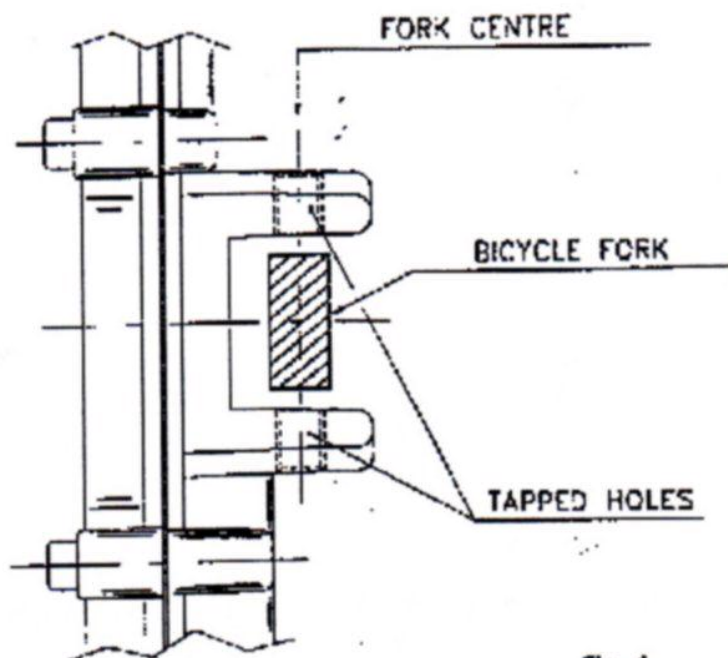


Fig. 4

PREPARING THE REAR WHEEL

Install spokes to rear wheel using the hub. Use spokes with 2.25 mm diameter. While preparing the wheel, bear in mind that the centre must be exactly centred between shaft ledges.

(see Fig. 5)

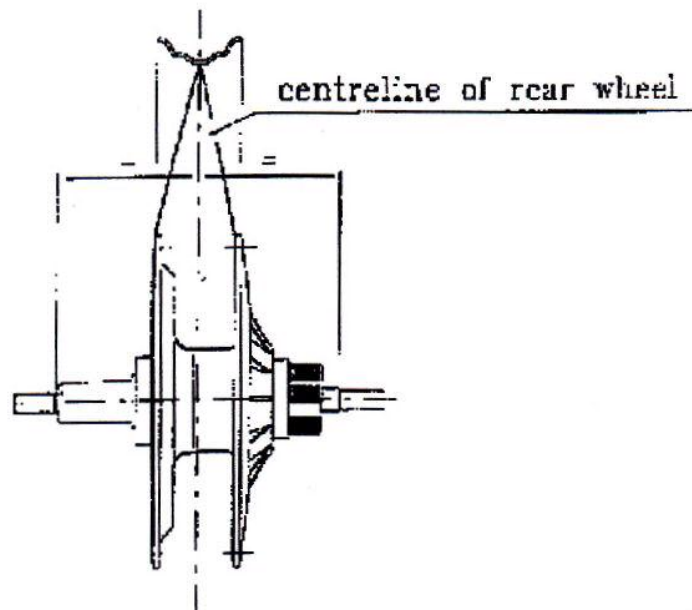


Fig. 5

PARTS REQUIRED FOR ENGINE INSTALLATION

(TO BE PROCURED BY CUSTOMER)

In order to install the engine, the user should procure the parts listed below:

- 1)- Tank for mixture, with cock
- 2)- Special fuel tube from tank cock to carburettor (with filter, if possible).
Tube inner diameter should be 5 - 5.5 mm
- 3)- Throttle cable with relating knob or lever to be installed on handlebar.
Throttle cable terminal should be at carburettor's end as shown
in Fig. 6 (see Fig. 6)

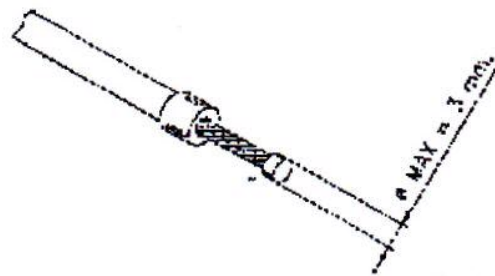


Fig. 6

- 6)- An electric cable with cross-section area of 0.25 sq. mm. with relating push-button to be installed on handlebar to switch off engine (to be connected to engine terminal)
- 7)- N^o. 2 screws 8Mx30 or equivalent to secure engine to rear fork (see detail "A" and "B" Fig. 1/b on Page 4)

Engine can be now installed to bicycle:

1st step:

Fit chain sprocket to the threaded end of the wheel hub, be careful with hub threading that is 35 x 1 mm (metric thread) (see Fig. 13)

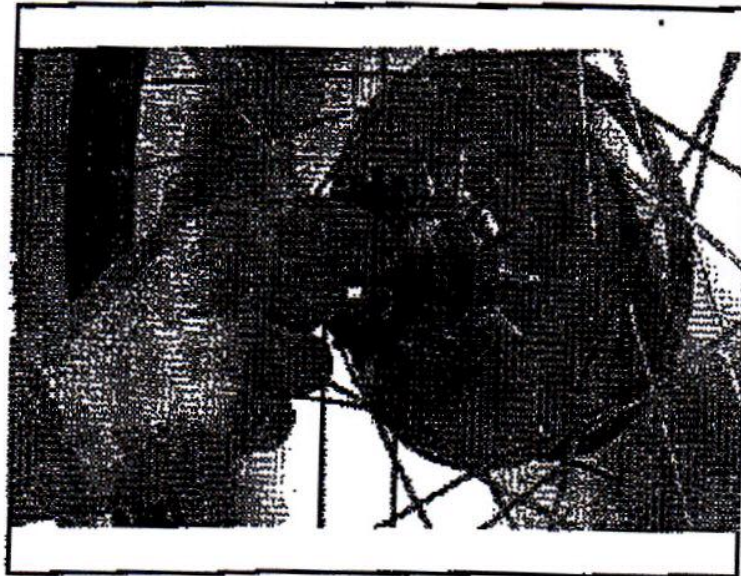


Fig. 13

2nd step:

assemble engine (with braking band installed) and wheel complete (see Fig. 14) and fit the whole assembly into the bicycle's rear fork. Snug the nuts of wheel axle, do not tighten them



Fig. 14

For easier installation of engine to bicycle, it is advisable to use suitable tools enabling you to keep fork wide open during the assembly procedure

3rd step:

insert screws "A" and "B" (Fig. 1/b Page 4), make sure that engine position is correct (screws "A" and "B" should be centred to rear fork). Line up wheel with frame and tighten the lock nuts of the wheel axle. Secure screws "A" and "B" to fork (see Fig. 16)



Fig. 16

4th step:

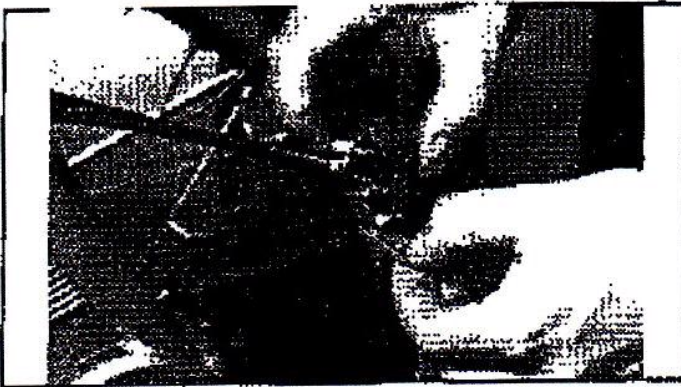
connect exhaust pipe using the suitable screws. Remember to fit the specially suited seal between cylinder and exhaust pipe (see Fig. 17)



Fig. 17

5th step:

connect the throttle control cable, removing the carburettor's end, and turning the suitable screws (see Fig. 19)



Insert cable terminal:
(Fig. 6 on Page 7) into
suitable seating (see Fig. 18)

Fig. 18



Reassemble and take up
play on cable both at the
control on handlebar and at
the adjuster on carburettor

Fig. 19

6th step:

connect mixture tube to carburettor

7th step:

connect engine "STOP" cable (push-button on handlebar) to the terminal of the transducer's red cable (see Fig. 20)



Fig. 20



FIRST START-UP

Usually, when supplied, the engine is provided with oil inside. Therefore, before starting the engine, the user must remove the plastic pin which closes the breather (see the yellow label on the crankcase) (Fig. 21) .

If the engine is supplied with no oil inside for haulage reasons (a suitable label will point out this lack), the user must proceed as follows:

- remove the screw "C" (see Fig. 21/1)
- fill the crankcase up with 60-70 ml of oil of the SAE 20 type

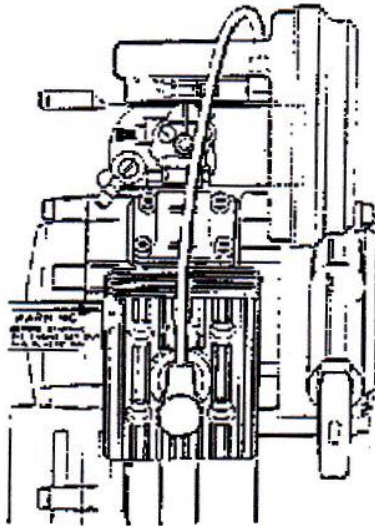


Fig. 21

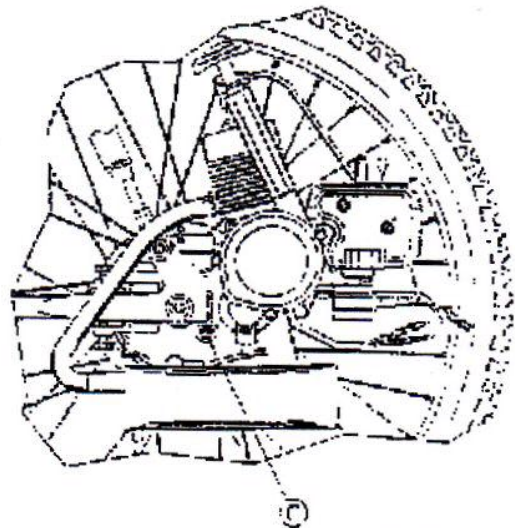


Fig. 21/1

- Open mixture cock
- Press down on the starter lever on carburettor (see Fig. 22)



Fig. 22

- Keep throttle slightly open and pull hard on pull-starter handle

WITH THE ENGINE RUNNING:

- Lift rear wheel off the ground and open the throttle; the starter lever will return to the initial position
- Rev the engine up for 50 - 60 sec (with rear wheel off the ground) so oil can circulate to all points inside engine
- Idling r.p.m. may only be adjusted on a hot engine

IDLING R.P.M. ADJUSTMENT:

Idling r.p.m. adjustment may be carried out, by turning the screw "F" located on the carburettor (see Fig. 23) as follows:

Turn clockwise to increase engine r.p.m.

Turn anticlockwise to decrease engine r.p.m.

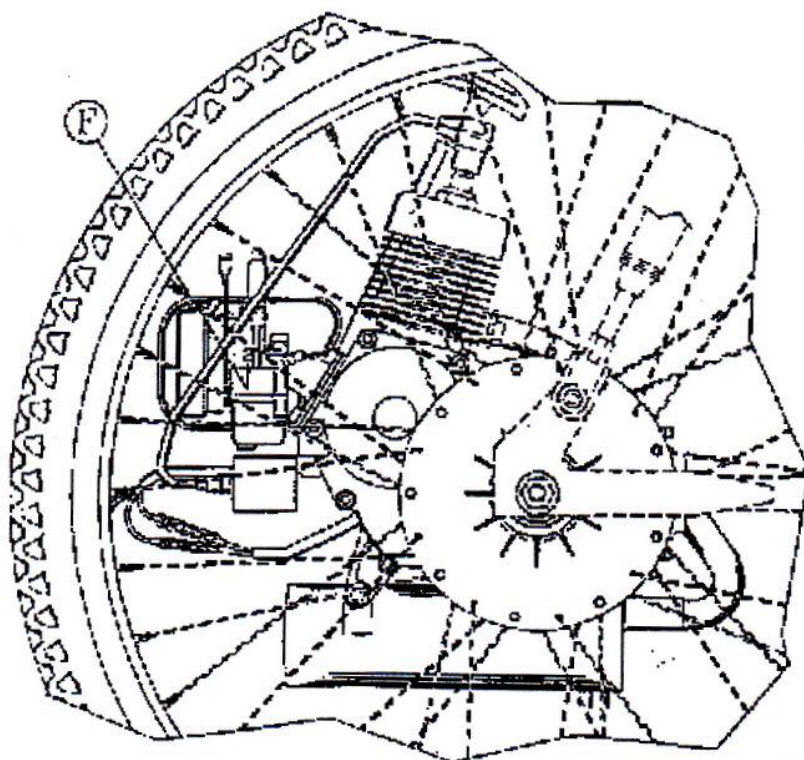


Fig. 23

WIRING DIAGRAM

