M. BRUCE. [redacted]
2ND APRIL, 1952.
NURSES HOME, OLDCHURCH HOSPITAL, ROMFORD, ESSEX.

# MAINTENANCE AND INSTRUCTION

# MANUAL

# Mobylette

## THE MASTER MOPED

SOLE CONCESSIONAIRES
MOTOR IMPORTS COMPANY LTD.,
158, STOCKWELL ROAD, LONDON, S.W.9.
Phone - BRIXTON 7807

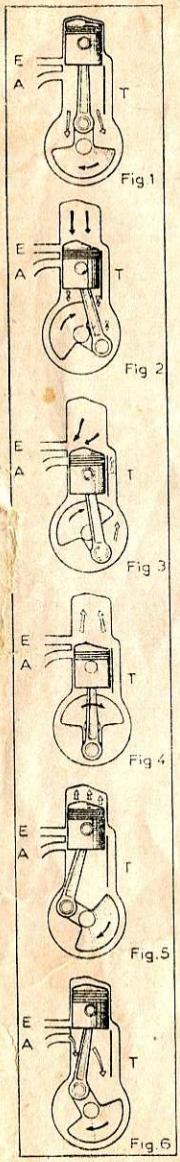
# FOREWORD

*THE Mobylette Moped is manufactured in France by Messrs. Motobecane of Pantin, and is imported into the United Kingdom by Messrs. Motor Imports Company Limited, of 158, Stockwell Road, London, S.W.9.*

*On its introduction in November 1949, the Mobylette met with instant success. There are now over 1¾ million machines on the road, and more are being produced at a rate of over a thousand a day.*

*This machine, with its 49 c.c. two-stroke engine and low petrol consumption, offers the most economical method of travelling, whilst its steadiness, silence and flexible transmission all blend to give increased comfort and ease of handling.*

# THE PRINCIPLE OF THE TWO-STROKE




**A.** The ascending piston compresses a mixture of petroil and air in the cylinder head and creates at the same time a partial vacuum in the crankcase, which, when the piston has travelled past the inlet port, causes a fresh mixture of petroil and air to be drawn into the crankcase, see Fig. 1.

**B.** A spark occurs at the sparking plug, and the resultant expansion of gases forces the piston downwards providing the power to drive the Autocycle, see Fig. 2.

**C.** The descending piston uncovers the exhaust port allowing a free escape of the burnt gases, and at the same time uncovers the transfer port, see Fig. 3, allowing the mixture, which is being compressed in the crankcase, to transfer into the cylinder, when, by the action of the deflector on the piston head, the incoming gases assist in exhaust scavenging by driving the spent gases before them, thus completing the cycle of operation, see Fig. 4.

**D.** Shows the mixture transferred to the cylinder head, see Fig. 5, with all ports closed by the piston and the cycle of operation about to recommence, see Fig. 6.

# GENERAL SPECIFICATION

## 1. ENGINE AND TRANSMISSION

| | |
|---|---|
| Type | Single cylinder, two-stroke. |
| Bore | 39 mm. |
| Stroke | 41.75 mm. |
| Piston displacement | 3.047 cub. in. |
| Compression ratio | 5.8—6.2 : 1. |
| Normal speed | 3.800 r.p.m. at 25 m.p.h. |
| Maximum speed | 4.000 r.p.m. at 28 m.p.h. |

**Cylinder Head:**

| | |
|---|---|
| Combustion chamber volume | 0.641 cub. in. |
| Combustion chamber depth | 0.610 in. |

**Piston:**

| | |
|---|---|
| Piston clearance | 0.0016 in. |
| Weight, complete with pin and rings | 3 oz. (approx.). |

**Piston rings:**

| | |
|---|---|
| Dimensions | 39 × 2 × 1.65 mm. |
| Gap clearance | 0.006 |
| Groove clearance | 0.004 |

**Gudgeon pin:**

| | |
|---|---|
| Diameter | 0.5116 to 0.5118 in. |
| Press-fit in piston | 0.0005 to 0.0010 in. |
| Clearance in small end | 0.0006 to 0.0013 in. |

**Side clearances:**

| | |
|---|---|
| Connecting rod on crankpin | 0.008 in. |
| Crankshaft in crankcase | 0.008 in. |

**Cylinder sleeve:**

| | |
|---|---|
| Outer diameter | 1.931 to 1.932 in. |
| Inner diameter | 1.535 to 1.536 in. |
| Height | 3.465 in. |
| Inlet port | 0.236 in. |
| Exhaust port | 0.236 in. |
| Transfer port | 0.177 in. |
| Intake pipe diameter | 0.433 in. |
| Decompressor diameter | 0.256 in. |

**Carburettor:**

| | |
|---|---|
| Make | Gurtner. |
| Model | S-10 with choke. |
| Jet | No. 20 (21 for run in). |
| Throttle | No. 8 special. |
| Sprayer | No. 3863-2. |
| Intake silencer | No. 3855. |

# GENERAL SPECIFICATION—*continued*

**Primary transmission:**

| | |
|---|---|
| V-belt dimensions ... ... ... | 0.511 × 0.315 × 28.54 in. |
| Centre distance ... ... ... | 6.30 in. |
| Ratio ... ... ... ... | 3.228. |

**Secondary transmission:**

| | |
|---|---|
| Chain dimensions ... ... ... | 0.5 × 0.305 × 0.205 in. 104 links. |
| Ratio ... ... ... ... | 52/12 = 4.333. |
| Overall ratio ... ... ... | 14.0 : 1. |

## II. CYCLE PARTS

**Bicycle transmission:**

| | |
|---|---|
| Bracket sprocket ... ... ... | 44 teeth. |
| Freewheel ... ... ... ... | 20 teeth. |
| Chain dimensions ... ... ... | 0.5 × 0.305. 104 links. |
| Ratio ... ... ... ... | 1 : 2.2. |

**Wheels:**

| | |
|---|---|
| Tyres ... ... ... ... | 600 × 50 Bmm. special Mobylette. |
| Outer diameter ... ... ... | 25.08 in. |
| Circumference ... ... ... | 78.74 in. |
| Rim diameter ... ... ... | 21.97 in. |
| Spokes ... ... ... ... | 253-250 mm. × 2 mm. |

**Fuel tank:**

| | |
|---|---|
| Capacity ... ... ... ... | ½ gall. approx. |
| Oil ... ... ... ... | 6% |

**Performances:**

| | |
|---|---|
| Speed on flat level after run in ... | 28 m.p.h. |
| Gradient limit without pedalling (10 st. driver) | 1 : 14. |

**Weight:**

| | |
|---|---|
| Empty ... ... ... ... | 62 lb. |

## III. ELECTRICAL EQUIPMENT

| | |
|---|---|
| Flywheel magneto ... ... ... | Novi, 6 volts, 8 watts. |
| Gap on breaker points ... ... | 0.012 to 0.016 in. |
| Gap on plug electrodes ... ... | 0.012 to 0.016 in. |
| Head lamp bulb ... ... ... | 6 volts, 1 amp. |
| Rear lamp bulb ... ... ... | 12 volts, 0.5 amp. |

## IV. BEARING DIMENSIONS

| | |
|---|---|
| Crankpin ... ... ... ... | 22 needles, 0.098 × 0.542 in. or 0.098 × 0.460 in. |
| Crankshaft bearings ... ... ... | Two, 15 × 42 × 13 mm. |
| Front wheel ... ... ... ... | 18 balls, dia. 0.25 in. |
| Rear wheel bearings ... ... ... | Two, 10 × 39 × 9 mm. |
| Steering head ... ... ... ... | 48 balls, dia. 5/32 in. |

# OPERATING THE MACHINE

*A.* Situated on the right handlebar is a twistgrip which serves to operate both the decompressor and the throttle. Turned to the right, i.e. away from the rider, the decompressor is opened, and when the grip is turned towards the rider the decompressor is closed and the throttle opened. The rider can then regulate the speed of the machine as desired.

*B.* On the left handlebar is the choke. The function of this is to assist starting from cold; it is not normally used except under very cold conditions.

Under no circumstances should this be used when the engine is warm.

*C.* BRAKES: These are operated by the two inverted type levers situated at the extreme end of the handlebars.

That on the left, operating rear brake, and the right the front brake.

*D.* By movement of one simple control, the engine can be disconnected and the machine used as an ordinary cycle. To do this, raise the milled knob, situated on the bracket pulley hub, and move into the outer socket marked "Velo". To reconnect engine to rear wheel, move knob back into the inner socket marked "Moteur". This action can be rendered easier by moving the machine gently backwards and forwards to enable the ratchet to engage easily.

*E.* Before riding the machine adjust the height of the handlebars and saddle, the latter being placed to enable the feet to be set easily on the ground.

*F.* Always pre-mix the petrol and oil by shaking together in a clean container, the oil proportion to be 6 per cent, i.e. slightly less than $\frac{1}{4}$ pint, or six measures of oil to $\frac{1}{2}$ gallon of petrol. N.B.: The measure is situated in the cap of the petroil tank.

## IMPORTANT

During the period of running-in a full $\frac{1}{4}$ pint of oil, but not more, should be used with each $\frac{1}{2}$ gallon of petrol.

**We recommend that Castrolite Oil be used at all times.**

# DRIVING

## STARTING

1.—Open petroil tap by turning milled knob, situated on top of tank, gently in anti-clockwise direction.

2.—Turn twistgrip as far to right as possible.

3.—Pedal a few yards, then turn twistgrip to the left, when engine will start.

4.—In very cold weather depress choke lever for a few moments, releasing as soon as engine starts.

5.—Control speed by rotating twistgrip as desired. Turn to left to increase speed and to right to decrease.

6.—If your Mobylette is a de-luxe model and is fitted with an automatic clutch, this will engage when the machine reaches a road speed of 4 m.p.h. When the machine speed falls below 4 m.p.h., either through braking or slowing down by closing the throttle, the clutch will automatically disengage, but the engine will continue to run.

## STOPPING

7.—To stop, close throttle and apply brakes. To stop engine, operate decompressor by turning twistgrip as far as possible to the right.

Although the Mobylette will climb fairly steep gradients unassisted, it is advisable to give pedal assistance when the speed falls below 8 m.p.h. Whilst running-in, do not overwork or overheat engine.

# SPECIFICATION

## ENGINE

*A.* CYLINDER HEAD: Of light alloy with deep finning to assist cooling; attached to cylinder by four studs.

*B.* SPARKING PLUG: 14 mm.

*C.* CYLINDER: Light alloy with chrome liner, attached to crankcase by four bolts, air tight joint at base and head.

## SPECIFICATION—*continued*

*D.* PISTON: Of light alloy, fitted with two rings at 3 mm. intervals. Gudgeon pin secured by circlips.

*E.* The crankpin is held firmly by means of two cones. The engine shafts are run on two bearings 15×42×13 mm. between the pulley and the flywheel magneto.

*F.* CRANKCASE HOUSING is in two sections, bolted together and sealed with a paper gasket.

**Primary Drive:** By endless V-belt between the crankshaft pulley and the loose reduction pulley on the gearwheel axle. Engine may be disconnected from rear wheel by movement of the milled knob on bracket pulley hub.

**Secondary Drive:** By chain from gearwheel to chain on rear wheel.

**Flywheel Magneto:** Provides direct current for ignition and lighting. Composed of a circular plate bearing the armatures, contact breaker, condenser and rotor, 6v. 8w.

FRAME: Electrically welded, double-cradle pattern, ensuring maximum stability through extremely low centre of gravity.

CHAINGUARDS: Of pressed steel, adequately protecting engine and chains. Easily detachable screws.

TANK: Capacity ½ gallon (approximately), fitted with a milled turncock-type tap.

EXHAUST SILENCER: Cylindrical, with spiral baffle plates. Attached to cylinder by exhaust pipe with finned nut and metal-plastic joint.

SADDLE: Soft top of large dimensions mounted at rear on long spiral springs.

HANDLEBARS: Raised pattern with two inverted type brake levers below grips.

CARBURETTOR: Gurtner SD10 type, with choke provided with main filter between tank and tap; safety filter at entry to float-chamber, with jet fitted below.

# DISMANTLING AND SERVICING

ENGINE: Remove chain covers (269.611 and 269.641) by means of screws, remove all engine controls, paying particular attention to the pipe (269.035A) from petroil tank to carburettor. Unscrew and remove fixing bolts (265.241 and 265.184B). Remove belt (5.290) from its pulley (262.554).

The engine may then be removed from the frame.

FLYWHEEL MAGNETO (7.620): Hold flywheel steady to prevent turning. Unscrew nut (N-7.660, left hand thread). Remove rotor (7.400) leaving cam (7.404) *in situ*.

Remove cam (N-7.404) with extractor (taking care not to damage thread of crankshaft).

ENGINE PULLEY (260.017): Remove locknut (291.018) (right hand thread). Unscrew pulley (260.017) by means of holes provided.

CYLINDER HEAD (172.062): Remove the four nuts (260.122) from fixing studs (14.716). Withdraw the securing plates (265.181B and 265.182B). Remove cylinder head.

CYLINDER: Remove cylinder (14.816) taking care not to exert any side force on the connecting rod (14.021) (keep piston at bottom dead centre).

Remove head gasket (172.061).

Remove base gasket (14.895).

ENGINE CRANKCASE: Undo nuts (260.122) and remove screws (260.135 and 260.136). Separate the two halves (14.814) by warming them slightly. The crankshaft is then freed.

CONNECTING ROD: Take down by removing crankpin plug (290.043) (this is a very delicate operation and great care should be taken). When reassembling, make certain that fitting is accurate and that crankshaft and bobweights are correctly aligned.

## DRIVES

PULLEY AND GEARWHEEL: Undo fixing-bolt (265.241).

Take off belt (5.290). Remove crank (265.217) by releasing cotter-pin (V6.842).

Withdraw dust-shield (260.360).

Take off clip (260.161), pulley (262.354), sprocket and spacing washers.

Undo cotter-pin of gearwheel-crank (V6.842).

Remove gearwheel crank (265.280).

Remove circlips and washers and withdraw spindle.

REAR WHEEL: Undo nuts (267.006).

Push wheel forward in frame-brackets.

Remove chains (265.273 and 268.101).

BELT: Tension correctly by undoing lower bolt (265.241) and upper bolt (265.184B).

Engine-unit will move to-and-fro in frame-slots about upper bolt. The belt requires no attention for thousands of miles.

GEAR WHEEL CHAIN: Undo nuts (265.289) (See chart).

Tension correctly by moving take-up (265.291).

ENGINE CHAIN: Take up slack in chain (268.101) by drawing wheel back. While adjusting, see also to adjustment of gearwheel chain.

To keep chains in good order, clean in paraffin bath and thoroughly grease every 1500 miles.

For re-assembling, work in reverse order.

## FRONT HUB

Needs little attention. Check for play; grease packed at factory.

ADJUSTMENT: Loosen nut (No. 267.205), then locknut (267.208). Withdraw brake-washer (267.213) and dustcover (267.209B).

Screw up cone (267.206).

Re-tighten nuts and make sure that wheel turns freely, with bearings not too tight.

### TWIST GRIP

Control cables should be examined occasionally and greased as required. Decompressor should have clearance at valve. Before working the decompressor, see that twist grip closes the throttle completely.

Choke control must have some play in position of rest, regulated by position of cable in slide (No. 266.287).

## FLYWHEEL MAGNETO

Lubricate by placing a few drops of oil on the cam packing every 2000 miles, adjusting the gap of the platinum points to .012 to .016 with a feeler gauge.

SETTING: Should the magneto timing slip and the engine cease to fire, the ignition setting will require attention.

Unscrew the nut (N-7.660), remove the rotor (N-7.400) and withdraw cam (N-7.404) by means of an extractor (6.483 B.I.S.). Set the piston at top dead centre, then lower it $\frac{1}{8}$ in. by turning to the left.

Replace cam (N-7.404), making it coincide with the stator (N-7.621), so that the platinum points (N-7.111 and N-4.946) separate exactly at this moment.

Clean the points if necessary.

Replace rotor.

Tighten up flywheel nut.

# AUTOMATIC CLUTCH

## DE LUXE MODEL MOBYLETTE ONLY

DESCRIPTION: Consisting of two units operated by the road speed of the rear wheel and rotating within the drum. Mounted on the left hand side of the engine these two units, mounted on ball bearings, and separated by centrifugal force, act on the two "Ferodo" shoes which adhere to the inside surface of the flywheel, making this turn, thus engaging the crankshaft and operating the engine. The clutch automatically comes into action when a road speed of 4 m.p.h. is attained by pedalling.

DISMANTLING: Hold flywheel (261.150D) steady. Remove nut (261.155). Take out flywheel (261.150D). Remove cotter (114.190) and pad (261.164). Take out circlip (261.158), washer (261.157) and needle distance piece (261.160). Withdraw plate (261.170).

TO RE-ASSEMBLE: First grease the pin bearing, then proceed in reverse order.

ADJUSTMENT: Remove nut (261.155).

Take out flywheel (261.150D).

Loosen screws (261.173).

Remove plate (261.174).

To reduce speed of engaging, i.e. to make it engage at a higher road speed, tighten equally nuts (261.216) and locknut (261.217).

To increase speed of engaging, slacken nuts (261.216) and locknut (261.217).

The speed depends on radial play between the packing (261.176B) and the flywheel (261.150D). To engage at 4 m.p.h. this should be from .6 to .8 mm.

N.B.—When re-assembling, tighten up well.

GREASING: Every 1200 miles in ordinary running, i.e. when riding over fairly long distances.

Every 600 miles for stopping and starting. General riding in towns or heavy traffic conditions.

# THE GURTNER CARBURETTOR

On Autocycles carburation presents special difficulties, and correct adjustment is particularly important. The maximum possible orifice of the jet is 2.585 mm., so that the slightest impurity can choke the jet either partially or completely, resulting in irregular firing, or complete stoppage of the engine.

To avoid this trouble, a decanting filter has been produced, which has proved to be very effective, making it impossible for any impurity to reach the jet. As the fuel passes through, it is perfectly filtered by a cylindrical sieve of very fine mesh, sealed at each end, and held firmly in position by a metal bracing. The petroil supply pipe is sloped to prevent sediment collecting in front of the sieve. Should any water become secreted in the petroil tank, this is prevented from entering the carburettor by a specially designed hollow cup, which serves as an inlet plug.

Cleaning the filter is simple. Unscrew the plug, tip the filter to an angle of about 45 degrees to discharge any water. Unscrew the inlet plug and clean filter with clear petrol, brushing lightly if the sieve is partially blocked. There is no necessity to dismantle the carburettor or petroil delivery pipe. We would recommend that the filter be cleaned every fifteen hundred miles.

# FAULTS CHART

## BREAKDOWNS

### ENGINE WILL NOT START

| CAUSE | CURE |
|---|---|
| **Petroil** | |
| Tap shut ... ... ... | Open it. |
| Tank empty ... ... ... | Fill it. |
| Petroil pipe clogged ... ... | Clear by blowing. |
| **Carburettor** | |
| Clogged filter ... ... ... | Clean it. |
| Choked jet ... ... ... | Clear it with a piece of fine wire; do not enlarge jet. |
| Float-needle seized ... ... | Replace. |
| Float damaged or holed ... | Replace. |
| Cable-controls... ... ... | Adjust them. |
| Air leaking in... ... ... | Tighten up carburettor joint to cylinder. |
| **Plug** | |
| Fouled ... ... ... | Clean with petrol. |
| Defective ... ... ... | Replace. |
| Wrong gap ... ... ... | Adjust to .012-.016. |
| **Flywheel Magneto** | |
| Ignition wire loose or damaged | Refix or replace. |
| Platinum points dirty ... ... | Clean them. |
| Platinum points displaced ... | Adjust to .012-.016. |
| Condenser burnt out ... ... | Replace. |
| Broken contact breaker spring . | Replace. |
| Short circuit in contact breaker | Examine for point of contact. |
| Short circuit inside coil ... | Replace. |

### ENGINE TURNS IRREGULARLY OR STOPS

| CAUSE | CURE |
|---|---|
| **Petroil** | |
| Empty tank ... ... ... | Refill. |
| Water in petroil ... ... | Thoroughly drain system and replenish. |
| Fouled piping ... ... | Clear. |
| **Carburettor** | |
| Choked jet ... ... ... | Clear. |
| Float-needle jammed ... ... | Remove float chamber, clean and free needle. |
| Fouled air inlet ... ... | Take out and clean. |
| Unsuitable fuel mixture ... | Observe rules for running-in and for mixture. |

# FAULTS CHART—*continued*

**Flywheel Magneto**

| | |
|---|---|
| Ignition cable loose or damaged | Examine. |
| Fouled platinum points ... | Clean and adjust. |
| Short circuit ... ... ... | Check ignition circuit. |
| Burnt out condenser ... ... | Replace. |

**Engine**

| | |
|---|---|
| Overheated, partial piston seizure | Allow to cool down, fit larger jet. |

## ENGINE FOUR-STROKING

(i.e. during each two strokes, once misfires.)

| CAUSE | CURE |
|---|---|
| **Carburettor** | |
| Jet too large ... ... ... | Fit a smaller one. |
| Damaged seating of float-needle | Refit. |
| Float chamber damaged or holed | Refit. |
| Fouled-air-filter ... .. | Clear. |
| Mixture too rich ... ... | See directions for mixture. |
| **Plug** | |
| Fouled ... ... ... | Clean or replace. |
| **Carbon Deposit** | |
| In exhaust-pipe and silencer ... | Clear cylinder ports with soft metal scraper.<br>Decarbonize silencer. |

## ENGINE NOT PULLING

| CAUSE | CURE |
|---|---|
| **Plug** | |
| Defective ... ... ... | Refit. |
| Broken porcelain ... ... | Replace. |
| Joint not gastight ... ... | Tighten up plug on cylinder-head. |
| Fouled air-filter ... ... | Clear. |
| Choked pipe ... ... ... | Clear. |
| Carburettor wrongly adjusted... | Fit larger jet and adjust controls. |
| **Flywheel-Magneto** | |
| Defective platinum points ... | Replace. |
| Defective condenser ... ... | Replace. |
| Contact breaker spring weak ... | Refit. |
| **Engine** | |
| New engine ... ... ... | Run in for 300 miles. |
| Engine carbonized ... ... | Decarbonize. |
| Cylinder bore worn ... ... | Replace. |
| Air leaks causing incorrect mixture ... ... ... | Replace carburettor joints on pipe and shields. |

# FAULTS CHART—*continued*

| | |
|---|---|
| Cylinder-head loose ... ... | Tighten up studs firmly. |
| Decompression-valve not gas-tight ... ... ... | Replace or recondition. |
| Exhaust chamber blocked ... | Clear. |

## ENGINE MISFIRING (Loud explosions)

| CAUSE | CURE |
|---|---|
| Mixture too rich or too weak ... | Keep to instructions for mixture. |
| **Plug** | |
| Overheated ... ... ... | See mixture above. |
| Slight short-circuit ... ... | Clean. |
| Broken porcelain ... ... | Replace. |
| **Magneto** | |
| Late firing ... ... ... | Adjust. |
| Fouled platinum points ... | Clean and adjust. |
| **Carburettor** | |
| Backfiring ... ... ... | Clean jet and air filter; fit larger jet. |

## ENGINE OVERHEATING

| CAUSE | CURE |
|---|---|
| Poor mixture ... ... ... | Keep to rules for mixture. |
| **Carburettor** | |
| Jet too small ... ... ... | Refit larger jet. |
| **Magneto** | |
| Late firing ... ... ... | Adjust. |
| **Engine** | |
| Carbonized ... ... ... | Clean cylinder ports, exhaust pipe and chamber. |
| Cylinder flanges fouled ... | Clear. |

## ENGINE RACING

| CAUSE | CURE |
|---|---|
| Sticking carburettor slide ... | Dismantle and free. |
| Sticking throttle cable ... | Free with penetrating oil. |
| Clutch slipping ... ... | Adjust with nuts on clutch bearing. |

## EXCESSIVE PETROIL CONSUMPTION

| CAUSE | CURE |
|---|---|
| Leak in petroil feed ... ... | Tighten up. |
| **Carburettor** | |
| Not petroil- and gas-tight ... | Refit packing, examine all joints. |
| Defective needles ... ... | Examine. |
| Jet too large ... ... ... | Fit smaller jet. |

# VITAL HINTS

**Sparking-Plug.** Regularly check the state of the plug. The electrodes should be of an earthy colouring, neither white nor black. White electrodes indicate the use of weak mixture causing loss of power and overheating of engine. Black deposit on electrodes shows that the mixture is too rich (too much petrol) or that the proportion of oil in the petrol is too great. If necessary, adjust plug-points to five to six tenths of a millimetre. Too small a gap leads to clogging of engine, while too large a gap may cause misfiring, especially when picking up speed again. With the engine turning slower and with maximum compression (gas full open) the rotary magneto cannot produce a spark strong enough to pass between the electrodes. To ascertain whether the plug is sparking, put it in contact with the engine-cylinder and work the flywheel magneto (plug connected up with magneto).

**Decarbonizing the Engine.** If the engine overheats, lacks power or backfires through the carburettor, it is essential to proceed with decarbonizing.

Every two thousand miles or so, clean the ports of the cylinder, top of piston and bottom of combustion-head with a copper scraper to prevent scratching. Piston-rings should move freely in their grooves. In case of sticking, loosen with petrol, and blackened rings should be replaced.

Decarbonize the exhaust piping and silencer by dipping in a soda-bath about every four thousand miles. Clean baffles by removing inspection plate on base of silencer.

N.B.—Using good quality oil means less carbonizing than with poor quality. Keep to the oil-petrol mixture of 6% oil, or 8 % while running-in. Shake up vigorously in a can before pouring into tank.

Insufficient oil means wear on piston and bearings. Too much oil causes carbonizing in engine.

When your machine has been running some time, it is a good plan to tighten up those engine-nuts which have no grip-washers.

# TOOLS FOR THE ROAD

## CONTENTS OF TOOL KIT

1 plug spanner
1 open ended spanner
2 tommy bars
3 box spanners
3 tyre levers

## REPAIR KIT

It is advisable to carry the following:

1 spare plug
1 section of chain with spring link
1 cylinder-head gasket
Brake cables, control cables, piston rings
1 spare inner tube
1 valve insert
1 tube solution, with scrapers, emery cloth, adhesive tape and patching
1 length of iron wire

## OUTSIDE UPKEEP

When washing be careful to shield carburettor and magneto.

Sponge down and polish up with very clean woollen cloth.

Use only a good wax polish. Clean chromed parts with woollen rag.

## TYRES

A flat tyre slows down running and results in damage to tyre and tube.

A tyre over-inflated may cause breakage of spokes, and detracts from comfort. Punctures are mended as on an ordinary bicycle.

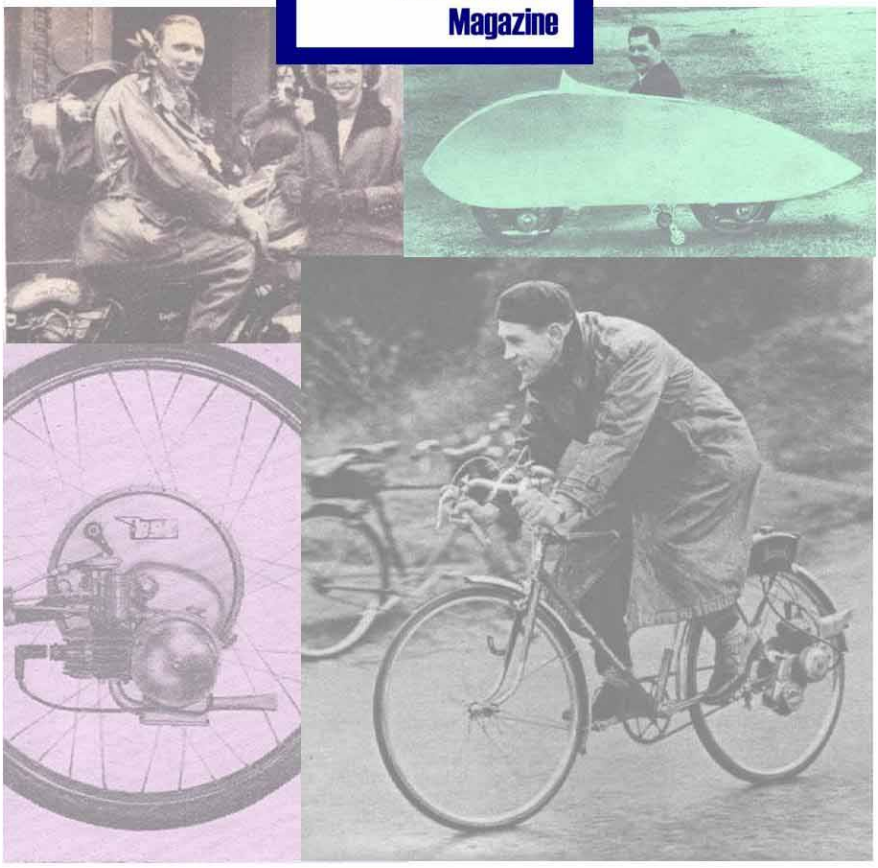
## PETROL/OIL MIXTURE

*Certain of the Oil Companies whose lubricants are recommended in this manual provide dispensing equipment which ensures the use of a petrol/oil mixture for two-stroke engines in the correct proportions.*

*Service by means of such equipment is approved by us.*

# IceniCAM
# Information Service

The Iceni CAM Magazine
Cyclemotor Autocycle C Moped



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