

# MAINTENANCE AND INSTRUCTION MANUAL

# *Mobylette*

THE MASTER MOPED

AND

# Mobymatic

THE WONDER MOPED

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

# FOREWORD

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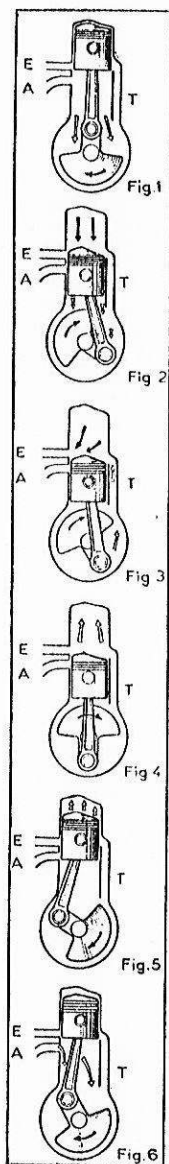
*THE Mobylette and Mobymatic Mopeds are manufactured in France by Moto-becane of Pantin, and are imported into the United Kingdom by Motor Imports Company, Limited, 158, Stockwell Road, London, S.W.9.*

*On its introduction in November 1949, the Mobylette met with instant success. There are now over  $1\frac{3}{4}$  million machines on the road, and more are being produced at a rate of over a thousand a day.*

*These machines, with their 49 c.c. two-stroke engines and low petrol consumption, offer the most economical method of travelling, whilst their 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 petrol 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 petrol 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 machine, 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. Fig. 5 shows the mixture transferred to the cylinder head, with all ports closed by the piston, and the cycle of operation about to recommence, as in Fig. 6.

# TECHNICAL DATA

## 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 in.
Groove clearance	...	0.004 in.

### 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.

## TECHNICAL DATA—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 ratios: Mobylette	...	...	...	14 : 1.
Mobymatic	...	...	...	19 : 1 to 12 : 1

## II. CYCLE PARTS

### Bicycle transmission:

Chain wheel	...	...	...	44 teeth.
Freewheel	...	...	...	20 teeth.
Chain dimensions	...	...	...	0.5×0.305. 104 links.
Ratio	...	...	...	1 : 2.2.

### Wheels:

Tyres	...	...	...	600×50 mm. (Mobylette); 23×2 in. (Mobymatic).
Spokes	...	...	...	2 mm.

### Fuel tank:

Capacity	...	...	...	$\frac{1}{2}$ gall. approx. (Mobylette); $1\frac{1}{2}$ gall. approx. (Mobymatic).
Oil	...	...	...	6% (1 to 16).

### Performances:

Speed on flat after run-in	...	...	...	28 m.p.h. (Mobylette); 35 m.p.h. (Mobymatic).
Gradient limit without pedalling (10 st. driver)	...	...	...	1 : 14.

### Weight (Dry):

Mobylette Standard Model	...	...	...	64 lb.
De Luxe Model	...	...	...	77 lb.
Mobymatic	...	...	...	88 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.
Horn (Mobymatic)	...	...	...	Tesvox C.M.56

## IV. BEARING DIMENSIONS

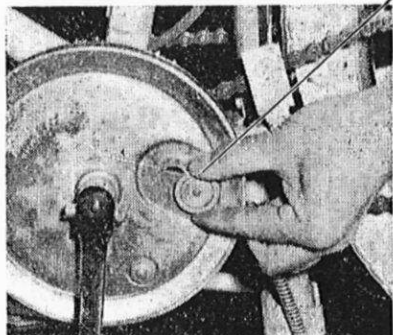
Crankpin	...	...	...	22 needles, 0.098×0.542 in. or 0.098×0.460 in.
Crankshaft bearings	...	...	...	Two, 15×42×13 mm.
Front wheel	...	...	...	18 balls, dia. $\frac{1}{4}$ in.
Rear wheel bearings	...	...	...	Two, 10×39×9 mm.
Steering head	...	...	...	48 balls, dia. 5/32 in.

## 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 levers situated at the ends of the handlebars. That on the left, operating rear brake, and that on the right, 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, and move into the outer socket marked "Velo". To reconnect engine to rear wheel, move knob back into the inner socket marked "Moteur". This can be facilitated by gently rocking the machine to and fro to enable

the ratchet to engage easily. On the Mobymatic the milled knob has been replaced by a hex. nut. The sparking plug spanner will fit this nut. Do not over-tighten when connecting or disconnecting the engine.

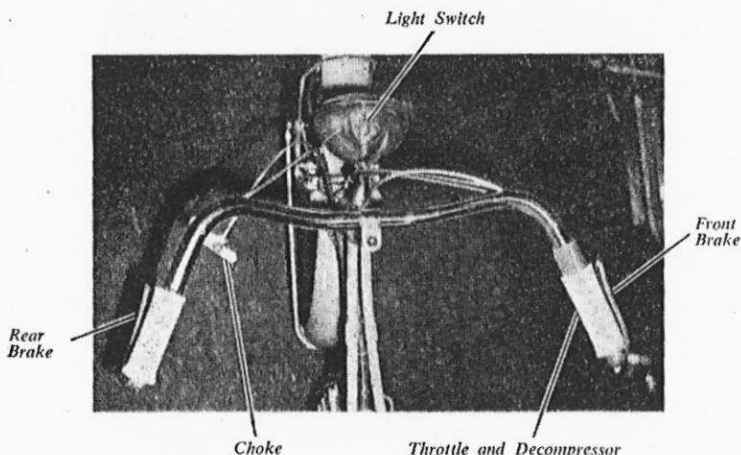
E. Before riding adjust height of handlebars and saddle, the latter being positioned to enable the feet to be set easily on the ground.

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 petrol 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.



MOYLETTE HANDLEBAR CONTROLS

## DRIVING

### STARTING

1.—Open petrol tap by turning milled knob 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 machine 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. When starting from stationary up a hill, first start engine with machine on its stand.



## DRIVING—continued

### 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 machine 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.

## GENERAL 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, chrome lined, attached to crankcase by four bolts; air-tight joint at base and head.

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

E. CRANKPIN is held firmly by means of two cones. The engine shafts are run on two bearings  $15 \times 42 \times 13$  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.

**Secondary Drive:** By chain from pulley sprocket to rear wheel.

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

**FRAME:** Electrically welded, double-cradle pattern for Mobylette, and pressed steel spine type for Mobymatic, ensuring maximum stability through extremely low centre of gravity.

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

## GENERAL SPECIFICATION--*continued*

**TANK:** Capacity  $\frac{1}{2}$  gal. approx. (Mobylette),  $1\frac{1}{8}$  gal. approx. (Mobymatic), 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 (Mobylette); rubber top cantilever-type (Mobymatic).

**HANDLEBARS:** Raised pattern with two brake levers below grips.

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

## DISMANTLING AND SERVICING

**ENGINE:** Remove chain covers by means of screws, remove all engine controls, paying particular attention to the pipe from petrol tank to carburettor. Unscrew and remove fixing bolts. Remove belt from its pulley.

The engine may then be removed from the frame.

**FLYWHEEL MAGNETO:** Hold flywheel steady to prevent turning. Unscrew nut, LEFT HAND THREAD. Remove rotor, leaving cam in place.

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

**ENGINE PULLEY:** Remove locknut, right hand thread. Unscrew pulley by means of holes provided.

**CYLINDER HEAD:** Remove the four nuts from fixing studs. Withdraw the securing plates. Remove cylinder head.

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

Remove head gasket.

Remove base gasket.

**ENGINE CRANKCASE:** Undo nuts and remove screws. Separate the two halves by warming them slightly. The crankshaft is then freed.

**CONNECTING ROD:** Take down by removing crankpin plug (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.

## DISMANTLING AND SERVICING—*continued*

### DRIVES

**PULLEY AND GEARWHEEL:** Undo fixing bolt. Take off belt. Remove crank by releasing cotter-pin. Withdraw dust-shield. Take off clip, pulley, sprocket and spacing washers. Undo cotter-pin of gearwheel crank. Remove gearwheel crank. Remove circlips and washers, and withdraw spindle.

**REAR WHEEL:** Undo nuts. Push wheel forward in frame-brackets. Remove chains.

**BELT:** Tension correctly by undoing lower bolt and upper bolt. Engine-unit will move to-and-fro in frame-slots about upper bolt. The belt requires no attention for thousands of miles.

**GEARWHEEL CHAIN:** Undo nuts. Tension correctly by moving take-up.

**ENGINE CHAIN:** Take up slack in chain 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.

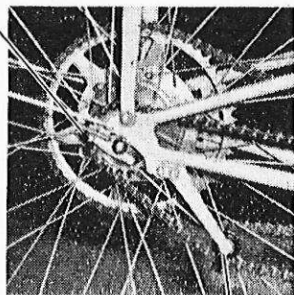
For re-assembling, work in reverse order.

### HUBS

Need little attention. Check for play; grease packed at factory, or fitted with grease nipple.

**ADJUSTMENT (FRONT HUB):** Loosen nut, then lock-nut. Withdraw brake-washer and dustcover. Screw up cone. Re-tighten nuts and make sure that wheel turns freely, with bearings not too tight.

*Wheel Adjuster*



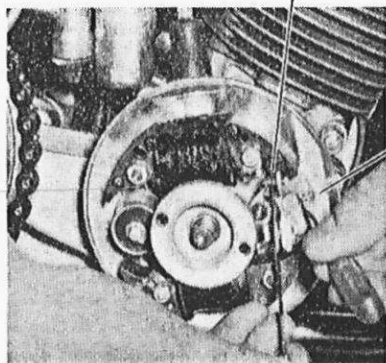
*Chain Adjuster*

## 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.

*Point Gap .012 to .016 in.*



*Adjusting Cam Screw*

## 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 in. 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, remove the rotor and withdraw cam by means of an extractor. Set the piston at top dead centre, then lower it  $\frac{1}{8}$  in. by turning to the left. Replace cam, making it coincide with the stator, so that the platinum points separate exactly at this moment. Clean the points if necessary. Replace rotor. Tighten up flywheel nut.

# NOVI FLYWHEEL MAGNETO



# AUTOMATIC CLUTCH

## DE LUXE MODEL MOBYLETTE AND MOBYMATIC 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 steady. Remove nut. Take out flywheel. Remove cotter and pad. Take out circlip, washer and needle distance piece. Withdraw plate.

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

**ADJUSTMENT:** Remove nut.

Take out flywheel.

Loosen screws.

Remove plate.

To reduce speed of engaging, i.e. to make it engage at a higher road speed, tighten equally nuts and locknuts.

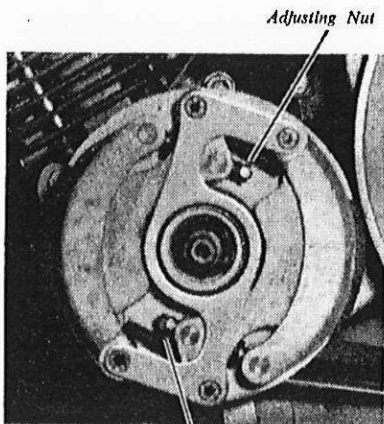
To increase speed of engaging, slacken nuts and locknuts.

The speed depends on radial play between the packing and the flywheel. To engage at 4 m.p.h. this should be from .025 to .035 in.

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

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

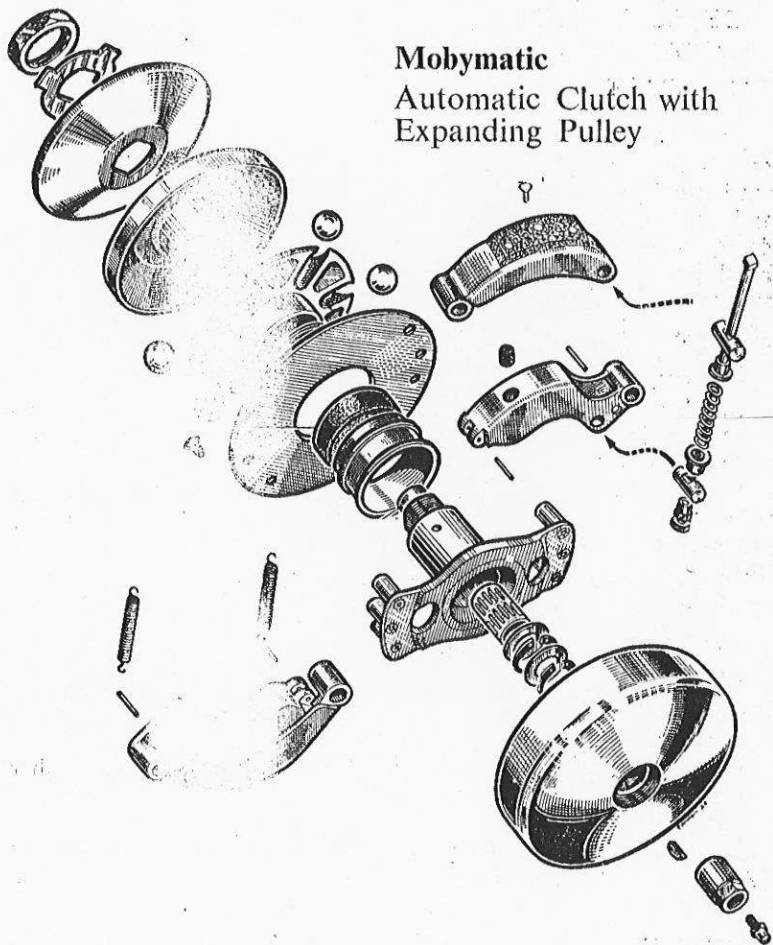
Every 600 miles for stopping and starting, i.e. general riding in towns or heavy traffic conditions.



*Adjusting Nut*

## Mobymatic

Automatic Clutch with  
Expanding Pulley

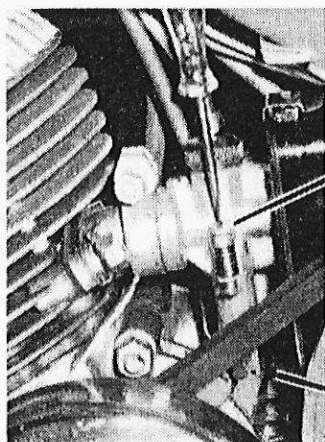


## THE GURTNER CARBURETTOR

On mopeds 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 introduced, 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, varied at each end, and held firmly in position by a metal bracing. The petrol supply pipe is sloped to prevent sediment collecting in front of the sieve. Should any water become secreted in the petrol 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 water. Unscrew the inlet plug and clean filter with clear petrol, working lightly if the sieve is partially blocked. There is no need to dismantle the carburettor or petrol delivery pipe. We recommend that the filter be cleaned every fifteen hundred miles.



*Slow Running Adjuster*

*Jet*



## BREAKDOWNS

### ENGINE WILL NOT START

CAUSE			CURE
<b>Petrol</b>			
Tap shut	...	...	Open it.
Tank empty	...	...	Fill it.
Petrol pipe clogged	...	...	Clear by blowing.
<b>Carburettor</b>			
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.
<b>Plug</b>			
Fouled	...	...	Clean with petrol.
Defective	...	...	Replace.
Wrong gap	...	...	Adjust to .012-.016.
<b>Flywheel Magneto</b>			
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
<b>Petrol</b>			
Empty tank	...	...	Refill.
Water in petrol	...	...	Thoroughly drain system and replenish.
Fouled piping	...	...	Clear.
<b>Carburettor</b>			
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.
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### Carbon Deposit

In exhaust-pipe and silencer ...	Clear cylinder ports with soft metal scraper. Decarbonize silencer.
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### 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.
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#### 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.
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### ENGINE OVERHEATING

#### CAUSE

#### CURE

Poor mixture ...	...	Keep to rules for mixture.
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#### Carburettor

Jet too small ...	...	Refit larger jet.
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#### Magneto

Late firing ...	...	Adjust.
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#### 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 petrol feed ...	...	Tighten up.
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#### Carburettor

Not petrol- and gas-tight ...	...	Refit packing, examine all joints.
Defective needles ...	...	Examine.
Jet too large ...	...	Fit smaller jet.

## VITAL HINTS

**Sparkign-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 .012-.016 in. Too small a gap leads to clogging of engine, while too large a gap may cause mis-firing, especially when picking up speed again. With the engine turning slowly and with maximum compression (throttle fully 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. Blackened rings should be replaced.

Decarbonize the exhaust pipe 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 7% 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        | 3 box spanners |
| 1 cranked jet spanner | 3 tyre levers  |
| 2 tommy bars          |                |

## REPAIR KIT

It is advisable to carry the following:

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

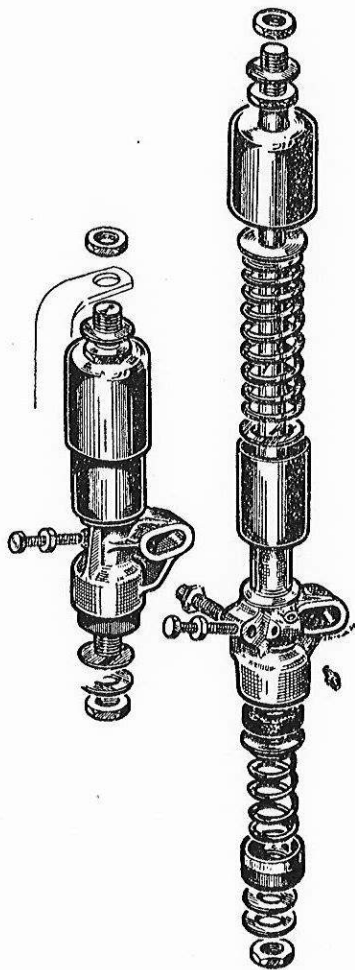
A tyre over-inflated may cause breakage of spokes, and detracts from comfort. Punctures are mended as on an ordinary bicycle.

## ACCESSORIES

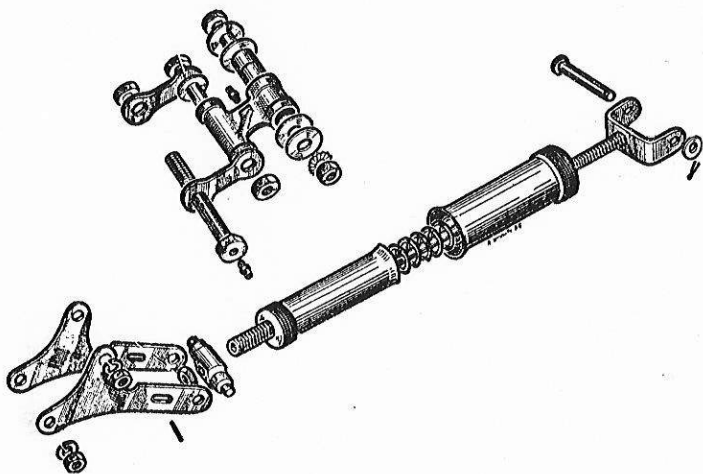
- |                           |                  |
|---------------------------|------------------|
| Windscreen                | Pannier bags     |
| Legshields                | Speedometer      |
| Electric horn             | Waterproof cover |
| Offset box wrench, 14 mm. |                  |

The above are available as extras.

**Mobymatic**  
Rear Plunger  
Suspension Unit



## Mobymatic Lower Engine Articulation and Belt Tensioner



# MOBYMATIC

This machine is equipped with a centrifugal, infinitely-variable gearing unit, self-changing to select the best gear ratio according to driving conditions.

Do not forget that this is a precision-engineered device, initially factory-adjusted, and it requires:

(a) **Frequent lubrication**

(b) **Periodical cleaning**

Belt tension can, if necessary, be adjusted by means of the milled knob on the lower frame in front of the centre-stand bracket. Screwing this knob towards front of machine compresses the release spring and thus increases belt tension.

The other knob opposite limits forward movement of the engine, and should be adjusted to prevent overturning of the compass-like rotating unit, when the belt is removed.

## LUBRICATION

- (1) When the machine is new, and then every 600 miles, grease the nipples on bottom bracket axle and on the clutch and gearing unit thoroughly with Castorgraphite.
- (2) At the same time, grease the engine swivel and the upper articulation bolt and sleeve.
- (3) Oil abundantly the balls in the gear changing device, particularly after every cleaning (see below).

## CLEANING

Proceed as follows:

Dismantle left-hand chainguard. Remove belt. Close pulley walls so that the balls appear.

Clean balls and housings thoroughly with paraffin.

Drain well by hand-turning the speed-changing unit. Lubricate balls and housings with an SAE 50 grade oil.

Replace belt and chainguard. Run engine with machine on stand so that gearing unit throws off any surplus oil. (Apply rear brake to de-clutch.)

N.B.—The above maintenance instructions should be observed in addition to those contained in the other sections of this manual.

Do not forget to lubricate front and rear suspension.

**LOOK AFTER YOUR MACHINE AND IT WILL SERVE YOU WELL.**

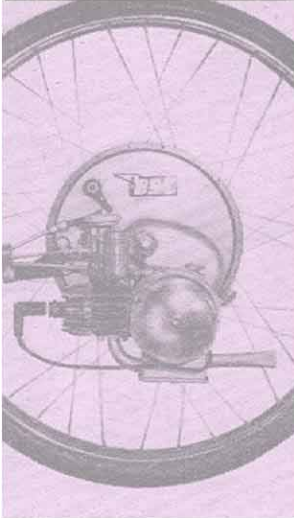


## PETROL/OIL MIXTURE

*Certain Oil Companies provide dispensing equipment for correctly proportioned petrol-oil mixtures for two-stroke engines. Make sure you obtain the right mix for your machine.*



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