

THE *Itom*, mounting as it does on the strongest part of the cycle frame is rapidly gaining popularity, particularly with that band of enthusiasts who have a light tourist or even a basically racing cycle. It is being realised that a spirited engine on such a machine produces (due to the high power-to-weight ratio) an extremely lively outfit capable of moving fast and fully on top of its work for climbing.

The mounting position makes it quite usual for an *Itom* to be fitted to the lightest of "531" framed, alloy-fitted cycles and for it to be used month in and month out without any fear of frame breakage due to engine reactive load.

A desirable modification is, of course, to have a pair of 26 x 1 1/2 heavy duty wheels built. One can then use tyres easily obtainable and designed for roller drive and which insulate one from the road shocks.

### Fitting

The mechanically minded will delight in fitting the *Itom*, for it is one of the few roller drive jobs which can be mounted very precisely in such a way that the roller meets the tyre squarely every time without any tendency to move due to securing clips shifting, or to rubber-like packings, sleeves, or slides, compressing inequally.

We will assume that you have taken delivery of an *Itom* already packed in its box and that you are going to fit it to your cycle yourself.

Perhaps the clearest way of advising will be to suggest the steps you might take in numerical order:

(1) LEAVE THE ENGINE IN ITS BOX. Examine your cycle carefully and check the following: Brakes sound and keenly adjusted? Wheels (particularly the rear one) true both in an "up-and-down" and a sideways sense? Bearings properly adjusted (1/32in. play

## We asked the Agent

by

### BROOK LISTER

at the rim) and condition good enough for the weight of the valve ends at bottom? Front tyre and tube sound? Any "lift" in fork head bearings? Saddle tight and not likely to suddenly drop its front end and pitch you on to the cross-bar? Mudguards sound and capable of carrying rear number plate without shaking themselves to bits?

If you are too eager to get your engine fitted, there is a big temptation, once running, just not to bother about cycle features; yet they are *very important*.

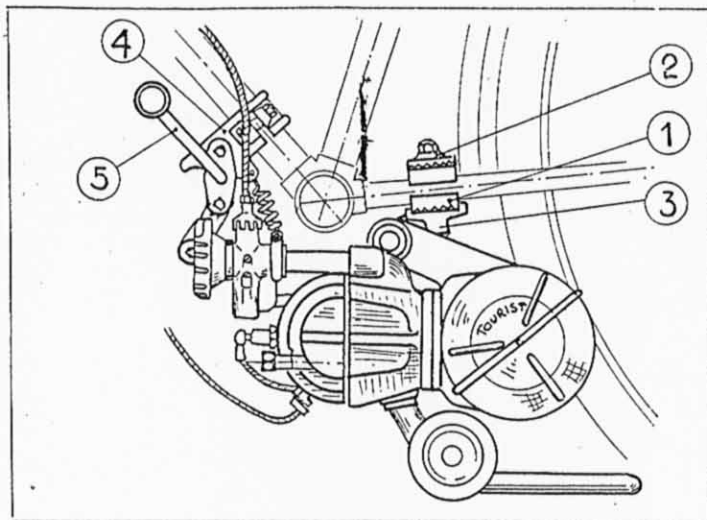
The best engine in the world doesn't like having its bearings hammered by an out-of-true rear wheel, nor will it give of its best if a lot of its power is absorbed in, say, crunching a set of faulty front wheel bearings around.

A tight and nicely adjusted machine is a pleasure to ride, your mind is free to concentrate on DRIVING, and above all *YOU ARE SAFE*. The police quite rightly keep an eye on cycle-motors, for they realise that here is a machine (and probably rider!) originally organised to average 15 m.p.h.—now being pushed along at anything up to 35 m.p.h.

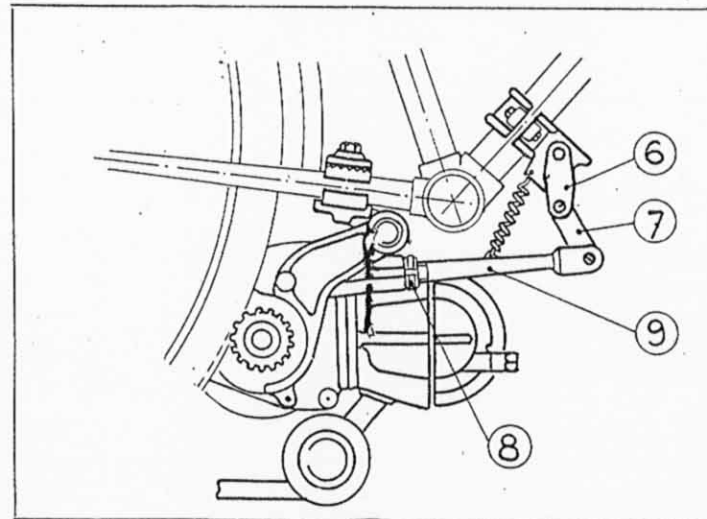
You have a duty to the Cycle-motoring fraternity to make sure your machine is sound. As a body we cannot afford ill report—it could lead to tiresome legislation.

(2) LEAVE THE ENGINE IN ITS BOX. Disconnect and remove your chain, chain wheel and left-hand crank without disturbing the rear wheel position. Remove the bottom-bracket axle

## HOW TO GET THE BEST OUT OF YOUR ITOM "TOURIST"



FLYWHEEL SIDE



ROLLER SIDE

and replace with one which is longer on the left-hand side (No. 8 *Bayliss-Wiley* solves most problems). This gives greater crank-to-magneto cap clearance without having to bend the special *Itom* crank and risk "shelling" the plating. Do not re-assemble the chain wheel or crank yet.

(3) Check the fit of the four aluminium blocks (Fig. 1 in fly-wheel side view) on the chain stays of your cycle frame. Remember, the aim, in general, is to get these to fit as near as possible towards the bottom front end of your rear mudguard. The inside curvature of the aluminium blocks must now be filed approximately to match that of the chain stay tubing (see drawing). This is not hyper-critical, for the aluminium being relatively soft will, in some measure, "bed" itself to the steel tube when the powerful fixing bolt (2) is tightened.

(4) Remove motor from box. Remove carburettor and put on one side. Fit the silencer assembly. Remove fixing bolt (2). Hold the motor in its approximate mounting position, slide in the blocks (1) and fit the top plate and screw (2), screwing up only LIGHTLY at this stage. If you find that screw (2) is not long enough, file equal amounts off the "easy-file" ridges built on the flat sides of two of the aluminium blocks (1).

Experiment now for a position with this clip and block assemble backwards and forwards along the chain stays until a position is reached when, with the roller indenting about 3/16th in. into the tyre by pushing the engine front end down, the carburettor inlet tube is parallel to the ground. A soft

tyre assists this experimentation. Then, making sure that the roller face itself is "square" to the wheel, tighten the fixing screw (2) securely.

(5) We have a workshop "drill" on the next operation, but it can be done with patience, as described. Assemble the clip of the foot-operated disengaging gear (4) on the front down tube of the cycle at an initial experimental distance of 1 in. up from the bottom bracket lug. In order to do this you may have to saw off and trim the lower brazed-on pump peg fitted to some cycles. Don't forget the piece of cushioning rubber which fits round the tube under the clip (4).

(6) Now exert an upward lift on the front end of the engine by hand, and operate the disengaging lever to ensure that you have clearance off the tyre in the "off" position and a tyre indentation of 3/16th in. in the "on" position. If you achieve this the first time, you will have been fortunate. You will probably have to experiment for the right setting along the following lines (now consult the roller side view):—

(a) Move the clip (4) up and down the frame tube, "down" gives greater indentation—"up" gives lesser.

(b) By undoing locknut (8) one can screw the connecting bar (9) in or out of the engine carcass and so compensate for various bottom-bracket to tyre-surface distances. This also influences the amount by which the toggles (6) and (7) pass over "dead centre" before the edge of toggle (7) butts against the slot edge of the connecting bar yoke.

The toggles (6) and (7) should only just pass over "dead centre" in the "on" position. Once satisfied, lock parts (8) and (2) really securely, also clip (4).

(7) Now check the length of the return spring. This must return the engine smartly when the lever (5) is flipped into the "Off"

position. In many cases, the spring has to be shortened by one or two loops. *Itom* spring material is very tough. In the absence of a pair of powerful bolt croppers, a sharp cold chisel, hammer, and anvil block will do for the job.

(8) The bolts in the toggle links (6) and (7) are adjusted in the same manner as motor cycle fork link bolts. By undoing the locknuts, one can turn the bolts to secure a "stiffish" movement, after which the locknuts are again tightened. This adjustment gives a nice positive feel to the disengaging foot lever.

(9) Now fit your chain-wheel and chain which, due to the fact that you didn't disturb the rear wheel position, will go back without trouble. Fit also the special *Itom* left-hand crank, making sure it clears the flywheel when the engine is in the "On" position.

(10) Fit the carburettor, pushing it fully home on its tube and mak-

ing sure it is level sideways before tightening the clamp bolt. Fit the carburettor and decompressor cables, making sure there are NO SHARP, MOVEMENT-RESTRICTING CURVES. Secure firmly to the frame. In particular, arrange a bigish loop at the bottom end for the decompressor cable so that the cable "outer" (which is the operator) can obtain a vertical push at the decompressor valve.

(11) Fit the petrol tap to the tank, tighten carefully in, and note the position of the tap lever. If this is in an awkward position for operation, remove the tap again, reduce the fibre washer thickness by rubbing on a file and re-assemble. Fit the tank to the frame, then warm one end of the thermo-plastic petrol tube with a lighted match held well below it and whilst it is soft, slip it over the knob-like petrol-tap extension. Lead the pipe on a convenient run (have engine in ON position) cut off the warming trick, fit it over the

carburettor inlet.

(12) This is where, thinking you have finished, you start to fill the tank. Nothing of the kind. A good mechanic trusts no mortal, not even himself. Your job now is to again go religiously over everything you have done, making sure everything is right and dead tight.

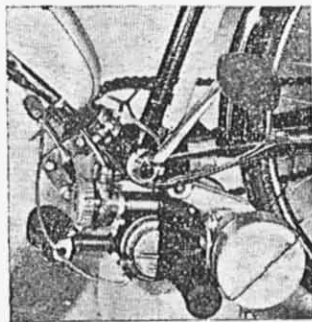
(13) It is recommended that 2 teaspoonsful of Upper Cylinder Lubricant be added to each of the first three tankfuls of petrol used in order to assist running-in.

The writer, apart from holding the *Itom* Agency, is in no way connected with either the makers or distributors, but feels sure he has their support in saying: Do not hesitate to write Messrs. Adimar if you are in any difficulty with your *Itom*. I have proved that they take a very real interest in seeing that you are satisfied and a very good organisation exists here for the immediate settlement of guarantee problems.

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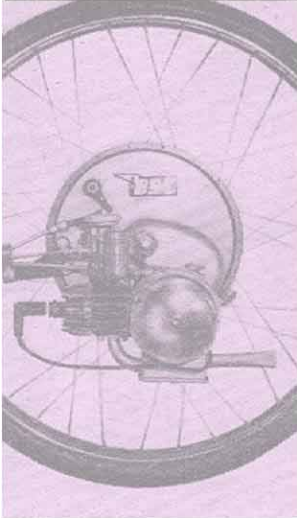
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