


Cymota



FITTING INSTRUCTIONS



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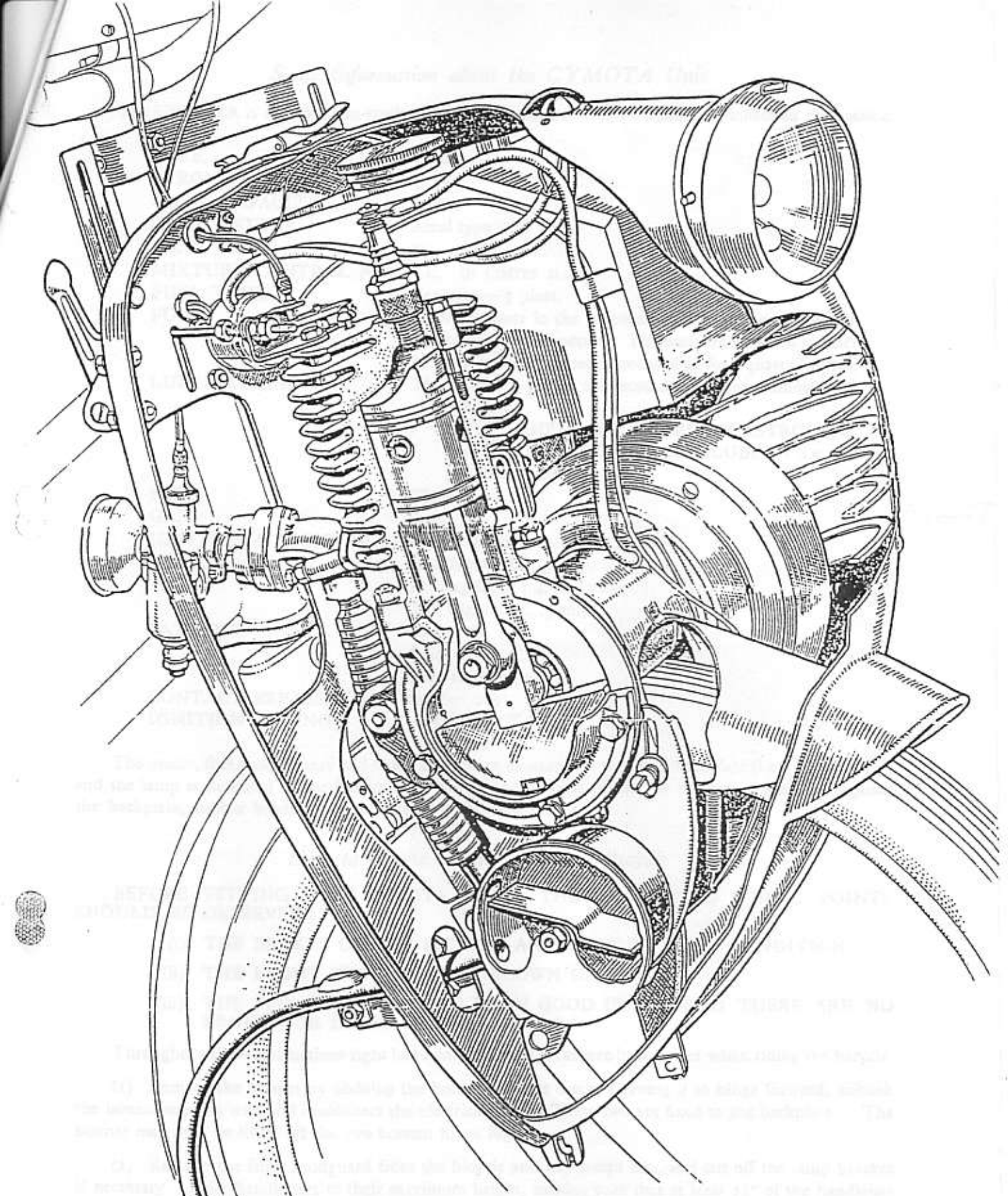
Manufacturers of CYMOTA,

the World's best Cycle Motor

CYMOTA fits every Bicycle!

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Some Information about the CYMOTA Unit

The CYMOTA is a 45 c.c. two-stroke Internal Combustion Engine utilising a deflection type piston.

BORE.	38 mm.
STROKE.	40 mm.
CUBIC CAPACITY.	45 c.c.
CARBURETTOR.	Amal type 308.
MAIN JET.	25.
MIXTURE CONTROL NEEDLE.	IN CENTRE SLOT.
FUEL TANK.	Capacity — 3 pints.
FUEL.	Petrol mixture in the proportion of 1 : 20 (i.e. 1 fluid oz. oil per pint of petrol). The measure attached to filler cap holds the correct amount of oil for 1 quart of petrol.
LUBRICATION.	The following grades are recommended for Summer and Winter : SINGLESHELL. WAKEFIELD. CASTROLITE. MOBILOIL. ARCTIC. ESSOLUBE 20 (i.e. All grades to SAE. 20).
PLUG.	Champion L.10
GAP.	.018"
IGNITION & LIGHTING.	Flywheel Magneto.
BULBS.	Headlamp : 8v. .5 amp. Parking Light : 4.5v. .3 amp. Tail Light : 6v. .5 amp.
BATTERY.	Twin cell. Exide type : C.60. Ever-ready type .800
CONTACT BREAKER GAP.	.012" — .015"
IGNITION TIMING.	.015" before T.D.C.

The motor, fuel tank, battery and fixing clamps are mounted on the black backplate (i.e. 'the chassis') and the lamp is mounted in the bonnet (i.e. 'the body'), which covers the motor and fits flush against the backplate, rubber beading being inserted to prevent rattles.

How to fit the CYMOTA to a Bicycle

BEFORE FITTING THE CYMOTA UNIT, THE FOLLOWING THREE POINTS SHOULD BE OBSERVED :

- (i) THE BRAKES OF THE BICYCLE ARE TO BE IN GOOD CONDITION.
- (ii) THE FRONT TYRE MUST BE BLOWN UP HARD.
- (iii) THE FRONT WHEEL IS TO BE IN GOOD ORDER AND THERE ARE NO BROKEN OR LOOSE SPOKES.

Throughout these instructions right hand and left hand are as seen by the rider when riding the bicycle.

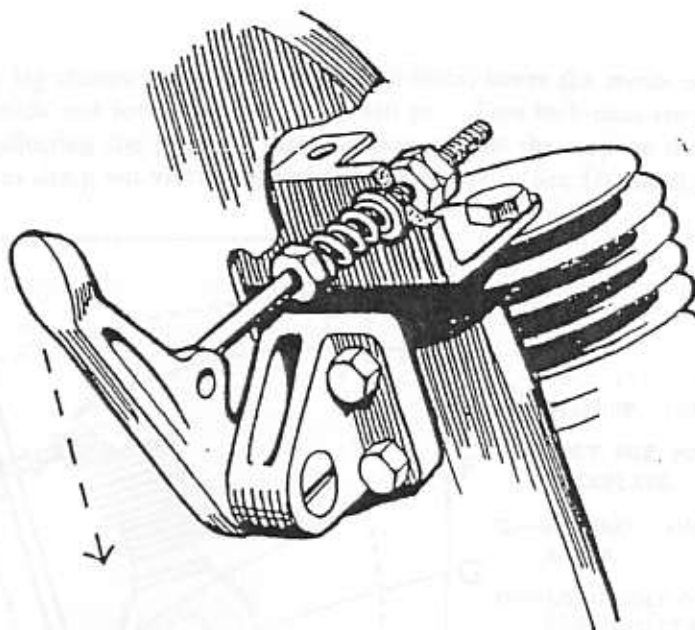
(1) Remove the bonnet by undoing the bonnet fastener catch, allowing it to hinge forward, unhook the bonnet support wire and disconnect the electrical plug. These two are fixed to the backplate. The bonnet may then be lifted off the two bottom hinge lugs.

(2) Remove the front mudguard from the bicycle and any lamps etc., and cut off the lamp bracket if necessary. Raise handlebars to their maximum height, making sure that at least 1½" of the handlebar stem remain in the steering column. Fit the number plate bracket to the top of the handlebars.

(3) Move the engine raising lever downwards so that the engine is in the raised position. (See DIAGRAM 1.)



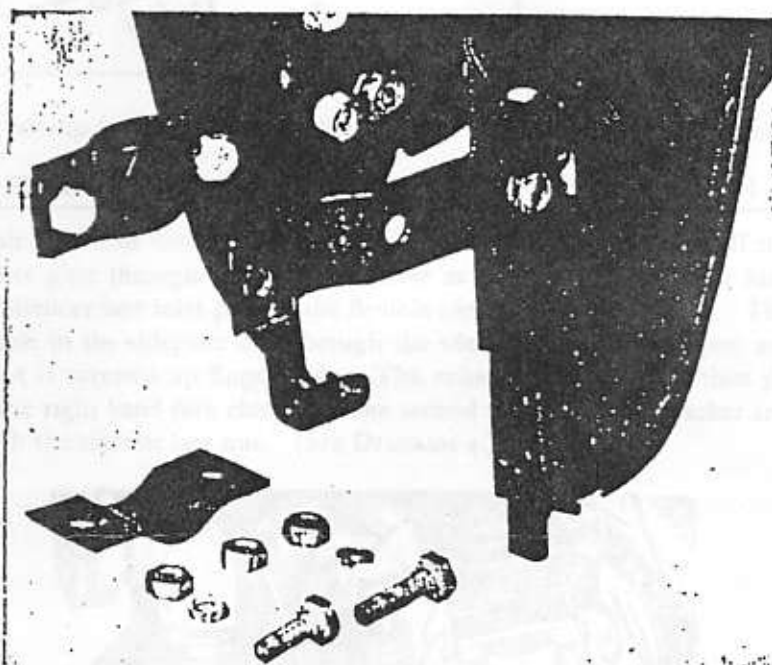
DIAGRAM 1.



For bicycles with rod operated brakes, remove the stirrup entirely, insert it between the brake rods and the steering column and replace it on the two backplate bolts.

(4) Remove the two fork leg clamps. It may be necessary to reverse the fork legs if the forks of the cycle are too narrow. This is done by undoing the three bolts on each sideplate (see Diagram 2), removing the clamps, reversing them and replacing them on the sideplate.

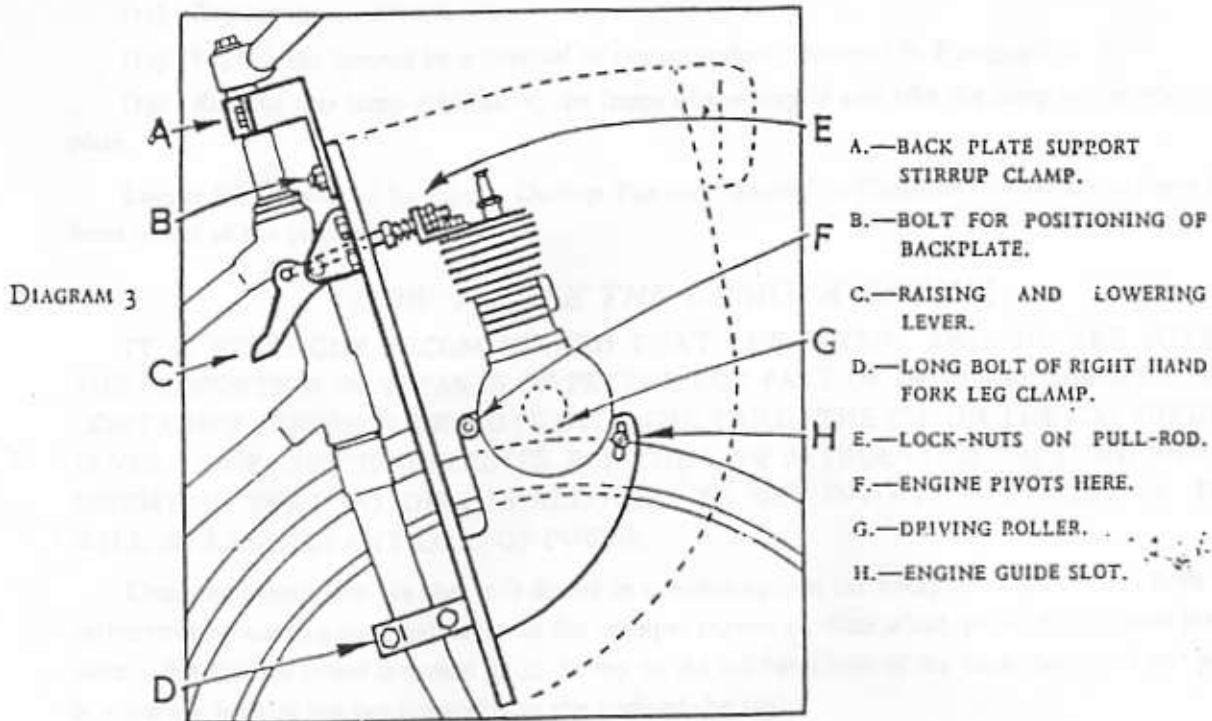
DIAGRAM 2.



(5) Slacken the two bolts on each sideplate which position the backplate. Place the unit on the bicycle and fit the backplate support stirrup clamp to the handle bar stem, and before tightening, position the unit so that the roller is $1/8$ " maximum from the tyre by sliding the backplate up or down on the support stirrup. Additional vertical adjustment can be obtained by sliding the stirrup up the handlebar stem; the stirrup should be as near the top of the stem as possible.

(6) Fit the two fork leg clamps, making sure that the long bolt is in the rear hole of the right hand clamp.

(7) Tighten up the fork leg clamps and the two backplate bolts, lower the motor on to the tyre by moving the raising lever upwards and forwards as far as it will go. Two lock-nuts are provided on the pull-rod for the purpose of adjusting the lever, so that it comes against the stop on the bracket on the backplate. A spring is fitted to damp out vibrations and prevent rattles. (See DIAGRAM 3.)



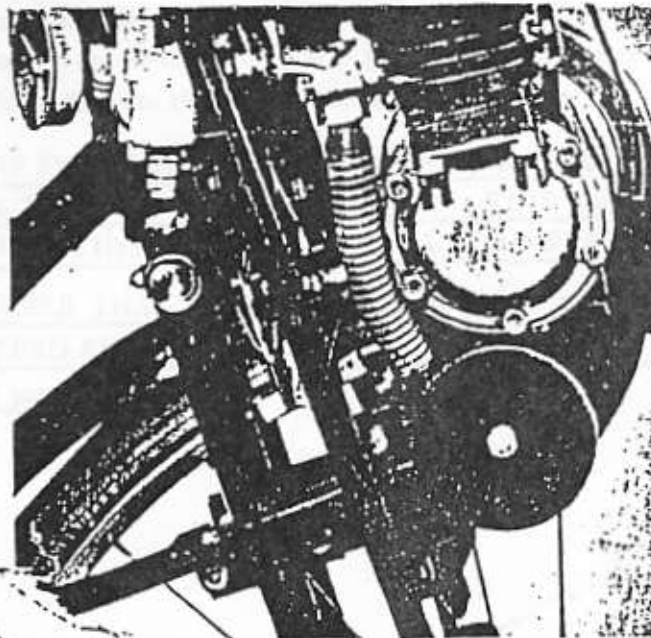
Make sure that the stirrup is square with the handlebars.

Tighten up the stirrup clamp.

IMPORTANT: THE SPRING WASHERS PROVIDED MUST BE FITTED ON ALL BOLTS.

(8) Remove the bolt that runs through the centre of the silencer box and take off the silencer box cover. Insert the exhaust pipe through the elongated hole at the base of the right hand side of the backplate and insert the silencer box inlet pipe in the flexible pipe from the manifold. The silencer bolt is then inserted in the hole in the sideplate and through the silencer box. The cover and washers are then replaced and the nut is screwed up finger tight. The exhaust pipe clamp is then placed over the long bolt on the rear of the right hand fork clamp and the second nut and spring washer are replaced and tightened up together with the silencer box nut. (See DIAGRAM 4.)

DIAGRAM 4.



(9) Clamp the handle bar throttle decompressor lever to the right hand handle bar in a convenient position.

(10) Measure the distance from the mudguard fork bracket to the back of the crankcase, then, at this distance less about $\frac{1}{8}$ " - $\frac{1}{4}$ " from the mudguard fork fixing hole, saw off the mudguard.

(11) Replace the mudguard.

(12) Replace the bonnet by a reversal of the procedure described in Paragraph 1.

(13) Run the rear lamp cable along the frame of the bicycle and affix the lamp to the rear number plate.

Longer life is achieved by using a Dunlop Tandem 'Sprite' or Firestone 'Power Drive' tyre for the front wheel of the bicycle.

HOW TO USE THE CYMOTA ENGINE

IT IS STRONGLY RECOMMENDED THAT THE PETROL AND OIL ARE MIXED IN THE PROPORTION OF 20 PARTS OF PETROL TO 1 PART OF OIL, IN A CLEAN SEPARATE CONTAINER BEFORE POURING IT INTO THE TANK. THE JET ON THE CARBURETTOR IS VERY FINE (WHICH ACCOUNTS FOR THE LOW PETROL CONSUMPTION) AND IT IS ESSENTIAL THAT NO DIRT IS ALLOWED TO GET INTO THE PETROL FOR THERE WILL BE A RESULTANT LOSS OF POWER.

Close the bonnet and see that it is firmly in position against the backplate. Close the choke on the carburettor by rotating the small lever on the trumpet shaped air-filter which protrudes through the backplate. See that the petrol is turned on at the tap on the left hand side of the backplate (the 'on' position is when the lever of the tap is parallel to the body of the tap).

Mount the bicycle, push the control lever on the handlebar over to the right as far as it will go. (This opens a valve in the cylinder head, releasing the compression and making it easy to pedal the machine.) The motor will NOT start with the decompressor valve open and it is inadvisable to run for an excessive distance in this way, for the plug will tend to oil up. Begin pedalling and when you have reached a speed of 5-10 m.p.h. move the control lever right over to the left and the motor should then start. You can adjust the speed of the cycle by moving the lever to the left or right. After about a minute's run (dependent on the temperature) commence to open the choke. As the motor attains running temperature the choke can be fully opened. If you wish to stop, use your brakes and push the controller over to the right.

If on a steep hill you find the revolutions of engine dropping, close the throttle slightly and turn the pedals round two or three times every 10-15 yards. It is advisable to keep the motor turning at full rev., and this slight assistance will ensure that. Very little physical effort will be required.

A freewheel should be fitted to all bicycles with a Cymota.

NEVER USE THE ENGAGING LEVER TO BRING THE ROLLER INTO CONTACT WITH THE TYRE WHILE THE BICYCLE IS IN MOTION. THIS LEVER SHOULD BE USED BEFORE YOU START, OTHERWISE EXCEPTIONAL TYRE WEAR WILL BE CAUSED.

PLEASE REMEMBER THAT YOUR CYMOTA—LIKE A MOTOR CAR ENGINE—WILL DEVELOP MORE SPEED AND POWER AFTER IT HAS BEEN "RUN IN," THAT IS TO SAY AFTER THE FIRST 500 MILES.