

WORKSHOP MANUAL

(To be read in conjunction with Cyclemaster Manual, Price 5/-)

PRICE TWO SHILLINGS AND SIXPENCE

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CYCLEMATE WORKSHOP MANUAL SUPPLEMENT

This Supplement contains information about the CYCLEMATE engine additional to that given in the CYCLEMATE Owner's Instruction Book and the Cyclemaster Workshop Manual. It describes differences from, and additions to, the Servicing procedure given for the Cyclemaster in the Workshop Manual.

Servicing of the bicycle part of the CYCLEMATE is briefly described in the Owner's Instruction Book, and is generally in accordance with standard cycle practice. Illustrations are included of two of the brake assemblies, as these are in some respects special to the CYCLEMATE.

LOCATION OF ENGINE NUMBER

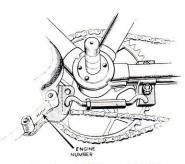


Fig. 1 N0001 to N3499

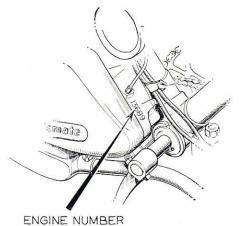


Fig. 2 N3500 and above

Please quote the engine number in all correspondence

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FIRST SERVICE

After a CYCLEMATE has covered approximately 150 miles it should be given a First Service, as set out below:

1. Inspect level of oil in clutch chamber. Top up if necessary but do not overfill.

2. Test clutch adjustment. (Page 20).

3. Check cylinder head, engine mounting, and exhaust bolts. Tighten, if necessary, with engine hot.

4. Check contact breaker points. Clean and adjust; gap should be .015" to .018" when fully open. (Page 18).

5. Inspect sparking plug, and adjust points if necessary. Examine all surfaces of plug which are exposed in combustion chamber; they should be light brown. If dark: mixture is too rich or too oily. If surfaces are covered with pearl-like formations, engine is running too hot, and spark is probably too far retarded. Check timing as described on page 20.

6. Adjust carburettor. (See 5 above and page 13).

7. Check wheel spokes.

8. Check hub bearing adjustments.

9. Adjust brakes.

10. Check tension of pedal chain. Adjust if necessary.

11. Check tension of secondary chain. Adjust if necessary. (Page 7A).

12. Check steering head adjustment.

13. Check bottom bracket axle adjustment.

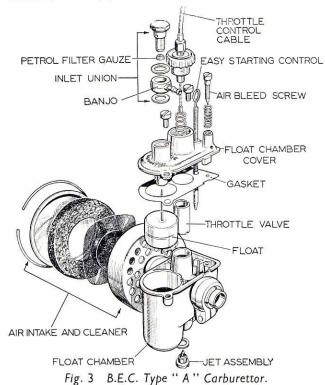
14. Check wheel alignment.

15. Generally test, inspect and carry out minor adjustments as may be required.

(Note:—Items 1, 8, 9, 10, 12 and 13 are described in Cyclemate Instruction Book).

FUEL SYSTEM

CARBURETTOR



The B.E.C. Type "A" carburettor of the CYCLE-MATE works in exactly the same way as the Cycle-master carburettor, even though, because of its mounting position, it is of slightly different construction.

The description of the Cyclemaster carburettor, on pages 11, 12 and 13 of the Workshop Manual, applies in almost all respects to the CYCLEMATE carburettor.

FUEL TAP, MARK I

(Engine numbers N.0001 to N.2357)

Inside the fuel tank and attached to the top of the fuel tap is a tubular gauze filter. To clean this, remove the tap and then screw out the filter. Before replacing, it should be cleaned both inside and out. Because of the construction of this type of tap, the passage through it is straight. With the tap in the "on" position and the filter removed, it is possible to see right through, so check for obstructions by holding the tap up to the light.

The seatings in the fuel tap are small cork washers which should be replaced if there is a leak. Dismantle the tap and, when refitting, tighten both screw caps fully.

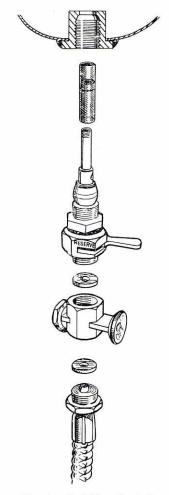


Fig. 4 Fuel Tap Mark 1.

When refitting the tap assembly to the tank, locate the controls so that they are convenient to use and clear of the engine mounting bracket before tightening the attachment nut. Any attempt to change the position of the tap after this nut is tightened may cause damage to the seating.

FUEL TAP, MARK II

(Engine number N.2358 onwards)

The Mark II fuel tap screws right into the inlet bush of the tank. To make a fuel-tight joint, a fibre packing is fitted between the tap and the tank; to obtain the correct position for the tap control it is sometimes necessary to alter the thickness of this packing by using one or more washers, as required.



Fig. 5 Fuel Tap Mark II

The tap control has three operating positions:

1. When the control is pushed right in, the tap is "off."

2. When the control is pulled out to its stop, the main fuel supply is turned on.

3. The reserve supply is obtained by turning the control to the right and pulling it out a little farther.

INTERCHANGEABILITY OF FUEL TAPS

The illustrations show the fuel tap outlet bush of each type of tank. The Mark II tap will fit into either tank, but the original fuel tap (with a separate reserve lever) will fit only the type of tank illustrated in Figure 4. Looking into the threaded hole for the fuel tap will show to which specification the tank is made. The fuel pipes are not interchangeable between the two types of tap, as nipple ends of different threads are required. Components must be used together as follows:

With Mark I Fuel Tank R.05 (Figure 4), use Fuel Tap J.70 with Fuel Pipe J.74; or Fuel Tap J.76 with Fuel Pipe J.81.

With Mark II Fuel Tank R.21 (Figure 5), only Fuel Tap J.76 and Fuel Pipe J.81 can be used. All orders for replacement Mark I taps are met by supplying the later type (J.76), complete with its Fuel Pipe (J.81).

TO RENEW THROTTLE CABLE

- 1. Screw the cable adjuster into the mixing chamber cap as far as it will go.
- **2.** At the handlebar end, pull on the outer cable and release this and the inner cable from the slot of the twist grip clamp.
- **3.** By pushing downward and towards the handlebar, unhook the nipple of the inner cable from the recess of the twist grip.
- 4. Detach the mixing chamber cap by unscrewing it to the left. Withdraw the throttle piston, together with cable and return spring, from the carburettor mixing chamber.
- **5.** Remove throttle piston from the end of the inner cable, followed by the return spring and mixing chamber cap.
- **6.** Withdraw the cable from the guide ring located on the engine cylinder head, and detach from the clips on the frame.
- 7. Reassemble by reversing the dismantling procedure, but make sure that the new cable assembly is threaded through the guide ring before the mixing chamber cap and carburettor parts are fitted to the cable. The throttle piston must be refitted with its plain end towards the mixing chamber cap.
- **8.** Refit this assembly to the carburettor as described in "Refit the Carburettor" (page 13).
- **9.** At the handlebar end, place the inner cable nipple in the recess of the movable part of the twist grip, and then pull on the outer cable so that it can be placed in position in the slot of the clamp.
- **10.** Attach the cable to the frame by the clips provided, and adjust the cable screw so that there is only a small amount of play on the twist grip before movement of it starts to lift the throttle piston.

IGNITION

MAGNETO

A WIPAC Series 90 magneto is fitted on the CYCLE-MATE. It is of exactly the same type as is fitted to the latest Cyclemasters, and therefore service and adjustment are as described in the Manual for Wheel Nos. 107828 onwards.

SUPPRESSOR

All CYCLEMATE engines are fitted with the same type of suppressor as the Cyclemaster. It is situated inside the engine cover behind the magneto stator plate, and fitted into the spark plug lead between the magneto and the crankcase grommet. To prevent ingress of water, a special plastic cap is fitted tightly over the end of the suppressor. When replacing or refitting the suppressor

it is important to make sure that this cap is securely refitted over the end of the suppressor nearer to the crankcase. An ordinary car suppressor, with recesses for 7 mm. diameter plug wire, can be used with the Cyclemaster 5 mm. spark plug lead, if this cap is fitted.

SPARK PLUG

CYCLEMATES are equipped with the new K.L.G. Cyclemaster anti-whiskering spark plug, type CF.50. The special feature of this plug is the loose earthing disc, with three electrodes, which moves slightly when the engine is running. This prevents the adhesion of "whiskers" between the earth and the centre points which would cause the engine to stop firing or to fire erratically.

In addition to normal plug cleaning, it is occasionally necessary to check that the disc is free to rotate, and is not gummed by oil deposits or carbon. If the disc is stuck, rotate it once or twice, and brush with a stiff brush. When re-setting the points, the three tongues should be lightly tapped down so that the correct setting is obtained. Whilst doing this, the gap from each tongue should be checked in several positions by rotating the disc to ensure that at no position is the gap less than .015".

If the inside of the sparking plug looks dirty, it is worth the extra effort required to dismantle the plug to clean it fully. To take the plug to pieces, unscrew the gland nut from the body so that the insulated electrode assembly may be withdrawn. If the insulation is oily, first wash it in petrol or paraffin, then, with fairly coarse glasspaper, remove the carbon deposit and wash again. The plug body should be scraped clean internally with a knife or wire brush, paying particular attention to the earth electrodes. Rinse the plug body in petrol to remove all loose particles before replacing the internal washer, which should be clean and lightly smeared with thin oil. Make sure that it is properly seated before re-inserting the central electrode assembly. Finally, screw up the gland nut and tighten sufficiently to make a gastight joint. Before refitting to the engine, the spark plug gap should be checked and adjusted as already described.

CLUTCH

Except for the outer end of the clutchshaft and the chain sprocket it carries, the primary drive and clutch are exactly as the Cyclemaster. Because of the increased length of the secondary chain, a transmission shock absorber is not required, so the rubber-cushioned sprocket drive has been replaced by a sprocket mounted directly on the shaft, and locked by a Woodruff key, a washer and nut.

It is unnecessary to remove the sprocket from the shaft (except for replacement of either part), as the clutchshaft is withdrawn outwards from the engine during dismantling. The mounting for the sprocket is parallel so a puller may be required to remove it. Cyclemaster Service Tool No. CA.4 is satisfactory for this purpose.

EXHAUST ASSEMBLY

Slight modifications to the exhaust system have been introduced on the CYCLEMATE. Comparison between the illustration below and that on page 21 of the Manual will show the slight internal difference between the Cyclemaster and CYCLEMATE patterns. It also shows that routine service is the same. Re-assembly of the CYCLEMATE pattern parts does not call for special attention in locating the front pipe, as there is no location boss on the baffle.

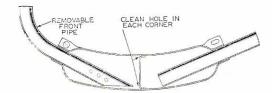


Fig. 6 Silencer

External differences are a longer tail pipe, and a threehole flange fitting to the cylinder instead of by a circular gland nut.

To support the additional weight of the longer tailpipe, a reinforcing clip is added to the rear mounting. When refitting the exhaust to the engine make sure that this clip is correctly positioned around the mounting lug before fitting the attachment nut. A new tab washer should always be used. It is important that the gasket, which fits between the flange of the front pipe and the cylinder, should be replaced by a new one if it shows any sign of deterioration or burning.

Always retighten the flange screws with the engine hot, especially if a new gasket has been fitted.

DECARBONISATION

There is almost no difference between the decarbonising of the Cyclemaster and CYCLEMATE engines, but because of the importance of correct diagnosis and execution of this service, full details are given here, for the CYCLEMATE.

Before deciding to decarbonise, make sure that the exhaust system is not choked. If this is clear and the engine power is still low, decarbonisation is probably necessary. The best way to check this is to inspect the exhaust port. Take out the three screws which hold the exhaust pipe to the cylinder, and remove the exhaust system. Looking into the cylinder, the inner end of the port should be visible as a well defined rectangle, approximately $\frac{5}{8}$ -in. wide and $\frac{5}{16}$ -in. deep. Any substantial change in size or shape indicates that decarbonisation is necessary.

If the port is free from carbon and the engine still does not give full power, check the ignition timing as described in the Manual (page 20).

To decarbonise:

- 1. Take off the exhaust system (if not already removed). So that no strain will be put on the piston and connecting rod, it is important to loosen the three flange screws before slackening the cylinder head nuts. Then lift the cylinder head by removing the three nuts; there is no cylinder head gasket.
- 2. Scrape carbon from the cylinder head, the top of the piston, and from inside the top of cylinder above the limit of piston travel. Do not use sharp tools to scrape the piston crown or cylinder head, as the surface of these components should not be scratched. Always blow away fragments of carbon with air line or tyre pump, being most careful to see that no carbon enters the transfer ports.
- **3.** Examine the transfer ports. If they are clean, the exhaust port can be scraped at this stage and the engine reassembled. If, however, the transfer ports require scraping, the cylinder must be removed, so leave the exhaust port until the cylinder is off and then clean all three ports together.

When scraping ports, do not make sharp edges which may damage the piston wall.

- 4. To remove the cylinder, use two nuts on each stud as illustrated on page 28. Remove the studs with a spanner and lift the cylinder straight up; do not attempt to twist it, or there will be a serious risk of breaking the piston rings. There is a paper gasket between cylinder and crankcase; a new one will be required. (Part No. B.10).
- **5.** It is important to remove carbon from the piston ring grooves. The rings are delicate, and must be eased off by using shims evenly spaced around the piston (page 28). The crankcase opening should be packed with rag while cleaning the grooves, to keep out carbon.
- **6.** When refitting rings, make sure that they are correctly located with the gap of each fitting over the small projection in its groove. (See special instructions on pages 23 and 26 of the Manual).
- **7.** Refit exhaust system *after* the cylinder head nuts have been tightened. Always recheck all head and exhaust bolts for tightness with the engine hot.

TO REMOVE THE ENGINE

- 1. Remove front portion of chain guard by taking off nut and washer holding the guard to the main engine bolt. Take out two screws at the rear, one which holds the guard to the "D" clip on the chain stays, and the other which fastens the two halves together on the top flange. On the "D" clip, the special spring nut will remain attached to the clip. Do not lose the nut from the upper fixing screw.
- 2. Remove the secondary chain by taking out the spring link.
- **3.** Remove the "CM" cover plate and disconnect the clutch cable by releasing it from the operating arm and screwing out the adjustor.
- **4.** Turn off the fuel tap and disconnect fuel pipe from the carburettor.

- **5.** Disconnect the lighting leads by pulling out the rubber push-in connector and removing the screw which attaches the earth lead to the crankcase.
- **6.** Unscrew the cap on the carburettor mixing chamber and withdraw the throttle piston.
- 7. Remove split pin from front chain adjustor rod and free adjustor from engine bracket (Fig. 10, page 8A).
- **8.** Support engine and remove main engine bolt. Do not lose the spacer which is fitted between the left-hand engine mounting bracket and the engine mounting bush. (The three bolts which secure the engine mounting block to the frame tube should not be moved).

TO DISMANTLE THE ENGINE

This operation is as described on page 22 of the Cyclemaster Manual, except for the following items which should be amended to read:

- 1. Remove engine from frame as already described.
- 3. Carried out during engine removal.
- **5.** Turn back the tabs of the locking washer and remove nut holding rear end of the silencer. Do not lose support clip.
- **6.** Take out three screws securing exhaust flange to cylinder. Remove exhaust system and retain asbestos gasket, if this is fit for further service. (See "Exhaust System").

Items 12 and 30 do not refer to this type of engine.

29. Press the outer bearing from the casting, taking care not to damage the oil seal. The oil seal should not be disturbed if fit for further service. (See "Before Rebuilding the Engine").

BEFORE REBUILDING THE ENGINE

The information provided under this heading on pages 23 and 25 of the Cyclemaster Manual, except for that which refers to earlier Cyclemaster models, applies also to the CYCLEMATE engine. The additional information given here covers only the clutchshaft assembly.

CLUTCHSHAFT OIL SEAL

Attention is drawn, in item 29 of "Dismantling the Engine," to the advisability of leaving the clutchshaft oil seal undisturbed; provided it is properly cleaned it can be inspected in position. The edge of this seal should be unbroken and not excessively worn. If necessary to replace the seal, the crankcase circlips must be removed and the seal pressed out towards the outside.

For easy removal it is advisable to heat the casting to approximately the temperature of boiling water; it is essential to heat the casting in this way when fitting a new seal. The open end of the seal should face towards the clutch itself, and it may be positioned anywhere between the two circlips. To avoid damage to the seal itself, it is important that the distance piece between the inner members of the two bearings should be clean and highly polished.

CLUTCHSHAFT SPROCKET

As already described, it is unnecessary to dismantle the clutchshaft and sprocket unless one of these parts needs replacing. However, whilst the engine is dismantled, it is a good idea to check that the sprocket is tight on the shaft. If there is any movement at all, the sprocket should be removed to make sure that the key is in good condition, before tightening the washer and nut which retain this sprocket on the shaft.

REBUILDING THE ENGINE

This operation is the same as rebuilding the Cyclemaster engine (as described on pages 25, 26 and 27), except for the following:

2. The rotary valve of the CYCLEMATE engine has a longer opening period and its timing is a few degrees later. When replacing the disc on the crankshaft, it is important that the slot of the valve is positioned as illustrated. Looking at the short end of the crankshaft with the inlet hole at the bottom, the extended slot of the valve should be to the right. General fitting instructions with regard to springs, oil and free movement, remain the same.

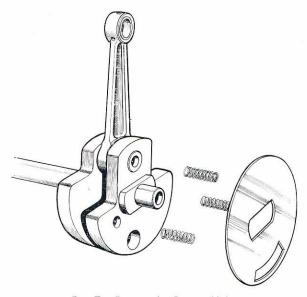


Fig. 7 Fitting the Rotary Valve

- **4.** If they have been removed, refit the circlips (A.08) into the centre part of the main engine casting. (One in bore for crankshaft and two in bore for clutch spindle).
- **5.** Pack with a good quality bearing grease and refit outer bearing (A.09) to clutchshaft, making sure that the sealing washer goes on first, right up to the shoulder.
- 7. Press the clutch spindle assembly into casting from the outside. Turn over casting and fit distance piece (F.35) to clutch spindle. When fitting both shaft and distance piece, exercise great care to avoid damage to the inner edge of the oil seal. Lightly oil second bearing (A.09) and press this into casting on to the other end of clutch spindle.

- **24.** Instructions for Cyclemaster should be followed, but take care to fit the two longer screws to the bottom two holes for mounting the chain tensioner bracket (S.27) later.
- **32.** Drop on cylinder head. Note that there is no gasket at this joint and sealing compound should be used. Fit three washers and three nuts, and tighten evenly. (A few engines have been fitted with special nuts, which had the seating washer under the hexagon machined as part of the nut itself. With this type of nut, there are no separate washers).
- **34.** This instruction refers only to early model Cyclemasters.
- **35.** The reference to wheels Nos. 1-76750, refers only to early model Cyclemasters.
- **41.** This operation is not required at this stage. (See "Refitting the Engine").
- **43.** Assemble exhaust pipe to silencer, but leave clamping screw slack. Fit front flange to cylinder, using new asbestos flange gasket, but do not tighten screws. Make sure that the support clip is in position at the rear silencer mounting and then attach this to support stud, using a new tab washer. Tighten flange screws, rear mounting and front clip, in that order, and then turn up the tabs of the rear mounting locking washer, so that the attachment nut is secure.
- 44. This refers to Cyclemaster only.

Items 46 and 61 can be ignored, as most of the operations refer to Cyclemaster only. Operations still to be carried out are dealt with in "Refitting the Engine."

REFITTING THE ENGINE

- 1. With the engine lifted into position so that the long mounting bush (S.08) and its rubber bush are between the suspension plates (S.28 and S.29), feed the main mounting bolt (S.05) with the washer (S.06) against its head, through the rubber bush and the short sleeve (S.09) from the magneto side. Before pushing the bolt right through, insert the spacer (S.26) between the bracket (S.29) and the mounting sleeve (S.08).
- 2. Fit chain tensioner bracket to engine, making sure that crankcase screws stay tight in the crankcase when tightening the bracket attachment nuts. Check chain adjustor as described under "Secondary Chain Adjustment" (page 7A), and then refit to engine bracket. Always use a new split pin, and open out its legs securely.
- **3.** Rotate the sleeve nut on adjustor rod, so that the secondary chain goes on easily. Refit spring link with the open end facing away from the movement of the chain. Adjust tension as described under "Secondary Chain Adjustment" (page 7A).
- 4. Refit carburettor control cable and fuel pipe.
- **5.** Connect lighting leads; press the shouldered nipple firmly into the rubber sheath connector and attach earth lead to the crankcase by screw.

6. Insert clutch cable through hole in engine casting and screw in adjustor half way; this makes the maximum adjustment at this point available. With screwdriver, turn main adjustor so that clutch operating crank (F.01) is in a convenient position, and connect the cable and pull-off spring (F.02). Finally, adjust the main adjustment screw so that there is a $\frac{1}{4}$ in. free movement of the clutch lever. (See Manual, page 20).

clutchshaft sprocket and large chain wheel. Use of the special Chain Alignment Gauge (Tool No. CA.23) greatly facilitates this operation. It will be seen that rotation of the bracket assembly around the frame tube alters the alignment of the clutchshaft sprocket, and that correct wheel alignment provides the correct chain wheel alignment.

If alteration of the bracket alignment is required, do not

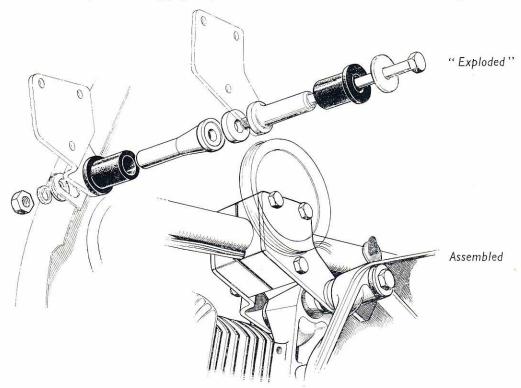


Fig. 8 Main Engine Mounting

7. Refit front portion of the chain guard, taking care to position it so that there is clearance for the chains. Replace the washer and nut on main engine bolt and tighten very tightly.

8. Remove clutch chamber filler plug and add SAE.140 gear oil, using the fuel tank filler cap as a measure. It is most important that the clutch chamber is not overfilled. Refit filler plug and "CM" cover.

9. Recheck tension of secondary chain and, if necessary, readjust carefully.

10. Turn on the fuel tap and start the engine. After road test, and with the engine hot, retighten the exhaust flange screws and cylinder head nuts.

SECONDARY CHAIN ALIGNMENT

Unless the components of the engine mounting block become damaged or distorted, they will not need to be removed or adjusted in any way. The only attention required is an occasional check of the clamping bolts and nuts.

If they have been disturbed, refit them so that the centres of the main engine mounting bolt hole and the bottom bracket axle are $6\frac{1}{8}$ in. apart, and parallel. Then refit the engine and check the alignment of the

slacken the clamping bolts so far that the assembly moves easily on the tube, or the $6\frac{1}{8}$ in. dimension may be altered. With these clamping bolts slightly slackened, rotate the mounting assembly until the clutchshaft sprocket is in line, and then tighten the three bolts and nuts securely. Recheck alignment before refitting the chain guard.

The licence holder fits under the head of the top clamping bolt, so it may be necessary to remove its rim and glass when tightening this bolt.

SECONDARY CHAIN ADJUSTMENT

Very easy adjustment for the secondary chain is provided by a long screwed sleeve, into each end of which fits a screwed rod. One rod has a right-hand thread and the other a left-hand, so that rotation of the sleeve causes this assembly to lengthen or shorten as required. There is, therefore, no need to uncouple the attachment in order to adjust the chain by altering the position of the engine.

Only one locknut is fitted, and that is on the right-hand thread (front rod). The rod with the left-hand thread has a longer arm, and, because of the double thickness of the lugs, this fits into the frame clamping bracket.

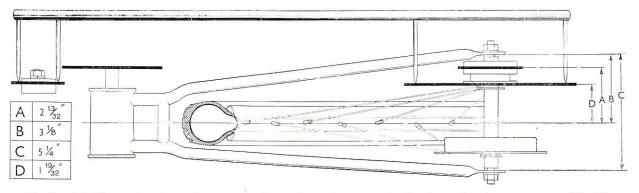


Fig. 9 This illustration shows the rear wheel and chain alignment. It also shows the alignment gauge (CA. 23) for checking the clutch and rear wheel sprockets.

The dimensions given are not required for normal service operations. They provide information for the correct rebuilding and alignment of the wheel itself.

If the rods have been uncoupled, make sure when refitting that an equal amount of thread on each rod is screwed into the sleeve. This ensures that the full range of adjustment can be obtained without the danger of one of the rods screwing out of the sleeve.

When the chain adjustor assembly has been opened out so that the amount of thread in each end of the sleeve is less than $\frac{5}{16}$ in., the chain should be replaced or shortened by half a link. Except in the case of a few early models, this dimension can best be checked by measuring the distance between the bracket centres. The maximum permissible is $4\frac{1}{2}$ in.

The frame bracket for the rear end of the chain adjustor

is fitted to the offside chain stay in front of the mudguard bridge. So that it cannot move rearwards under pressure, it rests against this bridge, and must be tightened securely. When correctly positioned, the lugs are vertical.

To adjust the chain, first make sure that the rear wheel bearing and pedal chain adjustments are satisfactory, then slacken locknut 1 and rotate the adjustment sleeve 2. Looking from the front, turn the adjustor clockwise to tighten the chain. Tighten the locknut and recheck the chain tension; rotate the wheel and check in several positions to verify that the $\frac{1}{2}$ in. up and down movement is present in all positions of the chain.

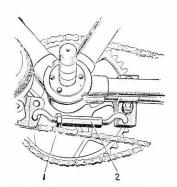
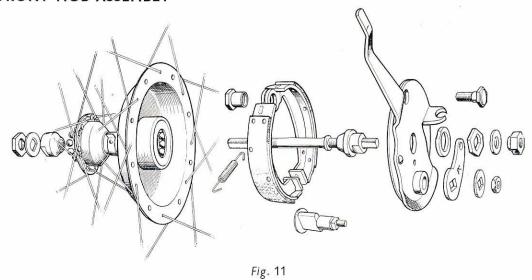


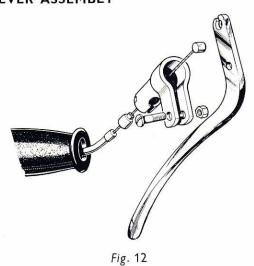
Fig. 10 Secondary Chain Adjustor

Illustrations are given overleaf of the front hub assembly and the inverted brake lever assembly, as these are in some respects special to the CYCLEMATE.

FRONT HUB ASSEMBLY



INVERTED BRAKE LEVER ASSEMBLY



"Exploded" Drawing of Cyclemate Engine

A NEW ENGINE OIL

FOR CYCLEMASTER ENGINES

Our engineers have put an entirely new oil to severe and lengthy testing on road and bench and have found results so consistently outstanding, that we have arranged to market it. Our tests have proved that it not only possesses the highest lubricating qualities, but also gives maximum power minimum carbon deposit in cylinder head and clogging of exhaust ports and silencer.

A user writes "Since using Cyclemaster oil my mileage between decarbonising has gone up enormously. When using ordinary oil I decoked about every 1,000 miles. With your oil my unit maintains its top performance up to and over the 2,000 mark. When stripping my engine down after 2,150 miles, I found very little carbon in inlet ports, the rings quite free and the carbon on piston much softer."



3/10 QUART TIN

E. L. E.

CYCLEMASTER SUPERFINE OIL

(Manufactured by T. PARRY & CO. LTD.)

Obtainable from all Cyclemaster Dealers

CYCLEMASTER LTD., Tudor Works, Chertsey Road, Byfleet, Surrey

IceniCAM Information Service



www.icenicam.org.uk