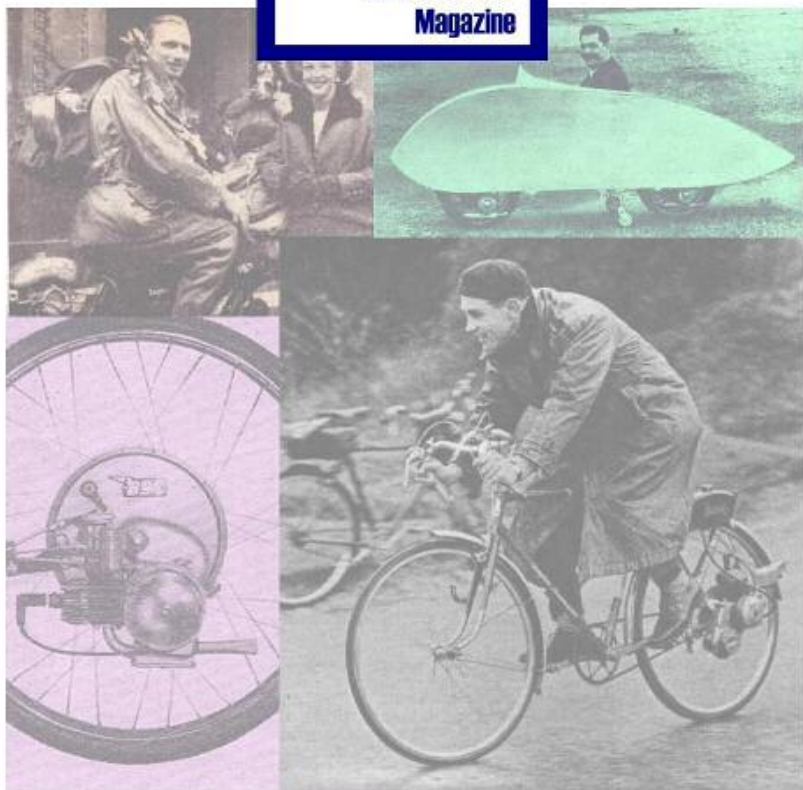


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OPERATING INSTRUCTIONS

AND

SPARE PARTS LIST FOR THE

Villiers

MOTOR-CYCLE ENGINES

Mk. 10D AND Mk. 6E
125 cc 197 cc

6^D.

APRIL, 1949.

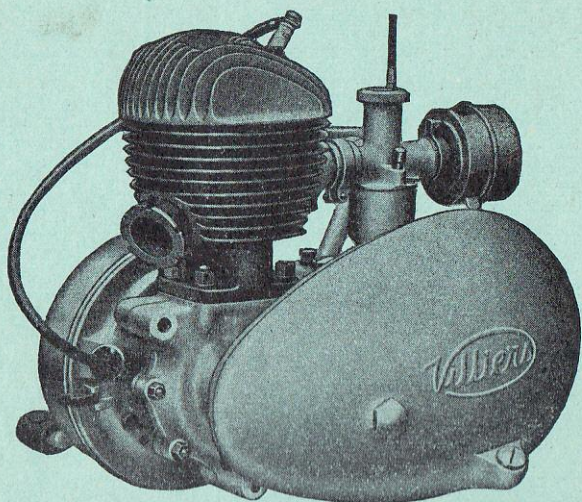
The Villiers Engineering Co Ltd
WOLVERHAMPTON . ENGLAND.

TELEPHONE NOS. 21666.
SERVICE DEPT. 20851.

TELEGRAMS: "VILLIERS,"
WOLVERHAMPTON.

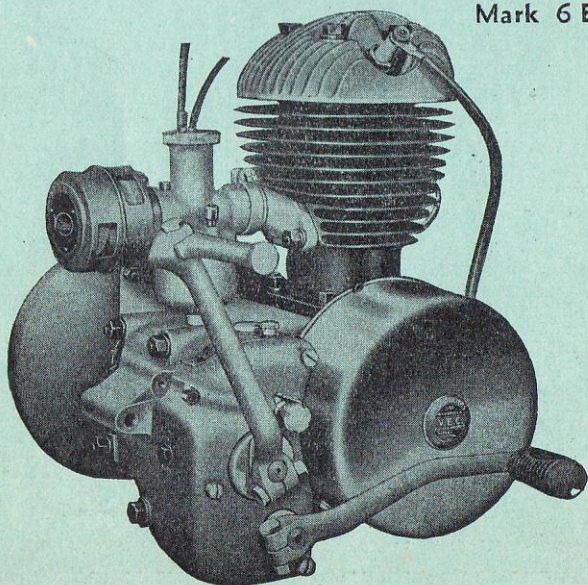
**KEEP THIS BOOK SAFELY
FOR REFERENCE**

Villiers



Mark 10 D.

Mark 6 E.



ERRATA

PAGE 19. SLIDING PINION, Illus. 7. Part No. D6525
 FOOT RUBBER. Illus. 20. Price 1/6.
 PAGE 21. CON. BOX ASSBLY. Illus. 2. Part No. M2013
 PAGE 23. FLOAT. Illus. 25. Part No. V107 x 1

USE THE LODGE H14 SPARK PLUG IN THE
 "AMBASSADOR" 196cc. MOTOR CYCLE.

SPECIFICATION.

| | MARK 10 D. | MARK 6 E. |
|------------------------------------|---|---|
| Bore - - - | 50 mm. | 59 mm. |
| Stroke - - - | 62 mm. | 72 mm. |
| Capacity - - | 122 cc. = 7.44 cu. ins. | 197 cc. = 11.71 cu. ins. |
| Engine Sprocket | 18 Teeth, $\frac{3}{8}$ " Pitch. | 19 Teeth, $\frac{1}{2}$ " Pitch. |
| Clutch Sprocket | 51 " " " | 38 " " " |
| Gearbox Ratios | 1-1, 1.7-1, 3.25-1. | 1-1, 1.7-1, 3.25-1. |
| Final Drive Sprocket - | 15 Teeth— $\frac{1}{2}$ " Pitch. For Renold Chain No. 110044. | 15 Teeth— $\frac{1}{2}$ " Pitch. For Renold Chain No. 110044. |
| Sparkign Plug - | Lodge H14, 14 mm. | Lodge HHN, 14 mm. |
| " " Gap | .018"/.025". | .018"/.025". |
| Spark Timing - | $\frac{5}{32}$ " before T.D.C. | $\frac{5}{32}$ " before T.D.C. |
| Carburetter - | Type 3/4 Single Lever. | Type 4/5 Two Lever. |
| Lubrication, Engine - - | Petrol Mixture, 1 part Castrol XL Oil (SAE 30) to 16 parts Petrol. | |
| Lubrication, Chaincase and Gearbox | Castrol 'D' Oil (SAE 140) filled to Level Plugs. | |

INSTRUCTIONS FOR USING THE MARK 10D & MARK 6E UNITS

IMPORTANT. When the Rectifier Lighting Set is used, the Rectifier and Battery must be connected up before starting the Engine. If the Battery has been removed, the Rectifier must be disconnected from Magneto.

FUEL TANK.

Fill up Tank with a mixture of half a pint of Castrol XL Oil (S.A.E.30) to one gallon of Petrol, the mixture to be made and well stirred before putting into Tank. Pour in through a fine gauze if possible.

GEARBOX.

Remove the oil level dipstick, situated alongside the oil filler plug on top of gearbox and check oil level. The "full" position is indicated by the groove about $\frac{3}{8}$ in. in from end of dipstick. If level is found to be below end of dipstick remove filler plug, top up with Castrol 'D' oil (S.A.E.140). Examine every 1000 miles approximately, and drain every 5000 miles by removing plug in bottom of box.

CHAINCASE.

Remove filler plug situated near bottom of chaincase, and with the cycle standing vertically, insert as much Castrol 'D' oil as will enter, the plug hole is so placed as to act as a level. Top up every 1000 miles and drain by removing front cover every 5000 miles.

STARTING.

Mark 10 D Unit.

WHEN COLD.

Turn petrol tap to the 'ON' position. Flood carburetter float chamber by depressing tickler.

The carburetter fitted to this engine has a single lever controlling the throttle position, and to obtain a rich mixture for starting it is necessary to turn the air filter shutter to the closed position. Having flooded the carburetter, place gear control lever in the "NEUTRAL" or free engine position, open throttle lever, or twist grip where fitted, about one third open and give kickstart lever two or three sharp kicks. Having started the engine, the air filter can gradually be returned to the fully open position as the engine warms up.

Mark 6 E Unit.

WHEN COLD.

The carburetter fitted to this engine has separate controls to the throttle and to the taper needle, and after flooding by depressing the tickler the taper needle should be raised as far as possible by moving the short control lever to the "RICH" position indicated on the top cover so as to give a rich mixture for starting. Open the throttle lever or twist grip about one third and after kickstarting the engine return the needle control lever to about the midway position between "RICH" and "WEAK."

WHEN HOT.

Do not flood the carburetter, or raise the needle to "RICH," and in the case of the Mark 10D Engine do not close the strangler shutter fitted to air cleaner.

FAILURE TO START.

If repeated kicks fail to start after flooding (when cold), turn off fuel supply, open throttle wide, and clear cylinder of excessive mixture by giving a number of kicks to starter lever. Now turn on fuel supply, and after opening throttle a little try again. If not successful, the sparking plug will probably be found to be wet, if so, remove and dry out, and turn over engine quickly after having removed the drain plug situated at bottom of crankcase, so that accumulated mixture can be blown out. If still not successful after having replaced drain plug the trouble must be found elsewhere, and reference should be made to the "Fault Finding Chart."

STOPPING THE ENGINE.

If the engine is stopped by turning off the fuel supply instead of closing throttle, an easier start will be made if the machine has to stand a long time before again being required.

RUNNING IN.

The useful life of a motor-cycle engine depends to a great extent upon how it is treated during the first 500 miles, and during this period the machine should not be driven at more than 30 miles per hour in top gear, 20 in middle, and 10 in bottom gear. Do not allow the engine to labour in top gear, change to a lower gear and ease back the throttle control.

GEARBOX.

The gear ratios are selected by the foot operated lever having a positive stop for each gear position, "neutral" or free engine position being obtained by pressing lever downwards from the first or low gear position.

When starting off, with gears in "neutral," lift control lever up against the stop to give first, or low gear, then when under way, press lever DOWN to next stop to obtain the second, or middle gear. Press DOWN again to next stop to obtain third, or top gear. The lever returns under spring pressure to its normal position after each change. When changing down from top to middle, and middle to bottom gear, LIFT the lever against its stop for each position. The lever is adjustable for position to suit the individual rider, and by releasing the clamp bolt, can be removed from the splined spindle and refitted in an alternative position.

CLUTCH.

The drive from the engine to clutch is taken by a pre-stretched endless roller chain running in the oil bath chaincase. No attention is necessary beyond that of lubrication, and correct adjustment of push rod to give the necessary clearance to prevent clutch slip. Whilst the clutch is engaged, i.e. driving, there must be clearance between end of pushrod and the clutch lever fitted to gearbox, and a special adjuster having a knurled and slotted head is provided so that adjustment can be made by the hand without having to use tools. There should be about $\frac{1}{16}$ inch movement at end of gearbox clutch lever before commencing to depress the clutch springs.

MAGNETO.

The magneto fitted to both engines is the latest 6-pole pattern providing current for ignition and lighting, the same magneto being used for both the "DIRECT" and "RECTIFIER" lighting sets available with each type of engine. The wiring connections differ, however, and reference should be made to the wiring diagrams Figs. 2 and 3. The flywheel should not be removed unless absolutely necessary, and then it is advisable to use a Villiers "Hammer-tight" spanner on the centre nut which is exposed after removal of flywheel cover. The centre nut is imprisoned in the flywheel and acts as an extractor when turned anti-clockwise.

The armature plate which carries the ignition coil, lighting coils and contact breaker mechanism is secured to the engine crankcase by four screws. The H.T. Lead from ignition coil to sparking plug is detachable by unscrewing from armature plate, and when refitting it is important to make sure that the brass pad carried by the spring and secured to the terminal makes contact with the soldered disc on the outside of the ignition coil.

CONTACT BREAKER ASSEMBLY.

This is of the latest improved type requiring a screwdriver only to adjust the contact points. To adjust the contact points proceed as follows:—

Turn flywheel until rocker pad is on top of cam profile of flywheel boss. Release the screw "A," see illustration Fig. 1.

Position Bracket "B" with .015" feeler gauge between contact points, tighten screw, taking care not to use too much force. It is not necessary to disturb screw "C" when adjusting point gap.

A felt pad is used to keep the cam in a slightly oily condition, and is impregnated when new with grease. This can if visibly dry, be oiled with a small amount of the heaviest oil available. It is better, however, to soak the pad in a molten high temperature grease if it is convenient to detach the box itself for this operation. If too much oil is put on the felt pad it may creep along the Rocker Arm, get on the contact points and so cause ignition trouble.

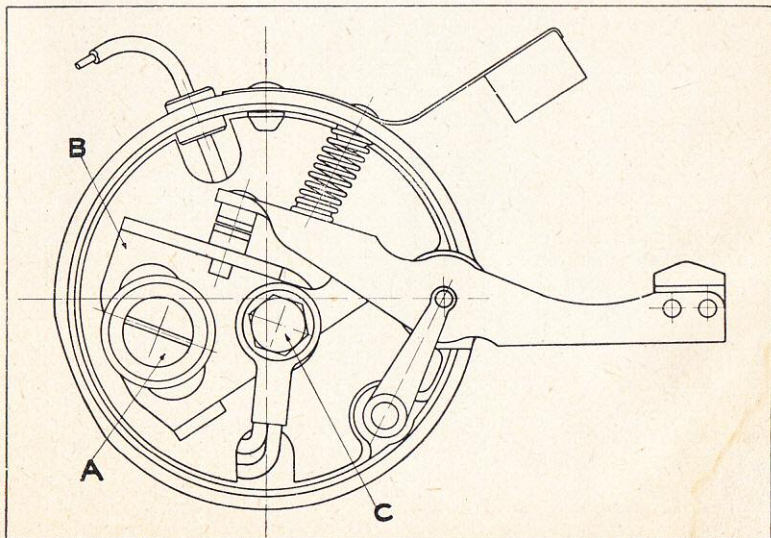


Fig. 1.
CONTACT BREAKER ASSEMBLY.

TIMING OF THE MAGNETO.

The contact breaker points must commence to open before the piston reaches top of stroke, in the case of the Mark 10 D and Mark 6 E Engines this dimension is $5/32$ inch. Timing marks are provided on the armature plate and flywheel rim. In the armature plate a slot is cut in line with the H.T. terminal, and the mark stamped on flywheel rim coincides with the slot when the piston is at TOP of stroke, the necessary amount of advance having been allowed for. When timing ignition, necessary because of flywheel removal, loosely fit flywheel to shaft, and, having set piston at correct distance BEFORE top dead centre, rotate flywheel without turning the crankshaft until the points commence to open. Tighten up flywheel centre nut sufficiently to turn crankshaft, rotate until piston is at top of stroke, then timing marks should be opposite one another. Finally, tighten up centre nut with the hammer-tight spanner, and refit flywheel cover.

CARBURETTERS.

OPERATION OF CARBURETTER.

The function of the carburetter is to supply a mixture of fuel and air in correct proportion under all conditions. In the Villiers carburetter the float chamber surrounds the centrepiece with jet, and inside the chamber the annular float rises as the fuel enters, until reaching the correct level. The fuel supply is then cut off by the conical ended needle operated by a forked lever resting on top of float. Fuel enters the jet body through a side hole and passes into the centrepiece through a small calibrated hole.

The throttle operated by the cable opens up the air supply to the inlet port and is fitted with a long taper needle which extends below the throttle and into the centrepiece. The combination of suitable jet size, degree of taper and position of taper needle gives a correct mixture strength at all throttle openings.

The carburetter fitted to the Mark 6 E Engine is a middleweight pattern type 4/5, and the position of the taper needle relative to the throttle can be altered whilst riding by means of the control cable, previously described.

In the case of the Mark 10 D Engine, the lightweight pattern carburetter type 3/4 having a single lever control to throttle is fitted. The position of needle in throttle is adjustable by means of a special screw situated in centre and at top of throttle. This adjustment is provided to suit individual engines and it should not be necessary to alter the makers' setting except after considerable mileage.

To dismantle Carburetter—Mark 10 D Engine.

TO CHANGE THE TAPER NEEDLE.

Remove throttle from body after unscrewing the top ring, and in the centre at top of throttle will be found a small slotted screw. This is the adjuster referred to in the previous paragraph, and when this is removed by unscrewing, the needle with spring can be pushed up from underneath. When replacing the needle make sure that the small end coil on spring is up against the head of the needle.

TO REMOVE THE CENTREPIECE.

It is necessary first to remove the throttle, then the bottom nut and fibre washer holding the float chamber in position. The float will now come away, but before the centrepiece can be removed it will be necessary to remove the two compensating tubes which stand through at the bottom of the throttle chamber. Having removed the compensating tubes the centrepiece with fibre washer under the head can then be pushed up from the underside of the carburetter.

Having removed the centrepiece, the forked lever on the underside of the body can be swung on one side to allow the fuel needle to drop out. Do not alter the shape of the fuel needle lever as this component governs the height of the petrol in the float chamber. Should, however, the lever be damaged, it should be reset to give a distance of $7/32$ inch between the top of float and underside of body when the fuel needle is fully raised.

TO REASSEMBLE CARBURETTER.

Clean the various components and make sure that the vent hole in the tickler cap is clear. Insert the centrepiece with fibre washer in position under head and make sure that the forked fuel needle lever and fuel needle are in position.

Replace the two compensating tubes, in no circumstances should the holes in the head of centrepiece be plugged. Clean out the float chamber and replace with large fibre washer at top making sure that the float is in position, now replace bottom nut and fibre washer and tighten, but do not use too much force otherwise there is the danger of stripping the thread of centrepiece. Replace throttle in carburetter body, at the same time guiding the taper needle into the hole in top of centrepiece. Locate top disc in top of body and screw on top ring.

If the carburetter has been removed from the Engine, make sure when refitting that the body is pushed on to the manifold as far as possible. There are four narrow slots in the body to allow the securing clip to function, and if the manifold stub does not extend past the end of the slots, air will be sucked in causing hard starting and erratic running.

To dismantle Carburetter—Mark 6 E Engine.

TO CHANGE THE TAPER NEEDLE.

Unscrew the top ring on body and pull throttle out complete with the two cables attached. The control cable screwed into centre of throttle and which controls the position of the taper needle has first to be removed. Do this by means of a small spanner on the hexagon extension which is screwed into the throttle. When this has been removed the needle with spring can be pushed up from underneath.

TO REMOVE CENTREPIECE.

Proceed exactly as for the carburetter fitted to the Mark 10 D Engine except that before the compensating tube can be unscrewed it will be necessary to remove the air cleaner. One compensating tube only is used and this is situated in the air intake of the carburetter. A retaining spring for the compensating tube is fitted, but it should not be necessary to remove this from the tube.

Having removed the compensating tube the centrepiece can be pushed up from underneath.

TO REASSEMBLE CARBURETTER.

This is carried out exactly as for the Mark 10 D Engine, but in place of the needle adjuster in the centre of the throttle, the hexagon throttle extension is fitted.

Both types of carburetters have a banjo petrol pipe fitting inside of which is a fine mesh filter gauze. This filter should be periodically cleaned by dipping in petrol, and when replacing make sure that the fibre washers make a petrol-tight joint.

AIR CLEANERS.

The Air Cleaner should be removed for cleaning approximately every 2000 miles. Remove by releasing clip bolt, dip the cleaner in petrol and after drying, immerse in thin oil and hang up to drain before refitting to carburetter.

LIGHTING SETS.

Two types of lighting sets are supplied for use with the Mark 10 D and Mark 6 E Engines, and although the magnetos are identical for both engines, and lighting sets, there is a difference to be noted when making the connections.

"DIRECT" LIGHTING SET.

In this set the alternating current is taken direct from magneto to lamps via the head lamp switch, and it will be seen on reference to wiring diagram Fig. 2 that the ends of the twin cable from magneto are joined together before connecting to the head lamp cable. The single lead coming from back of armature plate is EARTHED by attachment to frame of cycle.

LIGHTING BULBS FOR "DIRECT" SET.

| | | | |
|------------|-----|-----------------------------------|----------------|
| Head Lamp | ... | 6 Volt—30/30 Watt Double Filament | S.B.C. |
| Pilot Lamp | ... | 3.5 Volt—.15 amp. | M.E.S. |
| Tail Lamp | ... | 6 Volt—3 Watt | S.B.C. |
| Speedo | ... | 6 Volt—.17 amp. | Miniature B.C. |

"RECTIFIER" LIGHTING SET.

In this set the current from the lighting coils is converted to D.C. by passing through a Selenium type rectifier and then used for charging a 6 Volt 10 AMP/HR battery. When connecting up to lamp cables, one of the twin leads is joined to either of the rectifier leads, the other twin lead being connected to the head lamp cable marked with a yellow band and which is connected to lamp switch as shown in diagram Fig. 3. The remaining lead at back of armature plate is connected to the negative side of battery, via the switch and ammeter. The positive side of battery is EARTHED.

LIGHTING BULBS FOR "RECTIFIER" SET.

| | | | |
|-----------------------|-----|-----------------------------------|----------------|
| Head Lamp | ... | 6 Volt—24/24 Watt Double Filament | S.B.C. |
| Pilot Bulb | ... | 6 Volt—3 Watt. | |
| Tail Bulb | ... | 6 Volt—3 Watt. | |
| Tail Bulb. Stop Light | ... | 6 V.—3W/18W Double Filament. | |
| Speedo | ... | 6 Volt—.17 amp. | Miniature B.C. |

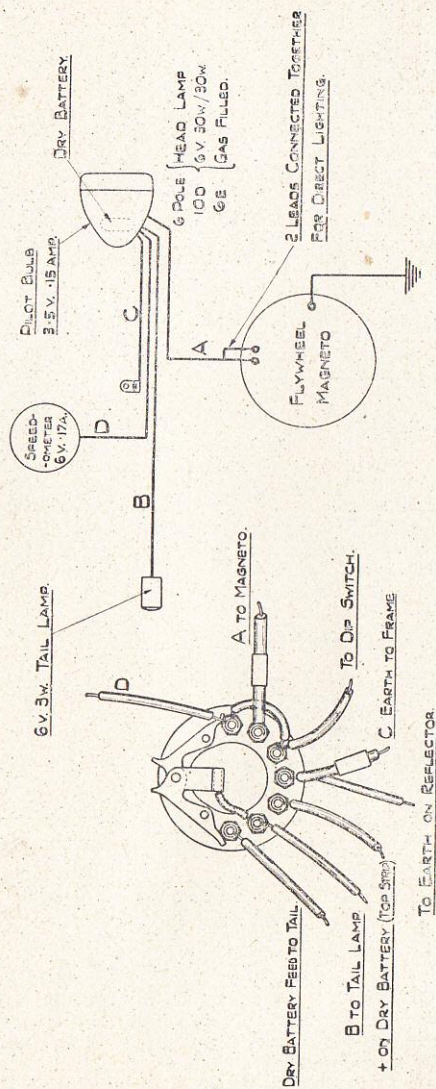
RECTIFIER.

The casing of rectifier is earthed by contact with cycle frame and needs no attention, but it is essential that the lead to magneto is disconnected should it be necessary to use the motor cycle whilst the battery is removed.

CARE OF BATTERY.

Once a month unscrew filler caps of each cell and pour in a small quantity of distilled water to bring the acid level with the tops of the separators. Do not use tap water as it contains impurities detrimental to the battery. Acid should not be added unless this is accidentally spilled out of the battery. This should be replaced by diluted sulphuric acid of the same specific gravity as in the cells. Keep the battery terminals clean.

Many lighting troubles can be traced to unseen corrosion between the surfaces of a perfectly tight joint, and in the case of the battery this corrosion takes place much more frequently than at other electrical contacts. The positive is earthed to reduce this effect to a minimum.



WIRING DIAGRAM. "DIRECT" LIGHTING SET.

TRACING TROUBLES.

For the satisfactory running of any Villiers Engine it is essential that three main conditions are fulfilled, and by making a systematic and intelligent investigation the faults can usually be located and rectified. Usually when the engine stops, symptoms give a clue to the cause, but where this is not the case, the trouble can be more easily diagnosed by following a definite method of investigation.

The three conditions mentioned above are as follows:—

1. The required quantity of combustible mixture (petrol and air) must enter the engine, which means that a sufficient supply of fuel must be available at the carburetter and that the throttle should open and close freely.
2. There must be a good spark at the plug points, when under compression, and at the correct time in relation to the position of piston on its upward stroke.
3. The engine must be in good mechanical condition, there must be good compression in cylinder and crankcase, and no air leaks at the various joints.

When cause of the trouble is not evident carry out a preliminary examination covering the following points, but if this fails to trace the cause reference should be made to the Fault Finding Charts.

Having made sure that there is "petrol" in the tank, and tap is in the ON position, depress tickler to check if

there is any stoppage or obstruction in the fuel supply either in the tap, fuel pipe, banjo union or fuel needle seating. Being satisfied that fuel is reaching the carburetter, next unscrew sparking plug and with high tension lead attached lay on cylinder head. Test by turning engine by means provided, and if the spark is satisfactory it is possible that the timing is incorrect. Finally examine the carburetter controls to make certain the throttle is actually opening when the control lever is moved.



ENGINE FOUR OR EIGHT STROKES.

Strangler may not be fully open or taper needle control in the "RICH" position. Air filter where fitted may need cleaning.

Check by watching for excessive smoke from exhaust pipe or silencers.

Mixture too rich.

Engine may four stroke for a little while after standing due to accumulation of oil in crankcase.
Flooding of carburettor.

ENGINE LACKS POWER.

Engine out of tune, bearings worn. Unsuitable sparking plug.

Loss of compression.

Incorrect "Petrol" mixture.

Excessive carbon deposit on piston crown, and cylinder head.

Exhaust system choked with carbon.

Incorrect carburettor setting.

Air cleaner choked.

Obstruction in fuel supply.

Incorrect ignition timing.

Brakes binding.

Driving chains too tight.

Weak mixture due to air leaks at carburettor stub or manifold joint, crankcase and cylinder base joints.

Crankcase drain screw loose or missing.

Worn crankshaft bearings or leaking compression gland.

Ignition timing too far advanced.

Spark plug lead detached.

Plug points bridged by oil, carbon, or deposit caused by use of leaded petrol.

Short circuit of high tension current by water on H.T. Lead.

Lower taper needle by moving to "WEAK" position. Lower needle by adjuster where fitted in throttle.

Usually ceases when engine has been running for a few minutes unless too much oil has been mixed with the petrol.

Persistent flooding is usually due to dirt under fuel needle seating, or sticking fuel needle, or damaged seating or punctured float.

Overhaul. Replace with recommended type.

Tighten cylinder head bolts. Worn piston rings.

Correct mixture is 1 part Oil—16 parts Petrol.

Decarbonise.

Clean out Silencer and Exhaust Pipes.

Check with Setting Chart.

Wash in petrol, drain and dip in thin oil.

Clean out tap, fuel pipe and filters.

Check against Timing Chart.

Adjust.

Adjust.

Tighten all joints.

Tighten or replace.

Replace.

Correct.

Replace and tighten nut.

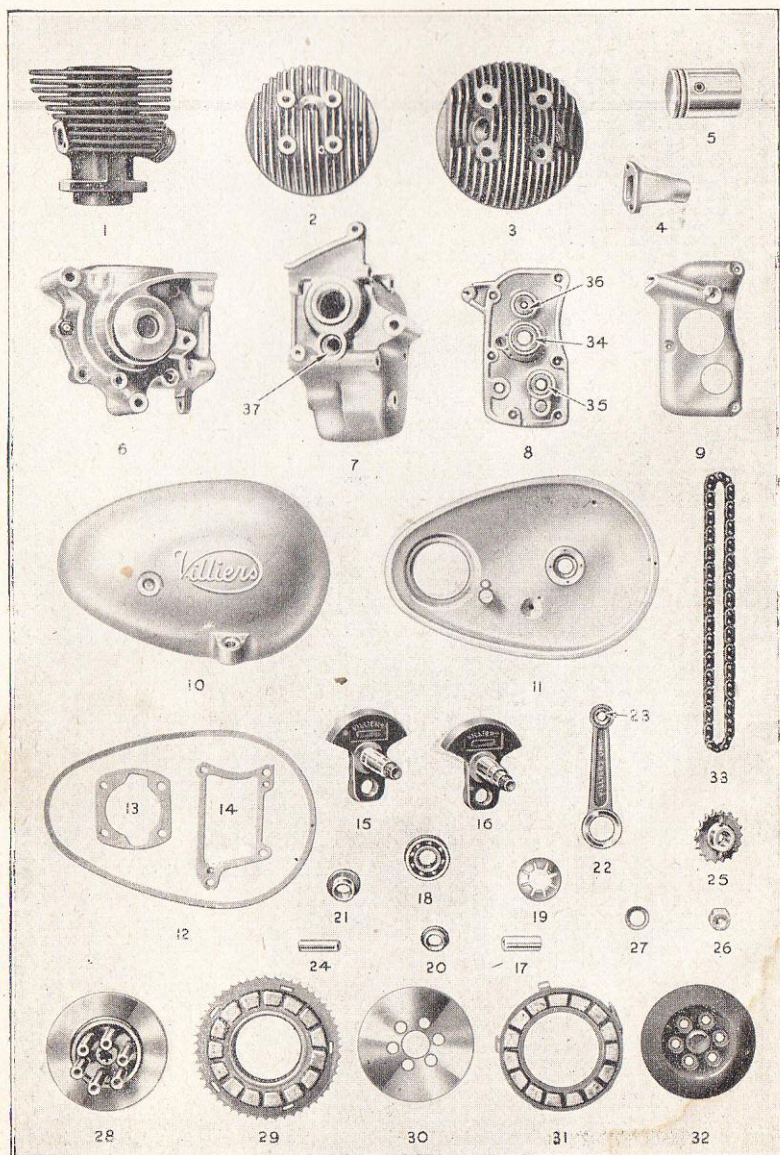
Clean or replace.

Dry out.

ENGINE WILL NOT RUN SLOWLY.

ENGINE SUDDENLY STOPS FIRING.

MARK 10 D and 6 E UNITS.

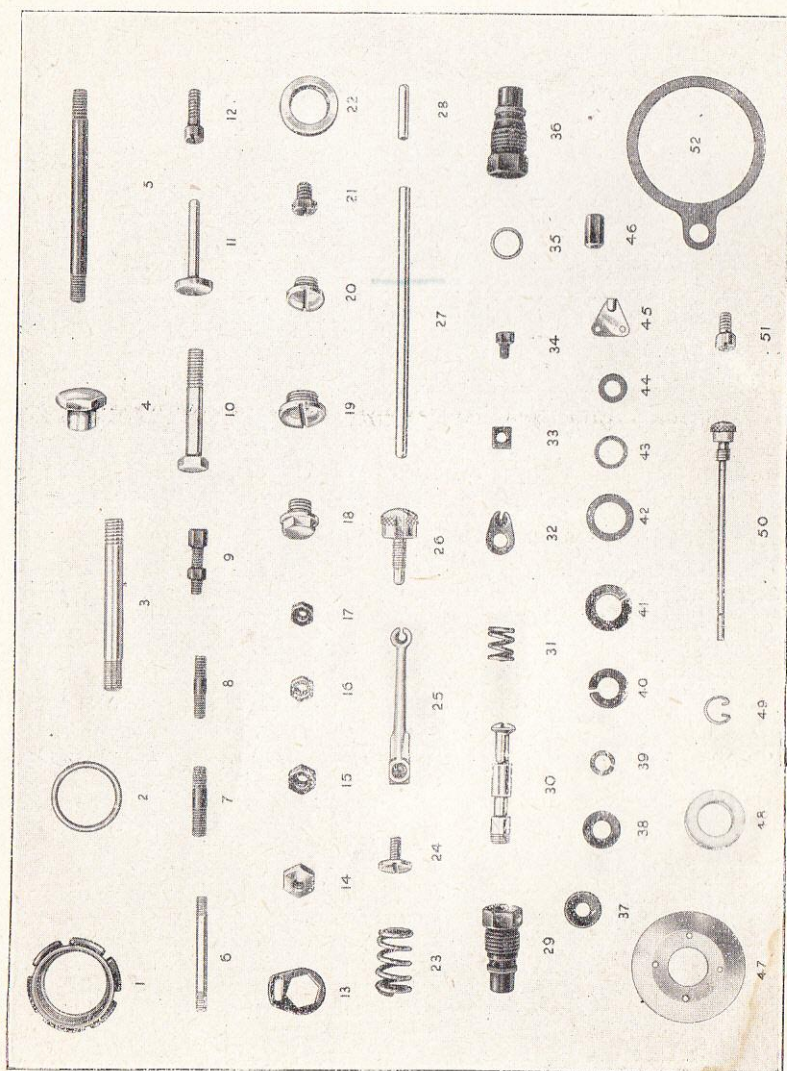


Always quote Engine Number when ordering Spares.

MARK 10 D and 6 E UNITS.

| COMPONENT. | Illus. No. | Part No. | MARK 10 D. | | | MARK 6 E. | | | | |
|---|------------|--------------------------------------|--------------|-----------------|---------|--------------------------------------|--------------|-----------------|---------|--|
| | | | No. per Set. | List Price Each | £ s. d. | Part No. | No. per Set. | List Price Each | £ s. d. | |
| ENGINE AND GEARBOX. | | | | | | | | | | |
| Cylinder, less Fittings | 1 | B.7138 | 1 | 3 3 0 | | B.7095 | 1 | 3 10 0 | | |
| Cylinder Head | 2 | C.7279 | 1 | 1 5 0 | | — | | | | |
| " " " " | 3 | — | | | | B.7336 | 1 | 1 15 0 | | |
| Inlet Manifold, Straight | 4 | D.7351 | 1 | 8 3 | | D.7096 | 1 | 8 3 | | |
| " " Bent | — | D.7442 | 1 | 8 3 | | D.7448 | 1 | 8 3 | | |
| Joint Washer, Inlet Manifold .. | — | E.7308 | 1 | 5 | | E.7341 | 1 | 5 | | |
| Piston, less Rings | 5 | C.7303 | 1 | 1 0 0 | | C.7337 | 1 | 1 5 0 | | |
| Piston Ring | — | E.1725 | 2 | 1 9 | | E.6622 | 2 | 2 3 | | |
| Crankcase, Right and Left Hand, less Fittings | 6 | B.6507/8 | 1 | 3 0 0 | | A.7093/4 | 1 | 3 0 0 | | |
| Gearbox, Bushed | 7 | B.7310/1 | 1 | 2 0 0 | | B.7310/1 | 1 | 2 0 0 | | |
| " " End Plate, Bushed | 8 | B.6505 | 1 | 1 10 0 | | B.6505 | 1 | 1 10 0 | | |
| " " Dust Cover | 9 | C.6506 | 1 | 10 0 | | C.6506 | 1 | 10 0 | | |
| Chaincase, Outer | 10 | B.7297/1 | 1 | 15 0 | | B.7297/1 | 1 | 15 0 | | |
| " " Inner | 11 | B.7298 | 1 | 1 5 0 | | B.7298 | 1 | 1 5 0 | | |
| " " Joint Washer | 12 | C.7304 | 1 | 1 0 | | C.7304 | 1 | 1 0 | | |
| Cylinder Base Joint Washer .. | 13 | E.7306 | 1 | 7 | | E.7340 | 1 | 7 | | |
| Joint Washer, Crankcase and Gearbox | 14 | D.7461 | 1 | 3 | | D.7461 | 1 | 3 | | |
| Driving Shaft Assembly with Con. Rod | — | D.7548 | 1 | 3 14 0 | | D.7551 | 1 | 4 5 0 | | |
| Driving Shaft, Left Hand | 15 | D.6514 | 1 | 1 0 0 | | D.7118 | 1 | 1 0 0 | | |
| " " Right | 16 | D.6515 | 1 | 1 0 0 | | D.7119 | 1 | 1 0 0 | | |
| Crankpin, Oversize .001" | 17 | E.7534 | 1 | 6 0 | | E.7505 | 1 | 7 6 | | |
| " " Plug | — | E.7229 | 2 | 3 | | E.5593 | 2 | 3 | | |
| " " Roller, Steel | — | $\frac{1}{2}'' \times \frac{1}{2}''$ | 12 | Set 3 0 | | $\frac{1}{2}'' \times \frac{1}{2}''$ | 26 | Set 6 6 | | |
| " " " " Bronze | — | $\frac{1}{2}'' \times \frac{1}{2}''$ | 6 | Set 1 3 | | — | | | | |
| Ball Bearing Drive Shaft. Left Hand | 18 | 6204 | 2 | 9 0 | | 6204 | 2 | 9 0 | | |
| " " Right | 18 | 6204 | 1 | 9 0 | | 6304 | 1 | 10 9 | | |
| Gland Spring, Left Hand | 19 | E.4656 | 1 | 10 | | E.4656 | 1 | 10 | | |
| " " Right | 19 | E.4656 | 1 | 10 | | E.7013 | 1 | 10 | | |
| " " Bush, Left Hand | 20 | E.4602 | 1 | 2 6 | | E.4602 | 1 | 2 6 | | |
| " " Right | 21 | E.5109 | 1 | 2 6 | | E.5109 | 1 | 2 6 | | |
| Connecting Rod, Oversize .001" .. | 22 | D.7533 | 1 | 18 0 | | D.7506 | 1 | 18 0 | | |
| Con. Rod Bush | 23 | E.1729 | 1 | 2 6 | | E.1547 | 1 | 2 6 | | |
| Gudgeon Pin | 24 | E.3903 | 1 | 2 3 | | E.5457 | 1 | 3 0 | | |
| Engine Sprocket | 25 | E.7301 | 1 | 5 0 | | E.7321 | 1 | 7 6 | | |
| " " Key | — | E.4873 | 1 | 3 | | E.5581 | 1 | 3 | | |
| " " Nut | 26 | E.3931 | 1 | 6 | | E.3931 | 1 | 6 | | |
| " " Shim | 27 | E.4150 | — | 3 | | E.4150 | — | 3 | | |
| Clutch Centre Assembly | 28 | D.7329 | 1 | 16 0 | | D.7329 | 1 | 16 0 | | |
| " " Chain Wheel Assembly | 29 | D.7328 | 1 | 18 0 | | D.7542 | 1 | 18 0 | | |
| Sprocket Ball Retainer | 29 | D.4462 | 2 | 1 0 | | D.4462 | 2 | 1 0 | | |
| Rivet, | 29 | E.5574 | 15 | Set 1 0 | | E.5574 | 15 | Set 1 0 | | |
| Set of Balls | 29 | $\frac{3}{8}''$ dia. | 50 | 1 0 | | $\frac{3}{8}''$ dia. | 50 | 1 0 | | |
| Clutch Corks | 29, 31 | E.4464 | 30 | 1 | | E.4464 | 30 | 1 | | |
| Clutch Centre Plate | 30 | D.7293 | 1 | 6 0 | | D.7293 | 1 | 6 0 | | |
| Clutch Plate, Corked | 31 | D.7292 | 1 | 6 0 | | D.7292 | 1 | 6 0 | | |
| Front Clutch Plate | 32 | D.7294 | 1 | 8 0 | | D.7294 | 1 | 8 0 | | |
| Primary Chain, 64 Pitches | 33 | 110038 | 1 | 13 9 | | — | | | | |
| " " 50 " " | 33 | — | | | | 110044 | 1 | 17 6 | | |
| Bush, K.S. Shaft, End Plate .. | 34 | E.6259 | 1 | 2 6 | | E.6259 | 1 | 2 6 | | |
| Bush, OP Spindle | 35 | E.6537 | 1 | 3 0 | | E.6537 | 1 | 3 0 | | |
| Bush, Mainshaft | 36 | E.6527 | 1 | 4 0 | | E.6527 | 1 | 4 0 | | |
| Bush, Layshaft, Gearbox | 37 | E.6528 | 1 | 1 9 | | E.6528 | 1 | 1 9 | | |
| Bush, OP Spindle | — | E.6595 | 1 | 9 | | E.6595 | 1 | 9 | | |

MARK 10 D and 6 E UNITS.

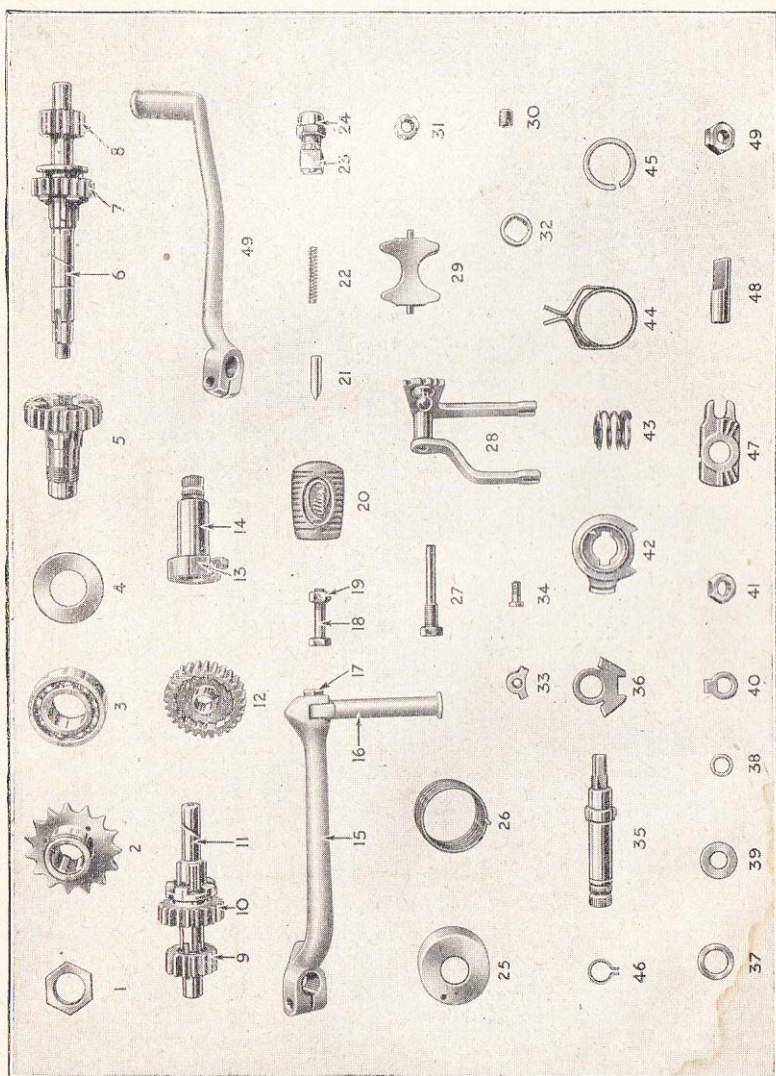


Always quote Engine Number when ordering Spares.

MARK 10 D and 6 E UNITS.

| COMPONENT. | Illus. No. | Part No. | MARK 10 D. | | | Part No. | MARK 6 E. | | |
|--|------------|------------------------|--------------|------------------|---------|------------------------|--------------|------------------|---------|
| | | | No. per Set. | List Price Each. | £ s. d. | | No. per Set. | List Price Each. | £ s. d. |
| ENGINE AND GEARBOX—contd. | | | | | | | | | |
| Nut, Exhaust Pipe .. | 1 | E.3934 | 1 | 3 | | E.5577 | 1 | 1 | 9 |
| C. and A. Washer for Nut .. | 2 | E.4453 | 1 | 1 | 3 | E.5578 | 1 | 4 | 4 |
| Chaincase Stud, $\frac{3}{8}$ " x $3\frac{3}{8}$ " .. | 3 | E.4093 | 1 | 6 | | E.4093 | 1 | 6 | 6 |
| Fixing Nut .. | 4 | E.4097 | 1 | 8 | | E.4097 | 1 | 8 | 8 |
| Gearbox Stud, $\frac{5}{16}$ " x $4\frac{5}{8}$ " .. | 5 | E.6558 | 1 | 9 | | E.6558 | 1 | 9 | 9 |
| " " x $4\frac{1}{2}$ " .. | 5 | E.6559 | 2 | 9 | | E.6559 | 2 | 9 | 9 |
| Crankcase Stud, $\frac{3}{8}$ " x $2\frac{5}{8}$ " .. | 6 | E.4008 | 2 | 3 | | — | — | — | — |
| " Dowel Stud, $\frac{3}{8}$ " x $2\frac{5}{8}$ " .. | 6 | E.7307 | 1 | 3 | | — | — | — | — |
| Stud, Cyl. Base, $\frac{5}{16}$ " x $1\frac{1}{8}$ " .. | 7 | E.4160 | 4 | 3 | | E.7210 | 3 | 4 | 4 |
| Gearbox, $\frac{5}{16}$ " x $1\frac{1}{8}$ " .. | 7 | E.2152 | 1 | 3 | | E.4160 | 4 | 3 | 3 |
| Inlet Manifold, $\frac{5}{16}$ " x $1\frac{1}{8}$ " .. | 8 | E.6902 | 2 | 3 | | E.2152 | 1 | 3 | 3 |
| " " x $1\frac{1}{4}$ " .. | 7 | — | — | — | | E.363 | 2 | 3 | 3 |
| Crankcase Stud, $\frac{1}{2}$ " x $1\frac{1}{8}$ " .. | 8 | E.3392 | 2 | 3 | | E.3392 | 2 | 3 | 3 |
| Chaincase Stud, $\frac{1}{2}$ " x $1\frac{3}{8}$ " .. | 8 | E.5107 | 2 | 3 | | E.5107 | 2 | 3 | 3 |
| End Plate Stud, $\frac{1}{2}$ " x $1\frac{1}{8}$ " .. | 8 | E.4011 | 3 | 3 | | E.4011 | 3 | 3 | 3 |
| Clutch Cable Adjuster Screw .. | 9 | E.4900 | 1 | 7 | | E.4900 | 1 | 7 | 7 |
| Locknut for Screw .. | 9 | E.2935 | 1 | 2 | | E.2985 | 1 | 2 | 2 |
| Cyl. Head Bolt .. | 10 | E.7339 | 4 | 9 | | E.1897 | 4 | 10 | 10 |
| Clutch Push Rod, Headed .. | 11 | E.7439 | 1 | 9 | | E.7439 | 1 | 9 | 9 |
| Screw, Gearbox End Plate .. | 12 | E.6561 | 3 | 4 | | E.6561 | 3 | 4 | 4 |
| Chaincase Lockwasher .. | 13 | E.5599 | 1 | 6 | | E.5599 | 1 | 6 | 6 |
| Screw for Lockwasher, 4 BA .. | — | E.5561 | 2 | 2 | | E.5561 | 2 | 2 | 2 |
| Cone Nut, Chaincase .. | 14 | E.5354 | 1 | 3 | | E.5354 | 1 | 3 | 3 |
| Nut, $\frac{1}{8}$ " Large Hexagon .. | 15 | E.364 | 4 | 2 | | E.364 | 4 | 2 | 2 |
| Nut, $\frac{1}{8}$ " Cyl. Base .. | 16 | E.3961 | 4 | 2 | | E.3961 | 4 | 2 | 2 |
| Nut, $\frac{1}{8}$ " Large Hexagon .. | 17 | E.401 | 1 | 2 | | E.401 | 1 | 2 | 2 |
| Nut, $\frac{1}{8}$ " Small .. | — | E.2539 | 12 | 2 | | E.2539 | 12 | 2 | 2 |
| Oil Drain Plug, Gearbox .. | 18 | E.6292 | 1 | 1 | 3 | E.6292 | 1 | 1 | 3 |
| Oil Filler Plug, Chaincase .. | 19 | E.6592 | 1 | 1 | 3 | E.6592 | 1 | 1 | 3 |
| Oil Level and Drain Plug .. | 20 | E.4104 | 1 | 10 | 10 | E.4104 | 1 | 10 | 10 |
| Distance Piece, Ball Bearing .. | 21 | E.1962 | 2 | 4 | | E.1962 | 2 | 4 | 4 |
| Clutch Spring .. | 22 | E.6517 | 1 | 9 | | E.6517 | 1 | 9 | 9 |
| Screw .. | 23 | E.4466 | 6 | 5 | | E.7541 | 6 | 5 | 5 |
| Clutch Lever .. | 24 | E.4208 | 6 | 5 | | E.4208 | 6 | 5 | 5 |
| Adjusting Screw .. | 25 | D.6546 | 1 | 2 | 6 | D.6546 | 1 | 2 | 6 |
| Push Rod, Long .. | 26 | E.7034/1 | 1 | 1 | 6 | E.7034/1 | 1 | 1 | 6 |
| " " Short .. | 27 | E.7372 | 1 | 8 | | E.7372 | 1 | 8 | 8 |
| Felt Washer for Push Rod .. | 28 | E.5263 | 1 | 4 | | E.5263 | 1 | 4 | 4 |
| Steel Release "Valve" Body .. | — | E.6564 | 1 | 3 | | E.6564 | 1 | 3 | 3 |
| " " Stem .. | 29 | E.5257 | 2 | 2 | | E.5257 | 2 | 2 | 2 |
| " " Spring .. | 30 | — | — | — | | E.3064 | 1 | 3 | 0 |
| " " Cable Nut .. | 31 | — | — | — | | E.1280 | 1 | 1 | 9 |
| " " Clamp .. | 32 | — | — | — | | E.1163 | 1 | 5 | 5 |
| " " Clamp Screw .. | 33 | — | — | — | | E.1276 | 1 | 3 | 3 |
| " " Joint Washer .. | 34 | — | — | — | | E.1545 | 1 | 2 | 2 |
| " " Plug .. | 35 | — | — | — | | E.6737 | 1 | 2 | 2 |
| Washer, Cyl. Head Bolt .. | 36 | — | — | — | | E.3318 | 1 | 2 | 2 |
| Spring Washer, $\frac{1}{8}$ " .. | 37 | E.5808 | 4 | 2 | | E.7496 | 1 | 10 | 10 |
| " " $\frac{1}{4}$ " .. | 38 | — | — | — | | E.1898 | 4 | 2 | 2 |
| " " $\frac{1}{2}$ " .. | 39 | E.1050 | 4 | 2 | | E.1050 | 4 | 2 | 2 |
| " " $\frac{3}{4}$ " .. | 40 | E.4915 | 1 | 2 | | E.4915 | 1 | 2 | 2 |
| " " 4 BA .. | 41 | E.5706 | 1 | 2 | | E.5706 | 1 | 2 | 2 |
| Plain Washer, $\frac{1}{2}$ " .. | — | E.7529 | 1 | 1 | | E.7529 | 1 | 1 | 1 |
| " " Dust Cover .. | — | E.2924 | 13 | 1 | | E.2924 | 13 | 1 | 1 |
| " " " .. | 37 | V.157x2 | 3 | 1 | | V.157x2 | 3 | 1 | 1 |
| " " " .. | 38 | E.2667 | 4 | 1 | | E.2667 | 6 | 1 | 1 |
| " " " .. | 38 | E.373 | 1 | 1 | | E.373 | 1 | 1 | 1 |
| Filler Plug Washer .. | 42 | E.6593 | 1 | 2 | | E.6593 | 1 | 2 | 2 |
| Filler and Drain Plug Washer .. | 43 | V.107x3 | 2 | 2 | | V.107x3 | 2 | 2 | 2 |
| Oil Level and " " .. | 44 | E.1905 | 2 | 2 | | E.1905 | 2 | 2 | 2 |
| Spring, Clutch Adjuster Screw .. | 45 | E.6829 | 1 | 3 | | E.6829 | 1 | 3 | 3 |
| Fixing Screw for Spring .. | — | No. 4x $\frac{1}{2}$ " | 2 | 1 | | No. 4x $\frac{1}{2}$ " | 2 | 1 | 1 |
| Nut, Long Hex., End Plate Screw .. | 46 | E.6547 | 3 | 3 | | E.6547 | 3 | 3 | 3 |
| Chaincase Gland Plate .. | 47 | E.5547 | 1 | 8 | | E.5547 | 1 | 8 | 8 |
| Rivet for " " .. | — | E.4083 | 4 | 3 | | E.4083 | 4 | 3 | 3 |
| Felt Washer " " .. | 48 | E.5715 | 1 | 4 | | E.5715 | 1 | 4 | 4 |
| Circlip, Gudgeon Pin .. | 49 | E.4047 | 2 | 4 | | E.4047 | 2 | 4 | 4 |
| Dipstick .. | 50 | E.7471 | 1 | 1 | 6 | E.7471 | 1 | 1 | 6 |
| " Washer, Fibre .. | — | V.476 | 1 | 2 | | V.476 | 1 | 2 | 2 |
| Screw, Gearbox Dust Cover .. | 51 | E.6562 | 3 | 3 | | E.6562 | 3 | 3 | 3 |
| Joint Washer, C'case and C'nCase .. | 52 | E.7305 | 1 | 3 | | E.7305 | 1 | 3 | 3 |
| Chaincase Dowel, $\frac{3}{32}$ " dia. x $\frac{1}{16}$ " .. | — | W.174 | 1 | 2 | | W.174 | 1 | 2 | 2 |

MARK 10 D and 6 E UNITS.

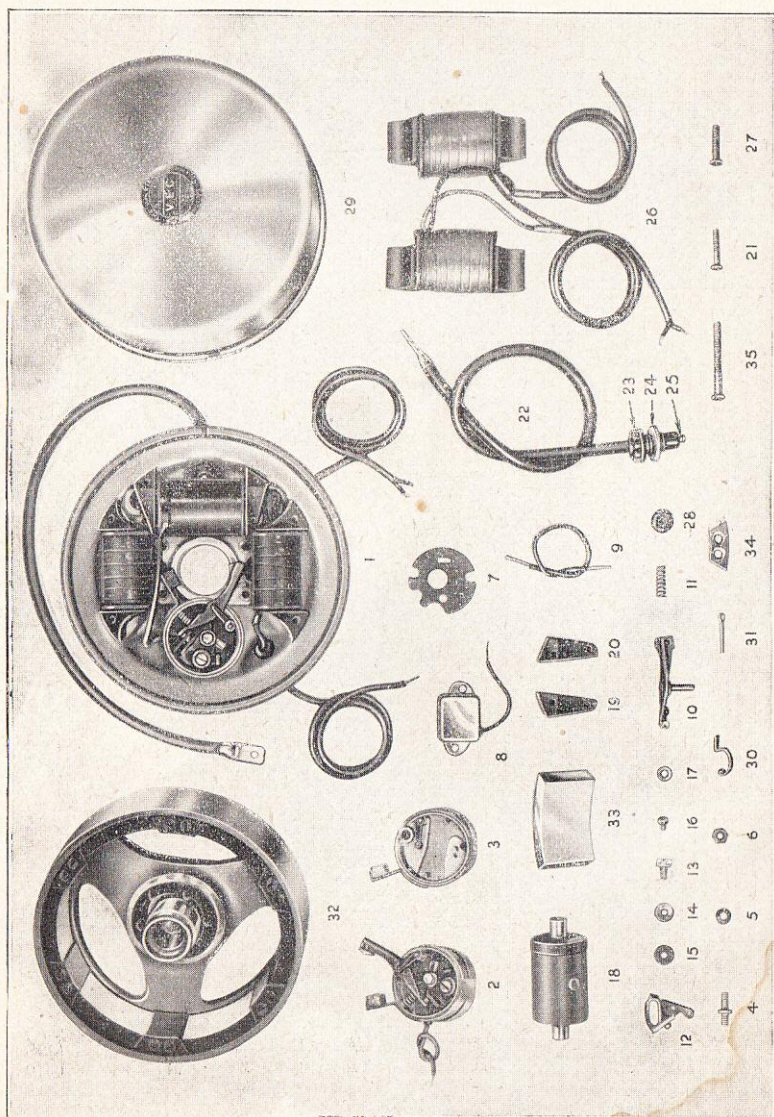


Always quote Engine Number when ordering Spares.

MARK 10 D and 6 E UNITS.

| COMPONENT. | Illus. No. | Part No. | No. per Set. | List Price Each. £ s. d |
|--------------------------------------|---------------|-------------|-----------------|-------------------------------|
| ENGINE AND GEARBOX—contd. | | | | |
| Locknut, C'Shaft Sprocket | 1 | E.6930 | 1 | 1 2 |
| C'Shaft Sprocket, 15 Teeth | 2 | E.7284/1 | 1 | 7 0 |
| Ball Bearing High Gear Pinion | 3 | 6205 | 1 | 10 6 |
| " " Sealing Washer | 4 | E.7347 | 1 | 4 |
| High Gear Pinion, 26 Teeth | 5 | D.7283 | 1 | 19 0 |
| Mainshaft | 6 | C.7281 | 1 | 17 0 |
| Sliding Pinion, 21 Teeth | 7 | D.6526 | 1 | 9 6 |
| Fixed .. 14 | 8 | E.7286 | 1 | 6 9 |
| " Pinion Layshaft, 16 Teeth | 9 | E.7287 | 1 | 6 9 |
| Sliding 22 | 10 | D.6524 | 1 | 9 6 |
| Layshaft | 11 | C.7282 | 1 | 14 0 |
| Ratchet Pinion, 28 Teeth | 12 | D.6523 | 1 | 13 9 |
| Kickstart Pawl | 13 | E.6882 | 1 | 9 |
| " " Plunger | — | E.4908 | 1 | 4 |
| " " " Spring | — | E.4907 | 1 | 2 |
| " Shaft, Bushed | 14 | D.6526 | 1 | 16 0 |
| " Lever | 15 | D.6555 | 1 | 10 0 |
| " " Pedal | 16 | E.4096 | 1 | 4 6 |
| " Pedal Pivot Pin | 17 | E.4098 | 1 | 6 |
| Ball for Pivot Pin | — | 1/2" Dia. | 1 | 2 |
| Spring for Ball | — | E.4270 | 1 | 2 |
| Bolt for K.S. and Foot Levers | 18 | E.4251 | 2 | 7 |
| Nut for Bolt | 19 | E.4252 | 2 | 3 |
| Rubber, Foot Lever | 20 | D.6861 | 1 | 6 |
| Plunger for Quadrant | 21 | E.7209 | 1 | 9 |
| Spring for Plunger | 22 | U.118 x 12 | 1 | 4 |
| Plunger Box | 23 | E.6534 | 1 | 1 6 |
| Nut for Box | 24 | E.6535 | 1 | 1 0 |
| Cap, K.S. Return Spring | 25 | E.4014 | 1 | 1 3 |
| Return Spring | 26 | E.7511 | 1 | 10 |
| Bearing Pin for Quadrant | 27 | E.6533 | 1 | 1 9 |
| Selector Quadrant Assembly | 28 | D.6532 | 1 | 19 0 |
| Operator, Sliding Pinions | 29 | E.6531 | 1 | 2 0 |
| Adjuster Bush, Mainshaft | 30 | E.4906 | 1 | 6 |
| " " Locknut | 31 | E.4905 | 1 | 3 |
| Pressure Washer, Mainshaft | 32 | E.6566 | 1 | 9 |
| K. Start Stop Piece | 33 | E.4899 | 1 | 6 |
| Screw for | 34 | E.6655 | 1 | 4 |
| Operating Spindle | 35 | D.6536 | 1 | 12 0 |
| " " Plate | 36 | E.6541 | 1 | 2 6 |
| " " Distance Washer | 37 | E.6542 | 1 | 4 |
| Shim, Operating Spindle | 38 | E.7228 | — | 2 |
| Washer | 39 | E.6573 | 1 | 3 |
| Lockwasher | 40 | E.6544 | 1 | 2 |
| Nut | 41 | E.6627 | 1 | 3 |
| Operating Pawl | 42 | D.6539 | 1 | 7 6 |
| " " Spring | 44 | E.7437 | 1 | 1 0 |
| Ratchet Spring | 43 | E.6543 | 1 | 6 |
| Pawl Spring Retainer | 45 | E.6742 | 1 | 4 |
| Circlip, Operating Spindle | 46 | E.6552 | 1 | 3 |
| Operating Lever | 47 | D.6538 | 1 | 4 6 |
| " Stop Pin | 48 | E.6545 | 1 | 1 0 |
| " Foot Lever | 49 | D.6996 | 1 | 9 6 |

MARK 10 D and 6 E UNITS.



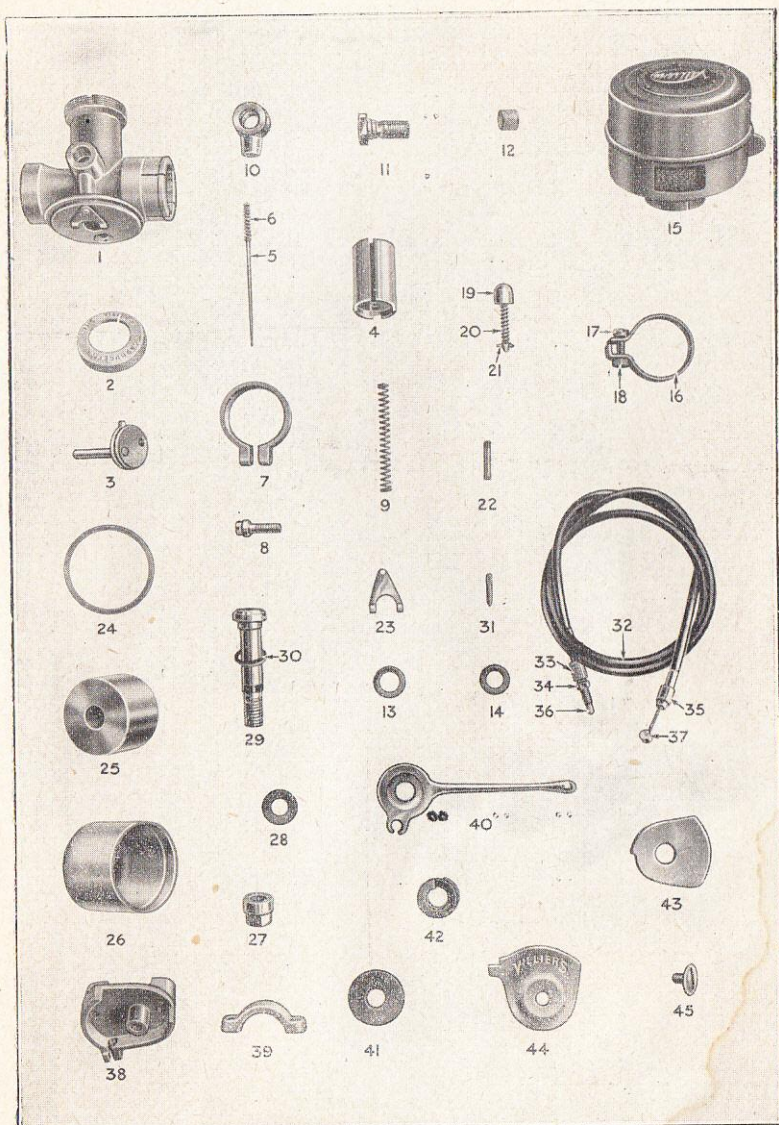
Always quote Engine Number when ordering Spares.

6 POLE MAGNETO.

MARK 10 D and 6 E UNITS.

| COMPONENT. | Illus. No. | Part No. | No. per Set. | List Price Each. £ s. d. |
|---|---------------|--------------|-----------------|--------------------------------|
| Armature Plate Assembly complete with Ignition and Lighting Coils | 1 | A.108M | 1 | 4 12 0 |
| Condenser Box Assembly | 2 | M.1834 | 1 | 18 6 |
| Con. Box only with Oil Pad | 3 | M.1872 | 1 | 5 0 |
| Ditto, but including Condenser, Fixing Studs, Nuts and L.T. Lead | — | M.1884 | 1 | 11 0 |
| Con. Box Fixing Stud | 4 | 1053 x 1 | 2 | 3 |
| " " " " Washer | 5 | 1002 x 13 | 2 | 2 |
| " " " " Nut | 6 | 1002 x 15 | 2 | 1 |
| " " Insulating Pad | 7 | M.1803 | 1 | 3 |
| Condenser only | 8 | M.1750 | 1 | 4 6 |
| L.T. Lead, Coil to Point Bracket | 9 | 482 | 1 | 6 |
| Rocker Arm with Point and Pad | 10 | M.1632 | 1 | 4 6 |
| " " Spring | 11 | 1047 x 3 | 1 | 3 |
| Point Bracket | 12 | M.1873 | 1 | 2 3 |
| " " Lockscrew | 13 | M.1801 | 1 | 4 |
| Brass Washer for " | 14 | M.1802 | 1 | 2 |
| Insulating Washer | 15 | M.1805 | 1 | 2 |
| Connection Screw, L.T. Lead | 16 | 1006 x 3 | 1 | 2 |
| Brass Washer for Screw | 17 | 1113 x 5 | 1 | 1 |
| High Tension Coil | 18 | M.1361 | 1 | 1 0 0 |
| H.T. Coil End, Left Hand | 19 | M.1855 | 1 | 2 6 |
| " " " Right " | 20 | M.1856 | 1 | 2 6 |
| Screw for Coil End | 21 | M.1383 | 4 | 3 |
| High Tension Lead Complete | 22 | 494 | 1 | 4 6 |
| " " Terminal | 23 | 1124 x 8 | 1 | 1 0 |
| " " " Felt Washer | 24 | E.869 | 1 | 3 |
| " " " Spring | — | 1010 x 11 | 1 | 2 |
| " " " Screw | — | 3/8" x No. 2 | 1 | 2 |
| " " " Pad | 25 | 1046 x 13 | 1 | 2 |
| Light Coils with Cheeks | 26 | M.1936 | 1 Pr. | 4 0 |
| " " Fixing Screws | 27 | 1140 x 1 | 4 | 3 |
| Armature Plate Grommet | 28 | M.1232 | 3 | 2 |
| " " Fixing Screws | 27 | 1140 x 1 | 4 | 3 |
| Flywheel Cover | 29 | M.1493 | 1 | 6 6 |
| " " Clip | 30 | M.1297 | 3 | 4 |
| " " " Cotter | 31 | M.1535 | 3 | 1 |
| " " Assembly Complete | 32 | R.111 | 1 | 4 18 0 |
| Magnet | 33 | M.1468 | 6 | 9 0 |
| Pole Shoe Top Plate, Brass | 34 | M.1411 | 1 | 3 |
| " " " Iron | 34 | M.1822 | 5 | 3 |
| " " Fixing Screw | 35 | M.1797 | 12 | 3 |

MARK 10 D UNIT CARBURETTER.



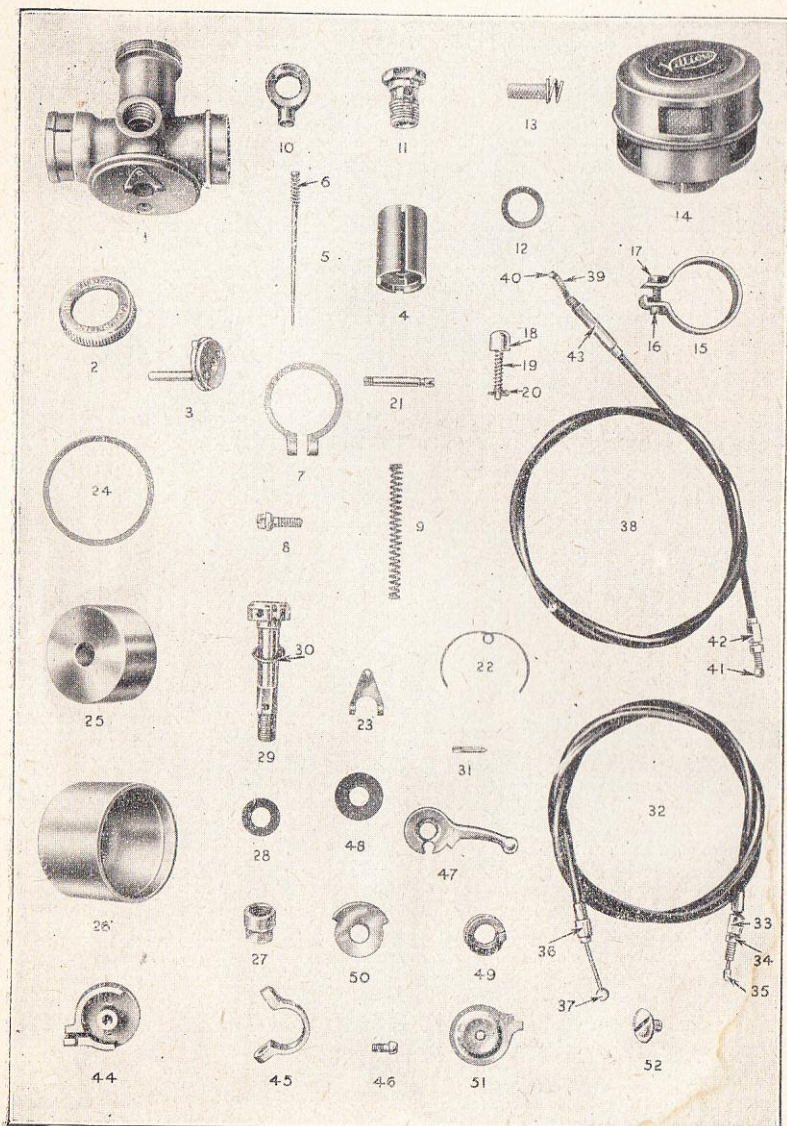
Always quote Engine Number when ordering Spares.

CARBURETTER.

MARK 10 D. TYPE 3/4.

| COMPONENT. | Illus. No. | Part No. | No. per Set. | List Price Each. | |
|--|---------------|-------------|-----------------|---------------------|-------|
| | | | | £ | s. d. |
| Carburetter complete with Control and Air Cleaner | — | Type 3/4 | — | 2 | 19 6 |
| Body with Fuel Bush, Needle Lever .. | 1 | V.648C | 1 | 13 | 3 |
| Top Ring | 2 | V.107 x 5 | 1 | 1 | 3 |
| Top Disc with Guide Peg | 3 | V.603E | 1 | 1 | 9 |
| Throttle | 4 | V.580E | 1 | 4 | 3 |
| Taper Needle No. 3 | 5 | V.625E | 1 | | 9 |
| " Spring | 6 | V.107 x 7 | 1 | | 3 |
| Body Clip | 7 | V.107 x 15 | 1 | 2 | 0 |
| Body and Control Clip Screw | 8 | V.107 x 16 | 3 | | 6 |
| Throttle Spring | 9 | V.586E | 1 | | 6 |
| Banjo Union | 10 | V.381E | 1 | 1 | 9 |
| " Bolt | 11 | V.382E | 1 | 1 | 0 |
| " Filter Gauze | 12 | V.404E | 1 | | 6 |
| " Washer, Large Hole | 13 | H.104 x 8 | 1 | | 3 |
| " " Small Hole | 14 | V.383E | 1 | | 3 |
| Air Filter with Strangler | 15 | EM.693 | 1 | 10 | 0 |
| " Clip | 16 | EM.618 | 1 | 1 | 6 |
| " " Screw | 17 | E.5102 | 1 | | 3 |
| " " Nut | 18 | 1002 x 15 | 1 | | 2 |
| Tickler | 19 | V.207E | 1 | | 5 |
| " Spring | 20 | V.369E | 1 | | 3 |
| " Split Pin | 21 | V.111 x 2 | 1 | | 1 |
| Compensating Tube | 22 | V.105 x 10 | 2 | | 6 |
| Fuel Needle Lever | 23 | V.257E | 1 | | 9 |
| Fibre Washer, Float Cup | 24 | V.107 x 2 | 1 | | 6 |
| Float | 25 | V.105 x 1 | 1 | 3 | 6 |
| Float Cup | 26 | V.146 x 6 | 1 | 3 | 3 |
| Bottom Nut | 27 | V.581E | 1 | 1 | 0 |
| " Washer | 28 | V.107 x 4 | 1 | | 2 |
| Centrepiece and Jet | 29 | V.595 | 1 | 5 | 0 |
| " Fibre Washer | 30 | V.107 x 3 | 1 | | 2 |
| Fuel Needle | 31 | V.355E | 1 | | 9 |
| Control Cable Assembly | 32 | V.234B/H | 1 | 5 | 0 |
| " " Adjuster | 33 | V.105 x 1 | 1 | | 7 |
| " " Locknut | 34 | V.104 x 2 | 1 | | 2 |
| " " Sleeve | 35 | V.108 x 4 | 1 | | 4 |
| Cable Nipple, Throttle End | 36 | V.108 x 15 | 1 | | 2 |
| " Control | 37 | V.123 x 4 | 1 | | 2 |
| Control Body | 38 | V.117 x 1 | 1 | 3 | 6 |
| " Clip | 39 | V.117 x 3 | 1 | 1 | 9 |
| " Lever | 40 | V.117 x 2 | 1 | 3 | 0 |
| " " Fibre Washer | 41 | V.117 x 7 | 2 | | 3 |
| " " Spring | 42 | V.117 x 8 | 1 | | 2 |
| " " Friction Plate | 43 | V.117 x 6 | 1 | | 6 |
| " " Top Cover | 44 | V.117 x 4 | 1 | 1 | 3 |
| " " " Screw | 45 | V.117 x 5 | 1 | | 6 |

MARK 6 E UNIT CARBURETTER.



Always quote Engine Number when ordering Spares.

CARBURETTER.

MARK 6 E. TYPE 4/5.

| COMPONENT. | Illus. No. | Part No | No. per Set. | List Price Each. | | |
|--|---------------|-----------------|-----------------|---------------------|----|----|
| | | | | £ | s. | d. |
| Carburetter complete with Controls, Air Cleaner | — | Type 4/5 | — | 3 | 15 | 0 |
| Body with Fuel Bush, Needle Lever .. | 1 | V.661C | 1 | 1 | 0 | 9 |
| Top Ring | 2 | V.108 x 7 | 1 | | 2 | 0 |
| Top Disc with Guide Peg | 3 | V.122 x 4 | 1 | | 2 | 6 |
| Throttle | 4 | V.122 x 3 | 1 | | 5 | 0 |
| Taper Needle No. 4½ | 5 | V.137 x 9 | 1 | | | 9 |
| " " Spring | 6 | V.107 x 7 | 1 | | | 3 |
| Body Clip | 7 | V.113 x 14 | 1 | | 2 | 0 |
| " " Screw | 8 | V.107 x 16 | 1 | | | 6 |
| Throttle Spring | 9 | V.107 x 8 | 1 | | | 6 |
| Banjo Union | 10 | V.458E | 1 | | 1 | 9 |
| " " Bolt | 11 | V.459E | 1 | | 2 | 0 |
| " " Fibre Washer | 12 | V.440E | 2 | | | 3 |
| " " Filter | 13 | V.457E | 1 | | 2 | 0 |
| Air Filter with Clip | 14 | V.660E | 1 | | 10 | 0 |
| " " Clip | 15 | EM.616 | 1 | | 1 | 6 |
| " " " Screw | 16 | E.5102 | 1 | | | 3 |
| " " " Nut | 17 | 1002 x 15 | 1 | | | 2 |
| Tickler | 18 | V.207E | 1 | | | 5 |
| " Spring | 19 | V.369E | 1 | | | 3 |
| " Split Pin | 20 | V.111 x 2 | 1 | | | 1 |
| Centrepiece Compensating Tube .. | 21 | V.436E | 1 | | | 6 |
| Spring for " " | 22 | V.545E | 1 | | | 2 |
| Fuel Needle Lever | 23 | V.257E | 1 | | | 9 |
| Float Cup Fibre Washer | 24 | V.125 x 8 | 1 | | | 6 |
| Float | 25 | V.132 x 5 | 1 | | 5 | 0 |
| Float Cup | 26 | V.151 x 3 | 1 | | 5 | 0 |
| Bottom Nut | 27 | V.172E | 1 | | 1 | 0 |
| " " Washer | 28 | V.107 x 4 | 1 | | | 2 |
| Centrepiece with Jet (V.461/V.434) .. | 29 | V.676E | 1 | | 5 | 0 |
| " " Fibre Washer | 30 | V.107 x 3 | 1 | | | 2 |
| Fuel Needle | 31 | V.355 | 1 | | | 9 |
| Throttle Cable Assembly, 3 ft., Outer .. | 32 | V.234B/F | 1 | | 6 | 9 |
| " " Adjuster | 33 | V.105 x 1 | 1 | | | 6 |
| " " " Locknut | 34 | V.105 x 2 | 1 | | | 3 |
| " " Nipple, Throttle End | 35 | V.108 x 15 | 1 | | | 2 |
| " " Sleeve | 36 | V.108 x 4 | 1 | | | 4 |
| " " Nipple, Twist Grip | 37 | Give Engine No. | 1 | | | 2 |
| Jet Cable Assembly, 3 ft., Outer .. | 38 | V.151 x 1/T | 1 | | 6 | 9 |
| " " Spring | 39 | V.122 x 14 | 1 | | | 6 |
| " " Nipple, Throttle End | 40 | V.122 x 16 | 1 | | | 2 |
| " " Disc, Control End | 41 | V.123 x 15 | 1 | | | 2 |
| " " Adjuster | 42 | V.120 x 5 | 1 | | | 6 |
| Throttle Extension | 43 | V.120 x 2 | 1 | | 1 | 3 |
| Jet Control Body | 44 | V.142 x 1 | 1 | | 3 | 6 |
| " " " Clip | 45 | V.142 x 7 | 1 | | 1 | 6 |
| " " " Screw | 46 | V.142 x 5 | 1 | | | 2 |
| " " Lever | 47 | V.142 x 3 | 1 | | 3 | 0 |
| " " Fibre Washer | 48 | V.142 x 10 | 2 | | | 3 |
| " " Spring | 49 | V.142 x 11 | 1 | | | 3 |
| " " Friction Plate | 50 | V.142 x 9 | 1 | | | 6 |
| " " Top Cover | 51 | V.142 x 6 | 1 | | 1 | 3 |
| " " " " Screw | 52 | V.117 x 5 | 1 | | | 6 |

ESTIMATES.

If required, we are always prepared to give an estimate before proceeding with any repair. This entails a certain amount of labour in dismantling to ascertain what new parts will be required, and therefore, in the case of any estimate not being accepted for special reasons, a small charge is made for our mechanics' time in taking down the parts for report.

Estimates must be treated as approximate only. We reserve the right to include additional parts should these be found, on further examination or on bench test, to be necessary, to make the repair satisfactory.

We do not undertake to fit to engines sent to us for overhaul, any parts specified by the customer when we consider that other parts are necessary to make an efficient repair. In such cases, we are prepared to supply the customers' requirements in spares, but we do not undertake to fit them.

TERMS OF BUSINESS.

Repairs and spares must always be treated on a cash basis. Ledger accounts will be opened for items of £5 (five pounds) and upwards for approved accounts.

An extra amount must always be included in remittances to cover the cost of postage or carriage and packing on spare parts. This is 5% extra up to £5 value. Minimum extra is 6d. Stamps cannot be accepted for items over 1/- (one shilling) in value.

When making remittances by telegraph money order, the name and address of the sender must be included in the space provided on the Post Office Requisition Form for a private message from remitter to payee. Unless this is done, the Post Office does not give this information upon the telegram.

GUARANTEE.

We give the following guarantee with VILLIERS Engines and Accessories in place of any implied guarantee by statute or otherwise, all such guarantees being in all cases excluded. No statement or representation contained in this catalogue shall be construed as enlarging or varying this guarantee. In the case of engines and accessories which have been used for "hiring out" purposes, or from which our trade mark, name, or manufacturing number has been removed, no guarantee of any kind is given or is to be implied.

We guarantee, subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, but this guarantee is to extend and to be in force for six months only from the date the engines or accessories are despatched by us, and the damages for which we make ourselves responsible under this guarantee are limited to the replacement of a part manufactured by us which may have proved defective.

We do not undertake to refit or bear the cost of replacement or refitting such new part. We guarantee, subject to the conditions mentioned below, to make good at any time within six months any defects in these respects. As VILLIERS Engines and Accessories are liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by wear and tear, misuse and neglect.

CONDITIONS OF GUARANTEE.

If a defective part should be found in our engines or accessories, it must be sent to us carriage paid and accompanied by an intimation from the sender that he desires to have it repaired free of charge, under our guarantee, and he must also furnish us at the same time with the number of the engine, and full particulars of the purchase. Failing compliance with the above, no notice will be taken of anything that may arrive, but such articles will lie here at the risk of the sender, and this guarantee or any implied guarantee shall not be enforceable.

THE TERM "AGENT" is used in a complimentary sense only, and those firms whom we style our agents are not authorised to advertise, incur any debts, or transact any business whatsoever on our account other than the sale of goods which they may purchase from us, nor are they authorised to give any warranty or make any representations on our behalf or sell subject to or with any conditions other than those contained in the above guarantee.

The guarantee becomes void if any parts not made or supplied by the VILLIERS ENGINEERING COMPANY, LTD., are fitted to a VILLIERS engine. To safeguard his own interests, the owner should always insist upon genuine VILLIERS parts.

