

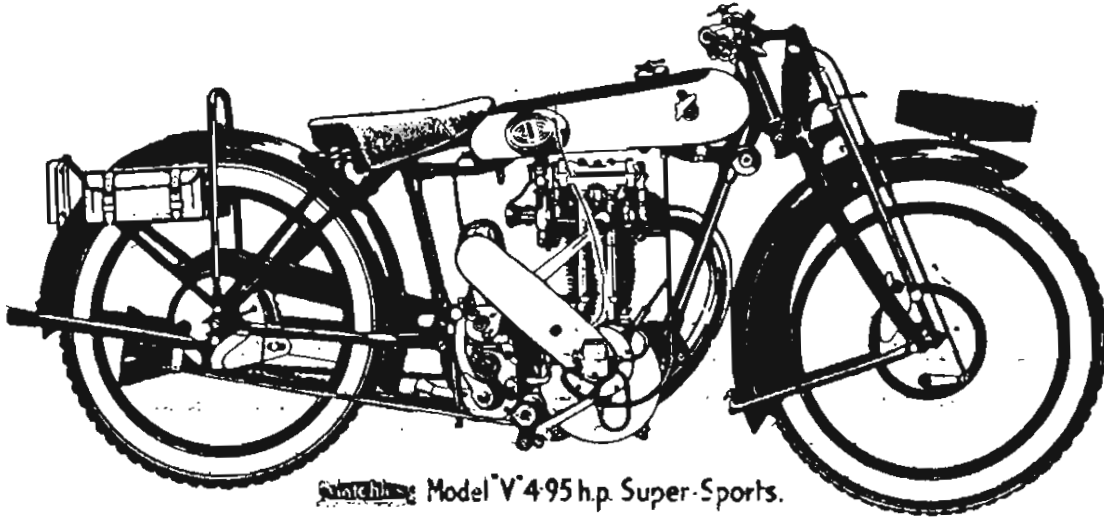
**Matchless**  
IN NAME & REPUTATION

**INSTRUCTION BOOK**  
**AND**  
**SPARE PARTS LIST**

**MODEL**  
**V**



# DRIVING AND ADJUSTMENT INSTRUCTIONS



~~Matchless~~ Model V 4.95 h.p. Super-Sports.

*Matchless Model "V."*

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## H. COLLIER & SONS, LIMITED,

*Manufacturers,*

Registered Offices :

44-45, PLUMSTEAD ROAD, PLUMSTEAD  
LONDON, S.E. 18, ENGLAND

Nearest Station :  
WOOLWICH ARSENAL, S.R.

Factories :  
BURRAGE GROVE & MAXEY ROAD  
PLUMSTEAD, S.E.  
And MAST POND WHARF, WOOLWICH

Telegrams & Cables — "Matchless," Woolwich."

Telephone — Woolwich 1010 (4 lines).

Code { A.B.C 5th Edition  
Bentley's,  
& Private Code

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## INTRODUCTION

Following our previous practice of endeavouring to obtain good service by making every purchaser thoroughly acquainted with the working of his mount, we issue herewith detailed description and adjustment advice on all important units, together with useful illustrations. A careful study of the contents will enable the possessor of a Model " V " to carry out any small adjustments that may be necessary from time to time, and so obtain the best service from his mount, which result is our earnest desire.

The Spares Section has been compiled to enable customers to correctly specify their requirements when renewals of any part are necessary (See pages 15 and 16) for Instructions *re* Ordering Parts and particulars of Deposit Account System.

H. COLLIER & SONS, LIMITED.

## General Description

### STARTING

The new Model " V " described herein has been introduced to meet the requirements of the keen competition rider or the high speed average enthusiast. The engine is particularly robust in construction and its capability for sustained extraordinary power output has not been obtained at the sacrifice of strength or reliability in the slightest degree, special alloy metals being used where a high factor of safety is required. The overhead rockers are mounted on roller bearings in an aluminium housing bolted over the cylinder head, Tecalet grease nipples being provided to facilitate occasional lubrication. A special duplex delivery oil pump is fitted by means of which four fifths of the oil supply is delivered to the connecting rod big end and the remainder to the rear of the cylinder wall. This distribution will be at once appreciated by the expert as ideal for all conditions. The tubular push rods are completely enclosed in oil tight tubes but are arranged to permit of easy tappet adjustment. The cylinder head is perfectly finned and free from any undesirable mass of metal. It is secured to the cylinder by six evenly spaced bolts, ensuring a perfectly sound joint without resort to washers or packing of any description. With regard to the general handling of the Model " V " it is perhaps advisable before describing the actual method of starting to explain the various controls and lever positions. Neutral or free engine position of the gear is the first downward or forward position of the lever from the extreme rear or top of its movement. Each gear position can be readily seen on the disc control fixed above the gear box, or can be distinctly felt as the various notches cut on the face of the moving disc engage the projection on the stationary disc. The engine must always be started with the gear in this neutral position.

Ignition is advanced or retarded by means of a lever on the left side of handlebar. To advance spark this lever should be drawn inwards; for starting it should be about three-quarters advanced.

The throttle and air levers for carburettor both open inwards, the top lever operating the air and the lower and longer one the throttle. For starting throttle should be about one-sixth open, and air completely closed. A small milled edge screw at the bottom of mixing chamber controls the air supply to pilot jet. This screw is accurately set at the works, but on account of variation in fuel or temperature, it may be found desirable to alter the adjustment occasionally. It should be explained, therefore, that by unscrewing, more air is admitted thereby weakening the mixture or vice versa, screwing in enriches the mixture by decreasing the air supply. This adjustment only affects carburation.

### Starting—*contd.*

on very small throttle openings and dead slow running. The taper needle attached to the throttle piston controls the petrol supply on large throttle openings. To weaken the mixture this needle must be lowered or alternatively to enrich it is necessary to raise same. These remarks are intended only to roughly convey some idea of the carburettor working, and owners are advised to refrain from making any adjustments without good cause.

The petrol is turned on when the lever on the tap to which the petrol pipe is attached is parallel to the body of the tap. Assuming that the tank has been filled with petrol and oil of the brand recommended elsewhere, and that all levers and taps have been set as above, to start engine first flood carburettor by depressing the button on the float chamber until the petrol overflows, then raise the valve by lifting the left side handlebar lever, and at the same time, with the right foot give the kick-starter pedal a sharp and vigorous push downwards, releasing the valve lifter lever when the starter crank is about half-way. This operation should ~~not~~ require at the most more than three or four attempts.

When the engine is started close the throttle slightly to check the engine speed, and seated on the cycle, disengage clutch by drawing inward the lever which is situated on the left side of handlebar. Then shift gear lever backward into first position, after which gently engage the clutch by releasing slowly the lever which has already been drawn inward.

When fairly under way, smartly declutch and simultaneously shift gear lever forward into second gear position, at the same time releasing clutch lever gently but smartly as engine takes up the drive, after which repeat the operation to obtain top gear. In all changes of gear it is advisable to make certain that the gear lever is fairly in engagement with the notches in gear disc control.

NOTE.—Any difficulty in starting will most probably be caused either by insufficient flooding, too liberal throttle opening, or ignition not sufficiently advanced.

### DRIVING

In general driving it is always advisable to advance the ignition as far as possible without causing knocking. When ascending a steep hill as the engine slows, care should be taken to retard the ignition just sufficiently to prevent knocking, and if a change of gear then be made the ignition should be again advanced, as the speed of the engine is increased by the use of the lower gear. For descending exceptionally steep and dangerous *inclines* the middle gear should be engaged enabling the frictional resistance of the engine to assist in retarding the descent. We do not, however, under any circumstances recommend using the bottom gear for this purpose owing to the strain imposed upon the rear driving chain. It is advisable to change down to second speed when rounding acute corners, as owing to the high compression ratio employed, the engine is somewhat harsh at very low revolutions. In addition or as an alternative in such cases, the clutch should be slightly eased. Much unnecessary strain on the transmission may be easily avoided by such considerations.

### **“ DON'TS ” IN DRIVING**

- DO NOT allow engine to labour on high gear on a steep gradient and remember that an easier, faster, and better ascent can be made on the next lower gear.
- DO NOT make a practice of starting on second speed.
- DO NOT under any circumstances, allow the chains to run very slack or very dry. Either will soon cause trouble, and adjustments are easy. Slack chains will inevitably cause harshness of transmission.
- DO NOT force engine for the first 500 miles. Mention is made of this warning on account of the natural desire of a new owner to ascertain his mount's maximum capabilities. However, until all bearings are well run in, etc., it is advisable to refrain from speed bursts and the accompanying possibility of seized bearing, piston rings, etc. The first 500 miles of an engine's existence is far more important than the next 5,000.
- DO NOT ignore these instructions or think them too elaborate. They have been compiled at a great amount of trouble, and are the outcome of practical experience extending over many thousand miles riding.

## **LUBRICATION**

### **ENGINE**

At all times when starting from cold, a thin film of oily smoke should be observed in the exhaust, and should this not be seen, the oil supply should be slightly increased. The oil delivery is set while machines are undergoing road test upon the liberal side, and unless this somewhat excessive supply causes trouble such as oiled up sparking plug, etc., it should not be reduced until at least 500 miles have been covered, by which time most bearings will have settled down. The oil passing into engine interior can be at all times observed through the transparent window of oil pump, and the approximately correct setting (after the initial running in period referred to above) is 20 to 25 drips per minute at about 20 m.p.h. This setting can best be checked by running the engine light at about the same rate as given by a road speed of 20 m.p.h. and counting the drips for one whole minute. This method of checking will be found quite simple and any alteration found necessary may be made in a second, by screwing in or out as the case may be, the knurled edge adjusting screw fitted to the side of oil pump body. Screw in, i.e., turn clockwise, to reduce the supply and vice versa to increase. Other than above it is impossible to lay down any hard and fast rules for lubricating. It must always be remembered that when in doubt it is safer to err on the generous side. Use only Wakefield Castrol R or Castrol XL the former for preference, particularly for sustained high speeds. Refuse all others and accept only sealed tins. Above all avoid the just as good sort from bulk.

NOTE.—Wakefield Castrol R or Castrol XL specially recommended.

### **CHAINS**

It will probably be found that the front chain will receive sufficient lubrication from the engine air release pipe, but however, this should be inspected periodically and oil injected at rear of chain guard if necessary. The rear chain should be removed occasionally and well soaked in paraffin especially in bad weather, and after carefully wiping should then be soaked in molten tallow. A good soaking in engine oil will serve as a poorer substitute.

### **FORK SPINDLES**

Every 200 or 300 miles the fork spindle bearings should be flooded with a good quality grease preferably Foliac Graphite Grease. This flooding process is one of a few seconds only by means of the special grease gun provided which requires merely holding nozzle end against the rounded nipples on fork spindles and given a few sharp strokes.

### **GEAR BOX**

Every 500 miles the gear box filling plug should be removed, and the gear box filled to overflowing when the machine is standing level with (preferably) Wakefield Castrolase which is specially recommended. If this is temporarily unobtainable Mobiloil C. Gear Oil may be used.

### **HUBS**

Every 500 miles (or more frequently in continuous bad weather) the lubricators in the centre of both front and rear hubs should have a small quantity of grease forced through them. (Wakefield Castrolase suitable).

In addition to the foregoing, all parts such as brake and gear rod joints, etc., should receive a few drops of oil occasionally, particularly in bad weather. Bicycle lubricating oil or engine oil.

### **ADJUSTMENTS**

Tappet or Rocker clearance :—To adjust, unscrew the lower portion of the push rod covering tube by means of the hexagonal collar provided on same, and slide up to uncover the adjustable tappet head. Then hold tappet head (bottom large hexagon) with spanner provided, and slack off lock nut securing tappet head. Then screw head down or up, as required, until correct clearance is obtained, after which securely lock in position with lock nut.

NOTE.—Correct clearance between tappet head and exhaust valve stem when valve is down on its seating is .004 while that for the inlet is .002. To obtain the best results as regards silence of valve gear, these clearances should be accurately maintained, and a cheap set of engineers feeler gauges will be found very useful for checking purposes.

### **TO REMOVE CYLINDER HEAD**

First remove silencer and exhaust pipe. Then withdraw throttle and air valves from carburettor, and remove petrol pipe and sparking plug. Next remove the small tie piece attached to the top of the foremost bolt which secures the overhead rocker housing. Now unscrew the lower portion of both tappet rod tubes, and slide these lower portions up until the ends of tappet rods are exposed. Next unscrew the three bolts securing the overhead rocker housing, and remove entirely this housing

### **To Remove Cylinder Head—*cont'd.***

complete with push rods and push rod tubes, etc., After removing the six cylinder head fixing bolts the head is free to be lifted clear.

### **TO GRIND IN VALVES**

After cylinder head has been removed as described, to remove valve springs it will be found convenient to rest the head of valve on a small block (wood preferably) while the spring is being compressed to allow of the removal of the taper valve cap divided collar. It may be necessary to give the valve spring cap a sharp tap to release this taper collar. After removing all carbon deposit the face of each valve seating should be smeared with a good grinding paste (this may be obtained already mixed) and the valve revolved slightly backward and forward (never revolve completely) while light pressure is applied to the head. During this operation it is advisable to occasionally raise the valve off its seating and turn in the guide slightly, afterwards repeating the backward and forward movement. Generally one application only of grinding paste will be ample for the inlet, but two or three applications may be necessary to entirely restore the exhaust valve seating. After this grinding in has been satisfactorily accomplished, all traces of the grinding mixture should be carefully washed off with petrol, and both valve stems and guides cleaned thoroughly. Prior to refitting it is advisable to smear each valve stem with Graphite Grease.

**NOTE.**—When refixing the overhead rocker assembly and push rods, it will be found necessary first of all to see that both tappets are down, and secondly, advisable to draw the assembly down into position by means of the central fixing bolt, after which the two side bolts may be screwed home. All three bolts must of course be in position in their respective holes before the assembly is fitted, as it is not possible on account of height to introduce same when the assembly is in position.

### **VALVE TIMING**

The correct setting for the closing and opening of valves is as follows : Inlet commences to open 25 degrees or  $\frac{3}{16}$ ins. before top of exhaust scavenging stroke and closes 50 degrees or  $\frac{1}{2}$ in. up the compression stroke. Exhaust valve commences to open 68 degrees or  $\frac{29}{32}$ ins. from bottom of firing stroke and closes 21 degrees or  $\frac{9}{64}$ ins. down induction stroke. To test these settings the rockers should be set at their correct respective clearances, which are .002 for the inlet and .004 for the exhaust. A cheap set of engineers feeler gauges will be found very useful for checking rocker clearances, which should be carefully maintained if best results are required.

### **IGNITION SETTING**

With ignition fully advanced the contact points of magneto should break 40 degrees or approximately  $\frac{1}{2}$ in. before the top of compression stroke. To obtain maximum power and speed this setting should be accurately obtained and preferably for ease any alteration made while cylinder head is removed when the exact position of piston may be checked instantly.



### **Ignition Setting—*contd.***

NOTE.—A greater amount of advance than described above is not recommended under any circumstances.

### **TO ADJUST MAGNETO CHAIN**

It will be observed that magneto chain adjustment is obtained by sliding the magneto platform back upon the engine cradle plates, by means of the adjuster situated on the down seat tube.

Correct chain adjustment is such that when the top of chain is lightly pressed up and down a whip of about  $\frac{3}{8}$  in. to  $\frac{1}{2}$  in. is obtained.

To adjust chain slack off the four nuts on gear box studs and screw the chain adjuster referred to above in a clockwise direction to tighten or in the opposite direction to slacken, after which securely tighten down gear box stud nuts.

### **TO DISMANTLE WHEEL BEARINGS**

After wheels have been removed (see Removing Wheels) withdraw brake cover plate. Then unscrew adjusting cone and from the opposite side draw out spindle. Upon reassembling each roller bearing cage should be packed with good quality medium transmission grease.

### **TO INSPECT GEAR BOX INTERIOR**

To remove gear box end plate for examination of gears, disconnect the clutch control wire by slackening off the adjustment, when the nipple can be slipped out of the small operating arm. After removing the seven nuts securing cover plate, gently draw off the latter.

NOTE.—While the end plate is being removed, a pan or some receptacle must be placed underneath to catch the oil, the bulk of which will run out. When re-assembling, the faces of the end plate and gear box must be thoroughly cleaned, and a new paper washer used if the old one has been damaged. Preferably coat with quick-drying gold size.

### **CLUTCH ADJUSTMENT**

In the event of clutch slip being experienced the adjustment of clutch operating cable should be suspected. When correctly adjusted it should be possible to move the clutch actuating worm (part to which lower end of cable is attached) forward and backward slightly with the fingers, and if this free movement cannot be felt the cable stop should be adjusted accordingly. If necessary the bolt securing the clutch worm lever may be slackened, and the worm portion revolved slightly backward to provide slacker cable adjustment or forward to tighten.

### **TO ADJUST FRONT CHAIN**

Adjustment of the front chain is arranged by sliding the gear box bodily forward or backward as the need may be upon the rear engine cradle plates under which it is mounted. A screwed draw bolt is provided forward of the gear box, operating through a bar fixed between the two cradle plates. To tighten the front chain firstly slack off the four

gear box holding down nuts and also the bolt which passes through cradle plates immediately above gear box. Then slack off a few turns, the front nut on the draw bolt referred to (i.e. the nut farthest from gear box) and screw up the special double hexagon rear nut until the correct chain tension is obtained, when the front nut must be screwed up tightly against the cross bar and all other gear box fixing nuts thoroughly tightened down. It should be explained here, that two sizes of hexagon spaced alternatively are provided on the special nut referred to above, to facilitate adjustment, and it will be found that both sizes are arranged for on one of the standard spanners in tool kit.

NOTE.—Correct chain tension should allow a whip or movement of  $\frac{3}{8}$  in. to  $\frac{1}{2}$  in. as chain is pressed lightly up and down.

### TO ADJUST REAR CHAIN

Put down rear stand, then slack off rear wheel spindle nuts and bolt which secures brake cover plate to special lug on frame tube. Then adjust chain as required, by means of the bolts which pass through each of the fork ends, after which securely tighten spindle nuts and bolt securing brake cover plate. Tension of chain should be tried in a number of places, and the correct adjustment (which should allow a whip of  $\frac{3}{8}$  in. to  $\frac{1}{2}$  in. when chain is pressed up and down), should be obtained for the tightest place.

NOTE.—Before tightening rear chain, the adjustment of front chain should be inspected, and if attention to each is required the latter should be treated first.

IMPORTANT :—Adjustment to each side chain adjuster bolt should be equal, otherwise chain alignment with sprockets will not be correct. It must be noted that rear wheel is not intended to be dead central in the chain stays. Measuring from edge of rim to each side stay in turn should show a gap on left or chain side  $\frac{5}{32}$  in. less than right or brake side. This alignment must be carefully maintained.

### TO ADJUST STEERING HEAD

The steering head should be occasionally tested for adjustment by exerting pressure upwards from the extreme tips of the handlebars. Should any shake be apparent, the top cap nut on steering column should be slacked off and the lower nut screwed down until all trace of slackness has disappeared when the top cap nut should be again tightened down.

IMPORTANT.—To guard against unconsciously overtightening the head bearings, the effect of which is extremely difficult steering, it is advisable to jack up the front of machine (a box of suitable height under crankcase will serve) in order that all shake may be taken up satisfactorily and the steering head left perfectly free.

### TO ADJUST WHEEL BEARINGS

To adjust either rear or front wheel bearings, slack off the left side spindle nut and with the thin cone spanner provided slack off the thin adjusting cone lock nut, after which with the same spanner turn the

**To Adjust Wheel Bearings—*cont'd.***

adjusting cone in the required direction, i.e., clockwise to tighten or vice versa after which lock the adjusting cone in position with the lock nut provided and lastly carefully re-tighten the axle nut.

NOTE :—A slight amount of shake is essential.

**PERIODICAL INSPECTION OF NUTS, Etc.**

Satisfactory service depends largely upon the necessary immediate attention to details. The old adage "A stitch in time saves nine" applies with particular force to motor cycle maintenance. Make a point of testing the security of all nuts occasionally with a spanner. There is possibly more dissatisfaction and damage caused through neglecting details than for any other reason. It must always be remembered that a motor cycle is a highly specialised piece of engineering, and that while it does not call for great engineering skill in driving, the exercise of a little mechanical sense and the occasional use of a spanner, cleaning cloth, etc., is very necessary if the maximum of service is to be obtained with the requisite degree of satisfaction. Therefore do not wait until to-morrow, but adjust it now.

**STOPPAGES AND THE LIKELY CAUSES**

ENGINE SUDDENLY STOPS. Probable cause :—

- Petrol low in tank.
- Dirt in petrol pipe.
- Choked jet.
- Water in float chamber.
- Choked petrol pipe or tap.
- Air lock in tank.
- Oiled up sparking plug

ENGINE RUNS BADLY. Probable cause :—

- Valve sticking.
- Weak valve spring.
- Plug points too close.
- Water on plug.
- Plug oily or sooted.
- Air leakage (due to carburettor being disturbed).
- Paraffin in petrol or bad petrol.
- Valve seating burnt.
- Faulty or badly adjusted magneto contacts.
- Defective sparking plug cable

ENGINE WILL NOT START. Probable cause :—

- Too liberal throttle opening.
- Valve stuck up.
- Water on plug, or oiled up plug.
- Choked jet, or insufficient flooding.
- Valve or valves not seating properly.
- Defective sparking plug cable.
- Magneto contact breaker arm stuck.

### LEGAL MATTERS

NOTE. - In view of the growing public objection to noisy motor-cycles, a word of warning on this subject may not be out of place here. Firstly it has been noted and freely commented upon that much of the noise complained of is unnecessary, being due to injudicious driving as for instance, violently accelerating from a standstill, racing the engine when stationary, driving on full throttle when ascending hills in residential districts, etc. Any motorcycle, or for that matter, any motor vehicle driven in this manner creates abnormal noise, and in the interests of all, we earnestly implore every " Matchless " owner to studiously refrain from any of the practices enumerated.

To comply with the law relating to motorcycles the owner of a " Matchless " Model V must :—

1. Hold a driver's licence, which can be obtained from the Chief Constable or Corporation of a County Borough, or from the County Council. The charge for this licence is 5/- yearly, and must be renewed annually from the date of issue. A motor-car driver's licence covers the driving of a motor-cycle.
2. Apply to the Taxation Department of the Local Authority of the district in which the vehicle is to be ordinarily kept for Inland Revenue Licence and Registration Form RF. 1/2 (Motor-cycles only). The address of the above Taxation Department can be obtained by enquiry at a post office.
3. The form RF. 1/2 when obtained must be filled in and returned accompanied by a remittance of £3 os. od., if used solo and £4 os. od. if desired for use with sidecar, and in some districts evidence that the vehicle to be licenced is new and has not previously been registered may be demanded. Manufacturers' or Agent's invoice will serve.
4. See that his front plate is illuminated at night on both sides. See that his machine if used with sidecar is provided with a lamp on the extreme near side of same showing a light forward compulsory in some counties only by (bye-law), and is also provided with a lamp which shows a red light to the rear. The law regarding this latter does not state any particular place in which the rear lamp must be fixed.
5. Never drive at a speed which is dangerous to the public.
6. Wherever necessary, give audible and sufficient warning by horn or other instrument of the approach of his motor-cycle.

For registration purposes, the following particulars will be required.

Weight of cycle unladen	...	...	260 lbs.
Weight of sidecar (if requested)	...	...	100 lbs.
If sidecar is detachable (if requested only)	...	...	Yes.
Description or type of motorcycle	...	...	" Matchless " motorcycle.
Position of front number plate	...	...	On front mudguard, visible from either side.
Position of rear number plate...	...	...	On back end of carrier behind saddle, and visible from the rear.

## Guarantee Terms and Conditions

We give the following Guarantee with our motorcycles instead of the Guarantee implied by statute or otherwise as to the quality of fitness of such machines for the purpose of motorcycling, and such implied Guarantee being in all cases excluded. In the case of machines which have been used for "Hiring out" or racing purposes, or in respect of which our trade mark 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 be in force for six months only from date of purchase, and the damages for which we make ourselves responsible under this guarantee are limited to the replacement of any part which may have proved defective.

WE UNDERTAKE, subject to the conditions mentioned below, to make good at any time within six months any defects in these respects. As motorcycles are easily liable to derangements by neglect and misuse, this Guarantee does not apply to defects caused by wear and tear, misuse or neglect.

### CONDITIONS.

Any motorcycle sent to us to be plated, enamelled or repaired will be repaired upon same conditions, i.e., we Guarantee that all precautions which are usual and reasonable, have been taken by us to secure excellence of material and workmanship, and this Guarantee is in lieu, and in exclusion of any common law or statute warranty, and the damages recoverable are limited to the cost of any further work which may be necessary to amend and make good the work found to be defective.

If a defective part should be found in our motorcycles 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 machine, the name of the Agent from whom he purchased, and the date of purchase.

Failing compliance with the above, no notice will be taken of anything which may arrive, but such articles will lie here at the risk of the senders; and this Guarantee, or any implied Guarantee shall not be enforceable.

We guarantee only those machines which are bought either direct from us or from one of our duly authorised agents, and under no other conditions.

We do not Guarantee the specialities of other firms, such as tyres, saddles, chains, lamps, etc., or of any component part supplied to the order of the purchaser differing from our standard specification supplied with our motorcycles or otherwise.

### **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 have purchased from us ; nor are they authorised to give warranty or make any representation on our behalf other than those contained in the above Guarantee.

### **MACHINE NUMBERS**

The frame number will be found stamped on the right hand side of lug under saddle.

The engine number is stamped on the aluminium crankcase, transmission side, immediately beneath cylinder base.

H. COLLIER & SONS, LIMITED.

## INTRODUCTION

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We have pleasure in presenting this Spares List for the " Matchless " " V " Model.

Every part likely to be required can readily be found by reference to illustrations contained therein.

Every part has a distinctive number, and care should be taken to order correct part, calling same by the name specified, and giving the part number.

Read carefully rules on pages 15 and 16.

We are at all times willing to give estimates for parts or repairs, and also give to all customers the benefit of our advice regarding any query.

H. COLLIER & SONS, LIMITED

### **TERMS OF BUSINESS**

Our invariable rule in this department is net cash with order. Remittance to £1 in value may be sent by Postal Order, but over this amount it is advisable to remit by cheque. Cheques to be made payable to H. Collier & Sons, Ltd., and crossed. When making remittance by Telegraph Money Order, the name and address of sender should be included; as, unless this is done, the Post Office do not give this information in the telegram. We frequently receive Telegraph Money Orders without sender's name, with the result that we cannot trace by whom the amount is sent, and we have to wait until customer writes complaining about delay before the matter can receive any attention. If remittance is not sufficient to pay for postage or carriage, goods will be sent "carriage forward" (Goods train).

All repair accounts are strictly cash before delivery.

The prices in this list are subject to alteration without notices.

### **DEPOSIT ACCOUNT**

We strongly advise all owners of "Matchless" motorcycles to take advantage of our "Deposit System." If often occurs that parts are required by return, but customers not having a current account, there is the inevitable delay of "pro forma" invoice being sent, and we have to wait receipt of his remittance before the goods can be despatched. This delay causes considerable inconvenience to the party concerned, and can be avoided by opening a Deposit Account.

A remittance of not less than £2 entitles a customer to this form of account, and when goods are ordered by 'phone, telegram or letter they will be despatched at the earliest possible moment by the quickest route. Invoices will be sent for all goods supplied, and a statement will be rendered showing amount of deposit in hand when required, and customers will be notified immediately their deposit becomes exhausted, so that they may renew same. We are at all times prepared to return balance of deposit upon request.

Kindly note, when ordering, to mention "Deposit" or quote reference as shown on monthly statements.

### **REPAIRS**

In case of extensive structural repairs being required, we strongly advise all owners to send machines to our works for attention. It is obvious that manufacturers can do this kind of work better than any repairer.

### **OVERHAULING**

When sending us a complete motorcycle, engine, gear-box or other part with the request that we overhaul same, we understand by the term "Overhaul" that it is to be entirely dismantled, thoroughly renovated, any worn part renewed and put in perfect working order. In case a customer desires only certain parts attended to, explicit instructions should be given us to that effect, otherwise cost may be far in excess of what is anticipated.



### ESTIMATES

It is becoming a general practice for customers when sending their engines or complete motorcycles to us for repairs, to request a detailed estimate for the necessary repairs before proceeding with the work.

We are always pleased to furnish these estimates, but it must be distinctly understood that only approximate quotations can be given, as, when re-erecting, it is often found that other repairs or new parts are necessary, which it was impossible to locate when dismantling.

In some instances, when an estimate has been submitted, several of the items quoted for are questioned as being unnecessary or not required. We may say that we only include in our quotation new parts and repairs that we consider essential to make the machine suitable and satisfactory for the road.

We much prefer not to undertake a repair (neither do we accept any responsibility) when the estimate for same has been curtailed by the owner, as the parts he may delete are probably the most important to obtain good results.

If an estimate is not accepted, i.e., the parts returned to the owner in their original condition, a nominal charge is made for taking down and re-assembling.

All repair accounts are strictly cash before delivery.

### RULES TO BE OBSERVED

1. Parts sent to us for repair, replacement, or as pattern must bear distinctly sender's full name and address. Instructions regarding same must be sent under separate cover, otherwise goods may lie at our works and not be unpacked until instructions regarding same are received.
2. All goods must be consigned to us carriage paid.
3. Do not enclose cash (whether in the form of coin or paper) with goods. Remittance should be sent by letter post for your own protection.
4. Customers having no account with us should not fail to remit at the time of order and also to include postage.
5. When customer has no account, a Telegraph Money Order will ensure immediate attention.
6. When making enquiries respecting any part on order or repair, it is advisable to quote date of order.
7. In case of doubt regarding correct names of parts required, it is advisable to send old part as pattern.

### DAMAGE IN TRANSIT

Our responsibility ceases when goods leave our Works, and claims must be made on carriers in the event of damage occurring in transit.

NOTE.—By Railway Companies special regulations, unless damage in transit is reported within three days from receipt of goods, no claim can be entertained.

# ENGINE PARTS

			£	s.	d.
<b>A.</b>					
M.E.	8	Axle for flywheel (transmission side) ...	6	9	
V.E.	26	Axle for flywheel (timing gear side) ...	5	6	
V.E.	18	Axle for flywheel (crankpin) ...	6	0	
L/3 E.	231	Axle for cam levers ...	2	0	
L/3 E.	231	Axle for valve lifter cam block ...	2	0	

<b>B.</b>					
M.E.	9	Bush (hardened steel for crankcase) trans- mission side ...	5	7	
V.E.	27	Bush for flywheel axle (timing gear side) ...	3	6	
L/3 E.	89	Bush for gudgeon pin ...	3	3	
L/3 E.	233	Bush for camshaft (cover side) ...	2	0	
L/3 E.	234	Bush for camshaft (crankcase side) ...	1	9	
L/3 E.	213	Bush (screwed) for valve lifter rod ...	1	0	
		Breather for crankcase (see release valve)			

<b>C.</b>					
V.E.	1	Cylinder (bare) ...	1	15	3
M.E.	126	Cylinder holding down stud (each) ...			5
M.E.	197	Cylinder stud nuts (each) ...			5
V.E.	2	Cylinder head (bare) ...	2	2	0
V.E.	88	Cylinder head fixing bolt (short head) ...			9
M.E.	88	Cylinder head fixing bolt (medium head) ...			10
M.E.	87	Cylinder head fixing bolt (long head with extension) ...		1	2
V.E.	108A	Crankcase complete with bushes and studs (supplied complete only) ...	4	10	0
L/3 E.	239	Crankcase drain plug ...			4
M.E.	54	Crankcase bolt $\frac{3}{8}$ in. short ...			8
M.F.	97	Crankcase bolt $\frac{3}{8}$ in. long for exhaust pipe fixing ...			9
L/4 M.	107	Distance tube for above ...			5
S.T.D.	3	Nuts for $\frac{3}{8}$ in. crankcase bolt (each) ...			3
S.T.D.	10	Washer for same ...			1
H.E.	18	Crankcase bolt $\frac{5}{16}$ in. dia. ...			6
S.T.D.	4	Nuts for above (each) ...			2
V.C.	8	Crankcase bolt $\frac{1}{2}$ in. dia. for chain cover ex- haust pipe fixing ...			8
H.F.B.	5	Distance tube for above ...			6
S.T.D.	1	Nuts for crankcase bolt $\frac{1}{2}$ in. (each) ...			5
		Crankcase timing gear cover (see timing gear)			
L.E.	40/S	Connecting rod only ...		9	6
V.E.	63	Connecting rod with big end assembly, and small end bush ...	1	16	6

			C.—contd.		£	s.	d.
V.E.	18a	Crankpin assembly (pin, rollers and outer race) ... ..	16	6			
V.E.	18	Crankpin only ... ..	6	0			
V.E.	33	Camshaft ... ..	1	2	0		
V.E.	10	Cam lever (inlet) complete ... ..	7	6			
V.E.	10	Cam lever (exhaust) complete ... ..	7	6			
L.E.	420/R	Cam lever roller only ... ..		6			
L.E.	424/R	Cam lever roller pin or axle ... ..		8			
L/4 M.	109	Clip for cylinder head stay to frame ... ..	1	0			
L.F.	160	Bolt for above ... ..		3			
S.T.D.	4	Nut for bolt ... ..		2			
V.E.	91	Cylinder head stay to frame tube clip ... ..		3			
S.T.D.	4	Nut securing above to rocker housing bolt ... ..		2			
L/3 E.	247	Cylinder or crankcase screwed oil union ... ..		3			

## D.

L/3 E.	239	Drain plug for crankcase ... ..		4			
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## E.

Engine bolts (see engine plates)  
 Exhaust valve (see valves)  
 Exhaust pipe (see silencer)

## F.

M. V.E.	6	Flywheel (timing gear side) ... ..	17	9			
M. V.E.	5	Flywheel (transmission side) ... ..	17	9			
V.E.	18	Flywheel crankpin ... ..	6	0			
L/3 E.	70	Fixing nuts (each) ... ..		6			
S.T.D.	15	Lock screw ... ..		2			
V.E.	26	Flywheel axle (timing side) ... ..	5	6			
L/3 E.	70	Nut for above (inside) ... ..		6			
S.T.D.	15	Lock screw for nut ... ..		2			
L/3 E.	71	Nut securing small timing pinion ... ..		5			
M.E.	8	Flywheel axle (transmission side) ... ..	6	9			
M.F.	120	Nuts for above (each) ... ..		5			
S.T.D.	15	Lock screw ... ..		2			
L/3 E.	95	Key for flywheel axle (each) ... ..		5			

## G.

M/3 E.	308	Gudgeon pin ... ..	4	9			
L/3 E.	88	Gudgeon pin securing spring ring (each) ... ..		1			
L/3 E.	89	Gudgeon pin bush ... ..	3	3			
L.E.	148/S	Guide for inlet valve ... ..	4	0			
L.E.	148/S	Guide for exhaust valve ... ..	4	0			
M.E.	72	Guide for tappet (inlet or exhaust) ... ..	4	0			
L/3 E.	213	Guide (screwed) for valve lifter rod ... ..	1	0			

**I.**

£ s. d.

Inlet valve (see valves)  
Inlet valve guide (see valves)

**M.**

Magneto and parts (see page 39)

**O.**

L/3 E.	239	Oil drain plug for crankcase	...	...	4	
V.E.	11	Oil delivery pipe (pump to cylinder wall)			3	6
V.E.	103	Oil delivery pipe (pump to crankcase)	...		2	6
V.E.	101	Oil supply pipe (tank to pump)	...	...	4	6
L/3 E.	247	Oil pipe connection for cylinder and crankcase	...	...		3
L/3 E.	287	Oil pipe connection and filter for tank	...		2	3
V.E.	99	Oil pump complete	...	...	17	6
P/OP.	1/S	Oil pump body only	...	...	6	0
P/OP	2	Oil pump cap with cam projection	...		1	0
P/OP	3/S	Oil pump plunger	...	...	3	0
P/OP	4	Oil pump regulator spindle	...	...	1	6
P/OP	5	Oil pump driving worm	...	...	1	6
P/OP	6	Oil pump screwed bush for above	...	...		9
P/OP	7	Oil pump fibre washer for regulator	...			1
P/OP	8	Oil pump steel washer for regulator	...			1
P/OP	9	Oil pump spring washer for regulator	...			1
P/OP	11	Oil pump glass window	...	...		2
P/OP	10	Oil pump cap or cover for above	...		1	0
P/OP	29/S	Oil pump screwed union for cylinder oil pipe				5
L/3 E.	284	Oil pipe nut for above	...	...		4
L/3 E.	290	Oil pipe nipple for above	...	...		3
P/OP	14	Oil pipe gland nut	...	...		3
P/OP	17	Oil pump screwed cap	...	...		6
P/OP	23	Fibre washer for above	...	...		1
P/OP	19	Screw securing cam cap (each)	...	...		1
P/OP	20	Washer for cam cap	...	...		1
L.E.	479/R	Oil pump driving worm block	...	...		8
P/OP	22	Oil pump spring	...	...		3
P/OP	24	Ratchet pin for regulator	...	...		1
P/OP	25	Ratchet spring for regulator	...	...		1
P/OP	26	Screw for window cap	...	...		1
V.E.	99A	Oil pump fixing screw	...	...		1
R.E.	121	Locking washer for above	...	...		1
R.E.	131	Oil pump paper joint washer	...	...		1

**P.**

V.E.	12	Piston only (standard type)	...	...	11	6
V.E.	112	Piston only (high compression type)	...	...	14	0
V.E.	12A	Piston complete with gudgeon pin and rings (standard type)	...	...	18	0

B

P.—*conld.*

£ s. d.

V.E.	112A	Piston complete with gudgeon pin and rings (high compression type) ... ..	I	I	6
M/3 E.	311	Piston rings (each) ... ..		I	0
L/3 E.	230	Pinion (small timing) ... ..		4	6
		Petrol pipe (see carburettor)			
L/3 E.	231	Pin or axle for cam levers ... ..		2	0
L/3 E.	231	Pin or axle for valve lifter cam block ... ..		2	0
L.E.	424/R	Pin or axle for cam lever roller ... ..			8

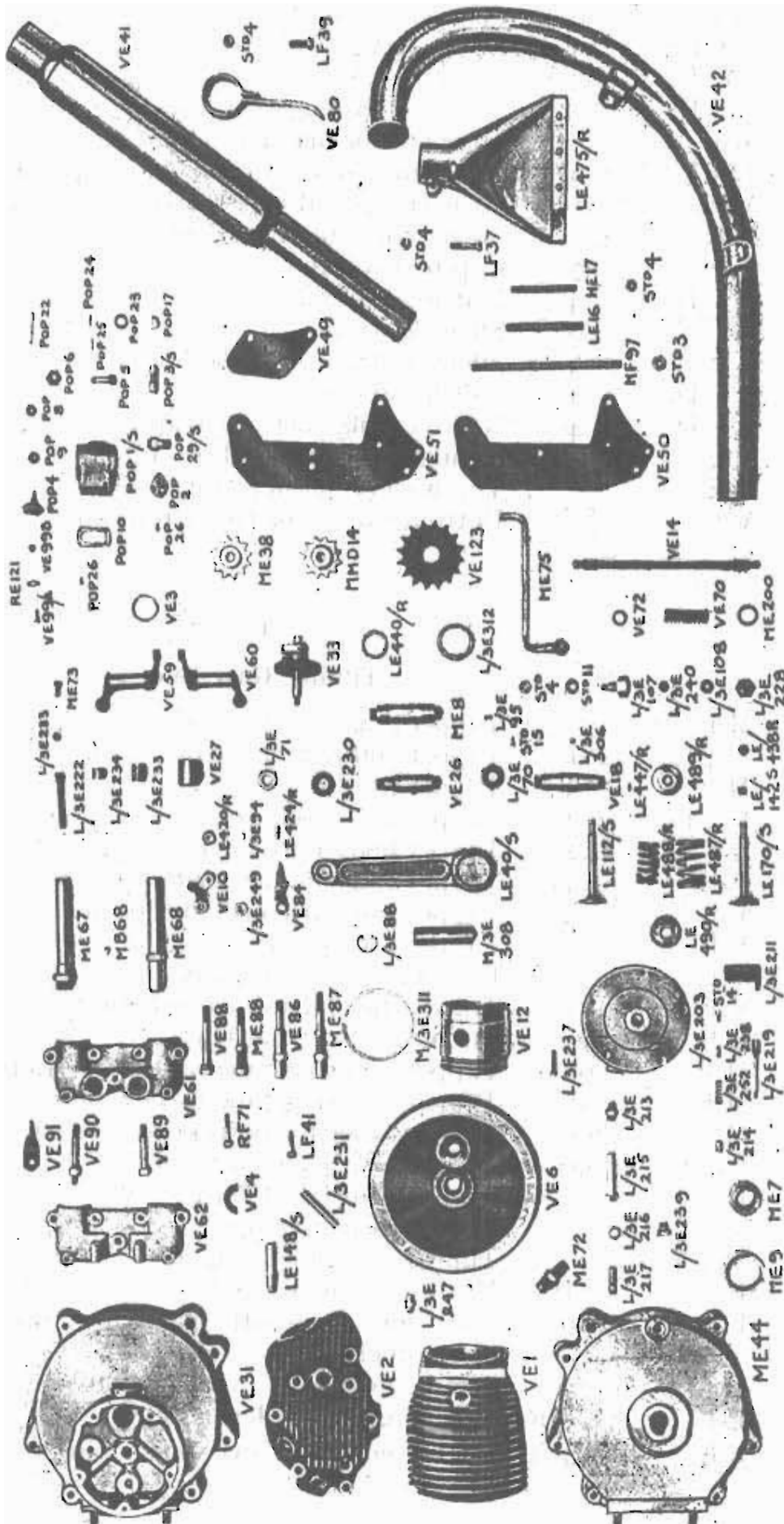
R.

M.E.	265	Release valve complete with pipe ... ..		6	0
M.E.	75	Release valve pipe and top only ... ..		3	7
L/3 E.	228	Release valve screwed body ... ..			10
L/3 E.	107	Release valve screwed cap for above ... ..	I	4	
S.T.D.	4	Nut securing pipe and top ... ..			2
S.T.D.	10	Washer for nut ... ..			I
L/3 E.	240	Release valve diaphragm ... ..			2
L/3 F.	108	Release valve diaphragm seating ... ..			9
M.E.	47	Rollers and cage for flywheel axle ... ..		8	6
M.E.	9	Outer hardened steel race for above ... ..		5	7
L/3 E.	306	Rollers for big end (each) per set 10/- each			2
L.E.	439/R	Rollers for overhead rockers (per dozen)		2	0
V.E.	3	Roller race for above (hardened steel) ... ..		2	6
L/3 E.	312	Roller race for big end (hardened steel) ... ..		4	6
V.E.	10	Rocker or cam lever inlet ... ..		7	6
V.E.	10	Rocker or cam lever exhaust ... ..		7	6
V.E.	59	Rocker overhead—inlet ... ..	II	6	
V.E.	60	Rocker overhead—exhaust ... ..	II	6	
V.E.	58	Rocker overhead aluminium housing (supplied complete only) ... ..	I	0	0
V.E.	4	Split washers for above (each two pieces) ... ..			6
L.F.	41	Clamping bolts for housing $\frac{1}{4}$ in. dia. short			3
R.F.	71	Clamping bolts for housing $\frac{1}{4}$ in. dia. long			4
M.B.	68	Grease nipple for housing ... ..			2
V.E.	89	Bolt securing housing (standard type) ... ..			10
V.E.	90	Bolt securing housing with extension ... ..	I	0	
S.T.D.	4	Nut for threaded extension ... ..			2
V.E.	91	Stay for frame tube clip secured by above Stay clip (see section C and frame parts)			3

S.

L.E.	158/S	Sparking plug K.L.G. type H.S.1 with washer ... ..		6	0
L/3 E.	246	Sparking plug C. & A. washer ... ..			2
L.E.	487/R	Spring for valves (outer) ... ..	I	0	
L.E.	488/R	Spring for valves (inner) ... ..			6

# ENGINE PARTS



			£	s.	d.
L/3 E.	252	Spring for valve lifter ... ..			2
V.E.	123	Sprocket for transmission ... ..	7		6
M.E.	120	Sprocket fixing nut ... ..			6
S.T.D.	15	Lock screw for above ... ..			2
L/3 E.	95	Sprocket key ... ..			5
L/3 E.	237	Screw for timing gear cover ... ..			7
M.E.	38	Sprocket for magneto chain ... ..	2		0
L/3 E.	269	Nut fixing above to camshaft (special) ...			11
V.E.	41	Silencer (special type Carbjetor) with clip	1	5	0
L.E.	475/R	Silencer fish tail extension ... ..	5		0
L.F.	37	Clip bolt for above ... ..			3
S.T.D.	4	Nut for clip bolt ... ..			2
V.E.	80	Silencer strap ... ..			9
L.F.	39	Silencer strap pinch bolt ... ..			3
S.T.D.	4	Nut for above ... ..			2
S.T.D.	4	Nut securing silencer strap to stand bolt ...			2
V.E.	70	Spring for tappet rod (each) ... ..			4
V.E.	72	Top washer or collar for above ... ..			3
V.E.	71	Bottom washer or collar for above ... ..			3

**T.**

**Timing Gear, etc.**

M.E.	72	Tappet guide inlet or exhaust ... ..	4		9
L/3 E.	281	Tappet complete inlet or exhaust ... ..	3		0
M.E.	73	Tappet head only ... ..			7
L/3 E.	223	Tappet head lock nut ... ..			4
L/3 E.	222	Tappet body only inlet or exhaust ... ..	2		0
V.E.	14a	Tappet rod complete with spring and collars	4		3
V.E.	79	Tappet rod hardened end (each) ... ..	1		0
V.E.	70	Tappet rod spring ... ..			4
V.E.	71	Bottom washer for above ... ..			3
V.E.	72	Top washer for tappet rod spring ... ..			3
V.E.	14	Tubular tappet rod bare ... ..	1		4
M.E.	68	Tappet covering tube bottom portion ... ..	3		0
M.E.	67	Tappet covering tube top portion ... ..	2		10
M.E.	200	Fibre washer for bottom portion ... ..			2
L/3 E.	256	Timing gear cover with bush ... ..	8		3
L/3 E.	233	Timing gear cover bush only ... ..	2		0
V.E.	33	Timing gear camshaft ... ..	1	2	0
L/3 E.	230	Timing gear small pinion ... ..	4		6
L/3 E.	71	Nut for fixing above ... ..			5
L/3 E.	269	Nut for camshaft (securing magneto sprocket) ... ..			11
V.E.	10	Timing gear cam lever complete ... ..	7		6
L.E.	420/R	Timing gear cam lever roller ... ..			6
L.E.	424/R	Timing gear cam lever roller pin ... ..			8

**T.—contd.**

				£	s.	d.
L/3 E.	249	Timing gear cam lever spacer ... ..				7
L/3 E.	231	Timing gear cam lever axle ... ..			2	0
L/3 E.	231	Timing gear axle for valve lifter ... ..			2	0
L/3 E.	237	Timing gear cover screw ... ..				3

**U.**

		Union nut for oil pipes (see section O) ...				4
L/3 E.	247	Union for oil pipe (screws into cylinder and crankcase) ... ..				3
L/3 E.	287	Union and filter for oil pipe (screws into tank) ... ..			2	3
P/OP	31	Union and ball valve for oil pipe (screws into oil pump) ... ..				9
		Union nut for petrol pipe (see Carburettor)				4

**V.**

L.E.	170/S	Valve stem only (inlet) ... ..			12	6
L.E.	170/S/A	Valve complete with springs, caps and taper collar (inlet) ... ..			16	4
L.E.	112/S	Valve stem only (exhaust) ... ..			12	6
L.E.	112/S/A	Valve complete with springs, caps and taper collar (exhaust) ... ..			16	4
L.F.	487/R	Valve spring only (outer) ... ..			1	0
L.E.	488/R	Valve spring only (inner) ... ..				6
L.E.	489/R	Valve spring top cap ... ..				9
L.E.	490/R	Valve spring lower cap or collar ... ..			10	
L.E.	142/S	Split valve taper collar (2 pieces) ... ..				9
L.E.	148/S	Valve guide (inlet) ... ..			4	0
L.E.	148/S	Valve guide (exhaust) ... ..			4	0
M.E.	72	Valve tappet guide (inlet or exhaust) ...			4	9
L/3 E.	215	Valve lifter barrel (screwed) ... ..			1	0
L/3 E.	217	Valve lifter cable adjuster (screws in above)				7
L/3 E.	213	Valve lifter guide for shackle rod ... ..			1	0
L/3 E.	219	Valve lifter shackle rod ... ..			1	4
L/3 E.	216	Lock nut for cable adjuster... ..				4
V.E.	84	Valve lifter lever (inside timing case) ...				7
L/3 E.	211	Valve lifter cam block ... ..			3	3
L/3 E.	238	Pin securing above to shackle rod ... ..				6
S.T.D.	14	Split pin for above ... ..				1
L/3 E.	252	Valve lifter spring ... ..				2
L/3 E.	214	Shackle rod end for cable nipple ... ..			1	0
L/3 E.	218	Valve lifter cable nipple (fits in above) ...				3
L.E.	180/S	Valve lifter cable nipple (lever end) ...				3
L.E.	407/S	Valve lifter cable (inner and outer) ...			2	10
L.E.	185/S	Valve lifter cable (inner only) ... ..				9
L.E.	186/S	Valve lifter cable (outer only) ... ..			2	1
		Valve lifter lever (see handlebars)				

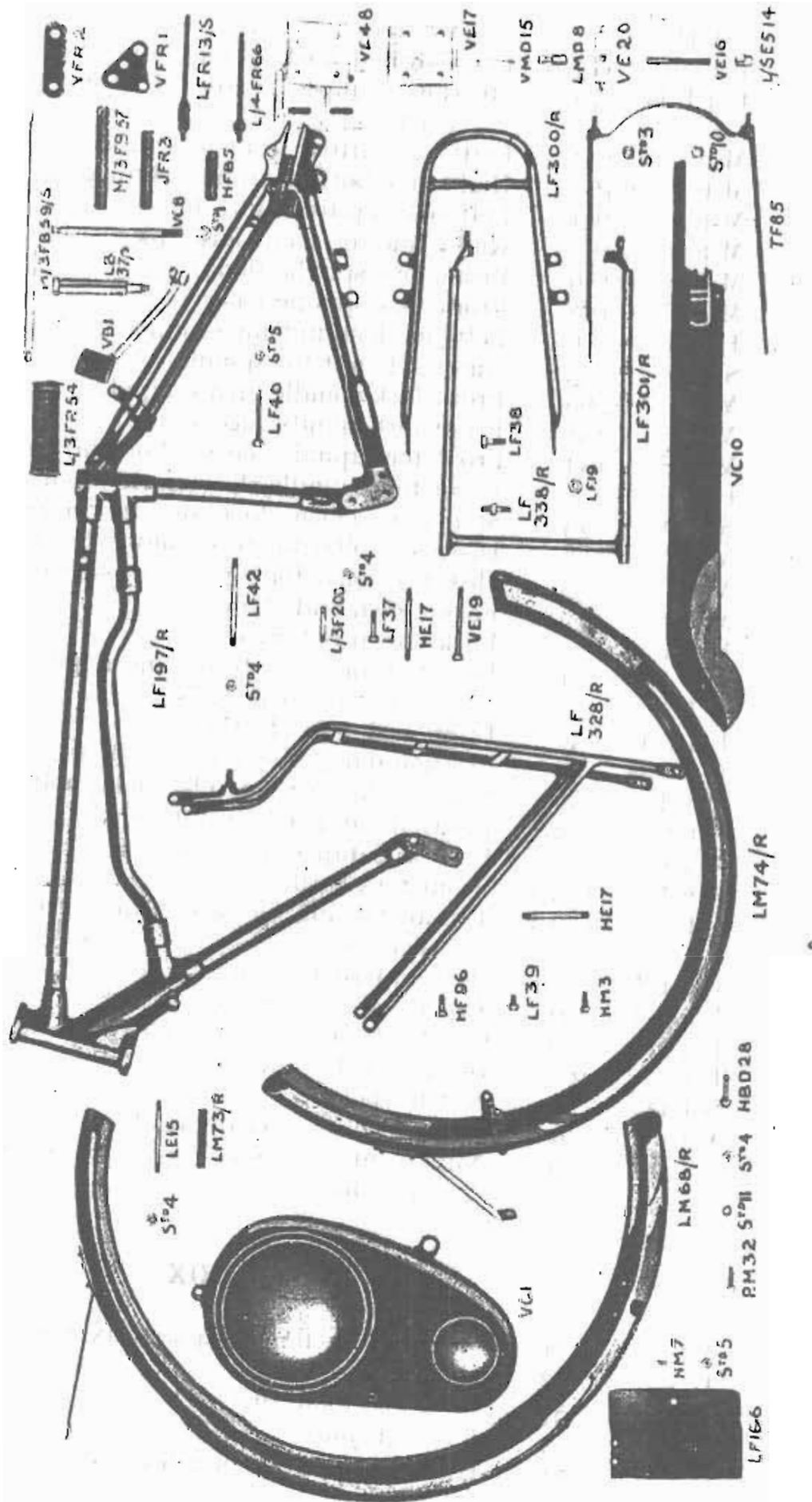


ENGINE PLATES AND BOLTS			£	s.	d.
V.E.	50	Rear engine plate (left side) ... ..	3	6	
V.E.	51	Rear engine plate (right side) ... ..	3	6	
M.E.	54	Long bolt $\frac{3}{8}$ in. dia. fixing above ... ..			8
S.T.D.	3	Nut for $\frac{3}{8}$ in. dia. bolt (each) ... ..			3
V.E.	49	Front engine plate (left or right) ... ..	1	0	
M.E.	54	Short bolt $\frac{3}{8}$ in. dia. fixing above ... ..			8
M.F.	97	Long bolt $\frac{3}{8}$ in. dia. fixing above and ex- haust pipe ... ..			9
H.E.	22	Distance tube for same ... ..			6
S.T.D.	3	Nuts for above (each) ... ..			3
H.E.	18	Engine bolt ( $\frac{5}{16}$ in. dia.) ... ..			6
S.T.D.	4	Nuts for above (each) ... ..			2
V.C.	8	Engine bolt $\frac{1}{2}$ in. dia. .... ..			2
S.T.D.	1	Nuts for above (each) ... ..			5
H.F.B.	5	Distance tube for $\frac{1}{2}$ in. bolt ... ..			5
M.E.	58	$\frac{3}{8}$ in. bolt fixing mag. chaincase ... ..			8
V.M.D.	16	Distance tube for above ... ..			4
V.F.R.	1	Footrest engine plate left or right ... ..			10
L.E.	16	$\frac{3}{8}$ in. bolt for above ... ..			7

## FRAME AND FORK PARTS

L.F.	277/R	Complete frame ... ..	5	7	6
H.F.F.	31	Steering head race for frame ... ..		2	5
L.F.	42	Seat lug bolt ... ..			8
S.T.D.	4	Nuts for above (each) ... ..			2
S.T.D.	11	Washer for nut (each) ... ..			1
L.F.	40	Rear chain adjuster bolt ... ..			9
L.F.F.	126/R	Front forks complete with stand and mud- guard ... ..	5	12	0
L.F.F.	122/R	Front forks complete less stand and mud- guard ... ..	4	5	0
L.F.F.	169/R	Front fork girder only (left side) ... ..		16	0
L.F.F.	168/R	Front fork girder only (right side) ... ..		17	6
M.F.F.	70	Fork handlebar clip ... ..		8	0
L/4 F.F.	64	Pinch bolt for above... ..			6
S.T.D.	3	Nut for bolt ... ..			3
H.F.F.	31	Ball race for handlebar clip... ..		2	5
M.F.F.	28	Steering head nut plain ... ..			8
M/3 F.	111/S	Steering head cap nut ... ..		1	6
M/3 F.F.	115/S	Steering friction damper long bolt ... ..		2	6
M/3 F.F.	101/S	Steering friction damper fly nut ... ..		1	9
M/3 F.F.	116/S	Steering friction damper base socket ... ..		5	9
M/3 F.F.	110/S	Steering friction damper long bolt spring ... ..			3
M/3 F.F.	117/S	Locating pin for long bolt ... ..			1
M/3 F.F.	97/S	Steering damper base bracket ... ..		1	0
M/3 F.F.	120/S	Bolt securing above to head lug ... ..			4

FRAME PARTS



**Frame and Fork Parts—contd.**

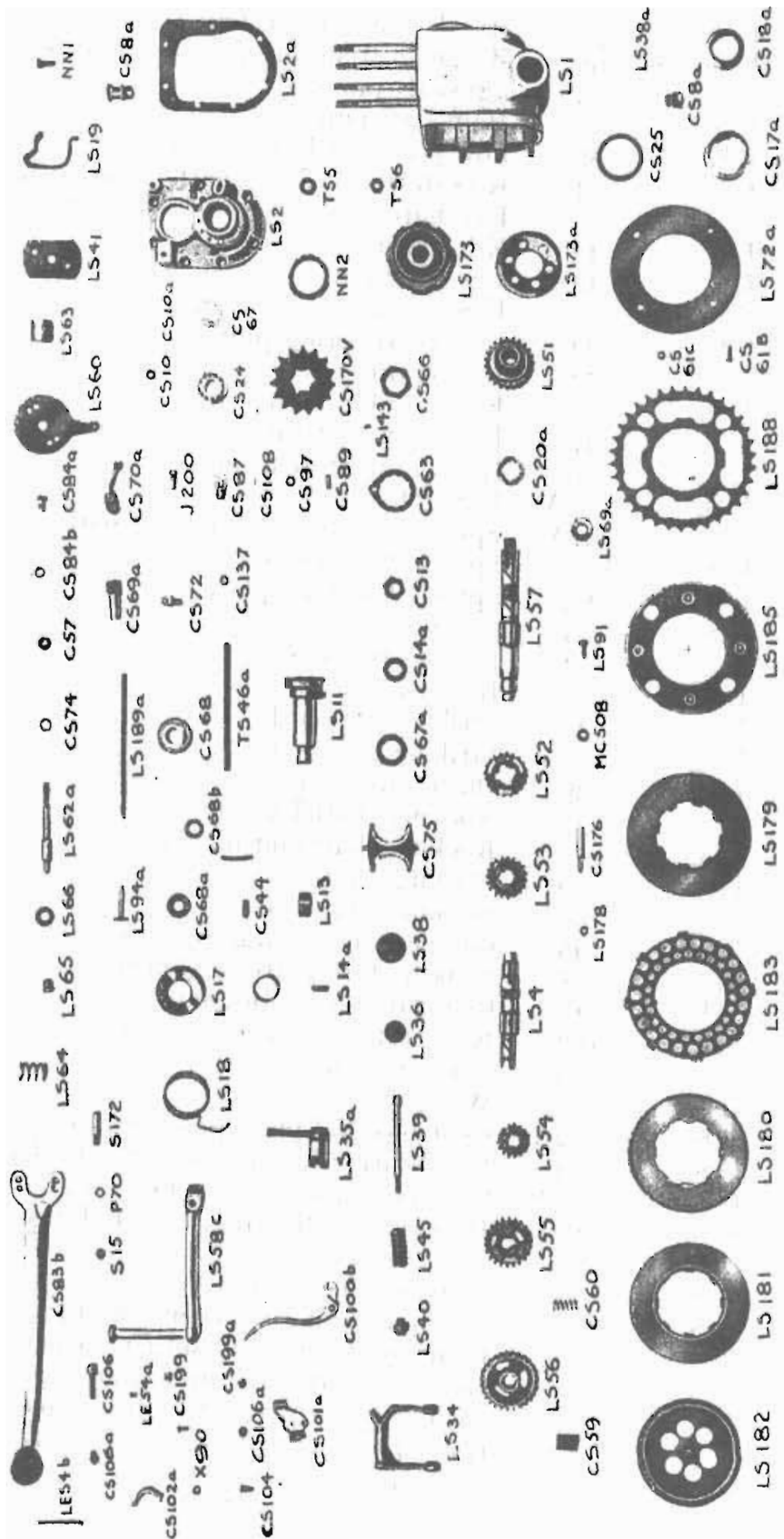
				£	s.	d.
S.T.D.	2	Nut for above (each)	...			2
L.F.	315/R	Large dished washers for above	...			9
L/4 F.F.	39	Steering damper leather friction washer (each)	...			1
M.F.F.	162	Left side bottom front fork link	...	1		4
M.F.F.	161	Right side bottom front fork link	...	1		3
M.F.F.	164	Left side top front fork link	...	1		8
M.F.F.	163	Right side top front fork link	...	1		3
M.F.F.	159	Front fork spindle (long)	...	1		0
M.F.F.	158	Front fork spindle (short)	...	1		1
H.G.	56	Left side lock nut for spindle	...			5
S.T.D.	3	Right side nut for spindle	...			3
M.B.	68	Front fork spindle grease nipple	...			5
M.F.F.	151	Front fork spindle sleeve (top)	...	2		4
M.F.F.	154	Front fork spindle sleeve (bottom)	...	2		6
H.B.	1	Front fork spindle sleeve nuts (each)	...			4
S.T.D.	14	Split pin securing lock nuts (per dozen)	...			6
M.F.F.	96	Distance collar for top spindle sleeve (long)	...			4
M.F.F.	95	Distance collar for top spindle sleeve (short)	...			4
M/3 F.	119/S	Fork crown and stem	...	13		6
H.F.F.	30	Fork crown ball race	...	3		2
H.F.F.	31	Fork ball race (for frame and handlebar lug)	...	2		5
M.F.F.	181	Set of steering head balls	...	1		3
L/4 F.F.	39	Friction damper leather ring	...			1
L/4 F.F.	38	Friction damper side plate (each)	...			6
M.F.F.	66	Friction damper side plate long bolt	...			3
S.T.D.	24	Friction damper bolt nuts (each)	...			2
L/4 F.F.	37	Friction damper spring washer	...			3
L.F.F.	153/R	Front fork spring	...	2		6
L.F.F.	150/R	Top anchor lug for spring (fits over spindle sleeve)	...	1		7
L/4 F.F.	54	Bottom fixing nut for spring	...			3
L/4 F.F.	36	Taper collar for nut for spring	...			4
L/4 M	109	Clip for frame tube for cylinder head steady	...	1		0
L.F.	160	Pinch bolt for clip	...			3
S.T.D.	4	Nut for bolt	...			2
V.E.	91	Cylinder head stay or steady	...			3
S.T.D.	4	Nut securing above to overhead rocker housing	...			2

**GEAR BOX**

L.S.	1	Gear box shell only (4 stud fixing)	...	2	2	0
L.S.	2	Gear box end plate	...	16		0
L.S.	57	Gear box main driving shaft	...	13		0
L.S.	4	Layshaft only	...	13		0
L.S.	51	High speed sleeve pinion less cones	...	18		0

Gear Box—contd.			£	s.	d.
C.S.	17A	Left or right cone for above ... ..	2	6	
C.S.	25	Adjusting shims or washers (each) ... ..			1
L.S.	52	Middle gear sliding pinion for mainshaft	10	0	
L.S.	55	Middle gear sliding pinion for layshaft	11	0	
L.S.	54	Layshaft pinion ... ..	6	0	
L.S.	53	Mainshaft pinion ... ..	4	6	
L.S.	56	Low gear and K.S. pinion ... ..	11	6	
L.S.	11	Kickstarter axle or shaft } supplied Layshaft bush } assembled only	12	6	
L.S.	13	K.S. pawl ... ..	1	3	
L.S.	14A	K.S. pawl pin ... ..			3
C.S.	43	K.S. pawl spring ... ..			1
C.S.	44	K.S. pawl spring plunger ... ..			3
L.S.	58c	K.S. crank ... ..	12	6	
L.S.	18	K.S. crank return spring ... ..	1	0	
L.S.	17	K.S. crank return spring cover ... ..	1	0	
L.S.	19	K.S. crank stop spring ... ..			7
L.S.	20A	K.S. relief cam ... ..			3
C.S.	170V	Sprocket for rear chain (15 tooth) ... ..	10	0	
C.S.	66	Sprocket fixing nut ... ..			9
C.S.	63	Sprocket locking plate ... ..			5
L.S.	143	Screw for same ... ..			1
L.S.	32	Ball bearing cup ... ..			3
L.S.	33	K.S. axle bush ... ..	1	6	
L.S.	34	Striking gear fork ... ..	6	6	
L.S.	35A	Striking gear lever ... ..	6	6	
L.S.	36	Oil retainer cap ... ..			3
L.S.	37	Rocking shaft lever bush ... ..	2	0	
L.S.	38	Rocking shaft end bush or cap ... ..	1	6	
L.S.	39	Rocking shaft ... ..	1	3	
L.S.	40	Rocking shaft nut ... ..			6
L.S.	45	Compensator spring for rocking shaft ... ..			5
C.S.	75	Striking fork plate or slipper ... ..	2	6	
V.E.	17	Gear box top guide plate ... ..	4	0	
S.	172	K.S. crank cotter pin (only) ... ..			2
S.	15	Nut for same ... ..			2
P.	70	Washer ... ..			1
L.S.	2A	Gear box end plate paper washer ... ..			1
C.S.	24	Ball bearing for layshaft or mainshaft ... ..	8	0	
C.S.	8A	Gear box filling or drain oil plug ... ..			9
C.S.	67	Packing or adjusting washers for main axle (each) ... ..			1
T.S.	4	Gear box fixing stud (each) ... ..			5
T.S.	6	Gear box fixing stud nuts (each) ... ..			3
T.S.	5	Gear box fixing stud spring washer ... ..			2
C.S.	9	Gear box end plate studs (each) ... ..			3
C.S.	10	Gear box end plate stud nuts (each) ... ..			2
N.N.	1	Gear box end plate bolt for K.S. stop spring ... ..			3

# GEAR BOX PARTS



			£	s.	d.
V.E.	16	Gear box adjuster for front chain ...			4
V.E.	20	Cross bar for above (fits between engine plates) ... ..			8
S.T.D.	4	Nuts for cross bar (each) ... ..			2
S.T.D.	3	Standard nut for gear box adjuster ...			3
L/5 E.	514	Special double nut for gear box adjuster ...			6

### CLUTCH PARTS

L.S.	173	Clutch hub or centre ... ..	17		6
C.S.	13	Clutch hub fixing nut ... ..			5
C.S.	14A	Washer for above ... ..			1
C.S.	15A	Clutch hub key for mainshaft ... ..			3
L.S.	179	Clutch hub back plate ... ..	2		6
L.S.	185	Clutch driver ... ..	8		0
L.S.	72A	Clutch sprocket back plate ... ..	2		6
L.S.	188	Clutch sprocket ... ..	1	0	0
L.S.	50B	Clutch sprocket rollers (each) ... ..			2
L.S.	93	Rubber shock absorbers (each) ... ..			2
L.S.	176	Clutch spring stud (each) ... ..			6
L.S.	178	Clutch spring stud nuts (each) ... ..			2
C.S.	60	Clutch spring (each) ... ..			2
C.S.	59	Clutch spring thimble ... ..			4
C.S.	61B	Clutch spring stud screw (each) ... ..			2
C.S.	61C	Washer for above (each) ... ..			1
L.S.	183	Clutch friction ring with inserts (each) ...	5		0
L.S.	180	Clutch centre plate (flat) each ... ..	2		6
L.S.	181	Clutch outer plate ... ..	2		6
L.S.	182	Clutch thrust plate ... ..	2		6
L.S.	116	Clutch inserts (per doz.) large or small ...	1		0
L.S.	116A	Clutch inserts per set of (92) ... ..	7		6
L.S.	189A	Clutch thrust rod (long) ... ..			10
L.S.	94A	Clutch thrust pin ... ..	4		10
C.S.	69A	Clutch thrust worm ... ..	1		9
C.S.	70A	Clutch thrust worm lever ... ..	2		6
J	200	Clutch thrust worm lever pinch bolt ...			1
C.S.	68	Clutch worm nut (screws into end plate) ...	1		9
C.S.	68A	Clutch worm nut oil retaining cap ... ..			3
C.S.	68B	Clutch worm felt washer ... ..			2
C.S.	100	Clutch handlebar lever complete (less cables)	8		0
C.S.	100B	Lever portion only ... ..	4		0
C.S.	104	Clutch lever fulcrum screw ... ..			1
C.S.	106A	Nuts for above (each) ... ..			1
C.S.	101A	Lower half of handlebar clip ... ..	2		6
C.S.	102A	Upper half of handlebar clip ... ..	1		0
X	90	Screw and nut for handlebar clip ... ..			2
L.E.	52	Clutch cable complete inner and outer ...	5		6
L.E.	54	Clutch cable inner only ... ..	1		6
L.E.	53	Clutch cable outer only ... ..	3		6

**Clutch Parts—contd.**

					£	s.	d.
T.E.	97A	Clutch cable thimble for lever	...	...			4
C.S.	106	Clutch cable stop only	...	...			9
C.S.	106A	Lock nut for above	...	...			1
C.S.	72	Clutch cable stop T piece	...	...			1 0
T.S.	46A	Gear operating rod (bare)	...	...			1 0
C.S.	87	Yoke end for above (each)	...	...			10
C.S.	137	Locking nut for yoke end	...	...			1
C.S.	89	Yoke end pin	...	...			2
C.S.	97	Washer for above	...	...			1
C.S.	108	Split pins each	...	...			1
L.S.	91	Screws securing clutch back plate (each)	...	...			1
M.C.	508	Nuts for above (each)	...	...			1
C.S.	199	Roller type adaptor for clutch cable nipple fits in handlebar lever	...	...			4

**GEAR CHANGE PARTS**

C.S.	83B	Gear lever with ball	...	...			6 0
C.S.	84A	Fixing bolts for above (each)	...	...			2
C.S.	84A/1	Spring washer for bolt (each)	...	...			1
L.S.	41	Gear control quadrant (bolted to above)	...	...			5 6
L.S.	60	Gear control index plate	...	...			3 0
L.S.	62A	Gear quadrant fixing bolt or stud...	...	...			1 6
C.S.	7	Nut securing above to engine plate	...	...			3
C.S.	74	Spring washer for nut	...	...			1
L.G.L.	24/R	Aluminium pad for gear control quadrant	...	...			1 6
V.E.	81	Screwed stud for above (passes through engine plates)	...	...			7
S.T.D.	3	Nut for above	...	...			3
L.S.	61	Gear control quadrant bush (screws in quadrant)	...	...			1 0
L.S.	63	Gear control spring box	...	...			3
L.S.	64	Gear control spring	...	...			3
L.S.	65	Gear control spring nut	...	...			6
L.S.	66	Gear control spring nut washer	...	...			1
T.S.	46A	Gear rod complete with yoke ends...	...	...			3 6
T.S.	46	Gear rod only	...	...			1 6
C.S.	87	Gear rod yoke end only	...	...			10
C.S.	89	Gear rod yoke end pin only	...	...			2
C.S.	108	Split pin for above	...	...			1
C.S.	137	Gear rod yoke end lock nut	...	...			1

**LUGGAGE CARRIER AND TOOL BOX**

L/4 F.F.	228	Luggage carrier complete	...	...			16 0
H.M.	3	Bolt for fixing same (top)	...	...			4

<b>Luggage Carrier and Tool Box - contd.</b>			£	s.	d.
S.T.D.	4	Nut for above	...	...	2
S.T.D.	11	Washer for above	...	...	1
H.M.	7	Bolt for fixing carrier to rear mudguard	...	...	3
S.T.D.	5	Nut for above	...	...	2
L.F.	39	Bolt for fixing carrier (bottom end) each	...	...	2
R.F.	45	Tool box for luggage carrier	...	...	15 0
H.M.	7	Bolts for fixing same (each)	...	...	3
S.T.D.	5	Nut for above (each)	...	...	2
L.F.	166	Rear number plate (see also mudguards) acetylene lamp type	...	...	1 1

## **SPECIAL PARTS TAKING THE PLACE OF CARRIER WHEN HAND**

### **HOLD IS FITTED IN LIEU**

L.F.	300/R	Hand-hold arch piece	...	...	7 6
L.F.	39	Bolt securing arch piece bottom end	...	...	3
H.M.	7	Bolt securing arch piece to mudguard	...	...	2
S.T.D.	5	Nut for same	...	...	2
L.F.	323/R	Tool box only left side	...	...	5 0
L.F.	322/R	Tool box only right side	...	...	5 0
L.F.	39	Bolts securing tool box (each)	...	...	3
S.T.D.	5	Nut for above	...	...	2

For other special parts see mudguard section

### **MUDGUARDS**

L/4 M.	142	Front mudguard only	...	...	15 6
L.F.	41	Front mudguard side fixing bolts (each)	...	...	3
S.T.D.	5	Nut for mudguard side fixing bolts (each)	...	...	2
R.M.	31	Front stand fixing stud	...	...	3
L.M.	75/R	Collar for front mudguard side bolt	...	...	3
S.T.D.	5	Lock nuts for stud (each)	...	...	2
H.B.D.	28	Wing nut for front stand fixing	...	...	1 0
L.M.	1	Rear mudguard (carrier type)	...	...	12 9
L.F.	39	Rear mudguard fixing bolt (chain stay bridge)	...	...	3
S.T.D.	4	Nut for chain stay bridge fixing bolt	...	...	2
L.F.	41	Rear mudguard fixing bolt (top stay bridge)	...	...	4
S.T.D.	5	Nut for top stay bridge fixing bolt	...	...	2
H.M.	7	Bolt fixing mudguard to luggage carrier	...	...	2
S.T.D.	5	Nut for above	...	...	2
H.M.	7	Bolt securing mudguard to tool box	...	...	2
S.T.D.	5	Nut for same	...	...	2
L.M.	29	Rear stand clip screwed stud	...	...	4
S.T.D.	5	Locking nuts for above (each)	...	...	2



**Mudguards—contd.**

			£	s.	d.
H.B.D.	28	Wing nut for rear stand ... ..	1	0	
L.M.	74/R	Rear mudguard (non carrier type) ...	13	6	
L.M.	72/R	Left side mudguard stay (rear) ... ..		9	
L.M.	72/R	Right side rear mudguard stay ... ..		9	
L.E.	15	Support rod for rear number plate bracket		5	
S.T.D.	4	Nuts for above (each) ... ..		2	
S.T.D.	11	Washer for nut (each) ... ..		1	
L.M.	73/R	Distance tube for rod ... ..		6	
H.M.	7	Top mudguard stay bolt ... ..		2	
S.T.D.	5	Nut for same ... ..		2	

**TANK AND FITTINGS**

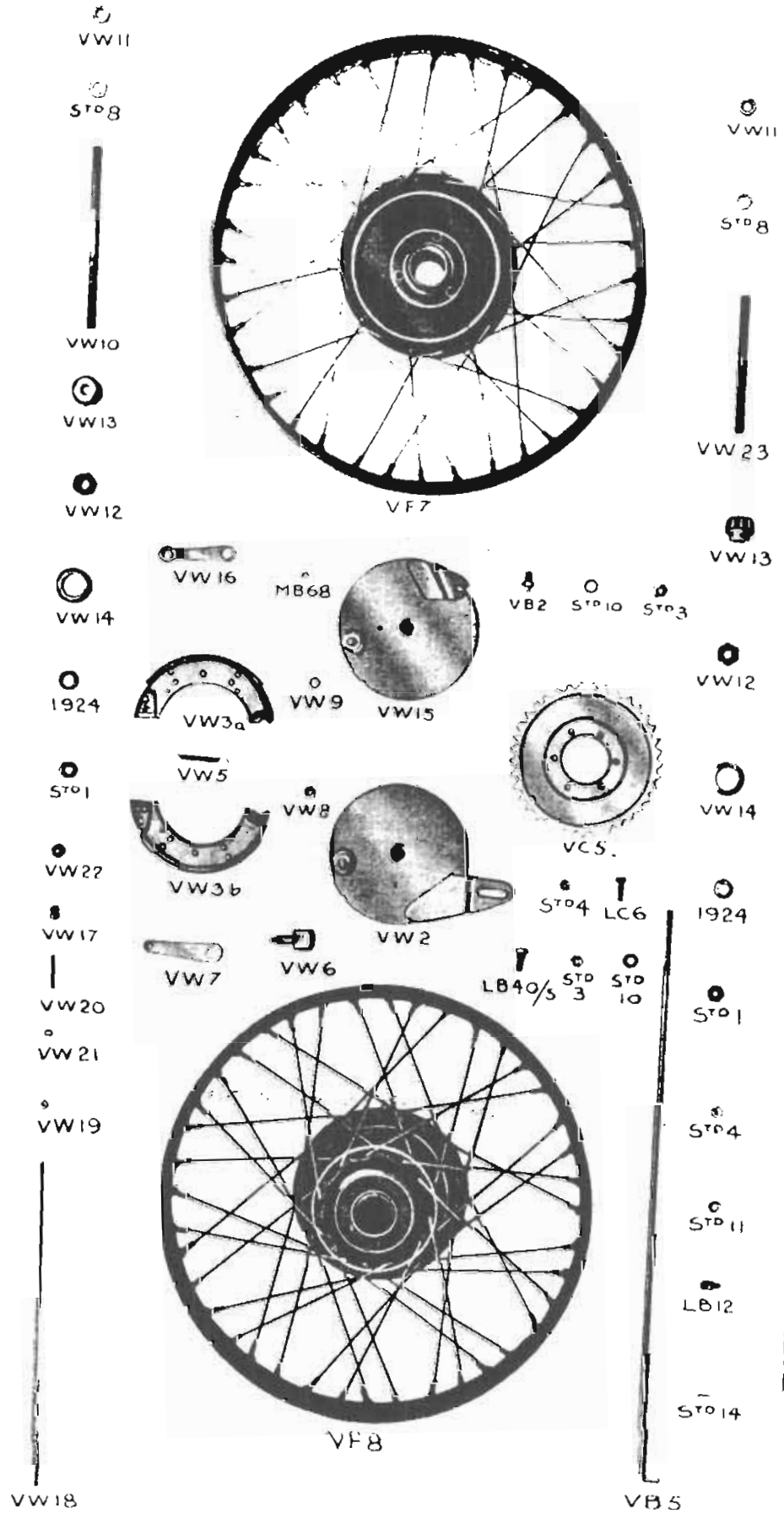
V.T.	68	Tank less all fittings ... ..	4	17	6
L.T.	71/R	Tank hinged filler cap (oil or petrol) ...	3	6	
L.T.	49	Fulcrum screw for cap ... ..		2	
H.T.	9	Petrol tap and filter ... ..	4	2	
H.T.	9A	Filter only for petrol tap ... ..		6	
H.T.	10	Petrol drain tap ... ..	1	9	
V.E.	44	Petrol pipe (see also carburettor) ... ..	4	0	
L.T.	16/R	Petrol tank fixing bolt (rear) H.T. 15 front		6	
H.T.	16	Petrol tank fixing bolt rubber pad ... ..		5	
H.T.	17	Petrol tank fixing bolt rubber pad washer		2	
L.T.	17/R	Capped nut for rear fixing bolt ... ..		6	
L/3 E.	287	Oil pipe union and filter ... ..	2	3	
L.T.	34	Knee grips (per pair) complete ... ..	5	0	
L.T.	35	Fixing bolt only ... ..		3	
L.T.	36	Fixing plate only ... ..		6	
M.T.	23	Petrol tank U pipe ... ..	2	4	
M.T.	24	Screwed nipples for above (screws into tank bottom) ... ..		3	
H.T.	27	Union nut for U pipe ... ..		4	
H.T.	28	Nipple for U pipe ... ..		3	

**STANDS**

T.F.F.	67	Front stand only ... ..	5	0	
L.F.	32	Front stand fixing bolt ... ..		3	
L.F.	159	Front stand fixing bolt lock nut ... ..		2	
L.F.	301/R	Rear stand only ... ..	10	9	
L.F.	38	Rear stand fixing bolt right ... ..		3	
L.F.	19	Rear stand fixing bolt lock nut ... ..		4	
R.M.	31	Stand clip screwed stud ... ..		3	
S.T.D.	5	Locking nut for screwed stud ... ..		2	
H.B.D.	28	Stand clip fly nut ... ..	1	0	
L.F.	338/R	Rear stand fixing bolt left ... ..		6	



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WHEELS AND PARTS



**REAR WHEEL AND BRAKE PARTS**

£ s. d.

V.F.	10A	Rear wheel complete with tyre Dunlop Cord B/E 650 × 65 and all fittings ... ..	6	10	2
V.F.	10	Rear wheel complete less tyre ... ..	4	0	0

**Rear Wheel and Brake Parts**

V.F.	8	Rear wheel bare (less all fittings) ... ..	3	0	0
V.C.	5	Rear wheel chain sprocket ... ..	8	0	
L.C.	6	Fixing bolts for above (each) ... ..			2
S.T.D.	4	Lock nut for sprocket bolt (each) ... ..			2
V.W.	1	Rear brake cover plate assembled with bands, expander, etc. ... ..	1	4	9
V.W.	2	Rear brake cover plate with anchor arm cam bush, oil dish and swivel pin integral		8	9
V.W.	3	Rear brake shoes with lining (per pair) ... ..	11	0	
V.W.	4	Linings only with rivets (per pair) ... ..	3	6	
V.W.	5	Brake shoe internal spring (each) ... ..			4
V.W.	6	Brake shoe expander ... ..	2	6	
V.W.	7	Brake shoe expander lever ... ..	1	0	
V.W.	8	Fixing nut for lever ... ..			4
V.W.	9	Washer for above ... ..			2
V.B.	5	Rear brake rod only ... ..	2	6	
S.T.D.	4	Nuts for same (each) ... ..			2
L.B.	12	Brake rod toggle or crosshead ... ..			8
S.T.D.	14	Split pin for fixing toggle and securing front end of brake rod ... ..			1
S.T.D.	11	Washer (fits behind split pin) ... ..			1
V.B.	1	Rear brake pedal ... ..	4	9	
M/3 B	61/S	Rear brake pedal pull-off spring ... ..			4
L.B.	37/S	Rear brake pedal fulcrum stud ... ..	4	6	
L.E.	16	Long bolt fixing above ... ..			7
S.T.D.	3	Nut for bolt ... ..			4
L.B.	6	Distance tube (fits between cradle plates)			4
V.W.	10	Rear wheel spindle ... ..	1	9	
S.T.D.	1	Rear wheel spindle nut (outside fork ends)			6
V.W.	11	Rear wheel spindle nut (inside fork ends)			6
V.W.	12	Rear wheel spindle nut (inside cover plate)			6
1845		Rear wheel spindle washer (outside fork end)			3
1924		Rear wheel spindle washer (domed) ... ..			3
V.W.	13	Rear wheel taper cone and rollers			6
V.W.	14	Hardened steel outer race for above }	7	6	
L.B.	40/S	Shouldered bolt for anchoring brake cover plate to frame ... ..			6
S.T.D.	3	Nut for above ... ..			3
S.T.D.	19	Washer ... ..			1
M.B.	68	Rear hub grease nipple ... ..			3

Rear Wheel and Brake parts— <i>contd.</i>			£	s.	d.
L.F.	55	Rear Wheel tyre complete (cover and tube) Dunlop Cord 650 × 65	2	10	2
L.F.	55B	Cover only ... ..	2	1	6
L.F.	55A	Inner tube only ... ..		8	8
V.F.	14	Rear wheel rim (drilled and enamelled) ...		8	0
H.D.H.	54	Rear wheel spokes (drum side) each ...			1
M.H.	73	Rear wheel spokes (sprocket side) each ...			1
H.D.H.	30	Rear wheel spoke nipples (each) ... ..			2
V.W.	24	Rear hub grease retaining metal washer ...			4

### FRONT WHEEL AND BRAKE PARTS

V.F.	9A	Front wheel complete with Dunlop Cord tyre 650 × 65 and all fittings... ..	5	16	2
V.F.	9	Front wheel complete less tyre ... ..	3	6	0
V.F.	7	Front wheel bare (less all fittings)... ..	2	6	0
V.W.	15	Front brake cover plate with anchor arm cam bush, oil dish and swivel pin integral ... ..		8	9
V.W.	3	Front brake shoes only with linings (per pr.)	11		0
V.W.	4	Front brake shoe linings with rivets (per pr.)	3		6
V.W.	5	Front brake shoe internal spring (each) ...			4
V.W.	6	Front brake shoe expander ... ..	2		6
V.W.	16	Front brake shoe expander lever ... ..	1		0
V.W.	8	Nut fixing lever ... ..			4
V.W.	9	Washer for nut ... ..			2
V.W.	17	Front brake rod roller for expander lever...			4
V.W.	18	Front brake rod ... ..			9
V.W.	19	Nuts for bottom end (each)... ..			2
V.W.	20	Spring for bottom end of rod ... ..			4
V.W.	21	Concave end collar for end of rod ... ..			4
V.W.	22	Concave end adjuster nut for rod ... ..			4
L/4 B.	103	Adaptor for top end of rod ... ..			3
V.B.	10	Front brake cable complete with spring-box	4		2
V.B.	11	Front brake cable only (inner and outer)	2		4
V.B.	12	Front brake cable (inner only) ... ..			9
V.B.	13	Front brake cable (outer only) ... ..	1		7
L.B.	25	Front brake spring-box ... ..	1		0
L.B.	27	Front brake cable adjuster only with nut			7
L.B.	26	Front brake spring ... ..			3
L/4 B.	102	Front brake nipple for wire (fits in spring- box) ... ..			2
V.W.	23	Front wheel spindle ... ..	1		9
S.T.D.	1	Front wheel spindle nuts (outside fork end) each ... ..			6
V.W.	11	Front wheel spindle nuts (inside fork end) each ... ..			6

<b>Front Wheel and Brake Parts—contd.</b>			£	s.	d.
V.W.	12	Front wheel spindle nut (inside cover plate)			6
1845		Front wheel spindle washer (outside fork end) ... ..			3
1924		Front wheel spindle washer (domed) outside cover plate ... ..			3
V.W.	13	Front wheel taper cone and rollers ... }	7		6
V.W.	14	Hardened steel outer race for above ... }			
M.B.	682	Front hub grease nipple ... ..			3
V.B.		Shouldered bolt for anchoring brake cover plate to forks ... ..			7
S.T.D.	3	Nut for above ... ..			3
S.T.D.	10	Washer for nut ... ..			1
V.F.	13	Front wheel rim (drilled and enamelled) ...	8		0
V.F.	12	Front wheel spoke (drum side) ... ..			1
V.F.	11	Front wheel spoke left side ... ..			1
H.D.H.	30	Front wheel spoke nipples (each) ...			2
L.F.	55	Front wheel tyre (cover and tube) Dunlop Cord ... ..	2	10	2
L.F.	55B	Front wheel tyre cover only ... ..	2	1	6
L.F.	55A	Inner tube only ... ..		8	8
V.W.	24	Front hub grease retaining metal washer			4
		Front brake lever (see Handlebars) ...			

### CHAIN GUARDS AND CHAINS

V.C.	10	Rear chain guard ... ..	7		6
L.F.	37	Bolt fixing same rear end ... ..			3
S.T.D.	4	Nut for above ... ..			2
V.E.	19	Bolt for front end (engine bolt) ... ..			5
V.C.	1	Front chain guard ... ..	16		6
V.C.	8	Bottom fixing bolt $\frac{1}{2}$ in. dia. (see also engine bolts) ... ..			6
H.F.B.	5	Distance tube for above ... ..			5
S.T.D.	1	Nuts for bolt (each) ... ..			5
L/3 C.	53	Distance collar for rear end fixing stud ...			3
S.T.D.	4	Nut for rear end fixing stud ... ..			2
S.T.D.	11	Washer for rear end fixing stud ... ..			1
V.M.D.	12	Magneto chain case ... ..	12		0
M.E.	58	Long centre fixing bolt to engine plate ...			6
V.M.D.	16	Distance tube for above ... ..			4
L/3 M.D.	50	Special spacer nut (inside chain case) ...			5
S.T.D.	3	Standard nuts for bolt (each) ... ..			3
H.M.	7	Screw securing magneto chain case to timing gear cover ... ..			2
V.C.	13	Rear driving chain complete ... ..	1	1	0
V.C.	14	Front driving chain complete ... ..	12		0
M.C.C.	15	Driving chain connecting link complete ...			7

<b>Chain Guards and Chains—<i>cont'd.</i></b>			£	s.	d.
M.C.C.	15A	Spring clip only for above ... ..			2
M.M.D.	18	Magneto driving chain complete ... ..	2	6	
M.M.D.	18A	Connecting link only ... ..			5
M.M.D.	18B	Spring clip only for above ... ..			2
L.C.	25	Chain rivet extractor ... ..	5	0	

**FOOTRESTS AND PARTS**

M/3 F.B.	59/S	Footrest rod only ... ..	1	6	
S.T.D.	3	Footrest rod end nuts (each) ... ..			2
L.F.R.	11	Footrest rod end washers (each) ... ..			3
V.F.R.	2	Footrest link plates (each) ... ..			8
V.B.R.	1	Footrest engine plates left or right ... ..			10
		Bolts securing above (see engine bolts)			
L/3 F.R.	51	Footrest rubber pad (only) ... ..			10
L/3 F.R.	54	Footrest rubber pad assembled in holder	2	2	
L/3 F.R.	53	Footrest rubber pad end flanges (each) ... ..			3
L/3 F.R.	52	Footrest rubber pad centre tube ... ..			5
L/4 F.R.	66	Footrest pad spindle (right side short)	1	0	
L.F.R.	13/S	Footrest pad spindle (left side long) ... ..	1	3	
S.T.D.	3	Footrest pad spindle end nuts ... ..			3
L.F.R.	11	Footrest pad spindle spigot washer ... ..			3
J.F.R.	3	Footrest distance tube left side ... ..			7
M/3 F.B.	57	Footrest distance tube right side ... ..			7
H.F.B.	5	Footrest distance tube centre (between plates) ... ..			5

**HANDLEBAR, ETC.**

M/3 F.F.	124/S	Handlebar bare ... ..	1	2	0
M/3 F.F.	124/S/A	Handlebar with grips ... ..	1	5	6
M.F.F.	48	Inverted lever left or right complete ... ..		7	6
M.F.F.	49	Lever portion of above only ... ..		3	9
M.F.F.	53	Body portion only ... ..		3	3
M.F.F.	50	Fulcrum screw for lever ... ..			4
M.F.F.	51	Nut for ditto ... ..			2
S.T.D.	40	Screw securing body portion to handlebar			2
L/4 F.F.	64	Handlebar clip bolt ... ..			6
S.T.D.	3	Nut for ditto ... ..			3

**SADDLE AND PARTS**

M/3 F.	181/S	Saddle only special Lycett Aero ... ..	1	15	0
L.F.	324/R	Bolt securing front end to frame tube ... ..			8
L.F.	325/R	Locking washer for above ... ..			4

<b>Saddle for Parts—<i>contd.</i></b>			£	s.	d.
S.T.D.	4	Nut for above ... ..			3.
M/3 F	155/S	Saddle springs only (each) ... ..	1		9
S.T.D.	3	Nut securing above to carrier or saddle arch			3.
T.F.	85	Saddle spring arch for non-carrier machines	5		0
L.F.	39	Bolt securing above to rear mudguard ...			2
S.T.D.	4	Nut for bolt ... ..			2
H.F.	96	Bolt securing lower end of arch ... ..			4
L.F.	159	Nut for above ... ..			3

### MAGNETO AND PARTS

M.M.D.	10	Complete magneto ... ..	4	2	6.
	41b	Contact breaker complete ... ..	1	2	6.
4I52/4I22		Contact screws only with bell crank levers	14		0
	7p	High tension pick-up complete ... ..	2		6
1052		Carbon brush and spring only ... ..			6
V.E.	113	Sparking plug cable with terminal end ...	1		0.
M.M.D.	14	Magneto chain sprocket magneto ... ..	2		3.
		Nut fixing above to magneto ... ..			2
		Washer for nut ... ..			1.
M.E.	38	Magneto chain sprocket on camshaft ...	2		0
L/3 E.	269	Special nut securing sprocket to camshaft			11
V.E.	48	Magneto aluminium platform ... ..	7		6
M.M.D.	1	Bolt securing magneto to above (each) ...			4
V.M.D.	15	Magneto chain adjuster stud screws in above			3.
L.M.D.	8	Special double head adjuster stud nut ...			9
M.M.D.	21	Magneto advance and retard cable (outer)	2		0.
M.M.D.	20	Magneto advance and retard cable (inner)			9
		Handlebar lever for above complete ...	6		9.
		Lever portion only ... ..	1		9.
		Screw centre screw securing lever ... ..			4.
		Large washer for centre screw ... ..			4.

### MECHANICAL OIL PUMP AND PARTS

V.E.	99	Oil pump complete ... ..	17		6.
R.E.	131	Oil pump paper joint washer for timing cover			1
P/OP	1/S	Oil pump body only ... ..	6		0.
P/OP	2	Oil pump cap (with cam projection) ...	1		0.
P/OP	3/S	Oil pump plunger ... ..	3		0.
P/OP	4	Oil pump regulator spindle ... ..	1		6.
P/OP	5	Oil pump driving worm ... ..	1		6.
P/OP	6	Oil pump screwed bush ... ..			9.
P/OP	7	Oil pump fibre washer for regulator ...			1
P/OP	8	Oil pump steel washer for regulator ...			1
P/OP	9	Oil pump spring washer for regulator ...			1



<b>Mechanical Oil Pump and Parts—<i>contd.</i></b>			£	s.	d.
P/OP	10	Oil pump cap for glass window ... ..	1	0	
P/OP	11	Oil pump glass window ... ..		2	
P/OP	29/S	Oil pump screwed union with ball valve ...		9	
P/OP	19	Screws securing cam cap (each) ... ..		1	
P/OP	20	Washer for cam cap ... ..		1	
P/OP	22	Oil pump spring ... ..		3	
P/OP	24	Ratchet pin for regulator ... ..		1	
P/OP	25	Ratchet spring for regulator ... ..		1	
P/OP	26	Screw for window cap (each) ... ..		1	
V.E.	99A	Oil pump fixing screw ... ..		1	
P/OP	28	Locking washer for screw ... ..		1	
V.E.	101	Oil pipe pump to tank ... ..	4	6	
V.E.	103	Oil pipe pump to crankcase ... ..	2	6	
V.E.	11	Oil pipe pump to cylinder wall ... ..	3	6	
L/3 E.	247	Oil pipe union (screws into crankcase and cylinder) ... ..		3	
P/OP	14	Oil pipe gland nut (pump end) ... ..		4	
P/OP	13	Oil pipe nipple ... ..		3	
L/3 E.	284	Oil pipe union nut tank end, etc. ... ..		4	
L/3 E.	290	Oil pipe nipple tank end, etc. ... ..		3	
L/3 E.	287	Oil pipe union and filter (screws into tank)	2	3	
L.E.	479/R	Oil pump worm shaft block for drive (fits on flattened end of shaft) ... ..		8	

**CARBURETTOR B. & B.**

L.E.	402/S	Complete carburettor (special type B. & B.	2	10	0
		Float chamber body only ... ..		8	6
		Float chamber cap and tickler ... ..		7	8
		Float chamber needle valve ... ..		10	
		Float ... ..	2	6	
		Main jet complete ... ..	1	9	
		Fibre washer for same ... ..		1	
		Pilot jet ... ..		9	
		Pilot jet air screw and spring ... ..		7	
		Jet taper needle ... ..	1	9	
		Needle holder and screw ... ..		7	
		Spraying chamber ... ..	8	6	
		Spraying chamber cap with bushes ... ..	1	8	
		Spraying chamber cap lock ring ... ..	1	3	
		Clip and bolt for inlet port ... ..	1	8	
		Bolt only ... ..		3	
		Throttle valve } per			
		Air valve } pair ... ..	6	9	
		Valve springs (pair) ... ..	1	2	
M.E.	289	Control levers complete ... ..	7	0	
M.E.	286	Air lever only ... ..	2	11	
M.E.	287	Throttle lever only ... ..	2	11	
V.E.	64	Control cables (inner and outer) complete	5	9	

**EQUIPMENT**

			£	s.	d.
L.E.Q.	56	Acetylene Head lamp set complete	2	1	6
L.E.Q.	57	Rubber tubing, per yard			8
L.E.Q.	58	Head lamp only (with special fittings)	1	14	6
L.E.Q.	59	Tail lamp only (No. 135)		4	0
L.E.Q.	62	Generator (with bracket)		12	0
L.E.Q.	64	Bonnixsen speedometer gear-box		16	0
L.E.Q.	65	Bonnixsen speedometer complete (trip)	4	10	0
		Bonnixsen speedometer complete (non-trip)	4	0	0
L.E.Q.	35	Bonnixsen speedometer driving wheel and axle		2	6
L.E.Q.	36	Bonnixsen speedometer driving wheel screw and clamps (per pair)			2½
L.E.Q.	37	Bonnixsen speedometer driving wheel complete		4	0
L.E.Q.	38	Bonnixsen speedometer flexible drive complete		6	3
L.E.Q.	39	Bonnixsen speedometer cable outer		4	1
L.E.Q.	40	Bonnixsen speedometer cable (inner)		2	2

**TOOLS**

L/3 T.K.	16	Oil injector		2	0
L/3 T.K.	15	Six inch combination pliers		1	6
L/3 T.K.	13	Six inch wire screwdriver			9
L/3 T.K.	10	Double end forged spanner ¼ × 5/16ins.		1	3
L/3 T.K.	11	Double end forged spanner ⅜ × ½ins.		1	6
L/3 T.K.	9	Tappet adjusting spanner			9
R.T.K.	1	Thin cone adjusting spanner			6
L.T.K.	12	Six inch adjustable spanner		6	0
L.T.K.	18	Large open end spanner for timing gear bevel shaft housing lock nut		2	0
L.T.K.	20	Tecalemit grease gun		2	6
L.T.K.	14	Tyre lever			3
L.T.K.	21	Tyre pump		3	9
L.T.K.	5	Magneto spanner			4
L.T.K.	17	Tool roll only		4	0
V.T.K.	22	Tool roll complete with all tools (less pump)	1	3	0
R.F.	45	Tool box only (for luggage carrier)		15	0
L.F.322/3/R		Tool box only (for carrier less model)		5	0
		Valve Holder and Spring compressor (a recommended Tool facilitating valve spring renewal without dismantling)		6	0

**SIDECAR AND PARTS**

L/4 F.	221	Sidecar main frame (with 2 double clip lugs attached, underslung chassis)	2	17	6
L.F.	148	Pinch bolt for clip lug (each)			7
S.T.D.	3	Nut for bolt (each)			3

Sidecar and Parts— <i>contd.</i>			£	s.	d.
L/4 F.	223	Sidecar front bent arm ... ..	9	6	
L.F.	95	Nut for same ... ..			3
L.F.	147	Washer for above ... ..			2
L.F.	88	Sidecar front arm clip lug (complete for frame tube) ... ..	6	3	
L.F.	101	Bolts for clip lug only (each) ... ..			4
L/4 F.	223	Sidecar rear bent arm ... ..	9	6	
L.F.	95	Nut for same ... ..			3
L.F.	147	Washer for above ... ..			2
L.F.	88	Sidecar rear arm clip lug (complete for frame tube) ... ..	6	3	
L.F.	101	Bolts for clip lug only (each) ... ..			4
L.F.	89	Clip lug for main sidecar frame attachment, to chain stay ... ..	5	6	
L.F.	101	Bolts for clip lug only (each) ... ..			4
L.F.	138	Packing sleeve for clip lug (2 parts) ...	1	2	
L.F.	94	Large bolt for fixing sidecar frame to above clip lug ... ..			6
S.T.D.	1	Nut for bolt ... ..			5
L/4 B.D.	14	Sidecar body complete with apron (standard touring) ... ..	7	0	0
L/4	38	Sidecar body Sports polished aluminium panelled type ... ..	7	10	0
L.B.D.	12	Apron only (Sports type 10/6) standard type ... ..	10	6	
H.B.D.	53	Apron turn buttons (each) ... ..			5
L.F.	91	Sidecar body rear springs (each) ... ..	7	3	
L.F.	96	Sidecar body rear spring fixing bolt long ...			4
L.F.	106	Sidecar body rear spring fixing bolt short			4
S.T.D.	4	Nuts for above (each) ... ..			2
L.F.	145	Sidecar rear spring pad lug plate ... ..	1	1	
L.F.	152	Sidecar body front coil spring (each) ...	1	6	
S.T.D.	3	Nut for fixing (bottom end) ... ..			3
S.T.D.	10	Washer for nut ... ..			1
L.F.	153	Bolt for fixing top end to body ... ..			3
L.F.	154	Large washers for same (each) ... ..			4
S.T.D.	3	Nut for bolt ... ..			3
L.B.D.	1	Sidecar body rear bearer bar ... ..	3	3	
S.T.D.	3	End nuts for same (each) ... ..			3
H.B.D.	14	Spring washer for end (each) ... ..			3
S.T.D.	10	Plain washer for end (each) ... ..			1
S.T.D.	14	Split pin for end (each) ... ..			1
H.B.D.	9	Coach bolts for fixing bearer bar to body			2
H.B.D.	13	Large washer for above ... ..			4
H.B.D.	24	Coach bolt nuts (each) ... ..			1
L.M.	24	Sidecar mudguard only ... ..	12	6	
S.T.D.	4	Nuts fixing to body studs ... ..			2
S.T.D.	11	Washer for above ... ..			1

Sidecar and Parts— <i>contd.</i>			£	s.	d.
I/4 B.D.	25	Windscreen complete with all fittings, Matchless hinged ... ..	1	5	0
L.F.	81/B	Sidecar wheel (with cups only) ... ..	1	2	3
C.H.	1	Sidecar wheel fixed cone ... ..	1		6
C.H.	2	Sidecar wheel adjusting cone ... ..	1		1
C.H.	3 and 5	Special locking washer and split pin ...			2
C.H.	4	Castellated lock nut ... ..			6
L.F.	6	Sidecar wheel hub end cap ... ..	1		6
L.F.	7	Sidecar hub balls (per set) ... ..	1		2
L.F.	8	Sidecar hub lubricator ... ..			5
L.B.D.	11	Sidecar door handle ... ..	2		6
L/4 B.D.	51	Hood Saloon type complete to suit wind- screen ... ..	1	10	0
L.F.	55	Sidecar tyre 650 × 65 B/E Dunlop Cord Cover only ... ..	2	1	6
L.F.	55A	Inner tube only ... ..		8	8
L.F.	16	Wheel rim drilled and enamelled ... ..		8	0
L.F.	67	Wheel spokes ... ..			1
L.F.	64	Spoke nipples (each) ... ..			2