

# STURMEY-ARCHER 3-SPEED COUNTERSHAFT GEAR (TYPE III).

SUITABLE FOR ENGINES FROM 350 c.c. to 1,000 c.c.

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## IMPROVEMENTS FOR 1931.

1.—The most up-to-date method of gear-cutting for the teeth is used, and all gears are specially burnished to ensure silence.

2.—The various gear positions are indexed internally as well as by the outside quadrants.

3.—A self-contained ball bearing is fitted on the main sleeve gear.

4.—A phosphor bronze bush is fitted in the Main Gear Wheel.

5.—The kickstarter axle and pawl have both been re-designed, and are now stronger than before.

6.—The kickstarter crank is fixed to the axle by serrations, and can be placed in any desired position.

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Three speeds and a kickstarter are provided by using only three pairs of pinions. The kickstarter drive is taken through the low gear pinions, thus dispensing with the extension on the box, and reducing weight appreciably. The kickstarter mechanism is entirely enclosed, and the box presents a particularly neat and pleasing appearance.

This box is fitted with constant mesh pinions, thereby preventing any possibility of damage to gears when changing.

## TYPES OF CLUTCHES.

- 2 Plate Multi Spring Plain or Shock Absorber Clutch.
- 3 Plate Multi Spring Plain or Shock Absorber Clutch.
- 4 Plate-Multi Spring Plain or Shock Absorber Clutch.

### Shock Absorber Multi-Spring Clutch.

A Multi-Spring Shock Absorber is made in 2, 3 or 4 plate sizes. The Sprocket is mounted on a roller bearing, and is securely held in position laterally to eliminate side play and also prevent any variation in chain line. The six springs are equally spaced round the face, and are arranged to bring the pressure as close to the driving surface as possible.

The advantage secured by the Multi-Spring Clutch is a more equal distribution of the spring pressure round the driving surfaces, while the plates are less liable to tilt when the clutch is released, and the clutch is altogether more efficient.

### SLIPPING CLUTCH.

Worm operated type :—

The clutch worm lever should be examined immediately any sign of slipping is suspected, to ensure that it has  $\frac{3}{16}$ " idle movement when the clutch is fully engaged.

In the case of the clutch nut, L.S.25, it may be found that the shoulder on the worm is bearing on the face of the felt washer. As a temporary measure release the steel cap, L.S.26, but to effectually cure the trouble, it will be necessary to shorten the clutch rod by  $\frac{1}{16}$ " or thereabout.

Direct Pull type :—

When the direct pull operating lever is fitted, it is important to ensure that there is  $\frac{3}{32}$ " clearance between the end of the rod and the ball-ended adjusting screw when the clutch is fully engaged.

When fitting up the clutch control cable, ease off the bends as much as possible, otherwise the clutch will be difficult to operate.

### TO DISMANTLE CLUTCHES.

#### Multi Spring Clutches.

The six screws which hold the Clutch Springs should be unscrewed first, afterwards lifting out the Springs and Spring Boxes. The Spring Box Plate and the other Clutch Plates are then lifted apart, noting particularly the direction in which the dished centre portions of these face, as they vary, and it is essential that they are replaced exactly as they were found originally.

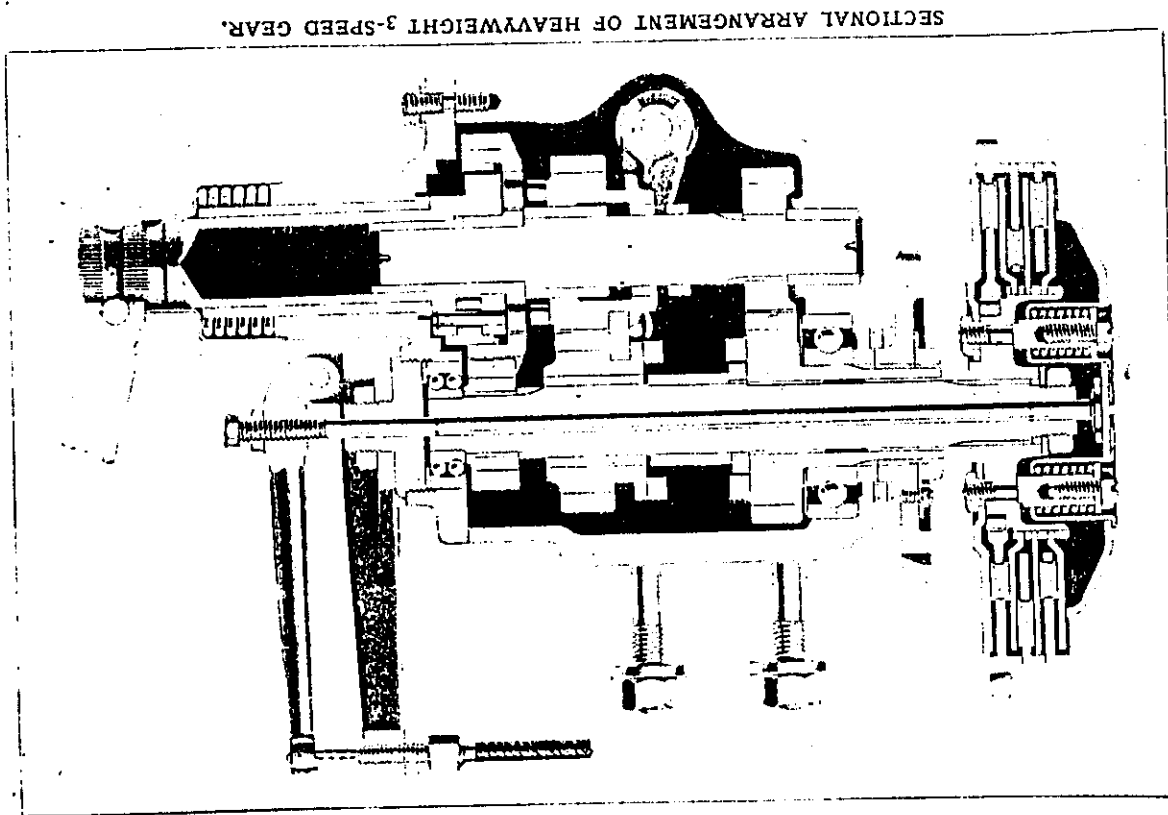
With these points carefully noted there should be no difficulty in re-assembling. No adjustment of the spring tension is provided, but extra strong springs are available in case of need. We do not recommend fitting these unless absolutely essential, as they are inclined to make the Clutch more difficult to release.

#### Shock Absorber Clutches.

The Clutch portion can be dismantled as described for the plain type. The Shock Absorber may present some difficulty, as the screws holding the parts together are burred over, to prevent the lock nuts from working loose.

After the four screws have been removed, the Driver can be withdrawn, and the rubbers taken out of the slots in the body of the Sprocket.

The positions of the rubbers should be carefully noted. The solid rubbers are fitted in the driving side, and those with the small hole on the opposite side.



SECTIONAL ARRANGEMENT OF HEAVYWEIGHT 3-SPEED GEAR.

To remove the Sprocket from the bearing, it is necessary to unscrew the six nuts on the Clutch Spring Studs; the small plate and the Sprocket can then be removed.

The Sprocket bearing is composed of loose  $\frac{1}{4}$ " dia. Balls and Rollers placed alternately. These should be assembled with grease.

### GEAR CONTROLS.

Two types of change gear control are supplied, and each type is available for the different positions given below:—

1. Disc Pattern with "V" Notches.
  2. Gate Pattern.
- This type of control is arranged to be bolted or rivetted to the side of the petrol tank.

Two types of Lever are available, one working in a vertical position, and the other in a horizontal position. The latter is used almost universally, and this type only has been illustrated in this booklet.

### CHANGING GEAR.

When starting from rest, with engine running and gear in neutral, release clutch and push gear control lever sharply into first or low position, when the throttle may be opened to the required amount, and clutch engaged gradually. As sufficient momentum is obtained, clutch and gear control may again be manipulated for second and finally high gear as above.

We would emphasise that gearboxes are meant to be used. Sturmeys-Archer gears are particularly easy to change, therefore never allow the engine to labour, or resort to slipping the clutch on a hill. Change down to a lower gear; keep the engine revving freely, and you will find that a much faster climb can be made without punishing the engine.

### GEAR CONTROL ADJUSTMENT.

It is important to see that the Gear Control is kept properly adjusted, and this should be tested occasionally to see that it is correct.

Before proceeding to adjust Control, see that the Nut on the Rockingshaft Spindle is thoroughly tight.

The adjustment of the gear is effected by removing the pin from the top connection on the end of the Control Rod, and giving the connection one turn, or half a turn, to the thread, up or down, to lengthen or shorten the Control Rod as required. When the gear is properly adjusted, the Control Lever should move an equal amount either side of the neutral notch without engaging either the middle or low gear; finally check by pin in top connection, being just free to slide with the pressure of the thumb and finger when in high gear.

As the gears are automatically indexed inside the box independent of the lever in the gate, it is important to see that the positions of the gate lever harmonise with the indexing mechanism inside the box.

To check this, place the Rockingshaft Lever in middle position and remove the pin from the top connection. If the holes in the two pieces do not coincide, give the connection one turn or half a turn up or down until the pin engages both freely without being forced.

If the Control is not mounted directly on the box, any adjustments made to the chains will interfere with the setting of the control.

### TO TAKE GEAR APART.

Disconnect Clutch Control Wire, then remove seven Cover Nuts and gently pull off the Cover Plate. Do not use a screwdriver or similar tool to part the joint or the latter will fail to retain oil when re-assembled. If the plate sticks, one or two light blows inside the Kickstarter Crank will loosen it. This will expose the complete interior to view. By disconnecting the Gear Control Rod, the Low and Middle Gear Pinions, also Layshaft, may be lifted out.

When replacing, take care that the ball bearings are not tilted. No forcing is necessary when replacing the Cover Plate.

### LUBRICATION.

Use Gargoyle Mobilgrease, which is used by us and specially prepared for Sturmeys-Archer Gearboxes. Charge with  $\frac{1}{2}$  lb. and re-charge with  $\frac{1}{2}$  lb. about every 1,000 to 1,500 miles. Gargoyle Mobilgrease is a thick oil and not ordinary grease, but it does not leak. It is marketed in 1 lb. collapsible tubes, the use of which facilitates filling.

It is very important to see that these instructions are carefully observed. No harm is done by an additional charge, but on the other hand we find that a large percentage of gear trouble can be directly attributable to insufficient lubrication or by using a lubricant which is not suitable.

It is not advisable to use thick grease, as it may prevent the free operation of the kickstarter pawl.

The various joints in the gear changing lever mechanism should be kept oiled regularly to ensure freedom of action. Inject a little vaseline or grease between the Index and Quadrant Plate, L.S.60 and L.S.41 on the Disc pattern Control.

DO NOT lubricate the Clutch, as this is designed to run dry.

### Formula for Finding the Top Gear Ratio.

$$\frac{\text{No. of teeth on Clutch Sprocket.} \times \text{No. of teeth on Rear Sprocket.}}{\text{No. of teeth on Engine Sprocket.} \times \text{No. of teeth on Gear Sprocket.}} = \text{Top Gear Ratio.}$$

$$\text{Example: } \frac{42 \times 55}{21 \times 20} = 5\frac{1}{2} \text{ to 1 Top Gear.}$$

A variation of the top gear ratio can be secured by altering the number of teeth on the Engine, or small Gear Sprockets.

### List of Available Gear Ratios.

Standard Gears ..... 1 : 1.47 : 2.97  
 Close Ratio..... 1 : 1.33 : 2.57

Note that Top Gear is controlled by the sizes of the chain sprockets on Engine, Gearbox and Rear Wheel, and cannot be altered by changing the internal gear wheels.

| Top. | Standard Ratio. |       | Close Ratio. |       |
|------|-----------------|-------|--------------|-------|
|      | Middle.         | Low.  | Middle.      | Low.  |
| 3    | 4.41            | 8.91  | 4            | 7.71  |
| 3.25 | 4.78            | 9.65  | 4.33         | 8.35  |
| 3.5  | 5.15            | 10.39 | 4.66         | 8.99  |
| 3.75 | 5.52            | 11.13 | 5            | 9.63  |
| 4    | 5.88            | 11.88 | 5.33         | 10.28 |
| 4.25 | 6.25            | 12.62 | 5.66         | 10.92 |
| 4.5  | 6.62            | 13.36 | 6            | 11.56 |
| 4.75 | 6.99            | 14.10 | 6.33         | 12.20 |
| 5    | 7.35            | 14.85 | 6.66         | 12.85 |
| 5.25 | 7.72            | 15.59 | 7            | 13.49 |
| 5.5  | 8.09            | 16.33 | 7.33         | 14.13 |
| 5.75 | 8.46            | 17.07 | 7.66         | 14.77 |
| 6    | 8.82            | 17.82 | 8            | 15.42 |

## NOTES AND RULES FOR ORDERING SPARES

- 1.—All prices refer to one only unless otherwise stated.
- 2.—Prices do not include cost of postage or carriage, but goods value £5 or more will be sent carriage paid.
- 3.—All prices of spares and replacement parts are subject to revision or modification, at our discretion, without notice.
- 4.—Our Three-speed gearboxes are stamped with a letter followed by the Roman numerals III preceding the box number. This lettering indicates to us the details of such fittings as the Kickstarter extension, sprocket sizes, type of clutch and chain lines, and it is often essential that we should be advised this lettering, in order to know which part to send. It is therefore always advisable to quote these symbol letters from the box when ordering spares. The number need only be quoted in the case of claims for replacement under guarantee.
- 5.—We have endeavoured to provide such dimensions as will enable customers to identify any parts which they may be requiring, but there are some parts, notably gear control rods, where the shapes required to suit some machines are quite impossible to describe in everyday terms. We strongly recommend customers to return the original parts if renewals are necessary in these cases.

6.—If in doubt regarding correct names of parts, it is advisable to send old part as pattern. (See Notes 7 and 8). However, we recommend giving some description if at all possible, such as shaft, gear-wheel, bearing, washer, screw, etc., as we might sometimes receive several such orders from the same town on the same day, and difficulty might arise in identifying all the owners.

7.—All parts sent as patterns should be clearly marked with sender's name and address so that they may readily be identified.

8.—Patterns are not returned unless specially requested at time of ordering, as this avoids considerable postage expenses. We cannot in any case return parts for which replacements are supplied under the terms of our guarantee.

9.—Do not enclose cash with goods. Remittance should be sent by letter post for your own protection.

10.—Customers having no account with us should not fail to remit at the time of the order, and also include postage. If the remittance exceeds the cost of the parts, the balance will always be refunded with our invoice and receipt.

11.—If goods are urgently needed a Telegraph Money Order will ensure immediate attention. But customers must send their name and address as part of the message. The name and address written on the back of the form is not transmitted to us.

12.—Goods will be sent by C.O.D. post if desired, but we do not use this service unless requested, as we find some customers object. We would point out here that we have to register all letter packets for this method of despatch, so that extra postage will be caused for small orders (under 1 lb. in weight), and the Post Office charge for collecting small amounts is also relatively heavy. These extra expenses (minimum 7d.) are, of course, charged to customers.

13.—We do not despatch goods or gear boxes by Passenger Train C.O.D. If a repair is required urgently we will, if requested, wire the cost immediately after examining the gears, and customers can then remit by post or by Telegraph Money Order to avoid delay. As an alternative a blank cheque could be sent with letter of advice. Invoice would then be posted when box is returned showing the amount for which the cheque is filled in.

14.—We are willing at all times to give customers the benefit of our advice regarding any queries or difficulties which may be experienced. We therefore invite all owners to write us for any information required which cannot be found in this booklet.

# THREE-SPEED H.W. GEARBOX PARTS.

## GEARBOX SHELL.

|    |  | £ | s. | d.   |
|----|--|---|----|------|
| LS | 280C   |   | 1  | 16 0 |
|    | Gearbox Shell (Norton, standard ratio, Stamped E.111) ...  |   |    |      |
| LS | 280C   |   | 1  | 16 0 |
|    | Gearbox Shell (Norton, Close Ratio, Stamped F.111) ...   |   |    |      |
| LS | 280B   |   | 1  | 16 0 |
|    | Gearbox Shell (Enfield Models J & JA, Stamped B.111) ...   |   |    |      |
| LS | 280B   |   | 1  | 16 0 |
|    | Gearbox Shell (Enfield Models H & HA, Stamped C.111) ...   |   |    |      |
| LS | 280B   |   | 1  | 16 0 |
|    | Gearbox Shell (Enfield Model K, Stamped N.111) ...   |   |    |      |
| LS | 280B   |   | 1  | 16 0 |
|    | Gearbox Shell (Enfield Model MK, Stamped O.111) ...  |   |    |      |
| LS | 383A   |   | 1  | 16 0 |
|    | Gearbox Shell (A.J.S. Model S2, Stamped H.111) ...   |   |    |      |
| LS | 451  |   | 1  | 16 0 |
|    | Gearbox Shell (Phelon & Moore, Stamped G.111) ...  |   |    |      |
| LS | 450A   |   | 1  | 16 0 |
|    | Gearbox Cover (used when Gate Tank Control is fitted) (Flat on left base). Norton ...  |   |    |      |
| LS | 450C   |   | 15 | 0    |
|    | Gearbox Cover (used when Disc Control is fitted) (As LS.450A, but with extension on top). Norton ...   |   |    |      |
| LS | 450D   |   | 15 | 0    |
|    | Gearbox Cover (Cable Stop extension at left base). A.J.S. Model S2 ...   |   |    |      |
| LS | 450E   |   | 15 | 0    |
|    | Gearbox Cover, Horizontal (used when Disc Control is fitted) (Cable Stop boss at right base and extension on top for Disc Control). Phelon & Moore ... |   |    |      |
| LS | 450F   |   | 15 | 0    |
|    | Gearbox Cover, Horizontal (used when Gate Tank Control is fitted. As LS.450E, but less extension on top). Phelon & Moore ...                           |   |    |      |
| LS | 450H   |   | 15 | 0    |
|    | Gearbox Cover (Oil Filler level with K.S. Axle centre, and 1 boss at each top corner for Cable Stops). Enfield Models J, JA, H, HA, K & MK ...         |   |    |      |
| LS | 15A  |   | 15 | 0    |
|    | Paper Washer ...   |   |    |      |
| CS | 8G   |   | 2  | 8    |
|    | Oil Filler Plug, $\frac{3}{4}$ " long ...  |   |    |      |
| CS | 9  |   | 3  | 1    |
|    | Gearbox Cover Stud, $1\frac{1}{2}$ " long, $\frac{3}{4}$ " out of box ...  |   |    |      |
| S  | 15   |   | 1  | 1    |
|    | Gearbox Cover Stud Nut ...   |   |    |      |
| LS | 331  |   | 1  | 1    |
|    | Gearbox Cover Stud Spring Washer ...   |   |    |      |

## BEARINGS.

|                          |   | £ | s. | d. |
|--------------------------|---|---|----|----|
| LS                       | 400   |   | 7  | 6  |
|                          | Main Gear Wheel Bearing complete, $2\frac{1}{4}$ " outside dia. $\times$ $1\frac{1}{4}$ " dia. bore $\times$ $\frac{3}{8}$ " wide Oil Retaining Washer (steel), used between Main Bearing and Main Gear Wheel ... |   |    |    |
| LS                       | 409A  |   | 1  | 1  |
|                          | Oil Retaining Washer (steel), used between Shell and Main Bearing ...   |   |    |    |
| E.IV                     | 52  |   | 2  | 2  |
|                          | Felt Oil Retaining Washer ...   |   |    |    |
| E.IV                     | 53  |   | 2  | 2  |
|                          | Leather Oil Retaining Washer ...  |   |    |    |
| CS                       | 24  |   | 4  | 7  |
|                          | Mainshaft R.H. Bearing, $1\frac{1}{8}$ " outside dia. $\times$ $\frac{3}{8}$ " dia. bore $\times$ $\frac{1}{16}$ " wide   |   |    |    |
| LS                       | 300A  |   | 1  | 0  |
|                          | Layshaft L.H. Bronze Bearing, $\frac{1}{2}$ " outside dia. $\times$ $\frac{1}{16}$ " dia. bore $\times$ $\frac{1}{8}$ " long ...  |   |    |    |
| <b>GEARS AND SHAFTS.</b> |   |   |    |    |
| LS                       | 420C  |   | 13 | 0  |
|                          | Main Axle, $8\frac{3}{8}$ " long (Enfield Models J, JA, H, HA, K & MK) ...  |   |    |    |
| LS                       | 426E  |   | 13 | 0  |
|                          | Main Axle, $7\frac{3}{8}$ " long (A.J.S. Model S2, Norton, Phelon & Moore) ...  |   |    |    |
| LS                       | 444   |   | 12 | 6  |
|                          | Layshaft, $5\frac{3}{8}$ " long ...   |   |    |    |
| LS                       | 401   |   | 16 | 0  |
|                          | Main Gear Wheel, 24T, with Bronze Bush LS.408 fitted  |   |    |    |
| LS                       | 401A  |   | 16 | 0  |
|                          | Main Gear Wheel, 22T (Norton Close Ratio Model) ...   |   |    |    |
| LS                       | 443   |   | 1  | 6  |
|                          | Main Axle Thrust Washer ...   |   |    |    |
| LS                       | 403   |   | 8  | 6  |
|                          | Main Axle Sliding Pinion, 20T ...   |   |    |    |
| LS                       | 403A  |   | 8  | 6  |
|                          | Main Axle Sliding Pinion, 19T (Norton Close Ratio Model) ...  |   |    |    |
| LS                       | 403B  |   | 8  | 6  |
|                          | Main Axle Sliding Pinion, 21T (Enfield Models J & JA. Close Ratio) ...  |   |    |    |
| LS                       | 445   |   | 4  | 0  |
|                          | Main Axle Pinion, 14T ...   |   |    |    |
| LS                       | 445A  |   | 4  | 0  |
|                          | Main Axle Pinion, 13T (A.J.S. Model S2, Enfield Models H, HA, K & MK, Norton) ...   |   |    |    |
| LS                       | 445B  |   | 4  | 0  |
|                          | Main Axle Pinion, 15T (Enfield Models J and JA. Close Ratio) ...  |   |    |    |
| LS                       | 405   |   | 4  | 0  |
|                          | Layshaft Pinion, 18T ...  |   |    |    |
| LS                       | 405A  |   | 5  | 0  |
|                          | Layshaft Pinion, 20T (Norton Close Ratio Model) ...   |   |    |    |
| LS                       | 405B  |   | 5  | 0  |
|                          | Layshaft Pinion, 15T (Enfield Models J and JA. Close Ratio) ...   |   |    |    |
| LS                       | 404A  |   | 5  | 0  |
|                          | Layshaft Sliding Pinion, 22T ...  |   |    |    |
| LS                       | 404B  |   | 10 | 0  |
|                          | Layshaft Sliding Pinion, 21T (Enfield Models J & JA only, Close Ratio) ...  |   |    |    |
| LS                       | 407B  |   | 10 | 0  |
|                          | Low Gear and K.S. Wheel, 28T, with Bronze Bush E.IV.35 fitted ...   |   |    |    |
| LS                       | 407C  |   | 10 | 0  |
|                          | Low Gear and K.S. Wheel, 29T (A.J.S. Model S2, Enfield Models H, HA, K and MK, Norton) ...  |   |    |    |
| LS                       | 407D  |   | 10 | 0  |
|                          | Low Gear and K.S. Wheel, 27T. (Enfield Models J & JA only. Close Ratio) ...   |   |    |    |

**GEAR OPERATING PARTS.**

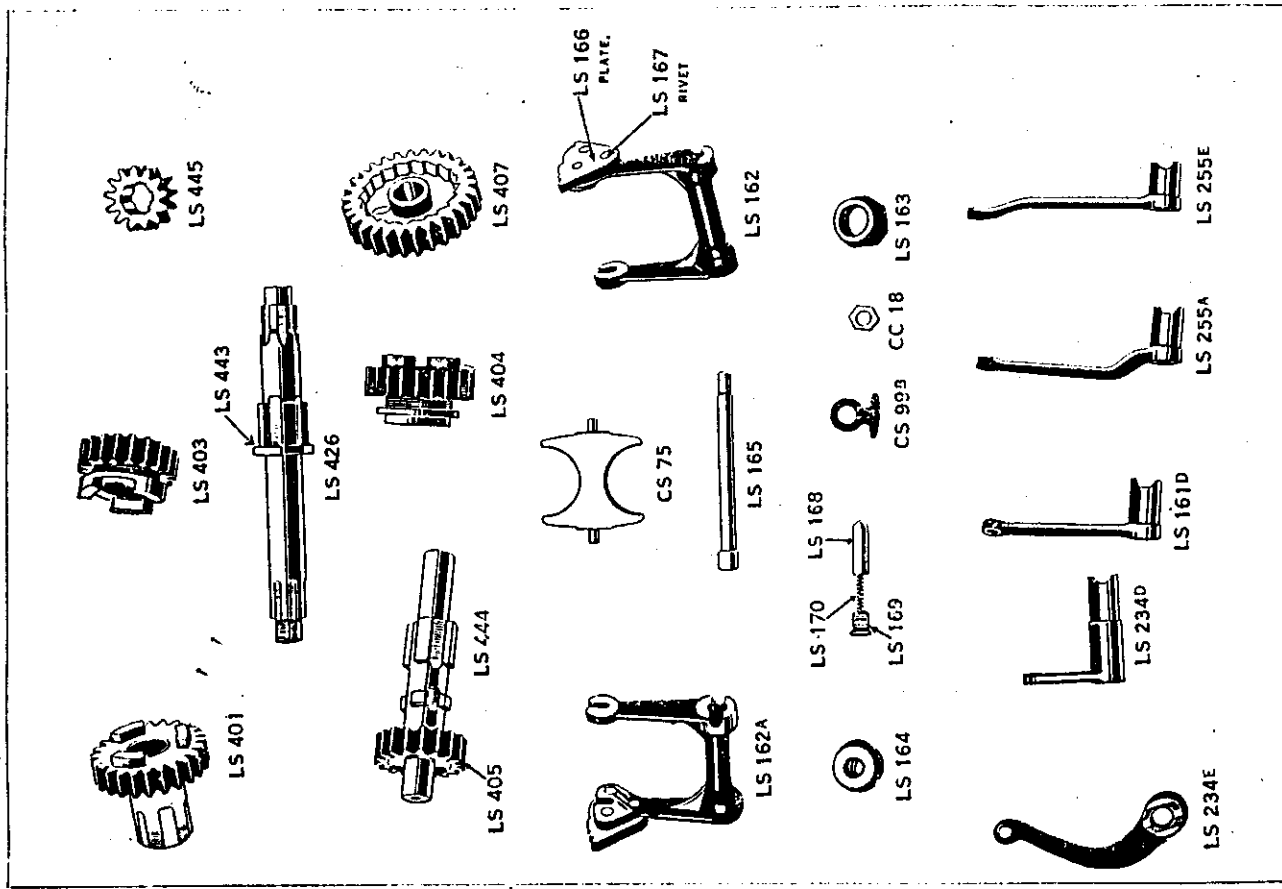
| LS   | Part Description  | £ s. d. |
|------|---|---------|
| 234D | Rockshaft Lever (Phelon & Moore). 1½" centres with body 2⅜" long                        | 3 6     |
| 234E | Rockshaft Lever, 3½" centres, flat but curved (Norton)                                  | 3 6     |
| 255C | Rockshaft Lever, 4" centres with "V" notches at an angle                                | 3 6     |
| 255D | Rockshaft Lever, 3⅝" centres both bent and curved (Enfield Models J, JA, H, HA, K & MK) | 3 6     |
| 163  | Rockshaft Lever Bush  | 2 0     |
| 164  | Rockshaft End Bush  | 1 6     |
| 165  | Rockshaft, 4½" long   | 1 3     |
| 165C | Rockshaft, 5⅝" long (Phelon & Moore)  | 1 3     |
| 166  | Sliding Gear Fork Index Plate (see note regarding Fork LS.162 below)                    | 2 0     |
| 167  | Sliding Gear Fork Index Plate Rivet, per doz.   | 0 6     |
| 168  | Sliding Gear Fork Index Plate Plunger   | 8 8     |
| 362  | Sliding Gear Fork Index Plate Plunger (Norton, A.J.S. Model S2)                         | 8 8     |
| 308  | Swivel for Rockshaft Lever (Phelon and Moore)   | 0 6     |
| 170  | Sliding Gear Fork Index Plate Spring  | 2 2     |
| 169  | Sliding Gear Fork Index Plate Screw   | 3 3     |
| 18   | Rockshaft Nut   | 2 2     |
| 75   | Sliding Gear Plate  | 6 6     |
| 99B  | Rockshaft Locking Washer  | 2 2     |
| 162  | Sliding Gear Fork with Index Plate fitted (Vertical, at same side as Index Plate)       | 8 0     |
| 162A | Sliding Gear Fork, with Index Plate fitted (Vertical at opposite side to Index Plate)   | 8 0     |

ALWAYS state make, year and model of machine, as there are four different arrangements.

Note that the Index Plate is reversible, and make sure that it is fitted the correct way round.

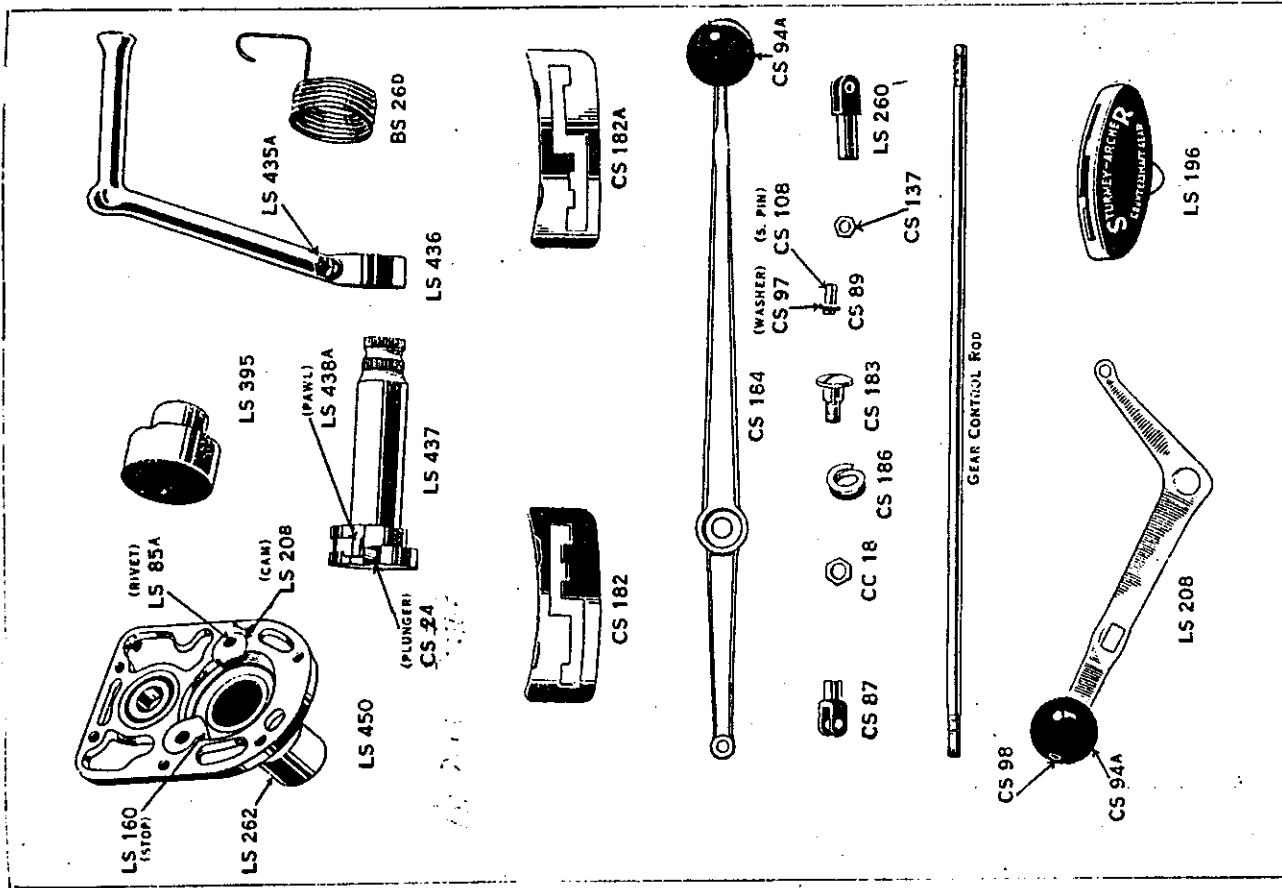
**KICK STARTER MECHANISM.**

|         |  |      |
|---------|--|------|
| LS 437A | Kick Starter Axle with Bronze Bush LS.12B fitted, 5⅜" overall (A.J.S. Model S2, Phelon & Moore and Norton) | 12 6 |
| LS 437B | Kick Starter Axle with Bronze Bush LS.12B fitted, 4⅝" overall. (Alternative Axle for Norton Models)        | 12 6 |
| LS 438  | Kick Starter Pawl  | 1 3  |
| LS 439  | Kick Starter Pawl Pin  | 3 3  |



GEARS AND SHAFTS. GEAR OPERATING PARTS.

| LS                                 | 395C | Kick Starter Return Spring Cover, to suit Kick Starter Axle, LS.437A, 1 1/8" long, 1 1/8" hole                 | £ | s. | d. |
|------------------------------------|------|--|---|----|----|
| LS                                 | 395D | Kick Starter Return Spring Cover, to suit Kick Starter Axle, LS.437B, 1 1/8" long, with 3/8" dia. hole         | 1 | 0  |    |
| LS                                 | 395F | Kick Starter Return Spring Cover, to suit Kick Starter Axle, LS.437C, 1 1/8" overall, 1 1/8" dia. hole         | 1 | 0  |    |
| LS                                 | 20B  | Kick Starter Cam   | 3 |    |    |
| LS                                 | 85A  | Kick Starter Cam Rivet   | 1 |    |    |
| LS                                 | 160  | Kick Starter Stop Piece  | 4 |    |    |
| LS                                 | 435  | Kick Starter Crank Bolt, 1 1/8" overall  | 3 |    |    |
| LS                                 | 435A | Kick Starter Crank Bolt, 1 1/8" overall  | 3 |    |    |
| LS                                 | 436  | Kick Start Crank   | 1 | 0  |    |
| LS                                 | 262  | Kick Starter Bush  | 2 | 0  |    |
| BS                                 | 26D  | Kick Starter Return Spring with arm, 1 1/8" long, suits LS.395C  | 1 | 0  |    |
| BS                                 | 26E  | Kick Starter Return Spring with arm 3/8" long, suits LS.395D   | 1 | 0  |    |
| BS                                 | 100  | Kick Starter Return Spring, double peg fitting (Enfield Models J, JA, H, HA, K, and MK)                        | 1 | 0  |    |
| BS                                 | 23   | Kick Starter Pawl Spring   | 1 |    |    |
| BS                                 | 24   | Kick Starter Pawl Spring Plunger   | 3 |    |    |
| CS                                 | 74   | Kick Starter Clamp Bolt Spring Washer  | 1 |    |    |
|                                    |      |  |   |    |    |
| <b>FINAL DRIVE.</b>                |      |  |   |    |    |
| LS                                 | 441B | Axle Sprocket, 18T, 3/8" x 3/8" (A.J.S. Model S.2, and Enfield Models H, HA, J, JA, and MK) 3/8" thick overall | 7 | 0  |    |
| LS                                 | 441C | Axle Sprocket, 19T, 3/8" x 3/8" (Enfield Model "K")  | 7 | 6  |    |
| LS                                 | 441G | Axle Sprocket, 19T, 3/8" x 1/4" (Norton), 3/8" thick overall   | 7 | 6  |    |
| LS                                 | 441H | Axle Sprocket, 18T, 3/8" x 3/8" (Phelon and Moore), 1/16" thick overall  | 7 | 6  |    |
| LS                                 | 442  | Axle Sprocket Distance Washer  | 6 |    |    |
| SB                                 | 23   | Axle Sprocket Lock Nut   | 8 |    |    |
| SB                                 | 25   | Axle Sprocket Locking Plate  | 4 |    |    |
| S                                  | 35   | Axle Sprocket Locking Plate Screw  | 1 |    |    |
|                                    |      |  |   |    |    |
| <b>CLUTCH OPERATING MECHANISM.</b> |      |  |   |    |    |
| LS                                 | 24   | Clutch Worm  | 1 | 9  |    |
| LS                                 | 25   | Clutch Nut   | 4 | 0  |    |
| LS                                 | 26   | Oil Retaining Cap for Clutch Nut   | 9 |    |    |
| LS                                 | 118  | Felt Washer for Clutch Nut   | 2 |    |    |
| LS                                 | 122A | Clutch Worm Lever, 1 3/16" centres, to suit J.200 (Phelon & Moore)   | 2 | 6  |    |



KICK STARTER PARTS. GATE CONTROL.

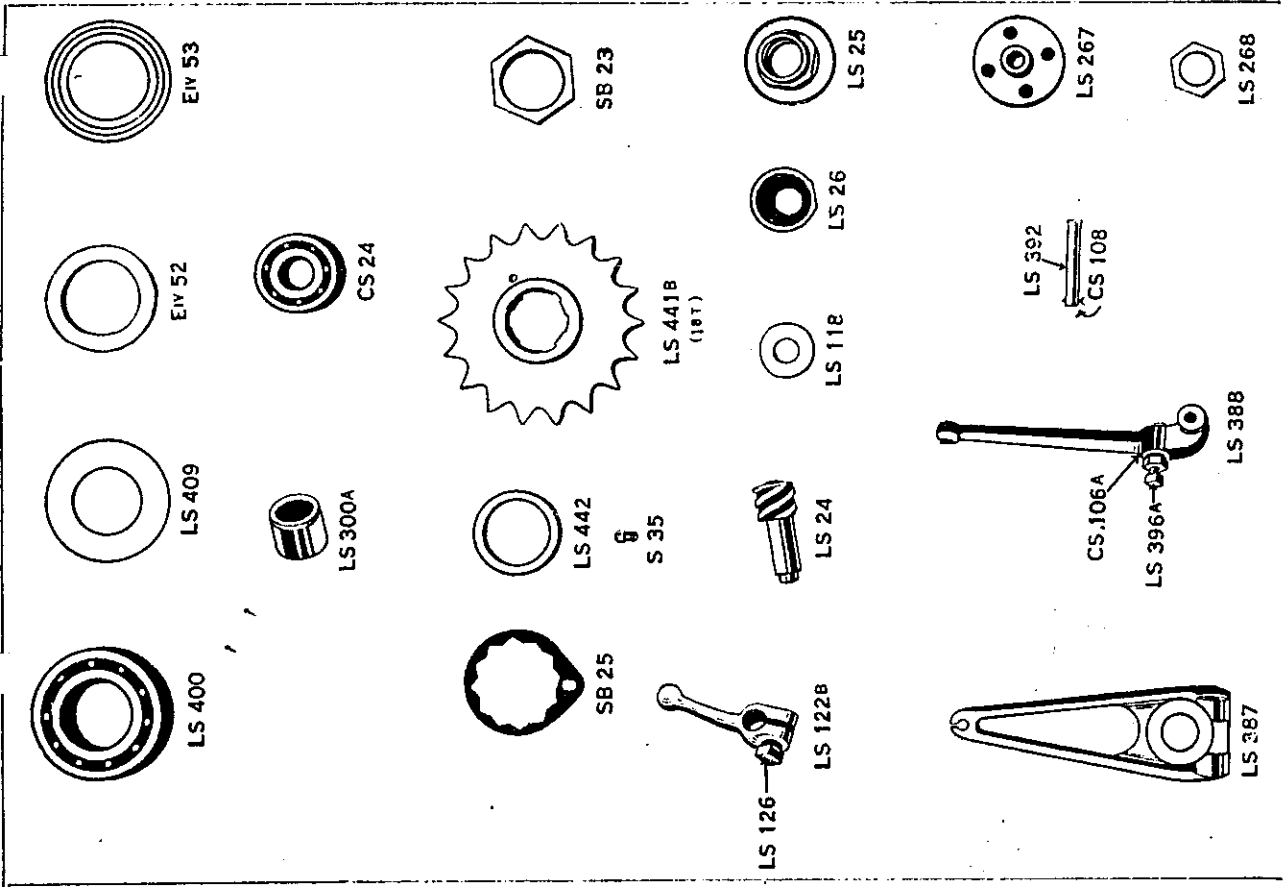
| J | LS | 200 | 122B | Clutch Worm Lever, 1 1/8" centre, suit LS.126 (Norton and Enfield Models K and MK) ...   | £ | s. | d. |
|---|----|-----|------|--|---|----|----|
|   |    |     |      | Clutch Worm Lever Bolt, 1/2" dia. thread, to suit LS.122A ...  | 2 | 6  |    |
|   |    |     |      | Clutch Worm Lever Bolt, 1/8" dia. thread, to suit LS.122B ...  | 1 |    |    |
|   |    |     |      | N.B.—These parts are not used on A.J.S. Models or on Enfield Models J, JA, H, HA. See list of special parts for these makes of machines. | 1 |    |    |

**STRAIGHT PULL CLUTCH CONTROL.**

|    |      |   |    |   |  |  |
|----|------|---|----|---|--|--|
| CS | 43   | Bowden Wire Stop Spring ...                           | 1  |   |  |  |
| CS | 73   | Nipple for Clutch Wire (Worm Lever end) per doz.      | 6  |   |  |  |
| CS | 73B  | Nipple for Handlebar Lever ...                        | 6  |   |  |  |
| CS | 100F | Handlebar Lever only ...                              | 3  |   |  |  |
| CS | 101E | Fulcrum, 1" Bar ...                                   | 2  | 0 |  |  |
| CS | 101G | Fulcrum, 5/8" Bar ...                                 | 2  | 0 |  |  |
| CS | 102A | Half Clip, 1" Bar ...                                 | 9  |   |  |  |
| CS | 102B | Half Clip, 5/8" Bar ...                               | 9  |   |  |  |
| CS | 104A | Fulcrum Pin ...                                       | 1  |   |  |  |
| CS | 106A | Fulcrum Pin Nut ...                                   | 1  |   |  |  |
| CS | 106  | Bowden Wire Stop and Nut, CS.106A ...                 | 6  |   |  |  |
| CS | 106A | Bowden Wire Stop Lock Nut ...                         | 1  |   |  |  |
| CS | 198  | Thimble ...   | 1  |   |  |  |
| CS | 199  | Swivel for Handlebar Lever ...                        | 4  |   |  |  |
| X  | 90   | Fixing Screw ...                                      | 1  |   |  |  |
| X  | 111  | Clip Nut ...  | 2  |   |  |  |
|    |      | (ft. Clutch Inner Wire ...                            | 8  |   |  |  |
|    |      | (ft. Sin. Outer Bowden Cable ...                      | 8  |   |  |  |
|    |      | Straight Pull Clutch Control, complete with wires ... | 11 | 0 |  |  |
|    |      | Straight Pull Clutch Control complete, less wires ... | 7  | 0 |  |  |

**2-PLATE MULTI SPRING PLAIN CLUTCH.**

|    |      |   |    |   |   |  |
|----|------|---|----|---|---|--|
| LS | 176  | Clutch Spring Stud, 1 1/8" long ...                                       | 6  |   |   |  |
| LS | 178  | Clutch Spring Stud Nut ...  | 2  |   |   |  |
| LS | 181  | Clutch Centre Plate, dished ...   | 2  | 3 |   |  |
| LS | 180  | Clutch Outer Plate, flat ...  | 2  | 3 |   |  |
| LS | 183A | Clutch Friction Plate with Corks ...                                      | 2  | 6 |   |  |
| LS | 210A | Clutch Centre, splined ...  | 15 | 0 |   |  |
| LS | 213  | Clutch Back Plate ...   | 2  | 3 |   |  |
| LS | 214A | Clutch Sprocket, 42T, 1/2" x 1/16" (with Corks) with slots 1/16" deep ... | 1  | 2 | 6 |  |
| LS | 217  | Clutch Spring Box Plate, 1/2" overall depth ...                           | 2  | 3 |   |  |
| LS | 16   | Axle Lock Washer ...  | 1  |   |   |  |



BEARINGS. FINAL DRIVE PARTS. CLUTCH OPERATING PARTS.



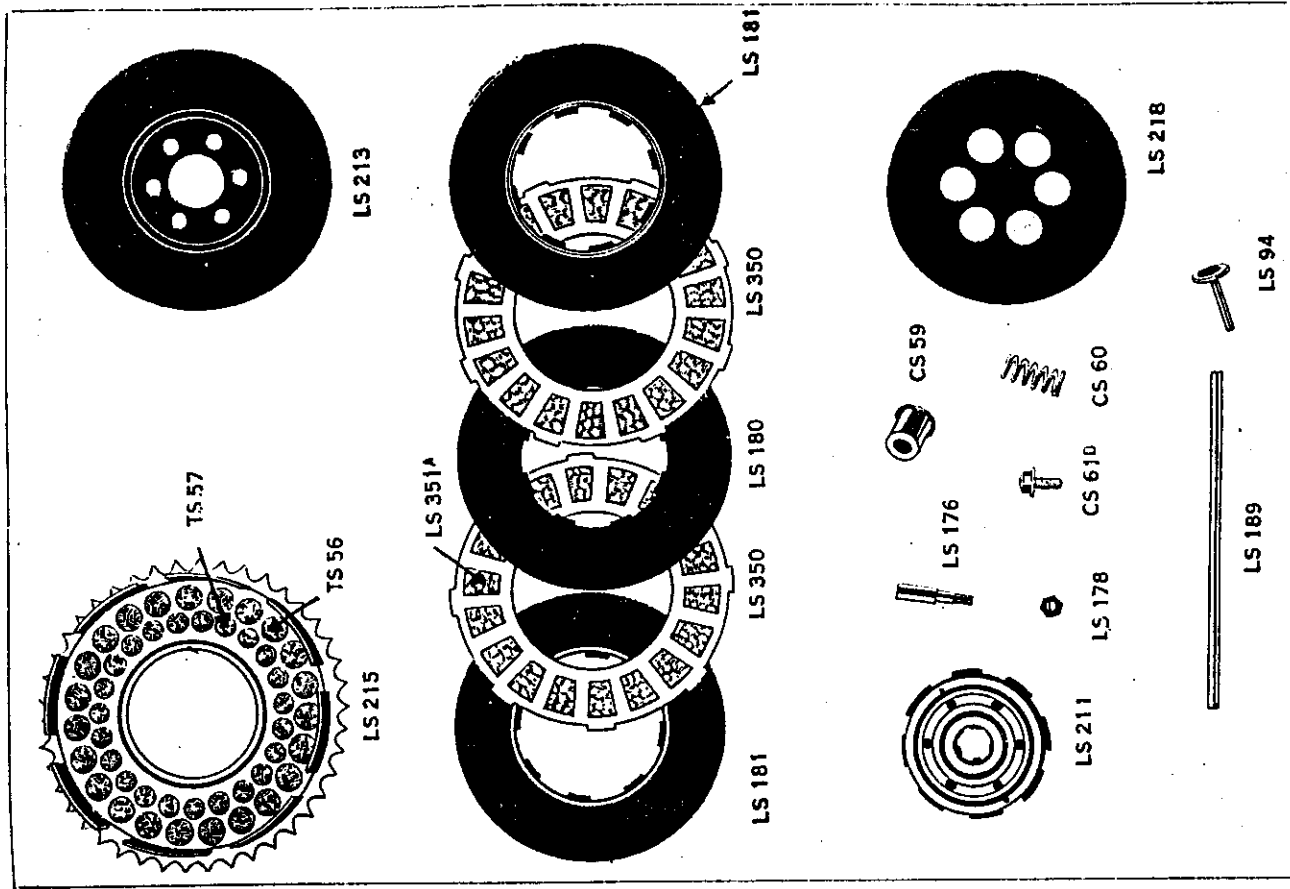
|    |     | £ | s. | d. |
|----|-----|---|----|----|
| CS | 15A |   | 3  |    |
| CS | 13  |   | 5  |    |
| CS | 59  |   | 4  |    |
| CS | 60  |   | 2  |    |
| CS | 61B |   | 2  |    |
| LS | 50B |   | 6  |    |
| TS | 56  |   | 4  |    |
| TS | 57  |   | 4  |    |

**3-PLATE MULTI SPRING PLAIN CLUTCH.**

|    |      |   |     |          |    |   |
|----|------|---|-----|----------|----|---|
| LS | 351  | Clutch Friction Plug  | ... | Per doz. | 2  | 0 |
| LS | 350  | Clutch Friction Plate with 18 Oblong Fibre inserts                      | ... | ...      | 4  | 0 |
| LS | 183A | Clutch Friction Plate, with corks                                       | ... | ...      | 2  | 6 |
| LS | 176  | Clutch Spring Stud, 1 1/8" long   | ... | ...      | 6  | 6 |
| LS | 178  | Clutch Spring Stud Nut  | ... | ...      | 2  | 2 |
| LS | 180  | Clutch Centre Plate, flat   | ... | ...      | 2  | 3 |
| LS | 181  | Clutch Centre Plate (Also used reversed as Outer Plate)                 | ... | ...      | 2  | 3 |
| LS | 181  | Clutch Outer Plate (Also used reversed as Dished Centre Plate)          | ... | ...      | 2  | 3 |
| LS | 211  | Clutch Centre, with clutch plate grooves 1/16" long                     | ... | ...      | 15 | 0 |
| LS | 213  | Clutch Back Plate   | ... | ...      | 2  | 3 |
| NS | 36A  | Clutch Sprocket, with corks, 42T, 1 1/2" x 1 1/8" with slots 3/8" deep  | ... | ...      | 1  | 5 |
| NS | 36A  | Clutch Sprocket, with fibres, 42T, 1 1/2" x 1 1/8" with slots 3/8" deep | ... | ...      | 1  | 7 |
| LS | 218  | Clutch Spring Box Plate, 5/8" deep overall                              | ... | ...      | 2  | 3 |
| LS | 16   | Axle Lock Washer  | ... | ...      | 1  |   |
| CS | 13   | Axle Nut  | ... | ...      | 5  |   |
| CS | 59   | Clutch Spring Box, 1 1/16" overall                                      | ... | ...      | 4  |   |
| CS | 60   | Clutch Spring   | ... | ...      | 2  |   |
| CS | 61B  | Clutch Spring Screw   | ... | ...      | 2  |   |
| TS | 56   | Cork Inserts, 3/8"  | ... | Per doz. | 4  |   |
| TS | 57   | Cork Inserts, 1/2"  | ... | Per doz. | 4  |   |
| LS | 50B  | 1" Rollers (17 used)  | ... | Each     | 2  |   |
|    |      | 1/2" dia. Balls (16 in set)   | ... | Per set  | 6  |   |

**4-PLATE MULTI SPRING PLAIN CLUTCH.**

|    |      |  |     |          |   |   |
|----|------|--|-----|----------|---|---|
| LS | 351  | Fibre Oblong Insert  | ... | Per doz. | 2 | 0 |
| LS | 176  | Clutch Spring Stud, 1 1/8" long                                | ... | ...      | 6 | 6 |
| LS | 178  | Clutch Spring Stud Nut   | ... | ...      | 2 | 2 |
| LS | 180  | Clutch Centre Plate, flat                                      | ... | ...      | 2 | 3 |
| LS | 181  | Clutch Centre Plate (also used reversed as Outer Plate)        | ... | ...      | 2 | 3 |
| LS | 181  | Clutch Outer Plate (also used reversed as Dished Centre Plate) | ... | ...      | 2 | 3 |
| LS | 182A | Clutch Spring Box Plate  | ... | ...      | 2 | 3 |



MULTI-SPRING PLAIN CLUTCH.

| LS  | £ s. d. | Description   |
|-----|---------|---|
| 330 | 4 0     | Clutch Friction Plate, fitted with oblong fibre inserts   |
| 212 | 15 0    | Clutch Centre   |
| 213 | 2 3     | Clutch Back Plate   |
| 30A | 1 7     | Clutch Sprocket with fibres, 42T $\frac{1}{4} \times \frac{1}{16}$ with slots $\frac{1}{16}$ " deep |
| 16  | 1       | Axle Lock Washer  |
| 18  | 5       | Axle Nut  |
| 59  | 4       | Clutch Spring Box, $1\frac{1}{16}$ " overall  |
| 60  | 2       | Clutch Spring   |
| 61B | 2       | Clutch Spring Screw   |
| 50B | 2       | $\frac{1}{4}$ " Roller (17 used)  |
| LS  | 6       | $\frac{1}{4}$ " dia. Balls (16 in set) ...per set   |

**SPECIAL PARTS FOR A.J.S. MODEL S2.**

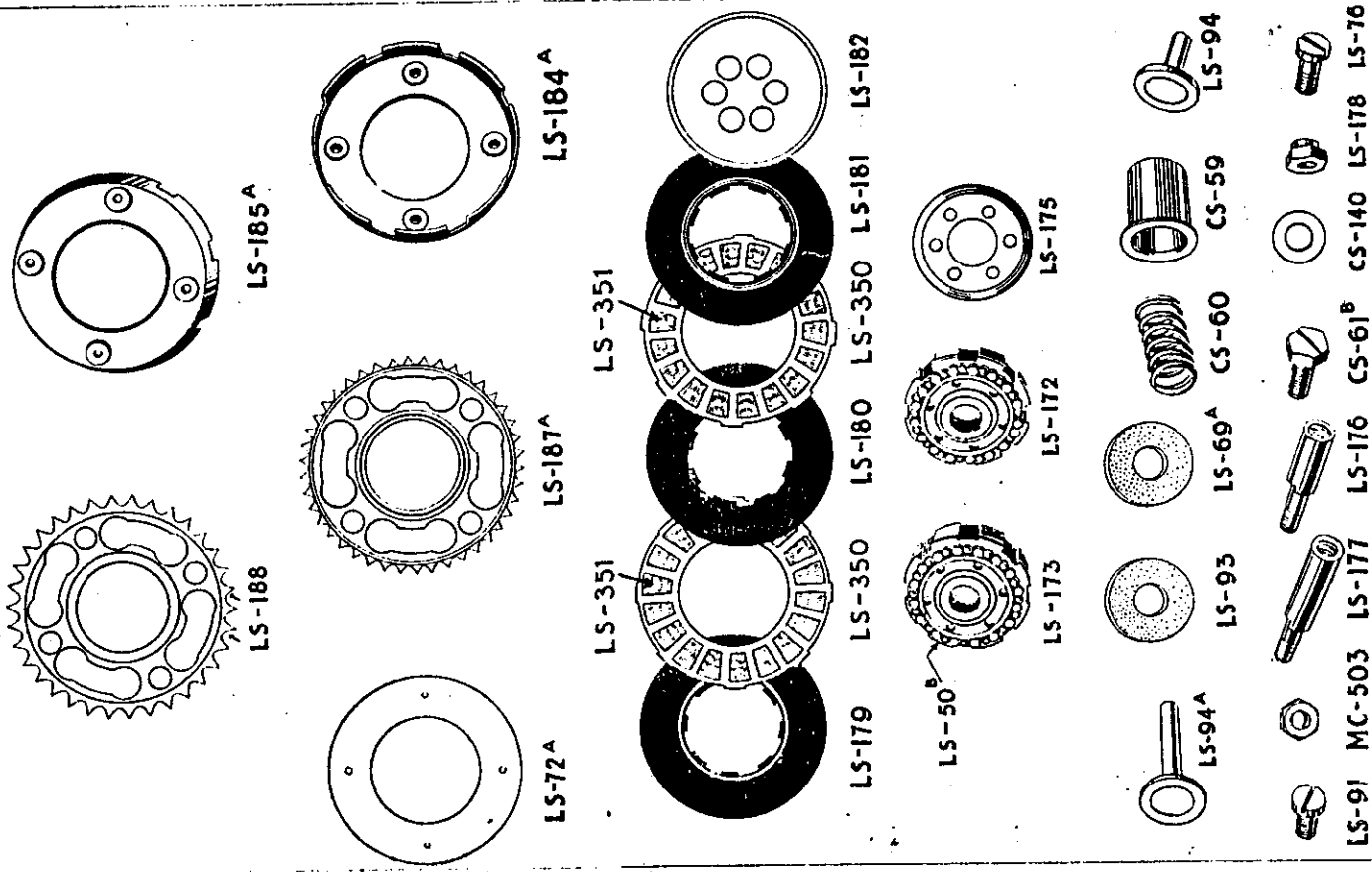
|         |      |   |  |
|---------|------|---|--|
| LS 388A | 1 16 | 0 | Gearbox Shell (Stamped H.111)  |
| LS 430D | 15   | 0 | Gearbox Cover (Cable Stop Extension on left base)                                      |
| LS 255C | 3    | 6 | Rockingshaft Lever, 4" centres with "V" notches at an angle                            |
| LS 362  | 8    |   | Sliding Gear Fork Index Plate Plunger  |
| LS 395C | 1    | 0 | Kick Starter Return Spring Cover, $1\frac{1}{16}$ " long, $1\frac{1}{8}$ " hole        |
| LS 407C | 10   | 0 | Low Gear and Kick Starter Wheel, 29T   |
| LS 426E | 13   | 0 | Main Axles, $7\frac{1}{2}$ " long  |
| LS 437A | 12   | 6 | Kick Starter Axle with Bronze Bush LS.12B fitted, $5\frac{1}{16}$ " overall            |
| LS 441B | 7    | 6 | Axle Sprocket, 18T, $\frac{1}{8}$ " x $\frac{3}{8}$ " x $\frac{1}{8}$ " thick over-all |
| LS 445A | 4    | 0 | Main Axle Pinion, 13T  |
| BS 26D  | 1    | 0 | Kick Starter Return Spring, $1\frac{1}{8}$ " long                                      |
| LS 82   | 10   |   | Clutch Rod, $7\frac{1}{2}$ " long  |
| LS 94B  | 9    |   | Thrust Pin, $1\frac{1}{8}$ " long  |

Fitted with 3-Plate Multi Spring Plain Clutch.

**CLUTCH OPERATING MECHANISM**

**FOR ENFIELD MODELS J, JA, H & HA AND A.J.S.**

|         |   |   |  |
|---------|---|---|--|
| LS 267  | 3 | 6 | Clutch Nut   |
| LS 268  | 1 |   | Clutch Operating Fulcrum Lock Nut                              |
| LS 387  | 3 | 6 | Clutch Operating Lever Bracket                                 |
| LS 388  | 4 | 0 | Clutch Operating Lever, $4\frac{3}{16}$ " from fulcrum to wire |
| LS 392  | 3 |   | Fulcrum Pin  |
| LS 396A | 3 |   | Clutch Operating Lever Adj. Screw, $1\frac{1}{2}$ " overall    |
| CS 106A | 1 |   | Lock Nut for Clutch Adj. Screw, LS.396A                        |
| CS 108  | 6 |   | Split Pin Per doz.   |



MULTI-SPRING SHOCK ABSORBER CLUTCH.

**SPECIAL PARTS FOR ENFIELD MODELS J, JA, H, HA, K & MK.**

| LS | 280B | Gearbox Shell (stamped B.111). Fitted to Models J & JA   | £  | s. | d. |
|----|------|--|----|----|----|
| LS | 280B | Gearbox Shell (stamped C.111). Fitted to Models H & HA   | 1  | 16 | 0  |
| LS | 280B | Gearbox Shell (stamped N.111). Fitted to Model K only  | 1  | 16 | 0  |
| LS | 280B | Gearbox Shell (stamped O.111). Fitted to Model MK  | 1  | 16 | 0  |
| LS | 430H | Gearbox Cover (Oil filler level with K.S. Axle centre and 1 boss at each top corner for Cable Stops) | 1  | 5  | 0  |
| LS | 122B | Clutch Worm Lever, 1 1/16" centres, to suit LS.126. Fitted to Models K and MK                        | 2  | 6  | 0  |
| LS | 126  | Clutch Worm Lever Bolt, 3/8" dia. thread. Suits LS.122B  | 1  | 8  | 0  |
| LS | 168  | Sliding Gear Fork Index Plate Plunger  | 1  | 8  | 0  |
| LS | 222  | Clutch Centre. Fitted to Model MK only (4-plate single spring clutch)                                | 1  | 2  | 0  |
| LS | 235D | Rockingshaft Lever. 3/4" centres, bent and curved  | 3  | 6  | 0  |
| LS | 395F | Kick Starter Return Spring Cover. 1 1/8" overall. 1 1/2" dia. hole                                   | 1  | 0  | 0  |
| LS | 403B | Main Axle Sliding Pinion, 21T. Fitted to Models J & JA (Close Ratio)                                 | 8  | 6  | 0  |
| LS | 404B | Layshaft Sliding Pinion, 21T. Fitted to Models J & JA. (Close Ratio)                                 | 10 | 0  | 0  |
| LS | 405B | Layshaft Pinion, 15T. Fitted to Models J & JA. (Close Ratio)   | 5  | 0  | 0  |
| LS | 407C | Low Gear and Kick Starter Wheel, 29T. Fitted to Models H, HA, K & MK                                 | 10 | 0  | 0  |
| LS | 407D | Low Gear and Kick Starter Wheel, 27T. Fitted to Models J & JA. (Close Ratio)                         | 10 | 0  | 0  |
| LS | 426C | Main Axle, 8 1/2" long   | 7  | 6  | 0  |
| LS | 437C | Kick Starter Axle with Bronze Bush LS.12B fitted. 5 1/16" overall                                    | 7  | 6  | 0  |
| LS | 441B | Axle Sprocket, 19T, 5/8" x 1 1/4", 3/4" thick overall  | 7  | 6  | 0  |
| LS | 441C | Axle Sprocket, 19T, 5/8" x 1 1/4", 3/4" thick overall  | 7  | 6  | 0  |
| LS | 445A | Main Axle Pinion, 13T. Fitted to Models H, HA, K & MK  | 4  | 0  | 0  |
| LS | 445B | Main Axle Pinion, 15T. Fitted to Models J & JA. (Close Ratio)  | 4  | 0  | 0  |
| BS | 100  | Kick Starter Return Spring (double peg fitting)  | 1  | 0  | 0  |
| CS | 164G | Clutch Sprocket, 42T, 1 1/2" x 1 1/8". Fitted to Model MK only (4-plate single spring plain clutch)  | 1  | 7  | 6  |
| LS | 82C  | Clutch Rod, 7 3/8" long  | 10 | 0  | 0  |
| LS | 94A  | Thrust Pin, 1 1/4" long  | 9  | 0  | 0  |

**SPECIAL PARTS FOR NORION MODELS (Standard & Close Ratio).**

| LS   | 230C | Gearbox Shell (stamped E.111). Fitted to Standard Ratio Model                       | £  | s. | d. |
|--|------|---|----|----|----|
| LS   | 230C | Gearbox Shell (stamped F.111). Fitted to Close Ratio Model                          | 1  | 16 | 0  |
| LS   | 450A | Gearbox Cover (when Gate Tank Control is fitted). Flat on left base                 | 1  | 5  | 0  |
| LS   | 450C | Gearbox Cover (used when Disc Control is fitted). As LS.450A with extension on top  | 1  | 5  | 0  |
| LS   | 122B | Clutch Worm Lever, 1 1/16" centres to suit LS.126                                   | 2  | 6  | 0  |
| LS   | 126  | Clutch Worm Lever Bolt, 3/8" dia. thread  | 1  | 8  | 0  |
| LS   | 234E | Rockingshaft Lever, 3 1/4" centres, flat but curved                                 | 3  | 6  | 0  |
| LS   | 362  | Sliding Gear Fork Index Plate Plunger   | 1  | 8  | 0  |
| LS   | 395C | Kick Starter Return Spring Cover, to suit LS.437A                                   | 1  | 0  | 0  |
| LS   | 395D | Kick Starter Return Spring Cover, to suit LS.437B                                   | 1  | 0  | 0  |
| LS   | 401A | Main Gear Wheel, 22T (fitted to Close Ratio Model)                                  | 1  | 6  | 0  |
| LS   | 403A | Main Axle Sliding Pinion, 19T (fitted to Close Ratio Model)                         | 8  | 6  | 0  |
| LS   | 405A | Layshaft Pinion, 20T (fitted to Close Ratio Model)                                  | 5  | 0  | 0  |
| LS   | 407C | Low Gear and Kick Starter Wheel, 29T (fitted to Close Ratio Model)                  | 10 | 0  | 0  |
| LS   | 426E | Main Axle, 7 1/2" long  | 13 | 0  | 0  |
| LS   | 437A | Kick Starter Axle with Bronze Bush LS.12B fitted. 5 1/16" overall                   | 12 | 6  | 0  |
| LS   | 437B | Kick Starter Axle with Bronze Bush LS.12B fitted. 4 1/2" overall (alternative Axle) | 12 | 6  | 0  |
| LS   | 441G | Axle Sprocket, 19T, 5/8" x 1 1/4", 3/4" thick overall                               | 7  | 6  | 0  |
| LS   | 445A | Main Axle Pinion, 13T   | 4  | 0  | 0  |
| BS   | 26D  | Kick Starter Return Spring, to suit LS.437A 1 3/8" long                             | 1  | 0  | 0  |
| BS   | 26E  | Kick Starter Return Spring to suit LS.437B Arm 3/8" long                            | 1  | 0  | 0  |
| LS   | 189B | Clutch Rod, 7 1/8" long   | 10 | 0  | 0  |
| LS   | 94B  | Thrust Pin, 1 3/8" long   | 9  | 0  | 0  |
| Fitted with 3-Plate Multi Spring Plain Clutch. |      |   |    |    |    |

**SPECIAL PARTS FOR PHELON & MOORE.**

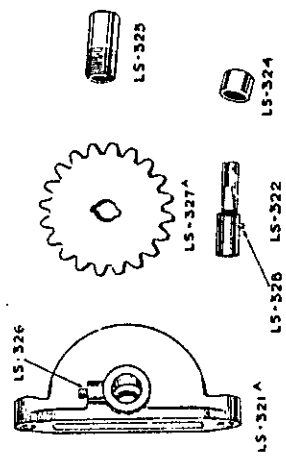
|    |      |   |    |    |   |
|----|------|---|----|----|---|
| LS | 451  | Gearbox Shell (stamped G.111)   | 1  | 16 | 0 |
| LS | 450E | Gearbox Cover (used when Disc Control is fitted). Horizontal. (Cable Stop boss at right base and extension on top for Disc Control) | 15 | 0  | 0 |

| LS  | Part Description  | £    | s.  | d.  |
|-----|---|------|-----|-----|
| 232 | Gear Control Rod, $5\frac{9}{16}$ " long (Bent one end) | ...  | 1   | 0   |
| 224 | Gear Connection Washer                                  | ...  | 5   | 0   |
| 233 | Control Quadrant  | ...  | 1   | 0   |
| 235 | Gear Connection Stud                                    | ...  | 10  | 0   |
| 238 | Gear Connection   | ...  | 2   | 1   |
| 7   | Axle Nut (for Quadrant Stud)                            | ...  | 6   | 0   |
| 74  | Spring Washer   | ...  | 10  | 0   |
| 83B | Long Gear Lever complete with Knob                      | ...  | 2   | 2   |
| 87  | Gear Connection Pin                                     | ...  | 9   | 9   |
| 89  | Gear Connection Pin                                     | ...  | 1   | 1   |
| 94A | Gear Lever Knob   | ...  | 2   | 2   |
| 95A | Gear Lever Knob Washer                                  | ...  | 6   | 6   |
| 98  | Collar for Quadrant Knob                                | ...  | 4   | 1   |
| 108 | Split Pin   | Doz. | 2   | 2   |
| 137 | Gear Connection Lock Nut                                | ...  | 1   | 1   |
| 151 | Spring Washer for Quadrant Stud                         | ...  | 2   | 2   |
| 84A | Long Gear Lever Bolt                                    | ...  | 1   | 1   |
| 97  | Gear Connection Washer                                  | ...  | ... | ... |

**SPEEDOMETER DRIVE PARTS FOR A.J.S. Model S2.**

(Smith type, 2,240 Revs. per mile).

| LS   | Part Description                          | £    | s. | d. |
|------|---|------|----|----|
| 321A | Pinion Casing                             | ...  | 2  | 6  |
| 322  | Pinion Spindle                            | ...  | 1  | 3  |
| 323  | Connection Bush                           | ...  | 1  | 6  |
| 324  | Spindle End Bush                          | ...  | 8  | 8  |
| 325  | Spindle End Washer                        | ...  | 1  | 1  |
| 326  | End Bush Fixing Screw                     | ...  | 1  | 1  |
| 328  | Pin for Coupling Spindle to Speedo Pinion | doz. | 6  | 6  |
| 331  | Casing Fixing Screw                       | ...  | 1  | 1  |
| 463B | Pinion, 20T                               | ...  | 2  | 0  |
| 255  | Casing Fixing Screw                       | ...  | 2  | 2  |
| MIC  | Speedometer Drive complete                | ...  | 7  | 6  |



| LS   | Part Description  | £   | s. | d. |
|------|---|-----|----|----|
| 450F | Gearbox Cover (used when Gate Tank Control is fitted). Horizontal. (As LS. 450E, but less extension on top) | ... | 15 | 0  |
| 122A | Clutch Worm Lever, $1\frac{1}{16}$ " centres  | ... | 2  | 6  |
| 165C | Rockingshaft, $5\frac{1}{16}$ " long  | ... | 1  | 3  |
| 168  | Sliding Gear Fork Index Plate Plunger   | ... | 8  | 8  |
| 234D | Rockingshaft Lever, $1\frac{1}{8}$ " centres with body $2\frac{3}{8}$ " long                                | ... | 3  | 6  |
| 395C | Kick Starter Return Spring Cover, $1\frac{1}{16}$ " long, $1\frac{1}{8}$ " hole                             | ... | 1  | 0  |
| 426E | Main Axle, $7\frac{1}{16}$ " long   | ... | 13 | 0  |
| 437A | Kick Starter Axle with bronze bush LS.12B fitted. $5\frac{1}{16}$ " overall                                 | ... | 12 | 6  |
| 441H | Axle Sprocket, 18T, $\frac{3}{8} \times \frac{3}{8}$ ", $\frac{11}{16}$ " thick overall                     | ... | 7  | 6  |
| 26D  | Kick Starter Return Spring with arm $1\frac{1}{8}$ " long   | ... | 1  | 0  |
| 200  | Clutch Worm Lever Bolt  | ... | 1  | 1  |
| 189B | Clutch Rod, $7\frac{1}{8}$ " long   | ... | 10 | 0  |
| 94B  | Thrust Pin, $1\frac{1}{8}$ " long   | ... | 9  | 9  |

**GATE TANK CONTROL FOR NORTON MODELS.**

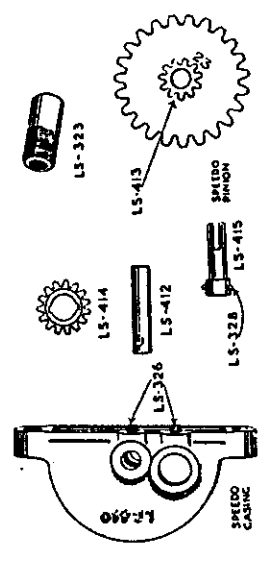
| CS   | Part Description  | £    | s. | d. |
|------|---|------|----|----|
| 184E | Gear Control Lever, $5\frac{1}{8}$ " centres from short arm | ...  | 8  | 0  |
| 182C | Gear Control Gate   | ...  | 3  | 6  |
| 183  | Gear Control Fulcrum Screw                                  | ...  | 10 | 10 |
| 186  | Gear Control Spring Screw                                   | ...  | 2  | 2  |
| 94A  | Gear Control Knob   | ...  | 9  | 9  |
| 95A  | Gear Control Knob Washer                                    | ...  | 1  | 1  |
| 98   | Collar for Quadrant Knob                                    | ...  | 2  | 2  |
| 87   | Gear Connection   | ...  | 10 | 10 |
| 89   | Gear Connection Pin   | ...  | 2  | 2  |
| 97   | Gear Connection Washer                                      | ...  | 1  | 1  |
| 108  | Split Pin   | doz. | 6  | 6  |
|      | Gear Control Rod  | ...  | 1  | 0  |

**DISC CONTROL ON COVER FOR NORTON MODELS.**

| LS  | Part Description               | £   | s. | d. |
|-----|--------------------------------|-----|----|----|
| 69  | Control Index Plate            | ... | 3  | 0  |
| 61  | Control Bush                   | ... | 1  | 0  |
| 62B | Control Quadrant Stud          | ... | 1  | 0  |
| 63  | Control Quadrant Spring Box    | ... | 3  | 3  |
| 64  | Control Quadrant Spring Nut    | ... | 6  | 6  |
| 65  | Control Quadrant Spring        | ... | 1  | 1  |
| 65A | Control Quadrant Spring Washer | ... | 1  | 1  |
| 84  | Control Quadrant Stop Peg      | ... | 1  | 1  |
| 84B | Control Quadrant Securing Peg  | ... | 1  | 1  |

**SPEEDOMETER DRIVE PARTS FOR A.J.S. MODEL S.2.**  
 (Jaeger type, 1,690 Revs. per mile).

|                             | £   | s. | d. |
|-----------------------------|-----|----|----|
| LS 410 Pinion Casing...     | ... | 2  | 6  |
| LS 412 Pinion Spindle       | ... | 1  | 3  |
| LS 413 Intermediate Pinion  | ... | 1  | 0  |
| LS 414 Final Pinion         | ... | 1  | 0  |
| LS 415 Final Pinion Spindle | ... | 1  | 3  |
| LS 402B Pinion, 20T         | ... | 2  | 0  |



|  |      |   |   |
|--|------|---|---|
| LS 323 Connection Bush                           | ...  | 1 | 0 |
| LS 328 Pin for Coupling Spindle to Speedo Pinion | doz. | 6 |   |
| LS 331 Casing Fixing Screw Washer                | ...  | 1 |   |
| LS 326 Grub Screw for Fixing Bush                | ...  | 1 |   |
| MC 255 Casing Fixing Screw                       | ...  | 2 |   |
| Speedometer Drive complete                       | ...  | 9 | 0 |

**SPEEDOMETER DRIVE PARTS FOR ENFIELD MODELS**  
**J, JA, H, HA, K & MK.**  
**ALSO PHELON & MOORE.**

|  |      |   |   |
|--|------|---|---|
| LS 321A Pinion Casing...                         | ...  | 2 | 6 |
| LS 322 Pinion Spindle                            | ...  | 1 | 3 |
| LS 323 Connection Bush                           | ...  | 1 | 0 |
| LS 324 Spindle End Bush                          | ...  | 8 |   |
| LS 325 Spindle End Bush Washer                   | ...  | 1 |   |
| LS 326 End Bush Fixing Screw                     | ...  | 1 |   |
| LS 328 Pin for Coupling Spindle to Speedo Pinion | doz. | 6 |   |
| LS 331 Casing Fixing Screw Washer                | ...  | 1 |   |
| LS 436A Pinion, 21T                              | ...  | 2 | 0 |
| MC 255 Casing Fixing Screw                       | ...  | 2 |   |