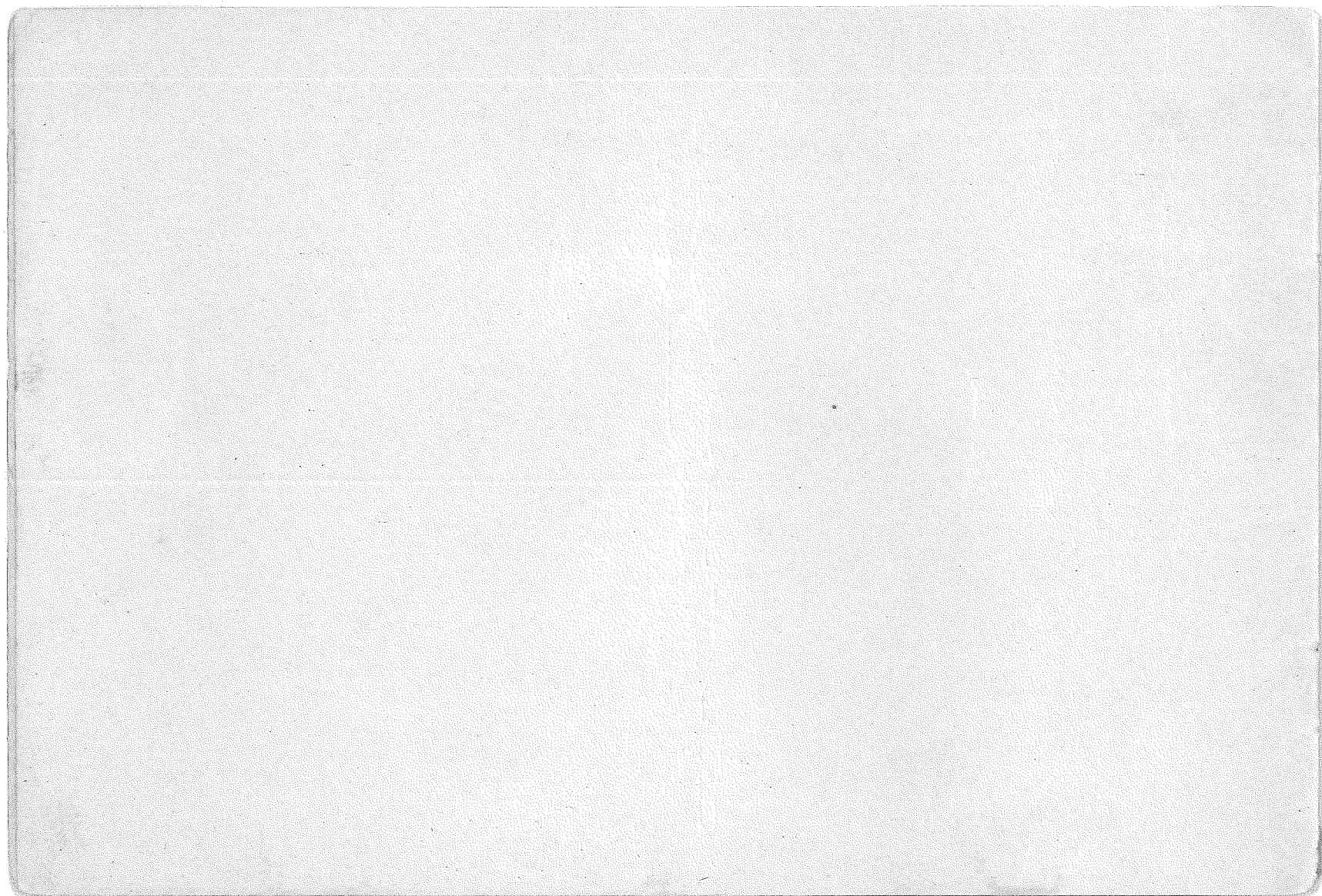


*The* **Landmaster**  
**ROTARY HOE**



**MAINTENANCE INSTRUCTIONS**  
**AND**  
**SPARE PARTS LIST**

WHEN ORDERING SPARES, SERIAL NUMBER OF MACHINE **MUST** BE QUOTED



# *The Landmaster*

## ROTARY HOE

### OPERATING AND MAINTENANCE INSTRUCTIONS

Before starting the Landmaster Rotary Hoe, the engine instruction book should be read carefully, **IT IS VITAL** that a high oil level is maintained in the sump at all times, otherwise lubrication may be adversely affected when the machine is operated off level.

**NOTE.** Great care should be taken to clean all dirt from around the oil filler cap before removal, to avoid risk of engine damage.

The Air Filter may be any one of the types described below and should be serviced as follows:—

1. **BURGESS WET TYPE.** The element must be soaked in engine oil before the machine is used and must be washed in petrol and resoaked in oil at frequent intervals.
2. **VOKES MICRO VEE.** The element must not be washed or wetted in any circumstances, but should frequently be removed and lightly tapped to dislodge dust.
3. **A.C. OIL BATH.** This should be filled with engine oil to the level indicated and checked frequently.

#### **THE CONTROLS FOR THE MACHINE ARE AS FOLLOWS:**

1. **CLUTCH LEVER,** on the left handlebar. This control must be lifted before any movement of the Gear lever or Dogclutch lever when the engine is running. Care should be taken to avoid operating the machine with the hand on the lever as this will cause overheating and clutch wear.
2. **GEAR LEVER,** situated on top of the machine. The three speeds are indicated beside the lever as L, N, M, and H; meaning Low, Neutral, Medium, and High. Low gear should be engaged for deep or heavy cultivation, and on light soils Medium may be used.

For obtaining a light tilth after deep cultivation, Medium or High gear may be engaged and these speeds may be used as conditions permit for hoeing or scuffling.

As soils vary considerably, the operator will find by experience the most suitable speeds and depths to suit his local conditions.

3. DOGCLUTCH LEVER, to the left of the Gear lever. This control enables the operator to manoeuvre the machine freely by disconnecting the whole of the transmission from the axleshaft.
4. DEPTH CONTROL LEVER, at the rear of the machine. When this lever is in the lowest position the Rotary Hoe blades will clear the ground, and upward movement of the lever into the successive positions on the quadrant will lower the Rotary Hoe into the ground.
5. HANDLEBAR ADJUSTMENT, HORIZONTAL. To avoid walking on newly tilled ground, the handlebars may quickly be moved to either side by releasing the clamping nut on top of the handlebar mounting bracket and retightening after the handlebar has been swung to the desired position.
6. HANDLEBAR ADJUSTMENT, VERTICAL. By releasing the wing nut on the right hand side of the mounting bracket, the handlebars may be moved to a convenient working height to suit the operator.  
To re-clamp at the required height, tighten the hand nut at the left hand side of the mounting bracket and finally clamp with the wing nut at right.
7. WHEEL ADJUSTMENT. The width of the wheel track may be adjusted to the extent of the axle by loosening the locking bolt in the wheel hub and retightening after moving the wheel to the required position. When adjusting wheels care should be taken not to move wheel axle sideways.
8. ENGINE. The engine is automatically governed, there is no manual throttle control. Keep the governor linkage as clean as possible, well lubricated and operating freely. Any stiffness on the governor control will cause considerable loss of power.

CHAIN ADJUSTMENTS. Means of manual adjustment are provided to the fast-moving chains only, *i.e.* primary, from engine to gearbox, and secondary, from gearbox to layshaft. Latest machines have automatic adjustment to all other chains.

To adjust primary chain, first remove the front chain case, then slacken the four engine bolts and slide the engine forward until the chain has approximately  $\frac{3}{8}$  inch slack lift.

To adjust secondary chain, remove top cowlings, then slacken the two nuts which hold the gearbox on to its mounting platform; these will be found on the underside of the platform. Adjust the gearbox forward using the adjusting screw at rear of the platform until the secondary chain has approximately  $\frac{3}{8}$  inch slack lift and retighten the nuts. **It is important** that these nuts are firmly tightened. If a chain is removed, make sure spring link is properly replaced.

*NOTE: Any adjustment made to the secondary chain will affect the adjustment of the primary.*

**Clutch Adjustment.** If the machine tends to pull forward with the clutch lever fully lifted or if the gears do not engage cleanly, the clutch may require adjustment.

To do this, first slacken the grub screw locknut at the bottom of the clutch thrust lever; this lever is connected to the clutch cable and will be found on the side of the machine to the right of the gear lever. With a screwdriver, tighten the grub screw until all the free movement is taken from the clutch lever on the handlebar, then slacken back half a turn and retighten the locknut while the grub screw is still held by the screwdriver. On latest machines this mechanism is housed in a cover on the right hand upper chassis side plate.

**It is vital** that some free movement of the clutch lever is obtained by slacking back the grub screw as described, otherwise clutch slip and overheating will result.

**To remove Rotary Hoe for fitment of Tool Bar or other Implement.** Remove Rotor drive chain case and chain, remove the four bolts attaching rotor side plates to each pedestal, unscrew the two bolts from the attachment bracket each side the machine immediately below the pedestals and draw away the Rotary Hoe assembly complete.

The power take-off cover supplied with the machine should be fitted to the R.H. pedestal, and the tool bar fitted to the two bosses below the pedestals exposed by removal of the Rotary Hoe.

## **LUBRICATION**

Check engine oil level daily.

Remove top cowling and Rotor Drive Chain Case and grease all chains.

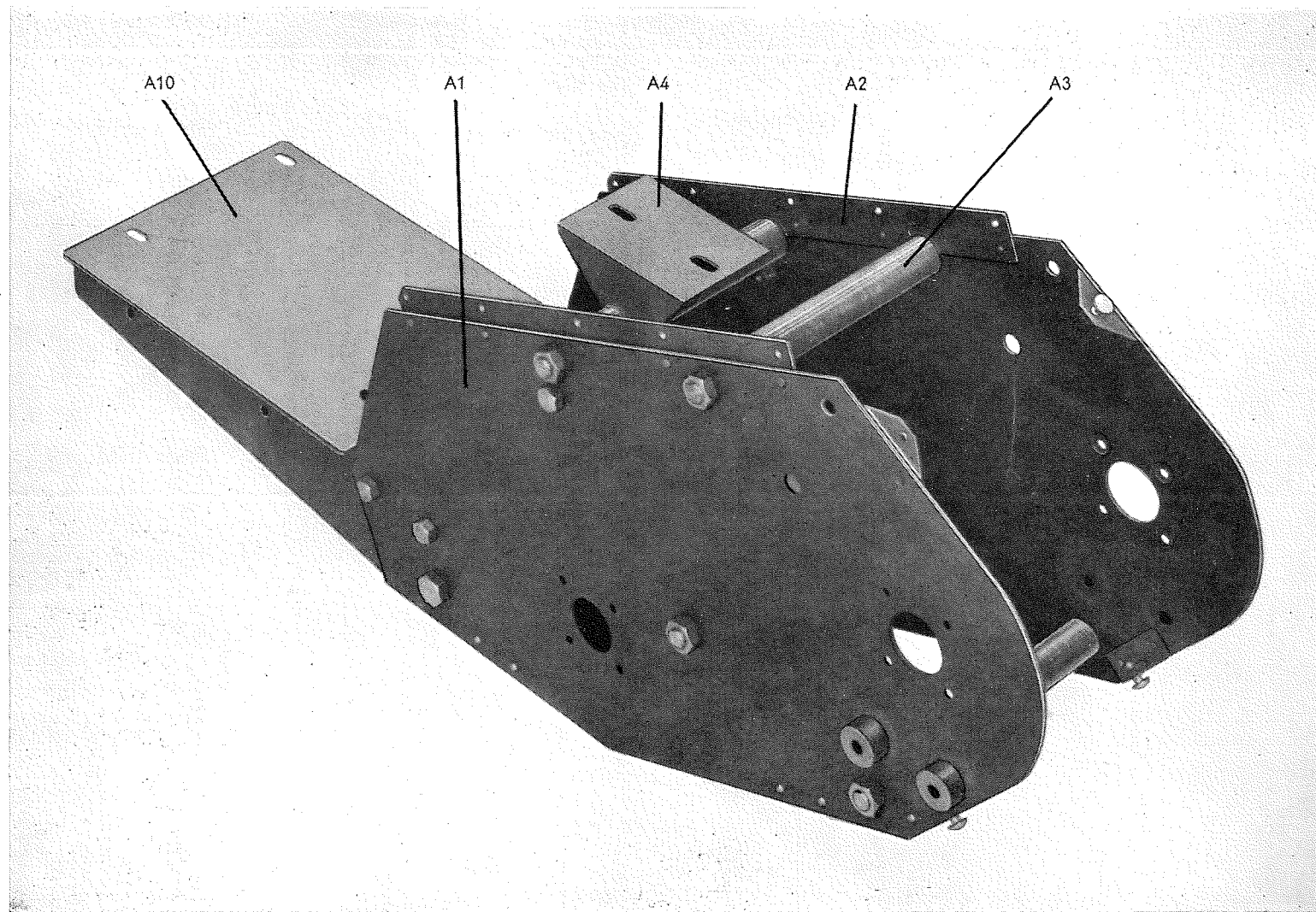
With grease gun lubricate the following:—

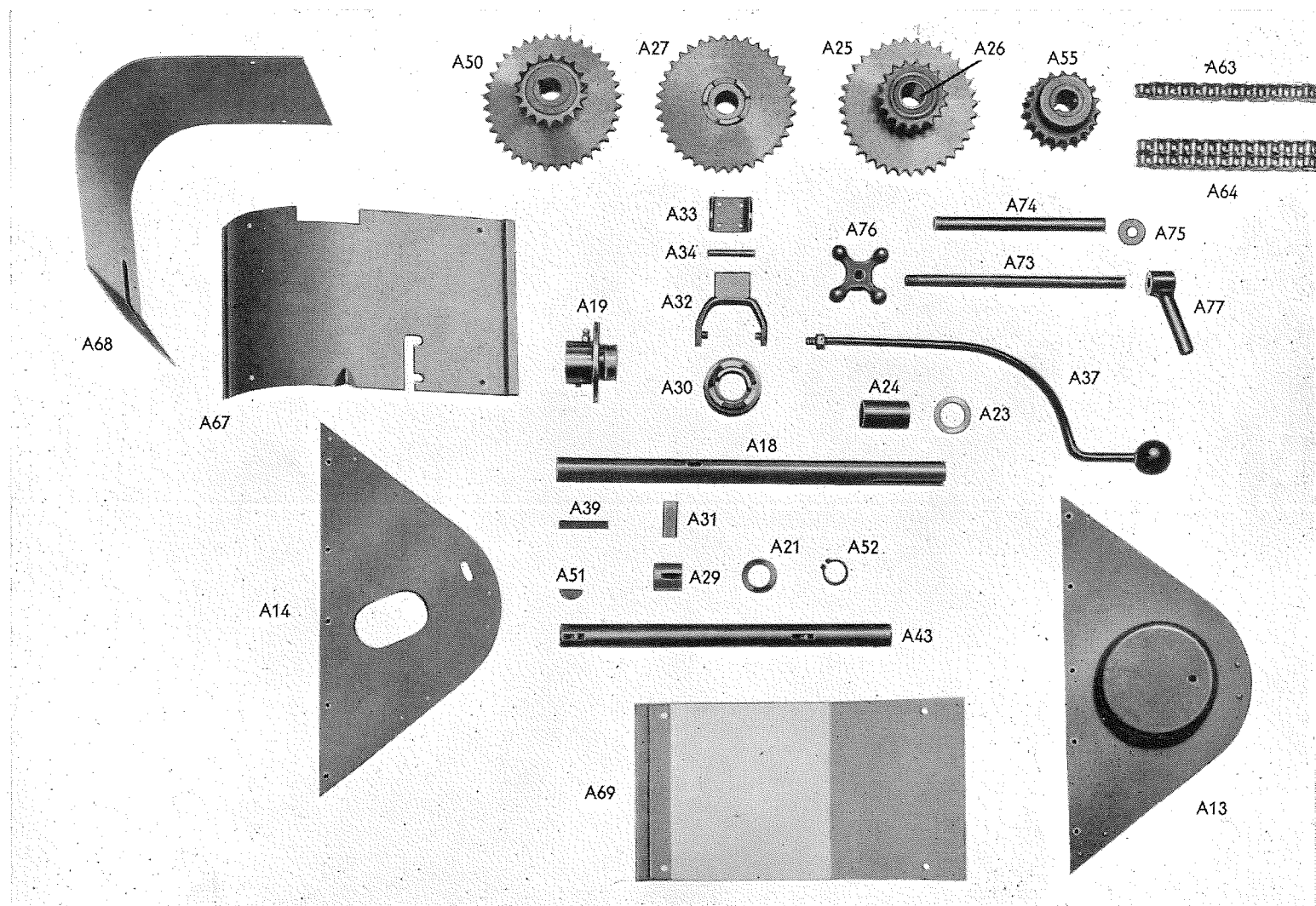
1. The grease nipple left hand side of Rotor. The grease is forced through the hollow Rotor Shaft to the right hand bearing.
2. The grease nipples on each Layshaft pedestal, these are the top castings to which the Rotor Side Plates are attached.
3. The grease nipples on each wheel bearing.
4. The grease nipple on the Layshaft between the two Right hand chains.
5. The grease nipple on the axleshaft between the two Left hand chains.

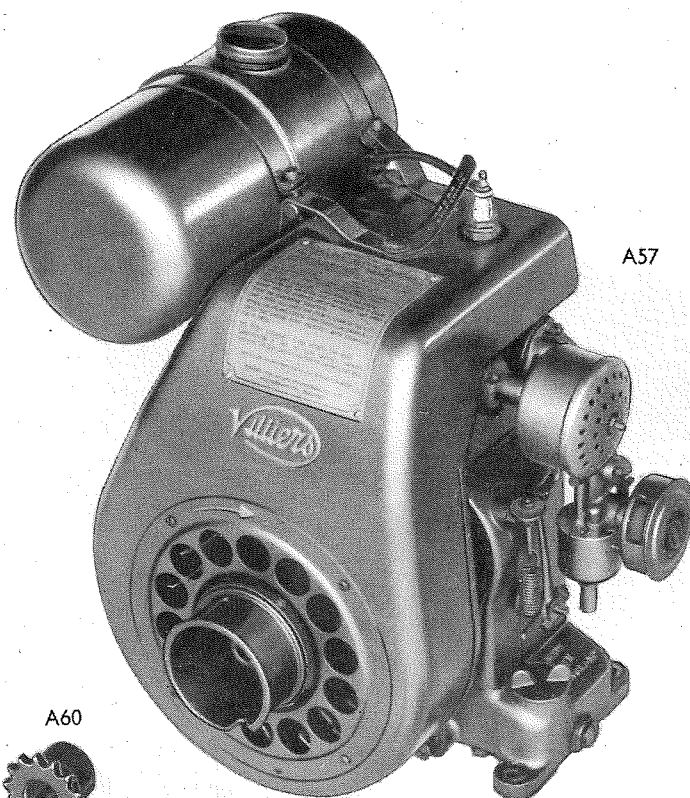
**To check gearbox oil level.** Disconnect the clutch cable from the thrust lever and remove the Right Hand Upper Chassis Side Plate. The filler plug will be found immediately forward of the thrust lever. The gearbox should be filled to the level of the plug when the gearbox platform is standing level.

On machines No. 521724 and upwards, it is not necessary to remove chassis side plate or disconnect clutch cable. The Right Hand cover only should be removed.

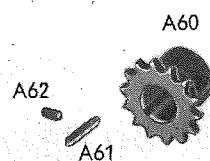








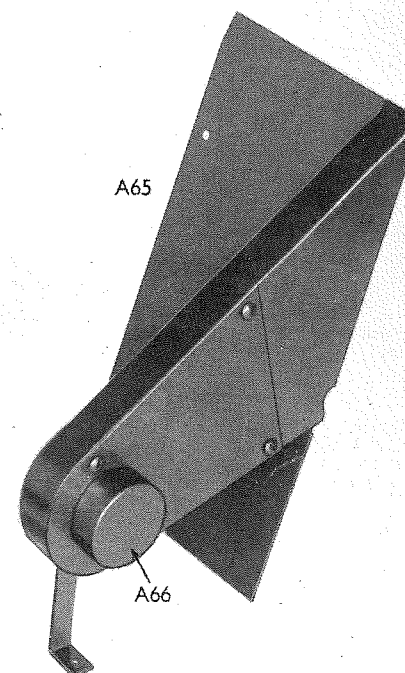
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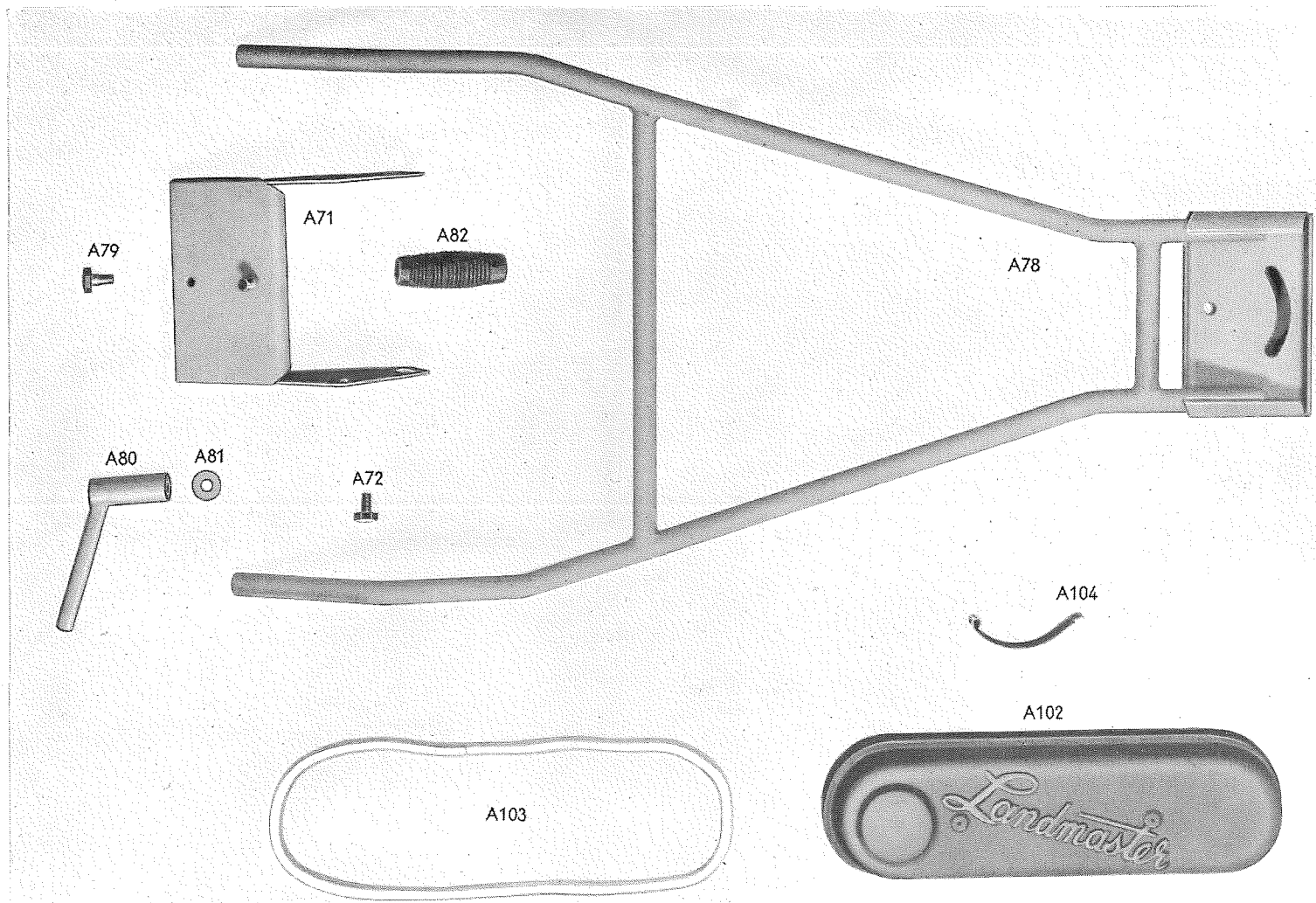
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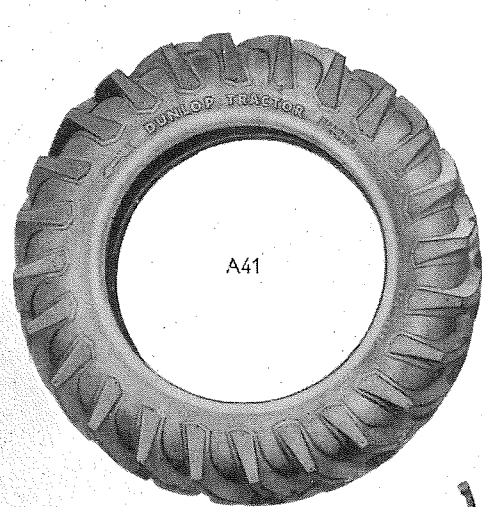
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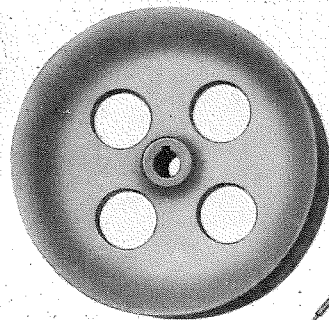
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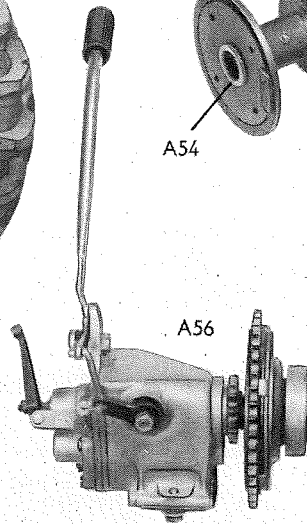
*Lendman's*



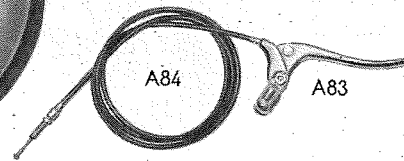
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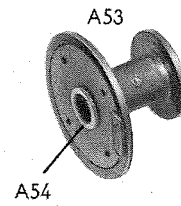


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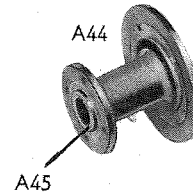


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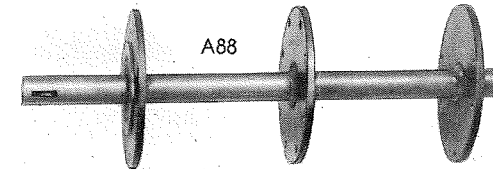


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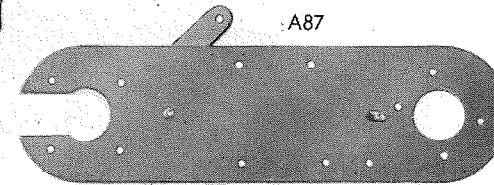
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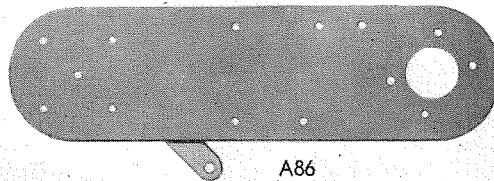
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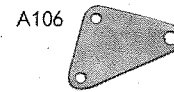
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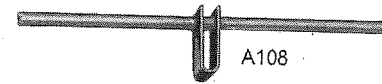
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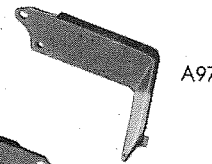


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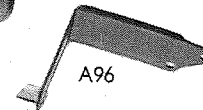


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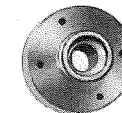
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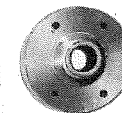
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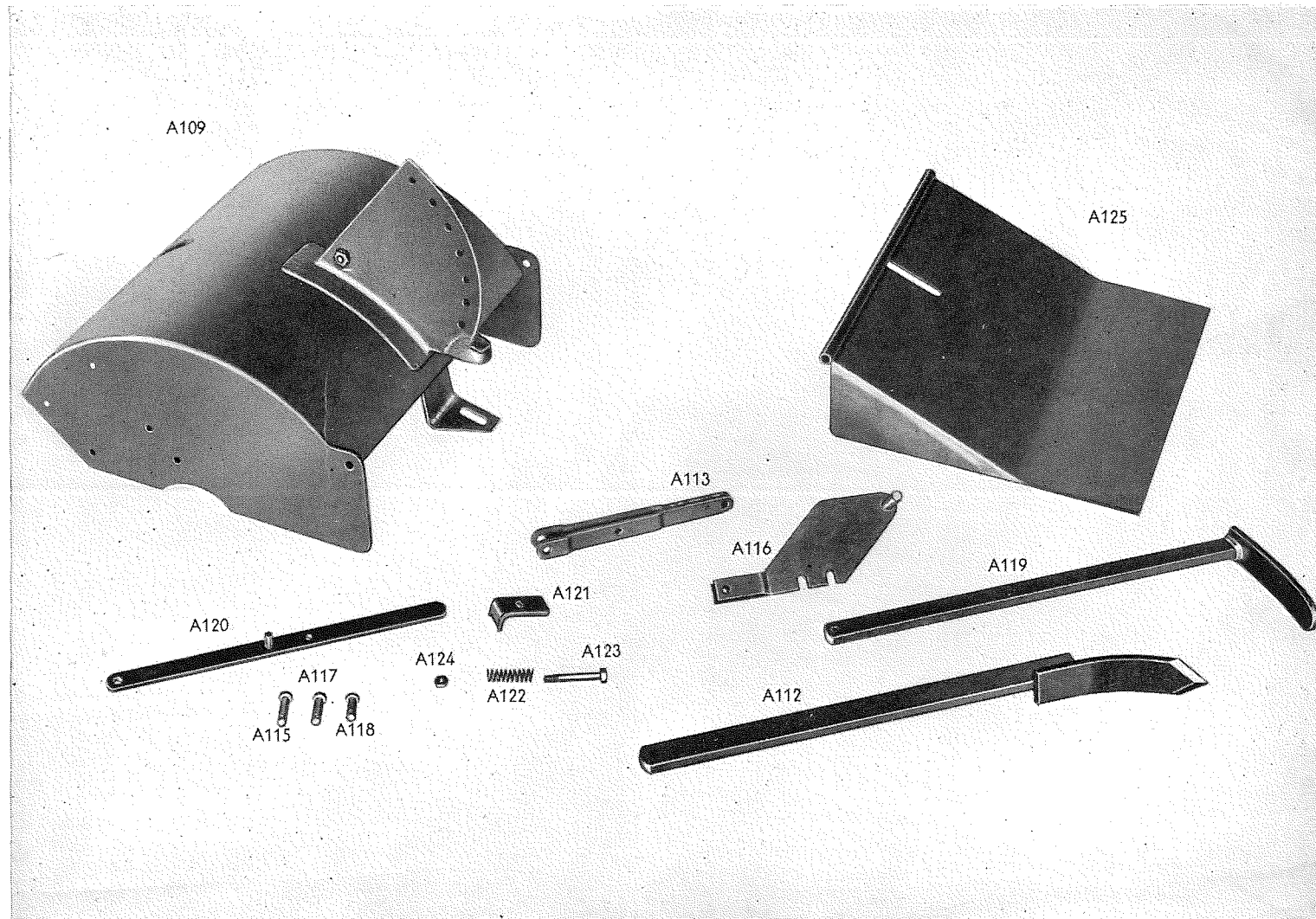
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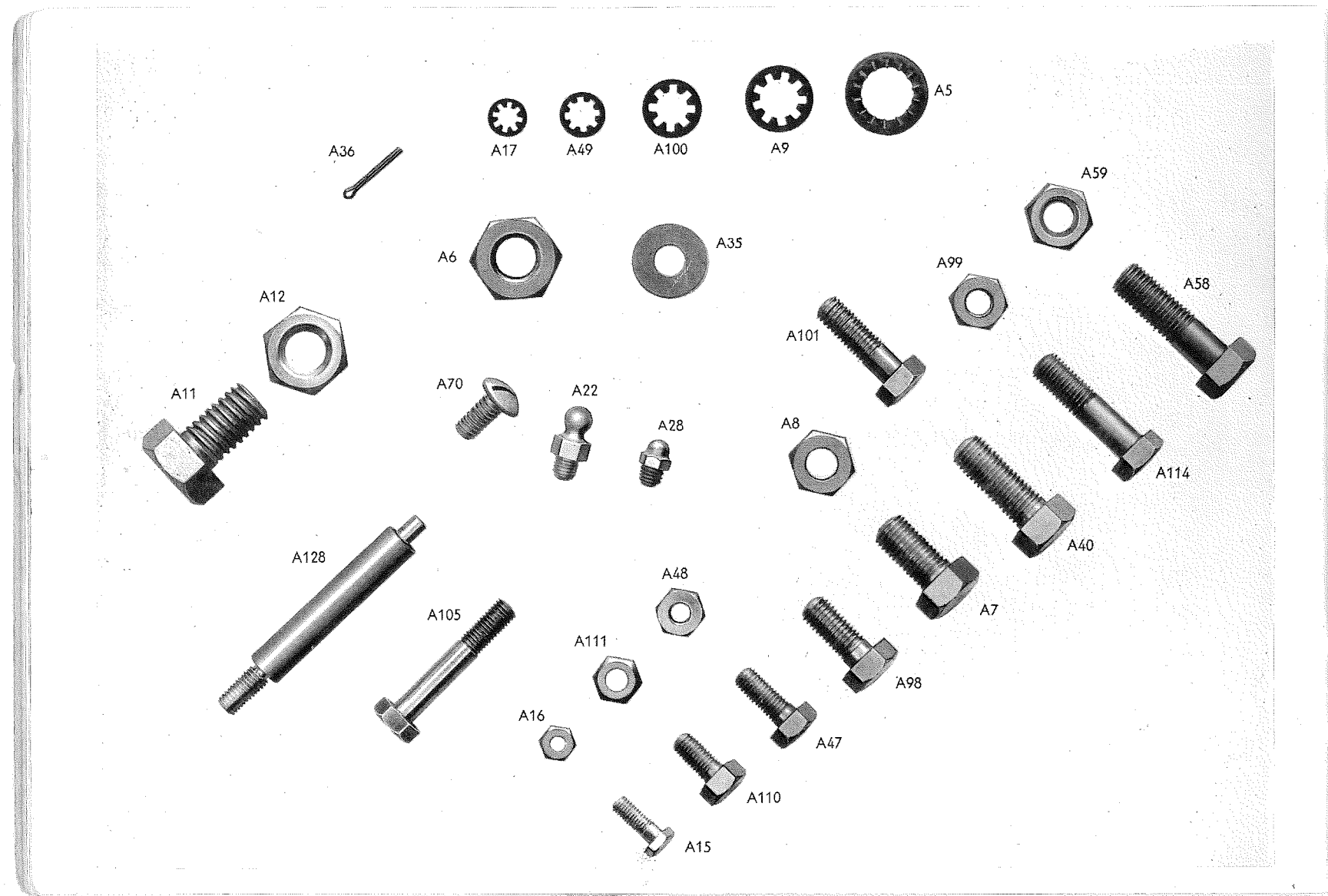


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## SPARE PARTS LIST

*The Manufacturers reserve the right to alter the specification without notice.*

|       |  |       |   |        |   |
|-------|--|-------|---|--------|---|
| A1    | Chassis Side Plate, L.H.                         | A33   | Yoke Support Bracket                        | A59    | Nut for A58   |
| A2    | Chassis Side Plate, R.H.                         | A34   | Yoke Swivel Pin                             | A9     | Lockwasher for A58  |
| A3    | Spacing Stud                                     | A35   | Washer for A34                              | A60    | Driving Sprocket, Engine, 14-Tooth                            |
| A4    | Gearbox Mounting                                 | A36   | Split Pin for A34                           | *B60   | Driving Sprocket, Engine, 17-Tooth                            |
| *A178 | Adjusting Bolt for A4                            | A15   | Bolt, Yoke Support Bracket to Chassis Plate | A61    | Key for Driving Sprocket                                      |
| A99   | Locknut for A178                                 | A16   | Nut for A15                                 | A62    | Locking Screw for Sprocket                                    |
| A5    | Lockwasher for A3 and A4                         | A17   | Lockwasher for A15                          | A135   | Roller Chain, $\frac{1}{2}$ " x ".335" Primary 88 Pitches     |
| A6    | Nut for A3 and A4                                | A37   | Dogclutch Lever complete                    | B135   | Roller Chain, $\frac{1}{2}$ " x ".335" Primary 89 Pitches     |
| A7    | Locating Bolt for Gearbox Mounting               | A38   | Driving Wheel                               | A136   | Roller Chain, $\frac{1}{2}$ " x ".335" Secondary 76 Pitches   |
| A8    | Nut for A7                                       | A39   | Key for Driving Wheel                       | A137   | Roller Chain, $\frac{1}{2}$ " x ".335" Final Drive 74 Pitches |
| A9    | Lockwasher for A7                                | A40   | Locking Bolt for Driving Wheel              | A64    | Duplex Roller Chain, $\frac{1}{2}$ " = ".335" Rotor Drive     |
| A10   | Engine Mounting                                  | A41   | Tractive Type Cover, size 3.00—10           |        | 68 Pitches  |
| *A156 | Hitch Bracket                                    | A42   | Inner Tube, size 16 x 3                     | B64    | Duplex Roller Chain, $\frac{1}{2}$ " = ".335" Rotor Drive     |
| A7    | Upper Bolt, Engine Mounting to Chassis Plate     | A43   | Layshaft                                    |        | 70 Pitches  |
| A8    | Nut for A7                                       | A44   | Pedestal, L.H.                              | † A65  | Front Cowling with Chain Case Back Plate                      |
| A9    | Lockwasher for A7                                | A45   | Oilite Bush for A44                         | † A110 | Bolt, Chain Case Bracket to Engine Mounting                   |
| A11   | Lower Bolt, Engine Mounting to Chassis Plate     | A46   | Core Plug for A44                           | † A111 | Nut for A110  |
| A12   | Nut for A11                                      | A47   | Bolt, Pedestal to Chassis Plate             | † A66  | Chain Case Inspection Cover                                   |
| A5    | Lockwasher for A11                               | A48   | Nut for A47                                 | † A67  | Top Cowling   |
| A13   | Chassis Side Plate, Upper L.H.                   | A49   | Lockwasher for A47                          | *A139  | Bolt, Chain Case to Back Plate                                |
| *A160 | Cover for L.H. Plate                             | A28   | Greaser for A44                             | *A140  | Thumbscrew for Front Cowling                                  |
| A14   | Chassis Side Plate, Upper R.H.                   | *A152 | Adaptor for A158                            | A68    | Rear Cowling  |
| *A164 | Cover for R.H. Plate                             | *A158 | Flexible Coupling                           | A69    | Bottom Cowling  |
| *A165 | Screw for A160 and A164                          | *A159 | Bolt, A158 to Cluster                       | A70    | Cowling Screw   |
| A15   | Bolt, Chassis Side Plate Upper to Lower          | A9    | Lockwasher for A159                         | A71    | Handlebar Mounting Bracket                                    |
| A16   | Nut for A15                                      | A59   | Nut for A159                                | A72    | Side Pivot Bolt for Mounting Bracket                          |
| A17   | Lockwasher for A15                               | *A172 | Cap Screw A158 to A152                      | A59    | Nut for A72   |
| A18   | Axle   | A54   | Flanged Bush for A44                        | A9     | Lockwasher for A72  |
| A19   | Axle Bearing                                     | *A166 | Long Grease Nipple                          | A73    | Handlebar Adjustment Stud                                     |
| A20   | Oil Seal for Axle Bearing                        | A50   | Chainwheel Cluster Secondary                | A74    | Distance Tube for Adjustment Stud                             |
| A21   | Protection Washer for Oil Seal                   | A51   | Key for A50 and A152                        | A75    | Plain Washer for A73  |
| A22   | Grease Nipple for A19                            | A62   | Locking Screw for Sprocket                  | A76    | Hand Nut for A73  |
| †A182 | Housing Axle Bearing                             | A52   | Circlip for Layshaft                        | A77    | Wing Nut for A73  |
| †A183 | Axle Bearing                                     | A25   | Layshaft Idler Chainwheel Cluster           | A78    | Handlebar Assembly  |
| †A184 | Cap for A182                                     | A26   | Bush for A25                                | A79    | Top Pivot Bolt for Handlebar                                  |
| †A134 | Collar   | A21   | Spacing Washer, Layshaft                    | A59    | Nut for A79   |
| A23   | Shim Washer for Axle                             | *A134 | Collar for Layshaft                         | A9     | Lockwasher for A79  |
| A24   | Distance Piece, Axle                             | A53   | Pedestal, R.H.                              | A80    | Top Clamping Nut for Handlebar                                |
| A15   | Locking Screw for A24                            | A54   | Flanged Oilite Bush for A53                 | A81    | Plain Washer for A80  |
| A25   | Axleshaft and Layshaft Idler Chain Wheel Cluster | A28   | Greaser for A53                             | A82    | Rubber Handlegrip   |
| A26   | Oilite Bush for A25                              | A47   | Bolt Pedestal to Chassis Plate              | A83    | Clutch Lever  |
| A27   | Final Drive Chainwheel with Dogclutch Female     | A48   | Nut for A 47                                | A84    | Clutch Cable complete   |
| A28   | Grease Nipple for A27                            | A49   | Lock Washer for A47                         | A85    | Rubber Cable Clip   |
| A29   | Dogclutch Sleeve                                 | A55   | Duplex Chain Sprocket—19-Tooth Rotor Drive  | A86    | Side Plate, Rotor L.H.  |
| A30   | Dogclutch, Sliding                               | A51   | Key for Sprocket                            | A47    | Bolt, Side Plate to Pedestal                                  |
| A31   | Dogclutch Key                                    | A62   | Locking Screw for Sprocket                  | A48    | Nut for A47   |
| A32   | Yoke Assembly                                    | A56   | Gear Box Complete                           | A49    | Lockwasher for A47  |
| *A133 | Slipper for Modified Yoke                        | A57   | Engine Complete                             | A47    | Side Plate, Rotor R.H.  |
|       |  | A58   | Bolt, Engine to Mounting                    |        | Bolt, Side Plate to Pedestal                                  |

\* Not Illustrated

† For Machines after 511243

‡ Not supplied separately for machines prior to 51588

|| Illustrated as A63

SERIAL NUMBER OF MACHINE MUST BE QUOTED WHEN ORDERING SPARES



# SPARE PARTS LIST (Continued) :—

A48 Nut for A47  
A49 Lockwasher for A47  
§ A88 Rotor Shaft Assembly  
§\*A141 Bearing Housing L.H.  
§\*A142 Bearing L.H.  
§\*A143 Bearing Housing R.H.  
§\*A144 Bearing R.H.  
§\*A145 Cover for L.H. Bearing  
§\*A146 Packing for A145  
§\*A147 Bolt for A145  
A89 Rotor Oil Seal  
A47 Bolt, Bearing to Side Plate  
A48 Nut for A47  
A49 Lockwasher for A47  
A91 Thrust Washer  
A92 Hollow Retaining Bolt for A91  
A93 Cap Nut for L.H. Bearing  
A28 Greaser for A93 and A145  
A47 Bolt, Bearing to Side Plate  
A48 Nut for A47  
A49 Lockwasher for A47  
A20 Oil Seal for R.H. Bearing  
A95 Duplex Sprocket Rotor Drive, 14-Tooth  
\*B95 Duplex Sprocket 18-Tooth  
A51 Key for Sprocket  
A62 Locking Screw for Sprocket  
A28 Greaser  
A96 Rotary Hoe Blade, L.H.

A97 Rotary Hoe Blade, R.H.  
A98 Bolt, Hoe Blade to Hub (Centre Hub Only)  
A99 Nut for A98  
A100 Lockwasher for A98  
A101 Bolt, Hoe Blade to Outer Hubs  
A99 Nut for A101  
A100 Lockwasher for A101  
A128 Chain Case Retaining Stud  
A48 Nut for A128  
A49 Lockwasher for A128  
A102 Chain Case, Rotor Drive  
A103 Felt Seal for Chain Case  
A104 Chain Tensioner  
A105 Bolt for Chain Tensioner  
\*A148 Stud for Chain Tensioner  
A106 Support Bracket for Tine Guide  
A40 Bolt, Support Bracket to Chassis Plate  
A9 Lockwasher for A40  
A108 Tine Guide  
A98 Bolt, Tine Guide to Support Bracket  
A100 Lockwasher for A104  
A109 Rotary Hoe Casing  
A110 Bolt, Casing to Side Plate  
A111 Nut for A110  
A49 Lockwasher for A110  
A112 Stabilizing Tine  
A113 Tine Link  
A114 Bolt, Link to Quadrant

A99 Nut for A114  
A115 Swivel Pin, Link to Tine  
A36 Split Pin for A115  
A116 Tine Control  
A117 Pivot Pin, Tine Control  
A36 Split Pin for A117  
A118 Lock Pin, Tine Control  
A36 Split Pin for A118  
A119 Depth Control Foot  
A120 Depth Control Lever  
A121 Spring Plate for Lever  
A122 Spring  
A123 Bolt, Spring Plate to Lever  
A124 Nut for A123  
A125 Rear Flap  
A98 Bolt, Rear Flap to Hoe Casing  
\*A129 Power Take-off Cover  
\*A130 Air Filter complete  
\*A153 Chain Tensioner Outer for Driving Wheel Chain  
\*A154 Chain Tensioner Inner for Driving Wheel Chain  
\*A151 Tension Spring for A153 and A154  
\*A161 Chain Tensioner Axle  
A11 Bolt for A161  
\*A162 Spacer L.H. for A161  
\*A163 Spacer R.H. for A161  
\*A155 Engine Guard

\* Not illustrated

§ Not supplied separately for machines prior to 51494

IMPORTANT—WHEN ORDERING SPARES QUOTE MACHINE SERIAL NUMBER

**BYRON HORTICULTURAL ENGINEERING LTD**  
**HUCKNALL · NOTTINGHAM · ENGLAND**

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