

The
Landmaster

KESTREL

ROTARY HOE



MAINTENANCE INSTRUCTIONS
AND
SPARE PARTS LIST

WHEN ORDERING SPARES, SERIAL NUMBER OF MACHINE MUST BE QUOTED

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OPERATING AND MAINTENANCE INSTRUCTIONS

Before starting the LANDMASTER the Engine Instruction Book should be read carefully. IT IS VITAL that a high oil level is maintained in the crank case at all times, otherwise lubrication may be adversely affected when the machine is operated off level. 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 is of the oil bath type; this should be filled to the indicated level with engine oil and checked frequently.

GENERAL LUBRICATION INSTRUCTIONS (see also page 6)

ENGINE : Fill sump to top of Dipstick with Engine Oil Grade S.A.E.30. Capacity 2 pints.

AIR FILTER : Fill to indicated level with Engine Oil Grade S.A.E.30. Remove Filter from Engine frequently; dismantle and wash in paraffin. Drain off surplus paraffin before re-fitting.

GEARBOX : Fill to Plug level with Engine Oil Grade S.A.E.40. On De-Luxe Models, half fill only.

ROTOR CHAIN CASE : Fill to plug level with Oil Grade S.A.E. 140 E.P. Capacity 1½ pints.

CHAINS : Lubricate with Oil Grade S.A.E. 140 E.P.

GREASE NIPPLES : L.H. Rotor Bearing; R.H. and L.H. Layshaft Pedestals. GREASE WITH GUN FREQUENTLY.

NOTE.—Machines after Serial Nos. 354383 and 454383 have Grease Nipples on L.H. Rotor Bearings and R.H. Layshaft Pedestal only.

The R.H. Rotor Bearing is lubricated by the oil in the Rotor Chain Case.

The wheel bearings are packed with grease at the factory and require no further lubrication. This applies also to L.H. Layshaft bearing on machines after Serial Nos. 354383 and 454383.

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 when the engine is running. Care should be taken to avoid operating the machine with the hand on the clutch as this will cause overheating and clutch wear.
2. **GEAR LEVER**, situated on top of the machine. The three forward 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.

Kestrel De-luxe models are fitted with reverse and this control lever is on the handle cross bar. The reverse lever should be used in conjunction with the clutch, and operated only when the gear lever is in neutral. When this lever is released, the machine will stop.

The Gearbox gives the following approximate land speeds :—
High Gear 2 m.p.h.; Medium Gear $1\frac{1}{4}$ m.p.h.; Low Gear $\frac{3}{4}$ m.p.h. Reverse (de luxe only) $\frac{3}{4}$ m.p.h.

3. **DOG CLUTCH LEVER**, to the left of the gear lever. This control enables the operator to manoeuvre the machine freely by disconnecting 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**. To avoid walking on newly tilled ground, the handlebars may be moved to either side by releasing the clamping nut on top of the handlebar mounting bracket and re-clamping in the desired position.

The handlebars may be adjusted to a convenient working height to suit the operator by releasing the hand nut and wing nut on either side of the mounting bracket.

WHEEL ADJUSTMENT. The wheels may be moved along the axleshaft by slackening the two bolts on the locking plate.

ENGINE. The engine is automatically governed, there is no manual throttle control. Keep the linkage as clean as possible, well lubricated and operating freely. Any stiffness on the governor control will cause considerable loss of power.

CHAIN ADJUSTMENTS. To adjust the primary chain (engine to gearbox), remove engine chain case then slide engine forward, first slackening the four engine holding bolts. The chain when properly adjusted should have approximately $\frac{3}{8}$ " slack lift.

To adjust secondary chain (gearbox to layshaft), remove top cowl and adjust chain by means of the adjuster on the spacer immediately behind the gearbox mounting. Care should be taken not to over tighten the chain, which should have approximately $\frac{3}{8}$ " slack lift when properly adjusted. (See illustration on page 6.)

The adjustment of all other chains is fully automatic.

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 remove the Blister from the R.H. chassis side plate, then slacken the locknut at the bottom of the clutch thrust lever; this lever is connected to the clutch control cable and will be found on the gearbox. With a screw-driver, tighten the grub-screw until all the free movement is taken from the clutch lever on the handlebar, then slacken back a half turn and retighten the locknut while the grub-screw is still held by the screwdriver.

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

TO REMOVE ROTARY HOE FOR FITMENT OF OTHER IMPLEMENTS. (See illustration on page 6.)

Slacken the nuts 'A' on the two hinge bolts on the R.H. Inner layshaft pedestal and swing the bolts sideways. Remove the two wing nuts 'B' on the L.H. pedestal, also the $\frac{1}{2}$ " bolt 'C' immediately behind this. The distance piece 'D' on this bolt will then become free and permit the rotor to be moved to the right; the whole Rotary Hoe assembly is then clear of the machine. When replacing ensure that the driving dogs are properly engaged by turning the blades by hand until the joint between the R.H. Inner and Outer pedestals is closed. **It is important that the hinge bolts should not be tightened until this has been done.**

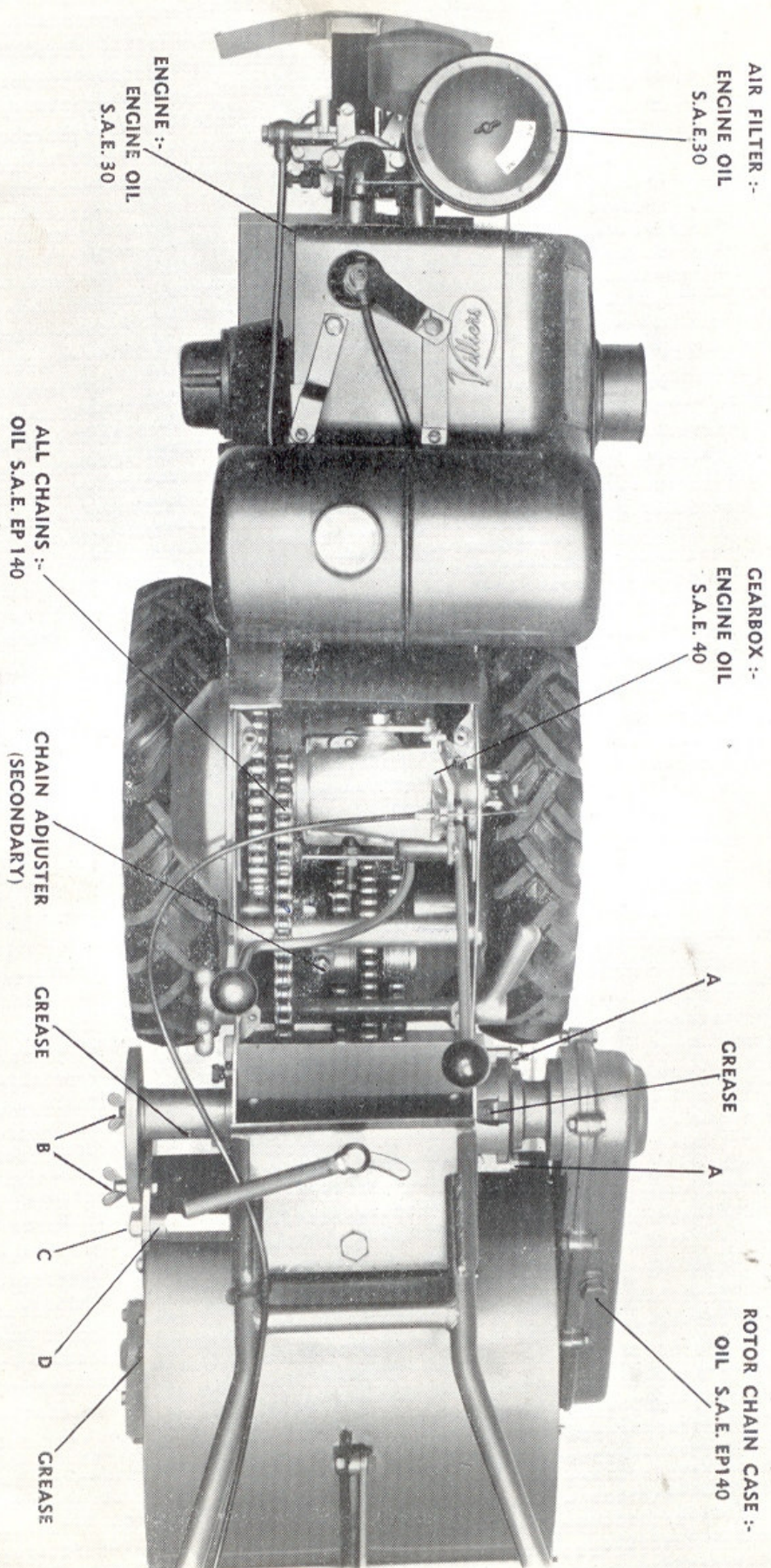
Do not forget to replace the distance piece 'D' on the $\frac{1}{2}$ " bolt 'C'.

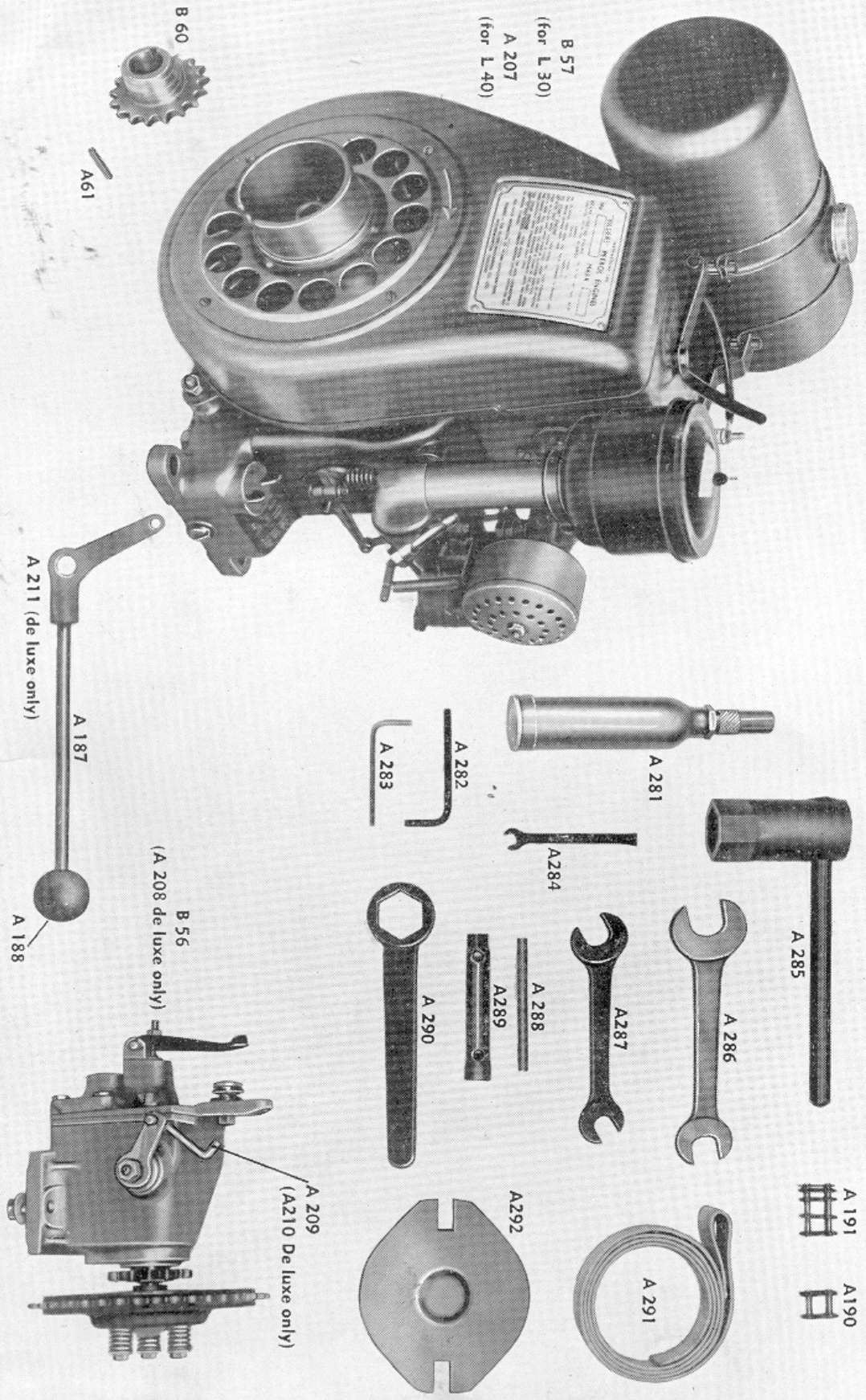
NOTE.—Machines after Serial Nos. 354383 and 454383 have no L.H. Layshaft Pedestal and the wing nuts 'B' are therefore not fitted.

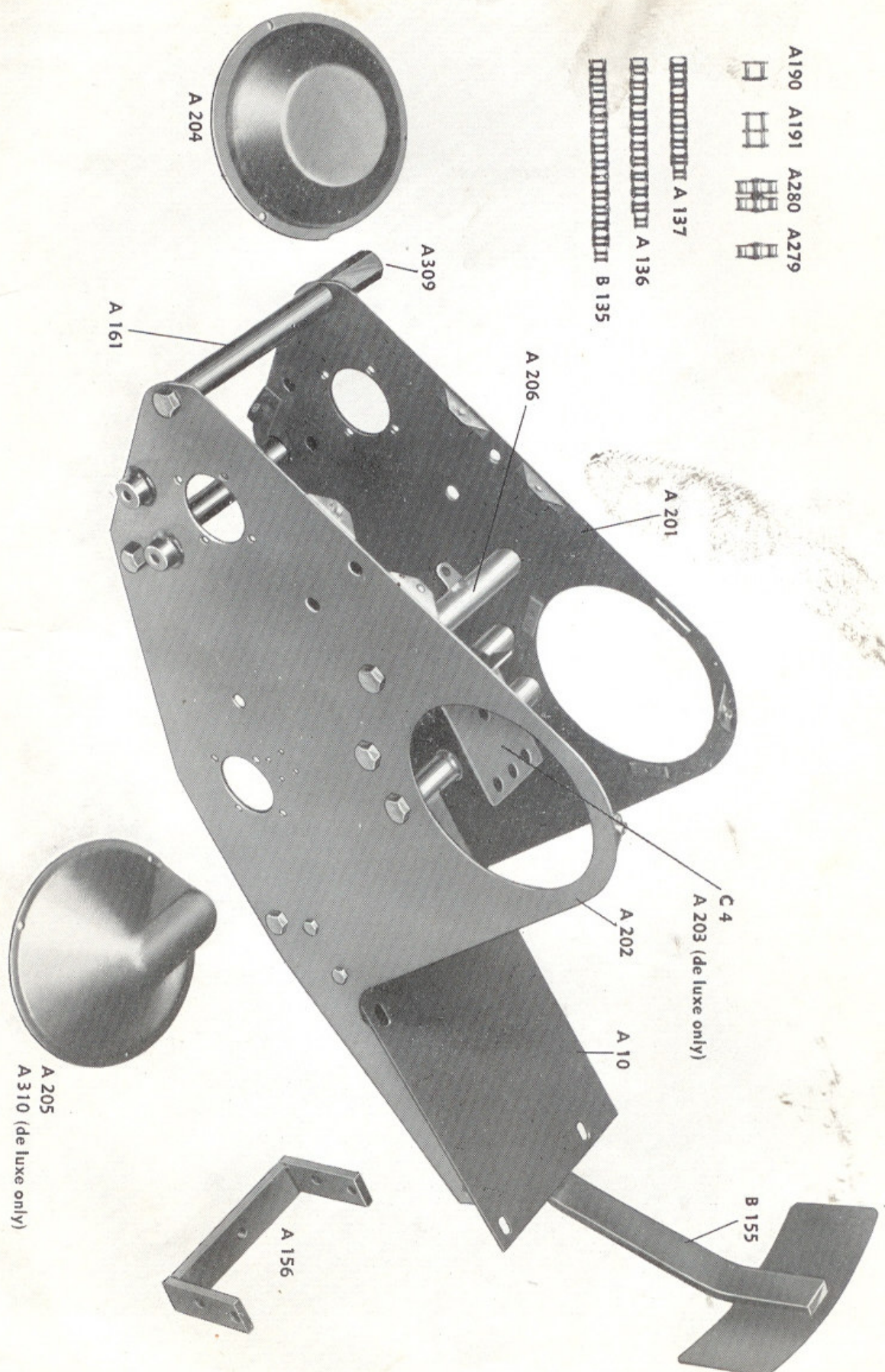
Various implements may be fitted to the Kestrel and attachment bosses for this purpose are located below the layshaft pedestals, two bosses on each side.

A power take-off may be fitted to the R.H. Layshaft pedestal when the Rotor is removed. This will give the following speeds :—
Low Gear 113 r.p.m.; Medium Gear 200 r.p.m.; High Gear 315 r.p.m.; Reverse 115 r.p.m. (de Luxe only).

A power take-off sprocket is available for the engine and access to this is obtained by removing the Power Take-off Cover on the engine chain case.







A 190 A 191 A 280 A 279



A 137

A 136

B 135

A 206

A 201

C 4

A 203 (de luxe only)

A 202

A 10

B 155

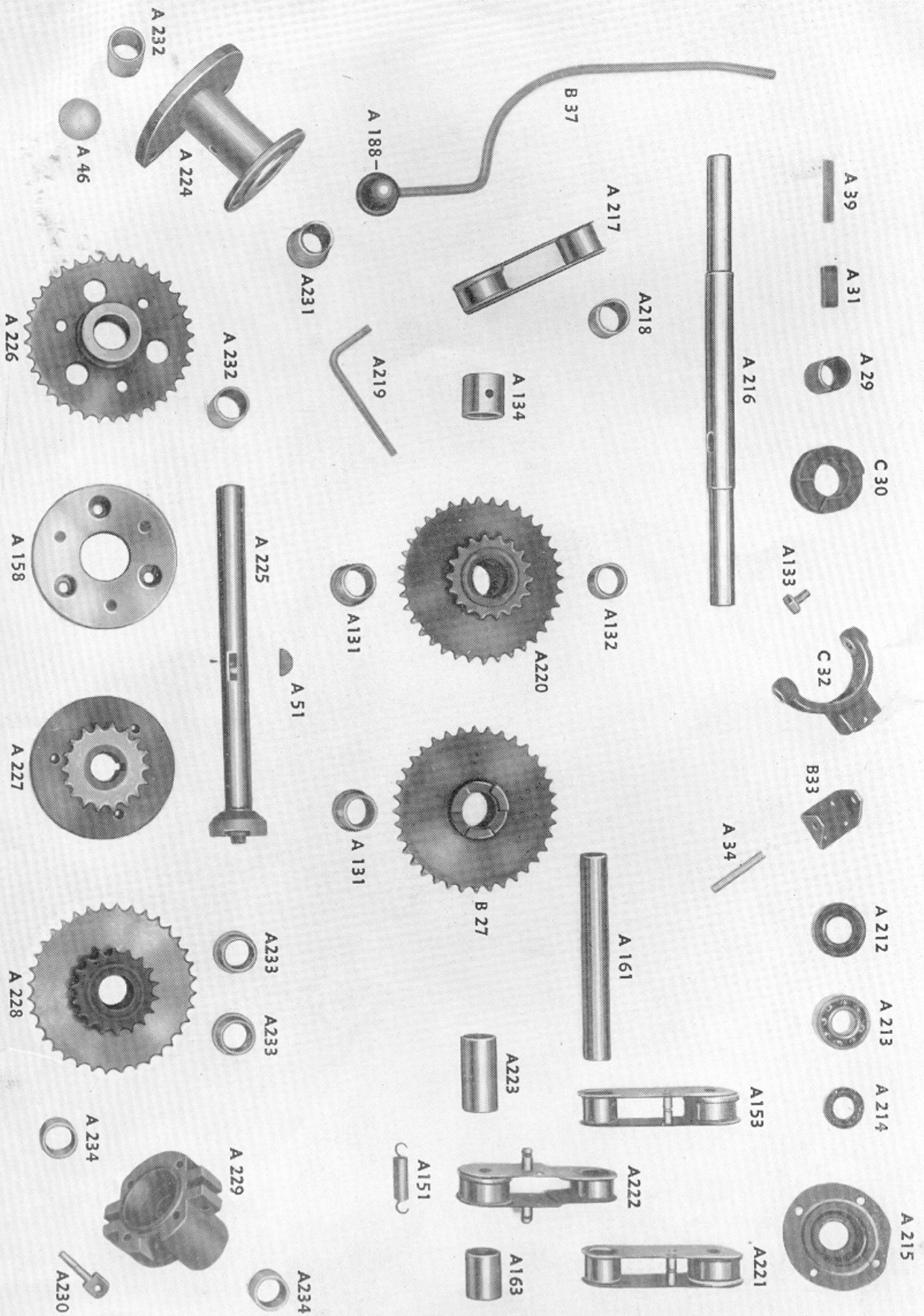
A 156

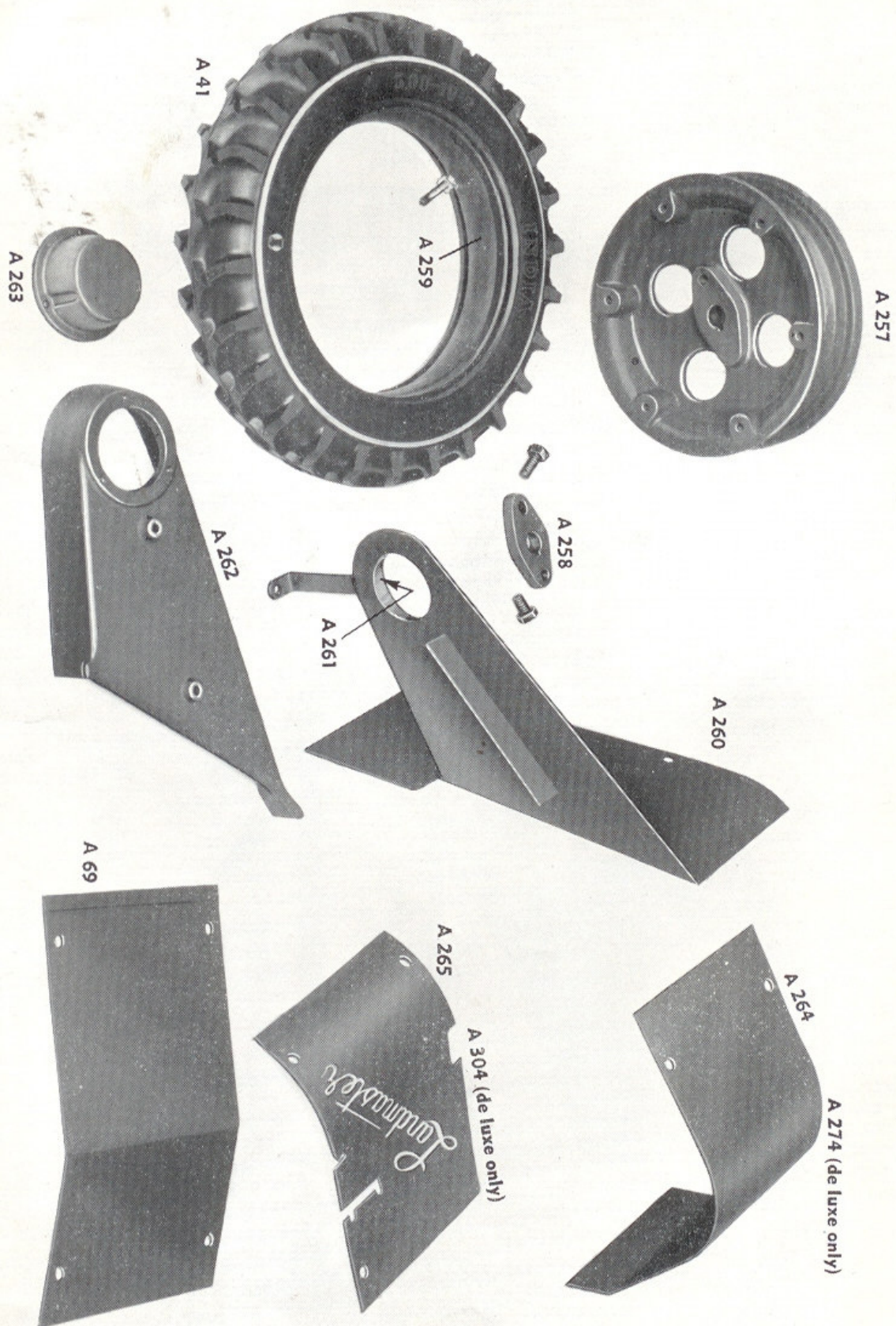
A 205
A 310 (de luxe only)

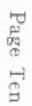
A 204

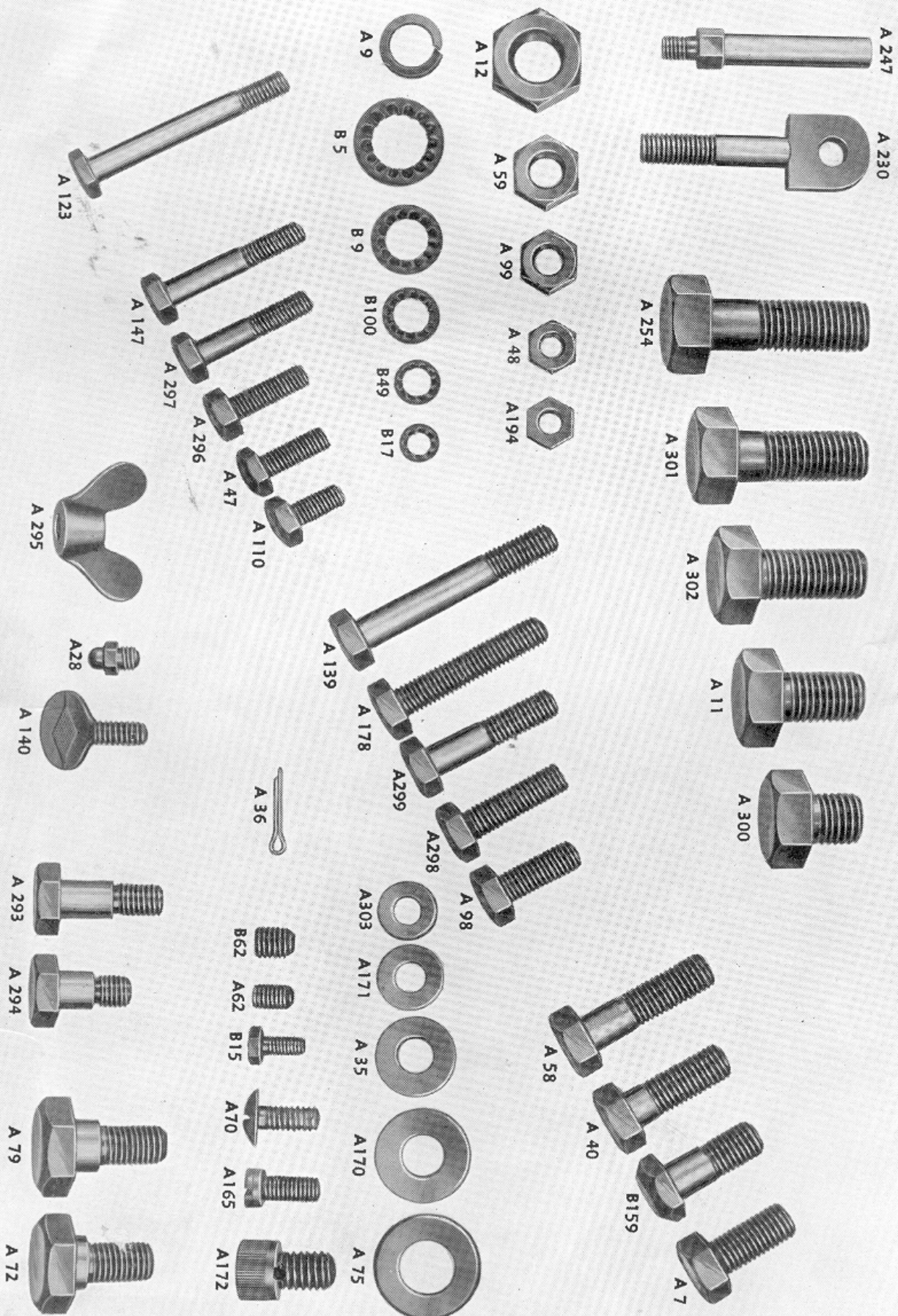
A 161

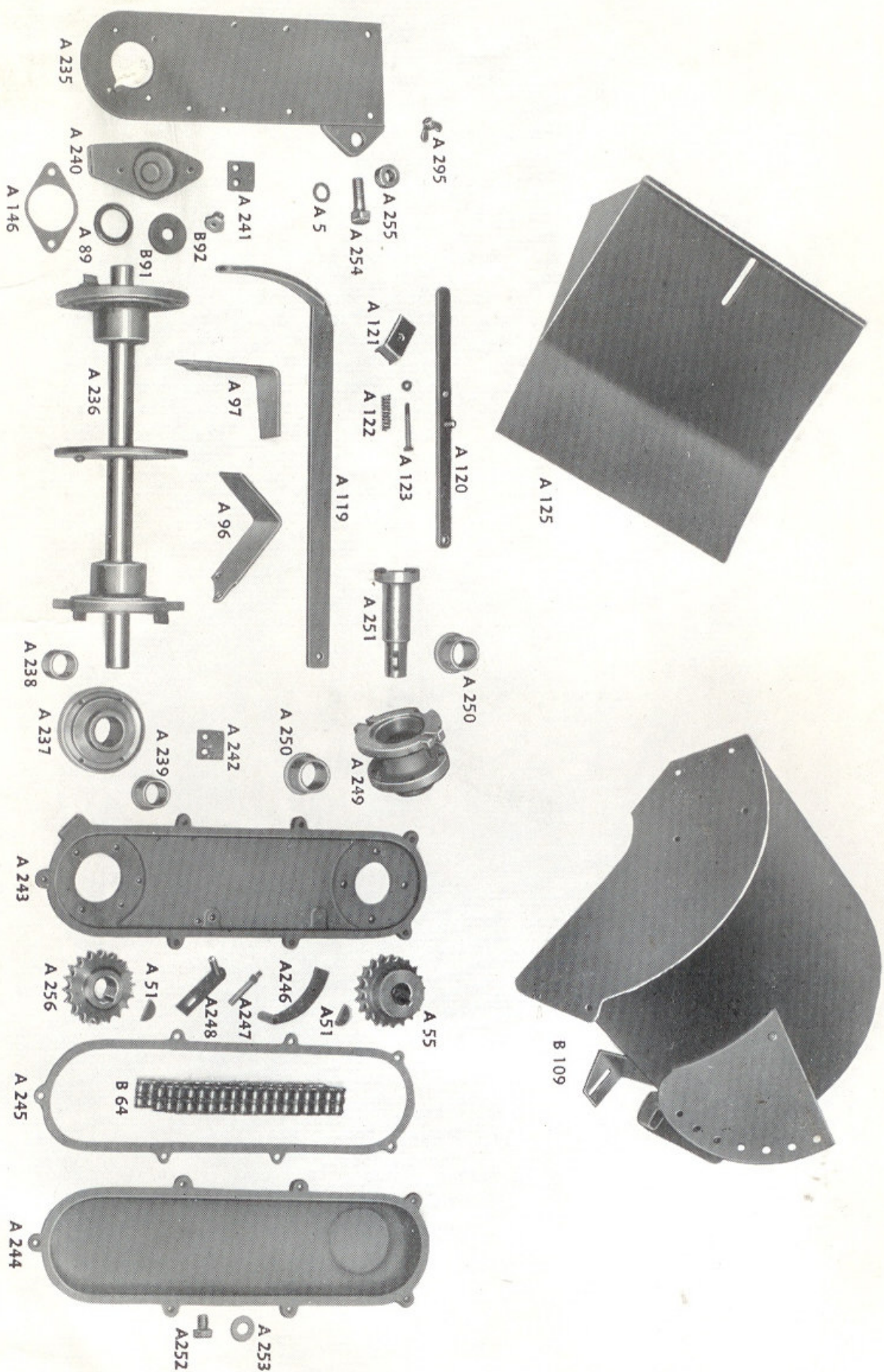
A 309











SPARE PARTS LIST

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

C4	B56		
Gearbox Mounting	Gearbox		
A11 Bolt for C4	A344 Pivot Bolt for Gear lever	A121 Spring Plate for A120	
B5 Lockwasher for A11	A345 Spring Washer for A344	A122 Spring Bolt for A121	
A178 Gearbox Adjusting Bolt	A346 Nut for A344	A123 Bolt for A121	
A99 Locknut for A178	Engine Villiers Mk. 20 HS (L30 only)	A194 Flat Locknut for A123	
B5 Lockwasher for A11, A301	Bolt for B57, A207, A10	A125 Rear Flap	
A7 Bolt for A10, A120, B155	Nut for A58, A7, A72, A79	A98 Bolt for A125	
A9 Spring Washer for A158	Driving Sprocket 17-Tooth	A131 Flanged Bush for B27 and A220	
B9 Lockwasher for A7, A40, A58, B159	B62 Locking Screw for B60	A132 Plain Bush for A220	
Engine Mounting	Key for B60	A133 Slipper for C32	
A7 Forward Upper Bolt, A10 to Chassis Plates	Locking Screw for C32, A55, A134, A256	A134 Collar	
A58 Rear Upper Bolt, A10 to Chassis Plates	Locking Screw for B60	A62 Locking Screw for A134	
A59 Nut for A7 and A58	Roller Chain Duplex 70 pitches	B135 Roller Chain Primary 89 pitches	
B9 Lockwasher for A7 and A58	Bottom Cowing	A136 Roller Chain Secondary 76 pitches	
A301 Lower Bolt A10 to Chassis Plates	Cowing Screw	A137 Roller Chain Final Drive 74 pitches	
A12 Nut for A301	Handlebar Mounting Bracket	A139 Bolt for A262	
B5 Lockwasher for A301	Side Pivot Bolt for A71	A140 Thumbscrew for Front Cowing	
A11 Bolt for C4, A161, A206, A258, A313	A59 Nut for A72	A171 Plain Washer for A140	
A12 Nut for A301	Handlebar Adjusting Stud	A146 Packing for A240	
B15 Bolt for Yoke Support Bracket	Distance Tube for A73	A147 Tension Spring for Chain Tensioners	
B17 Lockwasher for B15	Washer for A76, A77, A80	A151 Chain Tensioner Assembly L.H.	
B27 Final Drive Chainwheel with Dog Clutch	Hand Nut for A73	B155 Engine Guard	
A28 Greaser for A224, A229, A240	Wing Nut for A73	A40 Bolt for B155	
A29 Dog Clutch Sleeve	Handlebar Assembly	B9 Lockwasher for A40	
C30 Dog Clutch Sliding	Top Pivot Bolt for A78	Hitch Bracket	
A31 Dog Clutch Key	Top Clamping Nut for A78	A58 Bolt for A156	
C32 Dog Clutch Yoke	A75 Washer for A80	A59 Nut for A58	
B33 A62 Locking Screw for C32	Rubber Handle Grip	B9 Lockwasher for A58	
A34 Yoke Support Bracket	A82 Rubber Cable	A12 Nut for A156	
A35 Washer for A34	B83 Clutch Lever	A12 Nut for A301	
A36 Split Pin for A34	B84 Clutch Cable	B5 Lockwasher for A301	
B37 Dog Clutch Lever	A85 Rubber Cable Clip	Flexible Coupling	
A39 Wheel Key	A89 Rotor Oil Seal	Bolt, Flex Coupling to A226	
A40 Bolt for A120, B155	Thrust Washer	A59 Nut for B159	
A41 Tractive type Cover 3.00—10.	Hollow Retaining Bolt for B91	B9 Lockwasher for B159	
A46 A299 Inner Tube 3.00—10.	Rotor Blade L.H.	A172 Socket Cap Screw A158 to A227	
A47 Bolt for A215, A224, A229, A241, A242, A248, A260, A313, A360 and A387	Rotor Blade R.H.	B9 Lockwasher for A172	
A48 Nut for A47, A110, A207	Nut for A96, A97, A125, A249	Spacer and Axle for Chain Tensioner	
B49 Lockwasher for A47, A110, A147, A296, A297	Nut for A98, A178, A298	A11 Bolt for A161	
A51 Key for A55, B95, A227	Lockwasher for A98, A139	B5 Lockwasher	
A55 Duplex Sprocket 19-Tooth	Rotary Hoe Casing	Spacing Bush R.H. for Chain Tensioner	
	Bolt for B109, A235, A237, A241, A242, A243, A248, A48 Nut for A110	Screw for A204, A205, A263, A310	
	B49 Lockwasher for A110	Pain Washer for A58	
	Depth Control Foot	A171 Plain Washer for A110	
	A40 Pivot Bolt for A120	A172 Socket Cap Screw A158 to A227	
	A59 Locknut for A40	A178 Adjusting Bolt for Gearbox Mounting	
		A187 Gear Lever	

Serial number of machine **must** be quoted when ordering spares

SPARE PARTS LIST (Continued)—

A188	Knob for A187, A211, B37	A225	Layshaft Assembly	A245	Rotor Chain Case Packing
A190	Connecting Link for Single Roller Chain	B225	Layshaft Assembly after Serial Nos. 354383 and 454383	A297	Bolt, A243 to A244
A191	Flat Nut for A123	A226	Input Sprocket (Flex Coupling)	A48	Nut for A297
A194	Chassis Side Plate L.H.	A227	Adaptor Sprocket (Flex Coupling)	B49	Lockwasher for A297
A201	Chassis Side Plate R.H.	A228	Layshaft Idle Chainwheel Cluster	A246	Chain Tensioner
A202	Gearbox Mounting (de luxe only)	A229	Layshaft Pedestal Inner R.H.	A247	Stud for A246
A203	A11 Bolt for A203	A28	Greaser for A229	A248	Adjuster for A246
	B5 Lockwasher for A11	A47	Bolt A229 to A202	A110	Bolt for A248
	A178 Adjusting Bolt for A203	A48	Nut for A47	B49	Lockwasher for A110
	A99 Locknut for A178	B49	Lockwasher for A47	Outer Pedestal R.H. and Power Take-off Pedestal	
A204	Blister for A201	A230	Hinge Bolt	A98	Bolt, A249 to A243
A205	Blister for A202	A231	A99 Nut for A230	B100	Lockwasher for A98
A206	A165 Screw for A204 and A205	A232	Flanged Bush for A224	A250	Flanged Bush for A249
	Spacer with Lug	A233	Flanged Bush for A228	B251	Stub Shaft Assembly and Power Take-off Shaft
	A11 Bolt for A206	A234	Plain Bush for A229		Stub Shaft Assembly (after Serial Nos. 354236 and 454236)
A207	B5 Lockwasher for A11	A235	Rotor Side Plate L.H.	A252	Oil Filler Plug for A244
	Engine Villiers Mk. 25 HS (L.40 only)		A110 Bolt A235 to B109	A253	Packing for A252
	A58 Bolt for A207		A48 Nut for A110	A254	Bolt A235 to A309
	A59 Nut for A58		B49 Lockwasher for A110	A255	Distance Piece for Side Plate
A208	A170 Plain Washer for A58		A299 Bolt A235 to A224	A256	Duplex Sprocket 18-Tooth
	A9 Spring Washer for A58		A295 Wing Nut for A299	A257	Driving Wheel
	Gearbox with Reverse (de luxe only)		A312 Rotor Side Plate after Serial Nos. 354383 and 454383 (not illustrated)		Locking Plate for A257
	A344 Pivot Bolt for Gear Lever		A110 Bolt A312 to B109	A11	Lock Bolt for A258
	A345 Spring Washer for A344		A48 Nut for A110	A302	Lock Bolt for A258
	A346 Nut for A344		B49 Lockwasher for A110		Inner Tube 3.00—10.
A209	Link		A254 Bolt Sideplate to A309	A259	Front Cowling with Engine Chain Case Backplate
A210	Link (de luxe only)		Rotor Shaft Assembly	A260	A47 Bolt A260 to A10
A211	Gear Lever (de luxe only)	A236	Bearing Housing R.H. and L.H.		A48 Nut for A47
A212	Oil Seal Inner	A237	A296 Bolt for R.H. Bearing	A261	B49 Lockwasher for A47
A213	Ball Bearing for Axle		A110 Bolt for L.H. Bearing	A262	Felt Seal for A260
A214	Oil Seal Outer		A48 Nut for A110		Engine Chain Case
A215	Housing for Ball Bearing		B49 Lockwasher for A296 and A110	A139	Bolt, A262 to A260
	A47 Bolt for A215	A238	Plain Bush for A237	B100	Lockwasher for A139
	A48 Nut for A47	A239	Flanged Bush for A237		Engine Power Take-off Cover
	B49 Lockwasher for A47	A240	Cover for L.H. Bearing	A165	Screw, A263 to A262
A216	Axle		A28 Greaser for A240	B49	Lockwasher for A165
A217	Chain Tensioner Assembly Secondary		A147 Bolt for A240		Rear Cowling
A218	Spacer for A217		B49 Lockwasher for A147	A264	Top Cowling
A219	Adjuster for A217		Weed Clearing Knife L.H.	A265	Reverse Gear Lever
A220	Axleshaft Idle Chainwheel Cluster	A241	Weed Clearing Knife R.H.	A266	Reverse Gear Cable
A221	Chain Tensioner Assembly R.H.	A242	A110 Bolt for A241 and A242	A267	Reverse Gear Trigger
A222	Chain Tensioner Assembly Centre		B49 Lockwasher for A110	A268	A293 Shoulder Bolt for A268
A223	Spacing Bush L.H. for Chain Tensioner	A243	Rotor Chain Case Back		Reverse Trip Bar
A224	Pedestal L.H.		A313 Steady Plate for A243	A294	Pivot Bolt for A269
	A28 Greaser for A224		A47 Bolt A313 to A243	A298	Stop Bolt for A269
	A47 Bolt, A224 to A201		B49 Lockwasher	A99	Nut for A298
	A48 Nut for A47		A314 R.H. Support for A313		Spring for A269
	B49 Lockwasher for A47		A11 Bolt A313 to A314		Back Plate for Reverse Operating Mechanism
	A360 Layshaft Bearing Housing L.H.		B5 Lockwasher		Reverse Cable Spring
	A213 Bearing		Rotor Chain Case Cover		Rear Cowling (de luxe only)
	A214 Oil Seal		A387 Support Bearing Housing		Double Cranked Link for Single Roller Chain
	A47 Bolt A300 to A201		A47 Bolt A387 to A244		Doubled Cranked Link for Duplex Roller Chain
	A48 Nut for A47		B49 Lockwasher		Grease Gun
	B49 Lockwasher for A47		A388 Bush for A387		Hexagon Wrench W.S.4.
					Hexagon Wrench W.S.3.
					Flywheel Spanner

After Serial Nos. 354383 and 454383 (not illustrated)

After Serial Nos. 354236 and 454236 (not illustrated)

SPARE PARTS LIST (Continued)—

A286	Double Ended Spanner 7/16 x 5/16 whit	A301	Lower Bolt A10 to Chassis Plate	A313	Steady Plate for A243	After Serial Nos. 354383
A287	Double Ended Spanner 5/16 x 3/16 whit	A302	Lock Bolt for A258	A314	R.H. Support for A313	and 454383 (not illustrated)
A288	Tommy Bar	A303	Washer for A209 and A210			
A289	Box Wrench 1/4 x 3/16 whit	A304	Top Cowing (de luxe only)	A344	Pivot Bolt for Gear Lever A187	
A290	Plug Spanner	A305	Clutch Cable (de luxe only)			
A291	Starting Strap	A306	Transfer "Free-Engaged"	A345	Spring Washer for A344	
A292	Power Take-off Cover	A307	Transfer "L.N.M.H." (de luxe only)	A346	Nut for A344	
A293	Shoulder Bolt for A268	A308	Transfer "Reverse from Neutral Only" (de luxe only)	A387	Support Bearing Housing (after Serial Nos. 354236 & 454236)	
A294	Pivot Bolt for A266				Bush for A387 (after Serial Nos. 354236 and 454236)	
A295	Wing Nut for A235	A309	L.H. Support for A235	A388	Transfer "Pull to disengage"	
A296	Bolt for R.H. Rotor Bearing Housing	A310	Blister for A202 (de luxe only)	A400	Transfer "HMNI"	
A297	Bolt for Rotor Chain Case Joint			A401	Transfer "Landmaster"	
A298	Stop Bolt for A269	A312	A165 Bolt A310 to A202			
A299	Bolt for A235		Rotor Side Plate L.H. after Serial Nos. 354383 and 454383 (not illustrated)	A402		

IMPORTANT—When ordering spares quote machine serial number

PUB. DATE JULY, 1954.

LANDMASTER LTD.

HUCKNALL · NOTTINGHAM · ENGLAND

Telephone : Hucknall 643/4