



E SERIES III

SPARE PARTS LIST

It is important that when ordering spare parts, the user of a machine should always give the serial number of the particular machine for which the spare part is required, the part number (not the illustration number) and description. The serial number is stamped on the plate fixed to the inside of the Chaincase backplate (Illus. No. 124) above the shield, and again on the Stay-tube right hand mounting flange. We cannot guarantee to supply correct parts unless these numbers are quoted.

CUSHION DRIVE.
NO CLUTCH.

SUPPLEMENT TO HOWARD ROTAVATOR E SERIES THREE PARTS LIST

ILLUS. #	NEW PART #	DESCRIPTION
2 TO 6	600446	P.T.O. YOKE K.3.4GB.3458 1-3/8" X 6 SPLINES
2 TO 5	204008500	P.T.O. YOKE K.3.4.W.3678 1-3/8" X 21 SPLINES
27	202023400	O RING - PIONEER REF. 3-146 1.5/8" I.D. X 1.7/8" O.D. X .139
28	263021053	OILSEAL - PIONEER TYPE 13P.300.212.50 3" O.D. X 2.1/8" I.D. X 1/2" WIDE
29	251937191	BEARING - TIMKEN TYPE TS. CONE 3779 - CUP 3720
35	251219012	TORRINGTON THRUST RACE - REF. TRD.2031
36	251219011	TORRINGTON THRUST BEARING - REF. NTA.2031
39	251535115	BEARING - TIMKEN TYPE TS. CONE 418 - CUP 414
47	208002140	CIRCLIP 1.7/8" DIAMETER EXTERNAL
81	203032010	PRESSURE RELIEF VALVE 1/8" BSP TEC. TYPE OA.6862
99	202023160	O RING - PIONEER REF. PO/07505610 9/16" I.D. X 3/4" O.D. X .103
111	252542101	BEARING - TIMKEN TYPE TS. CONE 29585 - CUP 29520
112	263525051	OILSEAL - PIONEER TYPE 11P.350.250.50 2.1/2" I.D. X 3.1/2" O.D. X 1/2" WIDE
115	203032010	PRESSURE RELIEF VALVE 1/8" BSP TEC. TYPE OA.6862
116	251942142	BEARING - TIMKEN TYPE TS. CONE 536 - CUP 532X
124	208023070	RIVET - 3/8" X 7/8"
	208023080	RIVET - 3/8" X 1"
154	208001240	CIRCLIP 5" DIAMETER INTERNAL
155	252250121	BRM.2.1/4 BALLBEARING 2.1/4" I.D. X 5" O.D. X 1.1/4" WIDE
156	263727062	OILSEAL - SUPERSEAL 795036 2.3/4" I.D. X 3.3/4" O.D. X 5/8" WIDE FROM SERIAL NO. 6334122
156	263727051	OILSEAL - PIONEER 11P 375.275.50 2 3/4" I.D. X 3 3/4" O.D. X 1/2" WIDE UP TO SERIAL NO. 6334121
197	263022043	OILSEAL - PIONEER 13P 300.225.38 3" O.D. X 2 1/4" I.D. X 3/8" WIDE FROM SERIAL NO. 6334122
197	262721031	OILSEAL - PIONEER 11P 275.212.31 2 1/8" I.D. X 2 3/4" O.D. X 5/16" WIDE UP TO SERIAL NO. 6334121
199	251640091	BRM.1.5/8 BALLBEARING 1.5/8" I.D. X 4" O.D. X 15/16" WIDE
200	208002120	CIRCLIP 1.5/8" DIAMETER EXTERNAL
204	202030020	GREASE NIPPLE 1/8" BSP. TEC. NA5704

E SERIES PARTS LIST

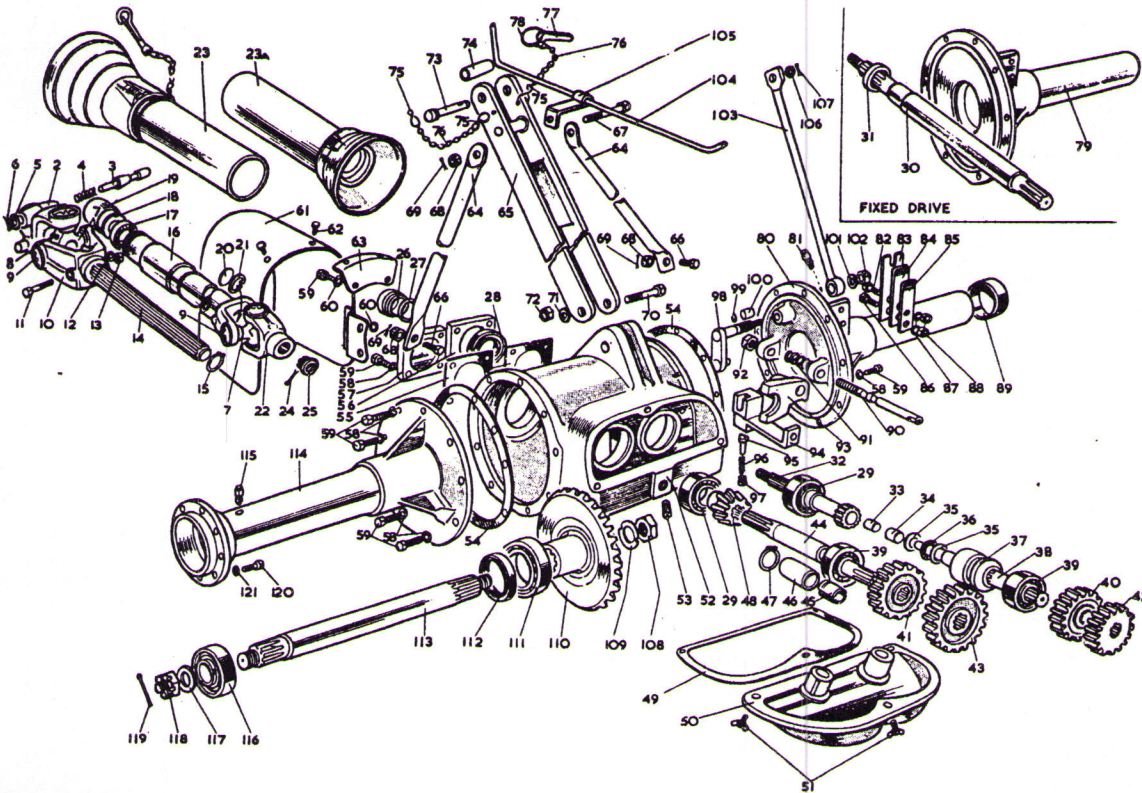


Diagram:-
Universal Joint, Gearbox, R. H. Sideplate
Jackshaft Assemblies

Illus. No.	Part No.	Description	No. off	Illus. No.	Part No.	Description	No. off
1	60954	Machine Number Plate	1	9	K.3.7.GB.19	Circlip	8
UNIVERSAL JOINT ASSEMBLY				41.82.002.1512	Yoke and Bar Shaft Assembly (comprising:-		1
(67957	Universal Joint Assembly - Standard fitment		1	10	41.26.008	(Yoke	1
(67959	Universal Joint Assembly - 1000 r.p.m. Tractors only comprising:-		1	11	6.73.GB.1160	(Bolt	1
(K.3.4.GB.3458	(P.T.O. Yoke Assembly (comprising:-		1	12	6.75.GB.99.	(Washer	1
2	K.3.4.GB.3441	{ Yoke	Standard fitment	13	6.74.GB.11	(Nut	1
3	94.GB.2747	{ Pin		2	14	00.93.02:1512	(Splined Shaft
4	94.GB.2839	{ Spring	2	15	K.3.77.GB.49	(Retainer Lockring	1
5	5.75.GB.59	{ Washer	2	16	41.61.003.0730	Yoke Tube and Sleeve Assembly	1
6	8.72.GB.69	{ Cotter	2	17	K.3.16.GB.123	Felt Washer	1
	K.3.4.W.3678	{ (P.T.O. Yoke Assembly (comprising:-	1	18	K.3.15.GB.71	Washer	1
2	K.3.4.W.3661	{ Yoke	1000 r.p.m. Tractors only	19	3.1/2.14.19	Dust Cap	1
3	00.08.01	{ Pin		2	20	K.3.68.GB.153	End Plug
4	00.12.00	{ Spring	2	21	K.3.7.GB.189	Circlip	1
5	00.33.04	{ Tension Pin	2	22	K.3.4.GB.3471	Attachment Yoke	1
7	3275	Spider Assembly	2		SN/B/18	Guard Assembly Complete	1
8	94.GB.2204	Journal Lubricator	2	23AP.93-TF.2.1131	Outer Half Guard Assembly	1	
				23AAP.93-TM.2.1516	Inner Half Guard Assembly	1	
GEARBOX ASSEMBLY				24		Splitpin 3/16" dia. x 2" long	1
				25	65540	Special Nut	1
				26	65539	Spacer	1
				27		'O' Ring - Pioneer Ref.3-146. 1.5/8" i.d. x 1.7/8" o.d. x .139	1

E SERIES PARTS LIST

Illus. No.	Part No.	Description	No. off	Illus. No.	Part No.	Description	No. off
28		Oilseal - Pioneer Type 13P.300.212.50. 3"o.d. x 2.1/8"i.d. x 1/2" w.	1	65	65582	Topmast	1
29		Bearing - Timkin Type TS. Cone 3779 - Cup 3720	2	66	65968	Special Bolt - Tube Support to Staytube	2
30	67938	Extension Shaft } for Fixed Drive only	1	67	65965	Special Bolt - Tube Support to Topmast	1
31	67939		Abutment Ring	1			Flat Washer 5/8" dia.
	+ 66288	Extension Shaft Assembly comprising:-	1	68		Slotted Nut 5/8" UNF.	3
32 +	65541	Front Bearing Shaft	1	69		Splitpin 1/8" dia. x 1.3/8" long	3
33 +		Bush - Glacier No.3208 - 1"i.d. x 1.1/8"o.d. x 1" long	1	70		Bolt 3/4" UNF. x 4.1/4" long.	1
34 +		Bush - Glacier No.4008 - 1.1/4"i.d. x 1.13/32"o.d. x 1" long	1	71		Shakeproof Washer 3/4" dia. External	1
35 +		Torrington Thrust Race - Ref.TRD.2031	2	72		Nut 3/4" UNF.	1
36 +		Torrington Thrust Bearing - Ref.NTA.2031	1	73	65566	Draw Pin	1
37 +	65542	Sliding Dog	1	74	65577	Sleeve	1
38 +	65543	Rear Extension Shaft	1	75	3912	Hook	3
39		Bearing - Timkin Type TS. Cone 418 - Cup 414	2	76	3913	Chain	2
40	65575	Pick-off Gear 17 Teeth	1	77	50934	Clip Pin	1
41	65576	Pick-off Gear 18 Teeth	1	78	60495	Clip Ring	1
42	65571	Pick-off Gear 15 Teeth	1	NOTE:- Parts marked + are for Dog Clutch Drive only.			
43	65572	Pick-off Gear 20 Teeth	1	R. H. SIDEPLATE ASSEMBLY			
	65567	Pick-off Gear 12 Teeth	1	79	67941	R. H. Sideplate - for Fixed Drive only.	1
	65568	Pick-off Gear 23 Teeth	1	80 +	65588	R. H. Sideplate - for Dog Clutch Drive only.	1
	65569	Pick-off Gear 14 Teeth	1	81		Pressure Relief Valve 1/8" BSP. Tec. Type OA.6862	1
	65570	Pick-off Gear 21 Teeth	1	82		Bolt 1/2" UNF. x 2" long	1
	65573	Pick-off Gear 16 Teeth	1	83	65599	Rear Leaf Spring	1
	65574	Pick-off Gear 19 Teeth	1	84	65600	Centre Leaf Spring	1
	66205	Pick-off Gear 13 Teeth	1	85	65601	Front Leaf Spring	1
	66206	Pick-off Gear 22 Teeth	1	86		Bolt 1/2" UNF. x 1.1/2" long	1
44	65550	Pinion Shaft	1	87		Spring Washer 1/2" dia.	2
45	65549	Split Sleeve	1	88		Nut 1/2" UNF.	2
46	65548	Retaining Sleeve	1	89	68208	Tube Cap	1
47	Circlip	*1.7/8" dia. External	1	90 +	65597	Slide Bar	1
48	65516	Pinion	1	91 +	61042	Dog Clutch Spring	1
49	65545	Cover Plate Gasket	1	92 +		Locknut 5/8" UNC.	1
50	65546A	Cover Plate	1	93 +	65509	Selector Fork	1
51	64808	Special Bolts	3	94 +	65596	Selector Block	1
52	65537	Gearbox	1	95 +	61045	Pawl	1
53		Plug 1/2" BSP. Square Head	1	96 +	61044	Pawl Spring	1
54	65544	Sideplate Gasket	3	97 +	61043	Adjuster	1
55	65552	Gasket .005	as req'd.	98 +	65592	Selector Arm	1
	65553	Gasket .010	as req'd.	99 +		'O' Ring - Pioneer Ref. PO/07506610. 9/16"i.d. x 3/4"o.d. x .103	1
	65554	Gasket .020	as req'd.	100 +	61189	Collar	1
56	65538	Extension Shaft End Cover	1	101 +		Flat Washer 7/16" dia.	1
57	65555	Pinion Shaft End Cover	1	102 +		Nut 7/16" UNF. Philidas Ref.LUFI.	1
58		Spring Washer 1/2" dia.	22	103 +	65914	Lever	1
59		Bolt 1/2" UNC. x 1.1/4" long	26		+ 65917	{ Selector Rod Assembly comprising:-	1
60		Shakeproof Washer 1/2" dia. External	4	104 +	65916	Selector Rod	1
61	65556	Cover	1	105 +	65915	Bracket	1
62		Setscrew 1/4" UNC. x 1/2" long, Hex. Head	2	106 +		Flat Washer 3/8" dia.	1
63	65559	Cover Bracket	1	107 +		Splitpin 3/32" dia. x 3/4" long	1
64	65936	Tube Support	2	NOTE:- Parts marked + are required for Dog Clutch Drive only.			

JACKSHAFT ASSEMBLY

108	22031	Special Nut	1
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E SERIES PARTS LIST

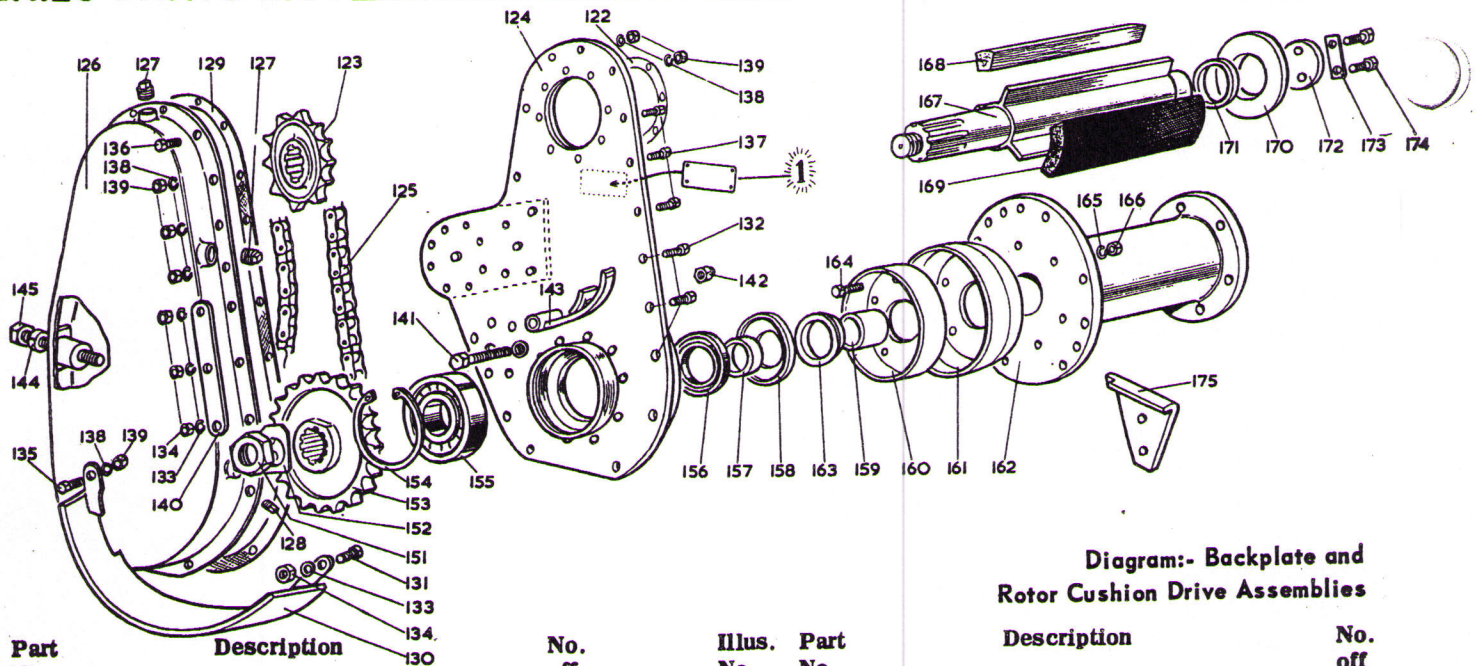


Diagram:- Backplate and Rotor Cushion Drive Assemblies

Illus. No.	Part No.	Description	No. off	Illus. No.	Part No.	Description	No. off	
109	22034	Tab Washer	1	125	54482	Chain Assembly - Morse comprising:-	1	
110	65515	Crownwheel	1		54471		Inner Link	19
111		Bearing - Timkin Type TS. Cone 29585 - Cup 29520	1		64472		Outer Link	Alternative 18 fitsments
112		- Oilseal - Pioneer Type 11P. 350.250.50 2.1/2" i.d. x 3.1/2" o.d. x 1/2" wide	1		54473	Connecting Link	1	
113	65925	Jackshaft	1	125	60483	Chain Assembly - Reynolds 185977 - comprising:-	1	
114	65926	Jackshaft Housing	1		60485	Inner Link	18	
113	67954	Jackshaft	1		60486	Outer Link	18	
114	67955	Jackshaft Housing	1		60487	Connecting Link	1	
113	65579	Jackshaft	1	126	61814	Chaincase	1	
114	65580	Jackshaft Housing	1	127		Oil Filler and Chain Tensioner Plw, 3/4" BSP. Sq. Head	2	
113	65775	Jackshaft	1	128		Oil Level Plug 1/8" BSP. Sq. Head	1	
114	65774	Jackshaft Housing	1	129	61816	Gasket	1	
115		Pressure Relief Valve 1/8" BSP. Tec. Type OA.6862	1	130	61818	Ground Skid	1	
116		Bearing - Timkin Type TS. Cone 536 - Cup 532X.	1	131		Bolt 1/2" UNF. x 1.1/4" long	1	
117	48486	Special Washer	1	132		Bolt 1/2" UNF. x 1.3/4" long	3	
118	61079	Special Nut	1	133		Shakeproof Washer 1/2" dia. Internal	4	
119		Splitpin 1/8" dia. x 2" long	1	134		Nut 1/2" UNF.	4	
120		Bolt 3/8" UNF. x 1.1/4" long	8	135		Bolt 3/8" UNF. x 1.1/2" long	3	
121		Spring Washer 3/8" dia.	8	136		Bolt 3/8" UNF. x 1" long	9	
				137		Bolt 3/8" UNF. x 1.1/4" long	3	
				138		Spring Washer 3/8" dia.	15	
				139		Nut 3/8" UNF.	15	
				140	61817	Stiffener	1	
122	65967	Gasket	1	141		Pivot Bolt 5/8" UNF. x 3.1/4" long	1	
123	65584	Jackshaft Sprocket 11T.	1	142		Nut 5/8" UNF. Philidas Type QUFN.	1	
124	65630	Backplate Rivet Assembly comprising:-	1	143	24853	Chainskid	1	
	65631	Backplate	1	144		Locknut 3/4" BSW.	1	
	65635	Rotor Bearing Housing	1	145	24833	Adjusting Screw	1	
		Rivet 3/8" dia. x 1" long, Pan Head	10	146 - 150		not allocated		
	65636	Dust Cover	1					
	52878	Thickening Pad	1					
		Rivet 3/8" dia. x 7/8" long, Pan Head	3					
				151	58801	Special Nut	1	
				152	65672	Tab Washer	1	

ROTOR CUSHION DRIVE ASSEMBLY

E SERIES PARTS LIST

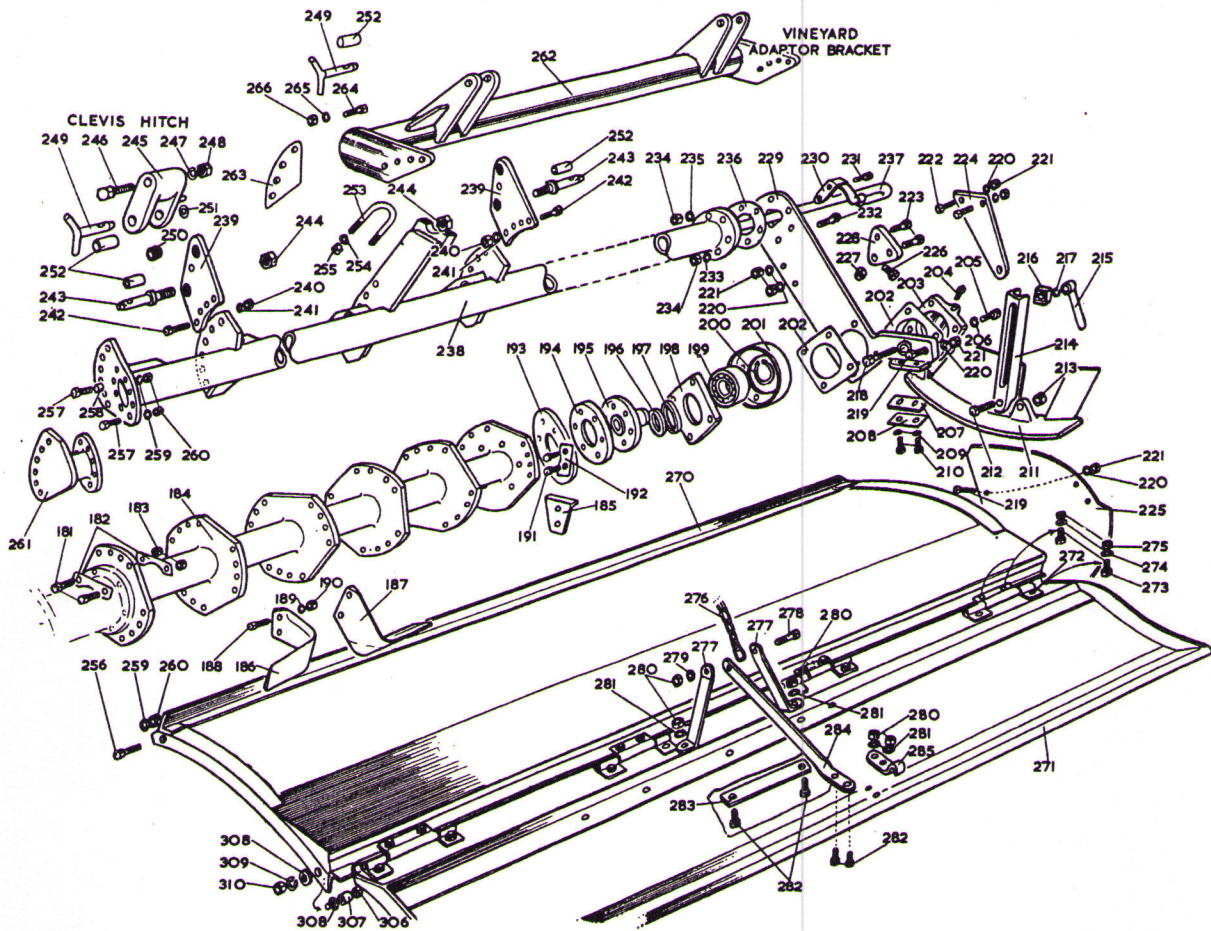


Diagram:- Rotor, Stub Axle, Support Arm, Staytube, Mounting Brackets, Shield Assemblies

Illus. No.	Part No.	Description	No. off	Illus. No.	Part No.	Description	No. off
153	65871	Rotor Drive Sprocket	1	170	65877	(End Flange	1
154		Circlip 5" dia. Internal	1	171	65878	(Bush	1
155	BRM.2.1/4	Ballbearing 2.1/4"i.d. x 5"o.d. x 1.1/4" wide	1	172	65875	End Washer	1
156		Oilseal.- Superseal 795038. 2.3/4"i.d. x 3.3/4"o.d. x 5/8" wide	1	173	65918	Tab Washer	1
157	67908	Rotor Shaft Spacer	1	174		Setscrew 1/2" UNC. x 1.1/4" long; Hex. Head	2
158	67907	Small Dust Cover	1	175	66869	Shearing Blade L.H.	1
159	67909	Spacer - Long	1	176 - 180		not allocated	
160	65892	Inner Dust Cover	1	ROTOR ASSEMBLY			
161	65893	Outer Dust Cover	1	181	3903	Special Bolt	6
161	65884	(Rotor Drive Body Sub Assembly (comprising:-	1	182	65964	Tab Washer	6
162	65885	(Rotor Drive Body	1	183		Nut 1/2" UNF.	6
163	65890	(Bush	1	184	67912	Rotor - 40" Model	1
164		Bolt 5/16" UNC. x 1.1/4" long	6		67917	Rotor - 50" Model	1
165		Spring Washer 5/16" dia.	6		67919	Rotor - 60" Model	1
166		Nut 5/16" UNC.	6		67921	Rotor - 70" Model	1
167	65881	Rotor Drive Shaft	1	185	66868	Shearing Blade R.H.	1
168	65873	Return Cushion	3				
169	65891	Rubber Cushion	3				
	65876	(End Flange Sub Assembly (comprising:-	1				
				ROTOR ASSEMBLY			
				181	3903	Special Bolt	6
				182	65964	Tab Washer	6
				183		Nut 1/2" UNF.	6
				184	67912	Rotor - 40" Model	1
					67917	Rotor - 50" Model	1
					67919	Rotor - 60" Model	1
					67921	Rotor - 70" Model	1
				185	66868	Shearing Blade R.H.	1
				<u>40 50 60 70</u>			
				186 +	63592	Universal Blade L.H. } Power	12 15 18 21
				187 +	63593	Universal Blade R.H. }	12 15 18 21
					+ 9930	Speed Blade L.H. } Heavy	12 15 18 21
					+ 9931	Speed Blade R.H. } Duty	12 15 18 21

E SERIES PARTS LIST

Illus. No.	Part No.	Description	No. off
			40 50 60 70
+	9948	Speed Blade L.H.	12 15 18 21
+	9949	Speed Blade R.H.	12 15 18 21
+	5978	Long Shank Blade L.H.	12 15 18 21
+	5979	Long Shank Blade R.H.	12 15 18 21
+	51587	Coffee Blade	12 15 18 21
188	3903	Blade Bolt	52 64 76 88
189		Spring Washer 1/2" dia.	52 64 76 88
190	52053	Special Nut	52 64 76 88

NOTE:- 3 Blades are fitted on End Flange of Cushion Drive. The Blade requirements as listed are for 6 Blade Rotor.
+ = Alternatives

HEAVY DUTY ROTOR ASSEMBLY - ALTERNATIVE FITMENT

67987	Rotor - 40" Model	1	
67989	Rotor - 50" Model	1	
67947	Rotor - 60" Model	1	
67949	Rotor - 70" Model	1	
		40 50 60 70	
+	9919	Universal Blade L.H.) Power	12 15 18 21
+	9920	Universal Blade R.H.)	12 15 18 21
+	9950	Speed Blade L.H.) Heavy	12 15 18 21
+	9951	Speed Blade R.H.) Duty	12 15 18 21
67556	Blade Bolt	48 60 72 84	
	Shakeproof Washer 5/8" dia.		
	Internal	48 60 72 84	
67557	Special High Nut	48 60 72 84	

NOTE:- 3 Blades are fitted on End Flange of Cushion Drive. Shearing Blades - Illus. No's. 175 and 185 and 4 off each Illus. No's.
188 - 189 & 190 required.

ROTOR CUSHION DRIVE ASSEMBLY - for HEAVY DUTY ROTOR

All parts as Standard Cushion Drive except

67996	(Rotor Drive Body Sub Assembly (comprising:-	1
67981	(Rotor Drive Body	1
65690	(Bush	1

ROTOR STUB AXLE ASSEMBLY

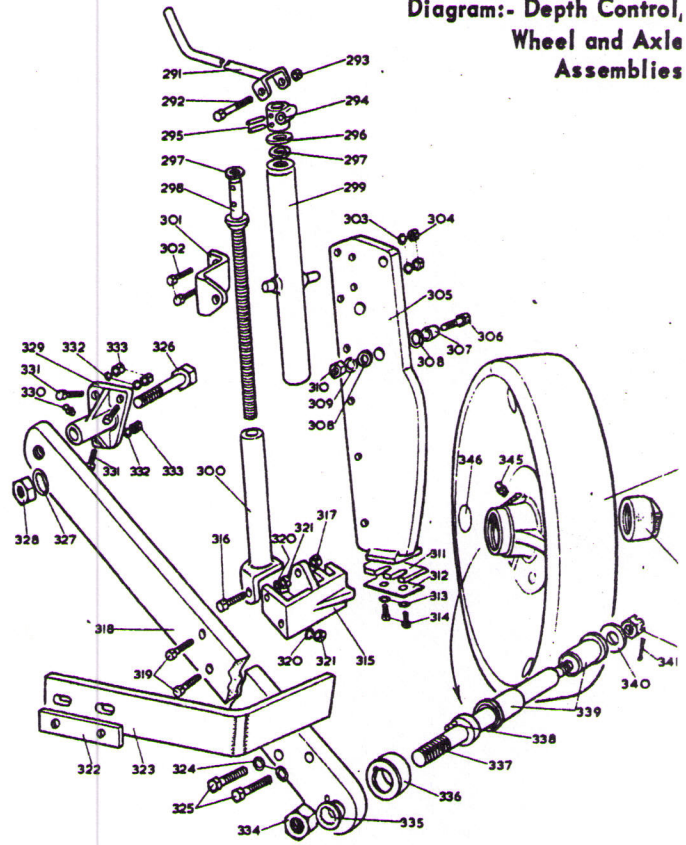
191	Bolt 1/2" UNC. x 1.1/8" long	6
192	65706 Tab Washer	3
193	66221 Dust Cover	1
194	65703 Inner Dust Cover	1
195	67930 Stub Axle	1
196	67932 Sleeve	1
197	Oilseal - Pioneer 13P. 300.225.38 - 3"o.d. x 2.1/4" i.d. x 3/8" wide	1
198	67931 Bearing Housing	1
199	BRM.1.5/8 Ballbearing 1.5/8" i.d. x 4"o.d. x 15/16" wide	1
200	Circlip 1.5/8" dia. External	1
201	65704 Outer Dust Cover	1
202	57545 Packing Shim	As req'd.
203	57541 End Cover	1
204	Grease Nipple 1/8" BSP. Tec. NA.5704	1

Illus. No.	Part No.	Description	No. off
205		Bolt 1/2" UNF. x 1.1/2" long	4
206		Shakeproof Washer 1/2" dia. Internal	4
SUPPORT ARM ASSEMBLY			
207	66223	R.H. Cutter Blade	1
208	5807	Backing Strip	1
209		Shakeproof Washer 3/8" dia. Internal	2
210		Bolt 3/8" UNC. x 7/8" long	2
211	5926	R.H. Skid - Standard fitment - Export only	1
	67608	R.H. Skid - standard fitment - Home Market only	1
	50881	R.H. Skid - Export only	1
	67609	R.H. Skid - Home Market only	1
	50889	Sole Plate - Standard fitment	1
	53788	Sole Plate - Alternative fitment for soft ground.	Alternative fitment.1
	G.922	Special Bolt	4
		Spring Washer 7/16" dia.	4
		Nut 7/16" BSF.	4
212		Bolt, Adjusting Bar-Skid 1/2" UNF. x 1.1/4" long	1
213		Locknut 1/2" UNF.	1
214	50476	Adjusting Bar	1
215	54228	Adjusting Bar Lever	1
216	50477	Adjusting Stop	1
217		Spring Washer 1/2" dia.	1
218		Bolt 1/2" UNC. x 2.1/2" long	1
219		Bolt, Support-Support Arm 1/2" UNF. x 1.1/2" long	1
220		Spring Washer 1/2" dia.	5
221		Nut 1/2" UNF.	5
222		Bolt, Shield-Support 1/2" UNF. x 1.1/4" long	2
223		Bolt, Pivot Lug-Support Arm 1/2" UNF. x 1.3/4" long	2
224	65624	R.H. Shield Support - Export only	1
225	67607	Side Shield	1
219		Bolt 1/2" UNF. x 1.1/2" long	Home market only 1
220		Spring Washer 1/2" dia.	1
221		Nut 1/2" UNF.	1
226		Bolt, Pivot Lug-Skid 1/2" UNF. x 1.1/2" long	1
227		Nut 1/2" UNF. Philidas Type NUF1.	1
228	5927	Pivot Lug	1
229	65621	Support Arm	1
230	65626	(Spring Rivet Assembly (comprising:-	1
	65627	(Spring	1
	65628	(Spring Holder	1
		(Rivet 1/8" dia. x 3/8" long, Round Head	3
STAYTUBE ASSEMBLY			
231		Bolt, Staytube - Support Arm 1/2" UNF. x 1.3/4" long	5
232		Bolt, Staytube-Support Arm-Shield 1/2" UNF. x 2.1/4" long	1
		Spring Washer 1/2" dia.	4
		Nut 1/2" UNF.	6
		Shakeproof Washer 1/2" dia. Internal	2
		Spacer	As req'd.
	66228	Blade Setting Bar	1
	3904A	Staytube - 40" EMU.	1
	65929	Staytube - 50" EMU.	1
	67961	Staytube - 60" EMU.	1
	67974	Staytube - 60" EMU.	1

E SERIES PARTS LIST

Diagram:- Depth Control, Wheel and Axle Assemblies

Illus. No.	Part No.	Description	No. off
	67979	Staytube - 70" EMU.	1
239	68070	Mounting Plate	2
240		Nut 5/8" UNF.	8
241		Spring Washer 5/8" dia.	8
242		Bolt, Mounting Plate 5/8" UNF. x 2.1/4" long	8
243	68071	Mounting Pin Standard	Alternatives: 2
	68072	Mounting Pin - Heavy Duty -	2
244	34800	Special Nut	2
245	65813	Clevis	2
246		Bolt 7/8" UNF. x 5" long	2
247		Spring Washer 7/8" dia.	Optional Extra 2
248		Nut 7/8" UNF.	2
249	65816	Clevis Mounting Pin	2
250	68074	Mounting Plate Sleeve	4
251		Flat Washer 7/8" dia.	2
252	54483	Sleeve - for Category 2 Tractors only 40" & 50" / 60" & 70"	2
253	65819	'U' Bolt	1 2
254		Spring Washer 5/8" dia.	2 4
255		Nut 5/8" UNF.	2 4
256		Bolt, Staytube-Backplate-Shield 1/2" UNF. x 2" long	1
256		Bolt, Staytube-Backplate-Shield-Extension Tube 1/2" UNF. x 2.1/2" long for 40" EMU. only	1
257		Bolt, Staytube - Backplate 1/2" UNF. x 1.3/4" long 50" = 6 / 60" + 70" =	7
		Bolt 5/8" UNF. x 2" long.	1
		Spring Washer 5/8" dia.	50 EMU. 1
		Nut 5/8" UNF.	1
257		Bolt, Staytube-Backplate-Extension Tube 1/2" UNF. x 2.1/4" long - 40" EMU. only	7
258	54288	Spacer - not required for 50" EMU.	1
259		Spring Washer 1/2" dia. 50" = 7	8
260		Nut 1/2" UNF. 50" = 7	8
261	65934	Extension Tube - for 40" EMU. only	1
MOUNTING BRACKETS - Optional extra for Vineyard Models			
262	67784	Mounting Bracket	1
263	67789	Shim	Ferguson 35, 2
264		Bolt 5/8" UNF. x 2" long	Dexta etc. 8
265		Spring Washer 5/8" dia.	8
266		Nut 5/8" UNF.	8
262	67750	Mounting Bracket	1
263	66289	Shim	David Brown 2
264		Bolt 5/8" UNF. x 2" long	880 6
265		Spring Washer 5/8" dia.	6
266		Nut 5/8" UNF.	6
249	65816	Mounting Pin	2
267		269 not allocated.	
SHIELD ASSEMBLY			
270	53707	Shield 40" Model	1
	54252	Shield 50" Model	1
	54301	Shield 60" Model	1
	54359	Shield 70" Model	1
271	65939	Trailing Board 40" Model	1
	67983	Trailing Board 50" Model	1
	65838	Trailing Board 60" Model	1
	65737	Trailing Board 70" Model	1



Illus. No.	Part No.	Description	No. off
			40" Model 3
272	50724	Hinge	4
273		Bolt 1/2" UNF. x 1.1/4" long	12 16
274		Shakeproof Washer 1/2" dia. Internal	12 16
275		Nut 1/2" UNF.	12 16
276	65848	Chain	1
277	65844	Front Support	2
278		Bolt 3/8" UNC. x 1.3/4" long	1
279		Spring Washer 3/8" dia.	1
280		Nut 3/8" UNC.	5
281		Shakeproof Washer 3/8" dia. Internal	4
282		Bolt 3/8" UNC. x 1.1/4" long	4
283	65647	Stiffening Strip	1
284	65645	Centre Stay	1
285	65646	Hook	1
286		290 not allocated.	
DEPTH CONTROL ASSEMBLY			
291	3448	Handle	1
292		Bolt, Handle-Pivot Block 3/8" UNC. x 2.1/4" long	1
293		Locknut 3/8" UNC.	1
294	55481	Handle Block	1
295		Grover Pin 1/4" dia. x 1.1/4" long	2
296		Flat Washer 3/4" dia.	1
297	65650	Thrust Washer	2
298	65654	Screw	1
299	65657	Outer Tube	1
300	65651	Inner Tube	1
301	65681	Trunnion Support Cranked	1

E SERIES PARTS LIST

Illus. No.	Part No.	Description	No. off
302		Bolt 3/8" UNC. x 1.1/2" long	2
303		Spring Washer 3/8" dia.	2
304		Nut 3/8" UNC.	2
305	66219	Anchor Plate	1
306		Bolt, Anchor Plate-Shield 1/2" UNC. x 2" long	1
307 +	50994	Spacer	1
308		Flat Washer 1/2" dia. As req'd.	1
309		Spring Washer 1/2" dia.	1
310		Nut 1/2" UNC.	1
311	66225	L.H. Cutter Blade	1
312	3678	Backing Strip	1
313		Shakeproof Washer 3/8" dia. Internal	2
314		Setscrew 3/8" UNC. x 3/4" long, Hex. Head	2
315	62503	Clevis Bracket	1
316		Bolt, Inner Tube-Clevis Bracket 5/8" UNC. x 1.1/2" long	1
317		Locknut 5/8" UNC.	1
318	65665	Wheel Arm	1
319		Bolt, Wheel Arm-Clevis Bracket 1/2" UNC. 2.1/4" long	2
320		Spring Washer 1/2" dia.	2
321		Nut 1/2" UNC.	2
322	66073	Plate	1
323	65664	Wheel Scraper	1
324		Shakeproof Washer 1/2" dia. Internal	2
325		Bolt, Wheel Scraper-Wheel Arm 1/2" UNC. x 1.1/2" long	2
326		Bolt 1" UNC. x 5.1/4" long, Cadium Plated	1
327		Shakeproof Washer 1" dia. Internal	1
328		Locknut 1" UNC.	1
329	62833	Pivot Plate	1
330		Grease Nipple 1/4" BSF. Nubrex N.7/A.	1
331		Bolt, Pivot Plate-Backplate 1/2" UNC. x 1.1/2" long	3
332		Spring Washer 1/2" dia.	3
333		Nut 1/2" UNC.	3

NOTE: - + for spares supply 62843 Spacer plus 1/2" Flat Washer

AXLE ASSEMBLY

334		Nut 1" UNC.	1
335		Shakeproof Washer 1" dia. Internal	1
336	65667	Dust Cover	1
337	65668	Axle	1
338	3998	Nib	1
339	3701	Bush	2
340	3703	Washer	1
341		Splitpin 3/32" dia. x 1" long	1
342		Nut 1/2" Slotted	1
343	3706	Cap	1
	52389	Depth Control Wheel Assembly comprising :-	1
344	51808	Depth Control Wheel	1
345		Grease Nipple 1/8" BSP. Tec. NA.5704	1
346	52441	Welsh Plug	3
347	-	350 not allocated	

ALTERNATIVE PARTS FOR DEPTH CONTROL SKID.

351	54496	Skid L.H.	1
352	50689	Sole Plate L.H.	1
	53788	Sole Plate - Alternative fitment for soft ground	1

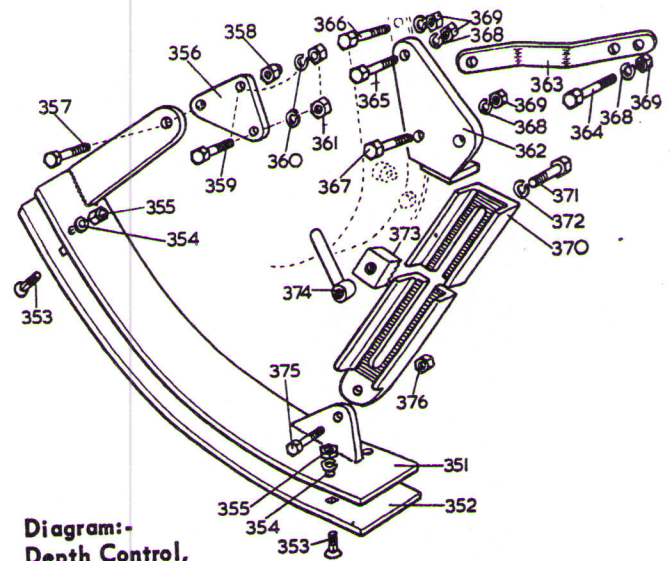


Diagram:-
Depth Control,
Skid Assembly

Illus. No.	Part No.	Description	No. off
353	G.922	Special Bolt	4
354		Spring Washer 7/16" dia.	4
355		Nut 7/16" B.S.F.	4
356	5927	Pivot Lug	1
357		Bolt, Skid to Pivot Lug 1/2" UNF. x 1.1/2" long	1
358		Nut 1/2" UNF. Philidas type NUFI.	1
359		Bolt, Pivot Lug to Backplate 1/2" UNF. x 1.1/2" long	2
360		Spring Washer 1/2" dia.	2
361		Nut 1/2" UNF.	2
362	66423	Anchor Plate	1
363	53668	Shield Support L.H.	1
364		Bolt, Shield Support to Shield 1/2" UNF. x 1.1/4" long	1
365		Bolt, Anchor Plate, Shield Support to Backplate - 1/2" UNF. x 2" long	1
366		Bolt, Backplate to Chaincase 1/2" UNF. x 1.1/4" long	2
367		Bolt, Anchor Plate to Backplate 1/2" UNF. x 1.1/2" long	1
368		Spring Washer 1/2" dia.	5
369		Nut 1/2" UNF.	5
370	50476	Adjusting Bar	1
371		Bolt, Adjusting Bar to Anchor Plate 1/2" UNC. x 2.1/4" long	1
372		Spring Washer 1/2" dia. double coil	1
373	50477	Adjusting Stop	1
374	54228	Adjusting Bar Lever	1
375		Bolt, Adjusting Bar to Skid 1/2" UNF. x 1.1/4" long	1
376		Locknut 1/2" UNF.	1
377	-	410 not allocated	

CROP GUARDS - OPTIONAL EXTRA

66512		L.H. Crop Shield Assembly comprising:-	As req'd.
411	66518	L.H. Shield	1
413	66235	Clamp	2
414		Bolt 3/8" UNC. x 1.1/2" long	4
415		Spring Washer 3/8" dia.	4

E SERIES PARTS LIST

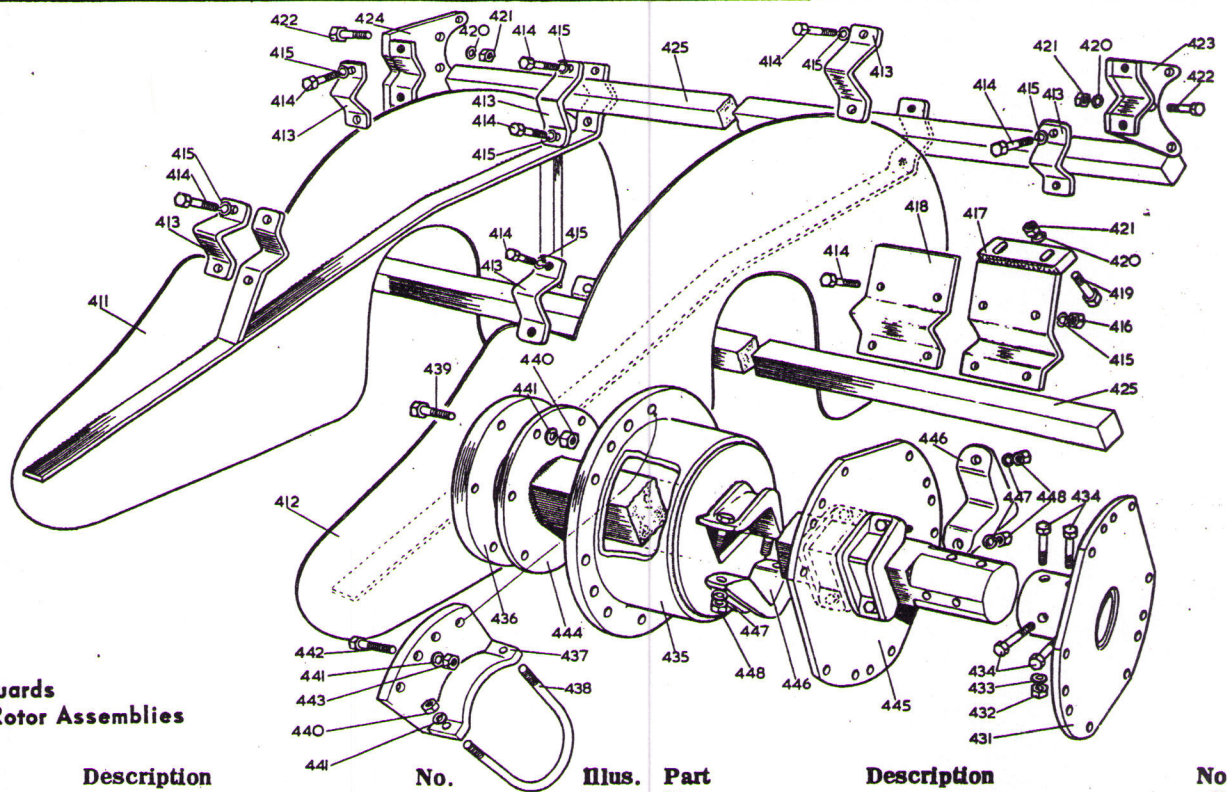


Diagram:- Crop Guards and Slip Flange Rotor Assemblies

Illus. No.	Part No.	Description	No. off	Illus. No.	Part No.	Description	No. off
	66511	R.H. Crop Shield Assembly comprising:-	As req'd.	440		Nut 1/2" UNC.	6
412	66517	R.H. Shield	1	441		Spring Washer 1/2" dia.	12
413	66235	Clamp	2	442	50058	Special Bolt	4
414		Bolt 3/8" UNC. x 1.1/2" long	4	443	52053	Special Nut	4
415		Spring Washer 3/8" dia.	4	444	66461	Rotor Shaft 50" Model	1
413	66235	Clamp	2	66472		Rotor Shaft 60" Model	1
414		Bolt - Clamp 3/8" UNC. x 1.1/2" long	16	66479		Rotor Shaft 70" Model	1
415		Spring Washer 3/8" dia.	16				50" 60" 70"
416		Nut 3/8" UNC.	12	445	67791	Centre Flange	3 4 5
417	66524	Bracket	3	446	67790	Clamp	7 9 11
418	66528	Clamp	3	447		Spring Washer 1/2" dia.	14 18 22
419		Bolt - Bracket to Shield 1/2" UNC. x 1.1/2" long	6	448		Nut 1/2" UNC.	14 18 22
420		Spring Washer 1/2" dia.	13	449 -		450 not allocated	
421		Nut 1/2" UNC.	13			PICKTINE ROTOR	
422		Bolt - Support Plate to Staytube 1/2" UNC. x 2.1/4" long	7	451	67923	Rotor 40" Model	1
423	66513	Support Plate R.H.	1	67927		Rotor 50" Model	1
424	66514	Support Plate L.H.	1	67928		Rotor 60" Model	1
425	66547	Support Bar 50" Model	2	67929		Rotor 70" Model	1
	66548	Support Bar 60" Model	2				40" 50" 60" 70"
	66549	Support Bar 70" Model	2	452	51312	Picktine	24 27 33 39
428 -		430 not allocated		453	3906A	Lucerne Tine	24 27 33 39
					3721	Stone Blade	24 27 33 39
				455	50370	Special Bolt	48 54 66 78
				456		Spring Washer 1/2" dia.	48 54 66 78
				457	52053	Special Nut	48 54 66 78
				458 -		470 not allocated	
						30" EXTENSION KIT	
431	66467	End Flange	1	471	67362	Staytube	1
432		Nut 1/2" UNF.	4	472		Bolt 1/2" UNF. x 1.3/4" long	5
433		Spring Washer 1/2" dia.	4	473		Bolt 1/2" UNF. x 2.1/2" long	1
434		Bolt, End Flange to Rotor Shaft 1/2" UNF. x 3.3/4" long	4	474		Spring Washer 1/2" dia.	6
435	66463	Extension Flange	1	475		Nut 1/2" UNF.	6
436	66470	Spacer	1	476	67933	Rotor	1
437	67792	Tube Support	1	68704		Clamp Flange	1
438	67795	'U' Bolt	1			Bolt 1/2" unc x 2 1/4" long	2
439		Bolt, Cushion Drive, Spacer to Rotor Shaft 1/2" UNC. x 2.1/2" long	6			Shakeproof Washer 1/2" DIA Internal.	2

E SERIES PARTS LIST

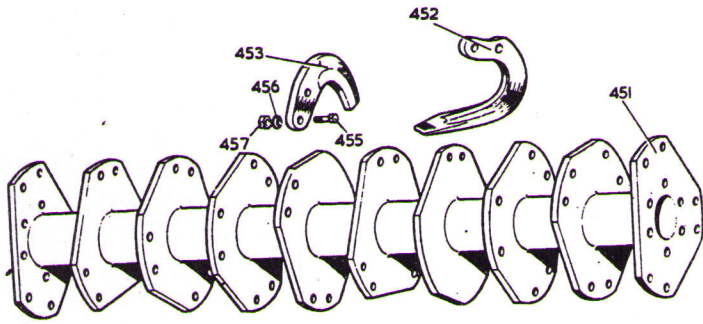


Diagram:- Picktine Rotor Assembly

Illus. No.	Part No.	Description	No. off
477		Bolt 1/2" UNF. x 6" long	6
478		Spring Washer 1/2" dia.	6
479	52053	Special High Nut	6
480 +	63592	Universal Blade L.H. } Power	9
481 +	63593	Universal Blade R.H. }	9
480 +	9948	Speed Blade L.H. }	9
481 +	9949	Speed Blade R.H. }	9
480 +	9930	Speed Blade L.H.) Heavy	9
481 +	9931	Speed Blade R.H.) Duty	9
480 +	5978	Long Shank Blade L.H. } Power	9
481 +	5979	Long Shank Blade R.H. }	9
482	3903	Special Blade Bolt	36
483		Spring Washer 1/2" dia.	36
484	52053	Special High Nut	36
485	67387	Main Shield	1
486		Bolt 1/2" UNF. x 1.1/4" long	2
487		Spring Washer 1/2" dia.	2
488		Nut 1/2" UNF.	2
489	67388	Trailing Board	1
490		Bolt 3/8" UNF. x 1" long	3
491		Spring Washer 3/8" dia.	3
492		Nut 3/8" UNF.	3
493	50724	Hinge	2
494		Bolt 1/2" UNF. x 1.1/4" long	8
495		Shakeproof Washer 1/2" dia. Internal	8
496		Nut 1/2" UNF.	8
	50881	Sole Plate Skid - Export only	1
	67609	Sole Plate Skid - Home Market only	1
	50669	Sole Plate	1
	G.922	Bolt	4
		Spring Washer 7/16" dia.	4
		Nut 7/16" BSF.	4
497 - 500		Not allocated	

NOTE :- + = Alternatives

CLUTCH ASSEMBLY - OPTIONAL EXTRA

501	Nut 1/2" UNF.	6
502	Flat Washer 1/2" dia.	6

Illus. No.	Part No.	Description	No. off
503	G.602	Spring	6
504	52726	Inner Cover	1
505	52744	Clutch Plate	1
506	52743	Friction Disc - Lipped	1
507	67239	Clutch Disc	1
508	52741	Friction Disc.	3
509	52742	Wearing Disc	2
510	52745	Pressure Plate	1
	67958	Universal Joint Assembly - for use with Clutch Assembly Illus. No's. 2 to 21 inclusive.	1
	67241	Special Bolt - required for End Covers	6
		Shake Proof Washer 1/2" DIA.	4

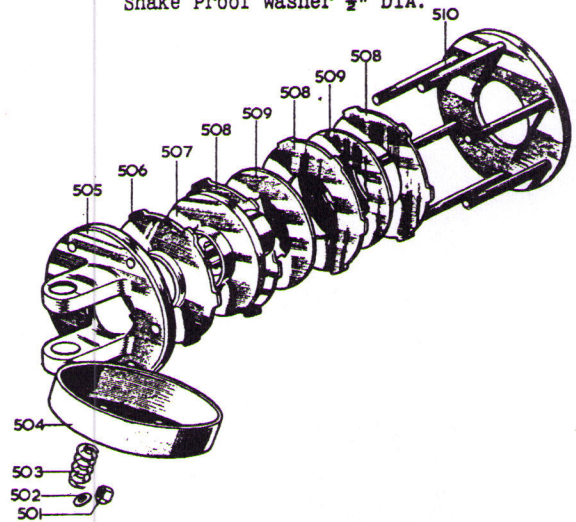


Diagram:- Clutch Assembly

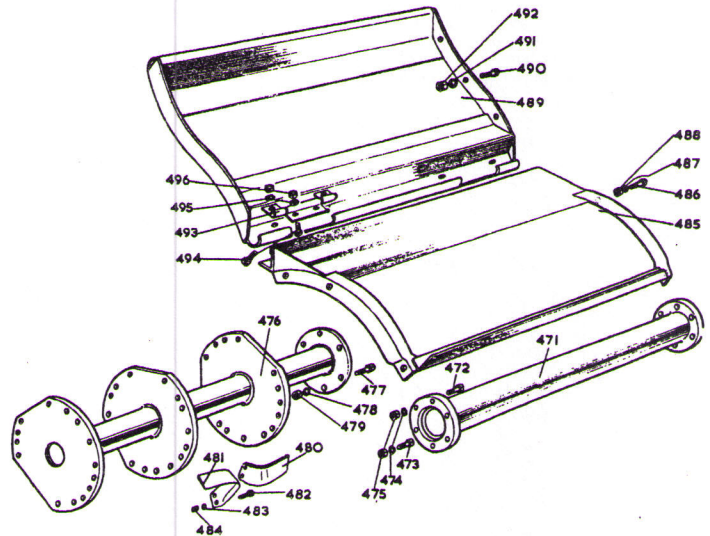


Diagram:- 30 Rotor Extension Kit Assembly

NUMERICAL PARTS LIST

Part No.	Illus. No.	Part No.	Illus. No.	Part No.	Illus. No.	Part No.	Illus. No.	Part No.	Illus. No.
G.602	503	9930	186	65537	52	65661	301	66524	417
G.922	211	9930	480	65538	56	65664	323	66528	418
G.922	353	9931	187	65539	26	65665	318	66547	425
3275	7	9931	481	65540	25	65667	336	66548	425
3448	291	52389	344	65541	32	65668	337	66549	425
3678	312	52441	346	65542	37	65671	153	66868	185
3701	339	52726	504	65543	38	65672	152	66869	175
3703	340	52741	508	65544	54	65673	168	67239	507
3706	343	52742	509	65545	49	65675	172	67241	N.I.
3721	453	52743	506	65546A	50	65676	169	67382	471
3903	181	52744	505	65548	46	65677	170	67387	485
3903	188	52745	510	65549	45	65678	171	67388	489
3903	482	52878	124	65550	44	65681	167	67556	N.I.
3904A	237	53668	363	65552	55	65684	162	67557	N.I.
3906A	453	53707	270	65553	55	65685	162	67607	225
3912	75	53788	211	65554	55	65690	163	67608	211
3913	76	53788	352	65555	57	65691	169	67609	211
3998	338	54228	215	65556	61	65692	160	67750	262
5807	208	54228	374	65559	63	65693	161	67784	262
5926	211	54252	270	65562	65	65703	194	67789	263
5927	228	54288	258	65566	73	65704	201	67790	446
5927	356	54301	270	65567	42	65706	192	67791	445
5978	186	54359	270	65568	43	65737	271	67792	437
5978	480	54463	252	65569	42	65774	114	67795	438
5979	187	54471	125	65570	43	65775	113	67907	158
5979	481	54472	125	65571	42	65914	103	67908	157
9917	N.I.	54482	125	65572	43	65915	105	67909	159
9918	N.I.	54482	125	65573	42	65916	104	67912	184
9919	N.I.	54496	351	65574	43	65917	104	67917	184
9920	N.I.	55481	294	65575	40	65918	173	67919	184
9948	186	56801	151	65576	41	65925	113	67921	184
9948	480	57541	203	65577	74	65926	114	67923	451
9949	187	57545	202	65579	113	65929	238	67927	451
9949	481	60483	125	65580	114	65934	261	67928	451
9950	N.I.	60485	125	65584	123	65936	64	67929	451
9951	N.I.	60486	125	65588	80	65939	271	67930	195
22031	108	60487	125	65592	98	65964	182	67931	198
22034	109	60495	78	65596	94	65965	67	67932	196
24833	145	60954	1	65597	90	65966	66	67933	476
24853	143	61042	91	65599	83	65967	122	67938	30
34800	244	61043	97	65600	84	66073	322	67939	31
48486	117	61044	96	65601	85	66205	42	67941	79
50058	442	61044	95	65613	245	66206	43	67947	N.I.
50370	455	61045	118	65616	249	66219	305	67949	N.I.
50370	477	61079	100	65619	253	66221	193	67954	113
50476	214	61189	100	65621	229	66223	207	67955	114
50476	370	61814	126	65624	224	66225	311	67957	2
50477	216	61816	129	65626	230	66226	236	67958	2
50477	373	61817	140	65627	230	66235	413	67959	22
50669	211	61818	130	65628	230	66269	263	67961	238
50669	352	62503	315	65630	124	66288	32	67963	271
50724	272	62833	329	65631	124	66423	362	67967	N.I.
50724	493	63592	186	65635	124	66461	444	67969	N.I.
50881	211	63592	480	65636	124	66463	435	67974	238
50934	77	63593	187	65638	271	66467	431	67979	238
50994	307	63593	481	65638	271	66470	436	67981	162
50994	452	64808	51	65644	277	66472	444	67986	162
51312	186	65509	93	65645	284	66479	444	68070	239
51587	186	65515	110	65646	285	66511	444	68071	243
51808	344	65516	48	65647	283	66512	412	68072	243
52053	190			65648	276	66514	411	68074	250
52053	443			65650	297	66514	423	68208	89
52053	457			65651	300	66517	424	68704	N.I.
52053	479			65654	298	66518	412		
52053	484			65657	299				

N.I. = NOT ILLUSTRATED

Following Howard policy of continuous improvement, the Company reserves the right to amend model specifications and prices at any time without notice.