HOWARD®

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 208023080	RIVET - 3/8" X 7/8" 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

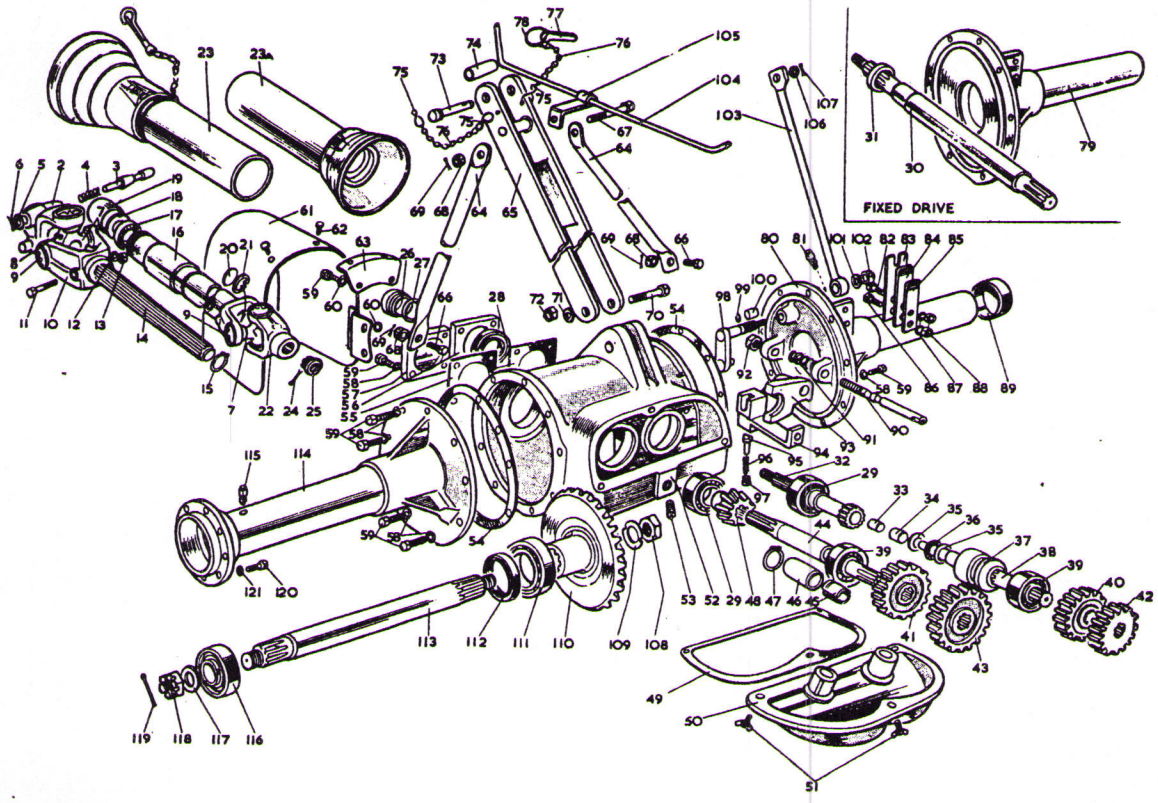

Diagram:-
Universal Joint, Gearbox, R. H. Sideplate Jackshaft Assemblies

Illus. No.	Part No.	Description	No. off
1	60954	Machine Number Plate	1
		UNIVERSAL JOINT ASSEMBLY	
	(67957	Universal Joint Assembly - Standard fitment	1
	(67959	Universal Joint Assembly - 1000 r.p.m. Tractors only comprising:-	1
	(K.3.4.GB.3458	(P.T.O. Yoke Assembly (comprising:-	1
2	K.3.4.GB.3441	(Yoke (Standard fitment	1
3	94.GB.2747	(Pin	2
4	94.GB.2839	(Spring	2
5	5.75.GB.59	(Washer	2
6	8.72.GB.69	(Cotter	2
	K.3.4.W.3678	(P.T.O. Yoke Assembly (comprising:-	1
2	K.3.4.W.3661	(Yoke (1000 r.p.m. Tractors only	1
3	00.08.01	(Pin	2
4	00.12.00	(Spring	2
5	00.33.04	(Tension Pin	2
7	3275	Spider Assembly	2
8	94.GB.2204	Journal Lubricator	2
9	K.3.7.GB.19	Circlip	8
	41.82.002.1512	(Yoke and Bar Shaft Assembly (comprising:-	1
10	41.26.008	(Yoke	1
11	6.73.GB.1160	(Bolt	1
12	6.75.GB.99.	(Washer	1
13	6.74.GB.11	(Nut	1
14	00.93.02.1512	(Splined Shaft	1
15	K.3.77.GB.49	(Retainer Lockring	1
16	41.61.003.0730	Yoke Tube and Sleeve Assembly	1
17	K.3.16.GB.123	Felt Washer	1
18	K.3.15.GB.71	Washer	1
19	3.1/2.14.19	Dust Cap	1
20	K.3.68.GB.153	End Plug	1
21	K.3.7.GB.189	Circlip	1
22	K.3.4.GB.3471	Attachment Yoke	1
	SN/B/18	Guard Assembly Complete	1
23A	P.93-TF.2.1131	Outer Half Guard Assembly	1
23A	P.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

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
29		Bearing - Timkin Type TS. Cone 3779 - Cup 3720	2
30	67938	Extension Shaft } for Fixed Drive only	1
31	67939	Abutment Ring } for Fixed Drive only	1
+	66288	Extension Shaft Assembly comprising:-	1
32 +	65541	Front Bearing Shaft	1
33 +		Bush - Glacier No.3208 - 1"i.d. x 1.1/8"o.d. x 1" long	1
34 +		Bush - Glacier No.4008 - 1.1/4"i.d. x 1.13/32"o.d. x 1" long	1
35 +		Torrington Thrust Race - Ref.TRD.2031	2
36 +		Torrington Thrust Bearing - Ref.NTA.2031	1
37 +	65542	Sliding Dog	1
38 +	65543	Rear Extension Shaft	1
39		Bearing - Timkin Type TS. Cone 418 - Cup 414	2
40	65575	Pick-off Gear 17 Teeth } Standard	1
41	65576	Pick-off Gear 18 Teeth } Standard	1
42	65571	Pick-off Gear 15 Teeth } Standard	1
43	65572	Pick-off Gear 20 Teeth } Standard	1
	65567	Pick-off Gear 12 Teeth } Extra Equipment	1
	65568	Pick-off Gear 23 Teeth } - Standard for	1
	65569	Pick-off Gear 14 Teeth } 1000 r.p.m.	1
	65570	Pick-off Gear 21 Teeth } Tractors.	1
	65573	Pick-off Gear 16 Teeth } Extra Equipment	1
	65574	Pick-off Gear 19 Teeth } * For Coffee	1
	66205	Pick-off Gear 13 Teeth } Cultivation	1
	66206	Pick-off Gear 22 Teeth } Cultivation	1
44	65550	Pinion Shaft	1
45	65549	Split Sleeve	1
46	65548	Retaining Sleeve	1
47	Circlip*	1.7/8" dia. External	1
48	65516	Pinion	1
49	65545	Cover Plate Gasket	1
50	65546A	Cover Plate	1
51	64808	Special Bolts	3
52	65537	Gearbox.	1
53		Plug 1/2" BSP. Square Head	1
54	65544	Sideplate Gasket	3
55	65552	Gasket .005	as req'd.
	65553	Gasket .010	as req'd.
	65554	Gasket .020	as req'd.
56	65538	Extension Shaft End Cover	1
57	65555	Pinion Shaft End Cover	1
58		Spring Washer 1/2" dia.	22
59		Bolt 1/2" UNC. x 1.1/4" long	26
60		Shakeproof Washer 1/2" dia. External	4
61	65556	Cover	1
62		Setscrew 1/4" UNC. x 1/2" long, Hex. Head	2
63	65559	Cover Bracket	1
64	65936	Tube Support	2
65	65562	Topmast	1
66	65966	Special Bolt - Tube Support to Staytube	2
67	65965	Special Bolt - Tube Support to Topmast	1
		Flat Washer 5/8" dia.	2
68		Slotted Nut 5/8" UNF.	3
69		Splitpin 1/8" dia. x 1.3/8" long	3
70		Bolt 3/4" UNF. x 4.1/4" long	1
71		Shakeproof Washer 3/4" dia. External	1
72		Nut 3/4" UNF.	1
73	65566	Draw Pin	1
74	65577	Sleeve	1
75	3912	Hook	3
76	3913	Chain	2
77	50934	Clip Pin	1
78	60495	Clip Ring	1

NOTE:- Parts marked + are for Dog Clutch Drive only.

R. H. SIDEPLATE ASSEMBLY

79	67941	R. H. Sideplate - for Fixed Drive only.	1
80 +	65588	R. H. Sideplate - for Dog Clutch Drive only.	1
81		Pressure Relief Valve 1/8" BSP. Tec. Type OA.6862	1
82		Bolt 1/2" UNF. x 2" long	1
83	65599	Rear Leaf Spring	1
84	65600	Centre Leaf Spring	1
85	65601	Front Leaf Spring	1
86		Bolt 1/2" UNF. x 1.1/2" long	1
87		Spring Washer 1/2" dia.	2
88		Nut 1/2" UNF.	2
89	68208	Tube Cap	1
90 +	65597	Slide Bar	1
91 +	61042	Dog Clutch Spring	1
92 +		Locknut 5/8" UNC.	1
93 +	65509	Selector Fork	1
94 +	65596	Selector Block	1
95 +	61045	Pawl	1
96 +	61044	Pawl Spring	1
97 +	61043	Adjuster	1
98 +	65592	Selector Arm	1
99 +		'O' Ring - Pioneer Ref. PO/07505610. 9/16"i.d. x 3/4"o.d. x .103	1
100 +	61189	Collar	1
101 +		Flat Washer 7/16" dia.	1
102 +		Nut 7/16" UNF. Phillidas Ref.LUFI.	1
103 +	65914	Lever	1
+	65917	Selector Rod Assembly comprising:-	1
104 +	65916	Selector Rod	1
105 +	65915	Bracket	1
106 +		Flat Washer 3/8" dia.	1
107 +		Splitpin 3/32" dia. x 3/4" long	1

NOTE:- Parts marked + are required for Dog Clutch Drive only.

JACKSHAFT ASSEMBLY

108	22031	Special Nut	1

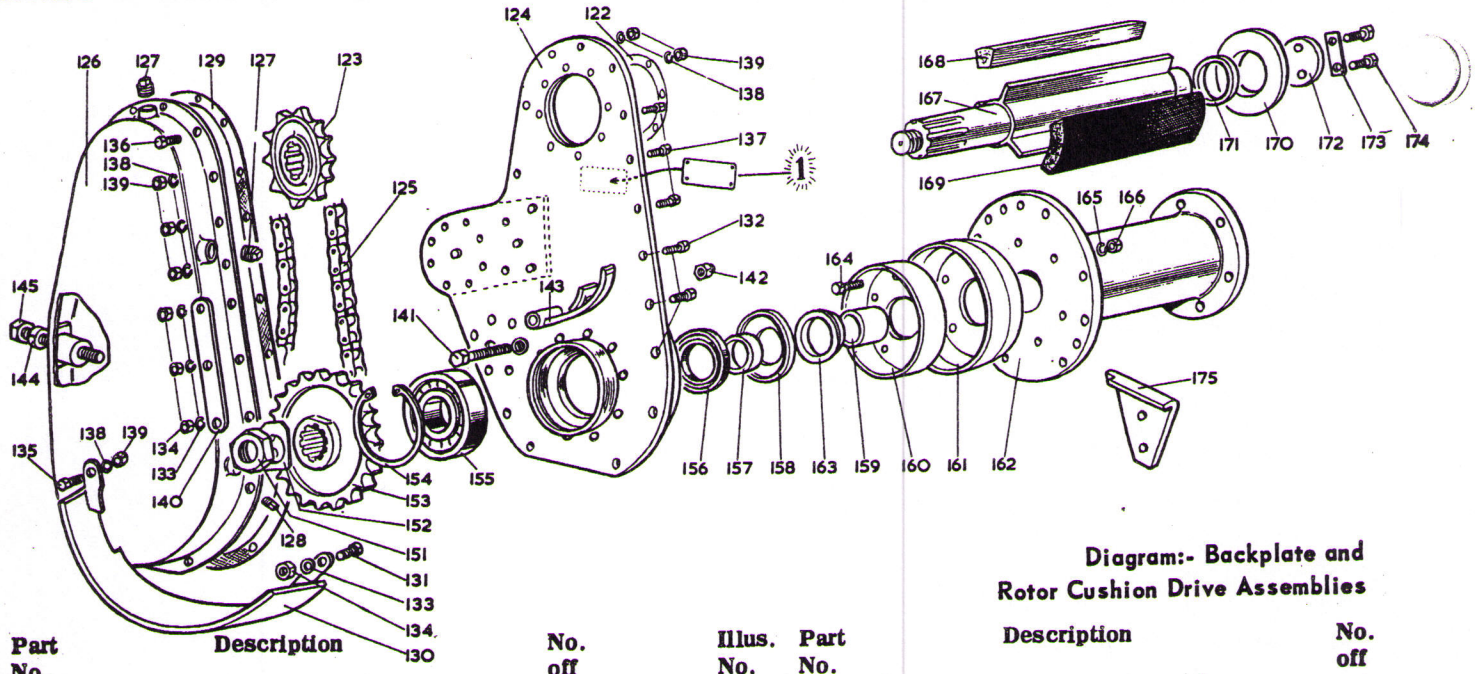

Diagram:- Backplate and Rotor Cushion Drive Assemblies

Illus. No.	Part No.	Description	No. off
109	22034	Tab Washer	1
110	65515	Crownwheel	1
111		Bearing - Timkin Type TS. Cone 29585 - Cup 29520	1
112		- Oilseal - Pioneer Type 11P. 350.250.50 2.1/2" i.d. x 3.1/2"o.d. x 1/2" wide	1
113	65925	Jackshaft (40" EMU.)	1
114	65926	Jackshaft Housing (40" EMU.)	1
113	67954	Jackshaft (50" EMU.)	1
114	67955	Jackshaft Housing (50" EMU.)	1
113	65579	Jackshaft (60" EMU.)	1
114	65580	Jackshaft Housing (60" EMU.)	1
113	65775	Jackshaft (70" EMU.)	1
114	65774	Jackshaft Housing (70" EMU.)	1
115		Pressure Relief Valve 1/8" BSP. Tec. Type OA.6862	1
116		Bearing - Timkin Type TS. Cone 536 - Cup 532X.	1
117	48486	Special Washer	1
118	61079	Special Nut	1
119		Splitpin 1/8" dia. x 2" long	1
120		Bolt 3/8" UNF. x 1.1/4" long	8
121		Spring Washer 3/8" dia.	8
		BACKPLATE ASSEMBLY	
122	65967	Gasket	1
123	65584	Jackshaft Sprocket 11T.	1
124	65630	Backplate Rivet Assembly comprising:-	1
	65631	Backplate	1
	65635	Rotor Bearing Housing	1
		Rivet 3/8" dia. x 1" long, Pan Head	10
	65636	Dust Cover	1
	52878	Thickening Pad	1
		Rivet 3/8" dia. x 7/8" long, Pan Head	3

Illus. No.	Part No.	Description	No. off
125	54482	Chain Assembly - Morse comprising:-	1
	54471	Inner Link (Alternative fitments)	19
	64472	Outer Link (Alternative fitments)	18
	54473	Connecting Link (Alternative fitments)	1
125	60483	Chain Assembly - Reynolds 185977 - comprising:-	1
	60485	Inner Link	18
	60486	Outer Link	18
	60487	Connecting Link	1
126	61814	Chaincase	1
127		Oil Filler and Chain Tensioner Plug 3/4" BSP.Sq. Head	2
128		Oil Level Plug 1/8" BSP. Sq. Head	1
129	61816	Gasket	1
130	61818	Ground Skid	1
131		Bolt 1/2" UNF. x 1.1/4" long	1
132		Bolt 1/2" UNF. x 1.3/4" long	3
133		Shakeproof Washer 1/2" dia. Internal	4
134		Nut 1/2" UNF.	4
135		Bolt 3/8" UNF. x 1.1/2" long	3
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
141		Pivot Bolt 5/8" UNF. x 3.1/4" long	1
142		Nut 5/8" UNF. Philidas Type QUFN.	1
143	24853	Chainskid	1
144		Locknut 3/4" BSW.	1
145	24833	Adjusting Screw	1
146 - 150 not allocated			
		ROTOR CUSHION DRIVE ASSEMBLY	
151	56801	Special Nut	1
152	65672	Tab Washer	1

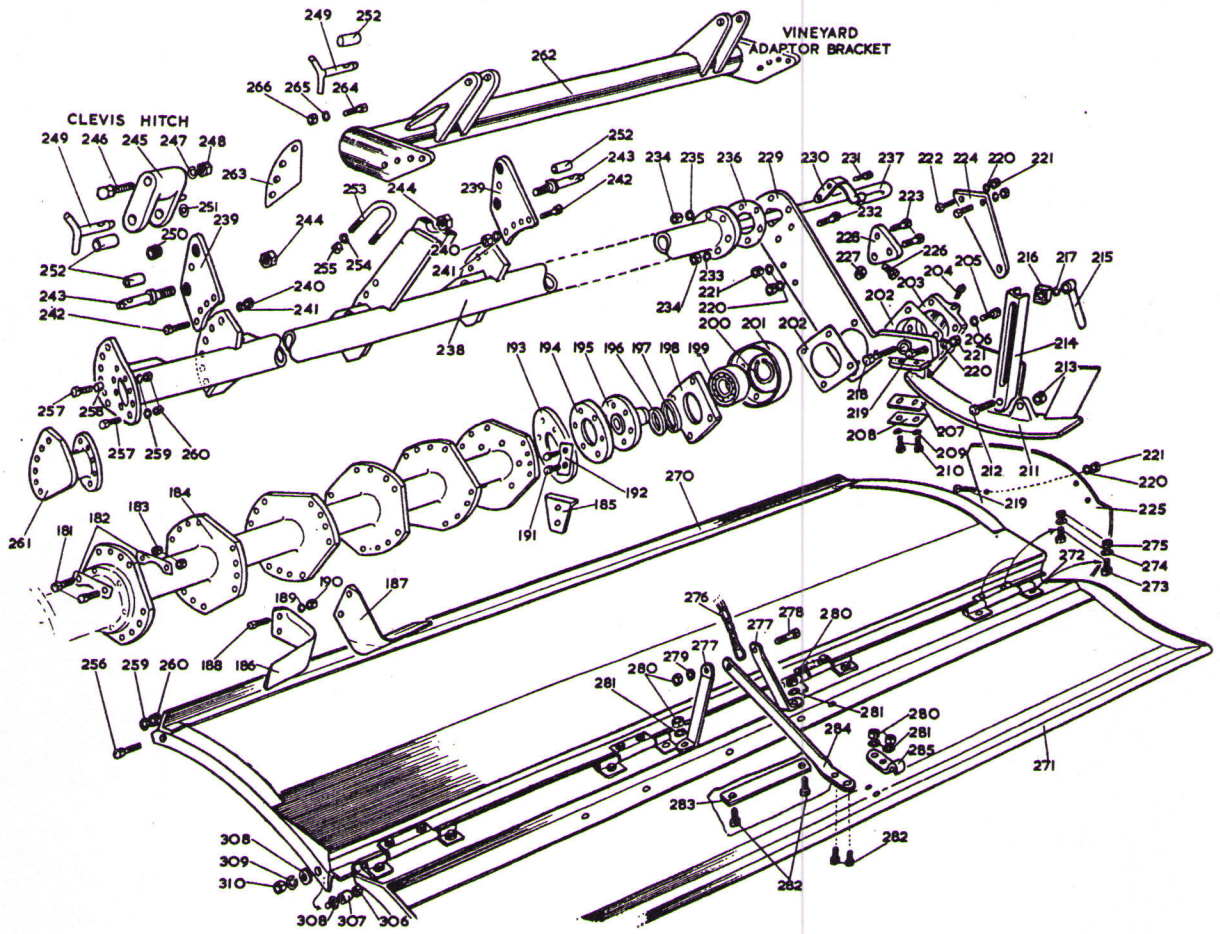

Diagram:- Rotor, Stub Axle, Support Arm, Staytube, Mounting Brackets, Shield Assemblies

Illus. No.	Part No.	Description	No. off
153	65671	Rotor Drive Sprocket	1
154		Circlip 5" dia. Internal	1
155	BRM.2.1/4	Ballbearing 2.1/4"i.d. x.5"o.d. x 1.1/4" wide	1
156		Oilseal.- Superseal 795036. 2.3/4"i.d. x 3.3/4"o.d. x 5/8" wide	1
157	67908	Rotor Shaft Spacer	1
158	67907	Small Dust Cover	1
159	67909	Spacer - Long	1
160	65692	Inner Dust Cover	1
161	65693	Outer Dust Cover	1
	65684	(Rotor Drive Body Sub Assembly (comprising:-	1
162	65685	(Rotor Drive Body	1
163	65690	(Bush	1
164		Bolt 5/16" UNC. x 1.1/4" long	6
165		Spring Washer 5/16" dia.	6
166		Nut 5/16" UNC.	6
167	65681	Rotor Drive Shaft	1
168	65673	Return Cushion	3
169	65691	Rubber Cushion	3
	65676	(End Flange Sub Assembly (comprising:-	1
170	65677	(End Flange	1
171	65678	(Bush	1
172	65675	End Washer	1
173	65918	Tab Washer	1
174		Setscrew 1/2" UNC. x 1.1/4" long; Hex. Head	2
175	66869	Shearing Blade L.H.	1
176 - 180 not allocated			

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

			40" 50" 60" 70"
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
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.
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	50669	Sole Plate L.H.	1
	53788	Sole Plate - Alternative fitment for soft ground	1

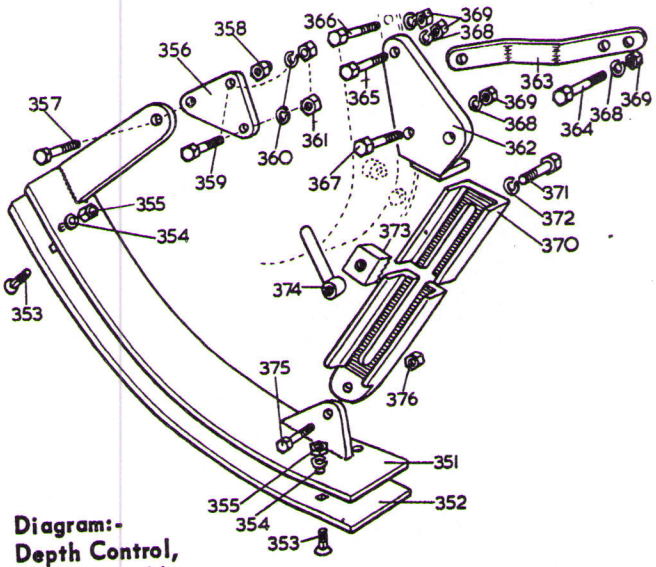

Diagram:- Depth Control, Skid Assembly

Illus. No.	Part No.	Description	No. off
353	G.822	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

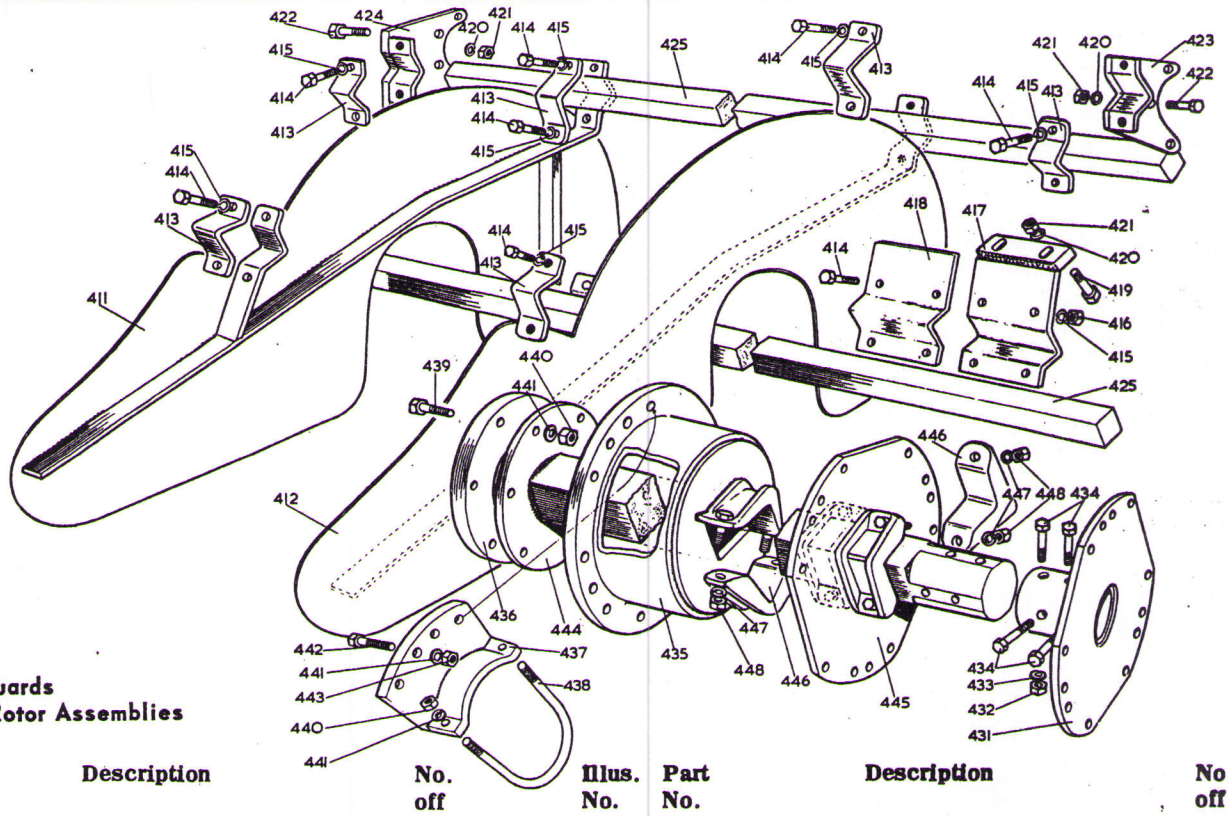

Diagram:- Crop Guards and Slip Flange Rotor Assemblies

Illus. No.	Part No.	Description	No. off
	66511	R.H. Crop Shield Assembly comprising:-	As req'd.
412	66517	R.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
413	66235	Clamp	2
414		Bolt - Clamp 3/8" UNC. x 1.1/2" long	16
415		Spring Washer 3/8" dia.	16
416		Nut 3/8" UNC.	12
417	66524	Bracket	3
418	66528	Clamp	3
419		Bolt - Bracket to Shield 1/2" UNC. x 1.1/2" long	6
420		Spring Washer 1/2" dia.	13
421		Nut 1/2" UNC.	13
422		Bolt - Support Plate to Staytube 1/2" UNC. x 2.1/4" long	7
423	66513	Support Plate R.H.	1
424	66514	Support Plate L.H.	1
425	66547	Support Bar 50" Model	2
	66548	Support Bar 60" Model	2
	66549	Support Bar 70" Model	2
426 - 430 not allocated			
	SLIP FLANGE ROTOR		
431	66467	End Flange	1
432		Nut 1/2" UNF.	4
433		Spring Washer 1/2" dia.	4
434		Bolt, End Flange to Rotor Shaft 1/2" UNF. x 3.3/4" long	4
435	66463	Extension Flange	1
436	66470	Spacer	1
437	67792	Tube Support	1
438	67795	'U' Bolt	1
439		Bolt, Cushion Drive, Spacer to Rotor Shaft 1/2" UNC. x 2.1/2" long	6

Illus. No.	Part No.	Description	No off
440		Nut 1/2" UNC.	8
441		Spring Washer 1/2" dia.	12
442	50058	Special Bolt	4
443	52053	Special Nut	4
444	66461	Rotor Shaft 50" Model	1
	66472	Rotor Shaft 60" Model	1
	66479	Rotor Shaft 70" Model	1

			50"	60"	70"
445	67791	Centre Flange	3	4	5
446	67790	Clamp	7	9	11
447		Spring Washer 1/2" dia.	14	18	22
448		Nut 1/2" UNC.	14	18	22

449 - 450 not allocated

PICKTINE ROTOR

451	67923	Rotor 40" Model	1
	67927	Rotor 50" Model	1
	67928	Rotor 60" Model	1
	67929	Rotor 70" Model	1

			40"	50"	60"	70"
452	51312	Picktine	24	27	33	39
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

471	67382	Staytube	1
472		Bolt 1/2" UNF. x 1.3/4" long	5
473		Bolt 1/2" UNF. x 2.1/2" long	1
474		Spring Washer 1/2" dia.	6
475		Nut 1/2" UNF.	6
476	67933	Rotor	1
	68704	Clamp Flange	1
		Bolt ½" unc x 2¼" long	2
		Shakeproof Washer ½" DIA Internal.	2

E SERIES PARTS LIST

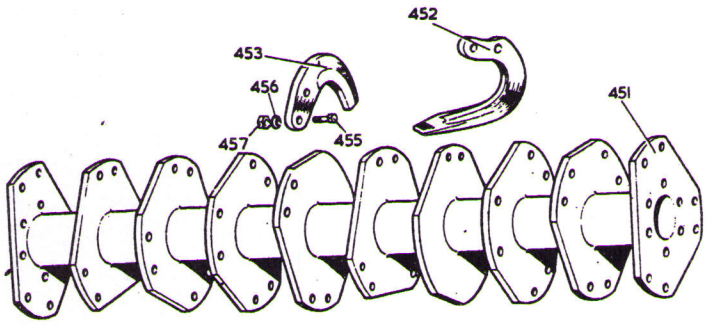

Diagram:- Picktine Rotor Assembly

Illus. No.	Part No.	Description	No. off
477		Bolt ½" 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. } Power	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. } Power	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 ½" DIA.	4

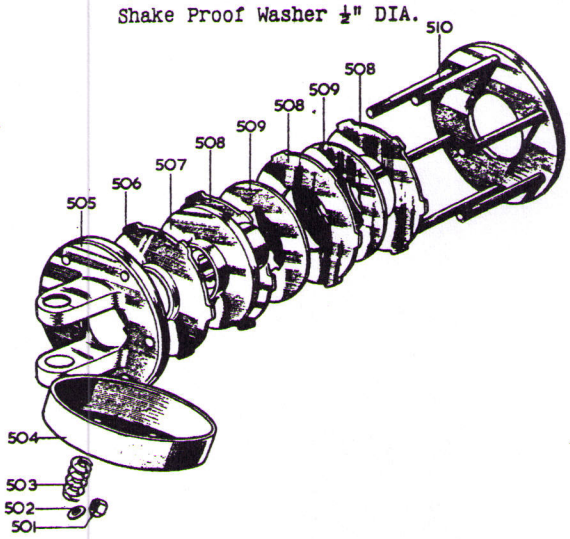

Diagram:- Clutch Assembly

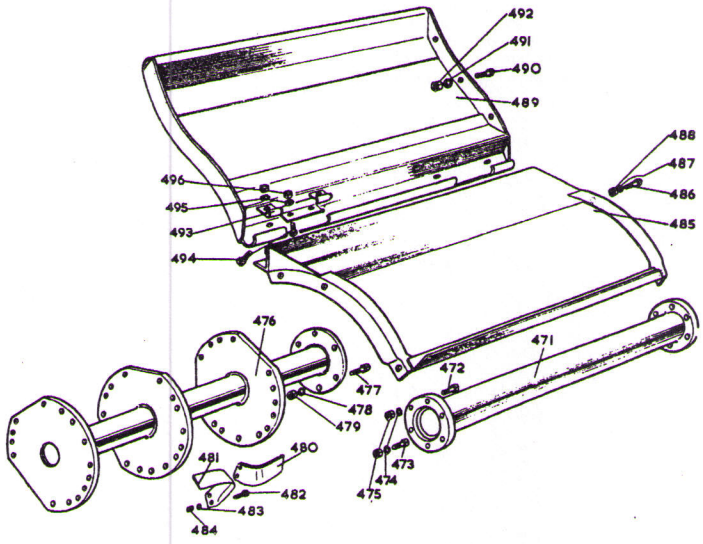

Diagram:- 30 Rotor Extension Kit Assembly

NUMERICAL PARTS LIST

Part No.	Illus. No.
G.602	503
G.922	211
G.922	353
3275	7
3448	291
3678	312
3701	339
3703	340
3706	343
3721	453
3903	181
3903	188
3903	482
3904A	237
3906A	453
3912	75
3913	76
3998	338
5807	208
5926	211
5927	228
5927	356
5978	186
5978	480
5979	187
5979	481
9917	N.I.
9918	N.I.
9919	N.I.
9920	N.I.
9948	186
9948	480
9949	187
9949	481
9950	N.I.
9951	N.I.
22031	108
22034	109
24833	145
24853	143
34800	244
48486	117
50058	442
50370	455
50370	477
50476	214
50476	370
50477	216
50477	373
50669	211
50669	352
50724	272
50724	493
50881	211
50934	77
50994	307
51312	452
51587	186
51808	344
52053	190
52053	443
52053	457
52053	479
52053	484
9930	186
9930	480
9931	187
9931	481
52389	344
52441	346
52726	504
52741	508
52742	509
52743	506
52744	505
52745	510
52878	124
53668	363
53707	270
53788	211
53788	352
54228	215
54228	374
54252	270
54288	258
54301	270
54359	270
54463	252
54471	125
54472	125
54473	125
54482	125
54496	351
55481	294
56801	151
57541	203
57545	202
60483	125
60485	125
60486	125
60487	125
60495	78
60954	1
61042	91
61043	97
61044	96
61045	95
61079	118
61189	100
61814	126
61816	129
61817	140
61818	130
62503	315
62833	329
63592	186
63592	480
63593	187
63593	481
64808	51
65509	93
65515	110
65516	48
65537	52
65538	56
65539	26
65540	25
65541	32
65542	37
65543	38
65544	54
65545	49
65546A	50
65548	46
65549	45
65550	44
65552	55
65553	55
65554	55
65555	57
65556	61
65559	63
65562	65
65566	73
65567	42
65568	43
65569	42
65570	43
65571	42
65572	43
65573	42
65574	43
65575	40
65576	41
65577	74
65579	113
65580	114
65584	123
65588	80
65592	98
65596	94
65597	90
65599	83
65600	84
65601	85
65613	245
65616	249
65619	253
65621	229
65624	224
65626	230
65627	230
65628	230
65630	124
65631	124
65635	124
65636	124
65638	271
65644	277
65645	284
65646	285
65647	283
65648	276
65650	297
65651	300
65654	298
65657	299
65661	301
65664	323
65665	318
65667	336
65668	337
65671	153
65672	152
65673	168
65675	172
65676	169
65677	170
65678	171
65681	167
65684	162
65685	162
65690	163
65691	169
65692	160
65693	161
65703	194
65704	201
65706	192
65737	271
65774	114
65775	113
65914	103
65915	105
65916	104
65917	104
65918	173
65925	113
65926	114
65929	238
65934	261
65936	64
65939	271
65964	182
65965	67
65966	66
65967	122
66073	322
66205	42
66206	43
66219	305
66221	193
66223	207
66225	311
66226	236
66235	413
66269	263
66288	32
66423	362
66461	444
66463	435
66467	431
66470	436
66472	444
66479	444
66511	412
66512	411
66513	423
66514	424
66517	412
66518	411
66524	417
66528	418
66547	425
66548	425
66549	425
66868	185
66869	175
67239	507
67241	N.I.
67382	471
67387	485
67388	489
67556	N.I.
67557	N.I.
67607	225
67608	211
67609	211
67750	262
67784	262
67789	263
67790	446
67791	445
67792	437
67795	438
67907	158
67908	157
67909	159
67912	184
67917	184
67919	184
67921	184
67923	451
67927	451
67928	451
67929	451
67930	195
67931	198
67932	196
67933	476
67938	30
67939	31
67941	79
67947	N.I.
67949	N.I.
67954	113
67955	114
67957	(2
67958	(to
67959	(22
67961	238
67963	271
67967	N.I.
67969	N.I.
67974	238
67979	238
67981	162
67996	162
68070	239
68071	243
68072	243
68074	250
68208	89
68704	N.I.

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.