



Power Harrow

ILLUSTRATION AND PARTS LIST

MODEL 672 B

SERIAL NO. _____

TILLAGE WIDTH 15' (180")

When ordering parts: Quote part number, model and tillage width.
Serial number is located on main frame near top link.

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SAFETY & INSTRUCTIONAL DECALS

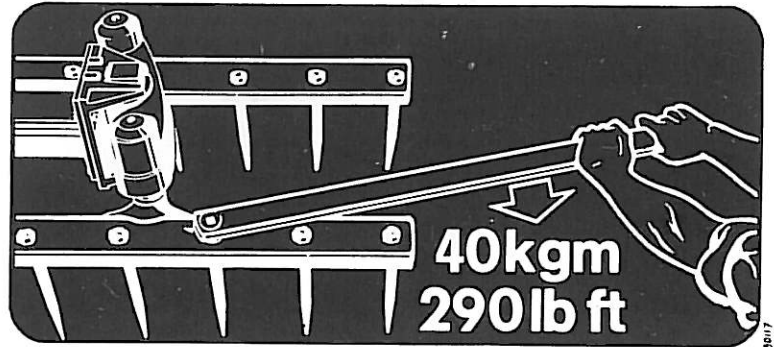


CAUTION: These decals are placed at strategic positions on the power harrow to provide the operator with a constant reminder of safe operating practices. "DANGER" means there is the possibility of severe injury if instructions are not followed. If decals become damaged or lost, replace them immediately. They may be obtained from your dealer.

IMPORTANT

TRACTOR LIFT LINKAGE OR HYDRAULIC LEVER LIFTING LIMIT STOPS MUST BE ADJUSTED TO PREVENT DAMAGE TO UNIVERSAL JOINTS FROM EXCESSIVE ANGLE WHEN IMPLEMENT IS FULLY LIFTED WITH P.T.O. ENGAGED.

Tractor Linkage Decal



Tine Torque Decal



WARNING

1. For your own safety, and that of others, read and understand the "Operator's Manual" before attempting to operate this machine. (If manual is not available, contact your local Howard dealer.)
2. All shields including power take off shields must be kept in place.
3. Disengage power take off and stop engine before adjusting, lubricating, cleaning, or unclogging machine.
4. Wait for all movement to stop before servicing the machine.
5. Keep hands, feet, and clothing away from power driven parts.
6. Keep off of machine and keep all others off.
7. Make certain everyone is clear of machine before starting engine or operation.

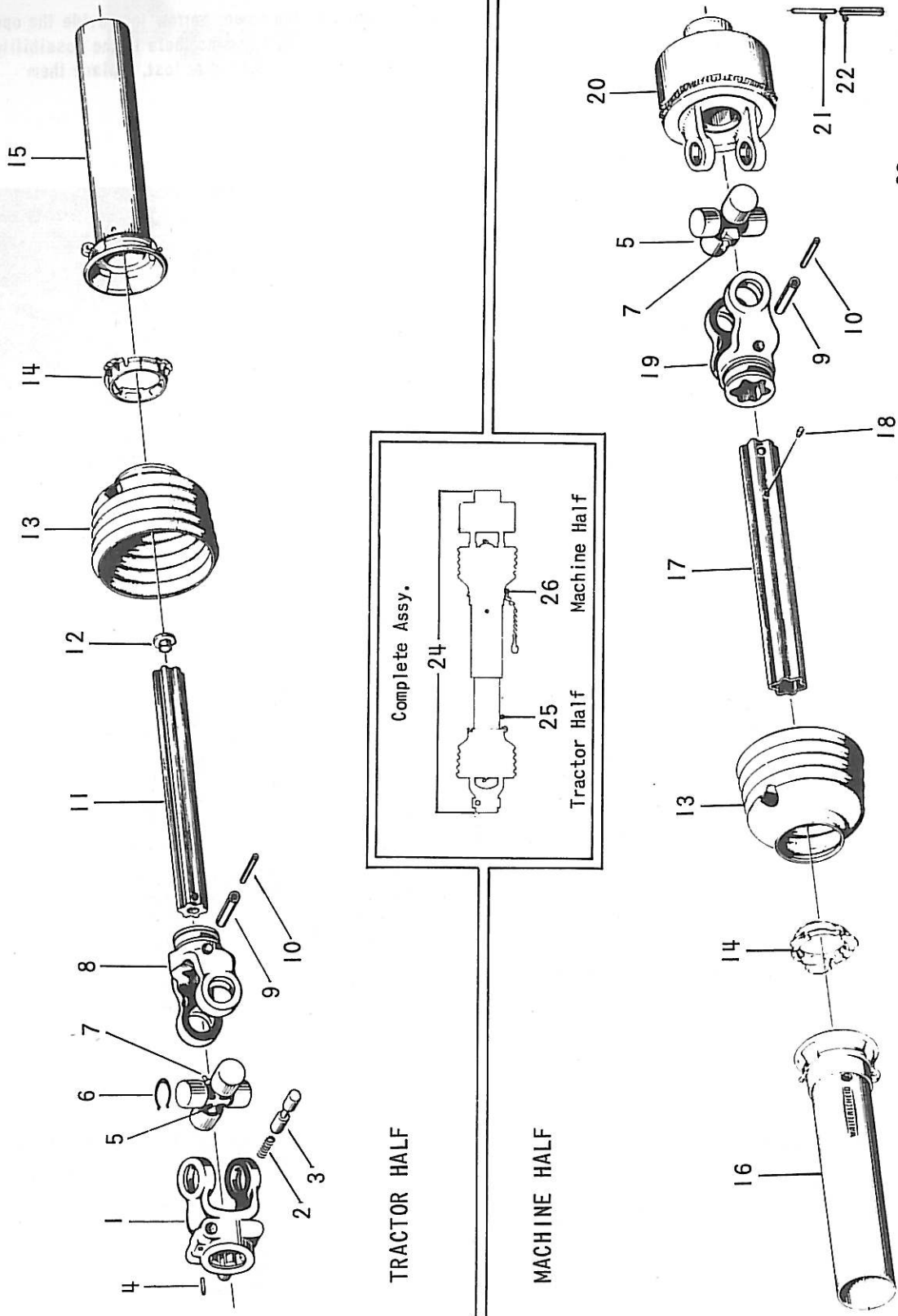
7-Point Warning Decal

ATTENTION!
P.T.O. speed must be over 400 R.P.M.
before teeth engage the ground.

Operating PTO Speed Decal

UNIVERSAL JOINT ASSEMBLY

ILLUSTRATION A



UNIVERSAL JOINT ASSEMBLY

PARTS LIST A

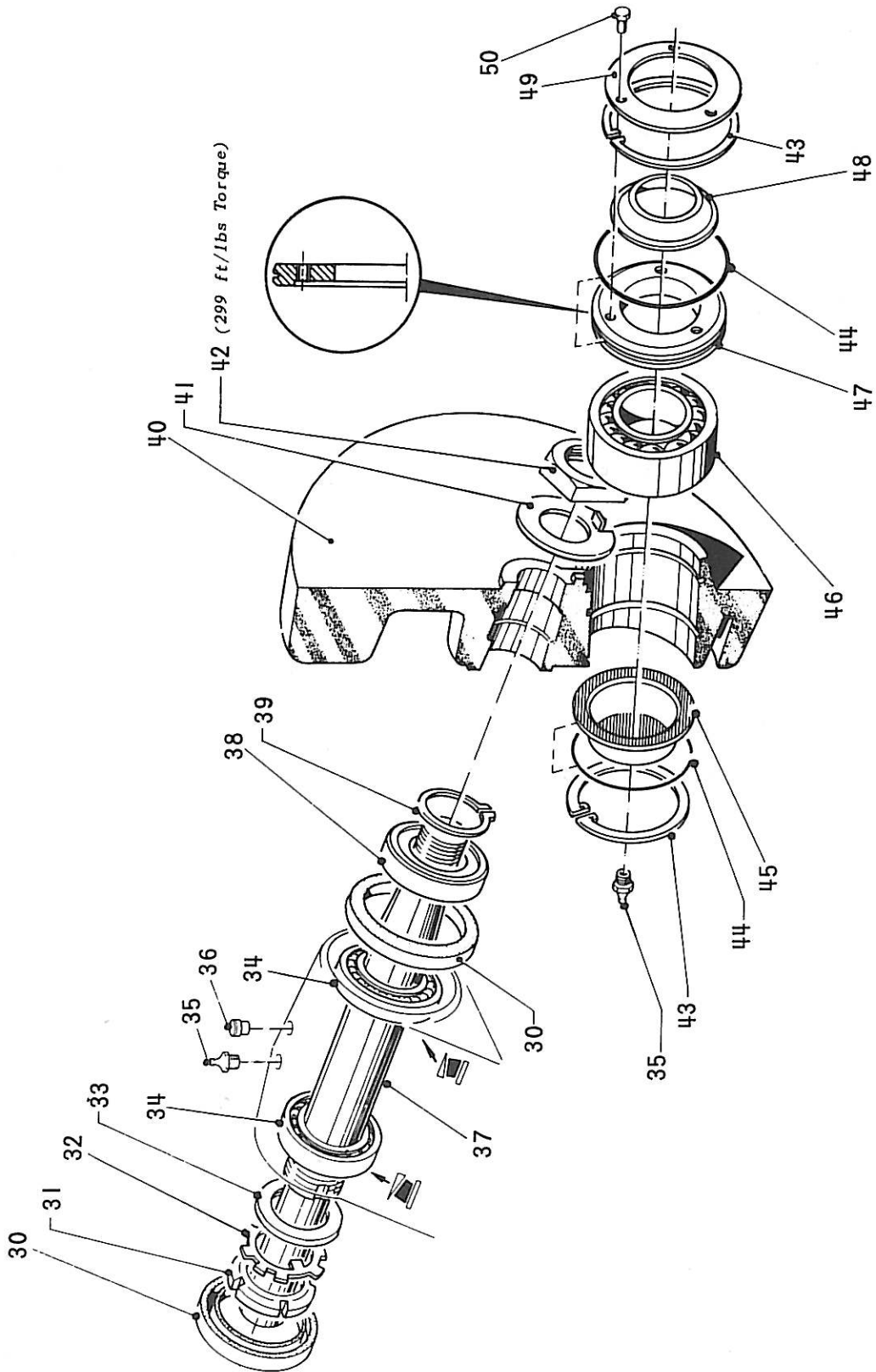
ILL. No.	PART No.	DESCRIPTION	QTY.
1	V462-61-110	1-3/8", 6-spline Yoke c/w Q. D. Pin	1
2	V462-22-410	Spring	2
3	V462-22-420	Q. D. Pin	2
4	V308-03-420	Tension Roll Pin (4mm dia. x 20mm)	2
5	V462-62-100	Cross and Bearing Kit	2
6	V310-03-006	External Spring Clip (34mm dia.)	8
7	V417-02-845	45° Grease Fitting (1/16"x27 NPT)	2
8	V462-63-353	Male Shaft Yoke	1
9	V308-03-185	Tension Roll Pin (10mm dia. x85mm)	2
10	V308-03-685	Tension Roll Pin (6mm dia. x 85mm)	2
11	V462-66-051	Male Shaft	1
12	V462-04-001	Plastic Dust Plug	1
13	V462-92-517	Ribbed Shield Cone	2
14	V462-92-641	Bearing Ring and Retainer	2
15	V462-95-753	Inner Shield Tube	1
16	V462-95-853	Outer Shield Tube	1
17	V462-66-151	Female Shaft Tube	1
18	V417-02-500	Grease Fitting (5mm std. metric thread)	1

ILL. No.	PART No.	DESCRIPTION	QTY.
19	V462-63-355	Female Shaft Yoke	1
20	V463-05-029	Yoke with Shock Absorber	1
21	V308-03-170	Tension Roll Pin (10mm dia. x 70mm)	1
22	V308-03-743	Tension Roll Pin (16mm dia. x 70mm)	1
23	V462-22-301	Shield Retainer Chain	1
24	V461-60-013	U. J. Drive Assembly Complete with shields, 1-3/8" 6-spline yoke and shock absorber	1
25	V461-66-126	U. J. Drive Tractor Half c/w 1-3/8" 6-spline yoke	1
26	V461-65-122	U. J. Drive Machine Half c/w Shock Absorber	1
27 thru 29		Not Allocated	

Quote part number and machine serial number when ordering parts.

INPUT SHAFT & FLYWHEEL ASSEMBLY

ILLUSTRATION B



INPUT SHAFT & FLYWHEEL ASSEMBLY

PARTS LIST B

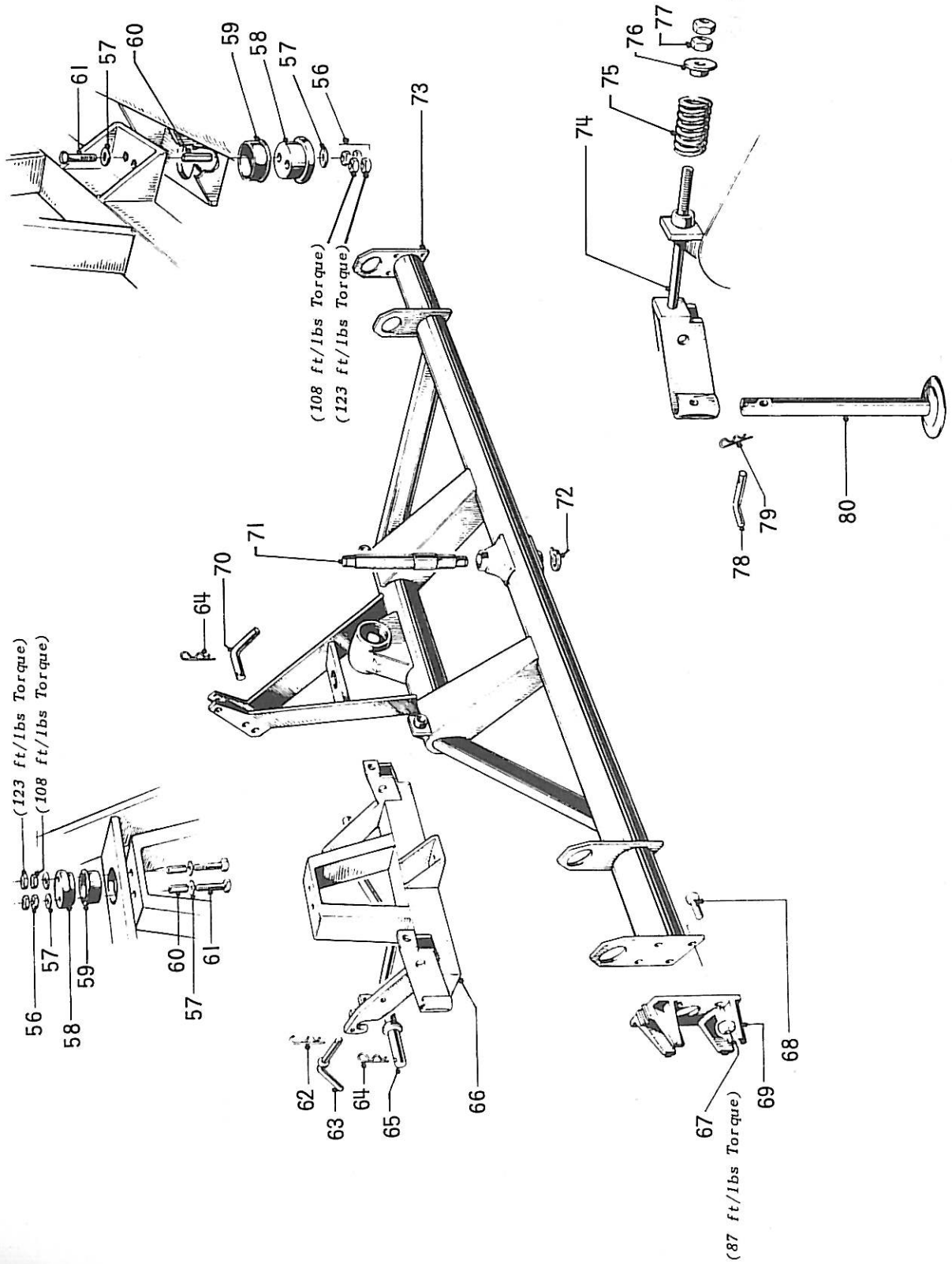
ILL. No.	PART No.	DESCRIPTION	QTY.
30	V361-19-900	Grease Seal (90mm ID x 110mm OD x 13mm wide)	2
31	V310-20-551	Ring Nut (Bearing Adjusting KM11)	1
32	V310-06-551	Shaft Lock Washer (Star Locking MB11)	1
33	V21281	Front Seal Spacer Ring	1
34	V401-19-111	Taper Roller Bearing - 30211 30211 <i>255990281</i>	2
35	V417-01-200	Grease Fitting (1/8"-28 BSP)	2
36	V389-09-200	Breather (1/8"-28 BSP)	1
37	V44072	Input Shaft	1
38	V21097	Rear Seal Spacer Ring	1
39	V310-01-550	External Circlip (55mm)	1
40	V21096	Flywheel	1
41	V310-16-037	Tab Washer (35mm ID)	1
42	V43831	Special Hex Nut (36mm x 1.5)	1
43	V310-02-011	Internal Circlip (110mm x 4mm thick)	2
44	V361-07-095	'O' Ring (101.27mm ID x 2.62mm dia.)	2
45	V70542	Plastic Cap with 'O' Ring Groove	1

ILL. No.	PART No.	DESCRIPTION	QTY.
46	V401-18-110	Double Row Self-Adjusting Ball Bearing - 2310 <i>SKF</i>	1
47	V41083	Spacer Ring with 'O' Ring Groove	1
48	V361-14-050	Rubber Scraper (H50-5)	1
49	V40922	Scraper Clamping Washer	1
50	V302-71-512	M5 x 12 Gr. 8.8 Pl. Hex Hd. Bolt	3
51 thru 55		Not Allocated	

Quote part number and machine serial number when ordering parts.

MAIN FRAME ASSEMBLY

ILLUSTRATION C



MAIN FRAME ASSEMBLY

PARTS LIST C

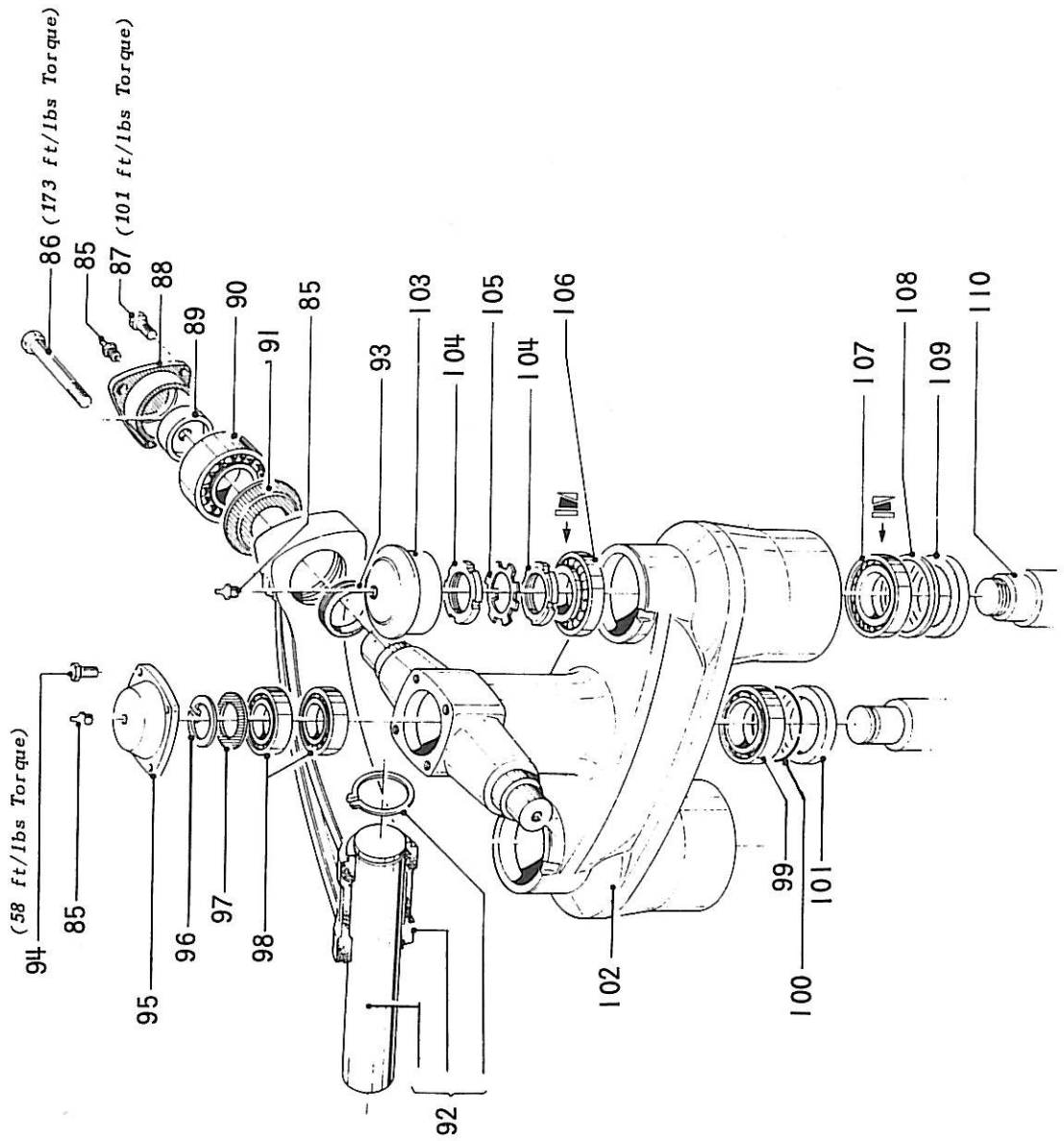
ILL. No.	PART No.	DESCRIPTION	QTY.
56	V305-61-300	M14 Gr. 8 Pl. Hex Nut	8
57	V314-61-275	15mm ID Pl. Flat Washer	8
58	V21282	Pivot Trunnion	2
59	V70449	Nylon Trunnion Bushing	2
60	V308-04-845	Tension Roll Pin (18mm dia. x 45mm)	4
61	V302-70-380	M14 x 80 Gr. 8.8 Pl. Hex Hd. Bolt	4
62	V91569	Hairpin Clip (5mm dia. x 102mm)	2
63	V10139	Handle Pin	2
64	V36012	Hairpin Clip (6.5mm dia. x 127mm)	3
65	V15458	Lower Hitch Crossbar (Cat. II)	1
66	V15459	Lower Hitch Frame	1
67	V305-61-200	M12 Gr. 8 Pl. Hex Nut	8
68	V302-71-235	M12 x 35 Gr. 8.8 Pl. Hex Hd. Bolt	8
69	V21100	Slotted Guide Bracket	2
70	V44349	Top Link Pin (Cat. II)	1
71	V43810	Drive Rocker Pivot Spindle	1
72	V310-01-450	External Circlip (45mm)	1

ILL. No.	PART No.	DESCRIPTION	QTY.
73	V15463	Main Frame (Includes V43810 Drive -Rocker Pivot Spindle and V310-01-450 Ext. Circlip)	1
74	V14506	M20 x 415 Special Hex Hd. Bolt	2
75	V30055	Stabilizer Spring	2
76	V21303	Shouldered Washer	2
77	V305-61-910	M20 Gr. 8 Pl. Hex Nut	4
78	V46097	Handle Pin (for parking stand)	1
79	V92054	Hairpin Clip (3mm dia. x 73mm)	1
80	V15056	Parking Stand	1
81 thru 84		Not Allocated	

Quote part number and machine serial number when ordering parts.

DRIVE YOKE & ROCKER ASSEMBLY

ILLUSTRATION D



DRIVE YOKE & ROCKER ASSEMBLY

PARTS LIST D

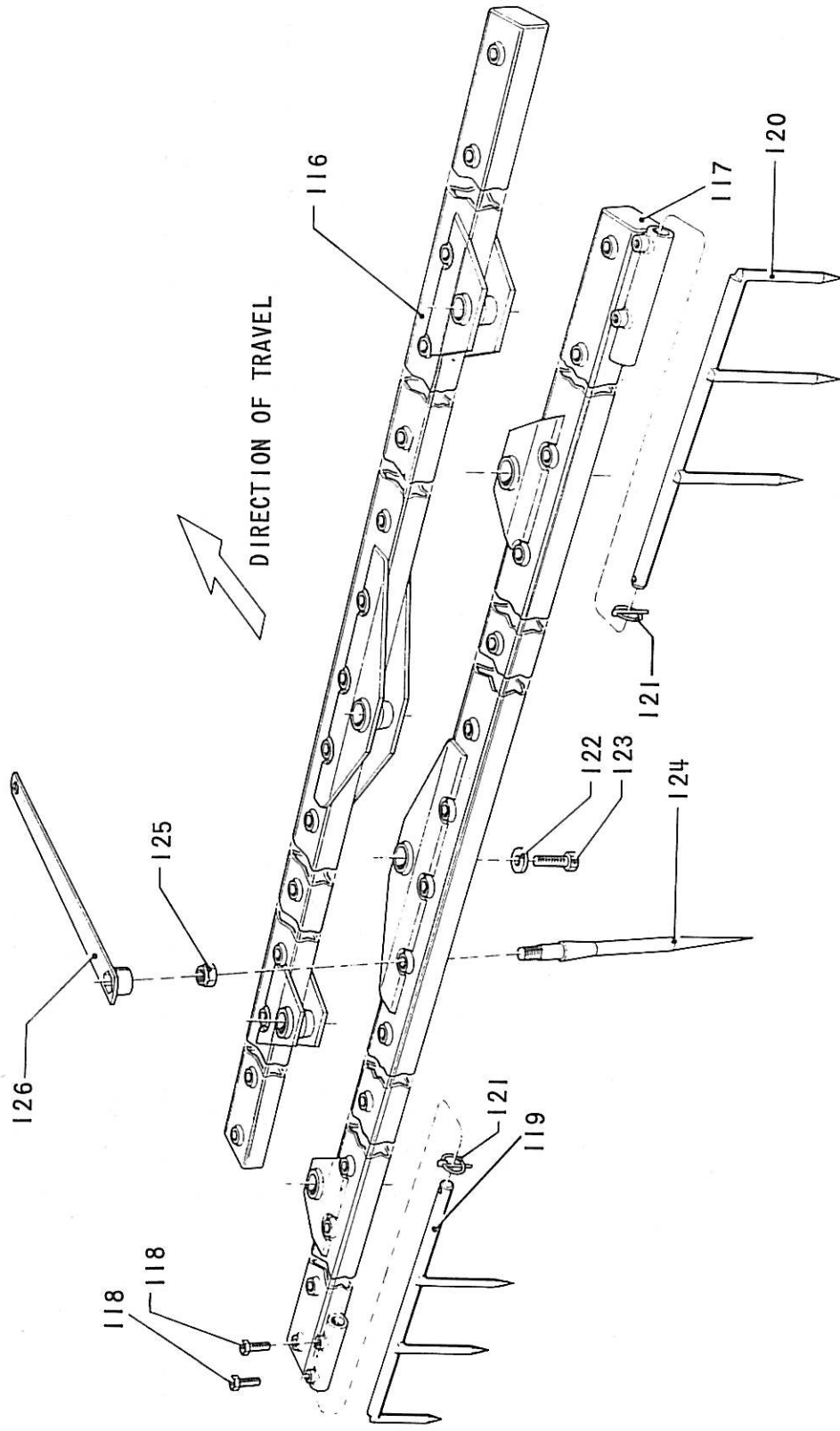
ILL. No.	PART No.	DESCRIPTION	QTY.
85	V417-01-200	Grease Fitting (1/8" - 28 BSP)	5
86	V302-90-101	5/8" UNF x 4 1/2" Gr. 8.8 Pl. Hex Hd. Bolt	2
87	V302-71-235	M12 x 35 Gr. 8.8 Pl. Hex Hd. Bolt	6
88	V21104	Triangular Bearing Cap	2
89	V21127	Bearing Thrust Washer	2
90	V401-03-110	Ball Bearing - 6310	2
91	V60730	Sealing Washer	2
92	V95580	Yoke and Shaft Assy. (Includes V2113 Yoke, V43818 Shaft and V310-01-500 Ext. Circlip)	1
93	V361-12-065	Rubber V-Ring (V-65, Type S)	2
94	V302-71-130	M10 x 30 Gr. 8.8 Pl. Hex Hd. Bolt	4
95	V21101	Center Bearing Cap	1
96	V310-13-040	External Circlip (40mm x 2.5mm thick)	1
97	V314-15-042	Hardened Washer	1
98	V401-01-008	Ball Bearing - 6208-C3	2
99	V401-01-011	Ball Bearing - 6211-C3	1

ILL. No.	PART No.	DESCRIPTION	QTY.
100	V36153	Spring Wire Ring	1
101	V361-15-700	Grease Seal (70mm ID x 100mm OD x 10mm wide)	1
102	V21085	Drive Rocker Housing	1
103	V60729	Dust Cap	2
104	V310-20-301	Ring Nut (Bearing Adjusting KM6)	4
105	V310-06-301	Shaft Lock Washer (Star Locking MB6)	2
106	V401-22-107	Taper Roller Bearing - 32207	2
107	V401-22-110	Taper Roller Bearing - 32210	2
108	V70293	Seal Support Ring	2
109	V361-15-605	Grease Seal (60mm ID x 90mm OD x 10mm wide)	2
110	V95942	Tine Bar Drive Spindle Assy. (Includes V47752 Spacer and V44347 Spindle)	2
111 thru 115		Not Allocated	

Quote part number and machine serial number when ordering parts.

TINES, TINE BARS & ANTI-RIDGING BARS

ILLUSTRATION E



TINES, TINE BARS & ANTI-RIDGING BARS

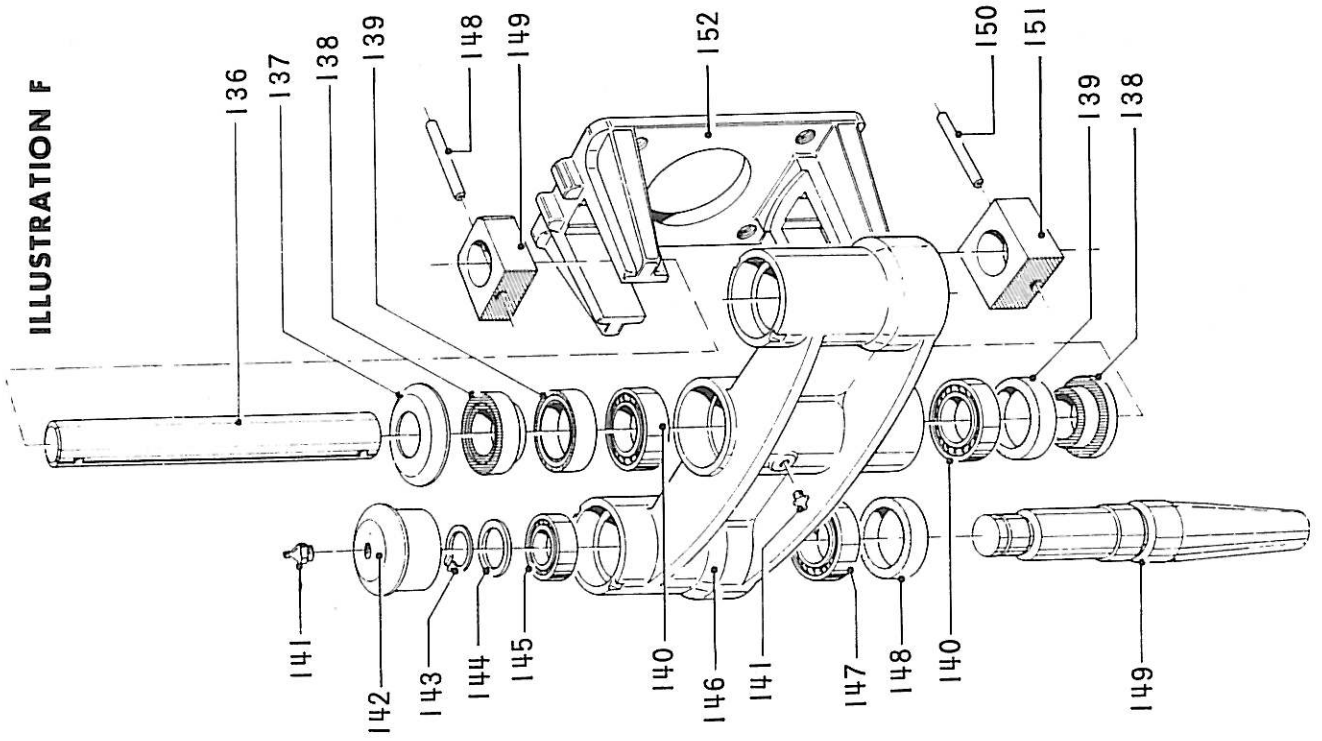
PARTS LIST E

ILL. No.	PART No.	DESCRIPTION	QTY.
116	V15464	Front Tine Bar	1
117	V15465	Rear Tine Bar	1
118	V302-71-425	M16 x 25 Gr. 8.8 Pl. Hex Hd. Bolt	4
119	V14710	L.H. Anti-riding Bar	1
120	V14711	R.H. Anti-riding Bar	1
121	V81423	Quick Pin Clip	2
122	V41118	Special Washer	6
123	V302-71-440	M16 x 40 Gr. 8.8 Pl. Hex Hd. Bolt	6
124	V44100	Tine	54
125	V81586	Special Hex Tine Nut	54
126	V13488	Tine Wrench	1
127 thru 135		Not Allocated	

Quote part number and machine serial number when ordering parts.

TINE BAR PIVOT ASSEMBLY (2 PER MACHINE)

ILLUSTRATION F



TINE BAR PIVOT ASSEMBLY

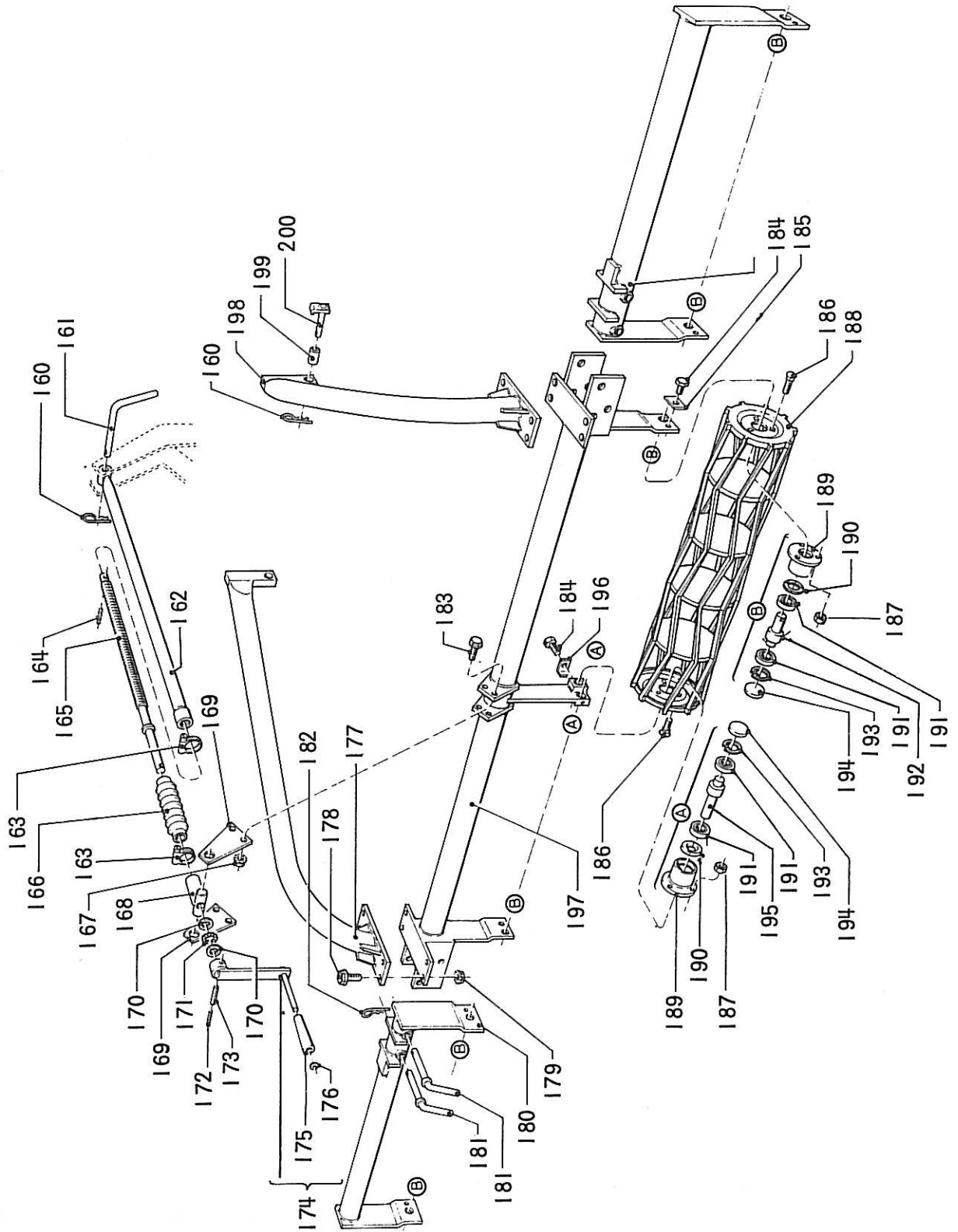
PARTS LIST F

ILL. No.	PART No.	DESCRIPTION	QTY.	ILL. No.	PART No.	DESCRIPTION	QTY.
136	V43807	Center Spindle	2	150	V308-03-855	Tension Roll Pin (8mm dia. x 55mm)	4
137	V60728	Dished Washer	2	151	V47740	Pivot Block	4
138	V21099	Spacer and Seal Wear Ring	4	152	V21100	Slotted Guide Bracket (Also listed p. 7, Ill. 69)	2
139	V361-15-501	Grease Seal (50mm ID x 72mm OD x 12mm wide)	4				
140	V401-03-006	Ball Bearing - 6306-C3	4	153 thru 159		Not Allocated	
141	V417-01-200	Grease Fitting (1/8" x 28 BSP)	6				
142	V60982	Dust Cap	4				
143	V310-01-300	External Circlip (30mm)	4				
144	V314-15-039	Hardened Washer	4				
145	V410-01-106	Ball Bearing - 6206-C3	4				
146	V21098	Tine Bar Pivot Housing	2				
147	V401-01-008	Ball Bearing - 6208-C3	4				
148	V361-15-502	Grease Seal (50mm ID x 80mm OD x 12mm wide)	4				
149	V44348	Outer Spindle	4				

Quote part number and machine serial number when ordering parts.

CRUMBLE ROLLER ASSEMBLY

ILLUSTRATION G



CRUMBLE ROLLER ASSEMBLY

PARTS LIST G

ILL. No.	PART No.	DESCRIPTION	QTY.
160	V91569	Hairpin Clip (5mm dia. x 102mm)	3
161	V94666	Handle Pin	1
162	V15152	Depth-Adjusting Screw Tube	1
163	V388-30-280	Hose Clamp	2
164	V308-03-530	Tension Roll Pin (5mm dia. x 30mm)	1
165	V44269	Depth-Adjusting Screw	1
166	V81834	Flexible Screw Cover	1
167	V305-83-200	M12 Gr. 12 Serrated Flange Pl. Hex Nut	4
168	V14896	Screw Trunnion Head	1
169	V66515	Trunnion Bracket	2
170	V314-15-053	Hardened Ring	2
171	V349-05-005	3/16" dia. Ball	18
172	V308-03-540	Tension Roll Pin (5mm dia. x 40mm)	1
173	V308-03-840	Tension Roll Pin (8mm dia. x 40mm)	1
174	V95903	Crank Assy. (Includes V321-00-004 Plastic Handle and V310-71-100 Cap Nut)	1
175	V321-00-004	Plastic Handle	1
176	V310-71-100	10mm Cap Nut	1
177	V15473	L.H. Roller Mounting Arm	1
178	V302-71-440	M16 x 40 Gr. 8.8 Pl. Hex Hd. Bolt	8
179	V305-83-400	M16 Gr. 12 Pl. Hex Nut	8
180	V15472	L.H./R.H. Roller Support Frame	2
181	V91886	Handle Pin with Washer	4
182	V92054	Hairpin Clip (3mm dia. x 73mm)	4
183	V302-71-235	M12 x 35 Gr. 8.8 Pl. Hex Hd. Bolt	4
184	V302-71-116	M12 x 16 Gr. 8.8 Pl. Hex Hd. Bolt	8

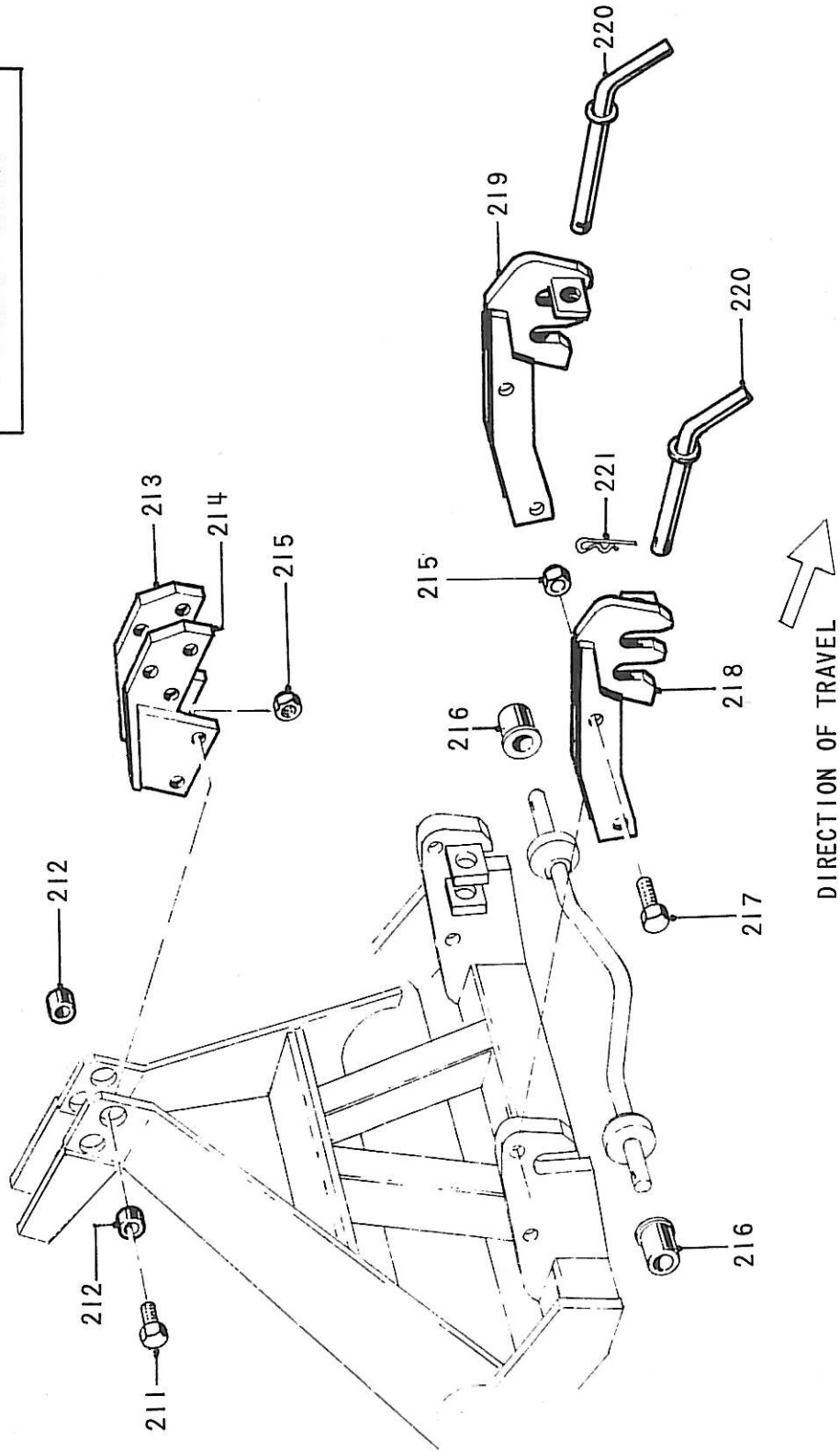
ILL. No.	PART No.	DESCRIPTION	QTY.
185	V62330	Axle Locking Tab (Straight)	6
186	V302-63-820	M8 x 20 Gr. 4.6 Pl. Rd. Hd. Sq. Neck Bolt	24
N.I.	V314-67-800	M8 Pl. External Serrated Washer	24
187	V305-61-800	M8 Gr. 8 Pl. Hex Nut	24
188	V15471	Crumble Roller Section	4
189	V15476	Bearing Housing	8
190	V314-25-405	Nilos Ring - 6005ZJV	8
191	V401-02-505	Ball Bearing - 6005-2RS	16
192	V44353	Short Axle	6
193	V310-02-470	Internal Circlip (47mm)	8
194	V70603	Plastic Hub Cap	8
195	V44352	Long Axle	2
196	V62329	Axle Locking Tab (Bent)	2
197	V15477	Center Roller Support Frame	1
198	V15474	R.H. Roller Mounting Arm	1
199	V70349	Nylon Bushing	2
200	V14519	Flange Pin	2
201 thru 210		Not Allocated	

N.I. - Not Illustrated.
Quote part number and machine serial number when ordering parts.

OPTIONAL 3-POINT LINKAGE EXTENSION

ILLUSTRATION H

COMPLETE
ASSEMBLY: 603450



OPTIONAL 3-POINT LINKAGE EXTENSION

PARTS LIST H

ILL. No.	PART No.	DESCRIPTION	QTY.	ILL. No.	PART No.	DESCRIPTION	QTY.
211	V302-71-913	M20 x 50 Gr. 8.8 Pl. Hex Hd. Bolt	4				
212	V52013	Reducer Bushing	4				
213	V15467	L.H. Top Extension Bracket	1				
214	V15108	R.H. Top Extension Bracket	1				
215	V305-75-910	M20 Gr. 8 Pl. Hex Nut with nylon insert	8				
216	V47969	Cat. II to Cat. III Shouldered Bushing	2				
217	V302-70-919	M20 x 80 Gr. 8.8 Pl. Hex Hd. Bolt	4				
218	V15076	R.H. Lower Hitch Extension Bracket	1				
219	V15075	L.H. Lower Hitch Extension Bracket	1				
220	V15077	Extended Handle Pin	2				
221	V91569	Hairpin Clip (5mm dia. x 102mm)	2				
	603450	3-Point Linkage Extension Assy. Complete (Includes all parts Ill. 211 thru Ill. 221)	1				
222 thru 230		Not Allocated					

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Home Office: 343 S. Division St., Harvard, Illinois 60033 (815) 943-6424
Branch Offices: 2348 Auburn Blvd., Sacramento, Calif. 95821 (916) 483-2777
P.O. Box 7180, Warehouse 18C, G.P.A., Savannah, Ga. 31408 (912) 964-7200