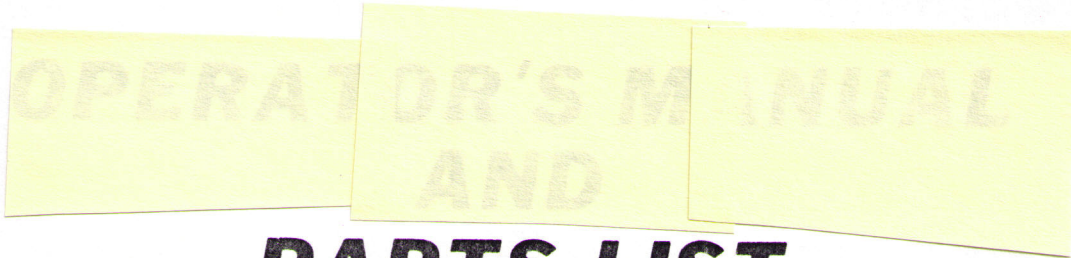




Model HN Rotavator



PARTS LIST

MODEL _____ HN _____

SERIAL NO. _____

TILLAGE WIDTH _____

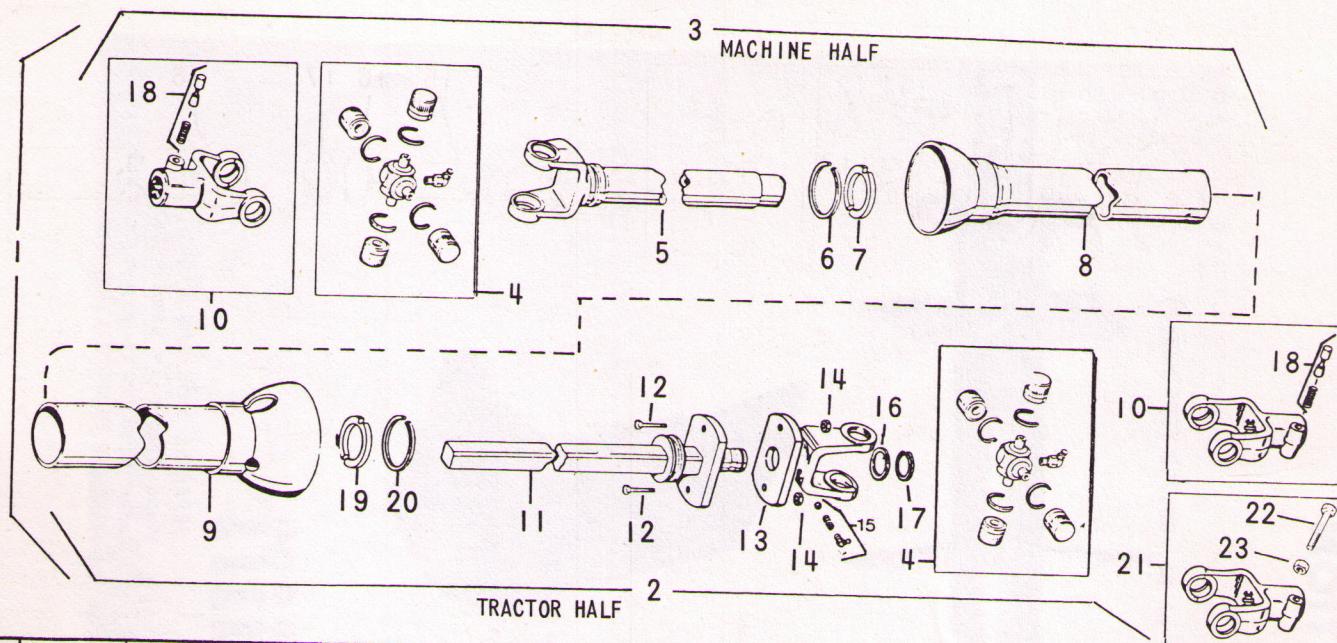
When ordering parts: Quote part number, model and tillage width.
Serial number is located on right front corner of main frame.

Howard USA Inc.
10 S. Jefferson Street
Harvard, IL 60033
Phone 815-943-5401
Fax 815-943-3636

APRIL 1981
FORM 150

SHEAR PIN UNIVERSAL DRIVE JOINT

ILLUSTRATION A



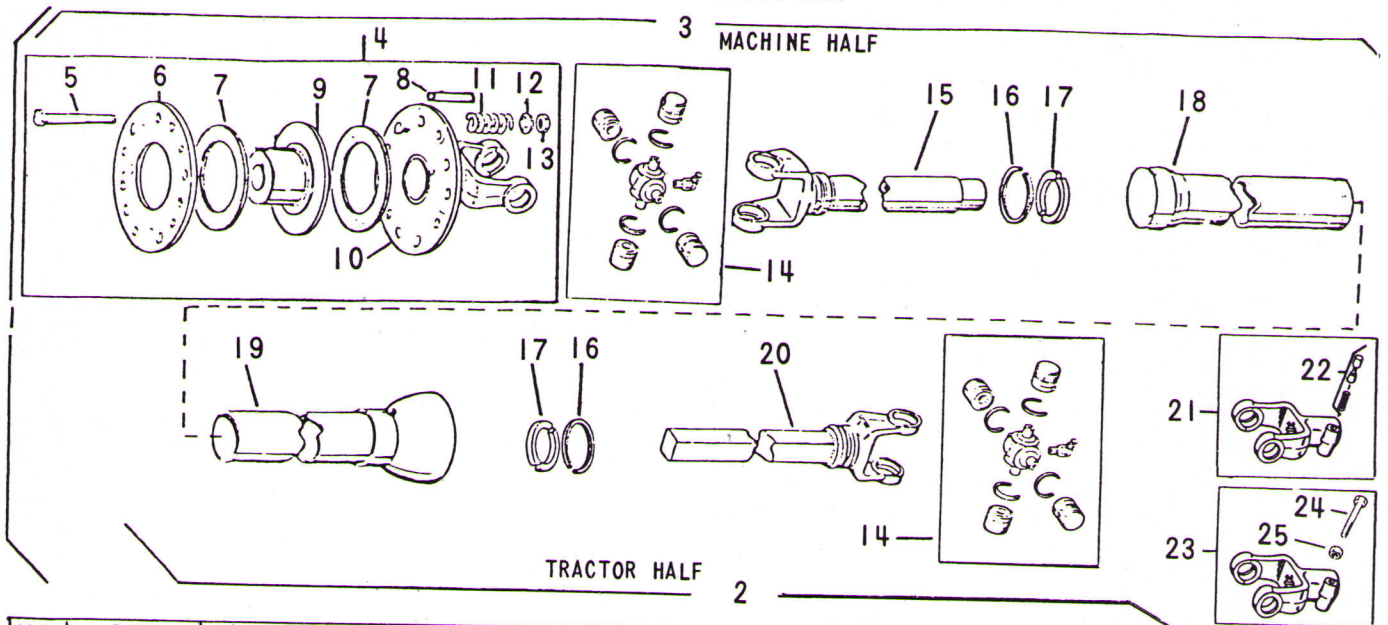
PART NO.	ILL. NO.	DESCRIPTION
1	601619	U.J. Assy. Complete (13-3/4" with 1-3/8", 6-spline tractor yoke)
1	601620	U.J. Assy. Complete (13-3/4" with 25mm, 18-spline tractor yoke)
1	601621	U.J. Assy. Complete (16" with 1-3/8", 6-spline tractor yoke)
1	601622	U.J. Assy. Complete (16" with 31/32", 10-spline tractor yoke)
1	601623	U.J. Assy. Complete (16" with 25mm, 18-spline tractor yoke)
2	601629	Tractor Half of 601619
2	601641	Tractor Half of 601620
2	601642	Tractor Half of 601621
2	601643	Tractor Half of 601622
2	601644	Tractor Half of 601623
3	601650	Machine Half of 601619 and 601620
3	601651	Machine Half of 601621, 601622 and 601623
4	601663	Cross and Bearing Kit
5	601672	Yoke and Tube for 13-3/4" U.J. (9-1/4" long overall)
5	601674	Yoke and Tube for 16" U.J. (11-1/2" long overall)
6	601676	Bearing Retainer
7	601677	Nylon Bearing
8	601683	Inner Shield Tube for 13-3/4" U.J.

PART NO.	ILL. NO.	DESCRIPTION
8	601685	Inner Shield Tube for 16" U.J.
9	601679	Outer Shield Tube for 13-3/4" U.J.
9	601681	Outer Shield Tube for 16" U.J.
10	601660	Yoke (1-3/8", 6-spline)
11	601664	Shaft and Shear Flange for 13-3/4" U.J. (10-5/8" long overall)
11	601665	Shaft and Shear Flange for 16" U.J. (12-7/8" long overall)
12	125204120	Shear Bolt 1/4" x 1-1/2", Gr. 2
13	601666	Shear Yoke and Lube Kit
14	107204155	Hex Gripco Nut 1/4" - 20
15	600262	Instamatic Lube Kit
16	601667	Washer
17	601668	Snap Ring
18	600261	Q.D. Pin and Spring Kit
19	600251	Nylon Bearing
20	600252	Bearing Retainer
21	601661	Tractor Yoke (31/32", 10-spline)
21	601662	Tractor Yoke (25mm, 18-spline)
22	106103180	Socket Hd. Bolt No. 10-32 x 2-1/4" (for 601661)
22	101205200	Hex Hd. Bolt 5/16" x 2-1/2" UNC (for 601662)
23	107103175	Hex Nyloc Nut No. 10-32 (for 106103180)
23	107205170	Hex Nyloc Nut 5/16" UNC (for 101205200)

NOTE: All lengths (unless described as "overall") refer to the cross and bearing centers when measured in the fully closed position.

CLUTCH UNIVERSAL DRIVE JOINT

ILLUSTRATION AA

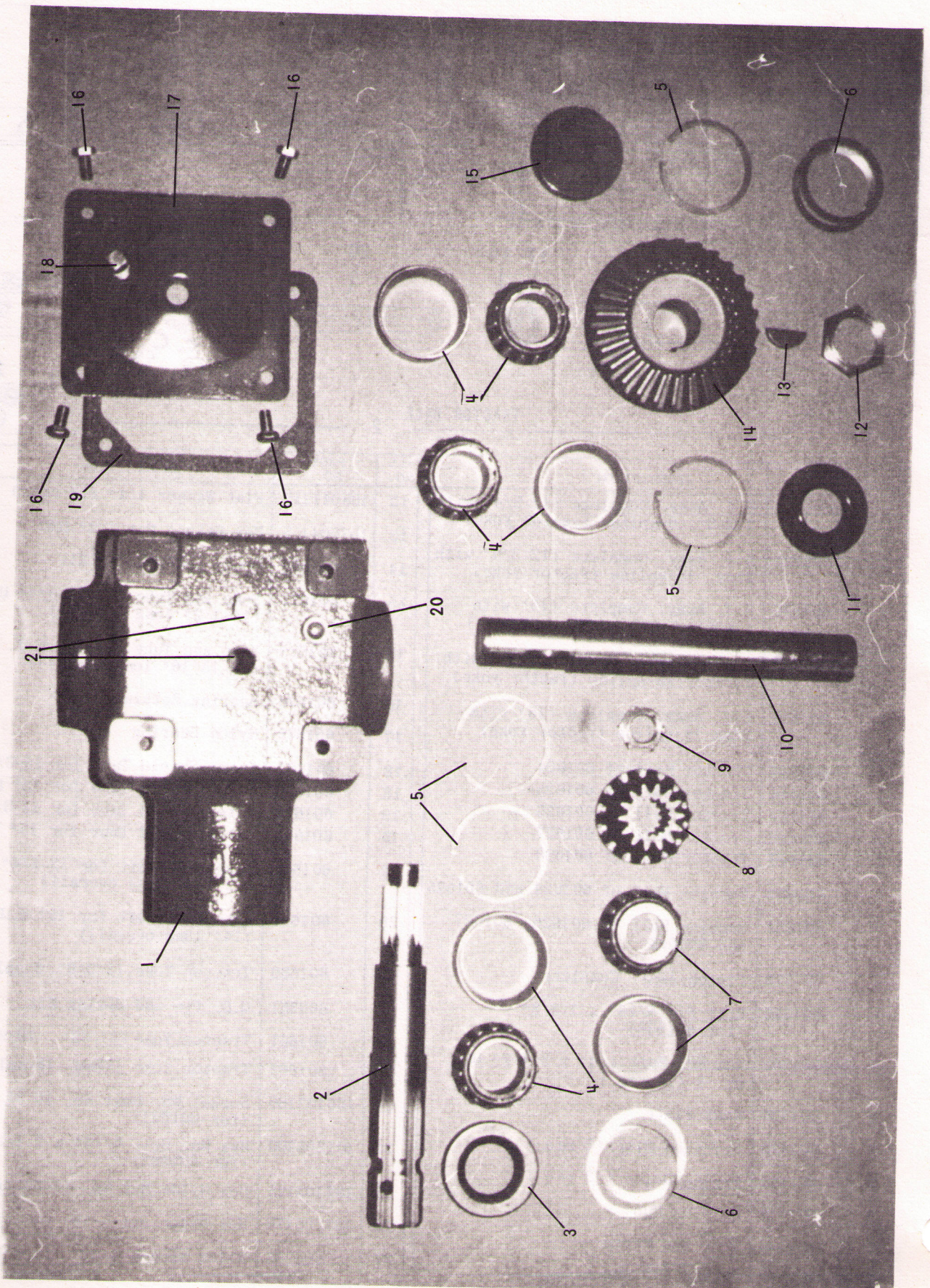


ILL. NO.	PART NO.	DESCRIPTION	ILL. NO.	PART NO.	DESCRIPTION
1	601624	U.J. Assy. Complete (12-3/4" with 1-3/8", 6-spline tractor yoke)	12	108041215	Flat Washer 1/4" (12 req.)
1	601625	U.J. Assy. Complete (12-3/4" with 25mm, 18-spline tractor yoke)	13	107204155	Hex Gripco Nut 1/4" UNC
1	601626	U.J. Assy. Complete (15" with 1-3/8", 6-spline tractor yoke)	14	601663	Cross and Bearing Kit
1	601627	U.J. Assembly Complete (15" with 31/32", 10-spline tractor yoke)	15	601671	Yoke and Tube for 12-3/4" U.J. (10-1/2" long overall)
1	601628	U.J. Assy. Complete (15" with 25mm 18-spline tractor yoke)	15	601673	Yoke and Tube for 15" U.J. (12-15/16" long overall)
2	601645	Tractor Half of 601624	16	601676	Bearing Retainer
2	601646	Tractor Half of 601625	17	601675	Nylon Bearing
2	601647	Tractor Half of 601626	18	601682	Inner Shield Tube for 12-3/4" U.J.
2	601648	Tractor Half of 601627	18	601684	Inner Shield Tube for 15" U.J.
2	601649	Tractor Half of 601628	19	601678	Outer Shield Tube for 12-3/4" U.J.
3	601652	Machine Half of 601624 and 601625	19	601680	Outer Shield Tube for 15" U.J.
3	601653	Machine Half of 601626, 601627 and 601628	20	601669	Yoke and Shaft for 12-3/4" U.J. (12-1/4" long overall)
4	601538	Clutch Assy. Complete	20	601670	Yoke and Shaft for 15" U.J. (14" long overall)
NI	601540	Roll Pin 5/16" x 1-5/8" (for 601538)	21	601660	Tractor Yoke (1-3/8", 6-spline)
5	125204285	Hex Hd. Bolt 1/4" x 3-1/2" UNC, Gr. 2 (12 req.)	22	600261	Q.D. Pin and Spring Kit
6	601420	Rear Plate	23	601661	Tractor Yoke (31/32", 10-spline)
7	601430	Friction Disc (2 req.)	23	601662	Tractor Yoke (25mm, 18-spline)
8	601431	Spring Guide (12 req.)	24	106103180	Socket Hd. Bolt No. 10-32 x 2-1/4" (for 601661)
9	601419	Driving Hub	24	101205200	Hex Hd. Bolt 5/16" x 2-1/2" UNC (for 601662)
10	601539	Yoke and Plate	25	107103175	Hex Nyloc Nut No. 10-32 (for 106103180)
11	601429	Spring (12 req.)	25	107205170	Hex Nyloc Nut 5/16" UNC (for 101205200)
			NI	600266	Allen Wrench 5/32" (for 106103180)

NOTE: All lengths (unless described as "overall") refer to the cross and bearing centers when measured in the fully closed position.

GEARBOX ASSEMBLIES

ILLUSTRATION B



GEARBOX ASSEMBLIES

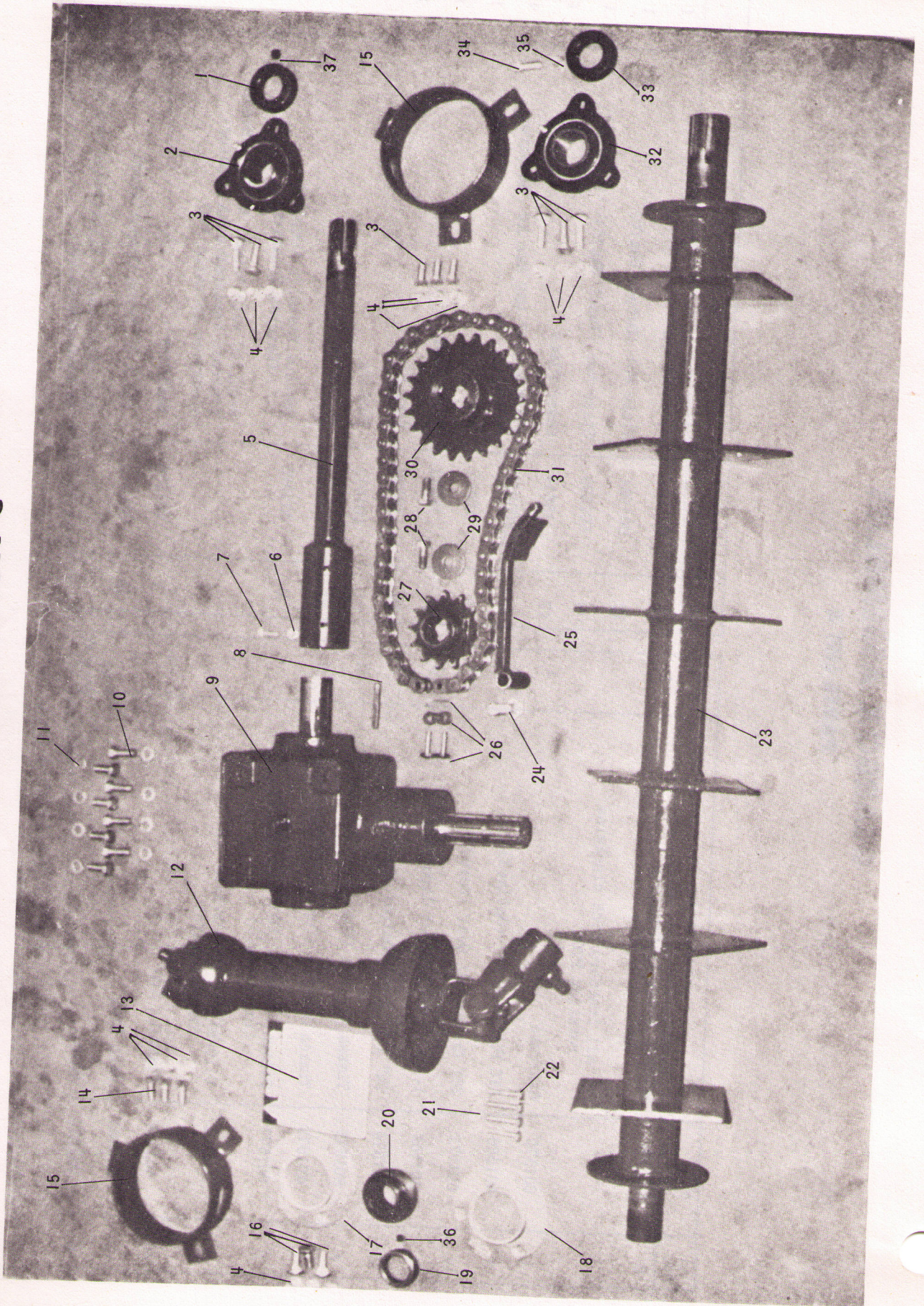
PARTS LIST B

ILL. NO.	PART NO.	DESCRIPTION	QTY.
B	601587	Gearbox Assembly Complete (Std. Rotation)	1
1	601570	For all tractors with clockwise rotation PTO Gearcase	1
8	601588	14T Pinion Gear (Splined)	1
14	601572	28T Crownwheel Gear (Keyed)	1
2	601589	1-3/8" - 6B Splined Input Shaft	1
10	601574	1 1/4" x 1/4" Keyed Output Shaft	1
4	601575	Timken Bearing (Cup 15245 Cone 15126)	3
7	601573	Timken Bearing (Cup 15245 Cone 15101)	1
3	601577	Oilseal 1-3/8" ID x 2-7/16" OD (Input Shaft)	1
11	601578	Oilseal 1 1/4" ID x 2-7/16" OD (Output Shaft)	1
15	601579	Blanking Cap	1
5	601580	Snap Ring	4
6	601581	Shim	As req'd.

ILL. NO.	PART NO.	DESCRIPTION	QTY.
13	601583	Woodruff Key	1
12	601584	Stake Nut (Output Shaft)	1
9	601590	Stake Nut (Input Shaft)	1
17	18844	Cover Plate	1
16	101205050	5/16" x 5/8" UNC Hex Hd Setscrew	4
19	18845	Gasket	1
18	18852	Level Plug	1
20	18853	Vent Plug	1
21	601573	Bushing	1
NI	601600	Drain Plug	1
B	601599	Gearbox Assembly Complete (Reverse Rotation)	1
1	601570	Required with Kubota B6000 & Beaver tractors equipped with counter-clockwise rotation PTO Gearcase	1
10	601601	1 1/4" x 1/4" Keyed Output Shaft	1

All other parts illustrated are common to both gearboxes.

DRIVE TRAIN & ROTOR ILLUSTRATION C



DRIVE TRAIN & ROTOR

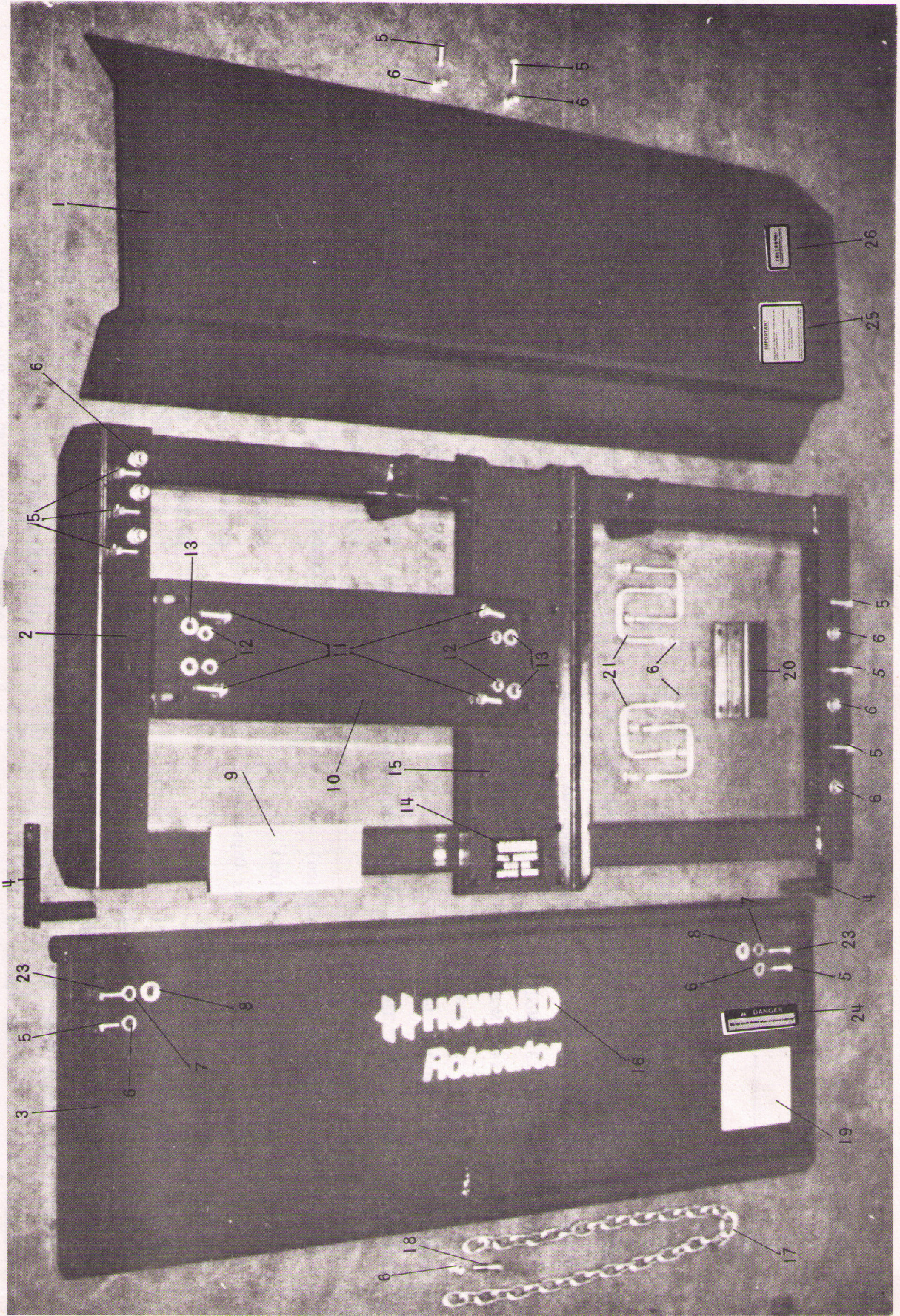
PARTS LIST C

ILL. NO.	PART NO.	DESCRIPTION	QTY	ILL. NO.	PART NO.	DESCRIPTION	QTY
1	601604	1/4" Camlock Collar Only	1	20	601611	1/4" Rotor Stub Bearing w/Cam Lock Collar & Triple Lip Seal	1
2	601602	1/4" Reverse Mount Flange Bearing c/w Cam Lock Collar & Single Lip Seal	1	* 21	125204120	1/4" - 20 x 1 1/2" Lg. Gr. 2 Hex Hd Shear Bolt	4
3	105206105	3/8" x 1/4" UNC Plated Rd. Hd. Sq. Neck Bolt	6	* 22	107204155	1/4" - 20 Hex Gripco Nut	4
4	107206315	3/8" UNC Plated Top Lock Hex Flange Nut	15	23	601408	Rotor (32" Model)	1
5	601410	Jackshaft (32" Model)	1	23	601495	Rotor (40" Model)	1
5	601501	Jackshaft (40" Model)	1	23	610790	Rotor (50" Model)	1
5	601792	Jackshaft (50" Model)	1	24	208063150	1/2" x 2 1/4" UNC Gr. 2 Hex Nylon Patch Bolt	1
6	107205025	5/16" UNC Hex Jam Nut	1	25	601491	Chain Adjusting Skid	1
7	126405065	5/16" x 3/4" UNC Sq. Hd. Cup Pt. Setscrew	1	26	601596	No. 60 Connecting Link, Heavy Duty	1
8	601592	Key 1/4" Square x 2" Lg.	1	27	601593	13-tooth Top Sprocket 1 1/4" - 6B Spline	1
9	601587	Gearbox Assembly (Std. Rotation)	1	28	208063060	3/8" x 1" UNC Gr. 5 Hex Capscrew w/Nylon Patch	1
	601599	Gearbox Assembly (Rev. Rotation)	1	29	600288	Sprocket Retainer	2
10	101206085	3/8" x 1" UNC Plated Gr 5 Hex Capscrew	4	30	601594	22-tooth Lower Sprocket 1-3/8" - 6B Spline	2
11	108061145	3/8" Plated Spring Washer	4	31	601595	No. 60 Roller Chain, Heavy Duty, 52 Pitches with Connector	1
12	6016XX	Universal Joint Assembly	1	32	601606	1-3/8" Reverse Mount Flange Bearing w/Cam Lock Collar & Triple Lip Seal	1
13	600983	Danger Rotating Drive Line Decal	1	33	601608	1-3/8" Cam Lock Collar Only	1
14	101406075	3/8" x 7/8" UNC Plated Gr 5 Hex Capscrew	6	34	208063015	3/8" x 3/4" UNC Sq. Hd. Cup Pt. Setscrew	1
15	18897	Anti Trash Cover (Trash Ring)	2	35	107206025	3/8" UNC Hex Jam Nut	1
16	105206075	3/8" x 7/8" UNC Plated Rd. Hd. Sq. Neck Bolt	3	36	118405020	5/16" - 18 UNC x 1/4" Lg. Cup Pt. Hex Socket Screw	1
17	601610	Stamped Bearing Housing Half	1	37	118406030	3/8" - 16 UNC x 3/8" Lg. Cup Pt. Hex Socket Screw	1
18	601609	Stamped Bearing Housing Half w/Zerk	1				
19	601612	1/4" Cam Lock Collar Only	1				

*Four extra bolts and nuts supplied with shear pin U-joint.

MAIN FRAME AND SHIELDS

ILLUSTRATION D



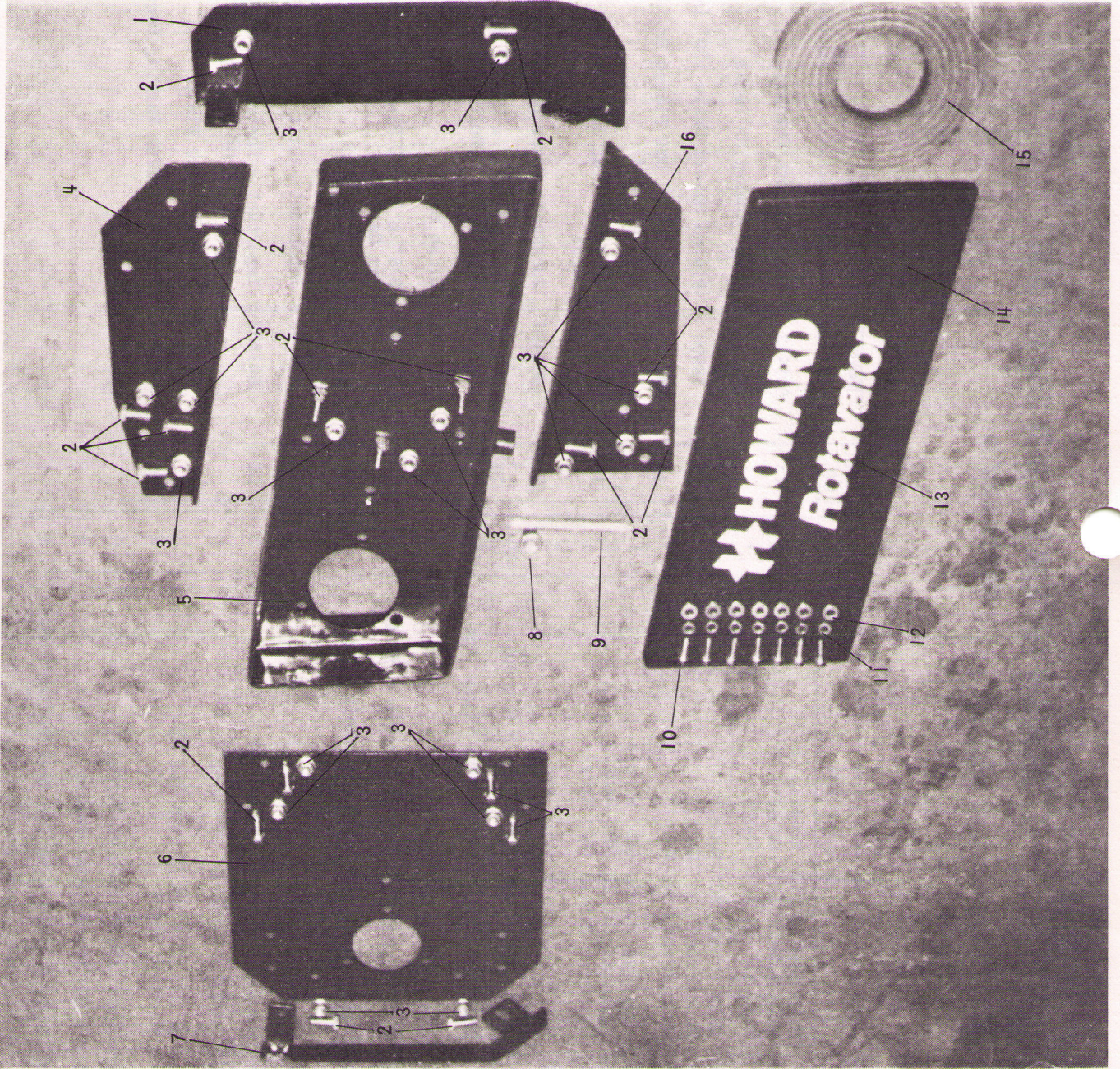
MAIN FRAME AND SHIELDS

PARTS LIST D

ILL. NO.	PART NO.	DESCRIPTION	QTY.	ILL. NO.	PART NO.	DESCRIPTION	QTY.
1	601407	Main Shield (32" Model)	1	15	601413	Main Support Channel	1
1	601415	Main Shield (40" Model)	1	16	601559	Large Howard HN Decal	1
1	601787	Main Shield (50" Model)	1	17	18903	Plated Shield Chain (36" Lg)	1
2	601403	Main Frame (32" Model)	1	18	101206105	3/8" x 1/4" UNC Plated Gr. 5 Hex Capscrew	1
2	601466	Main Frame (40" Model)	1	19	600205	Blade Fitting Instruction Decal	1
2	601788	Main Frame (50" Model)	1	20	601498	Jackshaft Cover Bracket	1
3	601417	Trailing Shield (32" Model)	1	21	601432	3/8" UNC x 2" x 2-3/4" Plated Sq. Corner U-Bolt	4
3	601546	Trailing Shield (40" Model)	1	NI	601558	Hinge Spacer	2
3	601794	Trailing Shield (50" Model)	1	23	101206085	3/8" x 1" UNC Plated Gr. 5 Hex Capscrew	2
4	601550	Trailing Shield Hinge Pin	2	24	601709	Danger Decal	1
5	101406075	3/8" x 7/8" UNC Plated Gr. 5 Hex Bolt	10	25	600203	Important - Lift Linkage Decal	1
6	107026315	3/8" UNC Plated Toplock Hex Flange Nut	19	26	601562	Important - Restricted PTO HP Decal	1
7	108061145	3/8" Plated Spring Washer	2	NI	601618	Serial Number Plate	1
8	108061215	3/8" Plated Flat Washer (Narrow Series)	2	NI	601708	7-Point Safety Warning Decal	1
9	601560	Small Howard HN Decal (Jackshaft Cover & Right End of Main Frame)	2				
10	601401	Jackshaft Cover (32" Model)	1				
10	601496	Jackshaft Cover (40" Model)	1				
10	601786	Jackshaft Cover (50" Model)	1				
11	208063035	5/16" x 1" UNC Plated Pan HD Slotted Screw	4				
12	108050945	5/16" Plated Spring Washer	4				
13	108051115	5/16" Plated Flat Washer	4				
14	600204	Fill Gearbox with Oil Instruction Decal	1				

CHAINCASE, WEAR SKIDS & END PLATES

ILLUSTRATION E



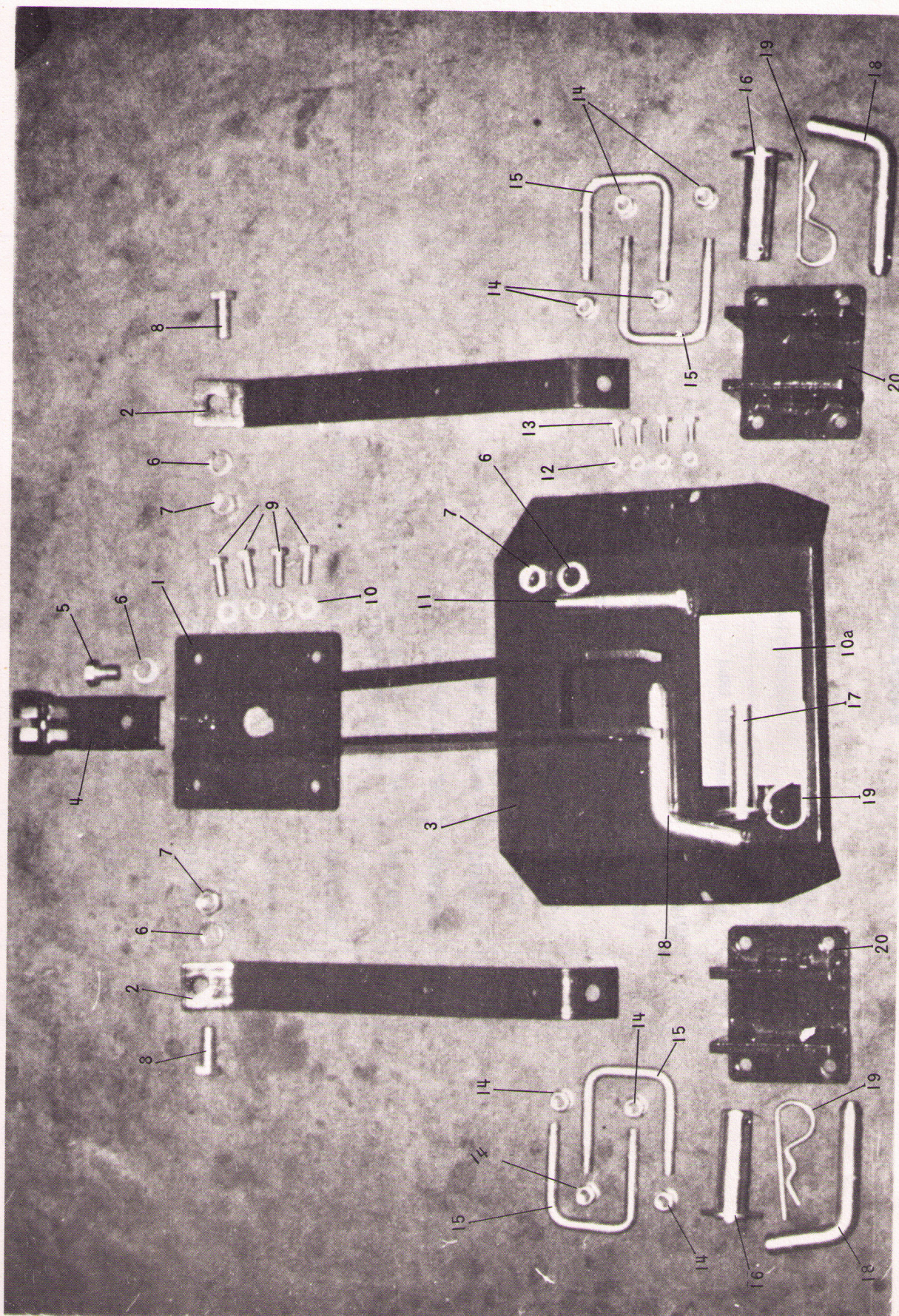
CHAINCASE, WEAR SKIDS & END PLATES

PARTS LIST E

ILL. NO.	PART NO.	DESCRIPTION	QTY.
1	601487	Wear Skid LHnd	1
2	101406075	3/8" x 7/8" UNC Plated Gr 5 Hex Capscrew	19
3	107206315	3/8" UNC Plated Toplock Hex Flange Nut	19
4	601485	Rear Angle Plate; w/assy.	1
5	601504	Chain Housing	1
6	601484	End Plate RHnd w/assy.	1
7	601472	Wear Skid RHnd	1
8	107208355	1/2" UNC Hex Nut	1
9	601569	1/2" x 4" UNC Gr. 2 Hex Capscrew (Fully Threaded)	1
10	208063045	1/4" x 3/4" UNC Plated Hex Washer Hd Self Tap Screw	7
11	108040845	1/4" Plated Spring Washer	7
12	108041015	1/4" Plated Flat Washer	7
13	601559	Large Howard HN Decal	1
14	601507	Chain Housing Cover	1
15	601598	Cover Gasket	1
16	601505	Front Angle Plate	1

TOP MAST ASSEMBLY & HITCH

ILLUSTRATION F



TOP MAST ASSEMBLY & HITCH

PARTS LIST F

ILL. NO.	PART NO.	DESCRIPTION	QTY.	ILL. NO.	PART NO.	DESCRIPTION	QTY.
1	601768	Top Mast	1	11	101208285	1/2" x 3/2" UNC Plated Gr. 5 Hex Capscrew	1
2	601459	Mast Stay	2	12	107204155	1/4" UNC Plated Hex Gripco Nut	4
3	601460	U-Joint & Clutch Guard	1	13	125404055	1/4" x 5/8" UNC Plated Gr. 2 Hex Capscrew	4
4	601547	Top Mast Chain Retainer	1	NI	108041015	1/4" Plated Flat Washer	4
5	125408065	1/2" x 3/4" UNC Plated Gr. 2 Hex Capscrew	1	14	107206315	3/8" UNC Plated Toplock Hex Flange Nut	8
6	108081445	1/2" Plated Spring Washer	4	15	601432	3/8" UNC x 2" x 2 3/4" Plated Sq. Corner U-Bolt	4
NI	108082015	1/2" Plated Flat Washer (Regular Series)	1	16	601614	Lower Hitch Pin (CAT I)	2
7	107208355	1/2" UNC Plated Hex Nut	3	17	601613	Top Link Pin (CAT I)	1
8	101208105	1/2" x 1 1/4" UNC Plated Gr. 5 Hex Capscrew	2	18	601691	Hitch Pin with Handles (CAT 'O' Hitch)	3
9	101206085	3/8" x 1" UNC PLATED GR. 5 Hex Capscrew	4	19	601615	3/16" Dia. Hair Pin Clip (Common to all hitch pins)	3
10	108061145	3/8" Plated Spring Washer	4	20	601478	Hitch Bracket	2
10a	601561	Shear Bolt Instruction Decal	1				