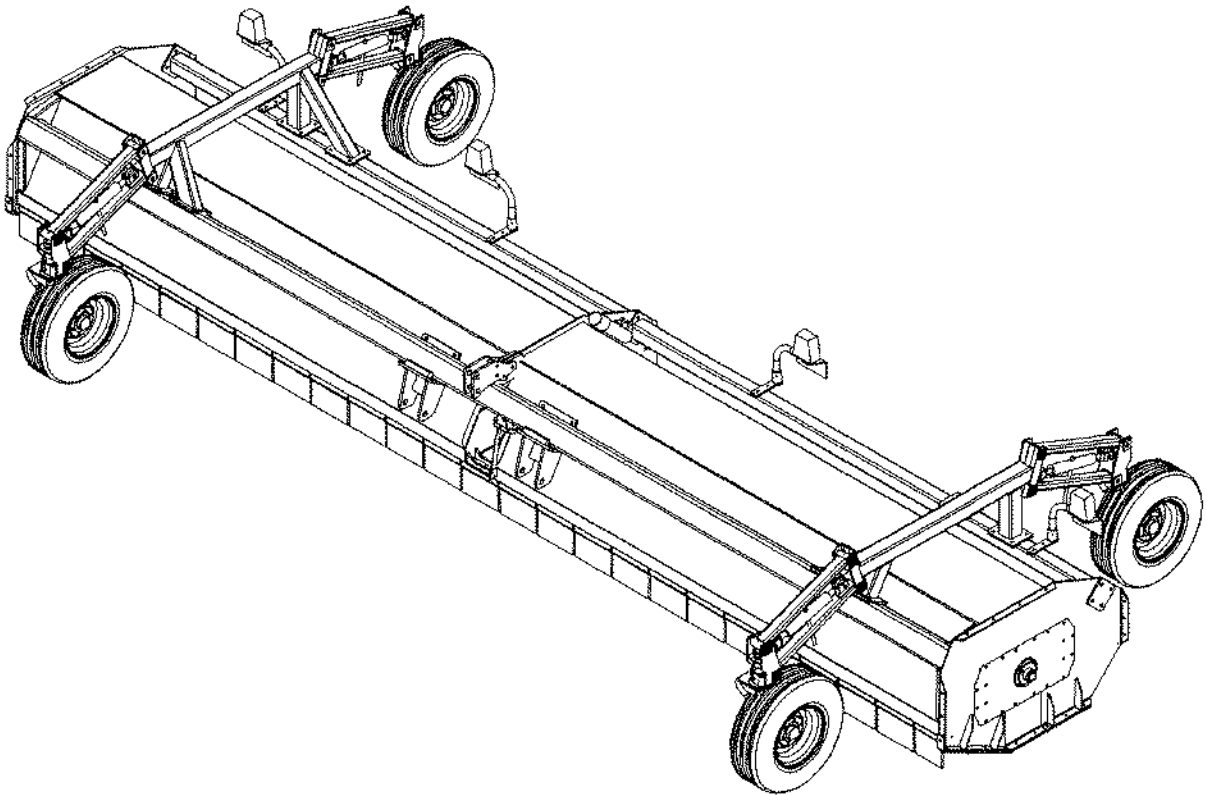




# PARTS MANUAL



# SHREDDER

Printed in USA (74247) JUNE 2004

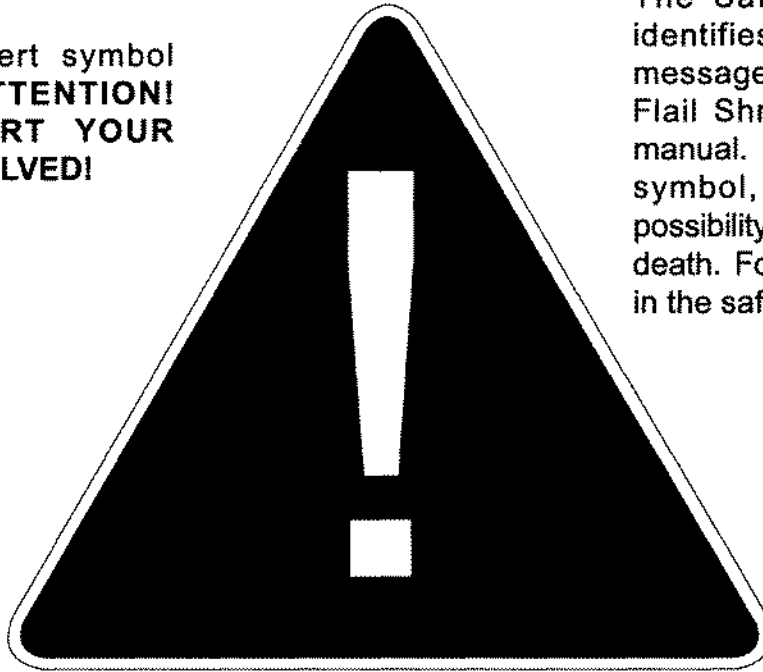
 **WIL-RICH**

PO Box 1030  
Wahpeton, ND 58074  
PH (701) 642-2621  
Fax (701) 642-3372

# PERSONAL SAFETY IS IMPORTANT!

ALL PERSONNEL INVOLVED WITH THE ASSEMBLY AND/OR OPERATION OF THIS EQUIPMENT MUST BE INFORMED OF PROPER SAFETY PROCEDURES. OPERATOR'S/ ASSEMBLY MANUALS PROVIDE THE NECESSARY INFORMATION. IF THE MANUAL IS LOST FOR A PARTICULAR IMPLEMENT, ORDER A REPLACEMENT AT ONCE. OPERATOR'S AND ASSEMBLY MANUALS ARE AVAILABLE AT NO CHARGE UPON REQUEST.

This Safety Alert symbol means **ATTENTION!**  
**BECOME ALERT YOUR SAFETY IS INVOLVED!**



The Safety Alert symbol identifies important safety messages on the Wil-Rich Flail Shredder and in this manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

## 3 Big Reasons

**Accidents Disable and Kill**

**Accidents Cost**

**Accidents Can Be Avoided**

### SIGNAL WORDS:

Note the use of the signal words **DANGER, WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guidelines:

### DANGER

An immediate and specific hazard which **WILL** result in severe personal injury or death if the proper precautions are not taken.

### WARNING

A specific hazard or unsafe practice which **COULD** result in severe personal injury or death if the proper precautions are not taken

### CAUTION

Unsafe practices which **COULD** result in personal injury if proper practices are not taken, or as a reminder of good safety practices.

ADDRESS INQUIRIES TO:  
WIL-RICH  
PO BOX 1030  
WAHPETON, ND 58074  
PH (701) 642-2621 FAX (701) 642-3372

# SPECIFICATIONS

Maximum Outside Body Width: .....20' ..... 247 in. (6.3m)  
.....22' ..... 271 in. (6.9m)  
.....25' ..... 307 in. (7.8m)

Cutting Height .....3 in. to 12 in. (7.62 cm to 30.5 cm)

Width of Cut .....20' ..... 238 in. (6.0m)  
.....22' ..... 262 in. (6.7m)  
.....25' ..... 298 in. (7.6m)

Knives	Cups	" L"
Number on 20' .....	112 .....	224
Number on 22' .....	124 .....	248
Number on 25' .....	144 .....	288

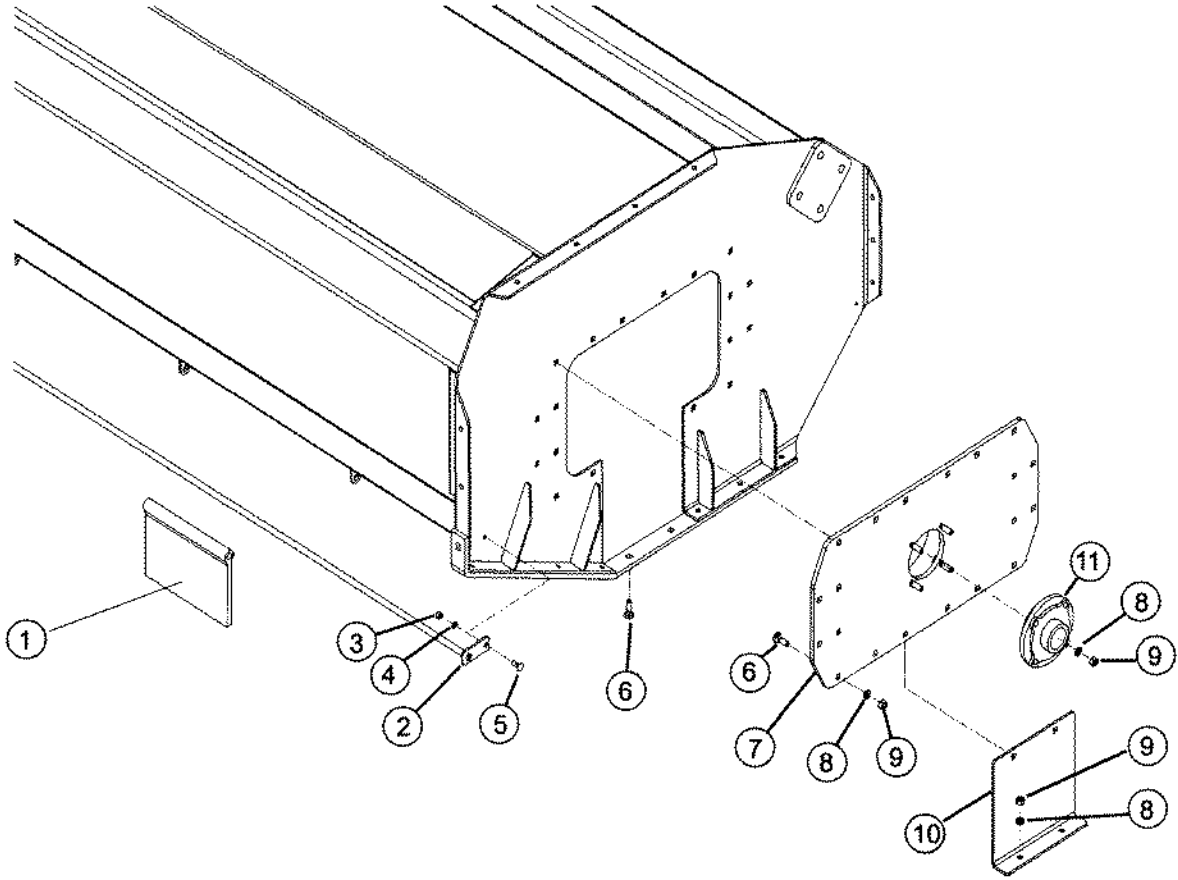
Recommended Tire Size .....9.5L - 15, 8 ply rated

Tire Inflation Pressure .....25 psi

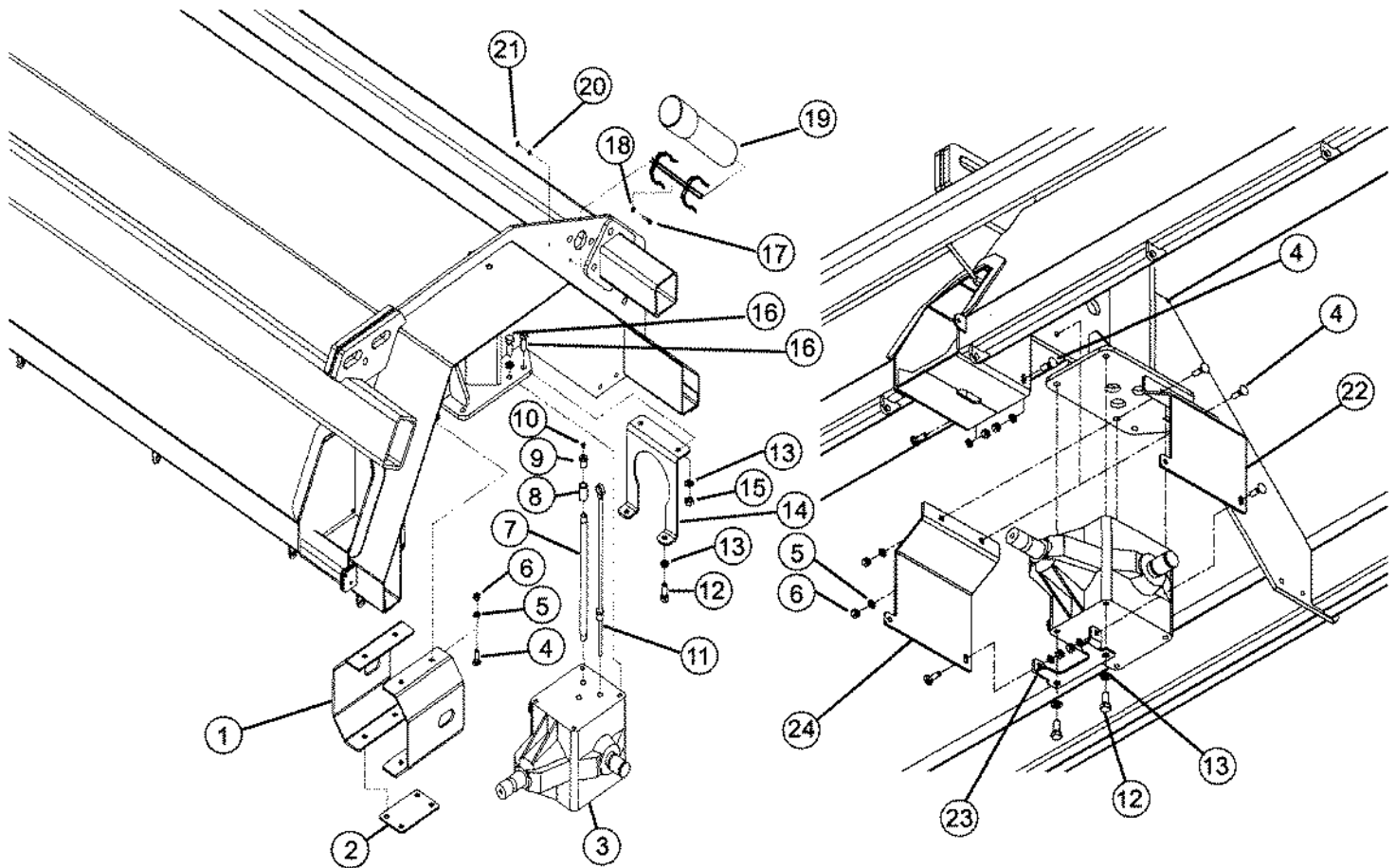
Rotor Speed .....1350 RPM dynamically balanced

Drive: PTO .....1000 RPM

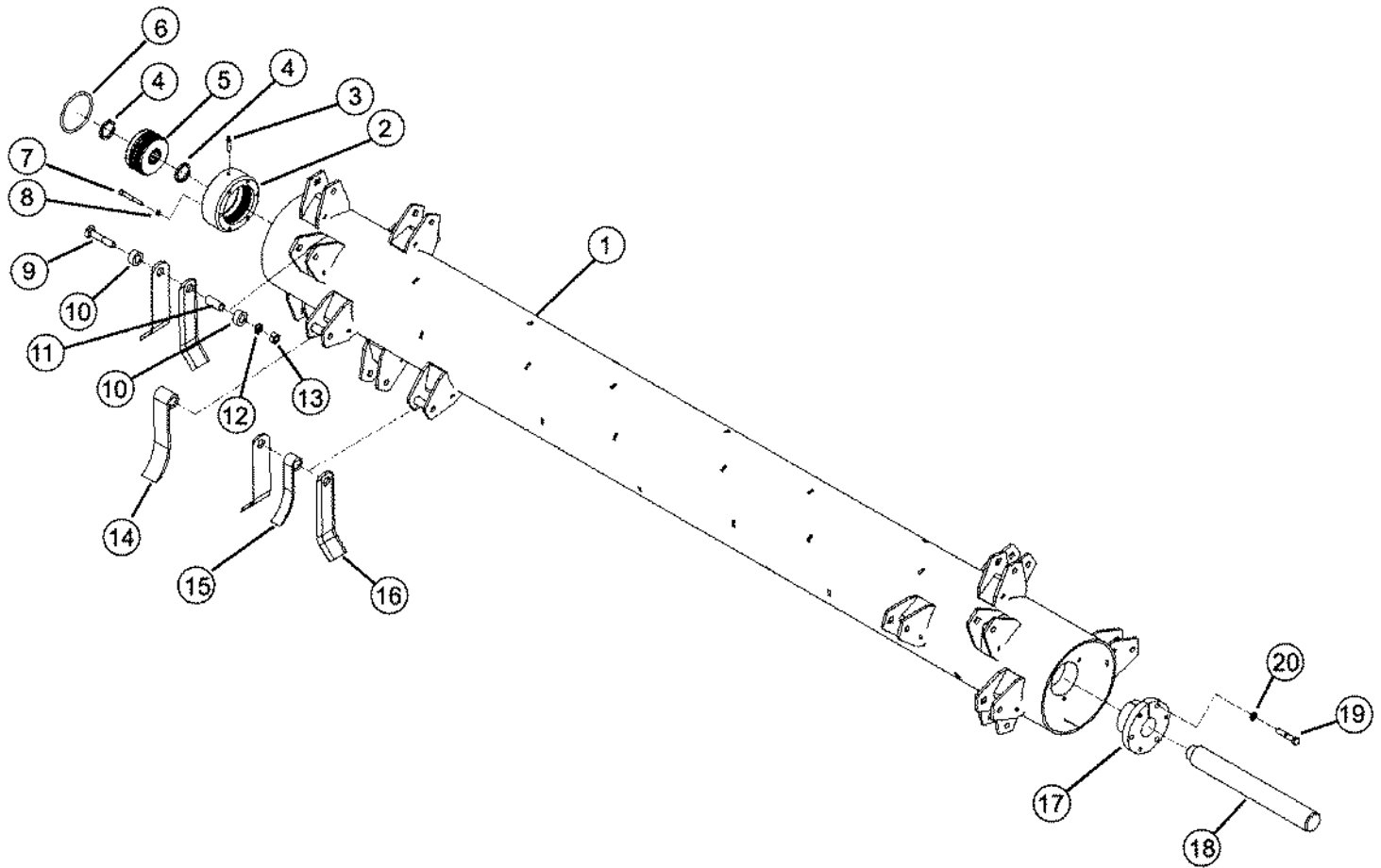
Weight of Shredder (approximate): .....20' ..... 6200 lbs. (2813 kg)  
.....22' ..... 6750 lbs. (3062 kg)  
.....25' ..... 7400 lbs. (3357 kg)



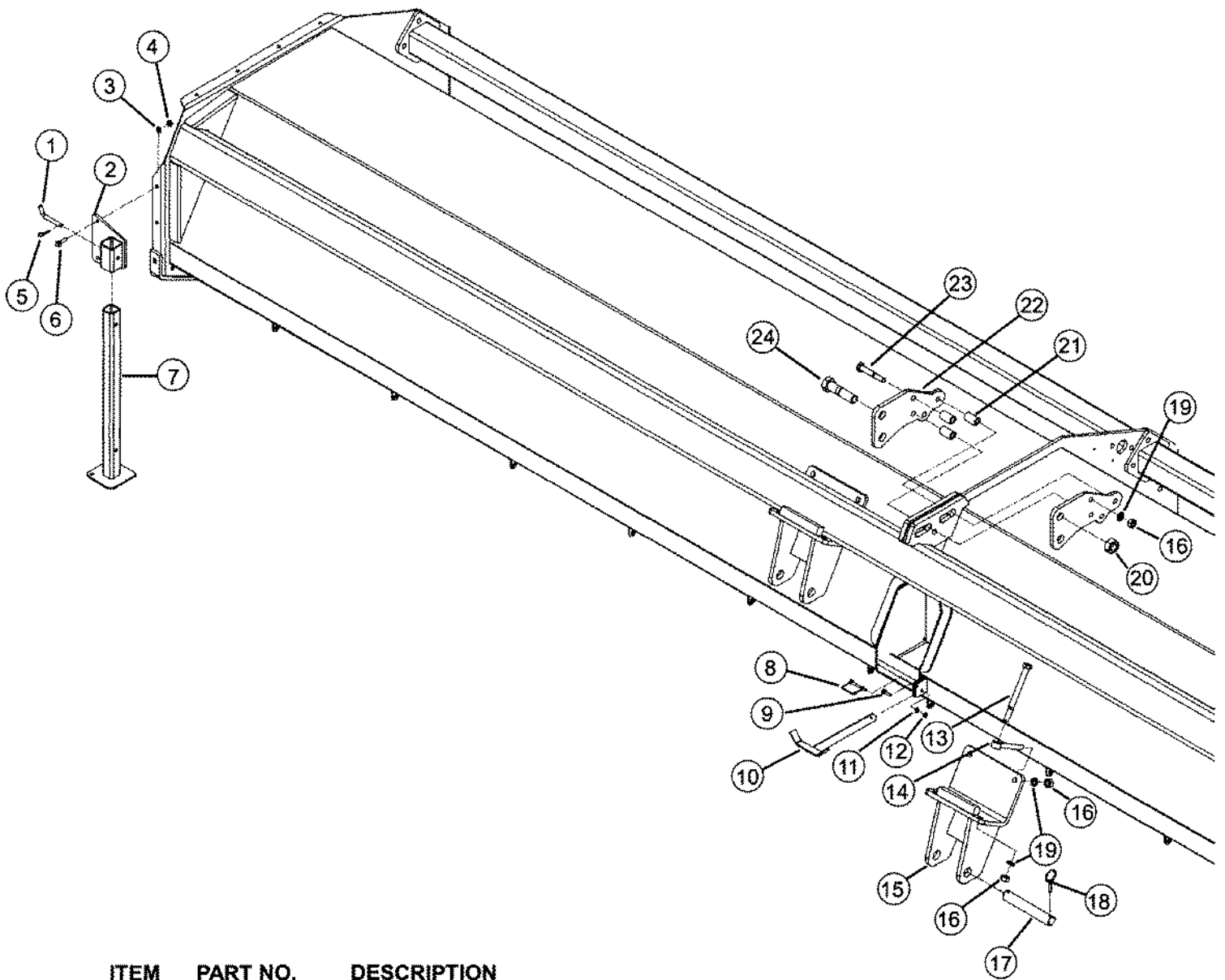
ITEM	PART NO.	DESCRIPTION
1	P234103	RUBBER FLAP - QTY 20'=20, 22'=22, 25'=25
2	P234180	20' FLAP ROD-120"
	P234179	22' FLAP ROD-133"
	P234101	25' FLAP ROD-150"
3	P88103	3/8 NC NUT
4	P88362	3/8 LOCK WASHER
5	P89009	3/8NCx1 CARRIAGE BOLT
6	P88873	1/2" x 1-1/2" CARRIAGE BOLT
7	P234009	BEARING PLATE
8	P88303	1/2 LOCK WASHER
9	P88104	1/2 NC NUT
10	P233960	COVER END PLATE (SERIAL NO 455118 TO 455632)
	P235529	COVER END PLATE
11	P233984	2-3/16" PILOTED BEARING



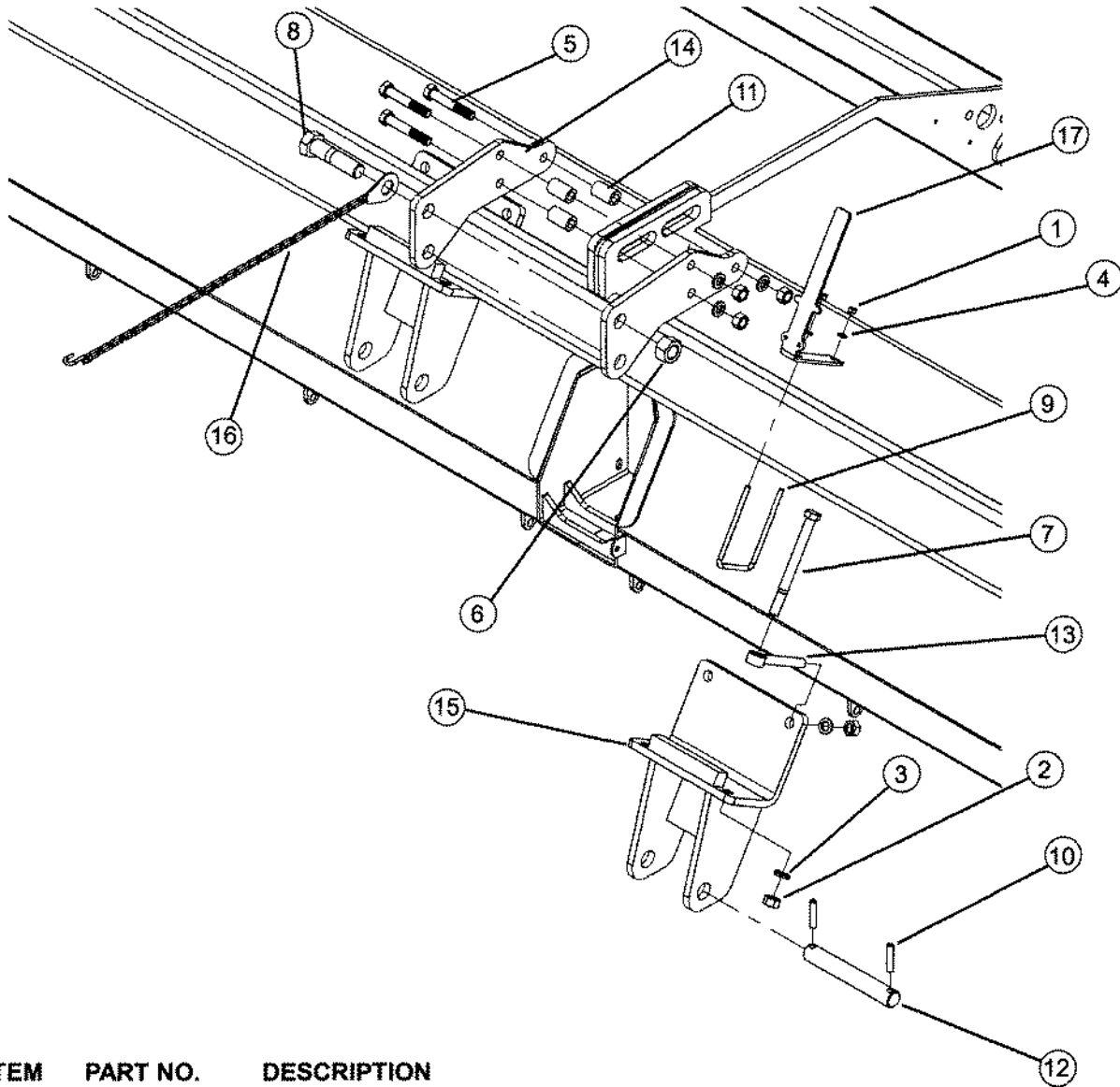
ITEM	PART NO.	DESCRIPTION
1	P234389	CLUTCH GAURD PLATE (SERIAL NO 455118 TO 455632)
2	P234387	CLUTCH GAURD BOTTOM PLATE (SERIAL NO 455118 TO 455632)
3	P233986	GEAR BOX
4	P88873	1/2 NCx1.5 CARRIAGE BOLT
5	P88303	1/2 LOCK WASHER
6	P88104	1/2 NC NUT
7	P234391	OIL FILL PIPE
8	P200800	1/2" COUPLING
9	P234147	1/2 MPTx1/8 FPT REDUCER
10	P234143	5 PSI BREATHER
11	P234139	DIP STICK
12	P88577	5/8NCx1.5" HEX BOLT
13	P88129	5/8 LOCK WASHER
14	P233963	GEARBOX SUPPORT PLATE
15	P88126	5/8 NC NUT
16	P88838	5/8NCx1.75" BOLT
17	P89028	1/4NCx1.25" BOLT
18	P88261	1/4 FLAT WASHER
19	P234313	OWNER MANUAL STORAGE TUBE & MOUNTING BRACKET
20	P88262	1/4 LOCK WASHER
21	P88172	1/4 NC NUT
22	P235919	SIDE PLATE-LH CLUTCH GUARD
23	P235920	CROSS PLATE-CLUTCH GUARD
24	P235524	SIDE PLATE-RH CLUTCH GUARD



ITEM	PART NO.	DESCRIPTION
1	P234137	20' FLAIL TUBE-114"
	P234138	22' FLAIL TUBE-126"
	P233983	25' FLAIL TUBE-144"
	P234132	20' TUBE WITH "L" KNIVES (224 KNIVES/UNIT)
	P234133	22' TUBE WITH "L" KNIVES (248 KNIVES/UNIT)
	P233988	25' TUBE WITH "L" KNIVES (288 KNIVES/UNIT)
	P234134	20' TUBE WITH CUP KNIVES (112 KNIVES/UNIT)
	P234135	22' TUBE WITH CUP KNIVES (124 KNIVES/UNIT)
	P234136	25' TUBE WITH CUP KNIVES (144 KNIVES/UNIT)
2	P233981	DRIVE SLEEVE
3	P234315	1-3/4" GREASE FITTING
4	P234142	SNAP RING
5	P233982	DRIVE HUB
6	P234141	O-RING
7	P89381	3/8NCx2.75" SOCKET HEAD BOLT
8	P234148	3/8 HIGH COLLAR LOCK WASHER
9	P89138	5/8NCx3.5 CARRIAGE BOLT
10	P233968	PLASTIC SPACER
11	P233969	HARDENED BUSHING
12	P88129	5/8 LOCK WASHER
13	P88369	5/8 LOCK NUT
14	P234187	9" CUP KNIFE
15	P234231	6.5" CUP KNIFE
16	P233987	9" L-KNIFE
17	P233975	2-3/16" DRIVE HUB
18	P233973	FLAIL TUBE END SHAFT
19	P234146	1/2NCx2.5" BOLT
20	P88303	1/2" LOCK WASHER

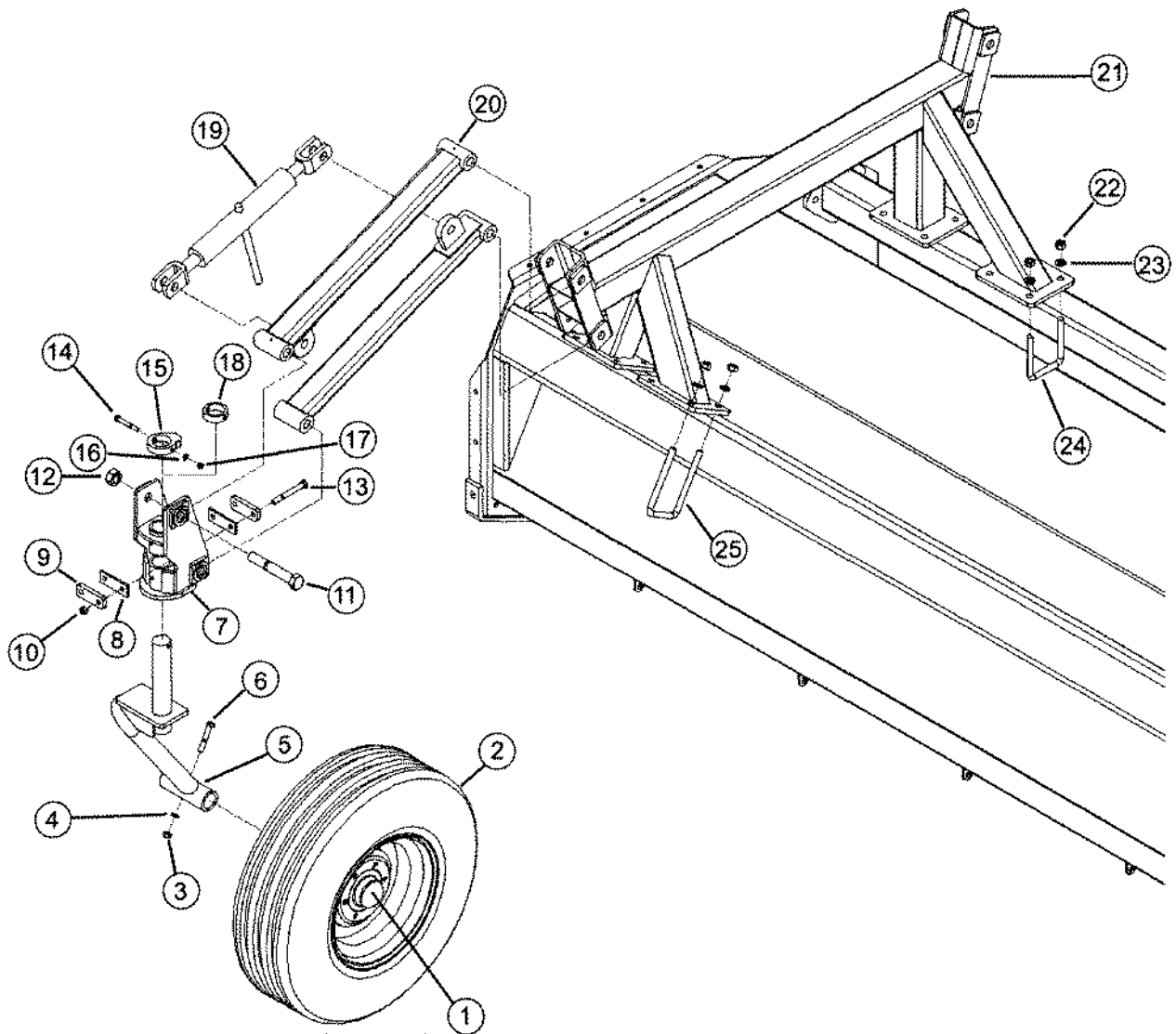


ITEM	PART NO.	DESCRIPTION
1	P23048	BENT HITCH PIN
2	P234354	STAND BRACKET
3	P88303	1/2" LOCK WASHER
4	P88104	1/2" NC NUT
5	P88435	.14x2.56" HAIR PIN
6	P88475	1/2NCx1.5 BOLT
7	P234355	PARK STAND
8	P915402	5/16x2.75 LYNCH PIN (SERIAL NO 455118 TO 455632)
9	P88555	3/8NCx1.25" BOLT
10	P234320	PTO CRADDLE (SERIAL NO 455118 TO 455632)
11	P88362	3/8" LOCK WASHER
12	P88103	3/8"NC NUT
13	P88487	3/4NCx8.5" BOLT
14	P234145	3/4NCx6 EYE BOLT
15	P234144	LOWER HITCH (SERIAL NO 455118 TO 455632)
16	P88110	3/4"NC NUT
17	P234102	LOWER 3PT PIN
18	P32990	7/16x1.5" CLICK PIN (SERIAL NO 455118 TO 455632)
19	P88130	3/4" LOCK WASHER
20	P88430	1-1/4"NC LOCK NUT
21	P233959	UPPER MAST BUSHING
22	P233958	UPPER MAST PLATE (SERIAL NO 455118 TO 455632)
23	P88421	3/4NCx4.5" BOLT
24	P89027	1.25NCx5" BOLT

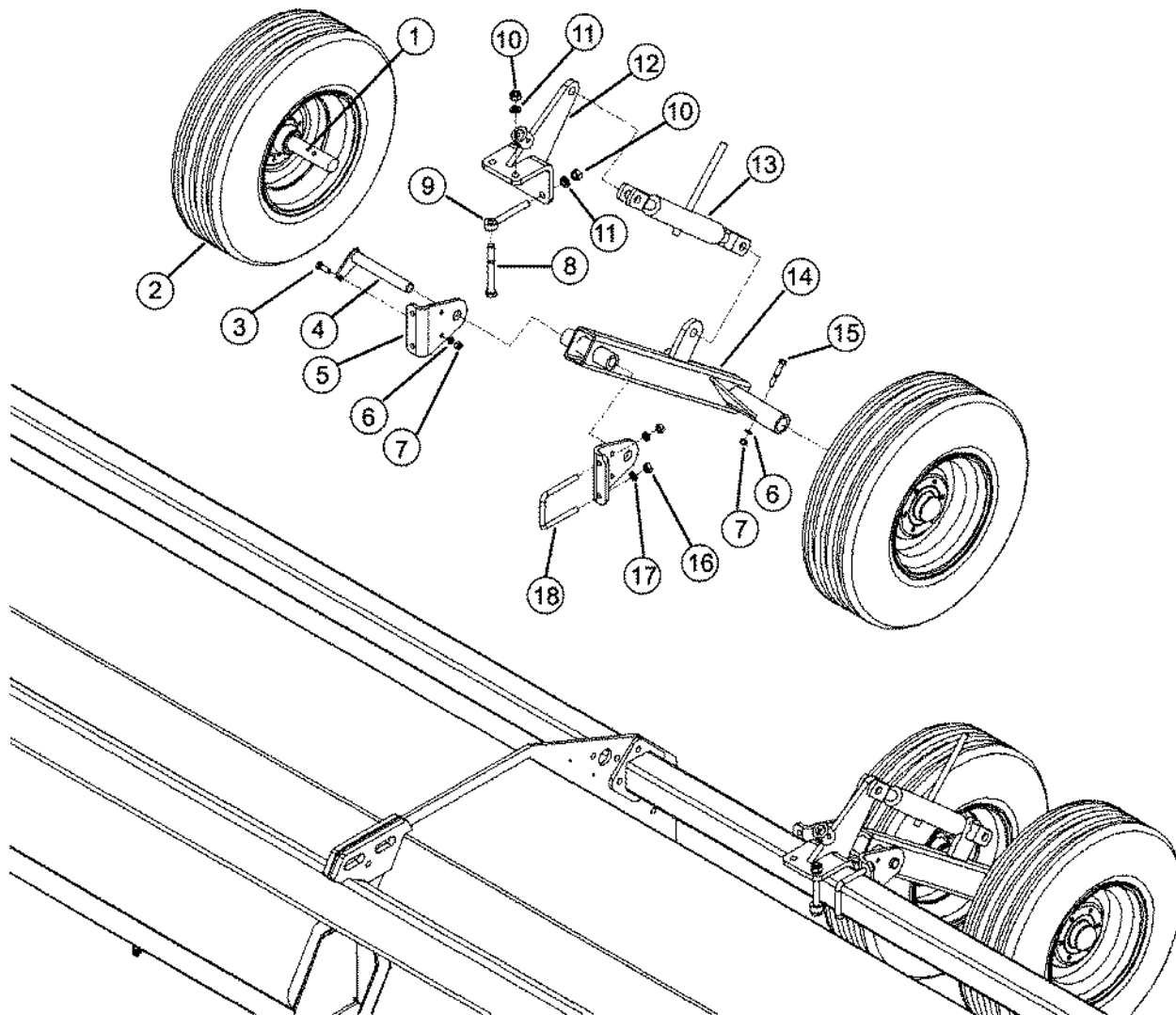


ITEM	PART NO.	DESCRIPTION
1	P88103	3/8" NC HEX NUT
2	P88110	3/4" NC HEX NUT
3	P88130	3/4" LOCK WASHER
4	P88362	3/8" LOCK WASHER
5	P88421	3/4" X 4-1/2" NC HEX BOLT
6	P88430	1-1/4" CENTER LOCK NUT
7	P88487	3/4" X 8-1/2" NC HEX BOLT
8	P89027	1-1/4" X 5" NC HEX BOLT
9	P89040	3/8" X 4" X 7" NC U-BOLT
10	P89059	1/2" DIA X 2-1/2" ROLL PIN
11	P233959	BUSHING-UPPER MAST
12	P234102	LOWER 2PT PIN
13	P234145	3/4" X 6" NC EYE BOLT
14	P235526	PLATE-FLOATING 3RD ARM
15	P235527	LOWER 2PT MOUNT
16	P235554	CHAIN ASSEMBLY-PTO
17	P235954	COMBINATION STRAP

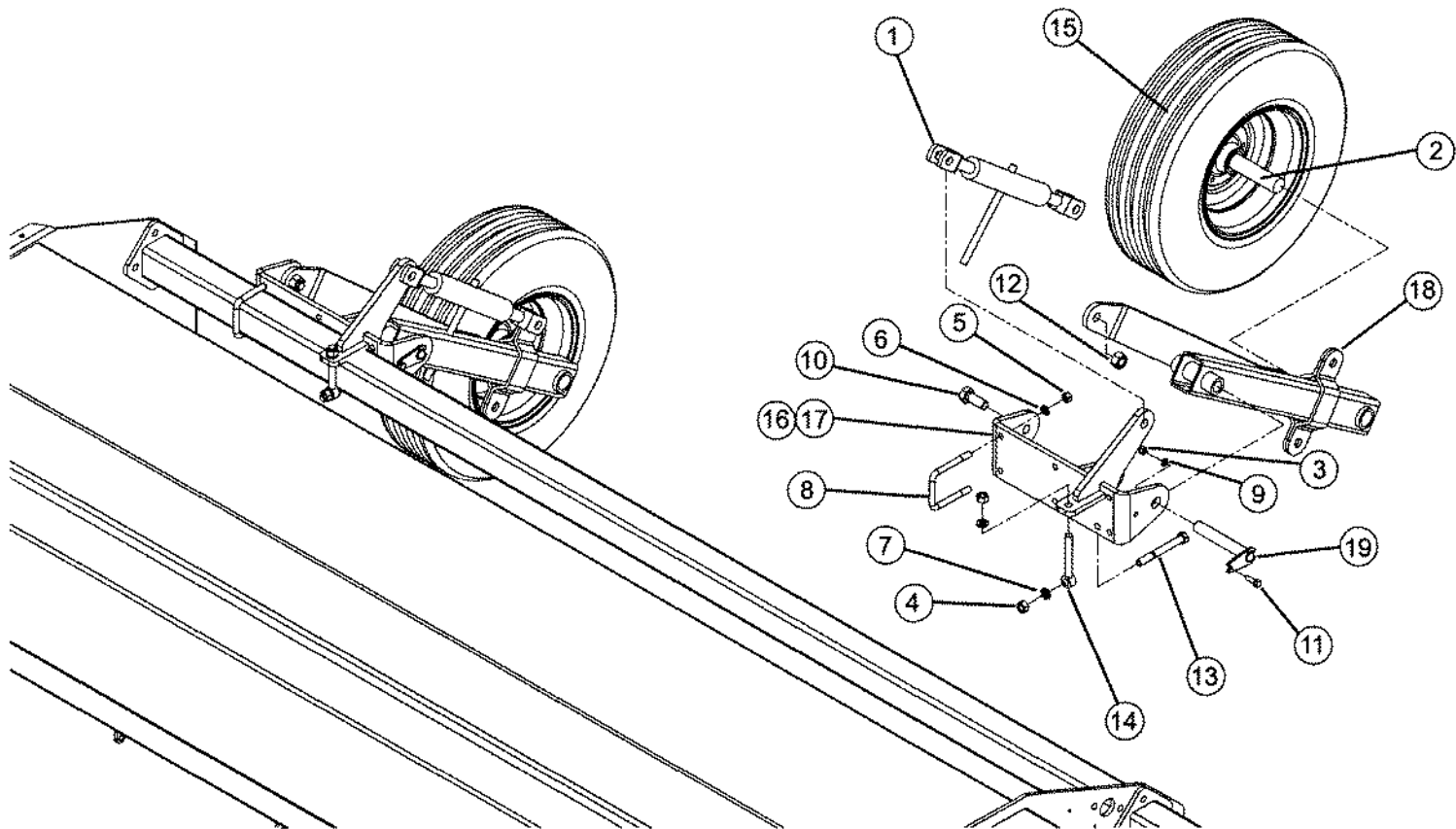




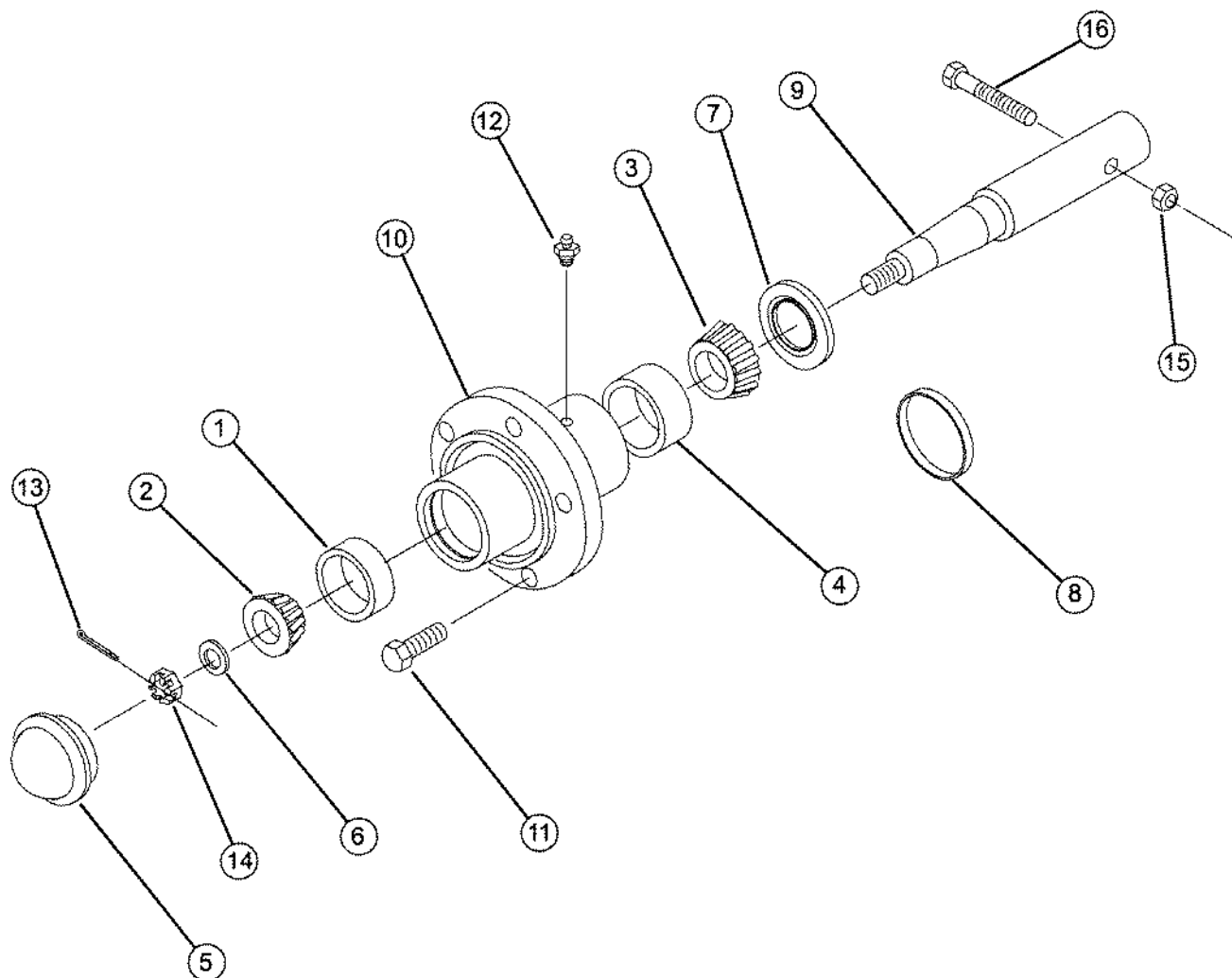
ITEM	PART NO.	DESCRIPTION
1	P41233	6-BOLT HUB & 1-3/4" SPINDLE ASS'Y (SEE PAGE 12)
2	P234393	TIRE W/TUBE 9.5L X 15 8-PLY & RIM 15 X 6 6-BOLT
3	P88104	1/2"NC NUT
4	P88303	1/2" LOCK WASHER
5	P16312	CASTOR WHEEL LUG
6	P88541	1/2NCx3" BOLT
7	P220850	GAUGE WHEEL PIVOT
8	P67790	DAMPER PAD
9	P67791	DAMPER PLATE
10	P88363	1/2"NC LOCK NUT
11	P221336	1NCx6.5" PIVOT BOLT
12	P89075	1"NC LOCK NUT
13	P88382	1/2NCx4.5" BOLT
14	P88531	3/8NCx3 BOLT
15	P235555	CASTOR STOP COLLAR (20' MODELS ONLY)
16	P88362	3/8 LOCK WASHER
17	P88103	3/8"NC NUT
18	P14189	LINK ARM STOP COLLAR
19	P33104	JACK, RATCHET
20	P234107	CASTER ARM
21	P234116	LH WHEEL MOUNT
	P234117	RH WHEEL MOUNT (SHOWN)
22	P88126	5/8"NC NUT
23	P88129	5/8" LOCK WASHER
24	P88145	5/8NCx4x5.25 U-BOLT
25	P89097	5/8NCx4x7.25 U-BOLT



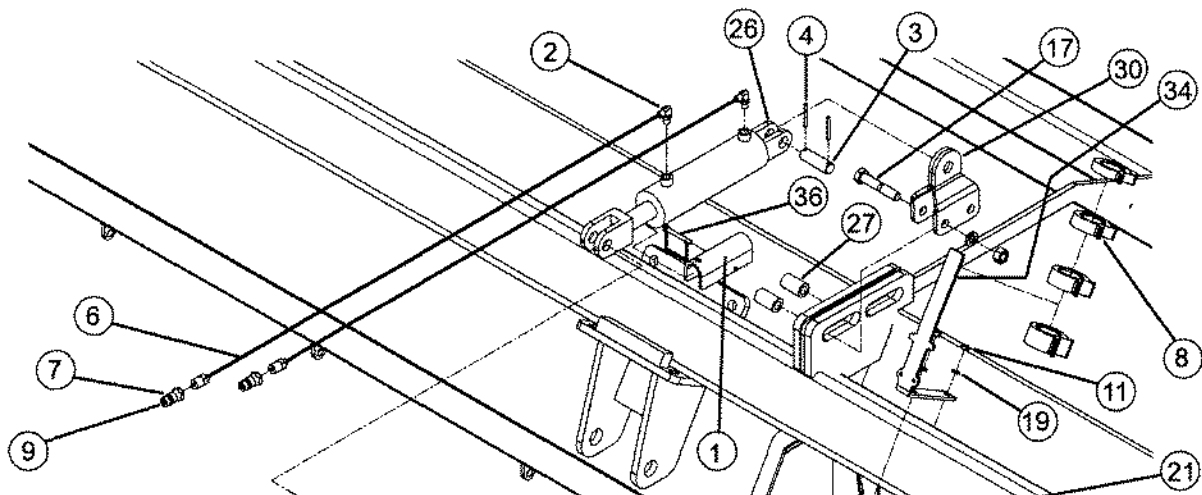
ITEM	PART NO.	DESCRIPTION
1	P41233	6-BOLT HUB & 1-3/4" SPINDLE ASS'Y (SEE PAGE 12)
2	P234393	TIRE W/TUBE 9.5L X 15 8-PLY & RIM 15 X 6 6-BOLT
3	P88475	1/2NCx1.5" BOLT
4	P233944	HINGE PIN (SERIAL NO 455118 TO 455632)
5	P234345	REAR STRUT EAR (SERIAL NO 455118 TO 455632)
6	P88303	1/2" LOCK WASHER
7	P88104	1/2" NC NUT
8	P89130	3/4NCx6.5" BOLT
9	P234145	3/4NCx6" EYE BOLT
10	P88110	3/4"NC NUT
11	P88130	3/4" LOCK WASHER
12	P234348	REAR STRUT ANCHOR (SERIAL NO 455118 TO 455632)
13	P33104	JACK, RATCHET
14	P234005	REAR STRUT (SERIAL NO 455118 TO 455632)
15	P88541	1/2NCx3" BOLT
16	P88126	5/8"NC NUT
17	P88129	5/8" LOCK WASHER
18	P88145	5/8NCx4x5.25 U-BOLT



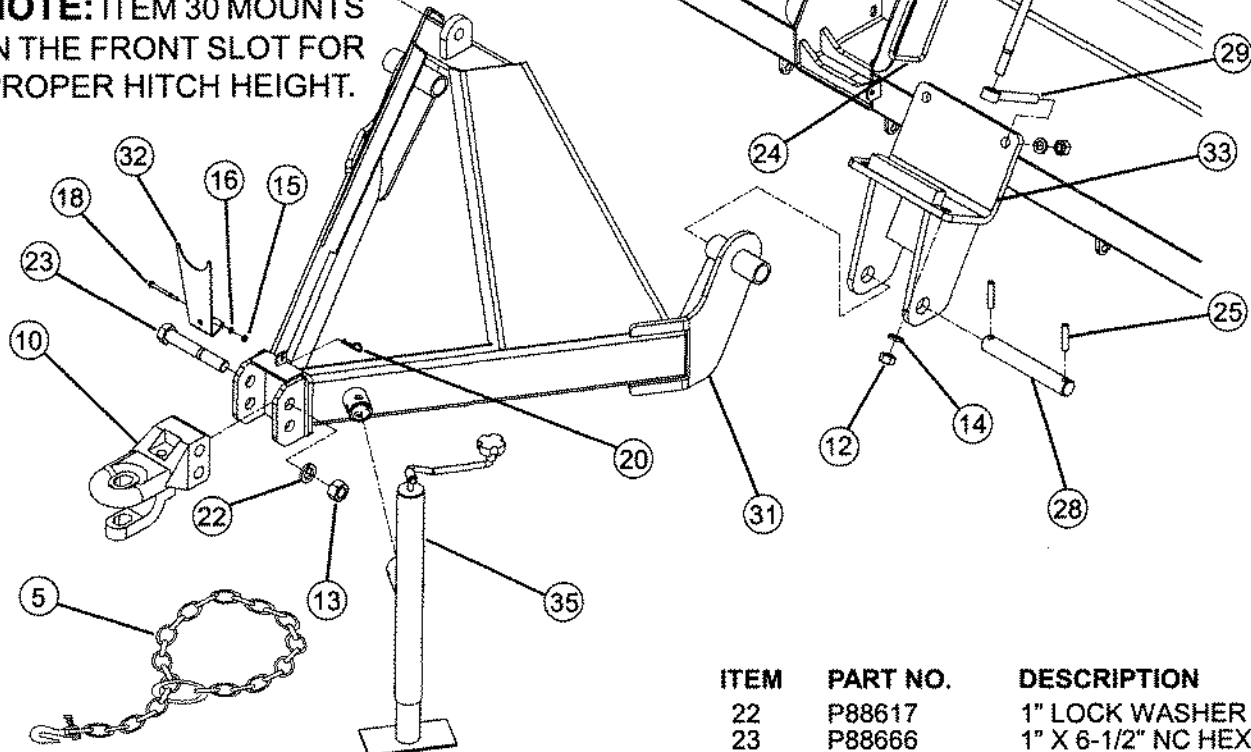
ITEM	PART NO.	DESCRIPTION
1	P33104	JACK, RATCHET
2	P41233	6-BOLT HUB & 1-3/4" SPINDLE ASS'Y (SEE PAGE 12)
3	P88104	1/2" NC HEX NUT
4	P88110	3/4" NC HEX NUT
5	P88126	5/8" NC HEX NUT
6	P88129	5/8" LOCK WASHER
7	P88130	3/4" LOCK WASHER
8	P88145	5/8" X 4" X 5-1/4" NC U-BOLT
9	P88303	1/2" LOCK WASHER
10	P88393	1" X 2-1/2" NC HEX BOLT
11	P88475	1/2" X 1-1/2" NC HEX BOLT
12	P88658	1" NC TOP LOCK NUT
13	P89130	3/4" X 6-1/2" NC HEX BOLT
14	P234145	3/4" X 6" NC EYE BOLT
15	P234393	TIRE W/TUBE 9.5L X 15 8-PLY & RIM 15 X 6 6-BOLT
16	P235538	MOUNTING BRKT WELD-RH(SHOWN)
17	P235546	MOUNTING BRKT WELD-LH
18	P235544	REAR STRUT WELD
19	P235548	1-1/4" PIN WELD



ITEM	PART NO.	DESCRIPTION
1	P10344	OUTER BEARING CUP
2	P10345	OUTER BEARING CONE
3	P11378	INNER BEARING CONE
4	P11379	INNER BEARING CUP
5	P11381	DUST CAP
6	P16094	7/8" SPINDLE WASHER
7	P25585	TRIPLE LIP SEAL
8	P25586	WEAR SLEEVE
9	P41232	1-3/4" SPINDLE X 11.12" LONG
10	P42317	6-BOLT MACHINED HUB
11	P88142	1/2"-20NF WHEEL BOLT
12	P88263	1/8" NPT GREASE FITTING
13	P88301	3/16" X 1-1/2" COTTER PIN
14	P88340	7/8" NF SLOTTED NUT
15	P88363	1/2" NC CENTER LOCK HEX NUT
16	P88541	1/2" X 3" NC HEX BOLT



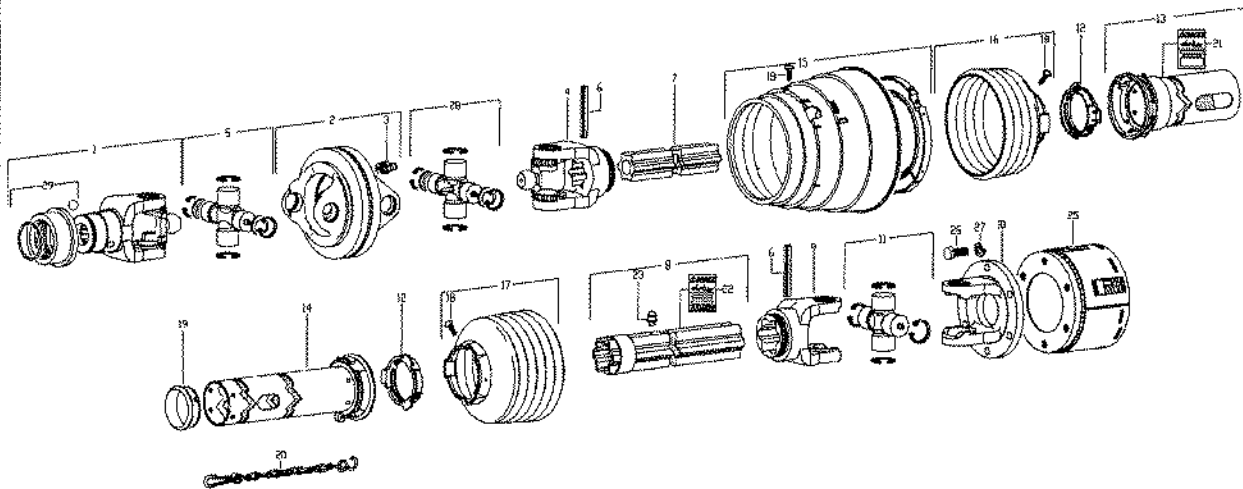
**NOTE: ITEM 30 MOUNTS IN THE FRONT SLOT FOR PROPER HITCH HEIGHT.**



ITEM	PART NO.	DESCRIPTION
1	P13681	1-1/2" CYLINDER LOCK CHANNEL
2	P24104	ELBOW 8MORB X 6MJ
	P61239	ELBOW 6MORB X 6MJ(SERIAL NO 455118 TO 455632
3	P42472	HEADLESS PIN 1" X 2-3/8"
4	P42484	1/4" X 2-1/4" ROLL PIN
5	P55174	10K SAFETY CHAIN
6	P58538	HOSE 1/4" X 84" 6FJX-6FJX
7	P58690	ADAPTOR 6MJ X 8MPT
8	P59185	HYD CYLINDER STOP PACKAGE
9	P60640	QUICK DISCONNECT COUPLER
10	P68587	CAT 1 CLEVIS HITCH
11	P88103	3/8" NC HEX NUT
12	P88110	3/4" NC HEX NUT
13	P88125	1" NC HEX NUT
14	P88130	3/4" LOCK WASHER
15	P88172	1/4" HEX NUT
16	P88262	1/4" LOCK WASHER
17	P88272	3/4" X 4" NC HEX BOLT
18	P88285	1/4" X 3" NC HEX NUT
19	P88362	3/8" LOCK WASHER
20	P88435	1/8" HAIR PIN
21	P88487	3/4" X 8-1/2" NC HEX BOLT

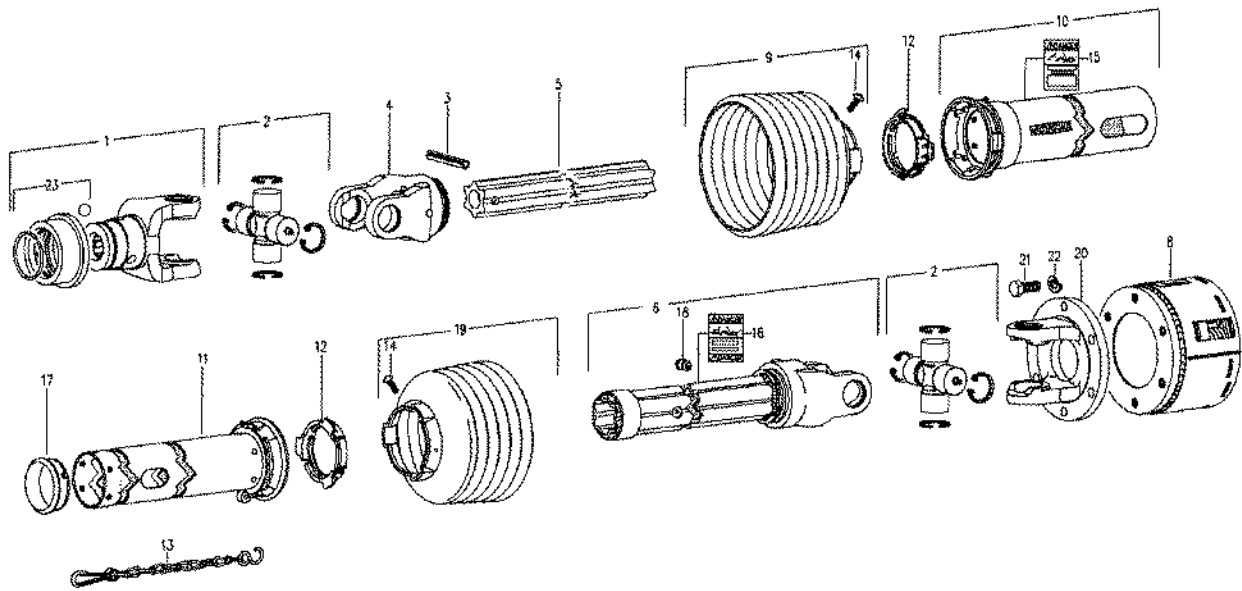
ITEM	PART NO.	DESCRIPTION
22	P88617	1" LOCK WASHER
23	P88666	1" X 6-1/2" NC HEX BOLT
24	P89040	3/8" X 4" X 7" NC U-BOLT
25	P89059	1/2" DIA X 2-1/2" ROLL PIN
26	P200958	3" DIA X 10" HYD CYLINDER SEAL KIT 236576
	P51239F	3" DIA X 8" HYD CYLINDER SEAL KIT 233842(SERIAL NO 455118 TO 455632)
27	P233959	BUSHING-UPPER MAST
28	P234102	1-7/16" DIA LOWER 2PT PIN
29	P234145	3/4" X 6" NC EYE BOLT
30	P234325	ANCHOR-FRONT HITCH
31	P234331	HITCH
32	P234344	BRACKET WELD-PTO
33	P235527	LOWER 2PT MOUNT
	P234144	LOWER 2PT MOUNT (SERIAL NO 455118 TO 455632)
34	P235954	COMBINATION STRAP
35	P808026	JACK 3000#
	P24415	JACK 2000#(SERIAL NO 455118 TO 455632)
36	P915402	5/16" DIA X 2-3/4" LYNCH PIN

# PULL TYPE PTO SHAFT



1	P234386	YOKE 1-3/4"-20SPL
	P234359	YOKE 1-3/8"-21 SPL
2	P234378	DOUBLE YOKE
3	P234379	ZERK - IN ITEM 2
4		INBOARD YOKE S4
5	P234380	CROSS & BEARING KIT
6		SPRING PIN, 10x90
7		INNER PROFILE S4GA
8		PROFILE S5H & SLV W.A.
9		INBOARD YOKE S5
10		FLANGE YOKE
11	P234360	CROSS & BEARING KIT
12	P234365	BEARING RING SC25
13	P234381	OUT SHIELD TUBE OVL
14	P234382	INN SHIELD TUBE RND
15	P234383	CV CONE & BRG ASSY
16	P234384	SHIELD CONE 4 RIB
17	P234370	SHIELD CONE 6 RIB
18	P234367	SCREW-IN ITEM 15, 16 & 17
19	P234368	SUPPORT BEARING
20	P234366	SAFETY CHAIN
21	P235523	DECAL OUT - IN ITEM 13
22		DECAL INN - IN TIEM 8
23	P234369	ZERK - IN ITEM 8
25	P234361	FRICION/OVERRUNNING CLUTCH
26	P234371	BOLT M12x30
27	P234372	LOCK WASHER M12
28	P234385	CROSS & BEARING KIT
	P234376	AS COL. KIT - IN ITEM 1
	P234374	CC. LOCK ASSY. - IN ITEM 25
	P235514	TRACTOR HALF PTO SHAFT 1-3/4"-20SPL
	P235516	TRACTOR HALP PTO SHAFT 1-3/8"-21 SPL
	P235515	CLUTCH HALF PTO SHAFT (NO CLUTCH 235518)
	P235519	TRACTOR HALF PTO SHAFT SHIELD
	P235520	CLUTCH HALF PTO SHAFT SHIELD
	P234121	1-3/4" PTO SHAFT COMPLETE
	P234120	1-3/8" PTO SHAFT COMPLETE

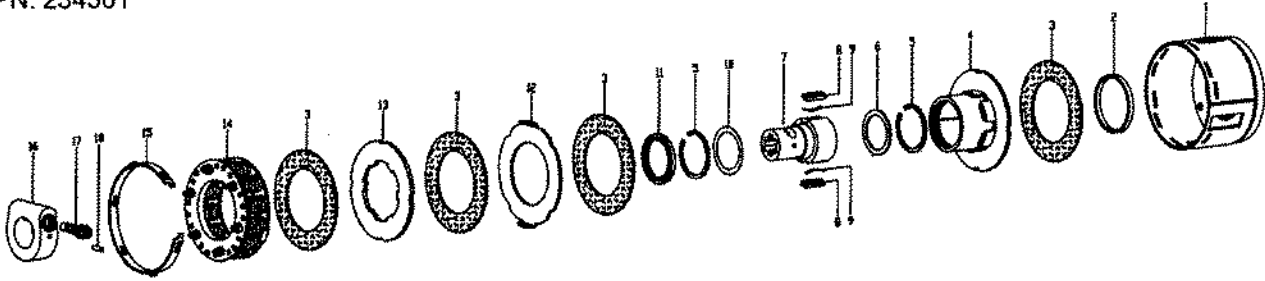
# 3 POINT PTO SHAFT



1	P234375	YOKE 1-3/4"-20 SPL ASG
	P234359	YOKE 1-3/8"-21 SPL ASG
2	P234360	CROSS & BEARING KIT
3		SPRING PIN 10x90
4		INBOARD YOKE S4
5		INNER PROFILE S4GA
6		IB YOKE, PROFILE (S5H) & SLEEVE W.A.
8	P234361	FRICITION/OVERRUNNING CLUTCH
9	P234362	SHIELD CONE 7 RIB
10	P234363	OUT. SHIELD TUBE OVL
11	P234364	INN. SHIELD TUBE RND
12	P234365	BEARING RING SC25
13	P234366	SAFETY CHAIN
14	P234367	SCREW-IN ITEM 9 & 19
15	P235523	DECAL OUT - IN ITEM 10
16		DECAL INN. - IN ITEM 6
17	P234368	SUPPORT BEARING
18	P234369	ZERK - IN ITEM 6
19	P234370	SHIELD CONE 6 RIB
20		FLANGE YOKE
21	P234371	BOLT M12x30
22	P234372	LOCK WASHER M12
	P234376	AS COL. KIT IN ITEM 1
	P234374	CC LOCK ASSY - IN ITEM 8
	P235513	TRACTOR HALF PTO SHAFT 1-3/4"-20SPL
	P235511	TRACTOR HALF PTO SHAFT 1-3/8"-21 SPL
	P235512	CLUTCH HALF PTO SHAFT (NO CLUTCH P235517)
	P235521	TRACTOR HALF PTO SHIELD
	P235522	CLUTCH HALF PTO SHIELD
	P234118	1-3/8" PTO SHAFT COMPLETE
	P234119	1-3/4" PTO SHAFT COMPLETE

# PTO CLUTCH EFK/97

PN: 234361

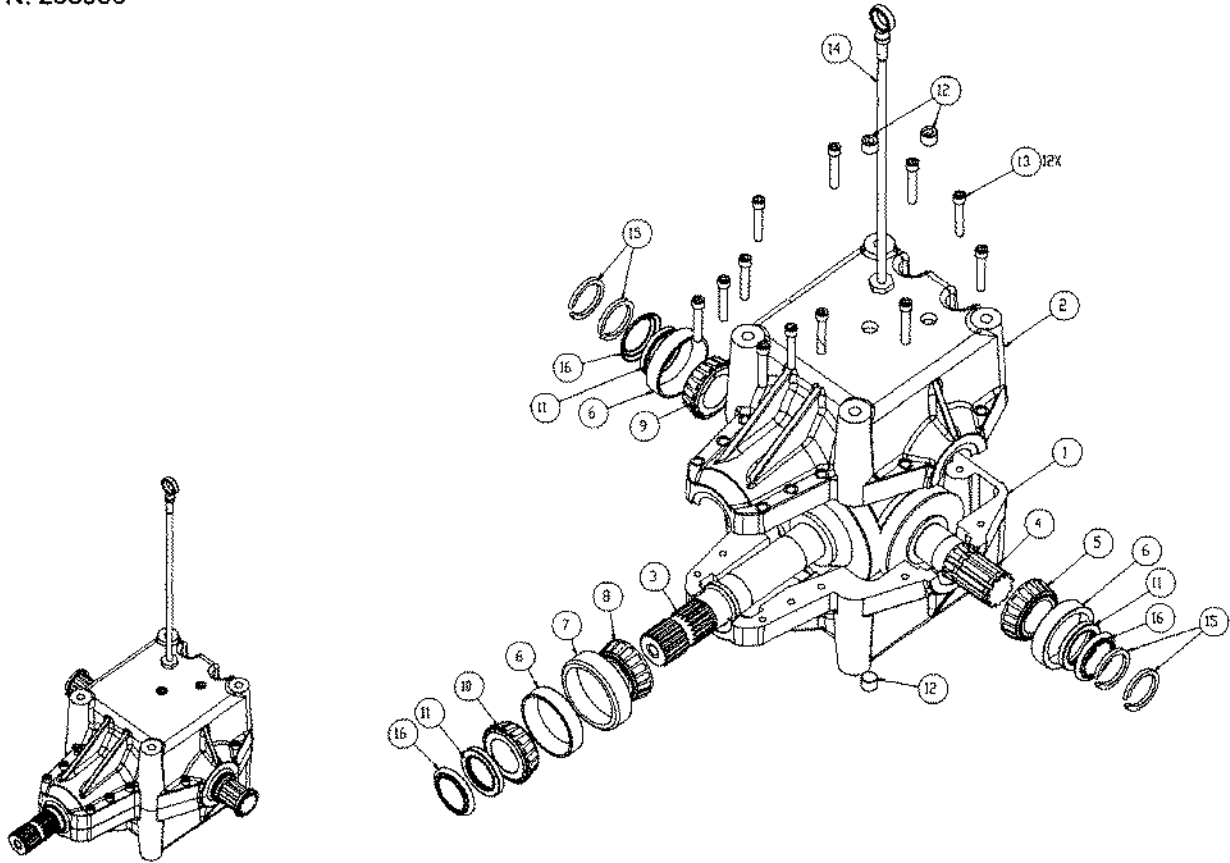


- |    |         |                     |
|----|---------|---------------------|
| 1  | P234795 | HOUSING             |
| 2  | P235507 | WEAR RING           |
| 3  | P234797 | FRICTION DISC       |
| 4  | P234794 | OVERRUNNING HOUSING |
| 5  | P235508 | RETAINING RING      |
| 6  | P235502 | WASHER - 56x72      |
| 7  | P234792 | HUB                 |
| 8  | P235504 | KEY                 |
| 9  | P235505 | LEAF SPRING         |
| 10 | P235506 | WASHER - 59.9x72    |
| 11 | P234796 | SEAL RING           |
| 12 | P234799 | DRIVE PLATE         |
| 13 | P234798 | DRIVE PLATE         |
| 14 | P234800 | SPRING PACK         |
| 15 | P235500 | SETTING RING        |
| 16 | P235501 | CLAMPING RING       |
| 17 | P234374 | CLAMPING CONE       |
| 18 | P235503 | SPRING PIN - 6x22   |



# GEARBOX 800 SERIES

PN: 233986



1	P234398	CASTING, MACHINED R800 TAP
2	P234399	CASTING, MACHINED R800 THRU
3	P234400	ASSY, SHAFT/GEAR R600
4	P234702	ASSY, CROSS SHAFT/GEAR
5	P234703	BEARING, CONE 1.750
6	P234704	BEARING, CUP 3.265
7	P234705	BEARING, CUP 3.6718
8	P234706	BEARING, CONE TMKN #3777
9	P234707	BEARING, CONE 25580
10	P234708	BEARING, CONE TMKN #25592
11	P234709	SEAL, 1.75-2.437-.312 (R) TC
12	P234710	PLUG, 1/2-14 NPT SCHD W/3M
13	P234711	BOLT, 3/8-16x2.25 SHCS
14	P234139	DIPSTICK, R800 1/2-14 NPT
15	P234142	SNAP RING - 603493
16	P235525	SHIELD STRWRAP 1.75 X 2.25

**NOTE:** Gear ratio is 1:1.35 (input CCW on stub shaft)  
Torque 3/8-16 capscrews (item 13) to 35-40 FT LBS

