

HIGHLINE
INC.

BALEMASTER

BALE PRO 6000 +

93-94

BP
SER# 9PB1853

CART
SER# 9HC1793

**Assembly-Operator
Parts Manual**



September 3, 1993

Dear Customer,

Congratulations on your purchase of a Bale Pro 6000⁺. Unfortunately due to production problems, the pictures in the operating manual are not of high quality. As soon as new operating manuals are produced we will send a copy as soon as possible. On the DELIVERY AND WARRANTY REGISTRATION please make a note that you require an updated manual. If any information is not clear, feel free to contact your dealer or **High-Line Manufacturing**. Sorry for any inconvenience.

Sincerely,

A handwritten signature in cursive script that reads "Troy Lucyshyn".

Troy Lucyshyn, Engineer

Warranty

High-Line Mfg. Inc. warrants its products to the original owner for a period of two years from date of purchase, subject to the following provisions.

- 1st year Parts & Labour
- 2nd year Parts Only

- All matters related with the warranty of products must be handled through an authorized High-Line Manufacturing dealer.
- Any labour subject to warranty must be authorized by a High-Line Mfg. Inc. Representative, before work is started.
- Machines used for rental, custom work, industrial or construction use will be warranted for a period of 30 days from date of purchase. (Parts and Labour)
- Warranty will be void if any component of this machine is altered or modified in any way, unless written permission is given by High-Line Mfg. Inc.
- High-Line Mfg. Inc. will not assume any responsibility for whatever damage may occur to equipment to which this machine may be attached.
- Warranty terms and conditions are subject to provincial and state legislation.

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2. Introduction

Congratulations on your purchase of the Bale Pro 6000⁺! BaleMaster a new name in livestock feed handling equipment, is manufactured by High-Line Manufacturing Inc. A company with a manufacturing team that has over 25 years experience in the farm implement industry.

This operator's manual has been prepared to provide information necessary for safe and efficient operation of your Bale Pro 6000⁺. In it you will find safety procedures, maintenance routines and detailed parts diagrams.

The Bale Pro 6000⁺ was designed for controlled, more aggressive processing with less bunching. A little time and effort spent in proper maintenance will increase the performance and durability of your Bale Processor.

In order to maintain high standards, improvements are made from time to time. High-Line Manufacturing Inc. reserves the right to make those changes and improvements when practical to do so without incurring any obligation to make such changes and improvements on machines sold previously.

Should the need arise, this manual will assist you in acquiring replacement parts. Should your dealer not have the parts you require in stock, the dealer will be happy to order them for you. Also if you should find that you require information not covered in this manual, feel free to consult us or your local dealer.

High-Line Manufacturing Inc. thanks and congratulates you for selecting a Bale Pro 6000⁺ as the machine of your choice.

P.O. Box 307, Vonda, Saskatchewan, S0K 4N0
Phone 1-800-665-2010 Fax (306) 258-2010

3. Safety

WORK SAFELY - FOLLOW THESE RULES

CAREFUL OPERATION IS THE BEST INSURANCE AGAINST AN ACCIDENT

- Keep children and adults away from discharge area while processing.
- Know the controls and what they do.
- Check machine to ensure nothing restricts moving or rotating parts.
- Ensure PTO is disengaged before starting tractor.
- Never leave tractor while PTO is engaged.
- Lower forks to ground after operation.
- Never attempt to manually remove debris while PTO is on. Disconnect PTO before unplugging or adjusting processor.
- Always keep safety PTO shields in place.
- Relieve pressure in hydraulic lines before disconnecting lines or performing other work on the hydraulic system.
- Never allow anyone to stand behind processor while loading bales.

4. Controls

Before operating the Bale Pro 6000⁺, be sure to review all the instructions and familiarize yourself with the processor's features.

1. Discharge chute adjusting bar.

For feeding place down and for spreading bedding position up.

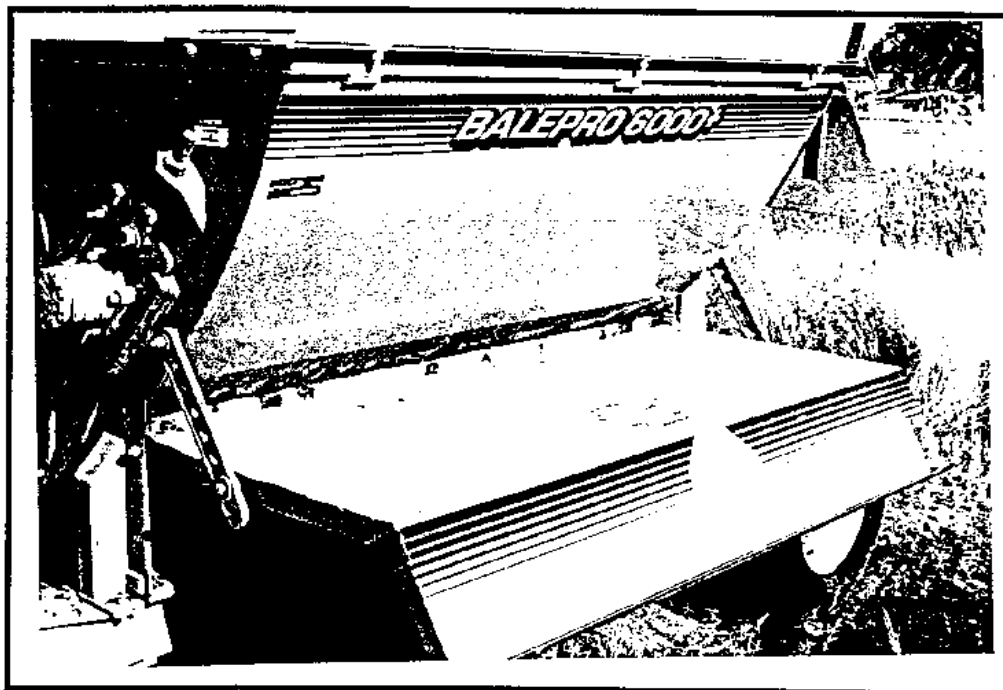


Figure 1 Discharge Chute

2. Feeder drum height adjustment.

Height of feeder drum changes the amount of bite taken from the bale. Tighten screws to raise feeder drums and loosen to lower feeder drums.

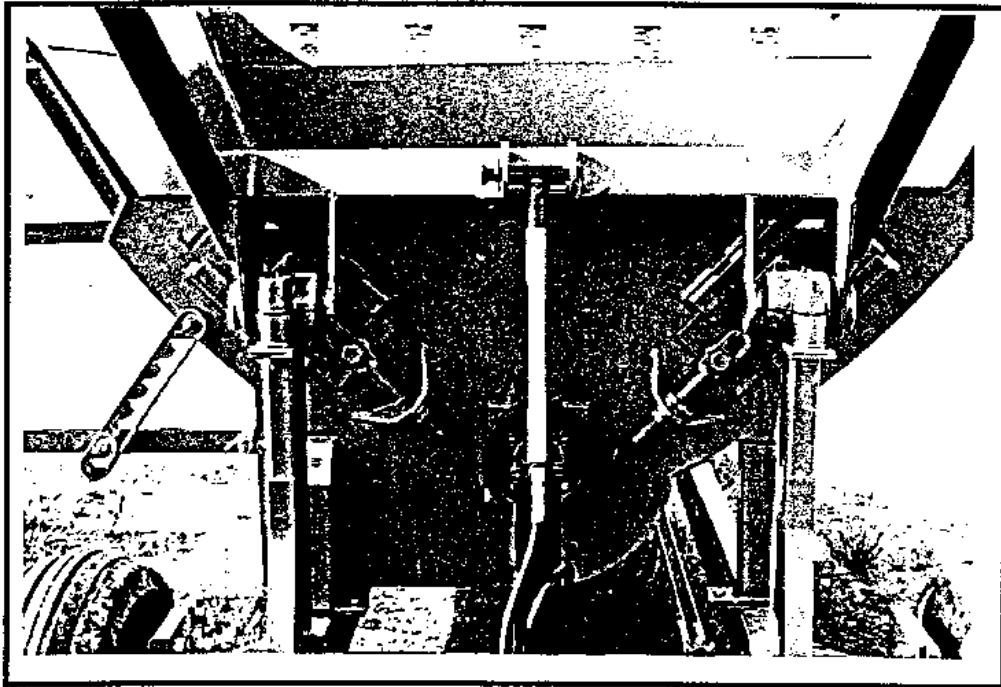


Figure 2 Feeder Drum

3. Flail drum height adjustment.

Insert flail spacers to raise height of flail bar. This reduces the amount of bite taken from the bale.

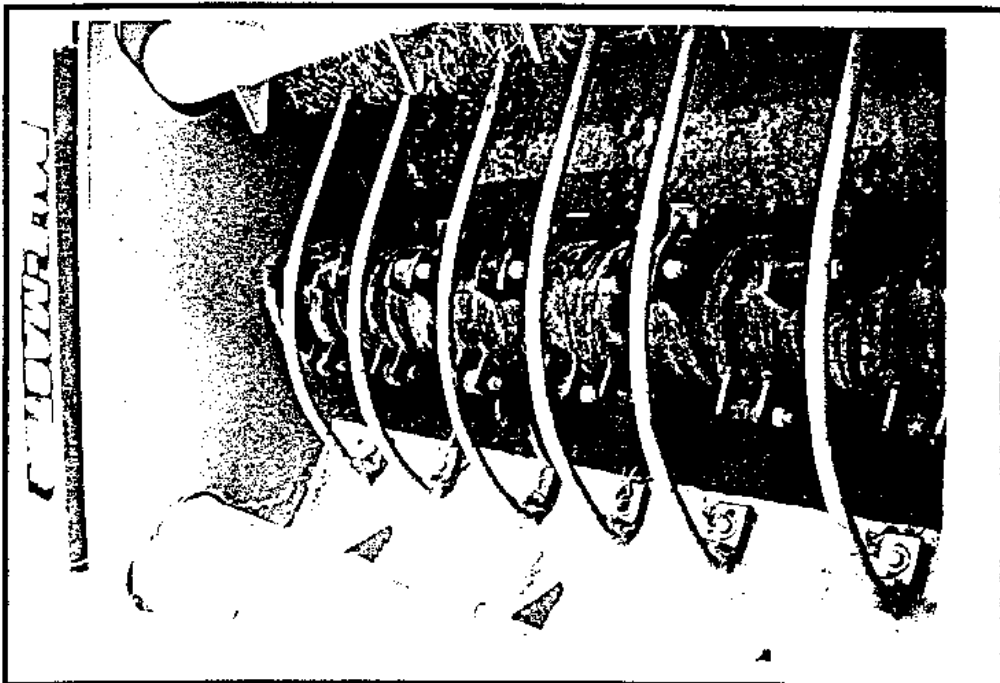


Figure 3 Flail Drum

4. Flail drum activated through PTO control in your tractor.
5. Feeder drum and fork lift operated through the hydraulic control in your tractor.

5. Maintenance

Please follow these maintenance steps, to ensure trouble free operation of your Bale Pro 6000⁺.

Lubrication

Maintaining proper lubrications is crucial for trouble free operations. Figure 2 shows eleven which require regular greasing. Table 1 lists the lubrication points and the frequency greasing.

1. PTO Shaft-front
Grease every ten bales.
2. PTO shaft-rear
Grease every ten bales.
3. PTO Extension Shaft Bearing
Grease every fifty bales

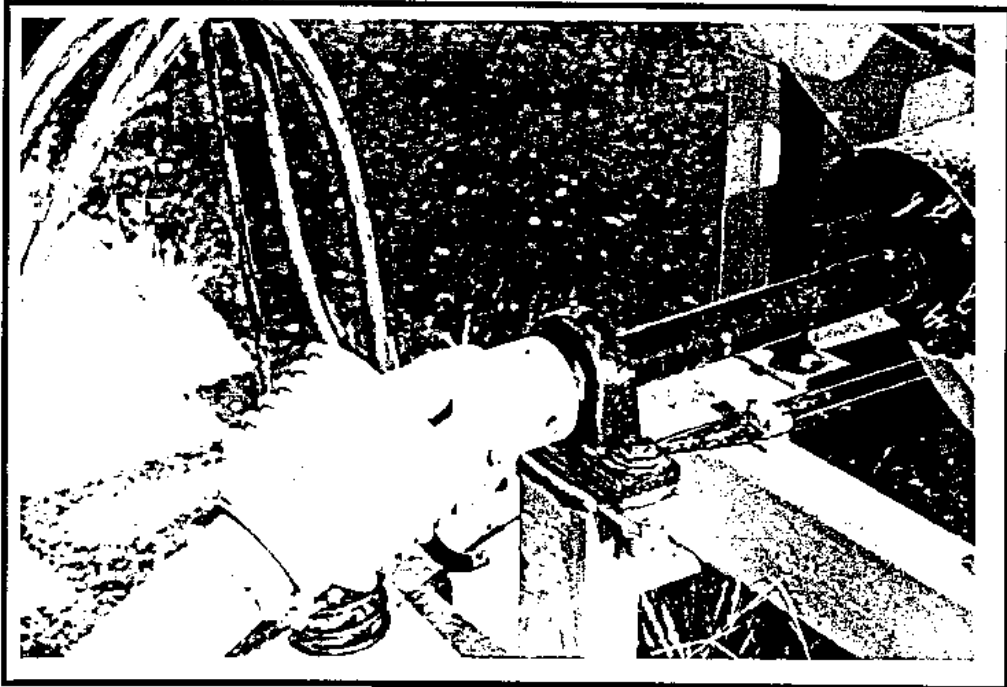


Figure 4 PTO Lubrication

- | | | | |
|----|----------------------------------|-----|--|
| 4. | Feeder Drum bearing-right | 8. | Fork Pivot shaft-right |
| 5. | Feeder Drum Bearing-left | | Grease every one hundred bales. |
| | Grease every fifty bales. | 9. | Tire Hub-left |
| 6. | Flail drum bearing | 10. | Tire Hub-right |
| | Grease every fifty bales. | | Greasing dependent upon travel |
| 7. | Fork Pivot shaft-left | | |

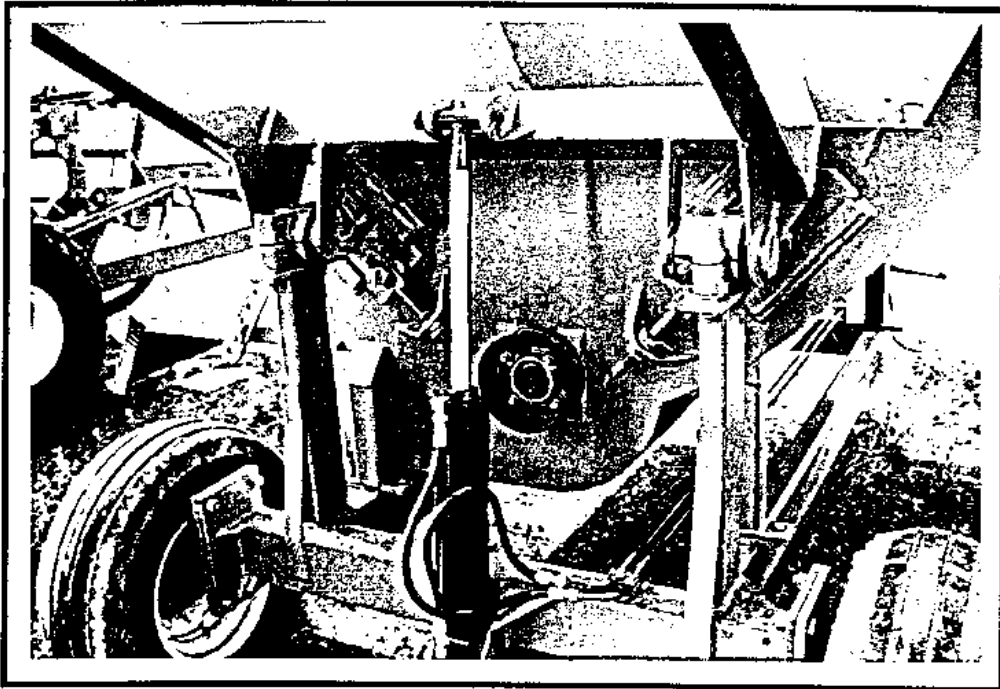


Figure 5 Assorted Lubrication Points

- | | |
|-----|--|
| 11. | Fork-left |
| 12. | Fork-right |
| | Grease every one hundred bales. |

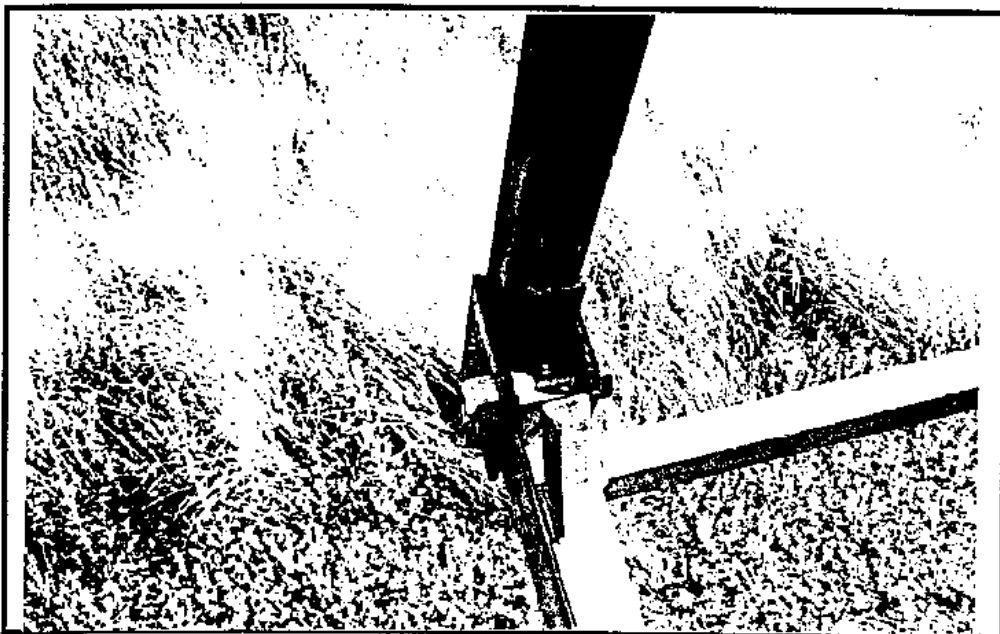


Figure 6 Fork Lubrication Points

General

Occasional tightening of the flail bolts are required so the bushings are tight against the flail lugs as shown in Figure 7. If twine is not cut from the bale before processing, it will rap around the flail drum and periodic removal is required to allow free movement of the flail.

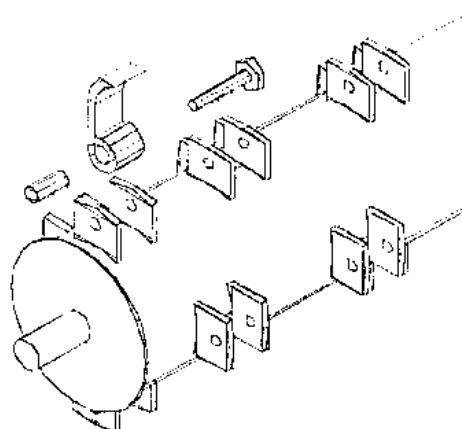


Figure 7. Flail Drum

6. Operating Instructions

Successful operation of the Bale Pro 6000+ is dependent upon the quality of the bale, height of the feeder drum, flail guard and the operator. The following steps ensure proper operation.

1. Before loading bale, engage PTO drive to check the flail drum if it is operating adequately. Start feed rollers using the hydraulics and check if the feed rollers turn clockwise and counter clockwise. If your tractor has hydraulic flow control, alter flow so the feed rollers are at an adequate speed for your conditions
2. To load, lower forks and back up to bale **slowly**. Raise forks until bale falls into the processor. Another bale may be loaded onto the forks while a bale is in the processor. If a bale is loaded on the forks while one is being shredded, raise the forks to approximately a 45° angle to reduce pressure to the hydraulic lift. Orientation of the bale during loading causes the hay/straw to come out of the processor differently. If the bale is shredded in the same direction as it was baled, the hay/straw will generally come off in layers. If the bale is shredded in the opposite way, the feeding may be uneven.
3. Before engaging flail drum, check that the forks are not interfering with the rotating bale and also check the position of the discharge deflector and lower forks. For spreading bedding the deflector is placed up and for feeding in rows the deflector is placed down.
4. When ready, engage flail drum using PTO drive and allow it to reach 1100 rpm before starting the feed drums. In most cases the feed drums only need to be turning periodically to prevent the flail drum from overloading.

5. If the feed rate is too fast, three items may be changed.
 - a. Decrease tractor RPM, however make sure the flails remain extended so they don't "back slap" on the drum. Severe damage may occur if the flails repeatedly hit the drum.
 - b. Raise feeder drum using adjusting bolts on the front and rear side of the processor (Figure 8 below). This decreases the amount the flail penetrates the bale.

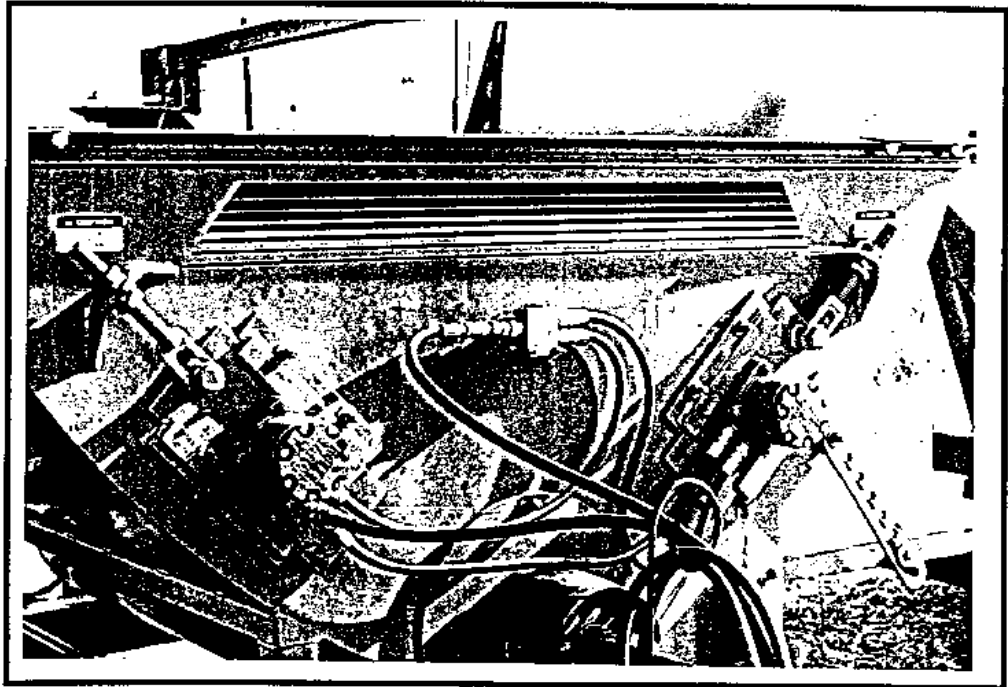


Figure 8

- c. Raise flail guard bars using spacers (Figure 9). This raises the bale decreasing the amount the flail penetrates the bale.

In all three cases, do not allow the flail to "back slap" on the drum.

6. If the feed rate is too slow, the same three items may be altered however "back slap" may occur if the feed rate is too high.
7. If the bale quits turning, reverse feed drums in opposite direction and periodically alternate direction. If the bale is loaded on end rather than on its side, it is better to keep reversing the feed drums back and forth to prevent spillage.

WARNING: Warranty will be void if any component of this machine is altered or modified in any way, unless written permission is given by High-Line Mfg. Inc.

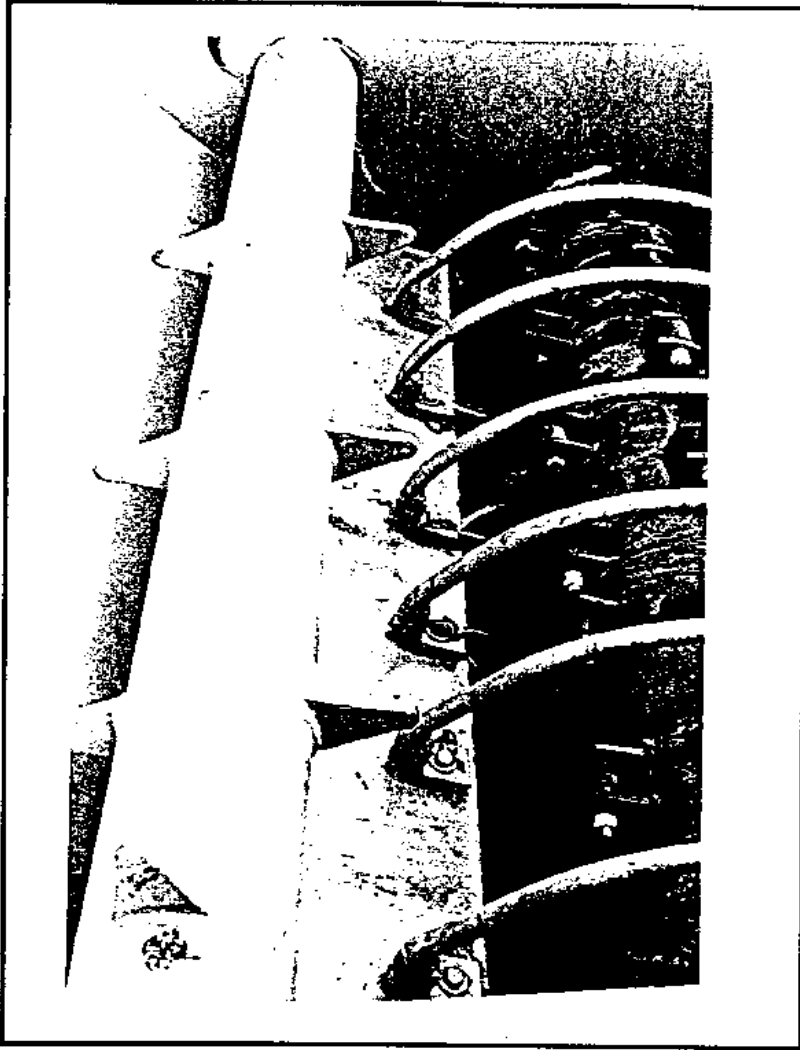
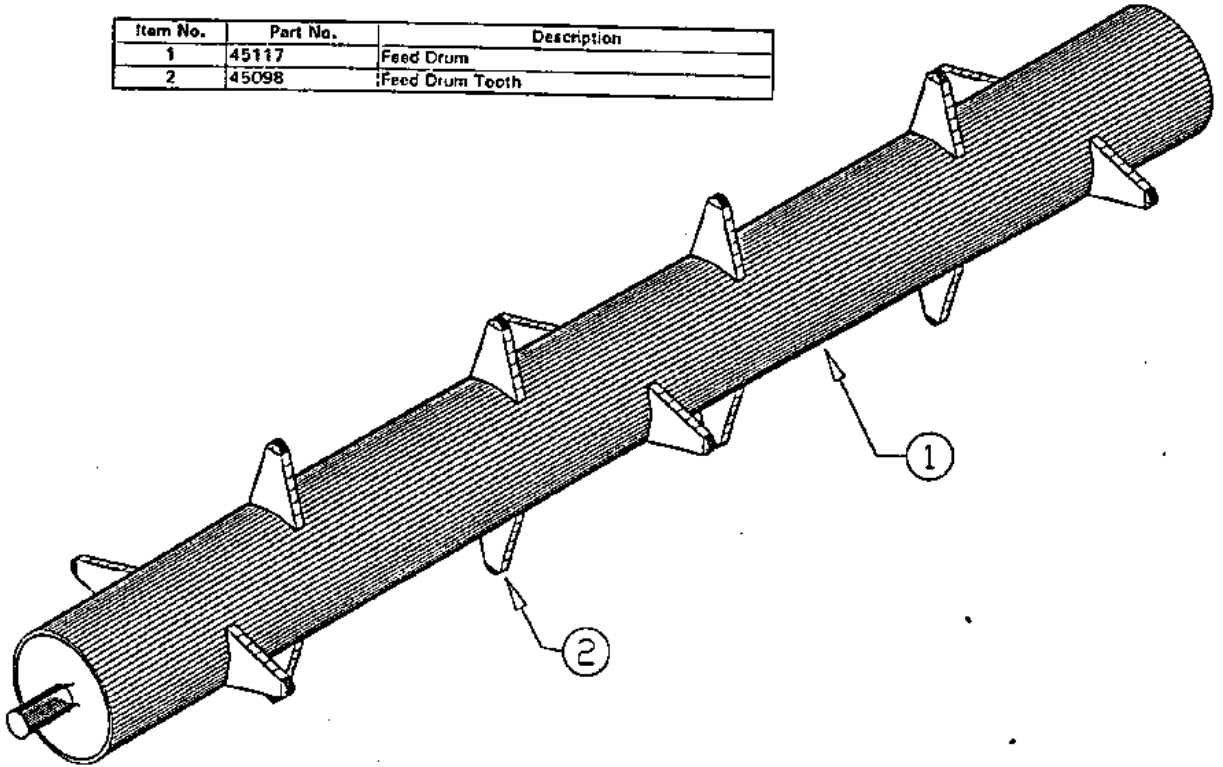


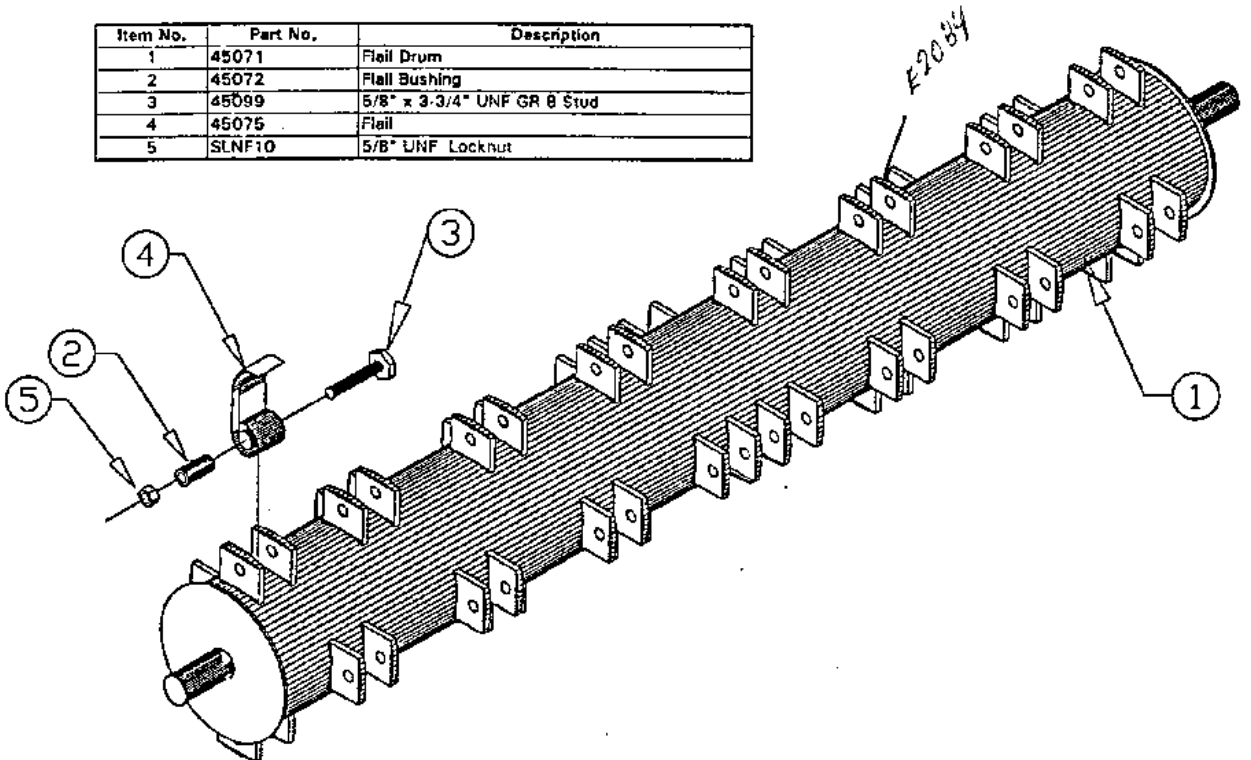
Figure 9

7. Assembly & Installations Flail & Feed Drum Assembly

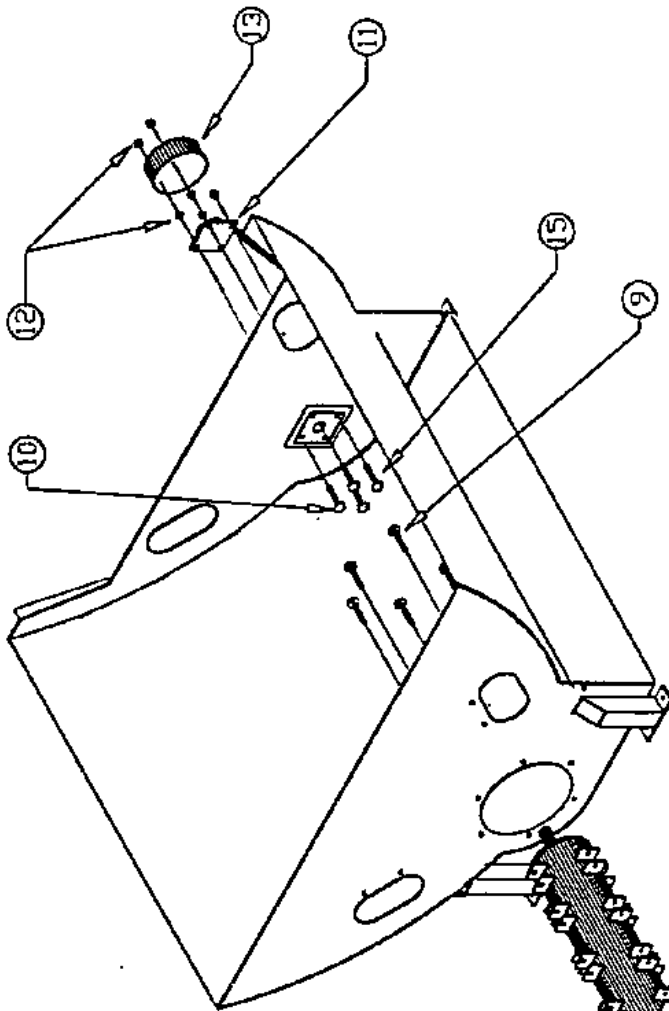
Item No.	Part No.	Description
1	45117	Feed Drum
2	45098	Feed Drum Tooth



Item No.	Part No.	Description
1	45071	Flail Drum
2	45072	Flail Bushing
3	45099	5/8" x 3-3/4" UNF GR 8 Stud
4	45075	Flail
5	SLNF10	5/8" UNF Locknut

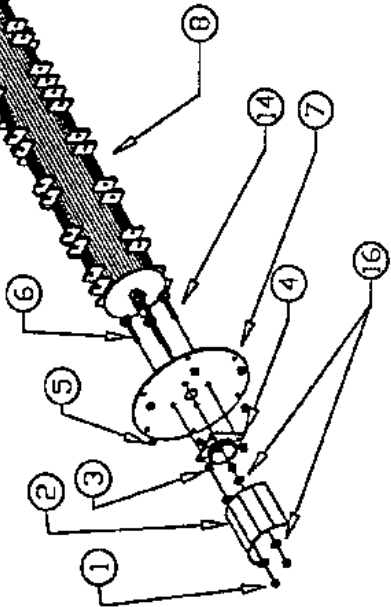


Flail Drum Installation



Item No.	Part No.	Description
1	UNC10	5/8" Locknut 3177
2	92109	Shaft Guard 3177
3	UNC10	5/8" Locknut 3177
4	92001	1-3/4" Flange Bearing
5	UNC08	1/2" Locknut 3173
6	C5C1048	5/8" x3" UNC Carriage Bolt 31274
7	45089	Flail Drum Mounting Plate
8	45071	Flail Drum
9	95C0824	1/2" x 1-1/2" UNC GR 5 Bolt 31791
10	C5C1048	5/8" x3" UNC Carriage Bolt 31274
11	92091	1-3/4" Flange Bearing
12	UNC10	5/8" Locknut 3177
13	45007	Rear Bearing Guard
14	C5C1040	5/8" x2-1/2" UNC Carriage Bolt 31073
15	C5C1040	5/8" x2-1/2" UNC Carriage Bolt 31073
16	FW10P	5/8" Flat Washer 31244

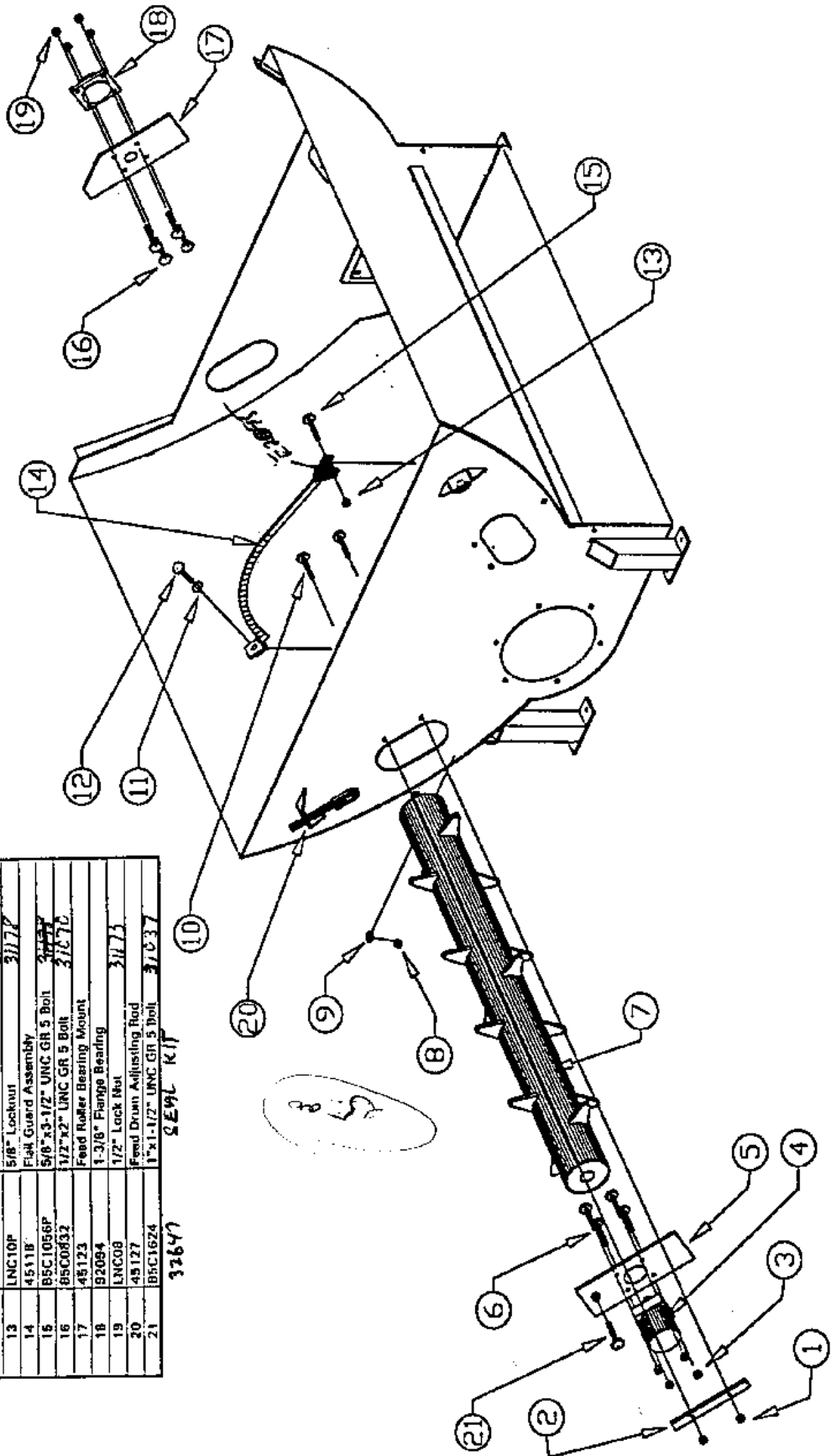
5/8" x 6"



Feed Drum Installation

Item No.	Part No.	Description
1	LNC08	1/2" Lock Nut
2	45125	Motor Slide Plate Retainer
3	LNC08	1/2" Lock Nut
4	92066	Hydraulic Motor <i>PE 31670400</i>
5	45124	Feed Roller Motor Mounts
6	B5C0840P	1/2"x2-1/2" UNC GR 5 Bolt <i>31016</i>
7	45117	Feed Drum
8	LNC08P	1/2" Lock Nut <i>31173</i>
9	FW08P	1/2" Flatwasher <i>31236</i>
10	B5C0824	1/2"x1-1/2" UNC GR 5 Bolt
11	FW08P	1/2" Flatwasher <i>31236</i>
12	B5C0840P	1/2"x2-1/2" UNC GR 5 Bolt <i>31016</i>
13	LNC10P	5/8" Locknut <i>31177</i>
14	45118	Flail Guard Assembly
15	B5C1056P	5/8"x3-1/2" UNC GR 5 Bolt <i>31037</i>
16	B5C0832	1/2"x2" UNC GR 5 Bolt <i>31676</i>
17	45123	Feed Roller Bearing Mount
18	92084	1-3/8" Flange Bearing
19	LNC08	1/2" Lock Nut <i>31173</i>
20	45127	Feed Drum Adjusting Rod
21	B5C1624	1"x1-1/2" UNC GR 5 Bolt <i>31037</i>

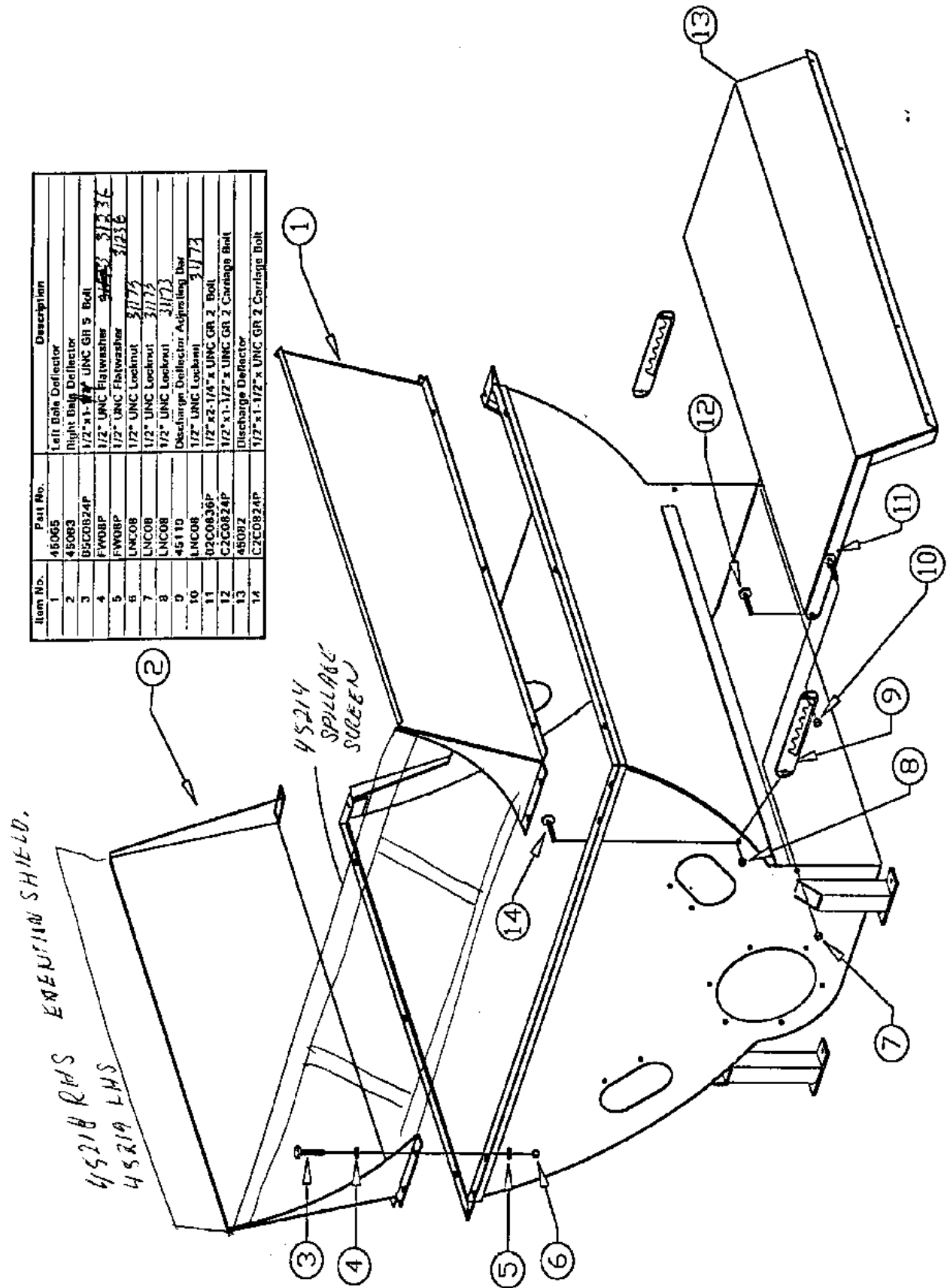
31647
SEWL KIT



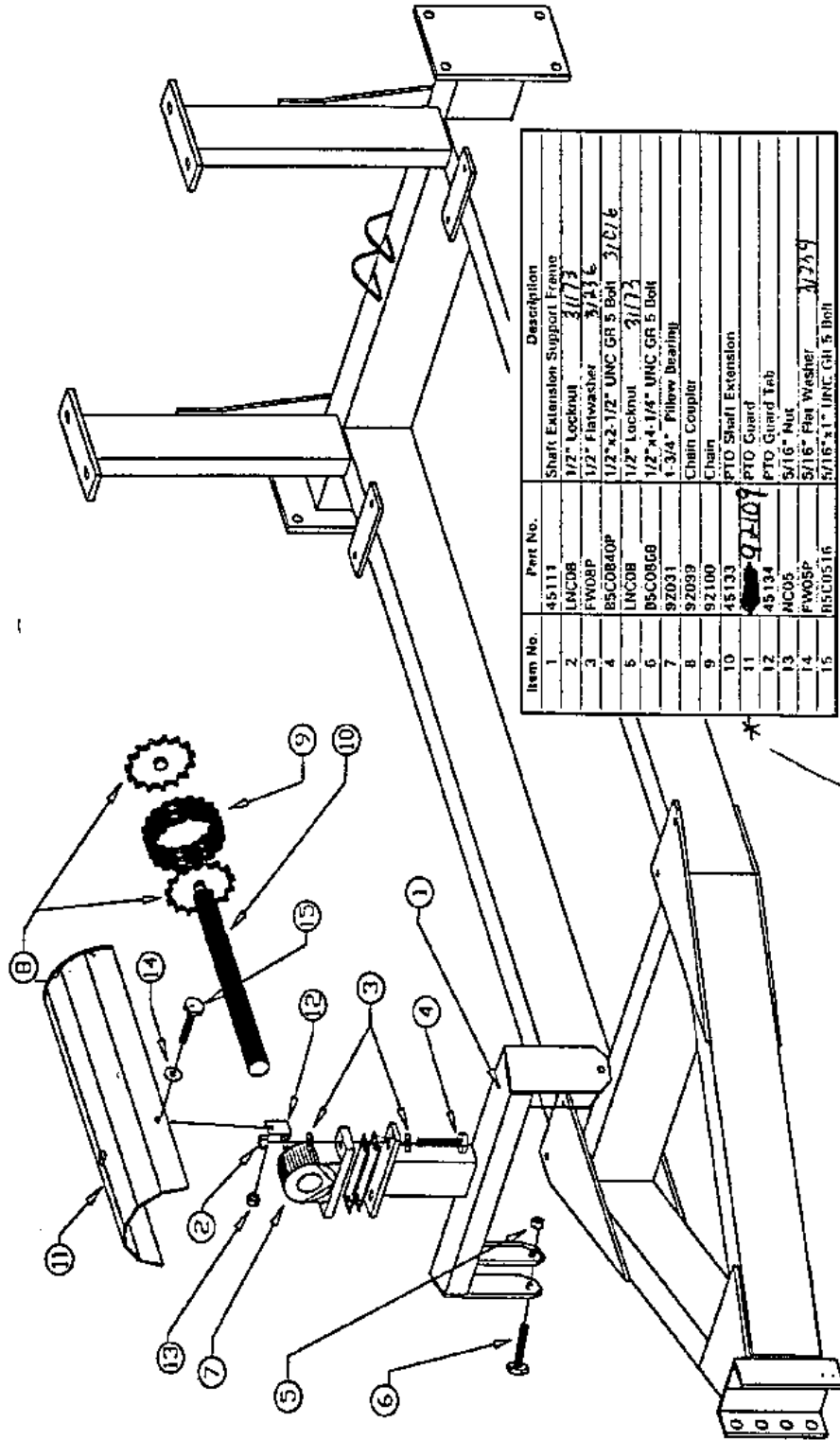
Shield Installation

Item No.	Part No.	Description
1	45065	Left Bolt Deflector
2	45063	Right Bolt Deflector
3	B5C0824P	1/2" x 1-1/2" UNC GR 5 Bolt
4	FVW0BP	1/2" UNC Flatwasher
5	FVW0BP	1/2" UNC Flatwasher
6	LNC08	1/2" UNC Locknut
7	LNC08	1/2" UNC Locknut
8	LNC08	1/2" UNC Locknut
9	45110	Discharge Deflector Adapter (eng. Des)
10	LNC08	1/2" UNC Locknut
11	B2C0836P	1/2" x 2-1/4" x UNC GR 2 Bolt
12	C2C0824P	1/2" x 1-1/2" x UNC GR 2 Carriage Bolt
13	45092	Discharge Deflector
14	C2C0824P	1/2" x 1-1/2" x UNC GR 2 Carriage Bolt

45218 RHS
45219 LHS



PTO Extension Installation



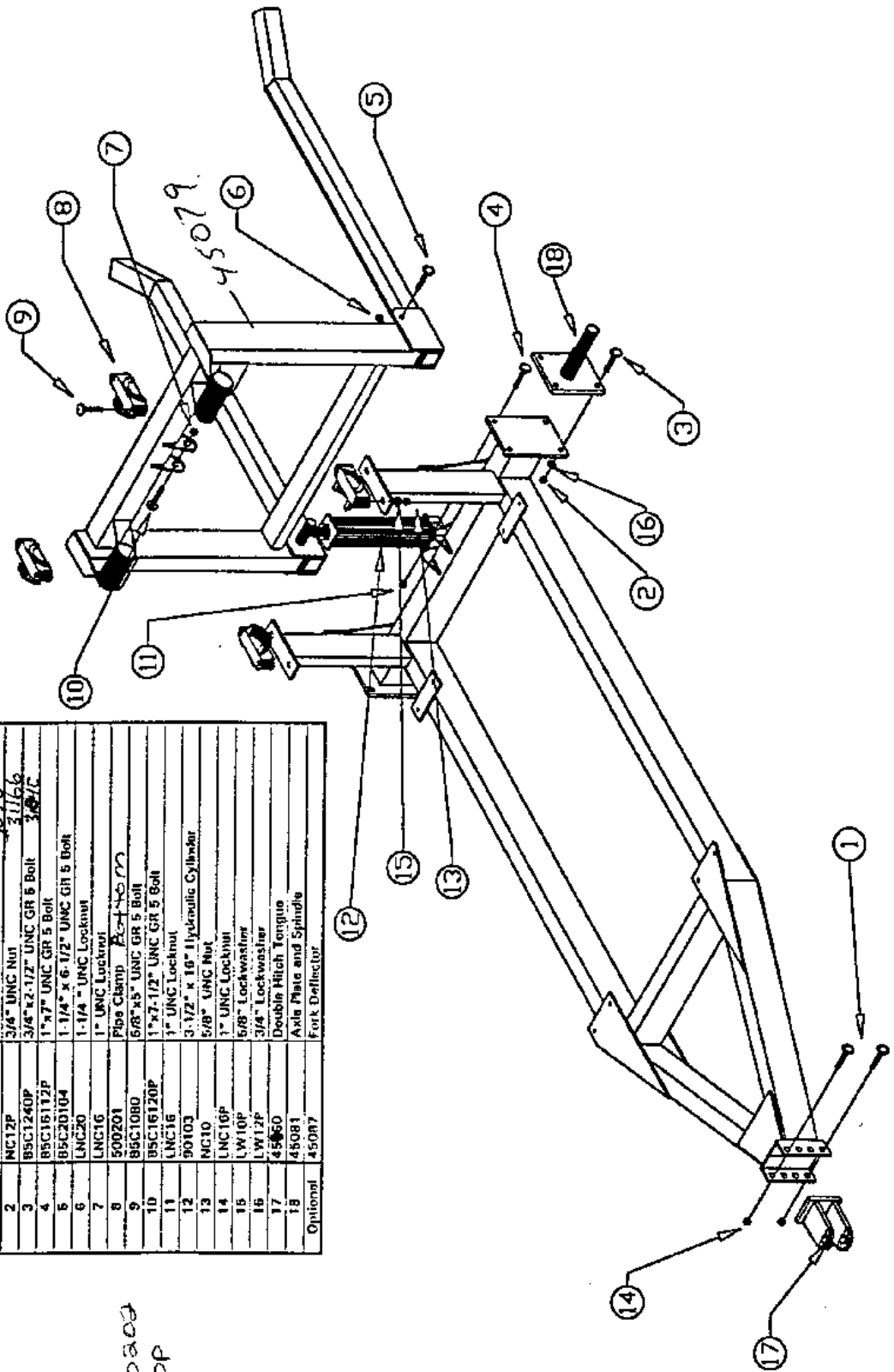
Item No.	Part No.	Description
1	45111	Shaft Extension Support Frame
2	LNCD8	1/2" Locknut <i>3173</i>
3	FW08P	1/2" Flatwasher <i>31416</i>
4	BSC0840P	1/2"x2-1/2" UMC GR 5 Bolt <i>31216</i>
5	LNCD8	1/2" Locknut <i>3173</i>
6	BSC08GB	1/2"x4-1/4" UMC GR 5 Bolt
7	92D31	1-3/4" Pillow Bearing
8	92D39	Chain Coupler
9	92100	Chain
10	45133	PTO Shaft Extension
11	45134 <i>92109</i>	PTO Guard
12	45134	PTO Guard Tab
13	MC05	5/16" Nut
14	FW05P	5/16" Flat Washer
15	BSC0516	5/16"x1" UMC GH 5 Bolt <i>31239</i>

SHOULD BE #92109

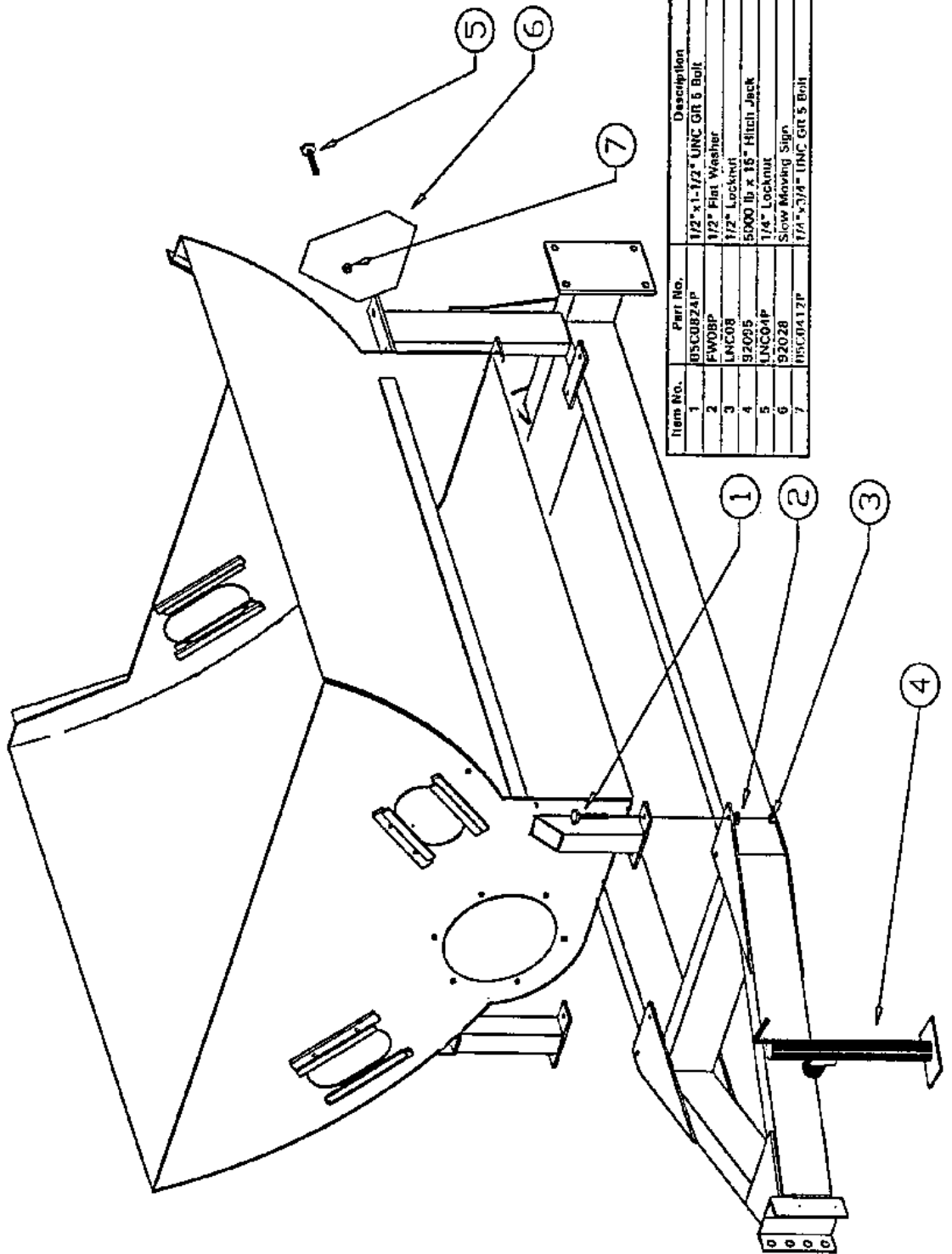
PIPE CLAMP TOP 30230
 BOT. 30231 CROSS A. 32407

Item No.	Part No.	Description
1	B5C16120P	1" x 7-1/2" UNC GR 5 Bolt
2	MC12P	3/4" UNC Nut
3	B5C1240P	3/4" x 2-1/2" UNC GR 5 Bolt
4	B5C16112P	1" x 7" UNC GR 5 Bolt
5	B5C20104	1-1/4" x 6-1/2" UNC GR 5 Bolt
6	LNC20	1-1/4" UNC Locknut
7	LNC16	1" UNC Locknut
8	500201	Pipe Clamp
9	B5C10B0	5/8" x 5" UNC GR 5 Bolt
10	B5C16120P	1" x 7-1/2" UNC GR 5 Bolt
11	LNC16	1" UNC Locknut
12	90103	3-1/2" x 16" Hydraulic Cylinder
13	MC10	5/8" UNC Nut
14	LNC16P	1" UNC Locknut
15	LW10P	5/8" Lockwasher
16	LW12P	3/4" Lockwasher
17	45560	Double Hitch Tongue
18	45081	Axle Plate and Spindle
Optional	45087	Fork Deflector

500302
 Clamp Top

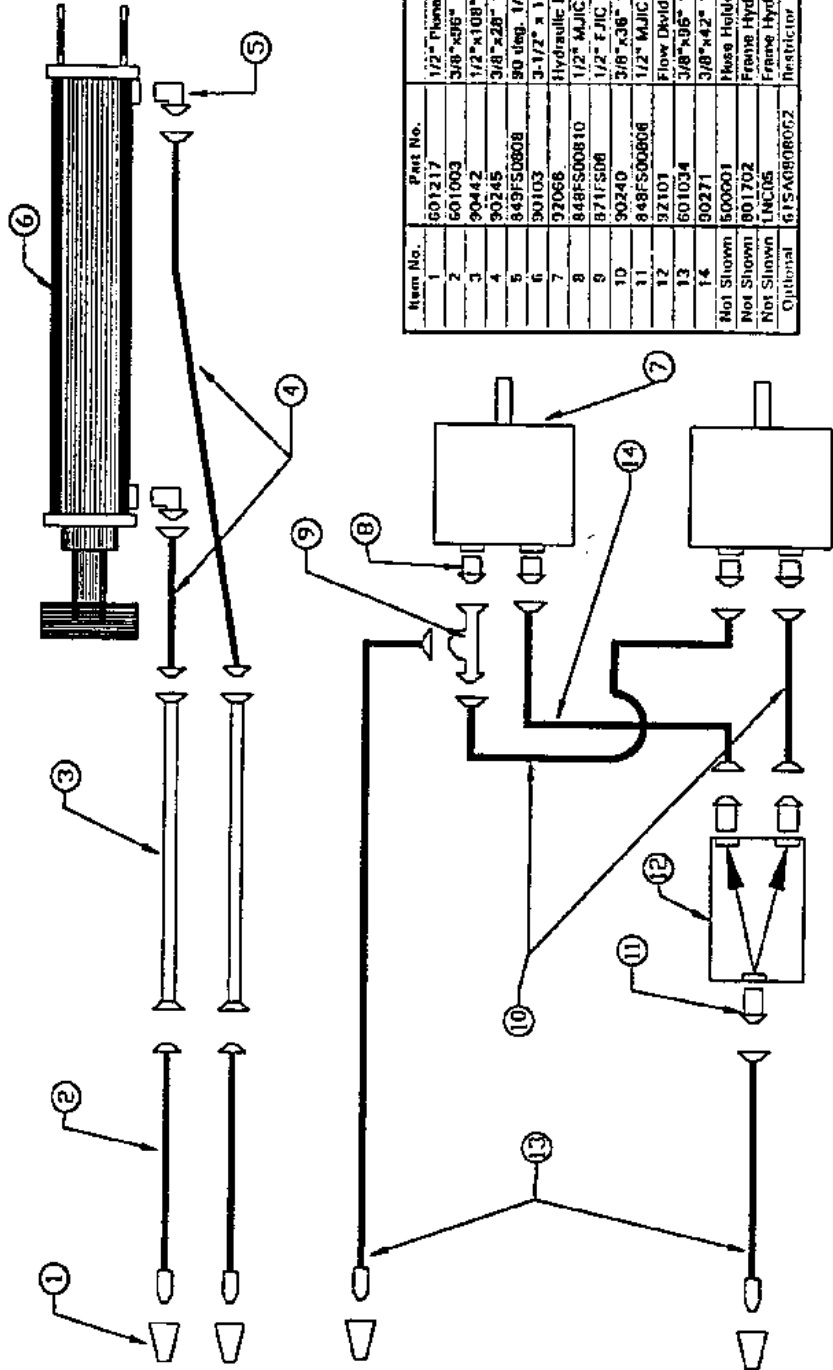


Tub on Cart Installation



Item No.	Part No.	Description
1	B5C082AP	1/2" x 1-1/2" UNC GR 5 Bolt
2	F-W08BP	1/2" Flat Washer
3	LNCO8	1/2" Locknut
4	92025	5000 lb. x 15" Hitch Jack
5	LNCO4P	1/4" Locknut
6	92028	Slow Moving Sips
7	B5C0412P	1/4" x 3/4" UNC GR 5 Bolt

Hydraulic Layout

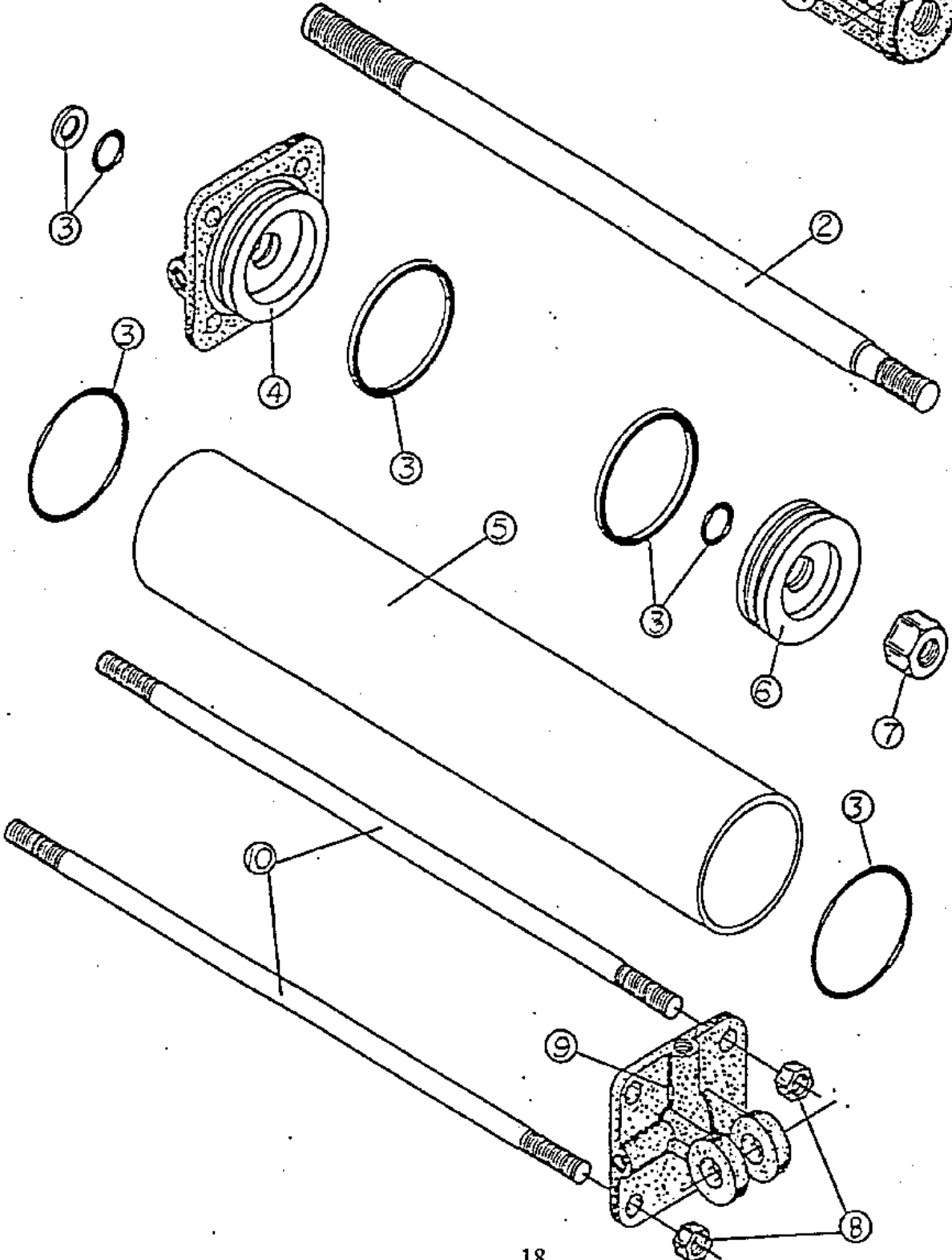
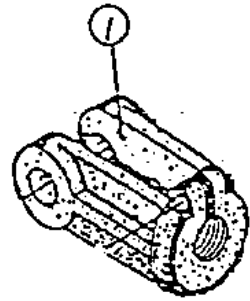


Item No.	Part No.	Description
1	601217	1/2" Flange and
2	601003	3/8"x36" 1/2" MNPT - 1/2" MJIC hose
3	90442	1/2"x108" Steel Lines
4	90245	3/8"x28" 1/2" FJIC 1/2" MJIC hose
5	849FSD808	80 deg. 1/2" MNPT - 1/2" MJIC
6	90103	3-1/2" x 18" Hydraulic Cylinder
7	97068	Hydraulic Motor
8	848FS00810	1/2" MJIC - 7/8" MORB
9	871S06	1/2" FJIC - 1/2" MJIC - 1/2" MJIC Tee
10	90240	3/8"x36" 1/2" FJIC - 1/2" FJIC hose
11	848FS00806	1/2" MJIC - 9/16" MORB
12	32101	Flow Divider
13	601034	3/8"x36" 1/2" MNPT - 1/2" FJIC hose
14	80271	3/8"x42" 1/2" FJIC - 1/2" FJIC hose
Not Shown	800001	Rese Holder
Not Shown	801702	Frame Hydraulic Line Clamps
Not Shown	1MC05	Frame Hydraulic Line Roll 5/16" Locknut
Optional	615A0808002	Restrictor

Cylinder Assembly

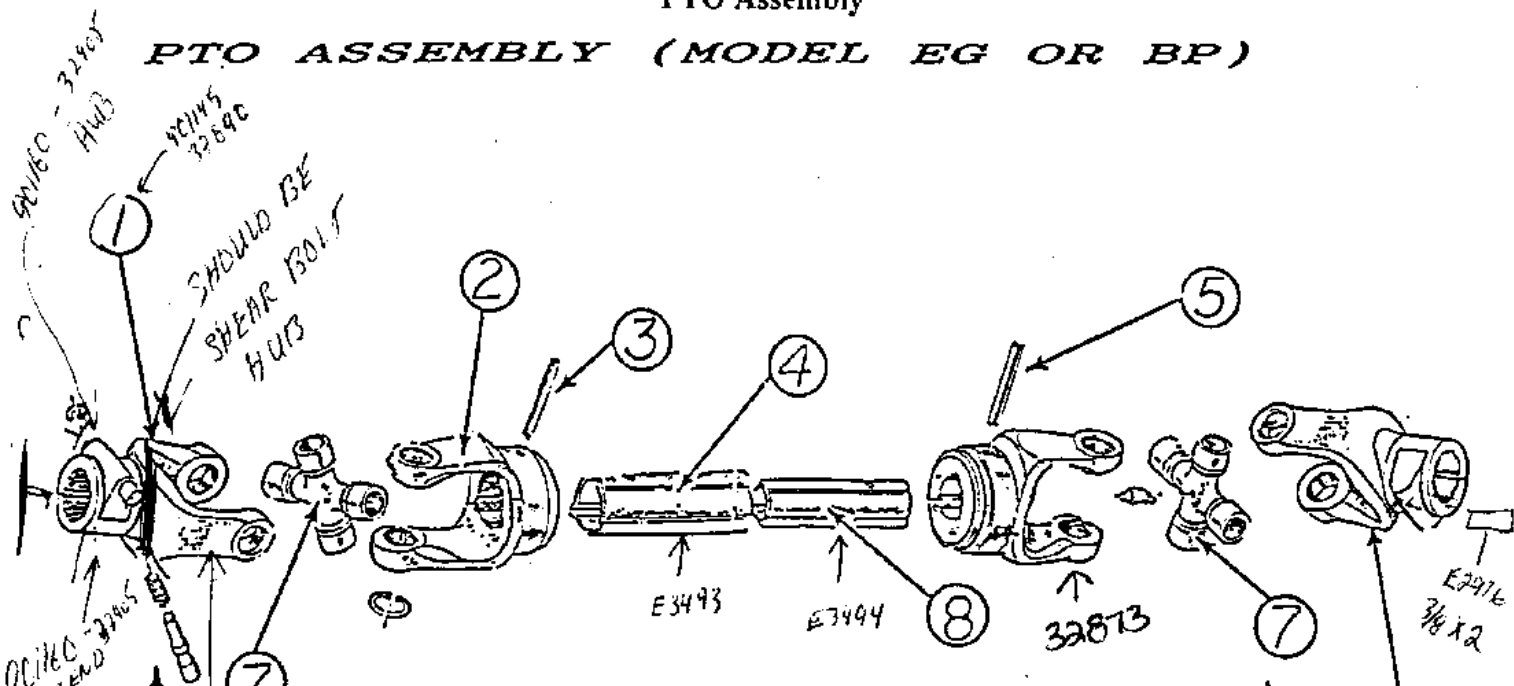
90617

Item No.	Part No.	Description
1	190520	Cylinder Clevis 3-1/2"
2	190540	Cylinder Shaft 3-1/2" x 16"
3	190600 90617	Seal Kit 3 1/2" (Monarch) 492910
4	190560	Rod End Cap 3-1/2"
5	190740	Tube 3-1/2" x 16"
6	190700	Piston 3-1/2"
7	190720	Piston Nut 3-1/2"
8	INCOB	Tie Rod Nuts 1/2"
9	190760	Anchor End Cap 3-1/2"
10	190802	Tie Rods 3-1/2" x 16"
	190103	Monarch Cylinder 3-1/2" x 16" 638026



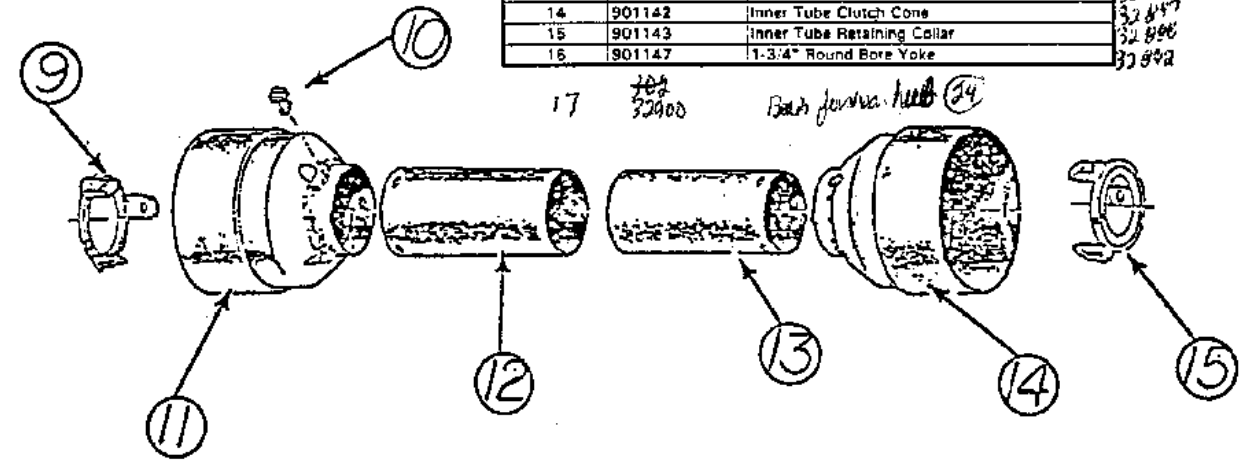
PTO Assembly

PTO ASSEMBLY (MODEL EG OR BP)



901149 COMPLETE PTO - 32894

Item No.	Part No.	Description	QTY
1	901145	1-3/8" Round Bore Yoke	1
2	901119	Outer Tube Yoke	32854
3	901120	Roll Pin Outer Yoke	32865
4	901121	Outer Tube	32866
5	901124	Roll Pin	32869
6	901123	Push Pin Kit	32860
7	901118	Cross Kit	32863
8	901122	Inner Tube	32867
9	901136	Outer Tube Retaining Collar	32851
10	901137	Cone Retaining Bolt	32852
11	901138	Outer Tube Cone	32853
12	901139	Outer Shield Tube	32854
13	901140	Inner Shield Tube	32855
14	901142	Inner Tube Clutch Cone	32857
15	901143	Inner Tube Retaining Collar	32868
16	901147	1-3/4" Round Bore Yoke	32894

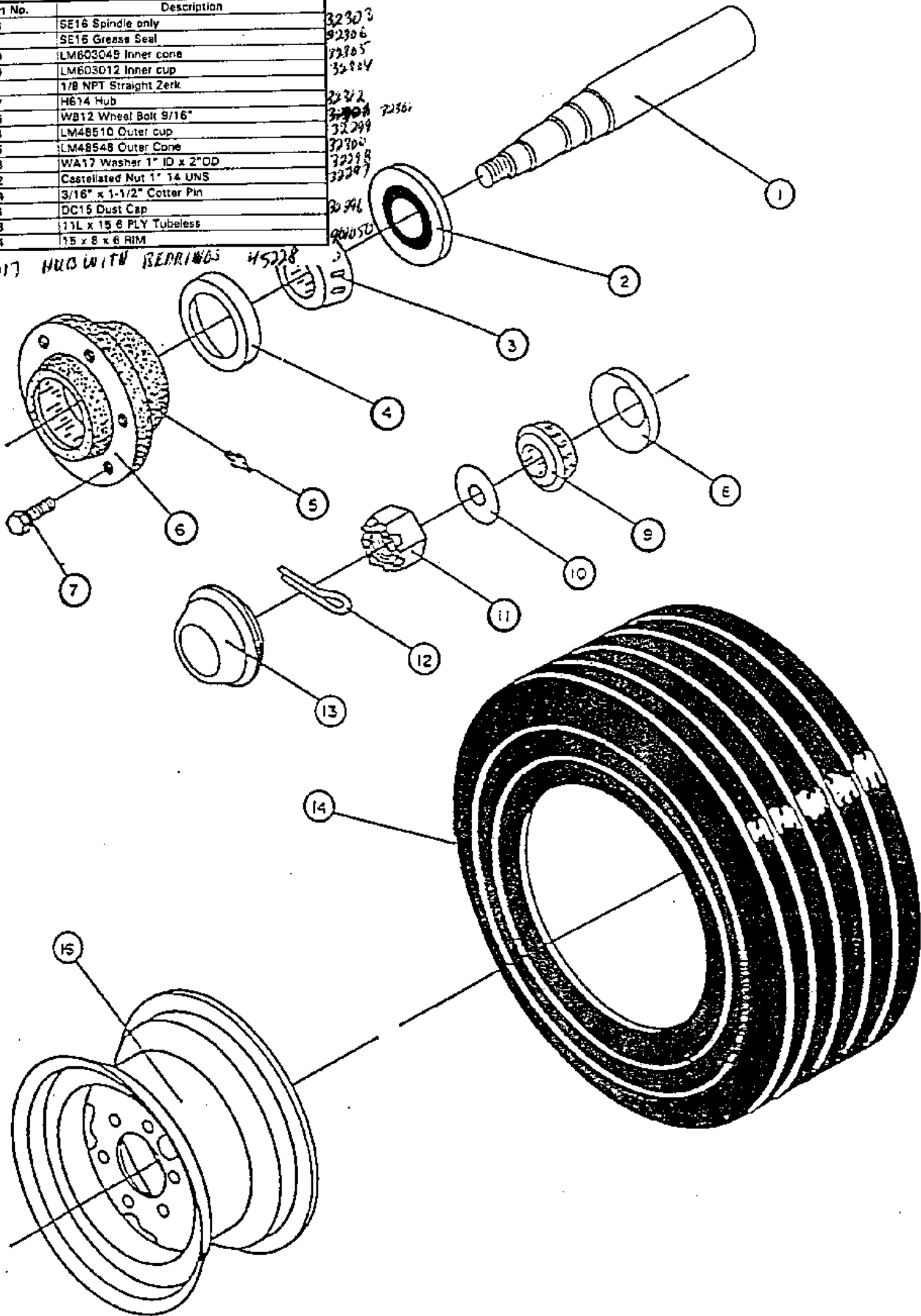


NOTE: PLEASE CHECK YOUR BALE PRO TO SEE WHICH PTO MODEL IS BEING USED ON THAT MACHINE. THE EG 60 SERIES IS A YELLOW PTO, OTHER RELEVANT INFORMATION WILL BE WRITTEN ON THE PTO SHAFT.

Hub & Wheel Assembly

Item No.	Part No.	Description
1	301008	SE16 Spindle only
2	301011	SE16 Grease Seal
3	301010	LM60304B Inner cone
4	301009	LM603012 Inner cup
5	91700	1/8 NPT Straight Zerk
6	301007	H614 Hub
7	301006	WB12 Wheel Bolt 9/16"
8	301004	LM48510 Outer cup
9	301005	LM48548 Outer Cone
10	301003	WA17 Washer 1" ID x 2" OD
11	301002	Castellated Nut 1" 14 UNS
12	CP0324	3/16" x 1-1/2" Cotter Pin
13	301001	DC15 Dust Cap
14	301013	11L x 15 6 PLY Tubeless
15	301014	15 x 8 x 6 RIM

301017 HUB WITH BEARINGS 45228



Specifications

Recommended Minimum Horsepower Required:	85 HP
Capacity:	6' diameter bale
Height:	90"
Width	100"
Weight	4000 lbs
PTO Requirements:	1000 R.P.M.
Dual Hydraulics:	2000 P.S.I.