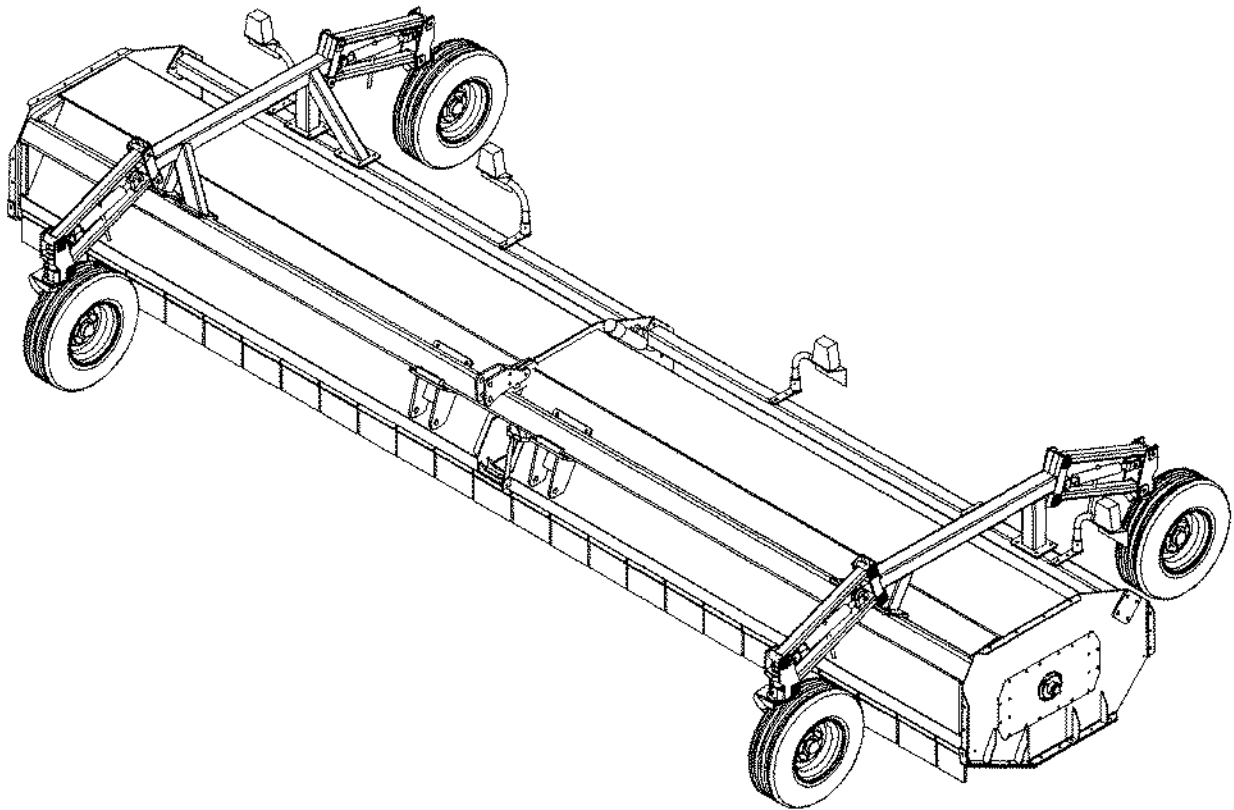




# ASSEMBLY INSTRUCTIONS



# SHREDDER

Printed in USA (74249) 8/05

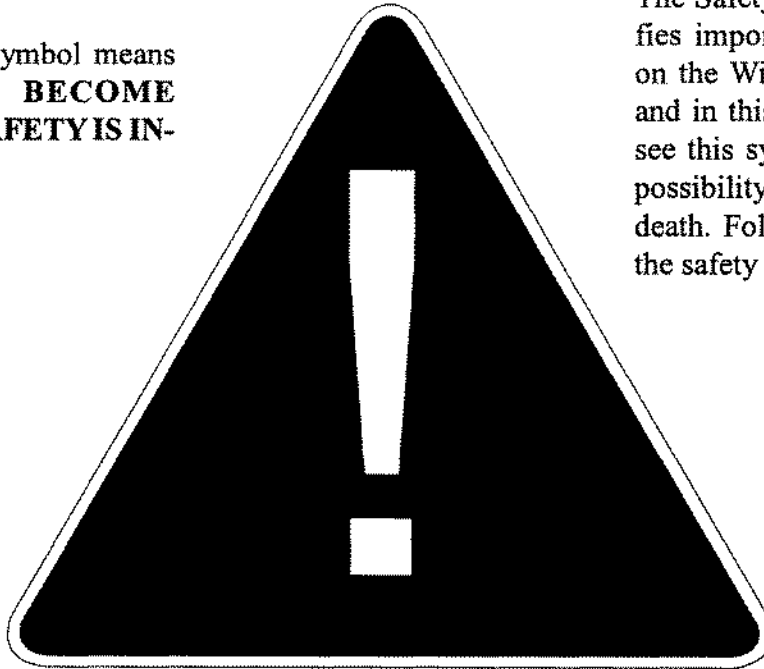
 **WIL-RICH**

PO Box 1030  
Wahpeton, ND 58074  
PH (701) 642-2621  
Fax (701) 642-3372  
[www.wil-rich.com](http://www.wil-rich.com)

# 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

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## SAFETY RULES

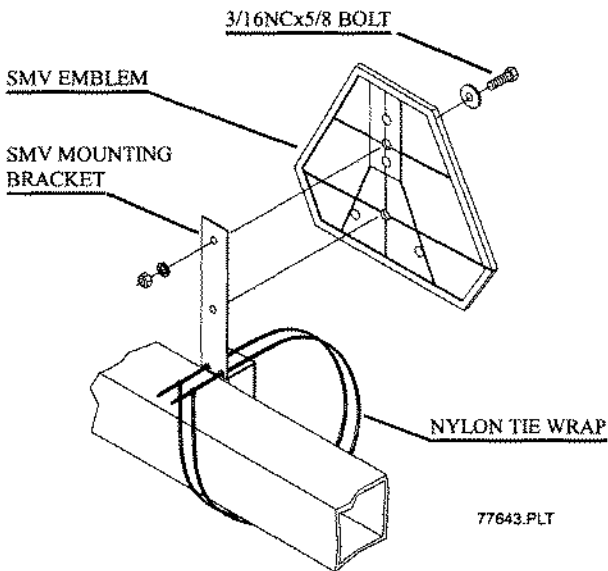
**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



### SMV

The SMV emblem is to be secured as near to the rear and centered, or as near to the left center of the implement as possible.

The bracket provided is designed to mount to numerous frame sizes and can be orientated in numerous positions to avoid interference with implement components.



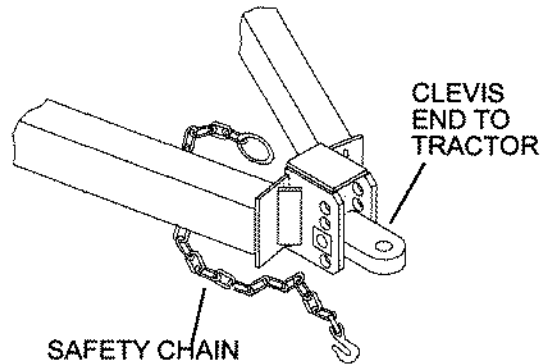
Emblem is to be 2 to 6 feet above the ground measured from the bottom edge of the emblem.

Keep safety decals clean. Replace any safety decals that are damaged, destroyed, missing, painted over or can no longer be read. Replacement safety decals are available through your dealer.

### SAFETY CHAINS

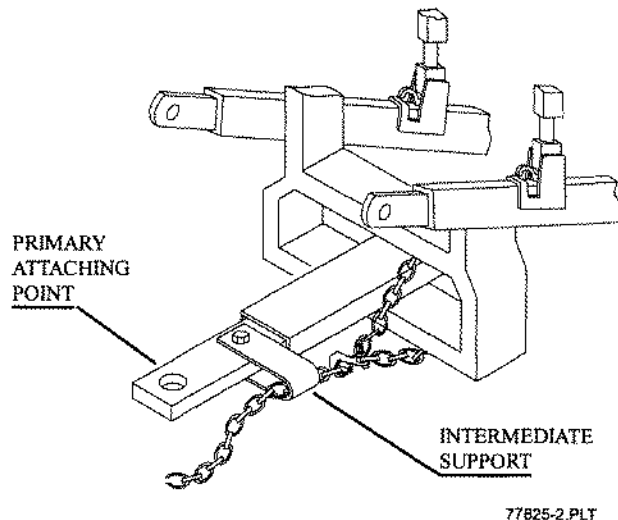
The purpose of the safety chain is to provide an auxiliary attaching system to retain the connection between towing and towed machine in the event of separation of the primary attaching system.

The safety chain should be hooked long enough to permit full turns. Unnecessary slack should be taken up.



The intermediate support is to be used if there is more than 6" of unsupported chain on either side of the primary attaching point.

The intermediate support must not be mounted more than 6" from the primary attaching point (see illustration below.)



Safety decals appear at various locations on your machine. These decals are provided for your safety, your family's safety and your employee's safety. Replace any decal that becomes worn, damaged, painted over or difficult to read.

Keep safety decals and signs clean and legible at all times.

Replace safety decals and signs that are missing or have become illegible.

Replaced parts that displayed a safety sign should also display the current sign.

Safety decals or signs are available from your Dealer Parts Department.

#### How to install Safety Decals:

Be sure that the installation area is clean and dry.

Decide on the exact position before you remove the backing paper.

Remove the smallest portion of the split backing paper.

Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.

Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.

Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

## **PREPARATION**

Before operating the **WIL-RICH** Fail Shredder, a careful inspection must become routine. A check must be made to ensure that all hardware and fasteners are securely tightened and moving parts properly lubricated.

Remove all wires and/or banding material. The parts have been conveniently arranged on the pallet for ease of assembly.

**NOTE: Always wear safety glasses or goggles and be careful when cutting wires and steel bands as they are under tension and will spring back when cut.**

Wherever the terms "left" and "right" are used, it must be understood to mean from a position behind and facing the machine.

Lubricate all bearings and moving parts as you proceed and make sure they work freely.

## **TIRES**

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.

Have a qualified tire dealer or repair service perform required tire maintenance.

# GENERAL INFORMATION

## FASTENERS

Loosely install all bolts connecting mating parts before final tightening.

When tightening bolts, they must be torqued to the proper number of foot-pounds as indicated in the table unless specified. It is important that all bolts be kept tight.

On new machines, all nuts and bolts must be re-checked after a few hours of operation.

When replacing a bolt, use only a bolt of the same grade or higher. Except in shear bolt applications, where you must use the same grade bolt.

Bolts with no markings are grade 2

Grade 5 bolts furnished with the machine are identified by three radial lines on the head.

Grade 8 bolts furnished with the machine are identified by six radial lines on the head.

All U-bolts are grade 5.




## TIRE INFLATION

The use of proper air pressure is the most important factor in satisfactory performance and maintenance of implement tire. Underinflation will damage the cord body of the tire and cause a series of diagonal breaks in the fabric sidewall area.

If the tire buckles or wrinkles, the air pressure must be increased to the point where the sidewall remains smooth while operating.

Check the air pressure every two or three weeks and do not allow the pressure to drop to a point where buckling or wrinkling of the tire may be possible.

**Note: Do not inflate tires beyond the specified tire pressure.**

	GRADE 2		GRADE 5		GRADE 8	
						
TORQUE IN FOOT POUNDS						
BOLT DIA	3/8	1/2	5/8	3/4	7/8	1
HEX HEAD	9/16	3/4	15/16	1-1/8	1-5/16	1-1/2
UNC GR2	18	45	89	160	252	320
UNC GR5	30	68	140	240	360	544
UNC GR8	40	100	196	340	528	792
UNF GR2	21	51	102	178	272	368
UNF GR5	32	70	168	284	392	572
UNF GR8	48	112	216	368	528	840

TORQUE.EPS

## WHEEL BOLTS

It is recommended that all wheel bolts be checked for tightness before using and again after one day of use. Check periodically to be sure the wheel bolts are tight.

## HYDRAULICS

Check hitch lift cylinder for proper alignment and operation. On any machine, check that the hydraulic system has been properly charged and purged.

### NOTE:

Transport wheel hubs are not fully filled with grease when assembled. Though these hubs are usually equipped with grease fittings, pumping a few shots of grease on a regular interval into these hubs will not ensure that the grease enters or flushes the bearings. It is essential that all bearing assemblies be repacked at the end of the season, or before the next season.

## **PTO LENGTH ADJUSTMENT**

**NOTE:** 3-PT MODELS ONLY. DO NOT CUT PTO ON PULL-TYPE MODELS.



To adjust the length, determine the shortest working position and mark them.



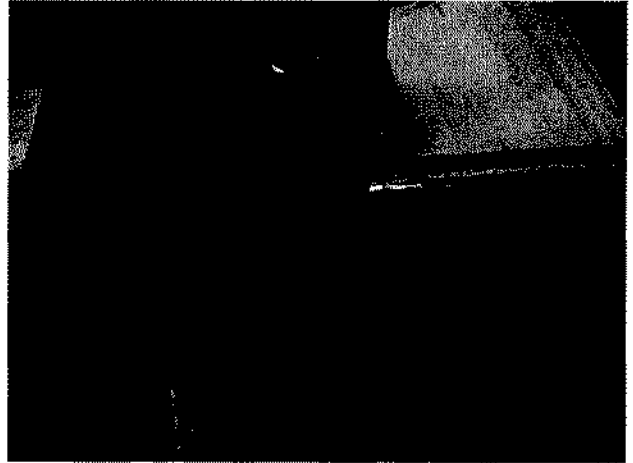
Shorten inner and outer collapsed tubes equally. If you want to shorten the shaft overall, cut 1" off of both the female and male ends.

**NOTE:** There must be a minimum of 10" of overlap at all times.



Using an abrasive saw, shorten the inner and outer profiles by the same length as the guard tubes.

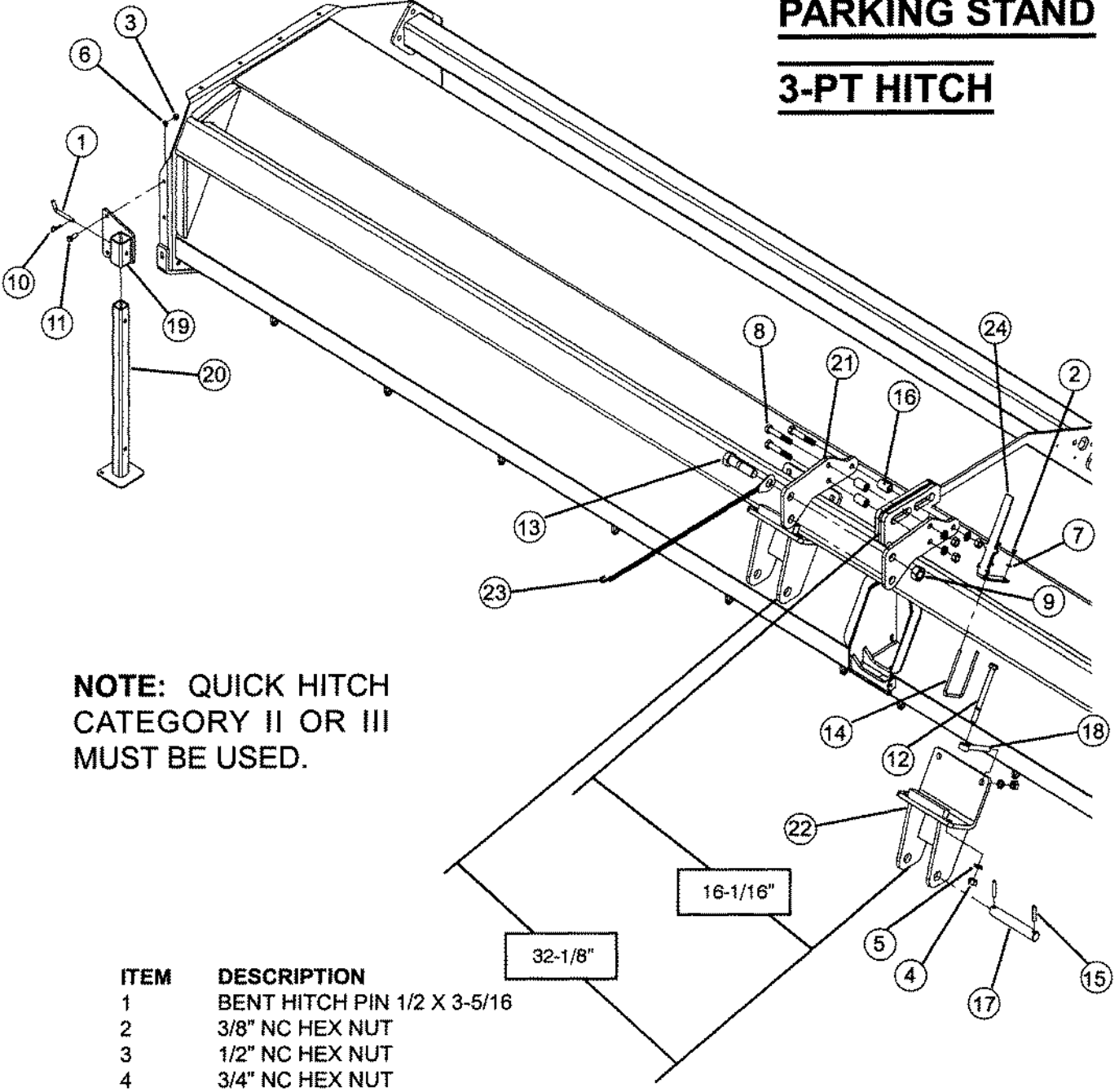
**NOTE:** It is acceptable to cut off and not replace the slide ring on the female shaft end.



Round off all sharp edges and remove burrs. Grease sliding profiles. No other changes may be made to the pto drive shaft and guard. Use a wire brush to smooth out the protective coating on the male half.

# PARKING STAND

## 3-PT HITCH



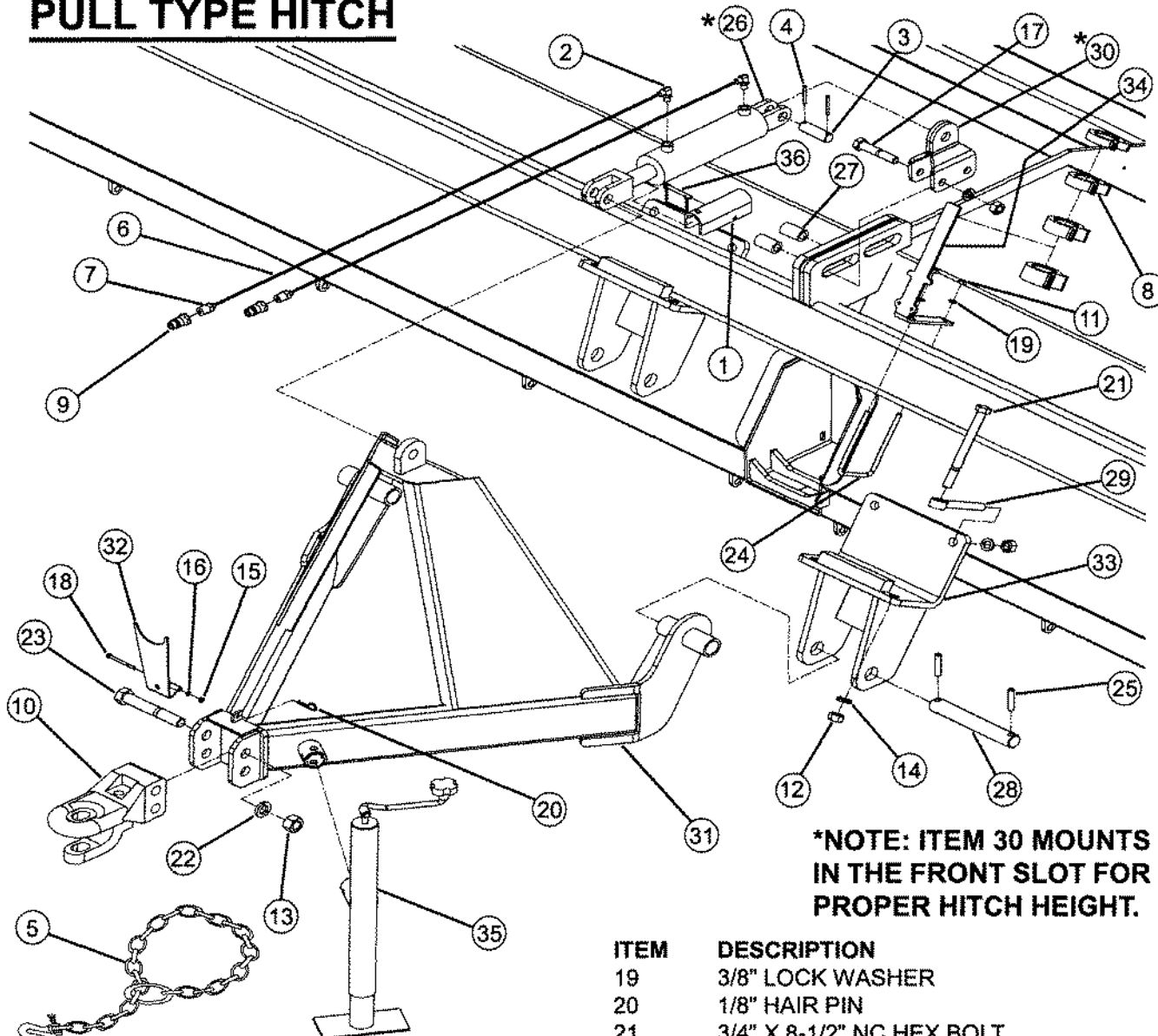
**NOTE: QUICK HITCH  
CATEGORY II OR III  
MUST BE USED.**

ITEM	DESCRIPTION
1	BENT HITCH PIN 1/2 X 3-5/16
2	3/8" NC HEX NUT
3	1/2" NC HEX NUT
4	3/4" NC HEX NUT
5	3/4" LOCK WASHER
6	1/2" LOCK WASHER
7	3/8" LOCK WASHER
8	3/4" X 4-1/2" NC HEX BOLT
9	1-1/4" NC CENTER LOCK NUT
10	HAIR PIN
11	1/2" X 1-1/2" NC HEX BOLT
12	3/4" X 8-1/2" NC HEX BOLT
13	1-1/4" X 5" NC HEX BOLT
14	3/8" X 4" X 7" NC U-BOLT
15	1/2" DIA X 2-1/2" ROLL PIN
16	BUSHING-UPPER MAST
17	1-7/16" DIA LOWER 2PT PIN
18	3/4" X 6" NC EYE BOLT
19	BRACKET-PARK STAND
20	PARK STAND

ITEM	DESCRIPTION
21	PLATE-FLOATING 3RD ARM
22	LOWER 2PT MOUNT
23	CHAIN ASSEMBLY-PTO
24	COMBINATION STRAP



# PULL TYPE HITCH



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

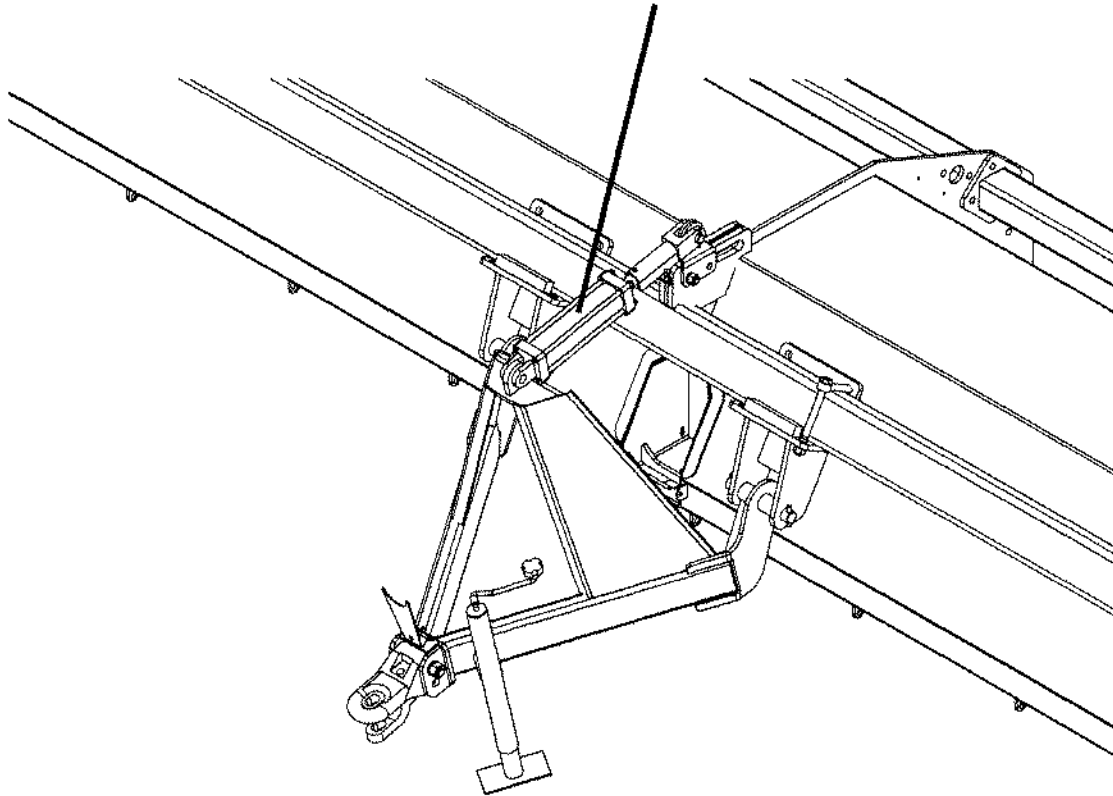
ITEM	DESCRIPTION
1	1-1/2" CYLINDER LOCK CHANNEL
2	ELBOW 8MORB X 6MJ
3	HEADLESS PIN 1" X 2-3/8"
4	1/4" X 2-1/4" ROLL PIN
5	10K SAFETY CHAIN
6	HOSE 1/4" X 84" 6FJX-6FJX
7	ADAPTOR 6MJ X 8MPT
8	HYD CYLINDER STOP PACKAGE
9	QUICK DISCONNECT COUPLER
10	CAT 1 CLEVIS HITCH
11	3/8" NC HEX NUT
12	3/4" NC HEX NUT
13	1" NC HEX NUT
14	3/4" LOCK WASHER
15	1/4" HEX NUT
16	1/4" LOCK WASHER
17	3/4" X 4" NC HEX BOLT
18	1/4" X 3" NC HEX NUT

ITEM	DESCRIPTION
19	3/8" LOCK WASHER
20	1/8" HAIR PIN
21	3/4" X 8-1/2" NC HEX BOLT
22	1" LOCK WASHER
23	1" X 6-1/2" NC HEX BOLT
24	3/8" X 4" X 7" NC U-BOLT
25	1/2" DIA X 2-1/2" ROLL PIN
26	3" DIA X 10" HYD CYLINDER
27	BUSHING-UPPER MAST
28	1-7/16" DIA LOWER 2PT PIN
29	3/4" X 6" NC EYE BOLT
30	ANCHOR-FRONT HITCH
31	HITCH
32	BRACKET-PTO
33	LOWER 2PT MOUNT WELD
34	COMBINATION STRAP
35	JACK
36	5/16" DIA X 2-3/4" LYNCH PIN

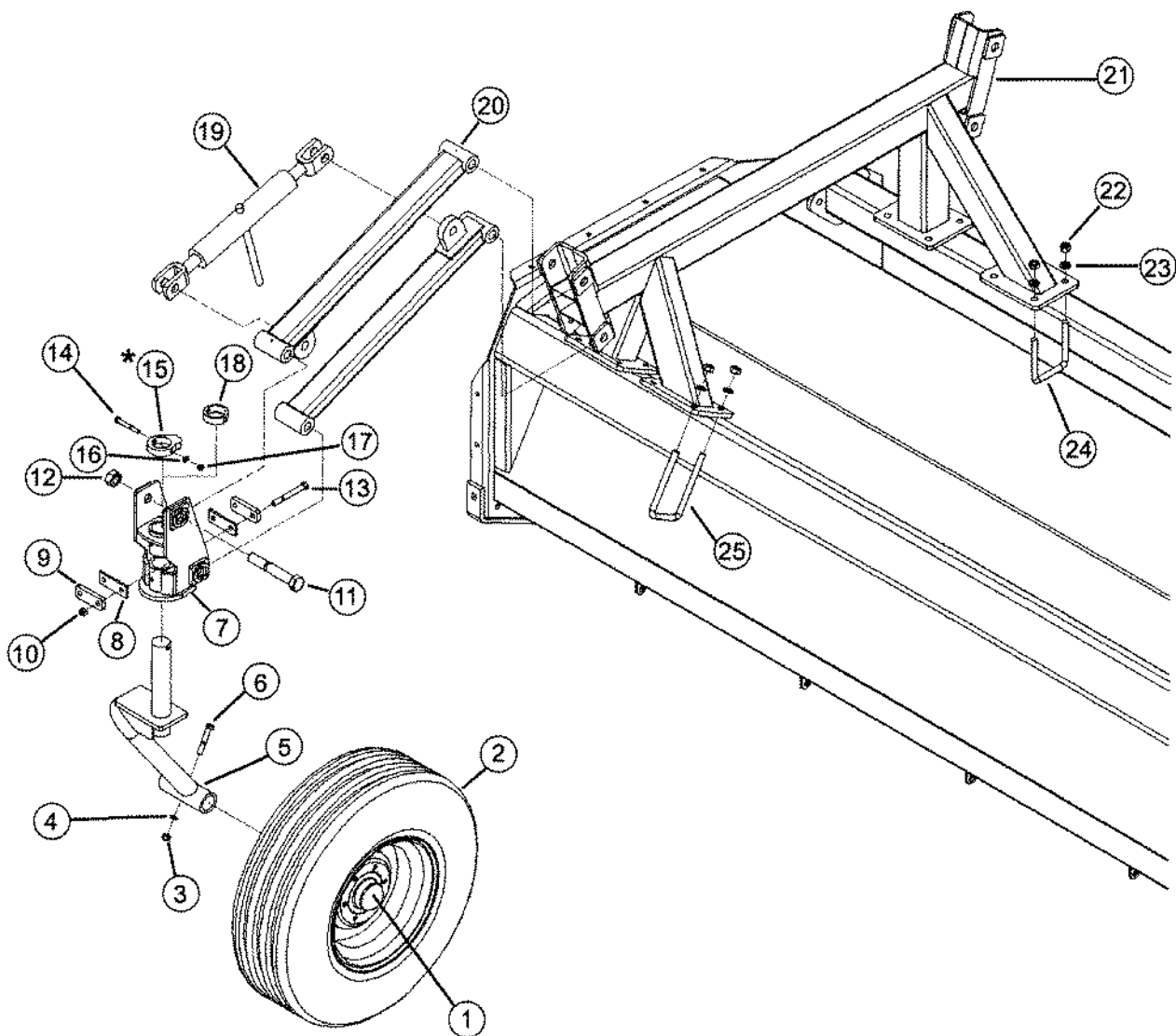
**\*NOTE: HYDRAULIC CYLINDER MOUNTS WITH BUTT END FACING FRONT TO PREVENT DAMAGE TO TIE ROD. SEE PAGE 10**

# **PULL HITCH HYDRAULIC LIFT**

**TO PREVENT DAMAGE TO HYDRAULIC CYLINDER,  
MOUNT CYLINDER WITH BUTT END FORWARD  
AND THE ROD END FACING THE REAR AS SHOWN.**



# CASTERING GAUGE WHEELS



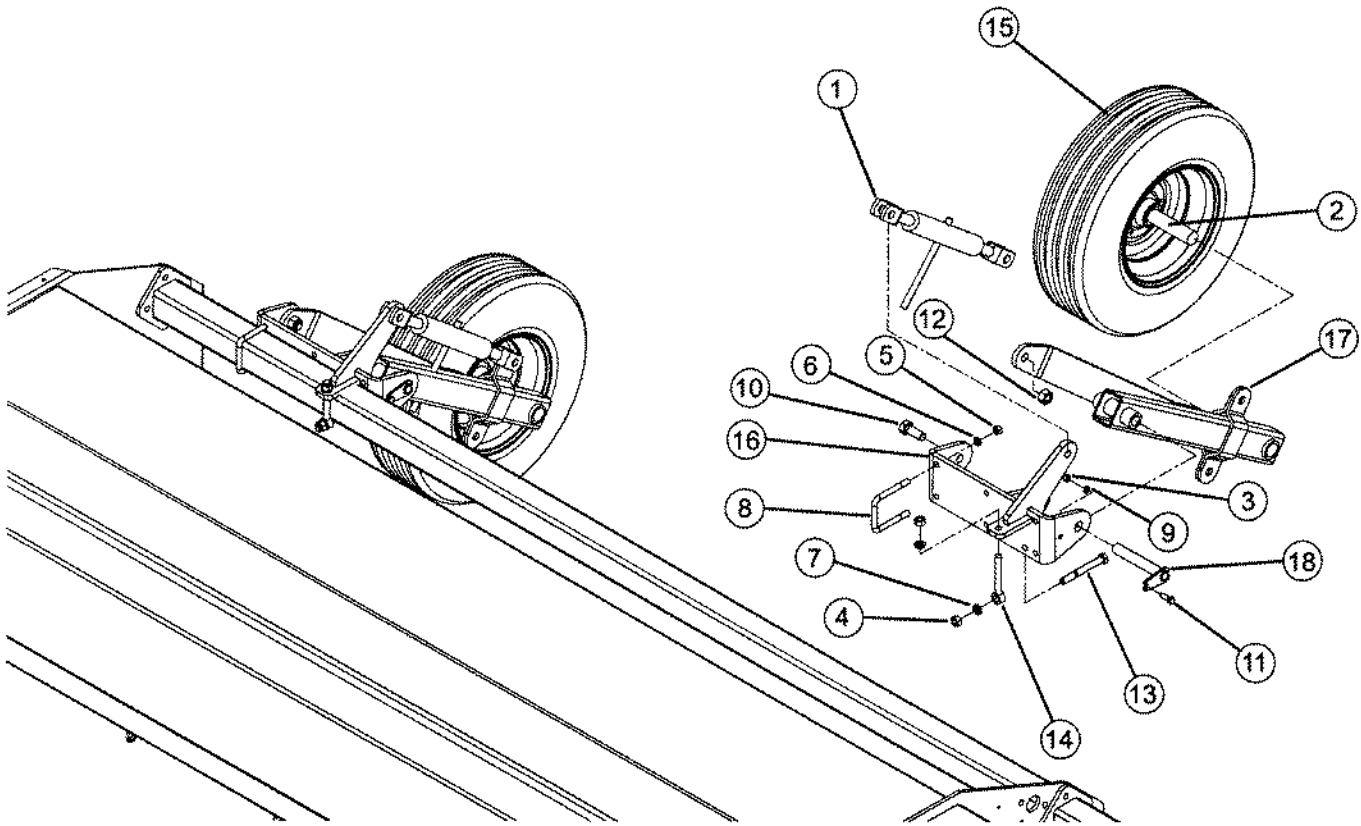
ITEM	DESCRIPTION
1	6-BOLT HUB & 1-3/4" SPINDLE ASS'Y
2	WHEEL ASSY
3	1/2" NC NUT
4	1/2" LOCK WASHER
5	CASTOR WHEEL LEG
6	1/2" NCx3"
7	GAUGE WHEEL PIVOT
8	DAMPER PAD
9	DAMPER PLATE
10	1/2" NC LOCK NUT
11	1"NCx6.5" PIVOT BOLT
12	1"NC LOCK NUT
13	1/2"NCx4.5
14	3/8"NCx3
15	CASTOR STOP COLLAR (20' MODELS ONLY)
16	3/8" LOCK WASHER
17	3/8" NC NUT
18	LINK ARM STOP COLLAR
19	JACK, RATCHET

ITEM	DESCRIPTION
20	CASTOR ARM
21	LH WHEEL MOUNT
	RH WHEEL MOUNT (SHOWN)
22	5/8" NC NUT
23	5/8" LOCK WASHER
24	5/8"NCx4x5.25 U-BOLT
25	5/8"NCx4x7.25 U-BOLT

**NOTE:** To set the wheel spacing, locate the tires between the 1st and 2nd outside rows.

**\*NOTE:** 20' models require stops (item 15) to prevent contact with the tractor duals. 22' models with 30" row spacing may require the stops also.

# RIGID GUAGE WHEELS

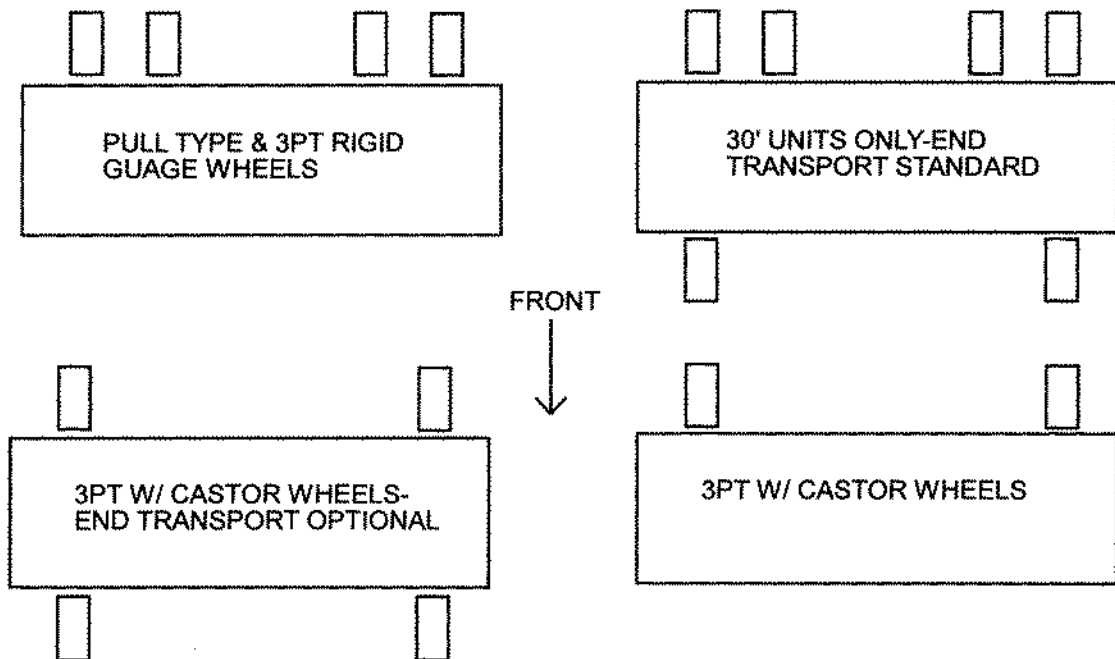
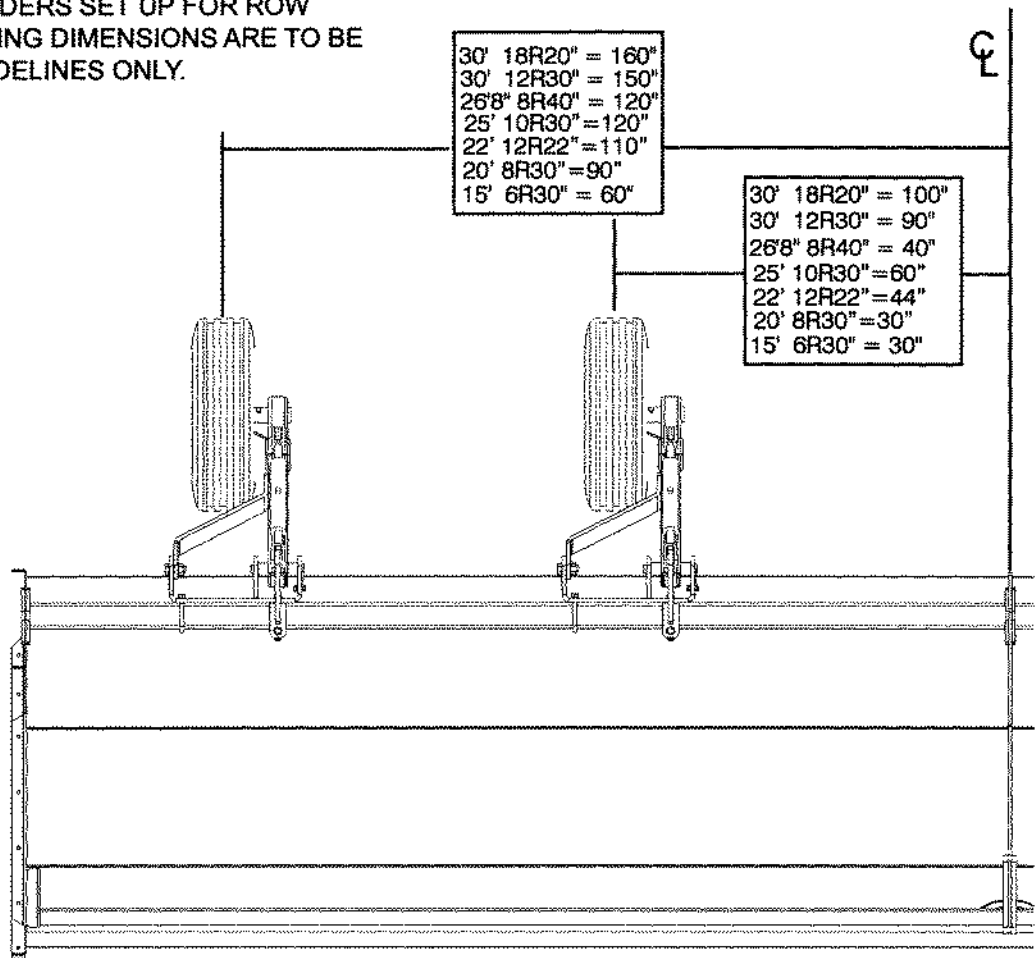


ITEM	DESCRIPTION
1	JACK, RATCHET
2	6-BOLT HUB & 1-3/4" SPINDLE ASSEMBLY
3	1/2" NC HEX NUT
4	3/4" NC HEX NUT
5	5/8" NC HEX NUT
6	5/8" LOCK WASHER
7	3/4" LOCK WASHER
8	5/8" X 4" X 5-1/4" NC U-BOLT
9	1/2" LOCK WASHER
10	1" X 2-1/2" NC HEX BOLT
11	1/2" X 1-1/2" NC HEX BOLT
12	1" NC TOP LOCK NUT
13	3/4" X 6-1/2" NC HEX BOLT
14	3/4" X 6" NC EYE BOLT
15	WHEEL ASS'Y 9.5L X 15" 6B 6" 8PLY
16	MOUNTING BRKT-RH(SHOWN) MOUNTING BRKT-LH
17	REAR STRUT
18	1-1/4" PIN

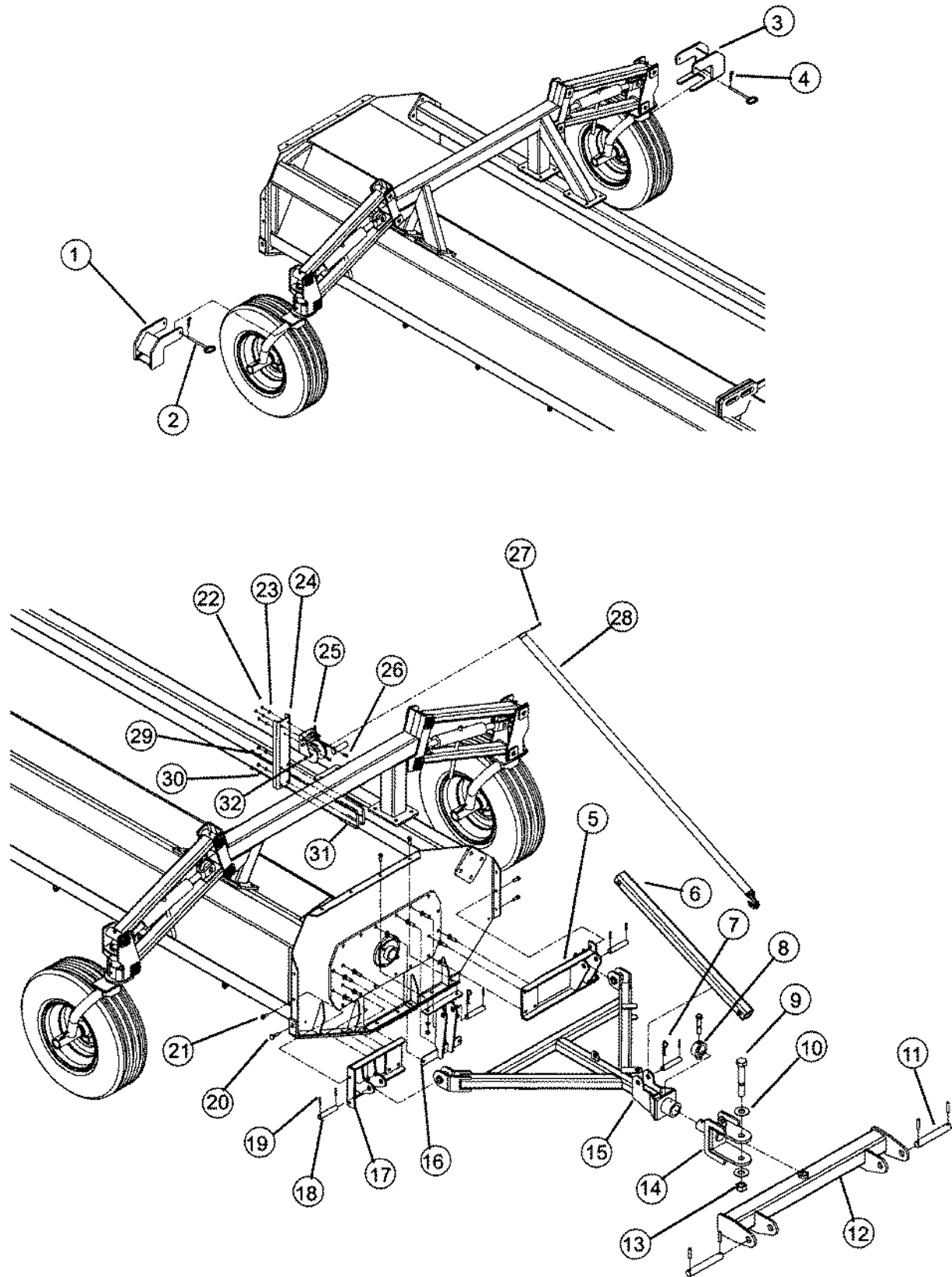
**NOTE:** To set the wheel spacing, locate the outside wheel between the 1st and 2nd outside row.

# TIRE LOCATIONS

NOTE: ON SHREDDERS SET UP FOR ROW CROPS-SPACING DIMENSIONS ARE TO BE USED AS GUIDELINES ONLY.

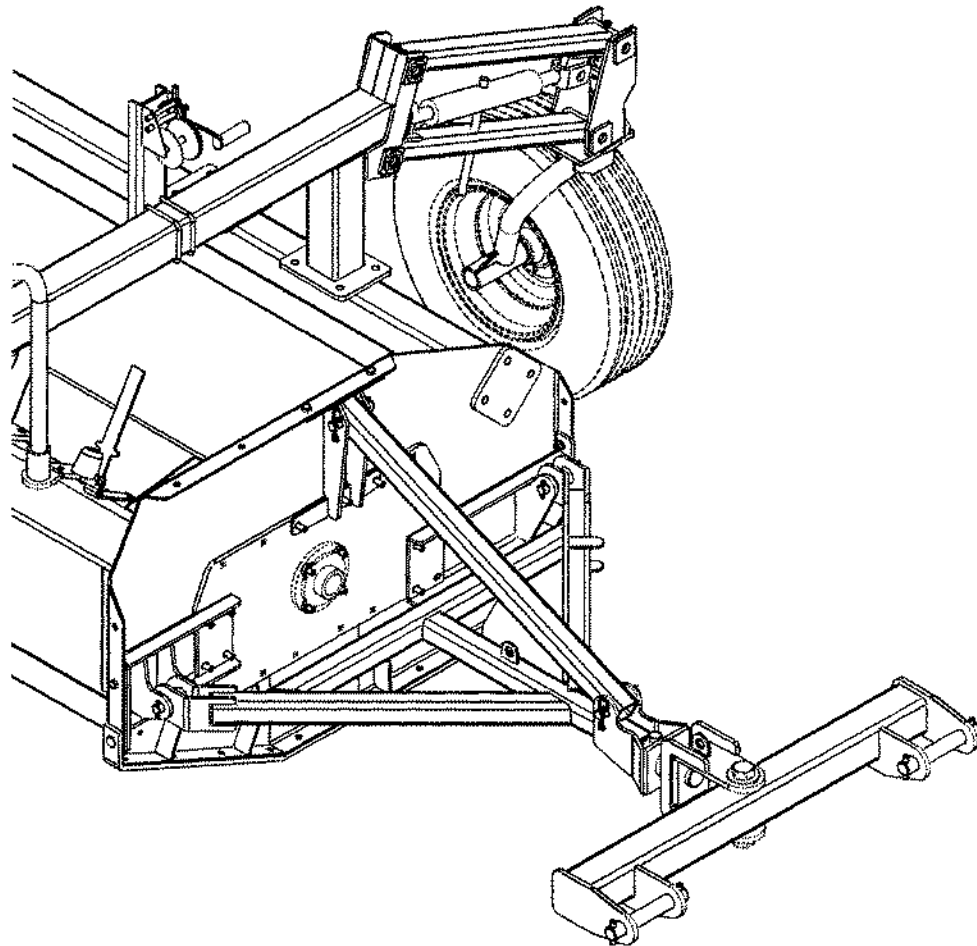


# END TRANSPORT HITCH



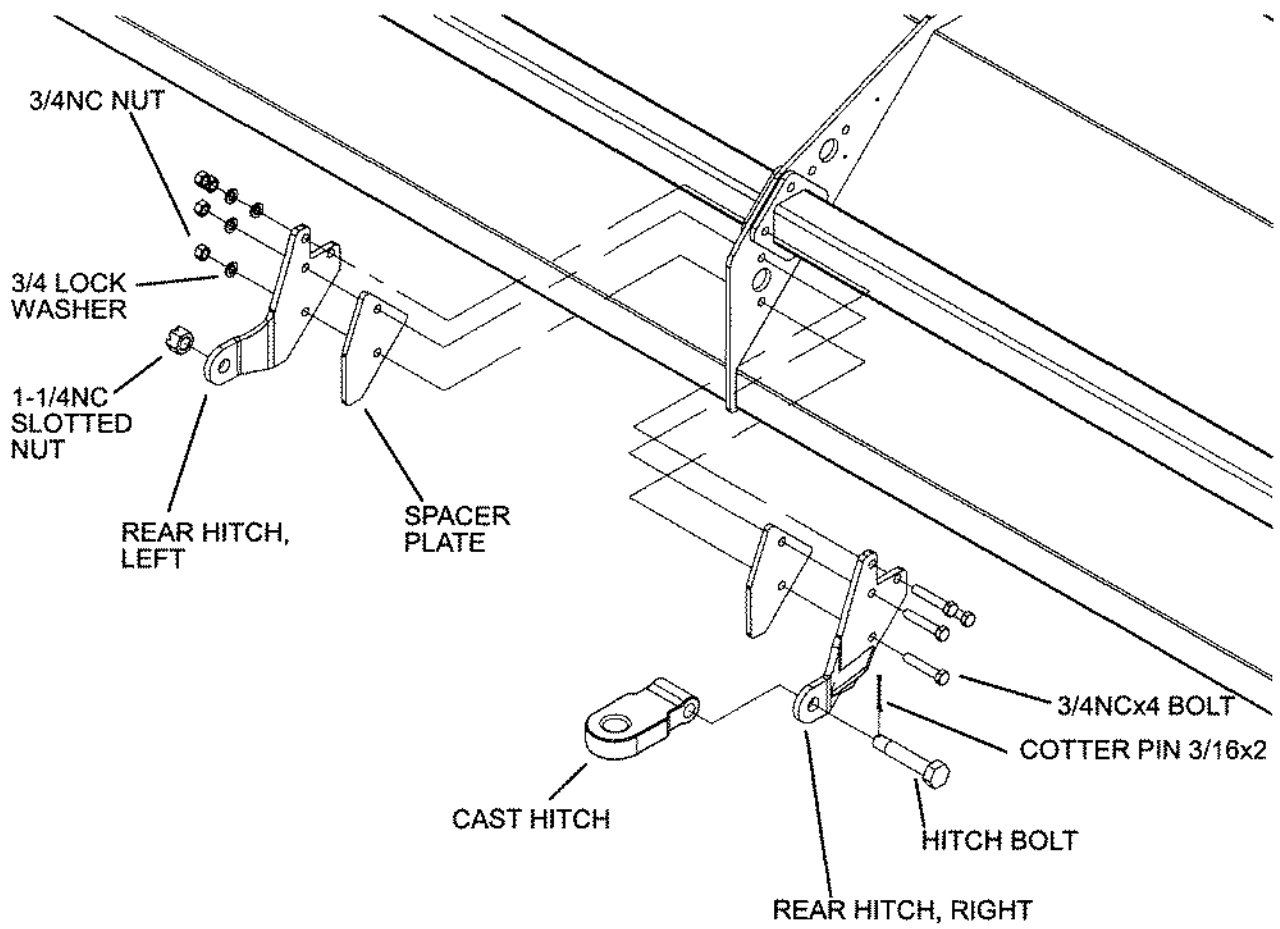
ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	CASTER LOCK FRONT	17	FRONT HITCH MOUNT
2	PIN 1/2x6-1/4	18	HEADLESS PIN 1x5.12
3	CASTER LOCK BACK	19	ROLL PIN 1/4x1-3/4
4	HAIR PIN .14x2.69	20	CARRIAGE BOLT 1/2NCx2
5	REAR HITCH MOUNT	21	1/2NCx1-1/4 BOLT
6	UPPER ARM	22	5/16NC NUT
7	SPRING LOCK PIN 3/16x3-3/4	23	5/16 LOCK WASHER
8	BUSHING 3-1/4ODx2.275IDx1.25	24	WINCH MOUNT
9	BOLT 1-1/4NCx8	25	TRAILER HITCH
10	1-1/4 FLAT WASHER	26	5/16NCx1
11	LOWER 3PT PIN	27	1/4NCx2-1/2
12	LOWER HITCH PIVOT	28	WINCH STRAP
13	1-1/4NC LOCK NUT	29	3/8NC NUT
14	PULL HITCH CLEVIS	30	3/8NC LOCK WASHER
15	END TRANSPORT HITCH	31	3/8NCx4x5 U-BOLT
16	UPPER ANCHOR MOUNT	32	1/4NC LOCK NUT

**NOTE: THE WINCH STRAP COMES WITH A BOW LOOP-LOCATED ON THE HOOK END OF THE STRAP, REMOVE THE BOW LOOP. WHEN MOUNTING A END TRANSPORT HITCH, FIRST REMOVE 10 1/2NCx1-1/2 CARRIAGE BOLTS (88873) FROM BEARING PLATE AS SHOWN. REPLACE WITH 10 1/2NCx2 CARRIAGE BOLTS (88714)**



# REAR PULL HITCH

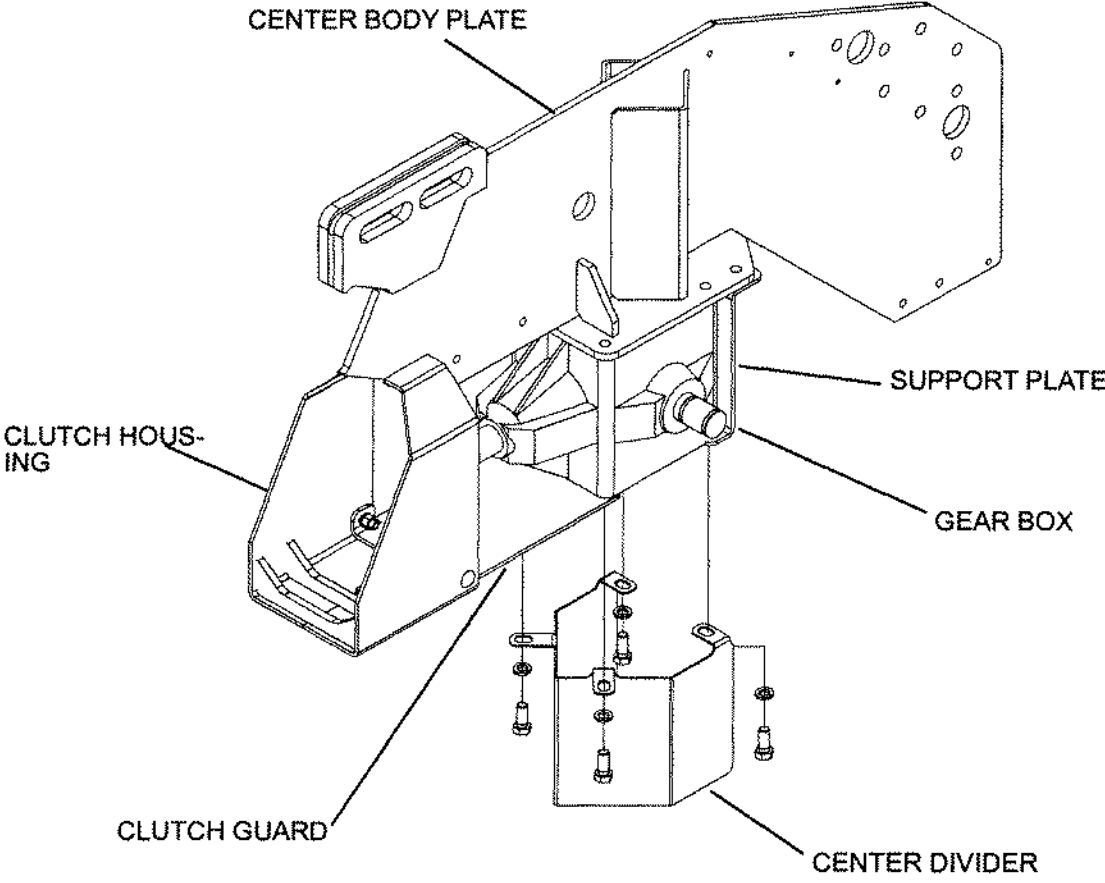
## OPTIONAL



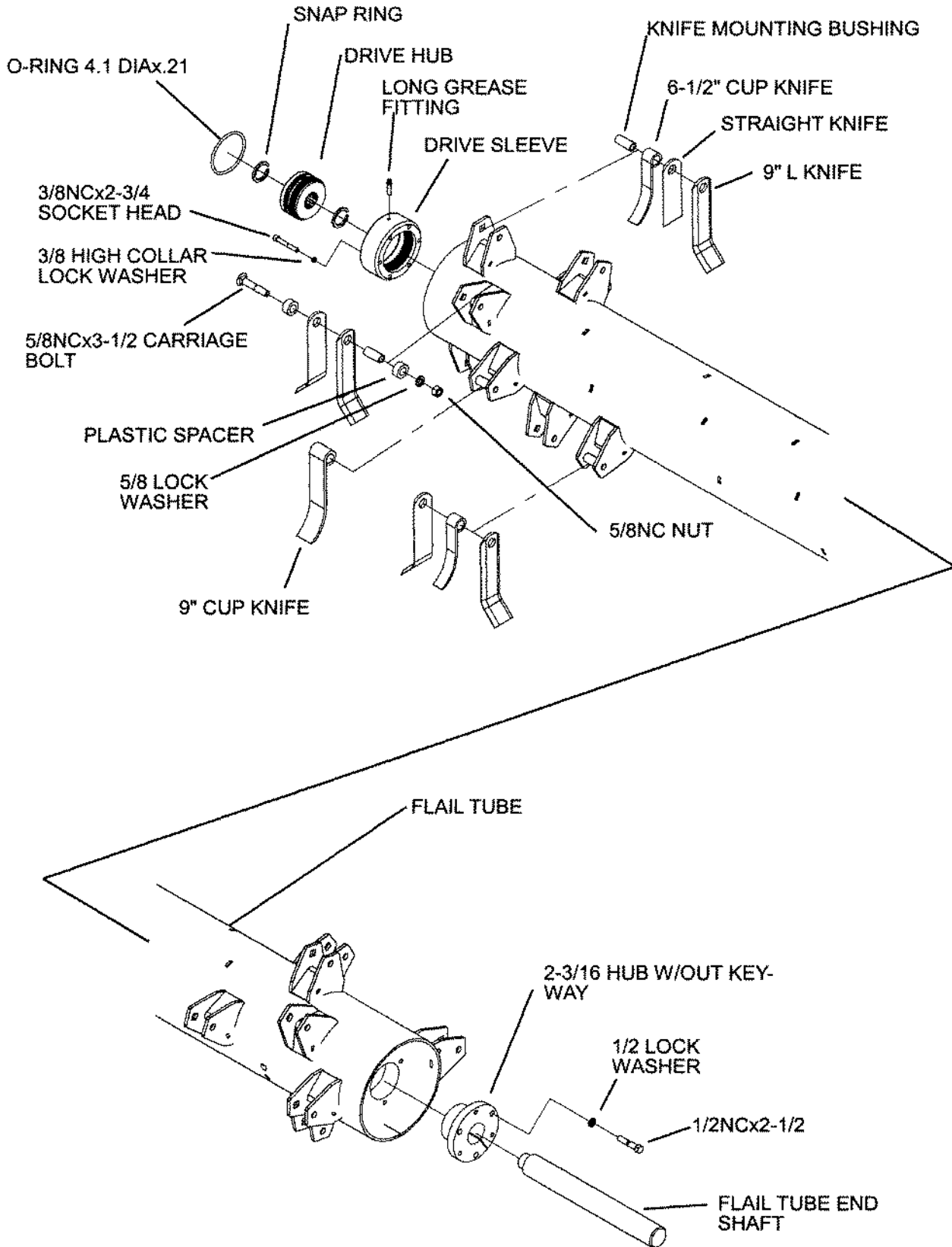


**CENTER DIVIDER**

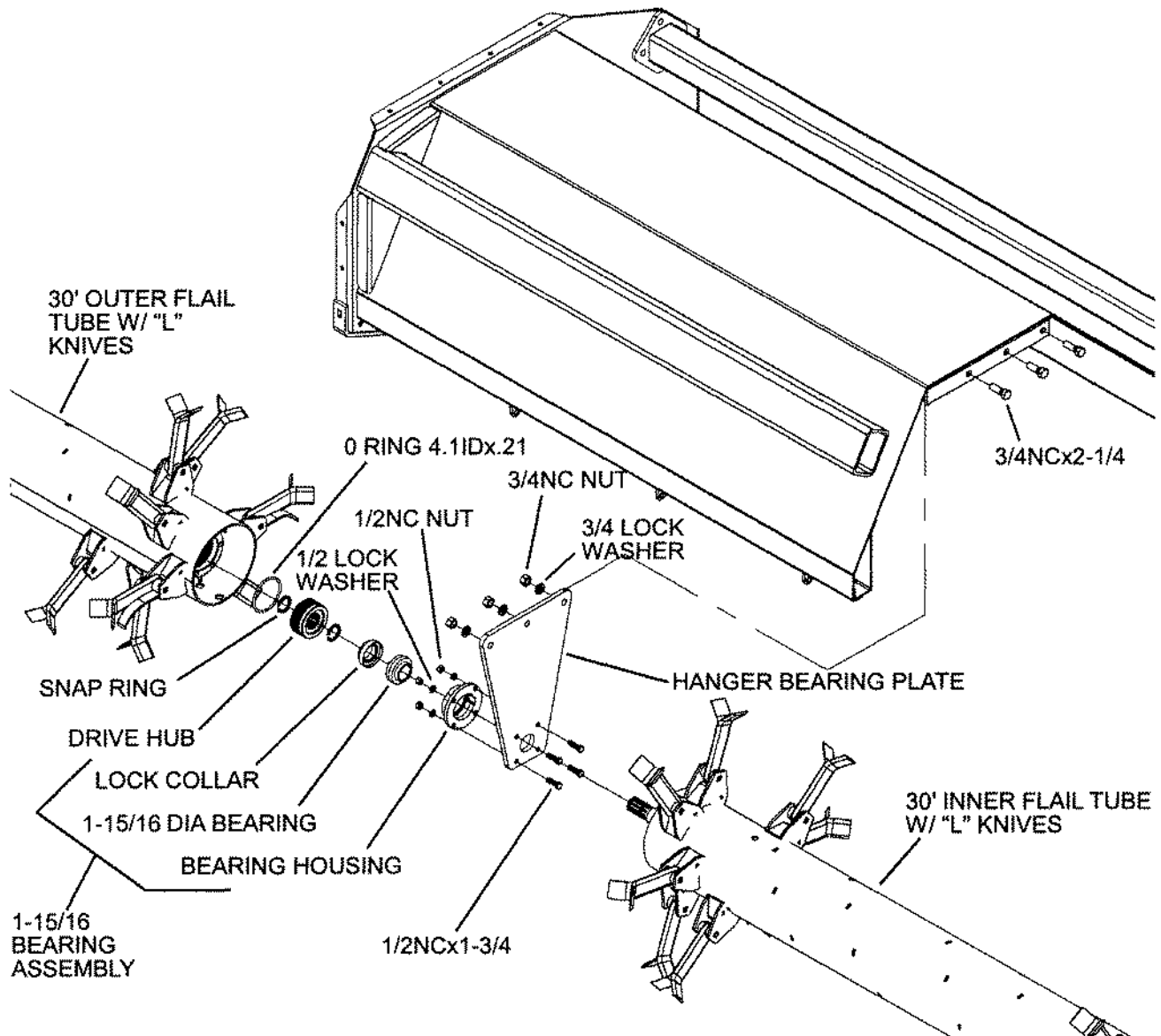
**OPTIONAL**



# FLAIL TUBE ASSEMBLY



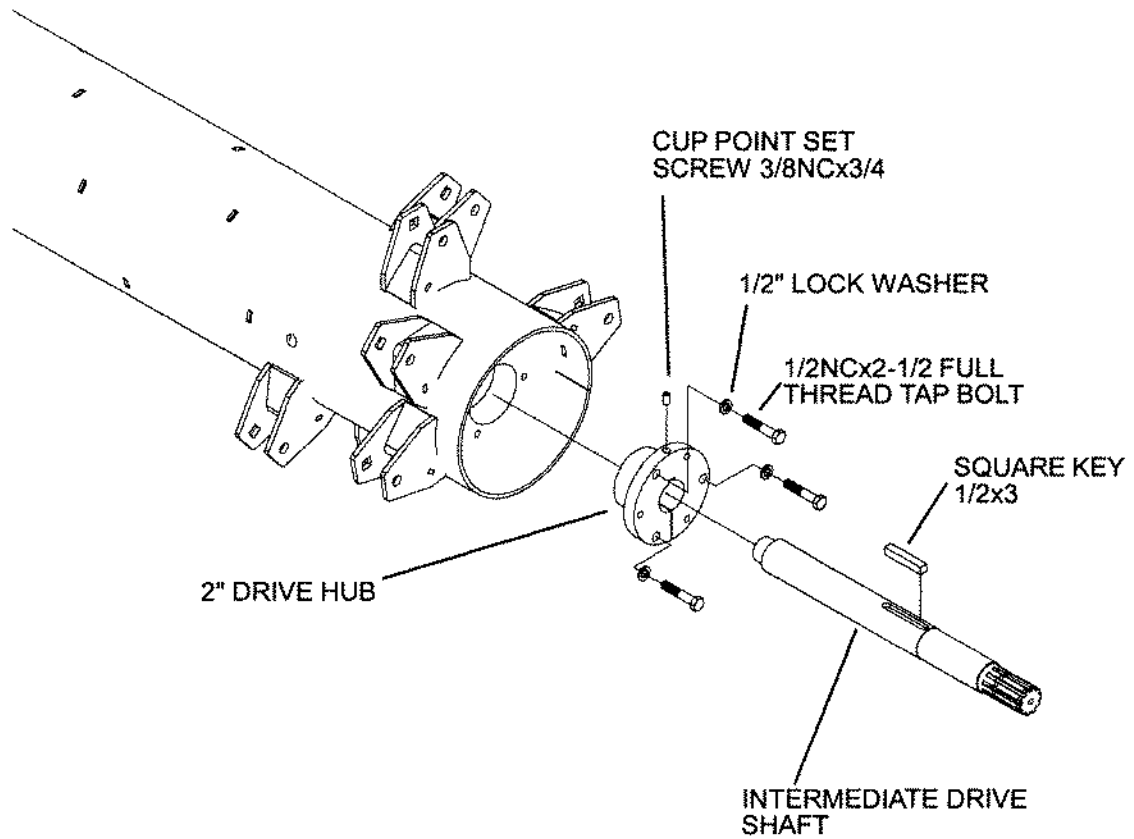
# 30' HANGER BEARING



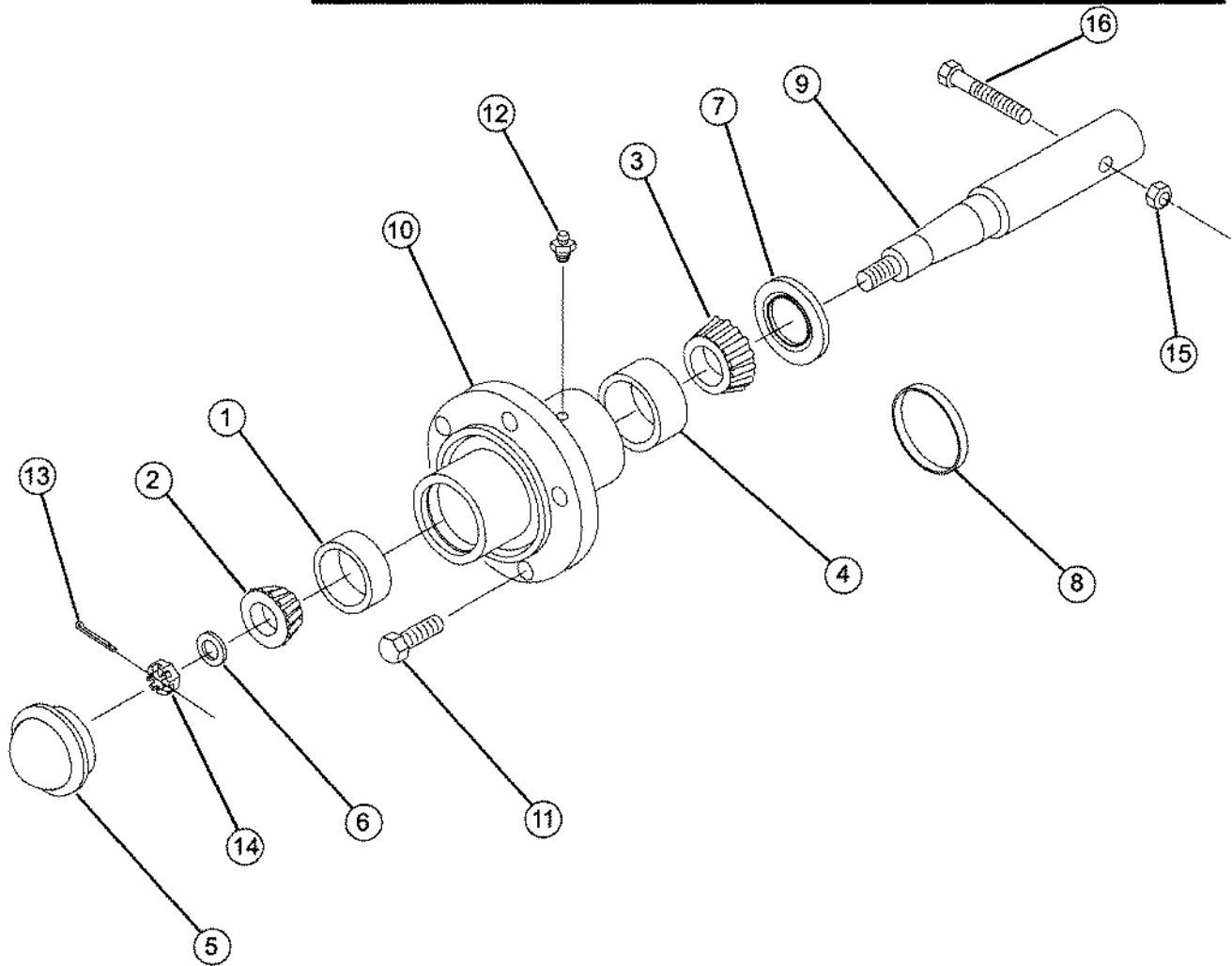
## ASSEMBLY:

- 1.) SLIDE INNER FLAIL TUBE ASSEMBLY ONTO DRIVE HUB - LOCATED ON GEARBOX SHAFT
- 2.) MOUNT BEARING ASSEMBLY TO BEARING PLATE USING 1/2NCx1-3/4 BOLTS, LOCK WASHERS, AND NUTS.
- 3.) SLIDE BEARING ASSEMBLY AND BEARING PLATE ONTO INTERMEDIATE DRIVE SHAFT AND MOUNT BEARING PLATE TO SHREDDER BODY USING 3/4NCx2-1/4 BOLT, LOCK WASHERS, AND NUTS.
- 4.) MAKE SURE INNER FLAIL TUBE IS SLID COMPLETELY ONTO DRIVE HUB - TIGHTEN ECCENTRIC LOCKING COLLAR USING A HAMMER AND PUNCH - ROTATE ECCENTRIC LOCKING COLLAR THE SAME DIRECTION AS FLAIL TUBE ROTATION - TIGHTEN SET SCREWS
- 5.) MOUNT DRIVE HUB ONTO INTERMEDIATE DRIVE SHAFT USING SNAP RINGS - SPREAD GREASE AROUND RUBBER O-RING
- 6.) SLIDE OUTER FLAIL TUBE ASSEMBLY ONTO INTERMEDIATE DRIVE HUB - MOUNT END BEARING PLATE AND BEARING - TIGHTEN ECCENTRIC LOCK COLLAR - ROTATE SAME DIRECTION AS FLAIL TUBE ROTATION - TIGHTEN SET SCREWS.

# INTERMEDIATE DRIVE SHAFT

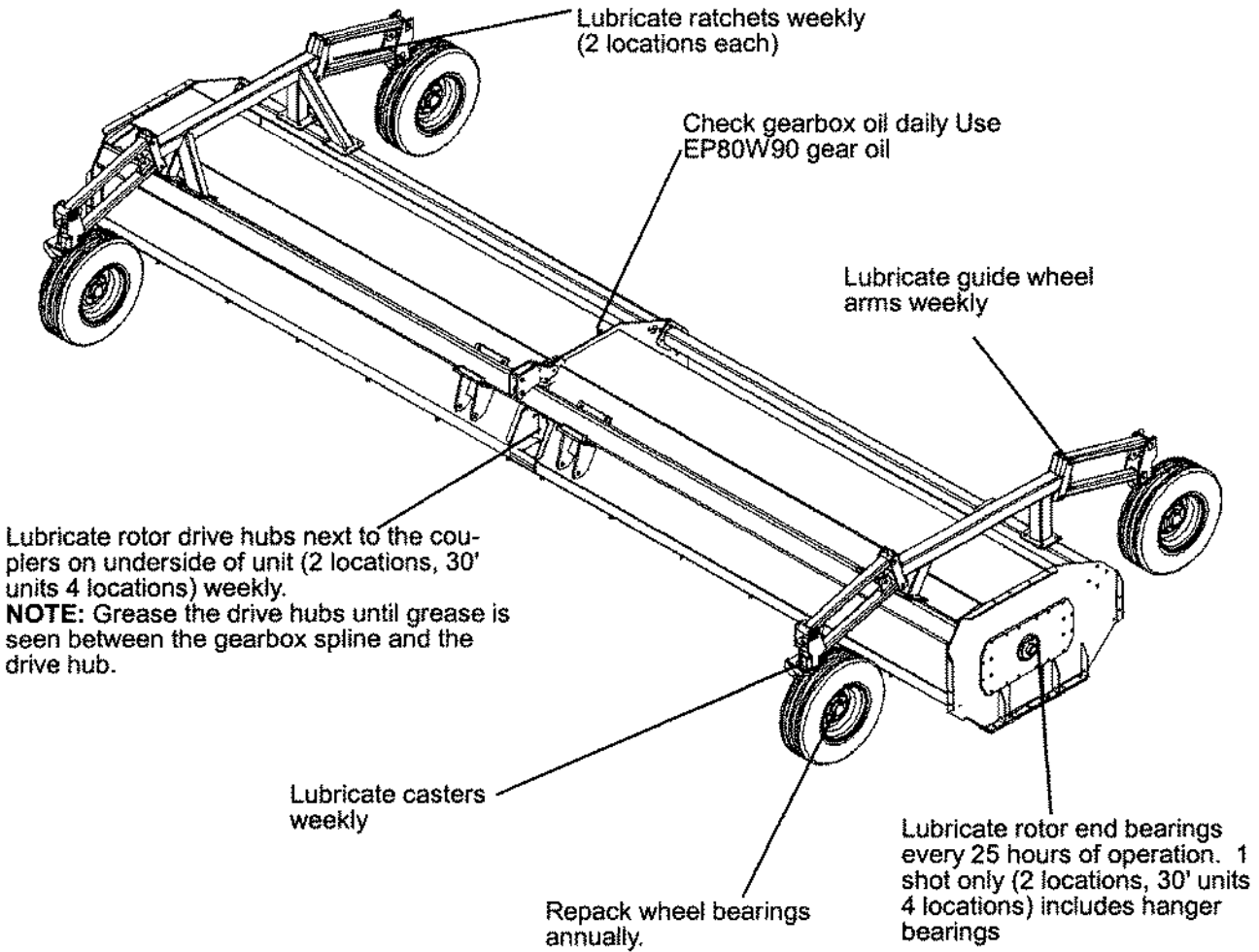


## **6-BOLT HUB & 1-3/4" SPINDLE ASSEMBLY**



ITEM	DESCRIPTION
1	OUTER BEARING CUP
2	OUTER BEARING CONE
3	INNER BEARING CONE
4	INNER BEARING CUP
5	DUST CAP
6	7/8" SPINDLE WASHER
7	TRIPLE LIP SEAL
8	WEAR SLEEVE
9	1-3/4" SPINDLE
10	6-BOLT MACHINED HUB
11	1/2"-20NF WHEEL BOLT
12	1/8" NPT GREASE FITTING
13	3/16" X 1-1/2" COTTER PIN
14	7/8" NF SLOTTED NUT
15	1/2" NC CENTER LOCK HEX NUT
16	1/2" X 3" NC HEX BOLT

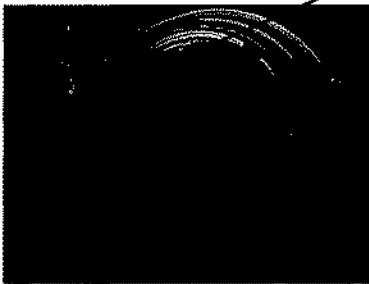
# LUBRICATION



## PTO GREASE POINTS

Lubricate daily

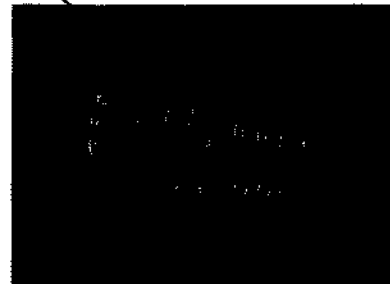
**PULL TYPE ONLY**



**PULL TYPE ONLY**



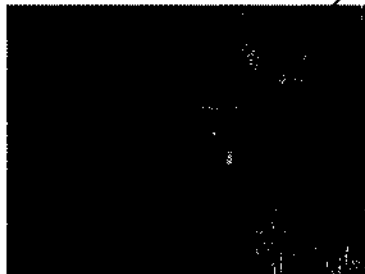
**3-POINT ONLY**



**ALL MODELS**

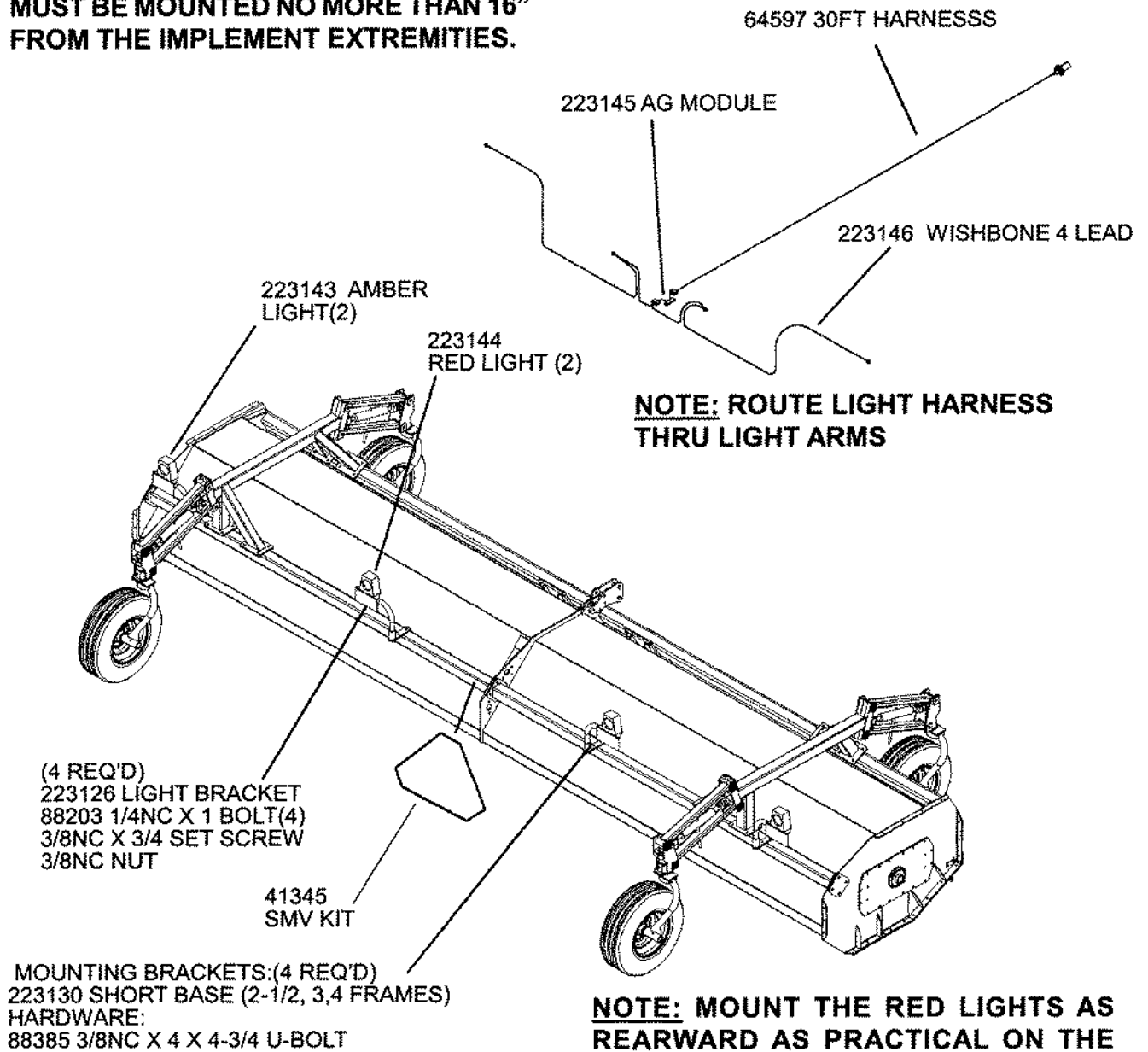


**ALL MODELS**



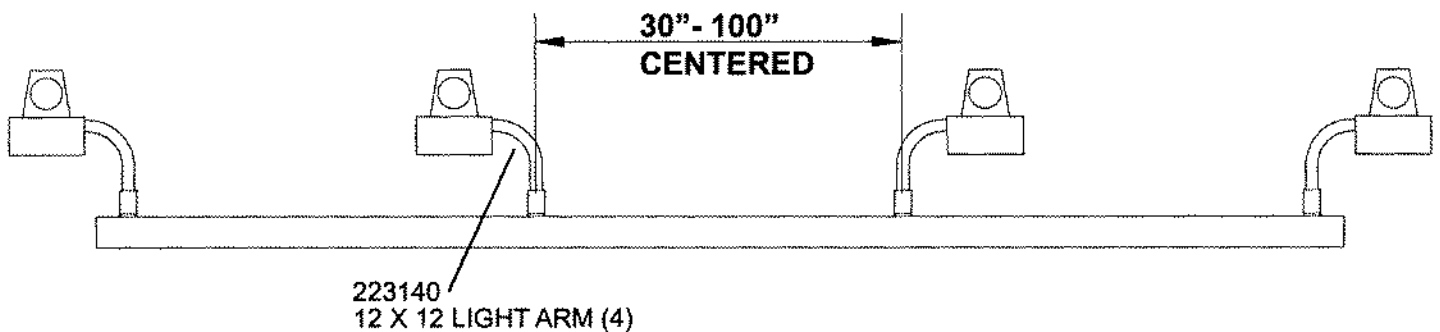
# SAFETY LIGHTS

**NOTE: MOUNT AMBER LIGHTS AS WIDE AS POSSIBLE. THE AMBER LIGHTS MUST BE MOUNTED NO MORE THAN 16" FROM THE IMPLEMENT EXTREMITIES.**

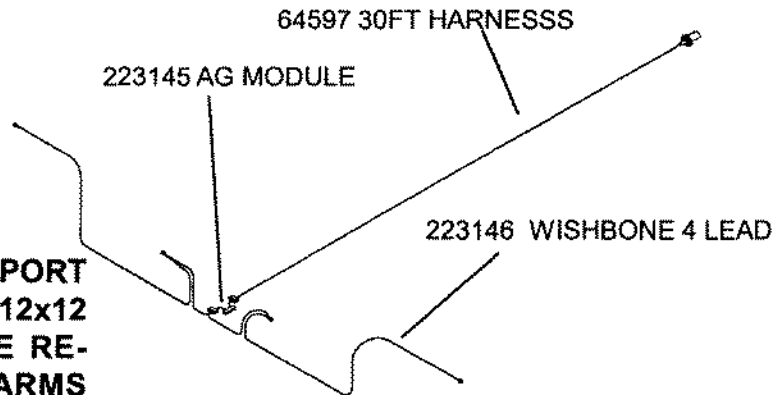


**NOTE: ROUTE LIGHT HARNESS THRU LIGHT ARMS**

**NOTE: MOUNT THE RED LIGHTS AS REARWARD AS PRACTICAL ON THE CENTER FRAME. SPACE EVENLY, 2' TO 5' FROM THE MACHINE CENTER.**

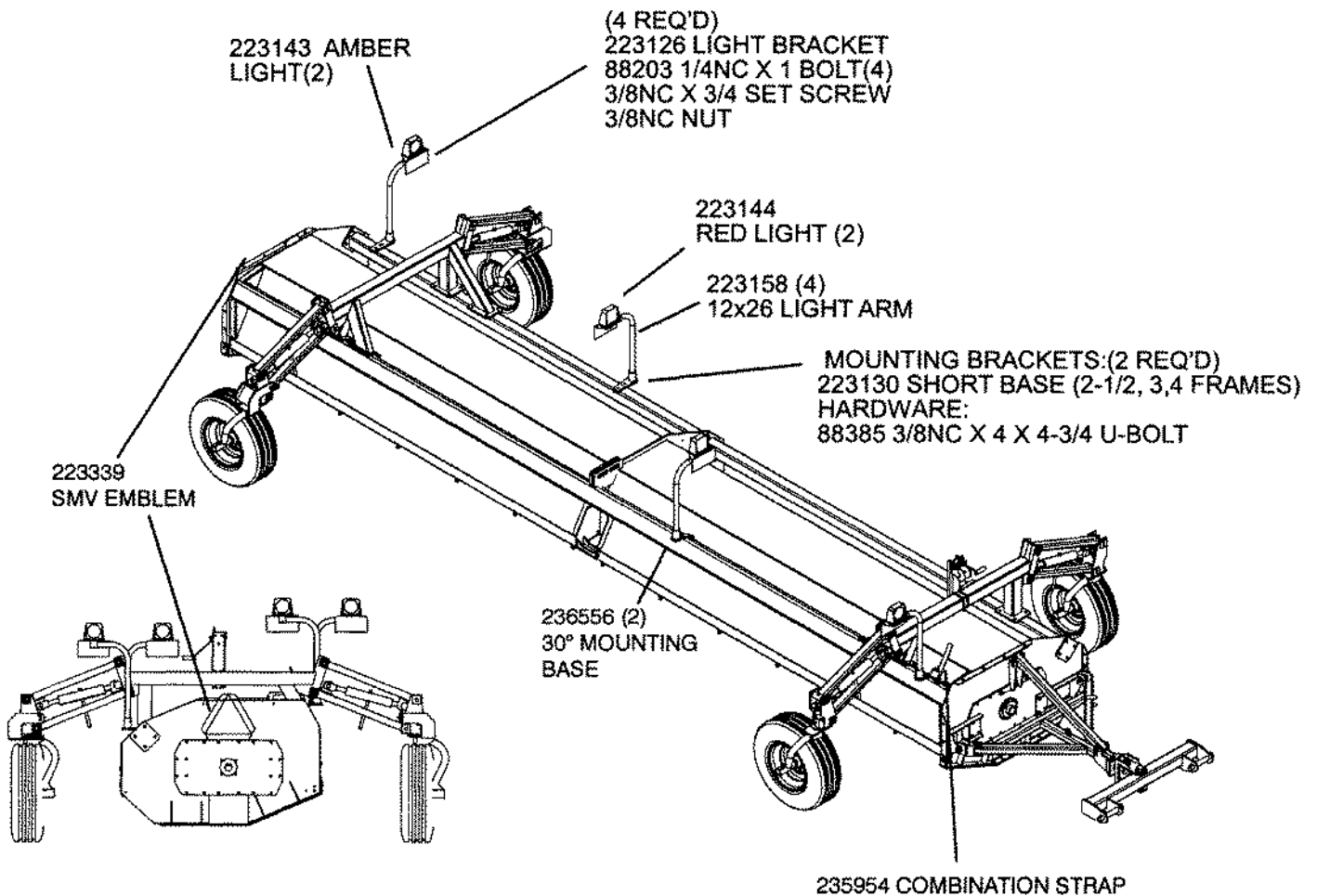


# END TRANSPORT SAFETY LIGHTS



WHEN MOUNTING AN END TRANSPORT HITCH ON EXISTING UNITS, THE 12x12 LIGHT ARMS 223140(4) MUST BE REMOVED AND THE 12x26 LIGHT ARMS ADDED, 223158(4). REMOVE ITEM 223130(2). THIS IS DONE TO KEEP THE LIGHT ARMS RUNNING VERTICAL. MOUNT ALL 4 LIGHTS AS SHOWN. ON UNITS WITH END TRANSPORT HITCH ITEM 235954 IS LOCATED AS SHOWN. TO PREVENT DAMAGE TO LIGHT CORD MAKE SURE IT IS ATTACHED SUCURELY TO SHREDDER BODY.

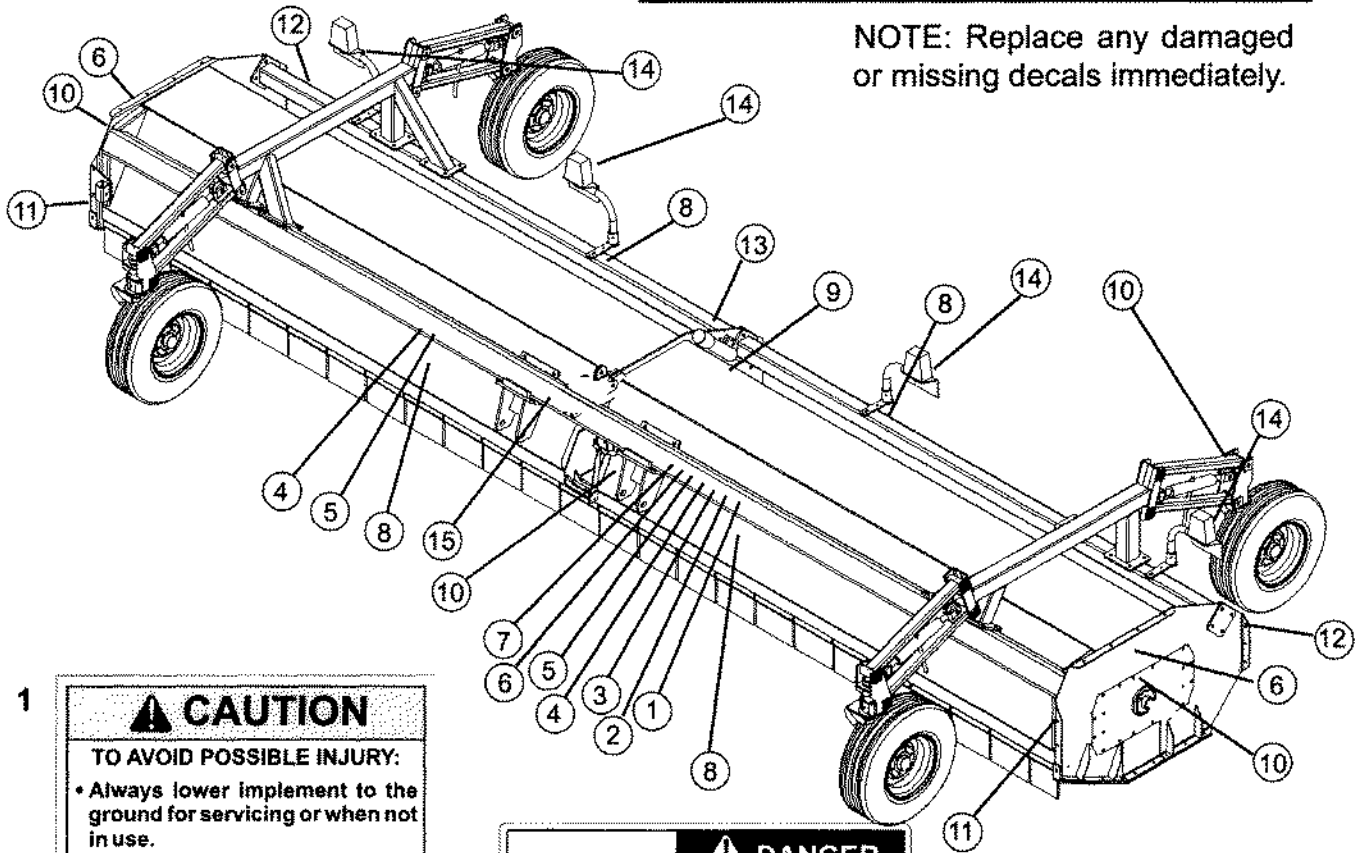
**NOTE: ROUTE LIGHT HARNESS THRU LIGHT ARMS**





# SAFETY DECAL PLACEMENT

NOTE: Replace any damaged or missing decals immediately.



**1**

**CAUTION**

**TO AVOID POSSIBLE INJURY:**

- Always lower implement to the ground for servicing or when not in use.
- Never allow anyone to ride on implement.
- Keep everyone clear of tractor and implement while in use or while tractor is running.

31926

**4**

**DANGER**

**CRUSHING HAZARD**

To prevent serious injury or death:

- Do not stand between implement and moving tractor.
- Stop tractor engine and set park brake before installing pins.

222802

**2**

**CAUTION**

1. Read Operator's Manual before using machine.
2. Stop tractor engine, lower machine to ground, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging or filing.
3. Install and secure all guards before starting.
4. Keep hands, feet, hair and clothing away from moving parts.
5. Do not allow riders.
6. Keep all hydraulic lines, fittings and couplers tight and free of leaks before using.
7. Clean reflectors, SMV and lights before transporting.
8. Install safety locks before transporting or working beneath components.
9. Add extra lights and use pilot vehicle when transporting during times of limited visibility.
10. Use hazard flashers in tractor when transporting.
11. Install safety chain when attaching to tractor.
12. Keep away from overhead electrical lines. Electrocuttion can occur without direct contact.
13. Review safety instructions with all operators annually.

234338

**5**

**DANGER**

**THROWN OBJECT HAZARD**

To prevent serious injury or death:

- Do not operate unless all guards are installed and in good condition.
- Stop blade rotation if bystanders come within several hundred feet.

M690

**3**

**To avoid injury, death or Machine Damage:**

- Avoid unsafe operation or maintenance.
- Make sure tractor engine is turned off before performing maintenance.
- Do not operate or work on this machine without reading and understanding the operator's manual.
- If manual is lost, contact your nearest dealer for a new manual.

62503 SERVICE DECAL

**6**

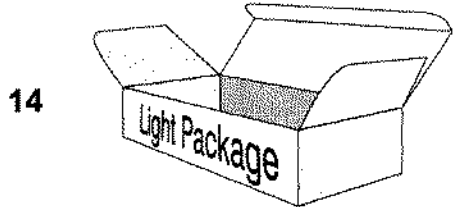
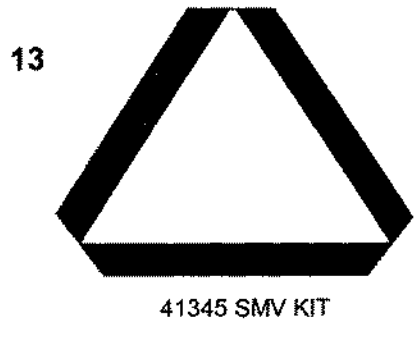
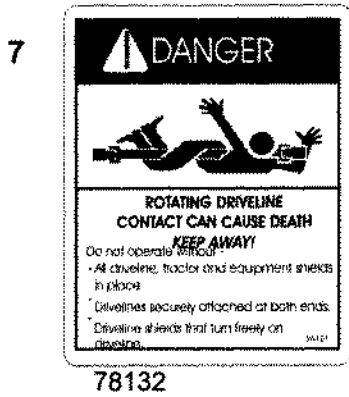
**DANGER**

**ROTATING BLADE HAZARD**

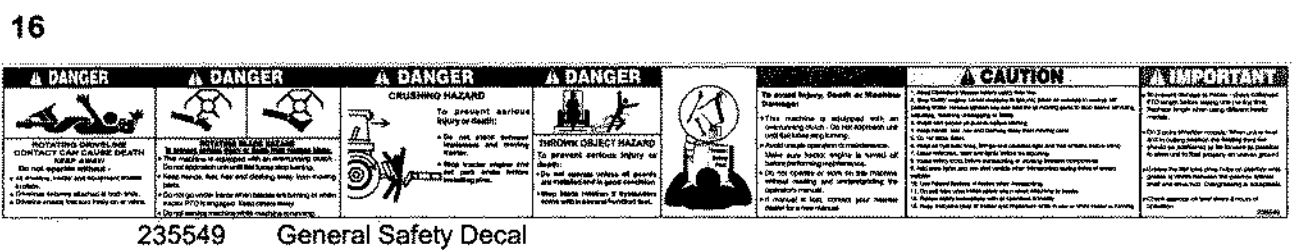
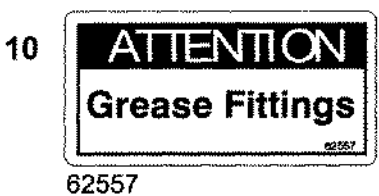
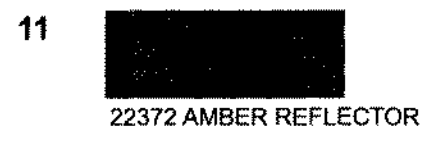
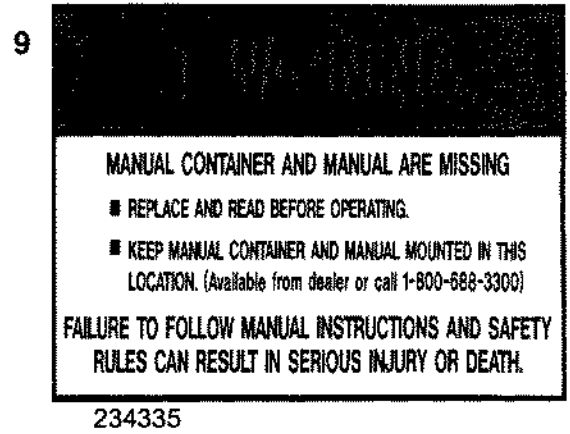
To prevent serious injury or death from rotating blade:

- Do not go under frame when blades are turning or tractor PTO is engaged. Keep others away.
- Do not service machine while machine is running.
- Keep hands, feet, hair and clothing away from moving parts.

234339



236559 CLEARANCE LIGHT PACKAGE (STANDARD)  
236559 CLEARANCE LIGHT PACKAGE (END TRANSPORT MODELS ONLY)



Item 16 to be used in place of items: 1,2,3,4,5,6 and 7.

**NOTE: Replace any damaged or missing decals immediately.**

