



# ASSEMBLY INSTRUCTIONS

## WIL-RICH QUAD 4 CHISEL PLOW

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**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 AND 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.

ADDRESS INQUIRIES TO:

WIL-RICH

PO BOX 1030

WAHPETON, ND 58074

PH (701)642-2621 FAX (701)642-3372

## ASSEMBLY INFORMATION

Remove all wires and arrange the parts conveniently.

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.

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.



**THIS SYMBOL USED TO CALL YOUR ATTENTION TO INSTRUCTIONS CONCERNING YOUR PERSONAL SAFETY. BE SURE TO OBSERVE AND FOLLOW THESE INSTRUCTIONS**

	GRADE 2			GRADE 5			GRADE 8		
<b>TORQUE IN FOOT POUNDS</b>									
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			
UNCGR2	18	45	88	160	252	320			
UNCGR5	30	68	140	240	380	544			
UNCGR8	40	100	196	340	528	792			
UNFGR2	21	51	102	178	272	368			
UNFGR5	32	70	168	284	392	572			
UNFGR8	46	112	216	388	792	840			

TORQUE EPS

### CAUTION

TO AVOID INJURY AND/OR MACHINE DAMAGE:

- Refer to Operator's Manual for safety instructions.
- Do not stand or climb on machine when operating.
- Use clean hazard flashers and SMV sign when transporting.
- Observe highway traffic regulations.

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**CAUTION**  
FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.

• Just before and during operation be sure no one is on or around the implement.

• Before activating the hydraulic system, check hoses for proper connections.

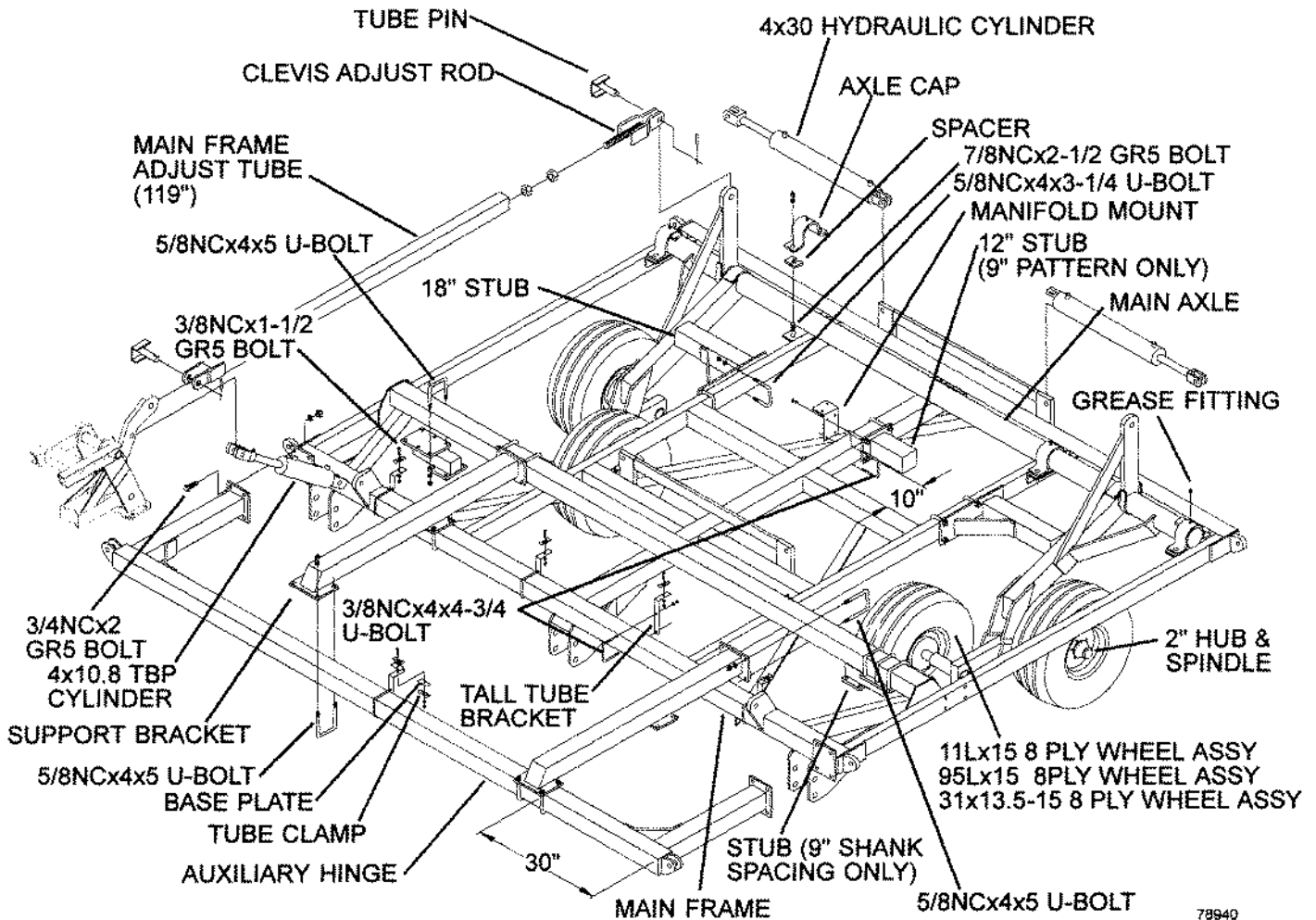
• Before lowering the wings for the first time, make sure the entire system has been charged with oil.

• With wings down always install hydraulic cylinder channel lock(s) for transporting.

# 13' MAIN FRAME

Note: Adequately support frame during assembly (allow sufficient ground clearance for shank installation).

Note: See shank placement pages for exact locations of all add-on stubs.



Note: Correct assembly of axle begins with proper shimming of axle cap about axle tube.

A properly shimmed axle should pivot freely when all axle cap bolts are completely tightened, without allowing the axle tube to shift in the axle cap when load is applied and removed.

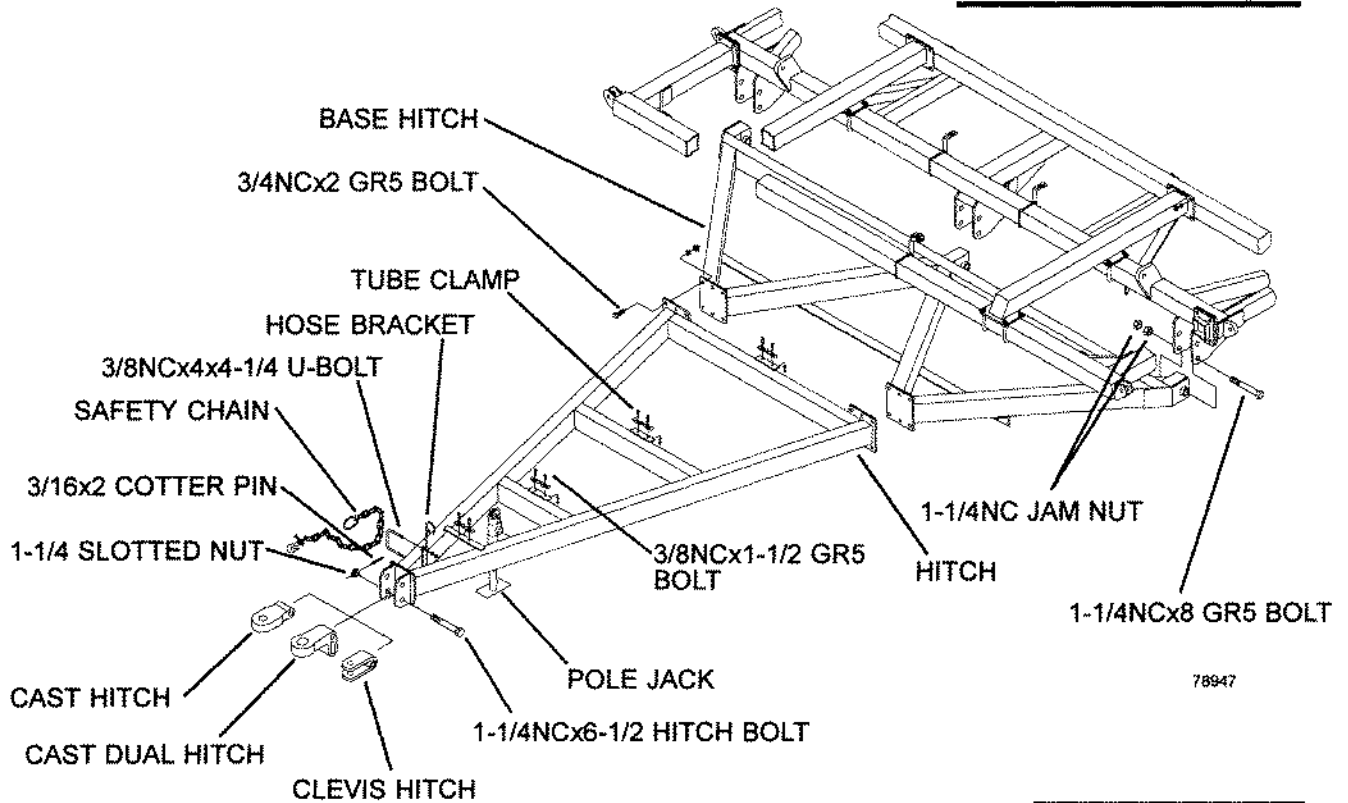
Properly shimmed axles will eliminate the possibility of uneven loads caused by clamping axle tubes and to eliminate unnecessary stress loads on axle assemblies.

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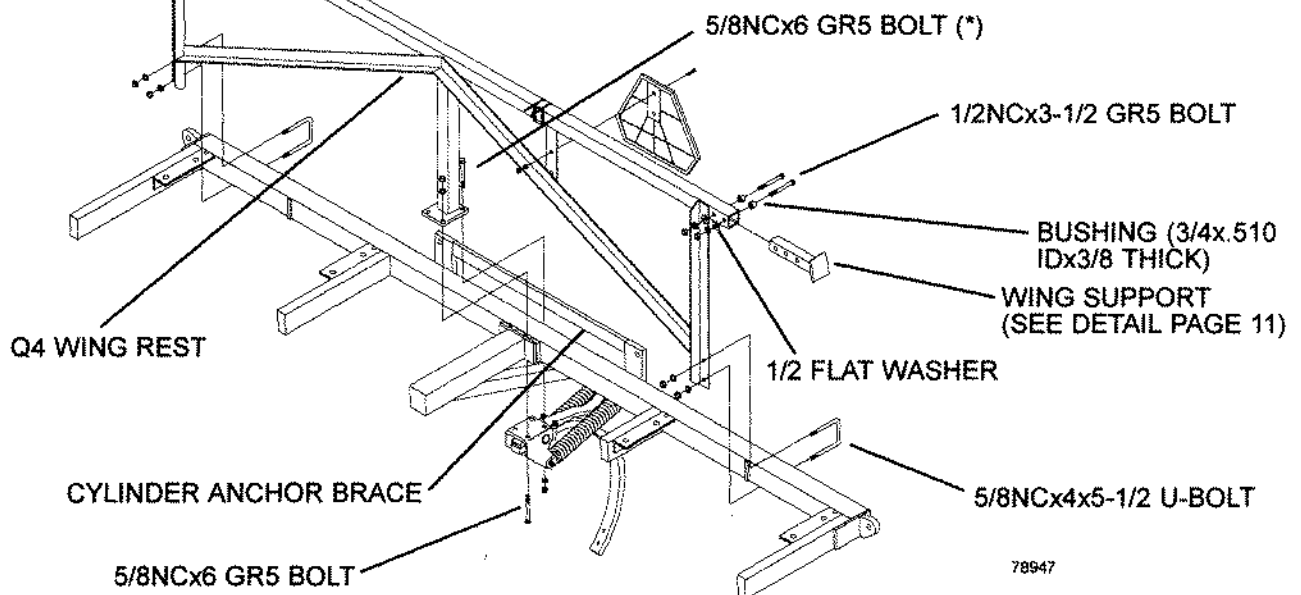
## 13' MAIN POLE



## WING REST

Note: Install *back two* (\*) 5/8NCx6 bolts into wing rest before lifting Wing Rest into position.

While installing Wing Rest, tilt the top of the Wing rest forward to slide bolts (\*) under cylinder anchor brace.

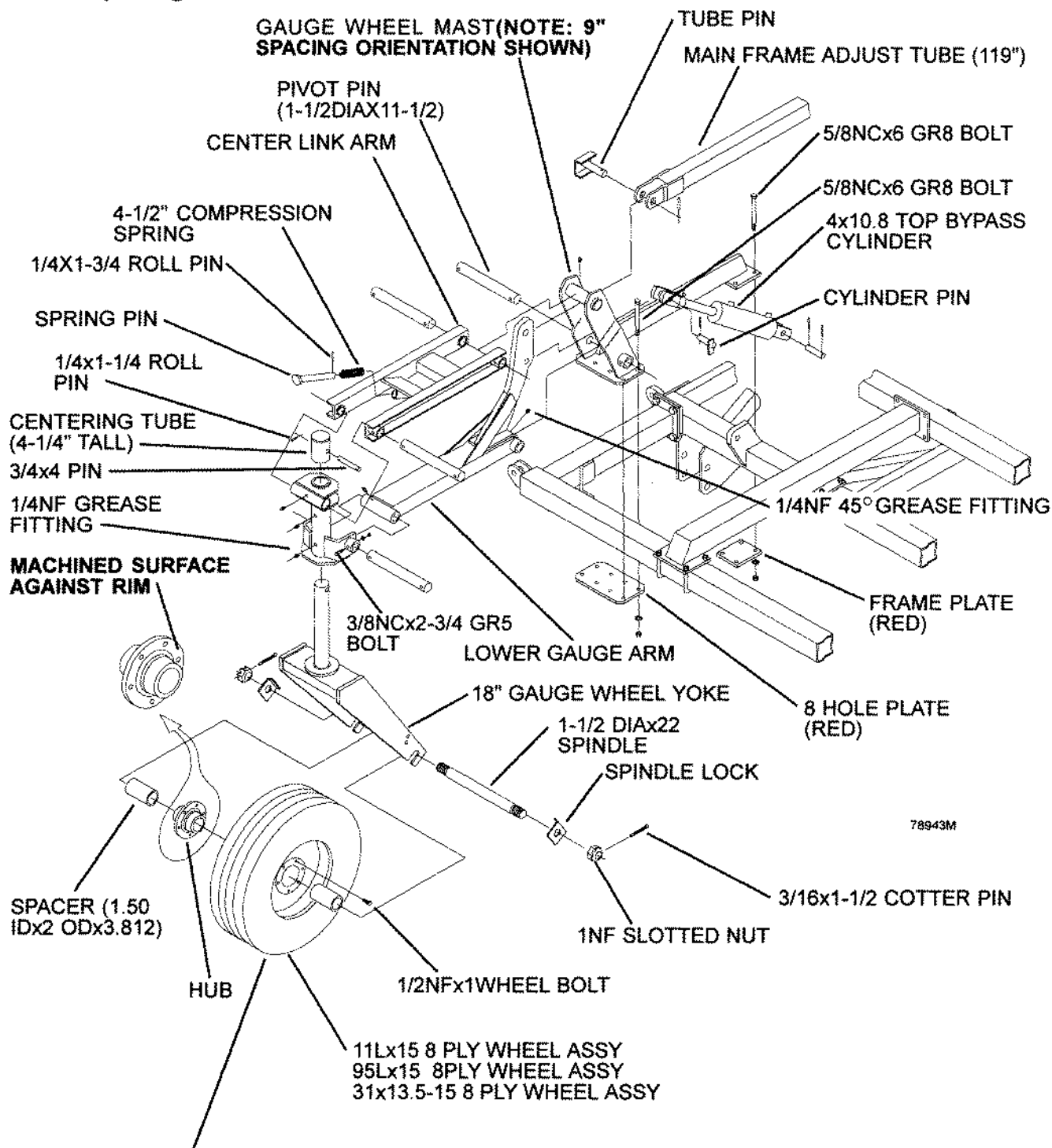


	<p><b>⚠ DANGER</b> STAND CLEAR AT ALL TIMES:</p>	<ul style="list-style-type: none"> <li>• Never walk or stand in the path of the wings.</li> </ul>	<ul style="list-style-type: none"> <li>• Completely lower the wings before performing service or adjustments.</li> </ul>	<ul style="list-style-type: none"> <li>• Failure to do so will result in serious injury or death.</li> </ul>	<p>ASSEMBLE SO DECAL IS READ FROM THE IMPLEMENT REAR.</p>
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# 10.8" GAUGE WHEEL - MAIN FRAME ONLY

(FRONT RIGHT HAND CORNER SHOWN)

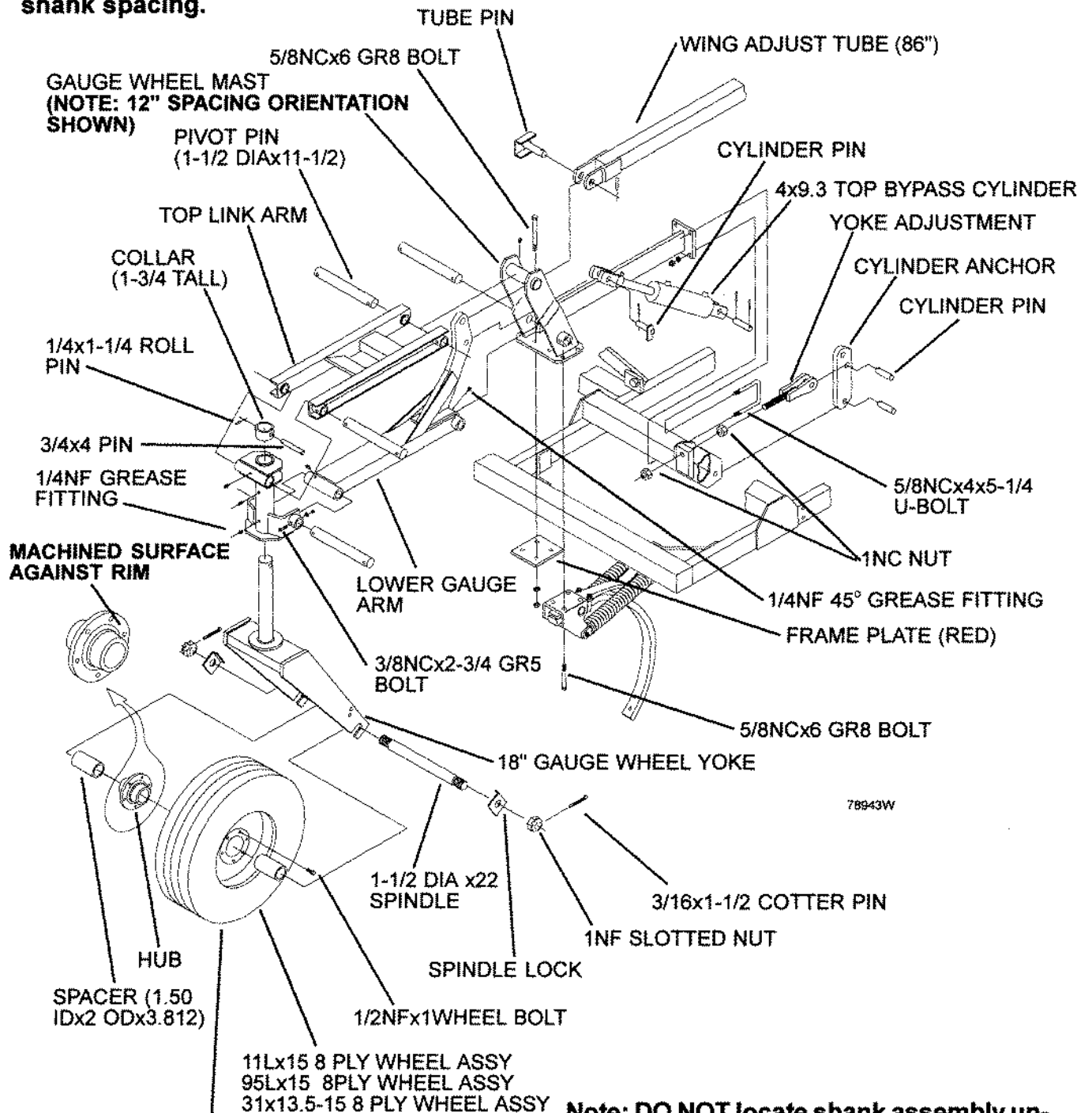
**Note: See shank placements for correct orientation of gauge wheel mast. Lefts and rights are dependent on 9" or 12" shank spacing.**



**Note: Wheel must be centered in yoke assembly.**

# 9.3" GAUGE WHEEL - WINGS ONLY

**Note: See shank placements for correct orientation of gauge wheel mast. Lefts and rights are dependent on 9" or 12" shank spacing.**

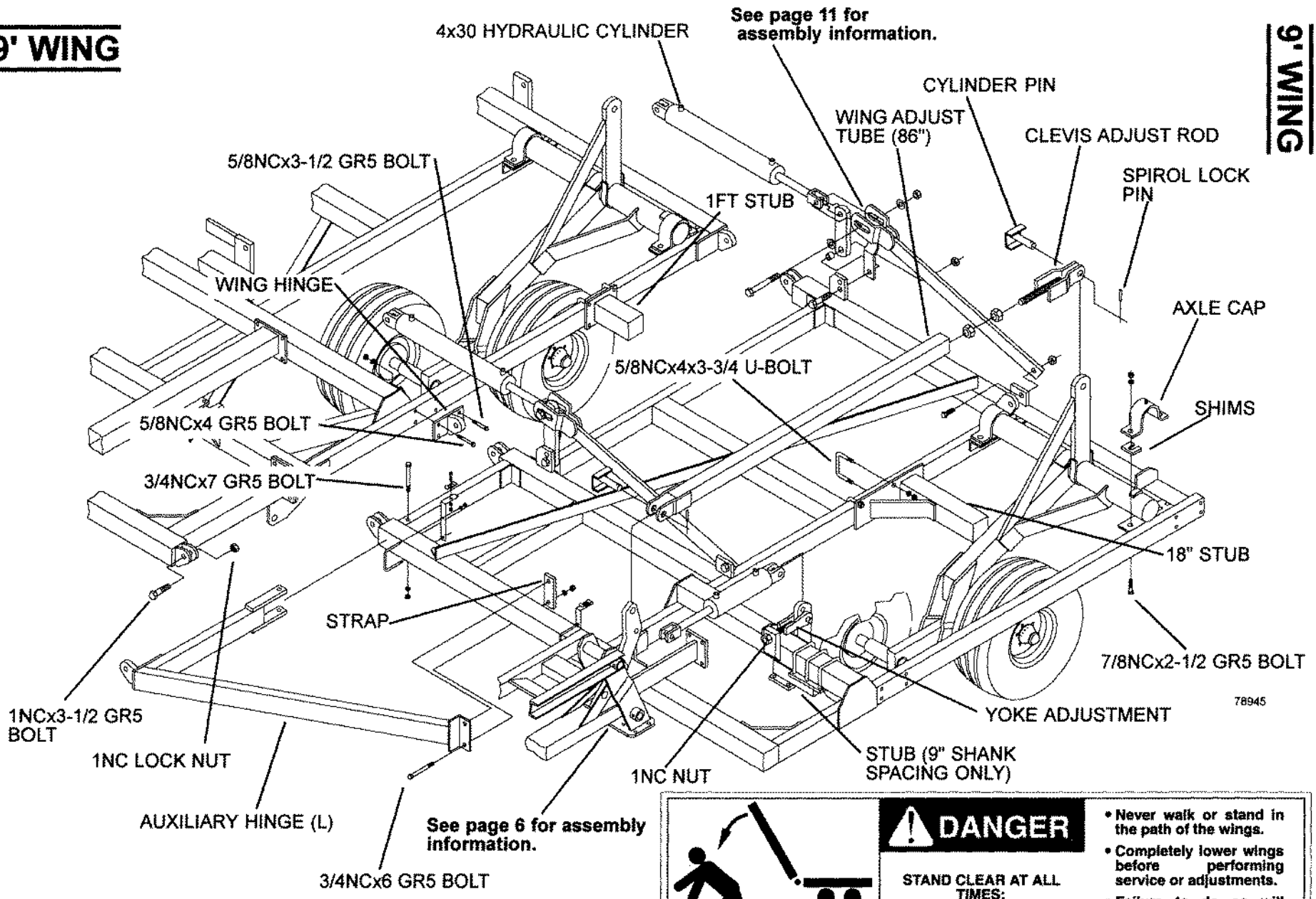


**Note: Wheel must be centered in yoke assembly.**

**Note: DO NOT locate shank assembly under the gauge wheel mast brace. Tripping of the shank assembly may damage mast brace and/or shank assembly.**

# 9' WING

# 9' WING



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See page 6 for assembly information.

See page 11 for assembly information.



**! DANGER**

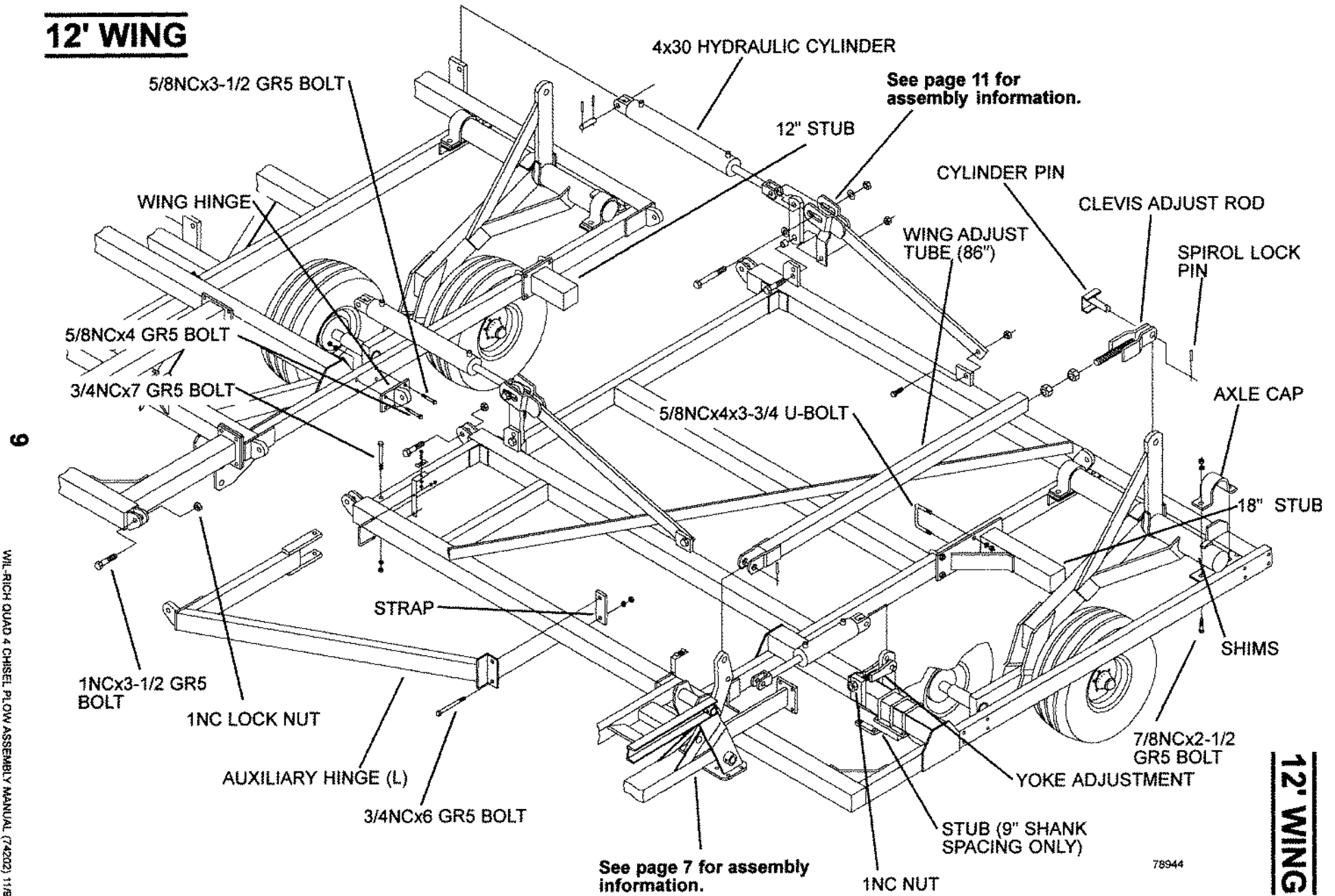
STAND CLEAR AT ALL TIMES:

- Never walk or stand in the path of the wings.
- Completely lower wings before performing service or adjustments.
- Failure to do so will result in serious injury.

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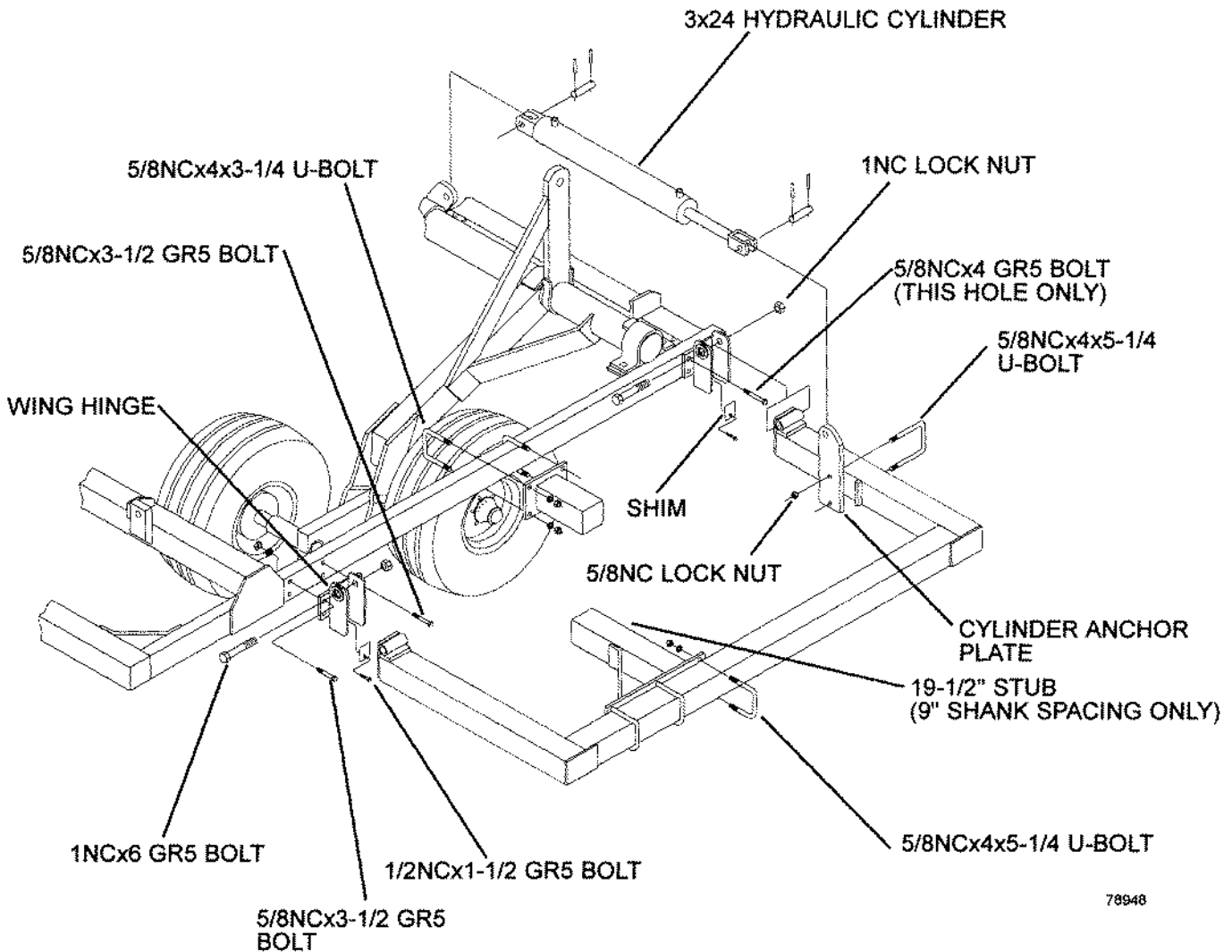


# 12' WING



# 3FT WING

Note: See shank placement pages for exact location of add-on stubs.



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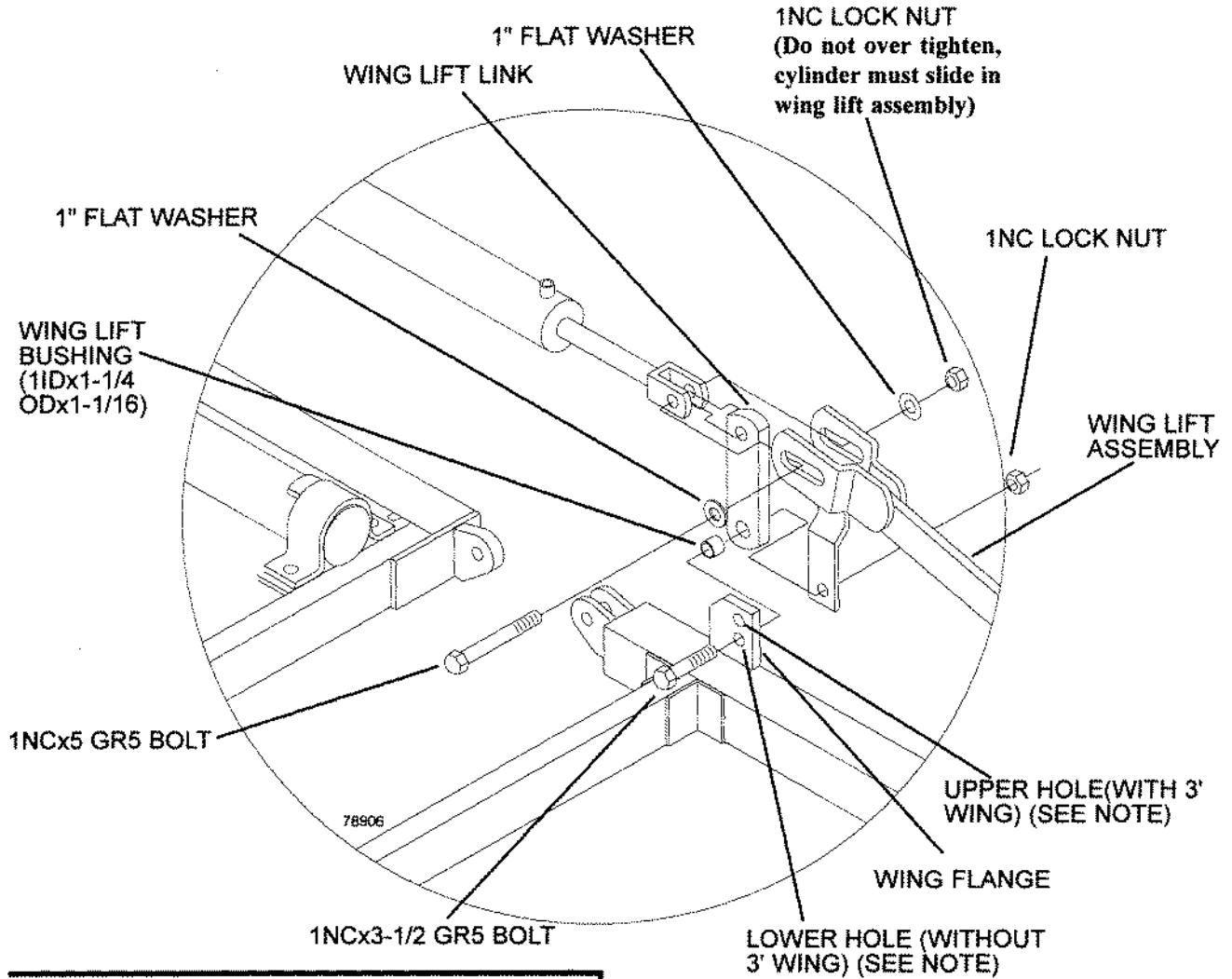


**! DANGER**

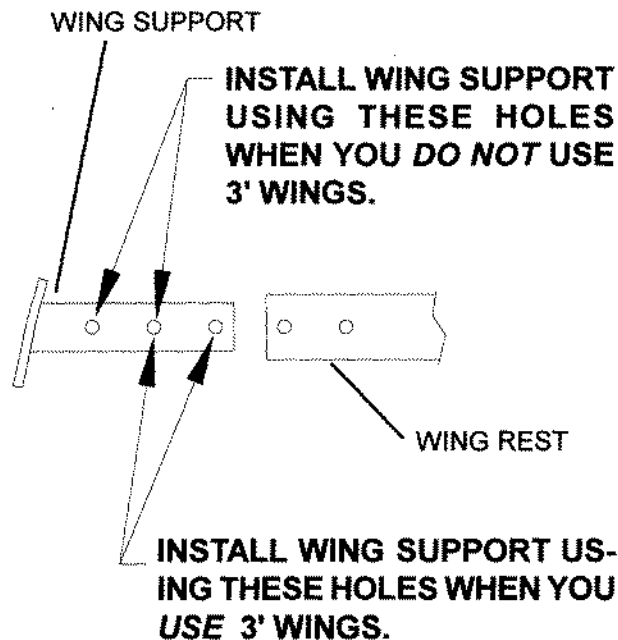
**STAND CLEAR AT ALL TIMES:**

- Never walk or stand in the path of the wings.
- Completely lower wings before performing service or adjustments.
- Failure to do so will result in serious injury

# WING LIFT COMPONENTS



## WING SUPPORT MOUNTING



### IF YOU ARE NOT USING A 3' OUTER WING

Note: Assemble Wing Lift Link & 1NCx3-1/2 GR5 Bolt in the bottom hole of the wing flange.

### IF YOU ARE USING A 3' OUTER WING

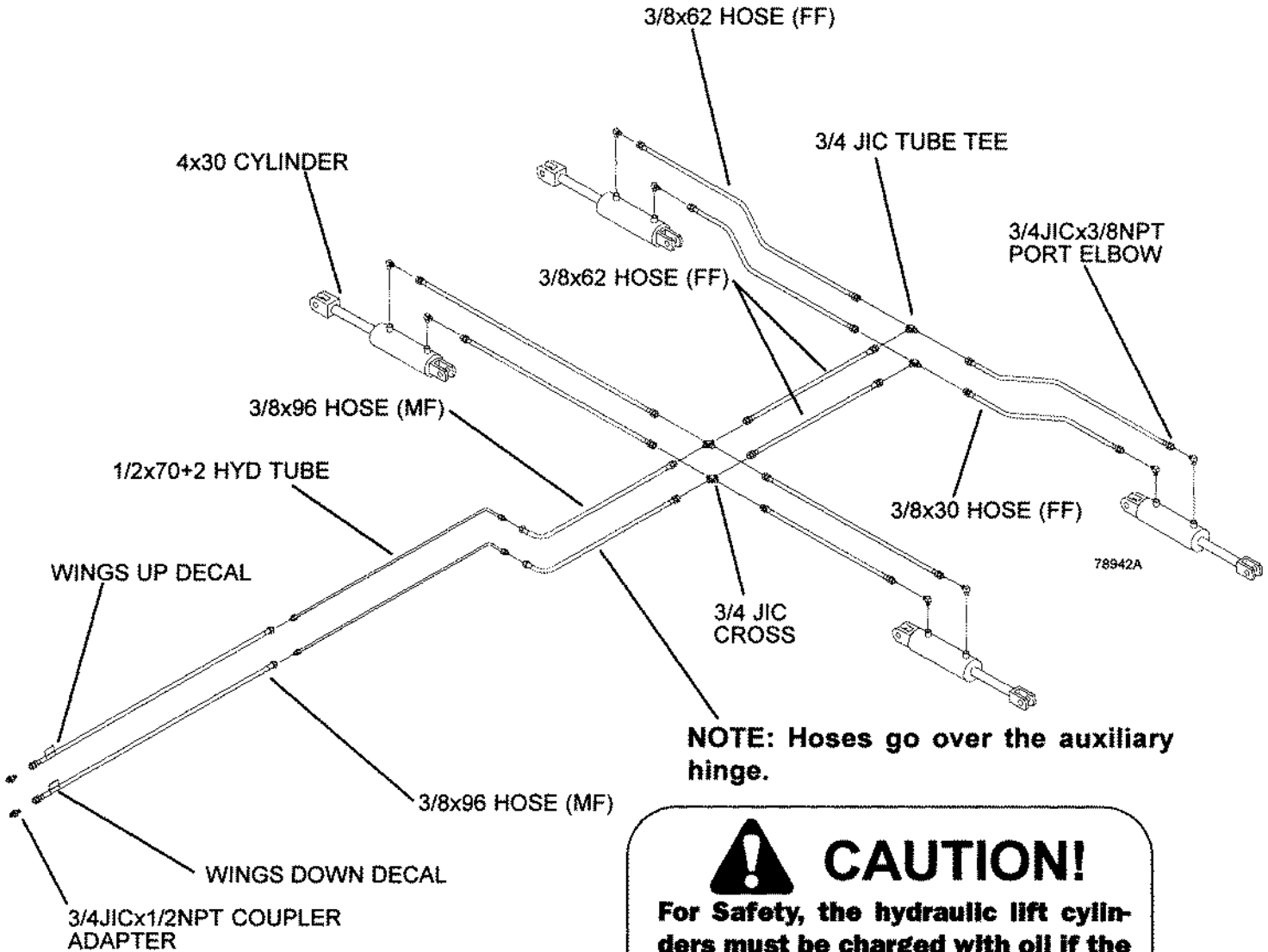
Note: Assemble Wing Lift Bushing & 1NCx3-1/2 GR5 Bolt in the top hole of the wing flange.

# WING LIFT HYDRAULICS

Note: Hydraulic pipe compound should be used to prevent leakage on all pipe threads (cylinder ports only)

Torque all hoses 20 to 40 foot pounds.  
Do not over tighten.

Note: Always make sure wing lift cylinders have an integral restrictor.



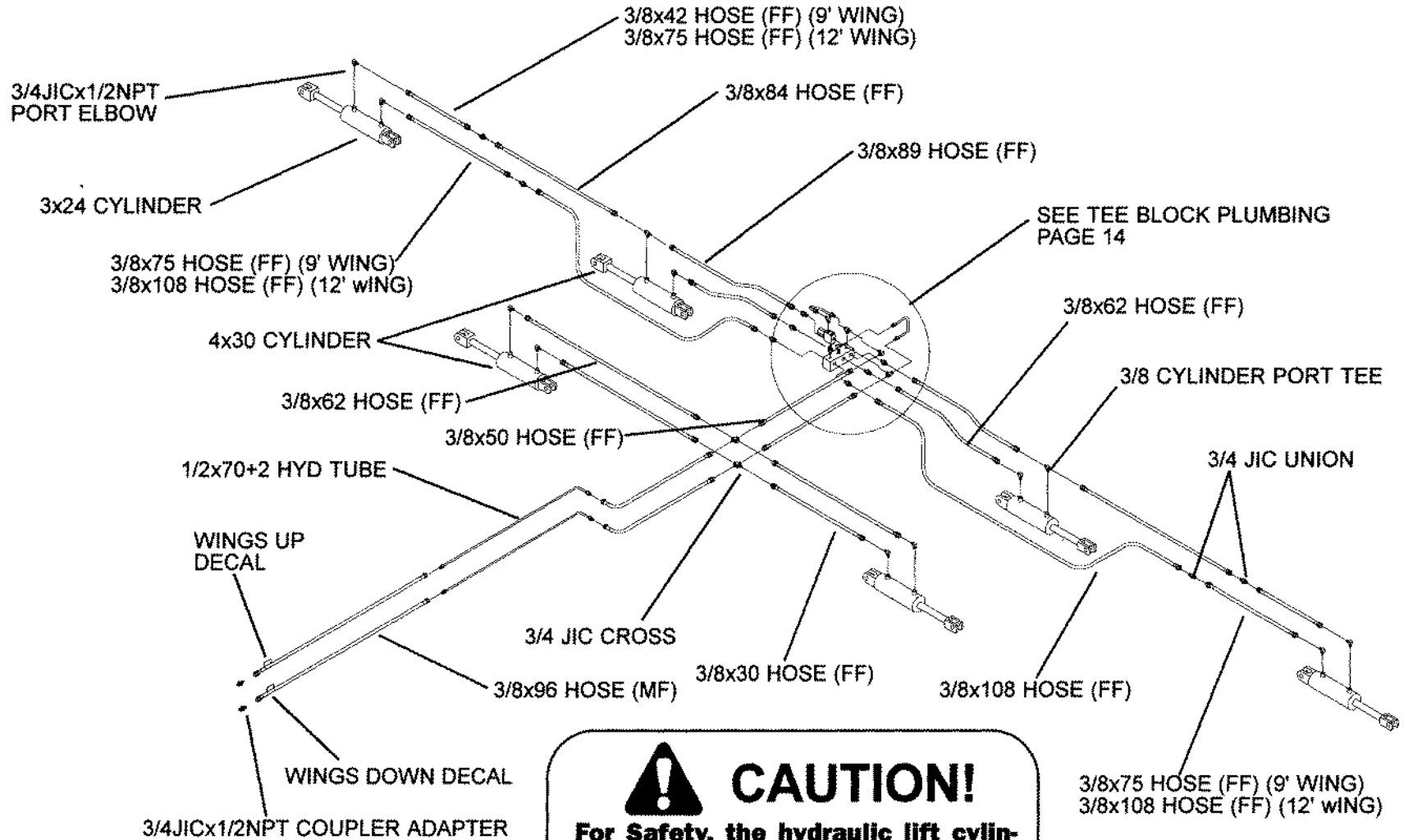
NOTE: Hoses go over the auxiliary hinge.

**CAUTION!**

**For Safety, the hydraulic lift cylinders must be charged with oil if the machine is going to be stored or transported with the wings raised.**

<p><b>CAUTION</b></p> <p>FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.</p>	<ul style="list-style-type: none"> <li>• Just before and during operation be sure no one is on or around the implement.</li> <li>• Before lowering the wings for the first time, make sure the entire system has been charged with oil.</li> <li>• Before activating the hydraulic system, check hoses for proper connections.</li> <li>• With wings down always install hydraulic cylinder channel lock(s) for transporting.</li> </ul>
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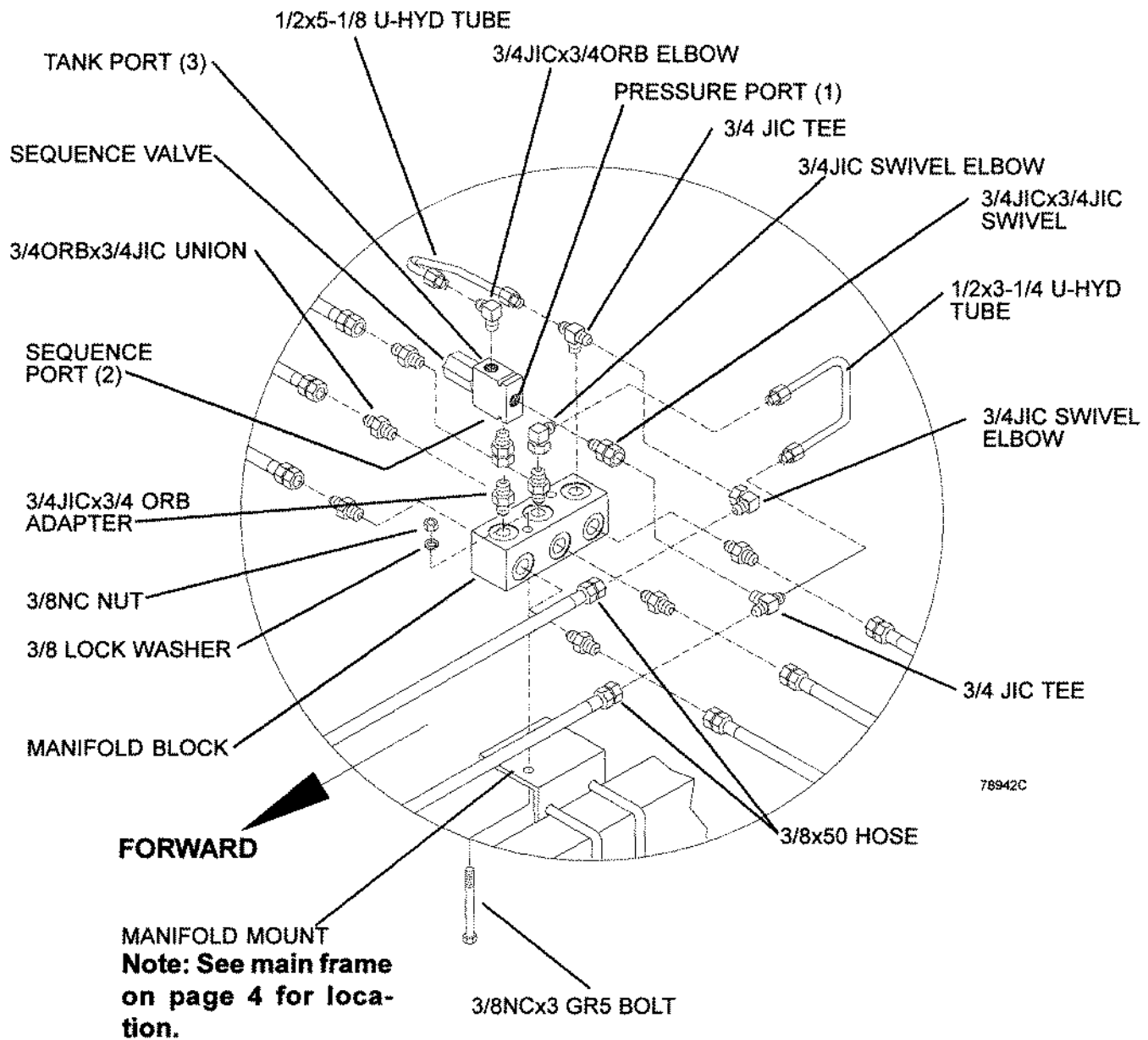
# WING LIFT HYDRAULICS W/ 3' OUTER WING




**CAUTION!**  
 For Safety, the hydraulic lift cylinders must be charged with oil if the machine is going to be stored or transported with the wings raised.

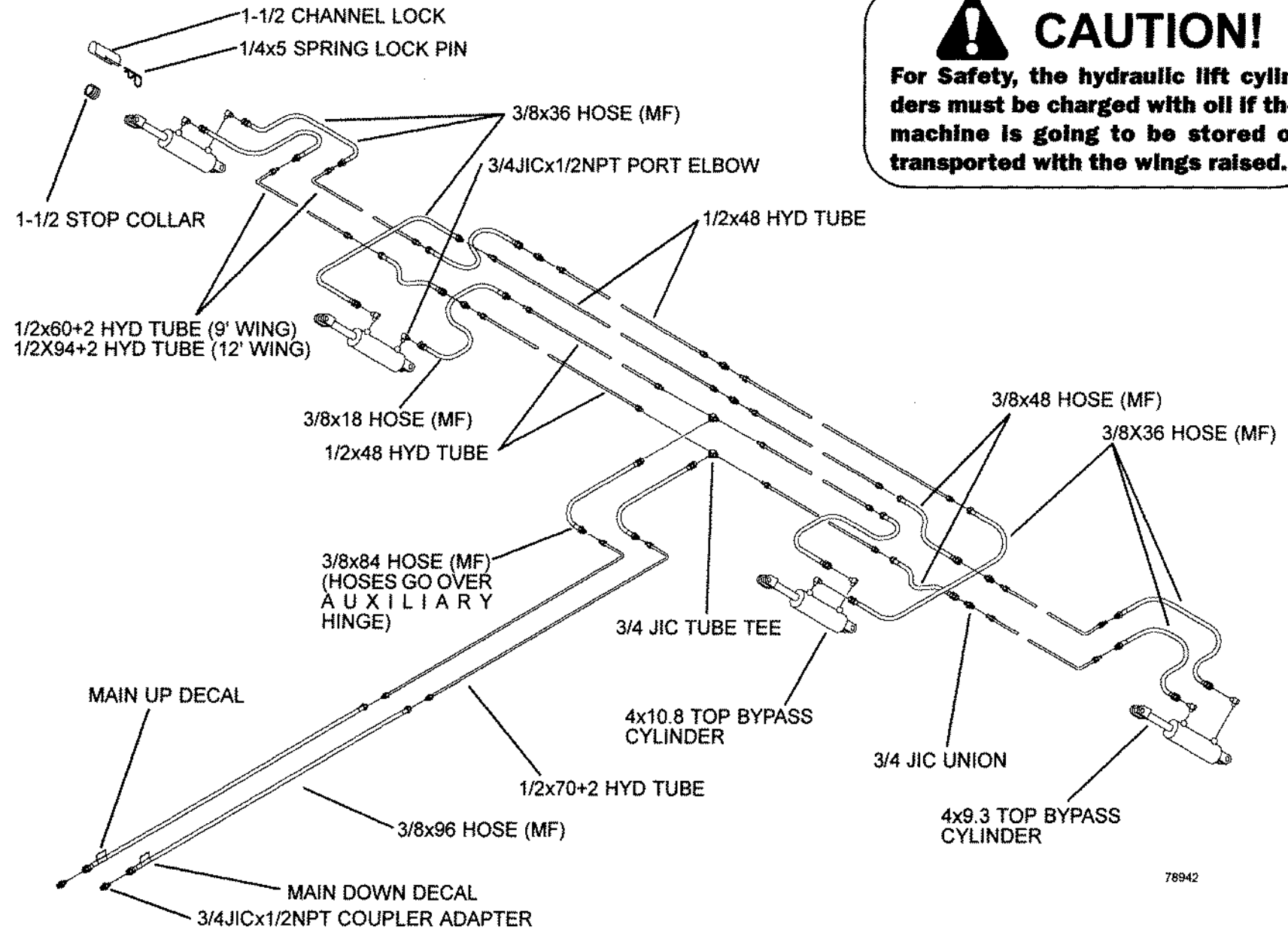
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# TEE BLOCK PLUMBING FOR 3' OUTER WING

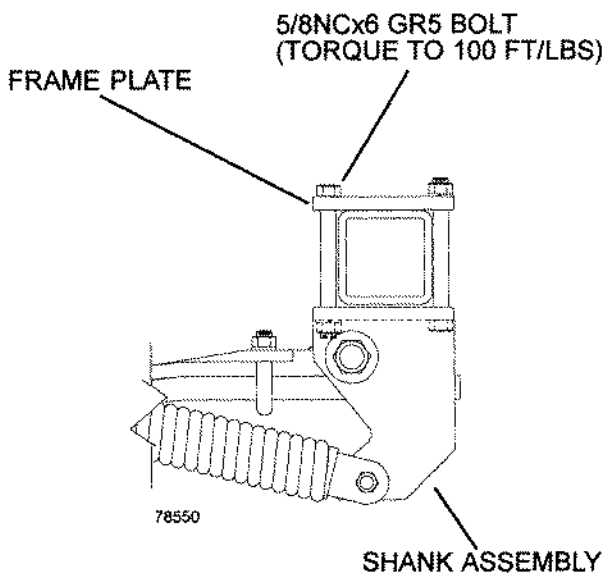


 <b>CAUTION</b>	<ul style="list-style-type: none"> <li>• Just before and during operation be sure no one is on or around the implement.</li> <li>• Before activating the hydraulic system, check hoses for proper connections.</li> </ul>	<ul style="list-style-type: none"> <li>• Before lowering the wings for the first time, make sure the entire system has been charged with oil.</li> <li>• With wings down always install hydraulic cylinder channel lock(s) for transporting.</li> </ul>
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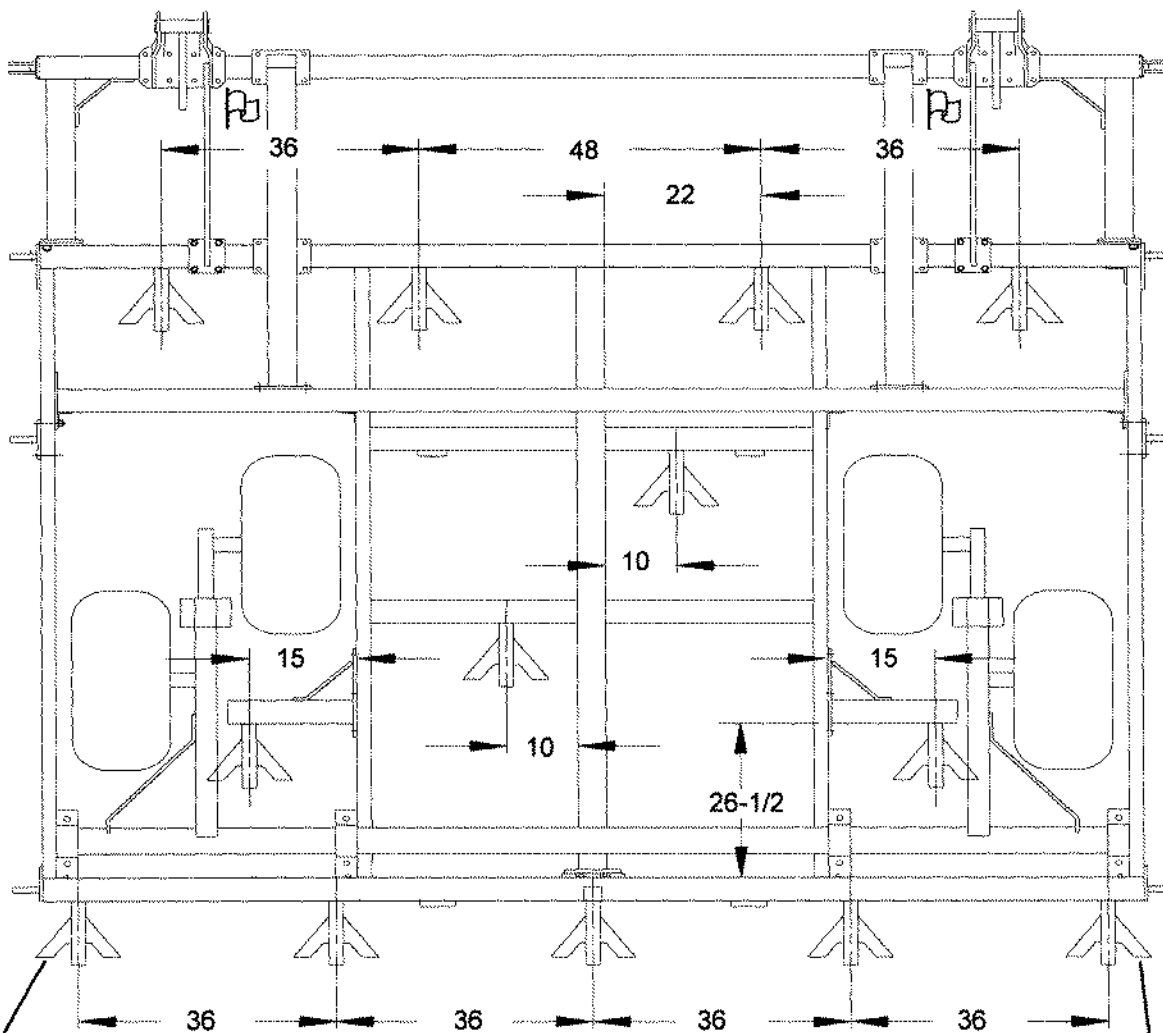
# SHANK ASSEMBLY



1. For ease of installation loosely assemble the frame plate to the shank assembly with the two rear bolts (Note direction of bolts).
2. Slide entire assembly onto frame then install front two mounting bolts (shank should then hang by itself).
3. To allow for tripping, shank assembly must have a minimum of five inches side clearance, measured from the center of the shank assembly.
4. When proper location of the shank assembly is reached tighten all four mounting bolts securely.

**Note:** (F) Denotes the gauge wheel mast that must be used for this specific shank configuration.

**13 FT MAIN FRAME  
12" Spacing**



**Note:** Mounting bolts for this shank must have the bolt heads installed up.

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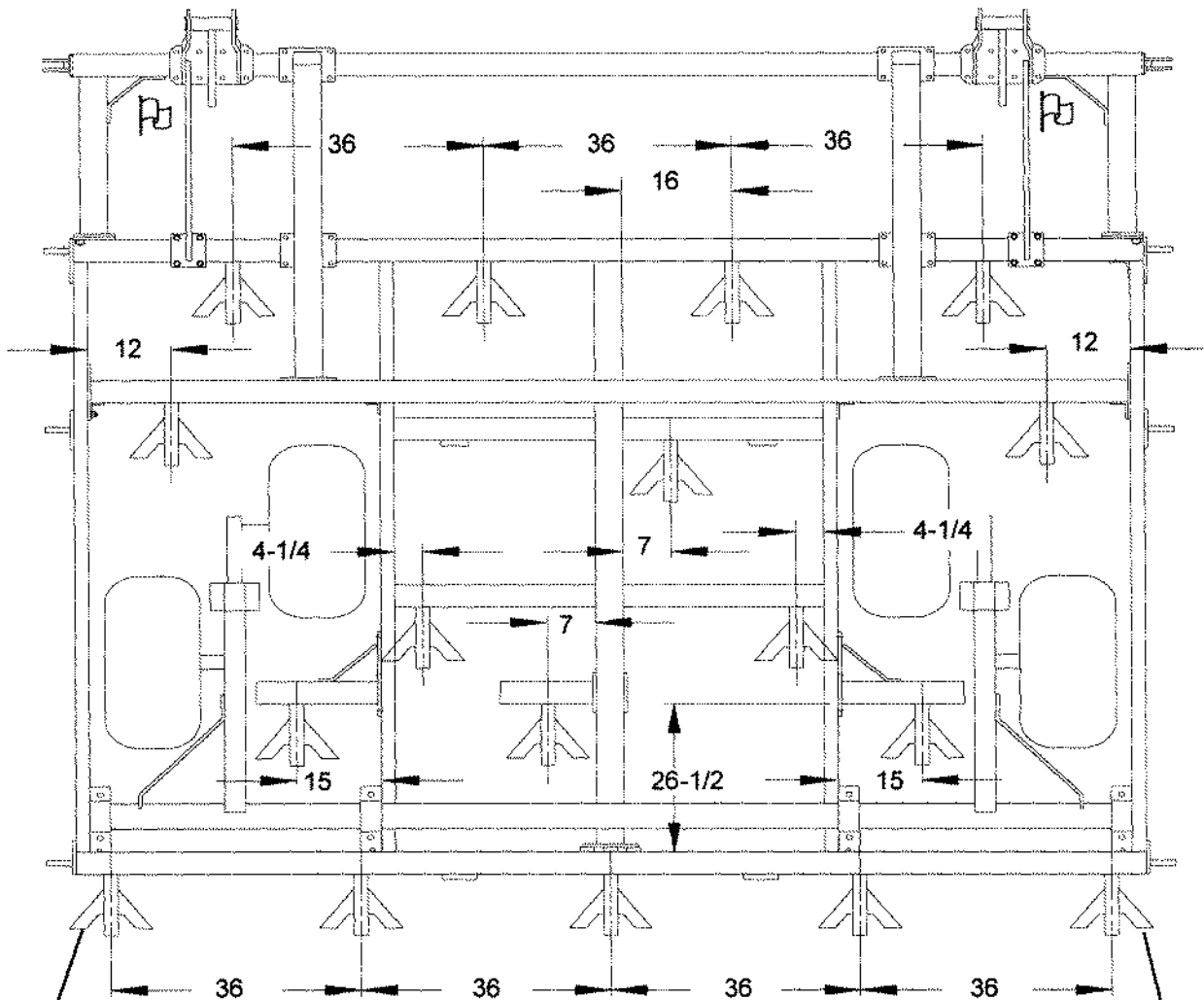
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# SHANK PLACEMENT

13 FT MAIN FRAME  
9" Spacing

Note: (R) Denotes the gauge wheel mast that must be used for this specific shank configuration.



Note: Mounting bolts for this shank must have the bolt heads installed up.

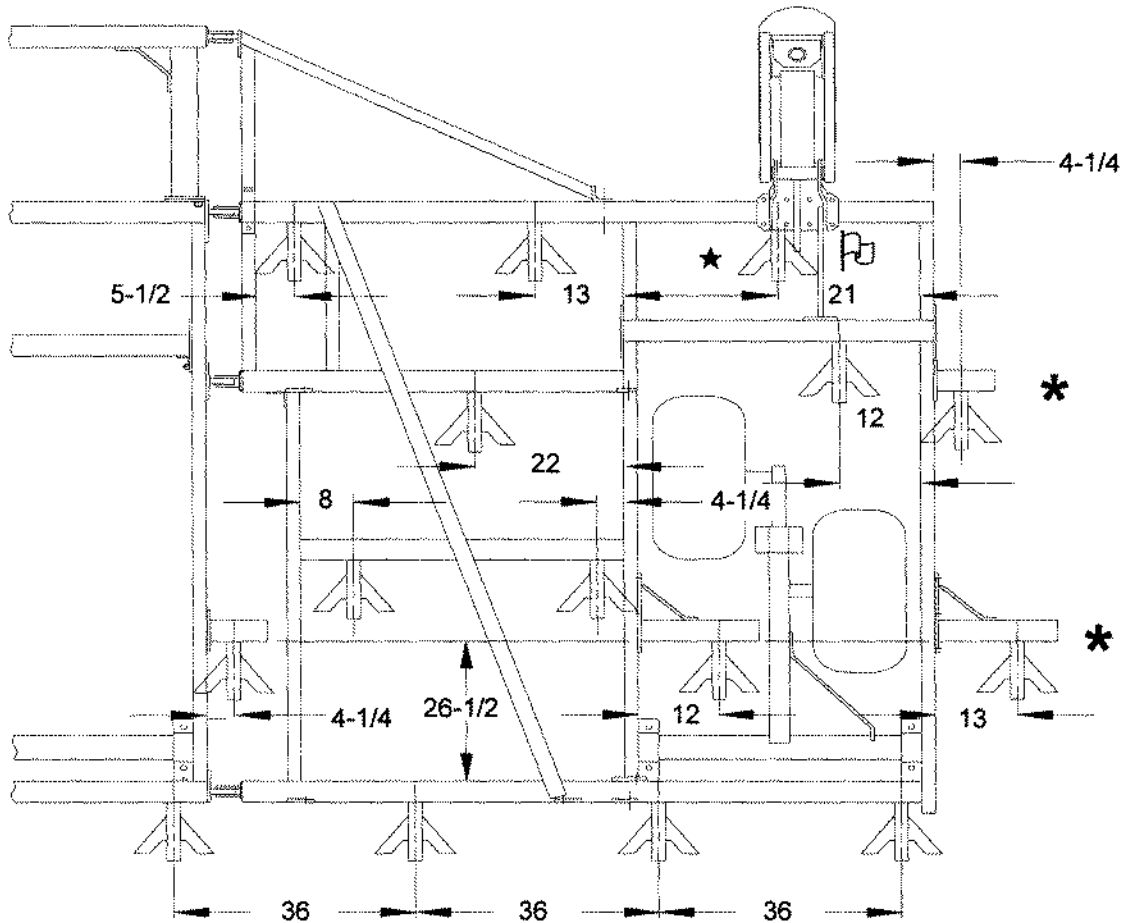
Note: Mounting bolts for this shank must have the bolt heads installed up.



# SHANK PLACEMENT

9FT WING  
9" Spacing

Note: (☆)Shank assembly mounts to inside 4 bolts on gauge wheel mast.  
Note: (P)Denotes the gauge wheel mast that must be used for this specific shank configuration.

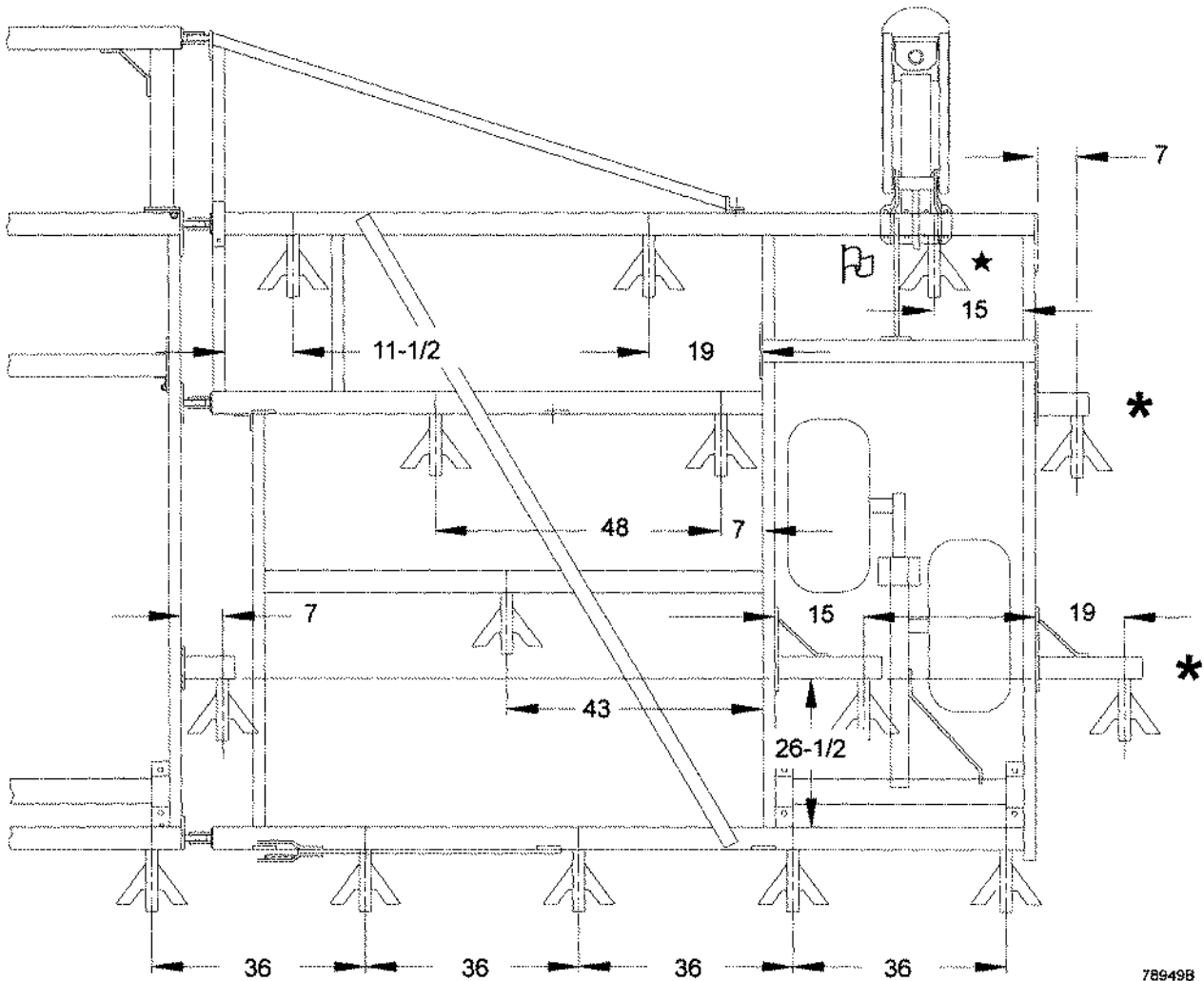


\* - Stubs indicated are additions to the base wing.

# SHANK PLACEMENT

12FT WING  
12" Spacing

Note: (☆)Shank assembly mounts to outside 4 bolts on gauge wheel mast.  
Note: (Ⓡ)Denotes the gauge wheel mast that must be used for this specific shank configuration.



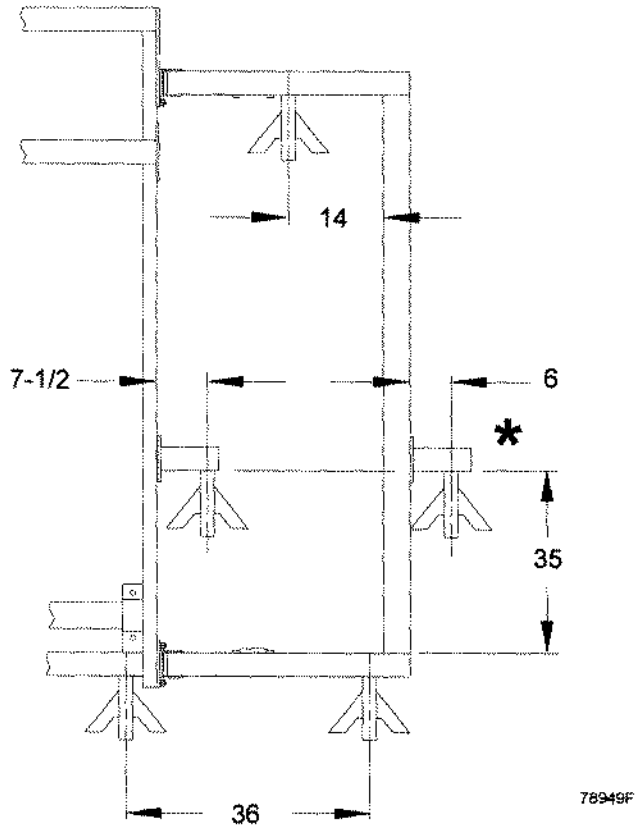
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\* - Stubs indicated are additions to the base wing.

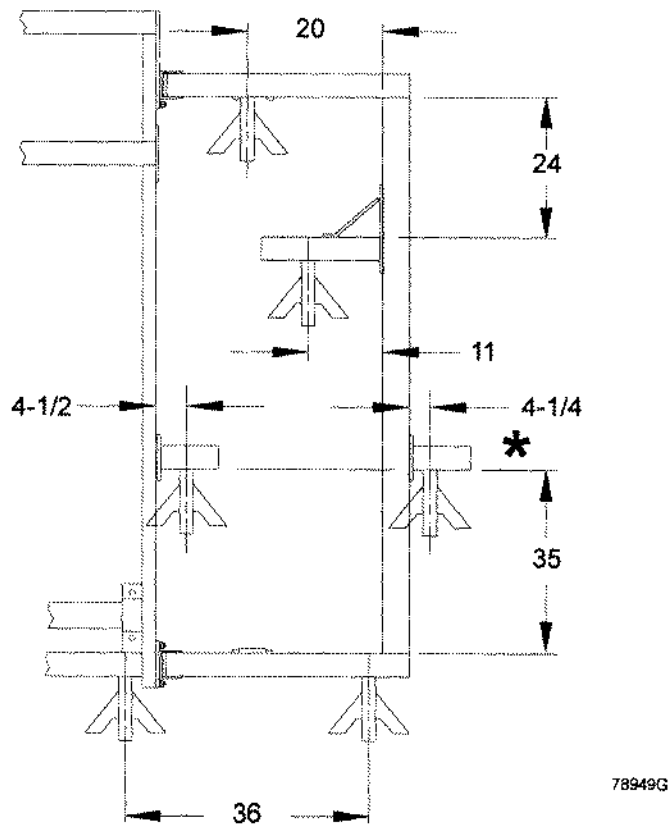


# SHANK PLACEMENT

3FT OUTER WING  
12" Spacing

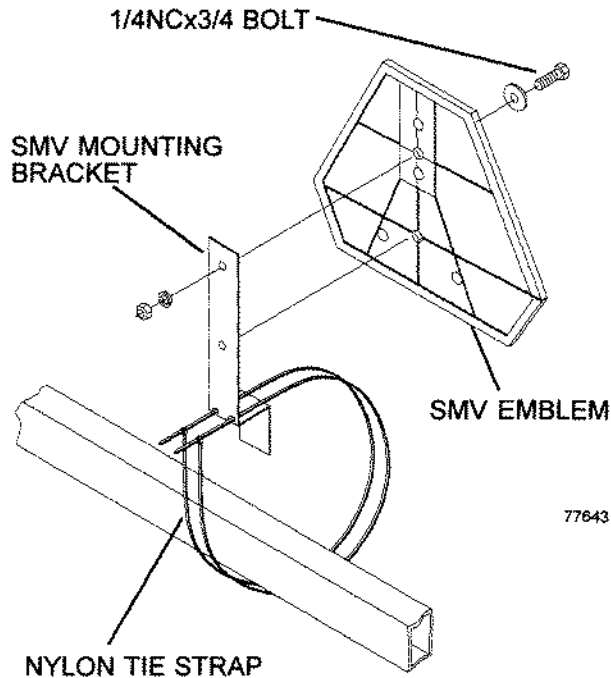


3FT OUTER WING  
9" Spacing



\* - Stubs indicated are additions to the base wing.

# SAFETY

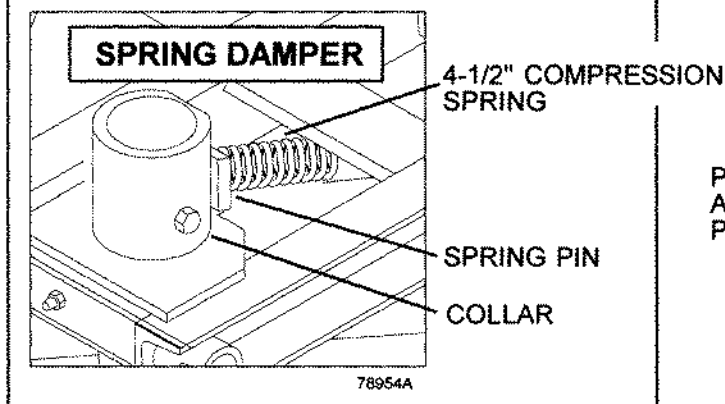


The bracket provided is designed to mount to numerous frame sizes and can be mounted in different positions to avoid interference with implement components.

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

The emblem is to be 2 to 6 feet above the ground measured from the lower edge of the emblem.

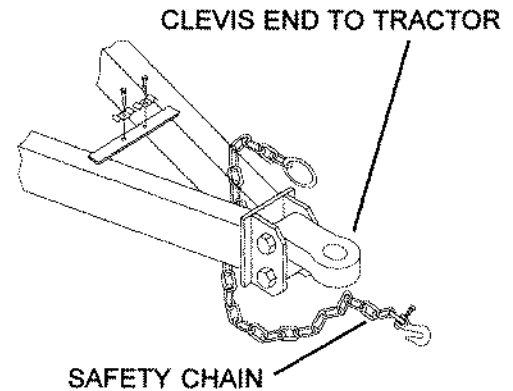
**IMPORTANT** - This spring damper will not function unless the unit is in the *fully raised position*. This means the main lift cylinders must be fully extended for the dampers to work.



Keep safety decals clean. Replace any safety decals that are damaged, destroyed, missing, painted over or can not longer be read. Replacement safety decals are available through your dealer.

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 figure below). The intermediate support is available from your **Wil-Rich** dealer.

