

ASSEMBLY INSTRUCTIONS

WIL-RICH 5 BAR QUAD-5 FIELD CULTIVATOR

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 a 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 inquires to:

Wil-Rich

P.O. 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.

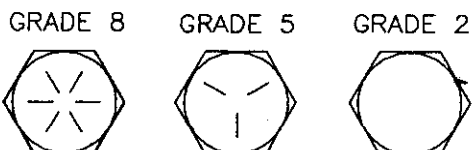
Wherever the terms "left" and "right" are used, it should be understood to mean from a position behind and facing the machine.

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 should 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 should be rechecked after a few hours of operation.



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 GRADE	2	18	45	89	160	252
	5	30	68	140	240	360
	8	40	100	196	340	528
UNF GRADE	2	21	51	102	178	272
	5	32	70	168	264	392
	8	48	112	216	368	792

CI-75623

When replacing a bolt, use only a bolt of the same grade or higher.

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



CAUTION

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

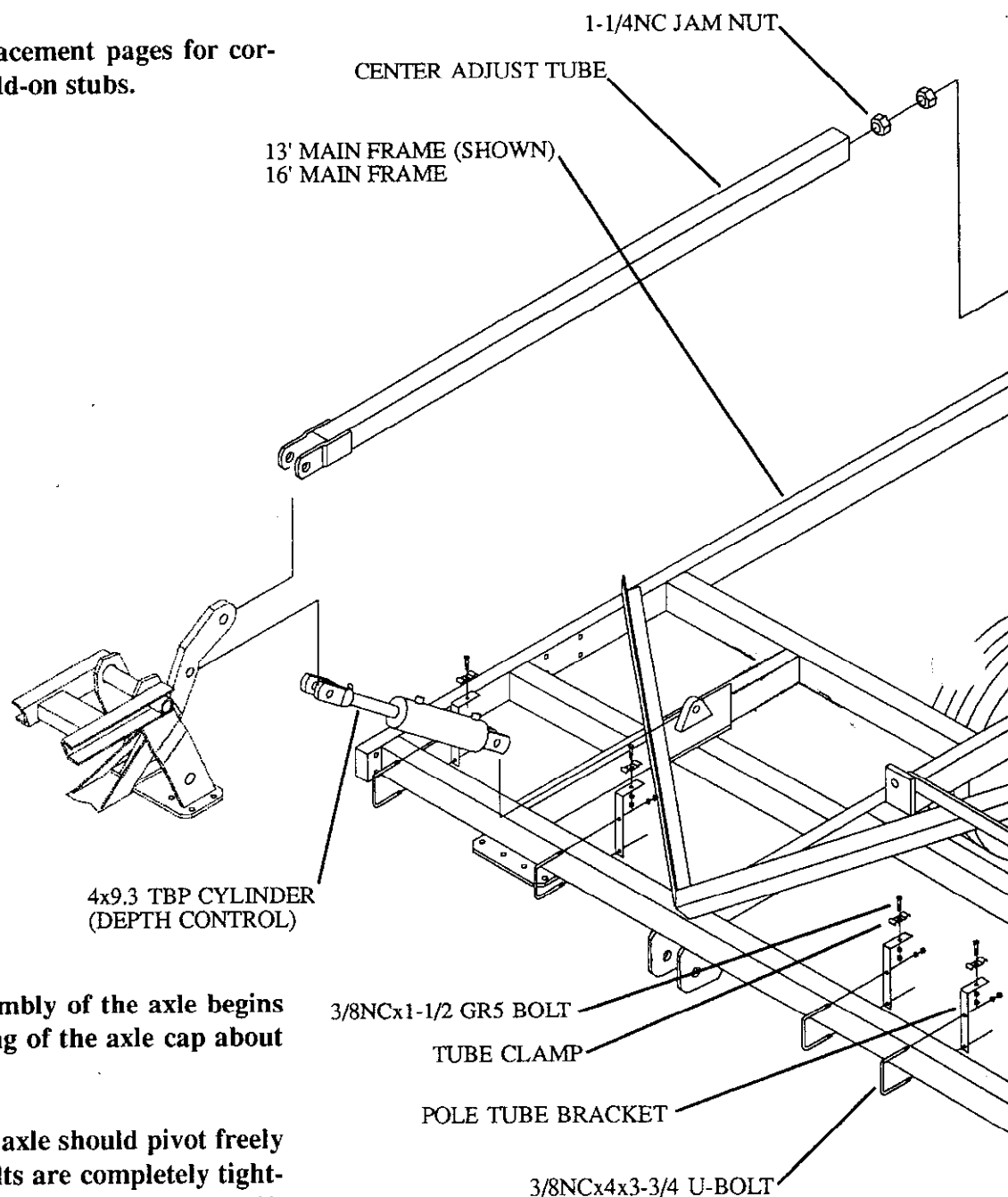
- JUST BEFORE AND DURING OPERATION BE SURE NO ONE IS ON OR AROUND THE IMPLEMENT.
- BEFORE LOWERING THE WINGS FOR THE FIRST TIME, MAKE SURE THE ENTIRE SYSTEM HAS BEEN CHARGED WITH OIL.
- BEFORE ACTIVATING THE HYDRAULIC SYSTEM, CHECK HOSES FOR PROPER CONNECTIONS.
- WITH WINGS DOWN ALWAYS INSTALL HYDRAULIC CYLINDER CHANNEL LOCK(S) FOR TRANSPORTING.

49155

MAIN FRAME

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

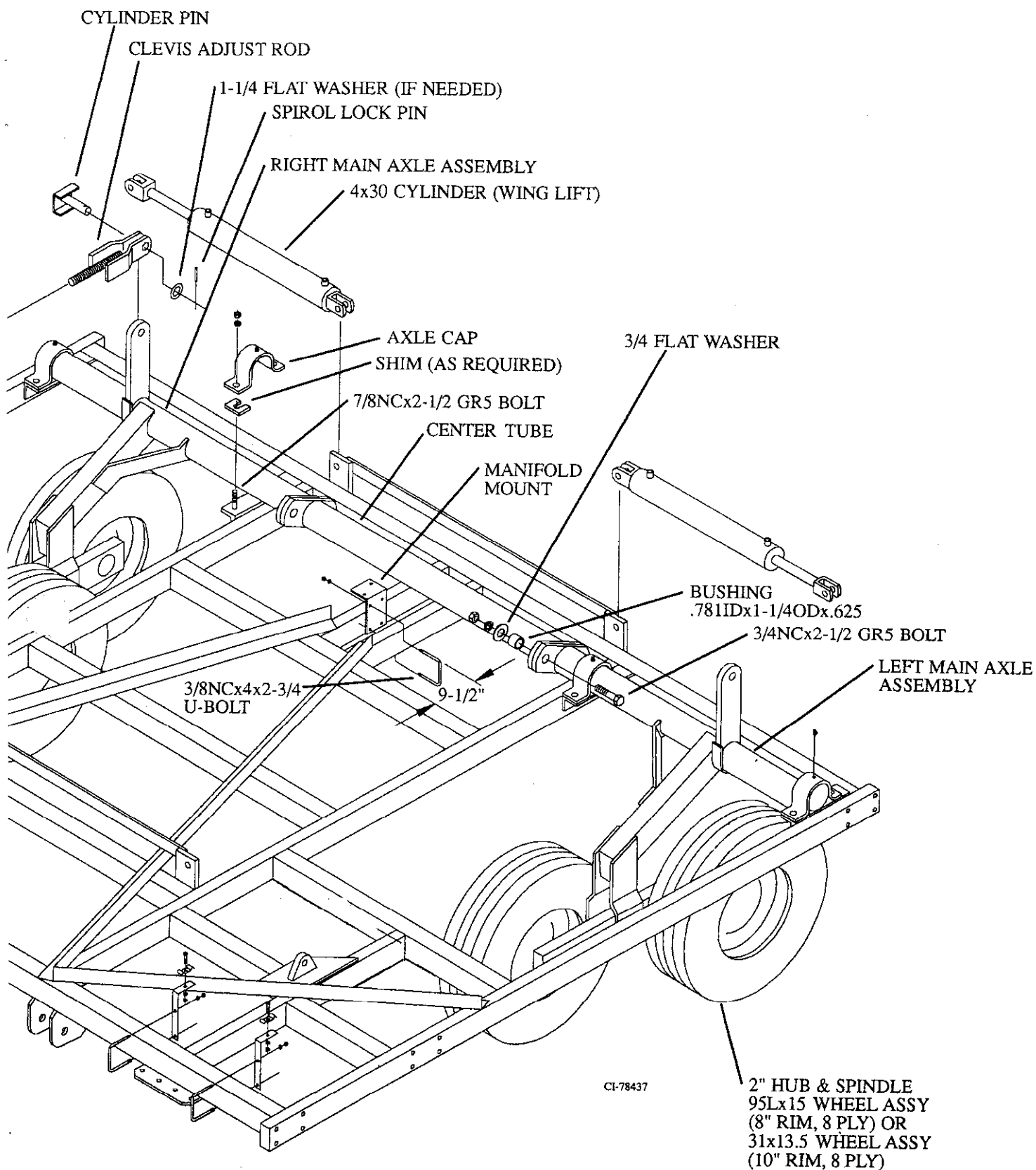
NOTE: See shank placement pages for correct locations of all add-on stubs.



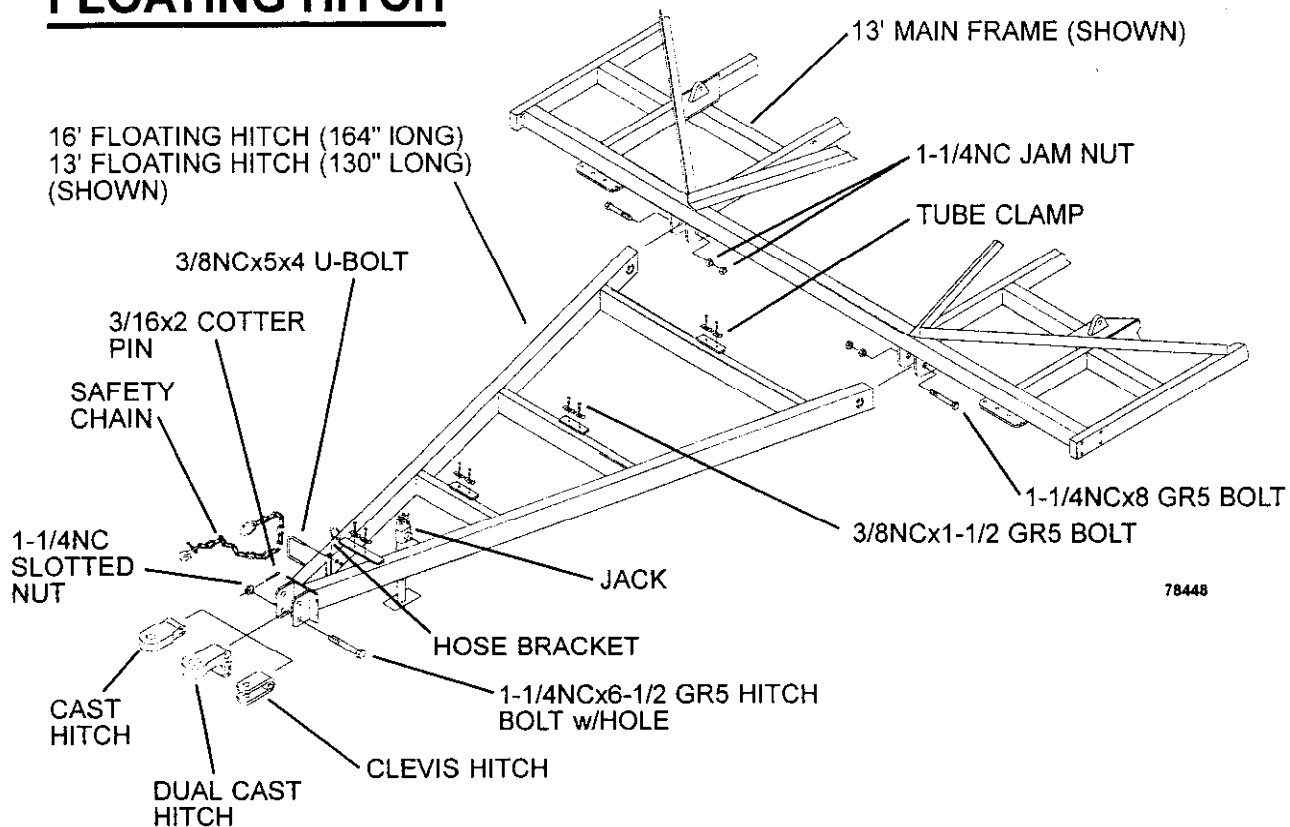
NOTE: Correct assembly of the axle begins with proper shimming of the axle cap about the axle tube.

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 of axle tubes and to eliminate unnecessary stress loads on axle assemblies.



FLOATING HITCH



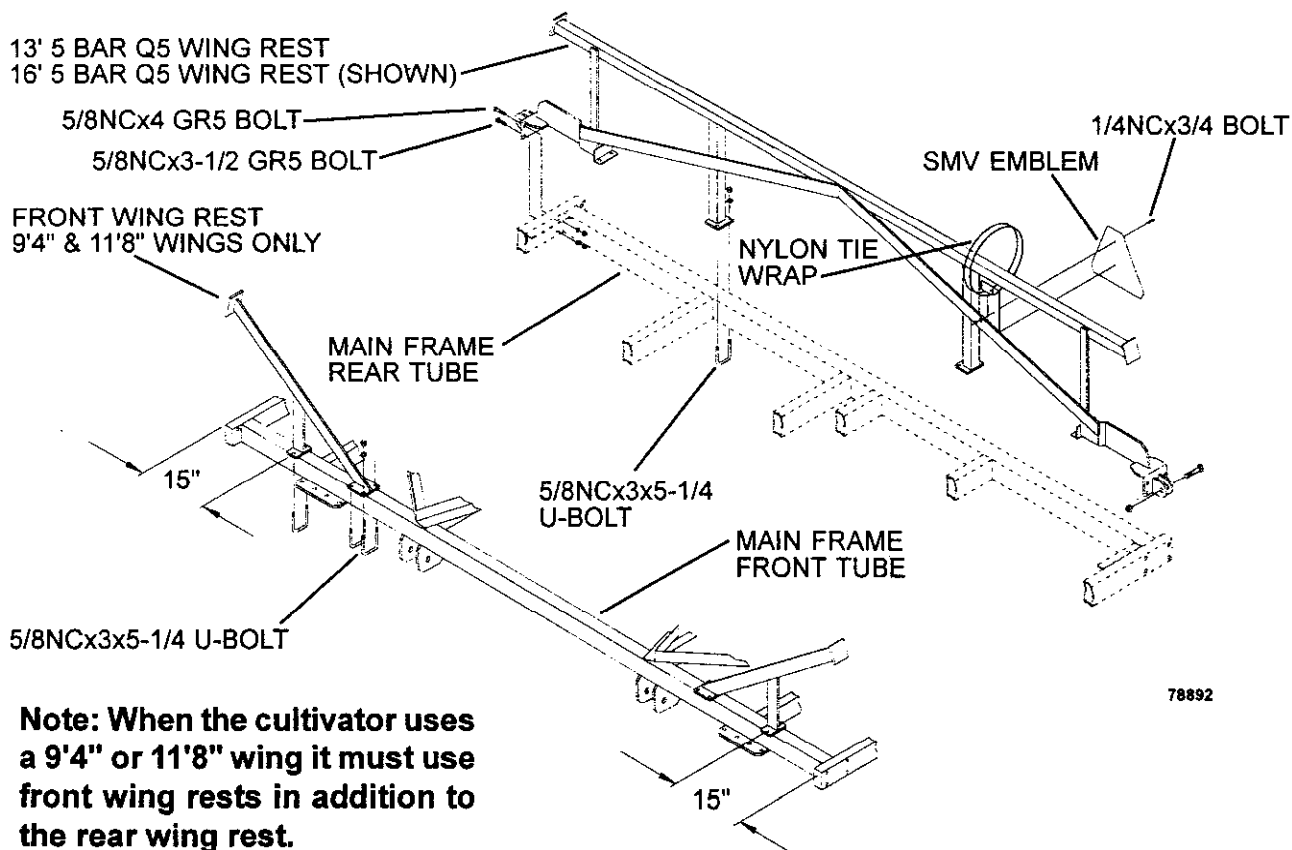
WING REST



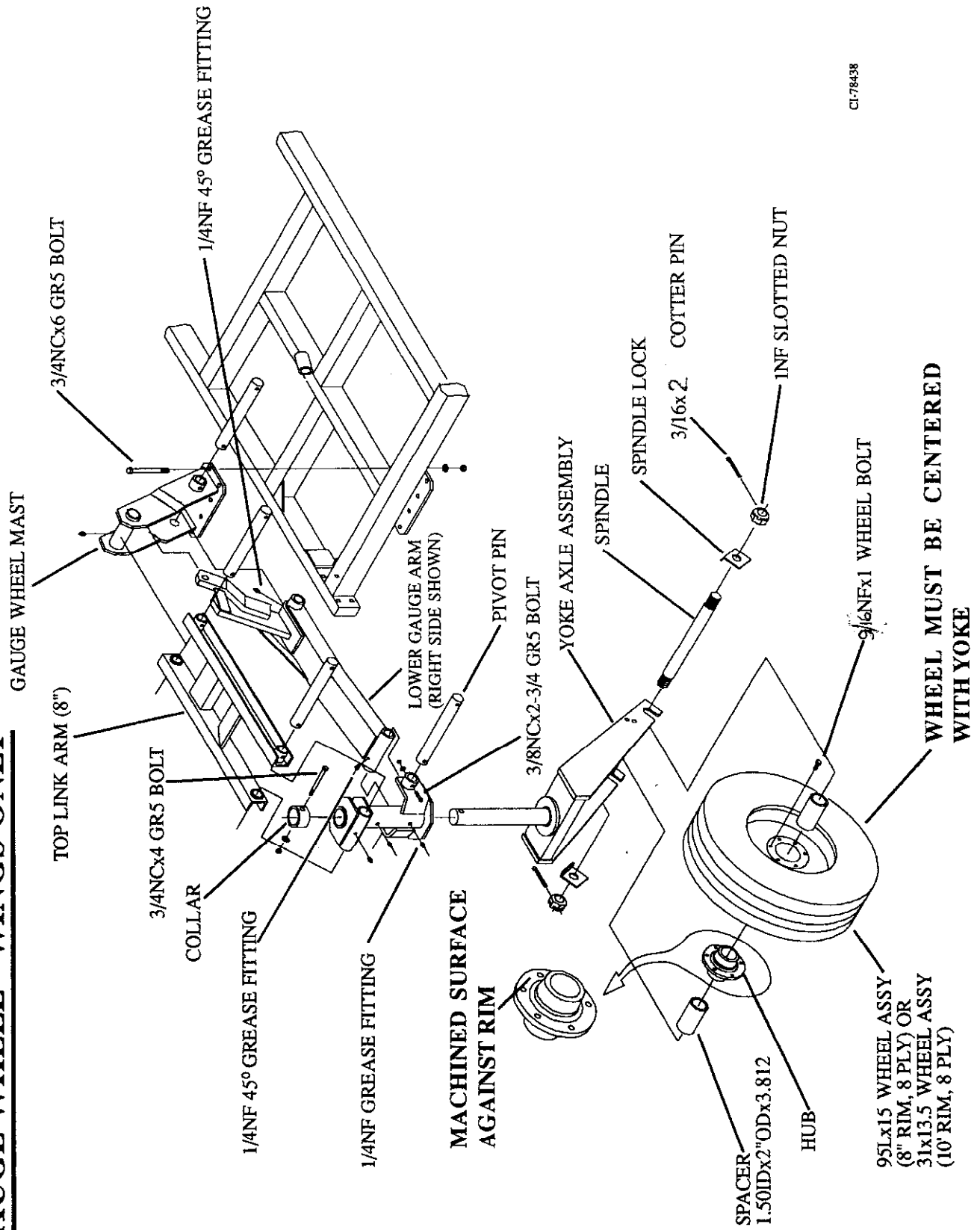
DANGER
STAND CLEAR AT ALL TIMES.

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

ASSEMBLE SO DECAL IS READ FROM THE IMPLEMENT REAR.

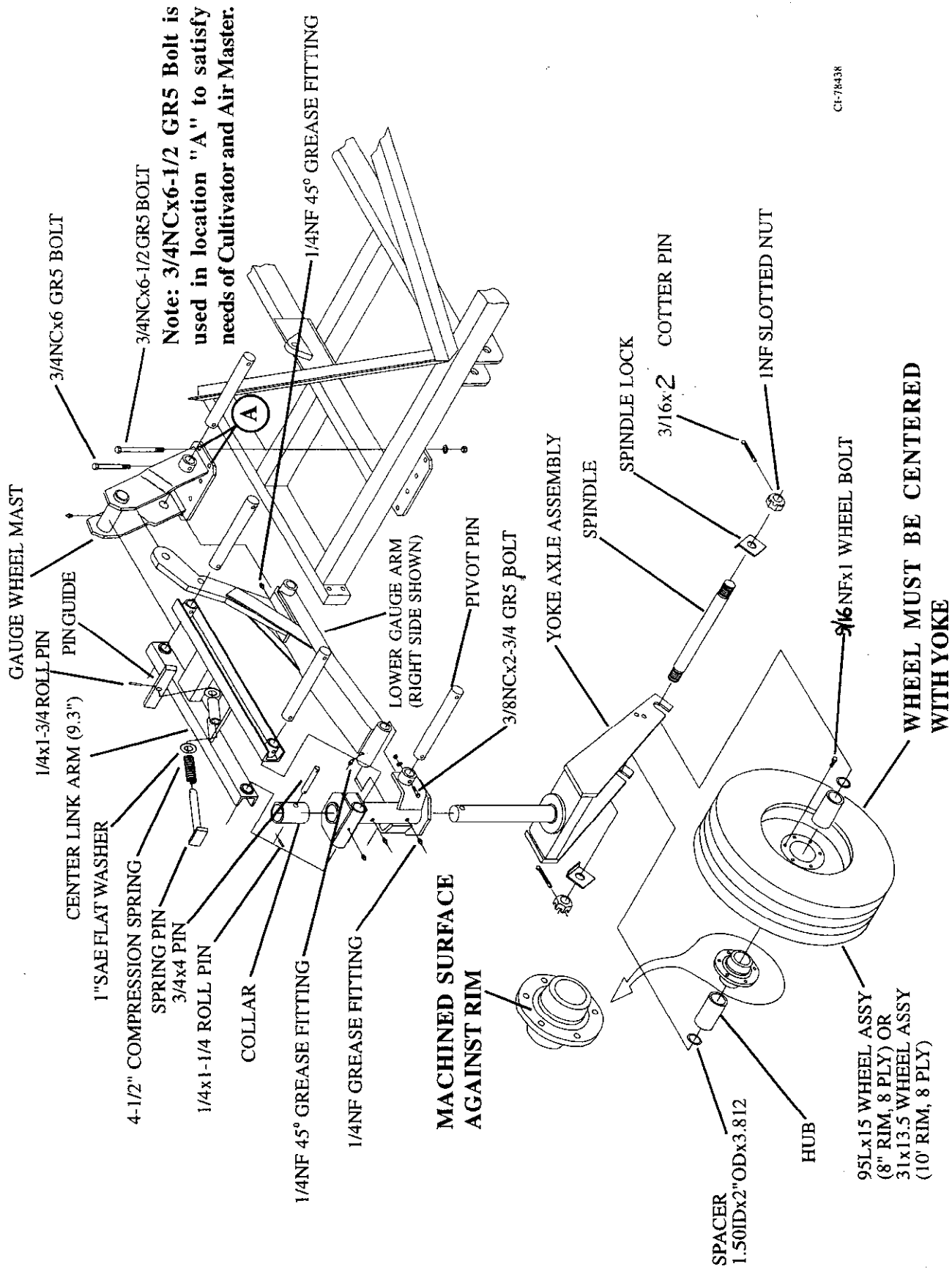


8" GAUGE WHEEL - WINGS ONLY



CI-78438

9.3" GAUGE WHEEL - MAIN FRAME ONLY



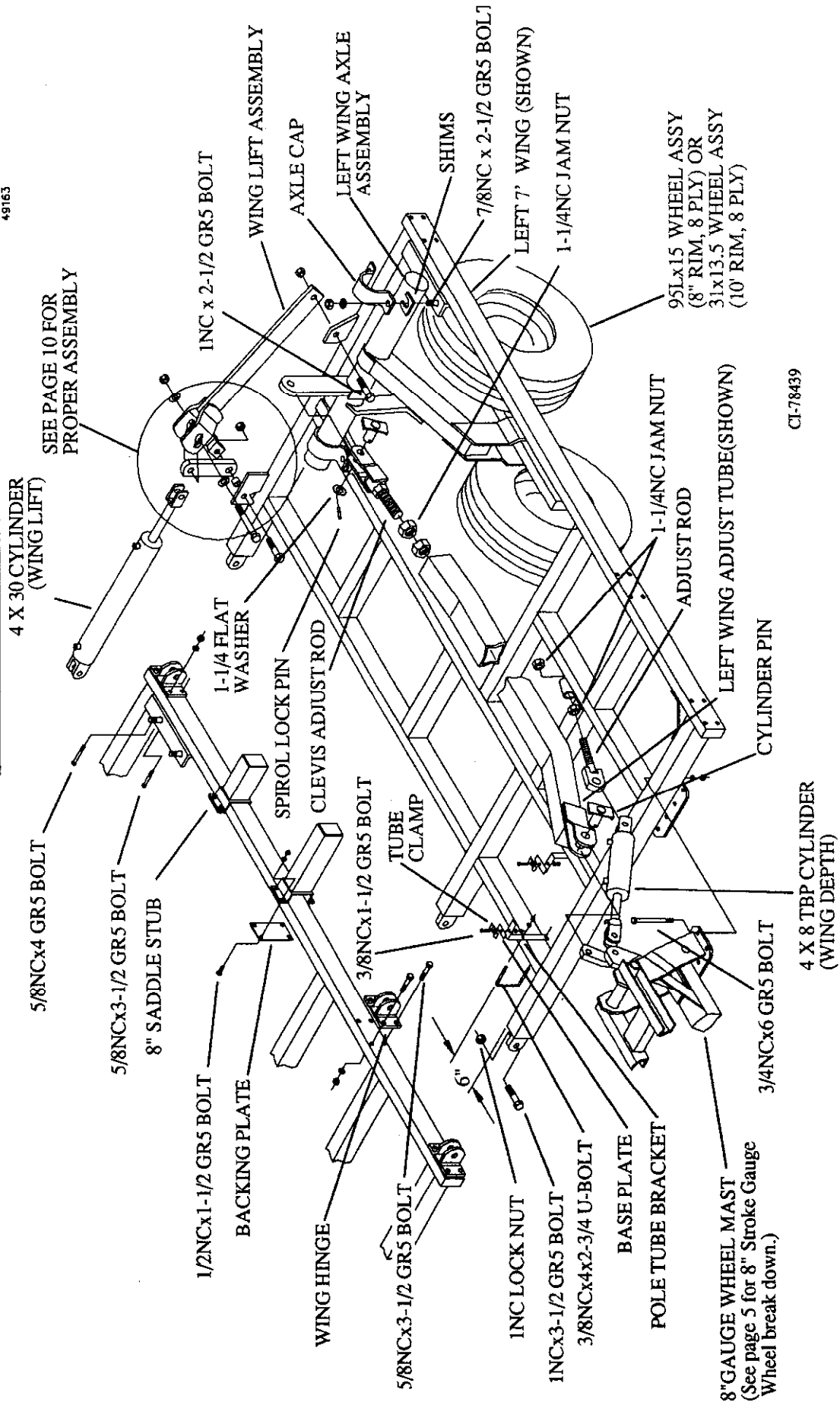
CI-78438

7' WING



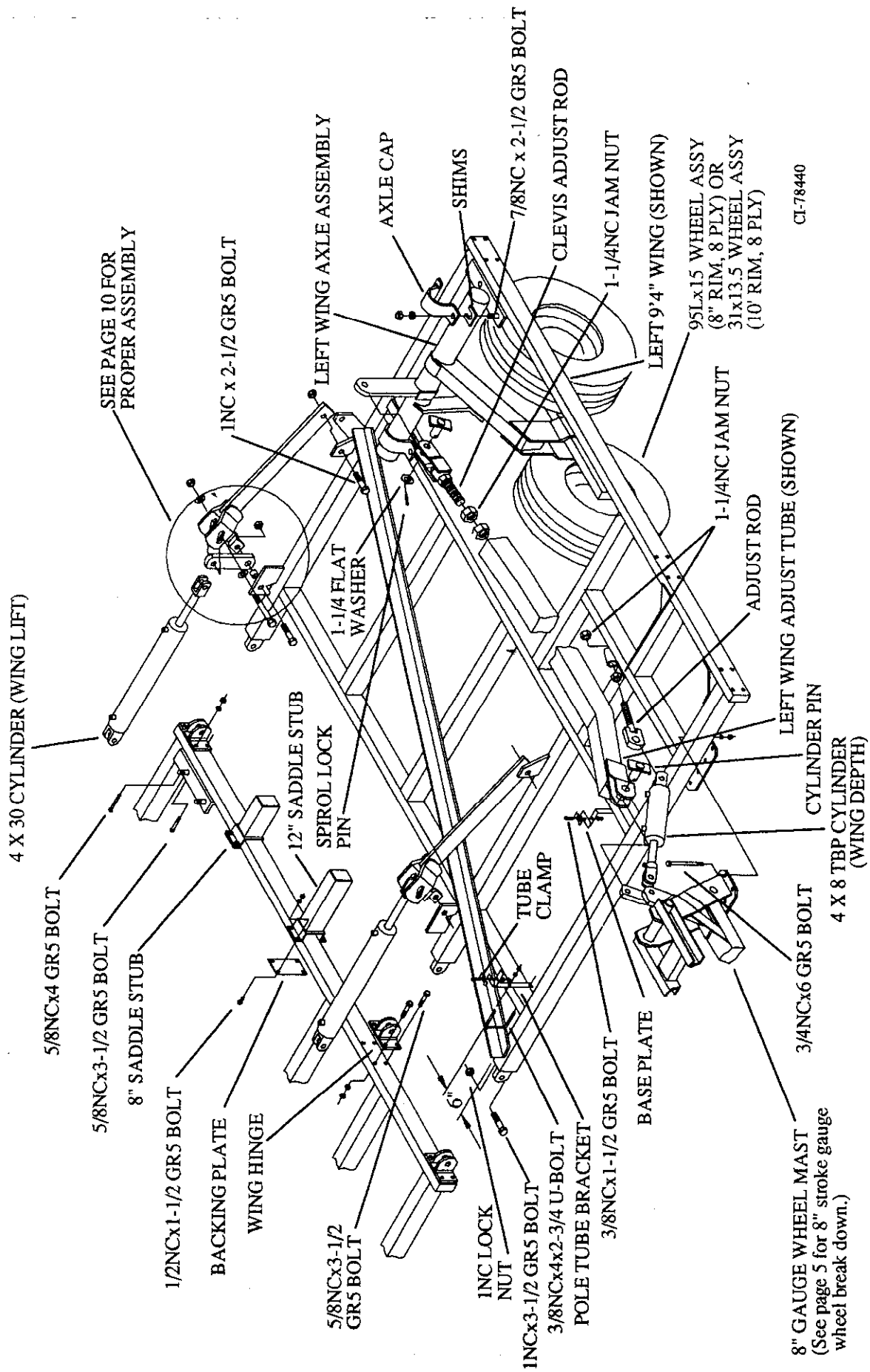
STAND CLEAR AT ALL TIMES.
NEVER WALK OR STAND IN THE
PATH OF THE WINGS. COMPLETELY
LOWER WINGS BEFORE PERFORM-
ING SERVICE OR ADJUSTMENTS.
FAILURE TO DO SO CAN RESULT
IN SERIOUS INJURY OR DEATH.

49163



CI-78439

9'4" WING



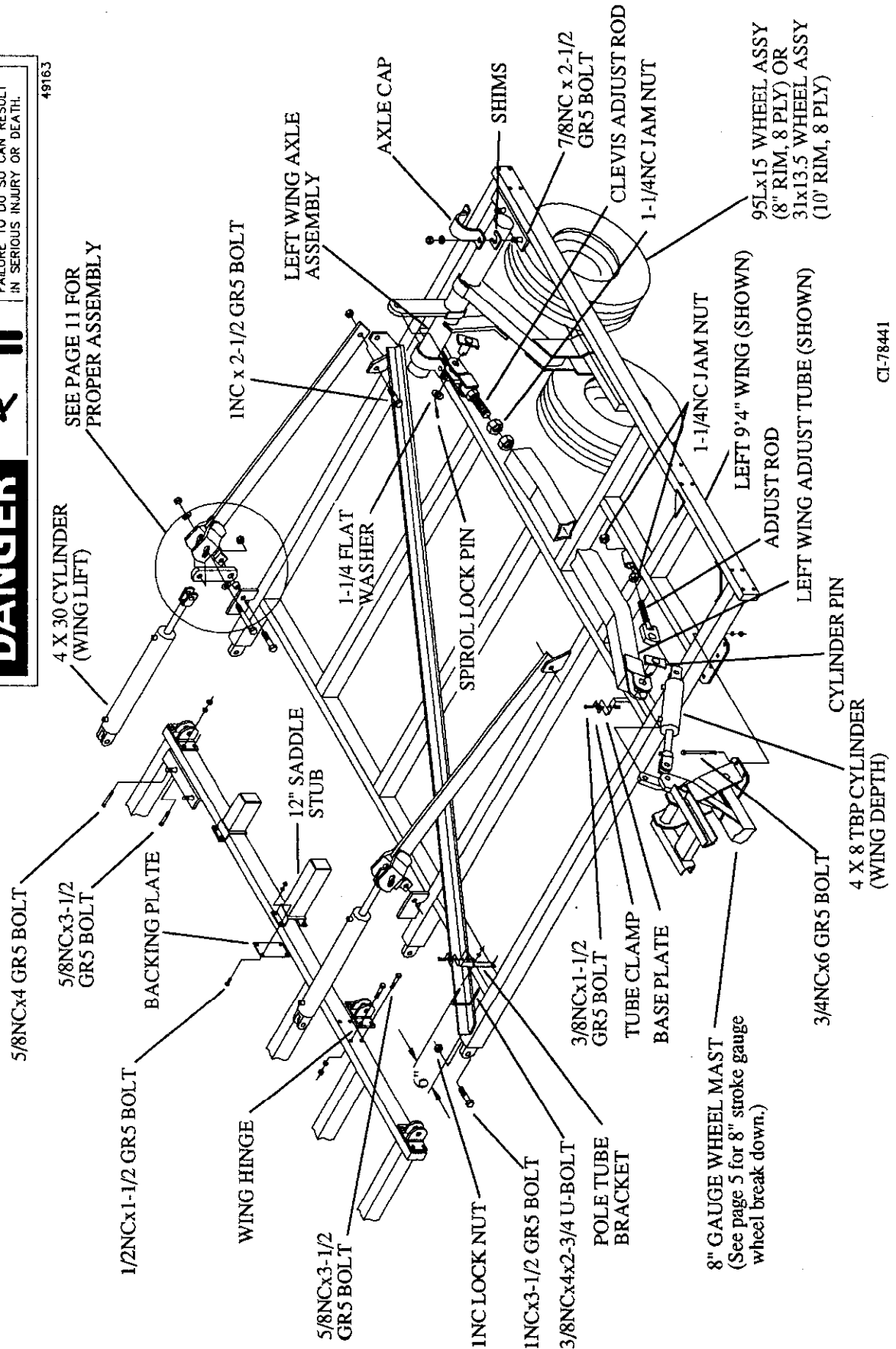
11'8" WING

⚠ DANGER



STAND CLEAR AT ALL TIMES.
NEVER WALK OR STAND IN THE
PATH OF THE WINGS. COMPLETELY
LOWER WINGS BEFORE PERFORM-
ING SERVICE OR ADJUSTMENTS.
FAILURE TO DO SO CAN RESULT
IN SERIOUS INJURY OR DEATH.

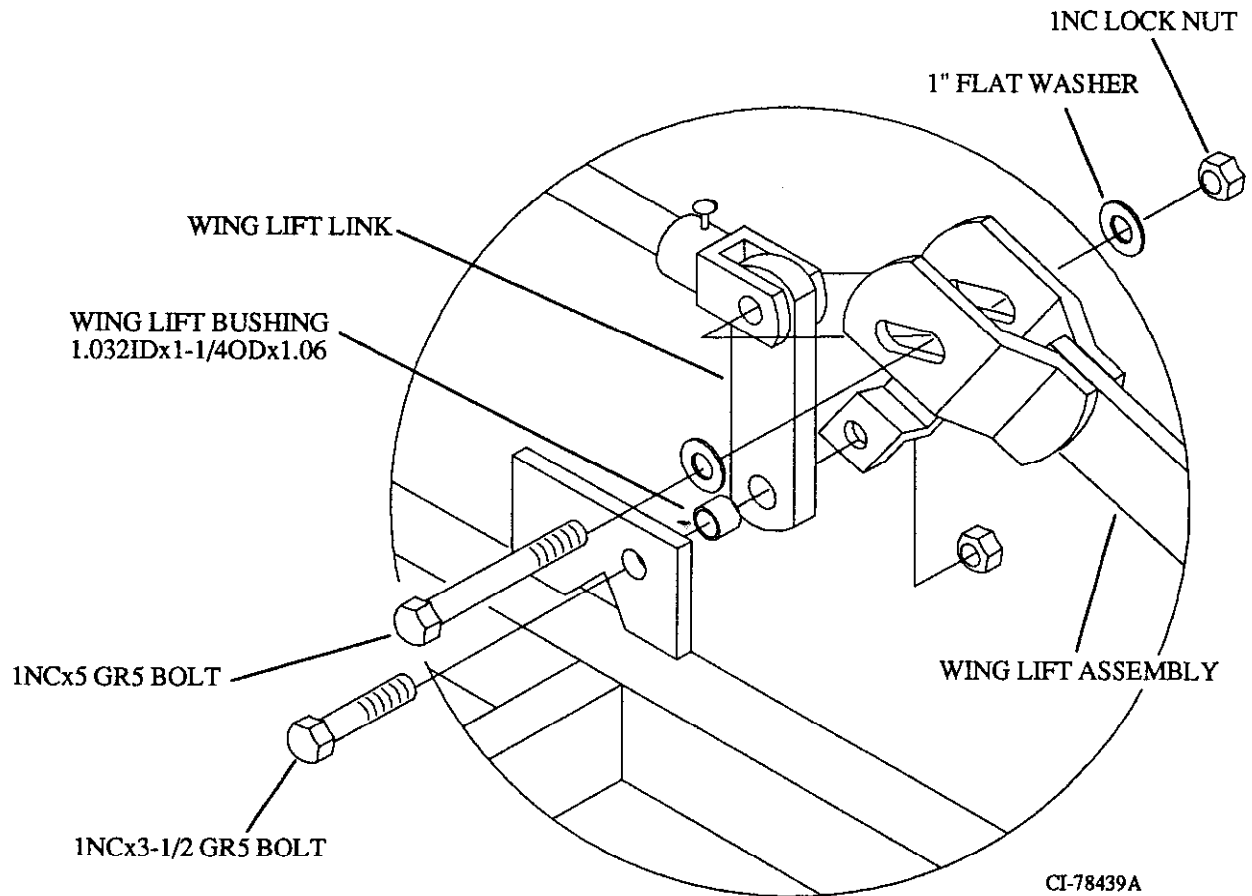
49163



CI-78441

WING LIFT LINK ASSEMBLY - ALL WINGS

NOTE: All wing lift links mount to the rearward side of the mount.

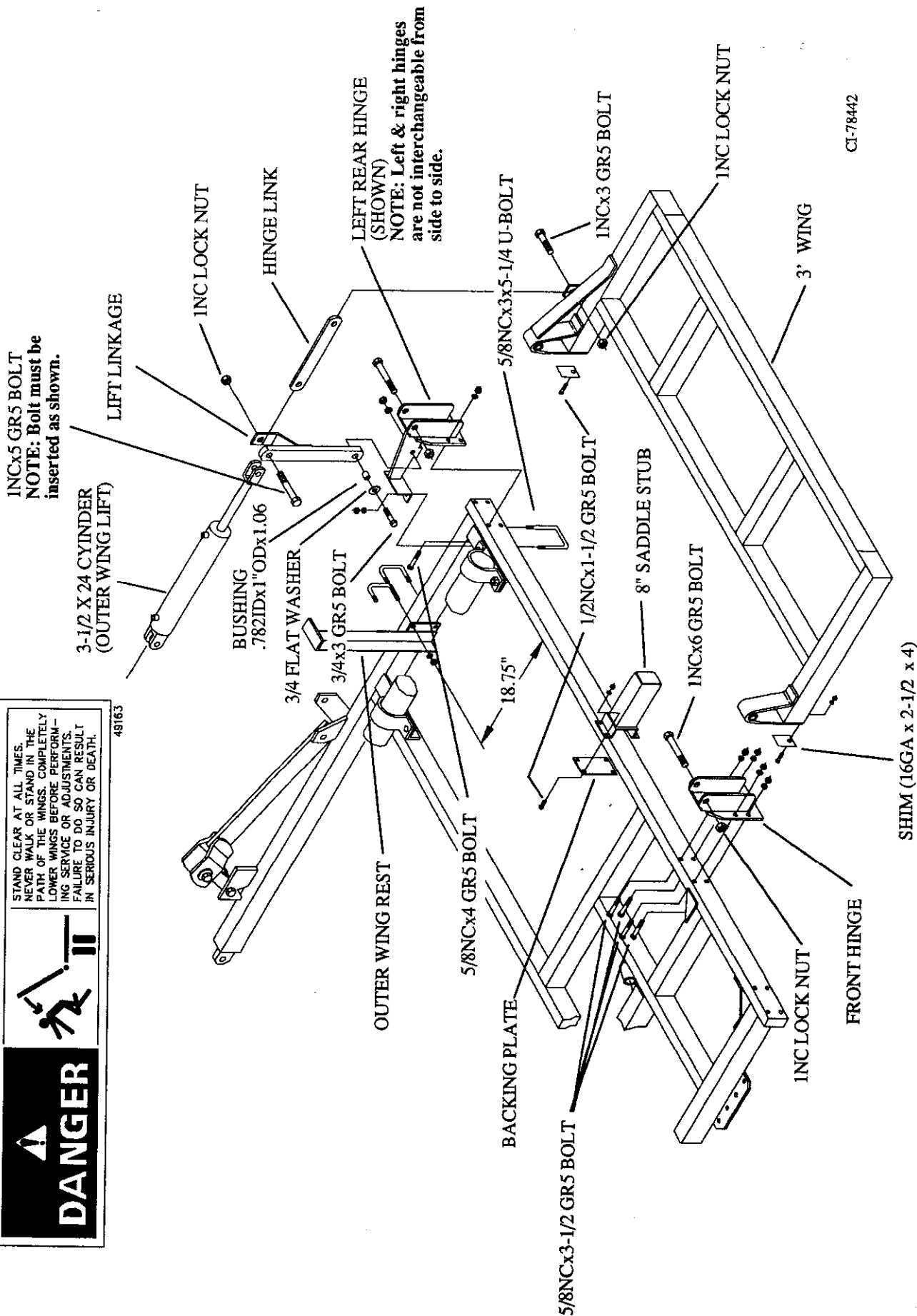


3FT OUTER WING

DANGER

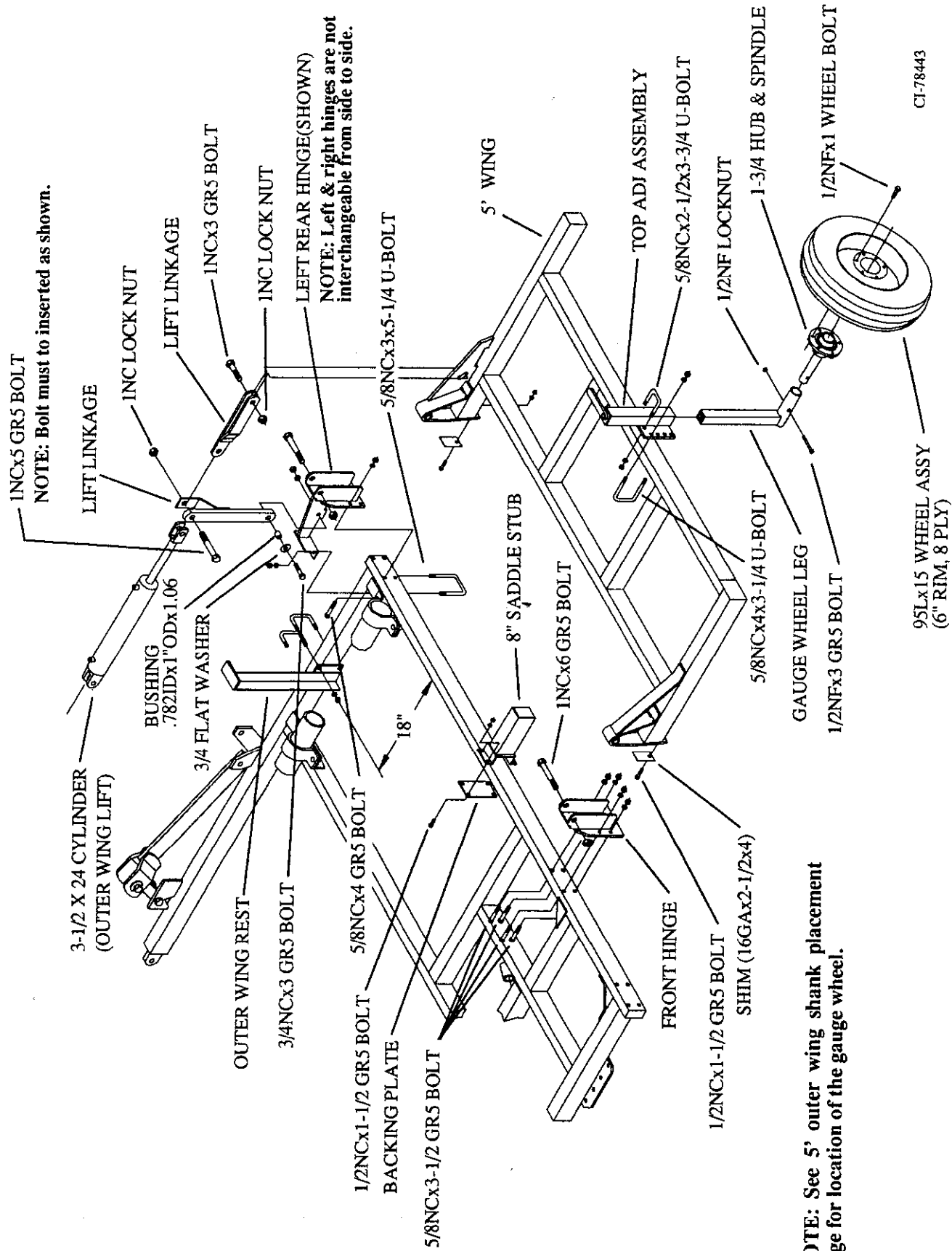
STAND CLEAR AT ALL TIMES.
NEVER WALK OR STAND IN THE
PATH OF THE WINGS. COMPLETELY
LOWER WINGS BEFORE PERFORM-
ING SERVICE OR ADJUSTMENTS.
FAILURE TO DO SO CAN RESULT
IN SERIOUS INJURY OR DEATH.

43163



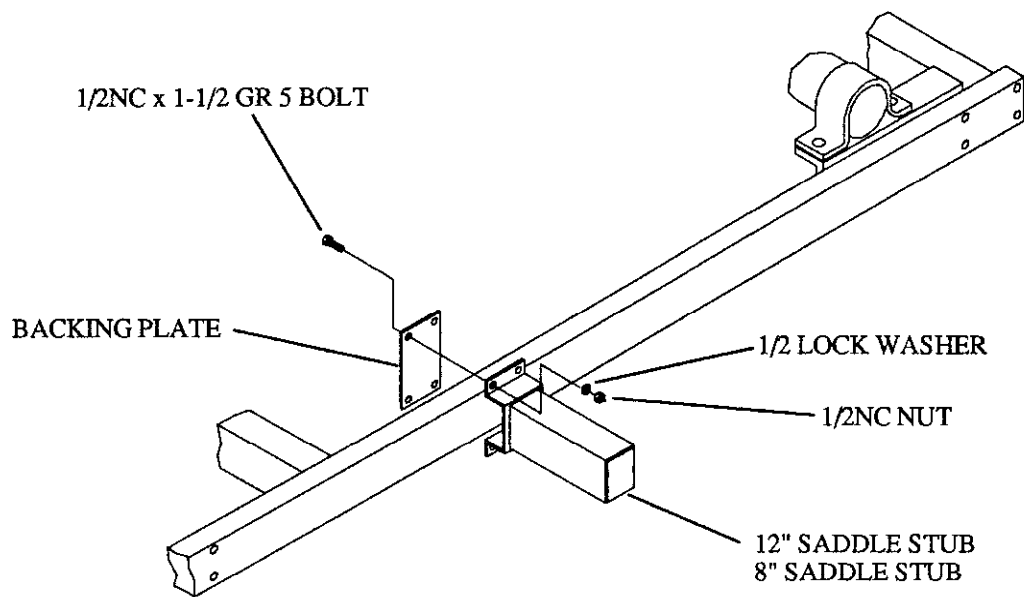
CL-78442

5FT OUTER WING



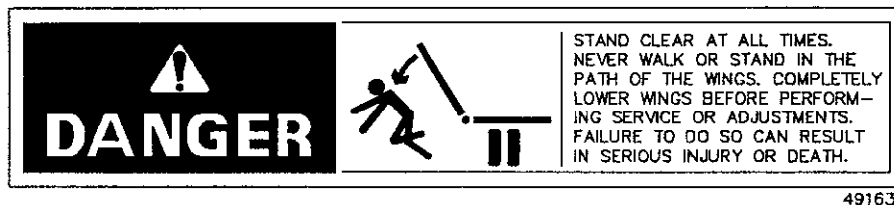
NOTE: See 5' outer wing shank placement page for location of the gauge wheel.

SADDLE STUB EXTENSIONS

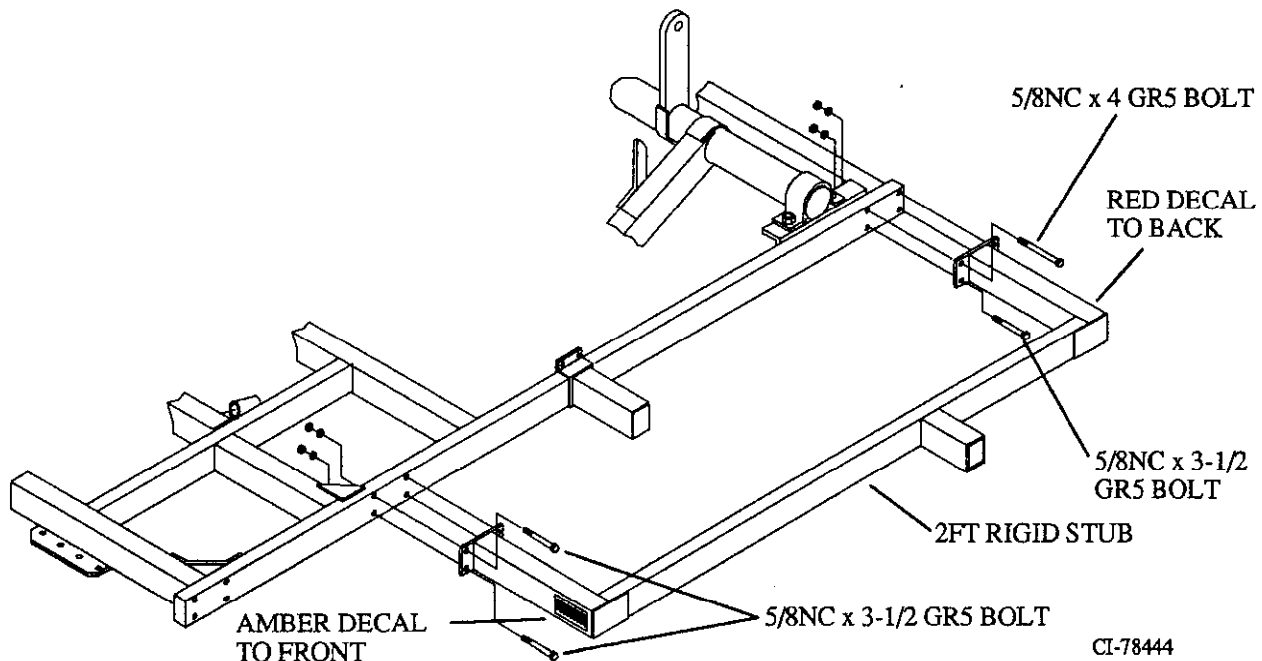


CI-77824

NOTE: See shank placements for location of the saddle



2 FT RIGID WING EXTENSION



CI-78444

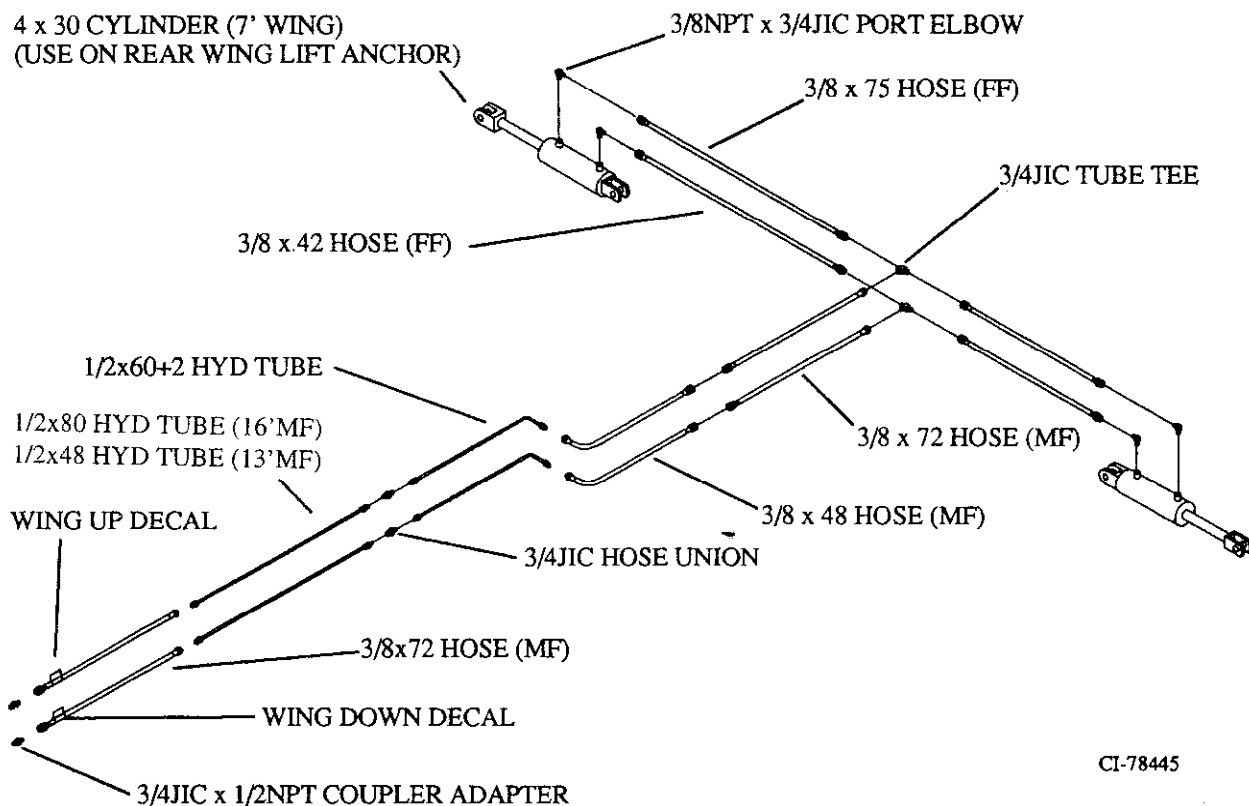
WING LIFT HYDRAULICS

7' WING

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

NOTE: Torque all hoses 20 to 40 foot pounds. do not over tighten.

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



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.



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.

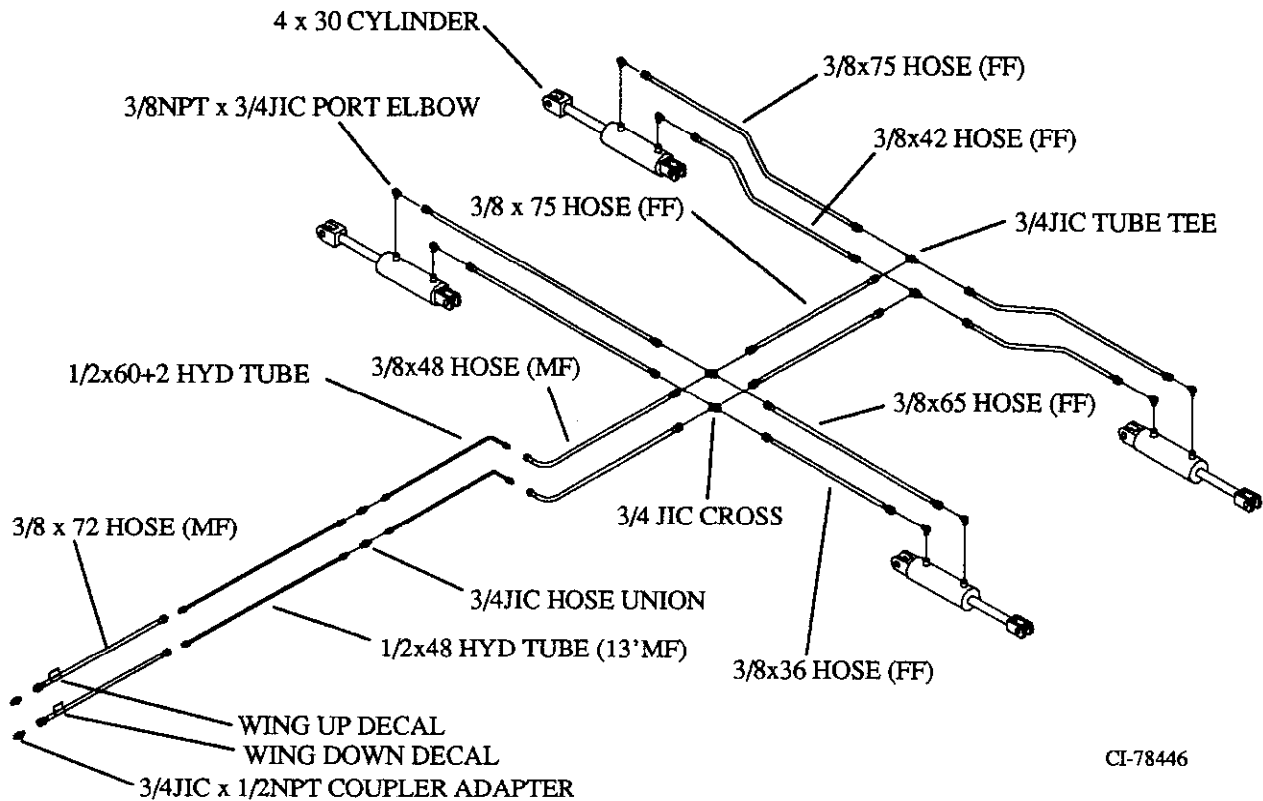
49165

9'4" & 11'8" WINGS (13' MF)

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

NOTE: Torque all hoses 20 to 40 foot pounds. do not over tighten.

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



CI-78446



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.



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.

49166

WING LIFT HYDRAULICS

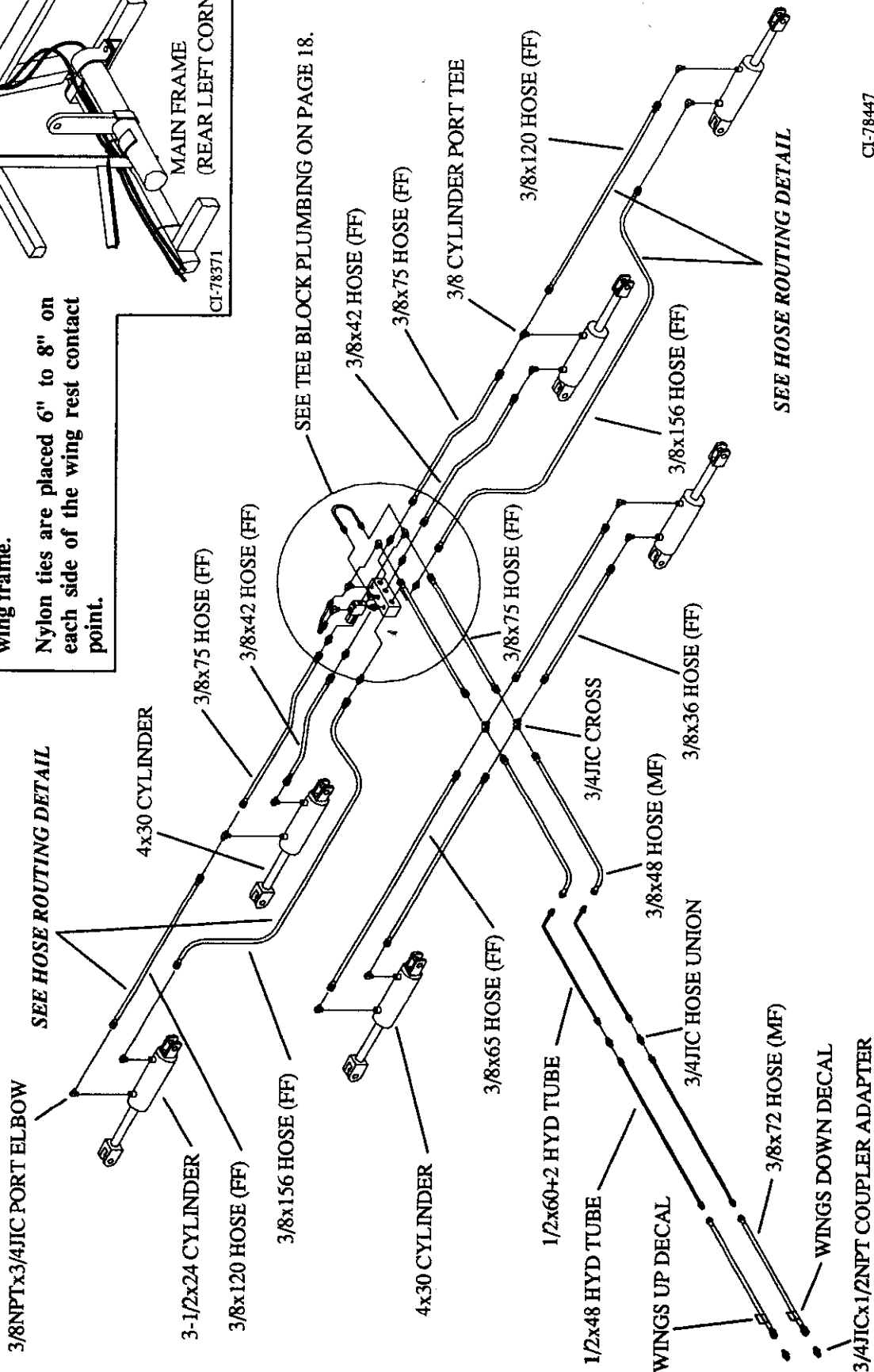
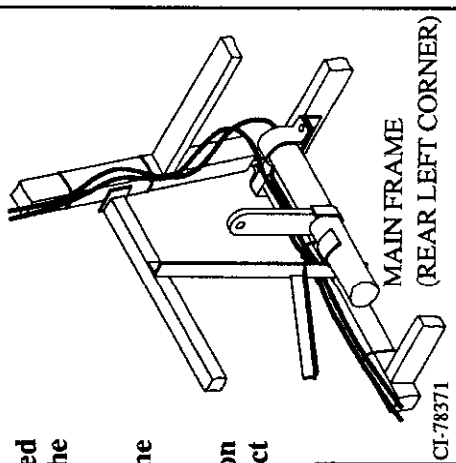
13' MF 9'4" WING W/3' OR 5' OUTER WINGS

HOSE ROUTING DETAIL

Hydraulic hoses cannot be routed where they will interfere with the wing rest.

Tie hydraulic hoses to the side of the wing frame.

Nylon ties are placed 6" to 8" on each side of the wing rest contact point.



WING LIFT HYDRAULICS

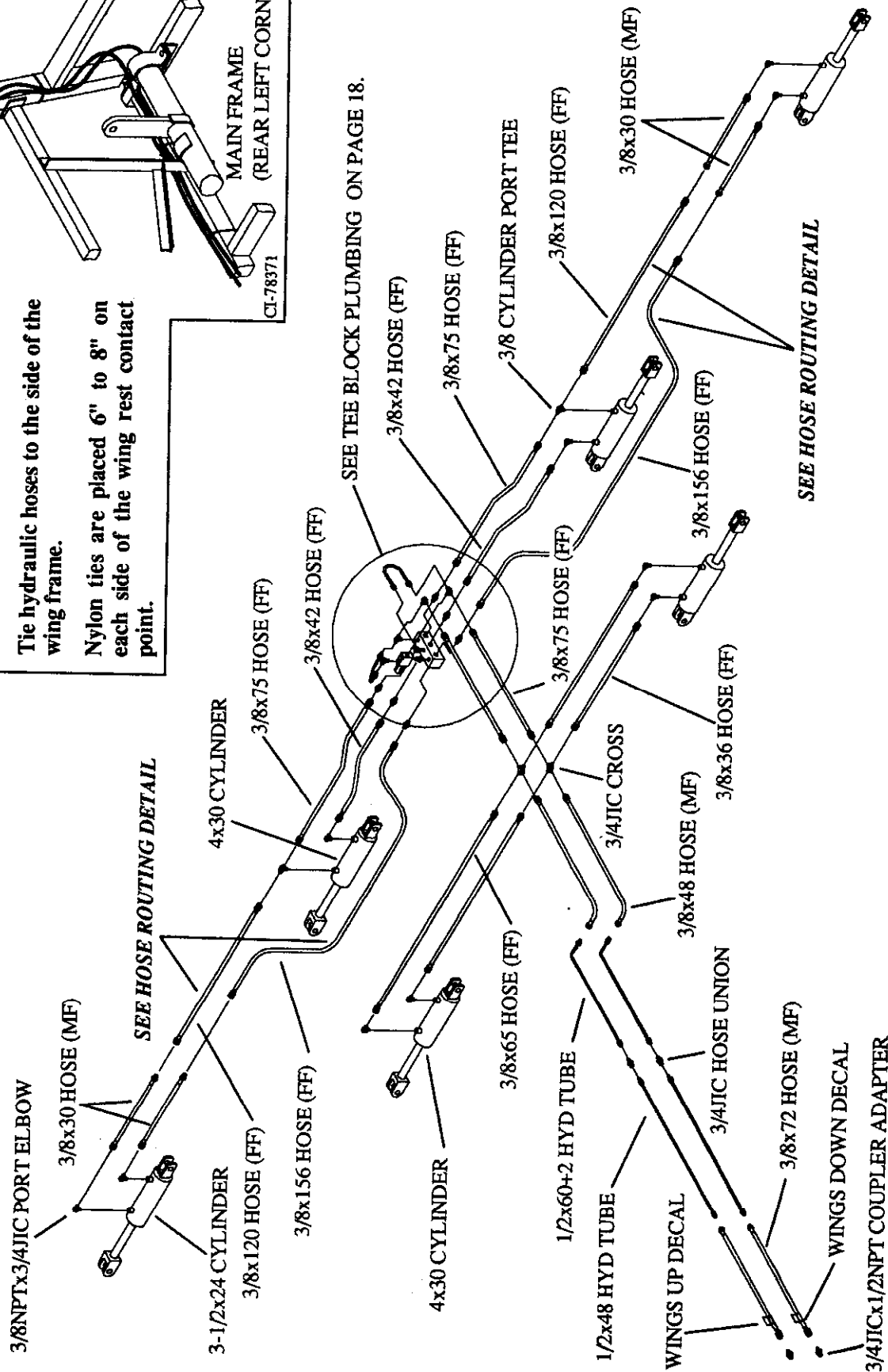
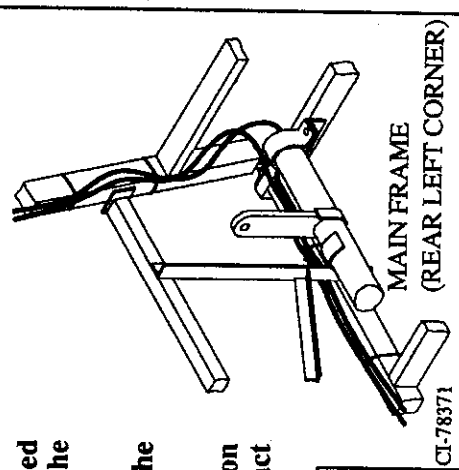
13'MF 11'8" WING W/3' OR 5' OUTER WINGS

HOSE ROUTING DETAIL

Hydraulic hoses cannot be routed where they will interfere with the wing rest.

Tie hydraulic hoses to the side of the wing frame.

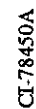
Nylon ties are placed 6" to 8" on each side of the wing rest contact point.



SEE HOSE ROUTING DETAIL

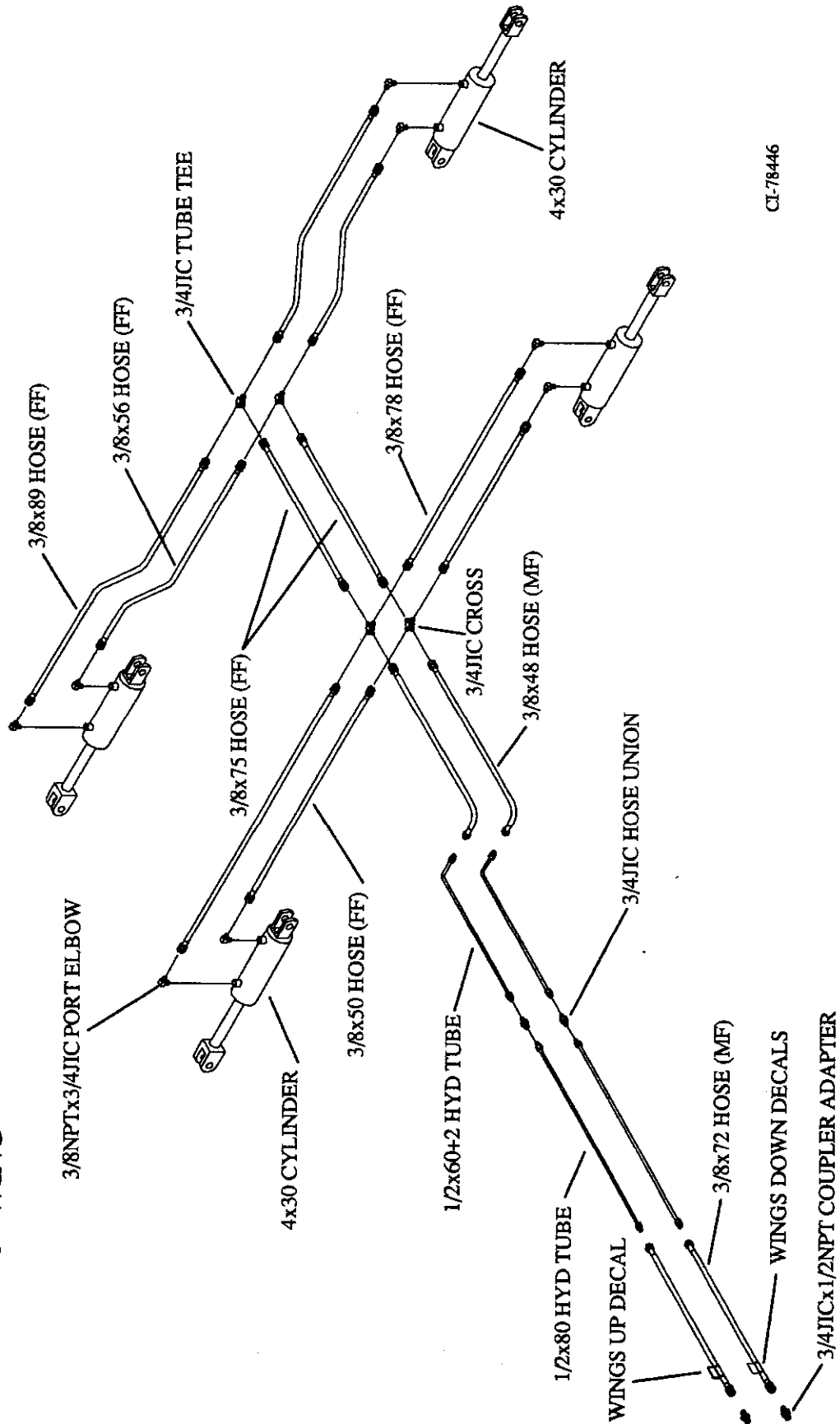
CI-78450

FOR 3' & 5' OUTER WINGS



WING LIFT HYDRAULICS

16'MF - 11'8" WING



CL-78446

WING LIFT HYDRAULICS

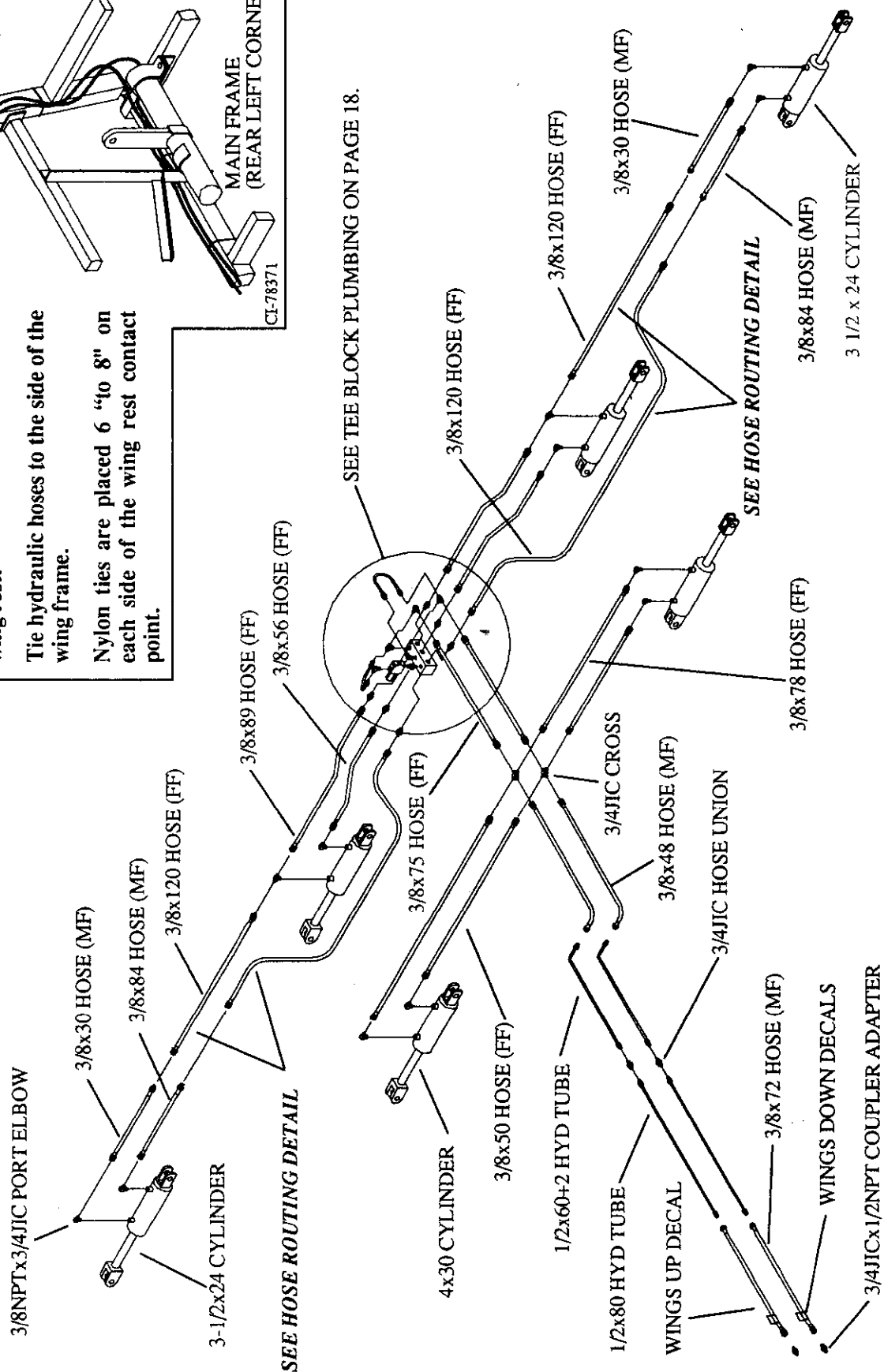
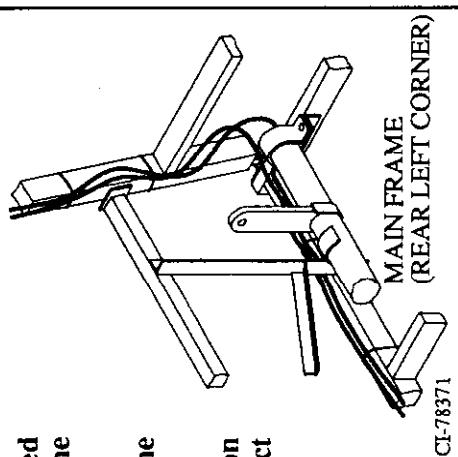
16"MF 11'8" WING W/3' OR 5' OUTER WINGS

HOSE ROUTING DETAIL

Hydraulic hoses cannot be routed where they will interfere with the wing rest.

Tie hydraulic hoses to the side of the wing frame.

Nylon ties are placed 6 "to 8" on each side of the wing rest contact point.



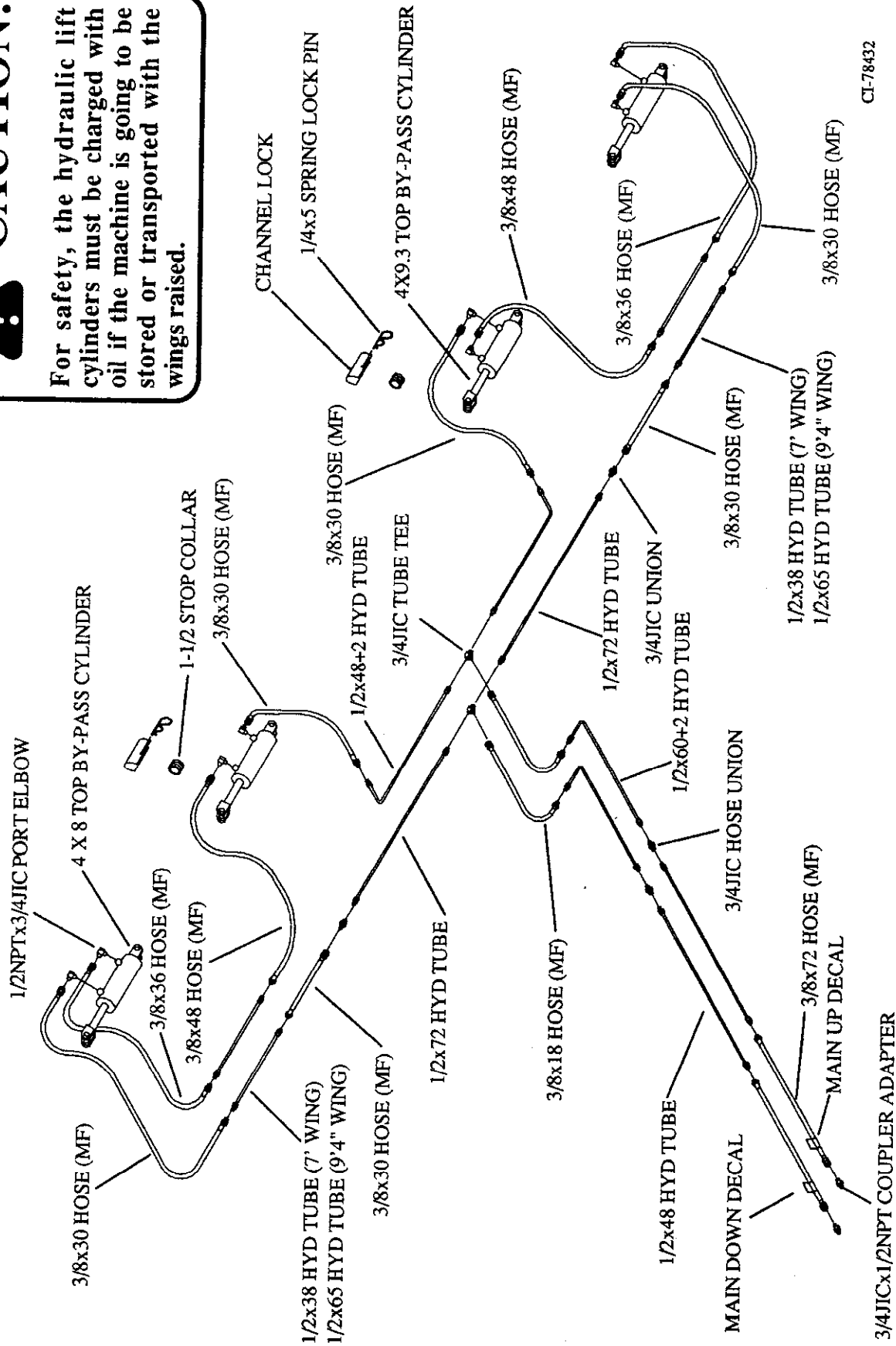
CI-78450

DEPTH CONTROL HYDRAULICS

13' MAIN FRAME - 7' & 9'4" WINGS



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.



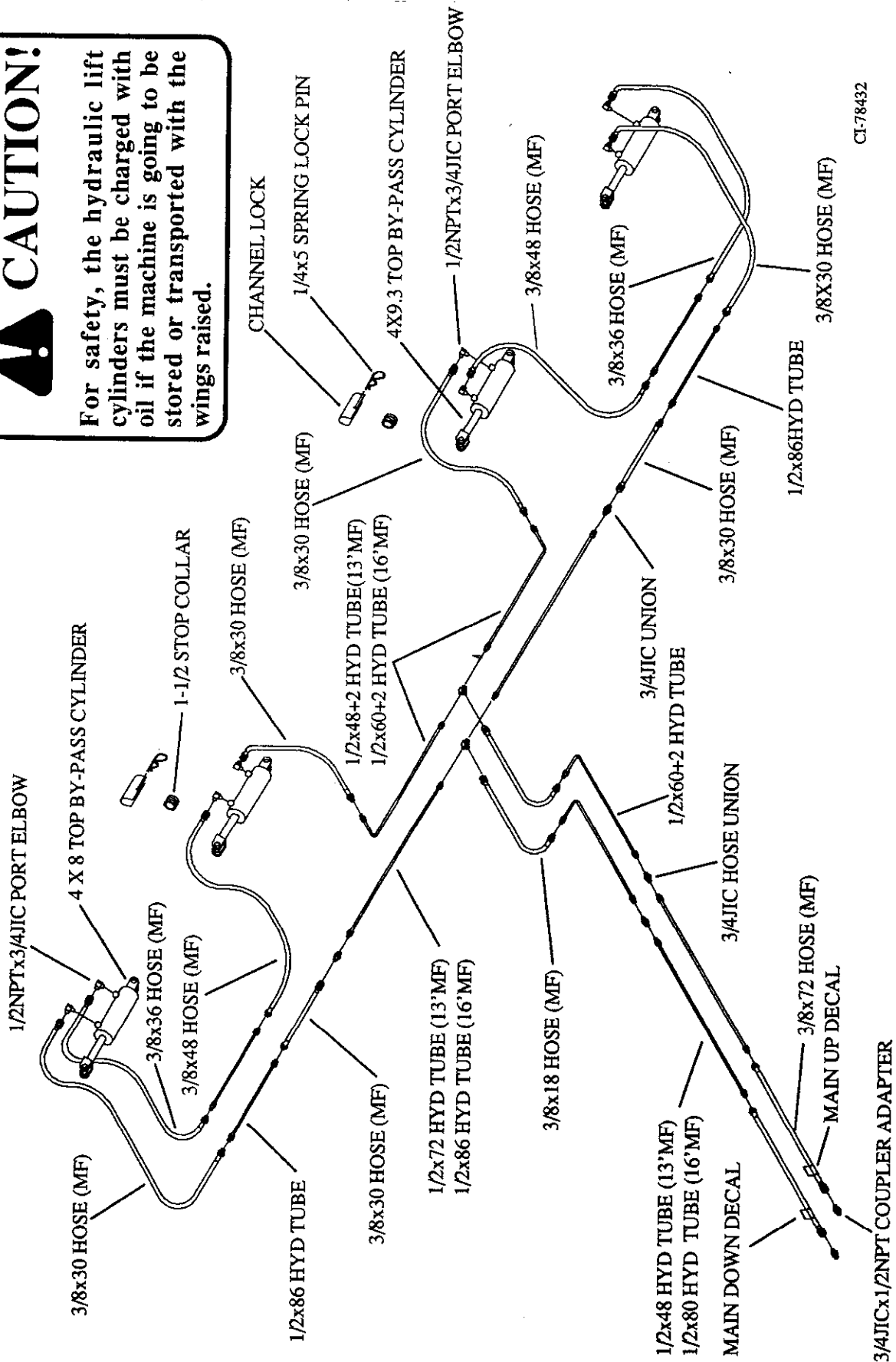
CI-78432

DEPTH CONTROL HYDRAULICS

13' & 16' MAIN FRAME - 11'8" WINGS



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.

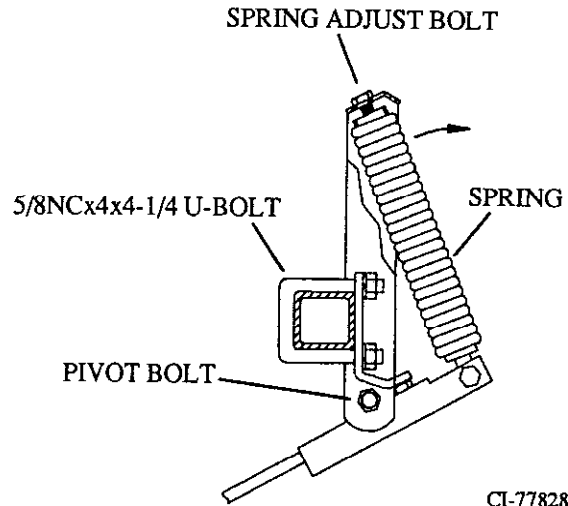


SHANK PLACEMENT

NOTE: Shank installation can be simplified by removing the spring adjustment bolt and swinging the spring forward, thus providing easy access to the U-bolt.

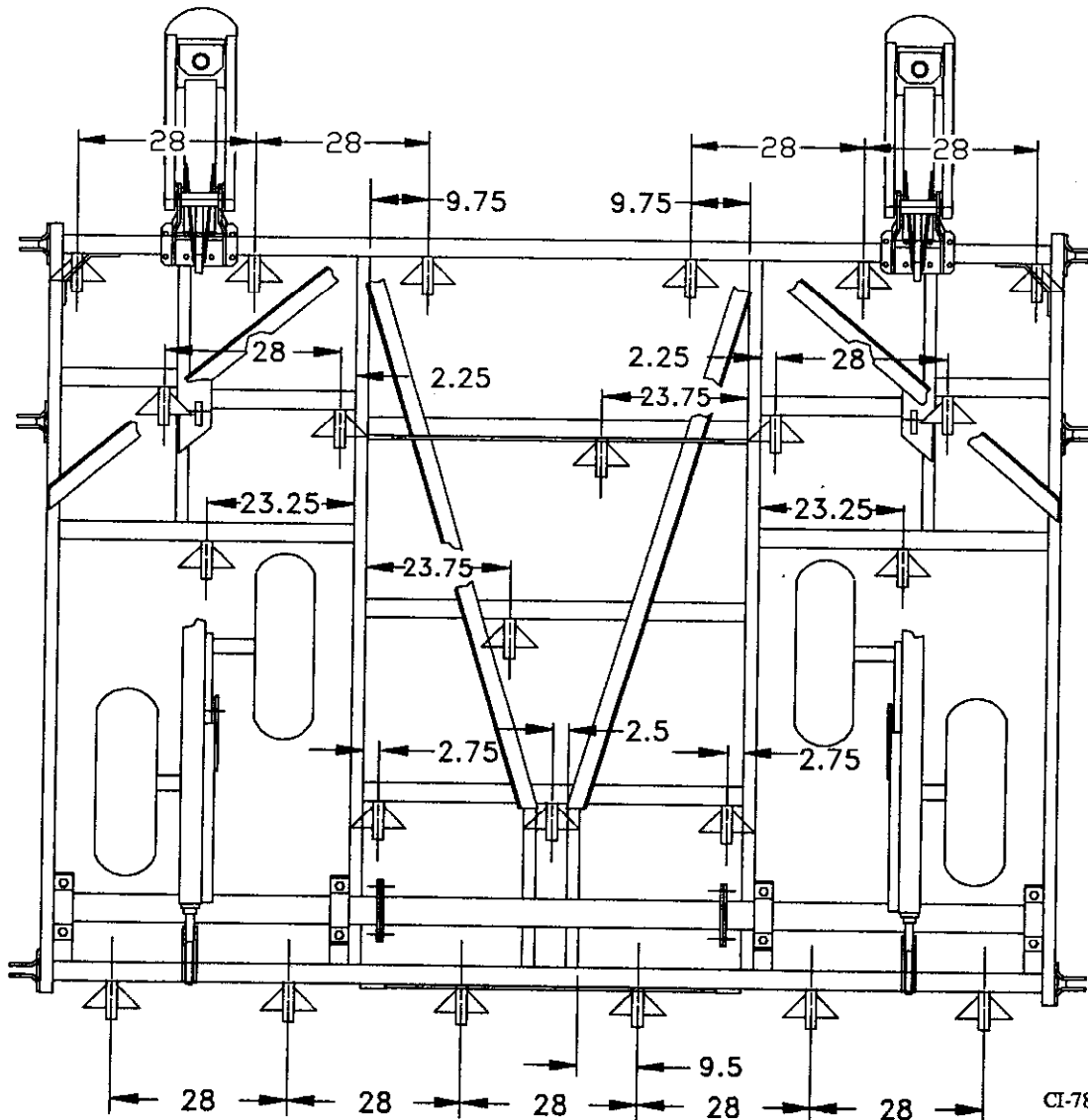
NOTE: Spring adjust bolt should be tightened just enough to crack the paint between spring coils.

NOTE: Stub locations (front to rear) on the following shank placements are approximate. Care must be taken to ensure shanks *do not* hit tires, frame tubes or other shanks when tripping.



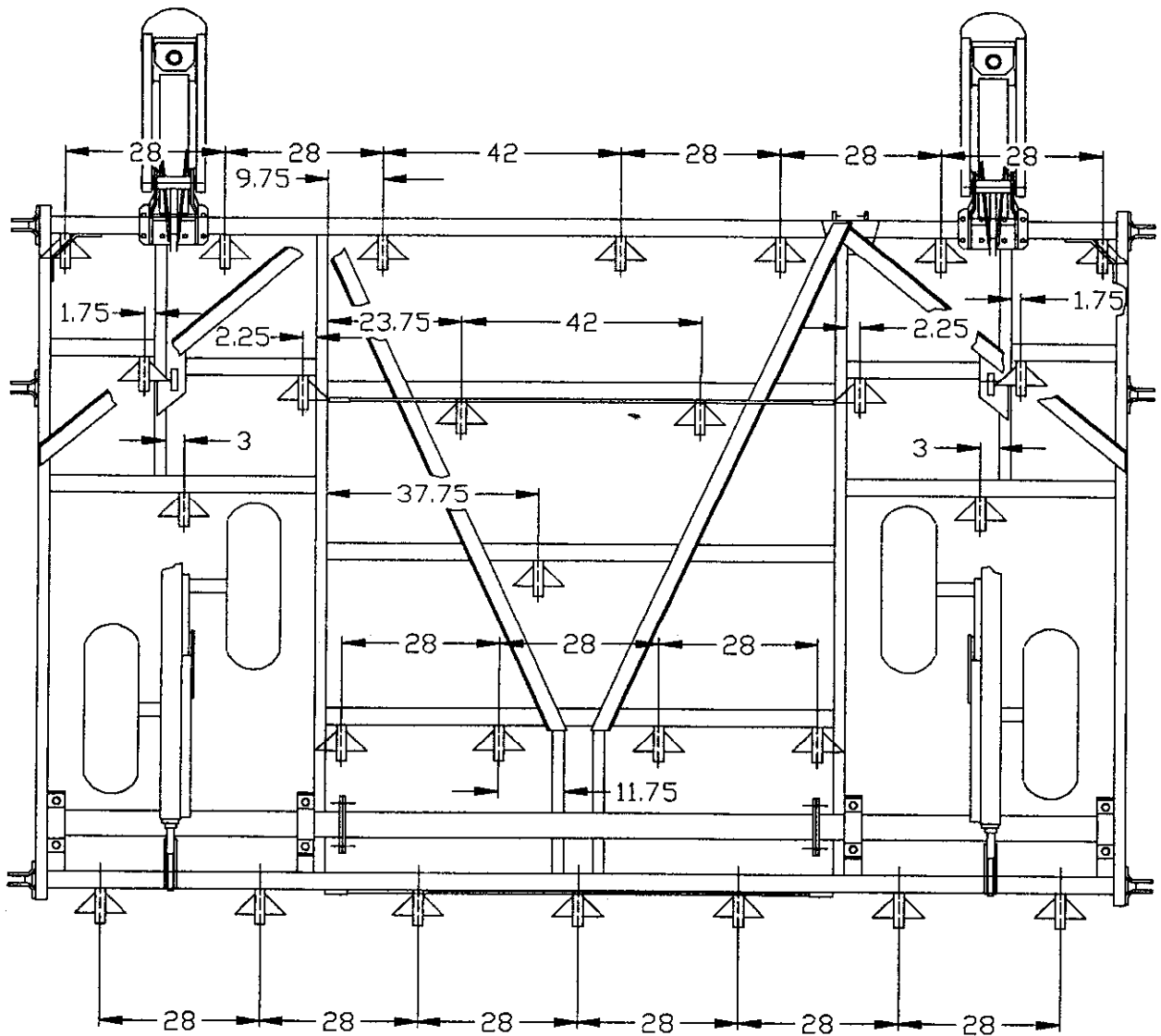
CI-77828

13' MAIN FRAME



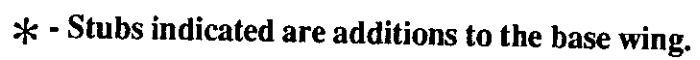
CI-78451

16' MAIN FRAME

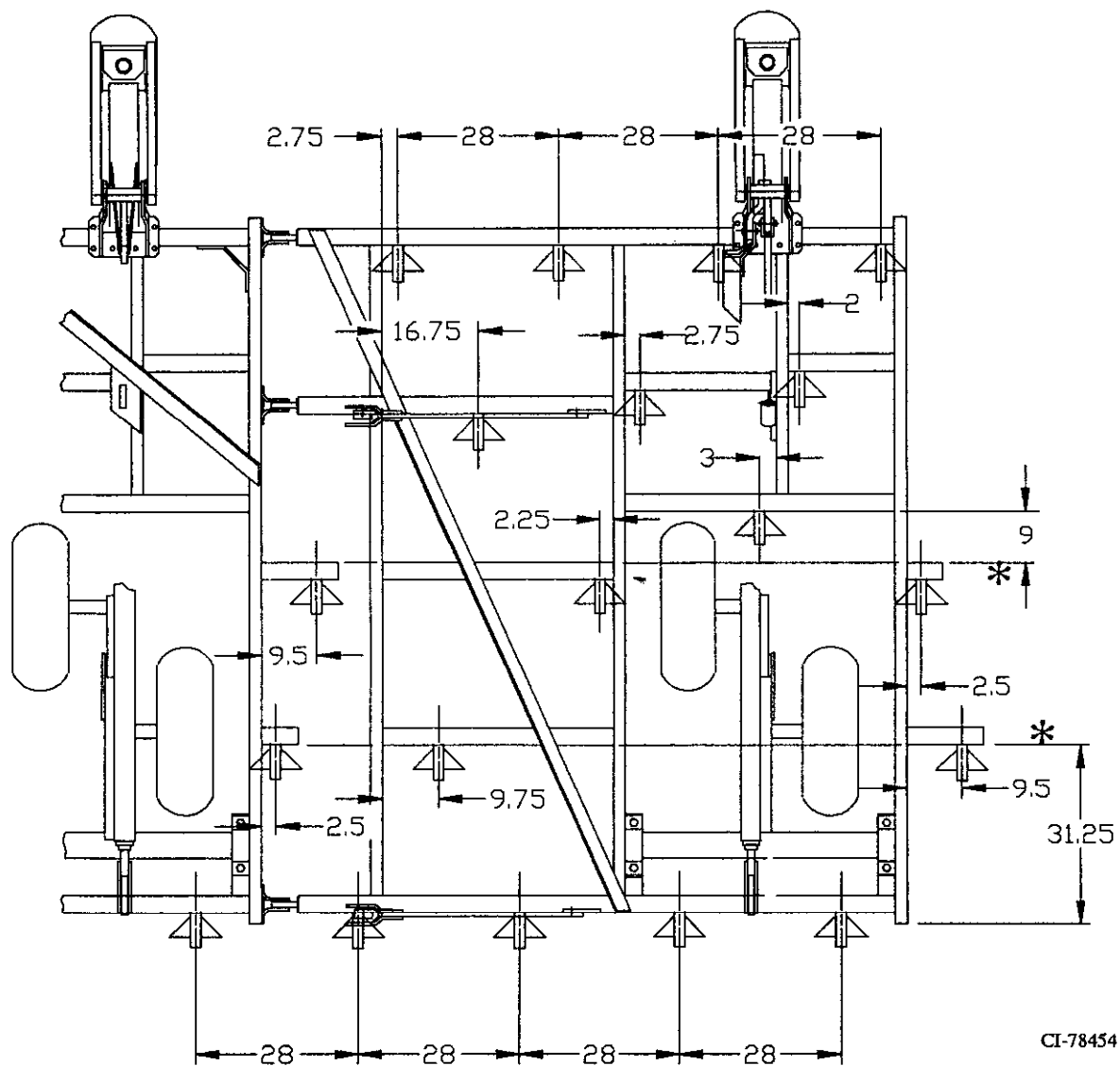


CI-78452

CI-78456

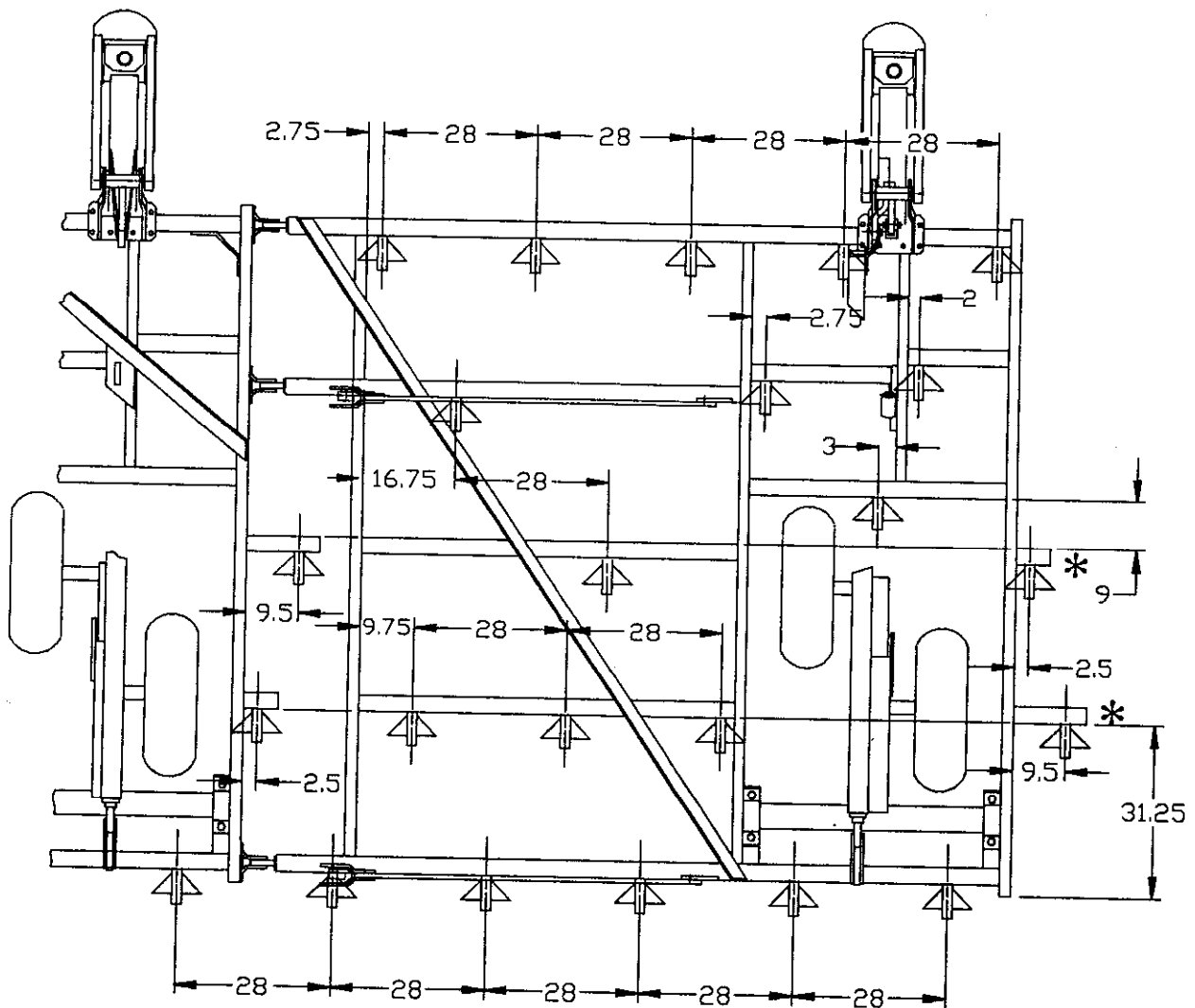


9'4" WING



* - Stubs indicated are additions to the base wing.

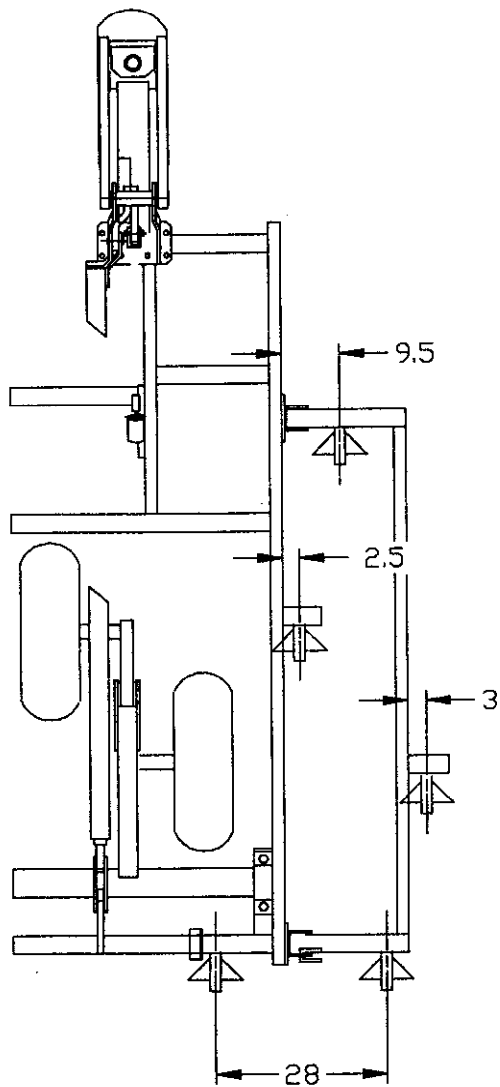
11'8" WING



CI-78455

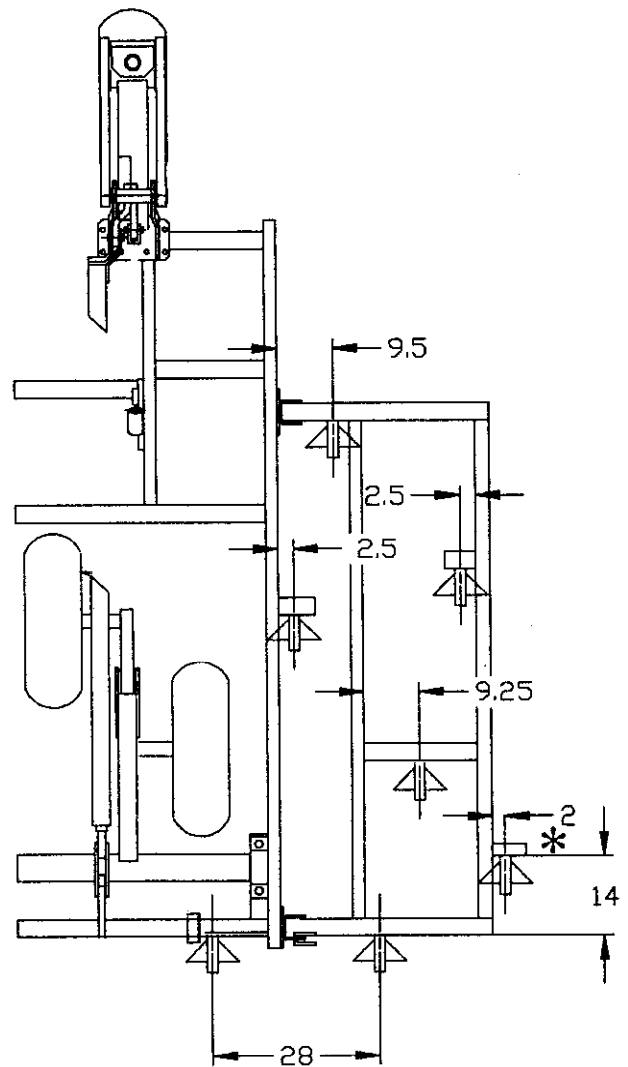
* - Stubs indicated are additions to the base wing.

2' RIGID WING



CI-78459

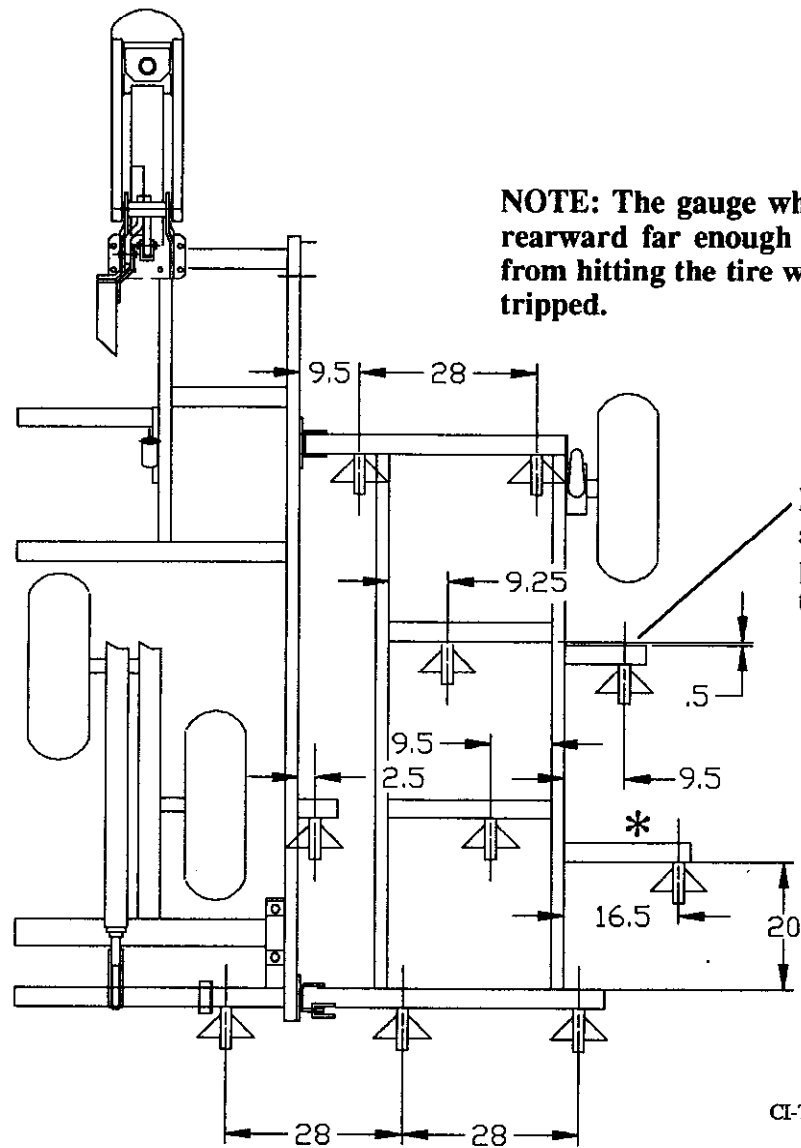
3' OUTER WING



CI-78457

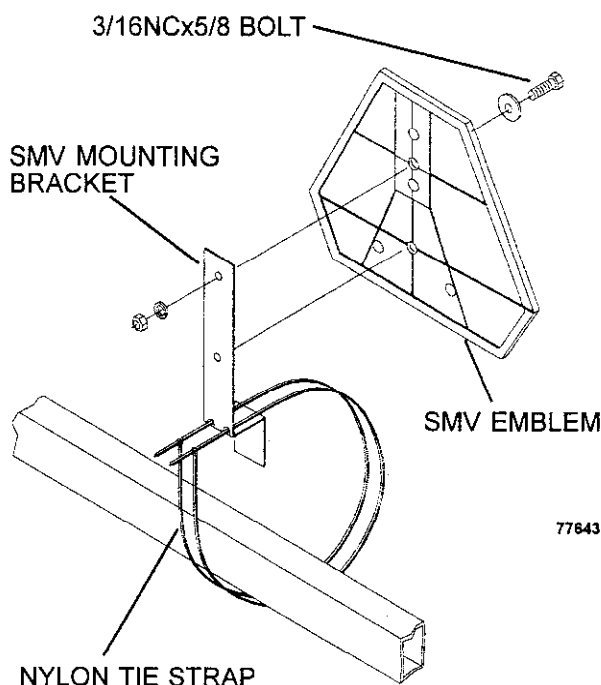
* - Stubs indicated are additions to the base wing.

5' OUTER WING



* - Stubs indicated are additions to the base wing.

SAFETY

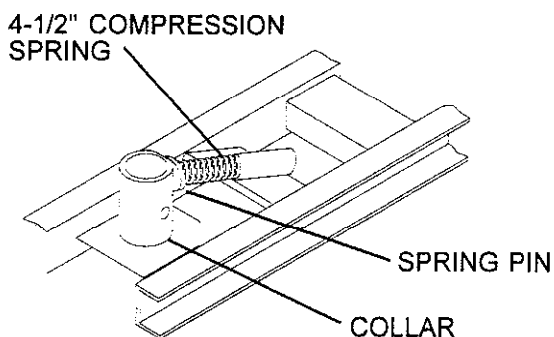


The bracket provided is designed to mount to numerous frame sizes and can be mounted in different positions to avoid interference with implement components.

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.

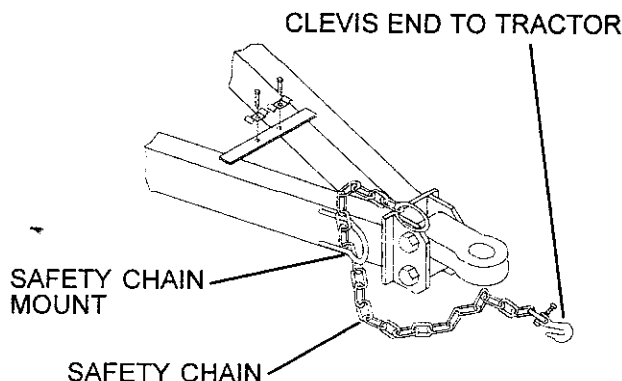
IMPORTANT - This spring damper will not function unless the unit is in the *fully raised position*. This means the main lift cylinders must be fully extended for the dampers to work.



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.

