



ASSEMBLY INSTRUCTIONS

WIL-RICH 2800 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 INQUIRIES TO:

HUTCHINSON WIL-RICH MANUFACTURING COMPANY

P.O. BOX 1030

WAHPETON, ND 58074

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

ASSEMBLY INFORMATION

Remove all bands and arrange the parts conveniently for assembly.

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

Whenever 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 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-

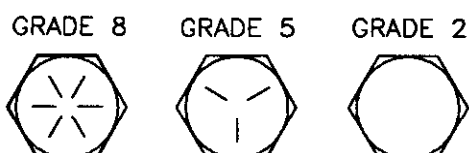
When replacing a bolt, use only a bolt of the same grade or higher.

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.



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	320
	5	30	68	140	240	544
	8	40	100	196	340	792
UNF GRADE	2	21	51	102	178	368
	5	32	70	168	264	572
	8	48	112	216	368	840

CI-75623



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.

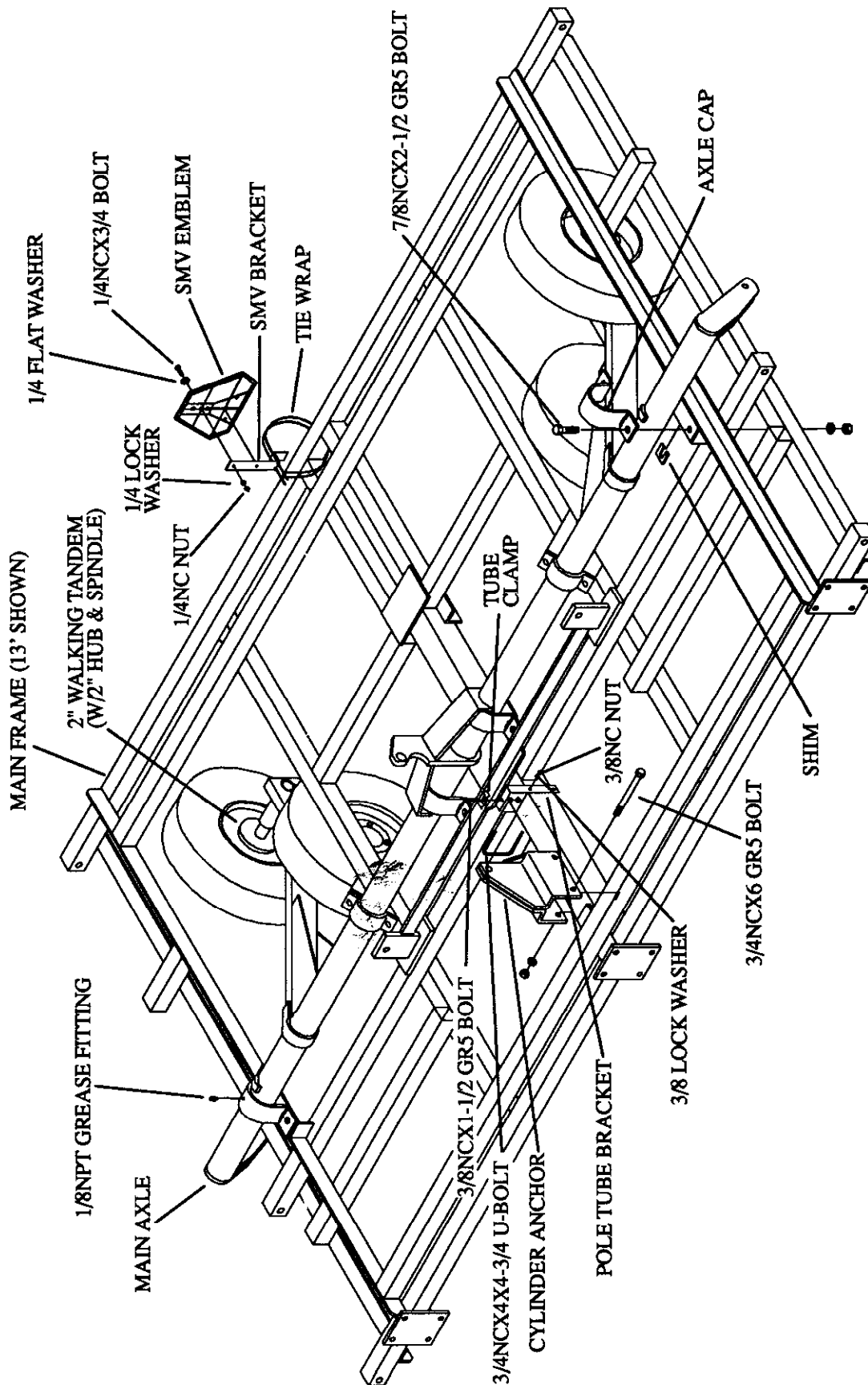
●Before activating the hydraulic system, check hoses for proper connections.

●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.

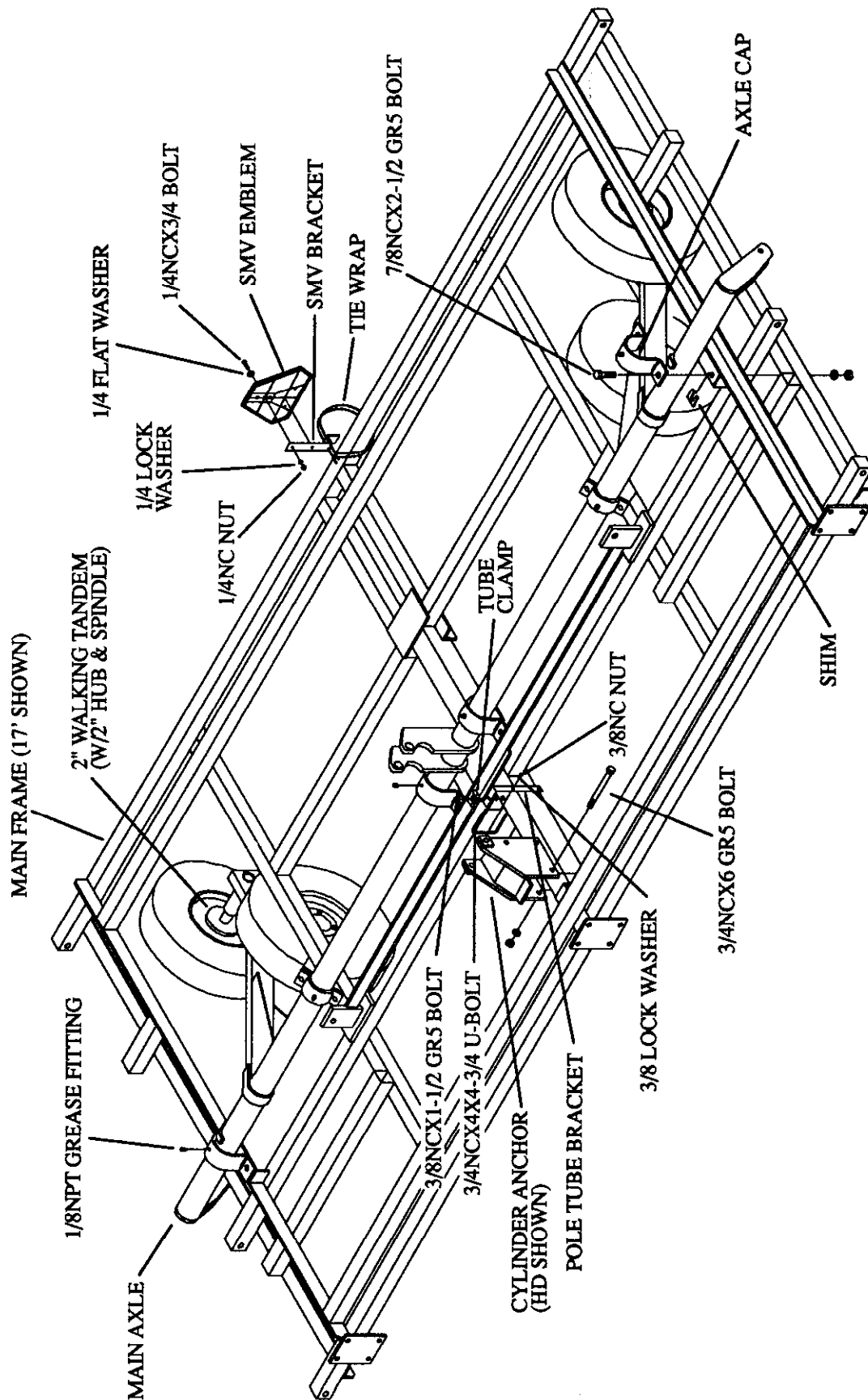
49165

10' & 13' SERIES I MAIN FRAME



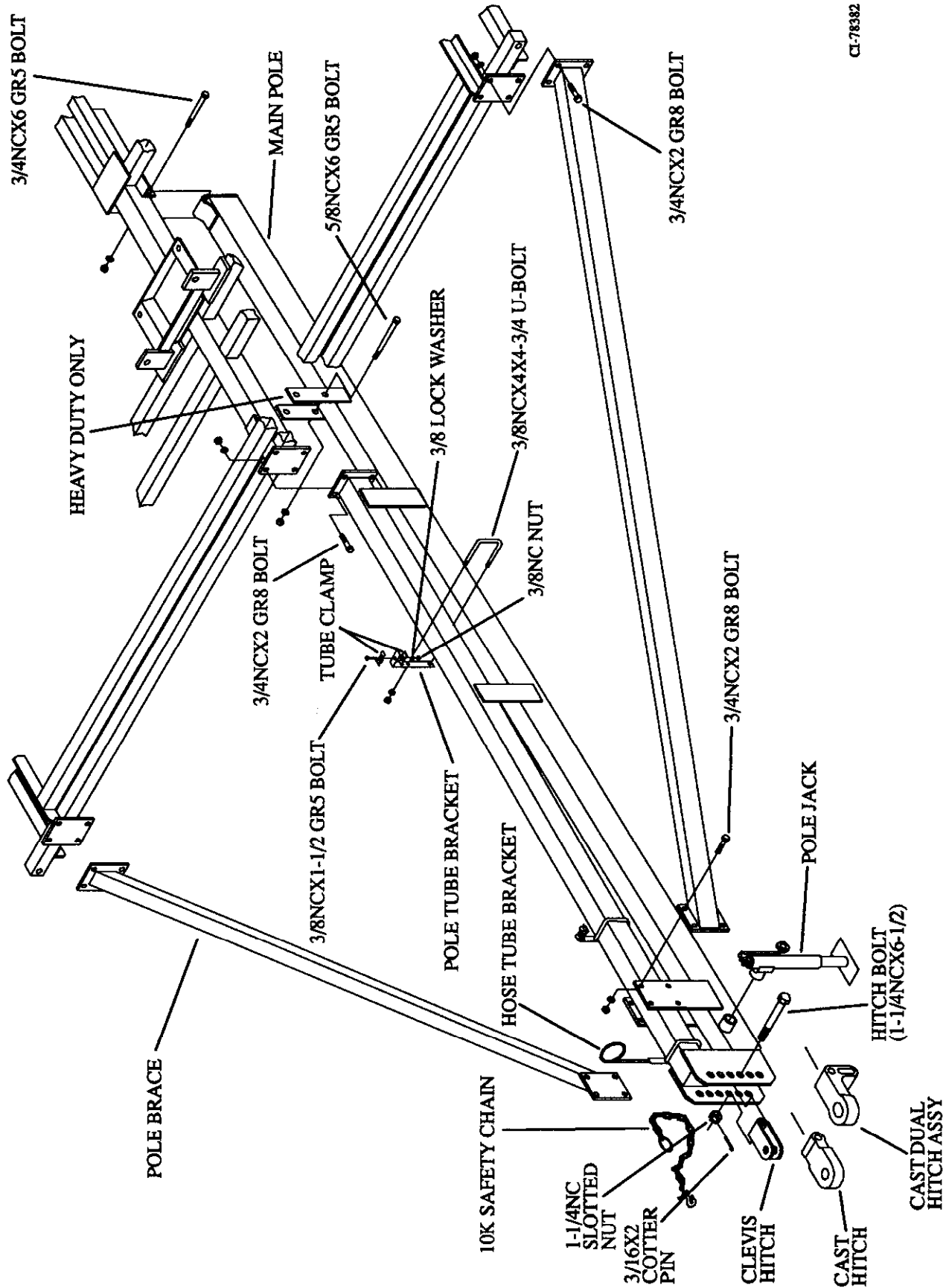
CI-78380

13' & 17' SERIES II MAIN FRAME



CI-78381

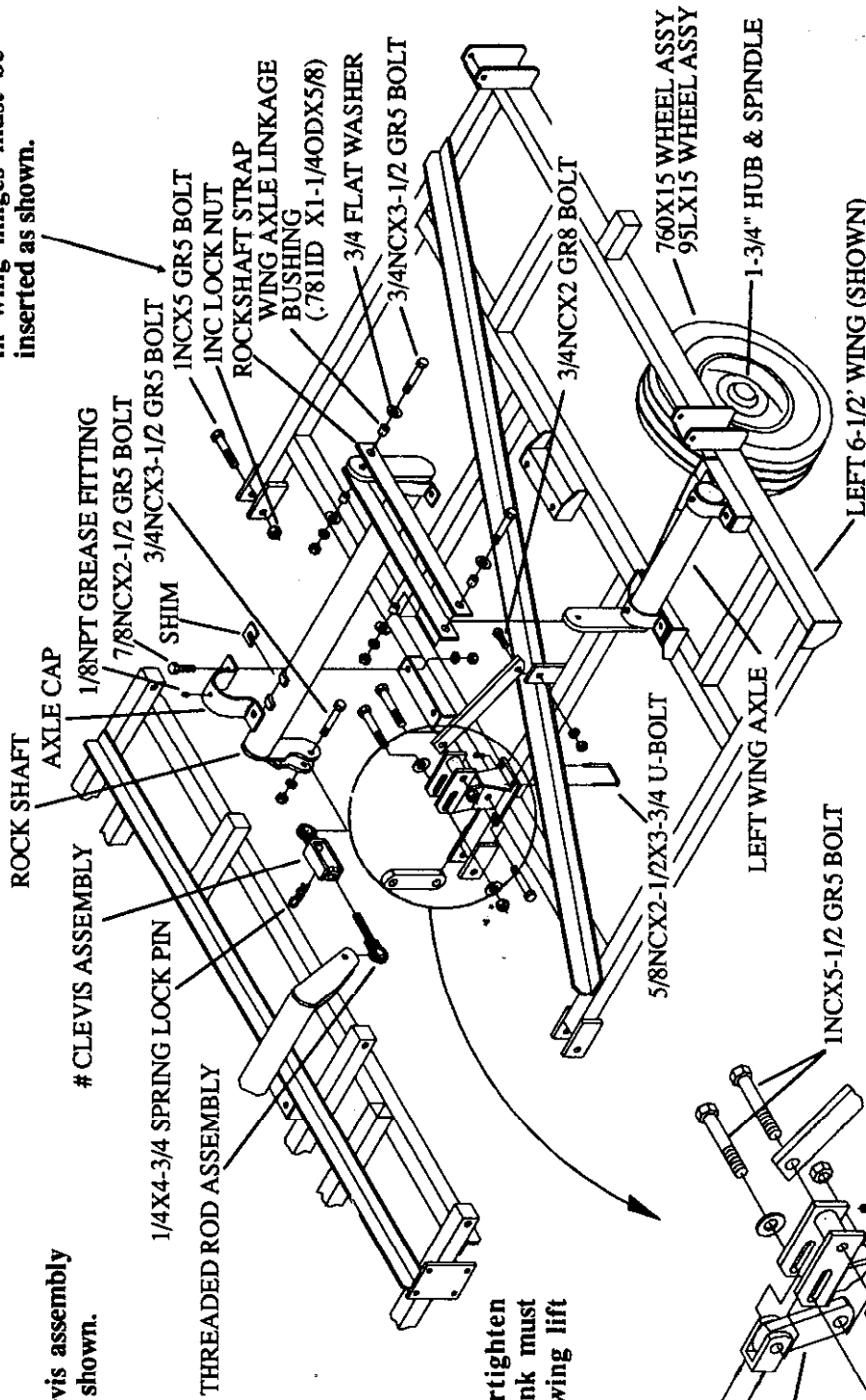
MAIN POLE



CL-78382

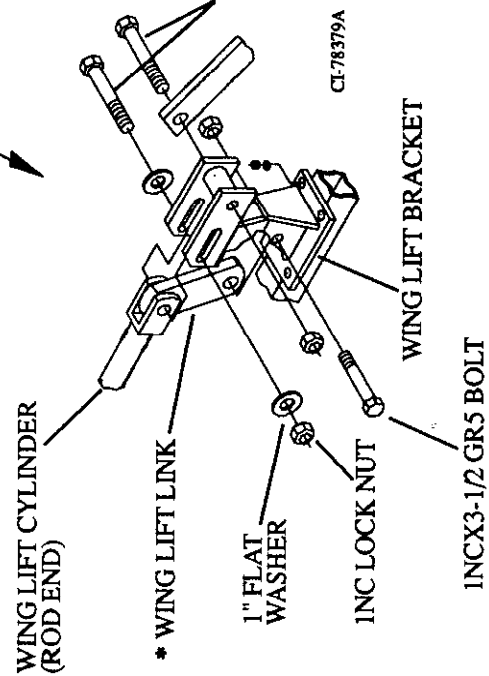
5' & 6-1/2' WING (6-1/2' SHOWN)

NOTE: INCx5 GR5 bolts in wing hinges must be inserted as shown.



CL-78379

* NOTE: Do not overtighten wing lift link. The link must pivot freely in the wing lift bracket.



CL-78379A



⚠ DANGER

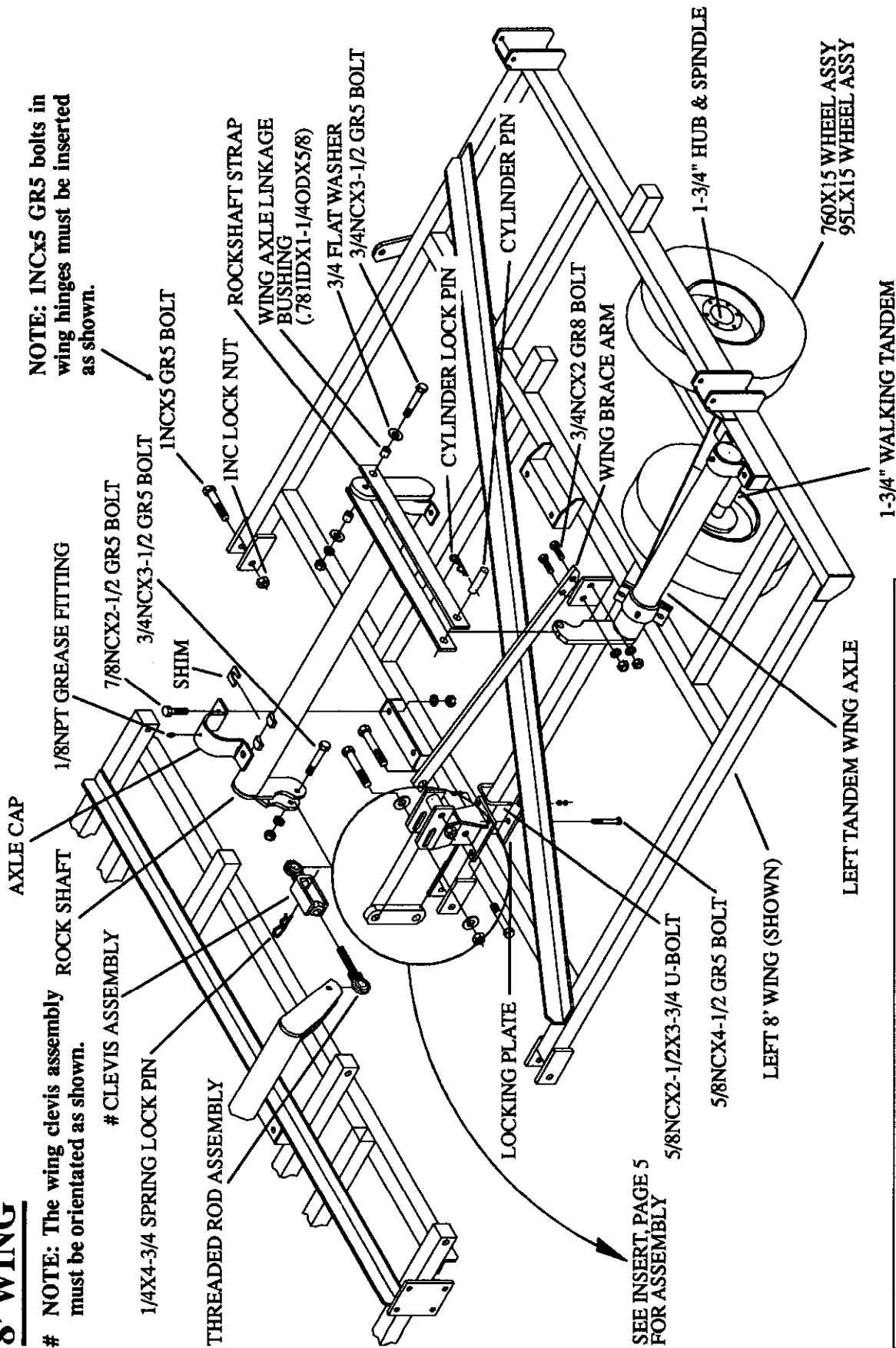
STAND CLEAR AT ALL TIMES

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

8' WING

NOTE: The wing clevis assembly must be orientated as shown.

NOTE: 1NCx5 GR5 bolts in wing hinges must be inserted as shown.



SEE INSERT, PAGE 5 FOR ASSEMBLY



⚠ DANGER

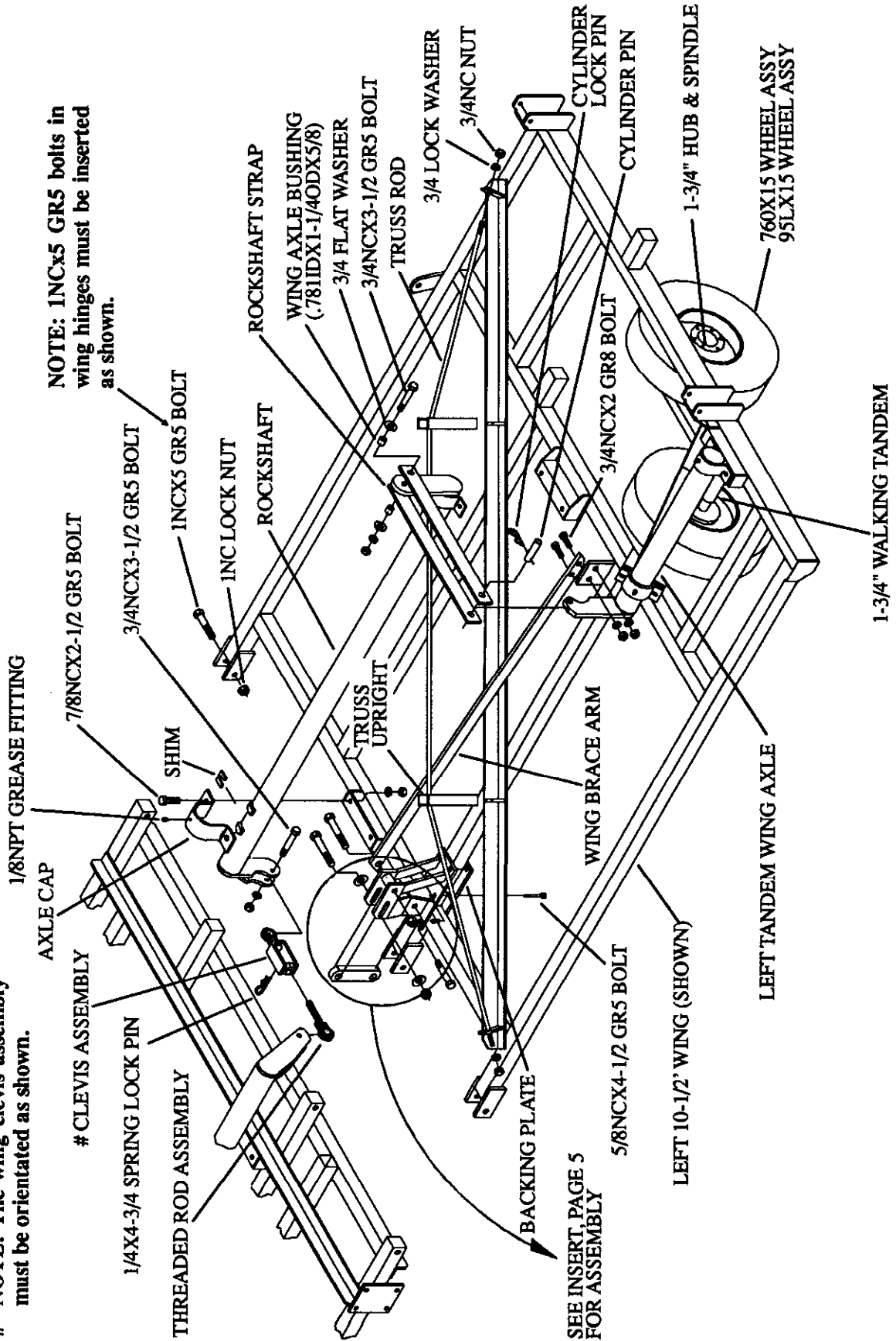
STAND CLEAR AT ALL TIMES

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

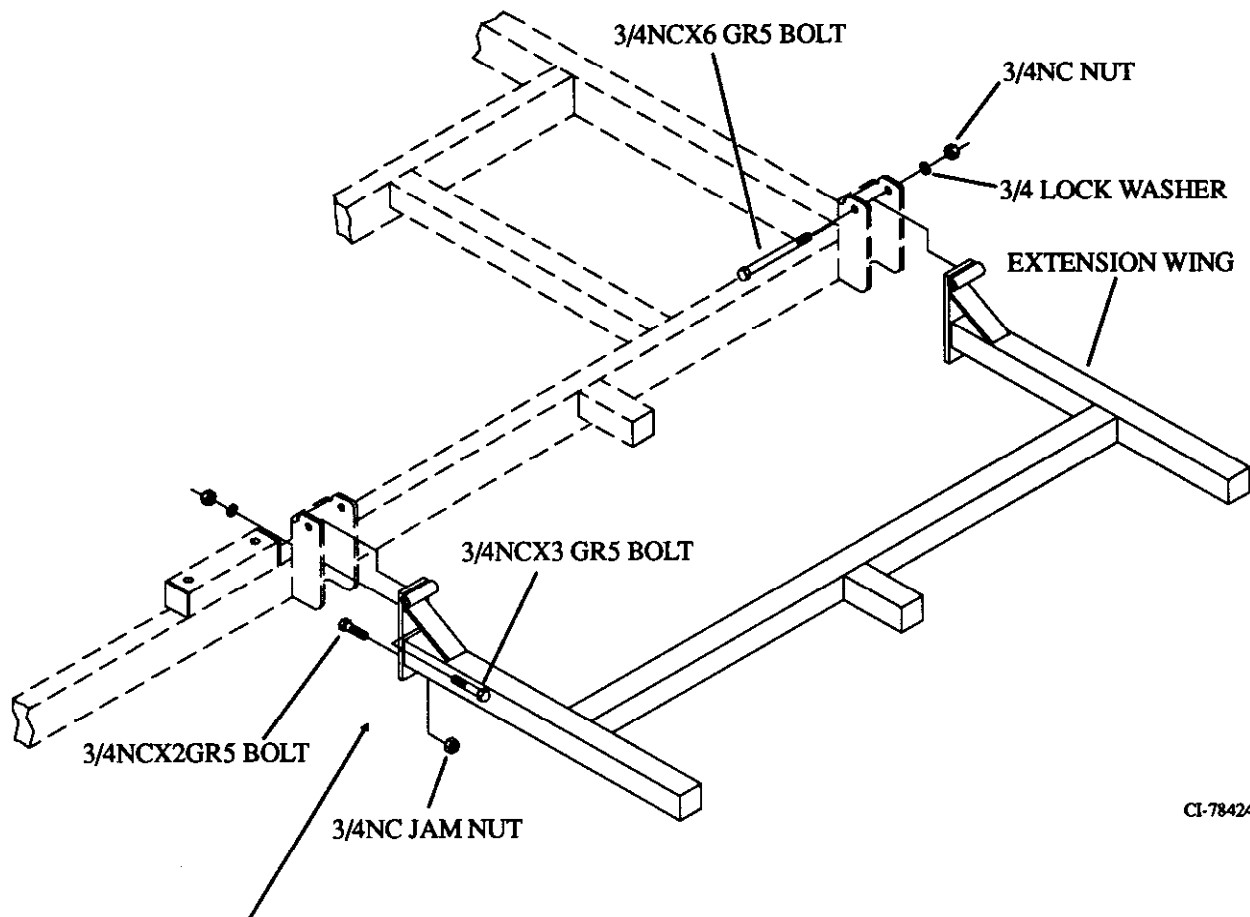
10-1/2' WING

NOTE: The wing clevis assembly must be orientated as shown.

NOTE: 1NCx5 GR5 bolts in wing hinges must be inserted as shown.



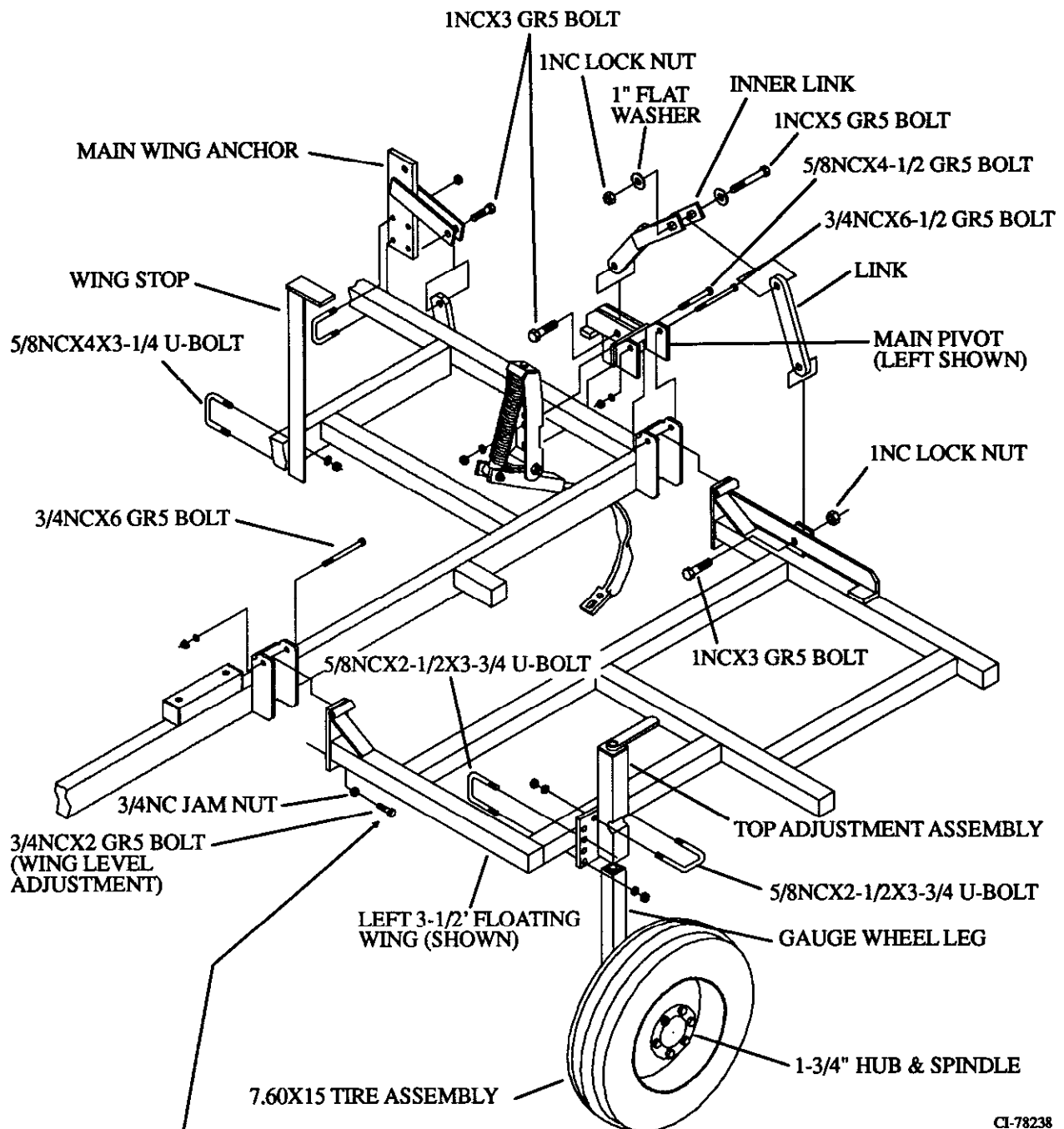
2-1/2' EXTENSION WING



CI-78424

NOTE: Level extension wing with the head end of the 3/4NCx2 GR5 bolt. Turn until extension wing is in line with inner wing frame and lock in position with 3/4NC Jam Nut.

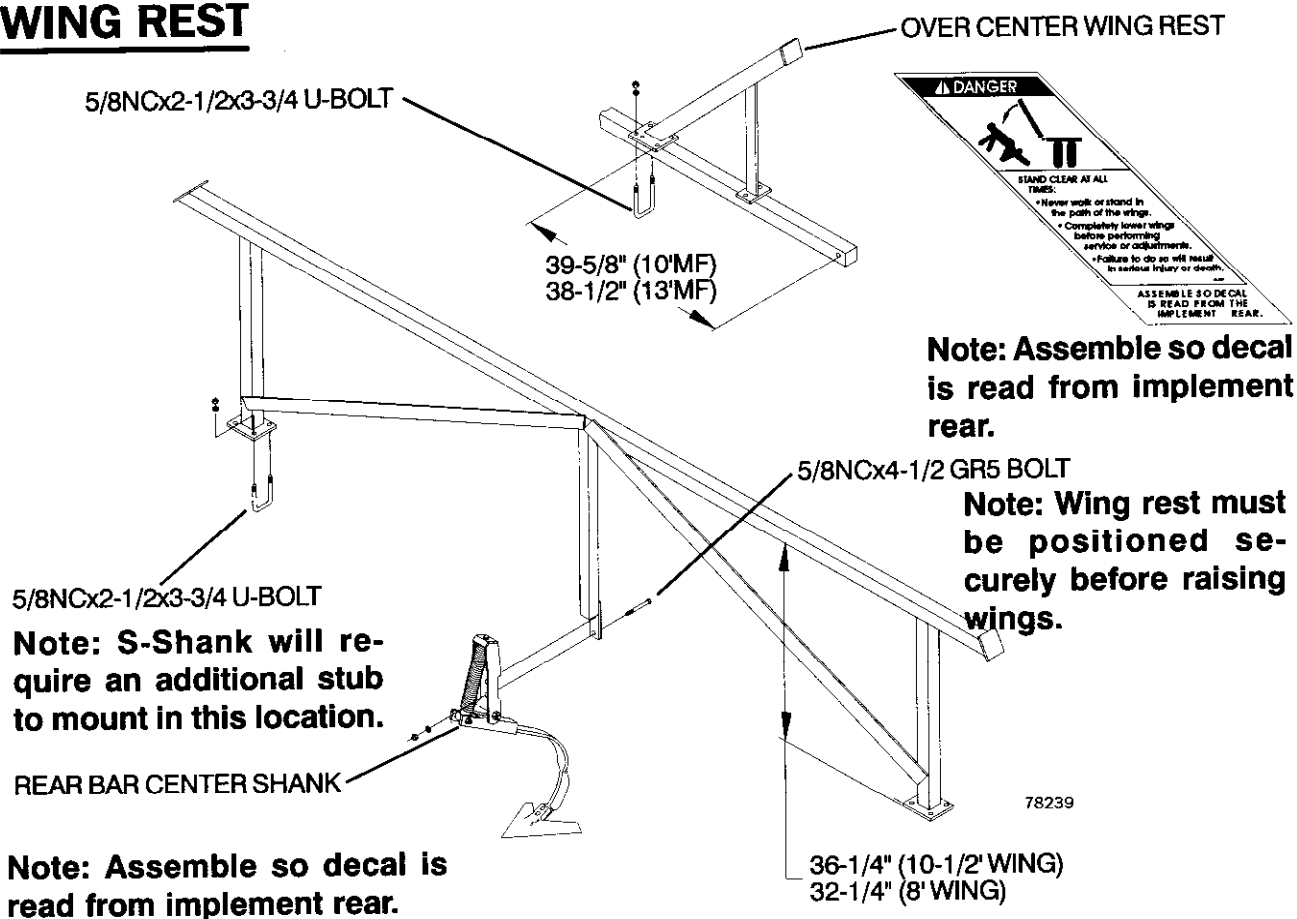
3-1/2' FLOATING WING



CI-78238

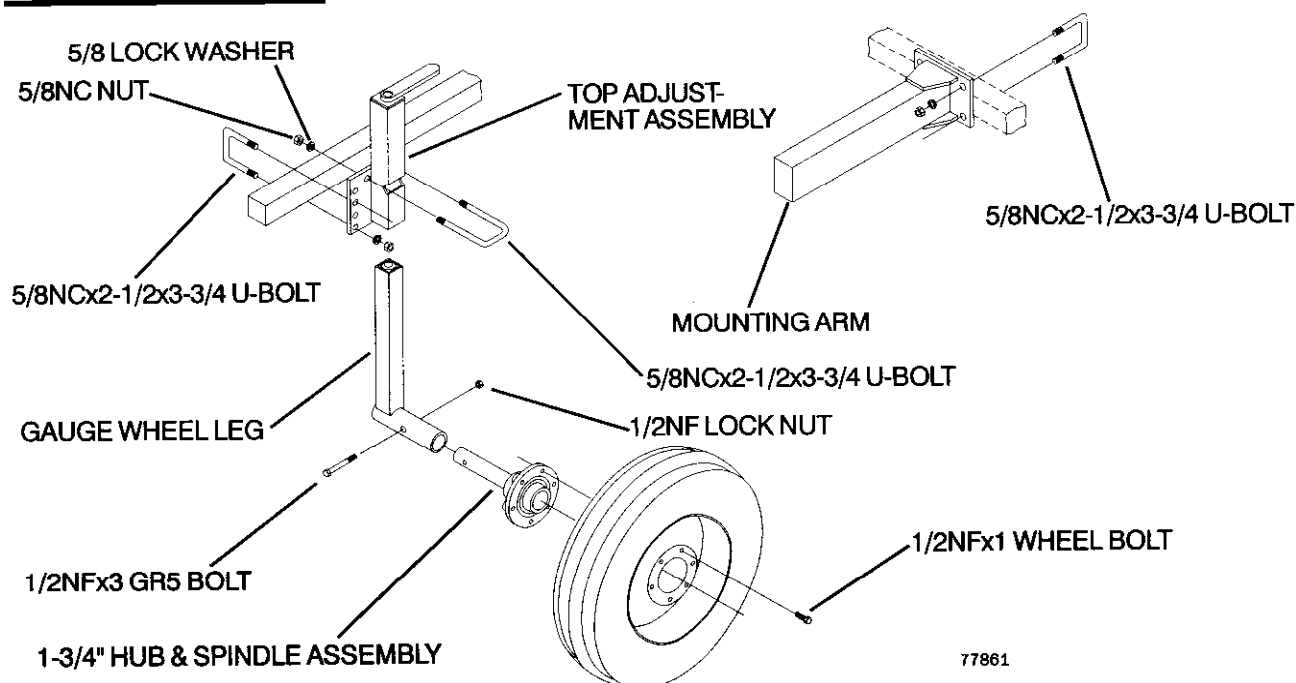
NOTE: Floating Wing - Turn the bolt into or thru the hinge to set the degree of downward float. Lock setting with the jam nut provided.

WING REST



	DANGER	• 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.
	STAND CLEAR AT ALL TIMES:		

GAUGE WHEEL



WING LIFT HYDRAULICS

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

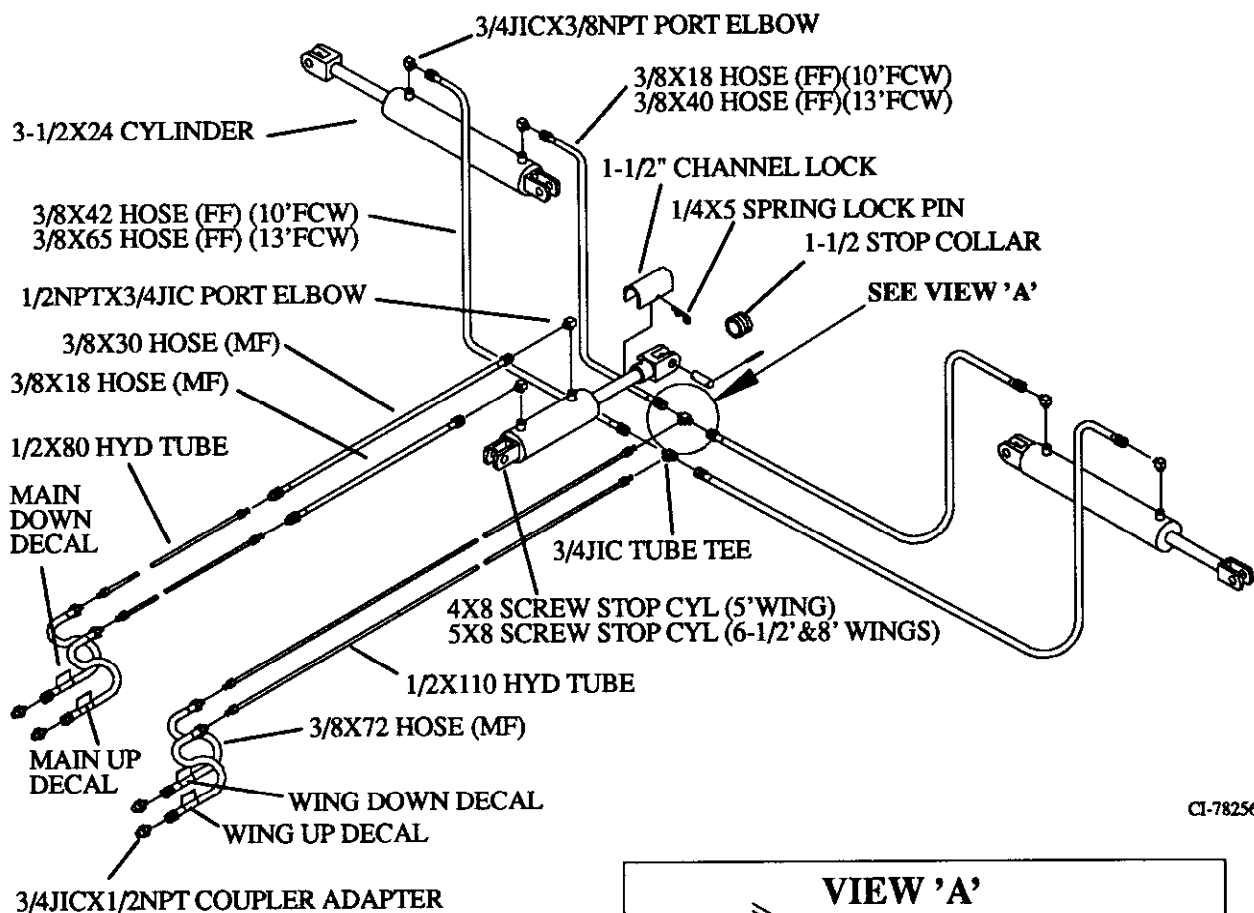
NOTE: Torque all 37° flare fittings and hoses 20 to 40 foot pounds. Do not over tighten as flares do the sealing, not thread deformation.

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

HYDRAULICS 5', 6-1/2' & 8' WINGS

10' FCW 19 - 31

13' FCW 23 - 31



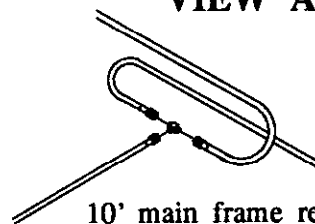
CI-78256



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.

VIEW 'A'

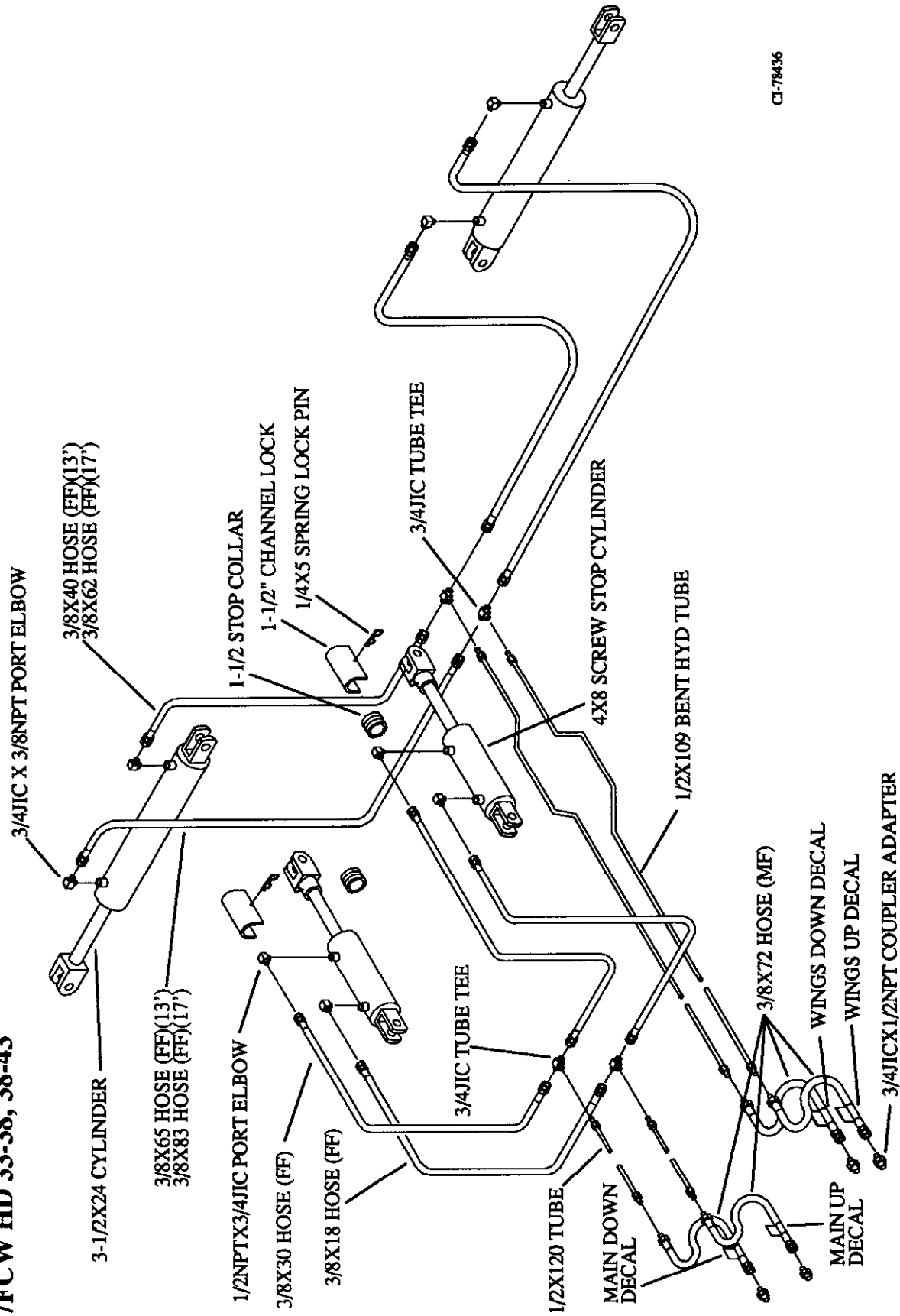


10' main frame requires hoses to be turned around as shown. Hoses turned at this tee only; prevents kinking of the hydraulic hose.

HYDRAULICS - 8'HD & 10-1/2'HD WINGS

13 FCW HD 30-34, 34-39

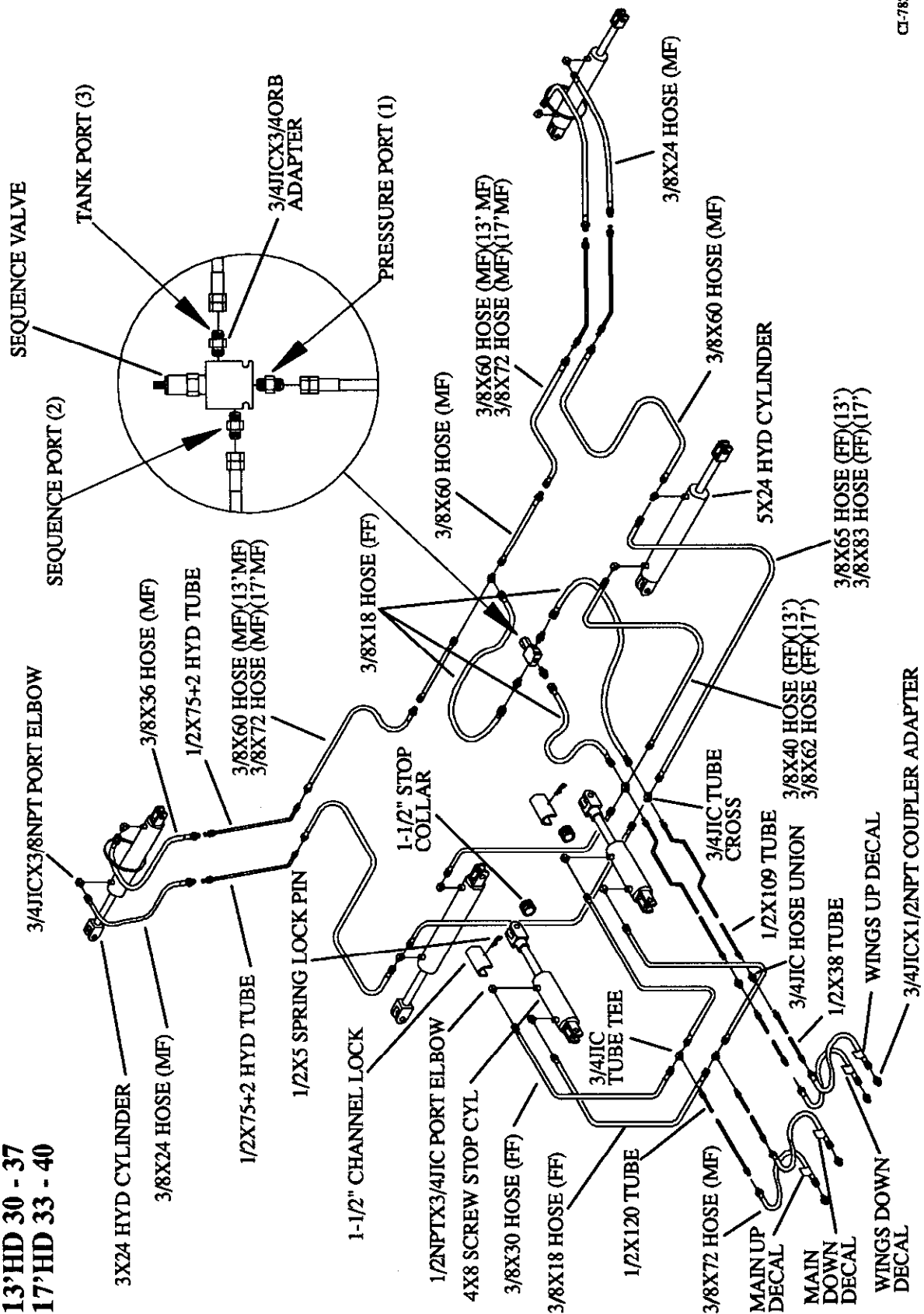
17FCW HD 33-38, 38-43



CI-78436

13' & 17' HD HYDRAULICS - 8' HD WING W/EXTENSIONS

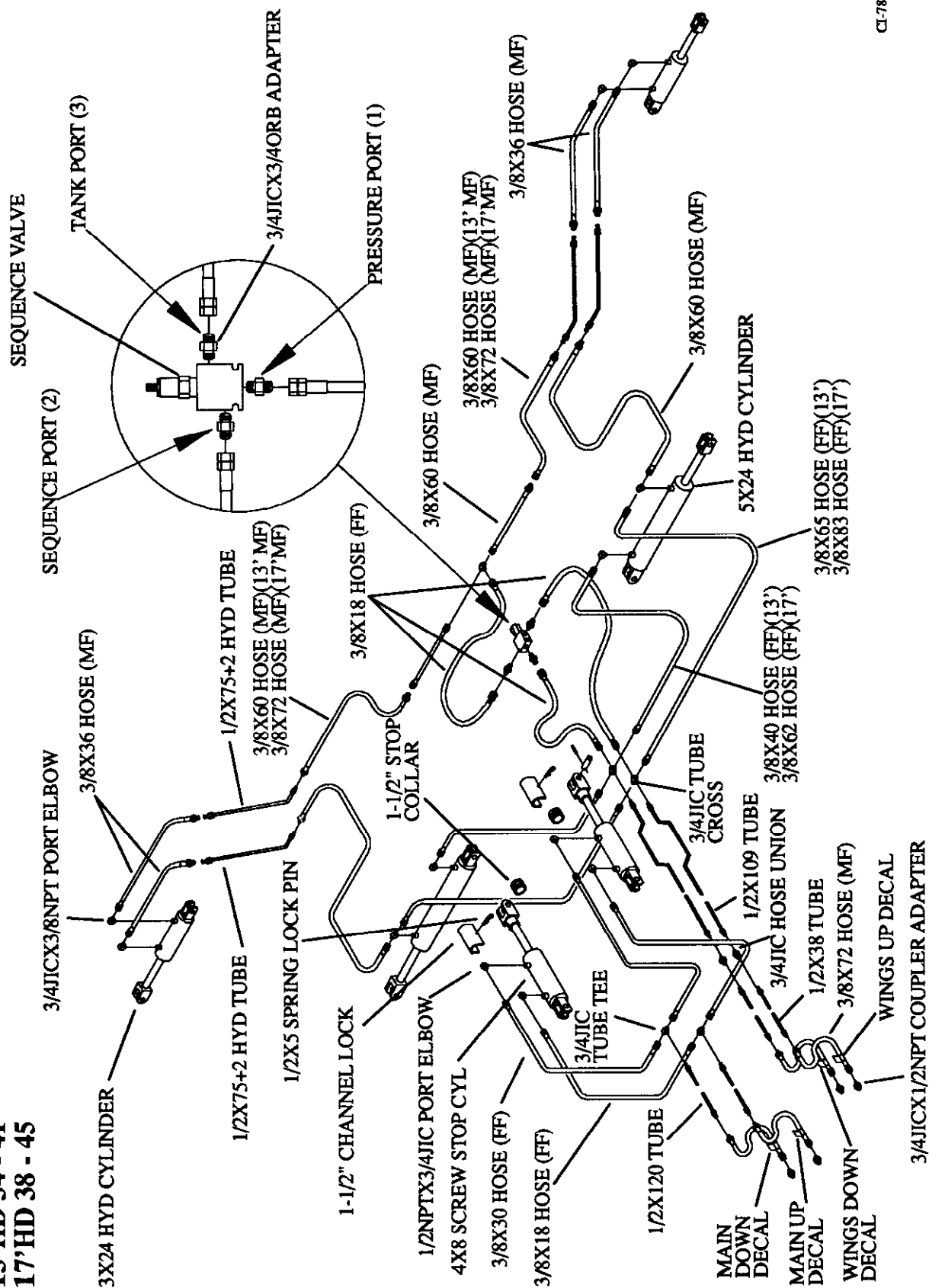
13'HD 30 - 37
17'HD 33 - 40



CI-78251

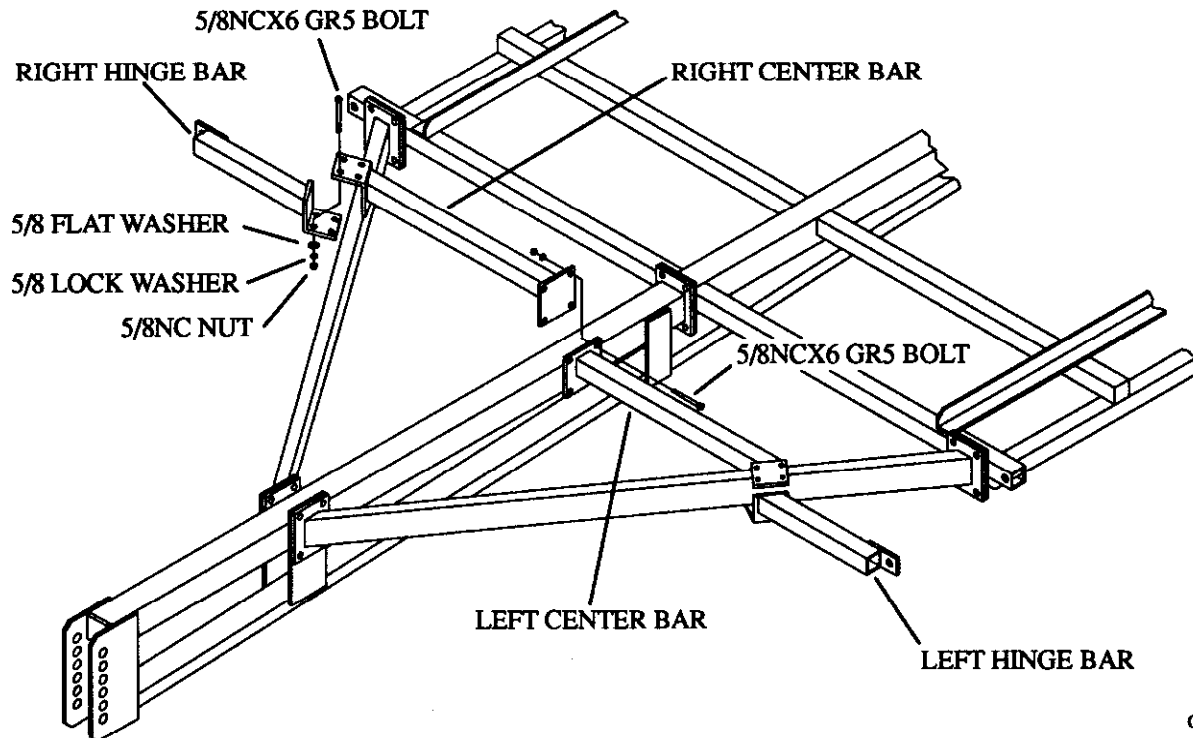
13' & 17' HD HYDRAULICS - 10-1/2' HD WING W/EXTENSIONS

13'HD 34 - 41
17'HD 38 - 45

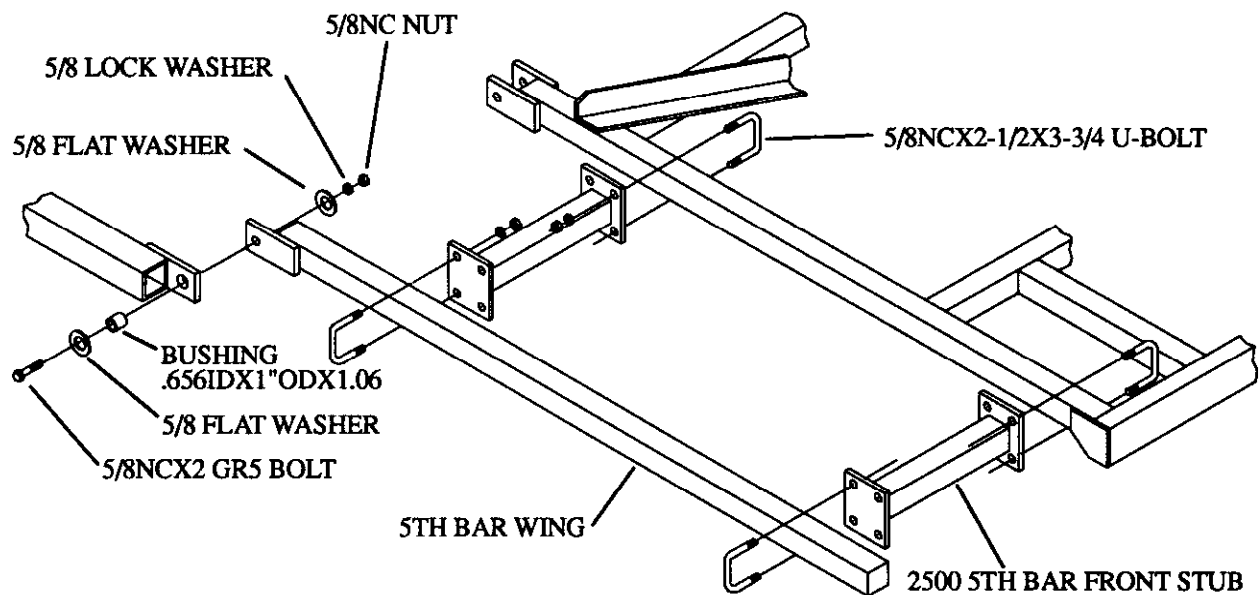


CI-78250

MAIN FRAME 5TH BAR MOUNTING

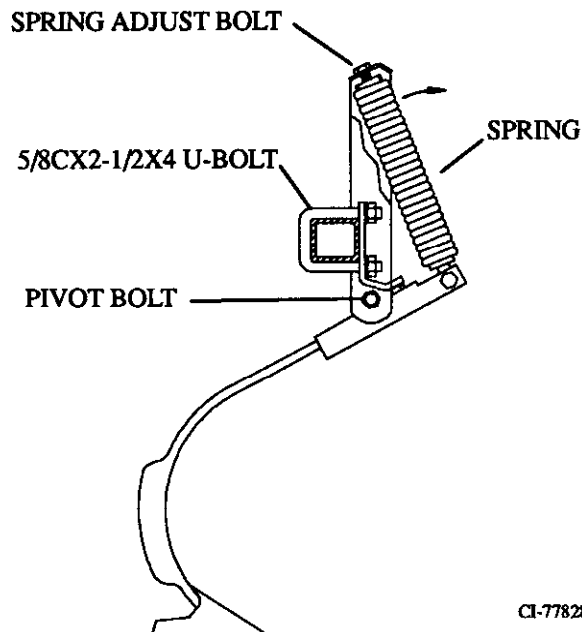


5TH BAR WING



SHANK MOUNTING

C-SHANK

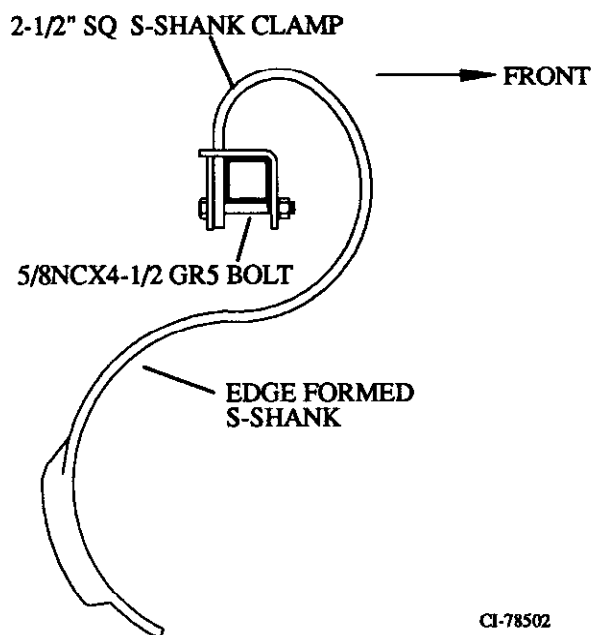


NOTE: Shank installation can be simplified by removing the spring adjustment bolt and swinging the spring forward, thus providing easy access to the U-bolt.

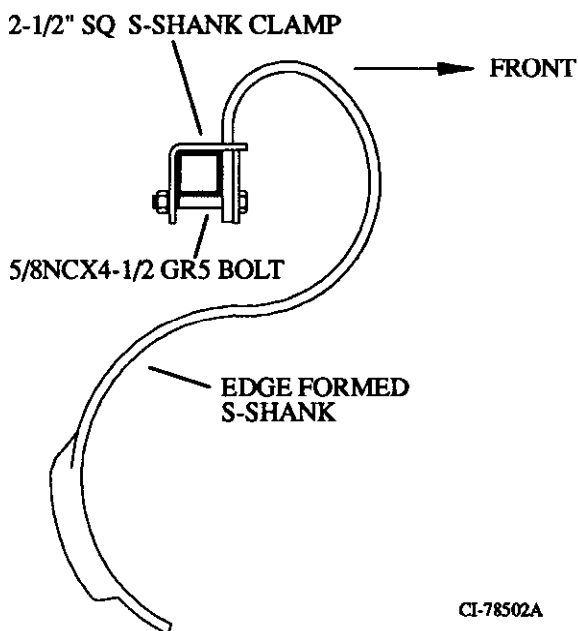
NOTE: Spring adjust bolt should be tightened just enough to crack the paint between spring coils.

NOTE: Care must be taken to ensure shanks do not hit tires, frame tubes or other shanks when tripping, or when folding the wings for transport.

S-SHANK - NORMAL MOUNT



S-SHANK - OPTIONAL MOUNT



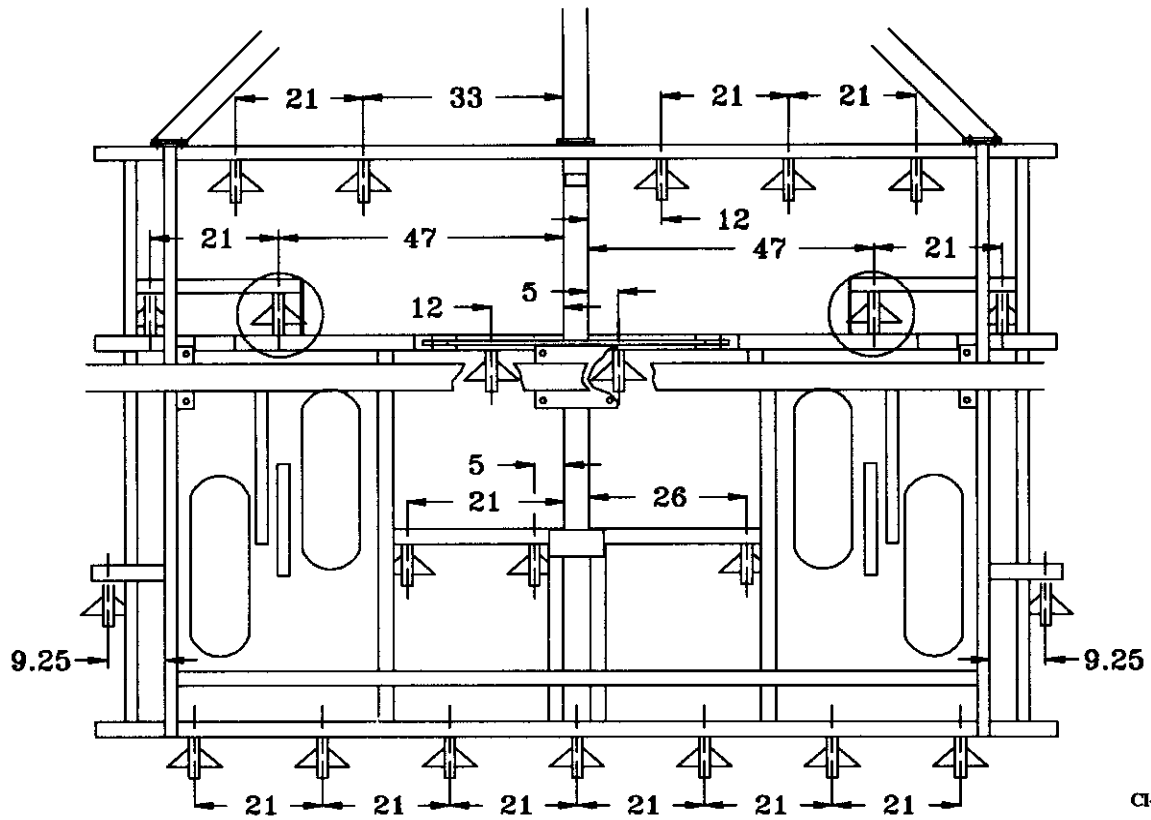
In some cases the S-shank mount may need to be reversed for clearance.

10' FCW MAIN FRAME



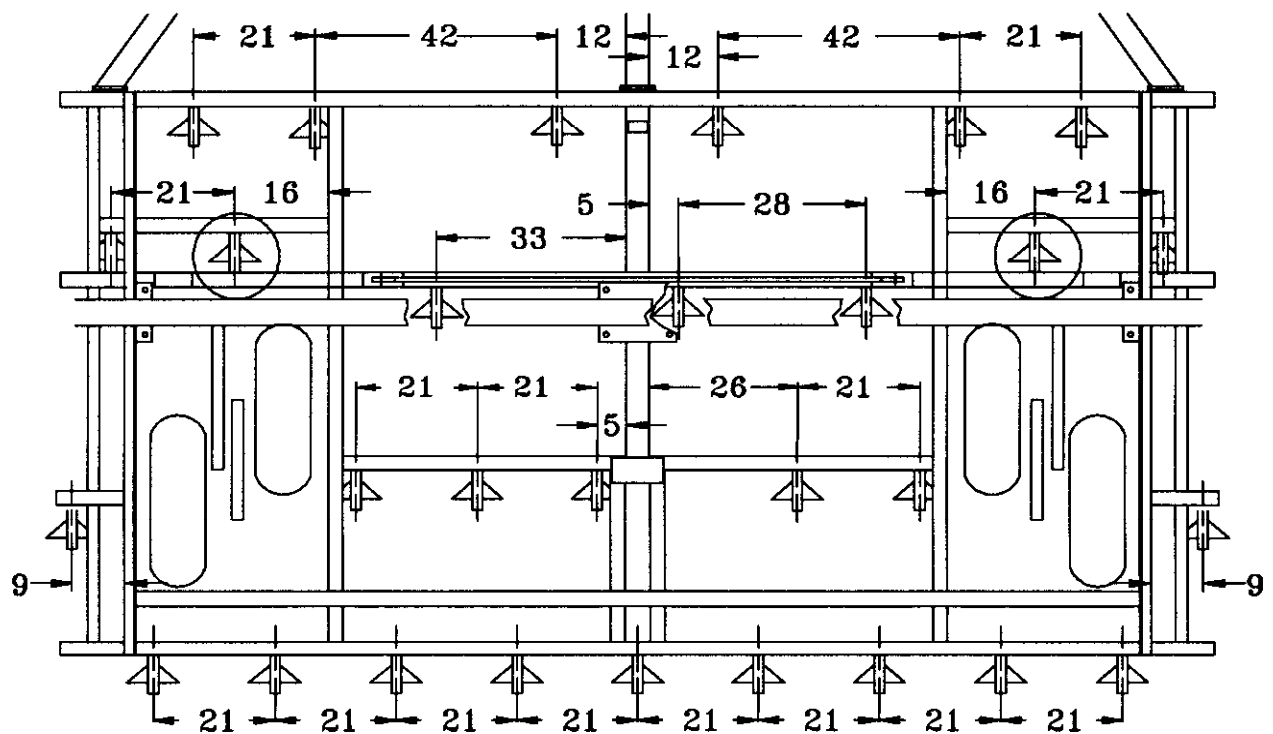
Note (+): The rear jack stand kit can be attached to the rear bar of the cultivator to prevent it from tipping backwards. Locate as close to center of main frame as possible.

13' FCW MAIN FRAME



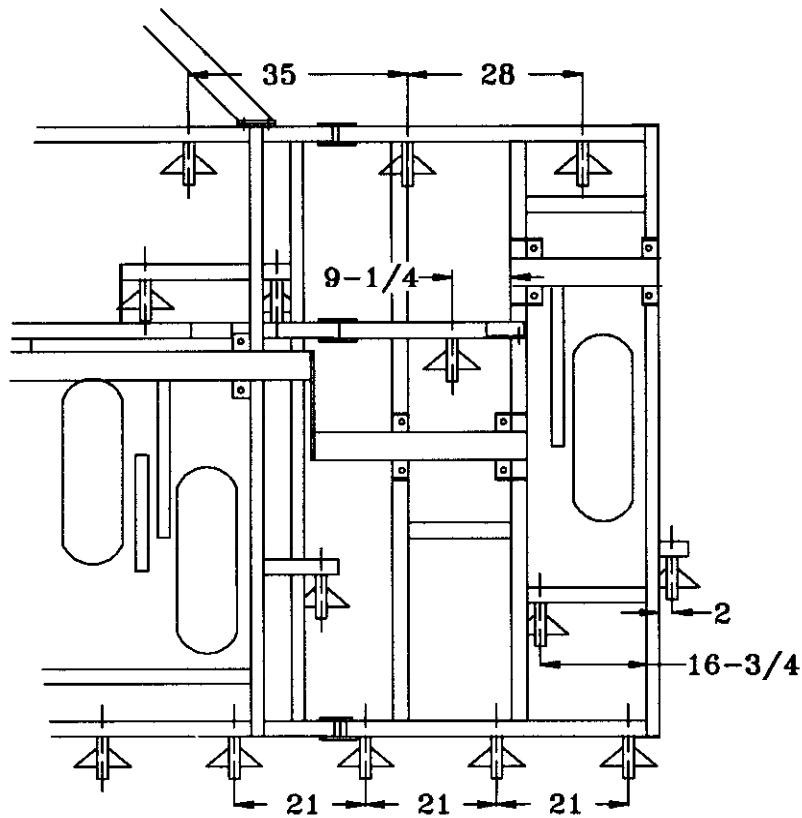
CI-78389

17' FCW MAIN FRAME



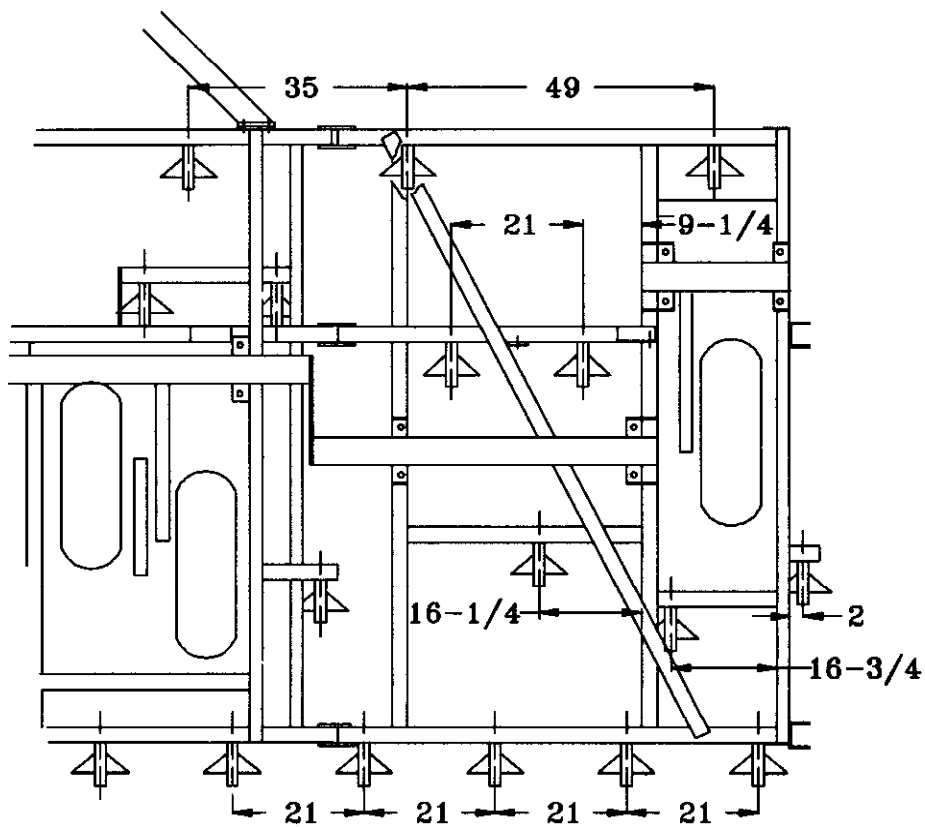
CI-78392

5' WING - 10' OR 13' FCW MAIN FRAME



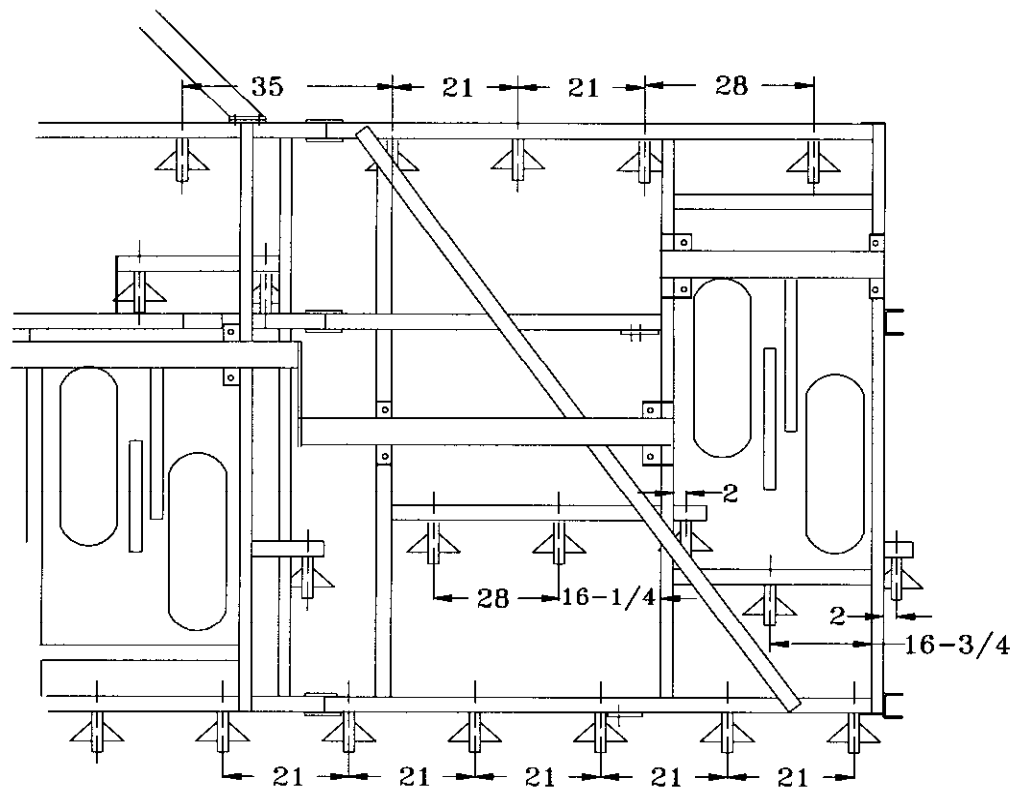
CI-78393

6-1/2' WING - 10', 13' OR 17' FCW MAIN FRAME



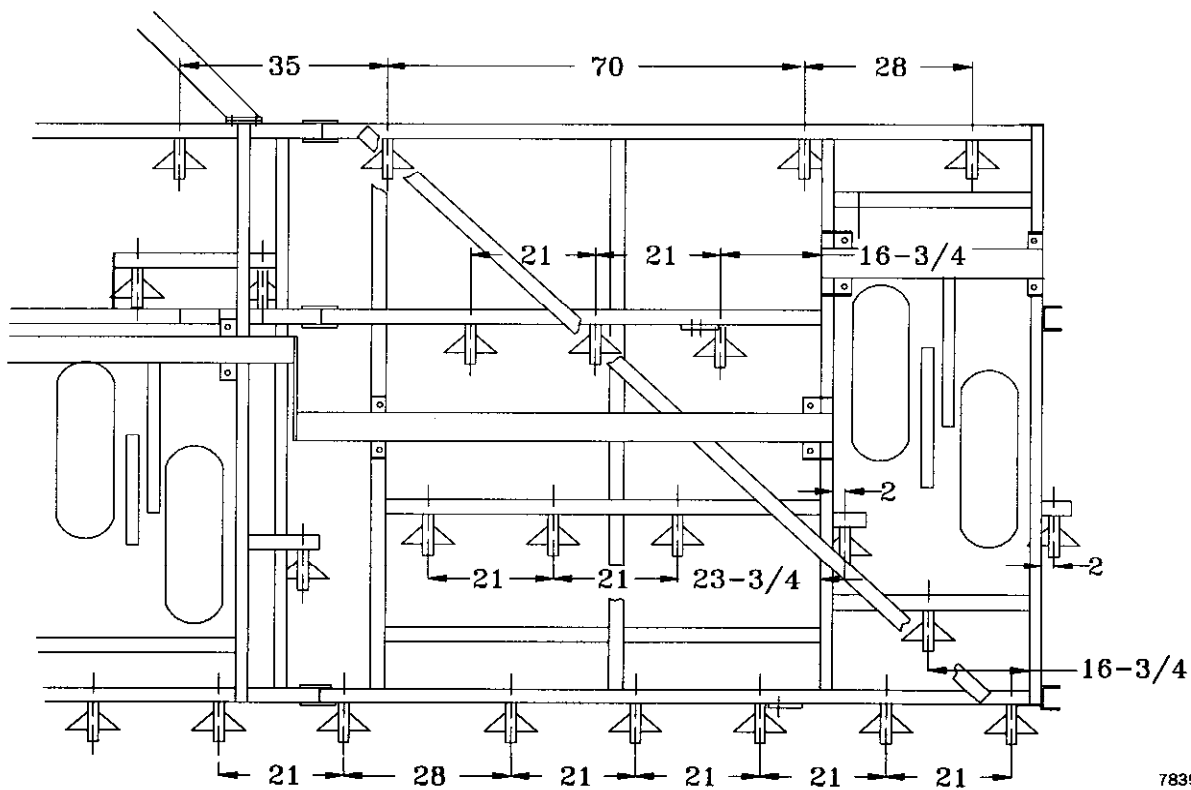
CI-78394

8' WING - 10', 13' OR 17' FCW MAIN FRAME



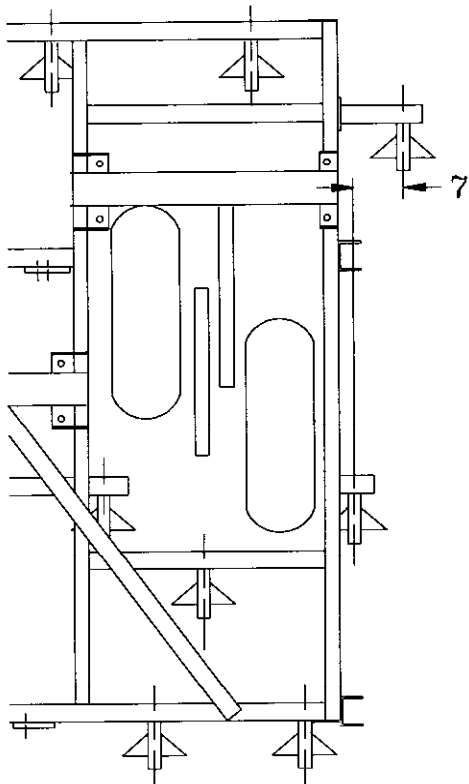
78395

10-1/2' WING - 13' OR 17' FCW MAIN FRAME

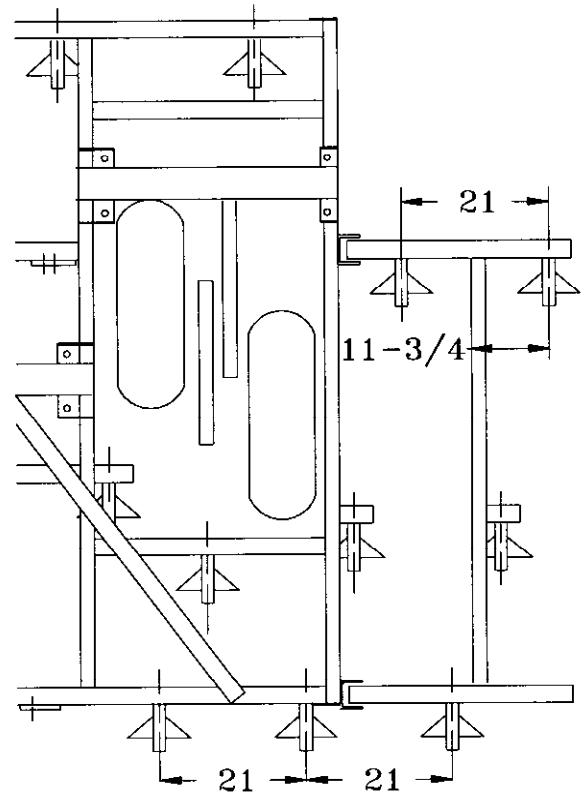


78396

14" STUB (2x4)
5', 6-1/2', 8' OR 10-1/2' WING

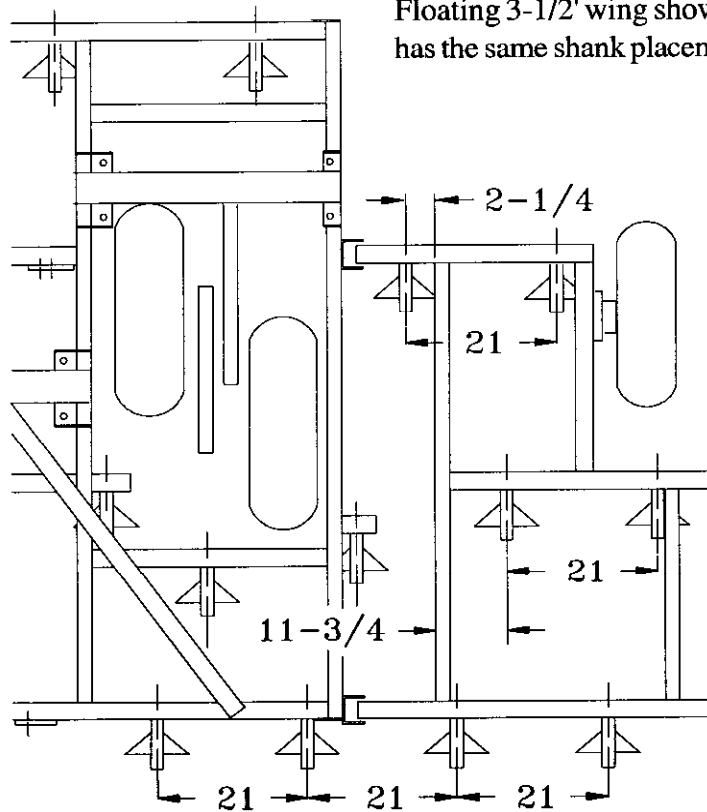


2-1/2' WING
5', 6-1/2', 8' OR 10-1/2' WING



3-1/2' WING - 8' OR 10-1/2' WING

Floating 3-1/2' wing shown, standard 3-1/2' wing has the same shank placement

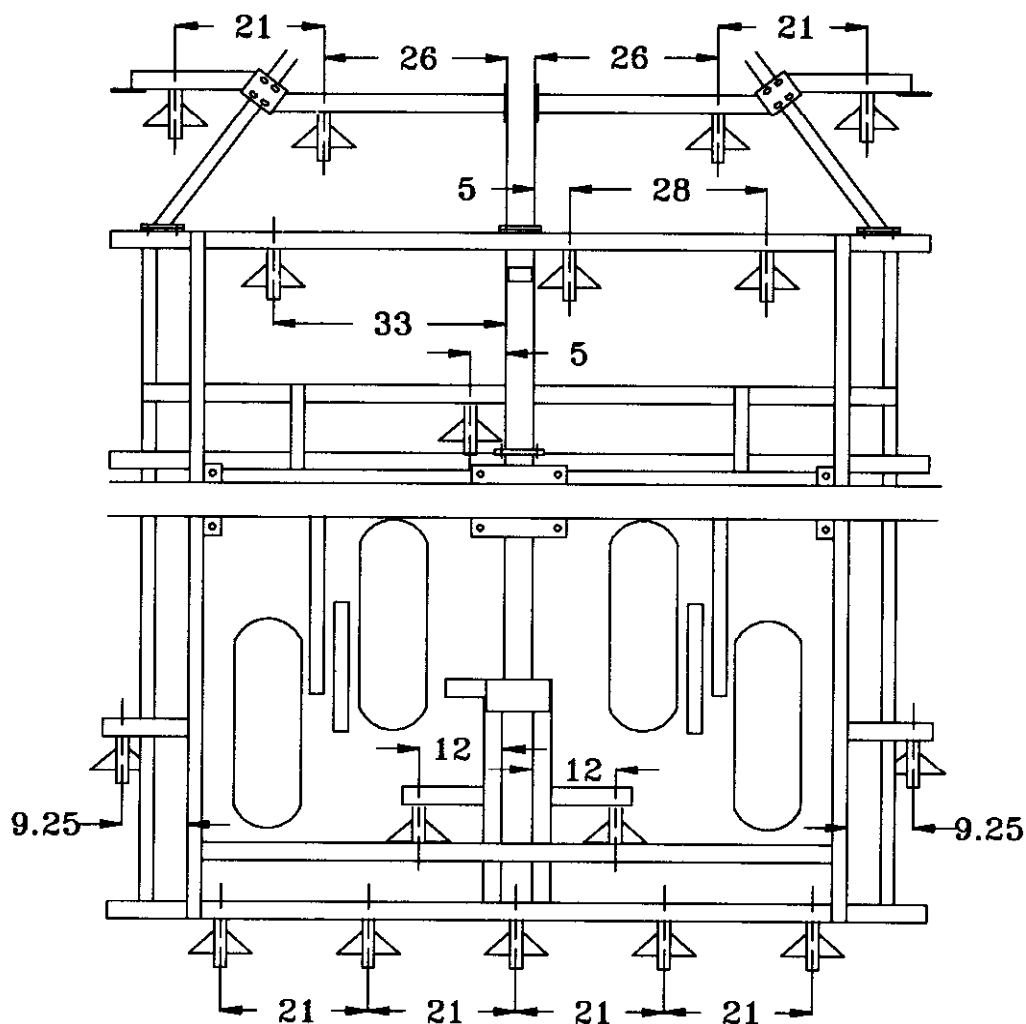


SHANK PLACEMENTS - 5TH BAR

NOTE: Shanks can be moved front to rear to open bars for added trash clearance. Check to ensure that the shanks do not contact frame members or tires, in operation or when folding wings for transport.

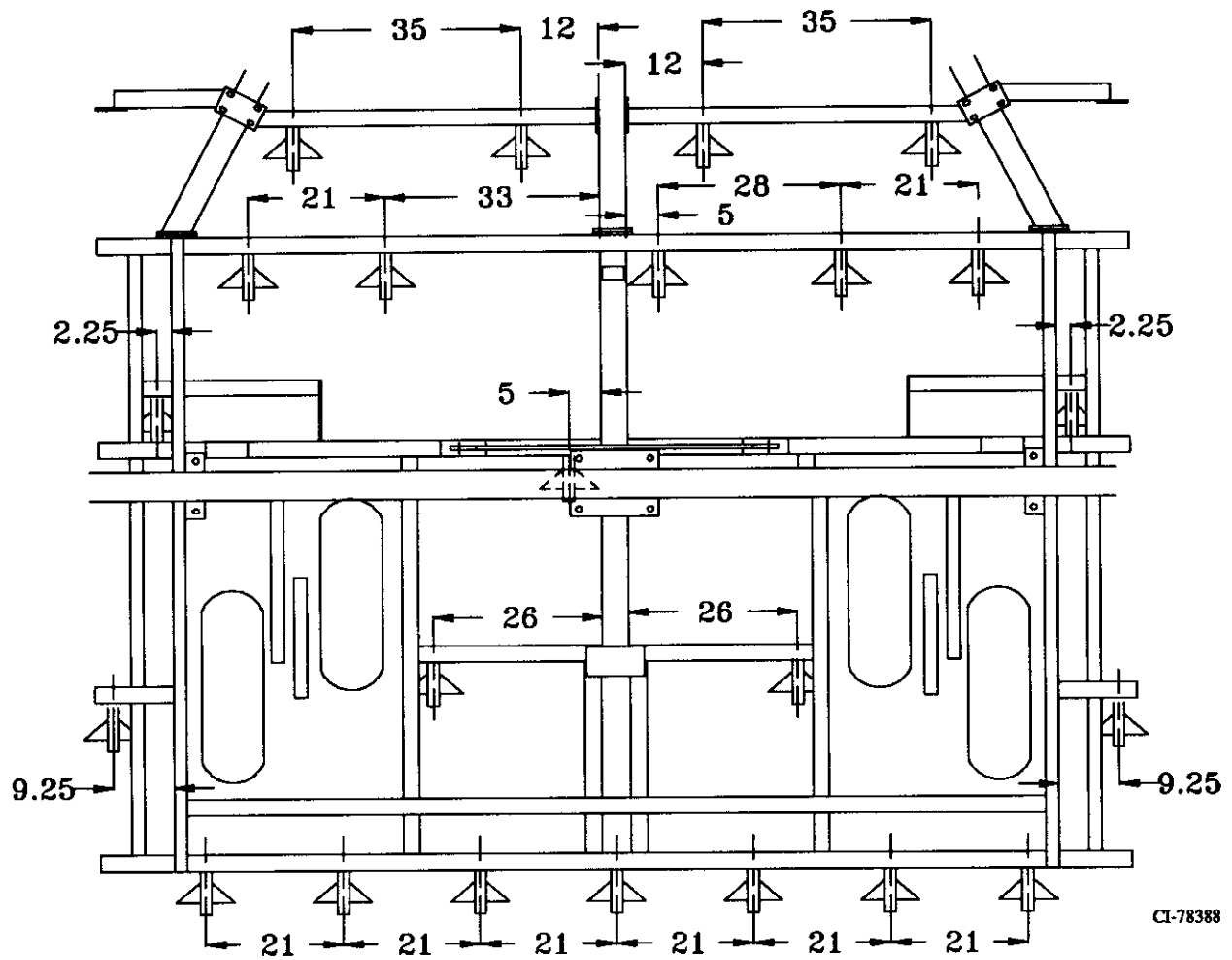
See page 15 for hardware specifics.

5TH BAR 10' FCW MAIN FRAME

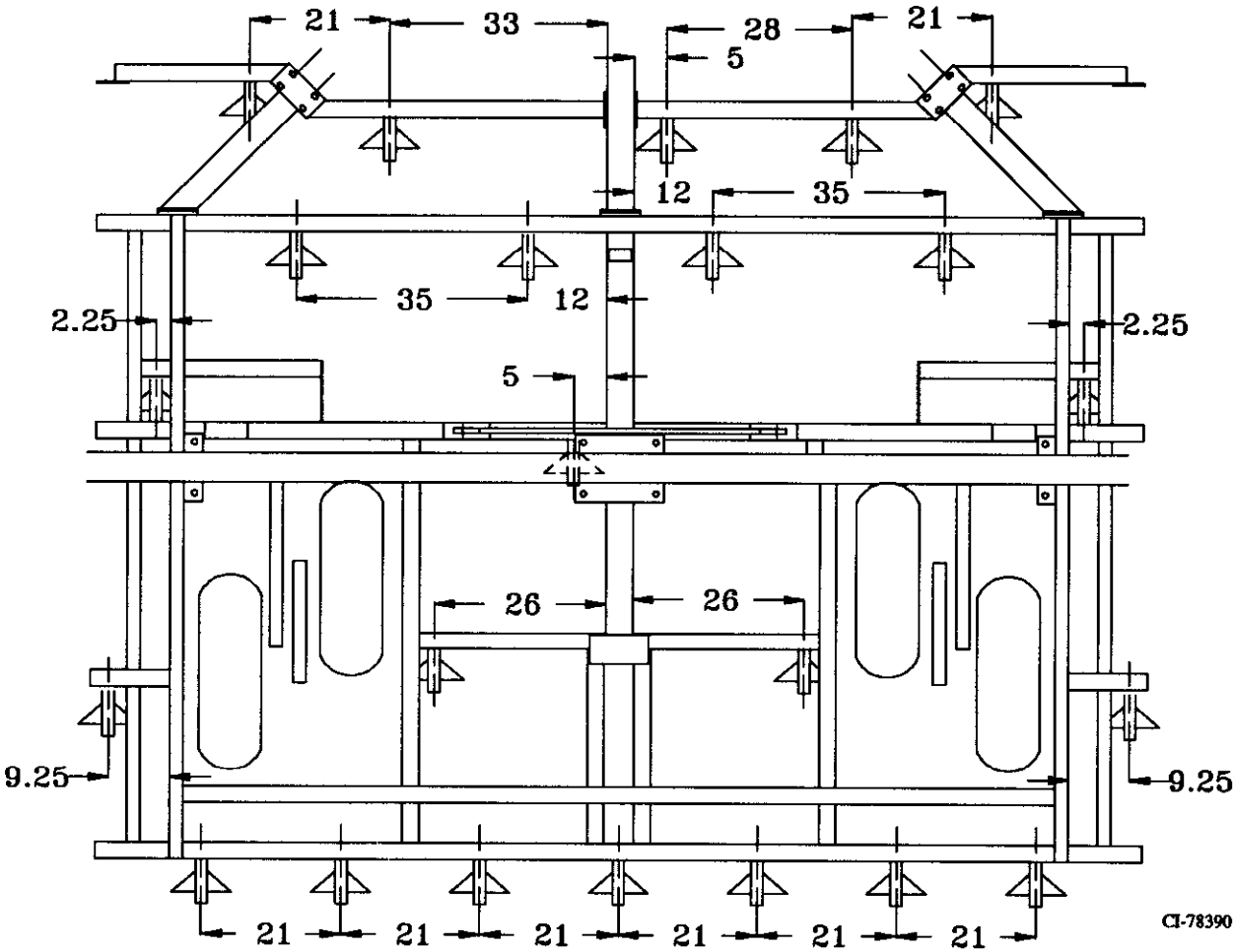


CI-78387

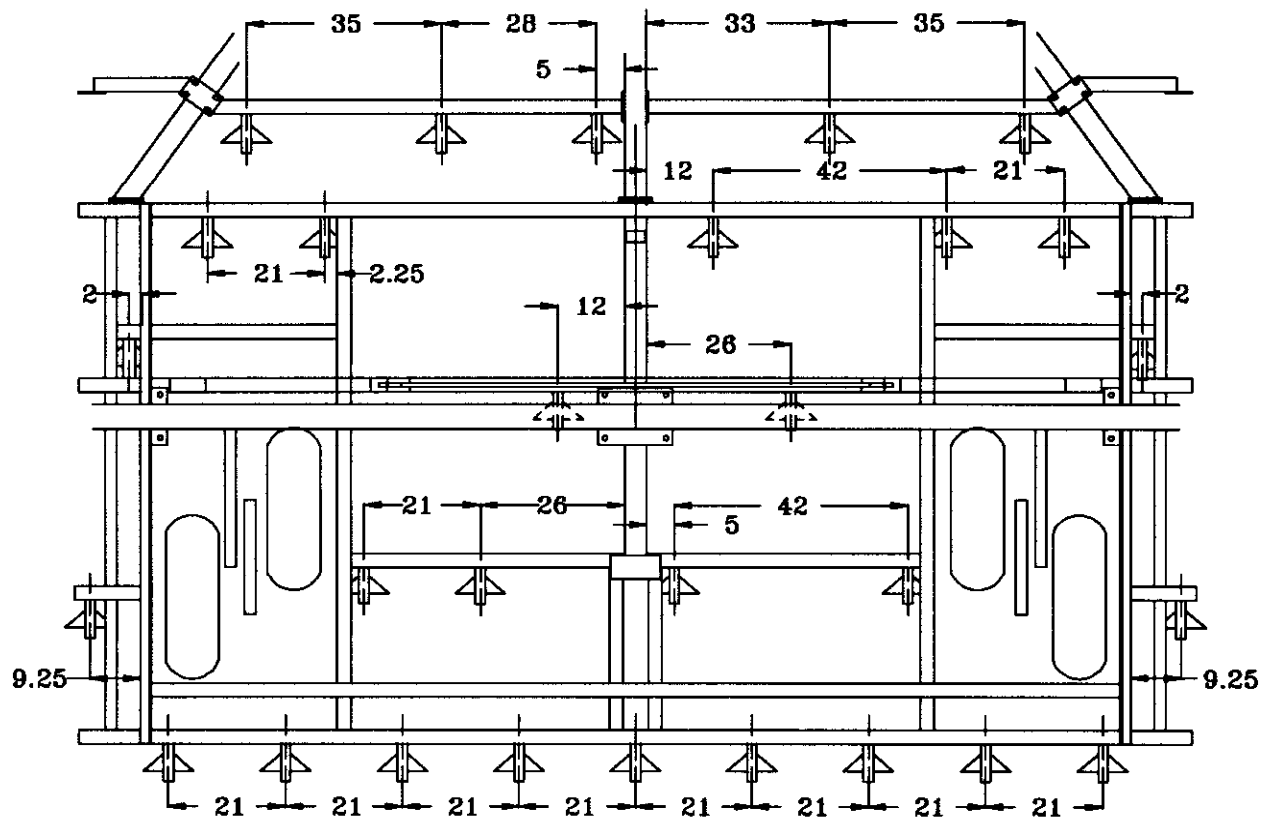
5TH BAR 13' MAIN FRAME - LONG POLE



5TH BAR 13' MAIN FRAME - SHORT POLE

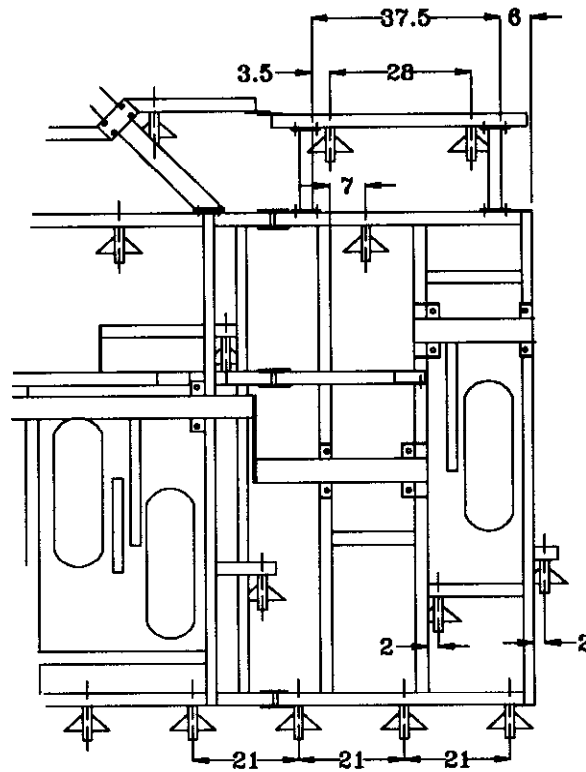


5TH BAR 17' MAIN FRAME



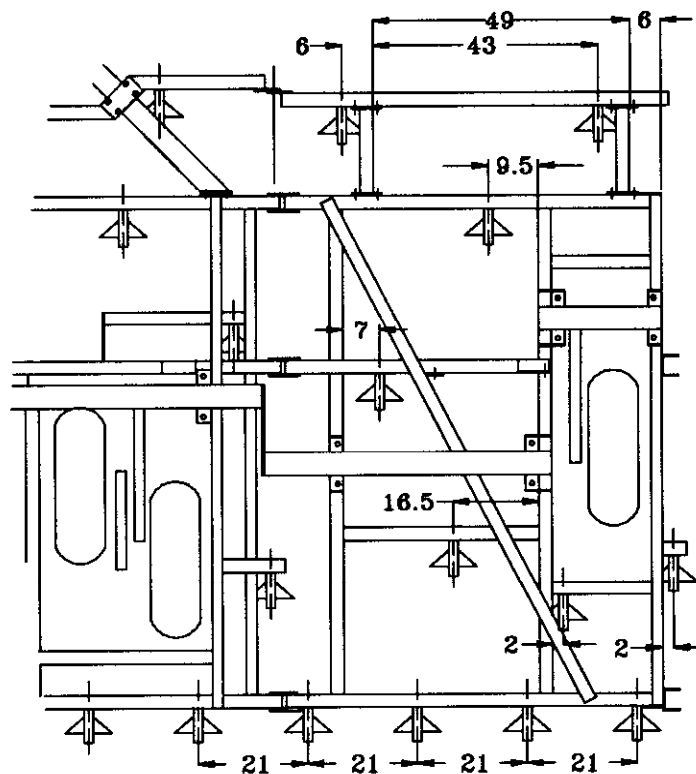
CI-78391

5TH BAR 5' WING



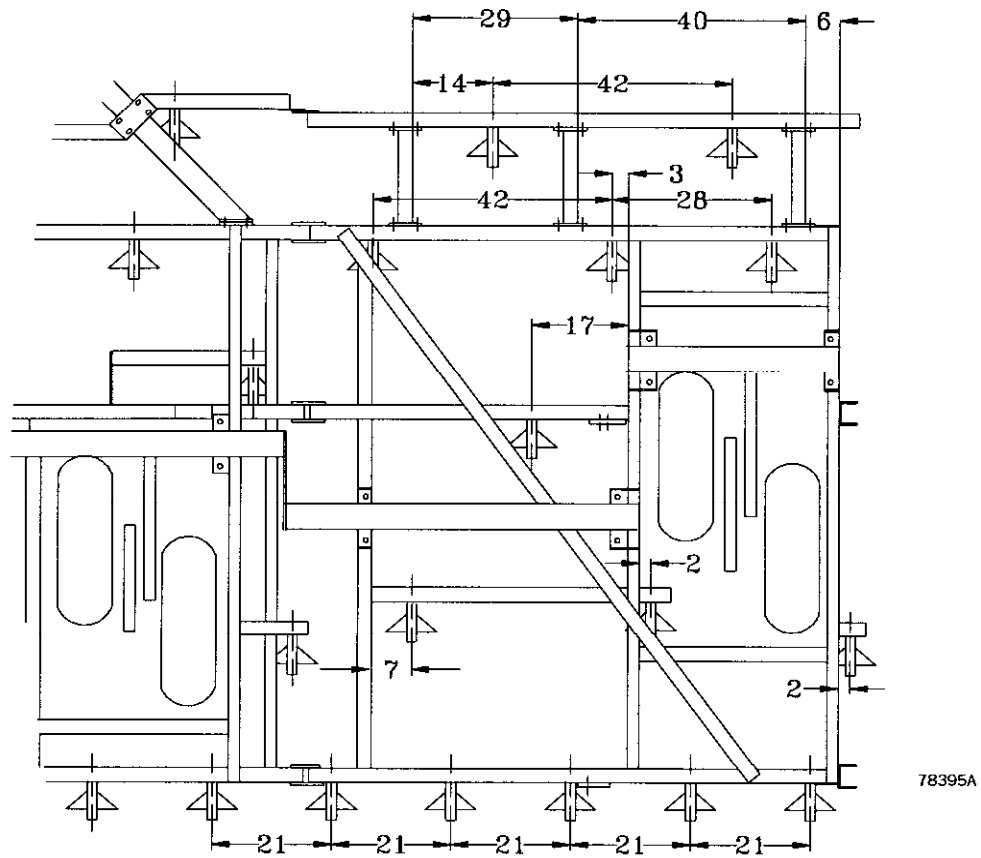
CI-78393A

5TH BAR 6-1/2' WING

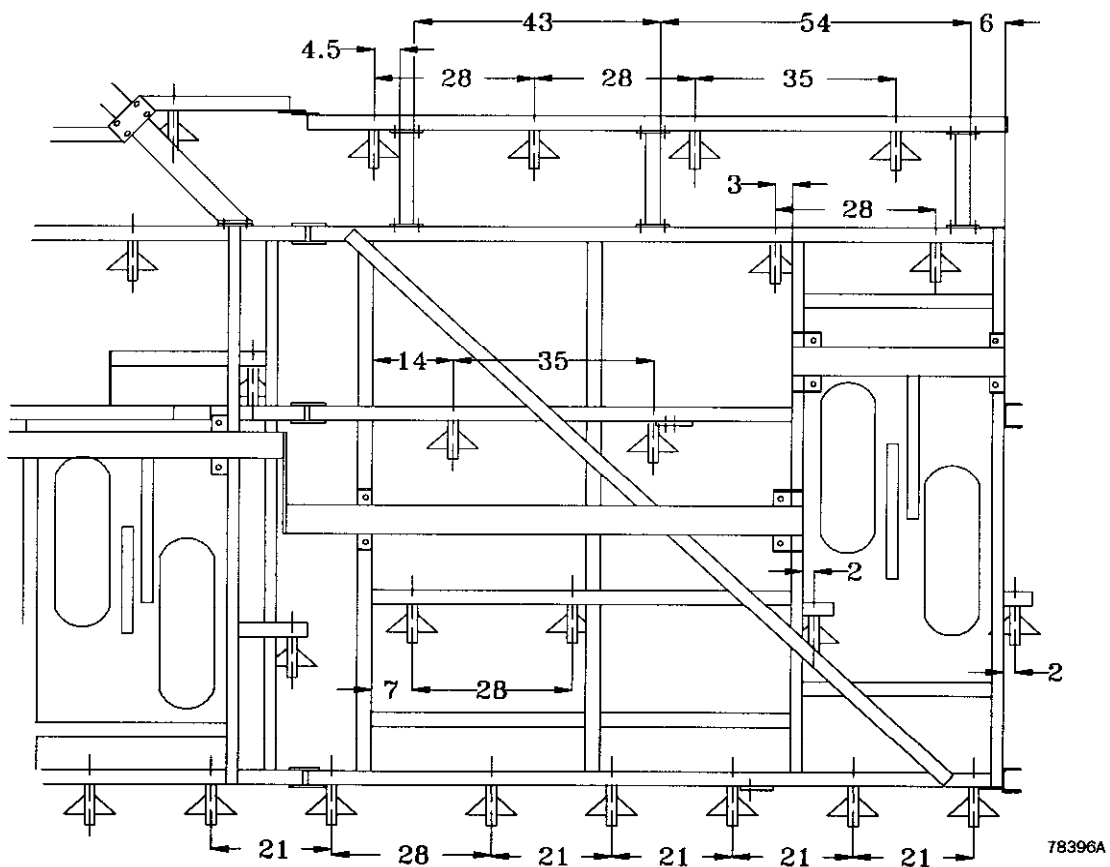


CI-78394A

5th BAR 8' WING

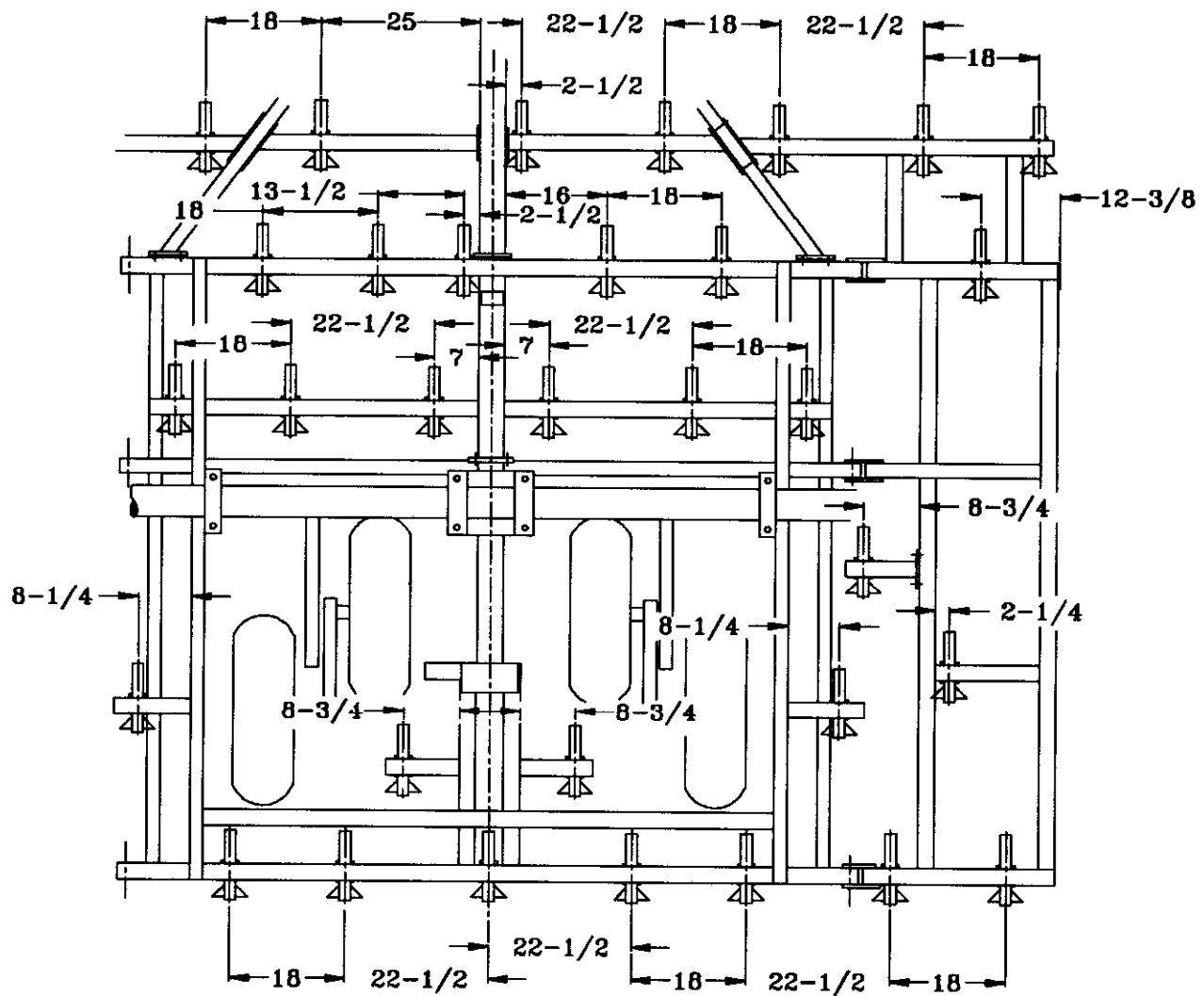


5th BAR 10-1/2' WING



DANISH TINE SHANK SPACING

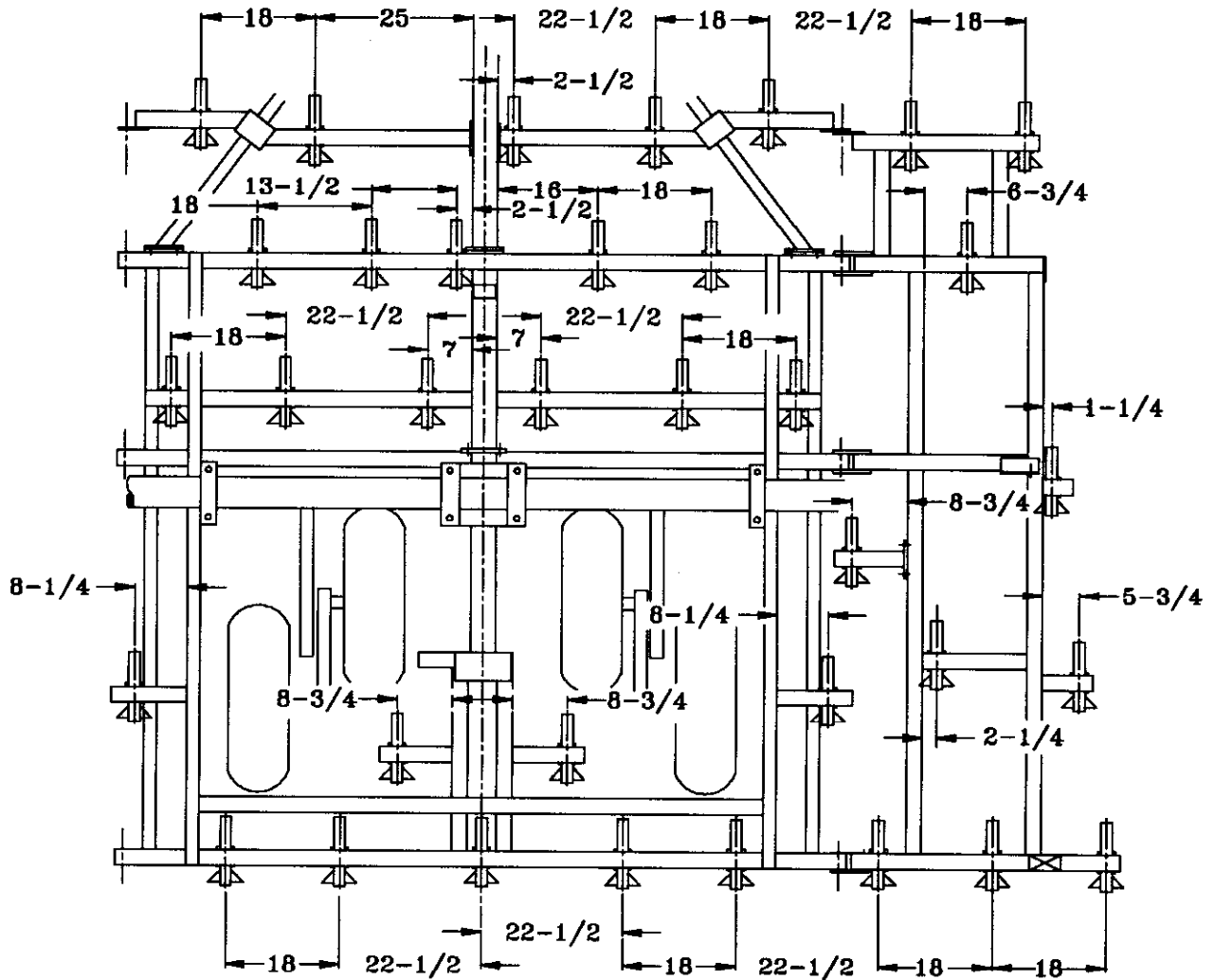
10FCW 15 DAINSH TINE



CI-78528

NOTE: Center frame shank placement is the same as shown on page 28 or 29.

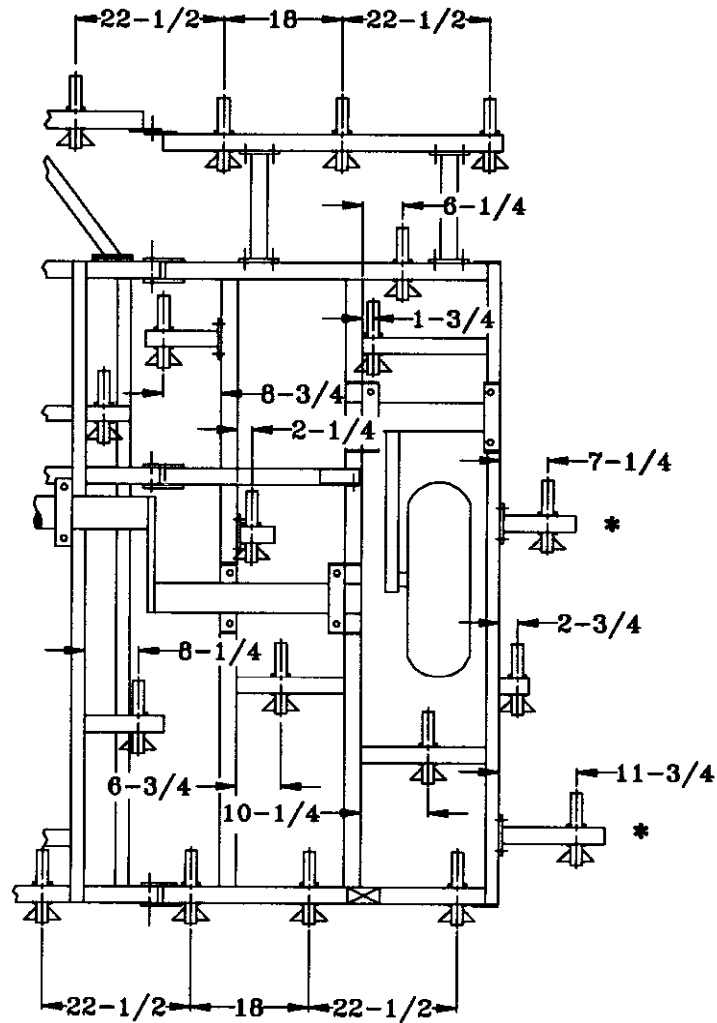
10FCW 17 DANISH TINE



CI-78529

NOTE: Center frame shank placement is the same as shown on page 28 or 29.

10FCW 19 DANISH TINE

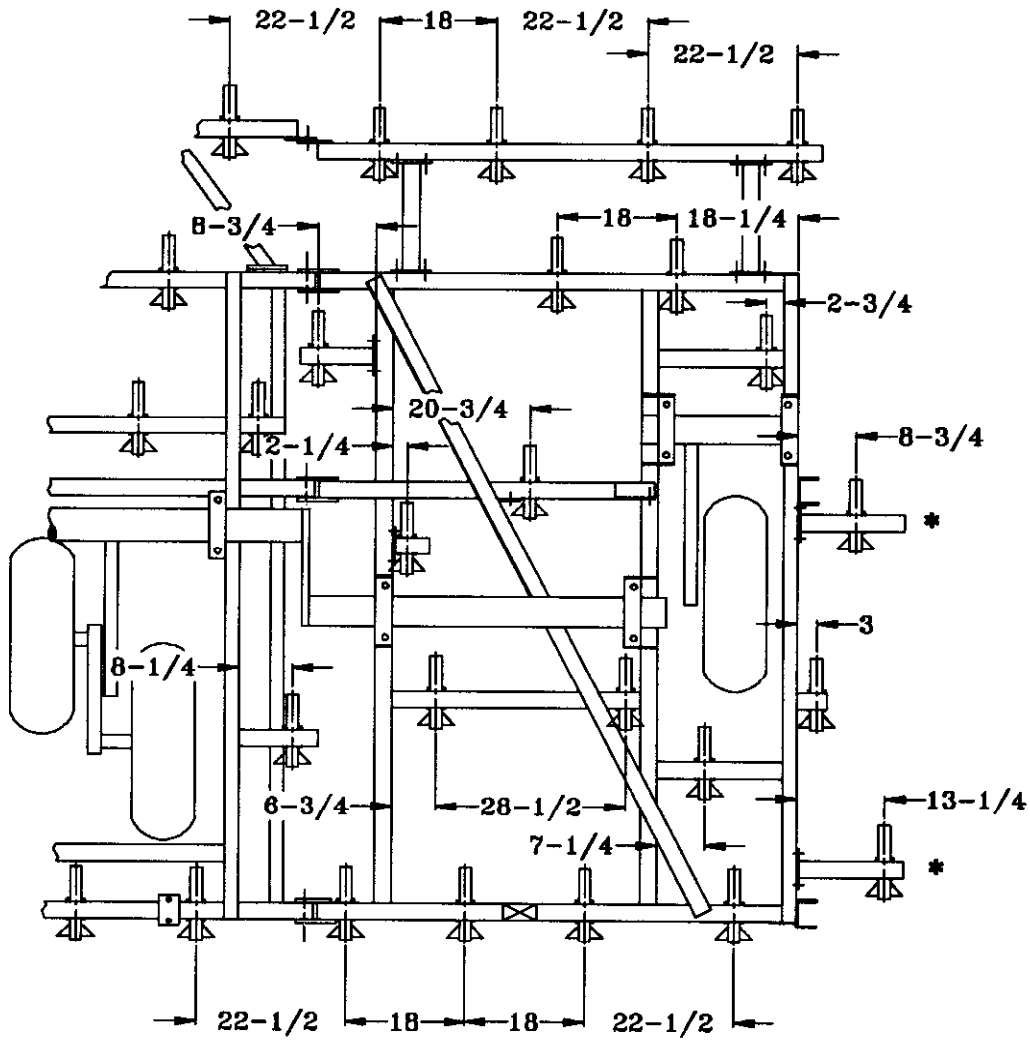


CI-78551

NOTE: Center frame shank placement is the same as shown on page 28 or 29.

*** = Stub additions for 10FCW 19-20**

10FCW 23 DANISH TINE

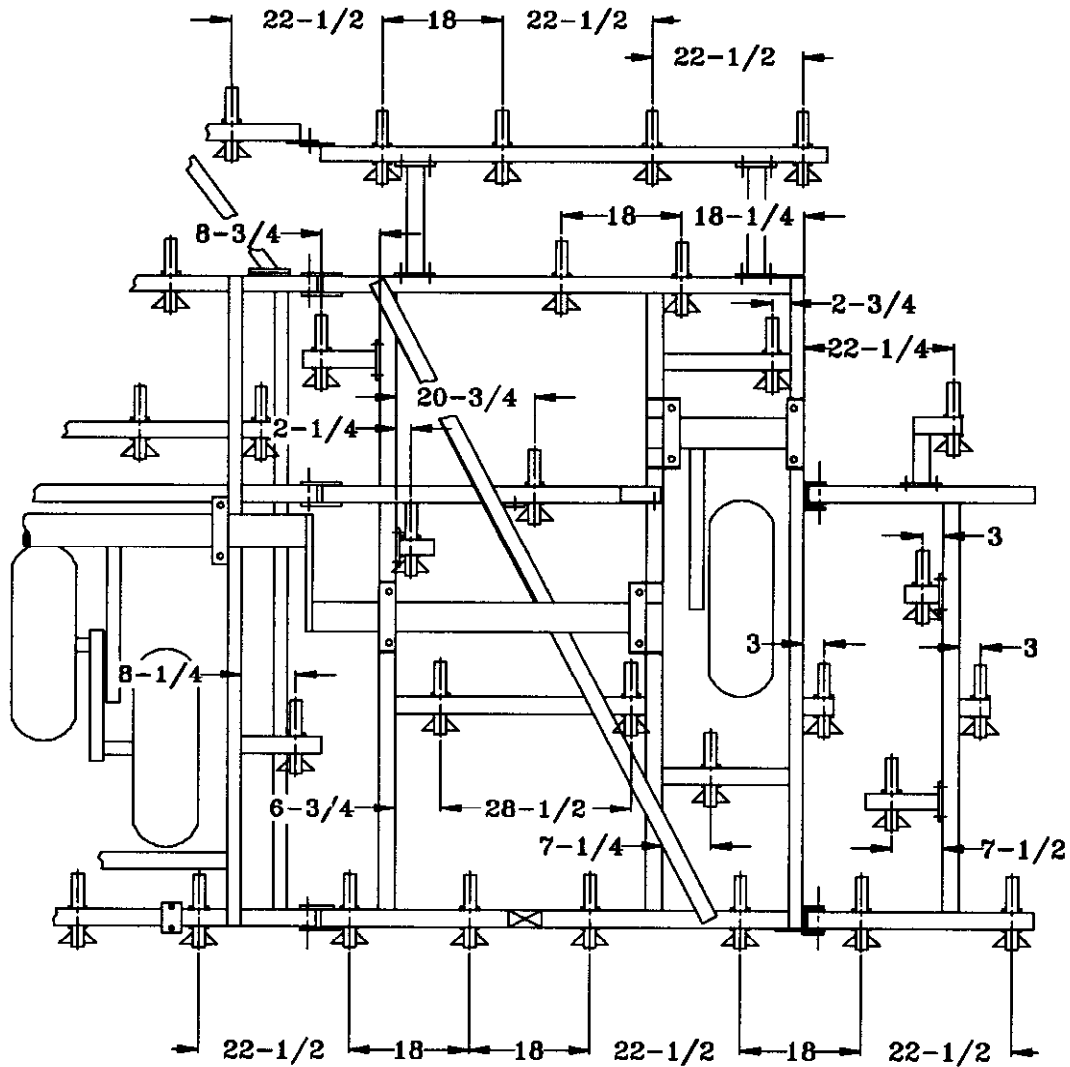


CI-78552

NOTE: Center frame shank placement is the same as shown on page 28 or 29.

***** = Stub additions for 10FCW 23-24

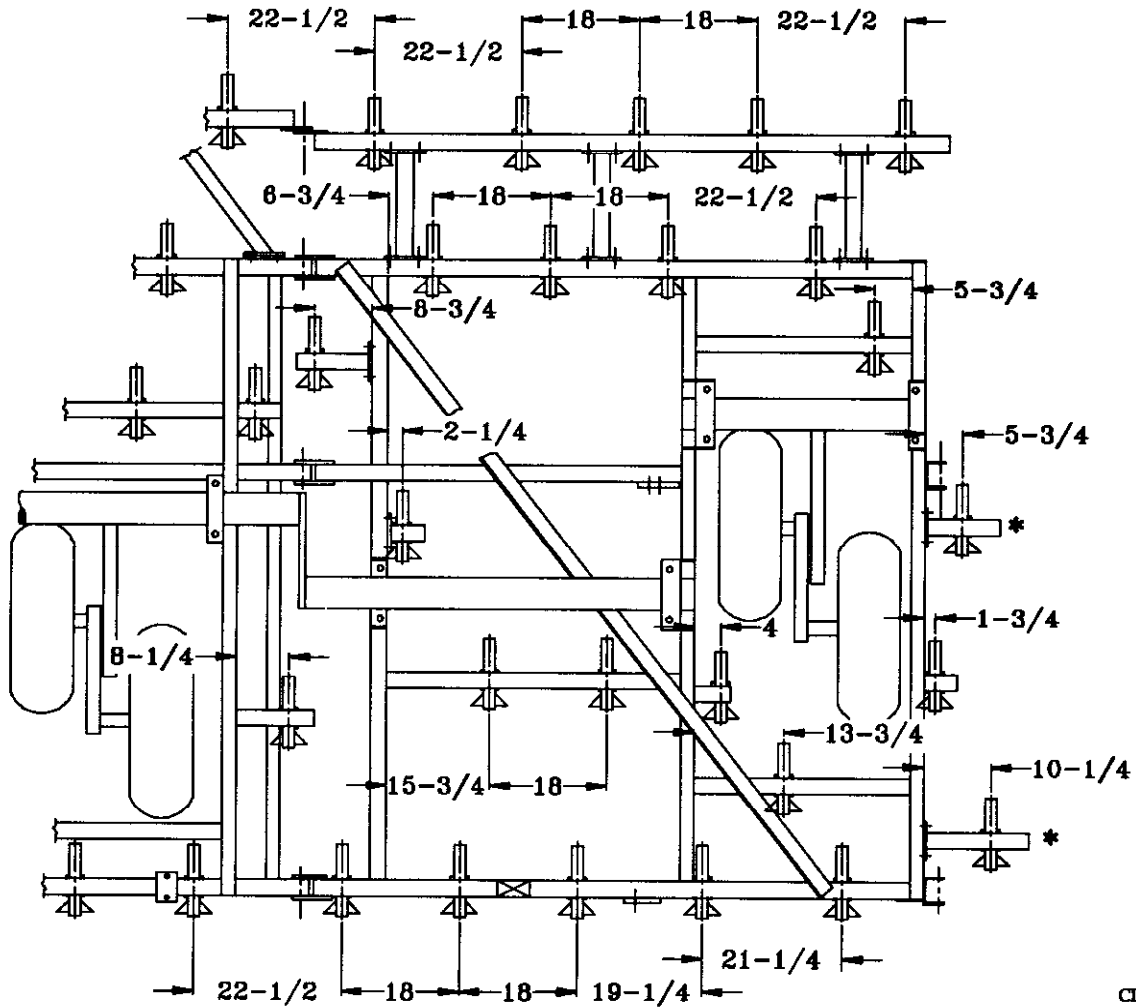
10FCW 23-27 DANISH TINE



CI-78553

NOTE: Center frame shank placement is the same as shown on page 28 or 29.

10FCW 26 DANISH TINE

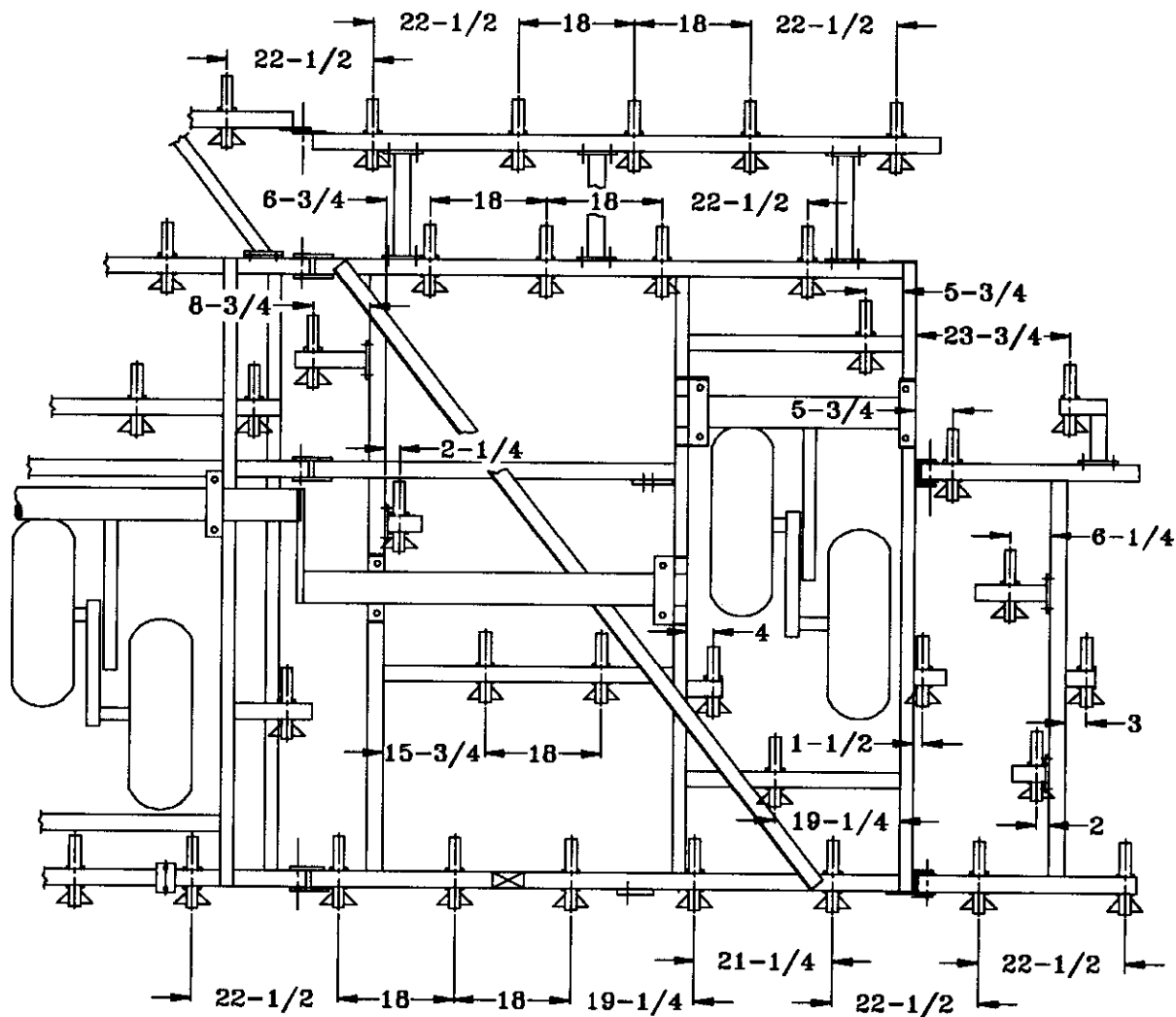


CI-78554

NOTE: Center frame shank placement is the same as shown on page 28 or 29.

* = Stub additions for 10FCW 26-27

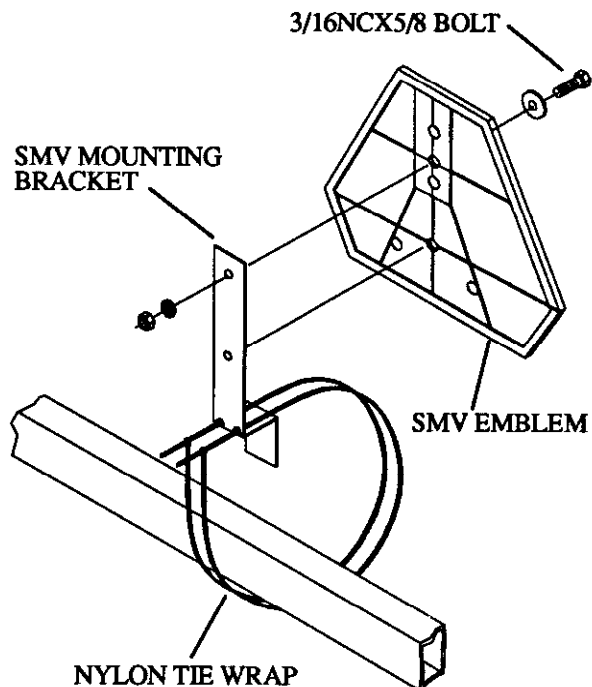
10FCW 26-31 DANISH TINE



CI-78555

NOTE: Center frame shank placement is the same as shown on page 28 or 29.

SAFETY



CI-77643

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

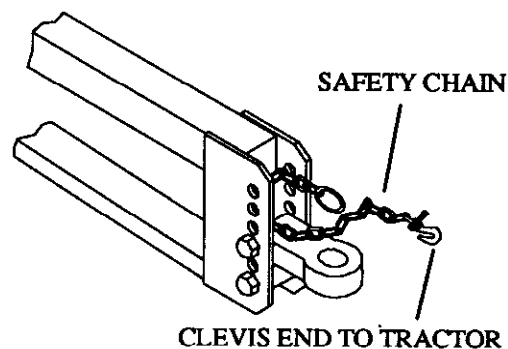
The SMV emblem is to be secured as near to the rear and centered or as near to the left of center of the implement as practical.

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

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.

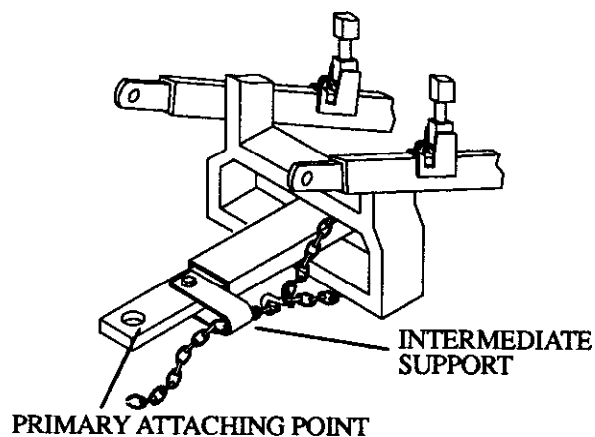
The purpose of the safety chain is to provide an auxiliary attaching system to retain the connection between towing and towed machine in the event of separation of the primary attaching system.

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 the figure Below.) The intermediate support is available from your Wil-Rich dealer.



CI-77825

