

ASSEMBLY INSTRUCTIONS

WIL-RICH SERIES 4400 CHISEL PLOW

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**WIL-RICH
P.O. Box 1030
Wahpeton, ND 58074
(701) 642-2621**

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.

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

Bolts with no markings and all U-bolts 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.



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	GRADE 2	18	45	89	160	252	320
	GRADE 5	30	68	140	240	360	544
	GRADE 8	40	100	196	340	528	792
UNF	GRADE 2	21	51	102	178	272	368
	GRADE 5	32	70	168	264	392	572
	GRADE 8	48	112	216	368	792	840

PI-75623



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



CAUTION

NEVER FORCE REMOVAL OF A WING LOCK PIN. CHECK ALL HYDRAULIC & MECHANICAL WING CONNECTIONS BEFORE REMOVING A TIGHT PIN. A FAULTY CONNECTION MAY RESULT IN THE WING FALLING UNCONTROLLED, CAUSING POSSIBLE PERSONAL INJURY AND EQUIPMENT DAMAGE.



CAUTION

REMOVE AND STORE WING LOCK PINS BEFORE LOWERING WINGS. ALWAYS INSTALL WING LOCK PINS WHEN TRANSPORTING OR STORING. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY AND EQUIPMENT DAMAGE.



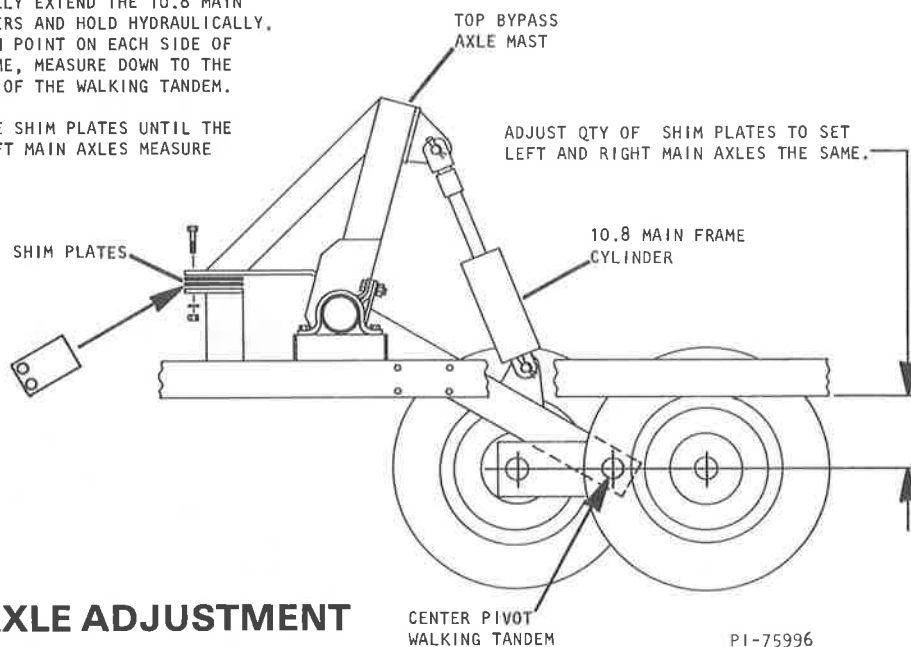
DANGER

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 CAN RESULT IN SERIOUS INJURY OR DEATH.

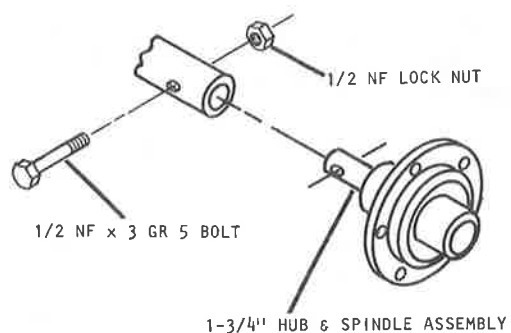
INITIALLY ASSEMBLE TOP BYPASS AXLE MASTS WITH 2 SHIM PLATES, AS SHOWN.

TO SET THE LEFT AND RIGHT MAIN AXLES THE SAME, FULLY EXTEND THE 10.8 MAIN FRAME CYLINDERS AND HOLD HYDRAULICALLY. FROM A COMMON POINT ON EACH SIDE OF THE MAIN FRAME, MEASURE DOWN TO THE CENTER PIVOT OF THE WALKING TANDEM.

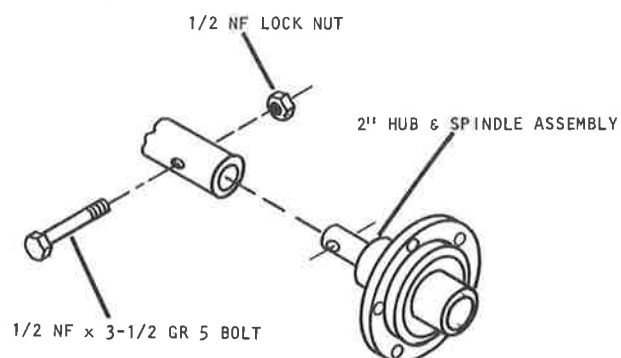
ADD OR REMOVE SHIM PLATES UNTIL THE RIGHT AND LEFT MAIN AXLES MEASURE THE SAME.



MAIN AXLE ADJUSTMENT

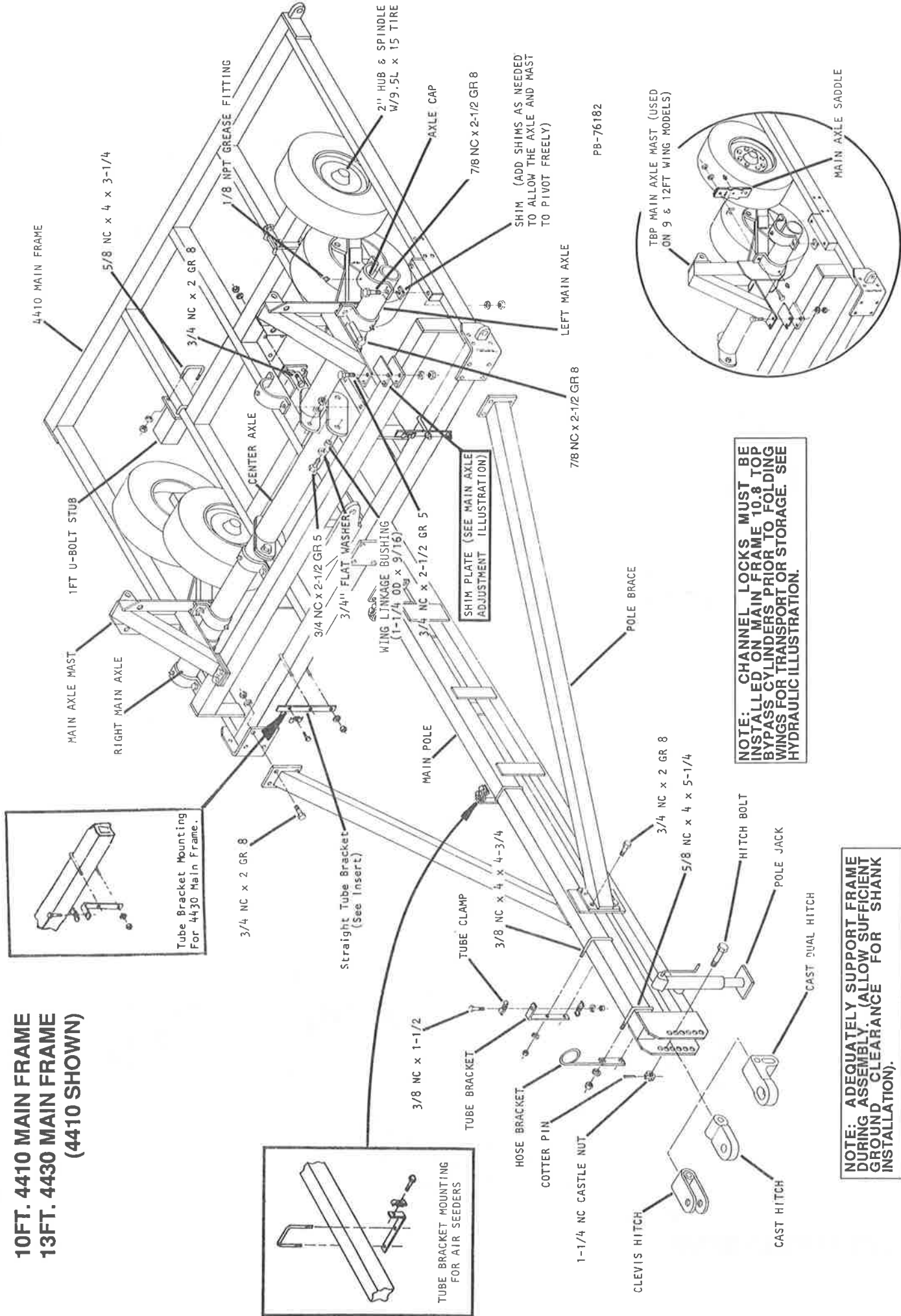


1-3/4" HUB & SPINDLE



2" HUB & SPINDLE

**10FT. 4410 MAIN FRAME
13FT. 4430 MAIN FRAME
(4410 SHOWN)**

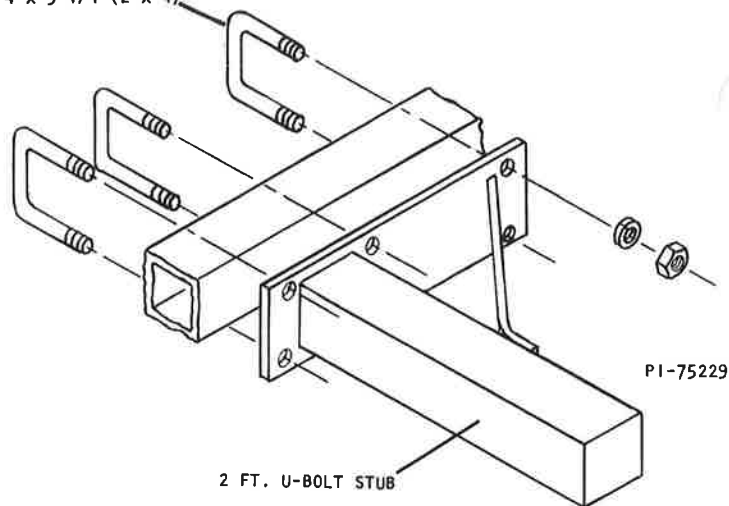


NOTE: CHANNEL LOCKS MUST BE INSTALLED ON MAIN FRAME 10.8 TOP BYPASS CYLINDERS PRIOR TO FOLDING WINGS FOR TRANSPORT OR STORAGE. SEE HYDRAULIC ILLUSTRATION.

NOTE: ADEQUATELY SUPPORT FRAME DURING ASSEMBLY. (ALLOW SUFFICIENT GROUND CLEARANCE FOR SHANK INSTALLATION).

PB-76182

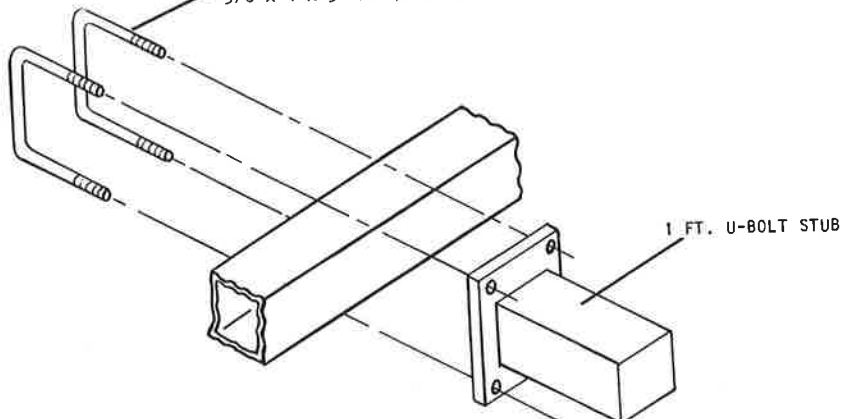
5/8 x 4 x 5-1/4 (4 x 4)
5/8 x 4 x 3-1/4 (2 x 4)



2 FT. U-BOLT STUB

2 FT. U-BOLT STUB

5/8 x 4 x 5-1/4 (4 x 4)
5/8 x 4 x 3-1/4 (2 x 4)

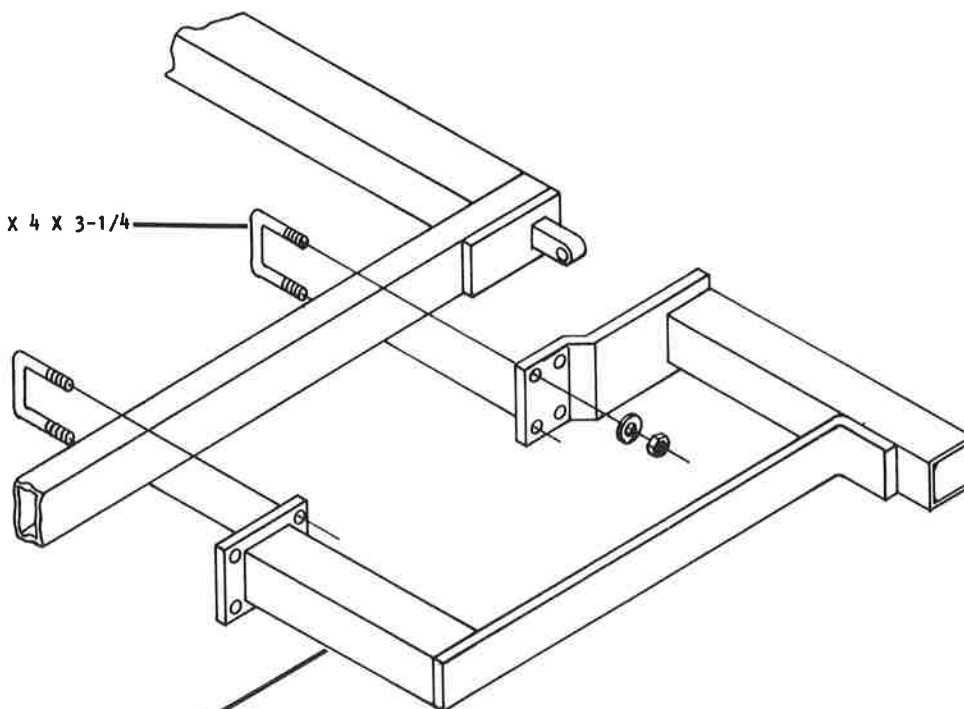


1 FT. U-BOLT STUB

P1-75230

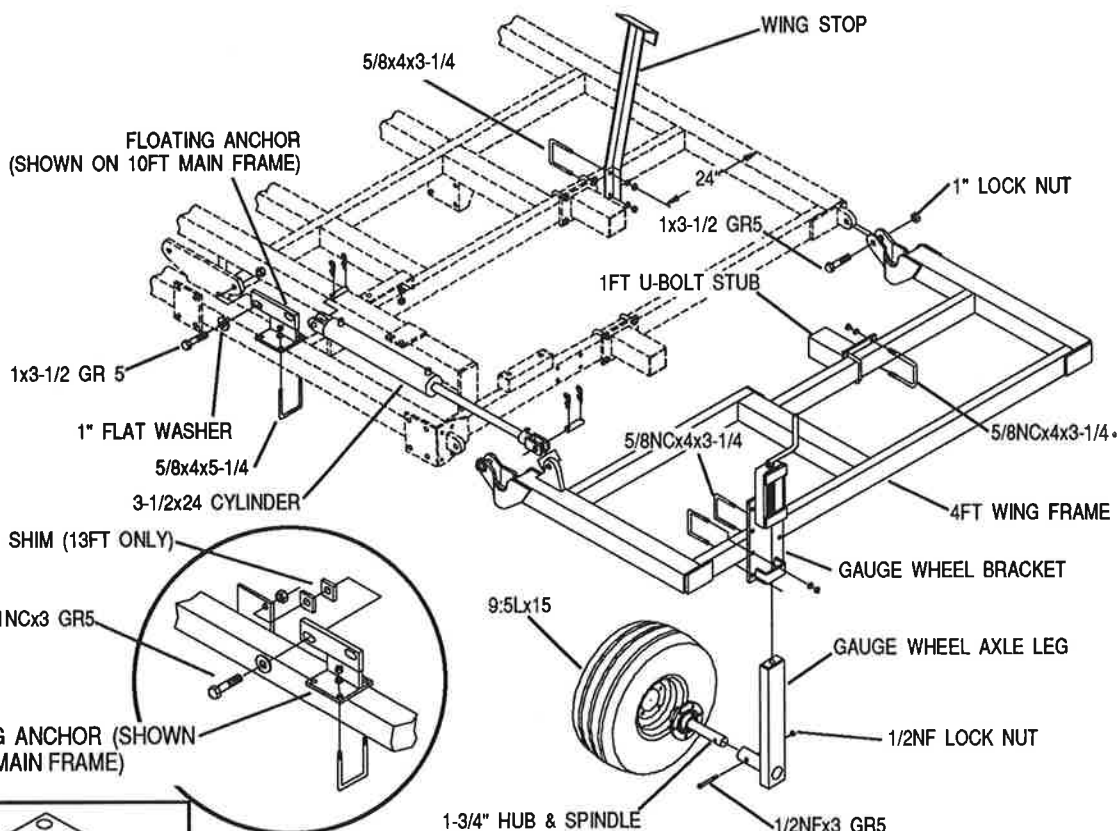
1 FT. U-BOLT STUB

5/8 x 4 x 3-1/4



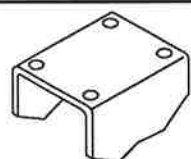
3 FT STUB

3 FT. U-BOLT STUB



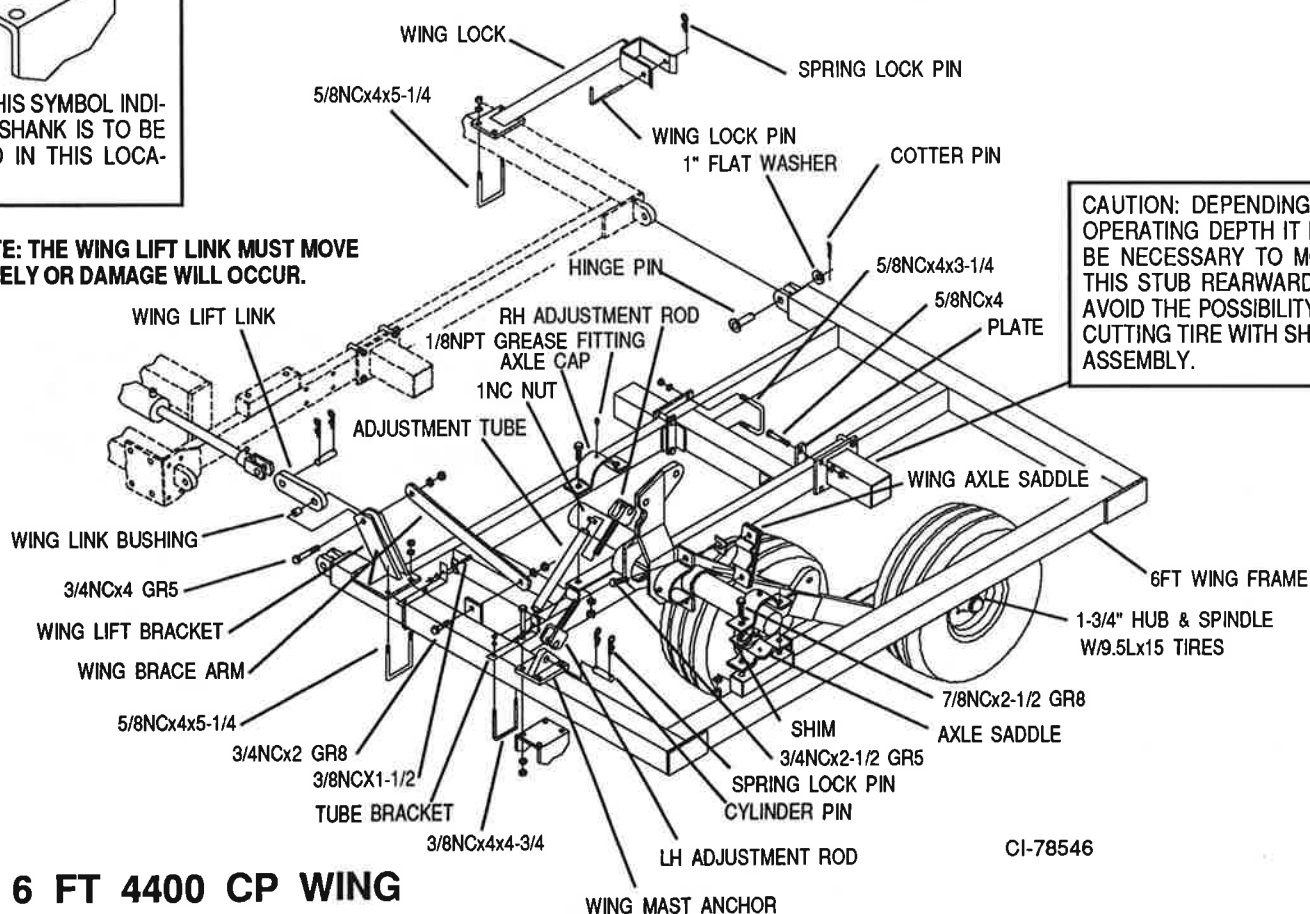
CI-78544

4 FT 4400 CP WING



USE OF THIS SYMBOL INDICATES A SHANK IS TO BE MOUNTED IN THIS LOCATION.

NOTE: THE WING LIFT LINK MUST MOVE FREELY OR DAMAGE WILL OCCUR.



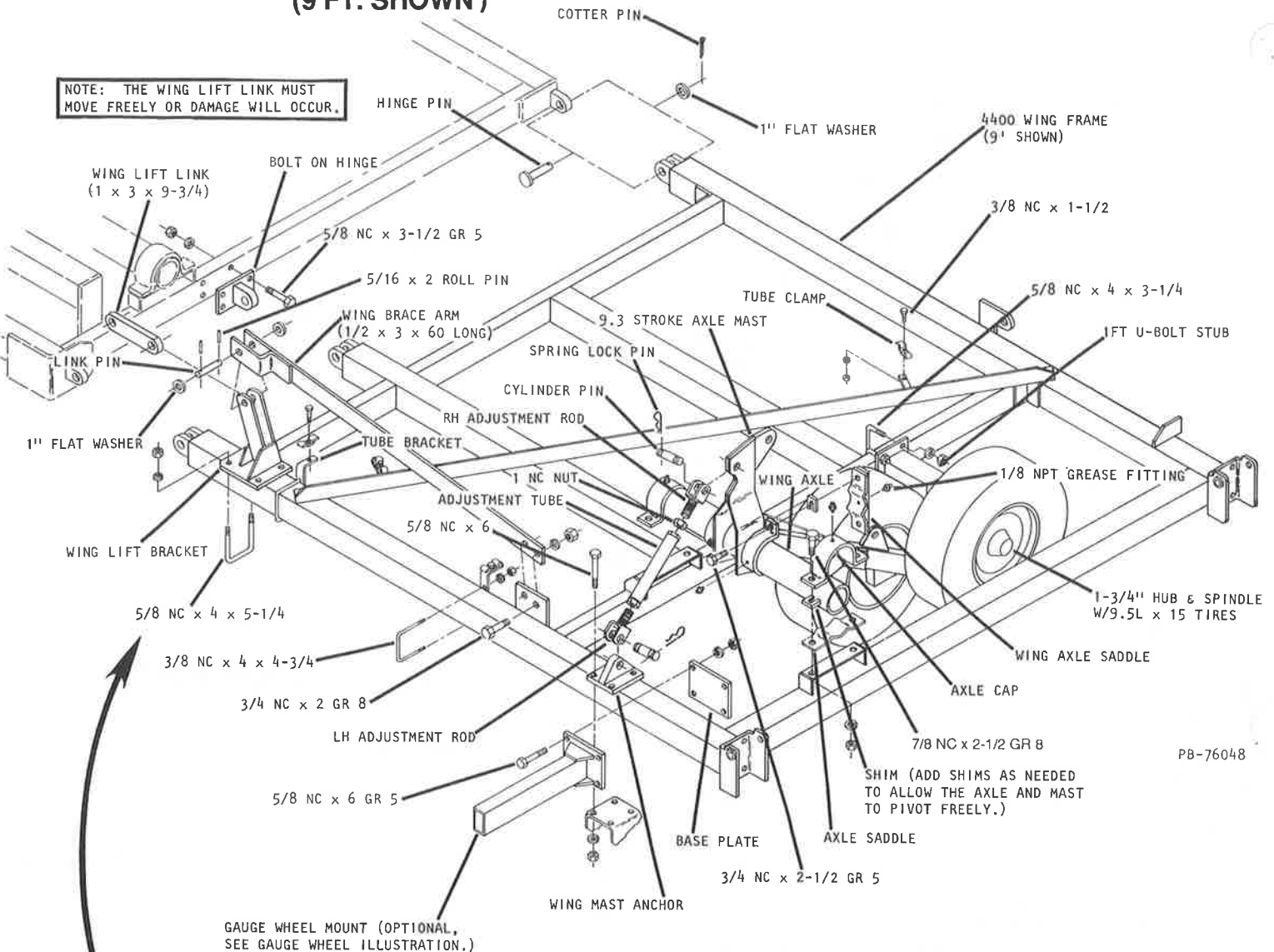
CAUTION: DEPENDING ON OPERATING DEPTH IT MAY BE NECESSARY TO MOVE THIS STUB REARWARD TO AVOID THE POSSIBILITY OF CUTTING TIRE WITH SHANK ASSEMBLY.

CI-78546

6 FT 4400 CP WING

9 FT. & 12 FT. 4400 CP WINGS **(9 FT. SHOWN)**

NOTE: THE WING LIFT LINK MUST MOVE FREELY OR DAMAGE WILL OCCUR.

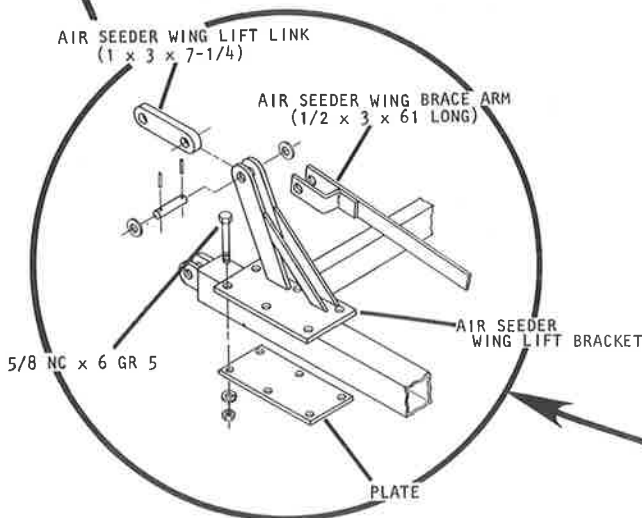


PB-76048

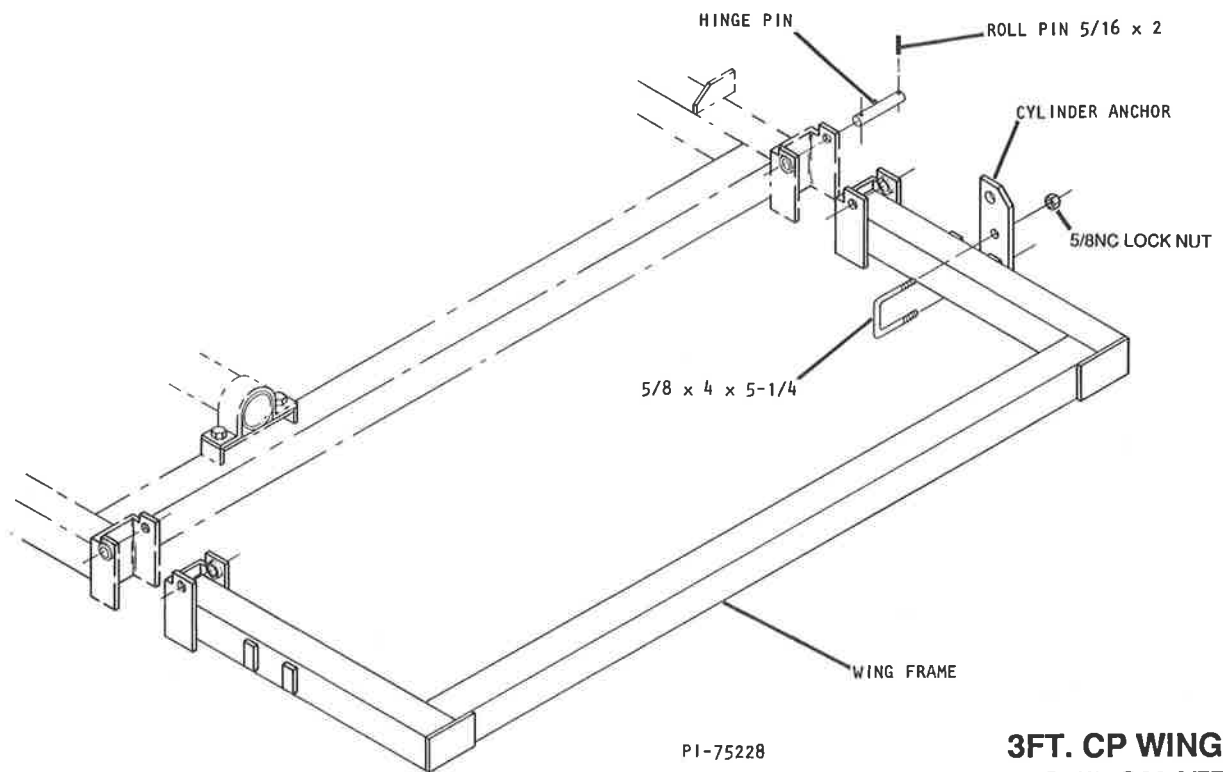


DANGER

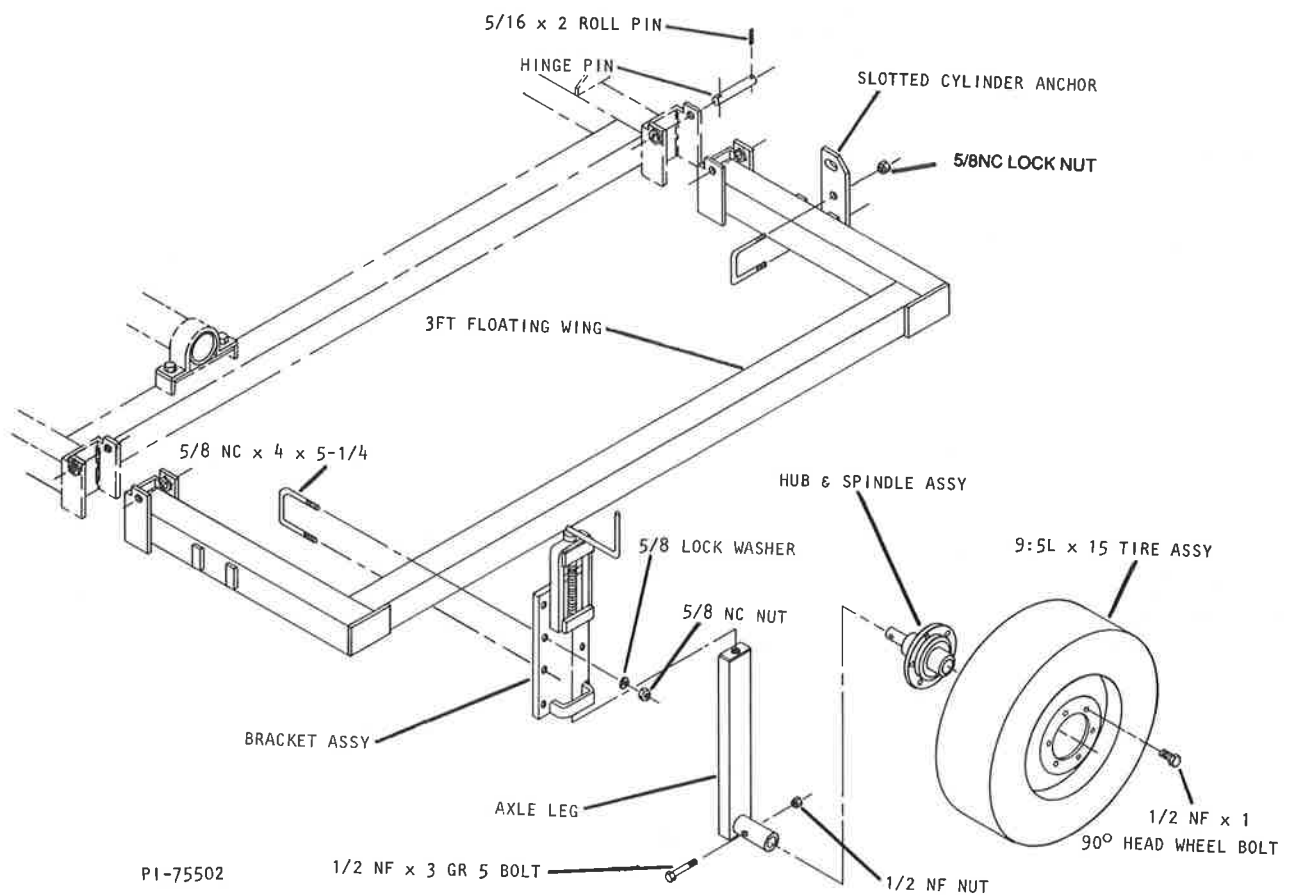
STAND CLEAR AT ALL TIMES. NEVER WALK OR STAND IN THE PATH OF THE WINGS. COMPLETELY LOWER WINGS BEFORE PERFORMING SERVICE OR ADJUSTMENTS. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.



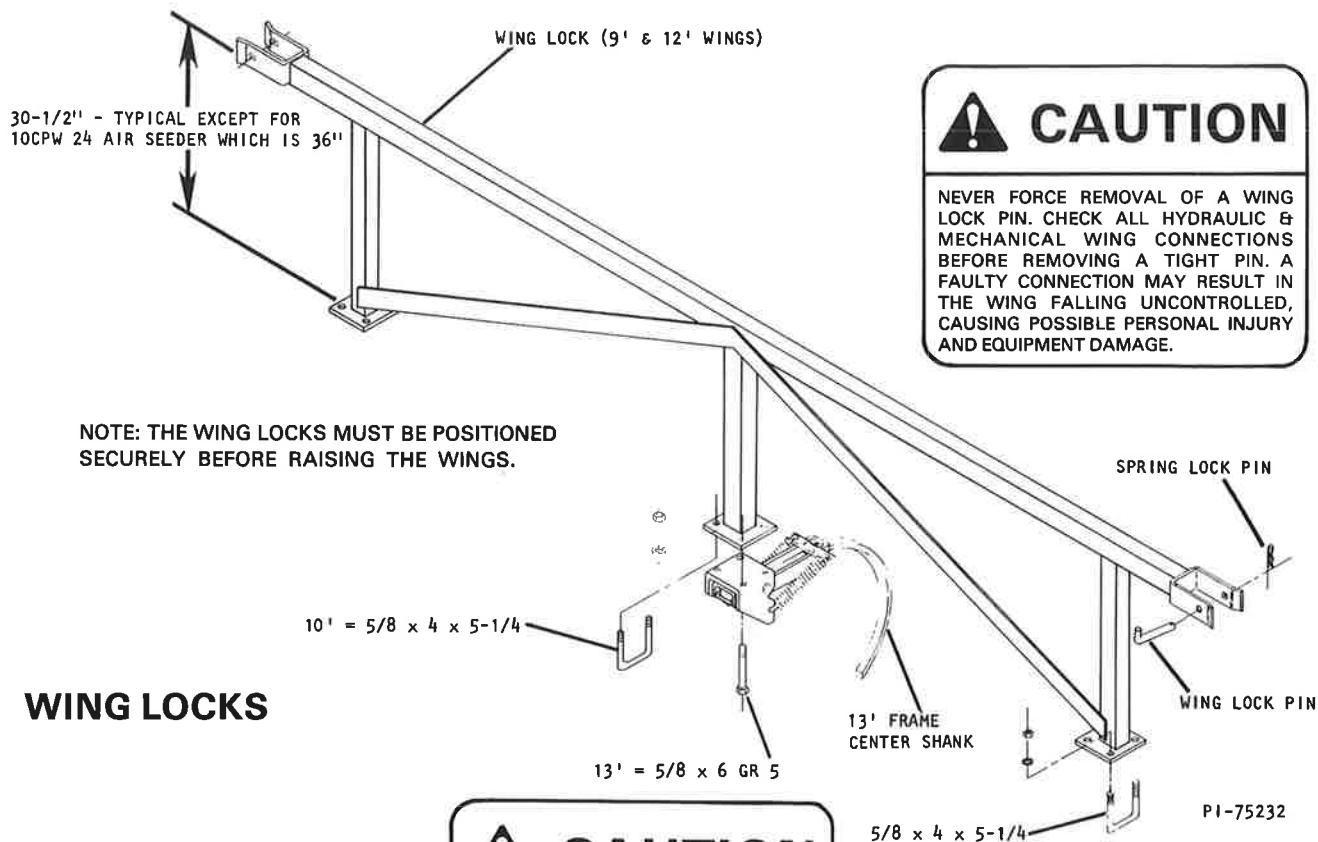
12 FT. AIR SEEDER WING ONLY



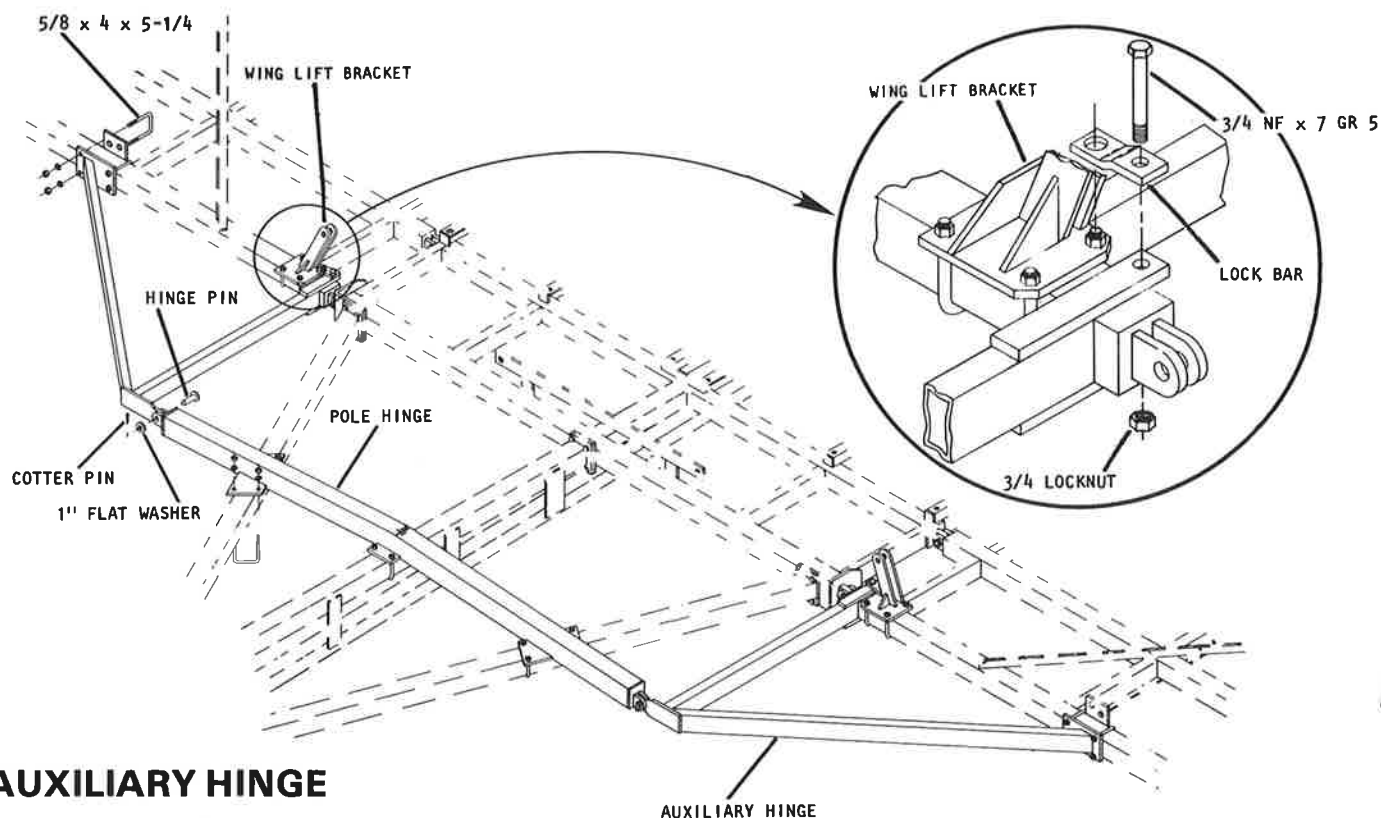
**3FT. CP WING
(USED ON 9FT.
& 12FT. WINGS)**



**3FT. FLOATING WING
(USED ON 47FT. AIR SEEDER)**



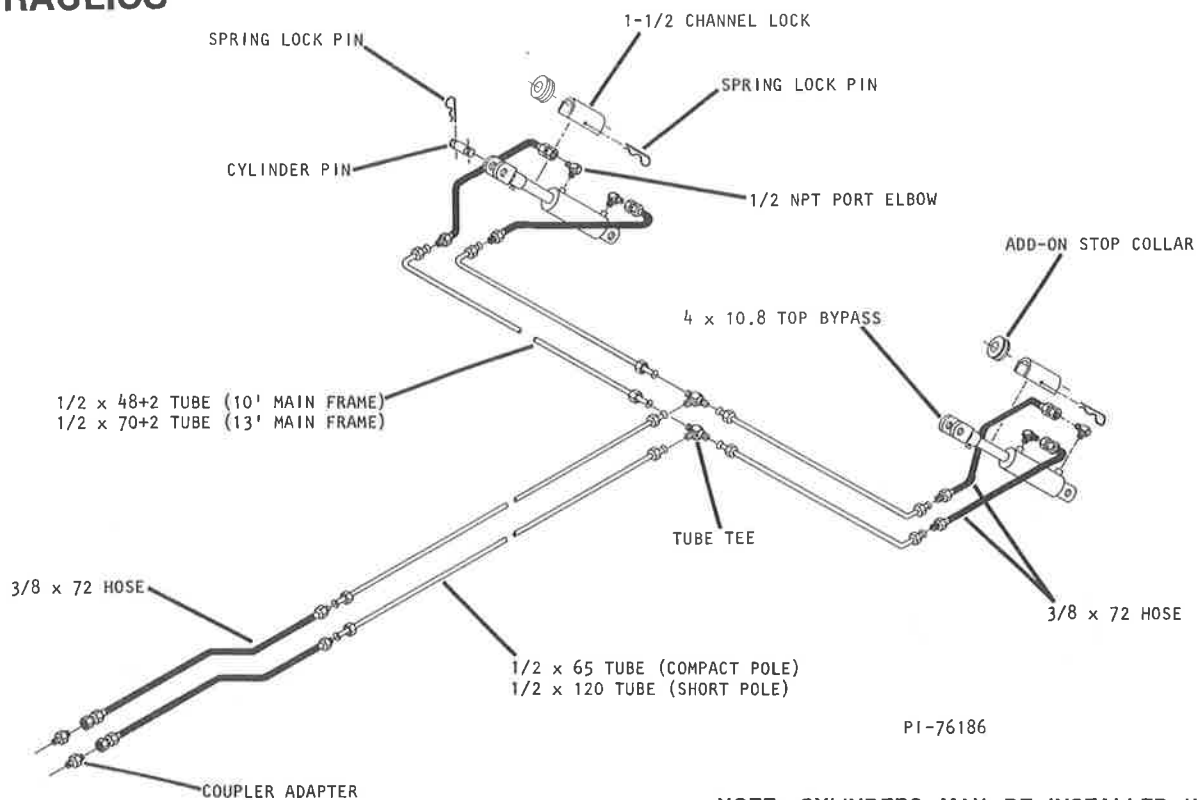
WING LOCKS



AUXILIARY HINGE (OPTIONAL - 12 FT. WING)

PI-75231

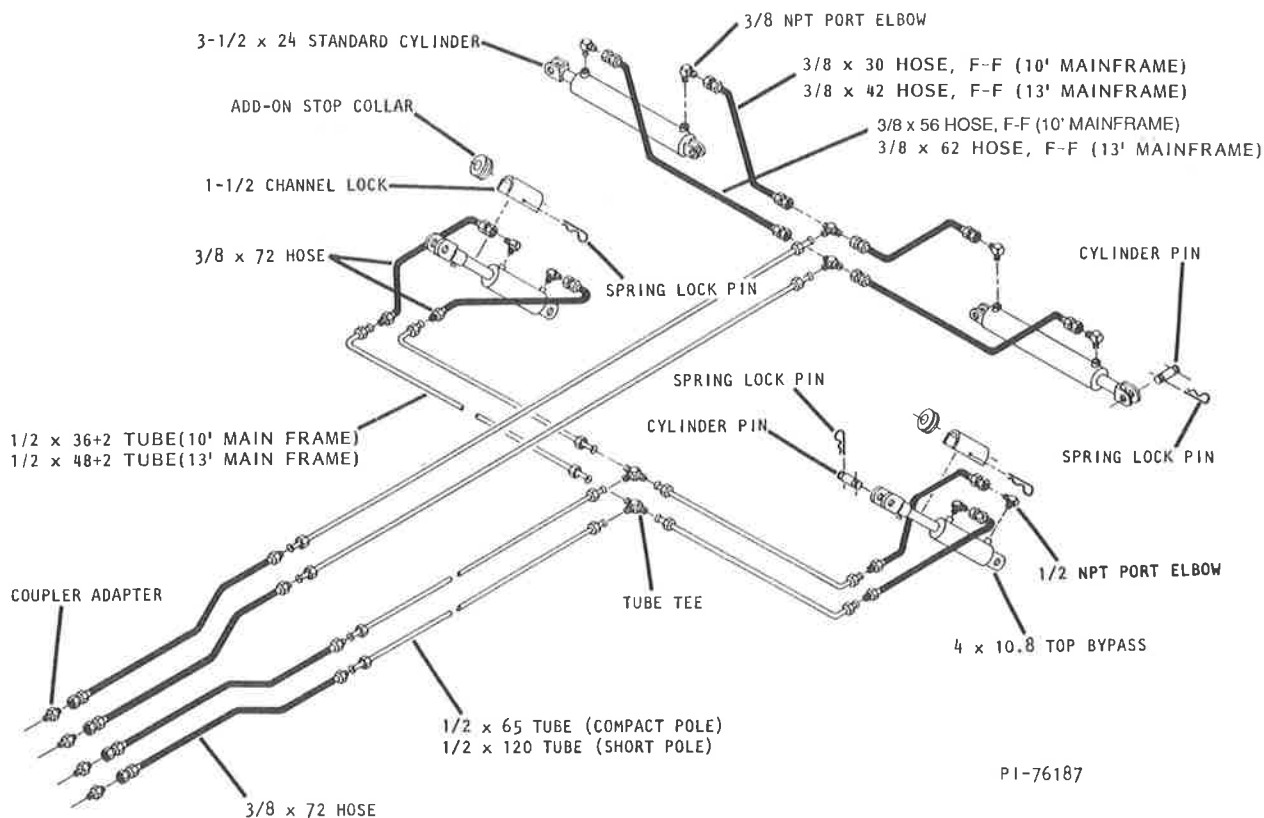
HYDRAULICS



NOTE: CYLINDERS MAY BE INSTALLED WITH ROD POINTED DOWN.

CHANNEL LOCKS MUST BE INSTALLED ON MAIN FRAME 10.8 TOP BY-PASS CYLINDERS PRIOR TO FOLDING WINGS FOR TRANSPORT OR STORAGE.

4410 10-16
4430 13-19



4410 18-20
4430 21-23

HYDRAULICS



CAUTION

BEFORE ACTIVATING HYDRAULIC SYSTEM, CHECK HOSES FOR PROPER CONNECTIONS. IF LOWERING WINGS FOR THE FIRST TIME, MAKE SURE THE ENTIP SYSTEM HAS BEEN CHARGED WITH OIL. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY AND EQUIPMENT DAMAGE.

NOTE: HYDRAULIC PIPE COMPOUND SHOULD BE USED TO PREVENT LEAKAGE ON ALL PIPE THREADS (CYLINDER PORTS ONLY).

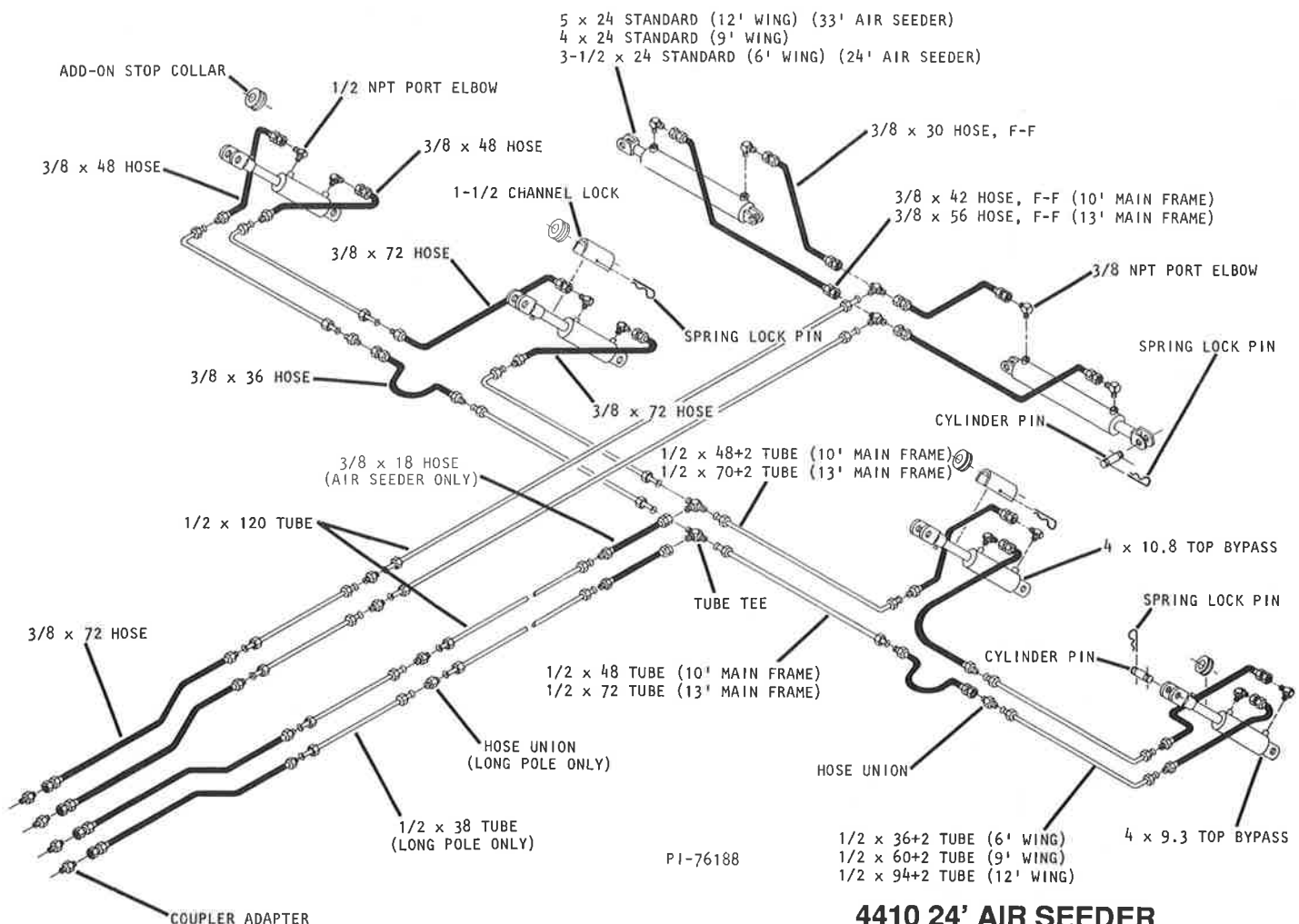
TORQUE ALL 37° FLARE FITTINGS AND HOSES 20 TO 40 FOOT POUNDS. DO NOT OVER TIGHTEN; FLARES DO THE SEALING, NOT THREAD DEFORMATION.

ALWAYS MAKE SURE WING LIFT CYLINDERS HAVE AN INTEGRAL RESTRICTOR.

CYLINDERS MAY BE INSTALLED WITH THE ROD POINTED DOWN.

HOWEVER, IF THE CYLINDERS ARE TURNED THE HOSES MUST BE SWITCHED.

OIL FLOW MUST ALWAYS GO FROM THE MAIN FRAME ROD END TO THE WING CYLINDER BUTT END.



4410 24' AIR SEEDER
4430 33' AIR SEEDER
4410 22-26, 28-32
4430 25-29, 31-35, 37-41

HYDRAULICS

4430 47 AIR SEEDER

4410 34

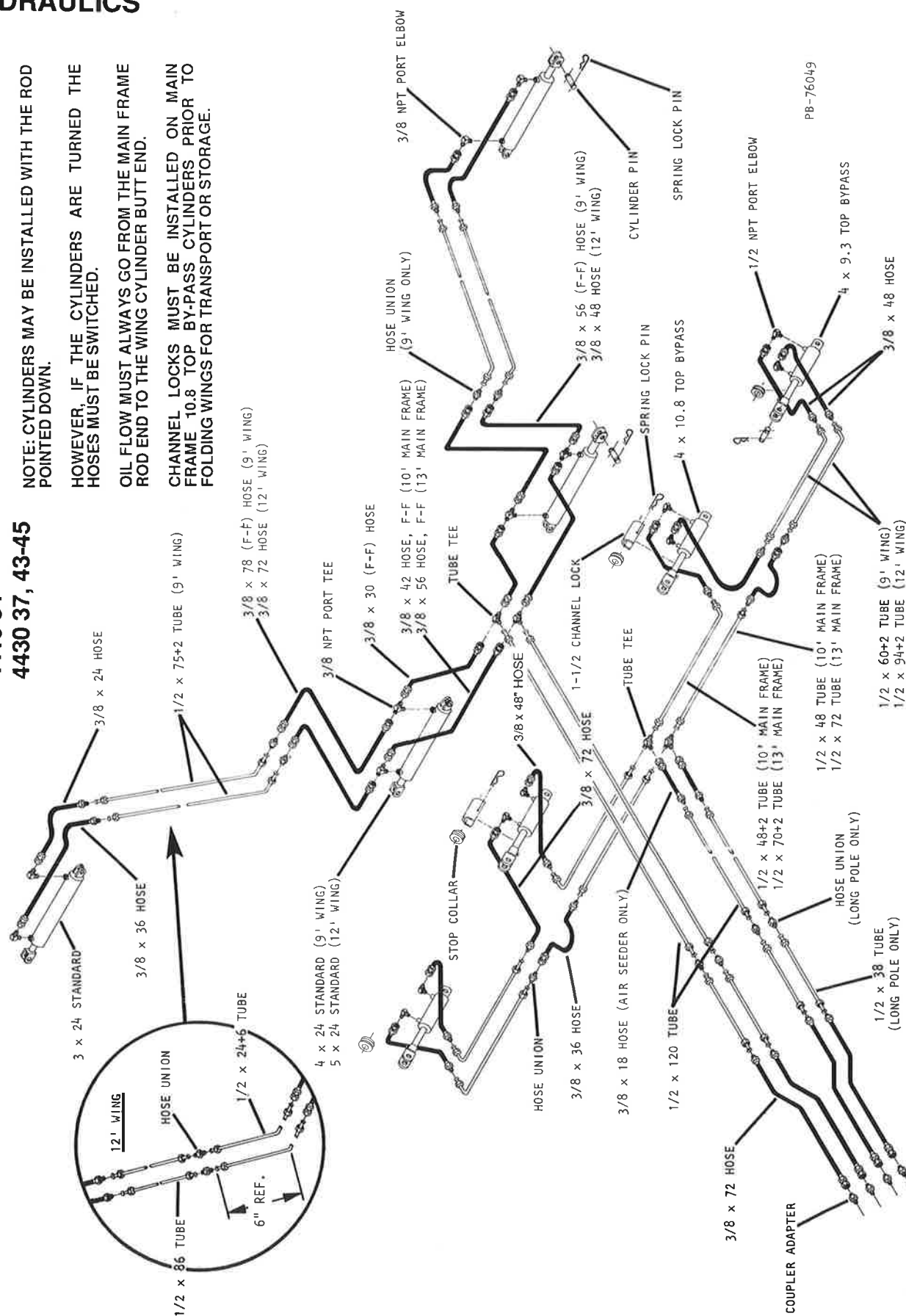
4430 37, 43-45

NOTE: CYLINDERS MAY BE INSTALLED WITH THE ROD POINTED DOWN.

HOWEVER, IF THE CYLINDERS ARE TURNED THE HOSES MUST BE SWITCHED.

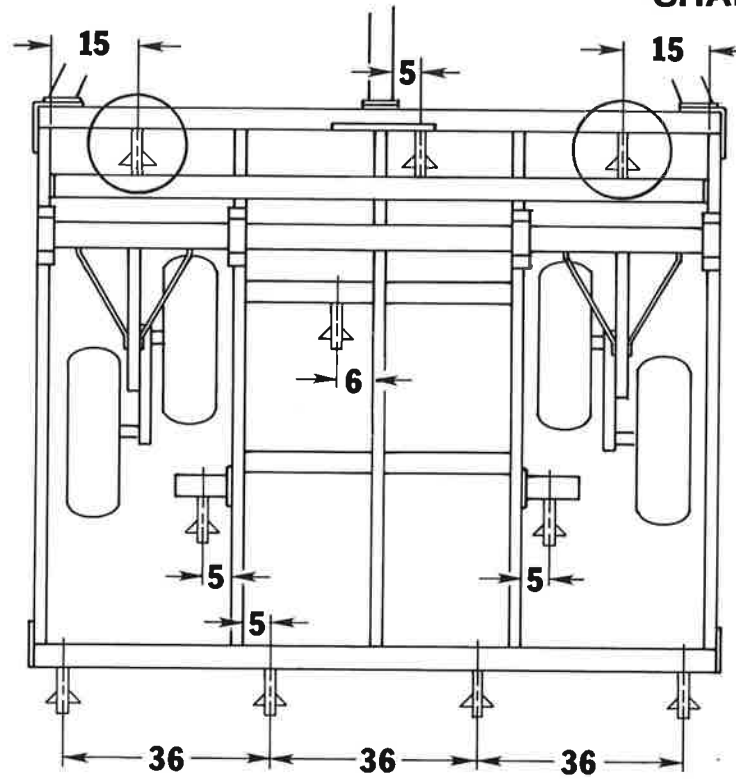
OIL FLOW MUST ALWAYS GO FROM THE MAIN FRAME ROD END TO THE WING CYLINDER BUTT END.

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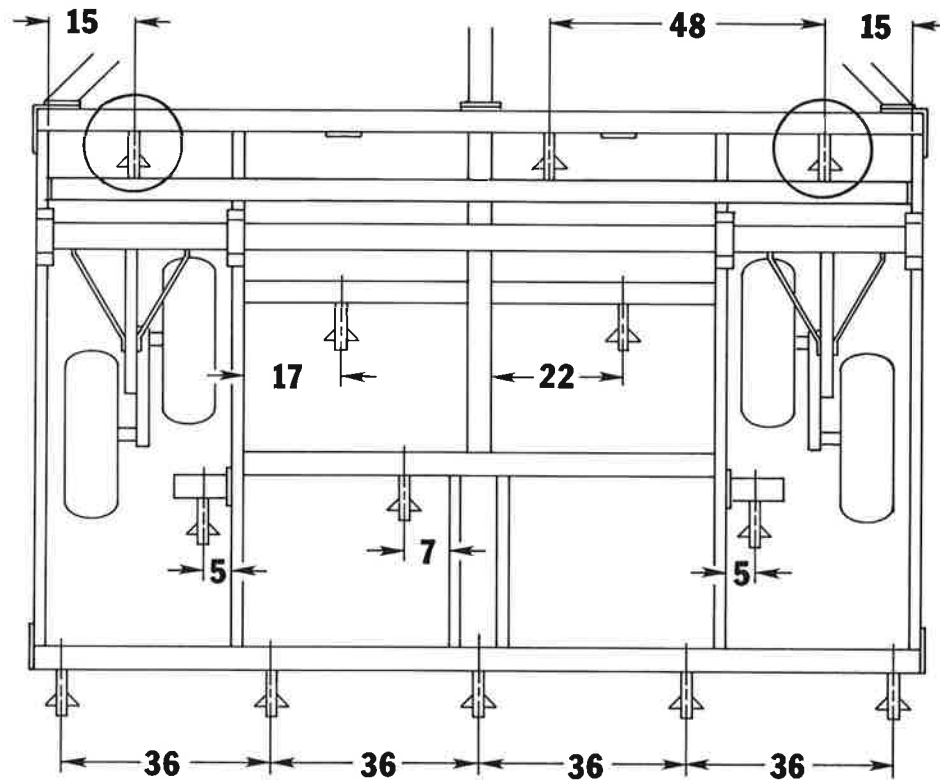
PB-76049

SHANK PLACEMENTS



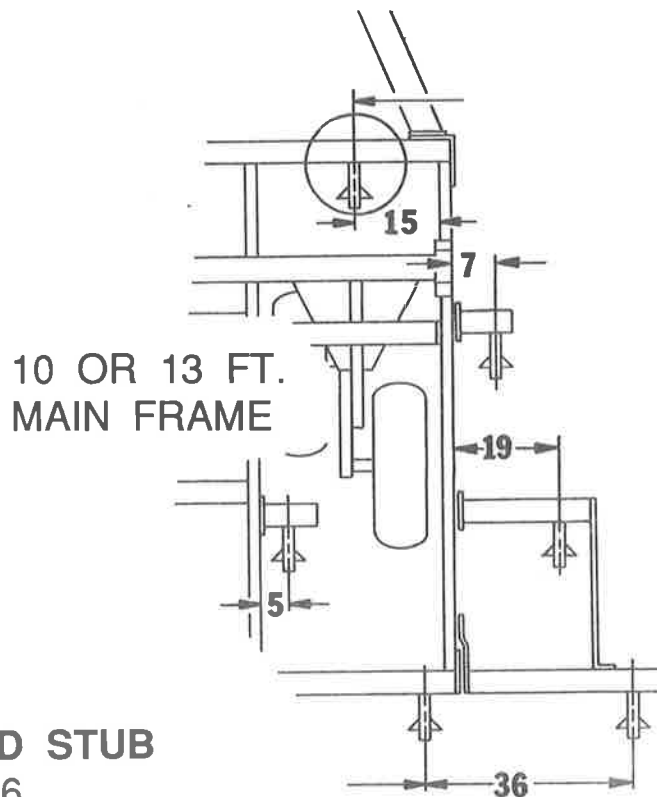
WHEN USING SWEEPS ON CIRCLED SHANKS, CAUTION SHOULD BE USED TO MAINTAIN PROPER TIRE CLEARANCE WHEN MACHINE IS IN THE RAISED POSITION.

10FT. 4410 MAIN FRAME



13FT. 4430 MAIN FRAME

SHANK PLACEMENTS



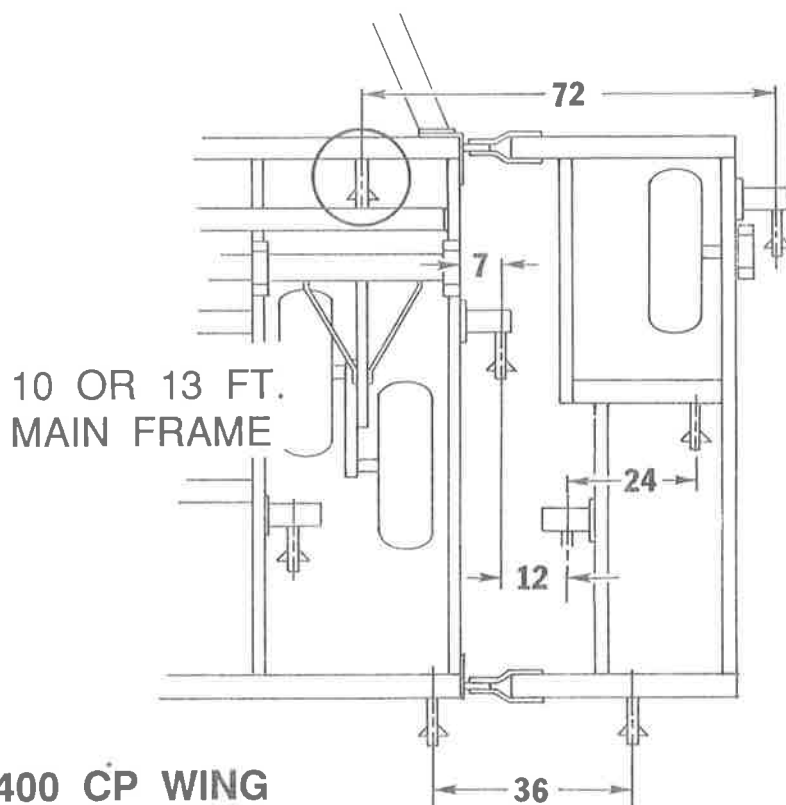
3FT. RIGID STUB

4410 10-16

4430 13-19

PI - 77384
SHT 2 of 2

WHEN USING SWEEPS ON CIRCLED SHANKS, CAUTION SHOULD BE USED TO MAINTAIN PROPER TIRE CLEARANCE WHEN MACHINE IS IN THE RAISED POSITION.

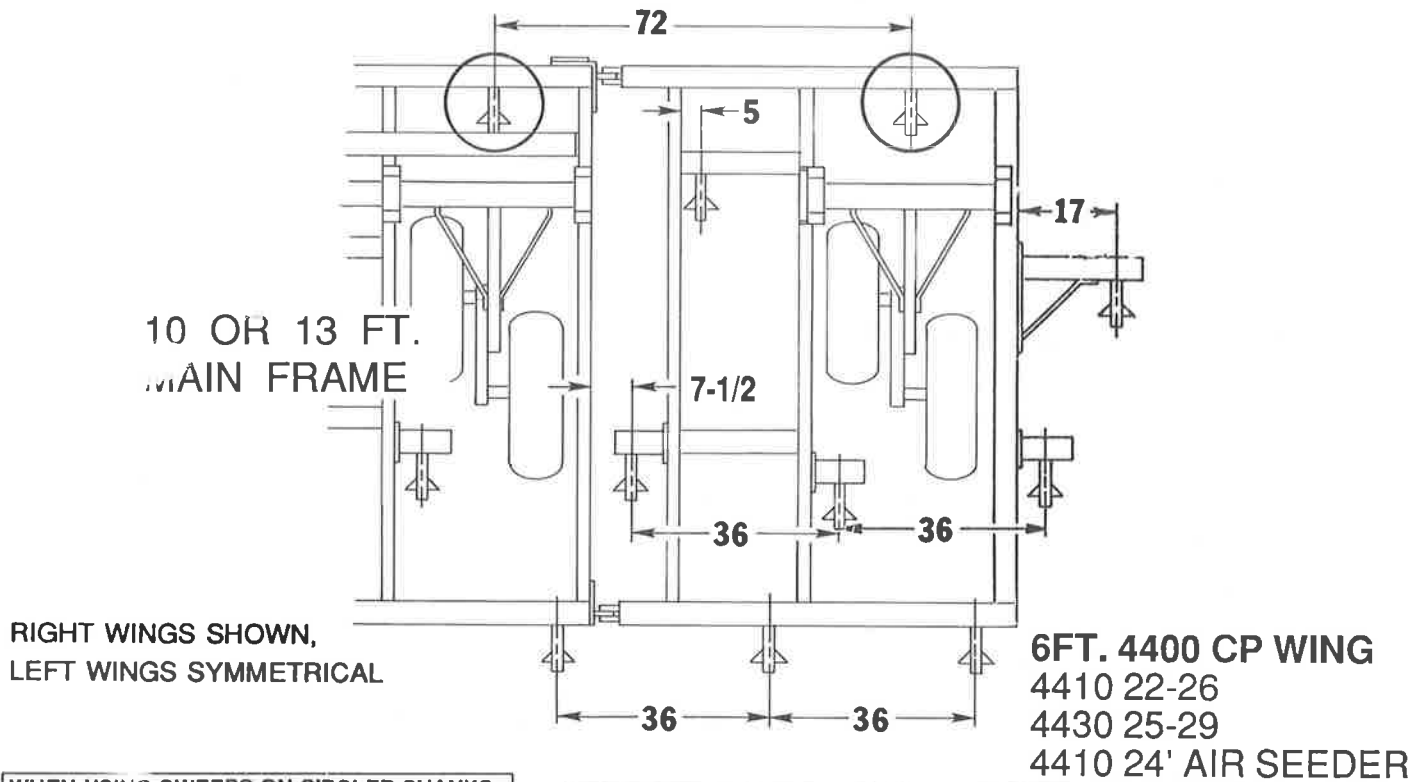


4FT. 4400 CP WING

4410 18-20

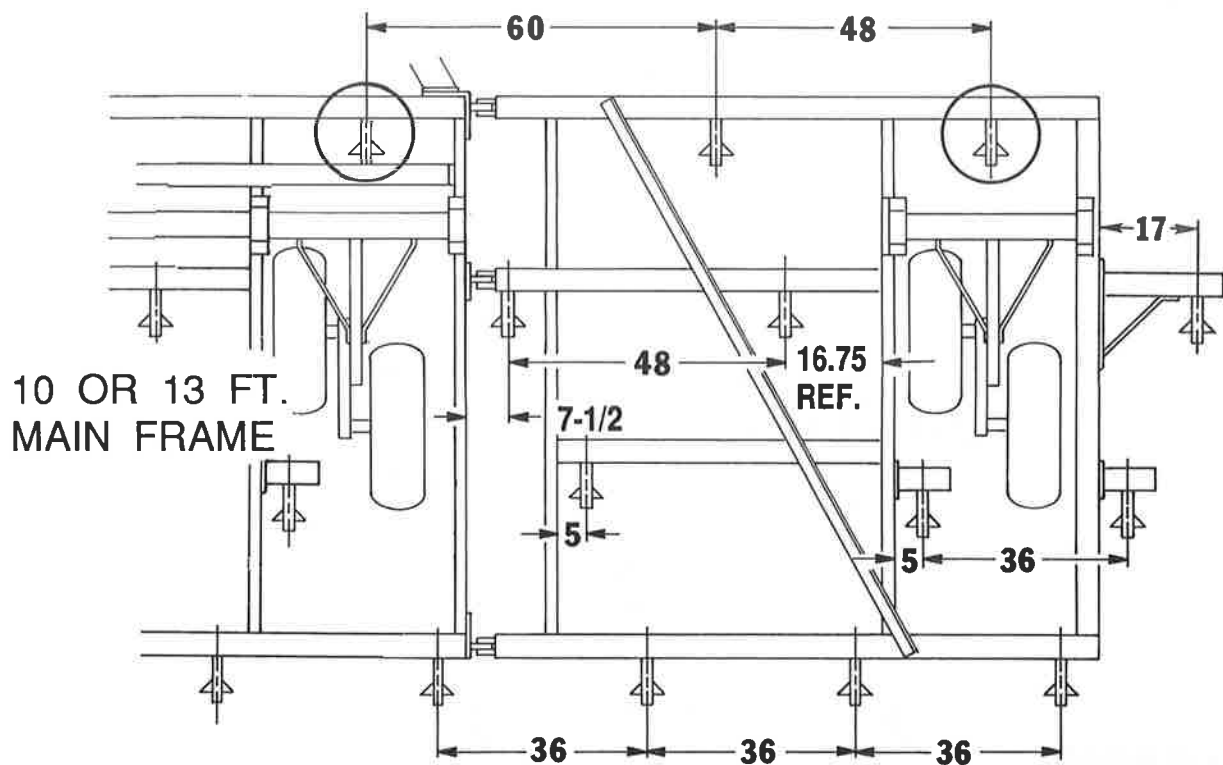
4430 21-23

SHANK PLACEMENTS

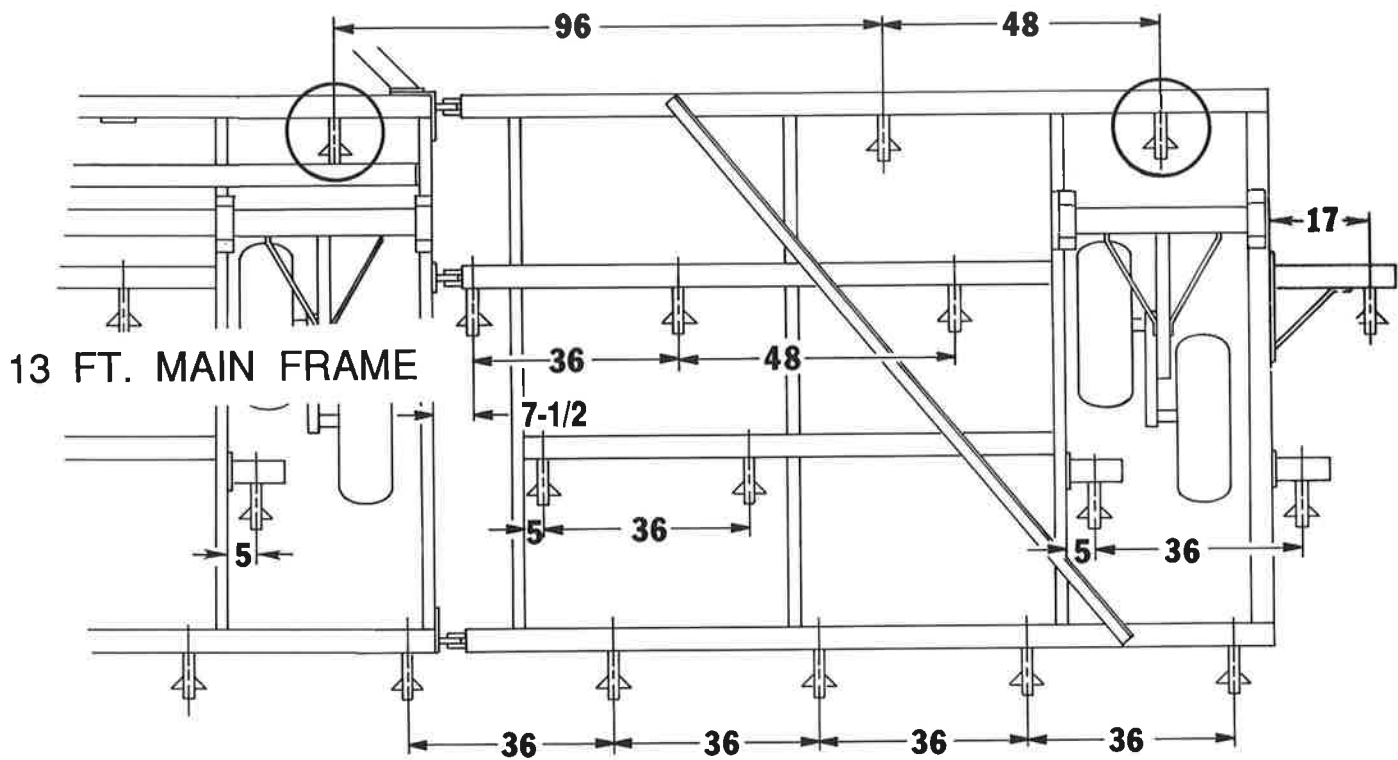


WHEN USING SWEEPS ON CIRCLED SHANKS,
CAUTION SHOULD BE USED TO MAINTAIN
PROPER TIRE CLEARANCE WHEN MACHINE
IS IN THE RAISED POSITION.

WATCH THAT PROPER CLEARANCE IS GIVEN
BETWEEN THE TIRE AND WHEEL WELL STUB
ESPECIALLY HIGH CLEARANCES.



SHANK PLACEMENTS

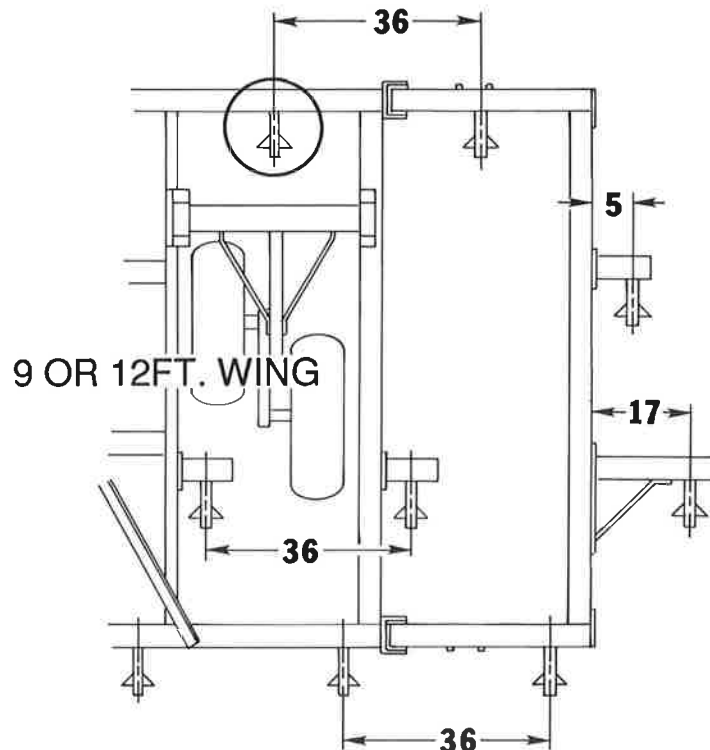


12FT. 4400 CP WING
4430 37-41

RIGHT WINGS SHOWN,
LEFT WINGS SYMMETRICAL

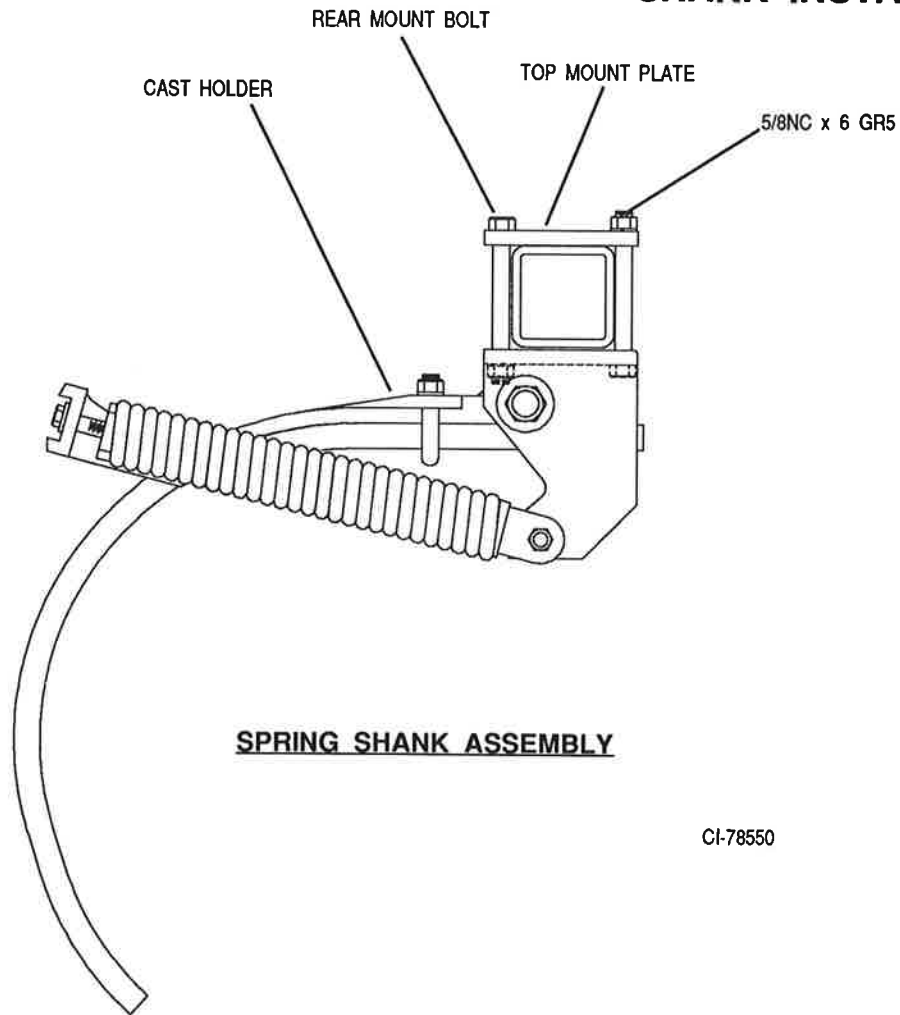
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BETWEEN THE TIRE AND WHEEL WELL STUB
ESPECIALLY HIGH CLEARANCES.



3FT. CP WING
4410 34
4430 37, 43-45
4430 47' AIR SEEDER

SHANK INSTALLATION



CI-78550

1. FOR EASE OF INSTALLATION LOOSELY ASSEMBLE THE TOP MOUNTING PLATE TO THE SHANK ASSEMBLY WITH THE 2 REAR BOLTS. THE 2 REAR BOLTS MUST BE ASSEMBLED WITH THE NUTS ON THE BOTTOM.

NOTE: IF ACCESS TO AIR IMPACT WRENCH IS NOT AVAILABLE, FOR EASE OF TIGHTENING IT IS SUGGESTED THAT THE 4 MOUNTING BOLTS BE INSTALLED WITH NUTS ON TOP.

2. SLIDE ENTIRE ASSEMBLY ONTO FRAME, THEN INSTALL FRONT 2 MOUNTING BOLTS (SHANK SHOULD THEN HANG BY ITSELF). IT IS BETTER TO ASSEMBLE THE FRONT BOLTS WITH THE NUTS ON TOP.

3. TO ALLOW FOR TRIPPING, SHANK ASSEMBLY MUST HAVE A MINIMUM OF 5 INCHES SIDE CLEARANCE, MEASURED FROM THE CENTER OF THE SHANK ASSEMBLY.

4. WHEN PROPER LOCATION OF SHANK ASSEMBLY IS REACHED, TIGHTEN ALL 4 MOUNTING BOLTS SECURELY (TORQUE 100 FT/LBS).

