

ASSEMBLY INSTRUCTIONS

WIL-RICH STANDARD FIELD CULTIVATOR

PRINTED IN USA (74100) JM 12/89-1.2M

HUTCHINSON WIL-RICH
MANUFACTURING COMPANY
P.O. BOX 1030 WAHPETON, ND 58074

ASSEMBLY INFORMATION

Remove all wires and arrange the parts conveniently.

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	G R 2	18	45	89	160	252	320
	A 5	30	68	140	240	360	544
	D E 8	40	100	196	340	528	792
UNF	G R 2	21	51	102	178	272	368
	A 5	32	70	168	264	392	572
	D E 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.



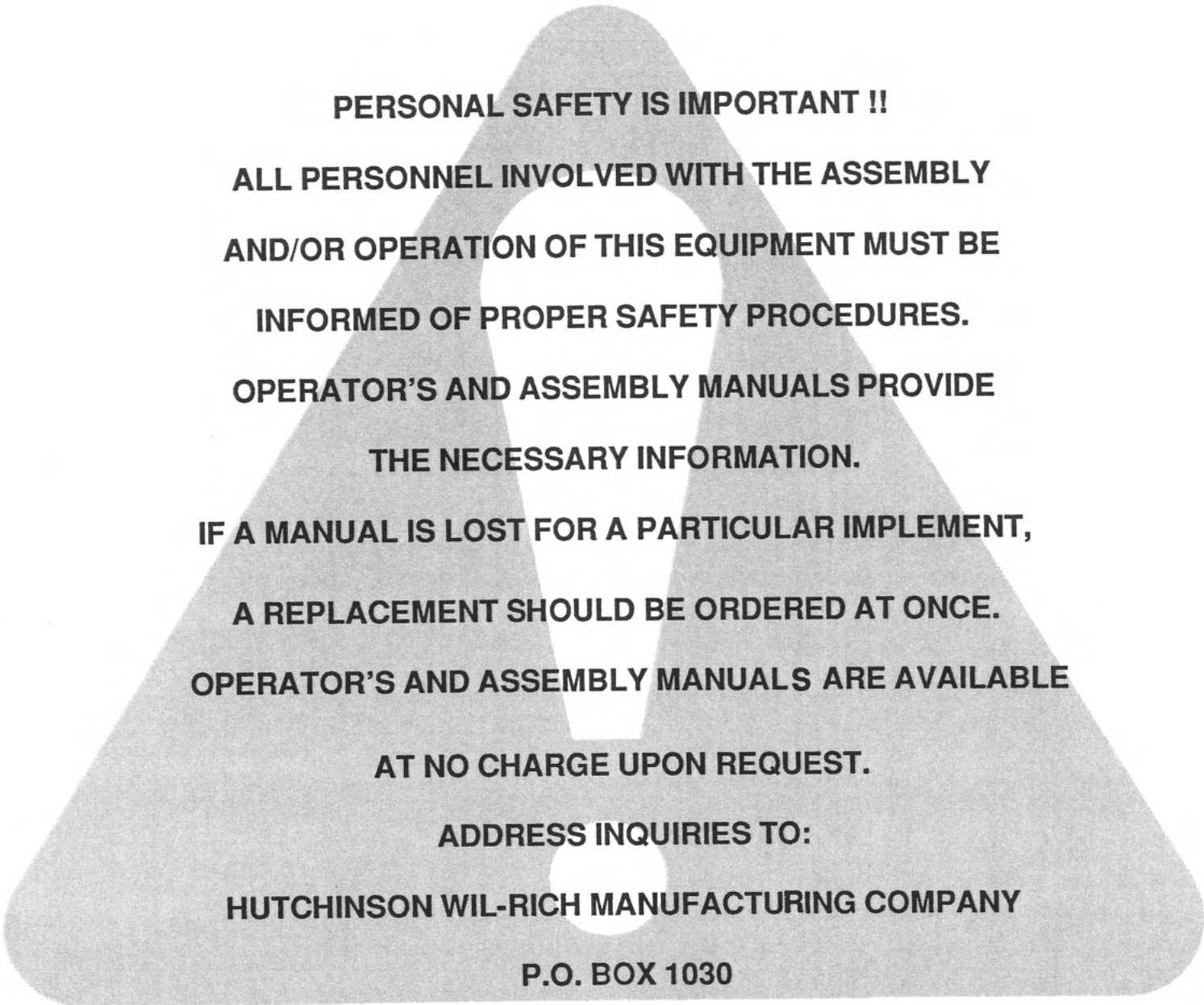
CAUTION

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.



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.



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.**

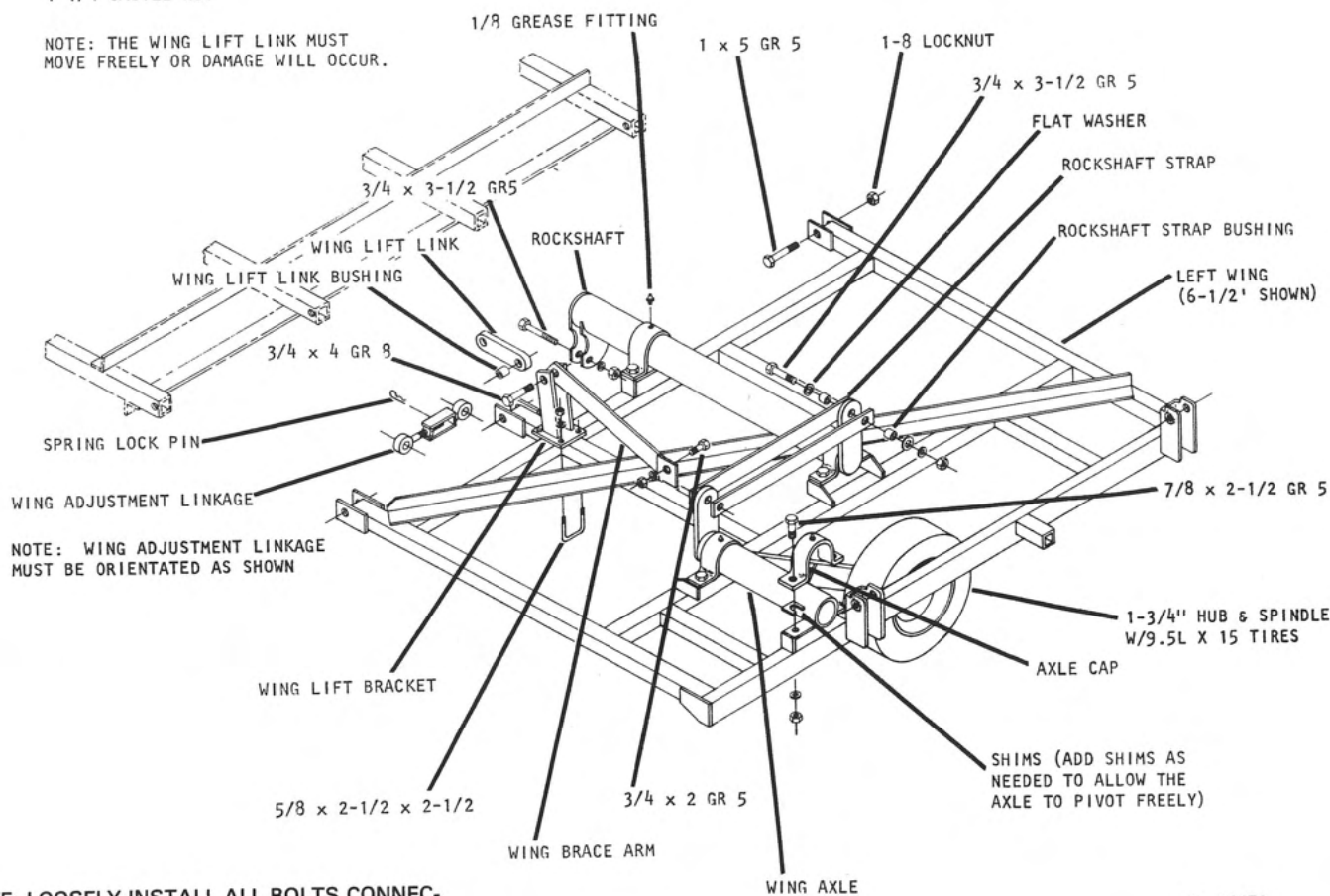
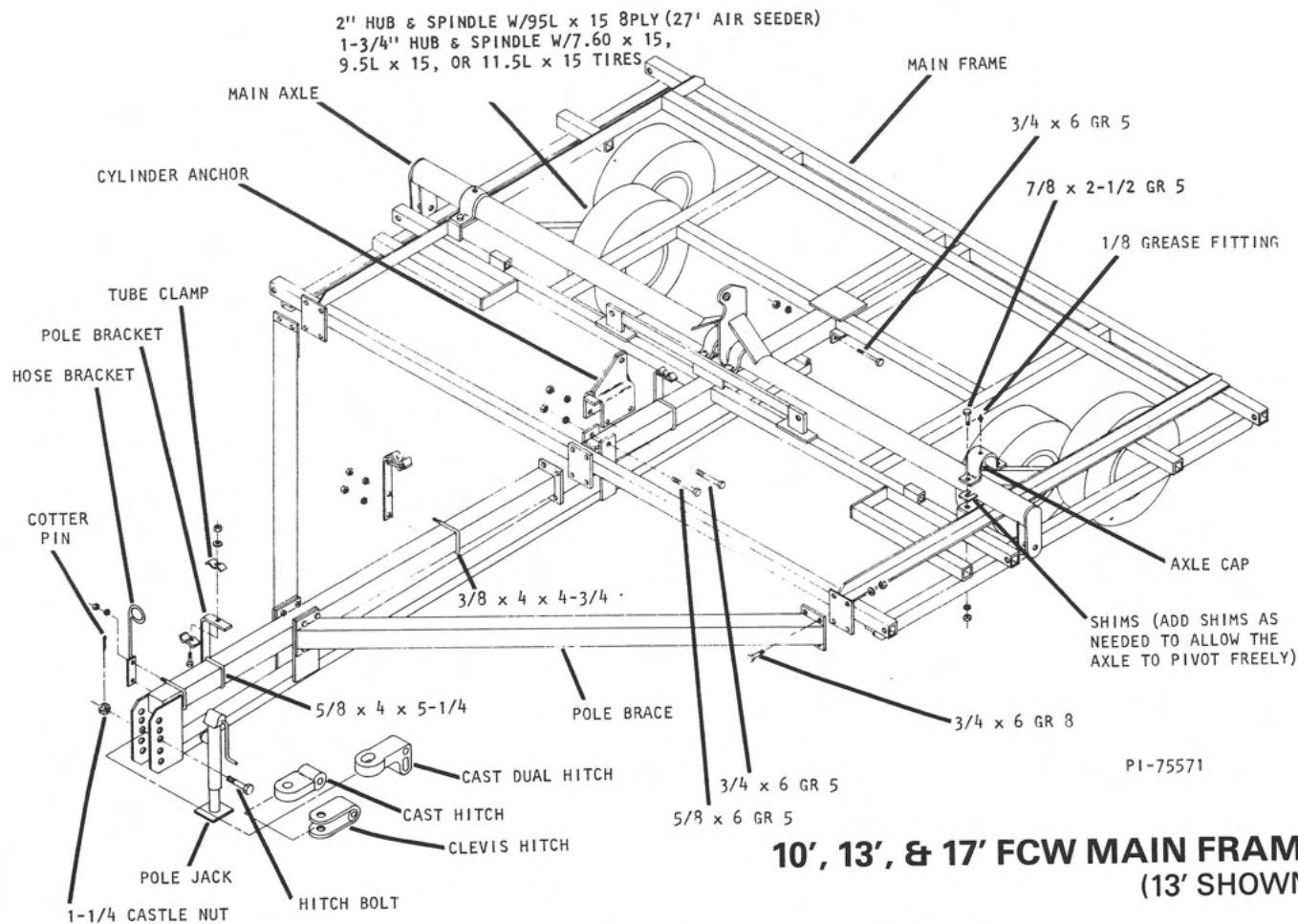
**IF A MANUAL IS LOST FOR A PARTICULAR IMPLEMENT,
A REPLACEMENT SHOULD BE ORDERED AT ONCE.
OPERATOR'S AND ASSEMBLY MANUALS ARE AVAILABLE
AT NO CHARGE UPON REQUEST.**

**ADDRESS INQUIRIES TO:
HUTCHINSON WIL-RICH MANUFACTURING COMPANY**

P.O. BOX 1030

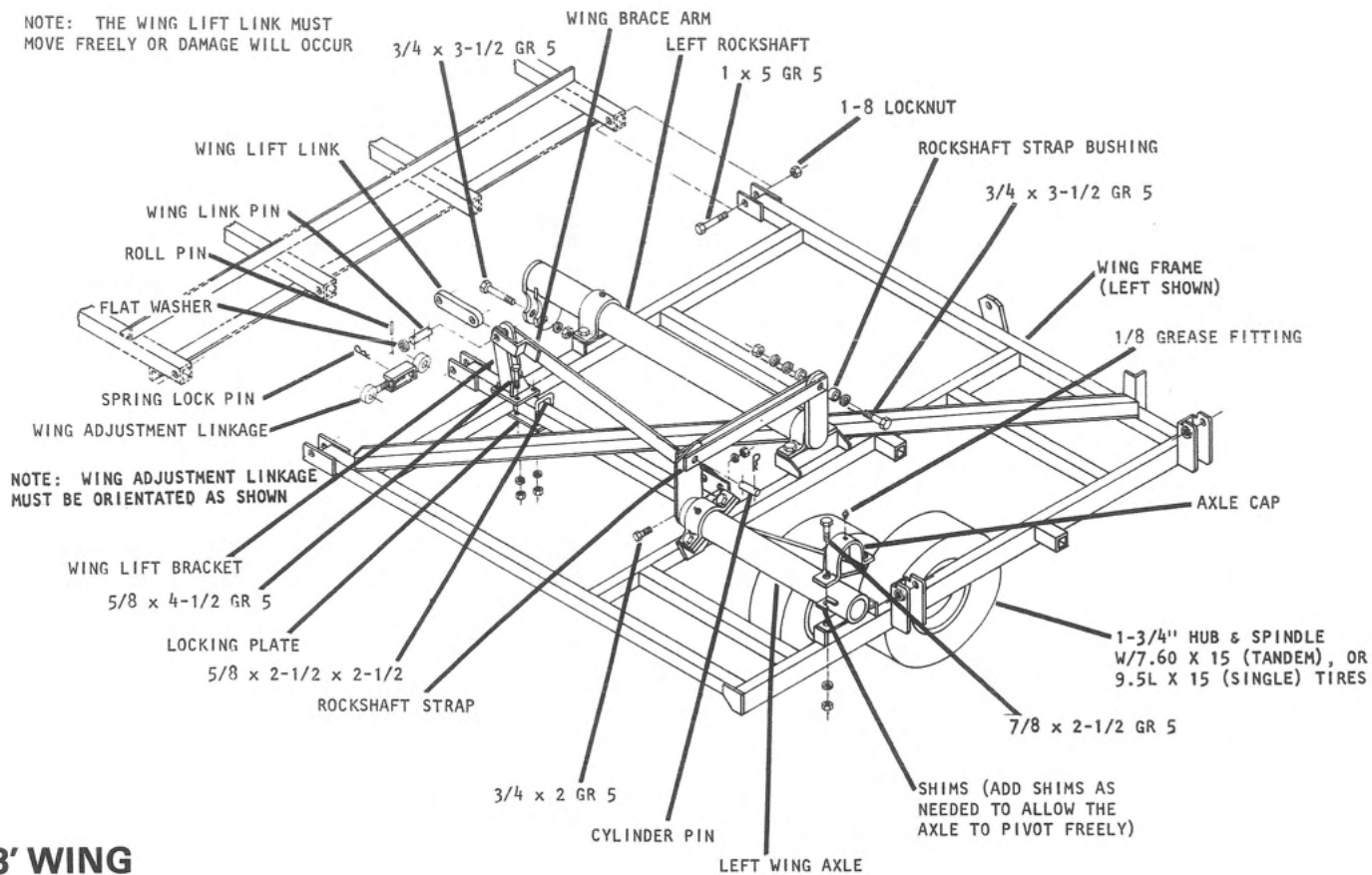
WAHPETON, ND 58074

(701) 642-2621



NOTE: LOOSELY INSTALL ALL BOLTS CONNECTING MATING PARTS BEFORE FINAL TIGHTENING. (SEE TORQUE CHART).

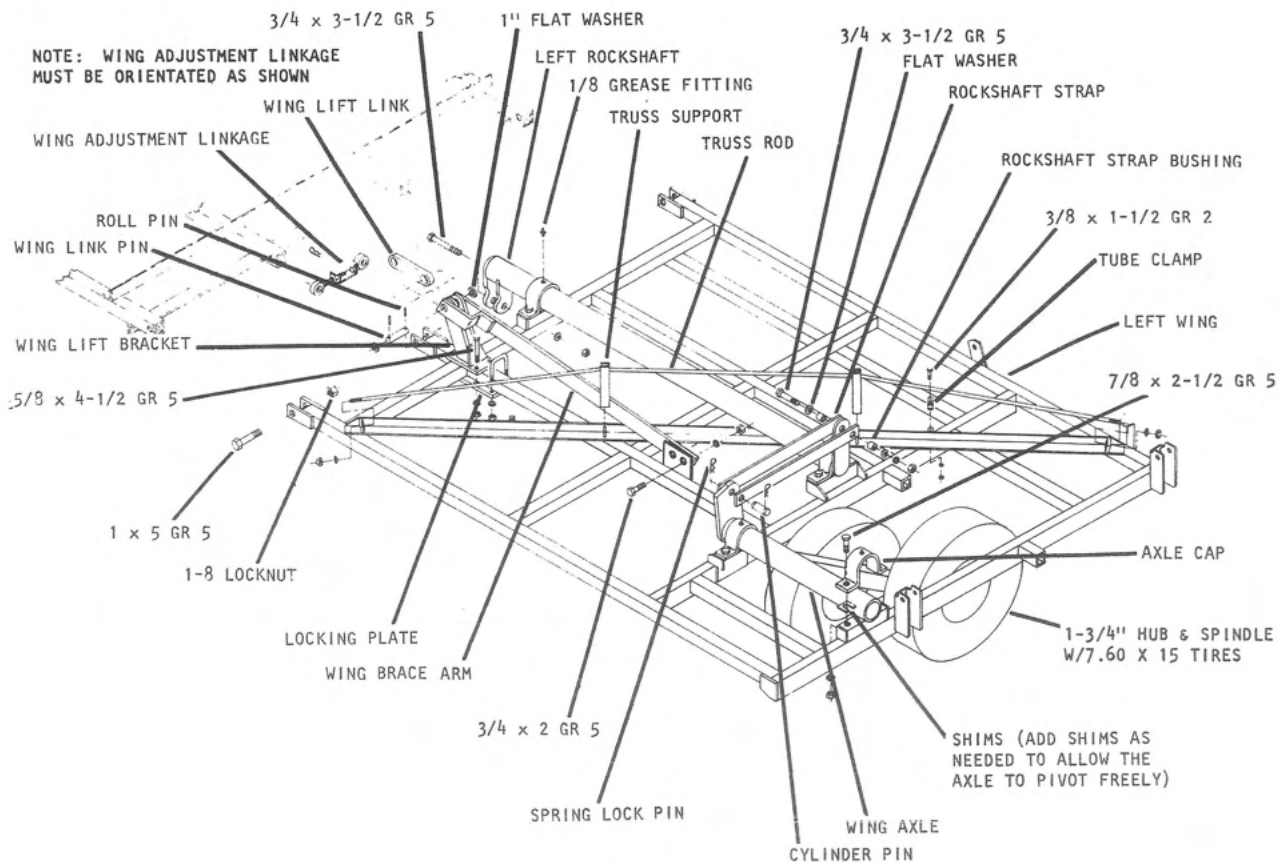
NOTE: THE WING LIFT LINK MUST
MOVE FREELY OR DAMAGE WILL OCCUR



8' WING

PI-75573

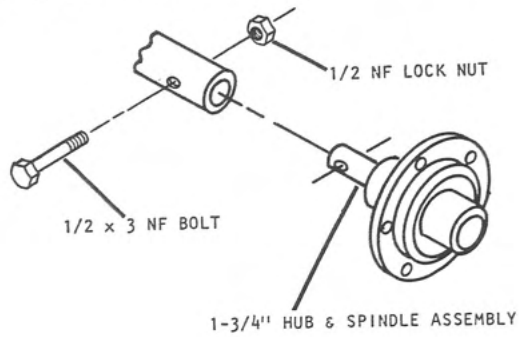
NOTE: THE WING LIFT LINK MUST
MOVE FREELY OR DAMAGE WILL OCCUR.



10-1/2' WING

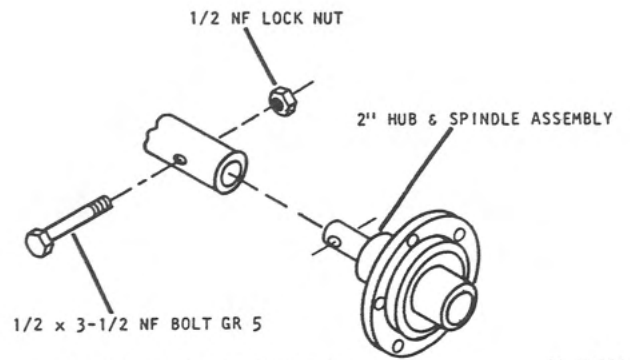
PI-75574

HUB AND SPINDLE



PI-75660

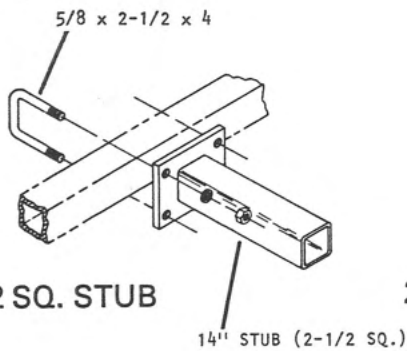
1-3/4" HUB & SPINDLE



PI-75660

2" HUB & SPINDLE

14" STUB

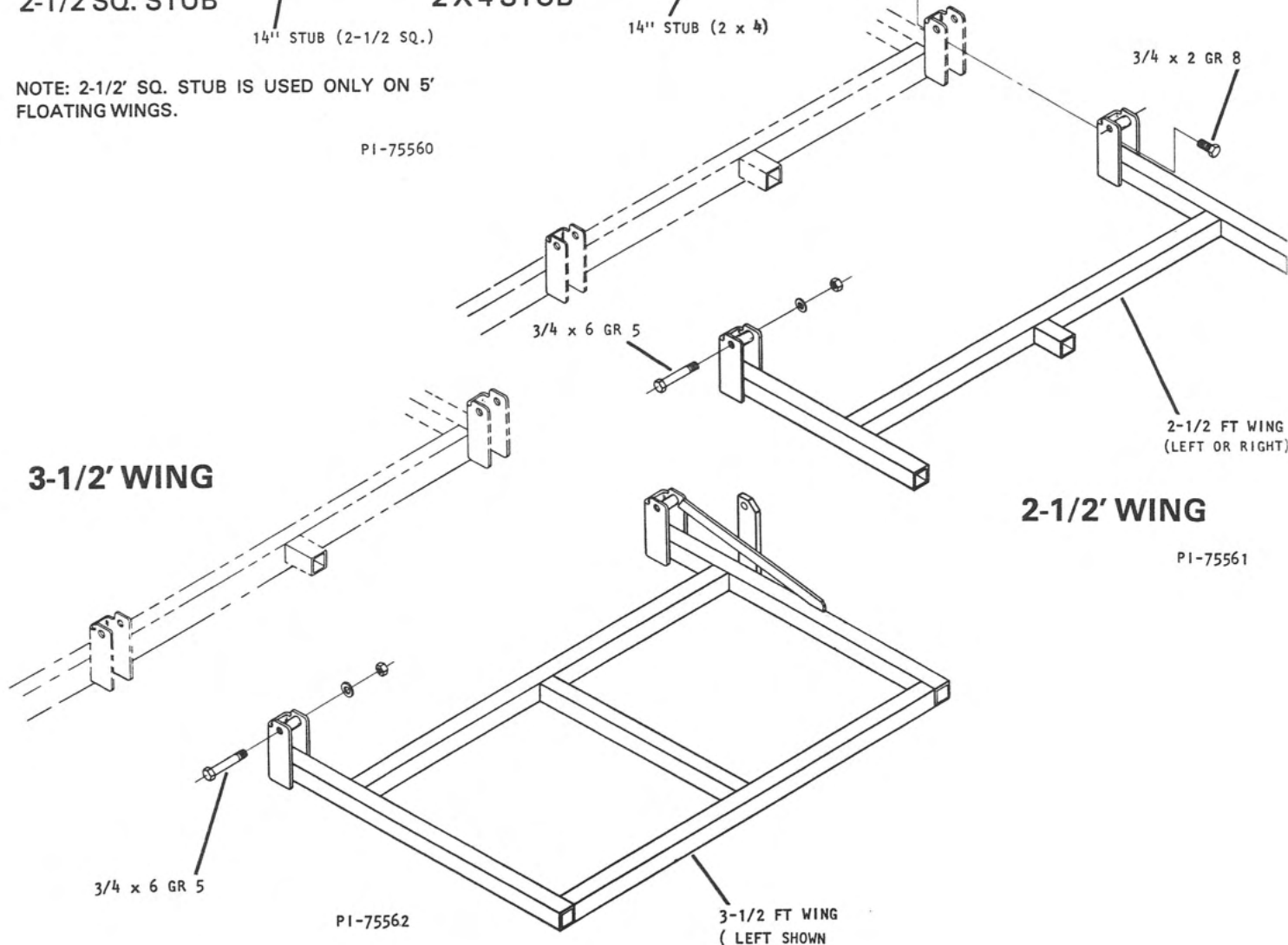
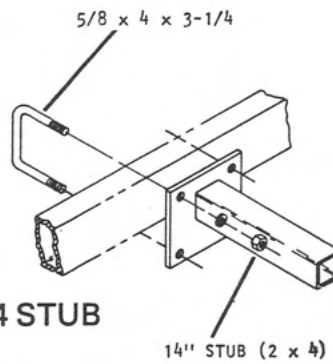


2-1/2 SQ. STUB

NOTE: 2-1/2' SQ. STUB IS USED ONLY ON 5' FLOATING WINGS.

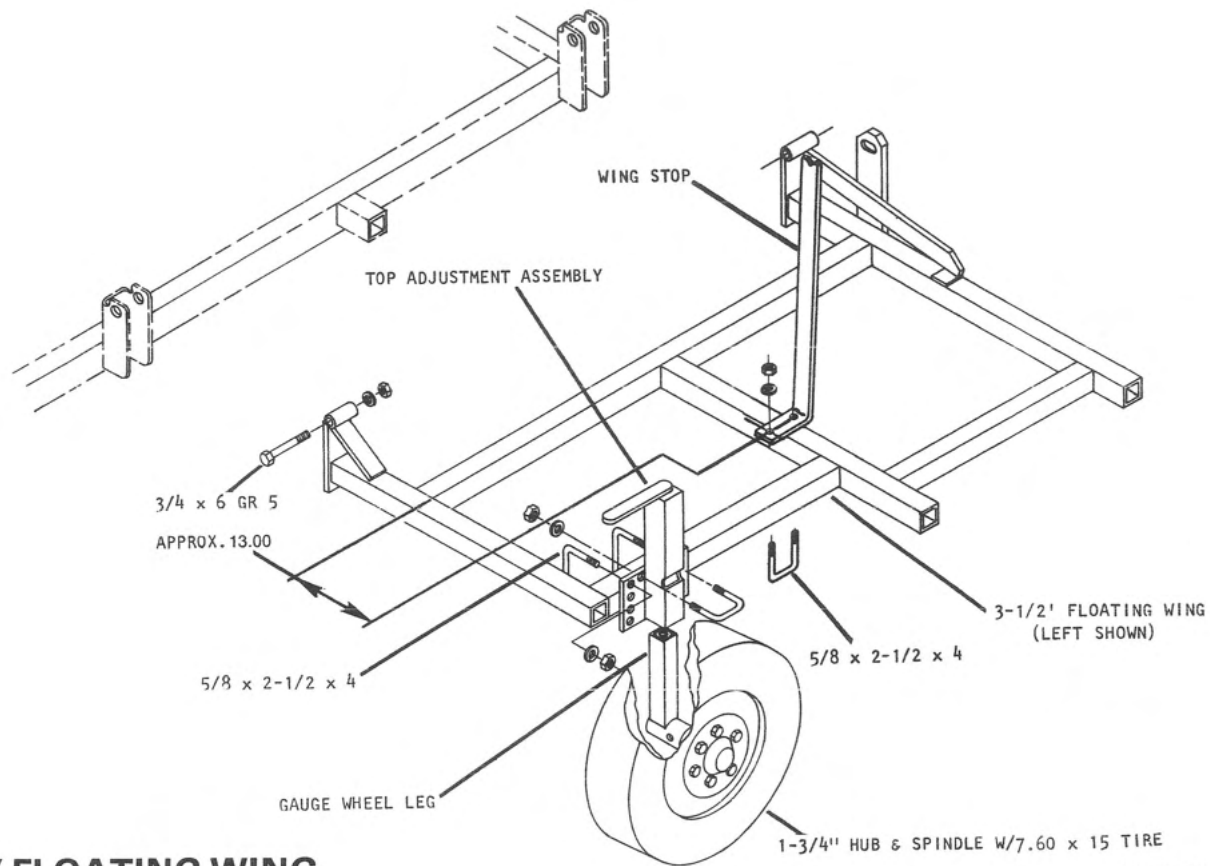
PI-75560

2X4 STUB



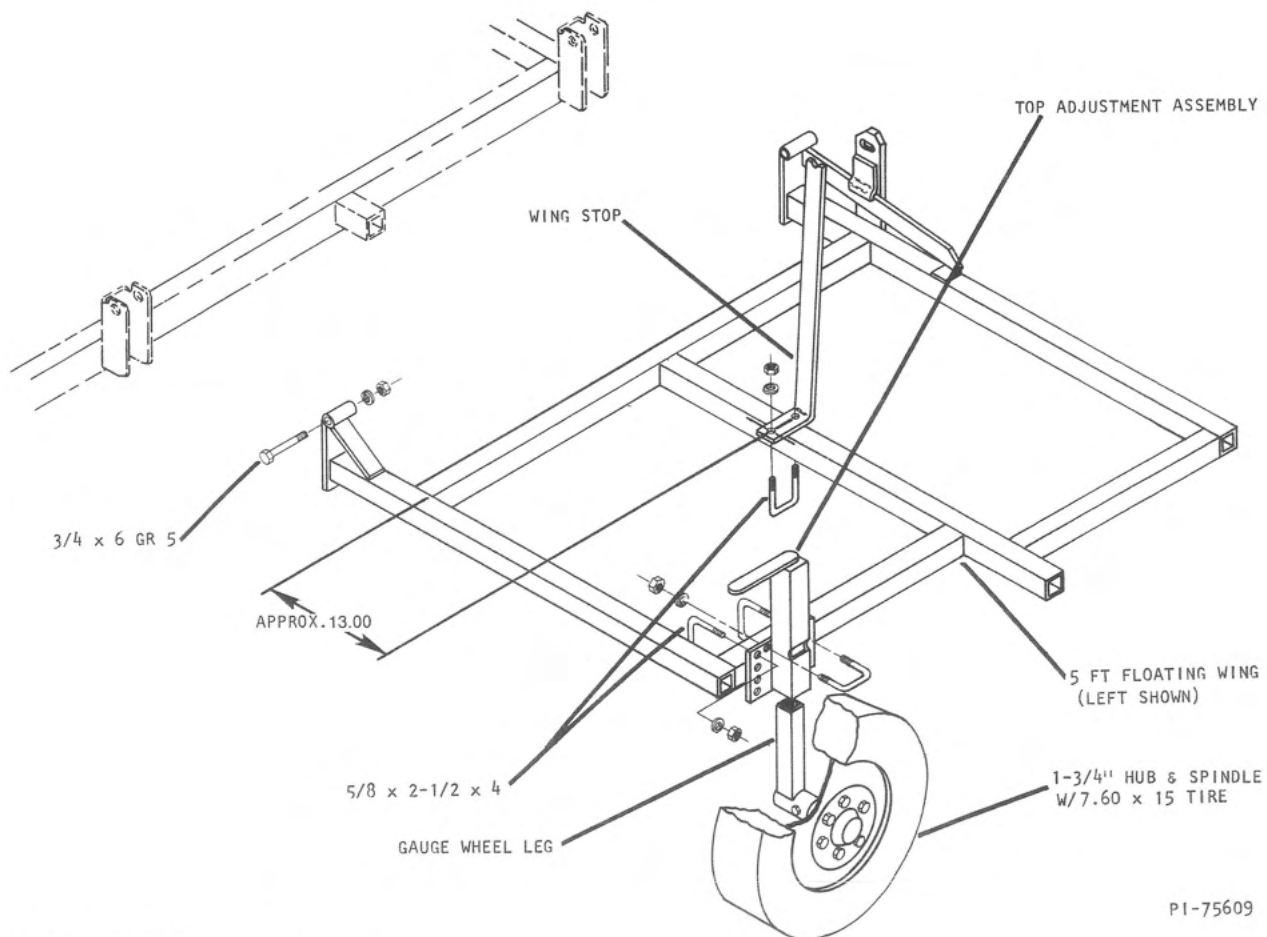
PI-75562

PI-75561



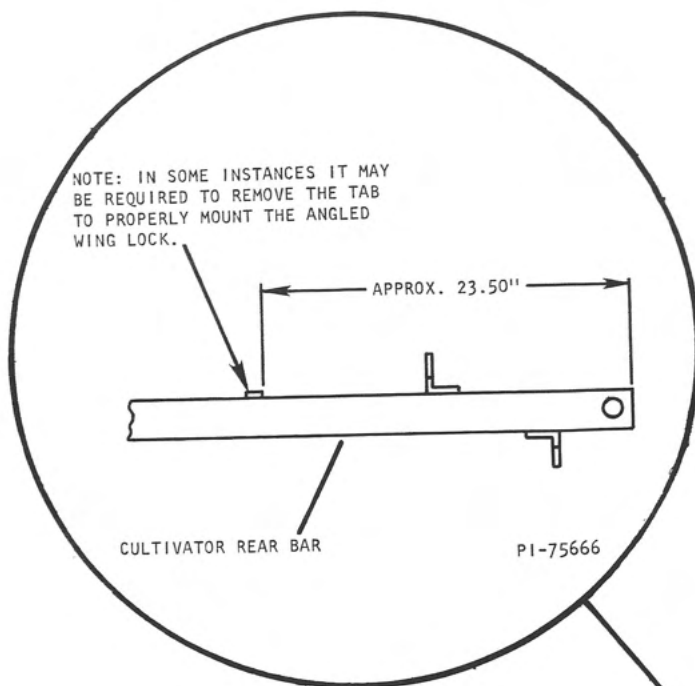
3-1/2' FLOATING WING

PI-75563

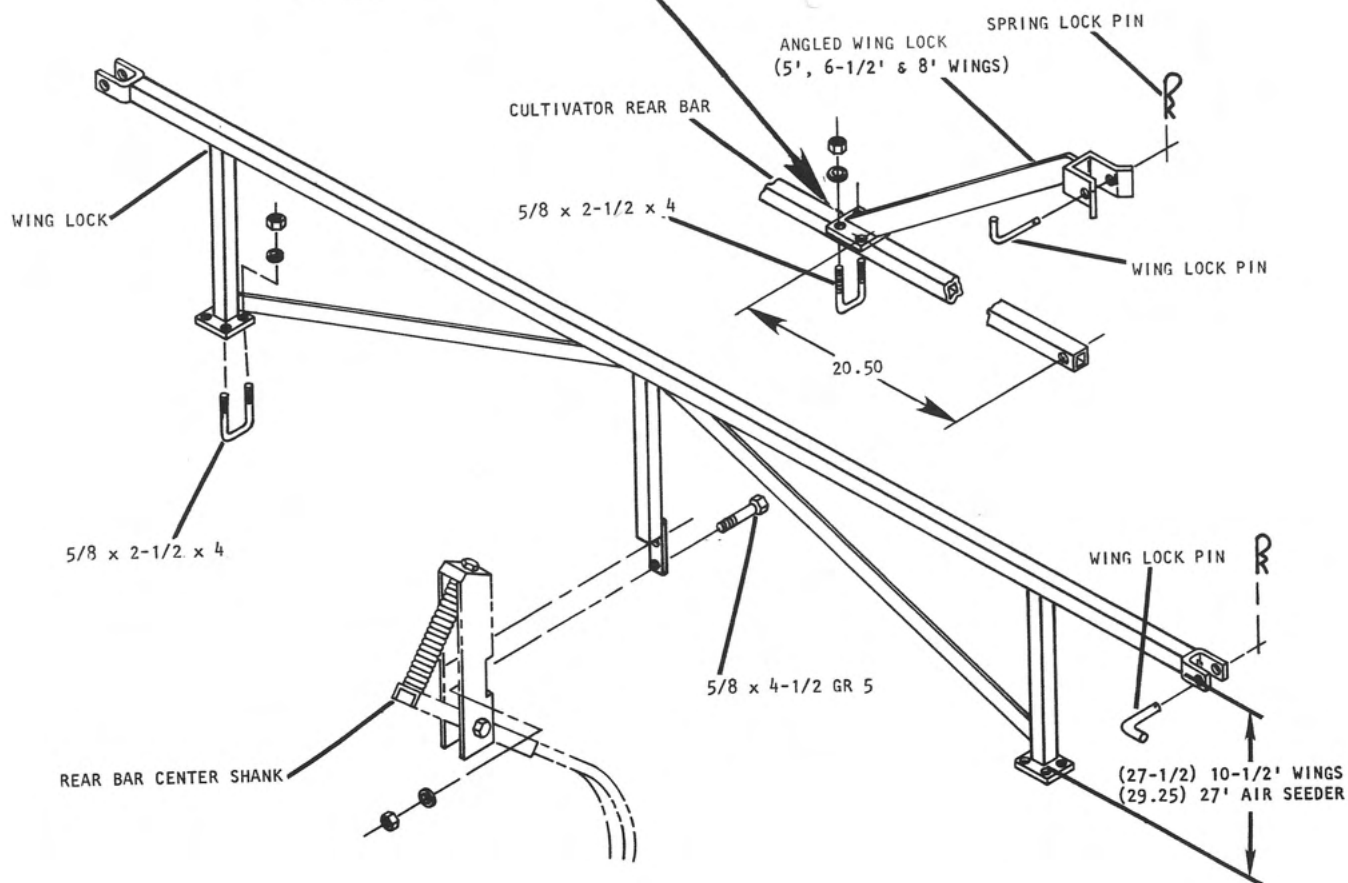


5' FLOATING WING

PI-75609



NOTE: THE WING LOCKS MUST BE POSITIONED SECURELY BEFORE RAISING THE WINGS. INSTALL WING LOCK PINS FOR ROAD TRAVEL.



PI-75575

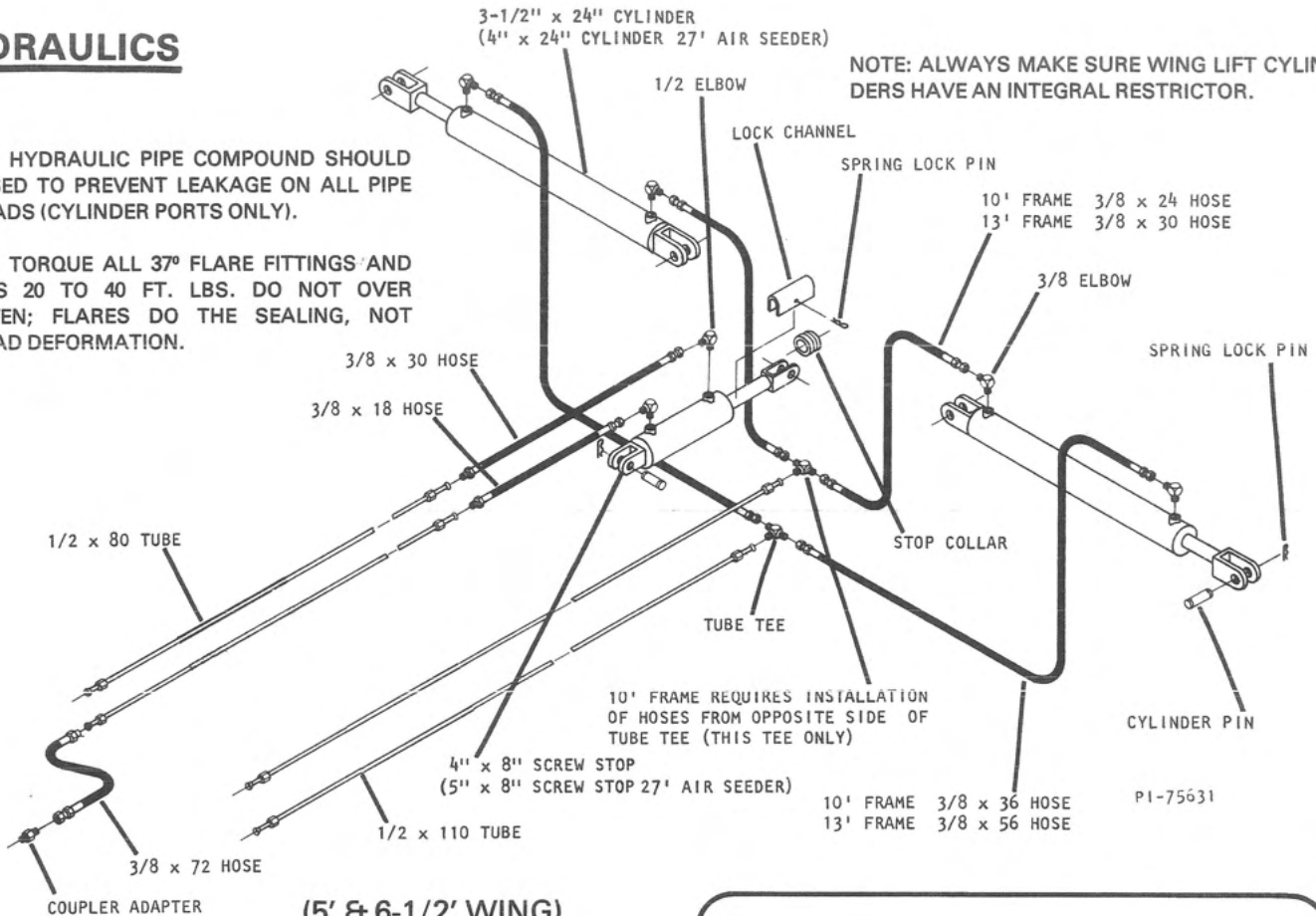
WING LOCKS

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 FT. LBS. DO NOT OVER TIGHTEN; FLARES DO THE SEALING, NOT THREAD DEFORMATION.

NOTE: ALWAYS MAKE SURE WING LIFT CYLINDERS HAVE AN INTEGRAL RESTRICTOR.



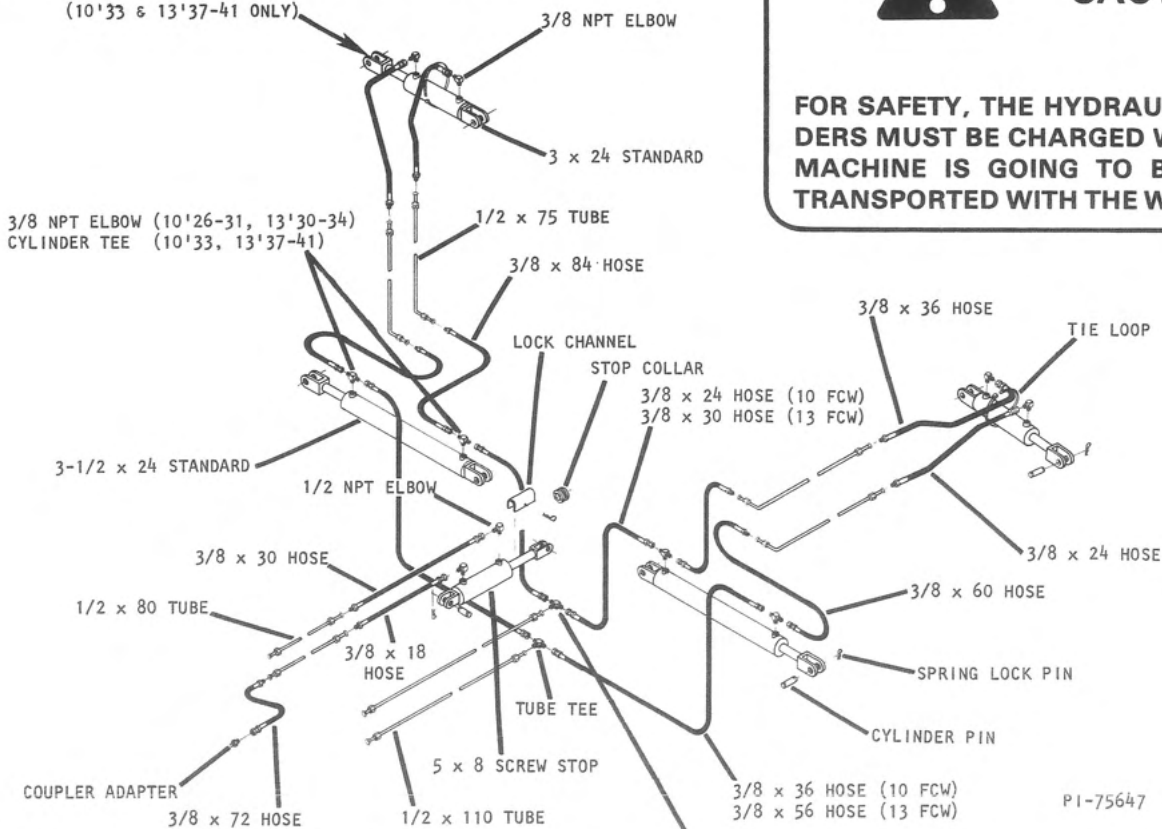
10' 19 - 24, 23 - 27 HYDRAULICS 13' 23 - 27, 26 - 31 HYDRAULICS

(10'33 & 13'37-41 ONLY)



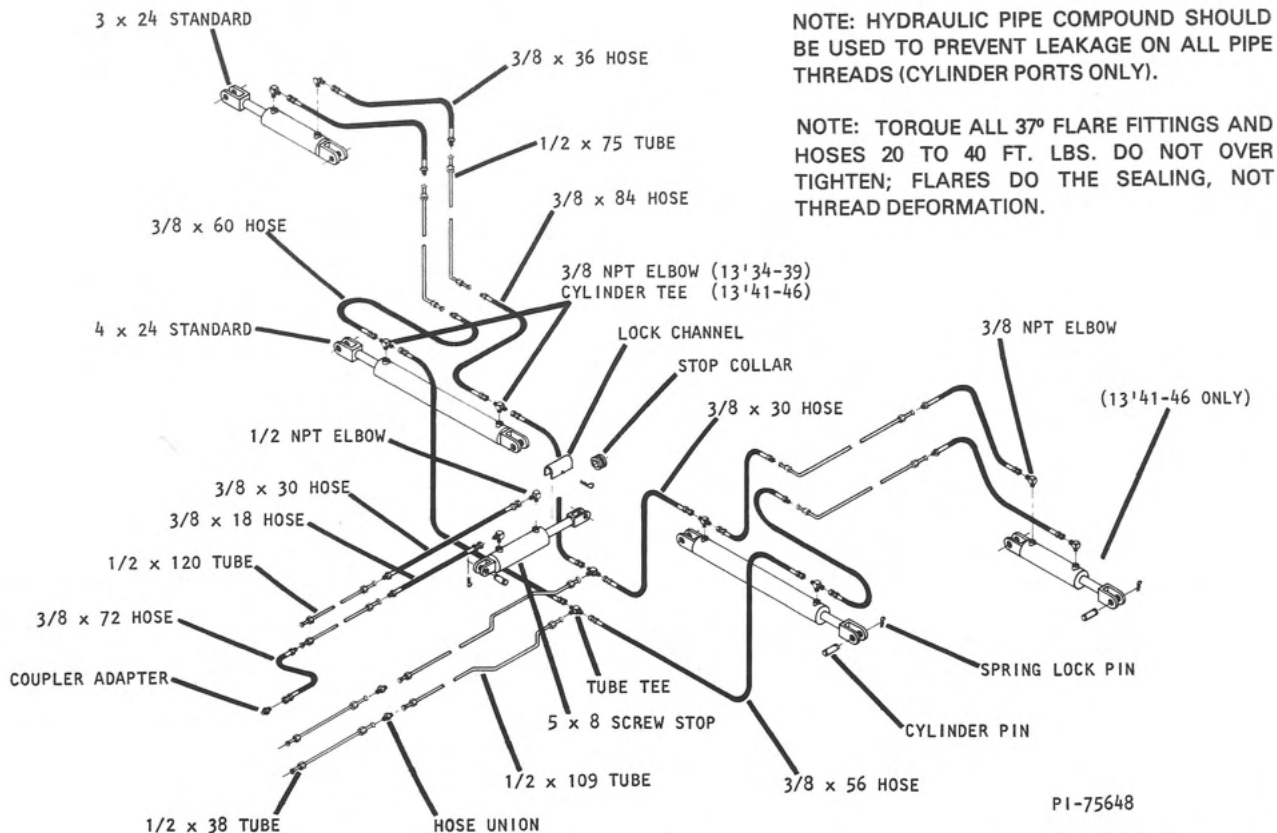
CAUTION

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.



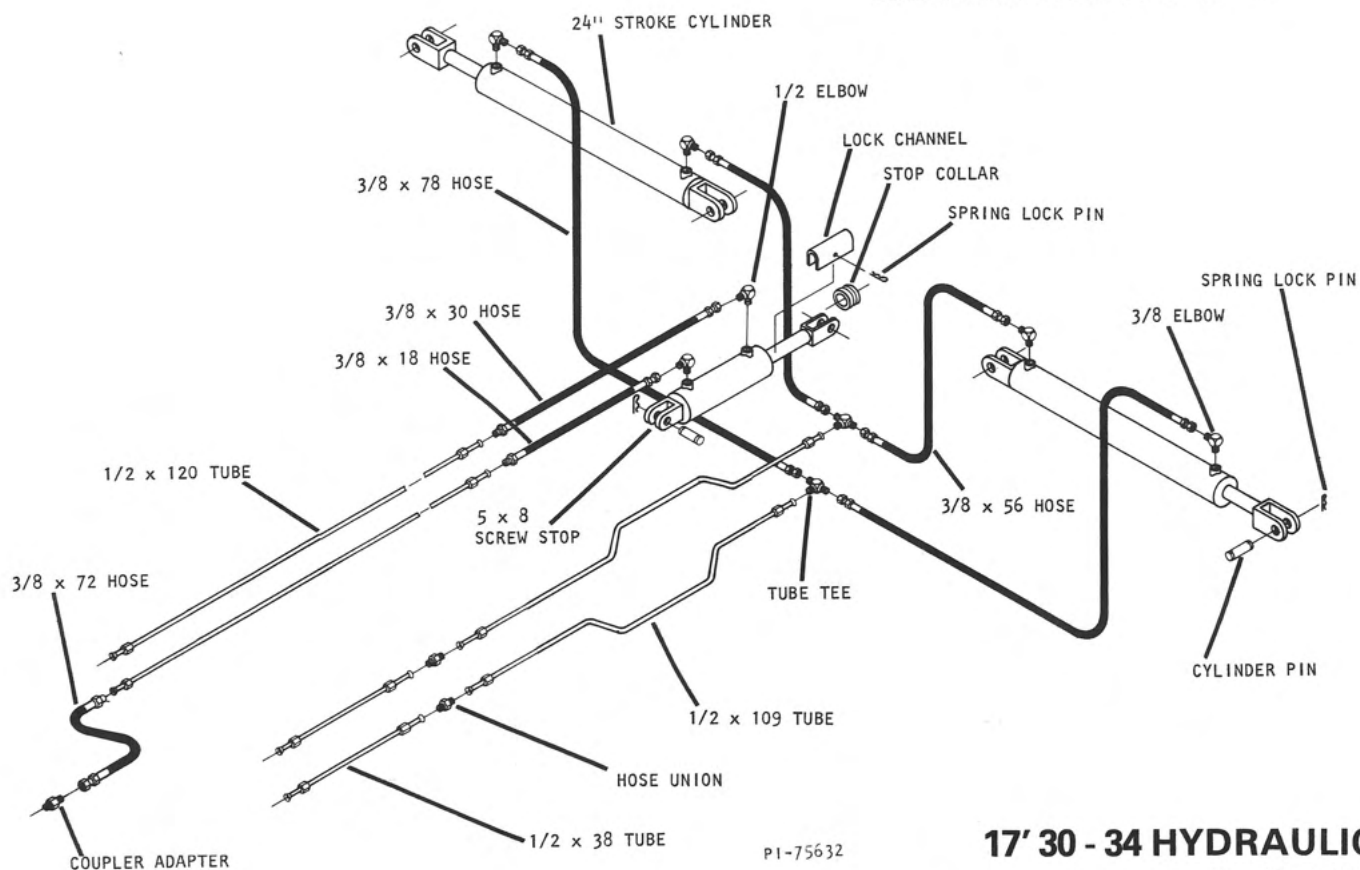
10' 26 - 33 HYDRAULICS (8' WING) 13' 30 - 41 HYDRAULICS

10' FRAME REQUIRES INSTALLATION OF HOSES FROM OPPOSITE SIDE OF TUBE TEE (THIS TEE ONLY)



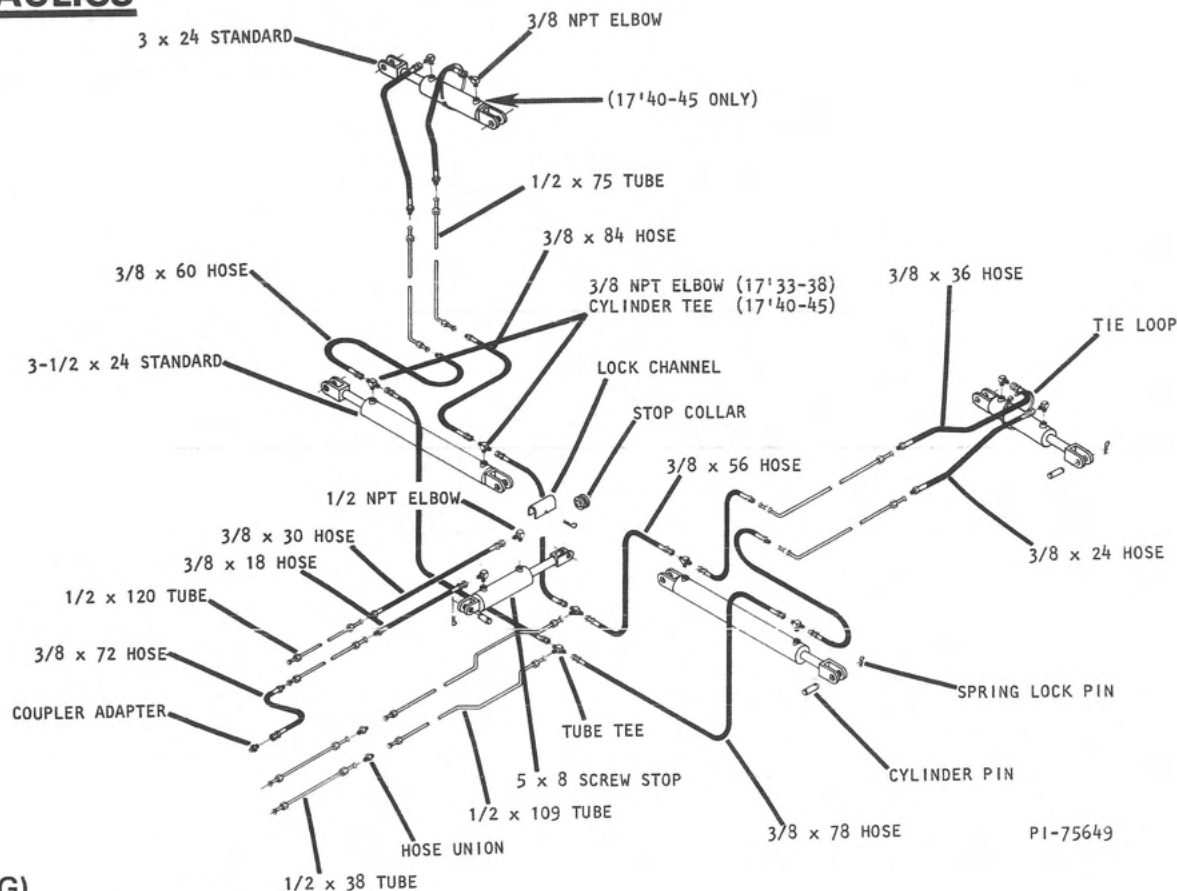
13' 34 - 46 HYDRAULICS (10-1/2' WING)

NOTE: ALWAYS MAKE SURE WING LIFT CYLINDERS HAVE AN INTEGRAL RESTRICTOR.



17' 30 - 34 HYDRAULICS (6-1/2' WING)

HYDRAULICS



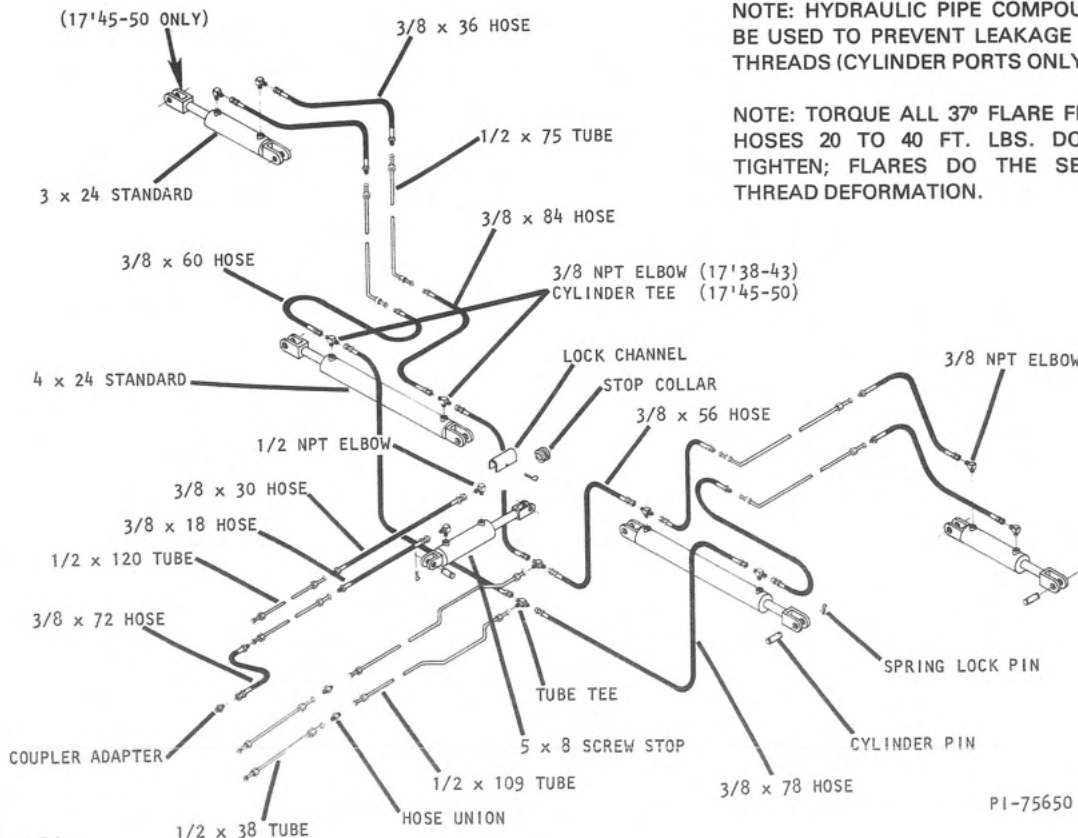
(8' WING)

17' 33 - 45 HYDRAULICS

NOTE: ALWAYS MAKE SURE WING LIFT CYLINDERS HAVE AN INTEGRAL RESTRICTOR.

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

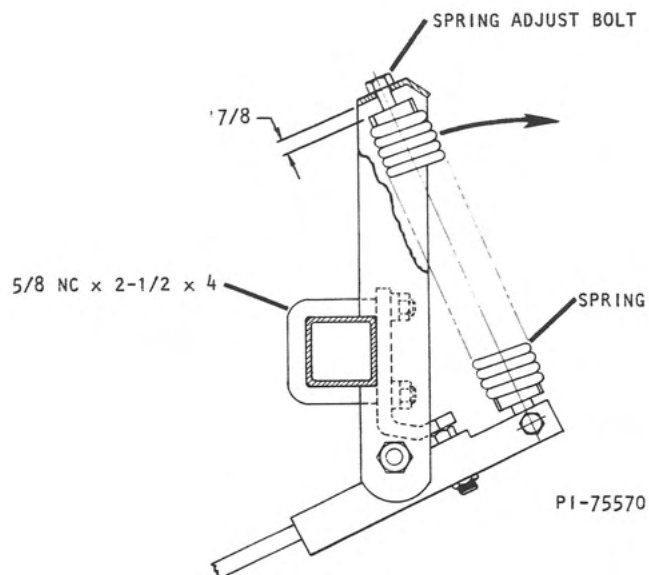
NOTE: TORQUE ALL 37° FLARE FITTINGS AND HOSES 20 TO 40 FT. LBS. DO NOT OVER TIGHTEN; FLARES DO THE SEALING, NOT THREAD DEFORMATION.



(10-1/2 WING)

17' 38 - 50 HYDRAULICS

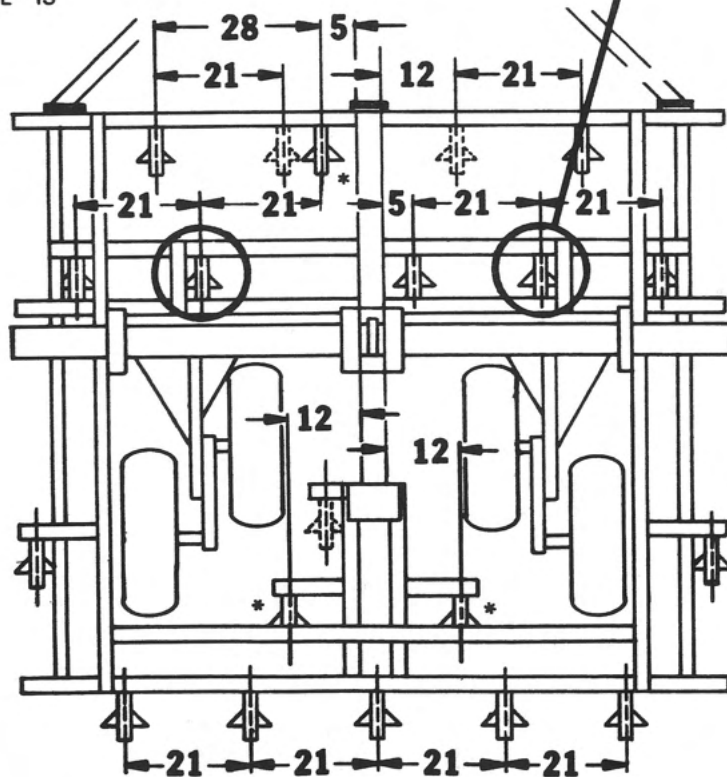
NOTE: SHANK INSTALLATION CAN BE SIMPLIFIED BY REMOVING THE SPRING ADJUSTMENT BOLT AND SWINGING THE SPRING FORWARD, THUS PROVIDING EASY ACCESS TO THE U-BOLT.



SHANK ILLUSTRATION

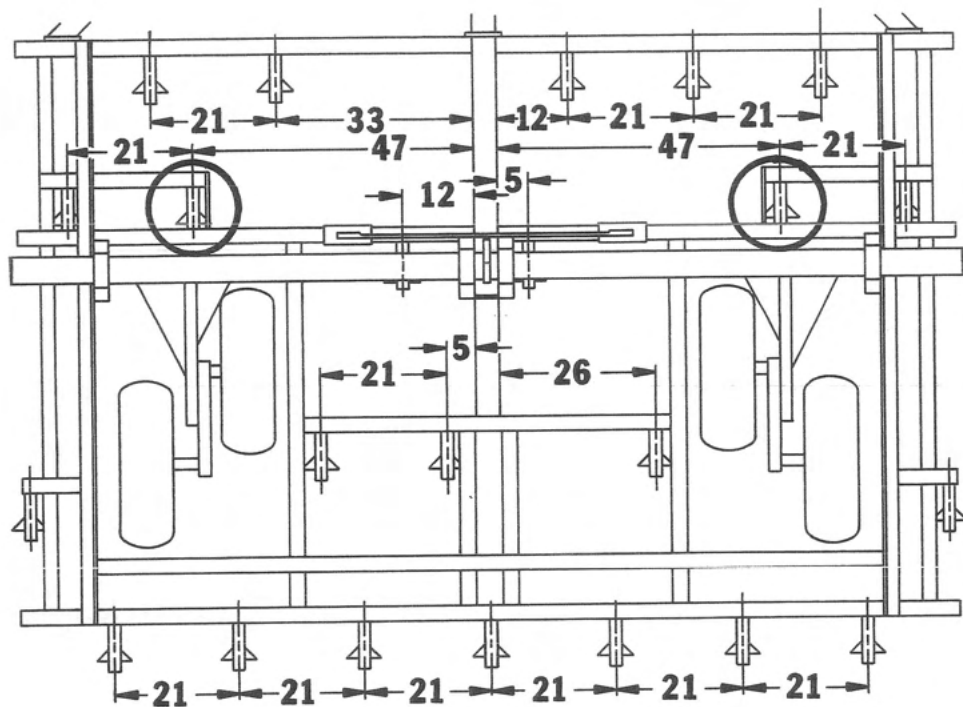
NOTE: SHANKS DENOTED BY THE SYMBOL (*) MAY BE MOVED TO THE DOTTED SHANK POSITIONS IF ADDITIONAL TRASH CLEARANCE IS DESIRED.

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

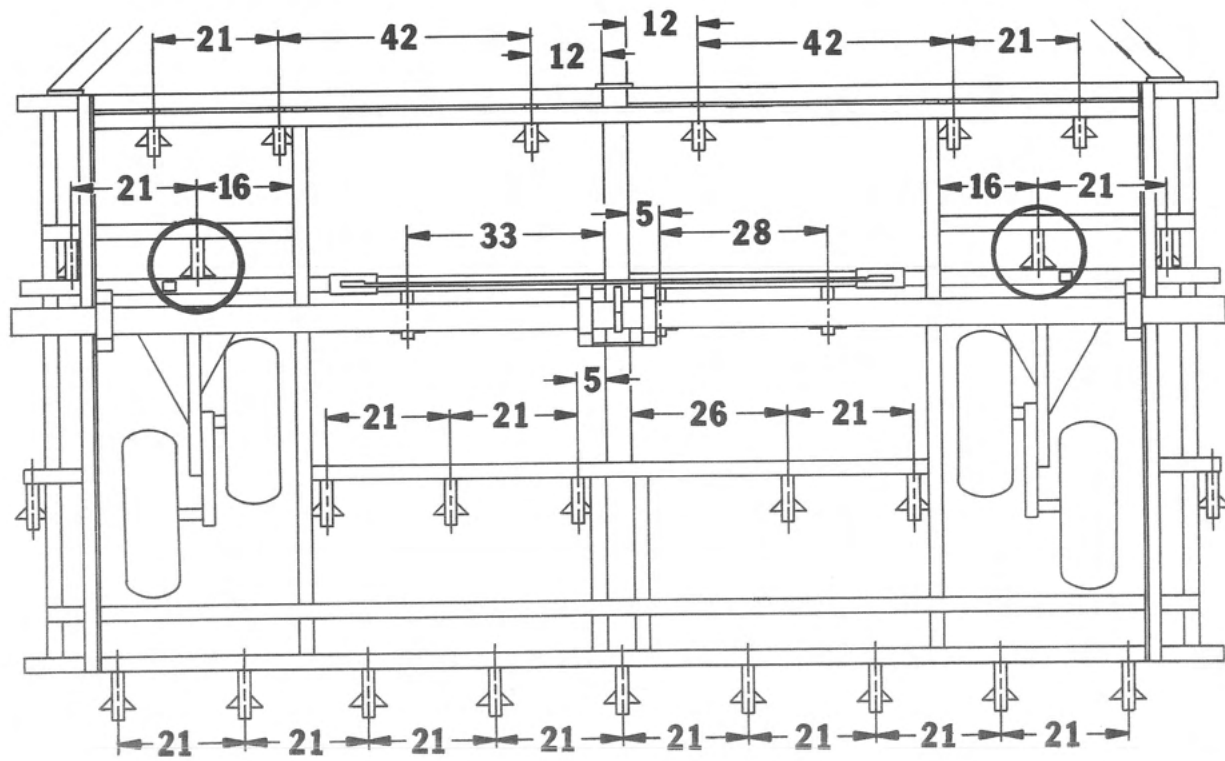


10' FCW MAIN FRAME (TYPICAL)

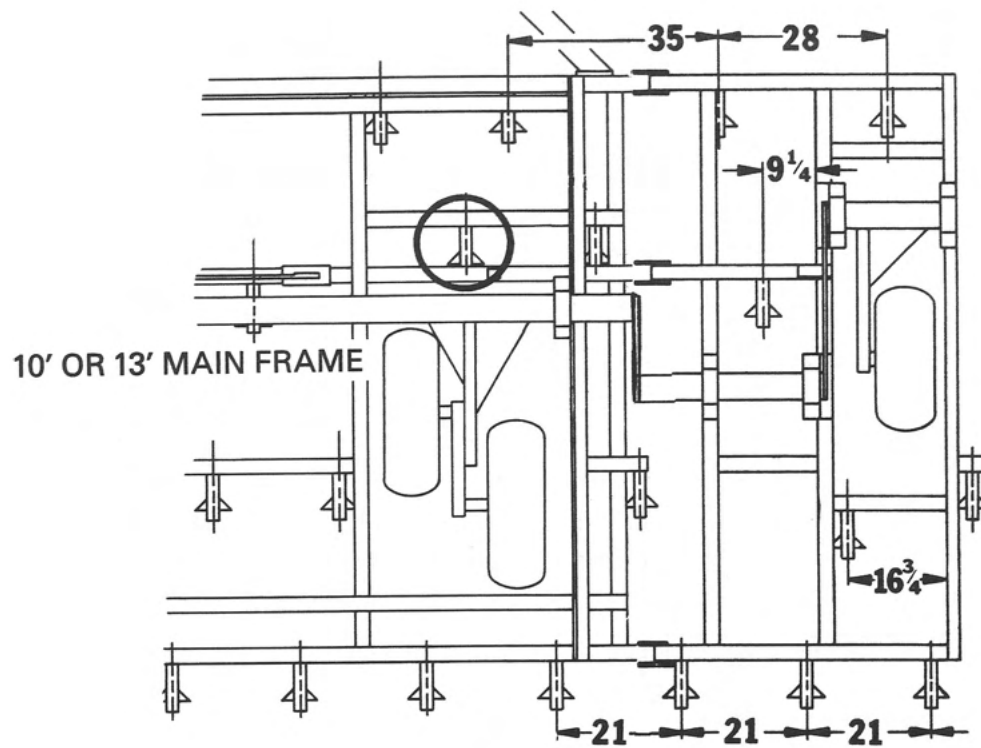
SHANK PLACEMENTS



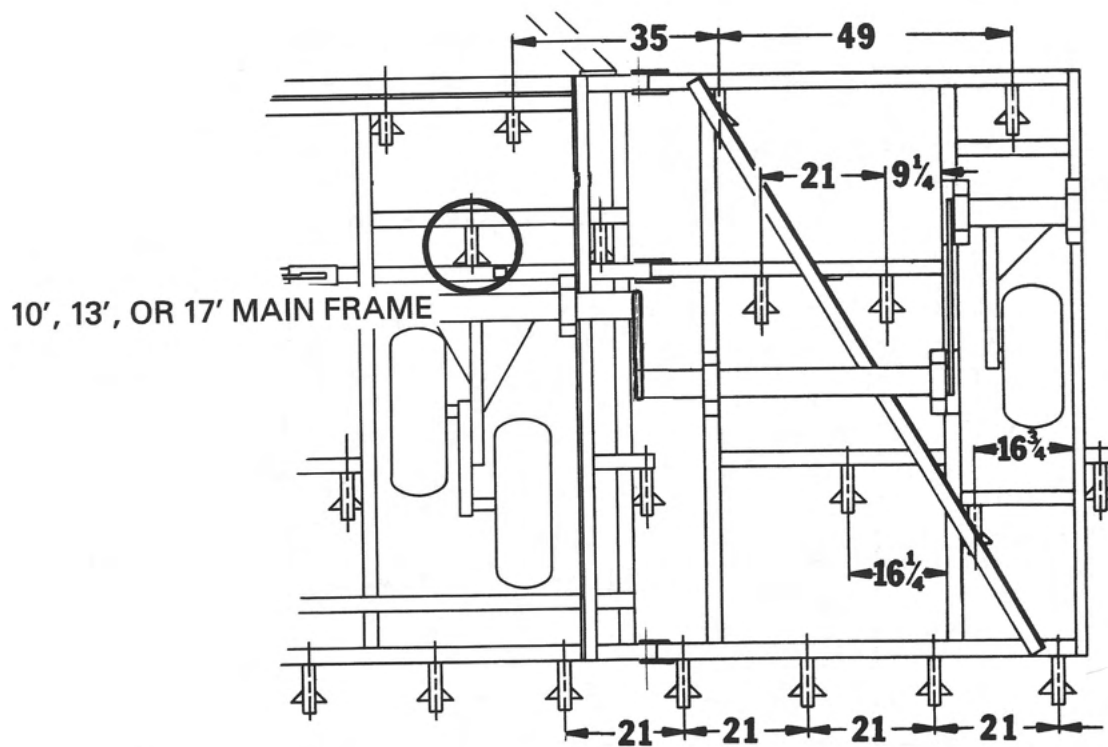
13' FCW MAIN FRAME (TYPICAL)



17' FCW MAIN FRAME (TYPICAL)

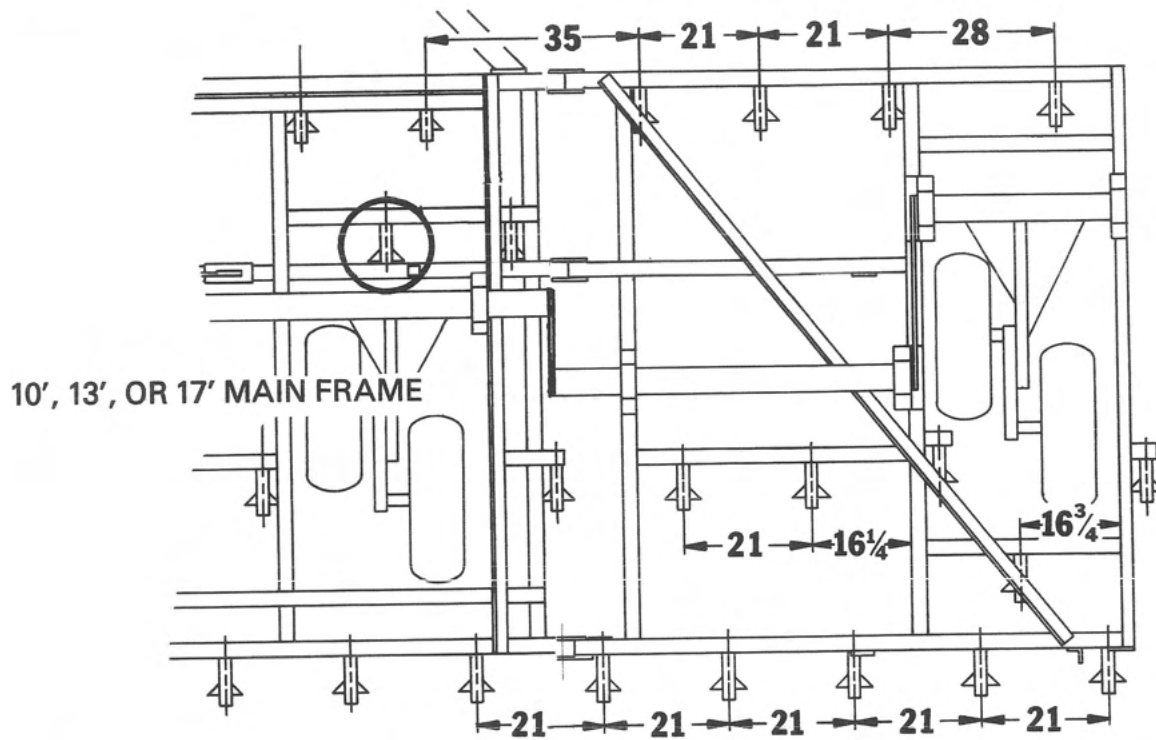


5' WING

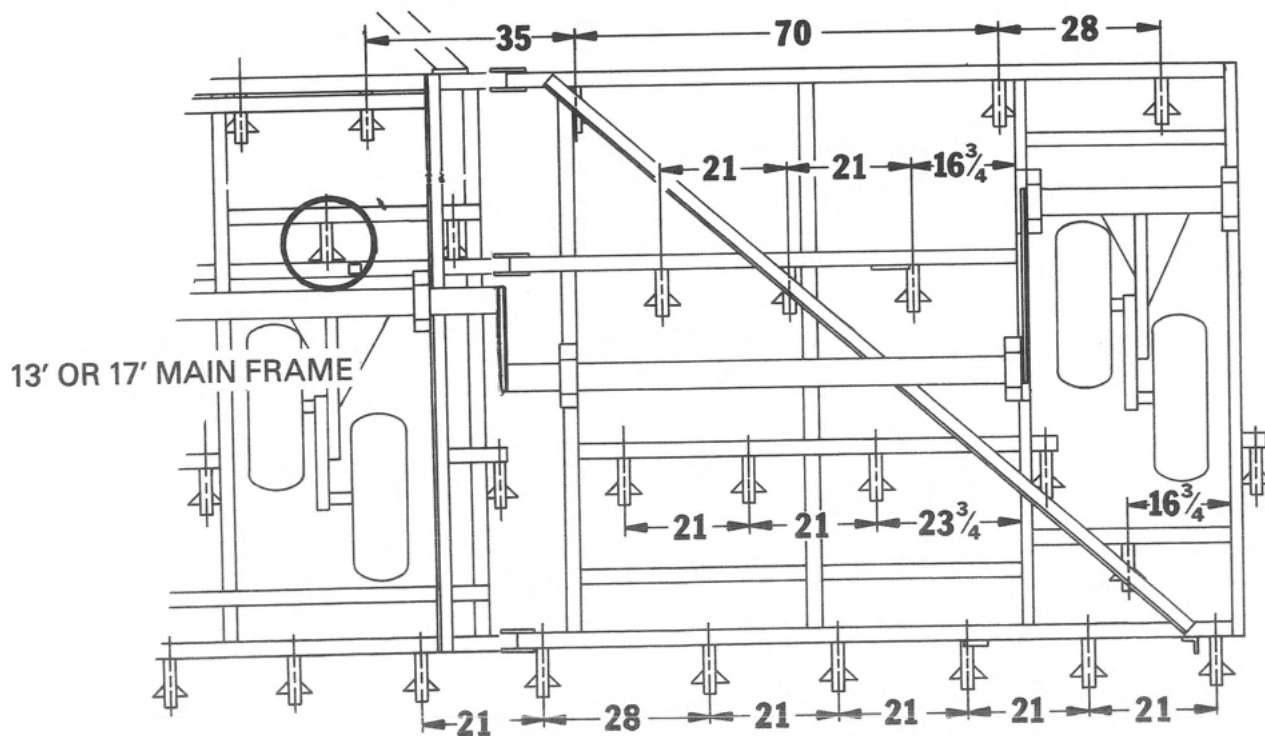


6-1/2' WING

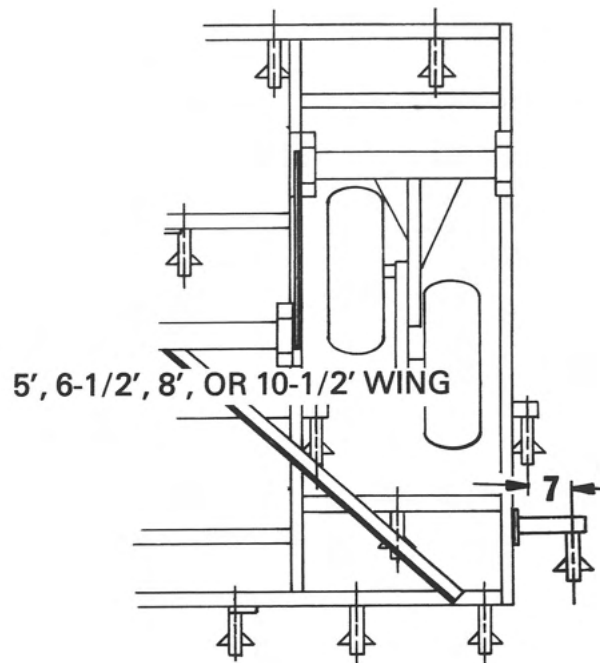
SHANK PLACEMENTS



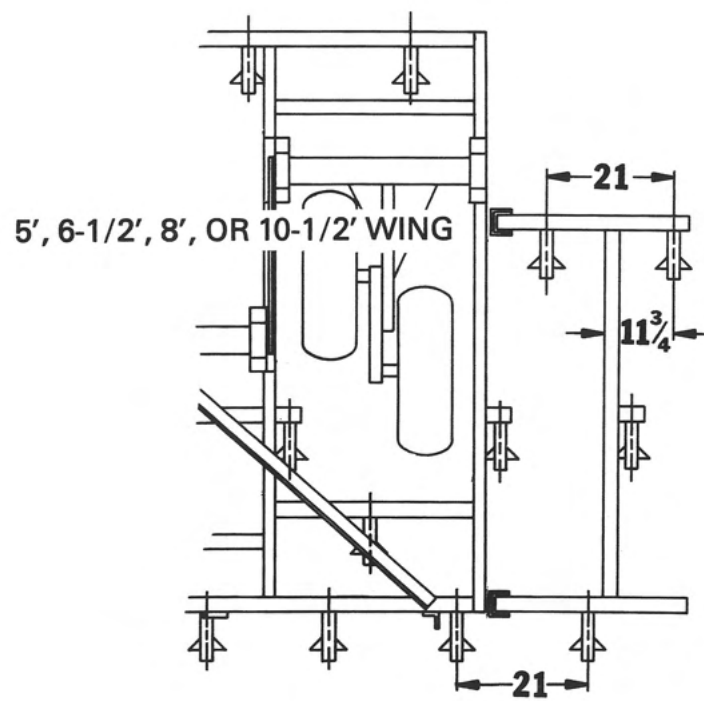
8' WING



10-1/2' WING

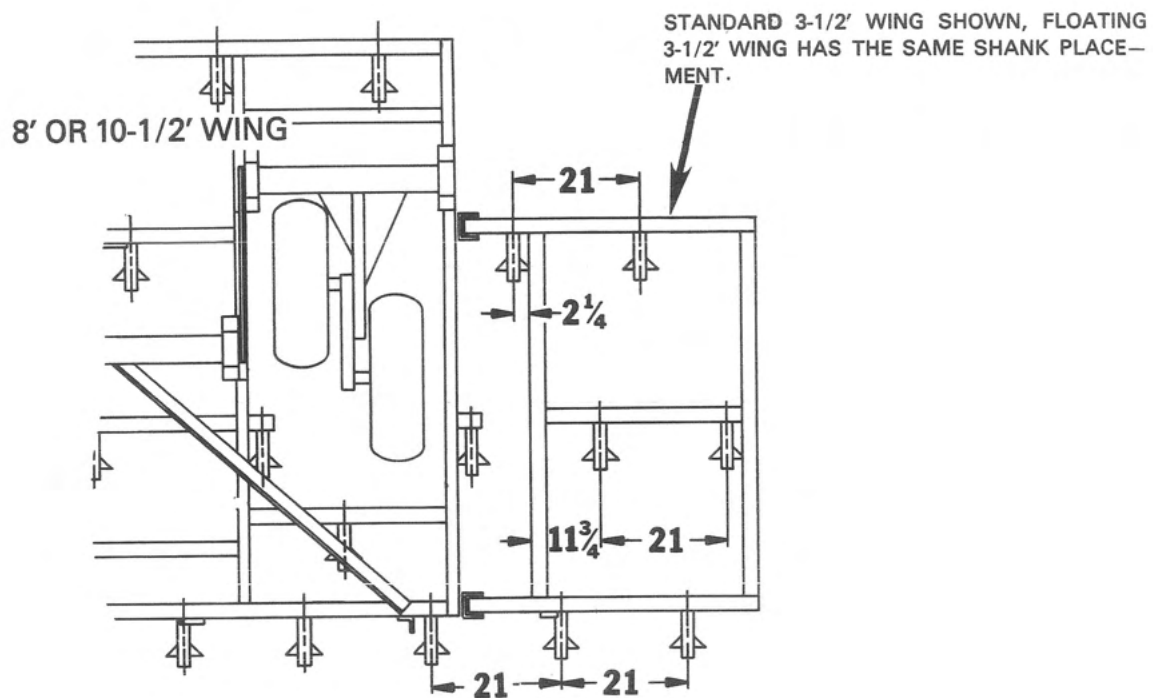


14" STUB (2x4)

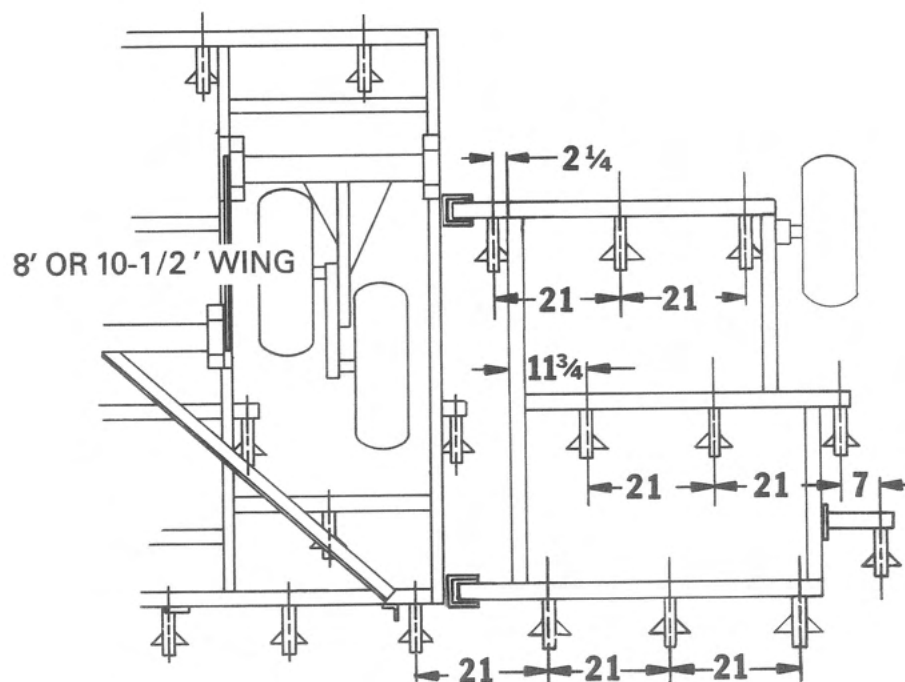


2-1/2' WING

SHANK PLACEMENTS



3-1/2' WING



5' FLOATING WING

