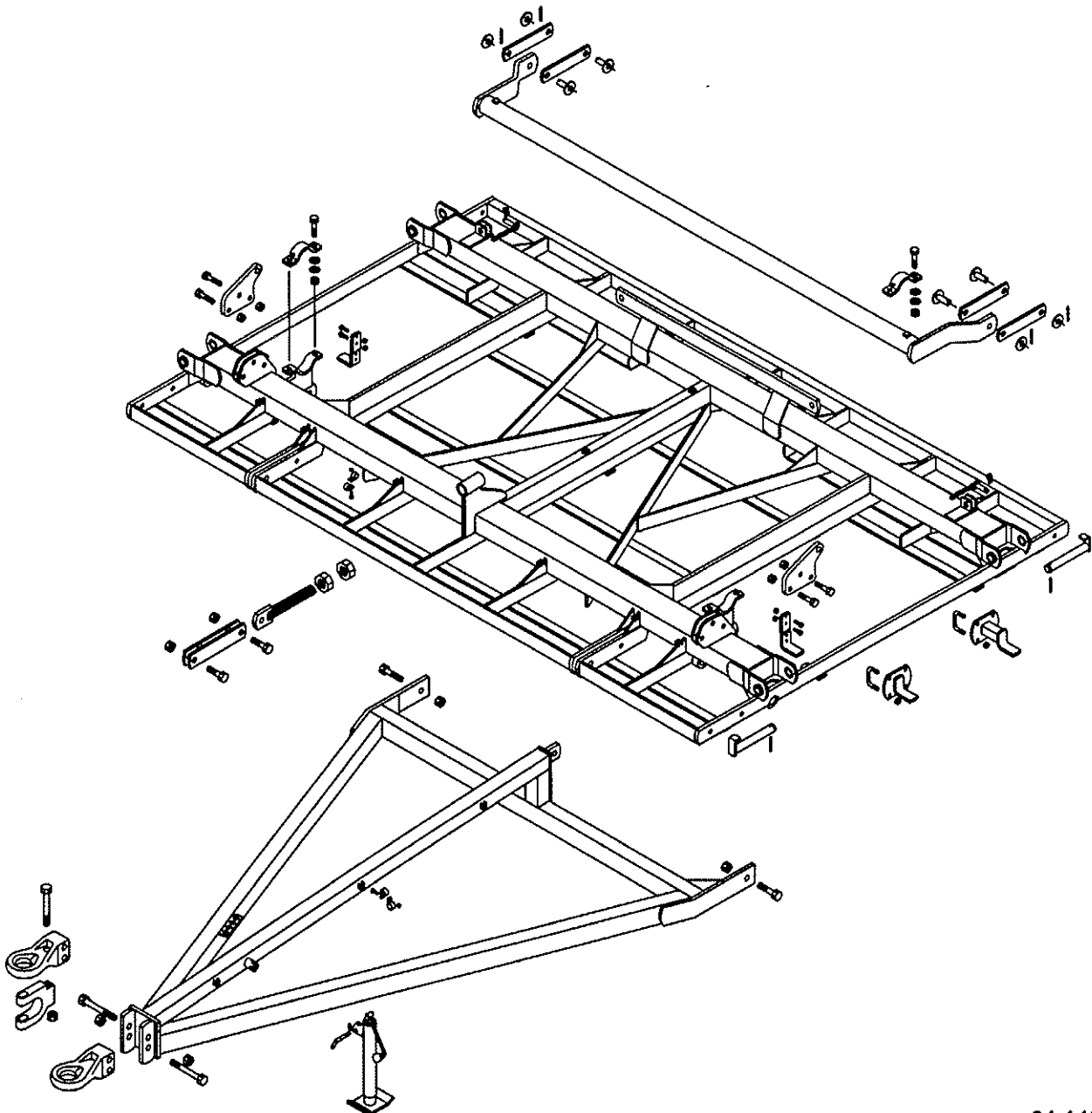


3500 SERIES

FIELD CULTIVATORS



ASSEMBLY INSTRUCTIONS

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PRINTED IN CANADA
DEC. 1997

TABLE OF CONTENTS

CENTER FRAME ASSEMBLY	2
ROCKSHAFT ASSEMBLY	4
WING ASSEMBLY.....	6
ASSEMBLY OF CULTIVATOR SECTIONS.....	6
DRAW TONGUE MOUNTING	8
DRAW CLEVIS MOUNTING.....	8
BOLT ON EXTENSION ASSEMBLY	10
UPRIGHTS FOR WINGFOLDING CYLINDERS.....	11
UPRIGHTS FOR WHEEL OPERATING CYLINDERS	13
3500 HYDRAULICS 20' - 34'	14
3500 HYDRAULICS 36' & 39'	16
TINE PATTERN INFORMATION.....	18
UPRIGHTS FOR WHEEL OPERATING CYLINDERS	18
TINE PATTERN SECTION	Special
OPTIONAL EQUIPMENT	19

CENTER FRAME ASSEMBLY

Place the main frame on two steel stands according to figure 1, in order to ease mounting of wheel arms and wheels.

Mount the wheel arms according to figure 2 in the following sequence.

1. Mount four bronze bushings (A) in the drilled holes in the cultivator frame.
2. Lift the wheel arms (B) into position and hold with axles (C) pushed in from the outside of the frame.
3. Line up holes in axles with those in the wheel arms.
4. Lock in position with 1/2" x 3" bolt (D) and locknut.

Mount four 9.5 x 15 wheels on the hubs with six 9/16" lug bolts each.

TINE MOUNTING:

For the standard 4" - 4 bar tine spacing, mount tines at the positions shown in the tine pattern section in the back of this manual.

For Optional Tine Patterns, refer to the appropriate section in the **"Tine Pattern Manual For Kongskilde Field Cultivators"**.

The tine pattern manual provides diagrams for optional tine placements for 3500 Series cultivators, 3500 Res-Till cultivators, Front 5-Bar attachment, Rear 5-Bar attachment, and Nose Extensions.

Lower the center frame assembly to the ground on a level area for easy wing mounting.

FIG.[1]

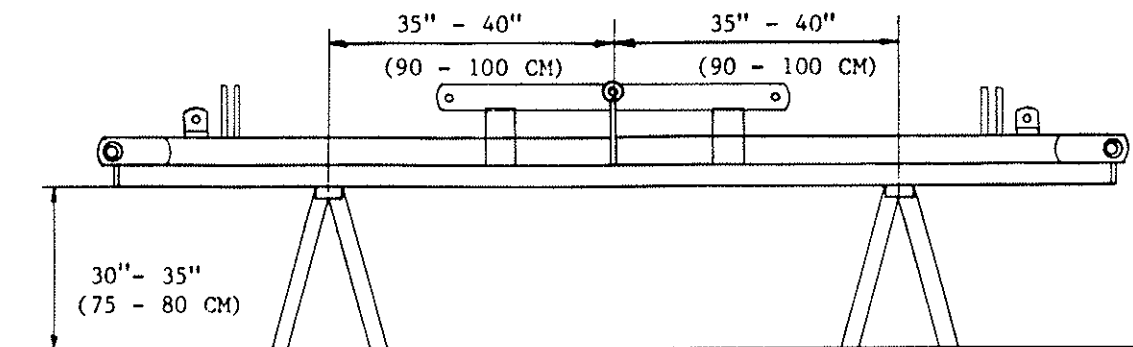


FIG.[2]

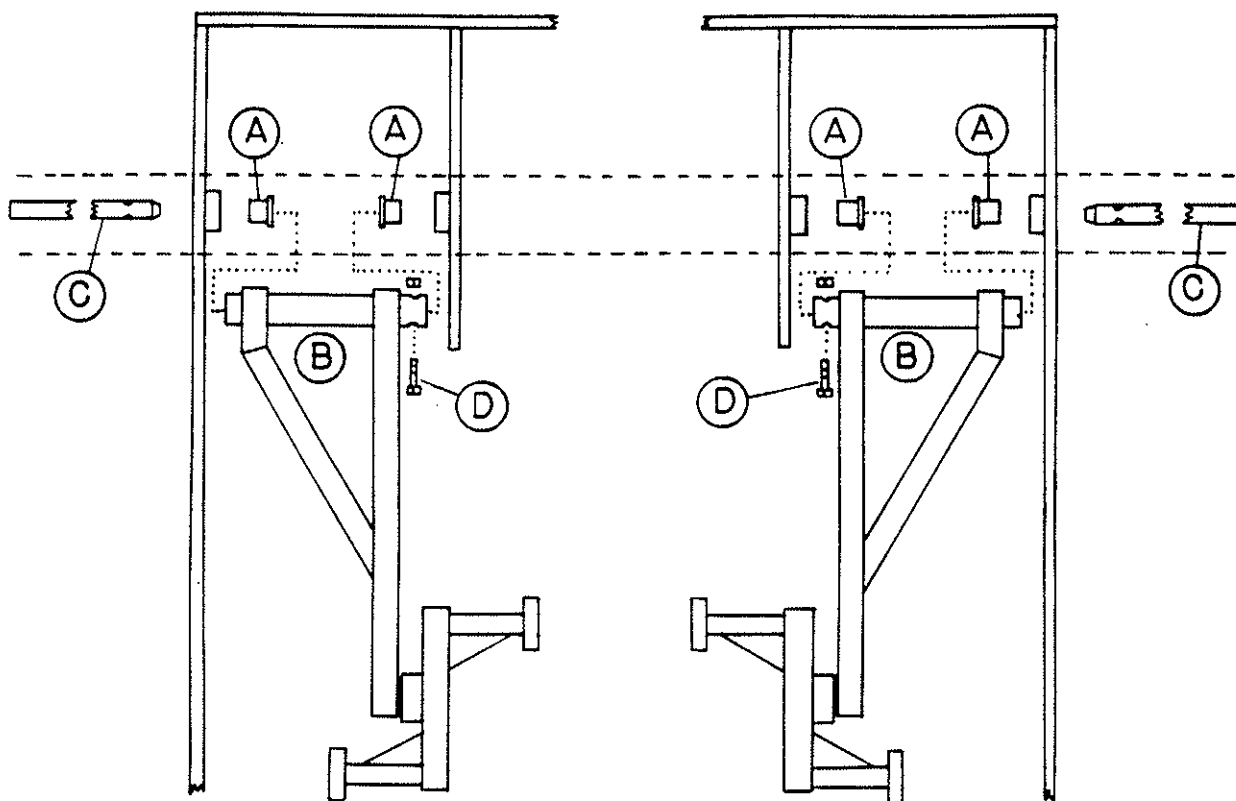
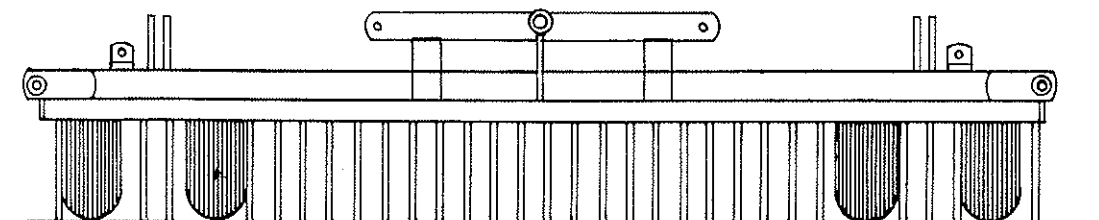


FIG.[3]



ROCKSHAFT ASSEMBLY

1. Place rockshaft (A) on the centre section bearing hangers (B) with the pivot arms facing the rear of the cultivator.
2. Attach the rockshaft to the frame by placing the 3/4" x 2" bolts (C) through the holes in the top bearing hangers (D). Place 2 shims (E) on each bolt, in between the top and bottom bearing hangers. Insert the bolts through the bottom bearing hangers and assemble with 3/4" locknuts (F).
3. Attach the rockshaft links (G) to the rockshaft with the pins provided (H) as shown on diagram and assemble with B/U washers (I) and roll pins (J).
4. Attach the rockshaft links to the wheel arm cylinder uprights in the same manner as in step 3.

Note: Place pin (H) for link through top hole in the wheel arm upright. (Refer to detail B).

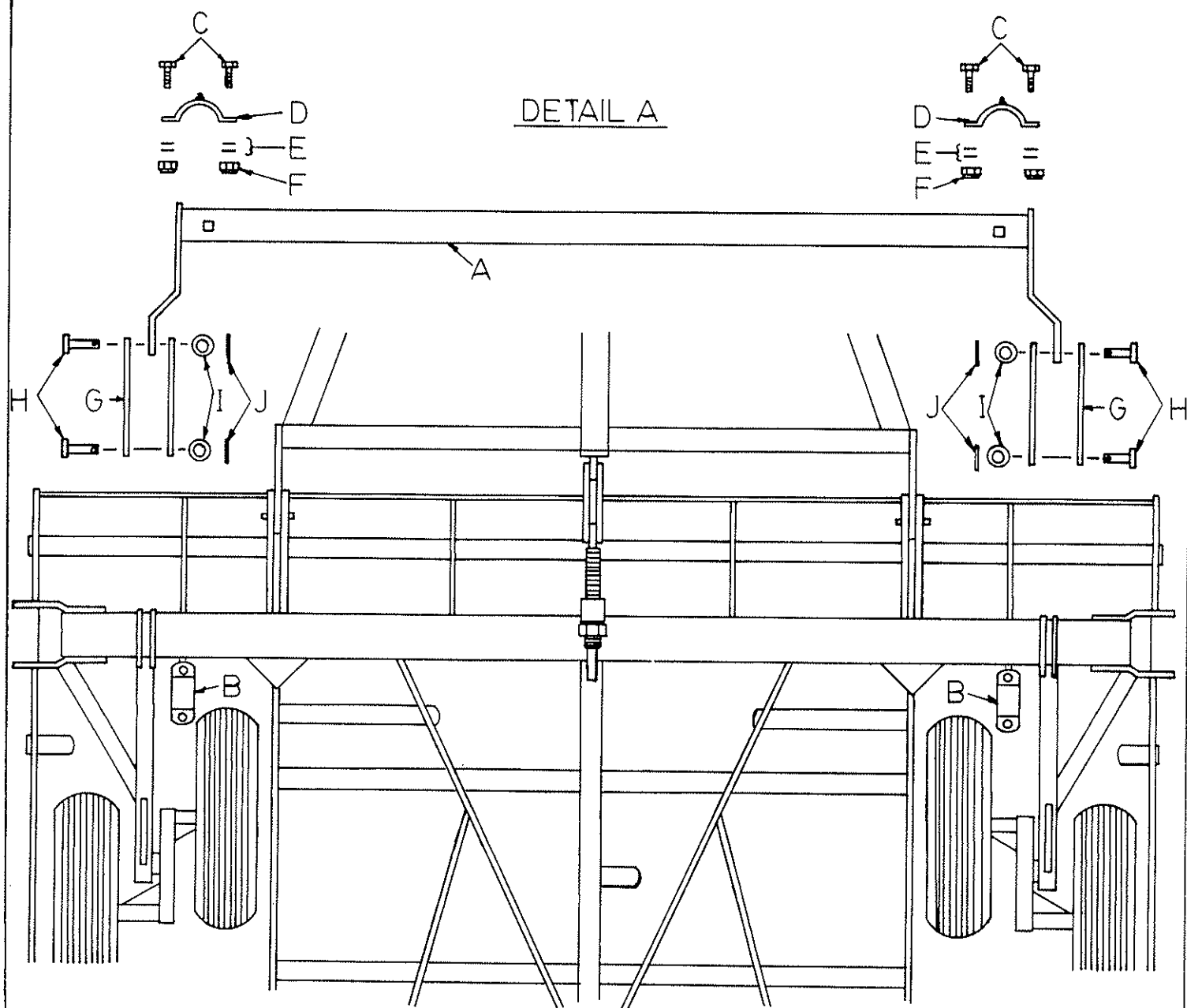
The rockshaft should be lubricated after assembly. The grease fittings are located on the top bearing hangers (D). The cultivator should be raised and lowered a couple of times to spread the grease thoroughly on the inner surface of the bearings.

When the cultivator is in use it is important to grease the rockshaft bearings daily.

After a certain period of time the rockshaft may become loose.

If this occurs, the rockshaft bearing hangers should be re-tightened by removing one set of shims (E), in the following manner:

- A. Lower cultivator to the ground.
- B. Loosen nuts (F) and remove bolts (C).
- C. Remove one set of shims (E), or more if necessary to tighten rockshaft.
- D. Replace bolts (C) and secure with locknuts (F).



DETAIL B

ROCKSHAFT LINK
CYLINDER



FIG. 4

WING ASSEMBLY

Place wing frame on two steel stands according to figure 5 in order to ease mounting of wheelarm and wheel.

Mount the wheel arm in the following sequence according to figure 6:

1. Mount the two bronze bushings (A) in the holes drilled in the cultivator frame.
2. Lift wheel arm (B) in position and hold with the axle (C).
3. Line up the holes in wheel axle with those in the wheel arm.
4. Lock the wheel arm in position with one 1/2" x 3" bolt (D) and locknut.

3500 Series 20' and 23' wings take 9.5 x 15 wheels on the hubs. Mount using six 9/16" lug bolts on each wheel. For tandem wing wheels mount four 9.5 x 15 wheels on the hubs with six 9/16" lug bolts each.

TINE MOUNTING:

For the standard 4" - 4 bar tine spacing, mount tines at the positions shown in the tine pattern section in the back of this manual.

For Optional Tine Patterns, refer to the appropriate section in the **"Tine Pattern Manual For Kongskilde Field Cultivators"**.

The tine pattern manual provides diagrams for optional tine placements for 3500 Series cultivators, 3500 Res-Till cultivators, Front 5-Bar attachment, Rear 5-Bar attachment, and Nose Extensions.

Repeat the wing assembly procedure for the other wing.

ASSEMBLY OF CULTIVATOR SECTIONS

With all sections of the cultivator resting on a level area, mount the wings to the centre section, see figure 7. Hold the wings in position with hinge pins (E) and lock with roll pins (F).

FIG. 5

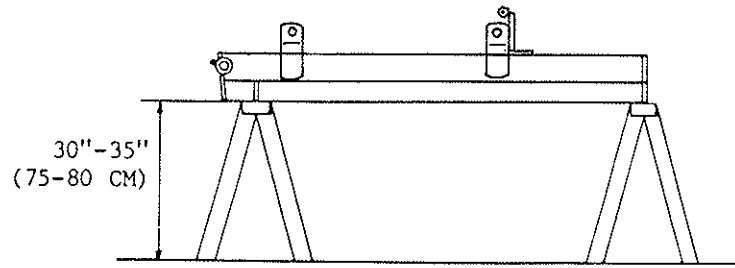


FIG. 6

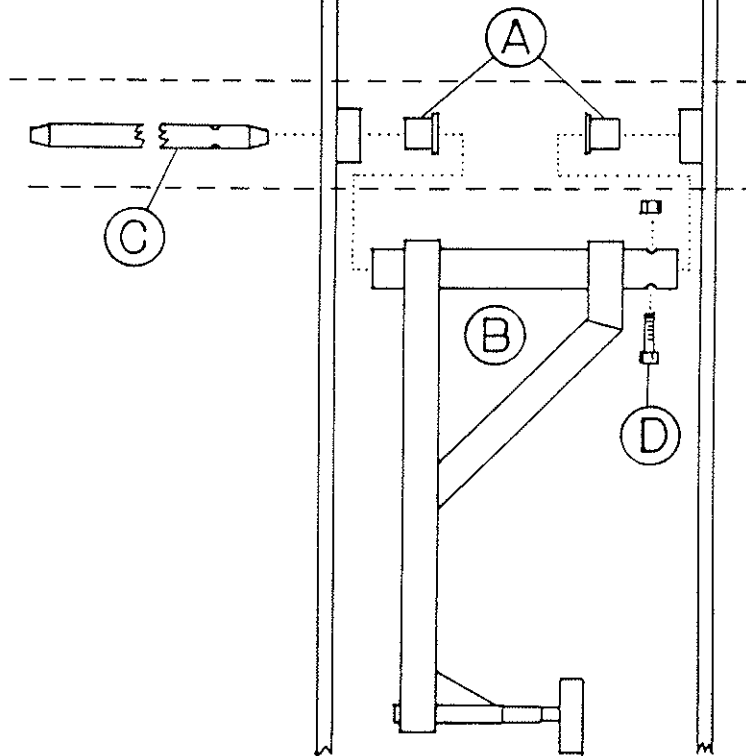
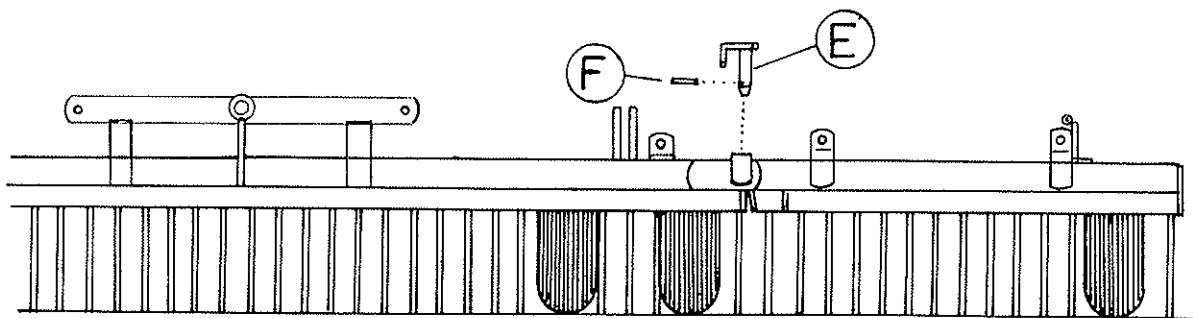


FIG. 7



DRAW TONGUE MOUNTING

Mount the draw tongue (A) into centre frame (B), as shown in figure 9. Hold in position with two 1" x 3 1/2" Gr.8 bolts (C) and 1" lock nuts. Do not tighten the lock nuts until the tongue assembly is completed.

Install the eye bolt (D) into the centre upright and secure on both sides with 1 3/4" jam nuts (E).

Mount the centre link connection (F) between the eye bolt and draw tongue with two 1" x 3" Gr.8 bolts (G) and two 1" lock nuts.

Mount the jack stand (H) on the draw tongue.

DRAW HITCH MOUNTING

NOTE: We have made a design change in the 3500 draw tongue to accommodate the new style ISO Ring Style (Pindle) Hitch. The new style hitch is quickly becoming an industry standard for drawn implements and we are pleased to offer it on the 3500 series cultivators in two configurations.

Beginning in September of 1996, 3500 field cultivators from 20' to 25' will come with the Cat.3 Pindle Hitch with Clevis option (I), as standard equipment.

All 3500 field cultivators from 28' and up will come with the Cat.4 Single Ring (Spade) Style Pindle Hitch (J), as standard equipment.

IMPORTANT NOTICE:

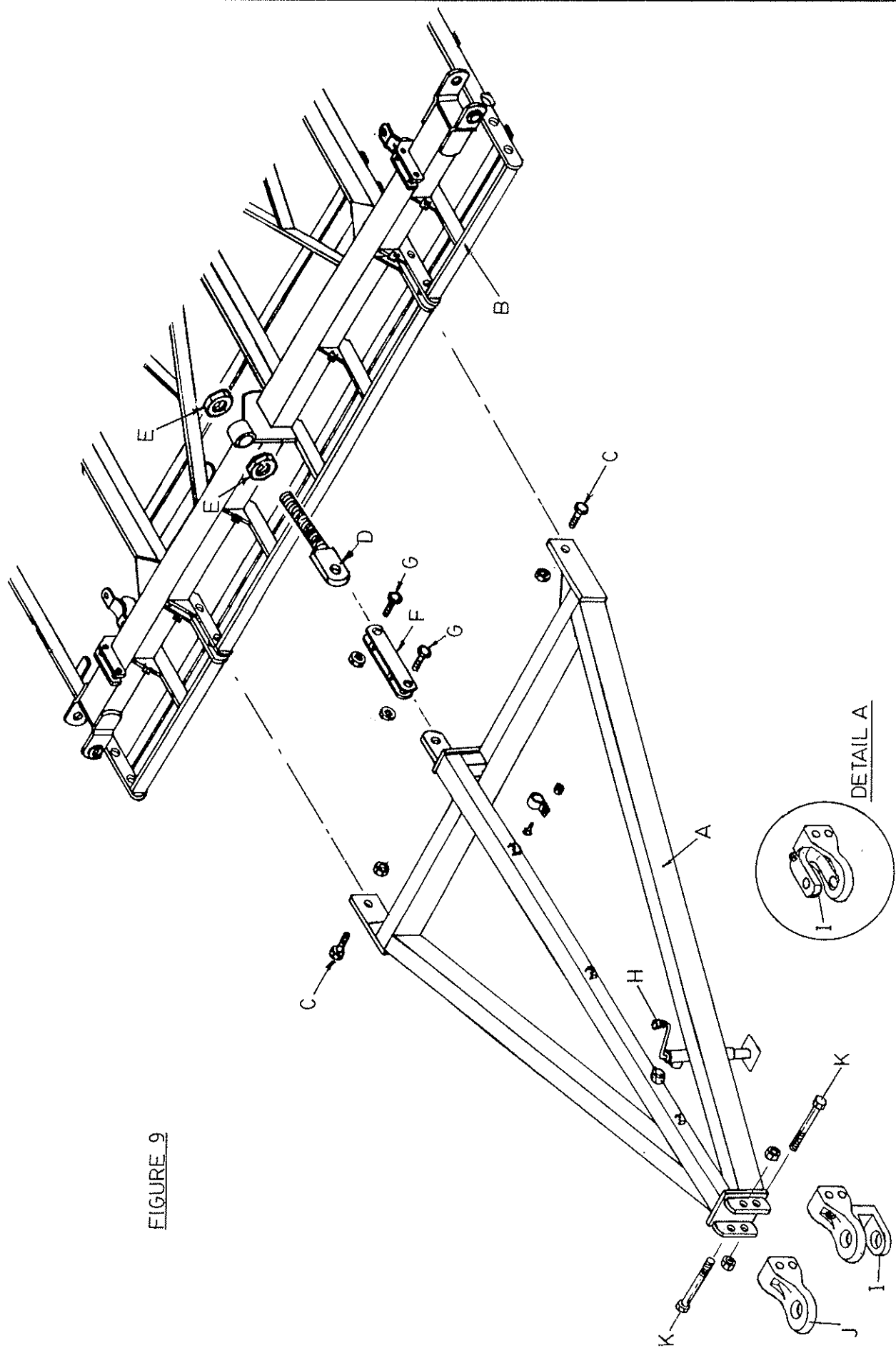
Kongsilde 3500 Series Cultivators have a number of front and rear mounted optional attachments. It is safe to say that front attachments like Front 5-Bar or Res-Till will make the cultivator hitch heavy on the tractor drawbar during transport, whereas rear attachments like Levelling Harrows will make the cultivator back heavy or light on the tractor drawbar during transport.

Therefore we advise that you determine which condition applies to your cultivator. When the cultivator is back heavy, take care to install the Cat.3 hitch with the clevis option on top, as shown in Detail A.

When the cultivator is drawbar heavy the hitch can be installed in the usual position with the clevis on the bottom.

The Cat.3 or Cat.4 draw hitch mounts to the new draw tongue with 2 - 1" x 7" Gr.8 bolts (K) and lock nuts.

Tighten all bolts and nuts on draw tongue to complete the assembly.



BOLT ON EXTENSION ASSEMBLY

The 3523 with bolt on extension becomes a 3525. The 3528 with a bolt on extension becomes a 3531.

Fasten the wing extension (A) to the outer most portion of the wing with four 5/8" x 2" bolts and locknuts (B).

TINE MOUNTING:

For the standard 4" - 4 bar tine spacing, mount tines at the positions shown in the tine pattern section in the back of this manual.

For Optional Tine Patterns, refer to the appropriate section in the **"Tine Pattern Manual For Kongskilde Field Cultivators"**.

The tine pattern manual provides diagrams for optional tine placements for 3500 Series cultivators, 3500 Res-Till cultivators, Front 5-Bar attachment, Rear 5-Bar attachment, and Nose Extensions.

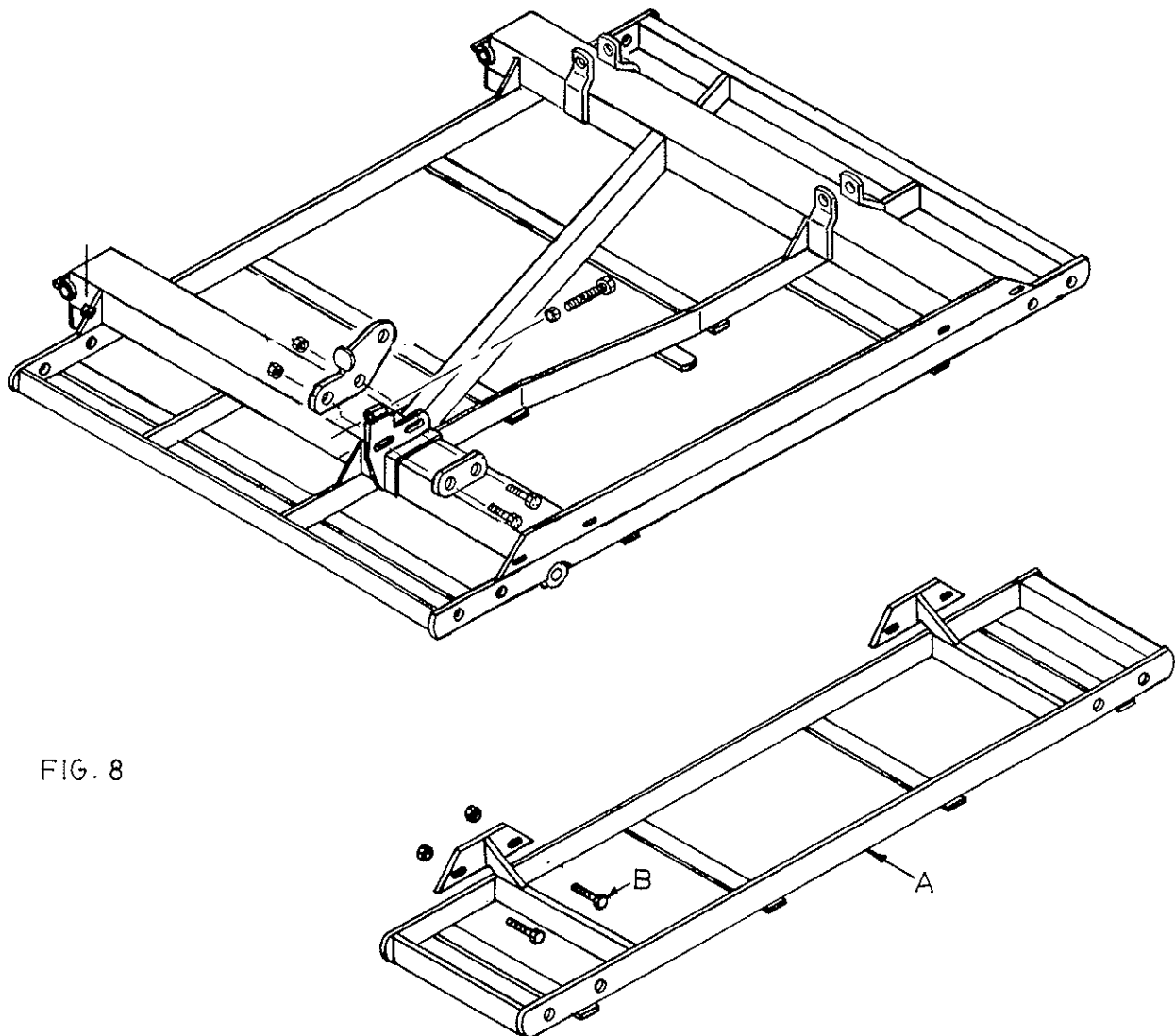


FIG. 8

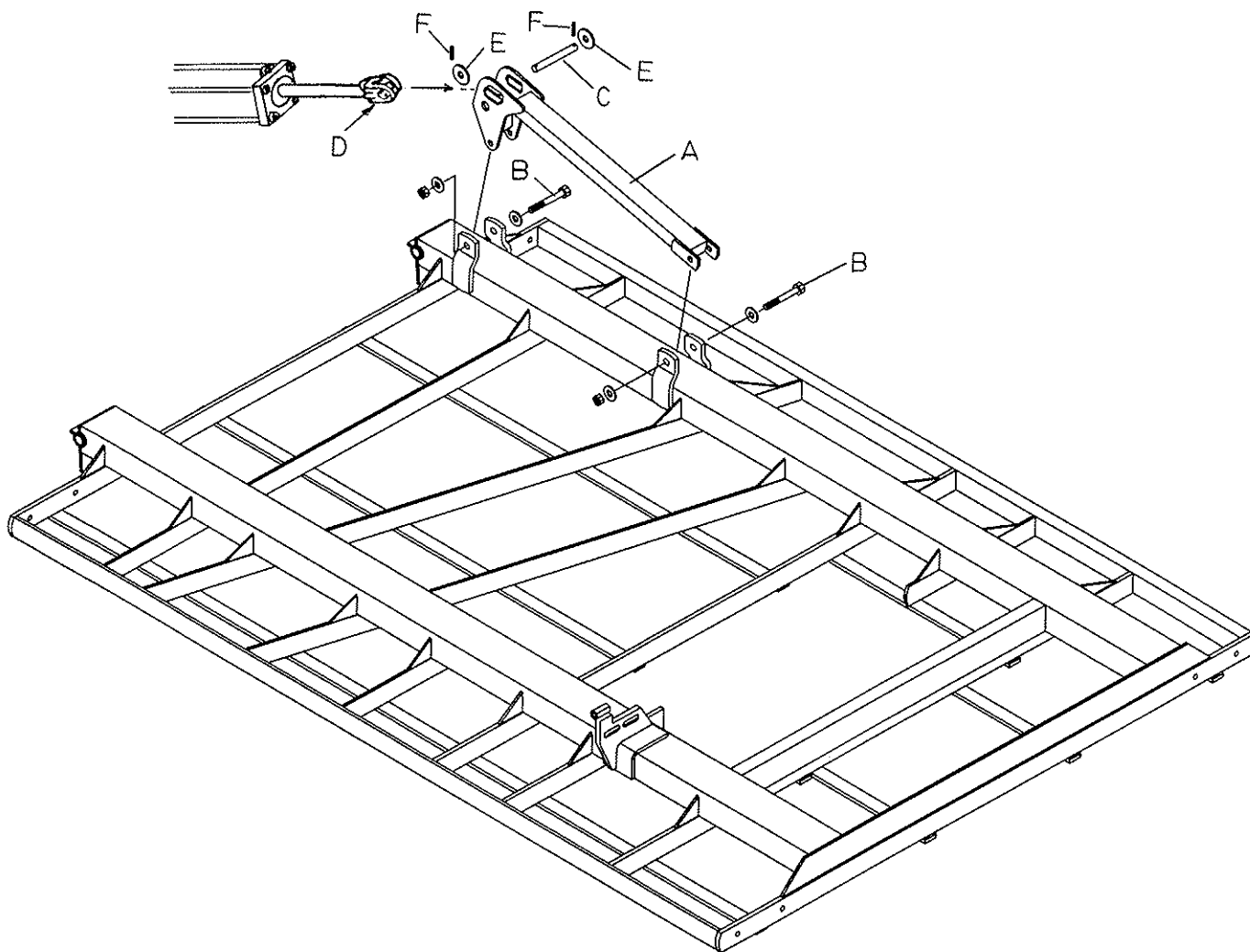
UPRIGHTS FOR WINGFOLDING CYLINDERS

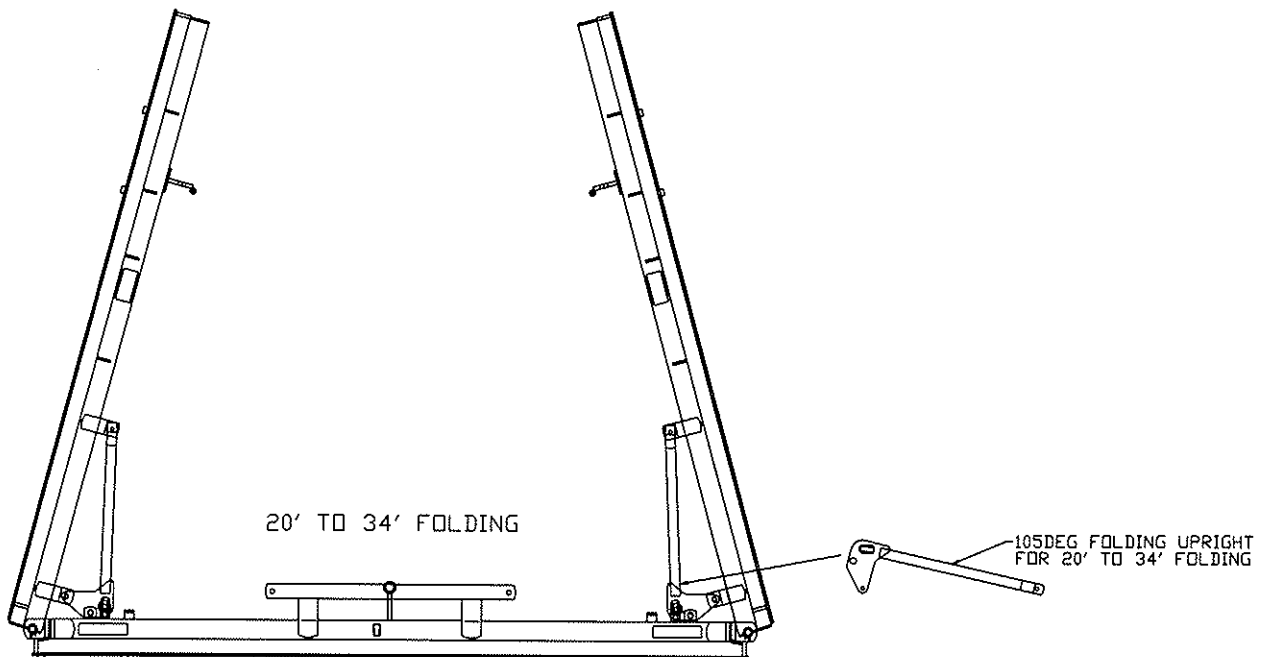
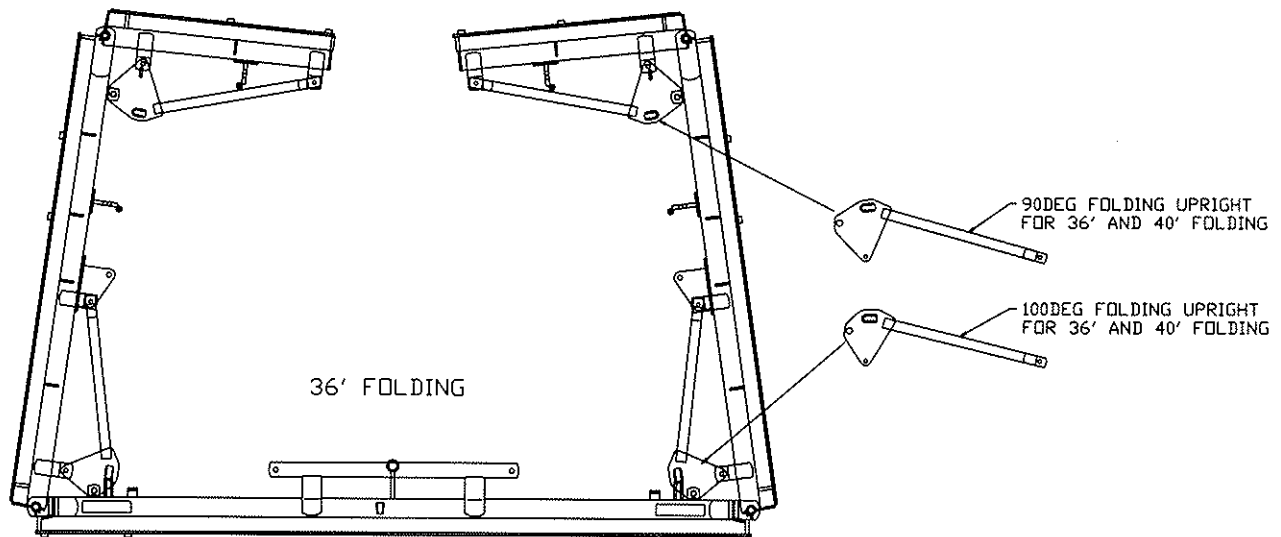
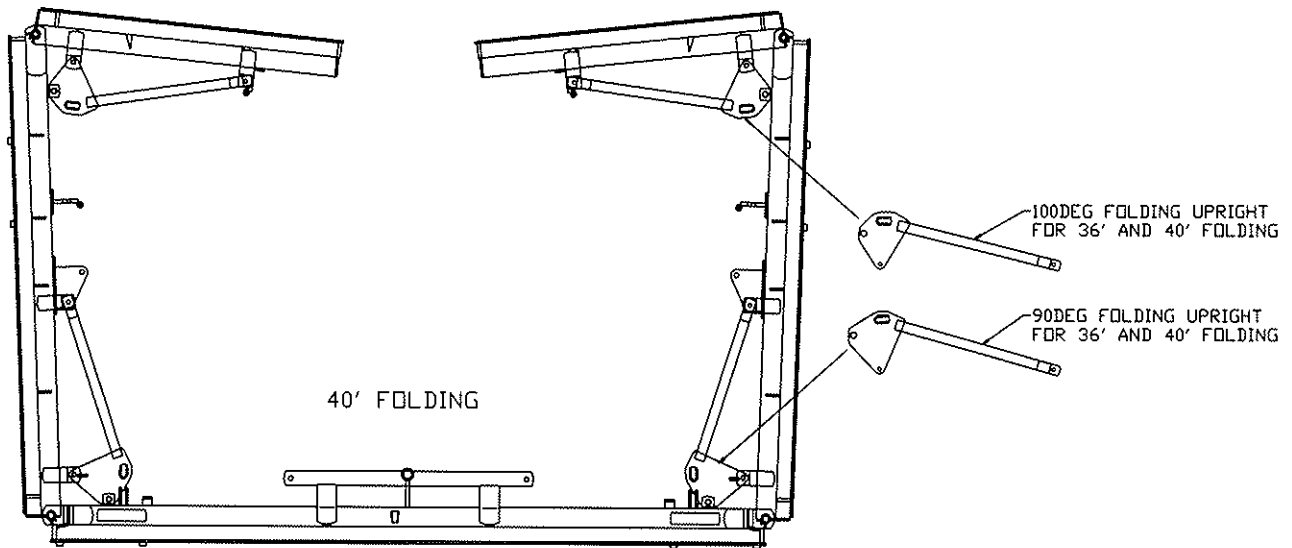
The introduction of the 300 Series Harrows and the addition of larger 9.5 x 15 tires on the tandem wings, has increased the loading on the fold mechanism on the 3500 Series Cultivators. Therefore we have designed a new wing fold system. The new longer uprights (A) shown below, have a secondary point of attachment further out on the 4 x 6 tube of the cultivator wing frames. This gives greater support when folding the wings. All machines are now shipped with these new wing fold uprights.

UPRIGHT ASSEMBLY

Please note there are 3 different folding uprights; a 105 degree upright for 20' to 34' wings; a 100 degree upright for 36' inner wings and 40' outer wings; and a 90 degree upright for 40' inner wings and 36' outer wings. See layouts on the next page for correct placement.

1. The uprights (A) mount to the wings frames with $\frac{3}{4}$ " x 6 $\frac{1}{2}$ " bolts (B), $\frac{3}{4}$ " flat washers and $\frac{3}{4}$ " locknuts.
2. The cylinder rod mounts to the upright with the long pivot pin (C).
3. Align the cylinder rod clevis (D), with the reinforced slot in the upright and insert the pivot pin.
4. Place the large 1" washers (E), over the ends of the pivot pin and secure with roll pins (F).

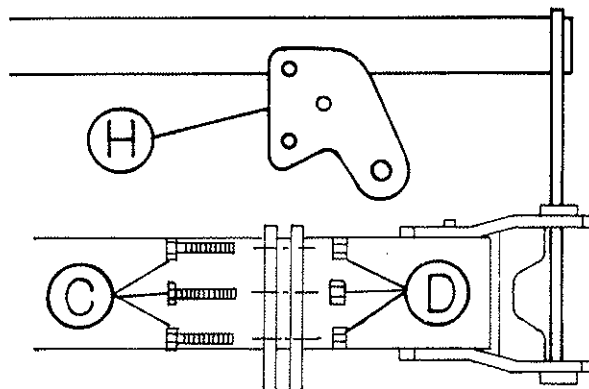




UPRIGHTS FOR WHEEL OPERATING CYLINDERS

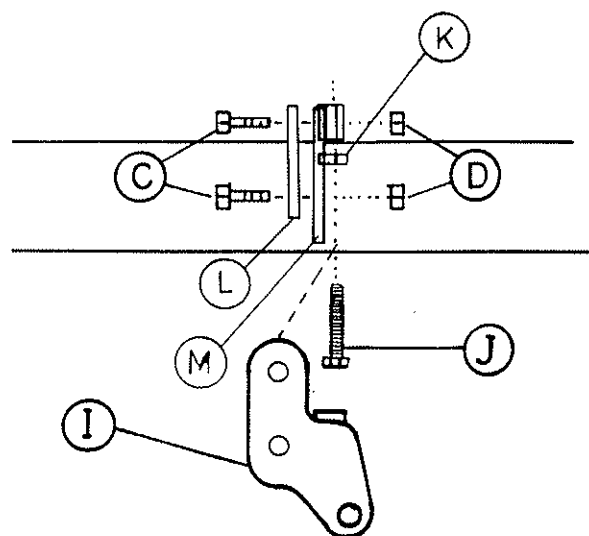
Centre Section

Place cylinder upright (H) on centre section with the mounting hole for the cylinder towards the rear of the cultivator. Hold in place with three $\frac{3}{4}$ " x 3" grade 8 bolts (C) and lock with locknuts (D).



Wings

Install $\frac{3}{4}$ " x 4" adjustment bolt (J) into the upright mounting plate (M) and lock in position with jam nut (K). Place wing cylinder upright (I) against the mounting plate (M), on the same side as bolt (J). The cylinder mounting hole must face towards the rear of the cultivator. Place the backing plate (L) on the opposite side of the of the mounting plate (M) with the cylinder upright (I) sandwiched in between them. Insert the $\frac{3}{4}$ " x 3" grade 8 bolts (C) thru all 3 pieces and secure with locknuts (D).



SLOW MOVING VEHICLE SIGN

Assemble the slow moving vehicle sign with the spade and insert into the mounting bracket on the rear of the cultivator centre section.

3500 HYDRAULICS 20' - 34'

<u>Sketch No.</u>	<u>Description</u>
1	1/2" Hose Assembly 171" all models
2	3/8" Hose Assembly 236" all models
3	3/8" Hose Assembly 81" all models
4	3/8" Hose Assembly 32" all models
5	3/8" Hose Assembly 60" all models
6	3/8" Hose Assembly 96" - 23', 25'
7	3/8" Hose Assembly 112" - 28', 31'
8	3/8" Hose Assembly 145" - 23', 25'
9	3/8" Hose Assembly 160" - 28', 31'
10	Union Tee 3/8" JIC 37° all models
11	Union Tee 1/2" JIC 37° all models
12	90 Elbow 1/2" O-ring x 1/2" JIC all models
13	00 474 322 Cylinder 3 1/2" x 8" Centre
14	00 474 323 Cylinder 3 1/4" x 8" Wing
15	01 140 199 Cylinder 3 1/2" x 24" Wing Fold- 20' to 25'
15A	00 474 347 Cylinder 4" x 24" Wing Fold - 28' to 34'
16	Transport Stop
17	Pin
18	Hair Pin
19	00 474 345 Cylinder 3 1/2" x 8 with Mech. Stop
20	Mechanical Depth Stop
21	3/8" Hose Assembly 195"
22	3/8" Hose Assembly 148"
23	3/8" Hose Assembly 81" - 20'
24	3/8" Hose Assembly 130" - 20'

Wing Fold Cylinders no.15 - 20' to 25', or no.15A - 28' to 34' are positioned on rear of cultivator with rams pointing to outside of cultivator and port holes towards the top.

3 1/2" cylinders no. 13 & 19 are mounted on the centre section with the rams pointing towards the wheels and ports in top position.

3 1/4" cylinders no. 14 are mounted on each wing with rams pointing towards the wheel and ports in top position.

Lock hoses to cultivator with clamps supplied.

TO TIGHTEN J.I.C. FLARE CONNECTIONS

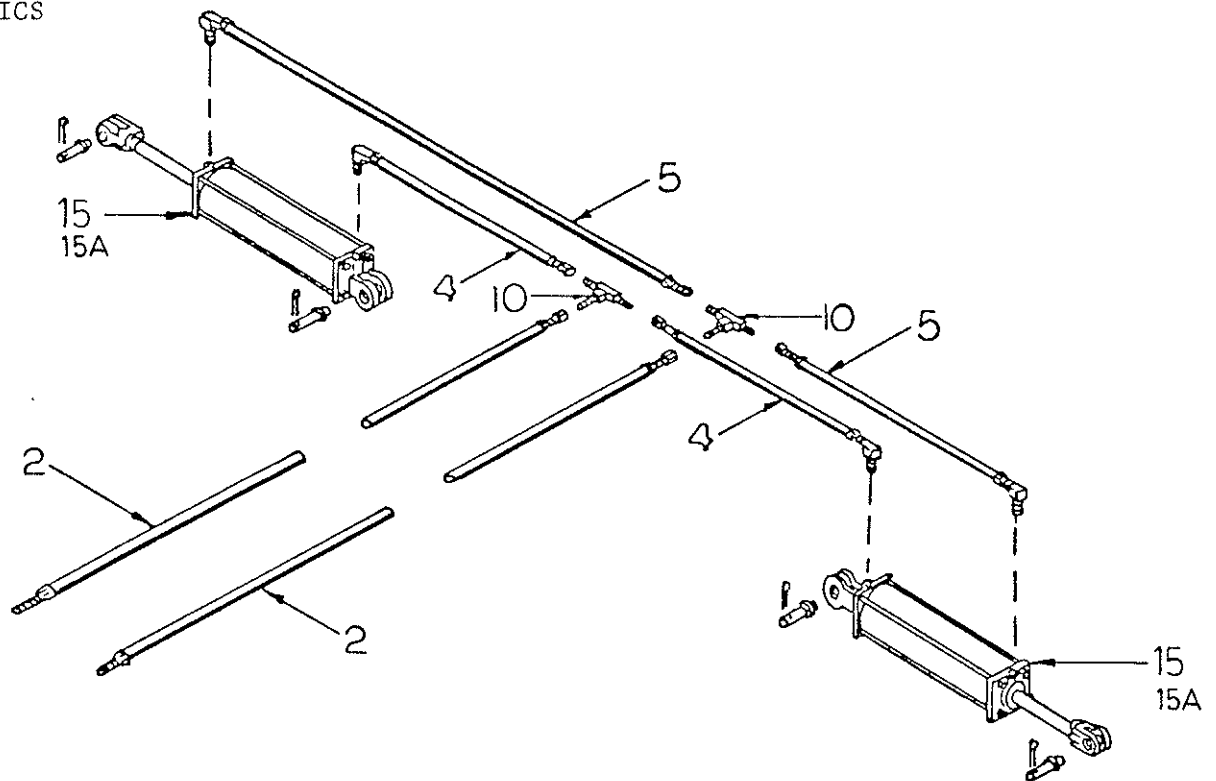
A. Finger tighten as much as possible.

B. 1/6 Turn (one flat section on hex) is sufficient to seal connection.

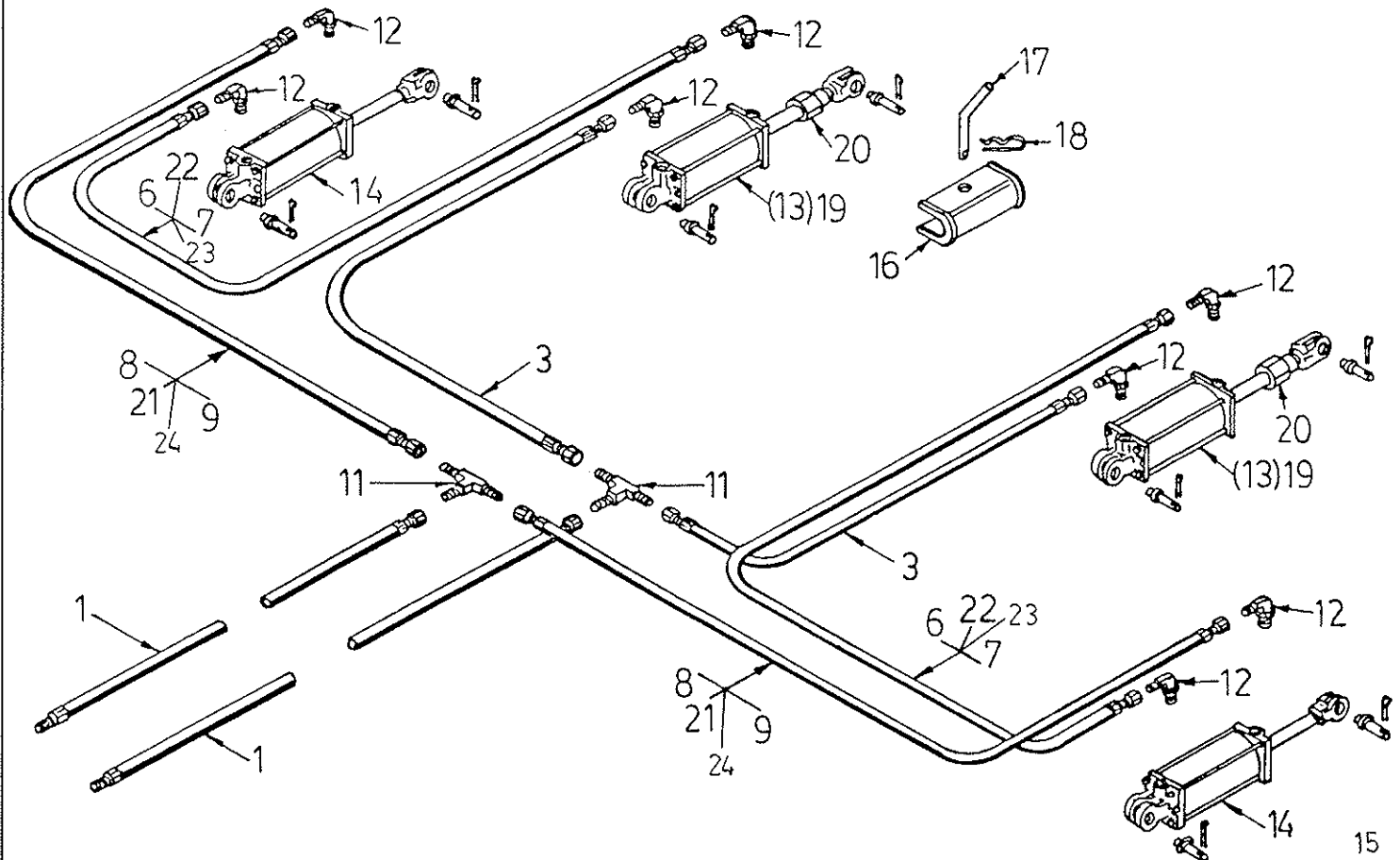
Over tightening could crack the swivel nut.

3500 SERIES 20', 23', 25', 28', 31', 34'

WING HYDRAULICS



WHEEL HYDRAULICS



3500 HYDRAULICS 36' & 40'

<u>Sketch No.</u>		<u>Description</u>
1		1/2" Hose Assembly 171"
2		3/8" Hose Assembly 236"
3		3/8" Hose Assembly 81"
4		3/8" Hose Assembly 32"
5		3/8" Hose Assembly 60"
6		3/8" Hose Assembly 20"
7		3/8" Hose Assembly 110"
8		3/8" Hose Assembly 112"
9		3/8" Hose Assembly 120"
10		3/8" Hose Assembly 248"
11		Union Tee 1/2" JIC 37° all models
12		90 Elbow 1/2" O-ring x 1/2" JIC all models
13	00 474 322	Cylinder 3 1/2" x 8" Centre
14	00 474 323	Cylinder 3 1/4" x 8" 1 st Wing
15	00 474 324	Cylinder 3" x 8" 2 nd Wing
16		Transport Stop
17		Pin
18		Hair Pin
19	00 474 345	Cylinder 3 1/2" x 8 with Mech. Stop
20		Mechanical Depth Stop
21	00 474 347	Cylinder 4" x 24" 1st. Wing Fold
21A	01 140 199	Cylinder 3 1/2" x 24" 2nd. Wing Fold
22		Union Tee 3/8" JIC 37°

Wing Fold Cylinders no. 21 and no. 21A are positioned on rear of cultivator with rams pointing to outside of cultivator and port holes towards the top.

3 1/2" x 8" cylinders no. 13 & 19 are mounted on the centre section with the rams pointing towards the wheels and ports in top position.

3 1/4" x 8" cylinders no. 14 are mounted on each inside wing with rams pointing towards the wheel and ports in top position.³

3" x 8" cylinders no. 15 are mounted on each outside wing with rams pointing towards the wheel and ports in top position.

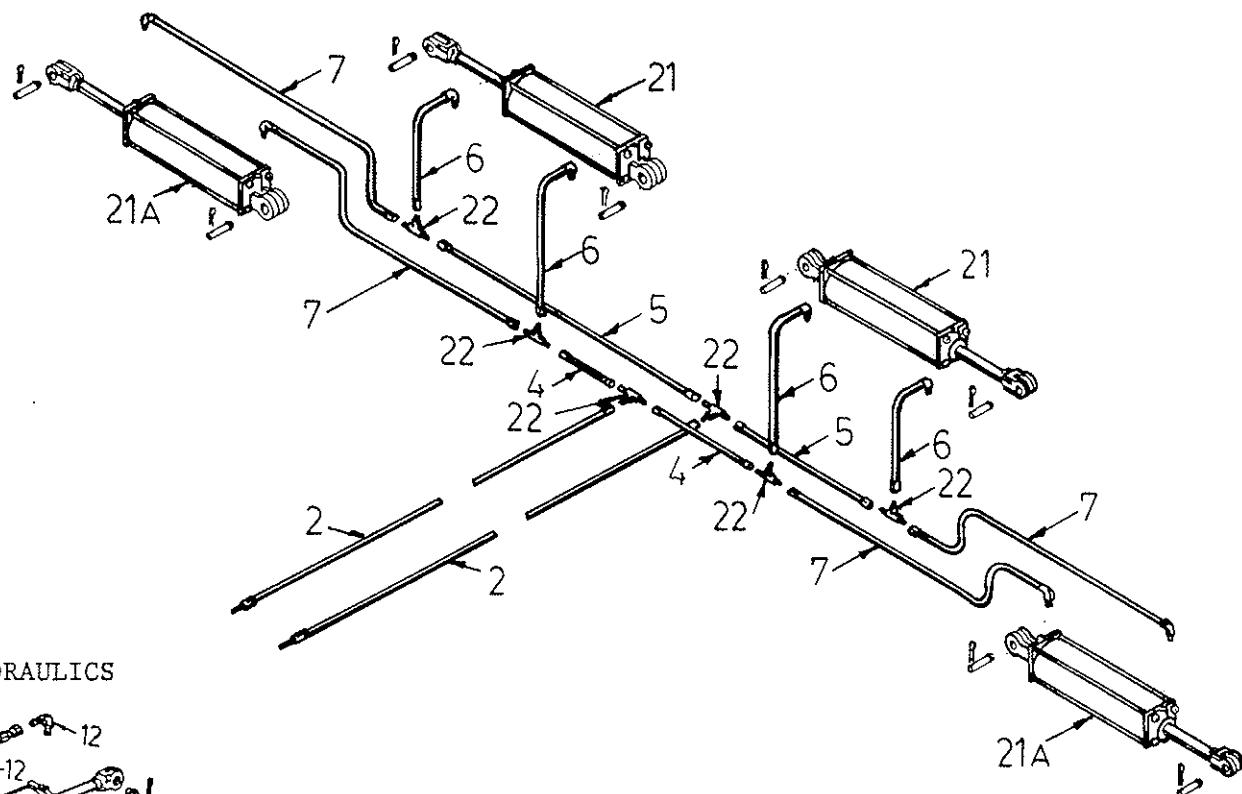
Lock hoses to cultivator with clamps supplied.

TO TIGHTEN J.I.C. FLARE CONNECTIONS

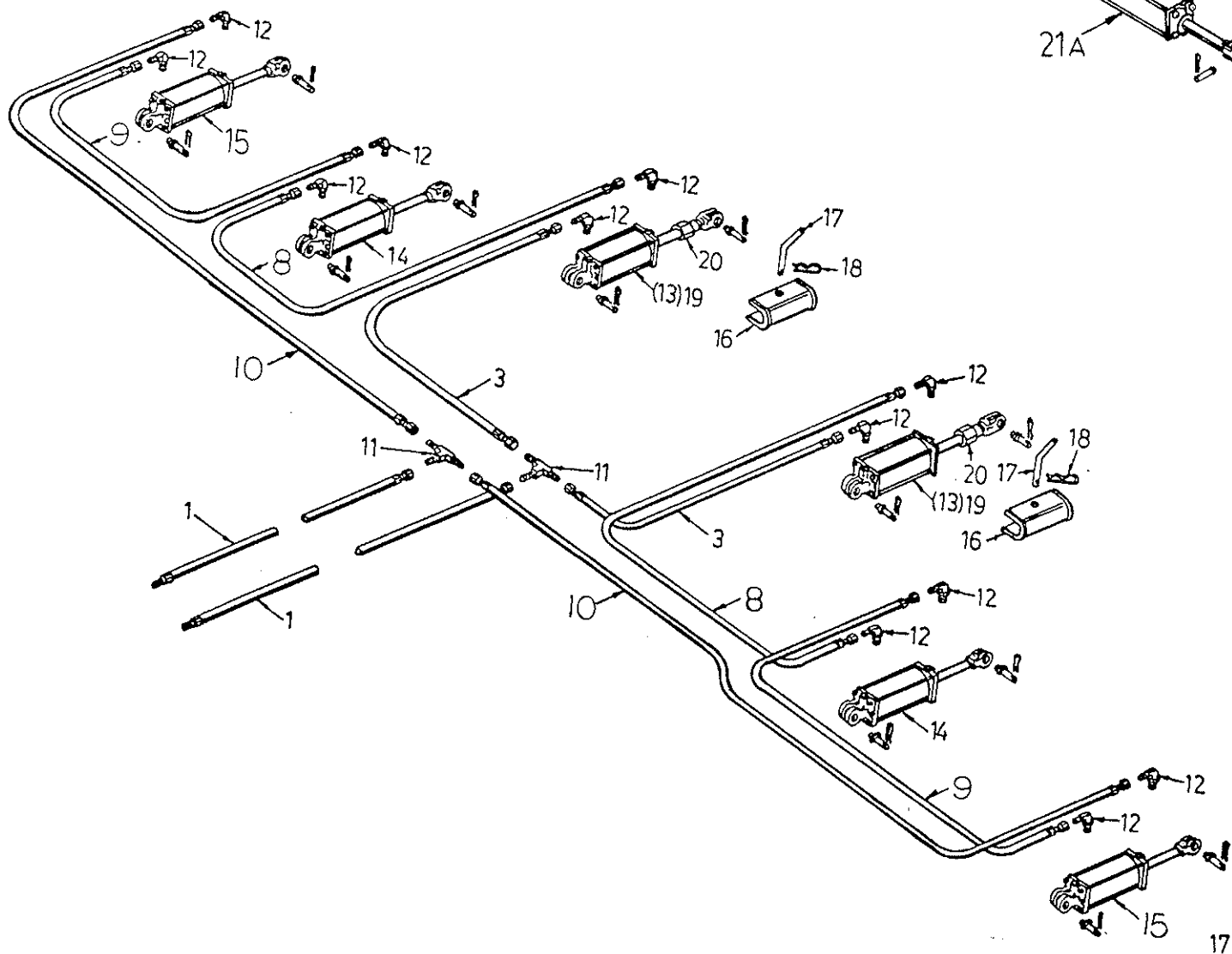
A. Finger tighten as much as possible.

B. 1/6 Turn (one flat section on hex) is sufficient to seal connection.

C. Over tightening could crack the swivel nut.



WHEEL HYDRAULICS



TINE PATTERNS:

For the standard 4" - 4 bar tine spacing, mount tines at the positions shown for each cultivator size according to the tine pattern diagrams provided in this section of the manual.

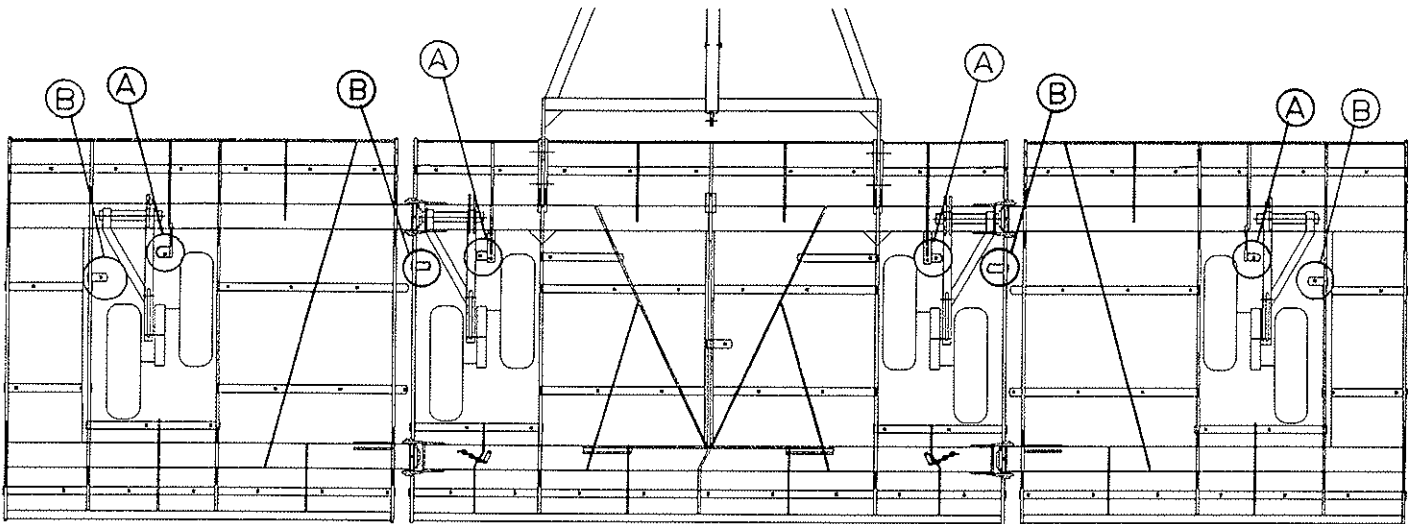
For Optional Tine Patterns, refer to the appropriate section in the "**Tine Pattern Manual For Kongskilde Field Cultivators**".

The tine pattern manual provides diagrams for optional tine placements for 3500 Series cultivators, 3500 Res-Till cultivators, Front 5-Bar attachment, Rear 5-Bar attachment, and Nose Extensions.

Note A: High Clearance Conser-Tines must not be placed on centre sections or wings at the positions "A" shown in Figure 10.

A special bolt-on tine bar at these locations has been designed to allow the standard "S" tine to be used instead of high tines.

Note B: 3500 Cultivator centre sections equipped with 9.5 x 15 Tires cannot accept tines mounted on the stub toolbars at the positions "B" shown in figure 10.



UPRIGHTS FOR WHEEL OPERATING CYLINDERS

3500 Series cultivators purchased as high tine models come equipped with the proper cylinder uprights for centre section and wing wheel arms. However, if you are converting your 3500 cultivator from regular S-tines to high clearance Conser-tines, it is necessary for you to obtain wheel cylinder uprights for high tine models from your dealer. **Failure to install the proper uprights could cause damage to the cultivator when transporting and will not allow correct depth adjustment in the field.**

Refer to page 13 for instructions on how to install the centre section and wing wheel cylinder uprights.

MODEL
3500

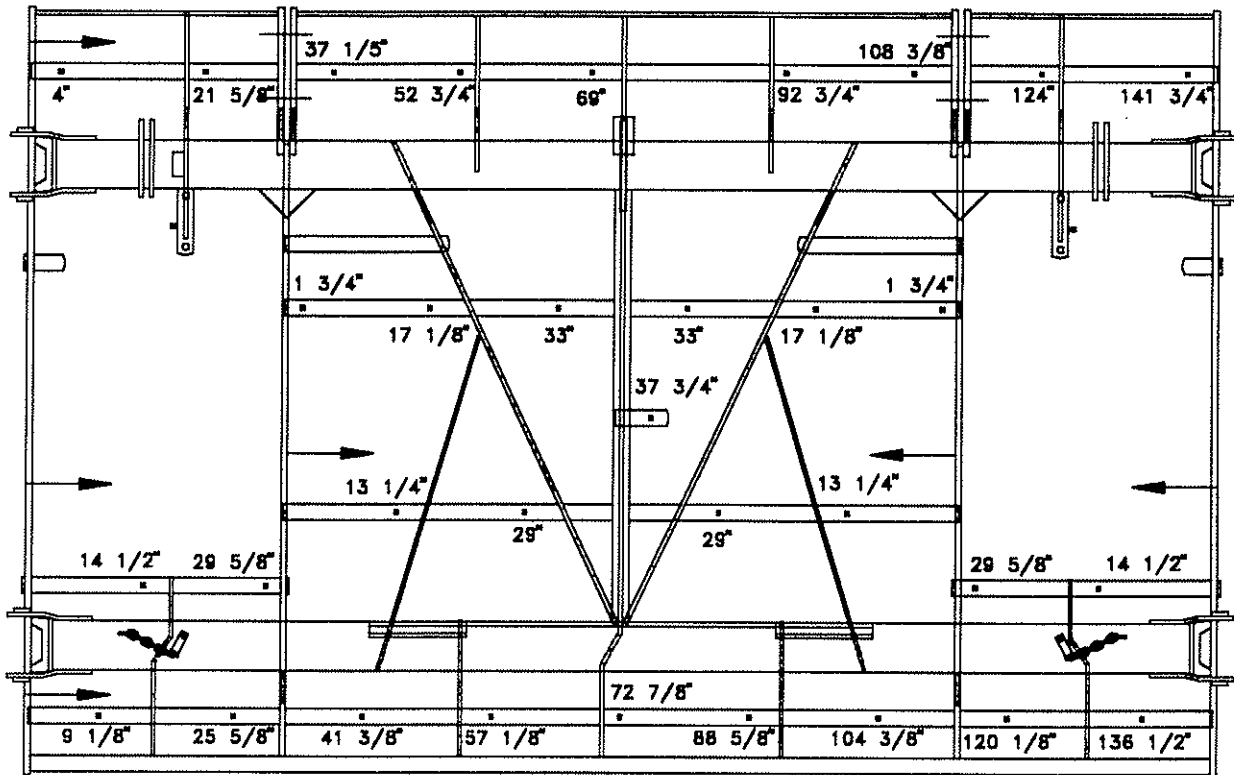
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4 BAR 16" REAR TINE PATTERN

DATE:
03/96

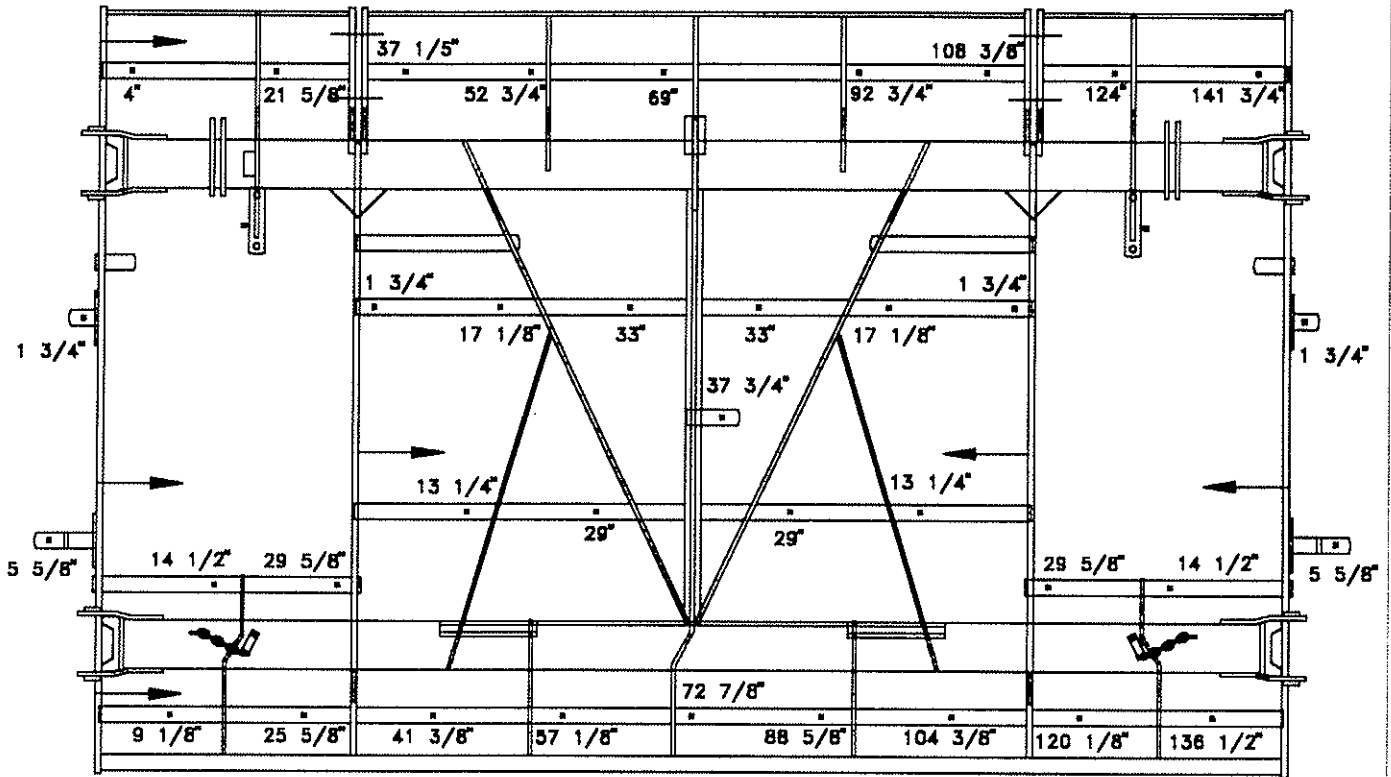
SECTION
1

PAGE
4

3500 CENTER SECTION
35 Standard Tines
or
2 Standard Tines & 33 Consortines



3514 CENTER SECTION
 39 Standard Tines
 or
 2 Standard Tines & 37 Consertines



MODEL
3520

TITLE

4 BAR 16" REAR TINE PATTERN

DATE:

11/97

SECTION

PAGE

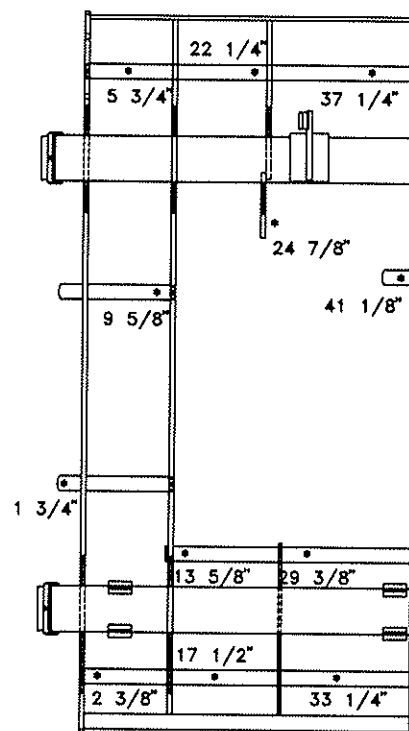
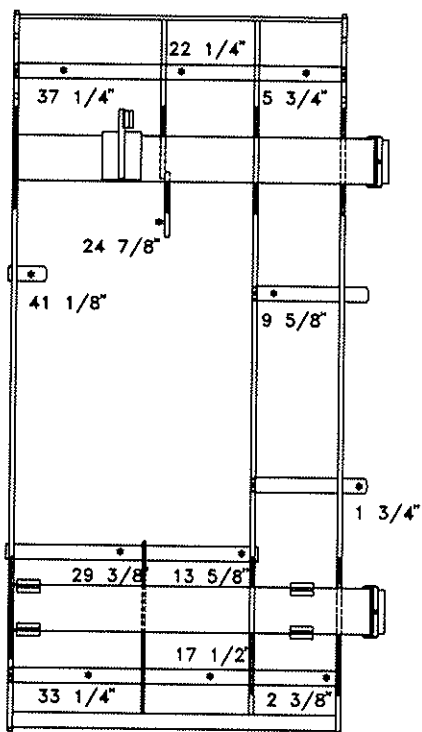
1 6B

20' WINGS

4" - 16" Rear Row

12 Standard Tines or

1 Standard Tine & 11 Consortines



MODEL
2620/3520

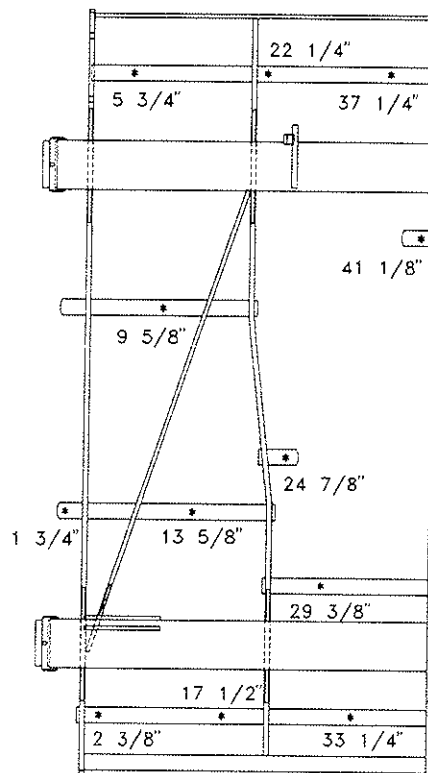
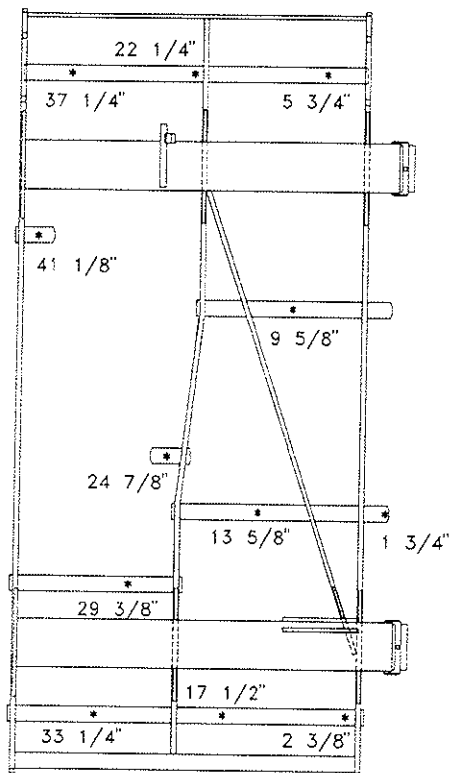
TITLE
4 BAR 16" REAR TINE PATTERN

DATE:
12/93

SECTION
1

PAGE
7

20' WINGS
4" - 16" Rear Row
12 Standard Tines Each



MODEL
3523

TITLE

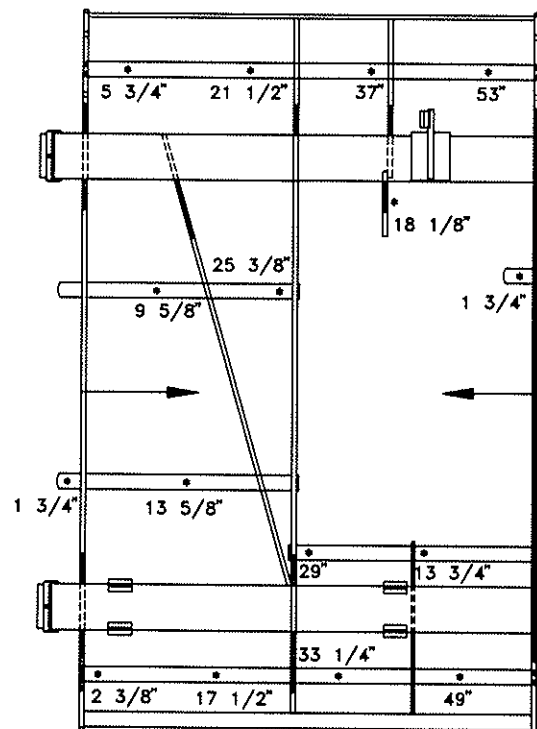
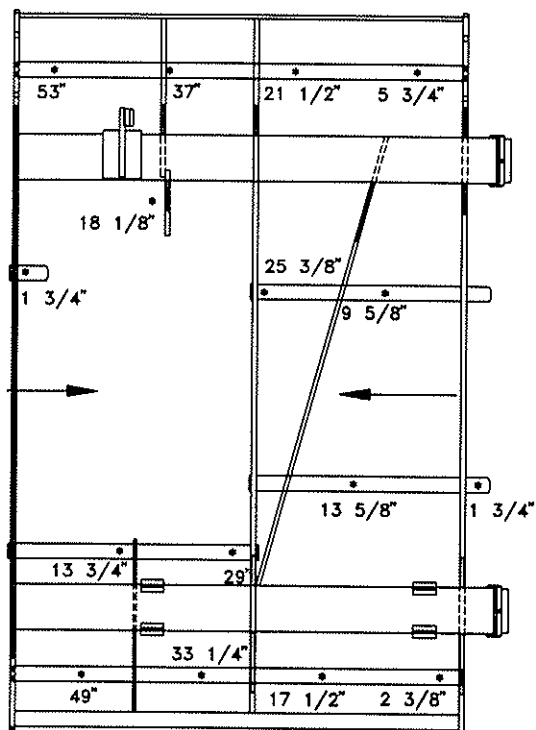
4 BAR 16" REAR TINE PATTERN

DATE:
11/97

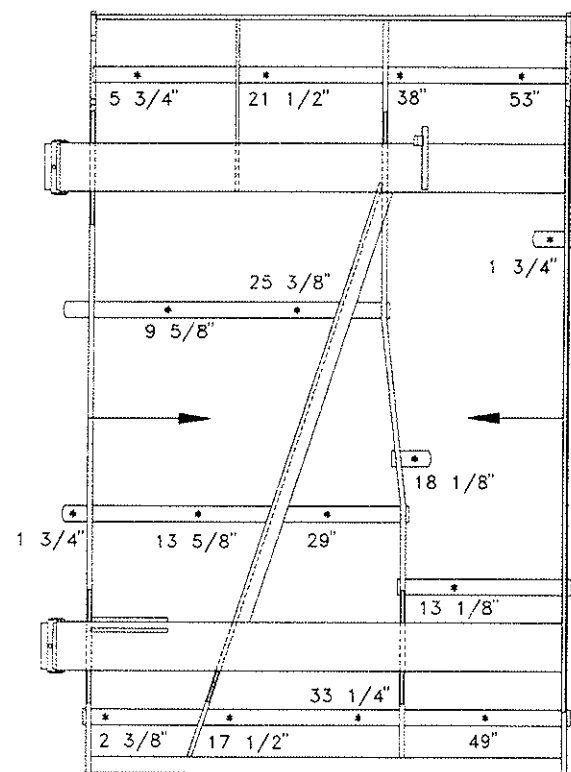
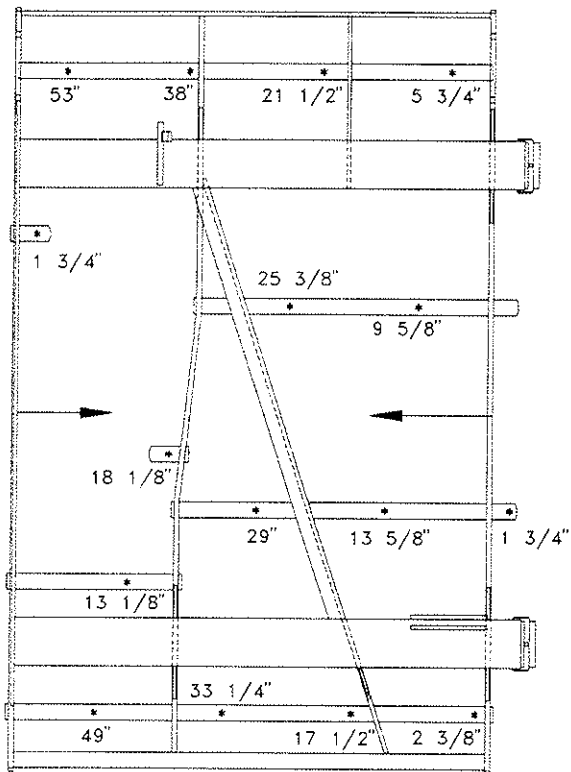
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1 8A

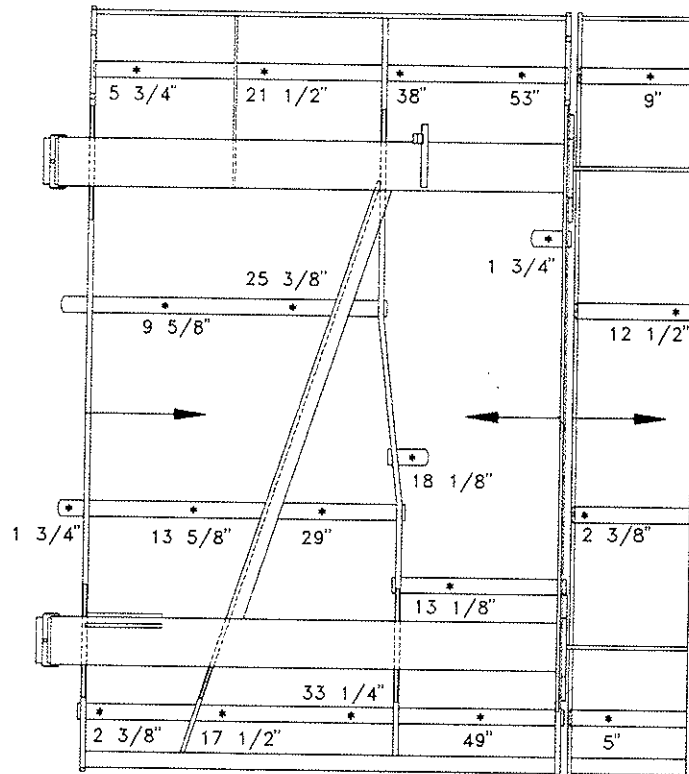
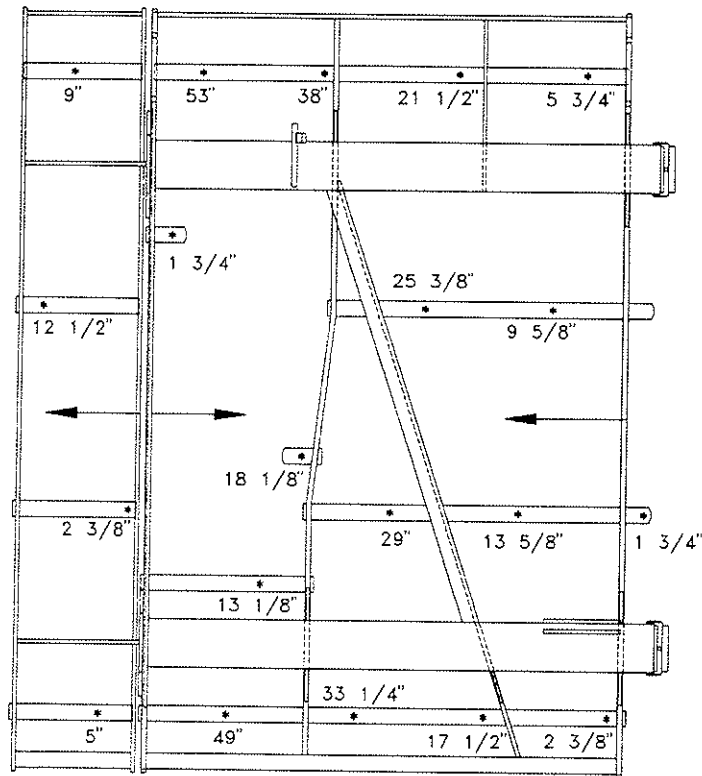
23' WINGS
4" - 16" Rear Row
16 Standard Tines or
1 Standard & 15 Consortines Each



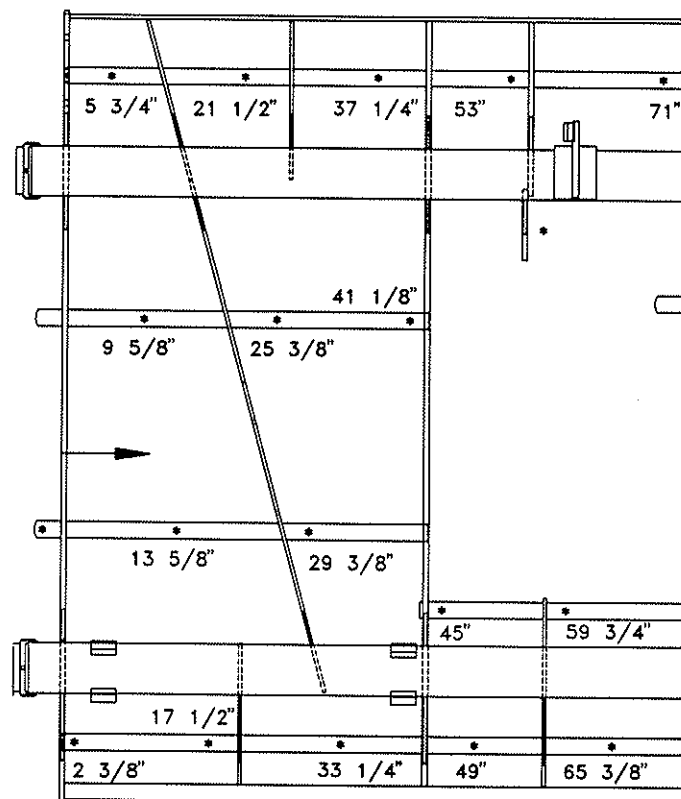
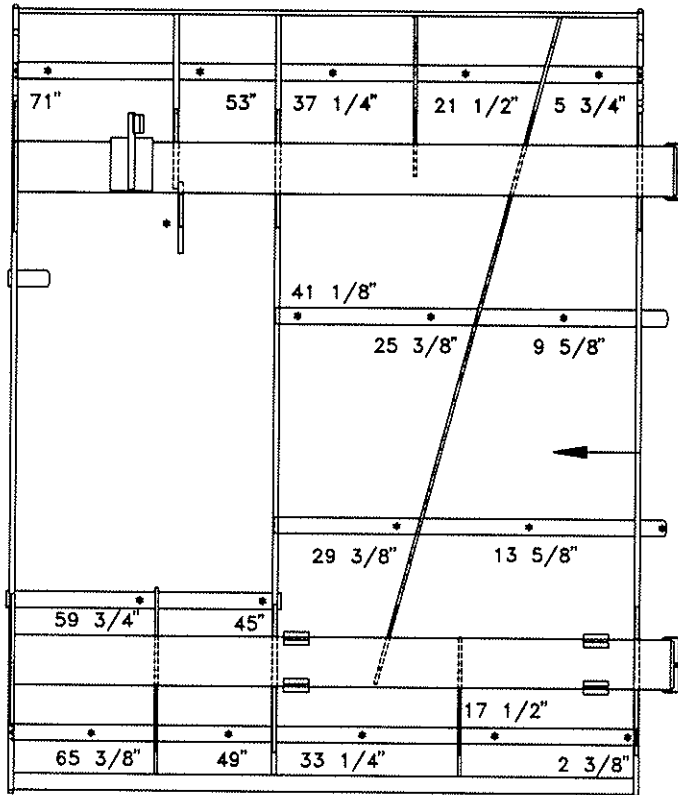
23' WINGS
4" - 16" Rear Row
16 Standard Tines Each



25' WINGS
4" - 16" Rear Row
20 Standard Tines Each



25' TANDEM WINGS
4" - 16" Rear Row
19 Standard Tines or
1 Standard Tine and 18 Consertines each



MODEL
3528

TITLE

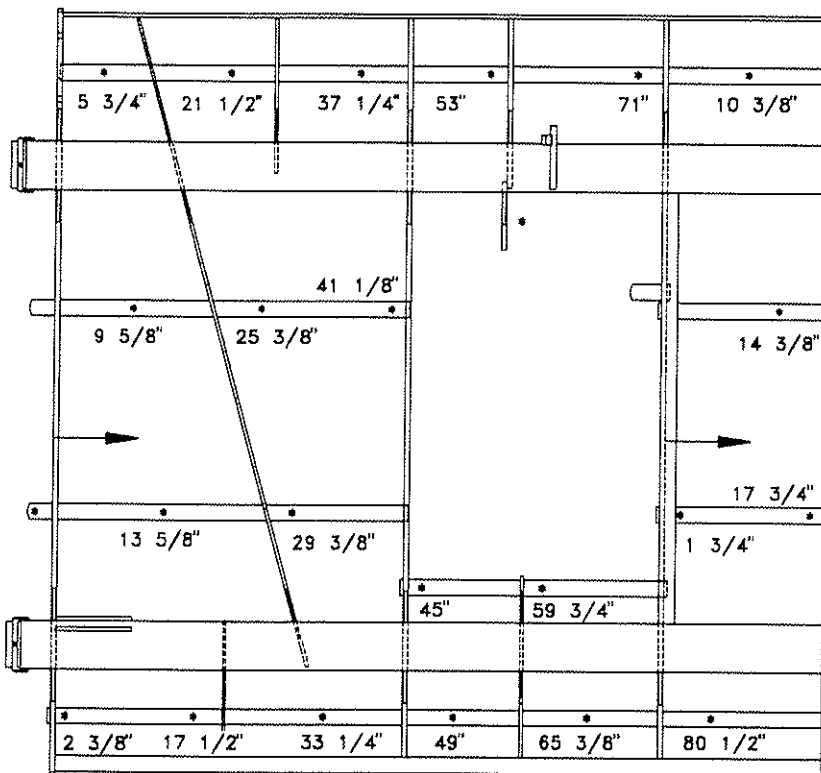
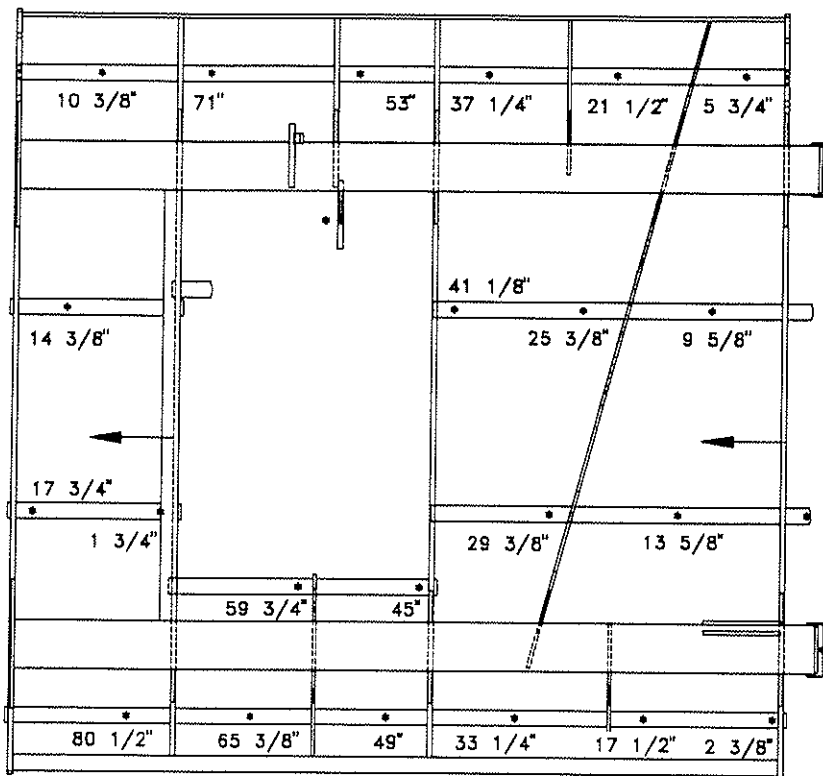
4 BAR 16" REAR TINE PATTERN

DATE:
03/96

SECTION
1

PAGE
10

28' WINGS
4" - 16" Rear Row
24 Standard Tines or
1 Standard Tine and 23 Consortines Each

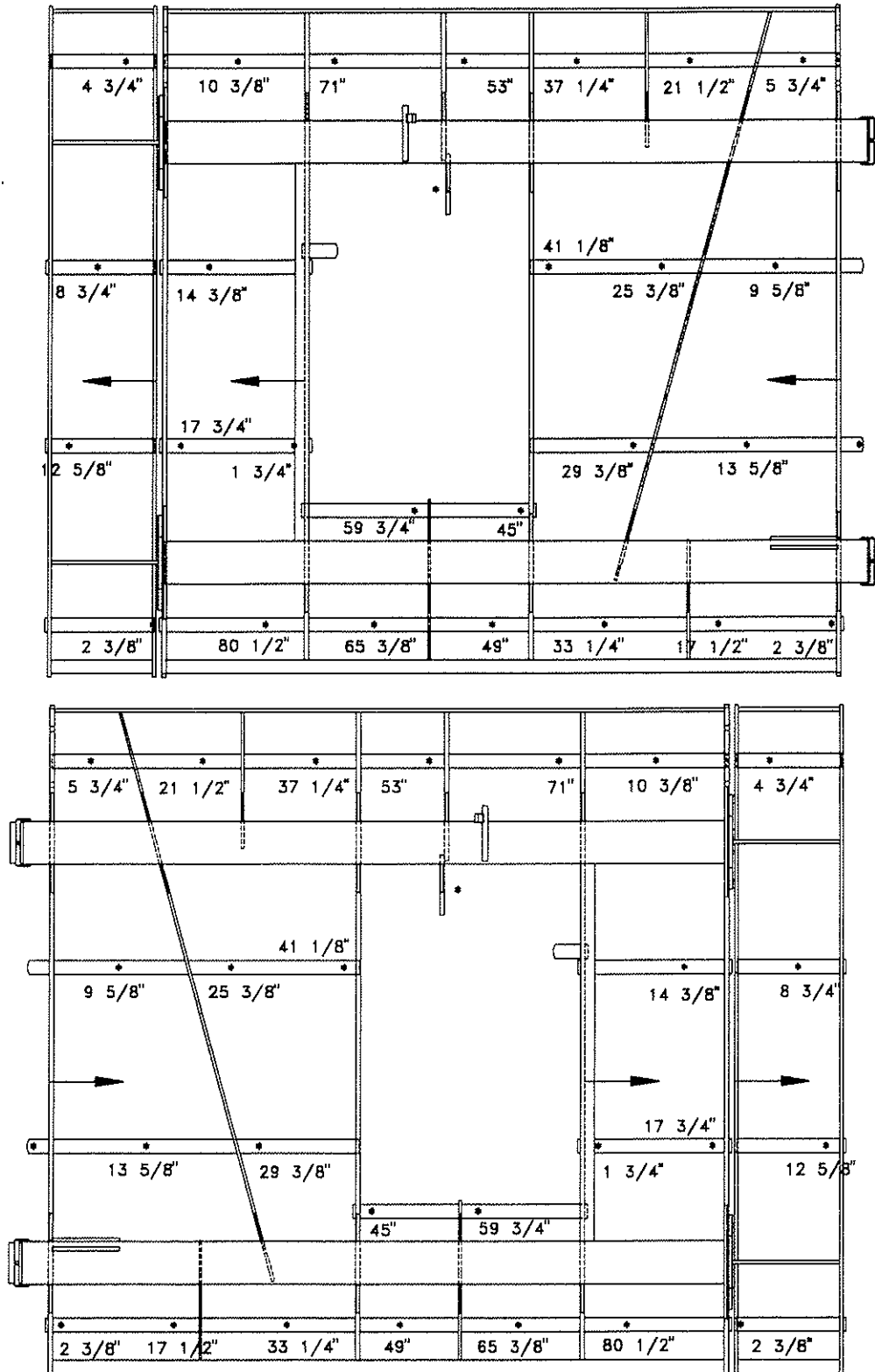


31' WINGS

4" - 16" Rear Row

28 Standard Tines or

1 Standard Tine and 27 Consortines Each

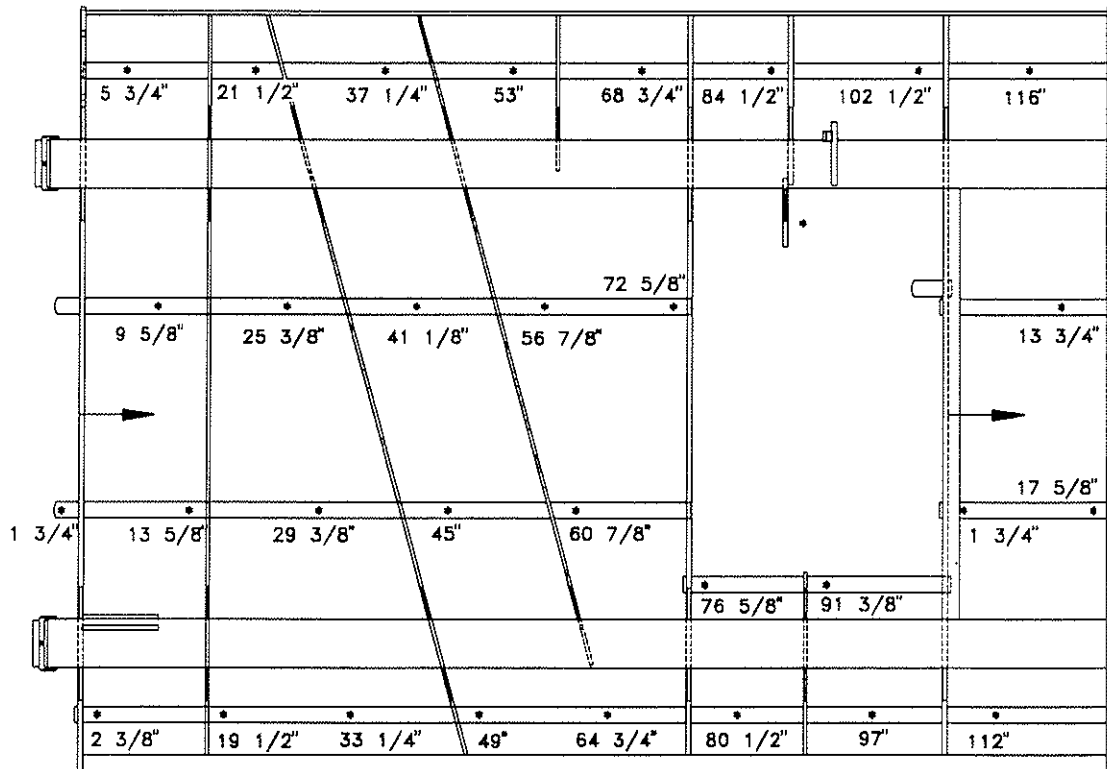
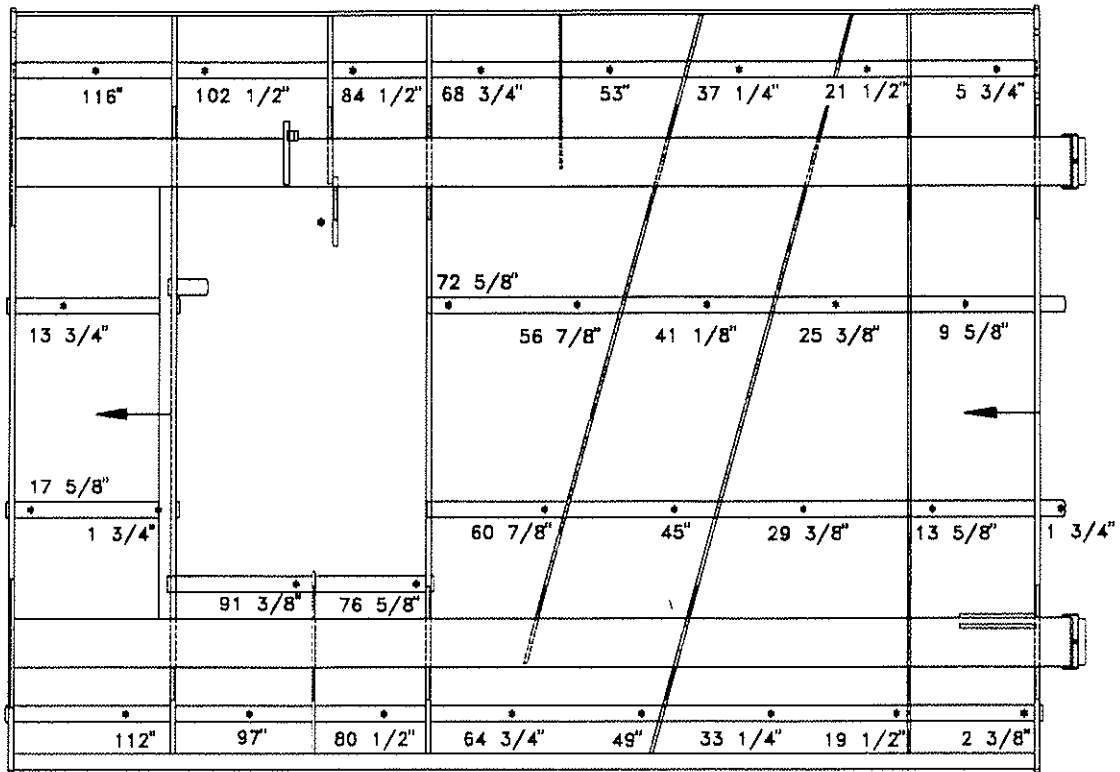


34' WINGS

4" - 16" Rear Row

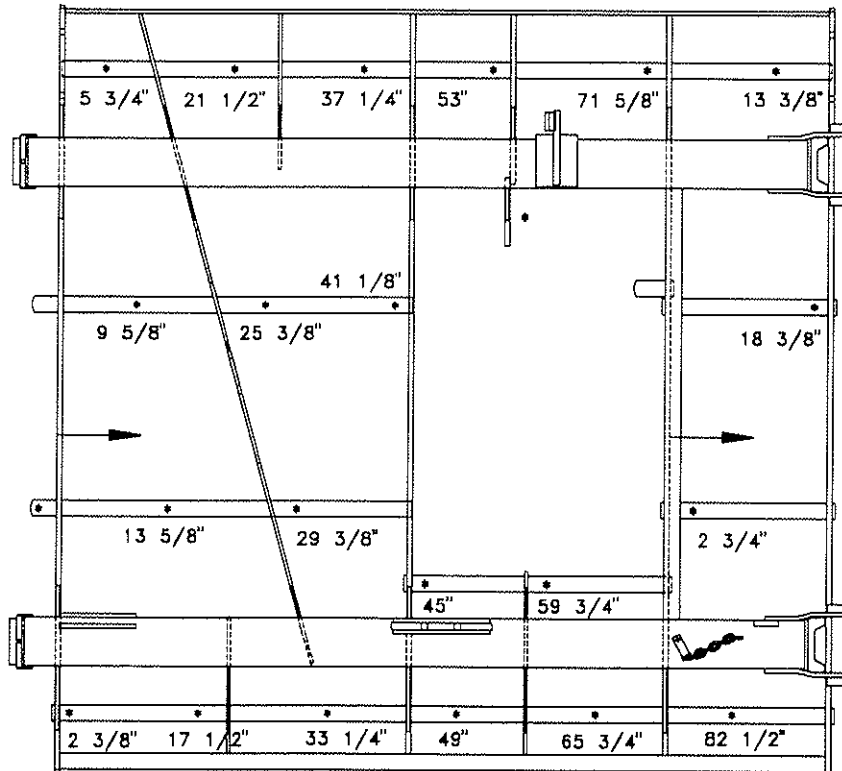
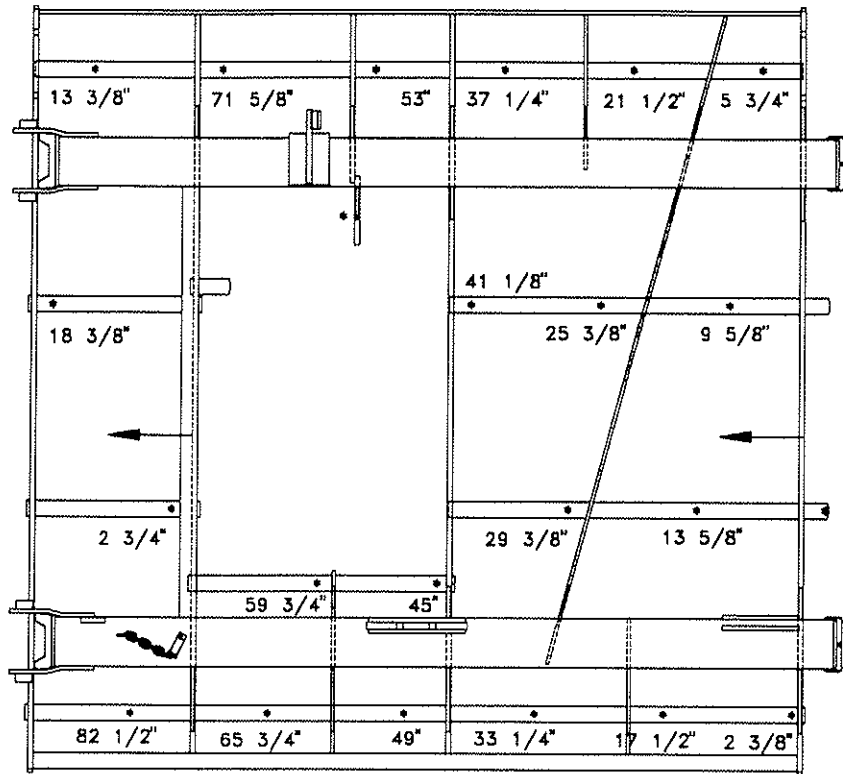
32 Standard Tines or

1 Standard Tine and 31 Consortines Each



MODEL	TITLE	DATE:	SECTION	PAGE
3536/3540	4 BAR 16" REAR TINE PATTERN	03/96	1	13

28' SPECIAL WINGS
4" - 16" Rear Row
23 Standard Tines or
1 Standard Tine and 22 Consortines Each



OPTIONAL EQUIPMENT FOR 3500 SERIES CULTIVATORS

A wide selection of optional equipment and levelling attachments are available for the 3500 Series field cultivators.

Assembly and operating instructions are included with the following optional equipment:

- Res-Till
- Single Point Hydraulics
- 5-Bar (Front or Rear Mounted)
- FL Harrow for 300 Double Spiral Rota-Harrows
- Rear Hitch
- Tine Extension Kit
- Levelling Planks
- Spike Drag Harrows
- 300 Series Double Spiral or RD Rota-Harrows
- 300 Series Flex Spiral Combi-Harrows