

OPERATOR'S MANUAL

FOR

Brillion

MODELS STT-8 THRU STT-20

SPRING TOOTH HARROW

MODEL 02

BRILLION IRON WORKS, INC.
BRILLION, WISCONSIN

SETTING UP AND OPERATING INSTRUCTIONS

BRILLION MODELS STT-8 THRU STT-20 TRANSPORT SPRING TOOTH HARROW

Your Brillion Transport Spring Tooth Harrow is built with the best materials and workmanship available. It has been designed to give years of trouble free operation, and proper care and operation will insure the service and long life built into it.

Study this manual carefully before attempting to assemble or operate the machine.

LOCATION REFERENCE

"Right" and "Left", "Front" and "Rear" refer to operators "Right" and "Left", "Front" and "Rear" when he faces in the same direction as the machine will travel.

TRANSPORT SPRING TOOTH HARROW SPECIFICATIONS

Model No.	Overall Width	No. of Teeth	Weight (Approx.)
STT-8	8 feet	23	950#
STT-10	10 feet	29	1035#
STT-12	12 feet	35	1120#
STT-14	14 feet	39	1205#
STT-16	16 feet	45	1295#
STT-18	18 feet	51	1375#
STT-20	20 feet	57	1465#

Teeth: - - - - - 3/8 x 1-3/4 heat treated alloy spring steel

Tooth Spacings: - - - - - 4"

Working Depth: - - - - - 1" to 6" - controlled by hydraulic cylinder from tractor

Transport Clearance: - - - - - 10"

Transport Wheels: - - - - - 15" - 4 bolt (standard); 14" - 4 bolt (optional)

Transport Wheel Bearings - - Tapered Roller

SETTING UP INSTRUCTIONS

Your Brillion Model STT Spring Tooth Harrow is shipped to you in separate assemblies. These assemblies are:

Assembly Name	Number Used On						
	STT-8	STT-10	STT-12	STT-14	STT-16	STT-18	STT-20
1-Rock Shaft Assembly	1	1	1	1	1	1	1
2-Axle Assembly L. H.	1	1	1	1	1	1	1
3-Axle Assembly R. H.	1	1	1	1	1	1	1
4-Main Frame Assembly	1	1	1	1	1	1	1
5-Side Frame Assembly L. H.				1	1	1	1
6-Side Frame Assembly R. H.				1	1	1	1
7-Frame Angle Bundles	2	2	2	2	2	2	2
8-Drawbar	1	1	1	1	1	1	1
9-Spring Tooth Bundles	3	4	4	5	6	7	7
10-Bag and/or Box Assemblies	2	2	2	4	4	4	4
11-Wheels	2	2	2	2	2	2	2

Before starting to assemble the spring tooth harrow, separate the various bundles, and open the bag and box assemblies, taking care to lose none of the parts or hardware.

NOTE: REFER TO REPAIR PARTS CATALOG FOR IDENTIFICATION OF PARTS

ASSEMBLY OF MAIN FRAME & AXLES

Block up the corners of the main frame about 12" off floor. Attach the 5D-868 drawbar to the center frame assembly, using four 5/8" x 1-3/4" long heat treated cap screws, securing with lock nuts. The hydraulic cylinder mounting lug should be pointing upward.

Attach the 5D-858 and 5D-859 frame angles to the rear holes of the drawbar plates using 5/8" x 1-1/2" long hardened cap screws, lock washers and lock nuts. Attach these angles to the mainframe tooth bars, using six 5D-856 straps and 1/2" x 3-1/2" long cap screws.

ON THE 12 FOOT MAIN FRAME, attach the 5D-854 and 5D-855 frame angles to the front holes of the drawbar plates using 5/8" x 1-1/2" long hardened cap screws, lock washers and lock nuts. Attach these angles to the main frame tooth bars using six 5D-856 straps and 1/2" x 3-1/2" long cap screws.

ON THE 10 FOOT MAIN FRAME, attach the 5D-902 and 5D-903 frame angles to the front holes of the drawbar plates using 5/8" x 1-1/2" long heat treated cap screws, lock washers and lock nuts. Attach these angles to the main frame tooth bars using four 5D-856 straps and 1/2" x 3-1/2" long cap screws, lock washers and nuts.

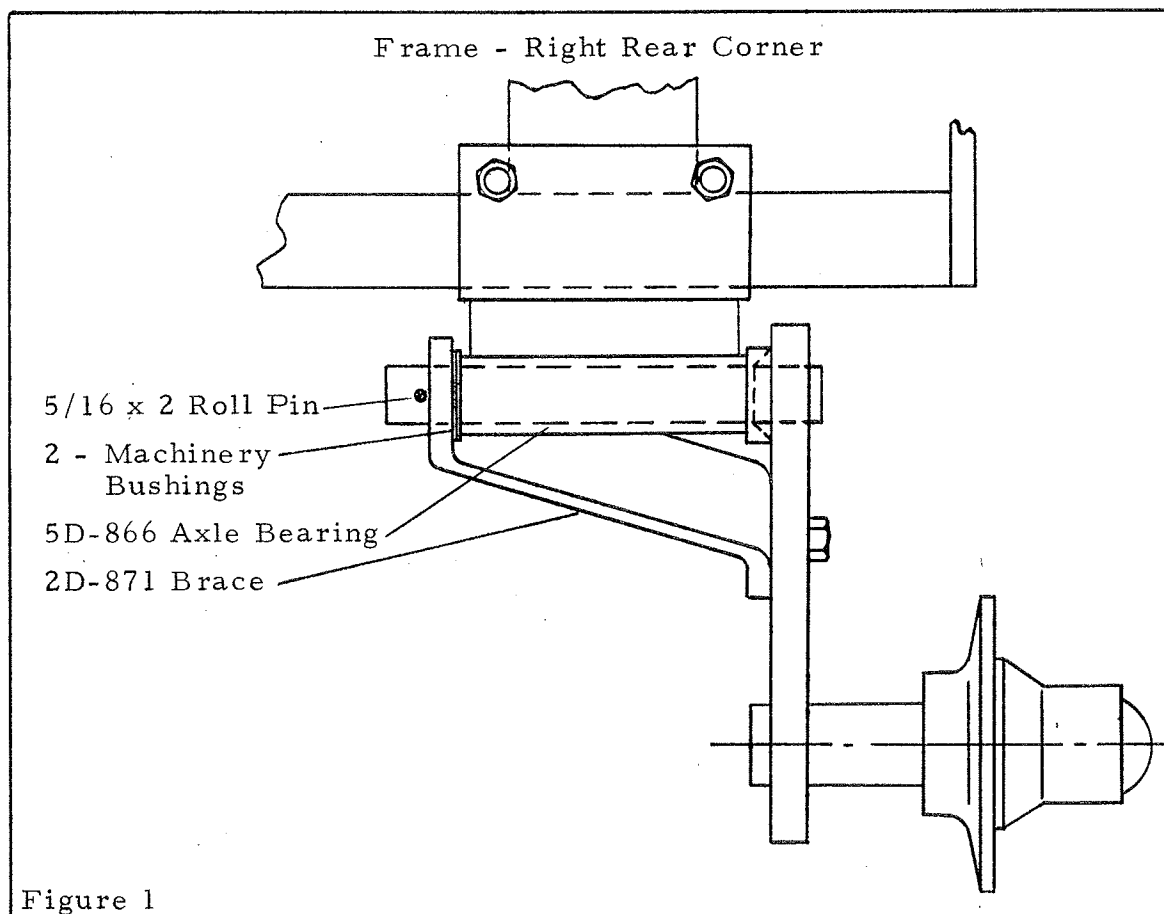
ON THE 8 FOOT MAIN FRAME, attach the 5D-900 and 5D-901 frame angles to the front holes of the drawbar plates, using 5/8" x 1-1/2" long hardened cap screws, lock washers and lock nuts. Attach these angles to the front main frame tooth bar, using two 5D-856 straps 4-3/16" long, and 1/2" x 3-1/2" long cap screws, lock washers and lock nuts.

Assemble the rock shaft, centered on the main frame, to the main frame, using the four 3D-543 bearing clamps and 1/2" x 1-1/2" long hardened cap screws, lock washers and lock nuts.

ASSEMBLY OF WHEELS & AXLES

Assemble the 5D-866 axle bearings to the rear tooth bar at each end, using 1/2" x 3" long cap screws, lock washers, and lock nuts. Assemble the 9D-580 and 9D-581 axle and lift link assemblies to the axle bearings, referring to Figure 1 for the order in which the parts are assembled.

Assemble the axle shaft into the 5D-866 axle bearing from the outer end. Place two machinery bushings (#18 GA x 1-1/2" I.D. x 1-7/8 O.D.) on the shaft up against the axle bearing. Assemble the 2D-871 brace onto the shaft and secure with a 5/16" x 2" long roll pin. Complete the assembly by bolting the brace to the axle arm using a 3/4" x 2-1/4" long cap screw, lock washer and nut, with the head of the cap screw toward the wheel hub side.



Attach the lift link portion of the axle and lift link assemblies to the rock shaft, placing the ends between the lift arms. Secure with the 3/4" x 1-7/8" long clevis pins, washers, and cotter pins, WITH THE HEADS OF THE CLEVIS PINS TOWARD THE OUTSIDE OF THE MACHINE. See Figure 1A.

Mount the wheels on the wheel hubs, using the wheel bolts provided.

NOTE: Use 6.70 x 15 or 6.40 x 15 tires.

Attach the 3D-798 quick hook-up attachment to the cylinder lift arm using the 1/2" x 1-3/4" cap screw and lock nut. Do not draw the nut up tight; leave just enough looseness to permit the attachment to swing freely.

MOUNTING SIDE FRAMES

Mount side frames on the main frame, using 3/4" x 5-1/2" long clevis pins through the hinges, taking care that the heads of the pins extend toward the outside of the machine. Secure with 3/4" flat washers and 1/8" cotter pins.

Attach the support springs, (6C-342 on 3' side frames or 6D-343 on 4' side frames) to the tooth bars at the outer front corners of the side frames. Use tooth clamps, 1/2 x 3-1/2" long heat treated cap screws, lock washers and lock nuts. On the 4' side frames, use the black tooth clamps for this purpose.

Attach the skids (2D-360 on 3' side frames or 2D-864 on 4' side frames) to the support springs using 3/8 x 1-1/2" long plow bolts, lock washers and nuts.

ATTACHING SPRING TEETH

Attach the spring teeth to the tooth bars at the points indicated in the following figures. Use the spring tooth clamps, 1/2 x 3-1/2" long heat treated cap screws, lock washers and lock nuts. See Figure 2.
Note: Use the two 2-1/2" wide clamps on the right and left positions on the rear bar of the center section.

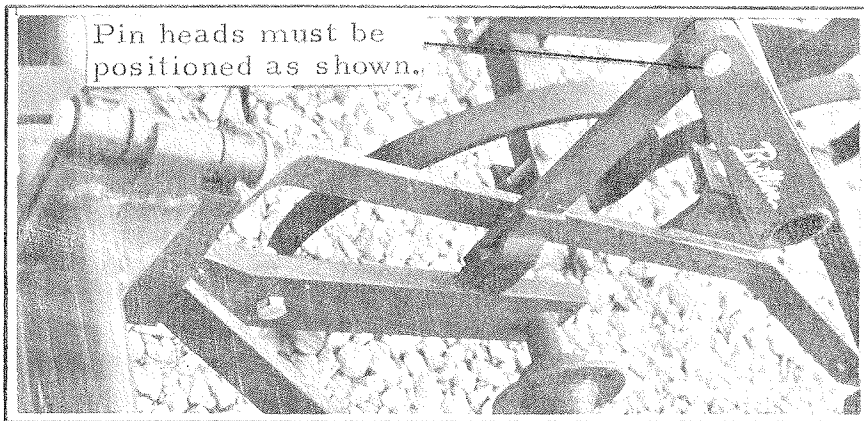


Figure 1A

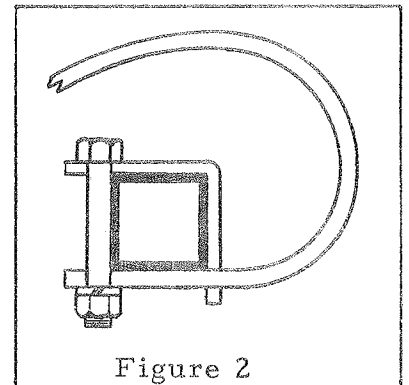
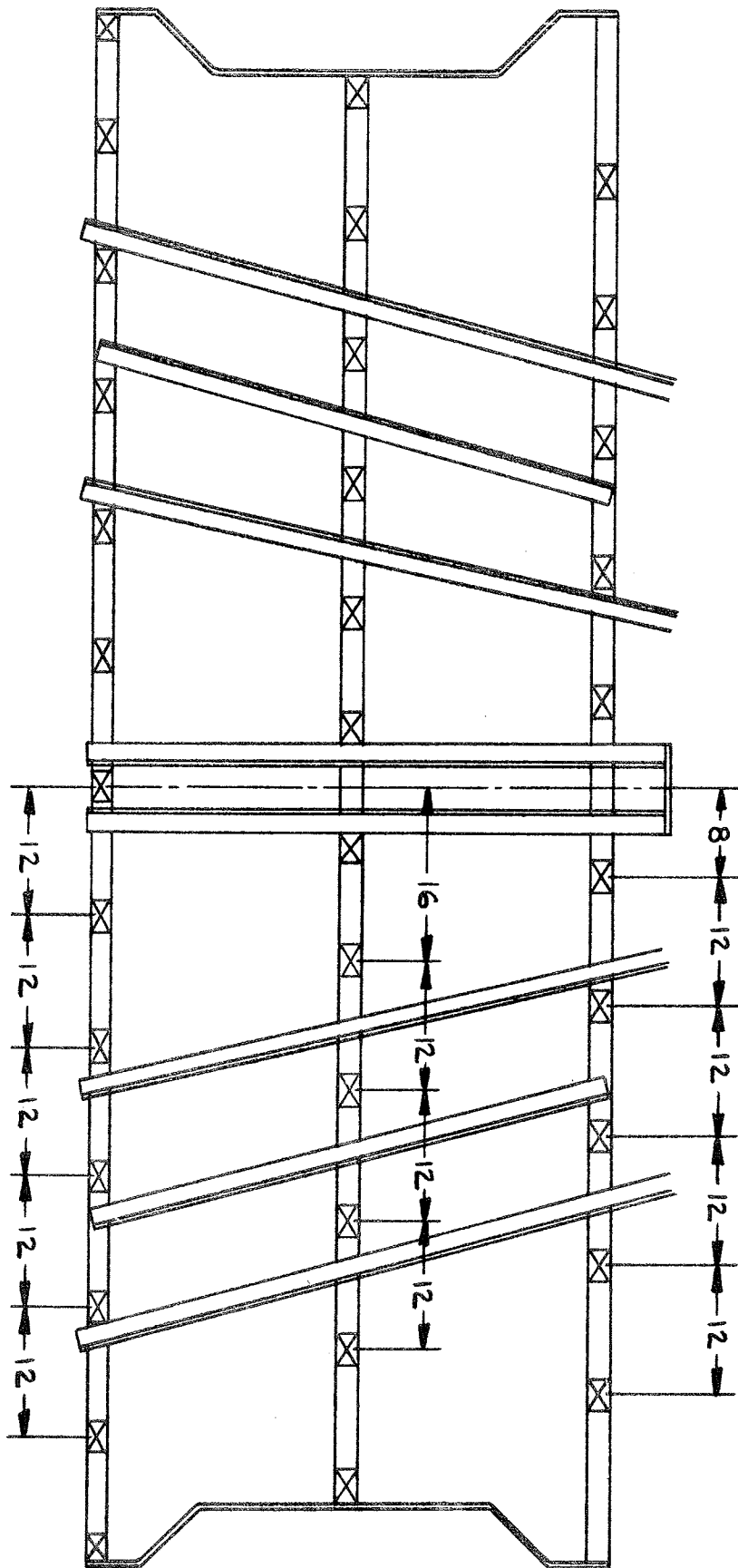
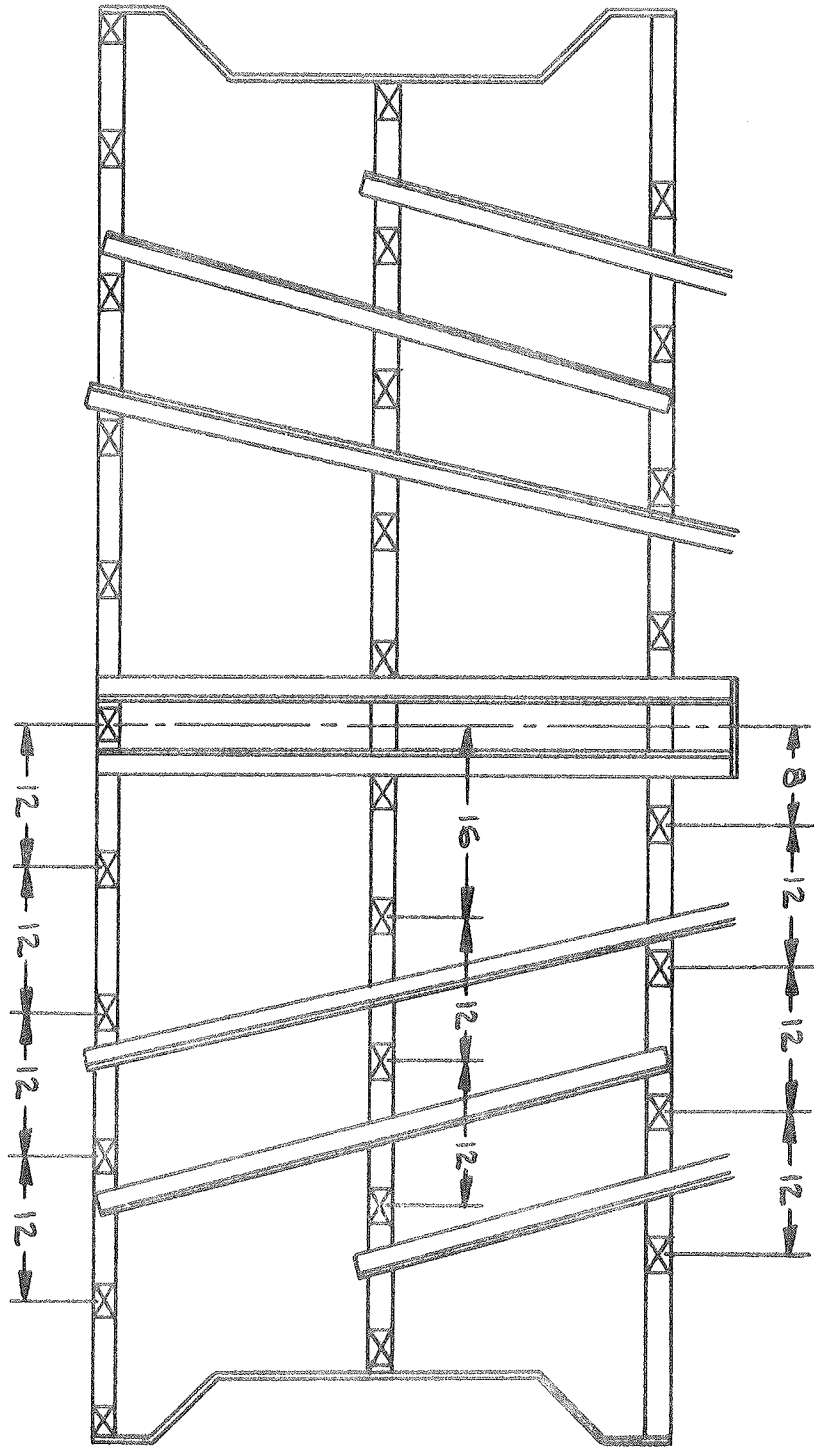


Figure 2



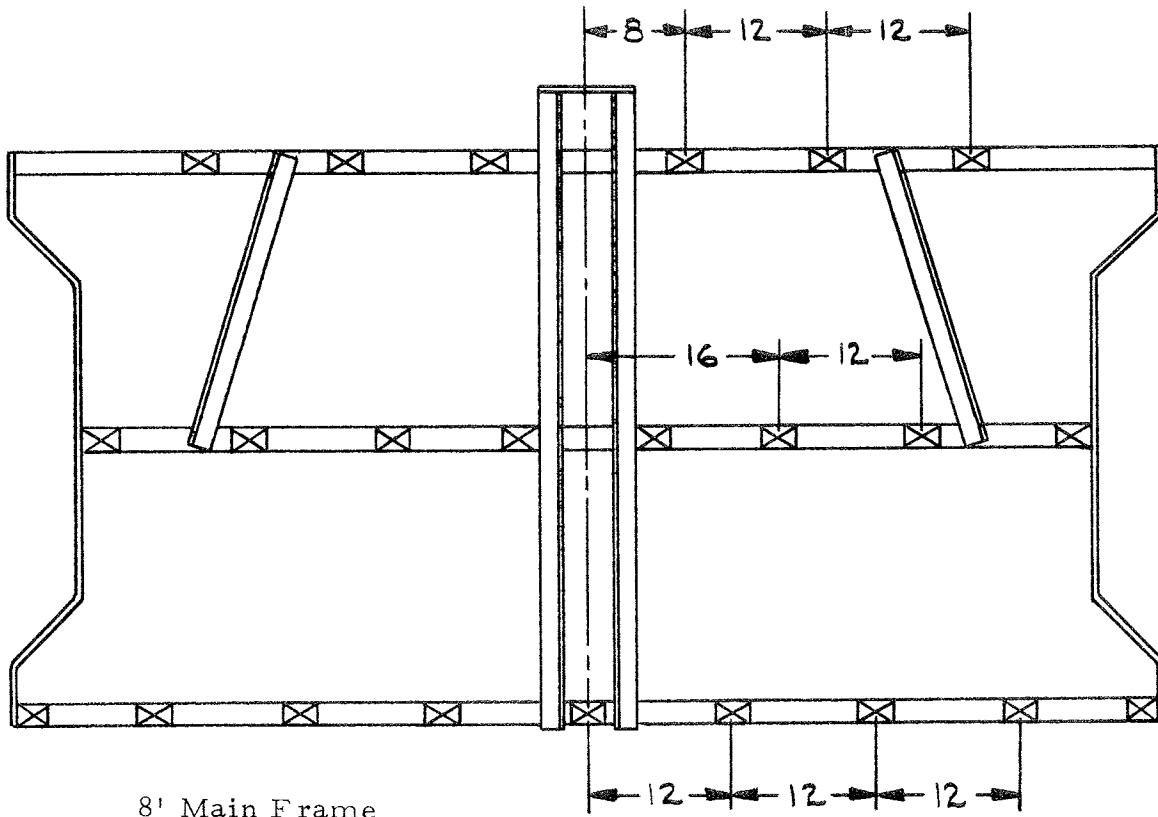
12' Main Frame

☒ 4" Tooth Spacing

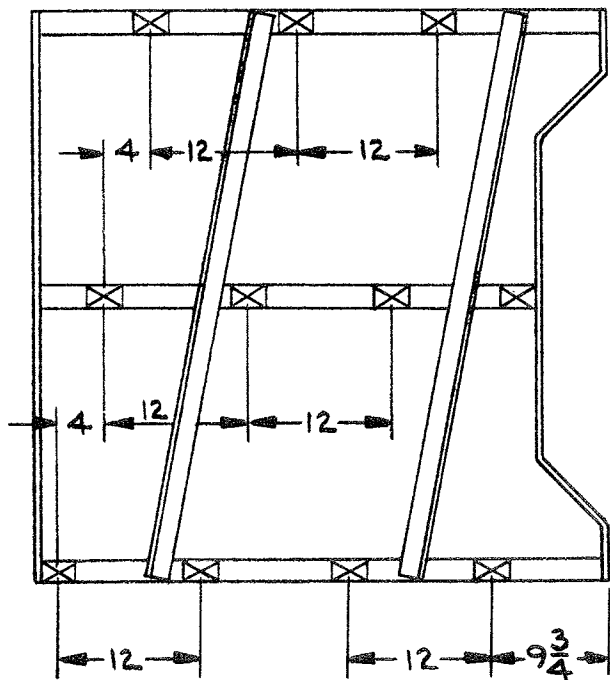


10' Main Frame

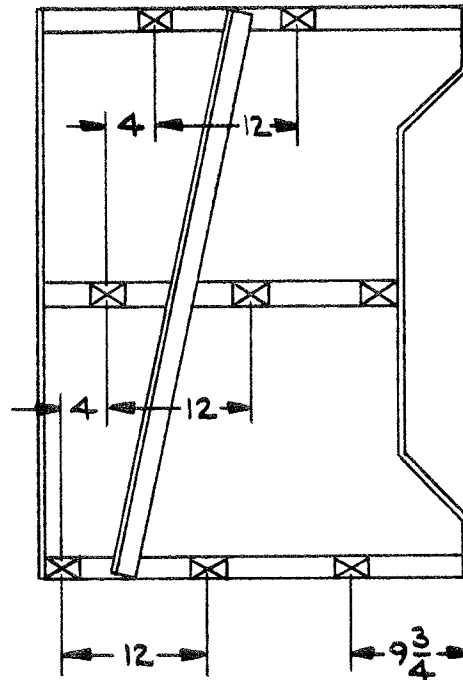
☒ 4" Tooth Spacing



8' Main Frame



4' Side Frame - Left Mounting
Right Mounting Opposite



3' Side Frame - Left Mounting
Right Mounting Opposite

☒ 4" Tooth Spacing

OPERATING INSTRUCTIONS

Depth Control

Working depth is controlled by the setting on the hydraulic cylinder. Once the depth is determined, the harrow is leveled by adjusting the drawbar clevis in the drawbar.

Transporting the Harrow

Raise the harrow for transport by extending the hydraulic cylinder to its full length. At this time, fold the wings in to reduce the overall width for traveling.

A travel link kit, 2D-552, is available as an accessory for transporting the harrow when the hydraulic cylinder is removed.

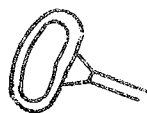
Operating

The harrow should be raised when making short turns, such as at the ends of the field. Failure to raise the harrow out of the ground when turning short, places excess strain on the teeth, and may result in premature tooth failure.

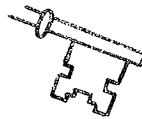
Operating in rough ground which causes the harrow to bounce excessively or pull unevenly, may require the use of the leveler kit, 5D-916. This kit, which levels the ground ahead of the wheels, is available as an accessory.

Lubrication

Coat the inner surfaces of the transport axle bearings and rockshaft bearing clamps with grease before assembling. Grease daily when in use.



3 KEYS TO SAFETY



1. KEEP HANDS AWAY FROM WING HINGES
2. LOWER WINGS WITH CAUTION - DON'T DROP
3. FRONT SKID SPRING MAKES A SAFE HANDLE.

