Corn Reel

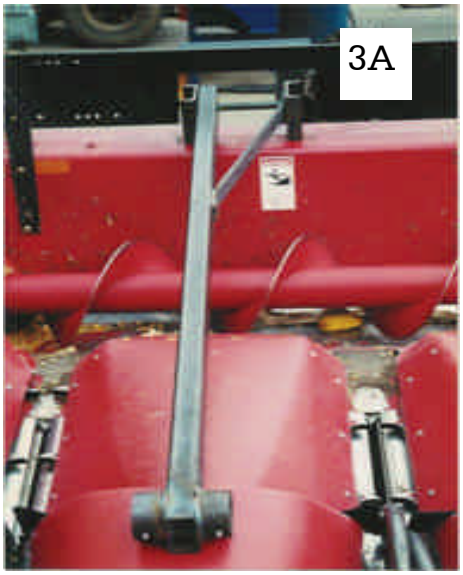
HERITAGE MACHINE & WELDING

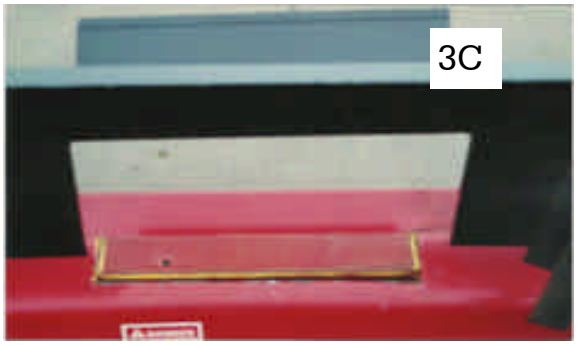
The concept of mounting these corn reels are basically the same for all corn heads although there are some modifications needed on 12 row units, mechanical drives and Gleaner heads.

Because of the wide diversity of corn heads there is no exact measurements available, but with the following pictures and drawings it should be readily apparent how this installation should proceed.

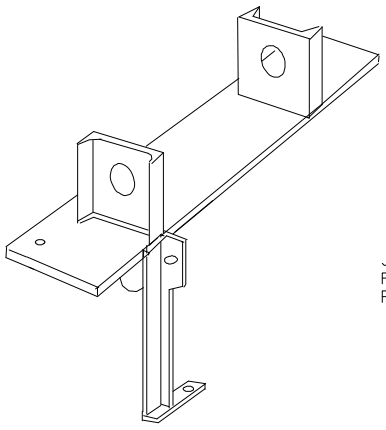
Start by locating 2 *Forward Arm Assemblies* [3A]. The arm with the unwelded *Center Tube* [5G] goes on the side that hooks up to the combines drive. The reason for the loose tube is for sprocket alignment and to compensate for the bow that is in most corn heads.

Take one of the *Forward Arm Assemblies* [3A] and lay the end with the *Center Tube* over the center of the first full snout, (not the outside snout), note that the *Arm Support Brackets* [5H] go to the inside. Next lay the end with the 2 *Forward Arm Mounts* [3G] on the top of the header bar [3B]. International units will have to cut away a small area [3C] to accommodate the *Forward Arm Mounts* [3D]. Once both *Forward Arm Assemblies* are resting on the snout and tack weld in place. Check again that they are square with the head and set on the center of the snouts and if no adjustments are needed finish welding in place. If the *Forward Arm Assemblies* are to be bolted on there will be special parts [3E] and instructions needed that will be supplied upon request.



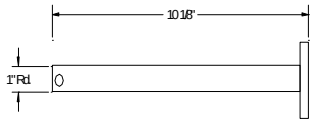


3E



J.D. BOLT ON MOUNT
FOR 893 PLASTIC HEAD
FITS IH 2208 ALSO
ONE LEFT AND ONE
RIGHT

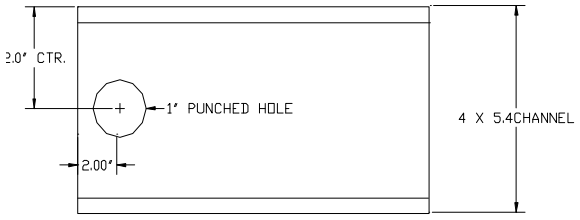
3F



3E

Pins for Forward Arms

3G



Forward Arm Mounts for Steel Corn Heads
(2 pair required)

The next step is to attach the *Forward Arm Supports* [5D] to the *Forward Arms*. This is accomplished by raising the end of the *Forward Arm* approximately 34" above the snout and bolting the Forward Arm Support to the side opposite of the Arm Support Bracket [5H] (see picture 5B). Then bolt the Rear Mount [5E] to the other end of *the Forward Arm support*, raise the entire assembly high enough to set the *Rear Mount* behind the cross auger and set it on the stripper bar (see picture 5C). Repeat process for the *Forward Arm* on the opposite side.

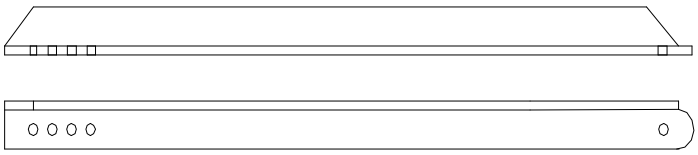
At this point the *Forward Arms* should be pointing straight out from the corn head with the *Rear Mount* pushed down and back against the rear of the head. Snug the 1/2" bolts just enough to take the slack out of the *Forward Arms* and *Braces*, check that the assembly is straight and that the top of the *Rear Mount* rests flat against the main head bar and that the bottom rests firmly on the stripper bar. The *Rear Mount* can now be welded to the corn head (see picture 5C) with a bead being ran only on the top and bottom of the angle. International heads will need a short plate welded between the top of the *Rear Mount* and the *Forward Arm Mounts* (see picture 5A).

Standing at either the left or right end of the corn head check that the *Forward Arms* are level with each other, make any adjustments necessary and then proceed with the next step.

5A

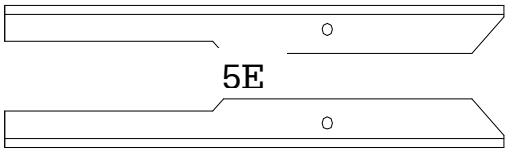
5B

5C



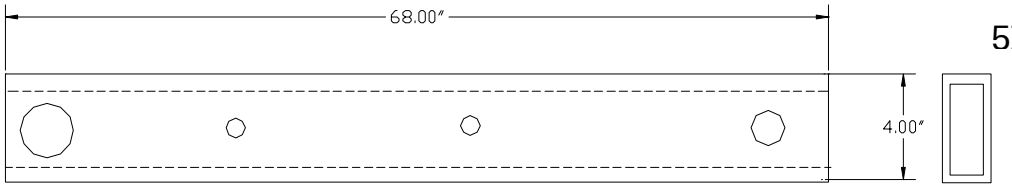
5D

Forward Arm Supports
(1 Left & ! Right required



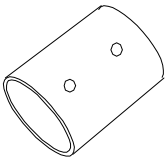
5E

Rear Mount for Forward Arm Supports
JD & IH (left and right)
Use 2x2x3/8" angle JD—24" Gleaner/IH 18"



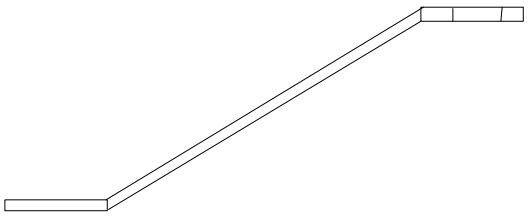
5F

Forward Arms (2 required)



Center Tubes with grease zirks

Arm Support Brackets
(2 Required)



Beginning from either side slide the *Main Axle Tube* [7C] through the *Center Tube* on the end of the *Forward Arm* [7A]. Bring the *Main Axle Tube* to within approximately 12" of the opposite *Forward Arm Assembly*. Maintaining support under the *Axle Tube* so as to prevent undue strain on the *Forward Arm Assembly* begin sliding pairs (lefts and rights) of *Reel Fingers* onto the *Main Axle Tube*. The number of pairs slid between the *Forward Arm Assemblies* will be determined by the number of rows on the corn head, i.e.6 row head will have 4 pairs, and 8 row will have 6 pairs, etc.. Once this is accomplished slide the *Main Axle Tube* through the other side of the opposite *Forward Arm Assembly* approximately 12" past the outside snout [7A].

On the side that has the *Forward Arm Assembly* with the loose *Center Tube* slide the *Large Drive Sprocket* onto the *Axle Tube* [7E]. Note that the sprocket hub is to the outside. Position *Center Tube* as shown in picture [7E], there should be just enough room between the sprocket and *Forward Arm* tube to get a grease gun on the zirk. Weld in *Center Tube* being careful that the *Center Tube* does not bind on the *Axle Tube*. When this is accomplished slide the *Large Drive Sprocket* tight up against the *Center Tube* and tack sprocket to *Axle Tube*. Do not weld solid until drive assembly is completed.

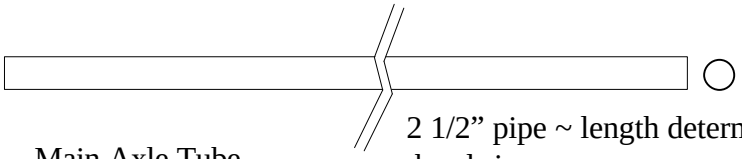
Locate the *Cross Tube Lock Collar* [7D] and slide it tight up against the *Center Tube* on the opposite *Forward Arm* assembly (see picture 7G) and tighten set screw.

Slide final pair of fingers on each end of *Axle Tube*, one set by the *Large Drive Sprocket* and one set by the *Cross Tube Lock Collar*.

At this point there should be a pair of fingers hanging between each snout and the tips of the fingers should be touching (see 7A & 7B).

7A

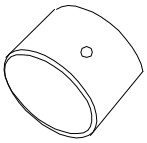
7B



Main Axle Tube

2 1/2” pipe ~ length determined by head size.

7C

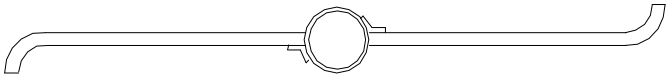


3” Pipe

Cross Tube Lock Collar

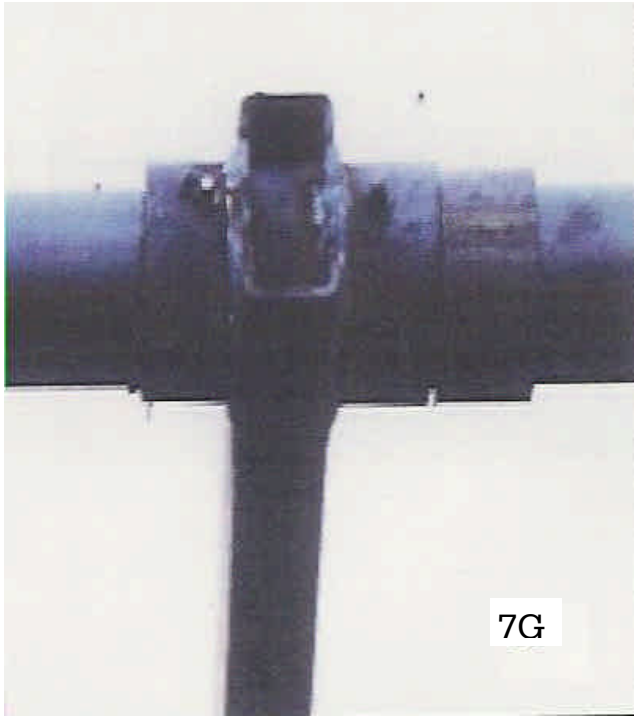
7D

7E



End Finger ~ 2 required

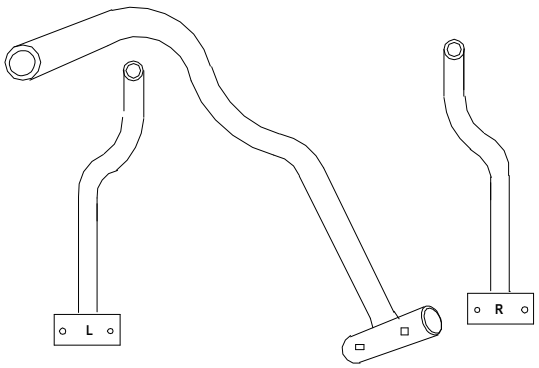
7F



7G

Reel Fingers
(2 per set ~ 1 left & 1 right)

7H



Starting from either side of the head take the first finger and center it between the two outside snouts with the tip of the finger just clearing the gathering chain (see picture 9A). Once this is done tighten the set screws onto the *Axle Tube* and then rotate the *Axle Tube* 180 degrees until this finger is pointed straight up. Check second finger for clearance and that it is hanging straight down from first finger then tighten its set screws.

Rotate the *Axle Tube* so as to move the finger approximately 20" from the starting position [9B] then move to the next set of fingers and repeat the above process until all of the fingers have been equally positioned (see picture 9C).

Note as the reel turns it sweeps across the head and there should not be more than two fingers in the corn at any one time. The positioning of these fingers is critical to the proper operation of the corn reel.

Slide on the *End Fingers* approximately 1" - 1 1/2" from the edge of the outside snout. Again paying special attention to the positioning of the *End Finger* in relation to the next closest finger.

Rotate the reel checking that it turns freely and that none of the fingers brush against the snouts, adjust as needed.

9A

9B

9C

Locate *Motor, Chain, Master Link, Small Sprocket, Motor Plate, Idler Sprocket Bracket, Idler Sprocket* and *3/8" Square Stock*.

Clamp *Motor Plate* [11B] to *Forward Arm* approximately 18" from the *Large Drive Sprocket* [11D]. Notice that the plate is leaned back at approximately a 45 degree angle. Bolt *Motor* to *Motor Plate* [11B]. Note that motor shaft protrudes through on the same side as the *Large Sprocket*. Slide *Small Sprocket* [11C] onto the motor shaft with the hub turned towards the motor. Take a straight edge and lay it along the face of the two sprockets and slide the *Small Sprocket* in or out as necessary.

Bolt *Idler Sprocket Bracket* [11E] to the hole provided between the *Large Drive Sprocket* and the *Small Sprocket*. With the bracket hanging at a 90 degree angle to the arm lay the 3/8" square stock along side bracket and weld on. (see picture 11A)

Lay the chain over the sprockets, cut to length and connect together with the master link.

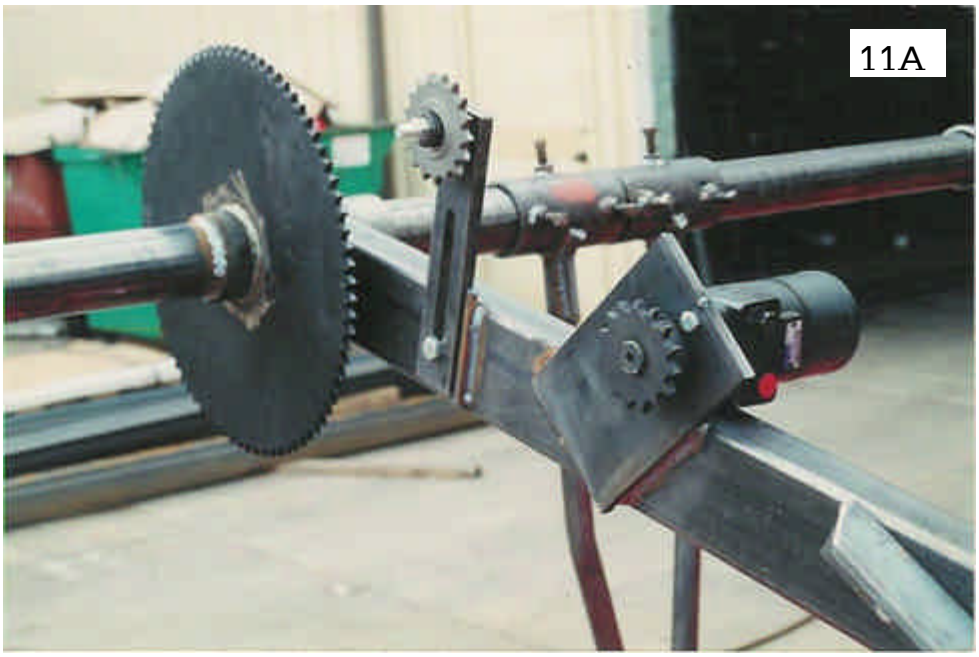
Install *Idler Sprocket* using spacer washers to align it to the other sprockets and then adjust the chain tension. (the *Idler Sprocket* will run on top of the chain)

Hook up hoses and start unit checking the rotation. If the reel runs backwards switch the hoses.

NOTE 1: The purpose of the unit design is so that the 'J' part of the finger pushes the corn down into the gathering chains and snap roller, what is left is then pushed up the snouts into the cross auger. As the finger moves up from the cross auger the 'J' part has a hook on the end to lift straight up out of any corn left before the auger takes it. This keeps it from flinging corn back out of the head.

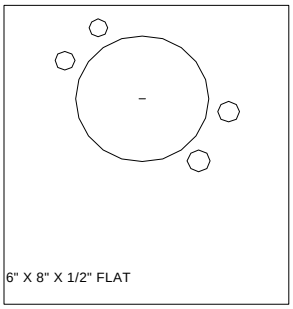
NOTE 2: This unit only wants to run at about 25-35 RPM. Adjust to ground speed similar to working with a bean head.

NOTE 3: The fingers are designed to bend under certain conditions for safety reasons. There are two things that will bend fingers, one is to run the unit to slow, and the other is if you have your ground speed is to fast and forces to much material into the head. Let the unit do its work, the fingers will feed the stocks in.

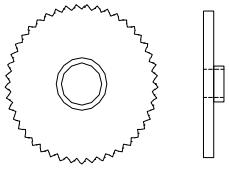


MOTOR PLATE
TWO HOLE FLANGE

11B

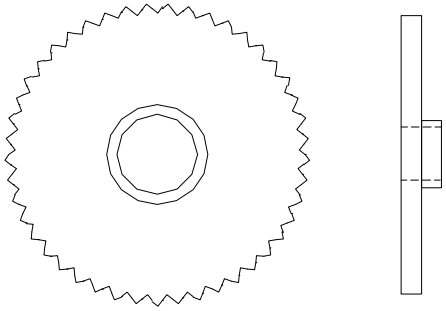


11C

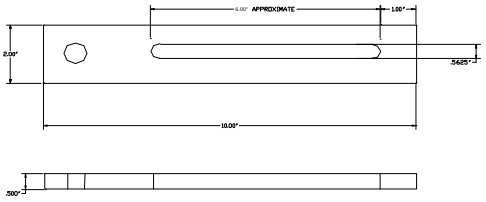


Small Drive Sprocket

11D



Large Drive Sprocket



IDLER SPROCKET
BRACKET

11E

CONTACT INFORMATION:

HERITAGE MACHINE AND WELDING
1001 W LOCUST
BLOOMINGTON, IL 61701
PH. 309-828-0400
FAX 309-828-2724
Email: heritage@hmwinet.com
www.hmwinet.com