

Vulcan Equipment  
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815/688-3051

## Instructions for Schlueter Harrow for Air Seeder



### Step 1:

Remove the pipe bracket and bolt 3/8" plate to INNER side of both wing wheel frames using existing bolts & lock-nuts



Step 2 FOR AIR SEEDERS WITHOUT DRIVE WHEEL ON CENTER FRAME:

Mount one (1) bracket on both sides of both center frame wheel brackets using ½"x12" bolts and Nylok nuts; do not tighten at this time.

Step 2 FOR AIR SEEDERS WITH DRIVE WHEEL ON CENTER FRAME:

Mount one (1) bracket on outside with plate on inside of both center frame wheel brackets using ½"x11 " bolts and Nylok nuts, do not tighten at this time.



Step 3:

Slide long 3 x 3 tube through 3/8" plate installed in step 1.

Mount one (1) short 3 x 3 tube to bottom of brackets installed in step 2 with four (4) 7/16" u-bolts each side WITHOUT DRIVE WHEEL and (2) 7/16" u-bolts WITH DRIVE WHEEL.

Fasten hinge point with 3/4" bolt & Nylok leaving loose enough to pivot.

Slide tube assemblies left or right to align pivot bolt with seeder frame pivot.

**Alignment is important.**

Slide brackets from step 2 forward or rearward until 3 x 3 tube assembly is parallel with seeder frame. DO NOT TIGHTEN HARDWARE.



Step 4; FOR AIR SEEDERS WITH DRIVE WHEEL ON CENTER FRAME:

(On air seeders without center drive wheel, skip to step 5.) Attach center ends of short 3 x 3 tubes to Seeder 6 x 4 tube with (1) bracket each side using (2) 3/8"x6" u-bolts and (2) 7/16" u-bolts. TIGHTEN ALL HARDWARE AT THIS TIME.



Step 4 FOR AIR SEEDERS WITHOUT DRIVE WHEEL ON CENTER FRAME:

Attach both 3 x 3 tubes together at center of frame with brackets using 3/8"x1-1/2" bolts. TIGHTEN ALL HARDWARE AT THIS TIME.



Step 5:

Lay out harrow sections per attached drawing (make sure harrow is rotated for proper direction of travel) and attach lift lever brackets and pull brackets (see picture in step 6 for pull brackets) in locations where there is no interference with tires and other. Use ½”x7” bolts, (1) flat washer, lock washers and nuts for levers and 7/16” u-bolts for pull brackets.

Use two (2) per harrow section\* and attach towards outer ends of sections if possible.\*\*

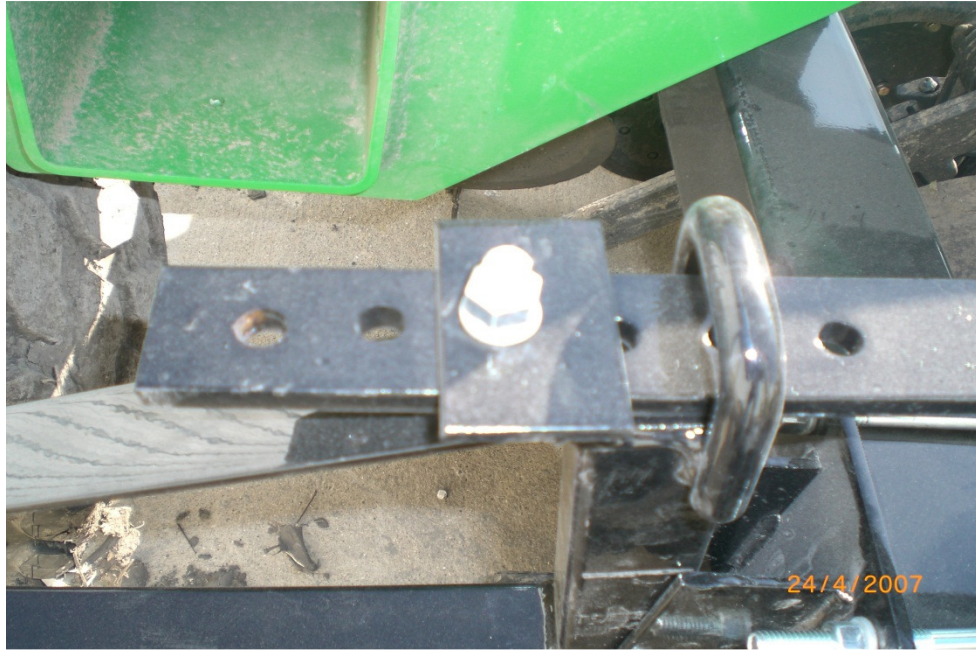
\*10’ wing harrow section will use (3) per section.

\*\* On CCS systems, left side of ladder may need to be re-worked to allow clearance for pull arm. Instructions and hardware are included.



**Step 6:**

Attach lift bars to lift lever brackets (step 5) using 1/2"x2" bolts & Nyloks. Install stops using 3/8"x1-1/4" bolts and adjust so harrow raises to desired height and stop moves far enough away in down position so harrow can float. Stop can be rotated 180 degrees for 1/2 inch increments. **INSTALL CLOSE TO END OF LIFT BAR FOR A TRIAL RUN AS DAMAGE COULD OCCUR IF PULL ARM IS TILTED TOO FAR. THE FINAL ADJUSTMENT SHOULD BE MADE WHEN ASSEMBLY IS COMPLETE.**



**Step 7:**

Attach pull arms to harrow at proper location using ½” u-bolts. Initial tine angle adjustment can be made by rotating tine bars and re-tightening tine u-bolts.

For installation questions, call Vulcan Equipment at 815/688-3051.