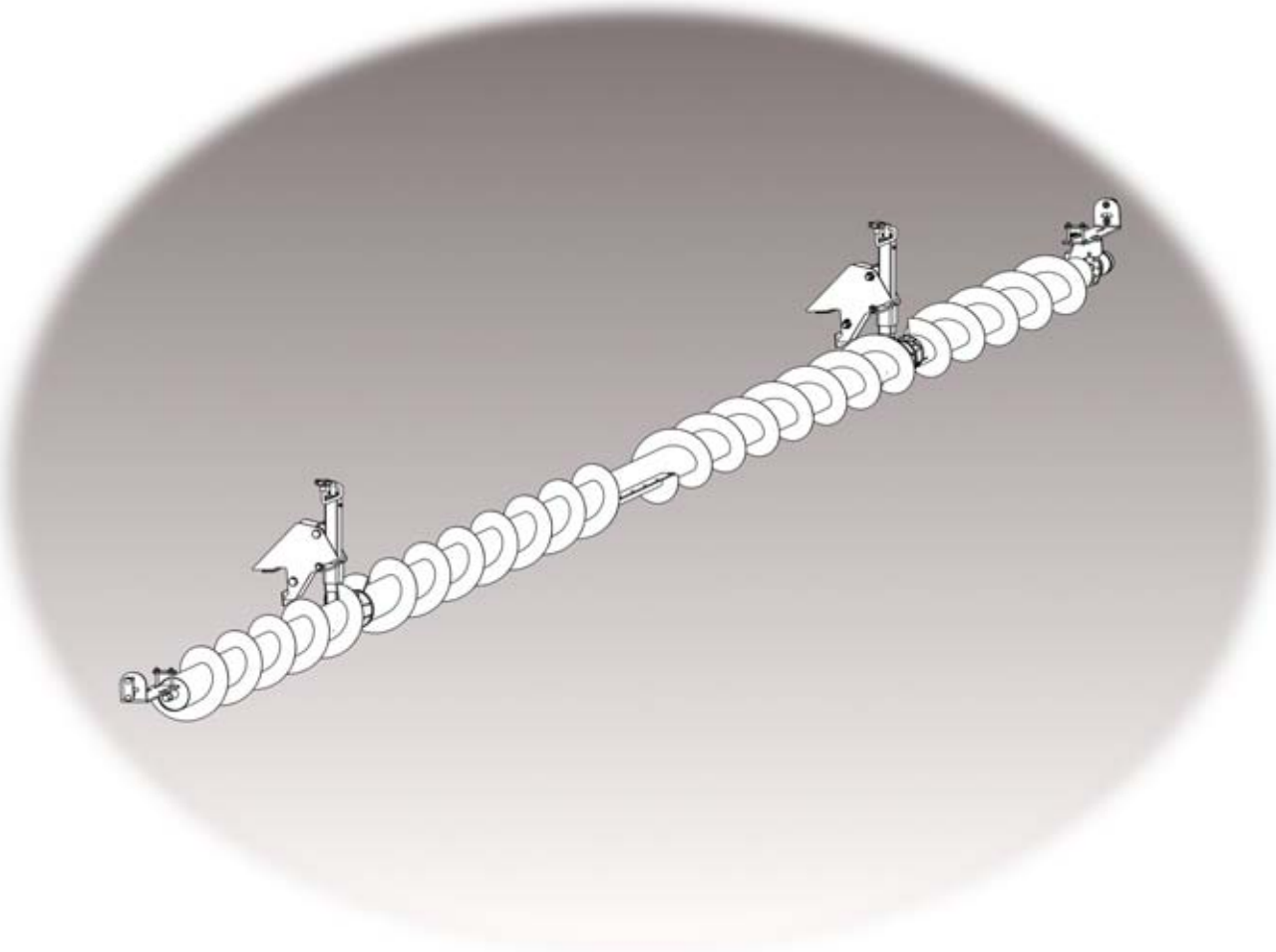
Honey Bee

Cross-Auger
Installation Manual



Preparation

Unpack the unit, and check the parts supplied against the packing list enclosed. Familiarize yourself with the components, their locations once installed, and the sequence of assembly by referring to the contents of this manual. Pay special attention to the orientations of the bearings.

Smooth the shafts, and universal sleeves with emery cloth if needed, and test the fit of all bearings and universals before you attempt to install them. Use a good anti-seize compound on all connections involving the auger shafts. This will aid assembly, and will make disassembly much easier if repairs are required at a later date.

Protect the drapers with a sturdy surface, such as sheets of plywood to prevent damage to the drapers while positioning and lifting the auger sections.

Kit Contents

DESCRIPTION	QTY.
BOLT 3/8 X ¾"	4
BOLT 3/8 X 1"	10
BOLT 3/8 X 1-1/2"	6
BOLT 1/2 X 1-3/4"	2
BOLT 1/2 X 4"	2
BOLT 3/4 X 4-1/2"	2
BOLT 3/8 X 1"	3
TEK SCREW 1/4 X 3/4"	3
NUT 1/2"	2
BOLT 3/4 X 4-1/2"	2
NUT 3/4"	2
WASHER FLAT 3/8"	14
NUT 3/4"	2
WASHER FLAT 1/2"	4
WASHER FLAT 3/8"	4
WASHER SAE 3/8"	4
WASHER SAE 1/2"	5
WASHER LOCK 3/8"	4
WASHER SAE 3/4"	8
NUT 1/2" UNC C/LOCK	9
NUT 3/8" UNC C/LOCK	27
ELBOW SW 10MJ-10FJX-90	1
ELBOW 10MB-10MJ -90	3
BOLT 3/8 X 3" NC CARR GR5	12
SAFETY WALK ADHESIVE- 2"	20
BEARING L/D FLNG	2
FLANGETTE 3 BOLT	2

DESCRIPTION	QTY.
BOLT 1/2 X 1-1/4"	5
KEY 1/4 X 1/4 X1-1/4"	5
NUT RODCPLG 3/8"	4
SET SCREW SQ.HD 1/2 X 1.5"	2
MOTOR HYDRAULIC-WHITE 115cc	1
NEEDLE VALVE #10 CAVITY	1
BRG SPHRCL-3 SEAL-NO SETS	3
U-JNT 1" YOKE	3
WASHER 3/8 SEAL BONDED	4
HH08 22 10FJX-10FJX	1
SPCR 1.050 X 0.824 X 0.875	4
SHIELD-CNTR XAUG PLST	1
UHMW-PDL-CNTR XAUG GBP	2
JACK-XAUG ASSY 07	2
SPCR 1.660 X 1.278 X 0.5	2
CLAMP PLT-JACK-XAUG	2
XAUG WD-240" CNTR	1
BRG MNT-XAUG FRMD	1
BRKT-L-XAUG FRMD	2
CLAMP PALTE-XAUG	2
BUSHING 1.050X0.850X0.4375	2
CLAMP PLATE-XAUG	2
MOUNT PALTE-XAUG/JACK GBH/SW	4
LOCK WD-SLV JACK-XAUG	2
SHIELD WD-HSG XAUG/BRG GBP	2
MOTOR MOUNT	1

Directions

For the purposes of this manual, "front" refers to the cutter-bar side of the header/swather, "back" refers to the side of the unit that attaches to the combine or windrower. "Left," and "right" are as viewed from the back of the unit facing the front.

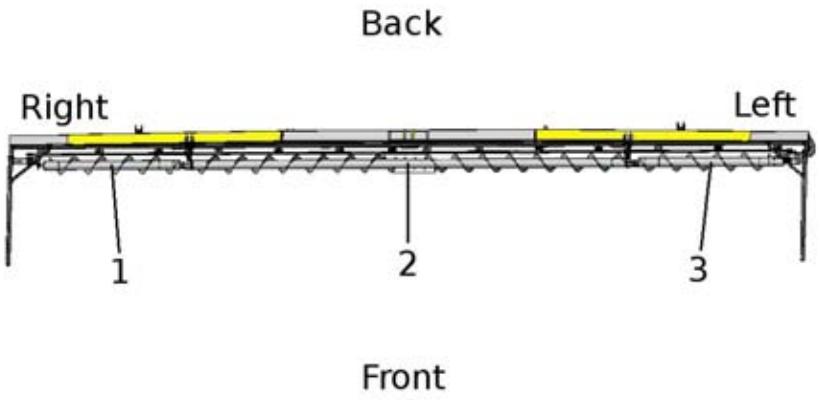


Illustration 1: Top-Down view of the cross auger assembly.

Assembly

Lower the header to the ground or onto stable blocks, whichever will provide the most comfortable working height. Lower the reel to the stops, and move it fully forward.

If you elect to use a front-end loader or other mobile hoisting device to lift the auger into place, dismount the swather from the power unit to provide clear access to the rear of the header. (See the header operator's manual for instructions.)

If you do not have a hoisting device, set (2) 2x4's across the main tube of the header, and across two tine arms of the reel, and have nylon straps or small come-alongs to lift the augers into place. Move one 2x4 at a time, as necessary for each lift.

When installing the universal joints, it will be helpful to wedge the slot in the sleeve open slightly until it is in place.

WARNING 	***Care must be used when working around pressurized hydraulic systems. All fittings must be securely connected before the windrower is started, and power is applied to the swather. Serious injury, and/or damage to equipment may result from poor connections.***

1. Before you begin, prepare each auger drum by attaching the auger shaft key to both shafts of each drum.

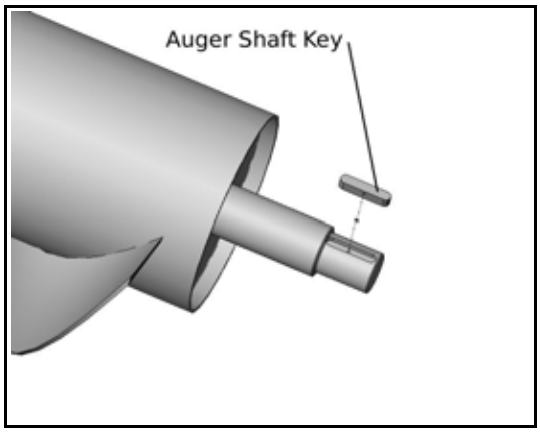


Illustration 2: Shaft Key

2. Attach all four grip adhesive pads to the frame above and below the mounting brackets. Each mounting bracket can be found about 1/4 of the way from each end of the header.

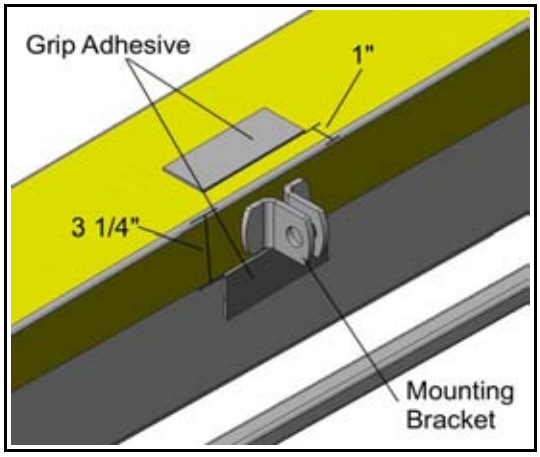


Illustration 3: Grip Adhesive

3. Loosely attach the mounting plates to both mounting brackets. Do not tighten until after you attach the auger jack.

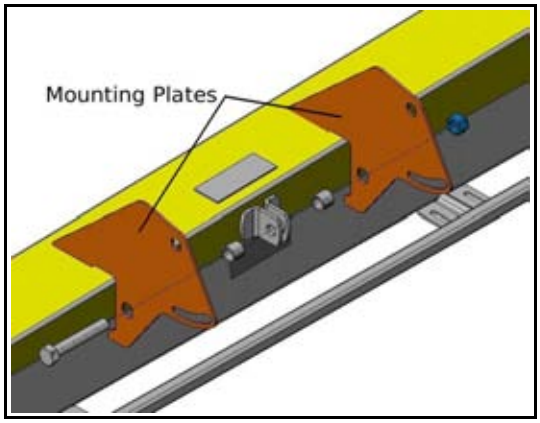


Illustration 4: Mounting Plate Installation

4. Assemble both of the auger jacks, be sure to enclose the bearing within the bearing clamp.

5. Slide both auger jacks onto each end of the center auger drum (#2 in the top down view located on page 2).

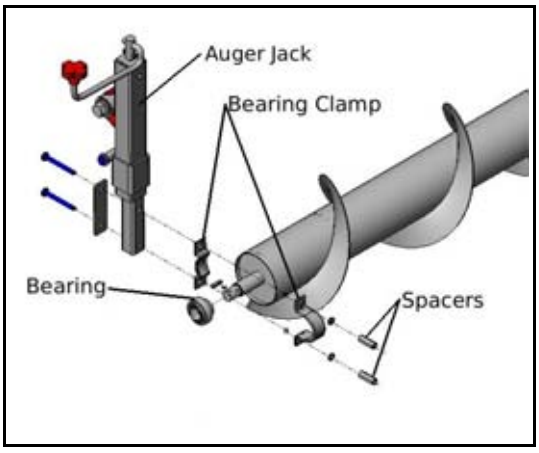


Illustration 5: Auger Jack Assembly

6. Lift the center auger drum and auger jacks into place. Connect both of the jacks to the mounting plates using the nuts, bolts and washers provided.

7. Tighten up the mounting plates.

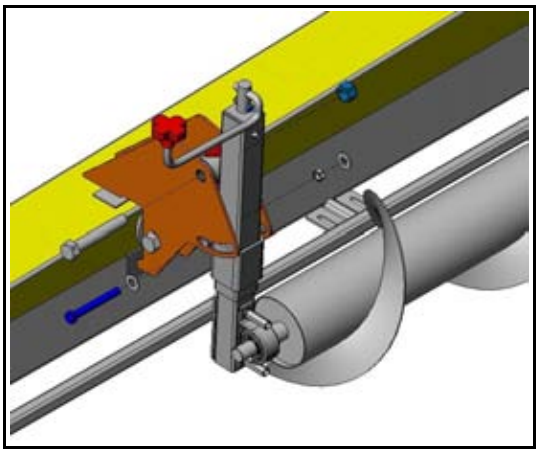


Illustration 6: Auger Jack Installation

8. Connect both center paddles to the center of the auger drum (#2 on the top down view on page 2). The paddle on the front of the auger drum should be on the underside of the plate, while the paddle on the back side of the auger drum should be on top of the plate.

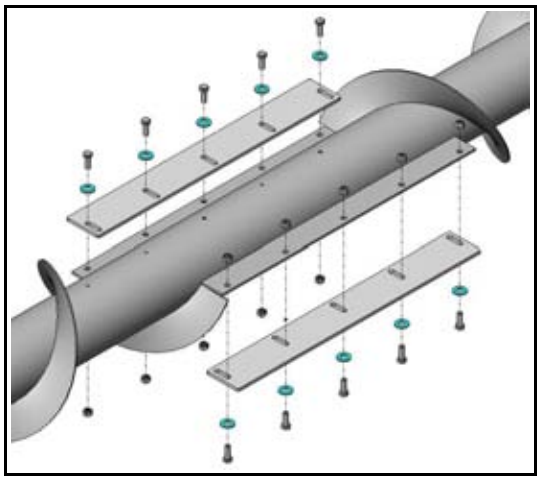


Illustration 7: Center Paddle Assembly

9. On the auger extension closest to the right side of the header (marked as #1 on the top down view), connect a universal joint to the shaft pointing towards the center of the machine.

10. Tighten the set screw and bolt on the portion of the universal joint that you just connected to the auger shaft.

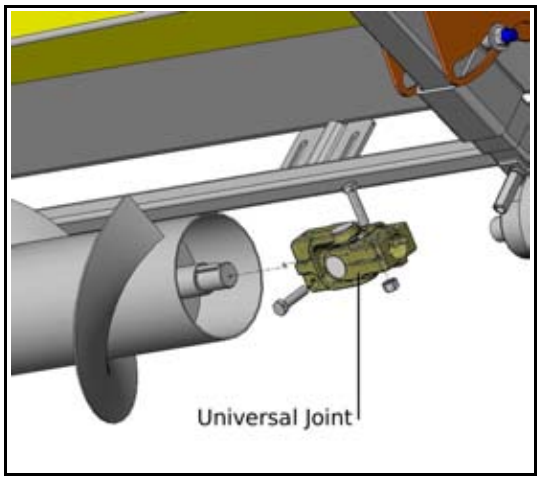


Illustration 8: U-Joint Assembly

11. Assemble the bearing and bearing mount for the right side of the auger extension. Do not tighten the nuts and bolts yet.

12. Slide the bearing and bearing mount assembly on to the shaft of the auger drum on the right side of the header (marked as #1 on the top down view).

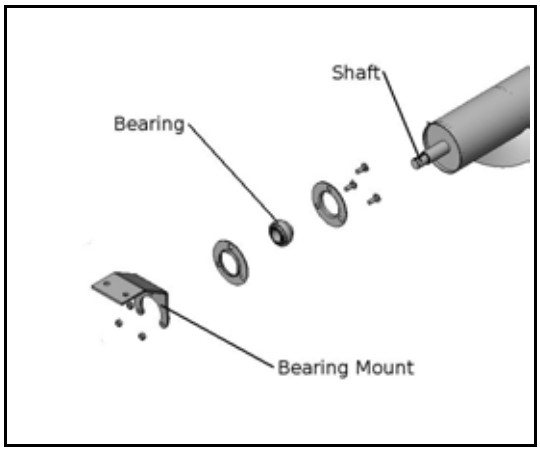


Illustration 9: Bearing Mount Assembly

13. Connect the other side of the universal joint to the center auger extension.

14. Tighten the remaining set screw and bolt on the universal joint.

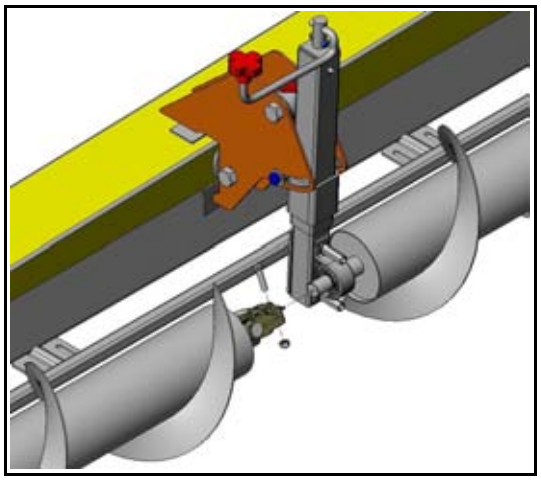
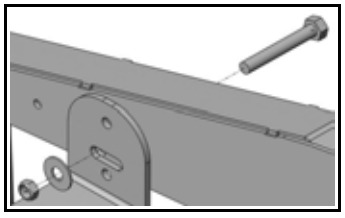


Illustration 10: U-Joint

15. Connect both of the L brackets to the reel arm and the reel arm brace at both ends of the header. Leave all the connections loose until the auger extensions have been attached.



All Grain Belt Plus models connect the L-bracket to the reel arm via a nut, washer and bolt (see above)

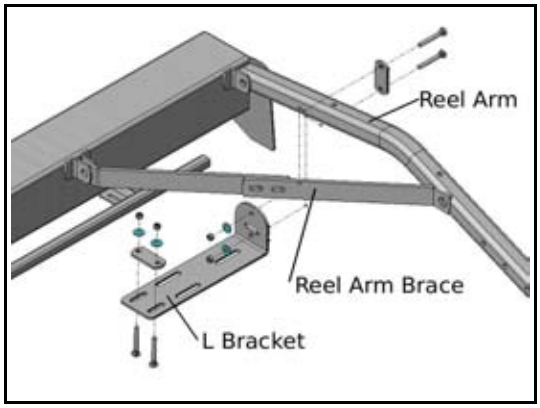


Illustration 11: L Bracket Installation

16. Attach the bearing mount that you had connected to the auger shaft in step 12 to the L bracket on the right side of the header. Leave the bolts loose.

    -The reel arm brace has been removed from this image for clarity.

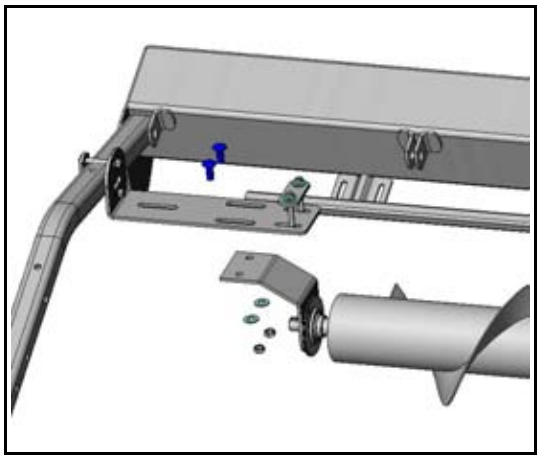


Illustration 12: Bearing Mount Connection

17. Attach the universal joint cover over top of the universal joint that you had previously connected. Make sure that you use washers both behind and in front of the cover.

18. You can now tighten up the L bracket and bearing assembly on the right hand side of the header after making sure everything is lined up.

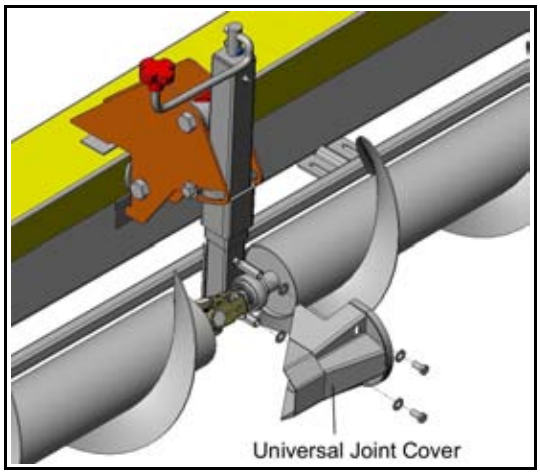


Illustration 13: U-Joint Cover

19. For the remaining auger extension (marked as #3 on the top down view), attach the second universal joint to the shaft pointing towards the center of the header.

20. Tighten the bolt and set screw for the portion of the universal joint that you connected to the shaft.

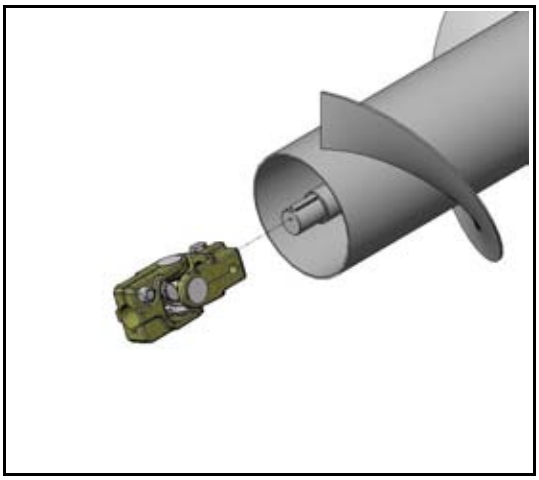


Illustration 14: U-Joint

21. Assemble the motor and it's fittings.
    1. Connect the needle valve to the bottom of the motor.
    2. Screw the 2 elbows into the side of the motor.
    3. Connect the motor to the motor mount using the nuts and bolts provided.

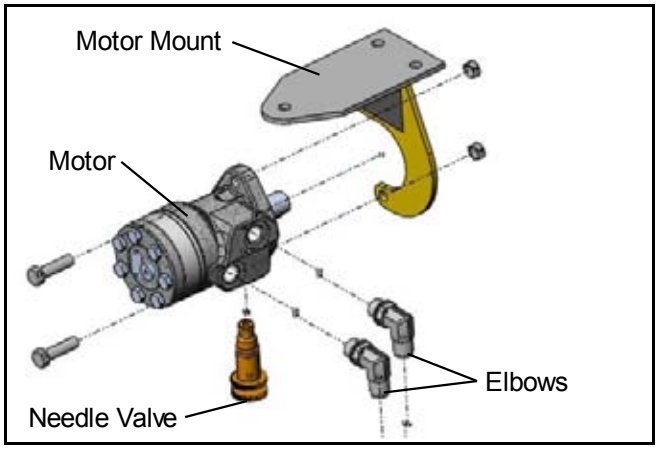


Illustration 15: Motor Assembly

22. Connect the remaining end of the second universal joint to the remaining shaft of the center auger drum.

23. Tighten the last bolt and set screw for the universal joint.

24. Attach the universal joint cover to the spacers, using the bolts and washers provided.

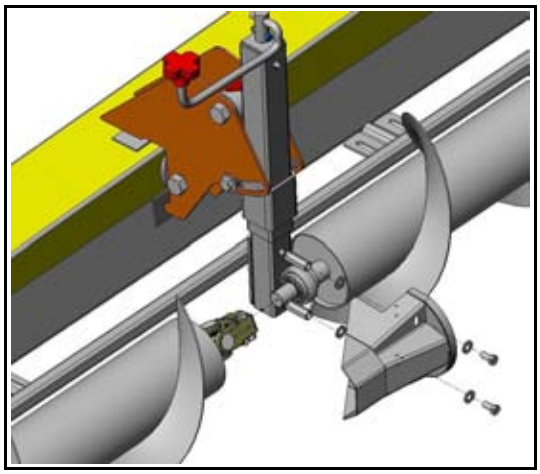


Illustration 16: U-Joint Cover Installation

25. Connect the final universal joint to the shaft of the last auger extension (#3 on the top down view).

26. Tighten the bolt and set screw on the universal joint.

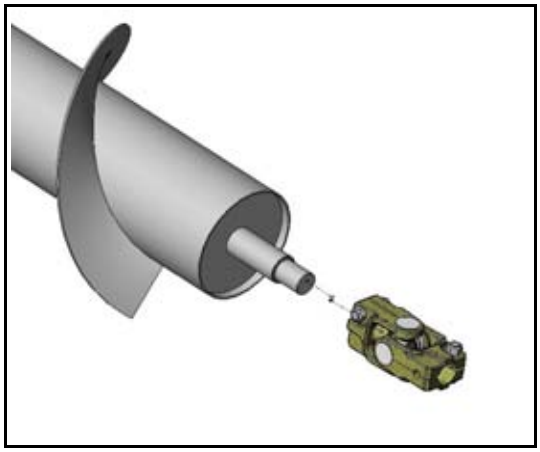


Illustration 17: Final U-Joint Installation

27. Slide the shield as far as you can over the end of the auger extension. Do not screw into place yet.

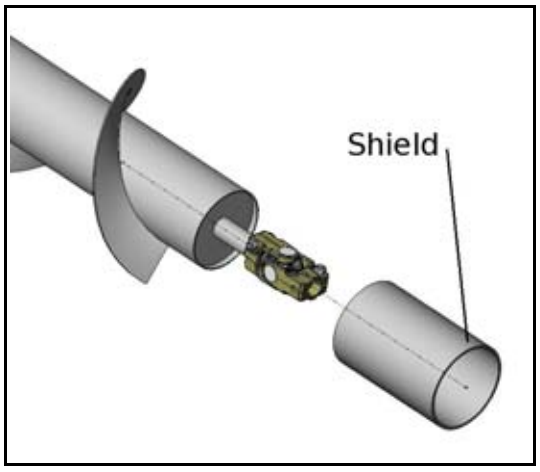


Illustration 18: Initial Shield installation

28. Connect the the motor assembly to the universal joint which you had just attached to the end of the final auger extension (#3 in the top down view)

29. Tighten the last bolt and set screw on the universal joint.

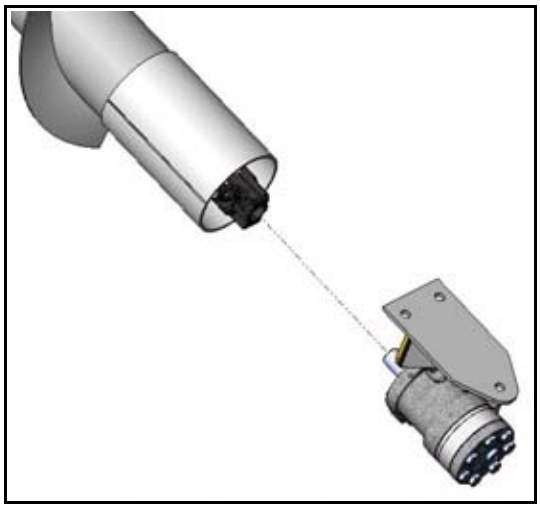


Illustration 19: Motor Assembly Connection

30. Attach everything to the remaining L bracket using the motor mount plate and the nuts, washers and bolts provided.

    The reel arm brace has been removed from this image for clarity.

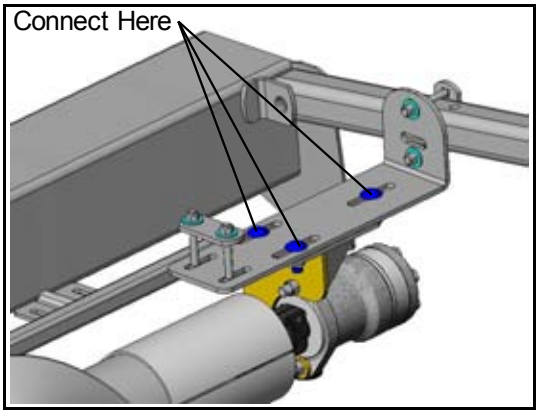


Illustration 20: L Bracket Connections.

31. Slide the cylindrical shield back up towards the motor. Leave approximately 1 inch of space between the shield and the motor mount plate.

32. Drill 3 holes around the circumference of the shield where it overlaps the auger extension.

33. Screw in 3 self tapping screws to hold the shield in place.

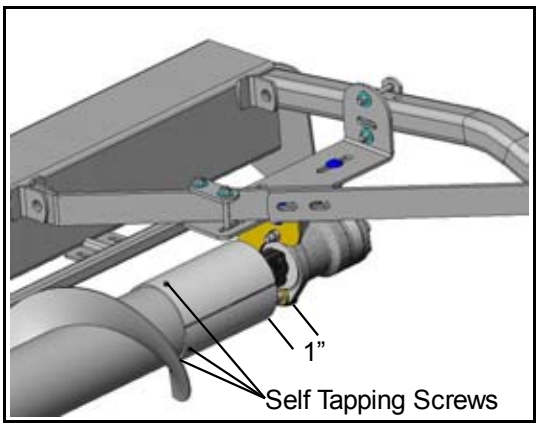


Illustration 21:Final Shield Installation

NOTE:	***If your swather/header has the <u>double swath option</u>, proceed directly to step 40 on page 13 and 14. Do not attempt steps 35 through 39.***

WARNING 	***Care must be used when working around pressurized hydraulic systems.*** ***All fittings must be securely connected before the windrower is started, and power is applied to the swather. Serious injury, and/or damage to equipment may result from poor connections.***

Hydraulic Set Up When Using the Single Swath Option.

34. Take the power return line from the left hand draper motor and disconnect it from the steel line.

35. Take the power return line from the draper motor that you had disconnected from the steel line and connect it to the power in port on the cross auger motor.

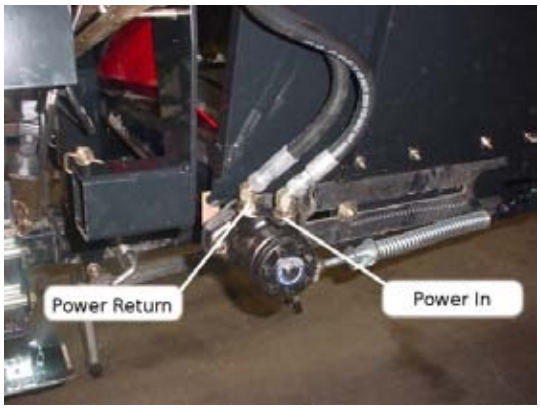


Illustration 22: Draper Motor Connections

36. Connect the Power return line from the cross auger motor to the power return steel line that had been disconnected on step 35.

37. Open the needle valve slightly, start the power unit and test the assembly.

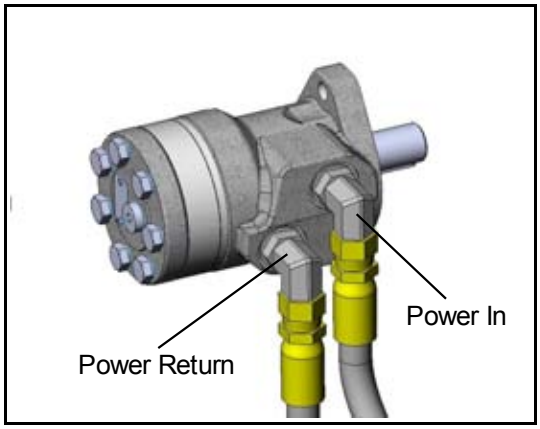


Illustration 23: Motor Connections

38. Adjust the speed of the cross auger via the needle valve, so that the flighting will move the crop with, or slightly faster than, the drapers. Be prepared to change this setting from time to time, as crop conditions dictate.

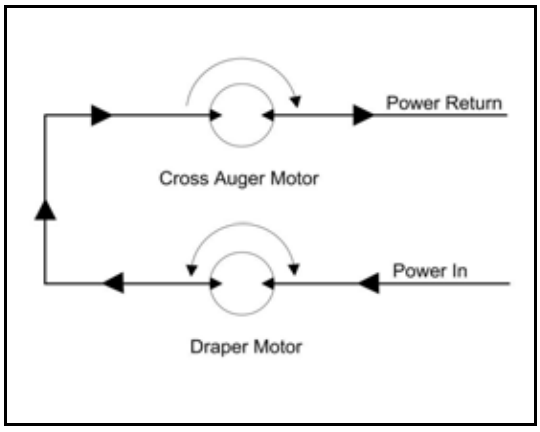


Illustration 24: Hydraulic Schematic

Hydraulic Set Up When Using the Double Swath Option.

With the double swath option, you will sometimes need to move your draper deck. Because the draper motor is connected in series to the cross auger motor, when you move the draper deck, the hydraulic lines connecting the two motors will interfere with the process. To alleviate the problem, you will be required to disconnect the cross auger motor from the hydraulic circuit when shifting the draper deck. To simplify the procedure, you will be provided with 2 quick couplers which will allow you to easily complete the hydraulic circuit using either the draper motor and the cross auger motor or just the draper motor on it's own.

39. Disconnect the hydraulic line from the power in port of the draper motor.

40. Using the fittings supplied, connect the female end of a quick coupler to the power in port of the draper motor.

41. Connect the male end of a quick coupler to the end of the line coming from the power return port of the cross auger motor.

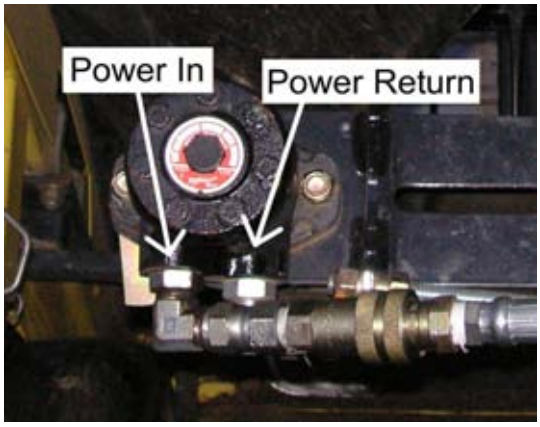


Illustration 25: Draper Motor Quick Coupler

42. Attach one end of the extra hydraulic line provided with the cross auger kit, to the power in port of the cross auger motor.

43. Connect the female end of a quick coupler to the remaining end of the extra hydraulic line.

44. Take the male end of the final quick coupler and connect it to the available end of the hydraulic line that you had disconnected from the power in port of the draper motor in step 40.

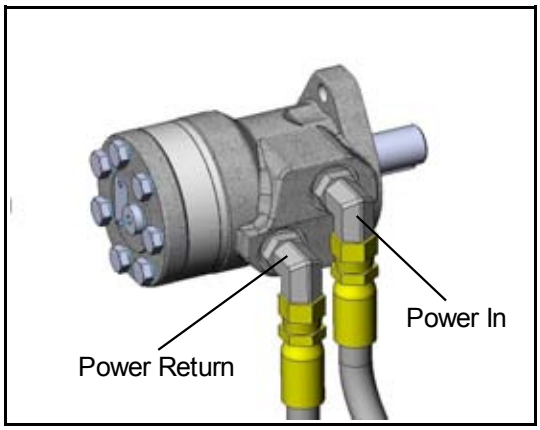


Illustration 26: Motor Connections

45. When shifting the draper deck, disconnect fittings 1, 2, 3, and 4, then reconnect fitting 1 with fitting 4, and fitting 3 with fitting 2.

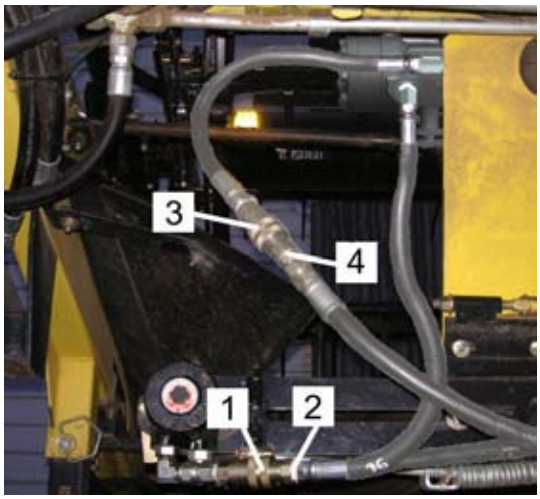


Illustration 27: Quick Coupler Assembly

46. Open the needle valve slightly, start the power unit and test the assembly.

47. Adjust the speed of the cross auger via the needle valve, so that the flighting will move the crop with, or slightly faster than, the drapers. Be prepared to change this setting from time to time, as crop conditions dictate.

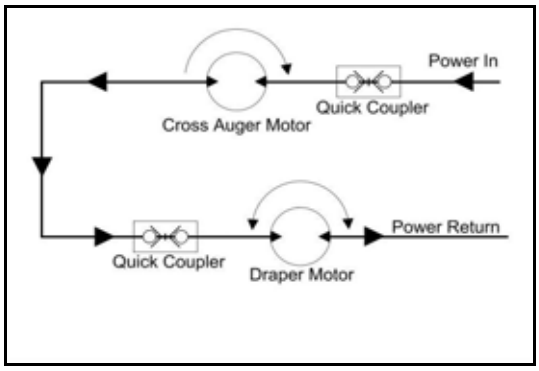


Illustration 28: Double Swath Schematic