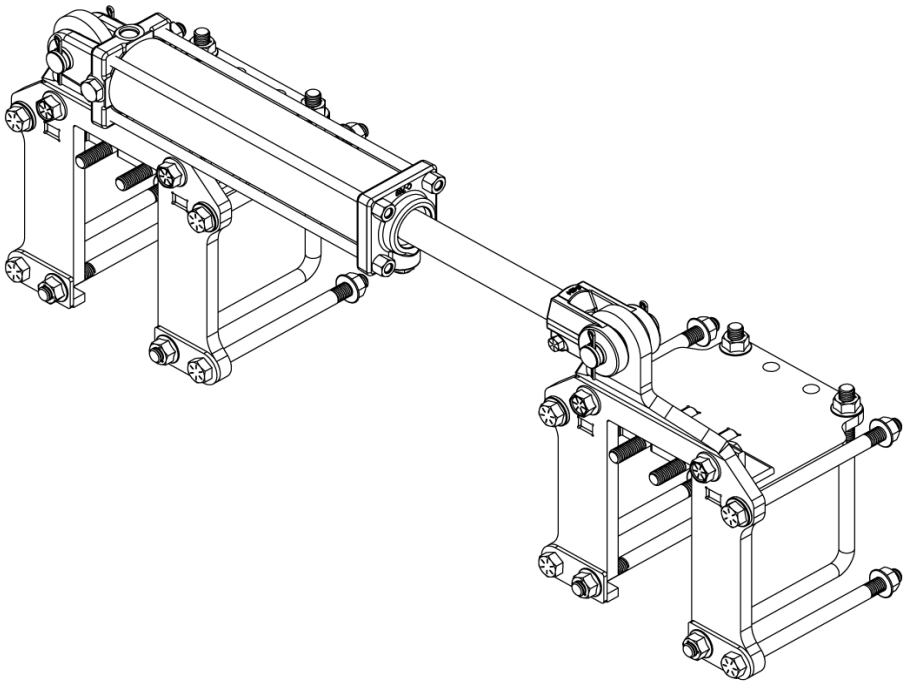
900083

1770/75 WEIGHT TRANSFER SYSTEM

16R-30 Frame

INSTALLATION INSTRUCTIONS



Martin-Till®

Martin Planter Attachments

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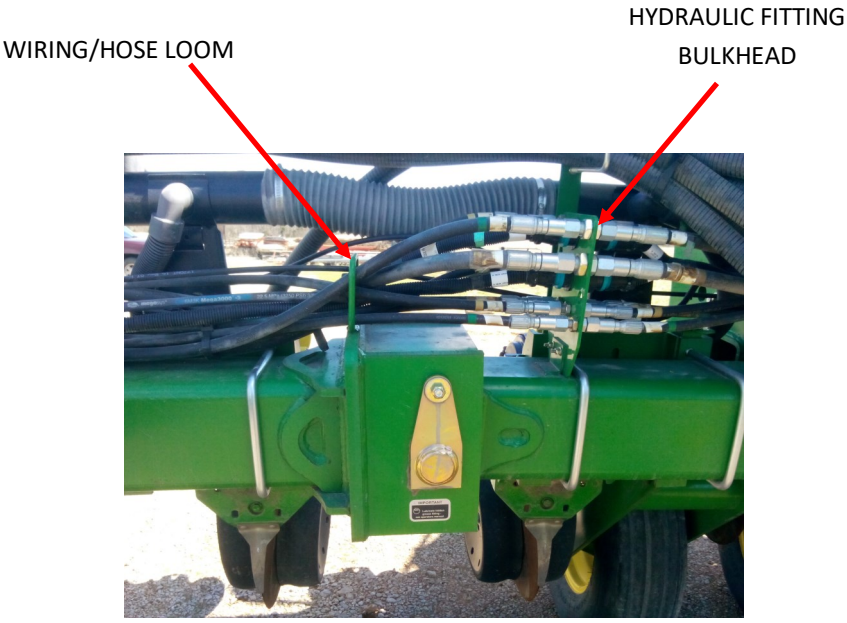
1/29/2024

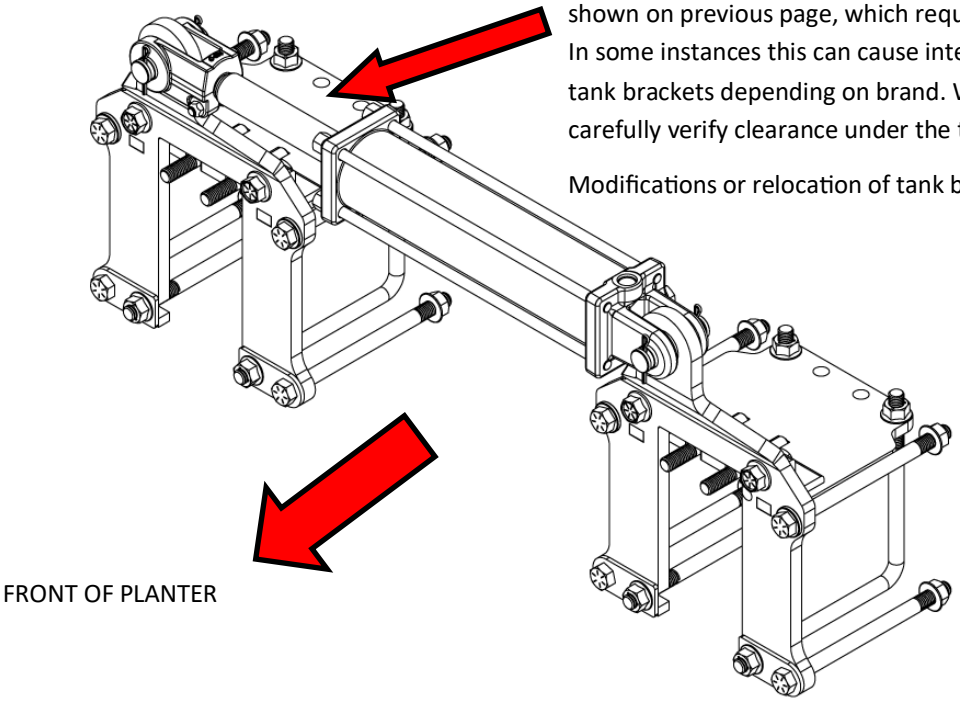
BEFORE INSTALLATION BEGINS EVALUTE POSSIBLE CLEARANCE ISSUES

It is important to verify that you do not have any installed accessories that may cause an interference problem when the planter is folded for transport. Mounting of liquid fertilizer tanks , air compressors, or other accessories along the center spine of the planter must be evaluated for interferences before and carefully confirmed after the initial installation upon the first time folding the planter. Every effort has been made to minimize the possibility of interferences, however any customizations or accessories mounted MUST be carefully evaluated by the installer to prevent the possibility of equipment damage.

Determine if you will need to use NORMAL or REVERSE mounting methods for the front bracket to avoid Hydraulic fitting bulkheads , wiring/hose looms, supports or fertilizer tanks.



NORMAL MOUNTING METHOD



FRONT OF PLANTER

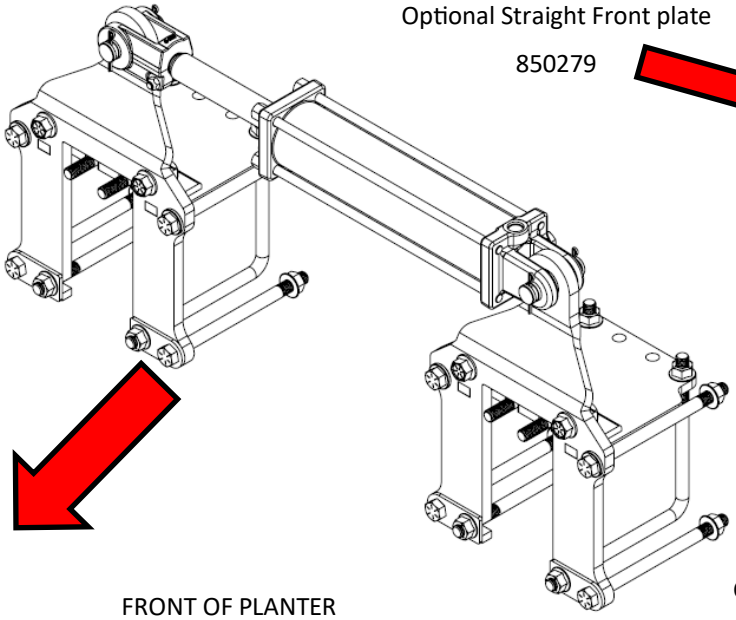
Late model planters have a hydraulic bulkhead at the hinge point , shown on previous page, which requires the offset to be forward. In some instances this can cause interference with some but not all tank brackets depending on brand. When folding the first time carefully verify clearance under the tank.

Modifications or relocation of tank brackets may be necessary.

MOUNTING WITH FRONT BRACKET REVERSED

In some cases for earlier model planters , or planters with custom fertilizer tanks installed , it may be desirable to relocate the cylinders closer to the center of the toolbar. In this case, it is possible to reverse the front brackets as shown below during the installation process, to change the cylinder position to eliminate interferences with tanks or equipment when the planter is folded for transport.

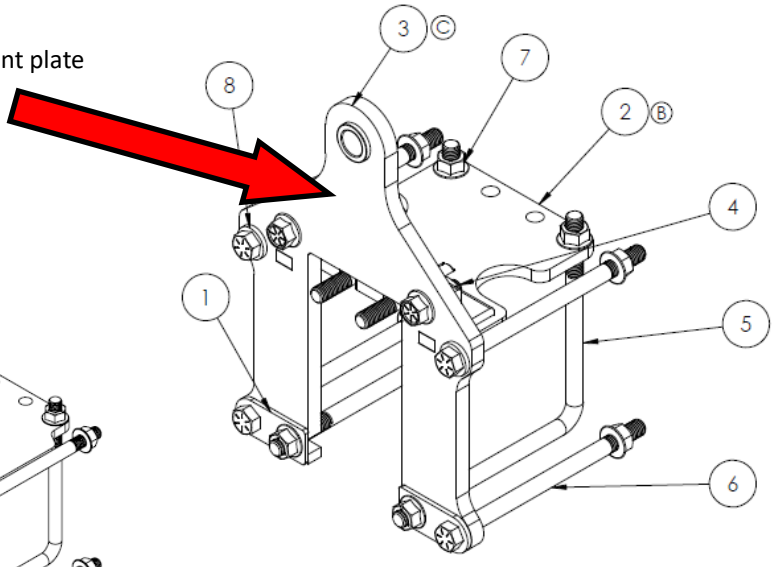
We also offer a front plate with no offset (850279) which will still interfere with the bulkhead but some users have opted toremove the bulkhead plate to allow the straight bracket to fit and also provide clearance for the fert. tank.



FRONT OF PLANTER

Optional Straight Front plate

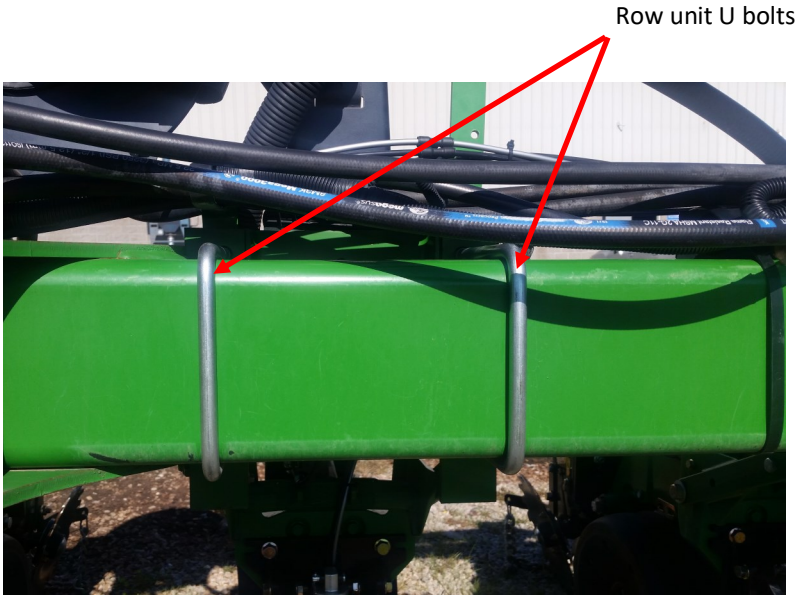
850279



CYLINDER OFFSET DIRECTION WITH FRONT BRACKETS RE-

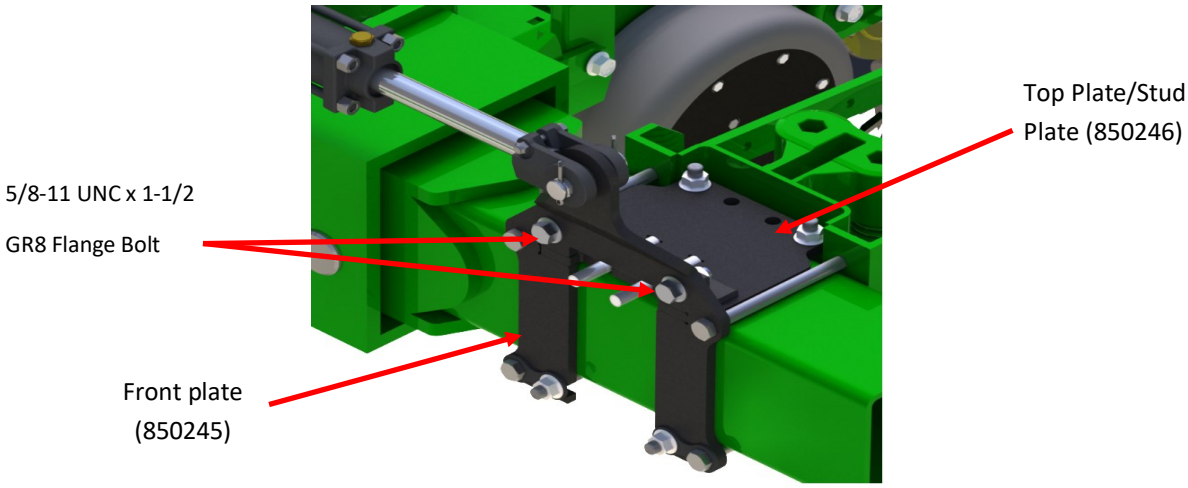
STEP 1 : SUPPORT THE ROW UNIT AND REMOVE U-BOLTS

Mark the position of the row units on either side of the wing so you can ensure that they are returned to the proper position. Properly support the row units in such a way that they do not fall, and remove the U-bolts attaching the row unit to the toolbar.



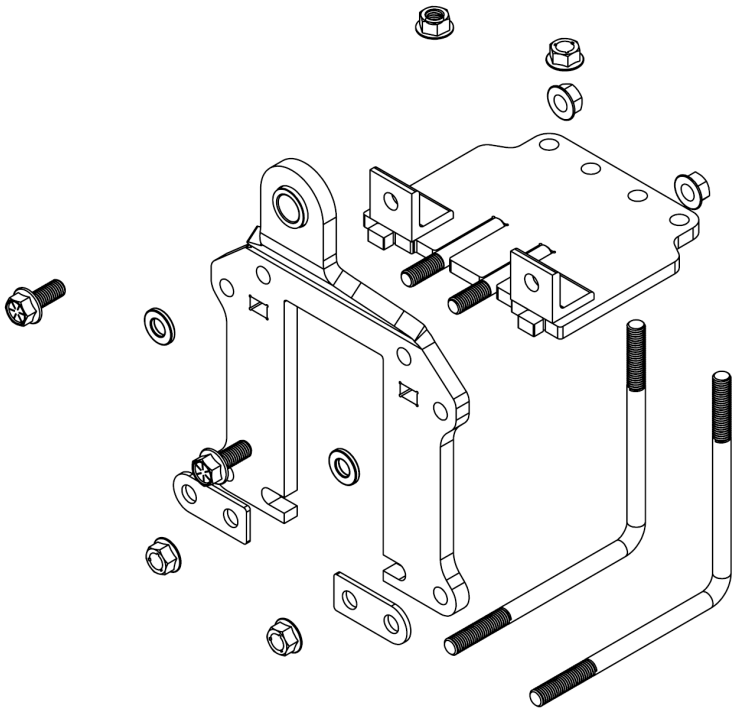
STEP 2 : PLACE THE TOP PLATE AND FRONT BRACKET

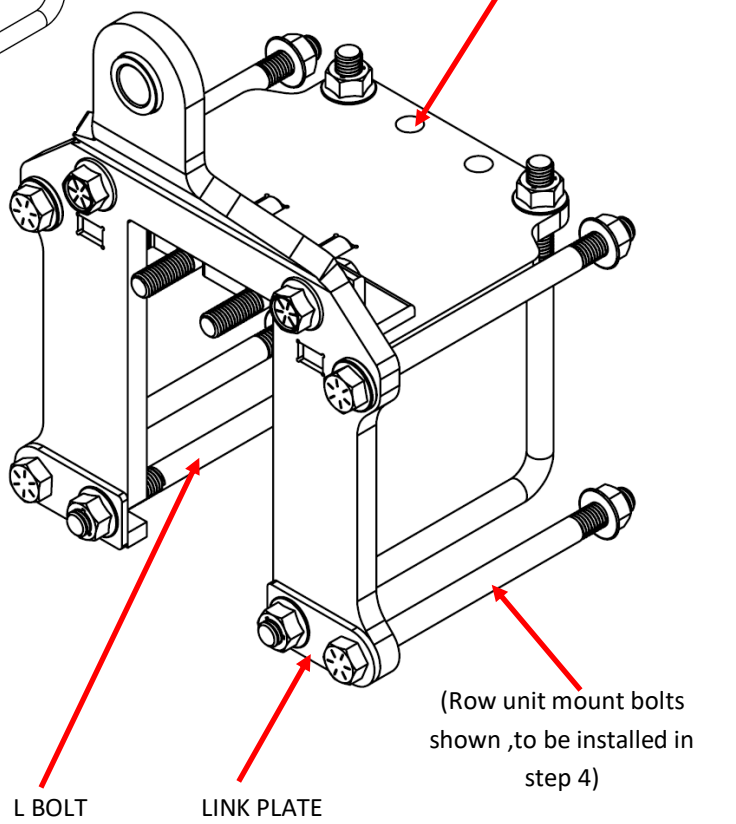
Place the top plate (850246) on top of the toolbar centered on the location of the row unit . Place the front bracket (850245) on the front of the toolbar as shown, aligning the slots in the bracket with the tabs on the top plate. Install the 2 , 5/8-11 X 1-1/2 flange bolts through the two upper holes in the front bracket and the angles on the top plate, install the 5/8 flange nuts finger tight to hold the assembly together for the remaining steps



STEP 3 : INSTALL THE L-BOLTS AND LINK PLATES

With the top plate and front brackets in place, insert the L bolts from underneath the toolbar inserting them in the two outermost holes in the top plate(850246). Start the 5/8 flange nuts on the L bolt to retain it in the hole, then place the bottom leg of the L bolt in the slot aligned with the hole, place the link plate(800201) over the L bolt with the flat edge of the plate to the inside of the bracket, the profile of the link plate should match the profile of the bracket . Install the second L bolt in the same manner in the opposite hole. Leave the L bolts finger tight , they will be tightened in step 4(NOTE: The two inner holes are for use when the factory fertilizer opener is to be installed)



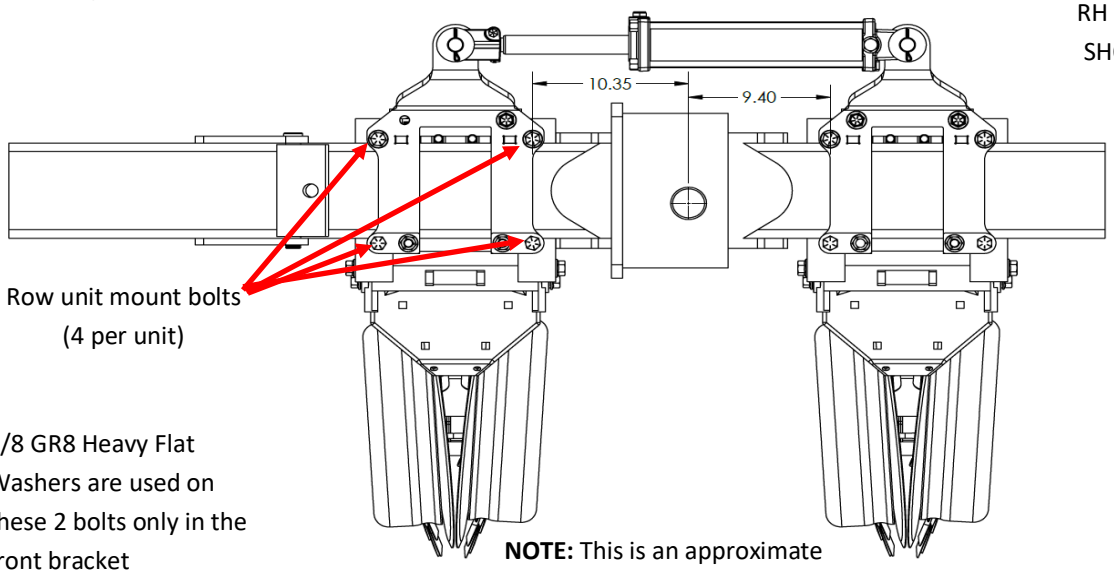


STEP 4: RE-MOUNT THE ROW UNITS

Insert the 4 row unit mount bolts through the 850245 bracket into the Row Unit mounting plate (W-Plate) and secure with the provided 5/8-11 flange nuts. (NOTE: The top 2 bolts only, require the use of the heavy washers supplied in the hardware kit) Verify the proper location of the row unit and refer to the figure below for the approximate location of the row units/brackets. Tighten the 4 bolts to sufficient torque to hold the row unit in place. Tighten the 2 ea 5/8 X 1-1/2 bolts to 150 ft/lbs (dry) . Next, tighten the 4 row unit bolts to 150 ft/lbs .Next, tighten the 5/8 flange nuts on the L bolts evenly , taking care that the bolts are located properly to the surfaces of the toolbar, final torque to 150 ft/lbs.

Distance from the pivot point to the flat edge of the front bracket

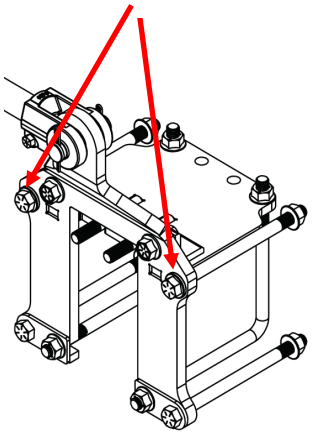
RH WING SHOWN



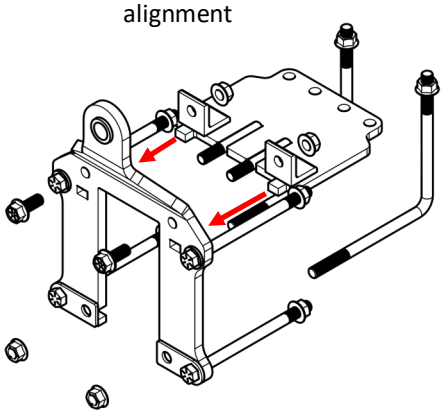
Row unit mount bolts (4 per unit)

5/8 GR8 Heavy Flat Washers are used on these 2 bolts only in the front bracket

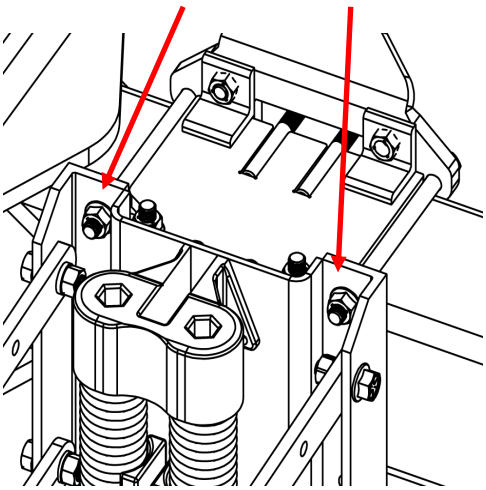
NOTE: This is an approximate distance provided for reference



Exploded view showing tab alignment



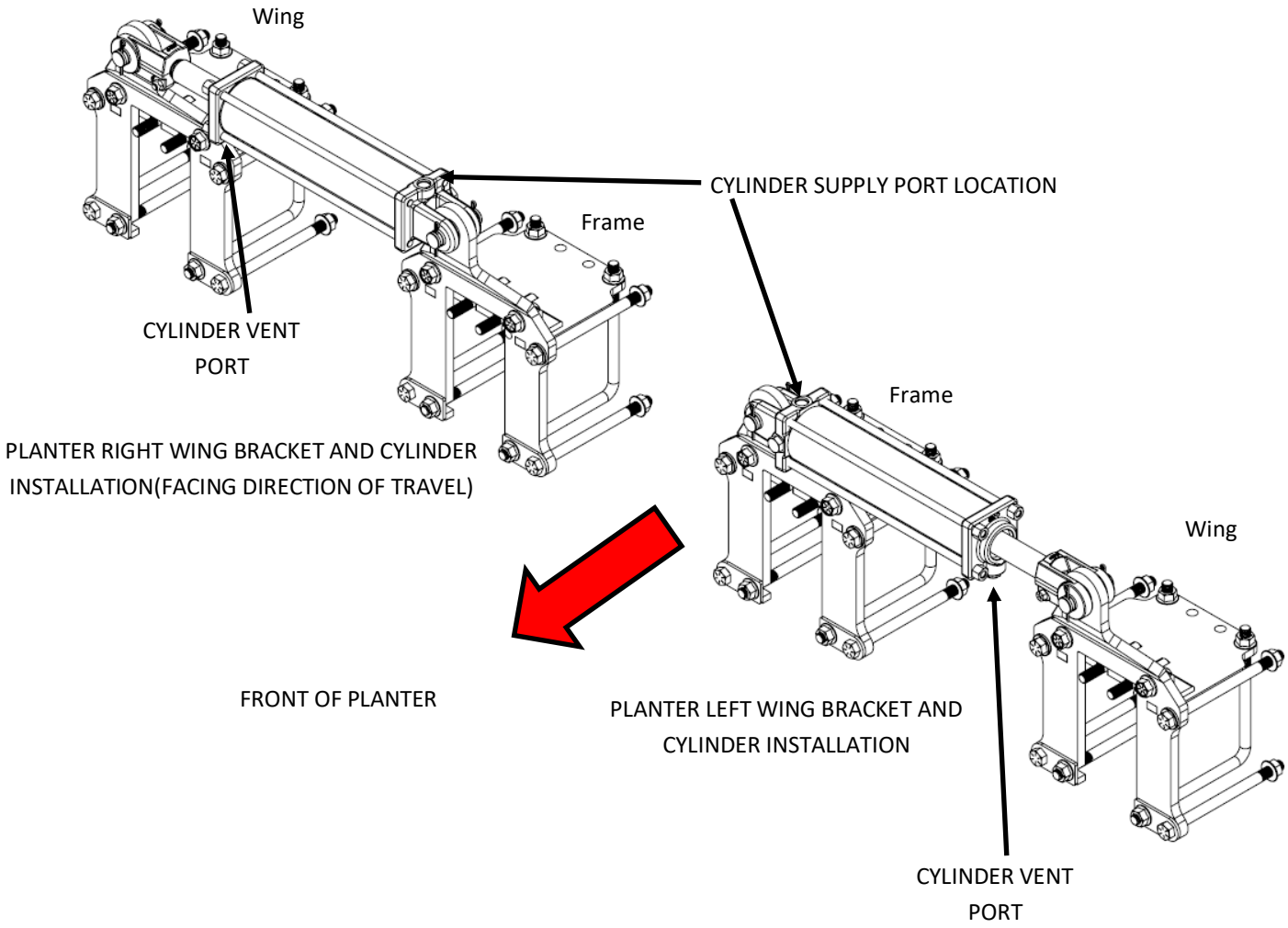
Secure the 4 , 5/8-11 x 9 GR8 Bolts with a Flange nut at the row unit mount plate



This view from the Row unit side of the planter toolbar

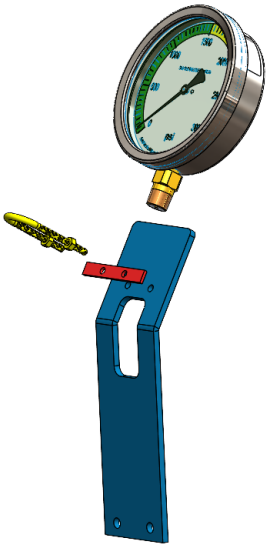
STEP 5: ATTACH THE HYDRAULIC CYLINDERS

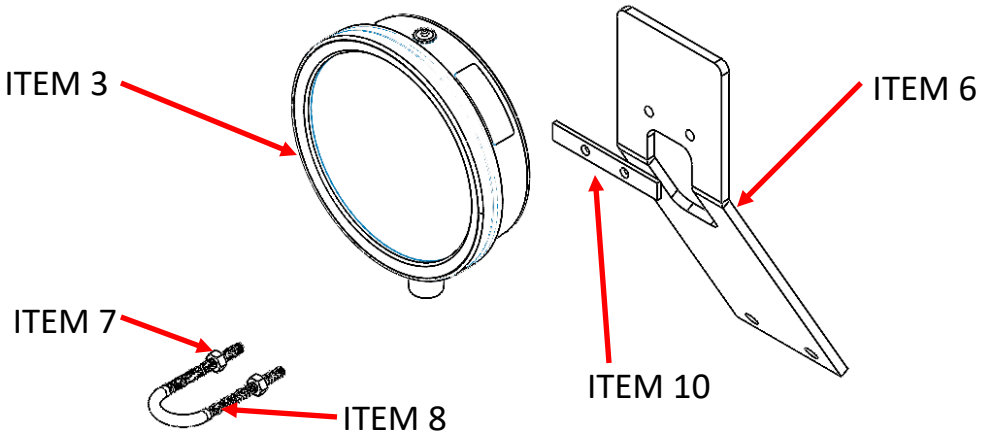
Install the cylinders to the bracket assemblies using the supplied pins. The cylinder's base end must be attached to the bracket of the frame section of the planter for clearance while folding . Install the brass breather vent (800192) on the Gland port (rod end) of the cylinder if not already installed. It may face front, back, up or down as it is water impregnable. You may use top ports or back ports to supply psi. to maintain clearance do not orient the cylinder so the supply port is facing towards the front. Proper orientation is needed to provide more clearance while folding.



STEP 6: INSTALL GAUGE

1. Mount the gauge as close to the hitch area as possible so It can be easily viewed while in operation. It comes with a black bracket that can be bolted to the main frame on JD. If your planter does not have this mounting location you will need to fabricate something to hold the gauge.
2. When installing, make sure to place the shim as shown to prevent vibration.



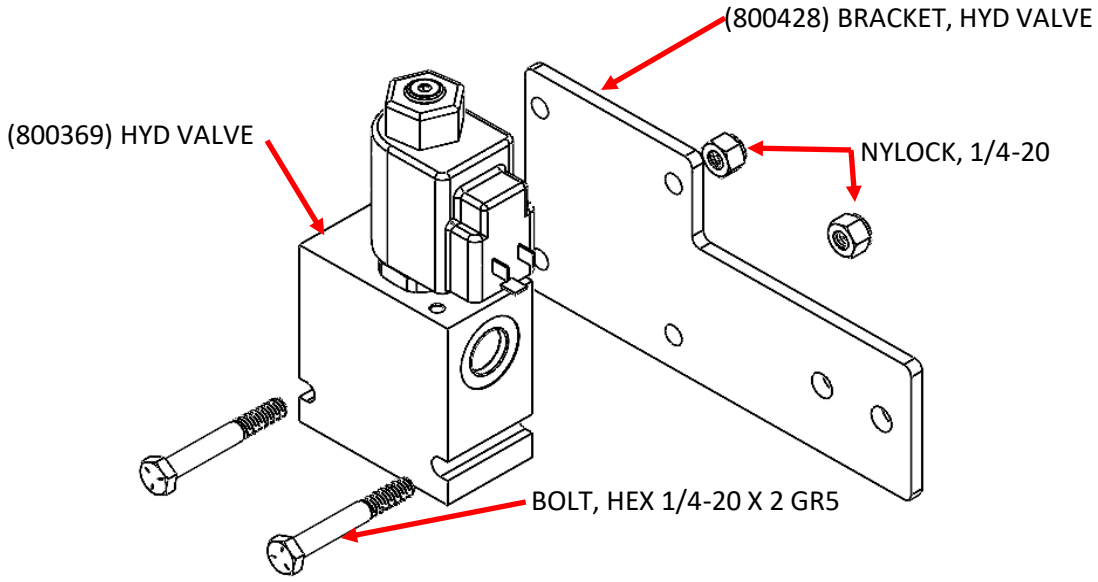


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3	800458	GAUGE,0-300 PSI ,MARTIN TILL	1
6	800660	GAUGE MOUNT	1
7	709052	1/4-20 X 1-3/8 U BOLT	1
8	757100	NUT,NYLOCK,1/4-20	2
10	800875	SHIM, WTS GAUGE MOUNT	1

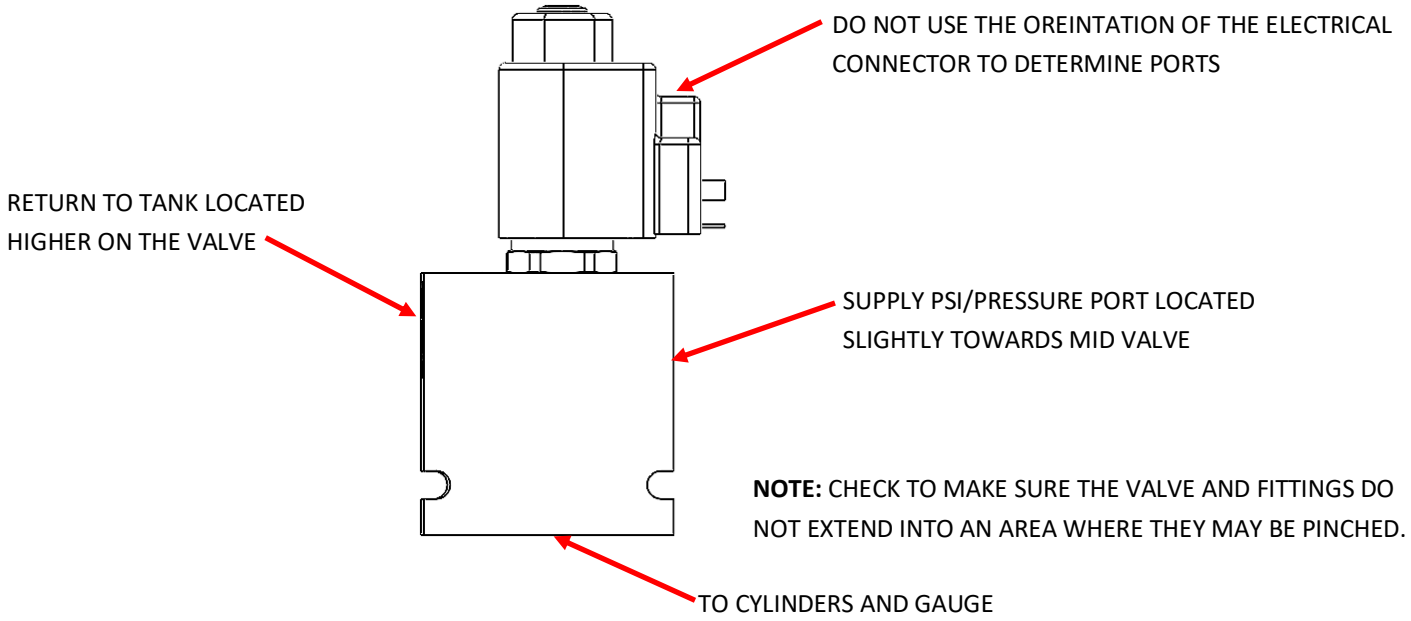
STEP 7: INSTALL 800369 HYDRAULIC VALVE

Due to the unique nature of the installations on each planter the hoses are not supplied with this kit and it is up to the installer/owner to properly route and secure the hoses according to the space available and the accessories installed on each particular planter. The use of 5000 psi rated hose is strongly recommended.

Your kit will be supplied containing a high quality hydraulic valve assembly. Due to availability, the brand may be different from what is shown. It is important to note the port positions and functions are the same on all Martin Till valves however the markings may vary. The supplied valve may be mounted in any desired location but typically would be installed in the center of the planter to reduce hose lengths.



NOTE: VALVE CAN BE ROTATED 90 DEGREES ON THIS BRACKET



STEP 8: HYDRUALIC CONNECTIONS

There are two options for connection of the weight transfer system to your tractor. When you want the system active determines which of the two options will work best for your application. Note: All hydraulic returns must be unobstructed. Due to the unique nature of the installations on each planter, the hoses are not supplied with this kit and it is up to the installer/owner to properly route and secure the hoses according to the space available and the accessories installed on each particular planter. The use of 5000 psi rated hose is strongly recommended.

Option 1: (recommended)

Weight transfer system is active while in plant mode only (Recommended). Frame pressure at the CCS fan turns on and off with the CCS fan on JD. CIH maintains pressure at the fan. **Note:** Do not connect the return to the motor case drain as this may cause seal damage.

Option 2: (Only with Power Beyond)

Attach the hydraulic supply and return to Power Beyond. **Also see 900440 Weight Transfer System Control instructions**

OPTION 1: HYDRAULIC CONNECTIONS (Recommended) (See page 11)

1. **Hydraulic supply:** Connect to "Frame Supply" prior to the CCS fan speed control. (Suggest using #8 JIC running tee). See instructions 900440 Weight Transfer System Control.
2. **Hydraulic return:** Connect to "Frame Return". Suggested that you splice into the system after the oil cooler at the CCS fan. It is important that return to tank path is completely unrestricted/unobstructed.

WARNING: Do not use the motor case drain for return hydraulics, this routing will damage your seals.

OPTION 2: HYDRAULIC CONNECTIONS (See page 12)

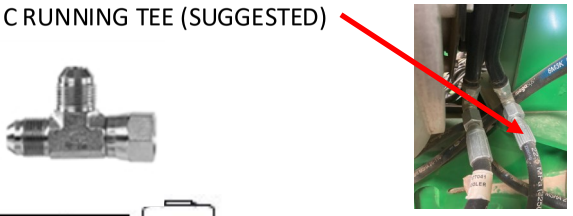
1. Connect to supply at Power Beyond. This will provide for constant power. Operator must remember to turn cab controller off while folding. Also see 900440 Weight Transfer System Control instructions
2. Connect to return at Power Beyond. Return to tank must be unobstructed

WARNING:

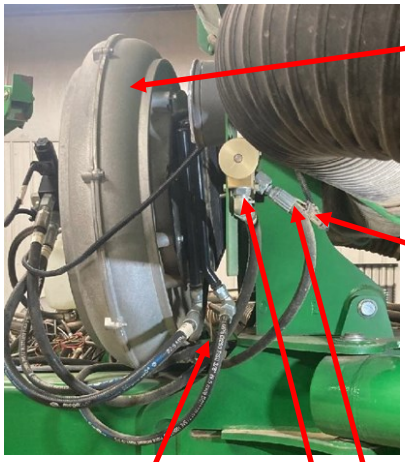
Wing VAC fan, not recommended. SCV must be either in continuous or float at all times. Failure to use the correct settings will cause the system to build Max PSI while the planter is folded.

OPTION 1 (Recommended)

#8 JIC RUNNING TEE (SUGGESTED)



CONNECTION AFTER OIL COOLER



EXISTING CCS FAN

#8 JIC RUNNING TEE (SUGGESTED)

EXISTING CCS FAN

RETURN PORT

(800369) HYD VALVE

PRESSURE PORT

TO CYLINDER AND GAUGE

FRAME RETURN

CCS FAN

SPEED CONTROL

FRAME SUPPLY

VENT

LEFT WING WTS CYLINDER

VENT

RIGHT WING WTS CYLINDER

GAUGE 800458

SPEED CONTROL (BACK SIDE)

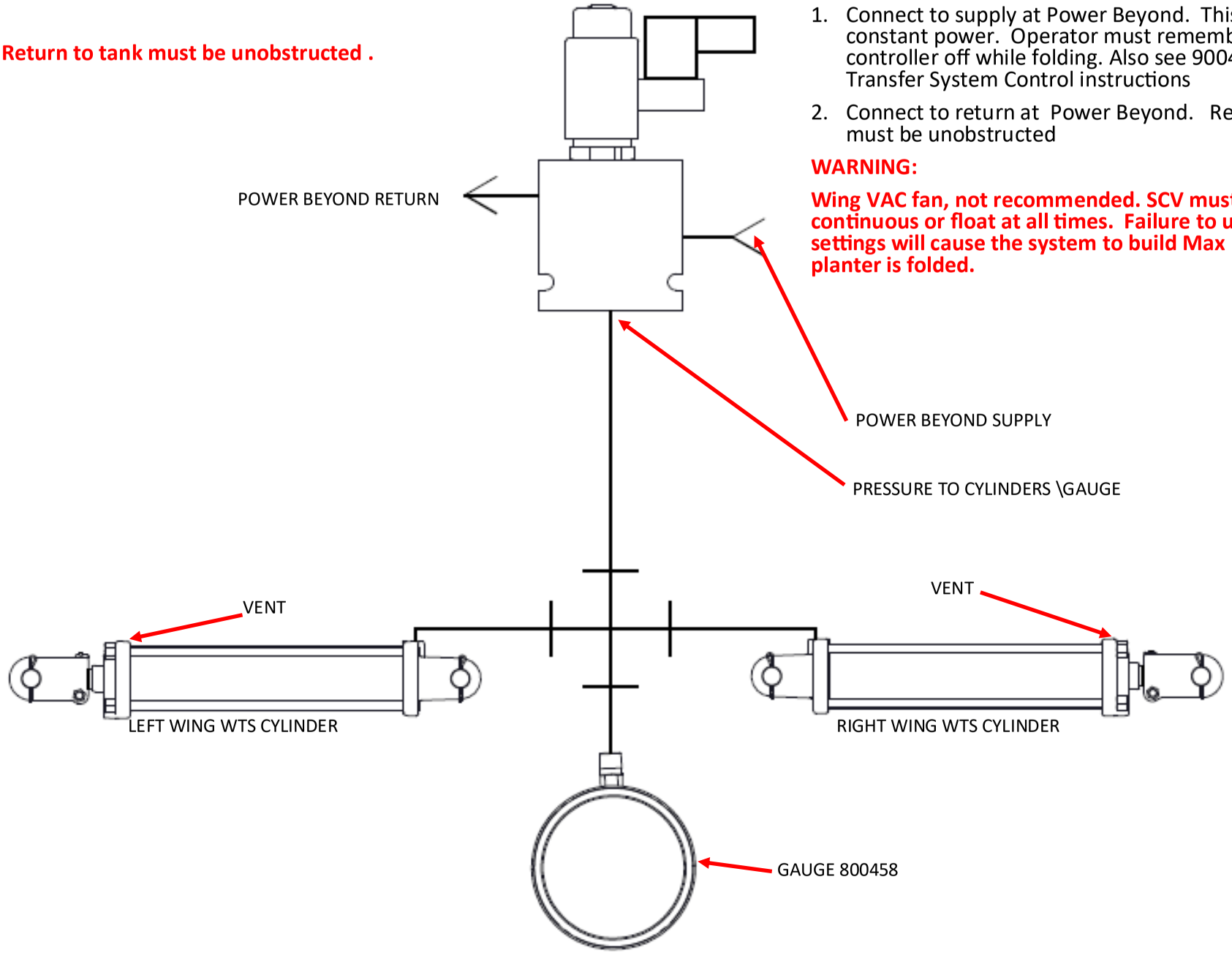
#8 JIC RUNNING TEE (SUGGESTED)

Do not return thru motor case drain. Seal damage will occur!

OPTION 1 (Recommended)

OPTION 2

Return to tank must be unobstructed .



OPTION 2: HYDRAULIC CONNECTIONS

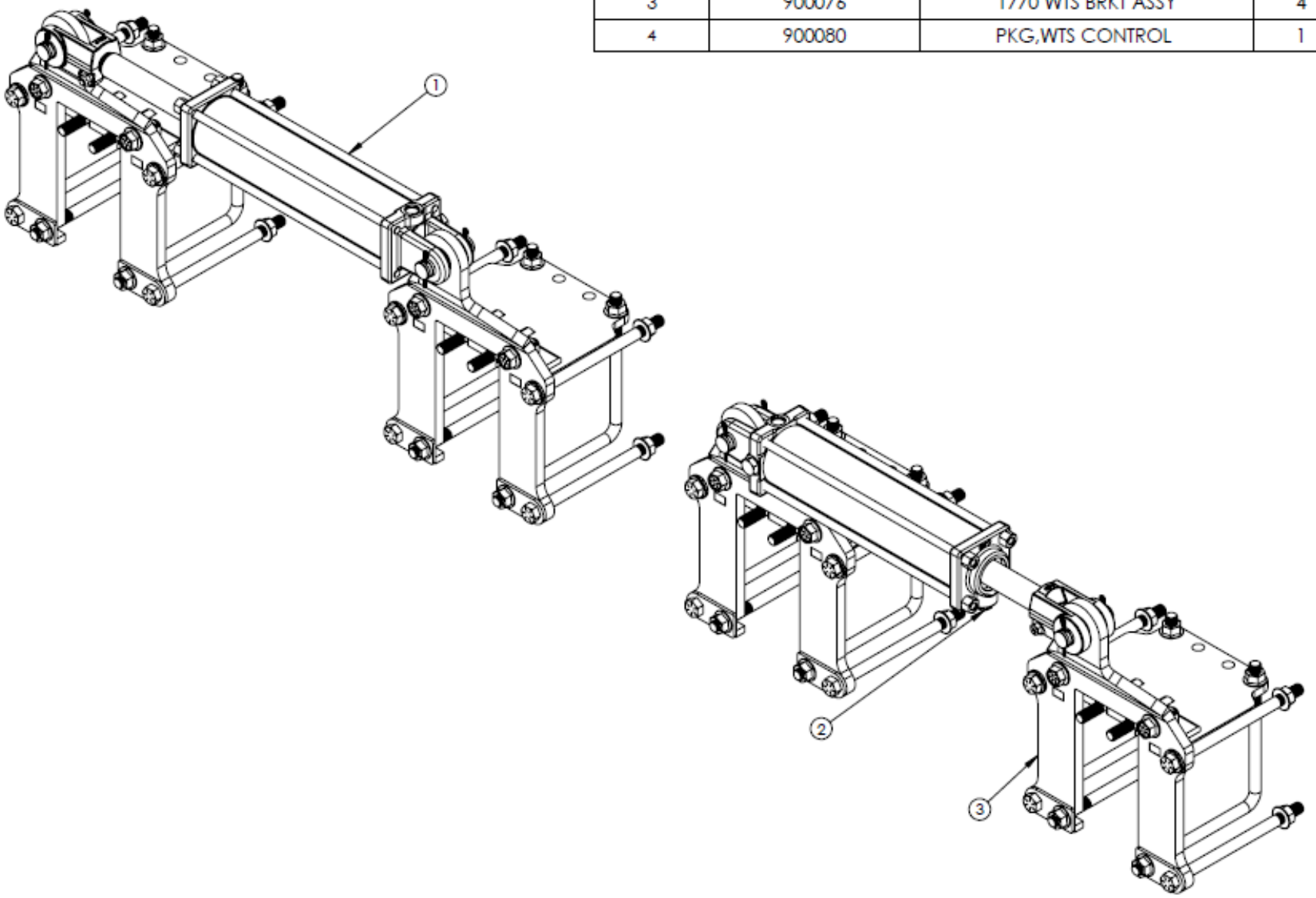
1. Connect to supply at Power Beyond. This will provide for constant power. Operator must remember to turn cab controller off while folding. Also see 900440 Weight Transfer System Control instructions
2. Connect to return at Power Beyond. Return to tank must be unobstructed

WARNING:

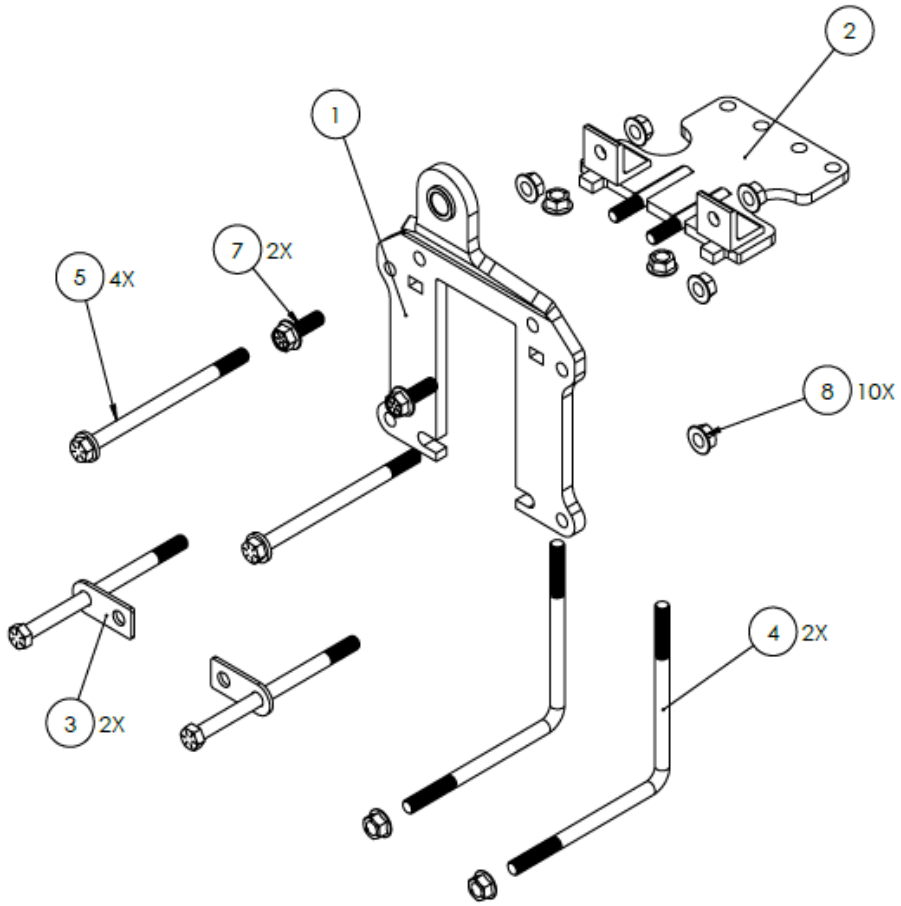
Wing VAC fan, not recommended. SCV must be either in continuous or float at all times. Failure to use the correct settings will cause the system to build Max PSI while the planter is folded.

Do not return thru motor case drain. Seal damage will occur!

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	800202	3.00 X 12 HYD CYL	2
2	800192	VENT, #8 ORB FLAT BRASS BREATHER	2
3	900076	1770 WTS BRKT ASSY	4
4	900080	PKG,WTS CONTROL	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	850245	BRKT, WELDMENT, 1770 WT OFFSET FRONT	1
2	850246	1770 WT, TOP PLATE, WELDMENT	1
3	800201	LINK PLATE 1770 WT	2
4	800178	L-BOLT, 5/8"-11 7" X 7"	2
5	784694	BOLT,HEX 5/8-11 X 9-1/2 GR8	4
6	788603	WASHER, 5/8 SAE THICK GR8	2
7	783616	BOLT, 5/8-11 X 1 3/4 FL GR8	2
8	785600	NUT, 5/8-11 FL PT GR8	10



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/32
ANGULAR: MACH ± 1 BEND ± 1
TWO PLACE DECIMAL ± 0.032
THREE PLACE DECIMAL ± 0.016
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN BY:	robr	2021-02-04
CHECKED BY:		
ENG APPR.		
MFG APPR.		
Q.A.		

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Martin-Till

MARTIN INDUSTRIES
206 ELK FORK RD
ELKTON, KY 42220

Description:
1770 WTS BRKT ASSY

SIZE	DWG. NO.	REV
B	900076	A

SCALE: 1:5 | WEIGHT:30.38 | SHEET 2 OF 2

The most trusted name in no-till

Established 1991

NOTES:

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Established 1991

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