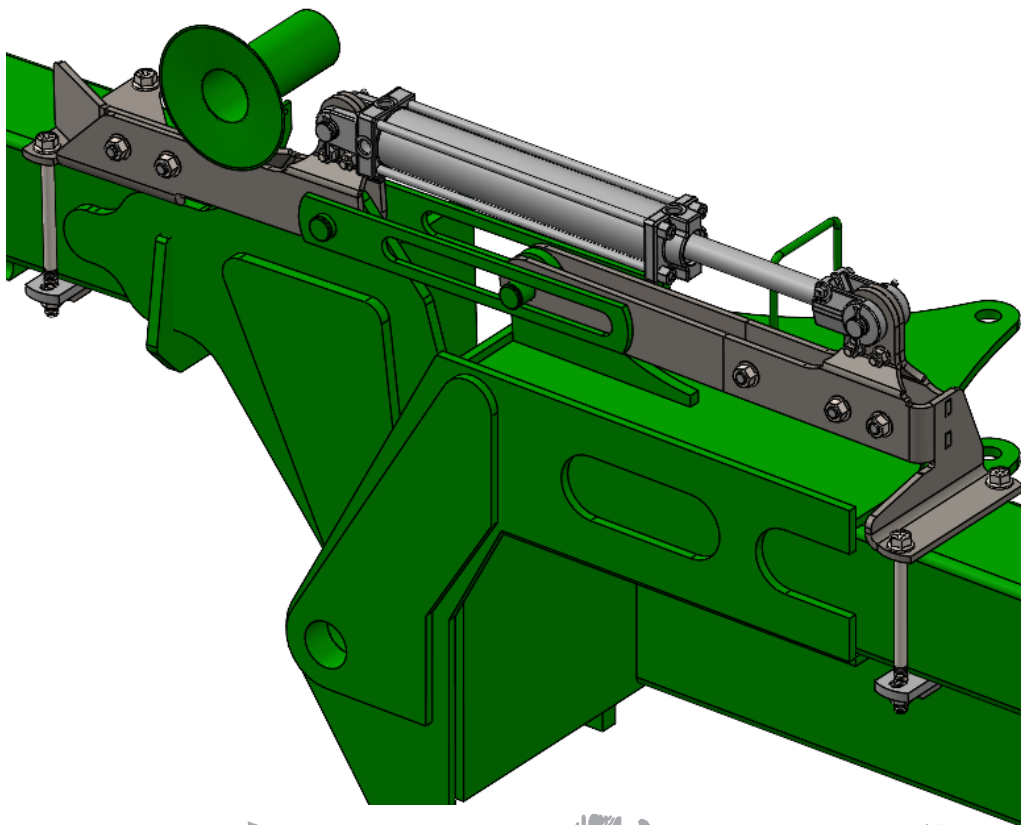


**900320**

**1790/95 WEIGHT TRANSFER SYSTEM**

**24R – 20" FRAME**

**INSTALLATION INSTRUCTIONS**



**MARTIN PLANTER ATTACHMENTS**

**Martin Industries LLC**

206 Elk Fork Road

Elkton, KY 42220

Telephone: 270-265-5817

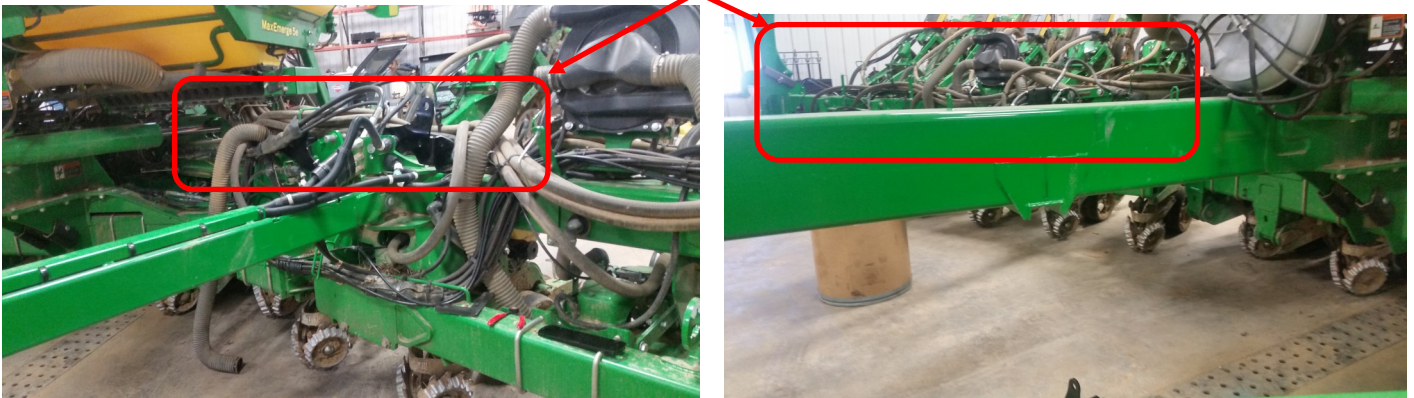
E-Mail: [martin@martintill.com](mailto:martin@martintill.com)

## 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. *These installation instructions apply to both the 1790 and 1795 planters. Please refer to the appropriate illustrated parts breakdown for the correct part number for your specific kit.*

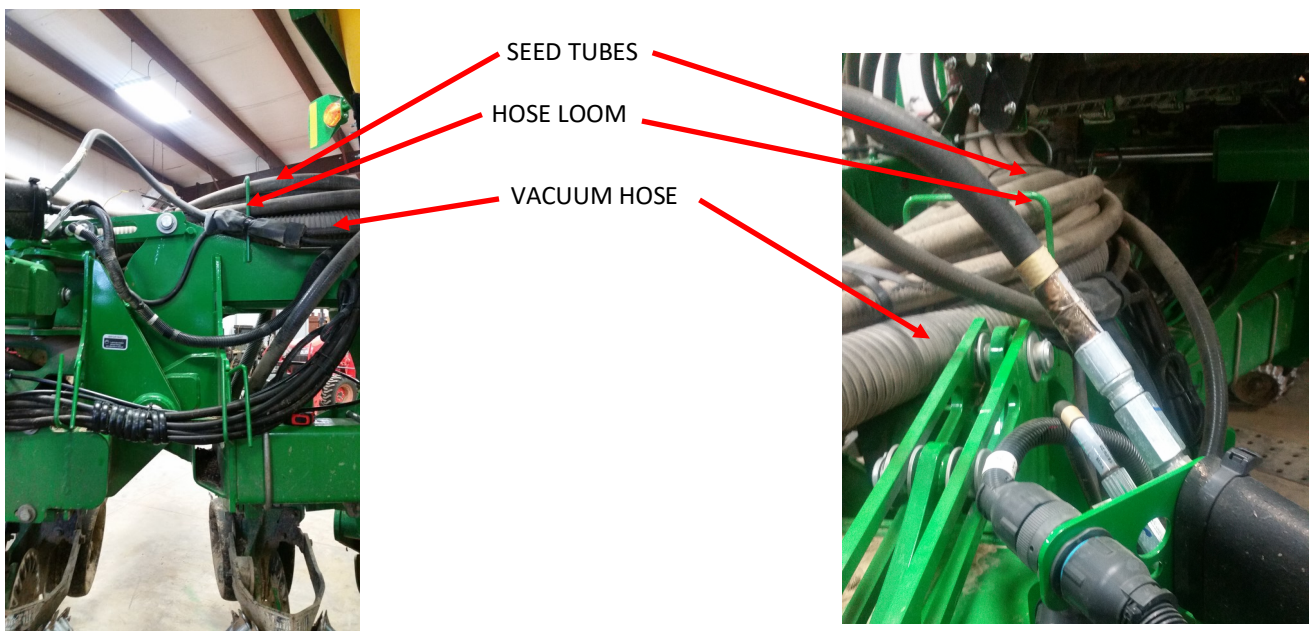
Before beginning the installation the planter should be unfolded and lowered to near operating levels to allow good access to the wing hinge area where the brackets will be installed. All hydraulic system pressure should be released and the planter supported as needed to prevent unexpected movement.

### AREAS OF CONCERN FOR INTERFERENCE/CLEARANCE ISSUES OF TONGUE MOUNTED TANKS WHEN FOLDED FOR TRANSPORT



## STEP 1. REMOVE WING VACUUM CONNECTOR HOSES.

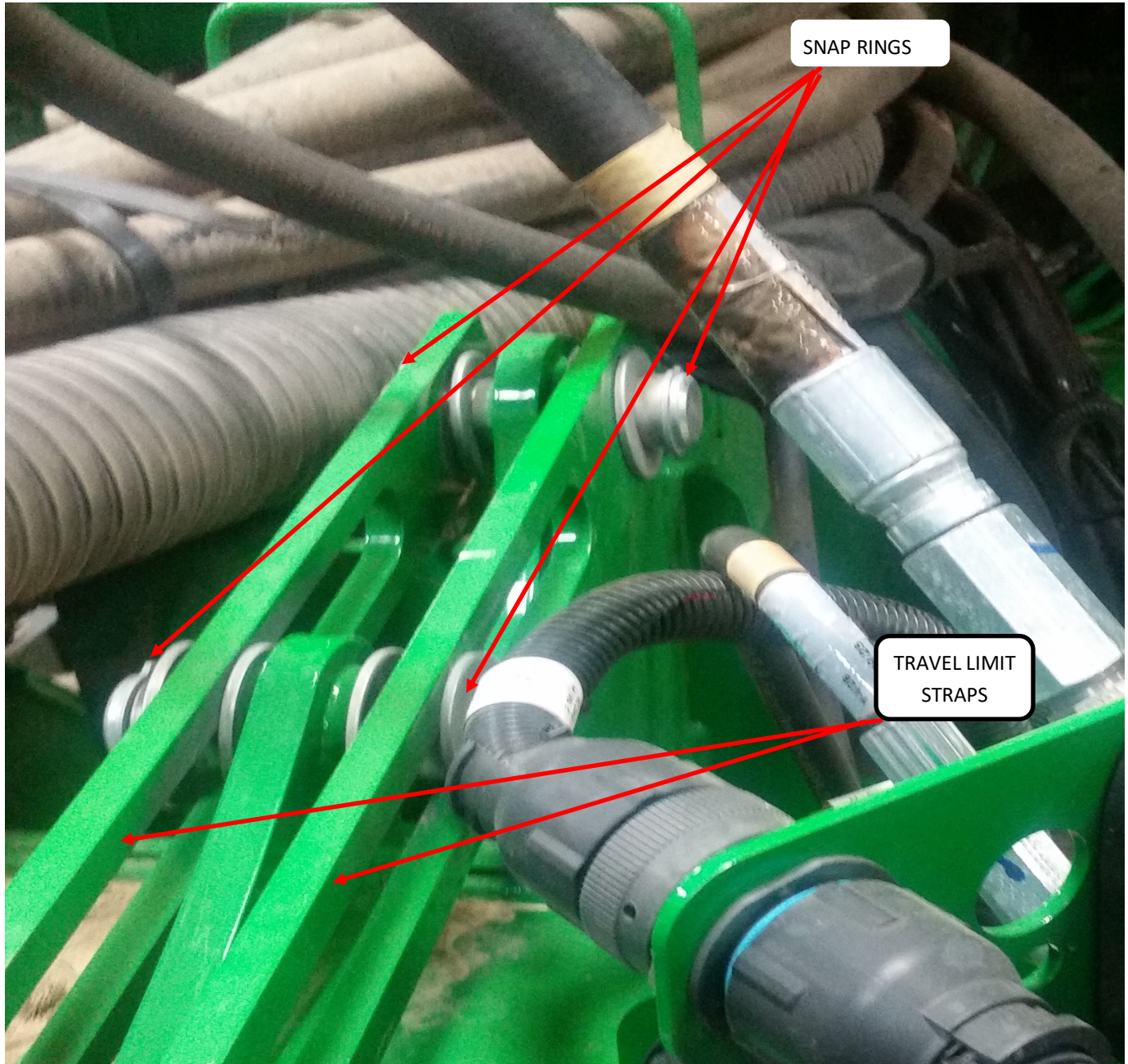
Loosen the clamp on the vacuum hoses at the plastic elbow connector and remove the hose from the loom on each wing. Normally this hose is routed through the loom at the wing pivot point and is underneath the seed delivery tubes , these hoses should be removed from the loom and set aside for rerouting after the brackets are installed (both sides).



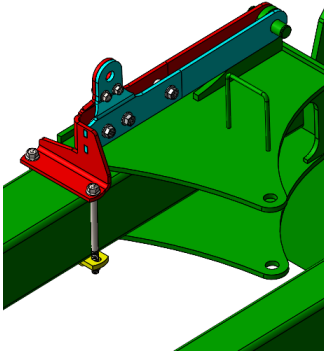


## STEP 2: REMOVE TRAVEL LIMIT STRAPS

Using large snap ring pliers, remove the external retaining rings (4) from the pins on the wings at the top of the hinge point for both left and right wings. Remove the washers and the travel limit straps from bot LEFT and RIGHT wings, and set aside for later reinstallation.



### STEP 3 : INSTALL WING MOUNTED BRACKETS

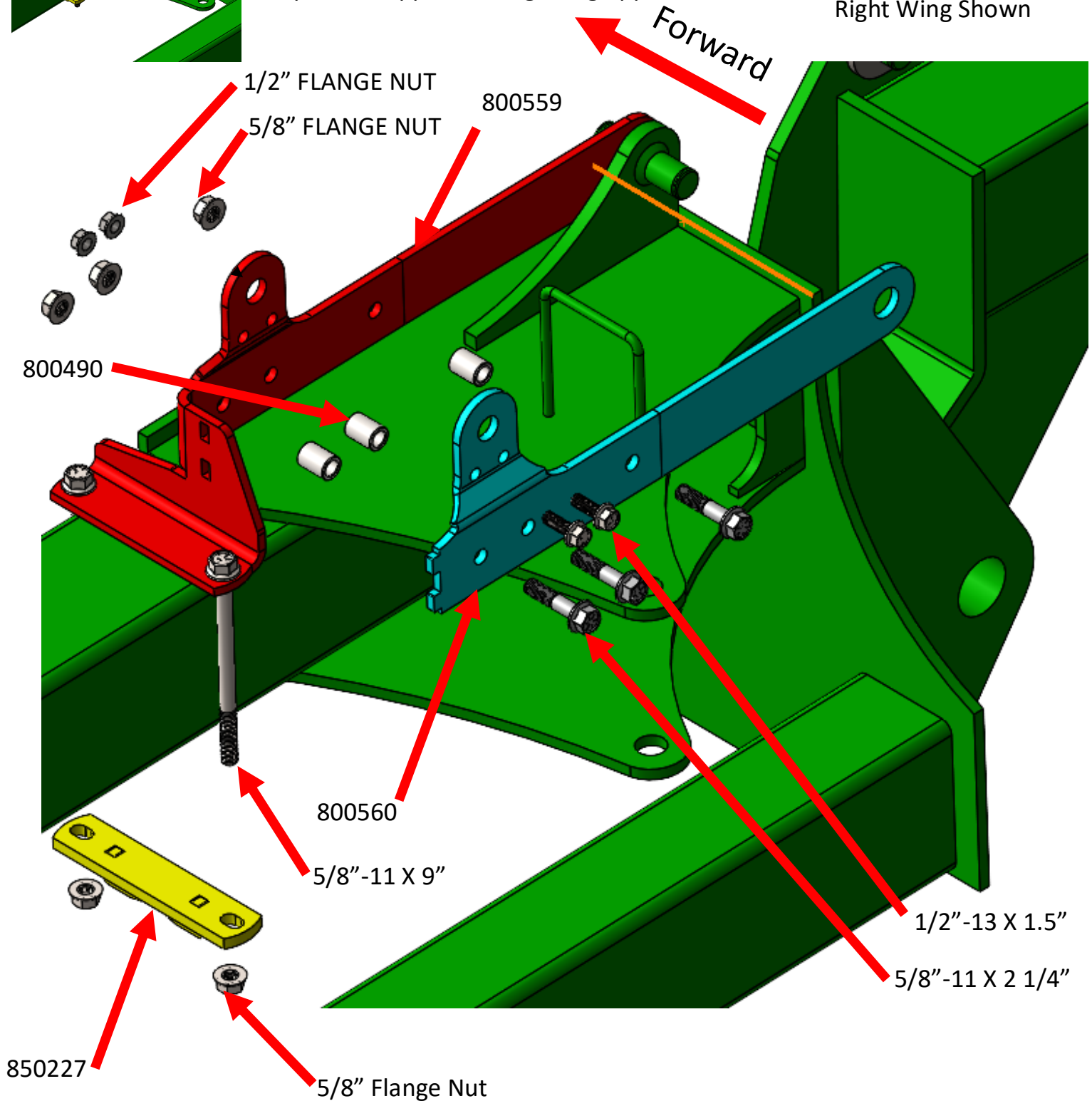


Install wing mounted brackets as shown below

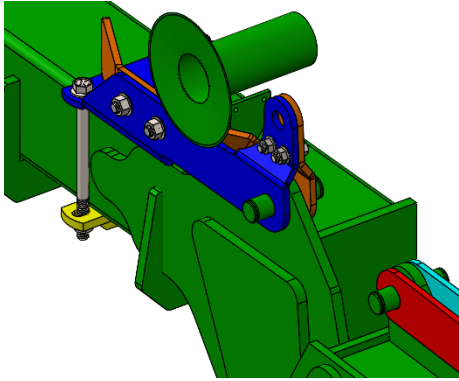
Do Not tighten any bolts completely until all components are lined up including factory wing travel limiters removed in previous step

Repeat for opposite wing using opposite handed

Right Wing Shown



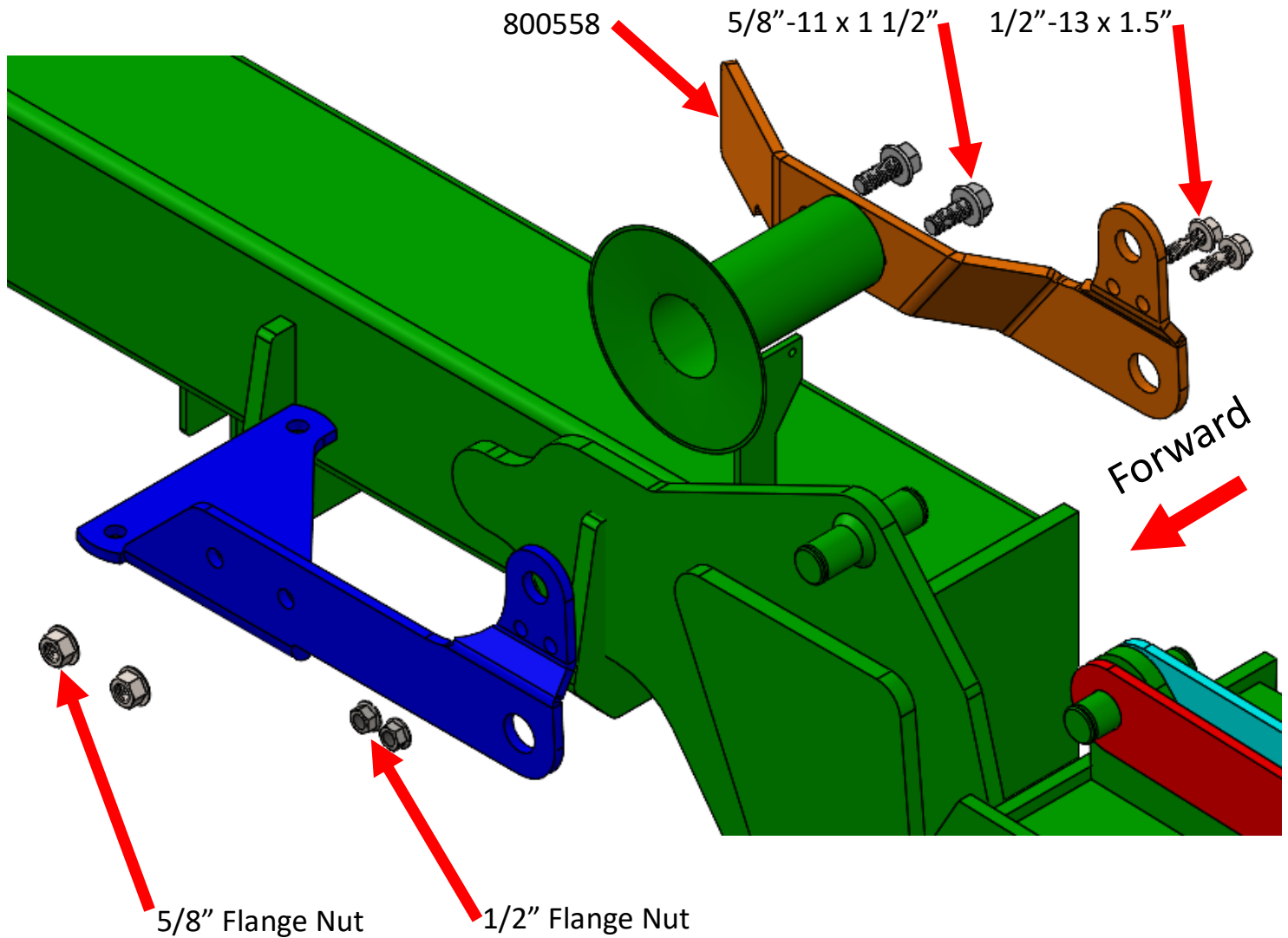
## STEP 4 :INSTALL WING PUSH ARMS



Install pull arms as shown below

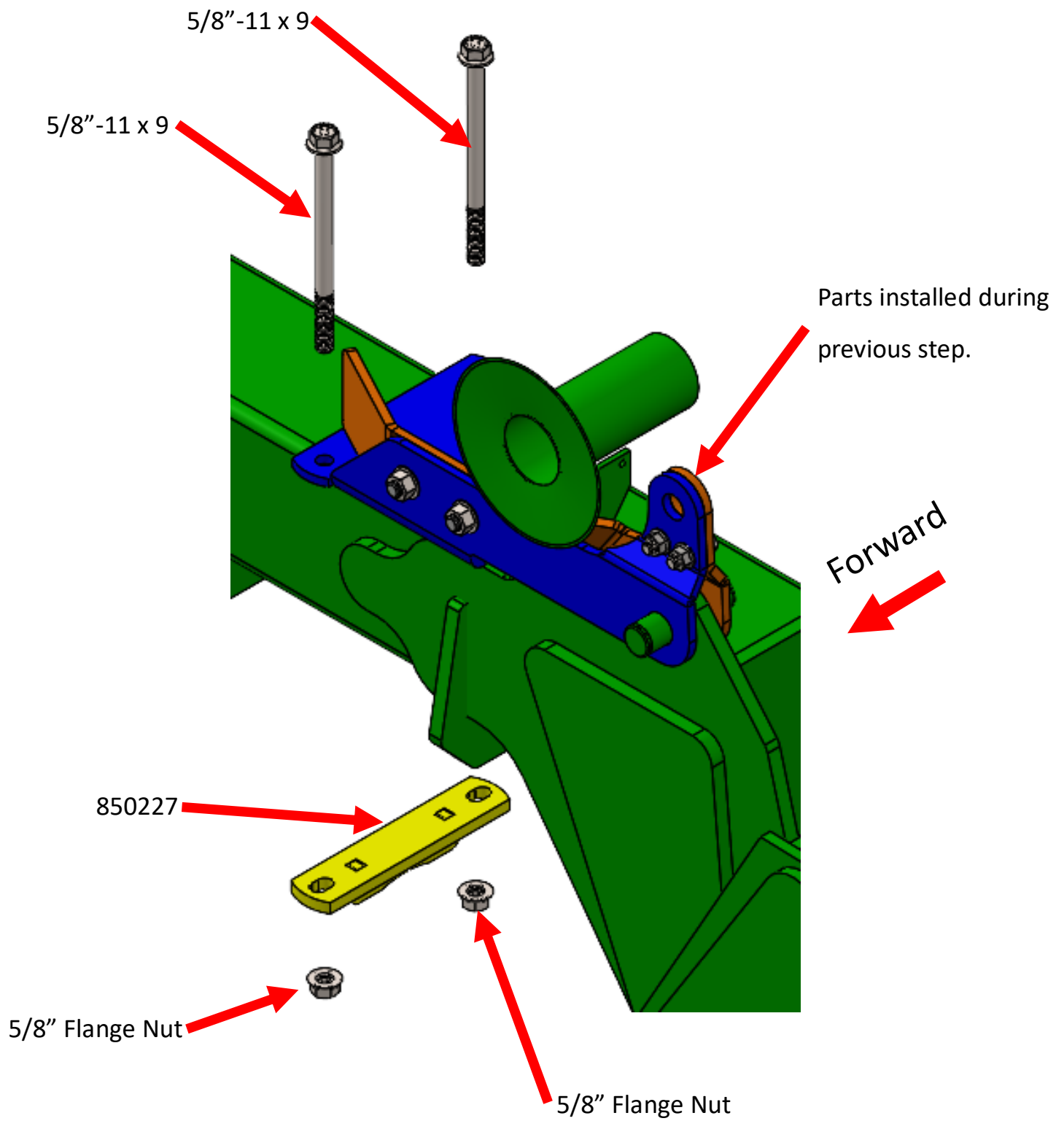
Do Not tighten bolts completely until all components are lined up including factory wing travel limiters removed in previous step

Install push arms as shown below leaving all bolts loose





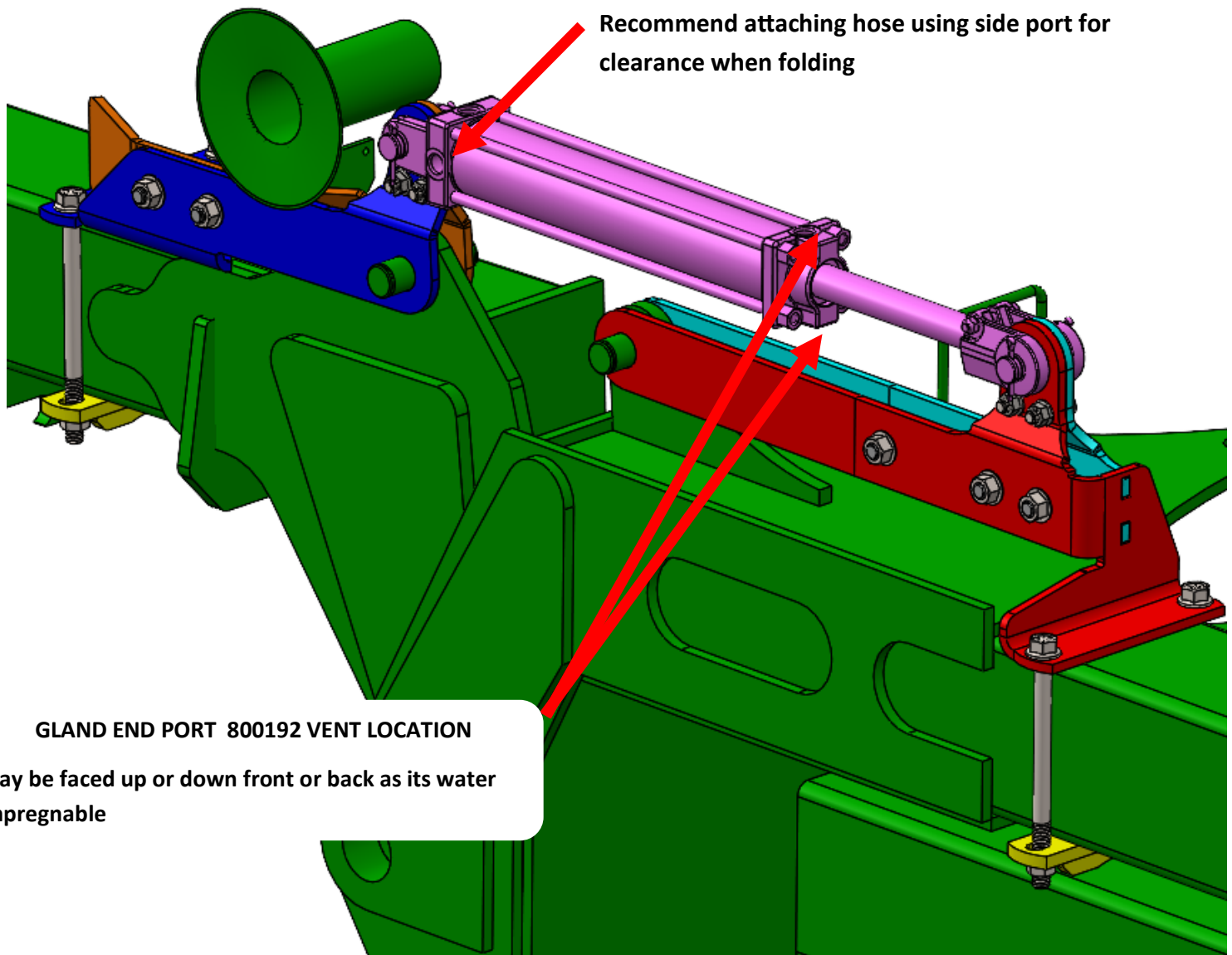
## STEP 4 continued :INSTALL WING PUSH ARMS



## STEP 5 : ATTACH THE HYDRAULIC CYLINDERS

At this stage of the installation both inner and outer wing bracket assemblies for both wings should be installed and all bolts in a finger tight condition to allow for cylinder installation and final adjustment and tightening. Right wing shown below

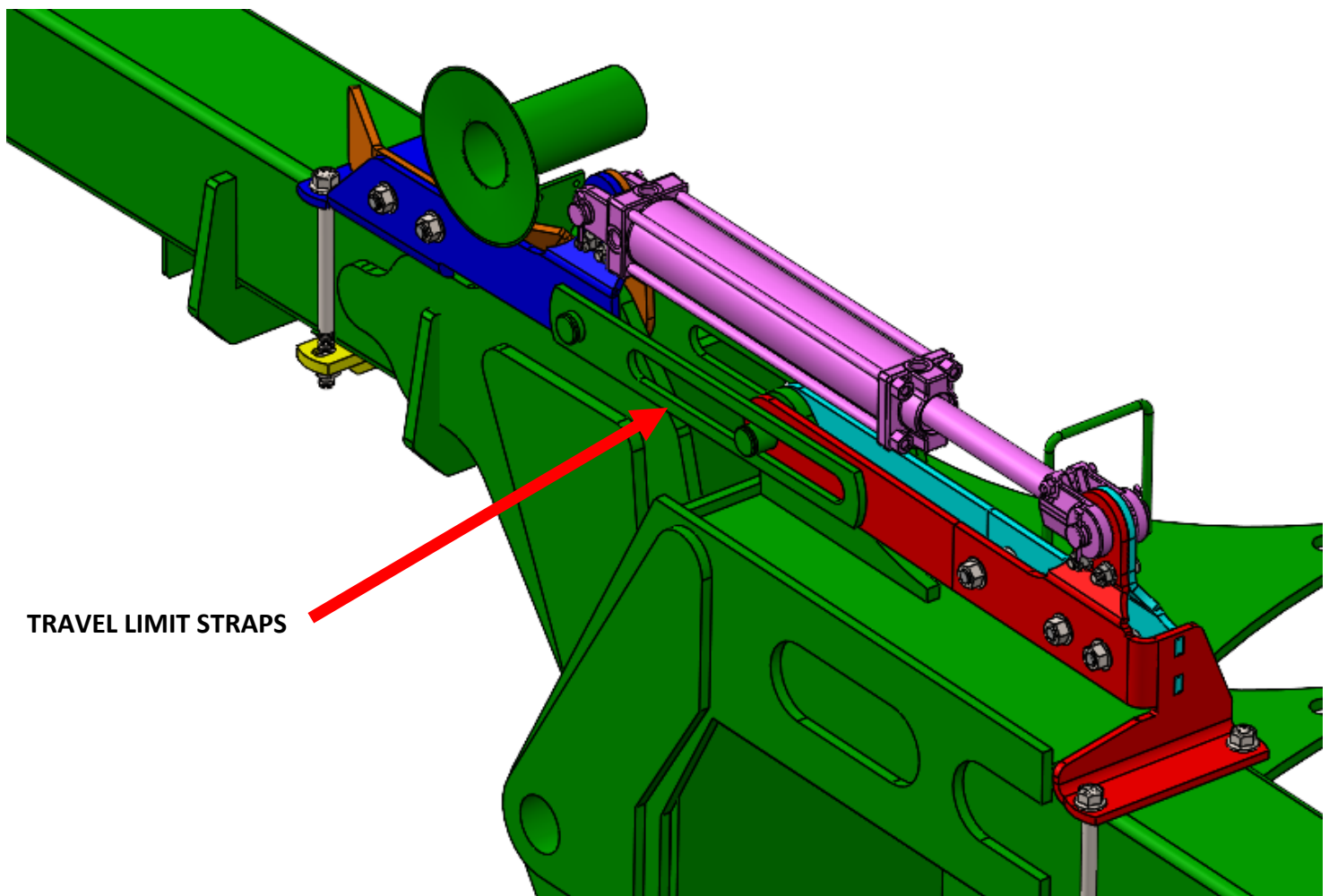
1. Install the cylinder as shown , using the pin kit supplied with the cylinder.
2. Install Rod end vent to prevent moisture from entering. It may face up down or back. It is water impregnable
3. When installing the hydraulic fittings and hoses, use the side port on the base end of the cylinder to provide extra clearance while folding



## STEP 6 : INSTALL TRAVEL LIMIT STRAPS

### REMOVED IN STEP 2

Reinstall the travel limit straps removed at the beginning of the installation noting that the notched end of the bar goes to the inner wing or frame side, pin. Reinstall the Flat washers and the heavy duty snap rings to retain the travel limit straps in place.

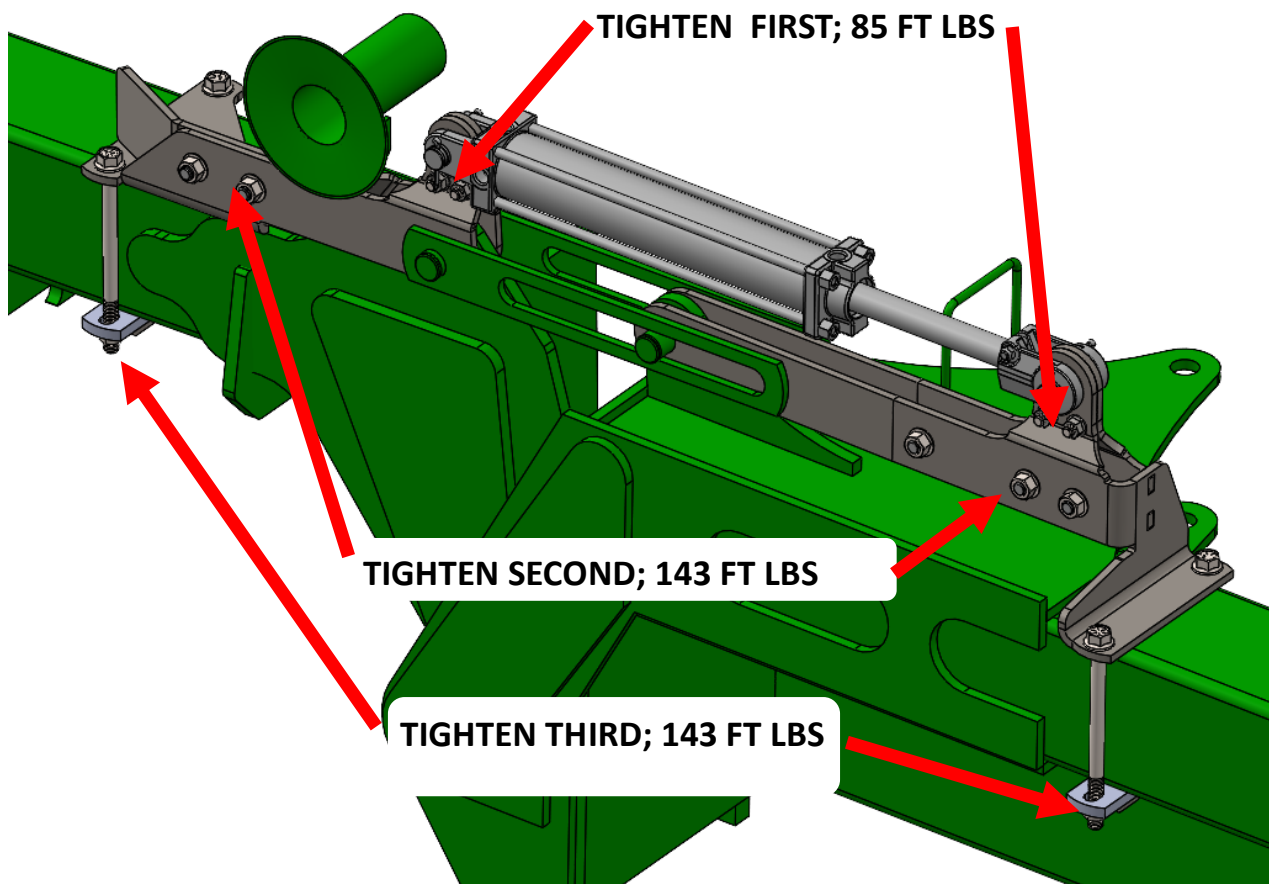




## STEP 7: TIGHTEN ALL BRACKETS

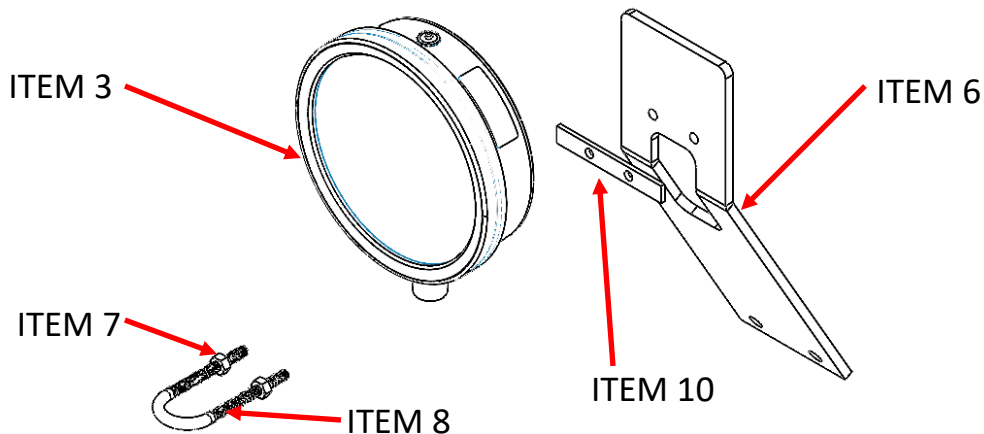
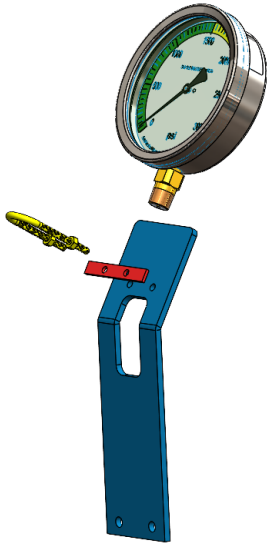
Before proceeding with this step inspect both inner and outer brackets and both wings to ensure that the brackets are not on top of any hoses or wiring harnesses or there are any interferences with aftermarket custom brackets or installed accessories before tightening.

1. Begin by tightening the top two bolts next to the cylinder ends on the inner and outer brackets, tighten to 85 foot lbs torque
2. Tighten the 5/8 bolts attaching the front and rear brackets together, tighten to 143 ft lbs torque
3. Tighten the 5/8 bolts clamping the brackets to the wings , tighten to 143 ft lbs torque.
4. Verify travel limit stop bar is free to float on each side. If not loosen bolts and adjust so each bar is free to float then retighten
5. Remove any blocking used to support seed tubes or other hoses ,route and tie off as appropriate to ensure there are no pinch points or radical bends in seed tubes.



## STEP 8: 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.

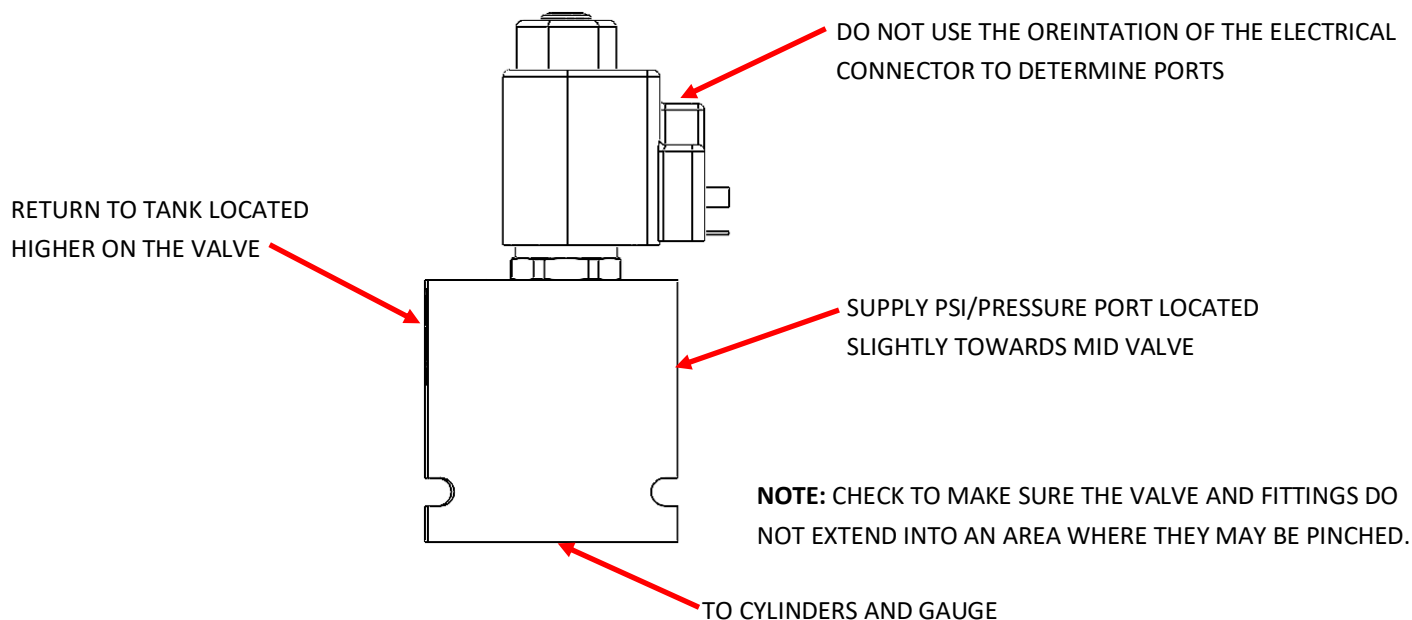
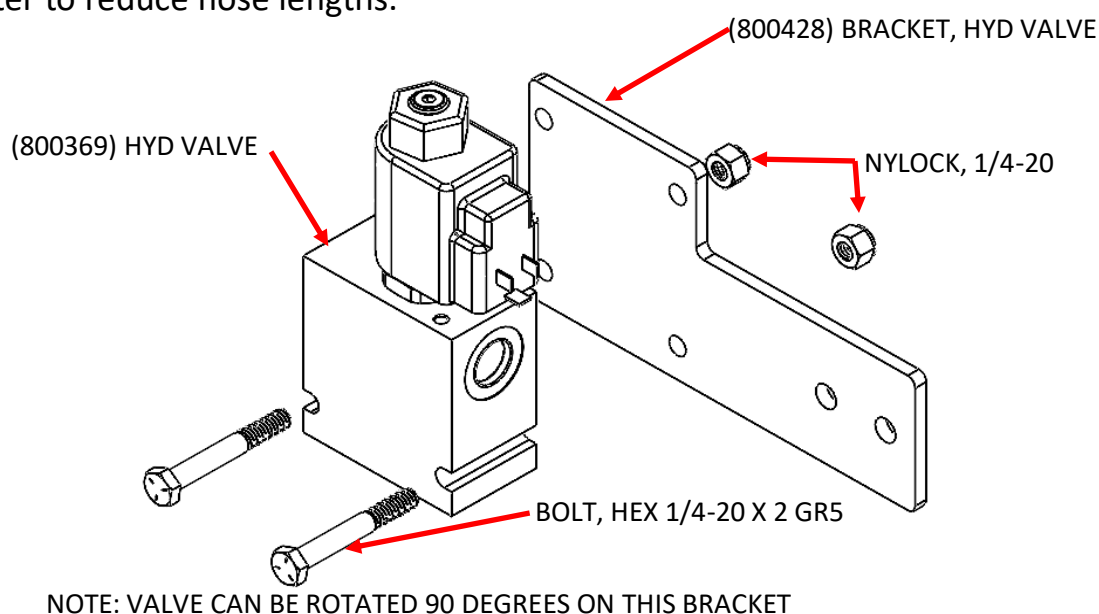


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
3	800458	GAUGE,0-300 PSI ,MARTIN TILL	1
6	800660	GAUGE MOUNT	1
7	709052	1/4-20 X 1-3/8 U BOLT	1
8	757100	NUT,NYLOCK,1/4-20	2
10	800875	SHIM, WTS GAUGE MOUNT	1

## STEP 9: INSTALL 800369 HYDRAULIC VALVE

Due to the unique nature of the installations on each planter the hoses and fittings 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.



## STEP 10: 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:**

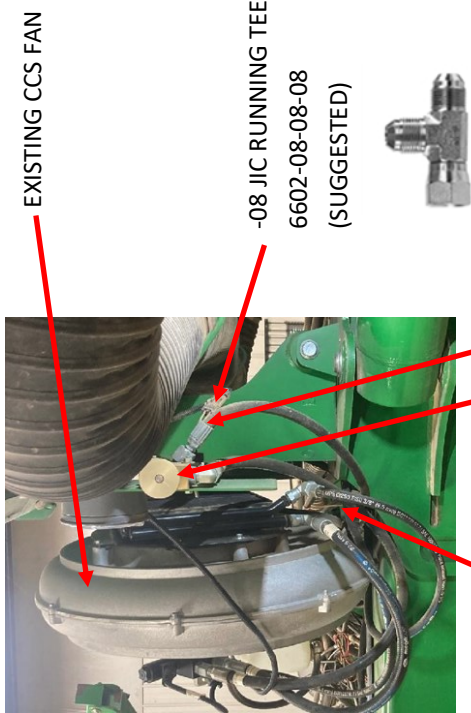
**Wing VAC fan, not recommended. SCV must be either in continuous or float at all times. Failure to use the correct settings will cause the system to build Max PSI while the planter is folded.**



OPTION 1 (Recommended)

Note: Fittings may vary depending on your planter.

SUGGESTED FITTING LIST	
QTY	DESCRIPTION
2	1/2" JIC Swivel Run Tee
1	Cross 3/8 JIC X 3/8" JIC X 3/8 JIC X 3/8 ORB
2	Straight 1/2" ORB X 1/2" JIC
2	Straight 3/8" ORB X 3/8" JIC



EXISTING CCS FAN

-08 JIC RUNNING TEE  
6602-08-08-08  
(SUGGESTED)



OIL COOLER

PRESSURE PORT  
-06 3/8" ORB PORTS  
6400-06-06-O



EXISTING CCS FAN

RETURN PORT  
-06 3/8" ORB PORTS  
6400-06-06-O

(800369) HYD VALVE

TO CYLINDER AND GAUGE  
-06 3/8" ORB PORTS

-08 CYLINDER PORT 1/2" ORB  
STRAIGHT ADAPTOR  
6400-06-08-O

-08 JIC RUNNING TEE  
6602-08-08-08 SUGGESTED)

FRAME RETURN

SPEED CONTROL

-08 CYLINDER PORT 1/2" ORB  
STRAIGHT ADAPTOR 6400-06-08-O

VENT

VENT

LEFT WING WTS CYLINDER

-06 JIC CROSS TEE  
6850-06-06-06-NOW-FG  
(SUGGESTED)

RIGHT WING WTS CYLINDER

GAUGE 800458

-08 JIC RUNNING TEE  
6602-08-08-06  
(SUGGESTED)

SPEED CONTROL  
(BACK SIDE)



OPTION 1 (Recommended)

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

OPTION 2

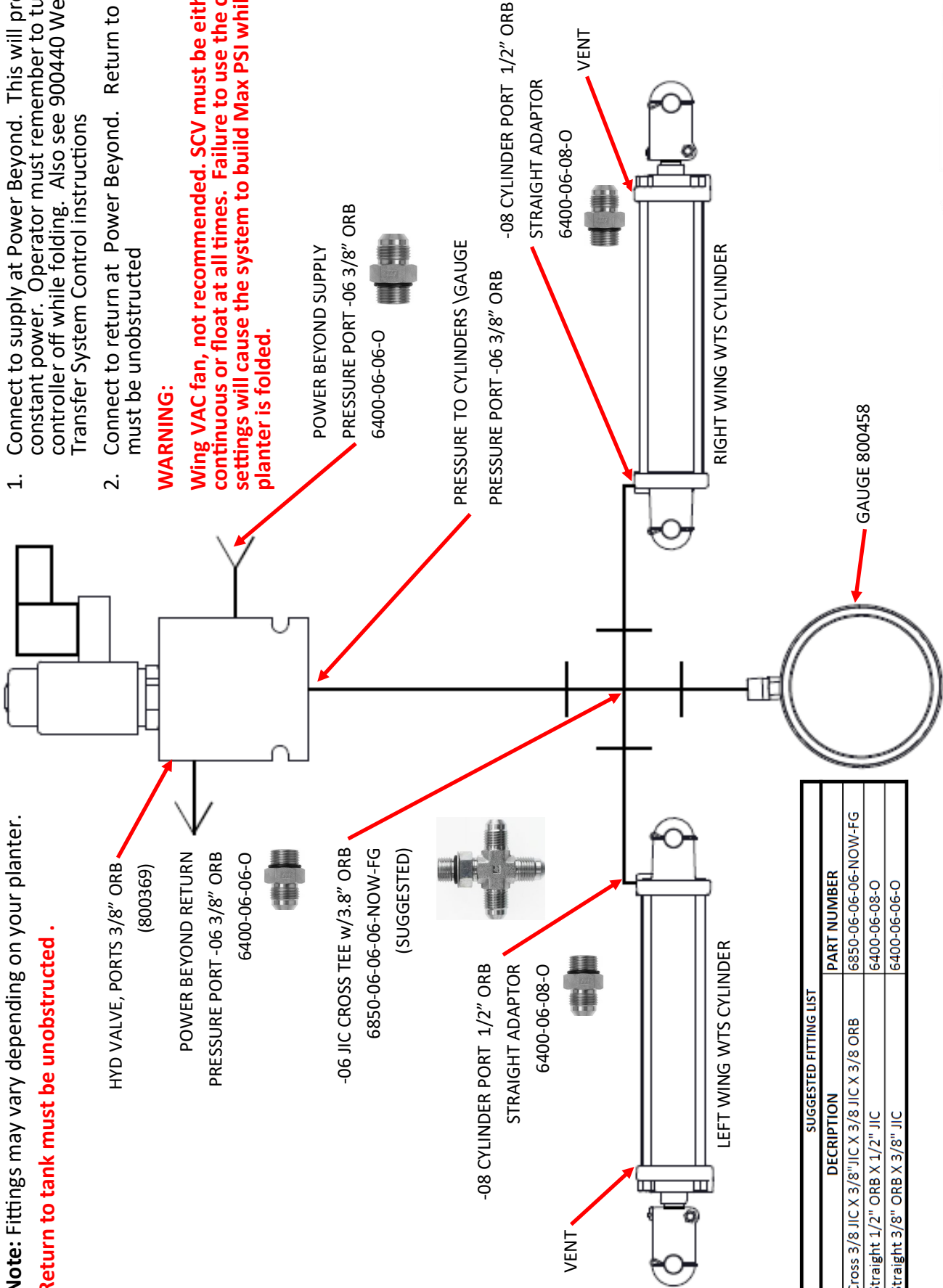
**Note:** Fittings may vary depending on your planter.  
**Return to tank must be unobstructed .**

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.**



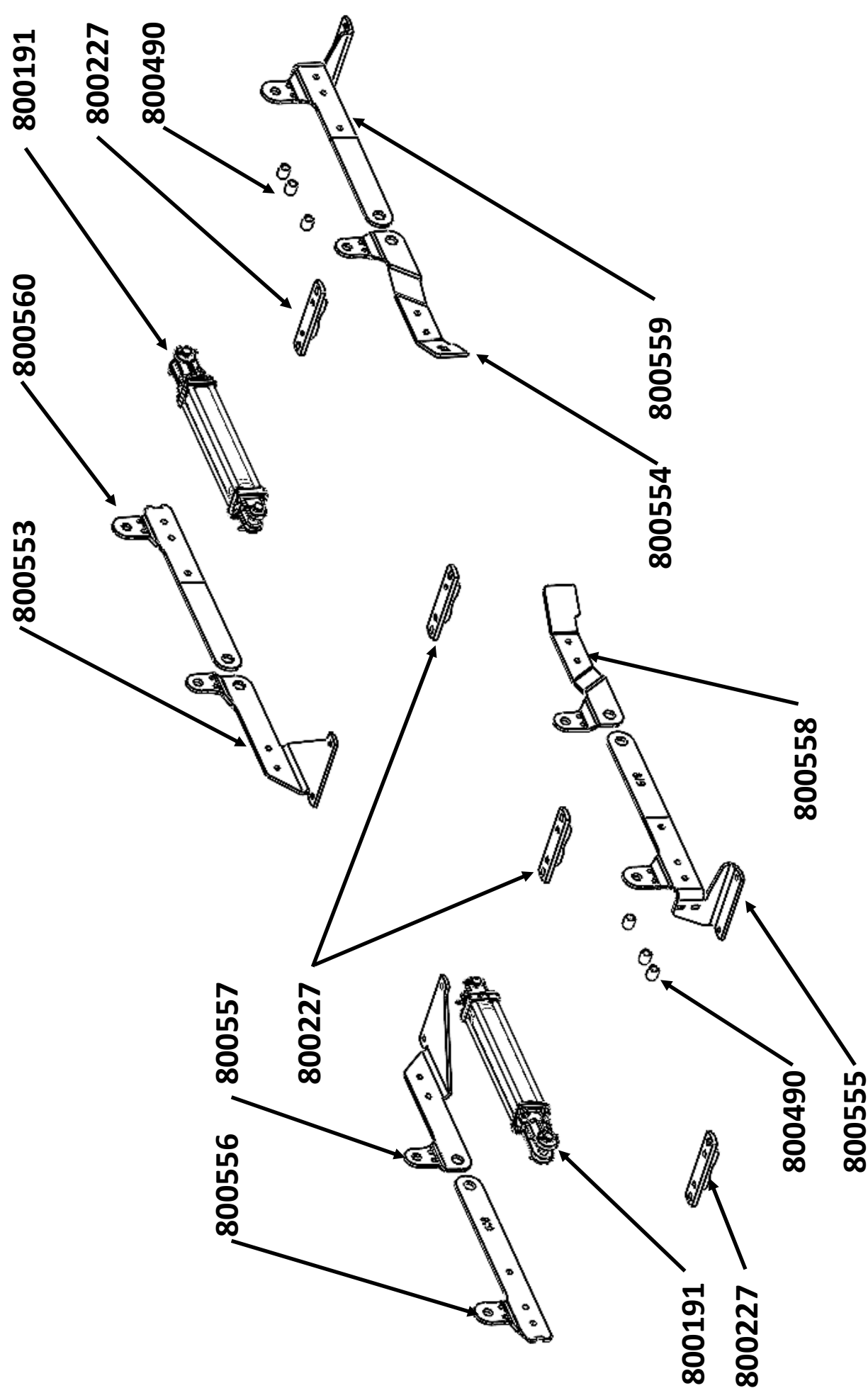
SUGGESTED FITTING LIST		
QTY	DESCRIPTION	PART NUMBER
1	Cross 3/8 JIC X 3/8" JIC X 3/8 JIC X 3/8 ORB	6850-06-06-06-NOW-FG
2	Straight 1/2" ORB X 1/2" JIC	6400-06-08-O
2	Straight 3/8" ORB X 3/8" JIC	6400-06-06-O



OPTION 2

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

Items not including hardware





**The most trusted name in no-till**  
**Established 1991**

**Martin Industries LLC**

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