

Assembling the Grain Tank onto the BP 660



Park the BP 660 on level ground.

Lower the forks to the ground for additional stability.

Ensure the BP 660 upper discharge door is locked in the upright position.

Disconnect the drive shaft from the tractor before beginning any work. Disconnect the BP 660 from the tractor hitch.

Block the machine to prevent any movement while assembling.



Shut down the tractor and remove the key before repairing, servicing, lubricating or cleaning the machine.

Relieve all hydraulic pressure in the hoses. Disconnect the hydraulic hoses from the tractor before going near the machine.

Securely block the machine to avoid any movement while doing the work.



Do Not Enter Tub While Parts Are Rotating

Before entering the tub:

- Turn off the tractor and remove the key.
 - Wait for rotating parts to stop
- Contact with the rotating flail drum will cause serious injury or death.

1. Jack up the BP 660 under the left rear frame to allow the left axle to be able to be removed.

Note: Do not place the jack on the axle or the bale lift frame.

Note: Leave the machine on the jack until the end of the assembly.

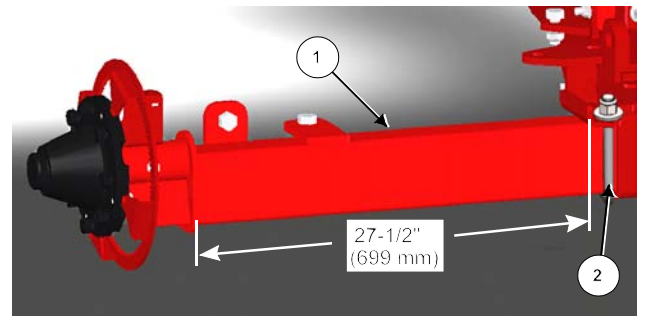


Jack Under the Left Frame

211191C

Assembling the Grain Tank onto the BP 660

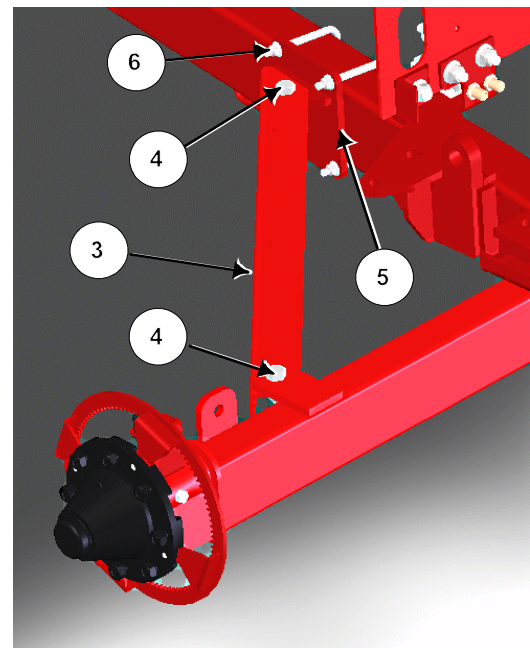
2. Remove the tire.
3. Remove the existing axle and hub.
 - Remove the u-bolt holding the axle.
 - The u-bolt will be used again.
 - Slide the axle out.
 - Discard the axle.
 - Discard the hub and spindle.
4. Slide in the new Grain Tank axle with hub and spindle (1).
 - Position the axle to be 27-1/2" (699 mm) from the inside of the tab near the hub to the outside of the flatbar that the u-bolt goes through.
 - Re-install the u-bolt (2) and locknuts.
 - Do not tighten at this time.



Slide in the New Axle

221455C

5. Install the axle brace.
 - Attach the brace plate (5) to the processor frame with 2 of 1/2" x 6-1/16" x 1/2" u-bolts and flange locknuts (6).
 - Do not tighten at this time.
 - Attach the axle brace (3) to the brace plate (5) with a 3/4" x 1-3/4" hex bolt and flange locknut (4).
 - Place the brace on top of the support tab.
 - Do not tighten at this time.
 - Fasten the brace (3) to the axle tab with a 3/4" x 1-3/4" hex bolt and flange locknut (4).
 - Place the brace under the tab on the axle.
 - Tighten the u-bolts on the brace plate (5) to 85 lbft (115 Nm).
 - Tighten the brace bolts (4) to 297 lbft (403 Nm).

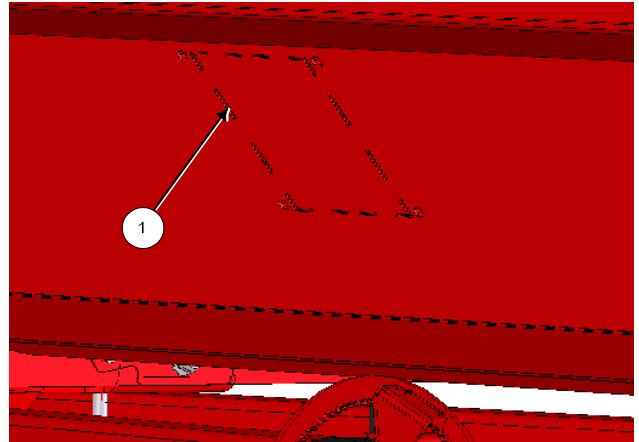


Install the Axle Brace

221456C

Assembling the Grain Tank onto the BP 660

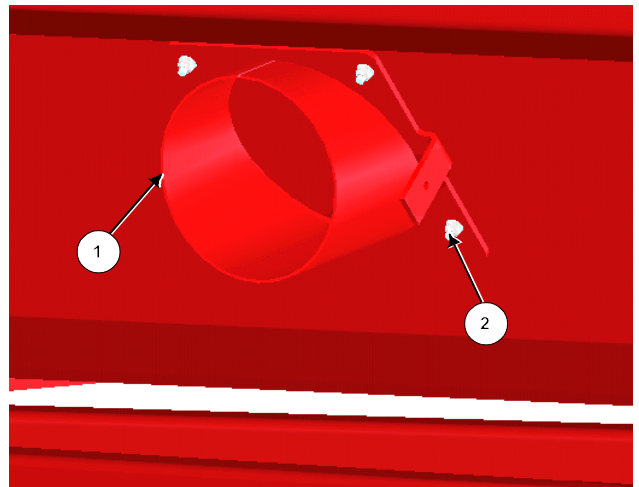
6. Cut out the auger discharge opening in the left side of the processor tub wall.
 - Follow the perforations (1) to cut out the tub wall.



Cut Out the Auger Discharge opening

221457C

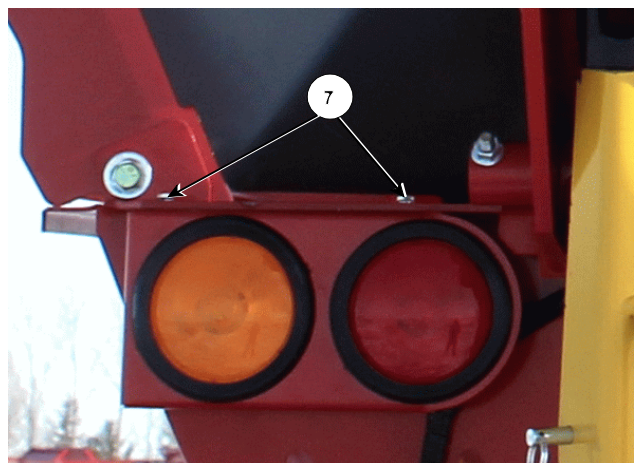
7. Mount the auger transition (1) to the outside of the tub wall using 4 of 3/8" x 1" carriage bolts (2) and locknuts.
 - Position the transition with longest portion of the tube at the bottom.
 - Place the heads of the carriage bolts inside the processor tub.
 - Keep the bolts loose at this time to ease assembly.
 - The fasteners will be tightened later.



Mount the Auger Transition to the Tub Wall

221458C

8. Remove the left rear clearance light assembly from the rear tub wall.
 - Disconnect the harness connection.
 - Remove the light assembly.
 - Keep the light assembly for re-installation later.



Remove the Left Rear Clearance Light

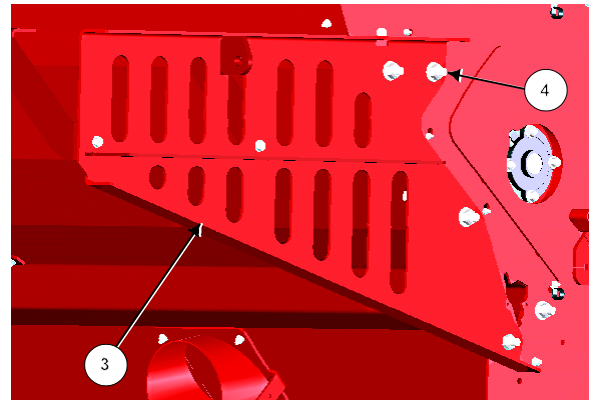
221473C

Assembling the Grain Tank onto the BP 660

9. Install the rear tank mount bracket (3) to the tub end wall.

Note: Have the middle flange facing to the rear.

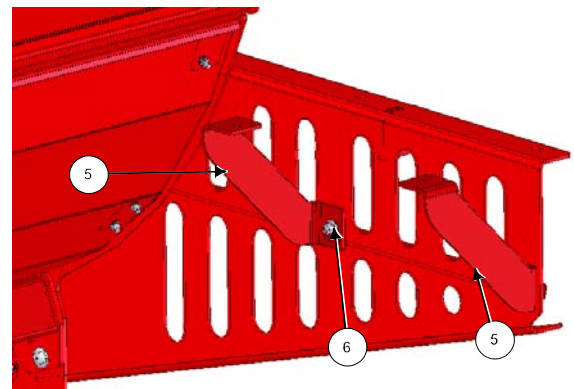
- Connect with a 4 of 3/4" x 1-3/4" flange bolt and flange locknut (4).
- Do not tighten at this time.



Install the Rear Tank Mount Bracket

221460C

10. Install 2 rear tank mount gussets (5) to the tank mount using 2 of 1/2" X 1-1/4" (6) flange bolts and flange locknuts.



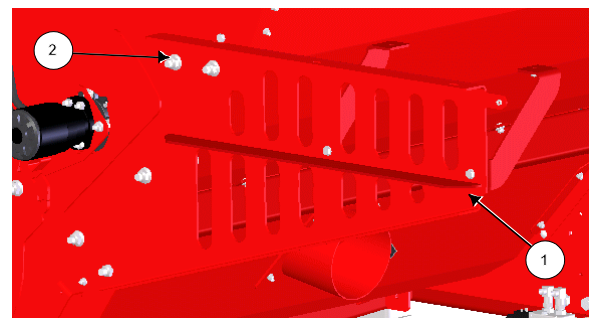
Install the Rear Tank Mount Gussets

221461C

11. Install the front tank mount bracket (1) to the tub end wall.

Note: The front mount has a tab in front with a hole for the tank lid handle.

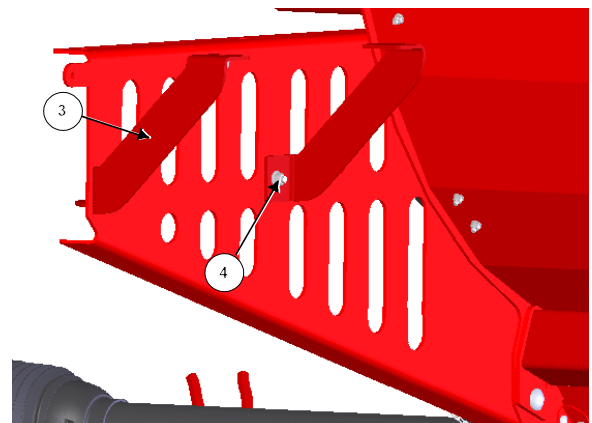
- Connect with a 4 of 3/4" x 1-3/4" flange bolt and flange locknut (2).
- Do not tighten at this time.



Install the Front Tank Mount Bracket

221462C

12. Install 2 front tank mount gussets (3) to the tank mount using 2 of 1/2" X 1-1/4" (4) flange bolts and flange locknuts.



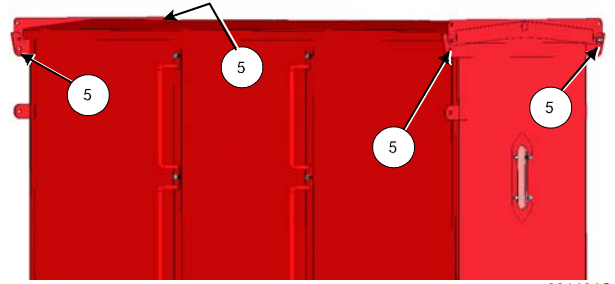
Install the Front Tank Mount Gussets

221463C

Assembling the Grain Tank onto the BP 660

13. Place lifting straps at the four corners (5) of the tank.

- Use the holes in the flat along the side of the tank as attachment points for the lifting straps.



Place Lifting Straps onto the Tank

221464C

14. Remove the fasteners holding the grain tank to the shipping frame.

15. Lift the tank.

16. Lower the tank onto the tank supports and gussets.

- Keep the weight of the tank on the lifting straps.

Note: The tank will need to be supported by the lifting straps until near the end of the assembly.



Lower the Tank Onto the Supports and Gussets

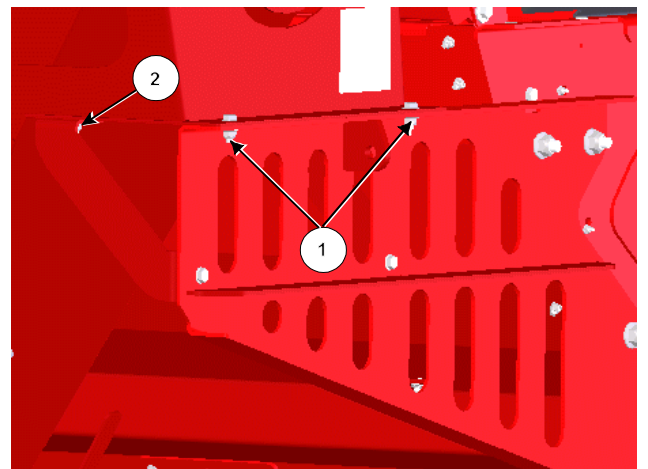
221465

17. Align the tank mount holes to the front and rear mounting bracket holes

- Fasten with 4 of $\frac{1}{2}$ " x 1- $\frac{1}{4}$ " flange bolts and flange locknuts (1).
- Do not tighten at this time.

18. Align the support gussets to the front and rear tank support holes.

- Fasten with 4 of $\frac{1}{2}$ " x 1- $\frac{1}{4}$ " flange bolts and flange locknuts (2).
- Do not tighten at this time.

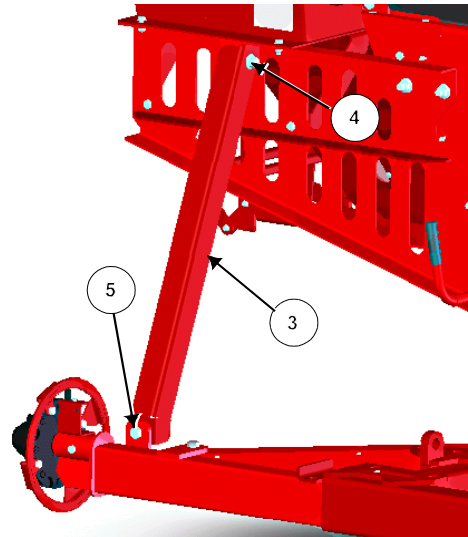


Fasten the Tank to the Mounting Brackets and Gussets

221466C

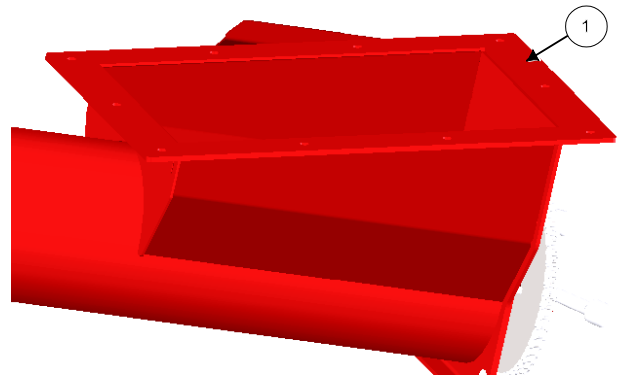
Assembling the Grain Tank onto the BP 660

19. At the rear of the processor attach the tank to axle brace (3).
- Attach to the tab on the rear tank mount with a $\frac{3}{4}$ " x $1\frac{3}{4}$ " hex bolt and flange locknut (4).
 - Do not tighten at this time.
 - Attach to the axle tab with a $\frac{3}{4}$ " x $1\frac{3}{4}$ " hex bolt and flange locknut (5).
 - Do not tighten at this time.



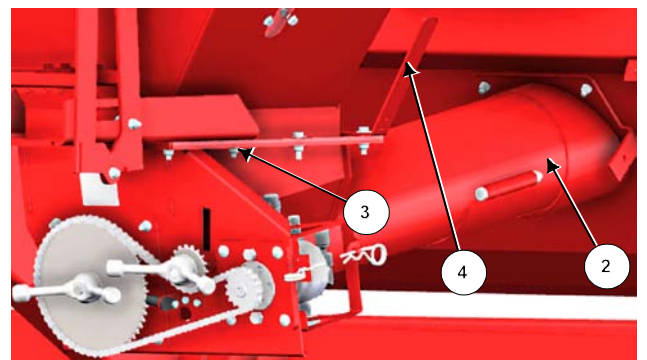
Attach the Tank to Axle Brace 221467C

20. Check the condition of the foam tape around the surface of the auger flange (1) that will connect to the bottom of the tank.
- This foam tape will ensure a good seal.



Check Condition of the Foam Tape on Flange 221468C

21. Slide the auger tube (2) into the auger transition mounted on the processor tub wall.
22. Mount the auger flange to the bottom of the tank using 10 of $\frac{3}{8}$ " x $1\frac{1}{2}$ " hex bolts, flatwashers and flange locknuts (3).
- On the back two bolts attach the calibration pail holder (4) with the fasteners.
 - Fully tighten all the fasteners to create a good seal to the tank.



Mount Auger to the Tank 222170C

23. Tighten the transition tube fasteners.

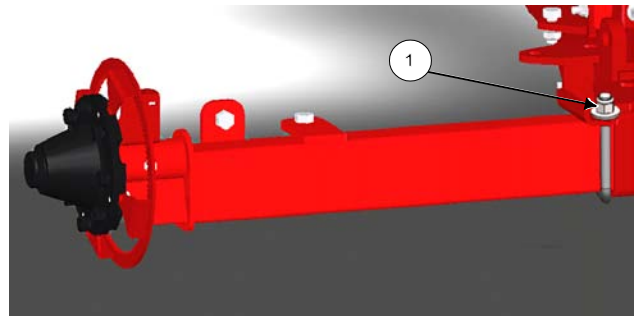
Assembling the Grain Tank onto the BP 660

24. Adjust the tank to be level with the frame of the processor.
25. Tighten all the fasteners on the tank supports, tank mounts, gussets and the axle brace.



Adjust Tank to Be Level, Tighten all Fasteners 221470

26. Tighten the u-bolt (1) holding the axle.
 - Torque to 200 lbft (271 Nm).



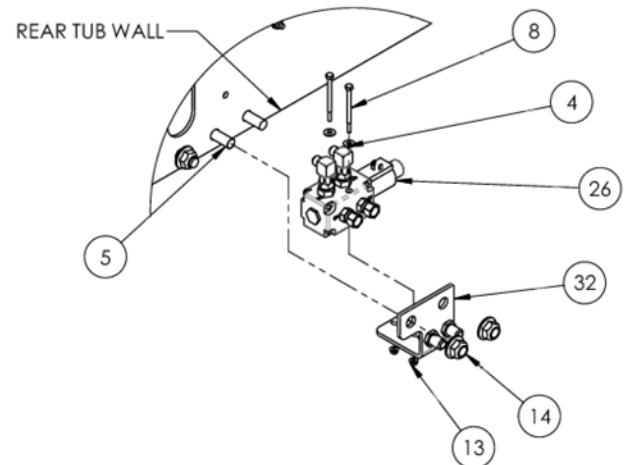
Tighten the U-bolt To Hold the Axle

221455C2

27. Mount the selector valve onto the rear tub wall.

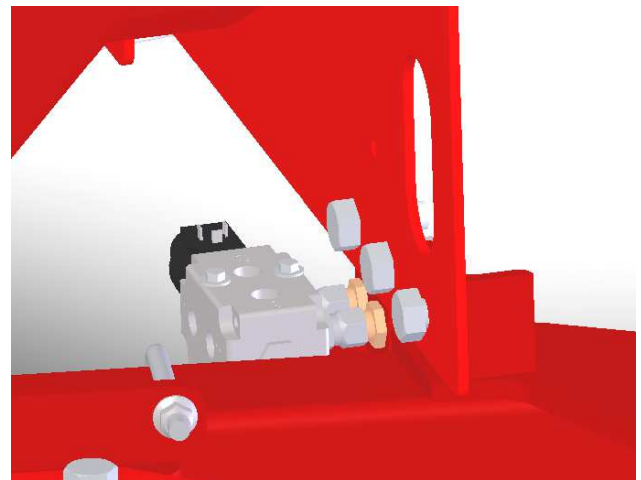
- Remove the hoses from both sides of the bulkhead on the rear tub wall.
- Remove the bulkhead union from the tub wall.
- Mount the union to the bottom holes of the valve support (32).
- Mount the selector valve according to the chart and diagram.

ITEM	DESCRIPTION
4	WASHER,FLAT,1/4,ZP
5	BOLT,HEX,3/4X1-3/4,UNC,GR5,ZP
8	BOLT,HEX,1/4X3-1/2,UNC,GR5,ZP
13	NUT,FLG,LOCK,1/4,UNC,GR5,ZP
14	NUT,FLG,LOCK,3/4,UNC,GR5,ZP
26	HYD,VALVE,ELEC_DOUBLE SELECTOR
32	BP660GT,VALVE_SUPPORT



Mount Selector Valve

221471



Selector Valve on Mounted on Rear Tub Wall

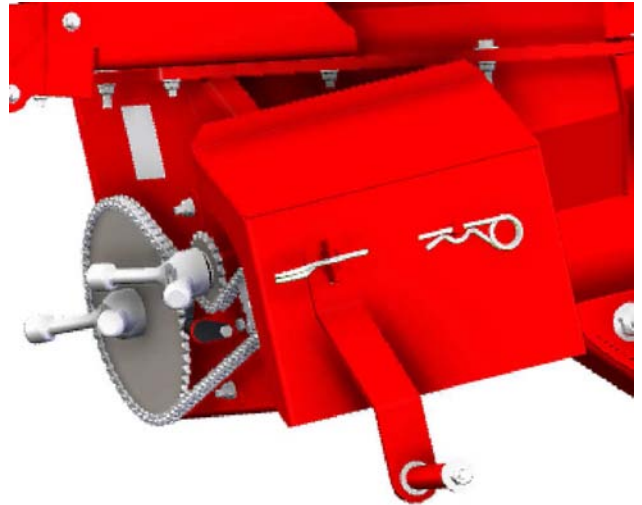
221472

28. Remove the lifting straps from the Grain Tank.

Assembling the Grain Tank onto the BP 660

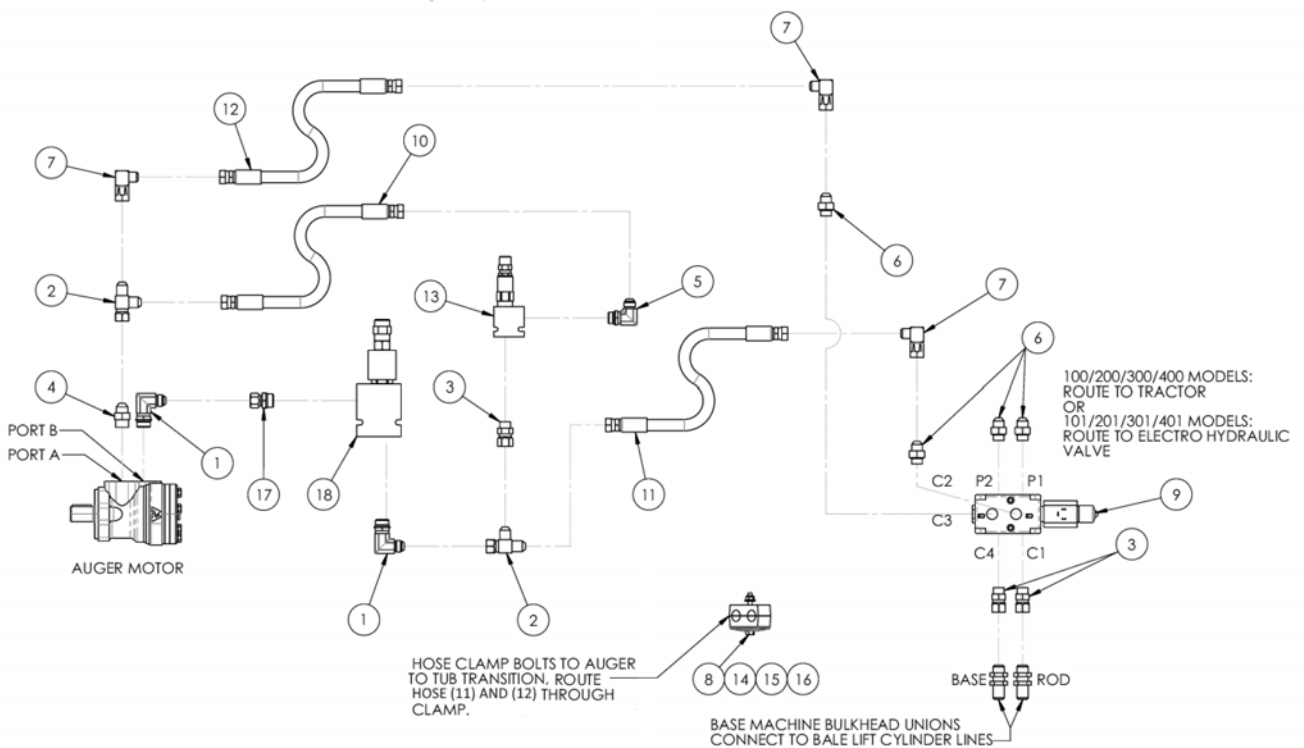
29. If the auger drive guard and calibration crank are attached to the auger, remove them to allow the assembly of the hydraulic components.
30. Assemble the hydraulics according to the chart and diagram.

Note: The motor is already installed on the auger. It is shown in the diagram for reference purposes only.



Remove Drive Guard and Crank

221516

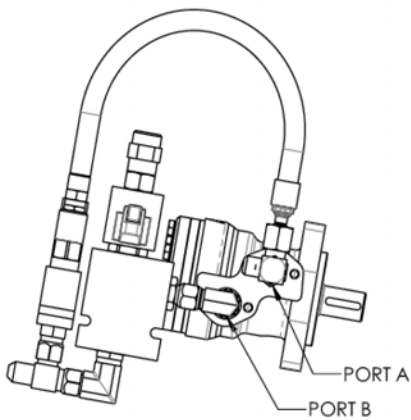


Auger Hydraulics

46195_C1

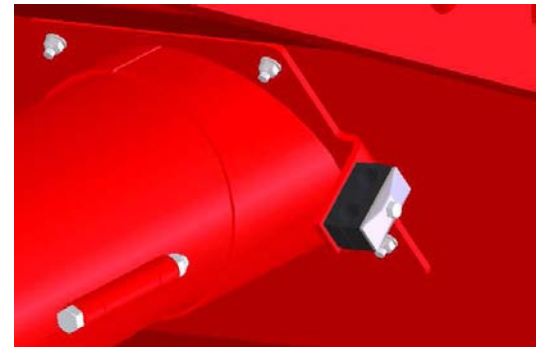
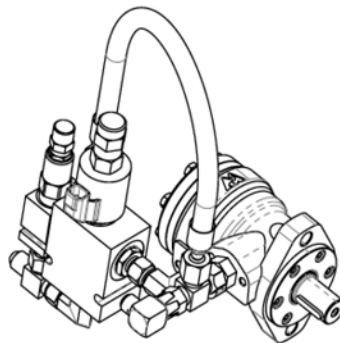
Assembling the Grain Tank onto the BP 660

ITEM	DESCRIPTION
1	HYD,FIT,ELBOW,10MB-8MJ90
2	HYD,FIT,TEE,8FJX-8MJ-8MJ
3	HYD,FIT,ADAPTER,8MB-8FJX
4	HYD,FIT,ADAPTER,10MB-8MJ
5	HYD,FIT,ELBOW,8MB-8MJ90
6	HYD,FIT,ADAPTER,8MB-8MJ
7	HYD,FIT,ELBOW,8FJX-8MJ90
8	BOLT,HEX,5/16X2-1/2,UNC,GR5,ZP
9	HYD,VALVE,ELEC_DOUBLE_SELECTOR
10	HYD,HOSE,3/8X19,8FJX-8FJX,2W
11	HYD,HOSE,3/8X76,8FJX-8FJX,2W
12	HYD,HOSE,3/8X84,8FJX-8FJX,2W
13	HYD,VALVE,RELIEF,1500,10 ORB
14	NUT,FLG,LOCK,5/16,UNC,GR5,ZP
15	HYD,CLP,19/19,3015-3,3,PA
16	HYD,CLAMP,CAP,DIN,3015-3,3
17	HYD,FIT,ADAPTER,10MB-8FJX
18	HYD,VLV,PRO,SOL,3500,10_ORB



Views of Installed Valves and Hoses
on Auger Motor

46195_C2



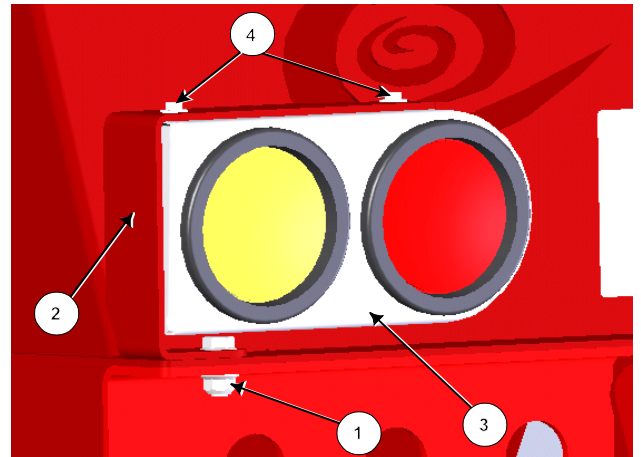
View of Installed Hose Clamp
on Auger Transition

221475

31. Route the hydraulic hoses along the frame and support them.

32. Install the left rear clearance light (3) that was removed earlier.

- Remove the outer $\frac{1}{2}$ " x 1- $\frac{1}{4}$ " hex bolt and flange nut (1) holding the tank to the mount.
 - Keep the fasteners.
- Place the light mount bracket (2) onto the tank mount.
 - Re-install the $\frac{1}{2}$ " x 1- $\frac{1}{4}$ " hex bolt through the bracket, tank and tank mount. Fasten with a flange locknut (1).
- Install the clearance light assembly (3) to the light bracket.
 - Use 2 of $\frac{1}{4}$ " x $\frac{3}{4}$ " hex bolts (4) that were removed earlier.

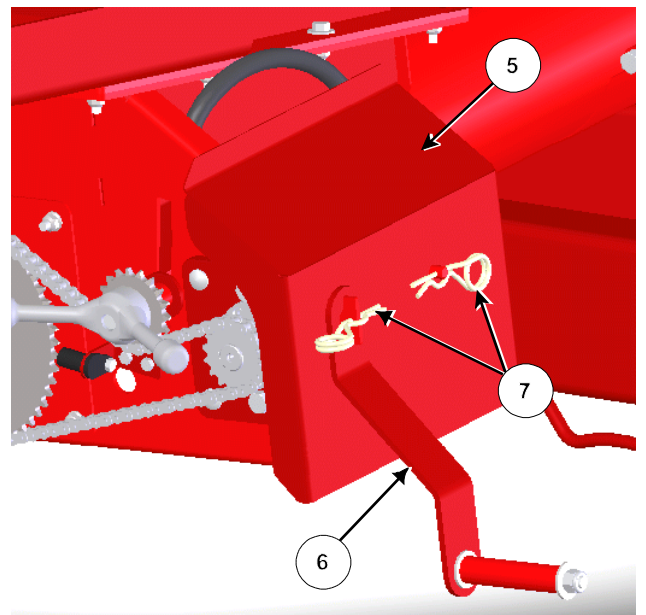


Install the Rear Left Clearance Light

221474C

33. Install the motor guard (5) and calibration crank (6).

- Fasten with 2 of 2" x 3- $\frac{5}{8}$ " clip pins (7).



Install the Motor Guard and Calibration Crank

221476C

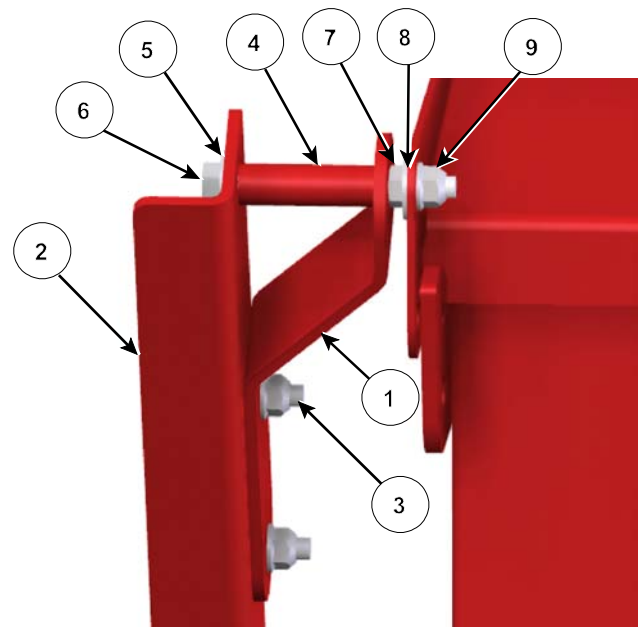
34. Attach the tank lid handle according to the instructions below.



Lid Handle Installed
(Handle Shown in Storage Position)

222146

- Attach the lid offset tab (1) to the handle (2) with 2 of 3/8" x 1" flange bolts and flange locknuts (3).
- Place a 3/8" flatwasher (5) onto a 3/8" x 3-1/2" hex bolt (6).
- Position the lid opener spacer (4) between the handle (2) and the offset tab (1).
- Place the bolt (6) with washer through the handle, the spacer and the tab.
- Place a 3/8" jam nut (7) onto the bolt.
- Place a 3/8" flatwasher (8) onto the bolt next to the jam nut.
- Place the bolt into the lid front upper hole.
- Place a 3/8" flange locknut (9) onto the bolt.
- Adjust the jam nut (7) and flange locknut (9) so the bolt becomes a pivot shaft for the handle.

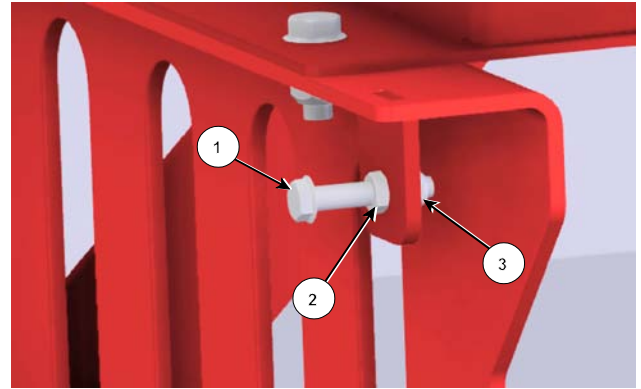


Attach Handle to Lid

46183_GC

Handle Guide Bolt

- Install a 3/8" jamnut (2) onto a 3/8" x 2" flange bolt (1).
- Place the bolt (1) with jamnut into the front tab on the front tank support.
- Place a 3/8" flange locknut (3) onto the bolt.
- Adjust the jamnut (2) and locknut (3) so the tank handle can fit over the bolt as a guide for the tank handle.
- Check for free movement of the handle and tank lid.

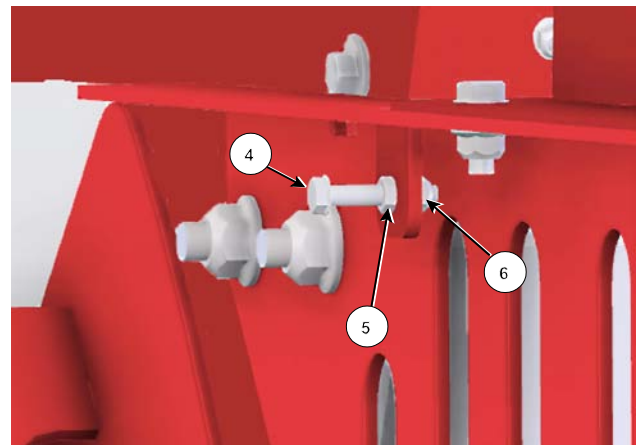


Install the Tank Handle Guide Bolt

222147C

Handle Storage Bolt

- Install a 3/8" jamnut (5) onto a 3/8" x 2" flange bolt (4).
- Place the bolt (4) with jamnut into the rear tab on the front tank support.
- Place a 3/8" flange locknut (6) onto the bolt.
- Adjust the jamnut (5) and locknut (6) so the tank handle can fit over the bolt and act as a storage location for the tank handle.

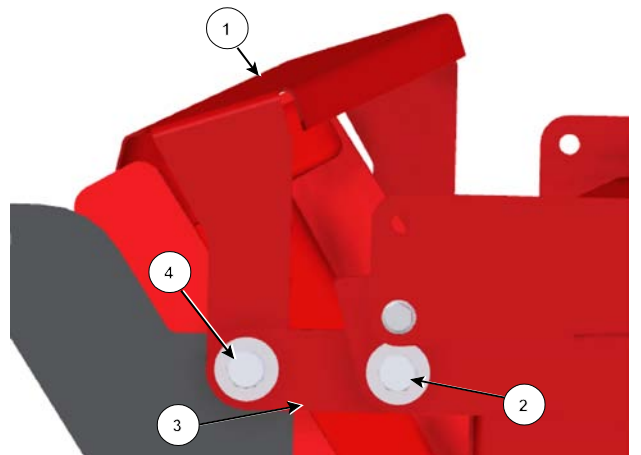


Install Handle Storage Bolt

222148C

35. Attach the top grain deflector (1) on both sides of the tank.

- At the rear of the grain tank place a 1/2" flatwasher onto a 1/2" x 1-3/4" hex bolt (2) and into the lower tank hole.
- Place a 1/2" flatwasher between the tank and the deflector link.
- Place the deflector link (3) onto the bolt.
- Place a 1/2" flange locknut onto the bolt (2).
- Place a 1/2" flatwasher onto a 1/2" x 1-3/4" hex bolt (4).
- Place the bolt (4) through the deflector link (3), through the grain deflector (1) and into the tub deflector.
- At the front tub screen place the bolt (4) through the link (3), grain deflector (1), tub screen and tub deflector.
- Place a 1/2" flange locknut onto the bolt (4).
- Tighten all the fasteners at the front and back of the grain tank.



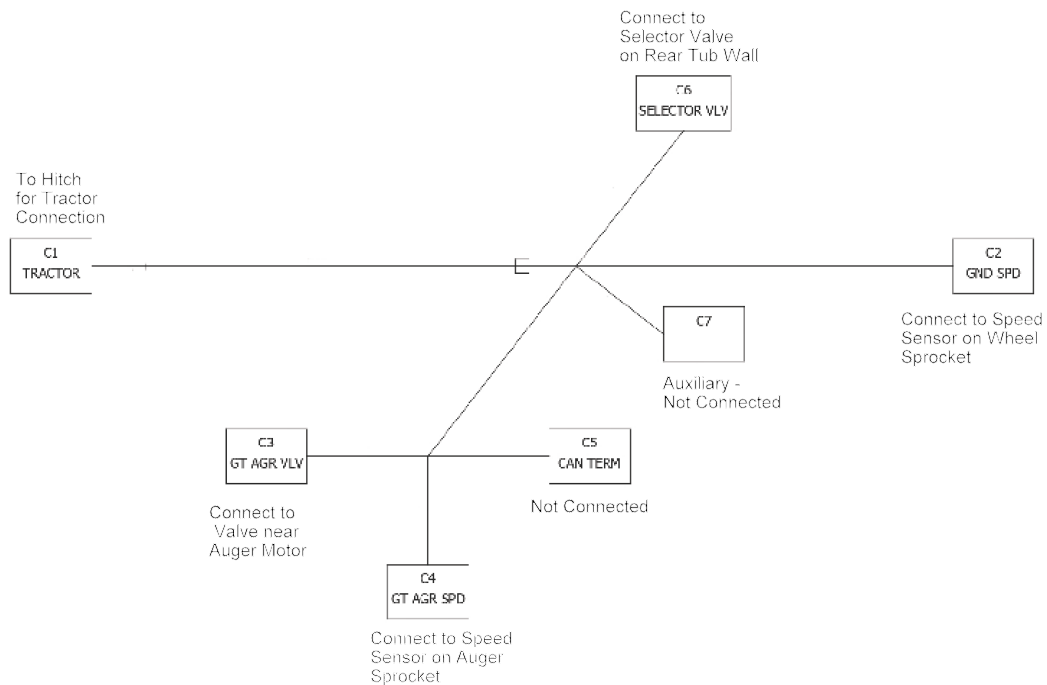
Attach the Top Grain Deflector

222149C

36. Connect the wiring harnesses according to the drawings.

Grain Tank Harness

46169_CC



Note: Install the electrical adapter (1) to the solenoid of the valve near the auger motor before attaching the harness (2).

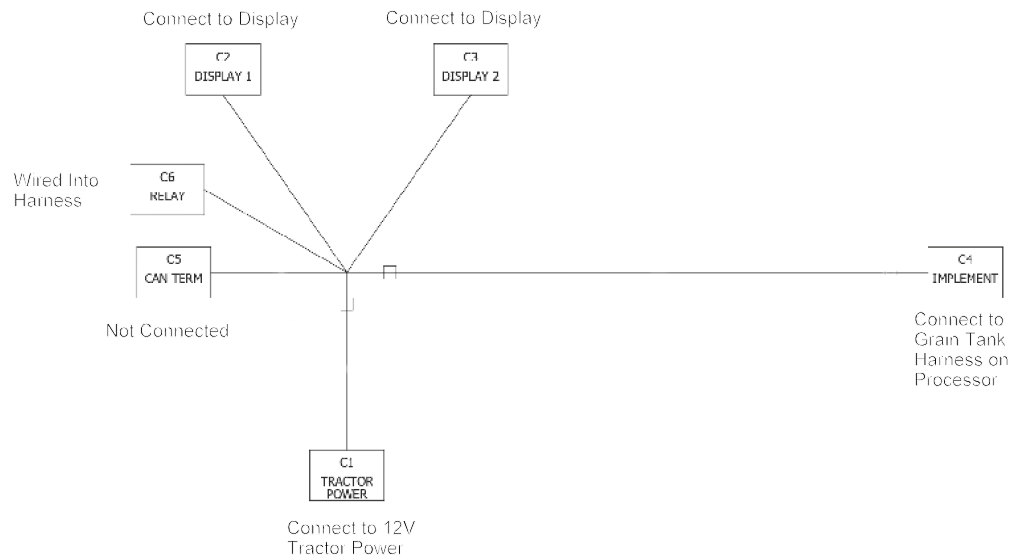


Attach Electrical Adapter to the Solenoid Before Attaching the Harness

223378C

Tractor Harness

46170_CC



37. Mount the tire onto the hub.
38. Remove the support jack and lower the BP 660.
39. Place the calibration bucket onto the bucket holder.
40. Place the Grain Tank Operator Manual in the manual tube located on the bale processor.
41. Place the weigh scale in the manual tube located on the bale processor.
42. Adjust the wheel sensor according to the instructions given in "Adjust the Wheel Sprocket Sensor" located in Section 5 "Maintaining the Grain Tank".