



Park the CFR650 on level ground.

Lower the forks to the ground for additional stability.

Ensure the CFR650 upper discharge door is locked in the upright position.

Disconnect the drive shaft and hydraulic lines from the tractor before beginning any work.

Disconnect the CFR650 from the tractor hitch.

Block the machine to prevent any movement while assembling.

1. Jack up the CFR650 under the left rear frame to allow the left axle to be removed.

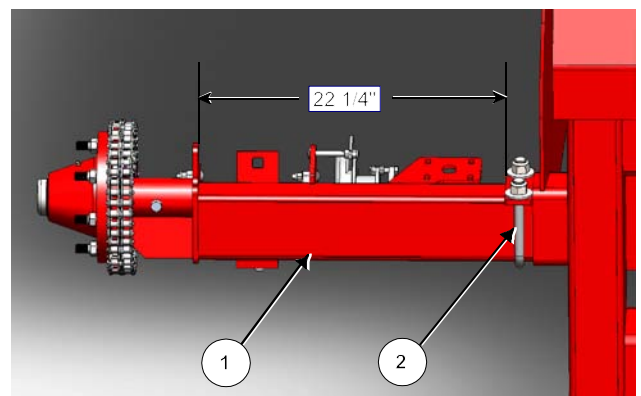
Note: Do not place the jack on the axle or the bale lift frame.

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.
 - This axle will not be used again.
4. Slide in the new Grain Tank axle (1).
 - Position with the clutch towards the front of the machine.
 - Position it to be approximately 22 1/4" 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.



Jack Under the Left Frame

211191C

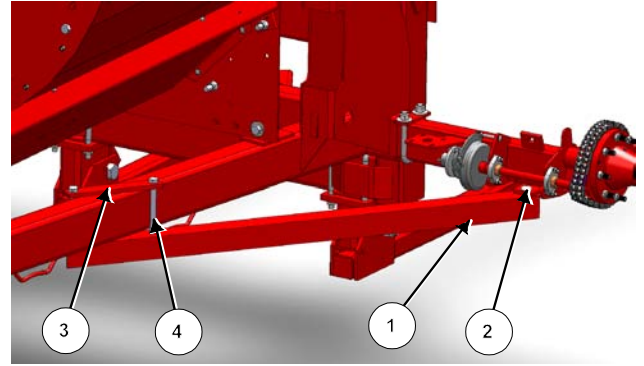


Slide in the New Axle

211192C

5. Install the axle brace.

- Fasten the brace (1) to the tab on the axle with a $\frac{3}{4}$ " x $2\frac{1}{2}$ " carriage bolt and locknut (2).
- Place the brace under the frame of the CFR650.
- Connect to the CFR650 frame with the bolt plate (3) and 2 of $\frac{3}{4}$ " x $8\frac{1}{2}$ " bolts and locknuts (4).
- Do not tighten at this time to allow for adjustment when the tank is installed.

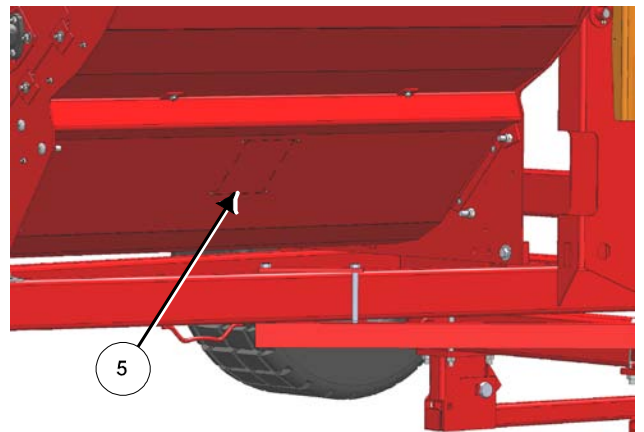


Install the Axle Brace

211193C

6. Cut out the auger discharge opening in the left side of the processor tub wall.

- Follow the perforations (5) cut into the tub wall.

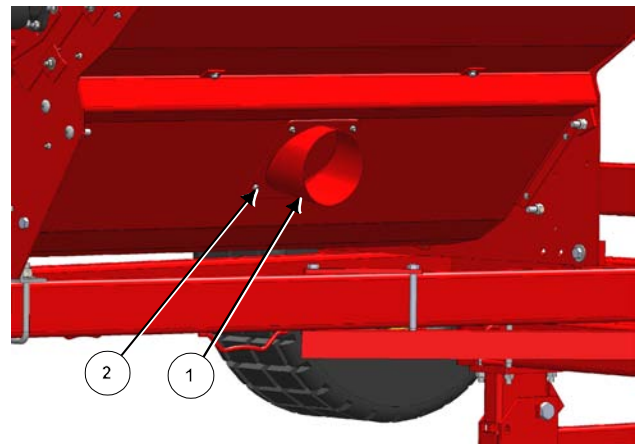


Cut Out the Auger Discharge Opening

211194C

7. Mount the auger transition (1) to the outside of the tub wall using 4 of $\frac{3}{8}$ " x 1" carriage bolts (2) and locknuts.

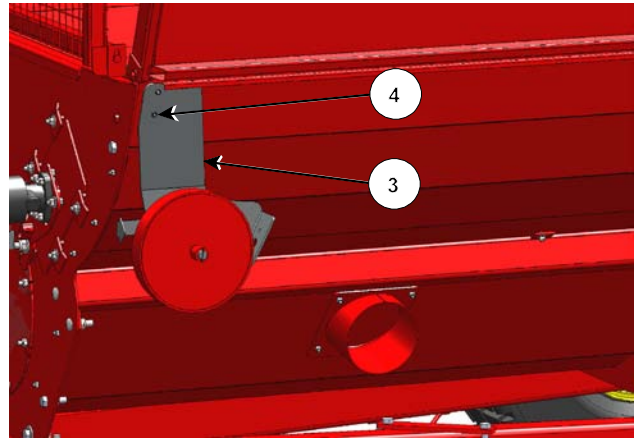
- Position with the transition with longest portion of the tube at the bottom.
- Place the heads of the carriage bolts inside the processor tub.
- Keep the bolts loose at this time to ease assembly.
 - They will be tightened at a later stage of assembly.



Mount the Auger Transition to the Tub Wall

211195C

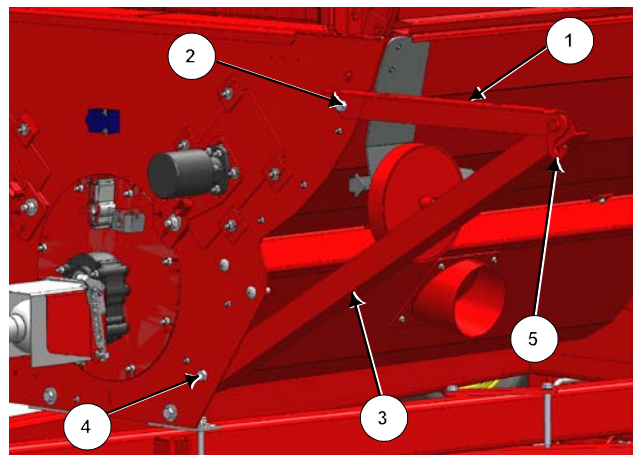
8. Mount the distance indicator
 - Remove the 2 existing bolts that are in the tub wall.
 - They will not be re-used.
 - a. Attach the support bracket (3) to the top left outside tub wall with 2 of 3/8" x 1" carriage bolts (4) and locknuts.
 - Place the heads of the carriage bolts inside the processor tub.



Mount the Distance Indicator

211196C

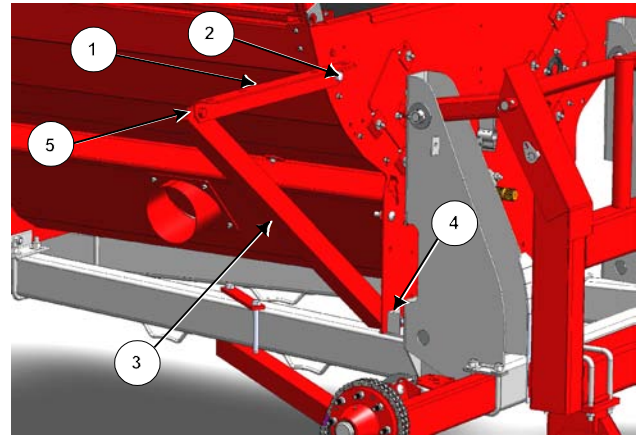
9. Install the front tank mount bracket (1) to the upper part of the tub end walls.
 - Connect with a 3/4" x 2 1/4" bolt and locknut (2).
 - Do not tighten at this time.
10. Attach the front tank mount brace (3) to the lower part of the tub end walls.
 - The front brace is 64 1/2" long.
 - Connect the brace to the lower hole in the tub wall with a 3/4" x 2 1/4" bolt and locknut (4).
 - Do not tighten at this time.
11. Connect the tank bracket to the tank brace.
 - Place the calibration hook (5) at the connection point.
 - Connect with 3/4" x 2" bolt and locknut.
 - Do not tighten at this time.



Install the Front Tank Mount and Brace

211197C

12. Install the rear tank mount bracket (1) to the upper part of the tub end walls.
 - Connect with a 3/4" x 2 1/4" bolt and locknut (2).
 - Do not tighten at this time.
13. Attach the rear tank mount brace (3) to the lower part of the tub end wall.
 - The rear brace is 61" long.
 - Loosen the tub mount bolt at the angle iron on the processor frame (4).
 - Place the brace on the inside of the tub processor wall
 - Fasten to the tub bolt.
 - Do not tighten at this time.
14. Connect the tank bracket (2) to the tank brace (3).
 - Connect with 3/4" x 2" bolt and locknut (5).

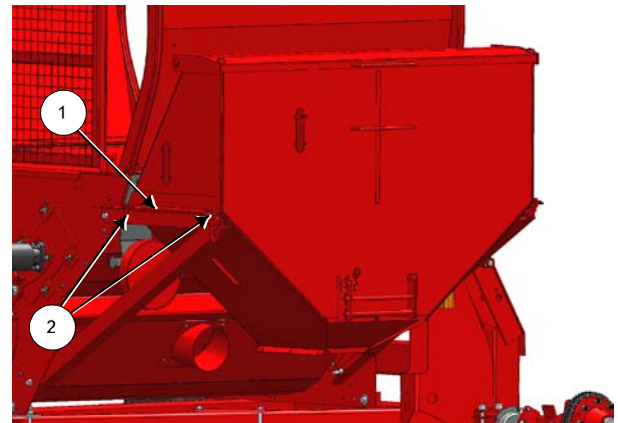


Install Rear Tank Mount and Brace

211198C

15. Lift the tank with straps and lower until the tank side brackets contact on the tank mount brackets (1).
 - 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.

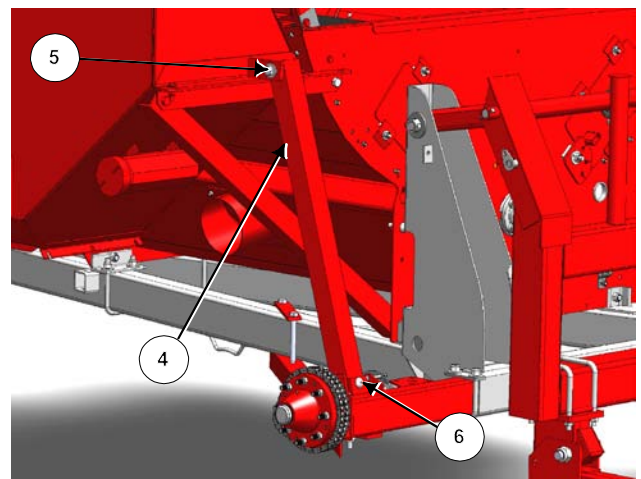


Lower Tank and Install to Braces

211199C

- Align the tank mount holes and fasten with 1/2" x 2" bolts, 2 flatwashers and locknuts (2) at the 4 connection points.
- Do not tighten at this time.

16. Attach the rear tank to axle bracket (4) to the tab on the tank mount (5) and the tab on the axle (6).
 - On the top tab use a 3/4" X 2 1/4" bolt, flatwasher and locknut.
 - Do not tighten at this time.
 - On the axle tab use a 3/4" x 2 1/2" carriage bolt and locknut.
 - Do not tighten at this time.



Rear Tank to Axle Bracket

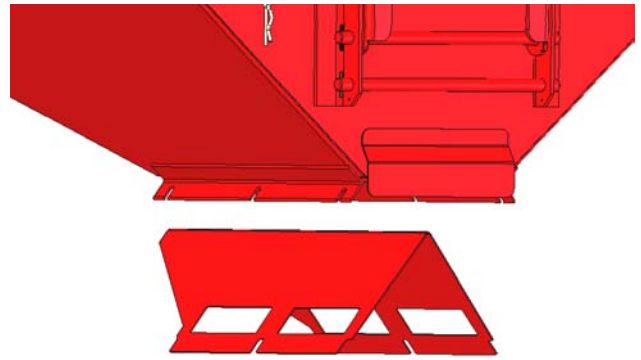
211201C

17. Place the supplied foam tape around the surface of the auger that will connect to the bottom of the tank.
 - This foam tape will ensure a good seal.
18. Place the tank insert into the tank before mounting the auger.
19. Slide the end of the auger into the auger transition (1) mounted on the processor tube.
20. Mount the auger to the bottom of the tank using 8 of 3/8" x 1" bolts, flatwashers and locknuts (2).
 - Fully tighten these fasteners.
21. Tighten the transition tube fasteners.
22. Tighten all the fasteners on the tank supports, tank braces, axle brace and u-bolt holding the axle.

Do not tighten bolts holding the tank to the supports at this time. The tank may have to be moved slightly later when installing the distance indicator.

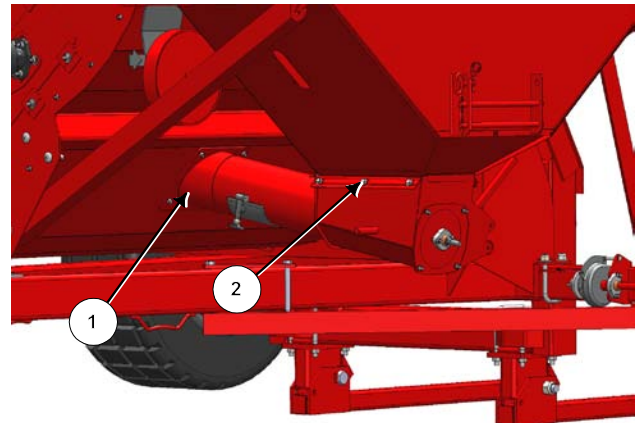
Identifying the Lower Drive Box (See the diagram to the right):

- the input shaft turns CCW
 - the output shaft turns CW
23. Place the rear drive box (3) onto the mount tab located on the axle
 - Place the vent up through the hole in the mount tab.
 - Insert the drive shaft and key into the clutch (4).
 - Fasten the drive box with one bolt in the hole nearest the axle tube and nearest to the wheel.



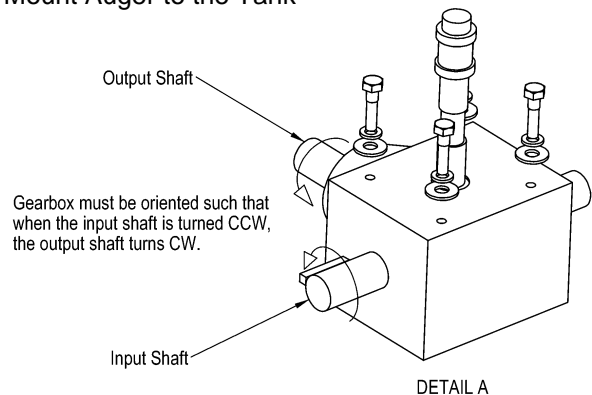
Place the Tank Insert Into the Tank

219388



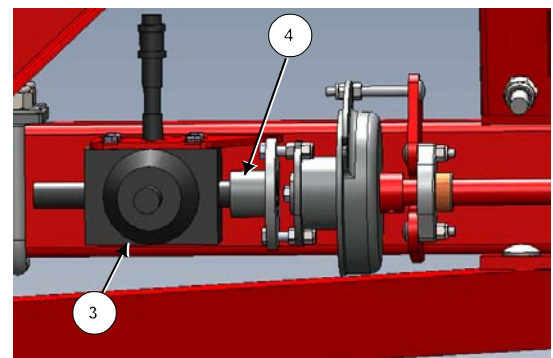
Mount Auger to the Tank

211200C



Identifying the Lower Drive Box

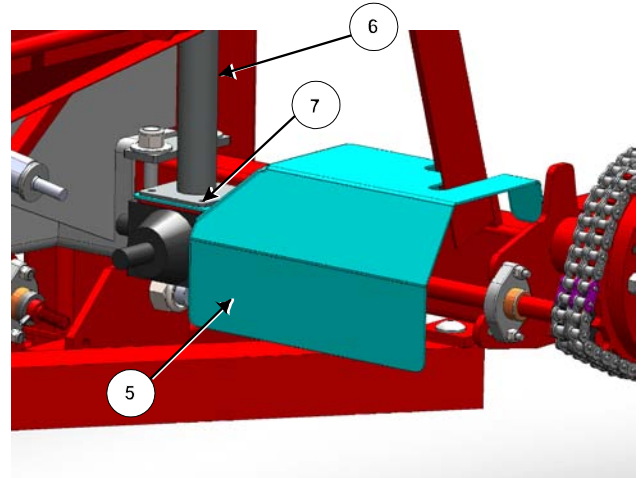
41194_C Det A



Place Rear Drive Box & Connect to Clutch

211202

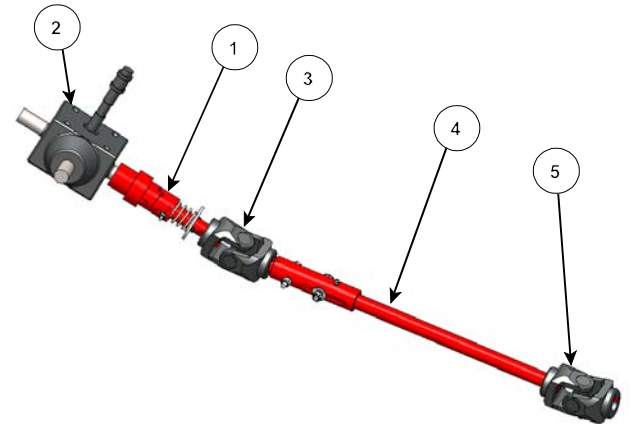
24. Place the clutch shield (5) on top of the axle mount.
25. Place the calibration bucket holder (6) on top of the shield.
26. Thread 5/16" x 1-1/4" bolts, flatwashers and lockwasher (7) through the calibration bucket holder, clutch shield and into the housing of the gearbox.
 - Tighten in place.



Install Clutch Shield & Bucket Holder

211207C

27. On a bench, loosely assemble the following drive components:
 - One way clutch (1) to upper drive box (2)



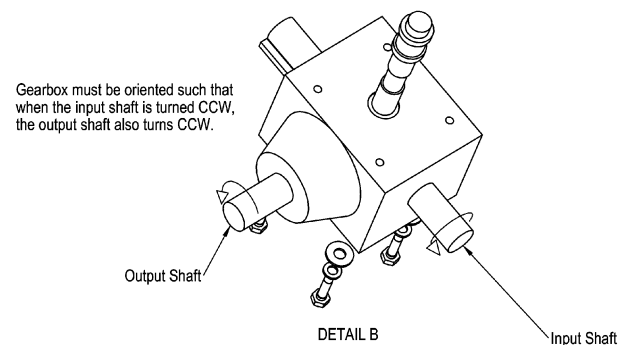
Assemble Drive Components

214129C

Identifying the Upper Drive Box

(See the diagram to the right):

- the input shaft turns CCW
- the output shaft turns CCW
- Remove the top plug from the drive box.
- Install the vent/tube into the top plug.
 - Place a key in the keyway.
 - Knuckle (3) to one way clutch.
 - Place a key in the keyway.
- Shaft to upper knuckle (4)
 - Place a key in the keyway.
- Lower Knuckle to shaft (5)
 - Place a key in the keyway.

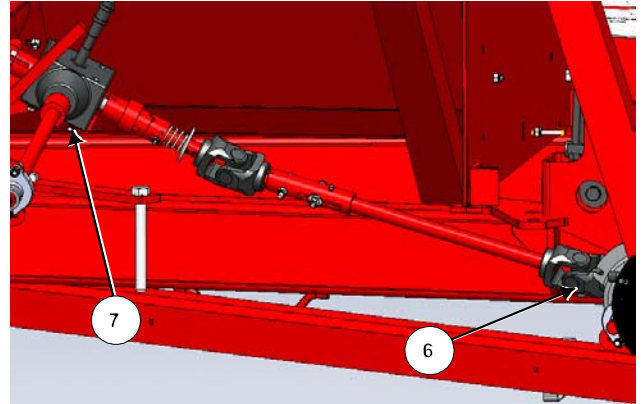


Identifying the Upper Drive Box

41194_C Det B

Assembling the Grain Tank onto the CFR650 BalePro®

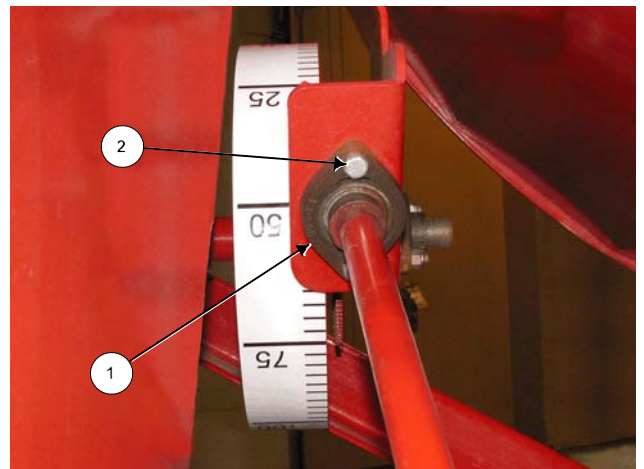
28. Slide the lower knuckle (6) onto the lower drive box shaft.
 - Place a key in the keyway. Tighten with the set screw.
29. Place the upper drive box onto the auger mount plate (7)
 - Mount with the vent tube upwards.
 - Fasten with 5/16" x 1" bolts.
30. Adjust all the drive components and tighten.



Connect Drive

214130C

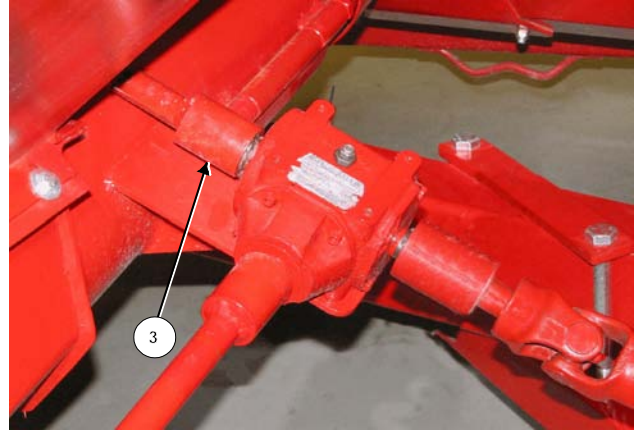
31. Install the distance indicator drive shaft to the distance indicator installed earlier
 - Loosen the bolts (2) on the bearing to allow adjustment.
 - Slide the geared end of the shaft into the bearing (1) on the distance indicator.



Install Indicator Shaft (Shown Back of Indicator)

211186C2

- Place the shaft hub (3) and key onto the upper drive box shaft.

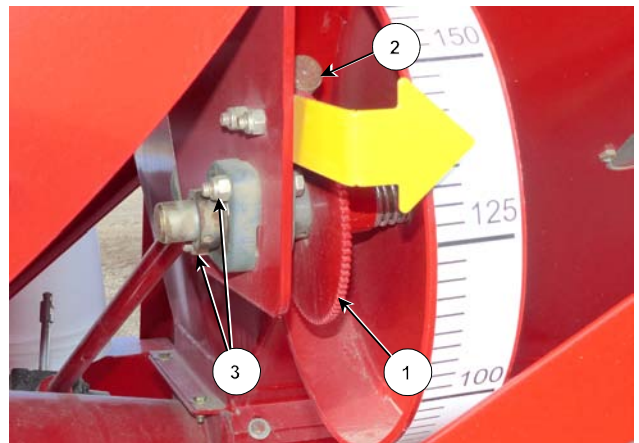


Distance Indicator Shaft on Gear Box

214131C

32. Adjust the distance sprocket (1) to engage the threaded end (2) of the distance shaft.

- Loosen the bearing bolts (3) on the distance indicator.
The front bearing bolt passes through a slot in the mount plate.
- Rotate the bearings to engage the sprocket into the threaded shaft.
- Tighten the bearings in place.



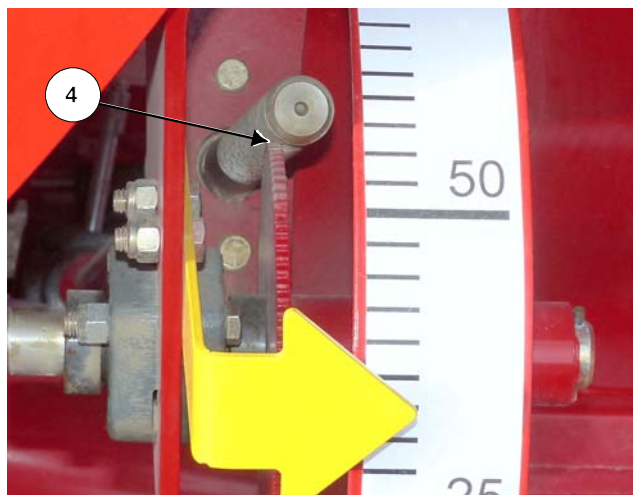
Adjust the Sprocket Into the Threaded Shaft

216217C

33. Check that the thread on the distance shaft is engaging the teeth of the distance sprocket (4).

Note: The thread on the shaft does not need to be parallel to the sprocket but the teeth of the sprocket do need to engage the thread.

- To adjust the angle of the thread, move the grain tank sitting on the supports. This in turn will move the gear box on the auger spout which will affect the angle of the shaft/threads to the sprocket.
- Tighten the tank bolts.



Adjust Threaded Shaft onto Sprocket

216218C

34. On a bench, loosely assemble the following drive components:

- Place the threaded end of the auger drive shaft (1) through the bearing that will go onto auger end plate.
- Place the locking collar on the shaft. Do not tighten at this time.
- Place the pipe spacer onto the threaded end of the shaft.
- Insert the 1/4" x 1 1/2" roll pin (3) with an equal amount exposed on each side.
- Place the shaft hub (2) and key onto the output shaft of the gear box.
- Slide shaft until the roll pin is against the pipe spacer.
- Fasten the bearing onto the auger end plate with 3/8" x 1 1/2" carriage bolts and locknuts.

- Tighten the bearing locking collar.

36. Mount a driving and an auger sprocket.

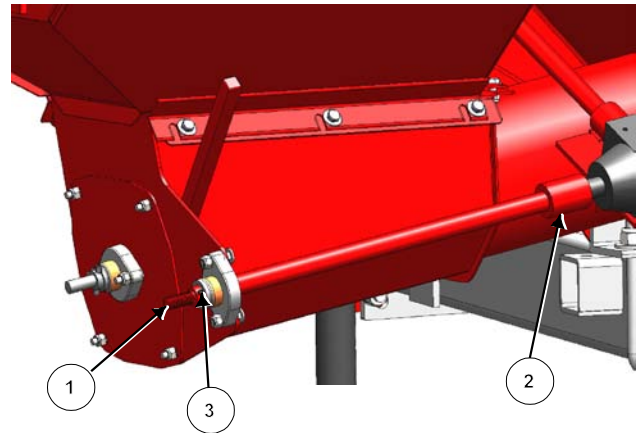
- Tighten in place with a quick turn handle.

37. Place the chain tightener (3) and quick turn handle over the post.

38. Place the chain onto the driving sprocket, auger sprocket and tightener sprocket.

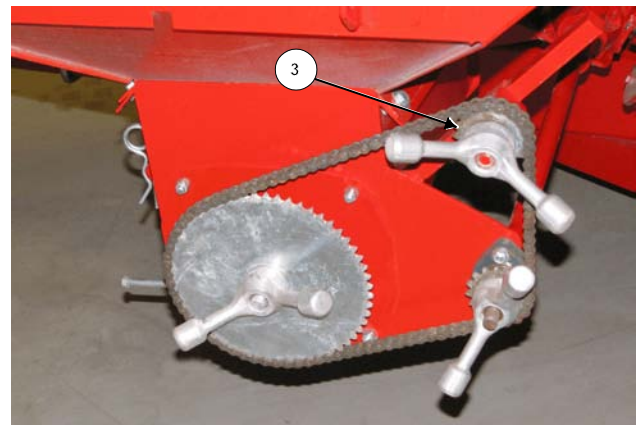
39. Slide the tightener (3) up the post and fasten with the quick turn handle.

35.



Install the Auger Driveshaft

211210C



Mount Sprockets, Chain and Tensioner

211166C2

40. Place the remaining sprockets and the auger crank handle onto the storage pin on the side of the auger housing.
 - Fasten in place with the spring pin.

Test the Drive Mechanism

1. Rotate the drive wheel counter-clockwise (direction of machine travel).
2. Confirm that the auger flighting is turning counter-clockwise (when facing the Grain Tank from outside the processor).
3. Confirm that the distance indicator is counting up.



Store the Sprockets and Crank Handle

211212

If the auger and distance indicator do not turn as indicated, then find the situation listed in the chart below and apply the solution.

Situation	Solution
If the auger turns counter clockwise & the distance indicator does not count up.	Flip the axle gearbox over and flip the auger gearbox over. Move the vents to the top.
If the auger turns clockwise & the distance indicator counts up.	Flip the auger gearbox over. Move the vent to the top.
If the auger turns clockwise & the distance indicator does not count up.	Flip the axle gearbox over. Move the vent to the top.

Finish the Assembly

1. Mount the tire onto the hub.
2. Lower the CFR650 and remove the jack.
3. Place the calibration pail onto the holding post.
4. Place the weigh scale in the manual tube on the side of the Grain Tank.
5. If the drive wheel chain has been removed for long or high speed transport, give the end user bag containing the drive wheel chain and the instructions on how to install the chain and adjust the clutch drive.

End User - Install the Drive Wheel Chain

If the drive wheel chain has been removed to enable long distance or high speed transport, follow these instructions to install the chain and adjust the clutch drive.

The auger will not work unless the wheel chain is installed on the drive wheel and the clutch sprocket is fully engaged into the wheel chain.



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Lower the forks to the ground for additional stability.

Ensure the CFR650 upper discharge door is locked in the upright position.

Disconnect the drive shaft and hydraulic lines from the tractor before beginning any work.

Disconnect the CFR650 from the tractor hitch.

Block the machine to prevent any movement while assembling.

1. Jack up the CFR650 under the left rear frame to allow the left axle to be able to removed.

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

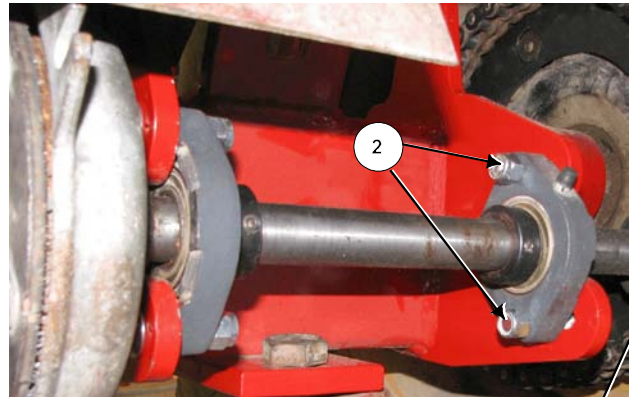
2. Remove the tire.



Jack Under the Left Frame

211191C

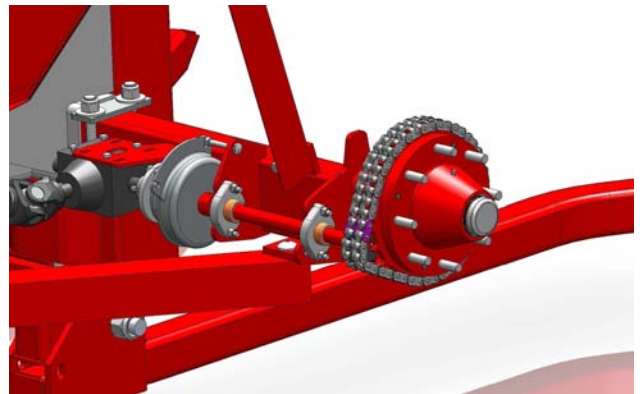
3. Rotate the clutch sprocket out of the way to ease installation of the chain.
 - Loosen the bolts (2) on the outer bearing mounts.
 - The bolts on the inner bearing do not have to be loosened as the bearing is self aligning.
 - Rotate the outer drive shaft bearing around the upper bolt. (The bottom bolt is in a slot.)



Rotate the Clutch Sprocket

211185C

4. Place the double row chain around the sprocket mounted on the wheel.
5. Connect the chain with the double row chain connector.
6. Rotate the clutch sprocket bearing to fully engage the clutch sprocket into the inner row of the drive chain.
7. Tighten the bolts on the outer bearing.
8. Replace the tire.
9. Lower the CFR650.



Double Row Drive Chain

211211