

Installation of the Side Sheets, Guard Rods and Flail Drum Access Door on the BP 661



WARNING

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.



DANGER

Disconnect the PTO from the tractor before doing work near the flail drum.

Do not place hands in the BP 661 when it is rotating. Contact with exposed rotating flails will cause serious injury or death.



WARNING

Heavy components require two or more people and/or lifting devices to remove and install.



This instruction details the installation of the side sheets (2), guard rods (3) and flail drum access door (1) on BP 661 units built prior to 2025, as shown in *Figure 1*.

Note: Some components are removed from drawings / figures in this instruction for clarity.

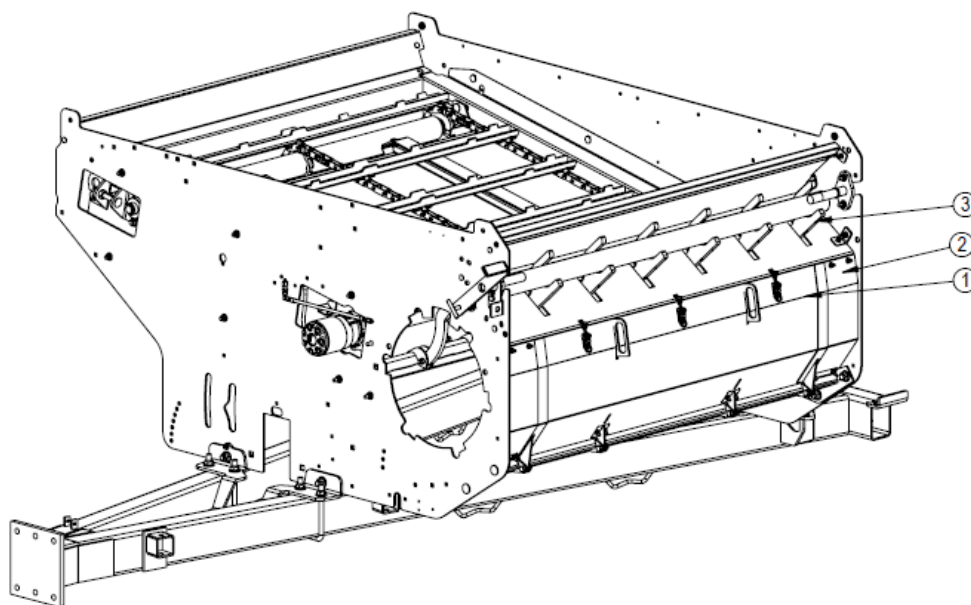
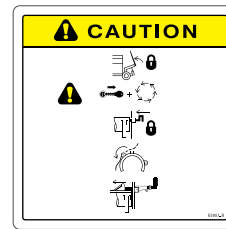


Figure 1: Model detailing the assemblies installed in this instruction

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Remove

1. Lock the flail drum following the instructions detailed in the Operator Manual.



2. Remove the flail drum access panels; see *Figure 2*.

- a. Remove the spring pins (1).
- b. Remove the panel pins.
- c. Lift the panels out and set aside.



Figure 2: Remove flail drum access panels and center door

3. Remove the flail drum center door (2); see *Figure 2*.
- a. Remove the bolts that are fastening the center door to the lower bent side sheet (under the guard rods) and the tub floor.
 - b. Remove the center door and set aside.

4. Remove the guard rod adjustment bar.

- a. If the guard rod adjustment handle (1) is installed, follow the below steps and refer to *Figure 3*:
 - i. Pull the guard rod adjustment handle (1) out of the handle lock (2).
 - ii. Remove the cross bolt (3) that is through the guard rod adjustment bar (4) and handle (1), and remove the handle. Set the handle aside for re-use.
 - iii. Remove the bolts (5) fastening the pin storage (6) and guard rod adjustment tube (7) to the tub wall, and remove. Set the pin storage and adjustment tube aside for re-use.

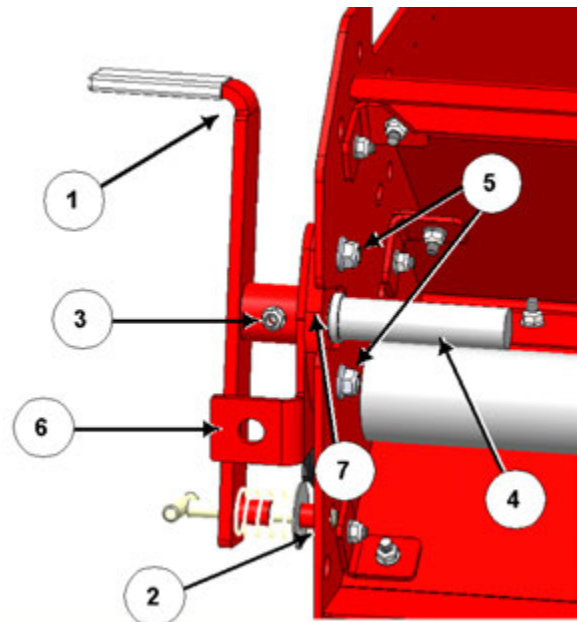


Figure 3: Remove adjustment handle, pin storage and adjustment tube

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- b. If the optional hydraulic aggression control is installed, follow the below steps and refer to *Figure 4*:
- Remove the pin (1) that fastens the hydraulic cylinder (2) to the hydraulic adjustment arrow (3). Set the pin aside for re-use.
 - Carefully lower the hydraulic cylinder down and support if needed.
 - Remove the cross bolt (4) that is through the guard rod adjustment bar (5) and hydraulic adjustment arrow (3), and remove the arrow. Set the arrow aside for re-use.
 - Remove the bolts fastening the guard rod adjustment tube (6) to the tub wall, and remove. Set the adjustment tube aside for re-use.

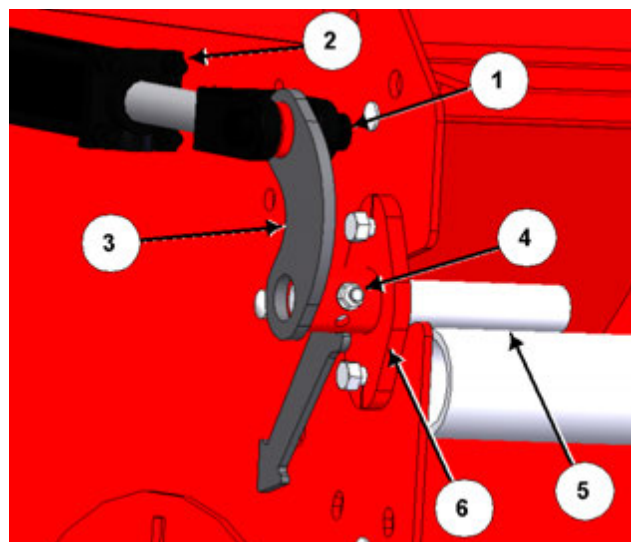


Figure 4: Remove pin and hydraulic adjustment arrow

- c. Carefully slide the guard rod adjustment bar (1) out of the guard rod adjustment tube (2) on the rear of the machine, and remove; see *Figure 5*.
- Note: The guard rod adjustment bar is heavy. Use appropriate support while removing.



Figure 5: Remove guard rod adjustment bar

- d. Save all hardware for re-use.

5. Remove the guard rods (1, 2); see *Figure 6*.

- Remove the bolts (3) fastening the 6 guard rods (1, 2) to the guard rod mount. Remove the guard rods and set aside.
 - To remove the guard rod (2) closest to the rear of the machine, remove the bolts fastening the bracket (4) to the upper bent side sheet.
 - Note: The flail drum is not shown in *Figure 6* for clarity.

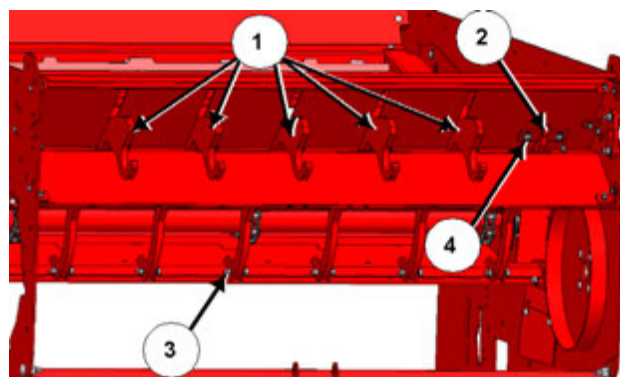


Figure 6: Remove guard rods

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6. Remove the side sheets.

- a. Remove the deflector brace/crossbar (1); see *Figure 7*:
 - i. Remove the bolt fastening the tub mount (2) to the tub wall, and the bolt fastening the tub mount (2) to the crossbar (1).
 - ii. Repeat on the opposite side of the crossbar ensuring to support the free end.
 - iii. Remove the tub mounts and crossbar. Set the crossbar aside for re-use.

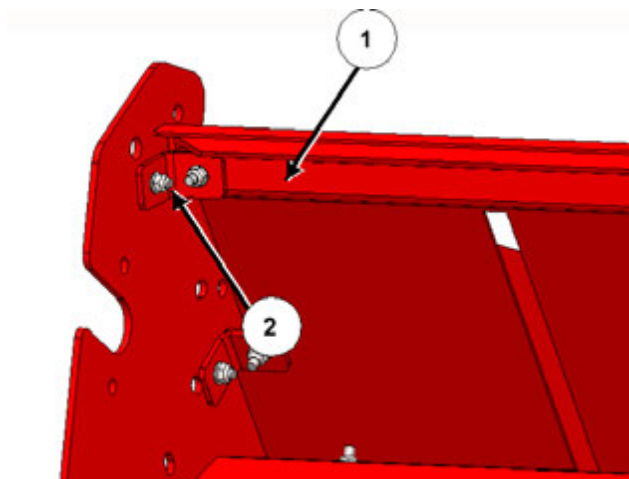


Figure 7: Remove crossbar

- b. Remove the upper bent side sheet (1); see *Figure 8*:
 - i. Remove the bolts (2) fastening the upper bent side sheet (1) to the lower bent side sheet (3).
 - ii. Carefully remove the bolt fastening the upper bent side sheet (1) to the tub mount (4), ensuring to support the side sheet.
 - iii. Support the free end of the side sheet (1) and carefully remove the remaining bolt fastening the side sheet to the opposite tub mount.
 - iv. Remove the upper bent side sheet.
 - Note: The side sheet is heavy. Use appropriate support while removing.
 - v. Remove the remaining bolts fastening the tub mounts (4) to the tub wall. Remove the tub mounts.

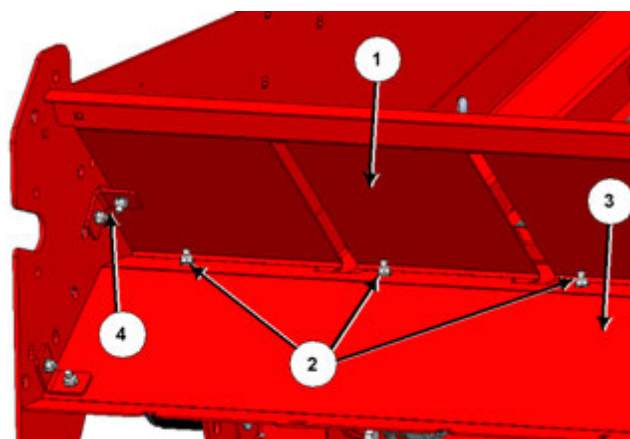


Figure 8: Remove upper bent side sheet

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- c. Remove the lower bent side sheet (1); see *Figure 9*:

- i. Carefully remove the bolt fastening the lower bent side sheet (1) to the tub mount (2), ensuring to support the side sheet.
- ii. Support the free end of the side sheet and carefully remove the remaining bolt fastening the side sheet to the opposite tub mount.
- iii. Remove the lower bent side sheet.
 - Note: The side sheet is heavy. Use appropriate support while removing.
- iv. Remove the remaining bolts fastening the tub mounts to the tub wall. Remove the tub mounts.

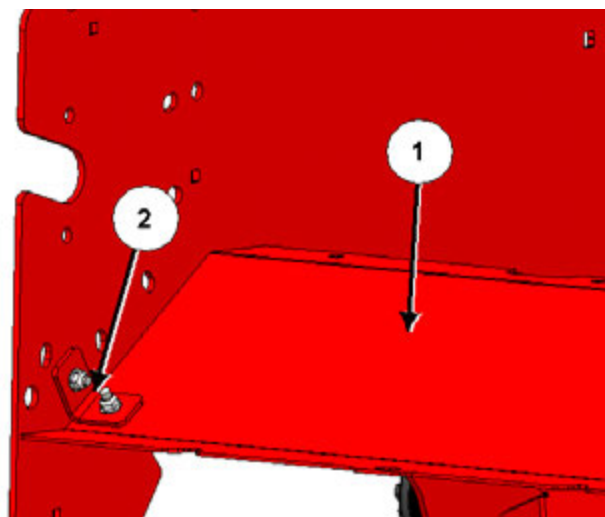


Figure 9: Remove lower bent side sheet

7. If there is no feed chopper installed, remove the lower discharge door and tub floor.
- a. Remove the spring pin (1) from the door handle pin. Move the door handle (2) up to lower the door; see *Figure 10*.
 - b. Place a support under the lower discharge door.

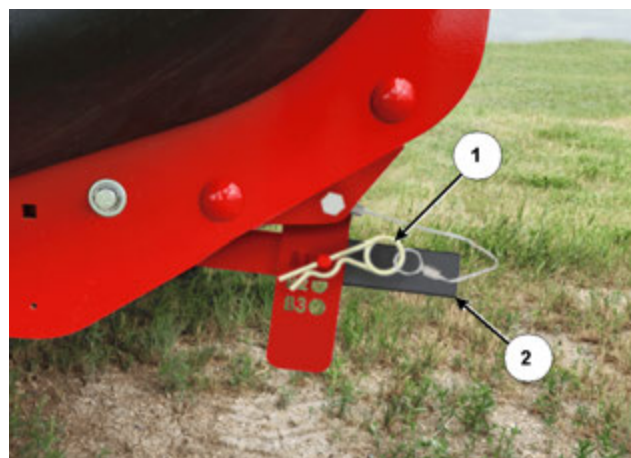


Figure 10: Adjust discharge door height

- c. Carefully remove the bolts (1) fastening the discharge door (2) to the front and rear tub walls, ensuring to properly support the door. Carefully lower the door to the ground; see *Figure 11*.
- i. Note: The discharge door is heavy. Use appropriate support while lowering down.
 - ii. Note: For clarity, the tub floor (3) is transparent in *Figure 11*.
- d. Set the discharge door and associated hardware aside for re-use.

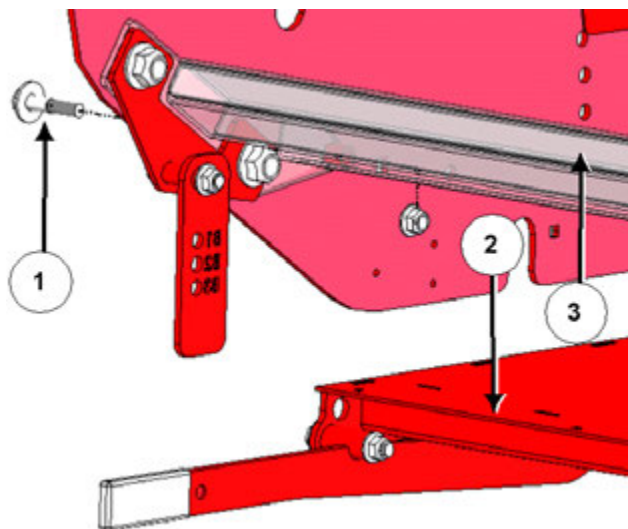


Figure 11: Remove lower discharge door

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- e. Support the tub floor (1) and remove the bolts (2) fastening the tub floor to the rear tub wall; see *Figure 12*.

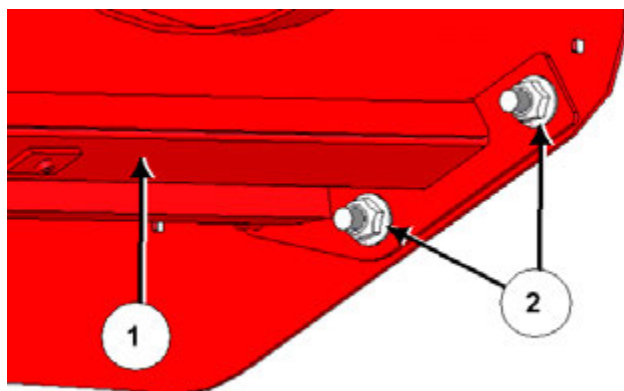


Figure 12: Remove bolts on rear tub wall

- f. Ensuring that the tub floor (1) remains supported, carefully remove the bolts fastening the deflector hanger (2) to the tub floor (1) and front tub wall. Remove the hanger deflector (and tab) and the tub floor; see *Figure 13*.

- i. Note: The tub floor is heavy. Use appropriate support while lowering down and removing.

- g. Set aside the deflector hanger (and tab) and associated hardware for re-use.

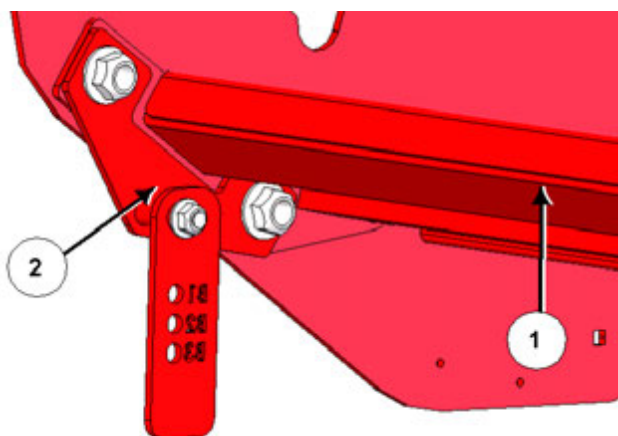


Figure 13: Remove deflector hanger and tub floor

- 8. If there is a feed chopper installed, lower the bottom door and remove the tub floor.
 - a. Adjust the feed chopper bottom door with the handle located on the front tub wall; see *Figure 14*.
 - i. Position the handle into the slot marked with the "C" for chopping mode.

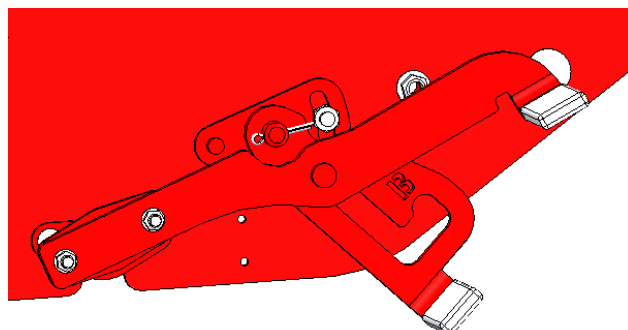


Figure 14: Adjust handle to "C" position

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- b. Supporting the bottom door (1), carefully remove the bolts (2) fastening the bottom door to the front and rear tub walls, and lower; see *Figure 15*.
 - i. Note: The bottom door is heavy. Use appropriate support while lowering down.

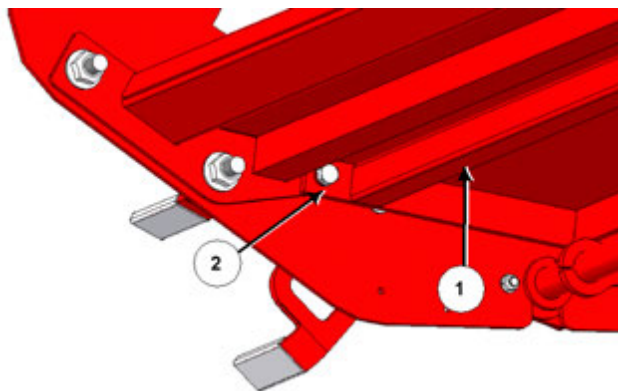


Figure 15: Remove bolt on front tub wall

- c. Remove the bolts (2) fastening one side of the tub floor (1) to the tub wall; see *Figure 16*.
- d. Supporting the free end of the tub floor, carefully remove the remaining bolts fastening the tub floor to the tub wall on the opposite side of the machine. Remove the tub floor.
 - i. Note: The tub floor is heavy. Use appropriate support while lowering down and removing.

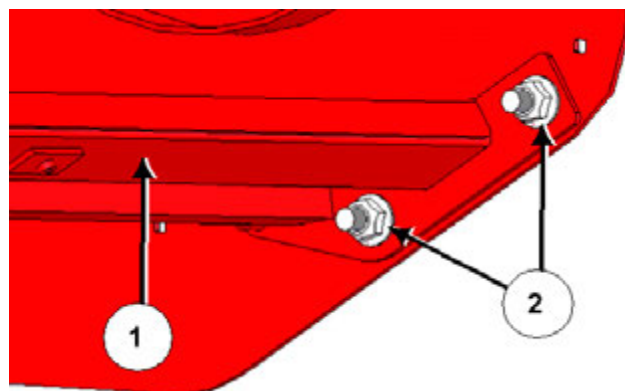


Figure 16: Remove bolts on rear tub wall

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Install the Side Sheets

Use *Figure 17* and *Table 1* as a guide throughout this section.

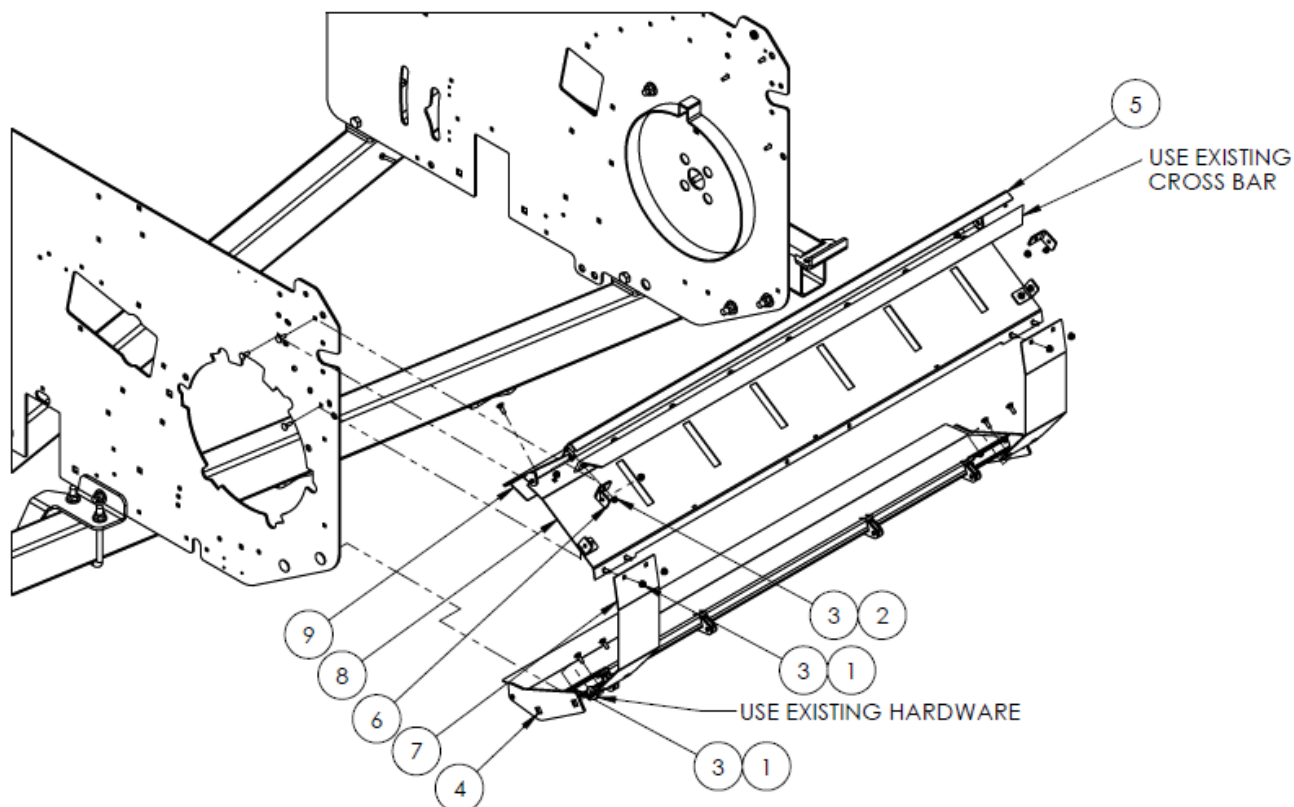


Figure 17: Installation of the side sheet assembly

ITEM NO.	DESCRIPTION
1	BOLT,CARR,3/8X1,UNC,GR5,ZP
2	BOLT,CARR,3/8X1-1/4,GR5,ZP
3	NUT,FLG,LOCK,3/8,UNC,GR5,ZP
4	WLDT,LOWER SHEET,BP661
5	WLDT,DEFLECTOR,FLAIL,TOP
6	FLATBAR,TUB MOUNT
7	PC,FLAIL,DOOR.SIDE
8	PC,SIDE SHEET,GUARD ROD
9	PC,DEFLECTOR,GUARD ROD,MID

Table 1: Parts list for the side sheet assembly

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1. Loosen the upper bolts (1) fastening the side deflector (2) to the front and rear tub walls to allow the tub wall panels to flex; see *Figure 18*.
 - a. Do not remove these bolts.

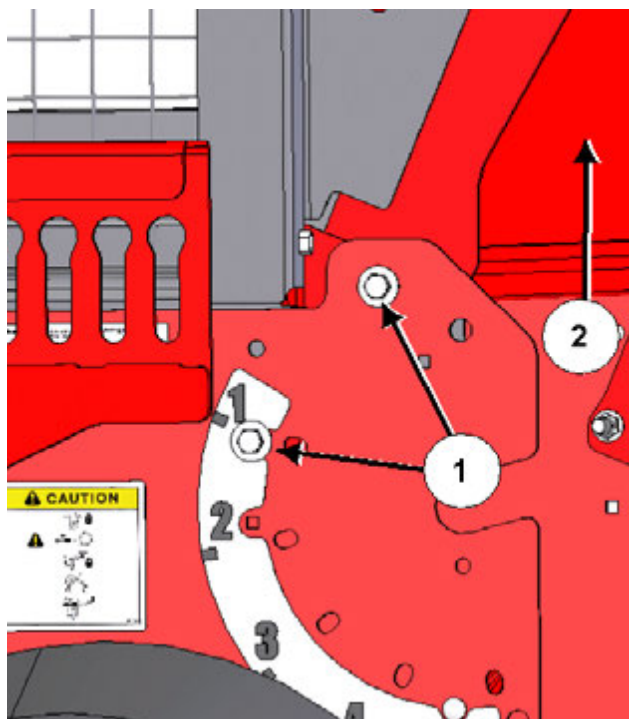


Figure 18: Loosen bolts on front tub wall

2. Install the lower sheet (Item No. 4 in *Table 1*).
 - a. Use the previously removed hardware (1) to fasten the rear side of the lower sheet (2) to the rear tub wall, supporting the opposite end; see *Figure 19*.
 - i. Note: The lower sheet is heavy. Use appropriate support while lifting.

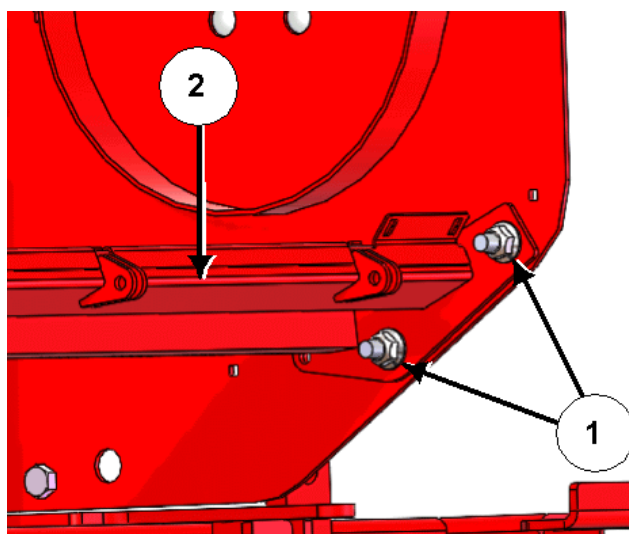


Figure 19: Fasten lower sheet to rear tub wall

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- b. If there is a feed chopper installed, fasten the opposite end of the lower sheet (1) to the front tub wall using the previously removed hardware (2); see [Figure 20](#).

i. Note: The lower sheet is heavy. Use appropriate support while lifting.

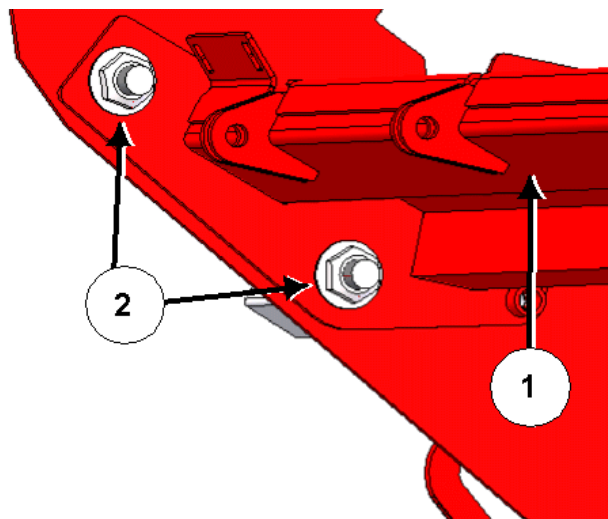


Figure 20: Fasten lower sheet to front tub wall

- c. If there is no feed chopper installed, re-install the hanger deflector with hanger tab (1) along with the opposite end of the lower sheet (2). Fasten all components using the previously removed hardware (3); see [Figure 21](#).

i. Note: The lower sheet is heavy. Use appropriate support while lifting.

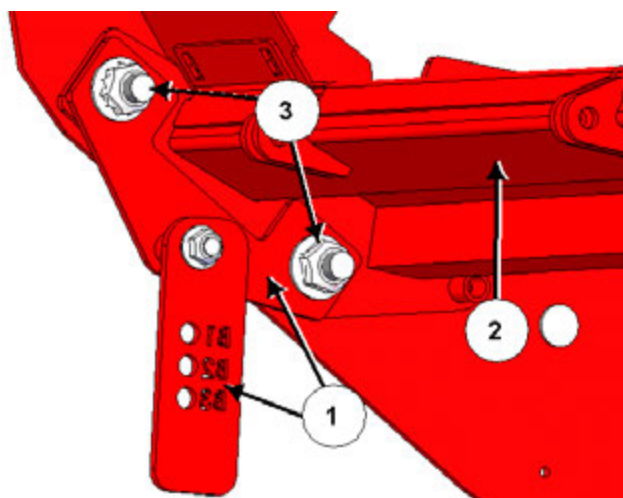


Figure 21: Fasten lower sheet and hanger deflector to front tub wall

3. If there is a feed chopper installed, re-install the bottom door (1); see [Figure 22](#).

- a. Supporting the bottom door (1), fasten the door to the lower sheet (2) and the front and rear tub walls using the previously removed hardware (3).

i. Note: The bottom door is heavy. Use appropriate support while lifting.

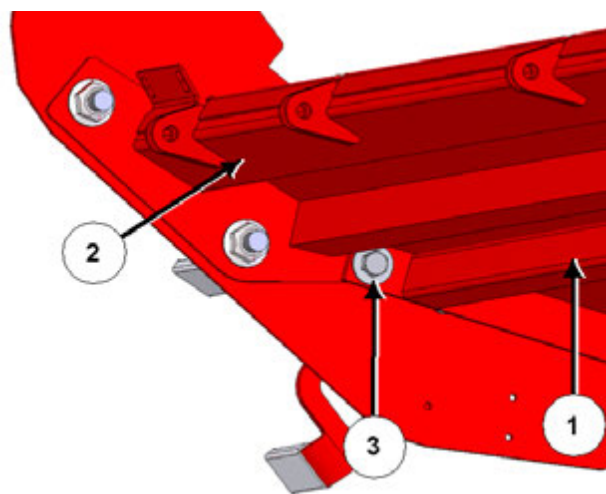


Figure 22: Re-install bottom door

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4. If there is no feed chopper installed, re-install the discharge door (1); see *Figure 23*.
 - a. Supporting the discharge door (1) in place under the machine, fasten discharge door to the front and rear tub walls using the previously removed hardware (2).
 - i. Note: The bottom door is heavy. Use appropriate support while lifting.
 - b. Replace the spring pin in the door handle (3) to raise the door.

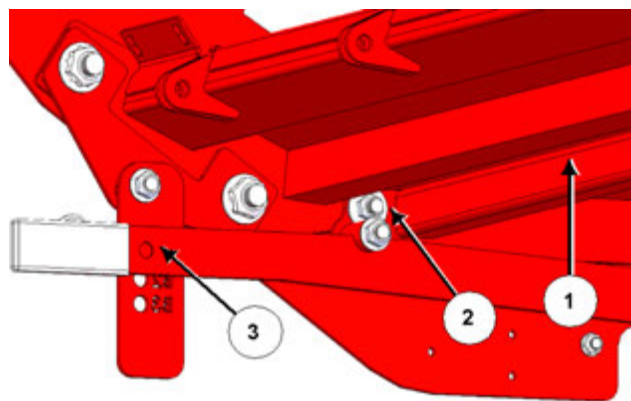


Figure 23: Re-install discharge door

5. Install the top flail deflector (Item No. 5 in *Table 1*) and the deflector brace/crossbar.
 - a. Fasten the top flail deflector (1) to the front and rear tub walls using the provided carriage bolts and flanged lock nuts (2); see *Figure 24*.
 - i. Note: The top flail deflector is heavy. Use appropriate support while lifting.

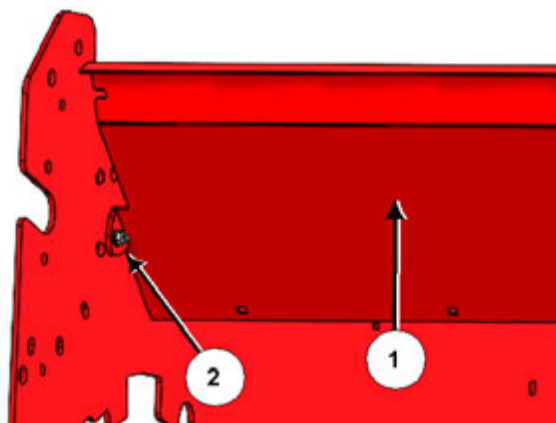


Figure 24: Fasten top flail deflector to front tub wall

- b. Replace the deflector brace/crossbar (1) by fastening it to the top flail deflector (2) using tub mounts (3), $\frac{3}{8}$ " x 1- $\frac{1}{4}$ " carriage bolts and flange lock nuts; see *Figure 25*.
 - c. Fasten the tub mounts (3) to the tub walls using $\frac{3}{8}$ " x 1" carriage bolts and flange lock nuts; see *Figure 25*.

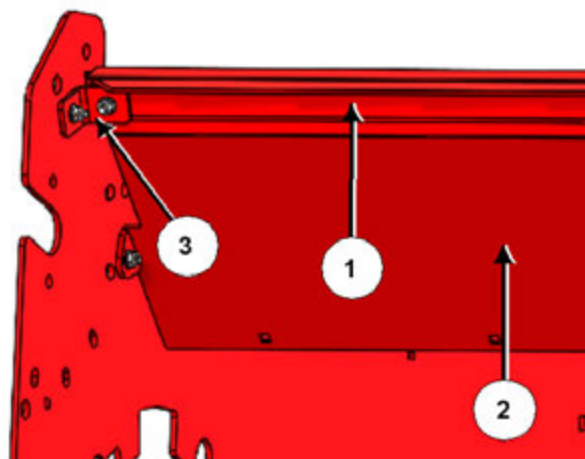


Figure 25: Re-install crossbar

Installation of the Side Sheets, Guard Rods and Flail Drum Access Door on the BP 661

6. Install the guard rod side sheet (Item No. 8 in [Table 1](#)); see [Figure 26](#).

- a. Pre-install the tub mounts (1) into the front holes on the guard rod side sheet (2) using the provided carriage bolts and flange lock nuts.
- b. Place the guard rod side sheet (2) in place and loosely fasten one tub mount to the tub wall.
 - i. Note: The side sheet is heavy. Use appropriate support while lifting.
- c. Loosely fasten the opposite tub mount to the opposite tub wall.
- d. Ensure that the holes on the guard rod side sheet (2) line up with the holes (3) on the top flail deflector (4), and tighten the bolts.

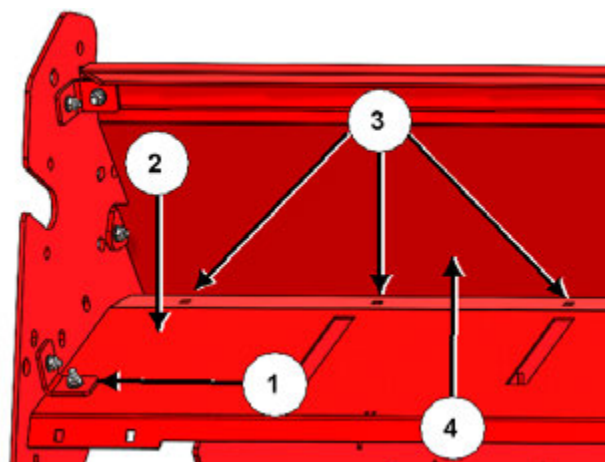


Figure 26: Install guard rod side sheet

7. Install the mid guard rod deflector (Item No. 9 in [Table 1](#)) to secure the top flail deflector and guard rod side sheet together; see [Figure 27](#).

- a. Place the mid guard rod deflector (1) on the underside of where the top flail deflector (2) and the guard rod side sheet (3) meet, and line up the holes.
- b. Fasten the mid guard rod deflector (1) in place using the provided carriage bolts and flange lock nuts.

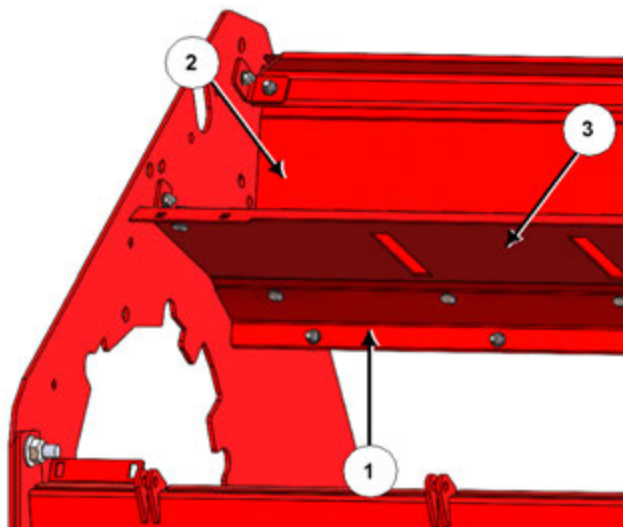


Figure 27: Install mid guard rod deflector
(Flail drum not shown for clarity)

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8. Install the flail drum door side panels (Item No. 7 in [Table 1](#)); see [Figure 28](#).
 - a. Using the provided carriage bolts and flange lock nuts, fasten the front and rear flail drum door side panels (1) to the guard rod side sheet (2) and the lower sheet (3), ensuring they are installed in the correct orientation.

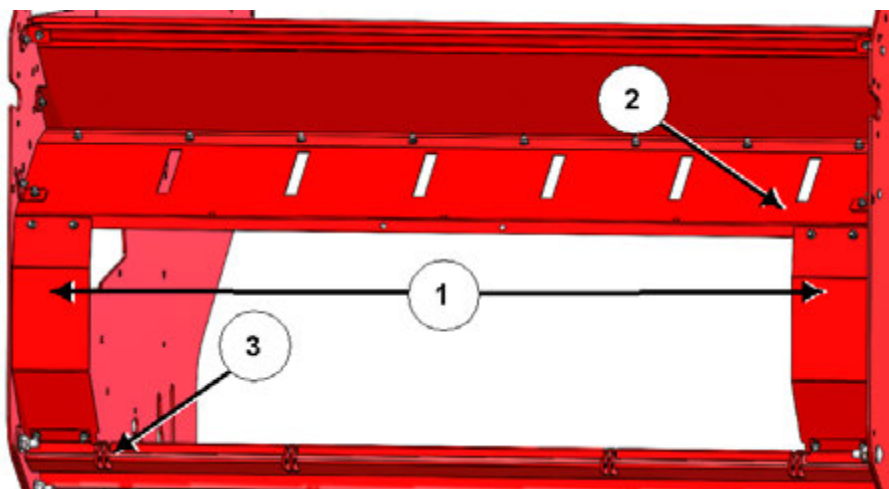


Figure 28: Install flail drum door side panels

9. Tighten the upper bolts (1) fastening the side deflector (2) to the front and rear tub walls; [Figure 29](#).

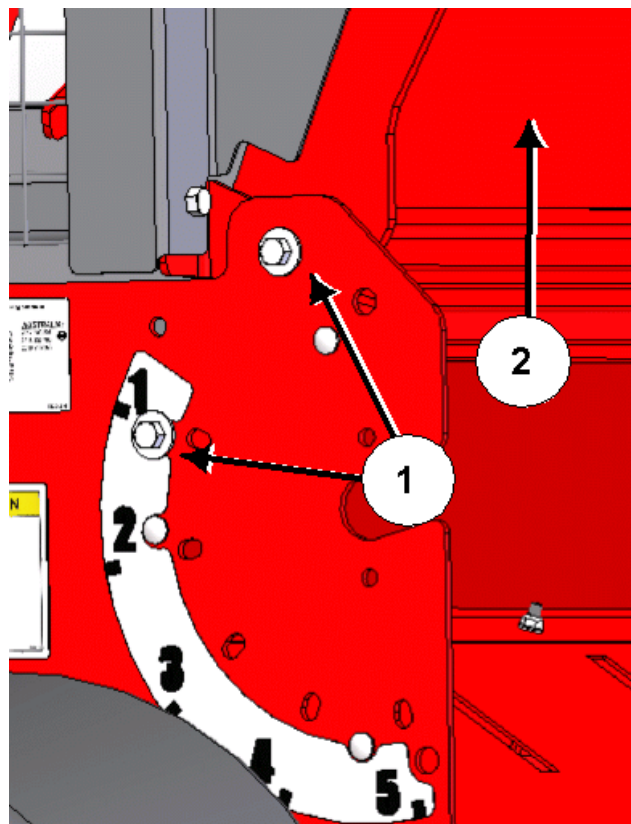


Figure 29: Tighten bolts on front tub wall

Installation of the Side Sheets, Guard Rods and Flail Drum Access Door on the BP 661

Install the Guard Rods

Use [Figure 30](#) and [Table 2](#) as a guide throughout this section.

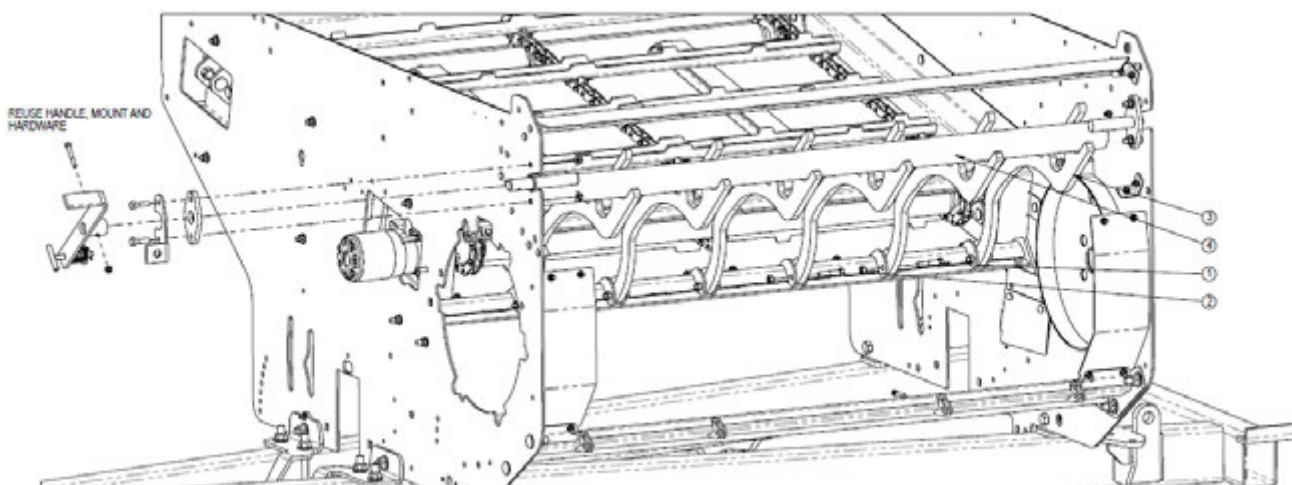


Figure 30: Installation of the guard rod assembly

ITEM NO.	DESCRIPTION
1	BOLT, HEX, 1/2X2-1/2, UNC, GR5, ZP
2	NUT, STOVER, 1/2, UNC, ZP
3	PC, GUARD ROD, SWEEP
4	WLDT, GUARD ROD ADJUST BAR

Table 2: Parts list for the guard rod assembly

1. Install the guard rods (Item No. 3 in [Table 2](#)); see [Figure 31](#).
 - a. Feed a guard rod (1) through the guard rod side sheet (2) and fasten it to the guard rod mount (3) using a provided hex bolt and stover nut (4).
 - i. Note: The flail drum is not shown in [Figure 31](#) for clarity. Take care when working around the flail drum.
- b. Repeat for all 6 guard rods.

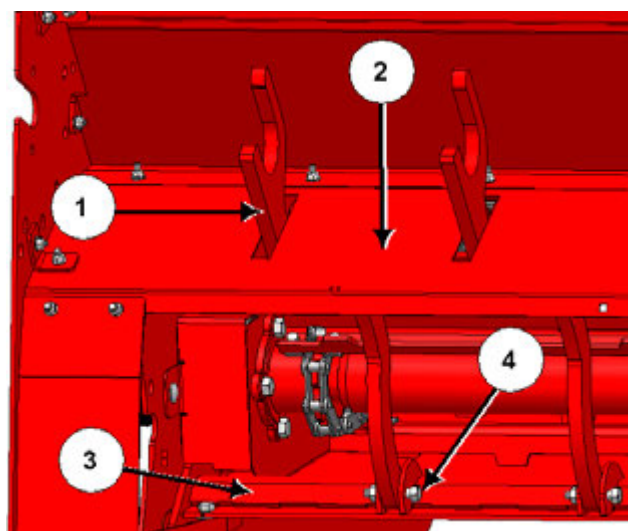


Figure 31: Install guard rods

Installation of the Side Sheets, Guard Rods and Flail Drum Access Door on the BP 661

2. Install the guard rod adjustment bar (Item No. 4 in [Table 2](#)).

- a. Slide the guard rod adjustment bar (1) in place; see [Figure 32](#).
- i. Note: The guard rod adjustment bar is heavy. Use appropriate support while installing.

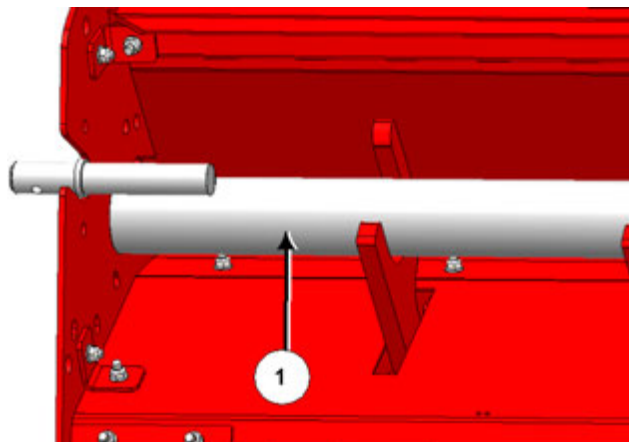


Figure 32: Slide adjustment bar in place

- b. If the guard rod adjustment handle was previously installed, follow the below steps and see [Figure 33](#):

- i. Re-install the pin storage (1) and guard rod adjustment tube (2) to the tub wall using the previously removed hardware.
- ii. Replace the guard rod adjustment handle (3) and fasten to the guard rod adjustment bar (4) using the previously removed cross bolt (5).
- iii. Place the handle in the handle lock (6).

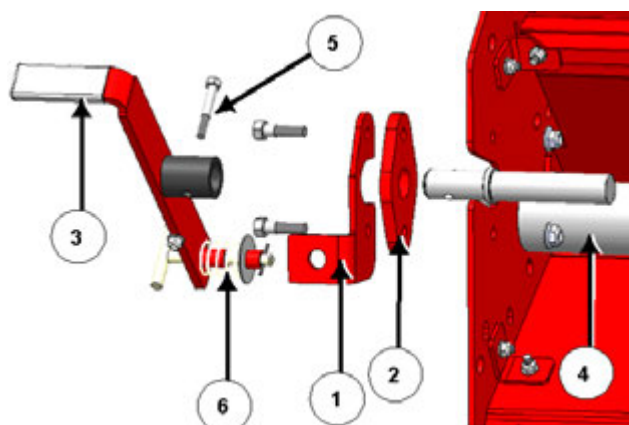


Figure 33: Re-install adjustment handle

- c. If the optional hydraulic aggression control was previously installed, follow the below steps and see [Figure 34](#):

- i. Fasten the guard rod adjustment tube (6) to the tub wall using the previously removed hardware.
- ii. Replace the hydraulic adjustment arrow (3) and fasten to the guard rod adjustment bar (5) using the previously removed cross bolt (4).
- iii. Replace the pin (1) that fastens the hydraulic cylinder (2) to the hydraulic adjustment arrow (3).

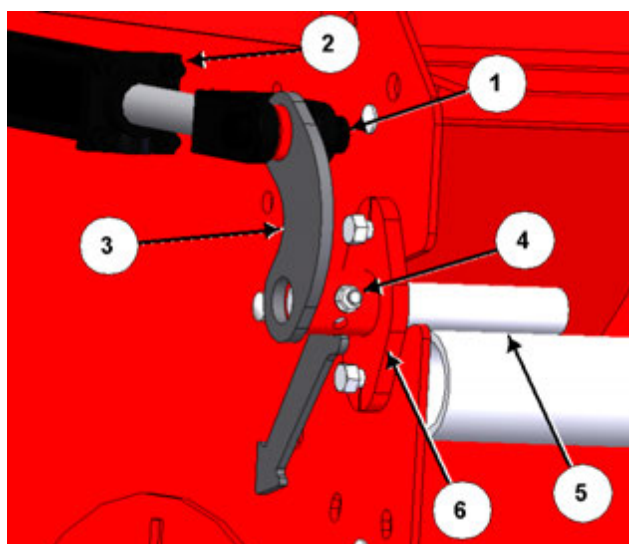


Figure 34: Replace pin and hydraulic adjustment
arrow

Installation of the Side Sheets, Guard Rods and Flail Drum Access Door on the BP 661

Install the Flail Drum Access Door

Use **Figure 35** and **Table 3** as a guide throughout this section.

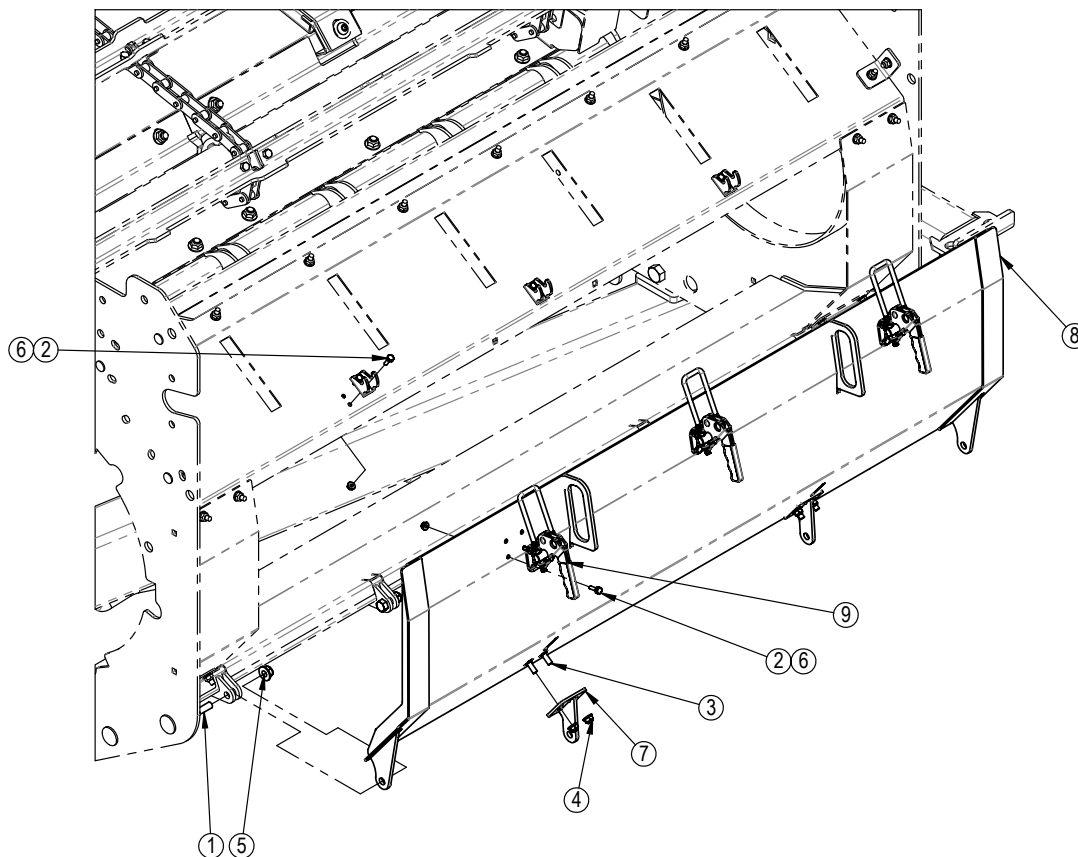


Figure 35: Installation of the flail drum door assembly

ITEM NO.	DESCRIPTION
1	BOLT, HEX, 1/2X1-1/2, UNC, GR5, ZP
2	BOLT, HEX, 1/4X3/4, UNC, GR5, ZP
3	BOLT, CARR, 3/8X1, UNC, GR5, ZP
4	NUT, FLG, LOCK, 3/8, UNC, GR5, ZP
5	NUT, FLG, LOCK, 1/2, UNC, GR5, ZP
6	NUT, FLG, LOCK, 1/4, UNC, GR5, ZP
7	WLDT, FLAIL DOOR, HINGE
8	WLDT, FLAIL, SIDE DOOR
9	CLAMP, LATCH

Table 3: Parts list for the flail drum door assembly

Installation of the Side Sheets, Guard Rods and Flail Drum Access Door on the BP 661

1. Prior to installing the flail drum door (Item No. 8 in [Table 3](#)) onto the machine, follow the below steps and see [Figure 36](#):

- a. Install the 3 clamp latches (1) onto the door using $\frac{1}{4}$ " x $\frac{3}{4}$ " hex bolts and $\frac{1}{4}$ " flange lock nuts.
- b. Loosely fasten the 2 hinges (2) on the door using $\frac{3}{8}$ " x 1" carriage bolts and $\frac{3}{8}$ " flange lock nuts.
- c. Fasten the latch hooks (3) into the pre-drilled holes on the guard rod side sheet using $\frac{1}{4}$ " x $\frac{3}{4}$ " hex bolts and $\frac{1}{4}$ " flange lock nuts.

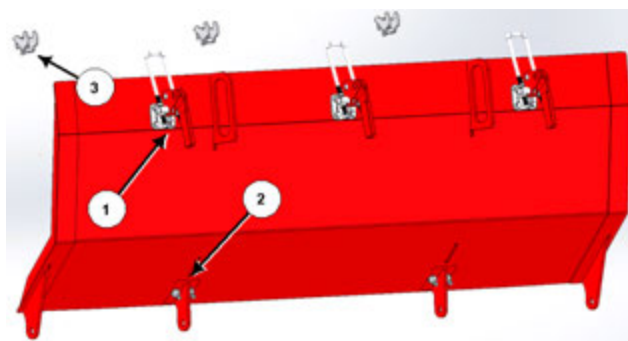


Figure 36: Install clamp latches and hinges

2. Supporting the flail drum door (1), line up the 4 hinges with the lower sheet (2) and fasten using $\frac{1}{2}$ " x 1- $\frac{1}{2}$ " hex bolts and $\frac{1}{2}$ " flange lock nuts; see [Figure 37](#).
 - a. Note: The flail drum door is heavy. Take care when lifting the door in place. Use appropriate support and assistance.

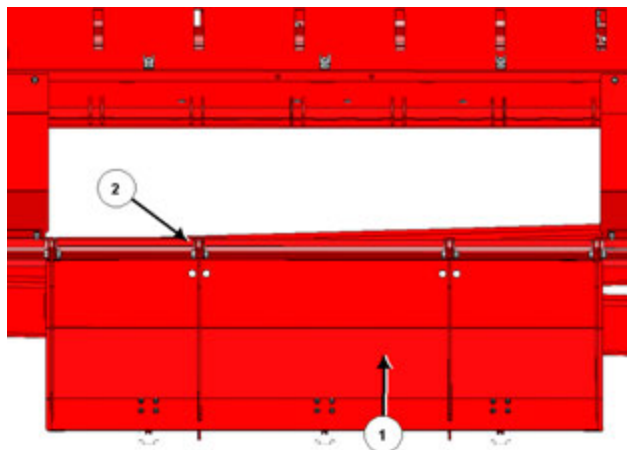


Figure 37: Install flail drum door
(Flail drum and guard rods not shown for clarity)

3. Close the flail drum door and secure the clamp latches; see [Figure 38](#).
 - a. Once the door is closed, tighten the latches to ensure a secure and tight fit.
 - b. Tighten the bolts on the center 2 hinges.

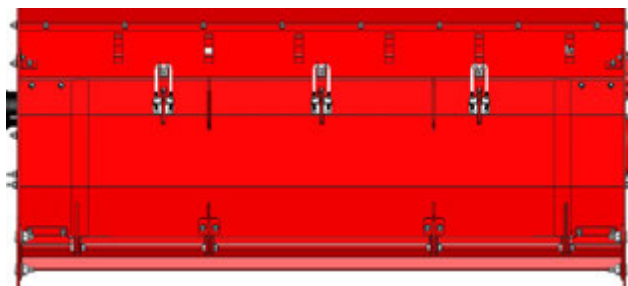


Figure 38: Close the flail drum door
(Guard rods not shown for clarity)