Bale Pro®

Complete Feed Ration
CFR1251

Operators Manual

Highline
MANUFACTURING LTD.

E16224_A

BalePro®
Complete Feed Ration 1251
Bale Processor

Operator's Manual

For Serial No: CFR1251034

From Serial No: CFR1251054

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Printed in Canada

Highline Team Message

Congratulations on your purchase of the Complete Feed Ration 1251 *manufactured by Highline Manufacturing Ltd.*

This Operator's Manual has been prepared to provide information necessary for the safe and efficient operation of your Complete Feed Ration 1251 (CFR 1251). In the manual you will find safety procedures, maintenance routines and detailed operational instructions.

If you find that you require information not covered in this manual, please feel free to consult your local dealer. Your dealer is always able to contact Highline for this technical information.

Highline Manufacturing Ltd. thanks and congratulates you for selecting a Complete Feed Ration 1251 as your machine of choice.

Highline Manufacturing Ltd.

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GENERAL DESCRIPTION OF THE COMPLETE FEED RATION 1251 (CFR 1251)

The Complete Feed Ration 1251 (CFR 1251) is a machine to process round bales of hay or other animal feed materials. The CFR 1251 can process 2 bales at the same time. The CFR 1251 mixes the bales before discharging the processed material.

When the CFR 1251 is engaged, it uses power from the tractor PTO to rotate a flail drum and an internal auger with blower. The flails strike the round bale and process it into feed size materials or animal bedding sized materials. The bale is rotated against the flails by a feeder chain The auger mixes the materials and discharges the material as bedding, as a feeding windrow or into a feed bunk.

The Complete Feed Ration (CFR 1251) has forks on the rear of the machine that allows the CFR 1251 to pick up and self-load a round bale into the processing tub. Bale transfer chains are activated to move a bale to the front processor tub. A second bale is loaded into the rear processor tub. A third bale may be carried on the forks while the bales in the tubs are being processed.

The amount of processing and chopping of material in the processing tubs are individually adjusted by setting the height of the guard rods. The height of the guard rods determine the level of aggression of the flails acting on the bale. The round bale is rotated by a feeder chain while the flail drum rotates to process the material. The rotation of the bale by the feeder chain assists in the bale being processed in an even manner.

The processed and mixed material is discharged from the CFR 1251 on the right side of the machine through a single opening as a homogenous mix. The height and distance of discharge is adjusted by moving the blower discharge door. A discharge deflector door allows the processed material to be placed into a feed bunk, windrow or spread to different distances.

The Complete Feed Ration 1251 has the option of adding a Feed Chopper for additional processing of feed materials. There is also the option of adding a Grain Tank to add feed grains in a measured amount to the feed mix to achieve the feed ration needed for the animals.

The operator of the CFR 1251 is located in the tractor cab to control the speed of driving and the operation of the CFR 1251.

INTENDED USE OF THE COMPLETE FEED RATION 1251 (CFR 1251)

The CFR 1251 is designed to process animal feed and bedding materials from a round bale.
The CFR 1251 is intended for use in farming applications.
The CFR 1251 is intended for off road use only.
The CFR 1251 is intended for use in locations away from people who could be harmed by the discharged materials.

Any uses of the CFR 1251 other than the above stated Intended Uses shall be considered misuse of the CFR 1251. This misuse shall include (but not limited to):

- Using the CFR 1251 in non-farming applications
- Using the CFR 1251 on public roads
- Using the CFR 1251 around people or in public places
- Processing materials other than animal feed materials

Always use the CFR 1251 according to the instructions contained in this Operator's Manual and the safety and instruction decals on the machine.
Perform regular maintenance and repair to ensure that the CFR 1251 operates safely and efficiently.

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SERIAL NUMBER

Your serial number is found on the serial number plate (1) attached to the tub wall of the Complete Feed Ration 1251.

Serial Plate Location 215120C

It is important to record the serial number for proof of ownership and for any service or maintenance assistance.

Serial Number _____

Owner _____

Model _____

Date of Purchase _____

SAFETY SIGN-OFF FORM

Highline Manufacturing Ltd. follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining this equipment should read and clearly understand all Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow someone to operate this equipment until this information has been reviewed. This information should be reviewed by all operators before the season start-up.

This sign-off sheet is provided for record keeping to indicate that the person working with the equipment has read and understood the information in the Operator's Manual and has been instructed in the safe operation of the equipment.

Date	Employee's Signature	Employer's Signature

SAFETY ALERT SYMBOL

The Safety Alert Symbol means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert Symbol combined with a Signal Word alert to the presence of a hazard and the degree of possible injury.

Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR SERIOUS INJURY. The color is Red with White lettering.

Indicates a potentially hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY, and includes hazards that are exposed when guards are removed or unsafe practices. The color is Orange with Black lettering.

Indicates a potentially hazardous situation that, if not avoided, MAY result in MINOR INJURY. The color is Yellow with Black lettering.

GENERAL SAFETY

1. Ensure that anyone who is going to operate, maintain or work near the Complete Feed Ration 1251 is familiar with the recommended operating, maintenance procedures and safety information contained in this manual and follows all the safety precautions.

2. In addition to the design and configuration of the equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of the machine.

3. The CFR1251 shall not be operated without all the guards in place.

SAFETY DECALS

1. Keep decals and signs clean and legible at all times.
2. Replace decals and signs that are damaged, missing or have become illegible.
3. Replaced parts that displayed a decal should also display the current decal.
4. Decals are available from the Highline Parts Department.
5. Be familiar with the decals, the type of warning and the area or function(s) related to the area(s) that requires your awareness.

DO NOT CONTACT ROTATING DRIVELINE

Contact with rotating driveline will cause serious injury or death.
Keep all driveline guards in place.
Securely attach drivelines at both ends.
Check that the driveline guards turn freely on the driveline.

DO NOT OPERATE WITH SHIELDS MISSING

Stop engine and ensure the PTO driveline is stopped before working on driveline

DO NOT REMOVE SIDE PANELS WHILE FLAIL DRUM IS ROTATING

Contact with rotating parts can cause serious injury or death.

Before removing the side panels:
- Turn off the tractor and remove key.
- Wait for all rotating parts to stop.

Ensure the side panels are in place and secured during operation.

DO NOT CONTACT THE ROTATING AUGER

Keep fingers and hand out of the auger tube and chamber.
Never attempt to manually remove debris while the auger is rotating.
Contact with the rotating auger will cause serious injury or death.
Keep all auger guards in place.

DO NOT CONTACT THE ROTATING BLOWER

Contact with rotating blower blades can cause serious injury or death.

Keep hands out of the blower chamber when the blower is rotating.

Always disengage power takeoff, set park brake, lower loader forks to the ground, shut off tractor engine, remove key, and wait for PTO to stop turning before unplugging by hand or servicing.

Keep guards in place and in good condition.

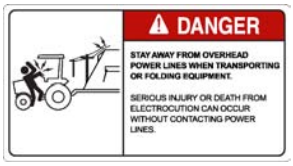
DO NOT ENTER TUB WHILE PARTS ARE ROTATING

- With a bale in the tub
- Without a bale in the tub

Before entering the tub

- Turn off the tractor and remove the key.
- Wait for rotating parts to stop

The bale is unstable and may cause entrapment.
Contact with the moving feed mechanism or rotating flail drum will cause serious injury or death.



STAY AWAY FROM OVERHEAD POWER LINES

Stay away from overhead power lines when transporting equipment.

Serious injury or death from electrocution can occur without contacting power lines.

STAY BACK FROM AN OPERATING MACHINE WHICH CAN DISCHARGE OBJECTS SEVERAL FEET

Stay clear from discharge side when PTO is engaged.

Thrown material or objects leaving the discharge area can cause serious injury or death.

Do not operate within 100 ft (30m) of any person.
Keep all shields and guards in place.

ENSURE SLOW MOVING VEHICLE SIGN IS IN PLACE

Ensure the Slow Moving Vehicle sign is in place, clean and easily visible.

Ensure the reflectors are in place, clean and easily visible.

DO NOT CONTACT THE ROTATING TRANSFER CHAINS

Stay clear when the transfer chains are rotating.

The transfer chains have sharp tabs that could cause serious injury or death.

Stop tractor and remove key before approaching the chains.

Use caution when walking under the chains. Sharp tabs protrude from the chains.

DO NOT OPERATE WITH SHIELDS MISSING

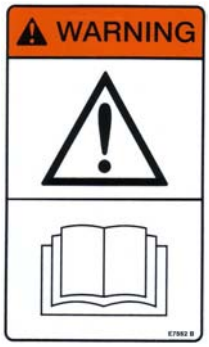
Contact with the moving belt/sheaves or moving chain/sprockets may cause serious injury or death.

Keep shields fastened in place.
Keep away from moving parts.
Do not stand or climb on the machine when operating.

DO NOT RIDE ON MACHINE

Falling from the moving machine can cause serious injury or death.
Falling from the operating machine can cause being entangled under the machine or being injured by the machine.

READ, UNDERSTAND, AND FOLLOW SAFETY INSTRUCTIONS

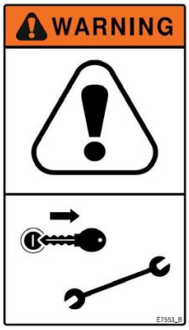


Read, understand and follow all instructions and safety messages included in this manual and on decals attached to the machine. These instructions and safety messages contain important information.

Allow only responsible, properly instructed individuals to operate and service the machine.

Failure to follow the instructions and safety messages in this manual and on the decals attached to the machine could result in serious injury or death.

Keep all safety and instruction decals in good condition. Replace any missing or damaged decals



SHUT DOWN THE TRACTOR BEFORE DISMOUNTING TRACTOR

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

Relieve all hydraulic pressure in the hoses before going near the machine. Leave the hydraulics in the “float” position.

INSTALL CYLINDER LOCK BEFORE GOING UNDER RAISED BALE FORKS

Install and secure the cylinder lock before going under raised bale forks.

Install and secure cylinder lock before using the twine cutter.

USE PAPER OR CARDBOARD TO CHECK FOR HYDRAULIC LEAKS

To prevent serious injury or death:
Relieve pressure on hydraulic system before repairing, adjusting or disconnecting.
Wear proper hand and eye protection when searching for leaks.
Use wood or cardboard instead of hands.
Keep all components in good repair.

IMPLEMENT IS DESIGNED FOR OFF ROAD USE ONLY.

Do not transport with bales in the processor tub.
Do not transport with a bale loaded on the forks.

DO NOT EXCEED PTO SPEED

Do not operate at excess speeds or damage to the machine may result.

DO NOT EXCEED 80° TURNS IN OPERATION

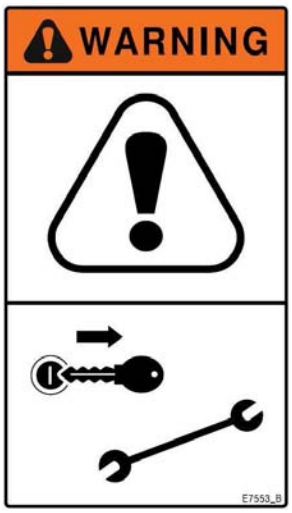
Do not operate the Constant Velocity (CV) driveline at greater than 80° to prevent damage to the driveline.

SHUT DOWN TRACTOR BEFORE USING TWINE CUTTER

Use the shutdown procedure to ensure no movement of the flail drum will occur while cutting twine or netwrap.

LOCK FORKS AND FLAIL DRUM BEFORE USING TWINE CUTTER

Lock forks in the upright position before going under the raised forks.
Lock the flail drum to ensure no movement of the flail drum will occur while cutting twine or netwrap.

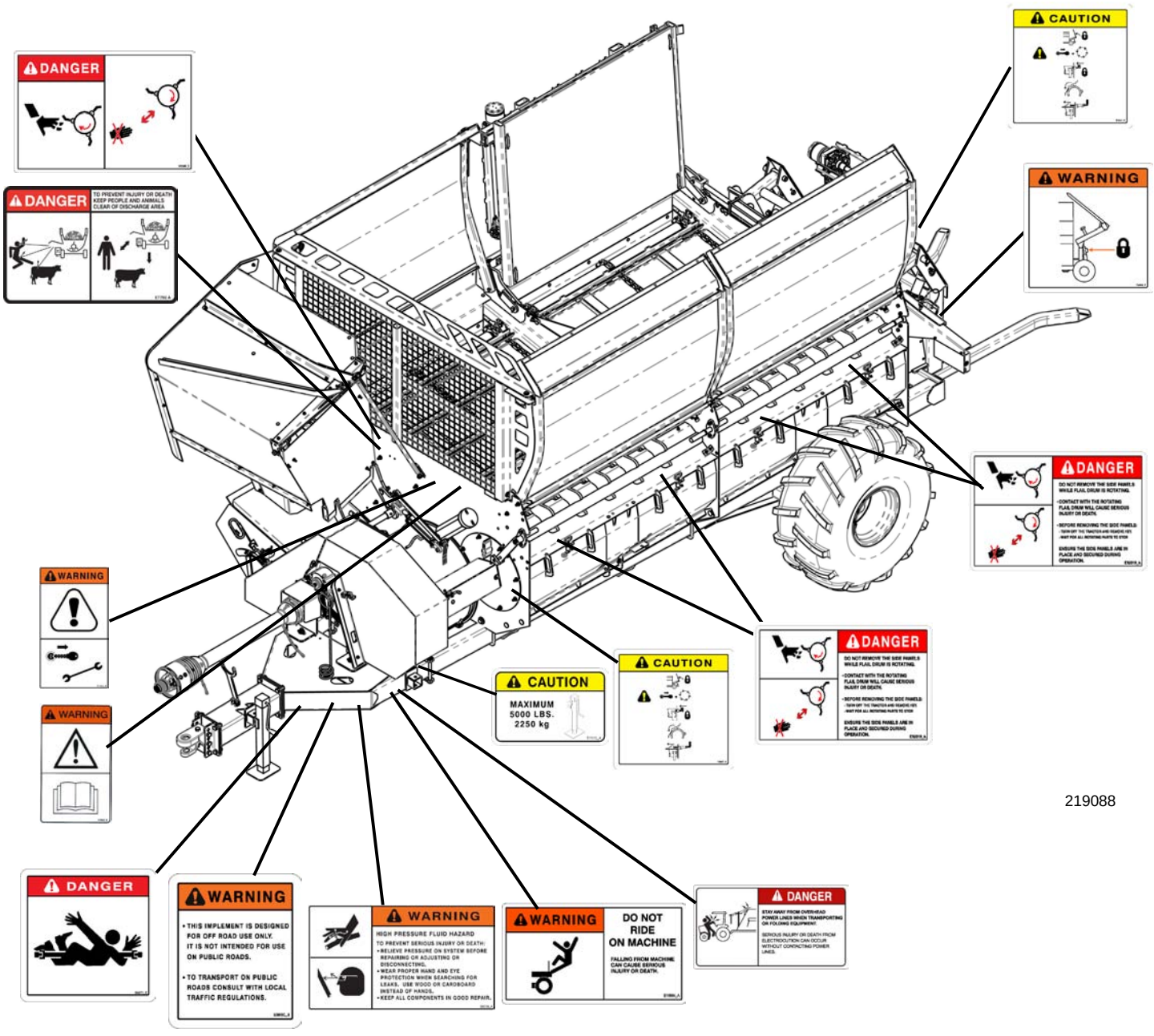


SHUTDOWN PROCEDURE

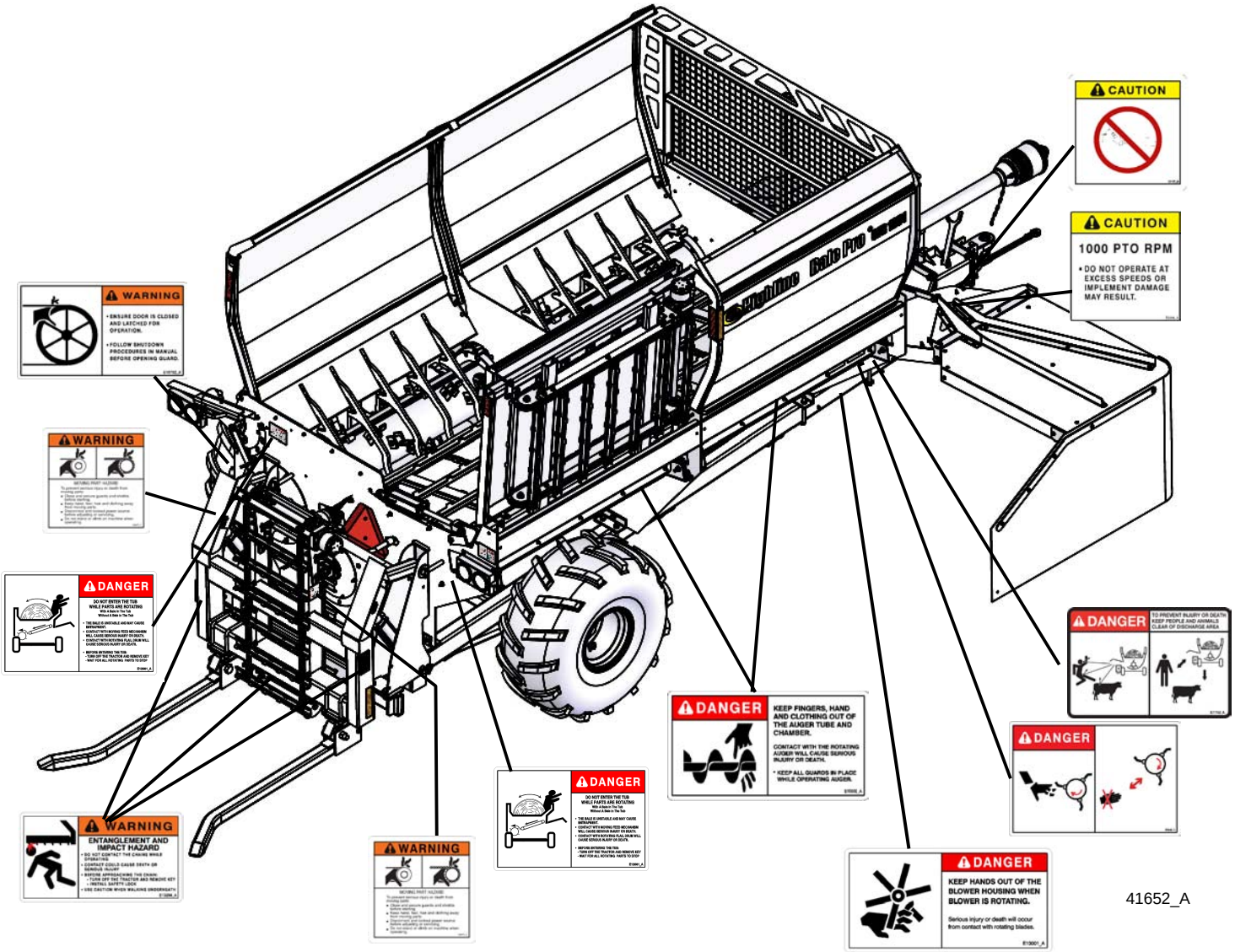
For your safety and the safety of others, this shutdown procedure must be followed before dismounting from the tractor for inspecting, repairing, servicing, cleaning, or lubricating the machine.

Step 1: Reduce the engine speed to idle.
Step 2: Disengage tractor power takeoff.
Step 3: Set tractor park brake.
Step 4: Lower bale loader forks to the ground.
Step 5: Shut off tractor engine and remove key.
Step 6: Cycle tractor controls to relieve any residual circuit pressure.
Step 7: Wait for drum to stop turning.

SAFETY DECAL LOCATIONS



SAFETY DECAL LOCATIONS



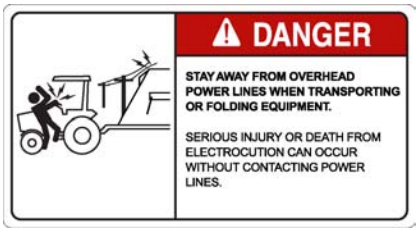
2.0 TRANSPORTING THE CFR 1251

Only tow the CFR 1251 behind a properly sized and equipped tractor which exceeds the loaded weight of the CFR 1251 by 50%. Do not tow behind a truck or other type of vehicle.

The CFR 1251 is designed for off road use only.

Do not transport on public roads with bales in the processor tub.
Do not transport on public roads with a bale loaded on the forks.
Check with local traffic regulations to transport on public roads.

Stay away from overhead power lines when transporting equipment. Electrocution can occur without contacting power lines.



Do not allow any person to ride on the tractor or CFR 1251. Falling off can result in serious injury or death.

1. Tractor Requirements
   - Roll Over Protection System (ROPS)
   - Working seatbelts
   - 1 3/8" 21 spline PTO
   - 3 Spool Control Valves (SCV)
     - An optional solenoid valve is available for tractors with 2 SCV.

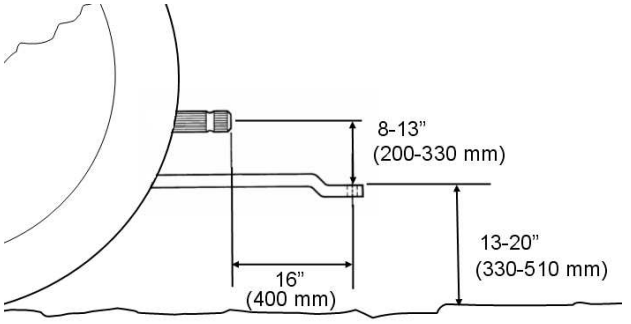
2. Ensure the correct PTO speed.
   - Ensure that the tractor PTO speed matches the CFR 1251's gearbox speed of 1000 rpm.
   - Do not attempt to operate the CFR 1251 at a different PTO speed.

Note: Do not use PTO adapters. PTO adapters will cause a driveline failure and possible tractor damage. Your CFR 1251 warranty will also be invalid.

3. Adjust the tractor drawbar length.

   - Set the drawbar length to 16" (406 mm) for a 1 3/8" 21 spline PTO.
   - This length is measured from the tip of the PTO shaft end to the center of the drawbar hole. (Refer to your tractor's operator manual for drawbar adjustment procedures.)

Note: To prevent damage to the tractor drawbar, avoid traveling at high speeds and over rough terrain.

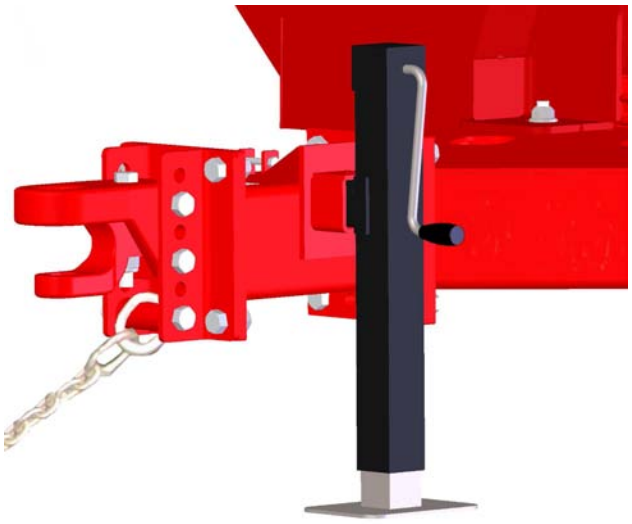


Tractor Drawbar Adjustment

PTO Dimensions

4. Lift the hitch.

   - Lift the hitch with the jack (1).
     - The hitch is heavy. Do not attempt to lift it without using the jack.



Lift Hitch with the Jack 219092

5. Connect the hitch to the tractor clevis drawbar.

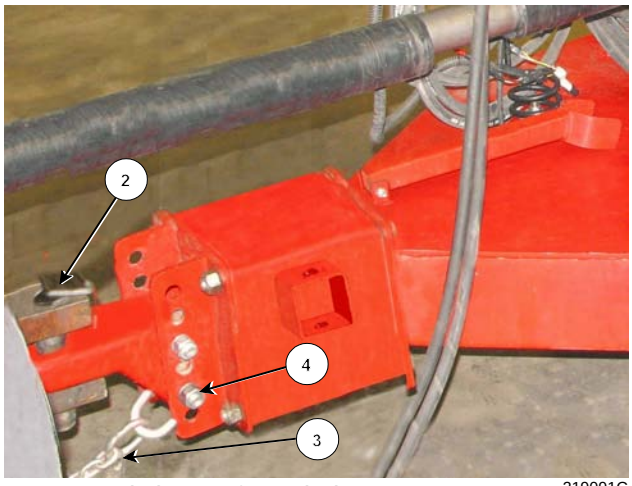
   - Use a 1" (25 mm) pin (2).
   - Secure with a hitch pin clip.

6. Connect the safety chain (3).

   - Ensure the safety chain rating is equal or greater than the gross weight of the loaded CFR 1251.

   - Route the safety chain around the lower safety chain bolt (4).

   - Attach the chain to a secure location on the tractor.

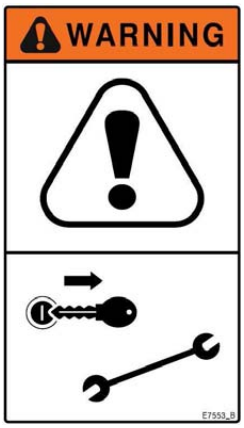


Connect Hitch & Safety Chain to Tractor 219091C

7. Route the hydraulic hoses and wiring harness through the hose support arm.

Hoses and Electrical in Support Arm 219143

8. Attach the driveline to the tractor PTO.



Shut off the tractor engine before attaching PTO driveline. Entanglement in the rotating driveline can cause serious injury or death.

The CFR 1251 shall not be operated without the driveline shields in place.

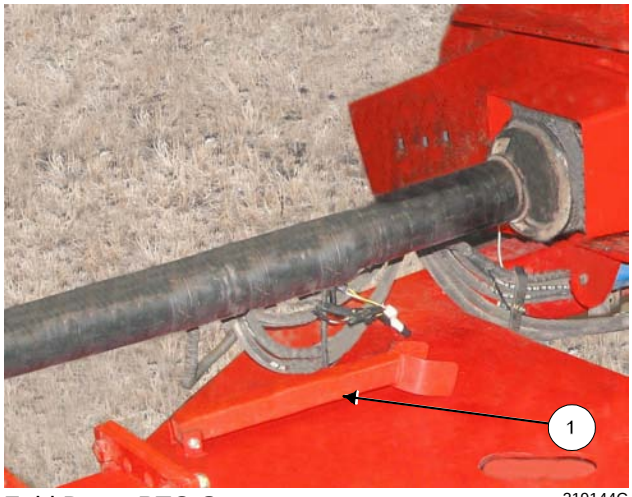
- Shut off the tractor engine and remove the key.
- Check that the driveline telescopes easily and that the shields are in good condition and rotate freely.
- Lift the tractor PTO shield.
- Support the driveline, pull back on the yoke collar, align the splines by rotating the CFR 1251 driveline and push the driveline into the tractor PTO shaft until the collar snaps into place.
- Push and pull the yoke several times to ensure the driveline is locked. Do not pull on the collar as this will release the lock.

  Note: If chains are on the driveline guard connect them to the processor and the tractor.

- Lower the tractor & hitch PTO shields into place.

Connect Driveline to PTO 201194C2

9. Fold down the PTO support holder (1).
   - Failure to fold down the support may result in damage to the driveline.



Fold Down PTO Support 219144C

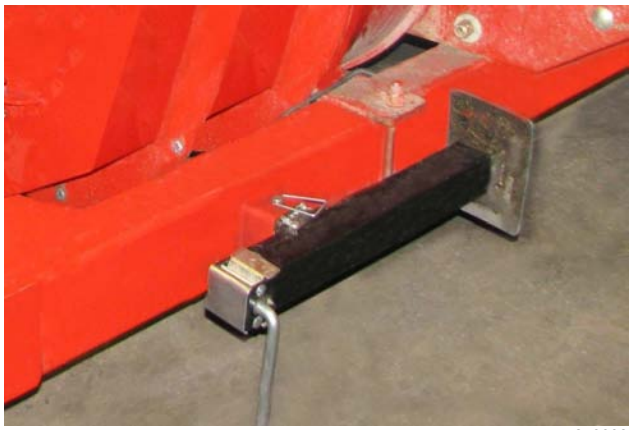
10. Attach the hydraulics.
    - Clean the end of the hoses and the connection.
    - Firmly push the hoses into the tractor receptacle according to user preference.
    - Route the hoses so they do not interfere with moving parts.

11. Connect the lights.
    - Connect the light plug into the appropriate tractor receptacle.
    - Ensure the light cable does not interfere with or contact moving parts.

12. Connect the switch box cable.

13. Rotate the hitch jack into the storage position.


Attach Hydraulics and Electrical 108008-1


Hitch Jack In The Storage Position 219093

14. Check the condition of the tires.

    - Ensure that the lug nuts have the cone side of the lug nut against the wheel rim.
    - Torque the lug nuts to 85-100lbs ft (115 -135Nm) dry.

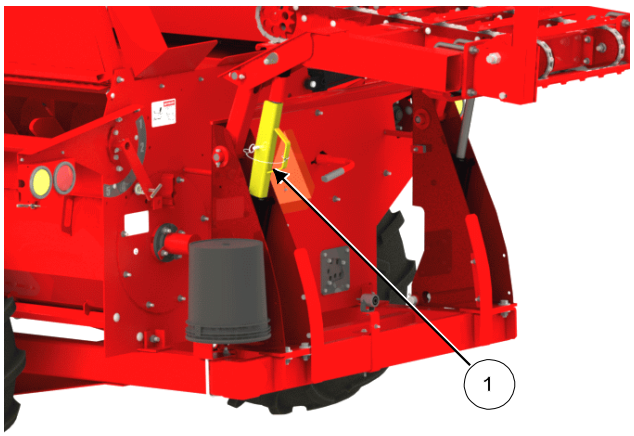
    - Fill the tires to 27 psi (186 Kpa).

Check the Tires 213091

15. Raise the bale loading forks to the highest position.

16. Install the cylinder lock (1) on the cylinder of the bale loading forks.

    - Fasten the cylinder lock in place with the pin.



Fork Cylinder Resting on Lock 219089C

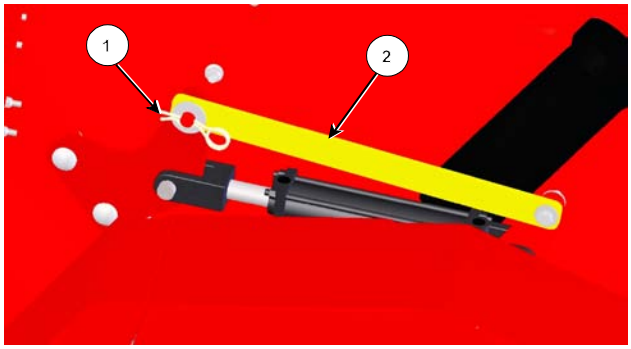
17. Raise the discharge deflector door to the transport position.

    - The discharge deflector door is operated by a hydraulic cylinder.

Discharge Door Raised 219090

18. Install the discharge deflector door transport lock.

    - Remove the clip pin (1).
    - Place the long flat (2) on to the connecting pin.
    - Replace the clip pin (1).



Deflector Door Lock 219064C

19. Ensure that the Slow Moving Vehicle (SMV) sign is clean and visible.

Ensure SMV is Visible 213094

20. Transport

Do not transport on public roads with bales in the processor tub.

Do not transport on public roads with a bale loaded on the forks.

Do not transport on public roads with the forks in the lowered position.

21. Transport Speed
    - Do not exceed 25 mph (40 km/h).

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3.0 PREPARING THE CFR 1251

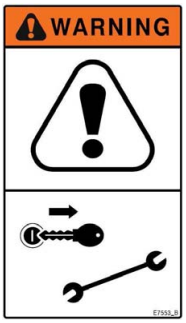
Check these items each time before using the machine.

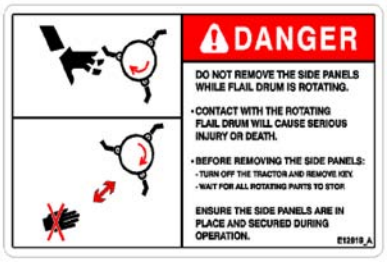
1. Park the tractor and CFR 1251 on level ground.
   - Engage the tractor parking brake and shut down the tractor.

2. Ensure that all decals are clean and in place.

3. Ensure that the Slow Moving Vehicle (SMV) sign is clean and visible.

Park on Level Ground 213095-1





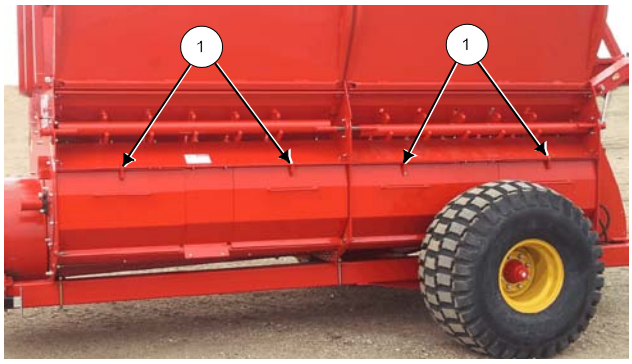
Shut down the tractor completely and set the parking brake.

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

Do not place hands in the CFR 1251 when it is rotating. Contact with exposed rotating flails will cause serious injury or death.

4. Check the condition of the flail drum.

   - Remove the front and rear flail drum access panels.
     - Remove the clip pins.
     - Remove the panel pins (1).
     - Lift the panels out.



Remove Flail Drum Access Panels 213096C

5. Clean debris and material buildup from the front and rear flail drum area and the processor tubs.

   - Do not use the twine cutter tool to dislodge jammed material.

   - Check the condition of the drum.

Clean Debris and Check Drum and Flails 212043

6. Check the condition of the flails.

   Spin the flail drum by hand to check all the flails.
   - Inspect the flails daily.
   - Check that the flails swing freely.
   - Check if they are broken or worn to the point that they would not process the material properly.
     - See Section 5 - "Maintaining the CFR 1251" for flail replacement information.
     - Replace the flails in pairs.
     - Replace on opposite sides of the drum to maintain drum balance.
   - Check the condition of the flail mounting bolts. Ensure the mounting bolts are tight.

7. Remove twine, netwrap or other materials that is around the flail drum or drum bearings.

   Note: Remove the netwrap or twine from the flail drum every 25 bales. Premature bearing failure can occur if twine is allowed to build up on the flail drum.

   See "Netwrap or Twine Removal Procedure" at the end of this Section.

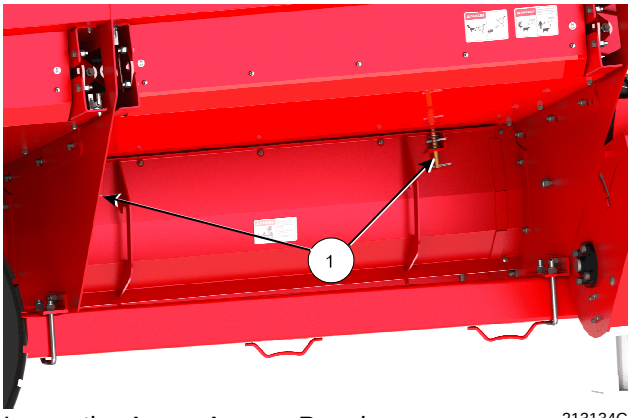
Remove Netwrap & Twine 213097

8. Replace the drum access panels. Secure in place with the panel pins and clip pins.

9. Lower the auger access panels.

   - Release spring loaded locks (1) on the front and rear panels.
   - Lower the hinged panels for access to the auger.

   Note: The panels can be removed if needed to additional access.



Lower the Auger Access Panels 213134C

10. Check the condition of the auger.

    - Check the condition of the auger flighting and the auger tube.

    - Check that the auger rotates freely.

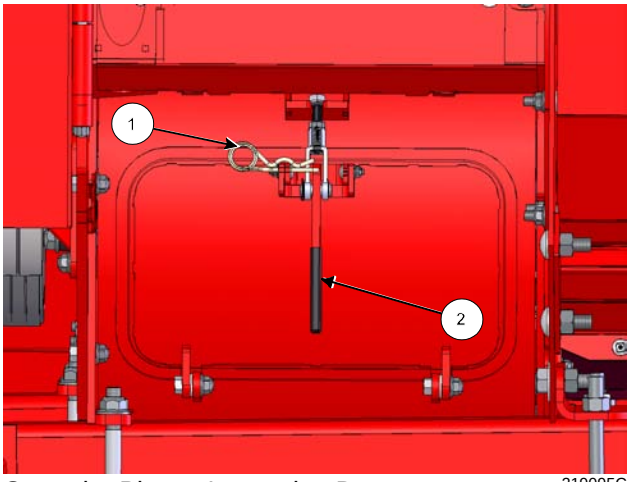
Check the Condition of the Auger 219099

11. Remove materials, twine/netwrap that are around the auger and in the blower area.

Remove Materials In Auger 219098

12. Check the condition of the blower blades.

- Open the blower inspection door to view the blades.
  - Remove the clip pin (1) from the clamp.
  - Release the over-center clamp (2) to lower the door.



Open the Blower Inspection Door 219095C

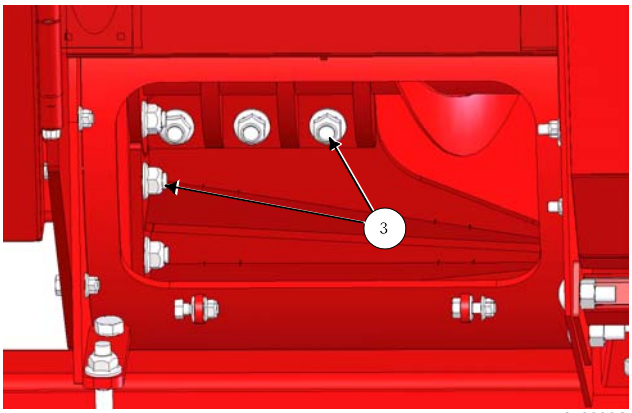
13. Remove any twine that is wrapped around the blower blades.

Note: Remove the netwrap or twine every 25 bales.

- Inspect the blades for damage that would interfere with blower operation.

- Check that all 6 of the bolts (3) holding the blades are securely fastened.

- Close the inspection door and latch it.



Check Blower Blades and Fastening Bolts 219096C
(Inspection Door Shown Removed for Clarity)

14. Check the condition of the front and rear feeder chains.

- Remove any debris in the tub area that would interfere with the operation of the feeder chain.
- Remove any twine or netwrap caught in the feeder chain bars.
- Remove any twine or netwrap caught in the chain.

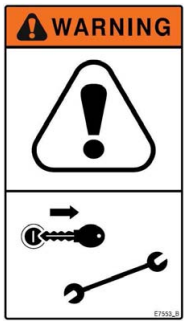
- Check that the bars are securely attached to the chains.
- Operate the feeder chain hydraulic motor to ensure the chain/bars rotate freely.


Check the Condition of the Feeder Chains 213102

15. Check the tension of the feeder chains.

Shut down the tractor completely and set the parking brake.

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



- Stand in the tub and hold the center of one of the feeder bars.
- Lift the bar.
  - The chain should lift about ½" off the deck.
- See Section 5 -“Adjust The Feeder Chain Tension” for adjustment information.

Check Tension of the Feeder Chains 212054

16. Adjust the height of the hitch tongue.

Note: Do this procedure on level ground.

- Level the frame of the CFR 1251 to ensure the bale forks can lower to load a bale.
- Adjust the hitch tongue height to connect with the tractor drawbar while keeping the frame level .
- Fasten the tongue in place and torque the bolts to 210 ft-lbs (285 Nm).

Adjust Height of Hitch Tongue 213086

17. Remove any material that has built up around the feeder chain bearings.

    - Upper front tub wall
    - Upper rear tub wall
    - Upper middle wall has bearings for the front and rear tub

- They are accessed from the tub sidewalls.

- Remove material from the front upper feeder chain bearing.

Remove Material - Upper Front Bearing 213103

- Remove material from around the rear upper feeder chain bearing.

Remove Material - Upper Rear Bearing 213104

- Remove material from the upper bearings located on the middle wall between the front and rear tubs.

Remove Material - Middle Wall Bearings 213105

18. Check the condition and tension of the flail drum/auger drive belt.

    - Open the left drive shield.

    - Check the tension of the drive belt.
        - The belt tension is in range if the spring washer (1) is showing in the cutout window of the tensioner.

        - See Section 5 - “Adjust the Belt Tension for the Flail Drum Drive”.

Check Condition and Tension of the Flail Belt 219097C

19. Check the condition of the rear tub bale transfer chains.


Check Condition of Tub Transfer Chains 219100

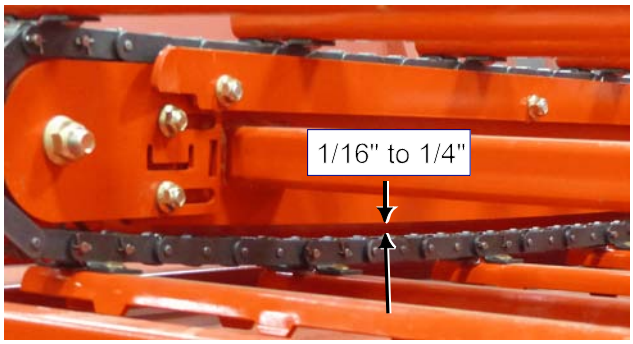
Do Not Contact Rotating Transfer Chains

Stay clear when the transfer chains are rotating. The transfer chains have sharp tabs that could cause serious injury or death.

20. Check the tension of rear tub chains.

    - They should hang below the chain guide by about 1/16" to 1/4".

    - See Section 5 “Adjusting Bale Transfer Chains” for adjustment information.



Check the Tension of Tub Transfer Chains 219105C

21. Check the condition of the fork transfer chains.

Check Condition of Fork Transfer Chains 219102

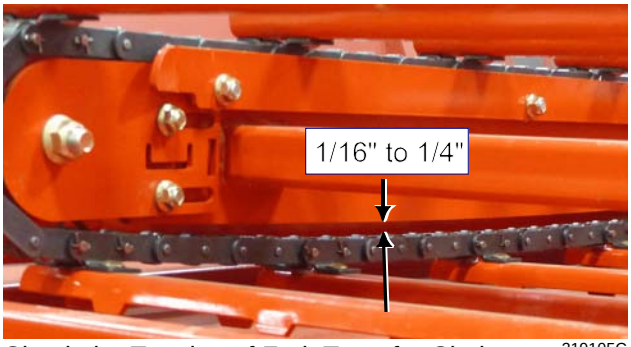
Do Not Contact Rotating Transfer Chains

Stay clear when the transfer chains are rotating. The transfer chains have sharp tabs that could cause serious injury or death.

- See Section 5 “Adjusting Bale Transfer Chains” for adjustment information.

22. Check the tension of fork transfer chains.

- When the forks are raised to a level position, the chains should hang below the chain guide by about 1/16" to 1/4".



Check the Tension of Fork Transfer Chains 219105C

  - See Section 5 "Adjusting Bale Transfer Chains" for adjustment information.

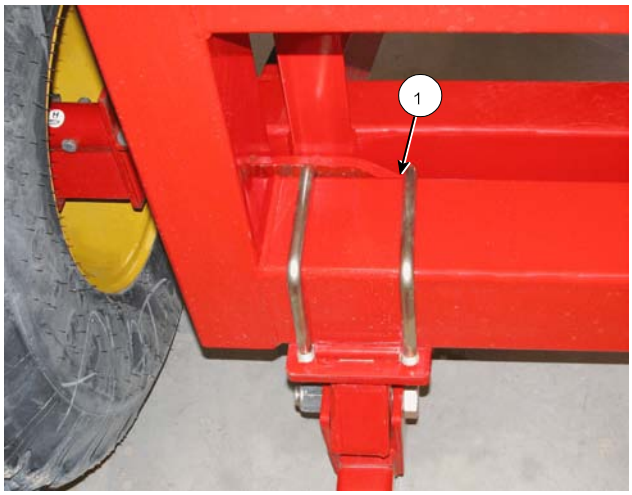
23. Check that the bale transfer panel in the rear tub will raise and lower freely.

- Remove any debris that would hinder the movement of the panel.

Bale Transfer In Rear tub 219103

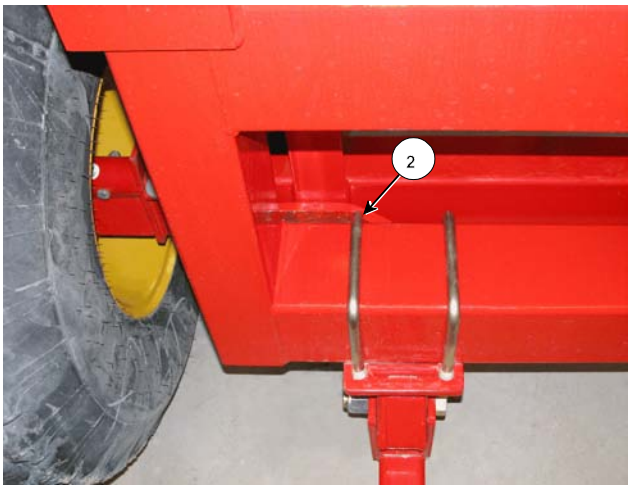
24. Adjust the bale loader forks for the width of bale being processed.

- For bales 6 feet (1.8 m) in diameter
  - Place both fork inner u-bolts against the brace (1).



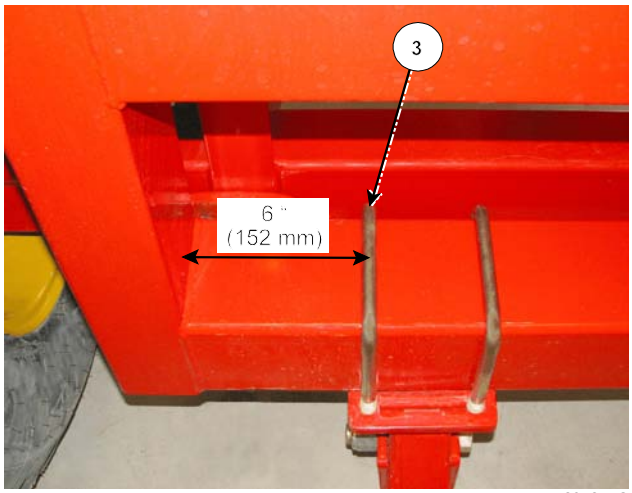
Fork Width - 6 Foot (1.8m) Bales 201209C

- For bales 5 feet (1.5 m) in diameter
  - Place both fork outer u-bolts against the inside of the brace (2).



Fork Width - 5 Foot (1.5m) Bales 201210C

- For bales 4 feet (1.2 m) in diameter
  - Place both outer u-bolts (3) a distance of 6" (152 mm) from the edge of the vertical frame post.



Fork Width - 4 Foot (1.2m) Bales 201211C

25. Inspect all the hydraulic motors, cylinders and hoses.

Use a piece of cardboard or heavy paper to check for leaks. Do not use your hand. Wear proper hand and eye protection when searching for leaks.

Relieve pressure on hydraulic system before repairing, adjusting or disconnecting.

- Visually inspect all the hydraulic hoses and fittings.
  - See Section 5 "Maintaining the CFR 1251" for conditions indicating that replacement is needed.

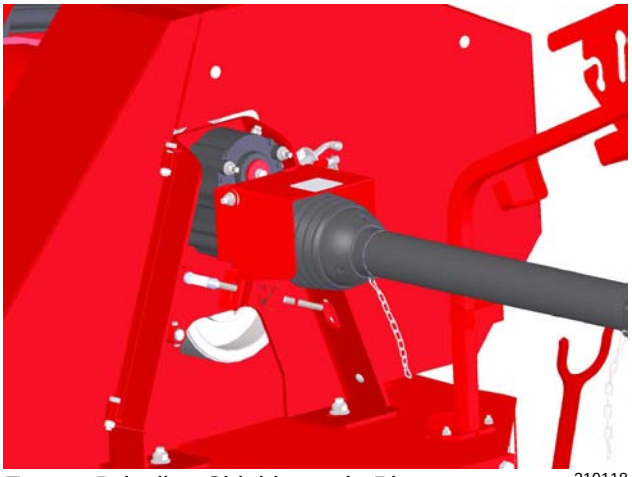
- Ensure the proper size pins are in place and secured.

26. Inspect the wheels and tires for damage or foreign objects. Repair or replace as necessary.

Inspect Wheels and Tires 213091

27. Ensure the driveline shield is in place and in good repair to prevent injuries.

The CFR 1251 shall not be operated without the driveline shield in place.



Ensure Driveline Shields are in Place 219118

28. Unlock the flail drum.

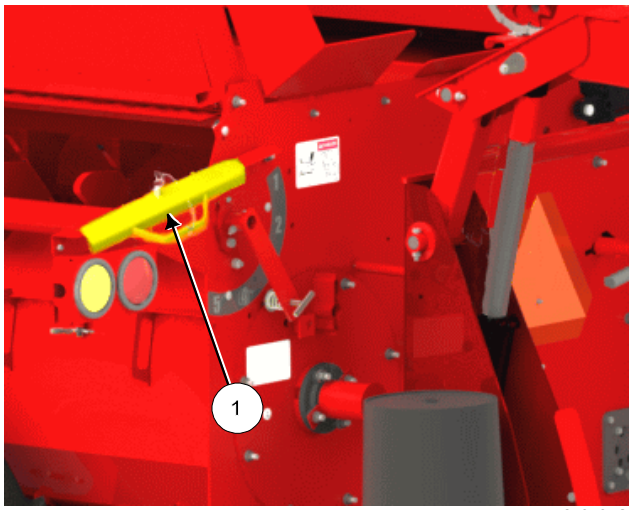
- The flail drum lock is located on the front tub wall.
- Disengage the drum clutch pin from the flail drum drive plate.
  - Pull the spring loaded pin out and rotate to place the roll pin into the slot.

Note: Failure to unlock the flail drum will result in damage to the machine during start up.

Unlock the Flail Drum 213117

29. Remove the fork cylinder lock (1) and fasten in the storage position located on the light bracket.

Note: The forks may need to be raised with the hydraulics to remove the weight from the lock.



Remove & Store Cylinder Lock 219107C

30. Remove the discharge deflector door transport lock to allow the door to be operated by the hydraulic cylinder.

    - Remove the clip pin (1).

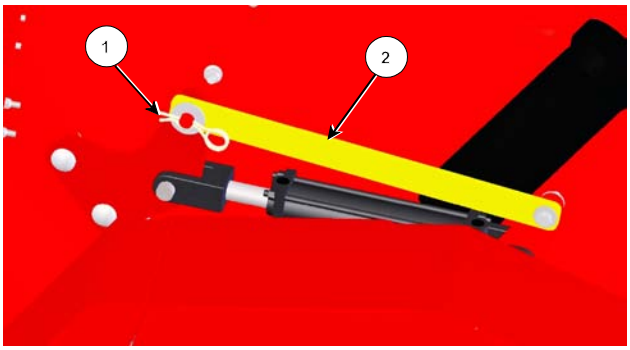
    - Remove the long flat (2) from the connecting pin.

    - Replace the clip pin (1).

    Note: The cylinder may need to be moved with the hydraulics to remove the weight of the door from the lock.

31. Lubricate all grease fittings and check the fluid level in the gear box. See the Maintenance Section.

32. Ensure all fasteners are tightened.



Remove the Deflector Door Lock 219064C

NetWrap or Twine Removal Procedure

Remove netwrap or twine that is around the flail drum.

Note: Remove the twine from the flail drum and feed rollers every 25 bales. Premature bearing failure can occur if twine is allowed to build up on the flail drum.

Shutdown tractor completely and set the parking brake.

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

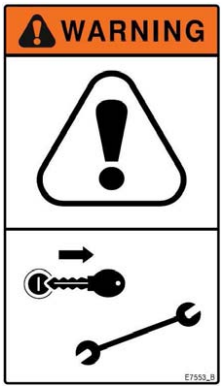
Do not remove the side panels while flail drum is rotating. Contact with rotating flail drum will cause serious injury or death.

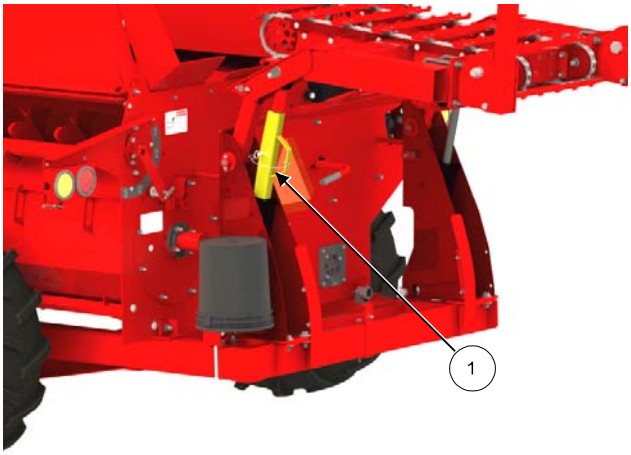
Ensure the side panels are in place an secured during operation.

1. Raise the forks to the fully raised position.

2. Install the cylinder lock (1) onto the fork cylinder. Pin in place.

Install and secure the cylinder lock before going under raised bale forks.





Raise Forks and Lock

219089C

3. At the front of the machine, move the flail guard rod adjustment lever to a number between 1 and 4.

   Note: Having the lever at position 5 will result in damage to the twine cutter blade.

4. At the rear of the machine, move the flail guard rod adjustment lever to a number between 1 and 4.

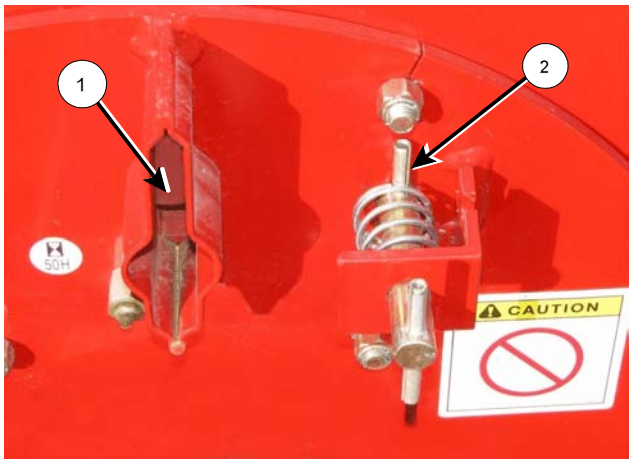
   Note: Having the lever at position 5 will result in damage to the twine cutter blade.

Move Flail Guard Rod Levers (to less than 5) 213120

5. On the front tub wall, align the flail drum knife path (1) with the tub opening on the front wall.

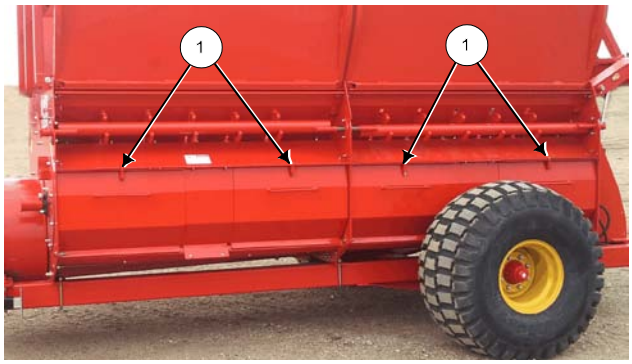
6. Engage the flail drum lock located on the front tub wall.

   - Turn the lock pin to release the roll pin (2) from the slot.
   - Allow the spring to push the lock pin into the processing chamber.
   - Manually rotate the driveline until the lock pin snaps into place locking the flail drum.



Engage Flail Drum Lock 213121C

7. Remove the front and rear flail drum access panels.
   - Remove the clip pins.
   - Remove the panel pins (1).
   - Lift the panels out.



Remove Flail Drum Access Panels 213096C

8. Move any flails blocking the knife path.

   - Reach through the drum access panels and move any flails that are lying across the knife path in the front and rear tub.

   - Failure to move flails on the knife path will result in damage to the twine cutter blade.

Move Flails Blocking the Knife Path 212072

9. Remove the Twine Cutter from the storage position on the back tub wall.

Remove Twine Cutter from Storage 213122

10. On the rear tub wall, insert the Twine Cutter with blade up.

11. Cut through the netwrap or twine.

    - Use a “saw” like action along the entire length of the drum.

12. On the front tub wall, insert the Twine Cutter with blade up.

    - Use a “saw” like action along the entire length of the drum.

13. Cut through the netwrap or twine.

    - Use a "saw" like action along the entire length of the drum.

14. Place Twine Cutter back into the storage position.

    - Ensure the handle is facing down and is locked into the key hole slot.

15. Unlock the Flail Drum.

- Disengage the drum clutch pin from the flail drum drive plate.

    - Pull the spring loaded pin out and rotate to lock in the disengaged position.

Note: Failure to unlock the flail drum will result in damage to the machine during start up.

Insert Twine Cutter with Blade Up 213123

Replace Twine Cutter Into Storage Position 213122

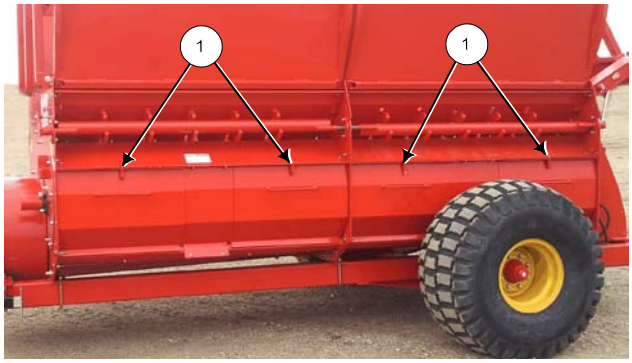
Unlock the Flail Drum 213117

16. Remove the netwrap or twine from the front and rear flail drums.

Remove Netwrap & Twine 212043

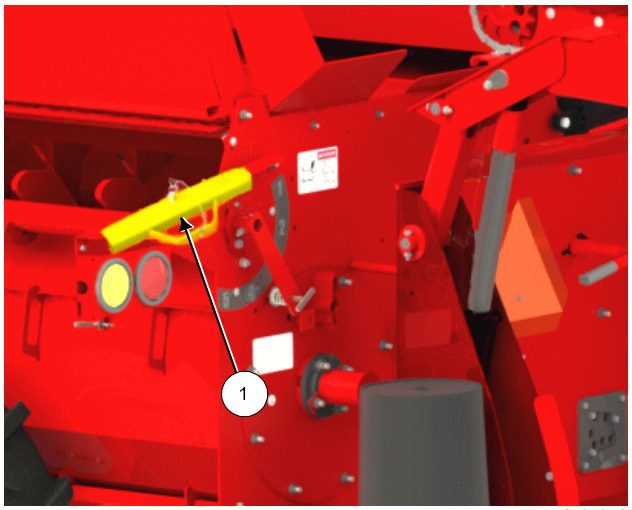
17. Replace the front and rear flail drum access panels.

    - Fasten in place with the panel pins (1).
        - Secure with the clip pins.



Replace Flail Drum Access Panels 213096C

18. Remove the fork cylinder lock (1) and fasten in the storage position located on the light bracket.



Remove & Store Fork Lock 219107C

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4.0 OPERATING THE CFR 1251

Do not allow anyone to ride on the CFR 1251.

- Falling from the machine can cause injury.

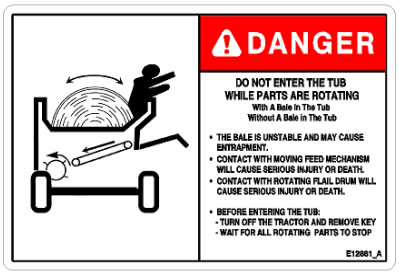
Do Not Enter the Tubs While Parts Are Rotating

- With Bale in Tub
- Without Bale in Tub

The Bale is Unstable and may cause entrapment.

Contact with the moving feed mechanism will cause serious injury or death.

Contact with the rotating flail drum will cause serious injury or death.



Note: Use caution if entering the tub with a bale in it - even <u>after</u> all rotation has stopped. The bale is unstable.

Stay back from an operating machine which can discharge objects a long distance.
Thrown material or objects leaving the discharge area can cause serious injury or death.

Do not operate within 100 ft (30m) of any person.

Adjusting the Output for Feeding

Feeding with a bale processor involves placing the appropriate amount of feed at a spacing suitable for each animal.
Highline has chosen a spacing of 5 feet for each animal.

Note: Other feeding spacings can be achieved, however they are more demanding on the operator and the processor.

There are 3 variables that affect the feed output:

- Speed of the feeder chain
- Aggression settings (guard rod settings)
- Tractor speed

Balance these variables to complete the processing of both bales by the time the travel distance is reached.

<u>The basic procedure involves:</u>

- Determine the travel distance needed by multiplying the number of head in the herd by 5 feet.
- Set the feeder chain speed
- Set the aggression levels
- Set the tractor speed
- Process the bales.
  - Observe the output and distance traveled.

- If the optional grain tank is on the machine, add grains to supplement the feed.

- Adjust the feeder chain speed, aggression levels and tractor speed for the desired processing.

1. Unlock the flail drum

   - The flail drum lock is located on the front tub wall.

   - Disengage the drum clutch pin from the flail drum drive plate.

     - Pull the spring loaded pin out and rotate to place the roll pin into the slot.

     Note: Failure to unlock the flail drum will result in damage to the machine during start up.

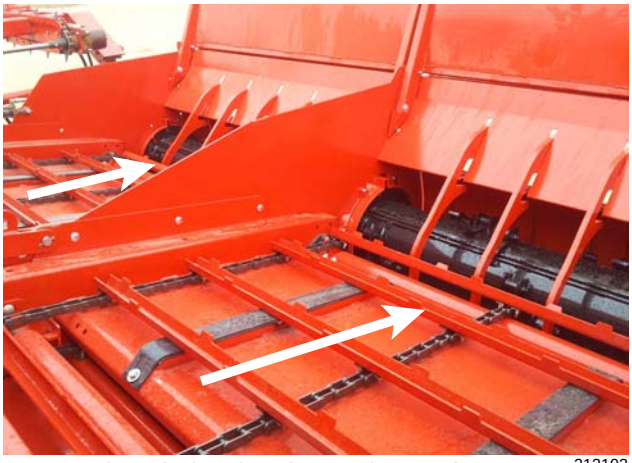
Unlock the Flail Drum 213117

2. Set the speed of the feeder chains

   Set the direction of the feeder chains so that the chain bars move toward the flail drum. This will keep the bale against the flails and will rotate the bale. It will also cause the bottom of the bale to move against the flail guard rods.

   The front and read feeder chains are linked together. The will rotate at the same speed.

   Adjusting the feeder chain speed will influence the discharge rate and the time to process the bales.
   - Adjust the feeder chain speed using the hydraulic flow control.


Set Feeder Chain Direction and Speed 213102

Recommended Feeder Chain Speed Range:
10 - 25 chain revolutions per minute.

Chain Speeds

- Faster feeder chain speeds (at the same aggression level setting) will result in a faster discharge of material.

- Slower feeder chain speeds (at the same aggression level setting) will result in a slower discharge of material.

Loose Material Build Up

- If loose material builds in the tub:
  - slow down the feeder chain to allow the flail drum to process the material.
  - slow down the feeder chain to avoid removing material with the feeder chain.

- To remove loose material buildup, reverse the feeder chain for a short time and then restore the direction of moving the bottom of the bale towards the flail drum.

Chain Speed and Direction 213102

3. Set the aggression level of the flails.

   The bale is fed up against the guard rods in each tub. The amount of contact between the bale and the flails is determined by the guard rod setting.

High Aggression Level 213124

<u>Ratio of Bale Processing:</u>

The ratio of bale processing is done by adjusting the aggression settings of the front and back bale.

- One to One Ratio
  Adjust the aggression settings of the front and rear tub so that the bales are finished processing at the same time.

- Two to One Ratio
  Set the rear tub to a higher aggression level than the front tub.
  - The CFR 1251 has the ability to load another bale into the rear tub while there is a bale in the front tub.

Low Aggression Level 213125

Adjusting the aggression levels is done with the guard rod adjustment handle.

- Adjust the front tub aggression setting on the front tub front wall.

- Adjust the rear tub aggression setting on the rear tub rear wall.

There are five aggression level settings.
- Pull the handle out of the handle lock.
- Raise or lower the handle to the desired discharge setting.
- Lock the handle in the hole.

To Increase the discharge rate:
- Move the handle to a higher number.

To Decrease the discharge rate:
- Move the handle to a lower number.

4. Load the first bale onto the lift forks.

   Note: The following procedure is for loading when the optional rear view camera is not installed.

   - Align the center of a bale with the center of the processor.

   - Lower the forks completely.

   - Slowly back up to the bale until the forks are completely under the bale.

   - Raise the forks enough to lift the bale off the ground but do not put it into the tub.

     - This makes it is possible to see through the screen to the back of the machine for aligning the machine to load the second bale.

   Note: If a bale is frozen to the ground, dislodge it by rocking the machine to impact the bale and loosen it.

5. Back up the machine to the second bale row and align the machine with the row.
   - Leave enough room that the bale on the forks can easily be lifted.

Align Bale to be Loaded 219108

Loading A Bale Into The Front Tub

6. Load the bale on the forks into the front tub.
   - Select “Front Bale” on the switch box.
     - This will activate the hydraulic block to raise the forks and lower the rear tub bale transfer chains so the bale will be loaded into the front tub.

   Note: If livestock is being fed, it is the operator's responsibility to ensure that the materials in the processed feed mix are suitable. Some of the wrapping material (twine, net wrap or other materials) may be discharged with the feed if the wrapping materials are not removed prior to processing.

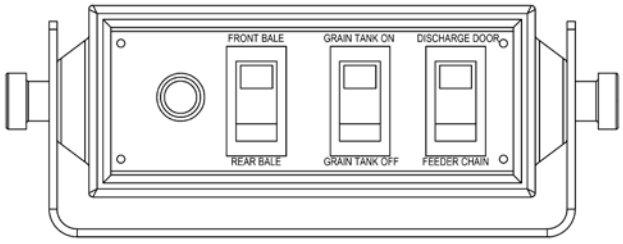
7. Press and hold the hydraulic lever in the cab to raise the forks.

     - As the forks are lifted, the bale transfer assembly (located in the rear tub) will lower.
     - When the bale forks reach a preset height, the bale transfer chains on the forks and in the rear tub will begin to rotate to move the bale into the front tub.

Do Not Contact the Rotating Transfer Chains The transfer chains could cause serious injury or death.

   - Continue to hold the hydraulic lever open to keep the transfer chains rotating until the bale is in the front tub.

   Note: The flail drum and the feeder chain should not be not turning while loading a bale.



Switch Box in Cab 41376_A

First Bale on Forks 219109

First Bale Moving to Front Tub 213130-1

Loading A Bale Into The Rear Tub

8. Lower the forks and back up to load the second bale onto the forks.

9. Select "Rear Bale" on the switch box.
   - This will activate the hydraulic block to move parts of the machine so the bale will be loaded into the rear tub.

10. Press and hold the hydraulic lever in the cab to raise the forks.

    Note: If livestock is being fed, it is the operator's responsibility to ensure that the materials in the processed feed mix are suitable. Some of the wrapping material (twine, net wrap or other materials) may be discharged with the feed if the wrapping materials are not removed prior to processing.

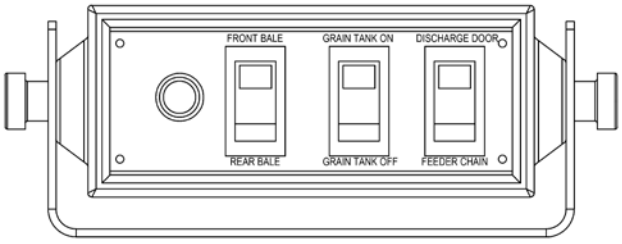
    - As the forks are being raised, the bale transfer assembly in the rear tub will rise to the storage position.

    - When the bale forks reach a preset height, the bale transfer chains on the forks will begin to rotate to move the bale into the rear tub.

    Note: The bale transfer chains in the rear tub will also rotate while the transfer assembly is raised.

Do Not Contact the Rotating Transfer Chains. The transfer chains could cause serious injury or death.

- Continue to hold the hydraulic lever open to keep the transfer chains rotating until the bale is in the rear tub.



Switch Box in Cab 41376_A

Transfer Assembly Rising 219111

Note: The flail drum and the feeder chain should not be not turning while loading a bale.

- Release the hydraulic lever to stop the transfer chains.

- Turn off the "Rear Bale" switch on the switch box.

Bale Loaded in Rear Tub 219113

11. A third bale may be loaded onto the forks to be carried while the bales in the tub are being processed.

    - Select "Rear Bale" on the switch box to prevent the tub transfer chains from being lowered.

    Note: If livestock is being fed, it is the operator's responsibility to ensure that the materials in the processed feed mix are suitable. Some of the wrapping material (twine, net wrap or other materials) may be discharged with the feed if the wrapping materials are not removed prior to processing.

    - Only raise the forks enough for the bale to clear the ground. If the forks are raised too much the bale transfer chains will be activated.

Third Bale Loaded On Forks 219114

Operating Without the Feed Chopper

For information on Operating with the Feed Chopper refer to the Feed Chopper Operators Manual.

12. Adjust the blower discharge doors.

<u>For Bedding</u>

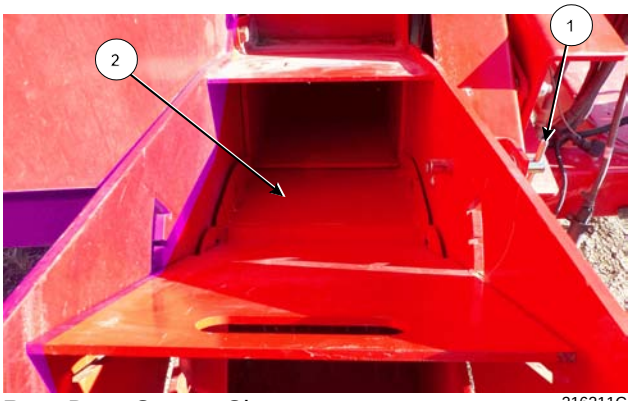
- Pull the rear door pin (1) to allow the rear door (2) to cover the chopper.
  - This door position will cause the material to by pass over the chopper and be discharged.

  Note: Ensure the rear door is slightly below the blower exit (3).
  If the rear door is slightly above the blower that means it is sitting on one of the chopper knives.
  Material will collect on the door edge if it is slightly above the blower exit.

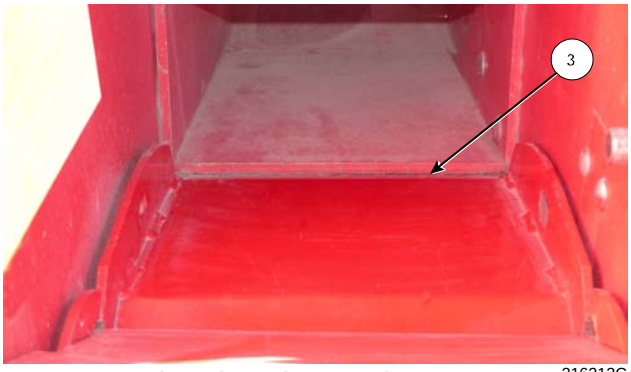
- Adjust the amount of lift of thrown material.
  - The amount of lift of the material is controlled by using the upper and lower door.
    - The amount of lift will influence the distance the material is discharged.

  - Adjust the lower door for the amount of discharge lift.
    - Slide the front discharge bar into one of the slots on the curve.
    - Place the blower discharge panel (1) into the slots (2) on the arc for the desired amount of lift.

  - Adjust the upper discharge door (5) as a deflector for additional control of the lift and throw.
    - Pull the handle (4) and move the door (5) to the desired position.

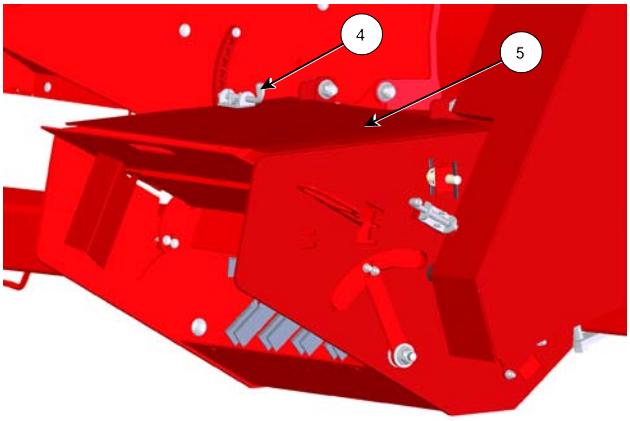


Rear Door Covers Chopper 216211C



Ensure Door is Below Blower Exit 216212C

Adjust The Lower Door for Amount of Lift 216214C
(Upper Discharge Door Not Shown)



Upper Discharge Door Adjustment 219116

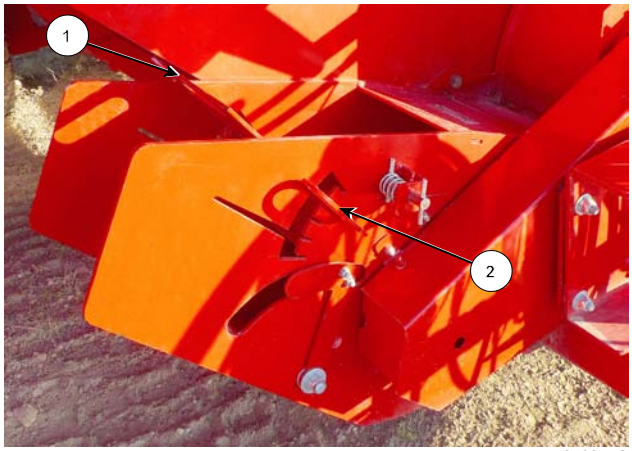
For Feeding (Without the Chopper)

- To place feed in a windrow or a bunk, raise the discharge panel to the highest position.
    - Place the blower discharge panel (1) into one of the upper slots (2) of the arc for the greater lift.
        - This will cause the material to be lifted into the discharge door and dropped into a windrow or bunk.

13. Set the deflector arm.
    - Raise or lower the deflector arm to adjust the amount of spreading of material.
    - Use the hydraulic cylinder to adjust the arm.

Raised - material will be spread out over a wide area - such as for bedding materials.

Lowered - the material will be left in a windrow or directed into a feed bunk.



Door in an Upper Slot For Feeding
(Upper Discharge Door Not Shown)
216215C


Deflector Arm For Bedding
213092-1


Deflector for Windrow or Bunk Feeding
213127

13. Start the PTO to engage the flail drum.

Stay back from an operating machine which can discharge objects a long distance.

Stay clear from the discharge side when the PTO is engaged.

Do not operate within 100 ft (30m) of any person.

Discharged material or objects leaving the discharge area can cause serious injury or death.

The CFR 1251 shall not be operated without the guards in place or in good condition.

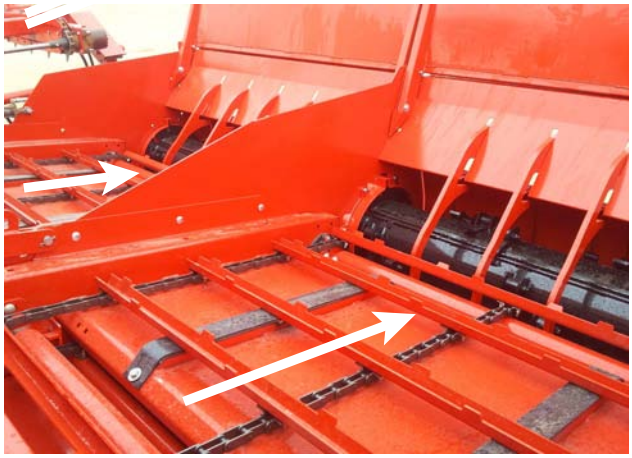
- Engage the tractor PTO.
- Increase the tractor RPM until 1000 PTO speed is reached.

Note: Ensure that the carried bale does not interfere with the bale in the tub.

14. Begin processing material.

- Start the feeder chains to move the bale towards the flail drum.

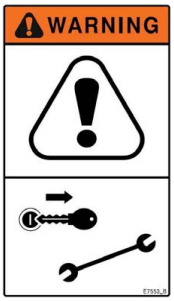
  Note: If livestock is being fed, it is the operator's responsibility to ensure that the materials in the processed feed mix are suitable. Some of the wrapping material (twine, net wrap or other materials) may be discharged with the feed if the wrapping materials are not removed prior to processing.



Start the Feeder Chains 213102

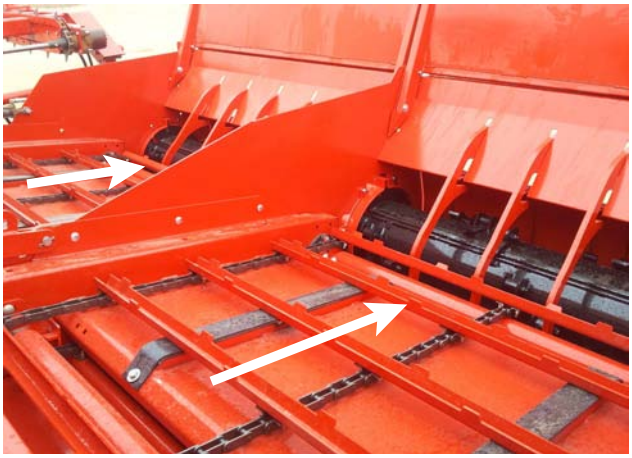
Note: If the processor vibrates excessively, immediately disengage PTO and stop the tractor.

Wait for all rotation to stop before approaching the processor. Inspect for blockages, missing flails or other causes of the vibration.



15. Adjust the feeder chain speed and direction (if needed) to have the bales processed within the desired travel distance.

- If loose material builds up near the top of the bale in the tub:
  - Slow down the feeder chain to allow the flail drum to process the material.
  - Slow down the feeder chain to avoid the feeder chain from removing material from the bale.
- To remove loose material buildup, reverse the feeder chain for a short time and then restore the chain direction to move the bottom of the bale towards the flail drum.



Adjust Feeder Chain Speed and Direction 213102

16. Adjust the aggression levels of the front and rear tubs (if needed) to have the bales processed within the desired travel distance.

    - If a different rate of material discharge is desired:

        - Stop the tractor and remove the key.

        - Wait until all flail drum rotation has stopped.

        - Move the discharge rate levers.

            - Higher Number = more material discharged.

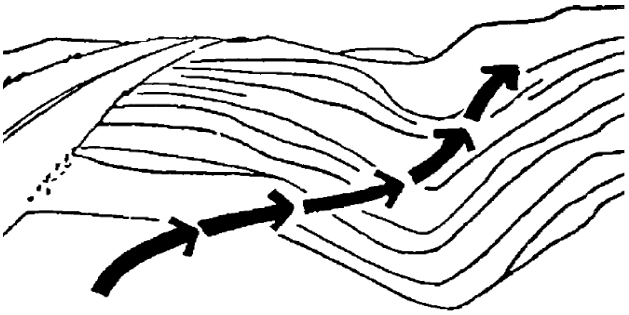
            - Lower Number = less material discharged.

Adjust Aggression Level 213124

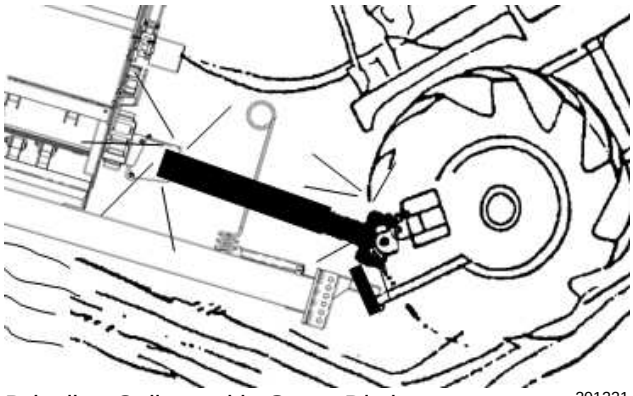
17. Stop the feeder chain before loading another bale into the processor tubs.

18. Crossing ditches and steep inclines.

    - Cross ditches or inclines at about a 30° approach angle.

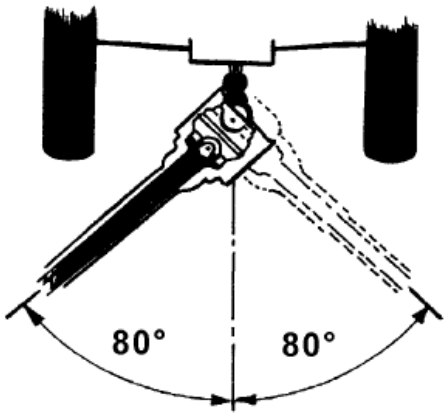

Cross Ditch at 30° Angle 107072

    - Do not approach a ditch or steep incline straight on as this may collapse the driveline to its shortest length, causing damage by pushing the PTO into the tractor or into the drivebox or downward onto the PTO shaft, breaking it off.


Driveline Collapsed in Steep Ditch 201221

19. Making turns.

- Do not make turns sharper than 80°.
- Angles greater than 80° can result in damage to the constant velocity joint and other driveline components.
- Ensure that the tractor tire does not contact the CFR 1251 tub or frame.



Turn Less Than 80° 109040

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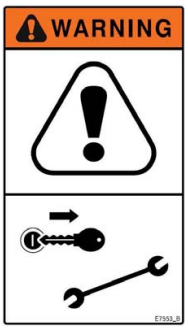
5.0 MAINTAINING THE CFR 1251

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

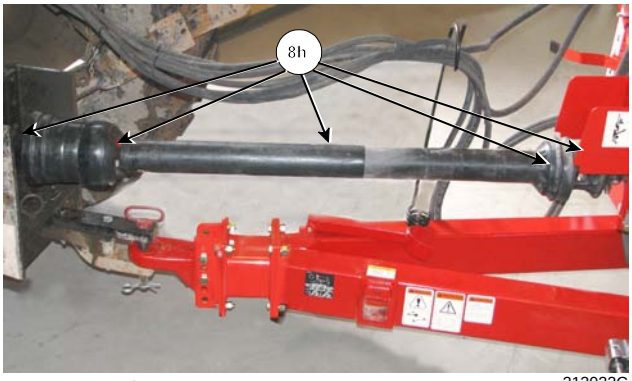
Relieve all hydraulic pressure in the hoses. Disconnect the hydraulic hoses from the tractor before going near the machine.



Securely block the CFR 1251 before any work is done to prevent the CFR 1251 from moving during servicing.

Lubrication

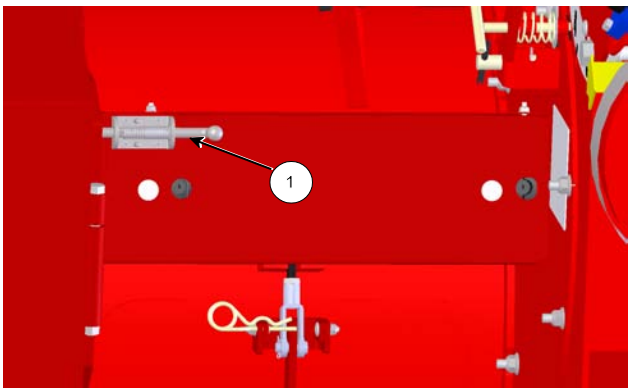
Lubricate all grease fittings with a quality lithium complex, extreme pressure NLGI Grade 2 grease.



Grease Points on PTO 213022C

Every 8 Hours

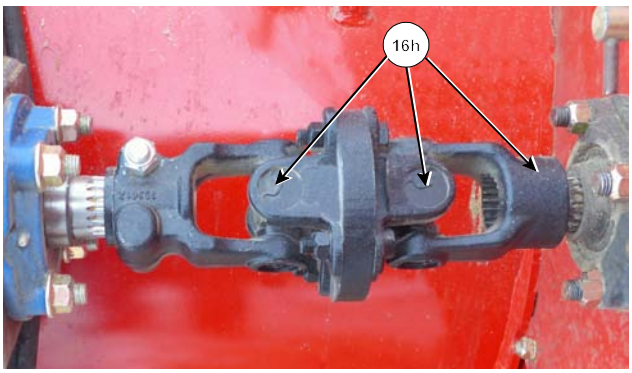
- PTO - Lubricate 5 points on the PTO every 8 hours.
  - 1 point each constant velocity joint. *Continued angled operation will require lubrication every 4 hours.
  - 1 point on each joint collar.
  - 1 point at the telescoping section.



Open the Driveline Guard to Flail Drum 219119C2

Every 16 Hours

- Lubricate 3 points on the driveline joint connecting the flail drum sheave to the flail drum.
  - Open the driveline transfer shaft guard to access the driveline.

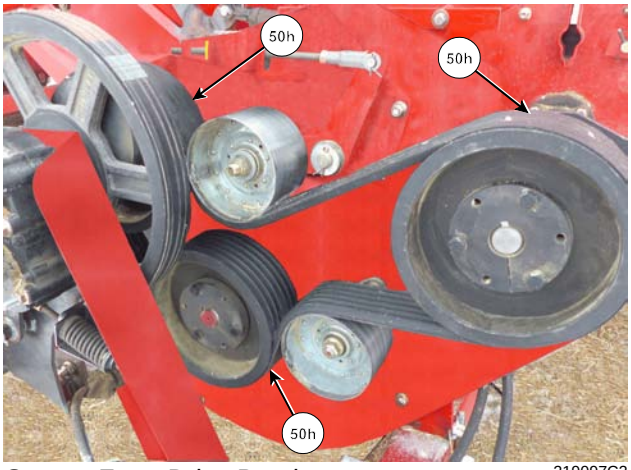


Grease Flail Drum Driveline Joints 219120C

Every 50 Hours

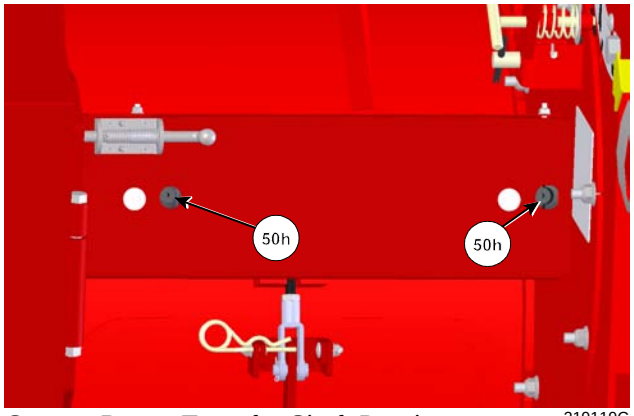
Front Main Drive

- Lubricate 1 point on the main drive bearing located behind the main drive sheave.
- Lubricate 1 point on the auger bearing located behind the auger sheave.
- Lubricate 1 point on the flail drum power sheave located behind the sheave.



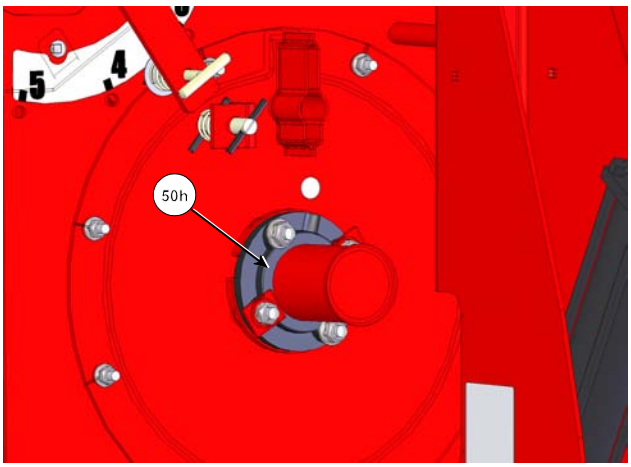
Grease Front Drive Bearings 219097C2

- Lubricate 2 points on the flail drum power transfer shaft bearings.
  - These 2 points can be accessed through cutouts in the transfer shaft guard.



Grease Power Transfer Shaft Bearings 219119C

- Lubricate 1 point on the rear flail drum bearing at the back of the machine.



Grease Rear Flail Drum Bearing 219121C

- Lubricate 1 point at the middle of the flail drum.

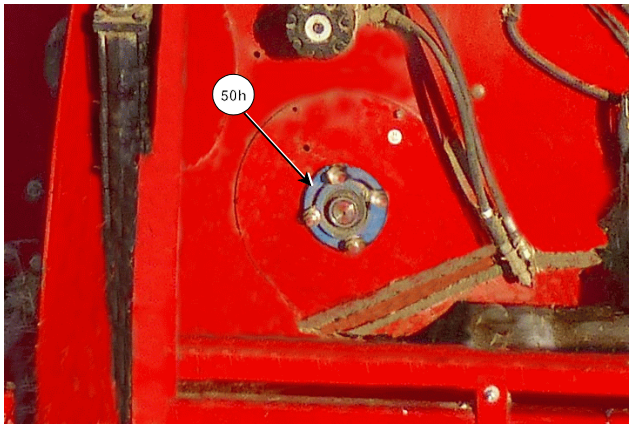
    - The flail drum bearing is located on the rear tub side of the middle tub wall.

    - Access the bearing through the cut outs in the flail drum.

Grease Middle Flail Drum Bearing 213157C

Auger

- Lubricate 1 point on the rear auger bearing at the back of the machine.



Grease Auger Rear Bearing 219122C

Feeder Chain Bearings

Upper Bearings

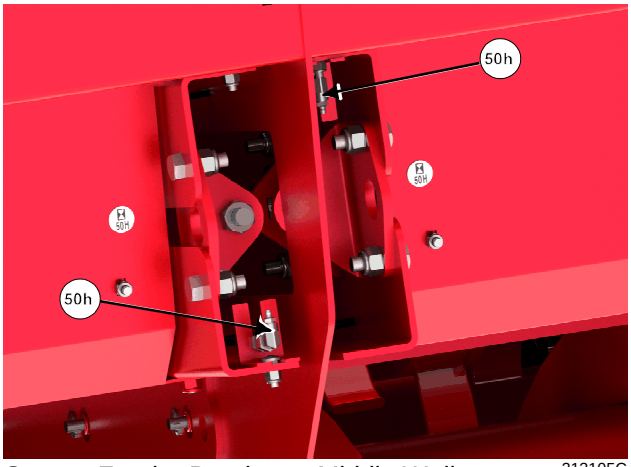
- Front Tub Wall - Lubricate 1 point on the upper feeder chain bearing on the front tub.

- Rear Tub Wall - Lubricate 1 point on the upper feeder chain bearing on the rear tub.

Grease Upper Feeder Chain Bearings 212008C

- Middle Tub Walls - Lubricate 2 points on the upper feeder chain bearing on the middle tub walls.

    - Lubricate through the remote grease points.



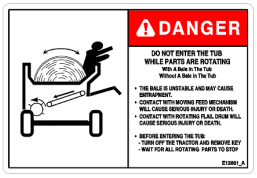
Grease Feeder Bearings - Middle Wall 213105C

Lower Bearings - Inside Tubs

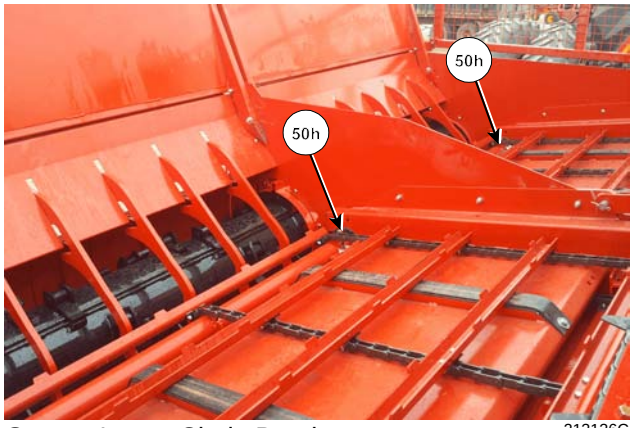
Do Not Enter the Tubs While Parts Are Rotating
- With Bale in Tub
- Without Bale in Tub

Contact with the moving feed mechanism will cause serious injury or death.

Contact with the rotating flail drum will cause serious injury or death.



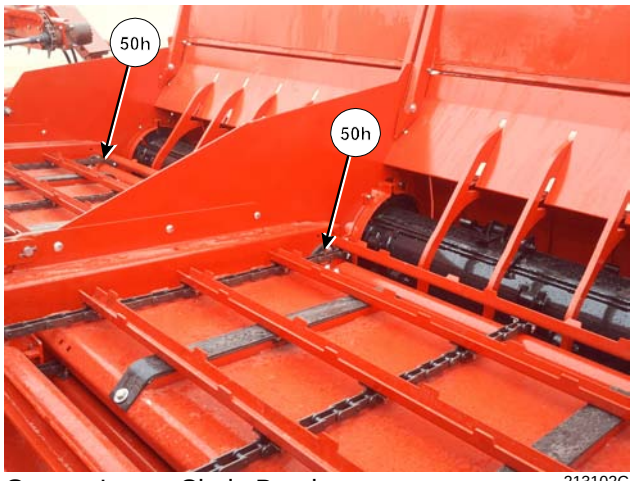
- Lubricate 2 points on the lower feeder chain bearings inside the front of each tub.



Grease Lower Chain Bearings (Front Inside Tub) 213136C

- Lubricate 2 points on the lower feeder chain bearings inside the rear of each tub.

- Lubricate the chains in both tubs with a quality chain oil.



Grease Lower Chain Bearings (Rear Inside Tub) 213102C

Bale Transfer Chain Bearings

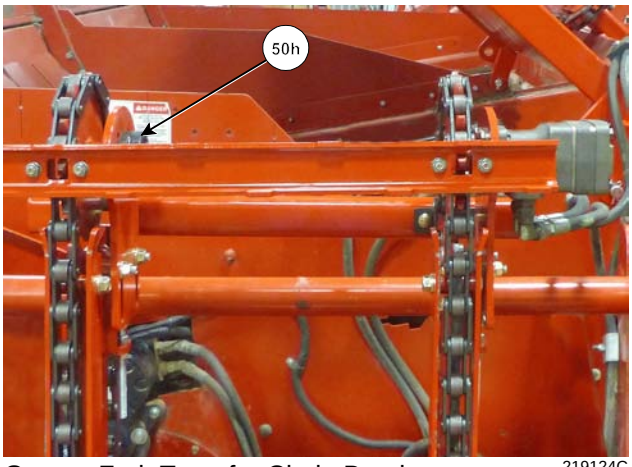
Do Not Contact Rotating Transfer Chains

Stay clear when the transfer chains are rotating. The transfer chains have bars that could cause serious injury or death.

- Lubricate 1 point on the tub bale transfer chain mechanism.
- Lubricate the chains with a quality chain oil.

Grease Tub Transfer Chain Bearing 213138C

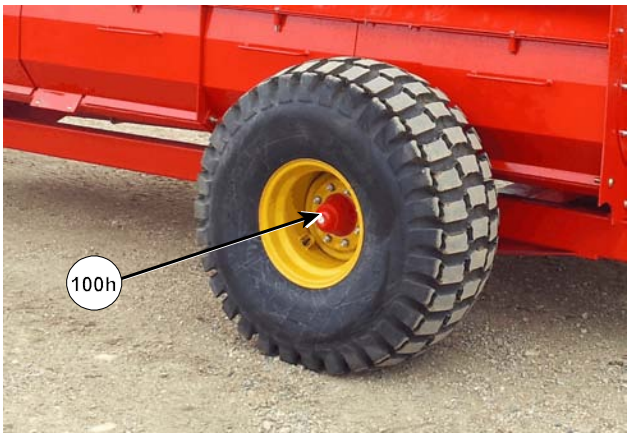
- Lubricate 1 point on the bearing of the fork bale transfer chain mechanism.
- Lubricate the chains with a quality chain oil.



Grease Fork Transfer Chain Bearing 219124C

Every 100 Hours

- Hubs on spindles - Lubricate the hubs every 100 hours.



Grease Hubs on Both Spindles 213109C2

Adjust Front Tub Feeder Chain Tension

Front Tub Wall

- On the front tub wall, loosen the nuts on the upper feeder chain bearing (1).
- Loosen the jam nut (2) on the adjustment bolt.
- Turn the adjustment nut (3) to change the chain tension.
- Measure the distance between the bolt tabs (4).

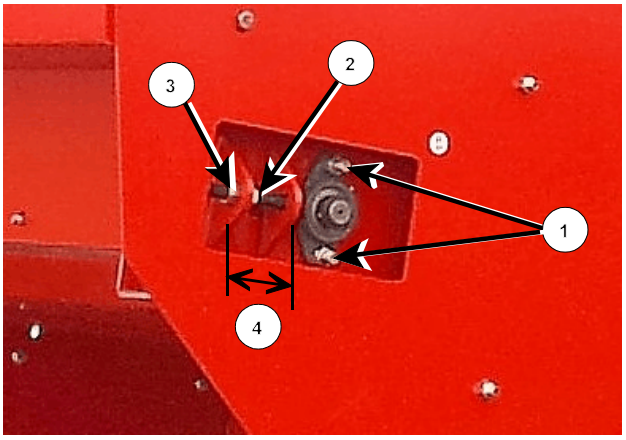
Middle Tub Wall

- On the middle tub wall, loosen the nuts on the upper front feeder chain bearing.
- Loosen the jam nut on the adjustment bolt.
- Turn the adjustment nut to change the chain tension.
- Adjust the distance between the bolt tabs to be the same as the tabs on the front wall.

Check Feeder Chain Tension

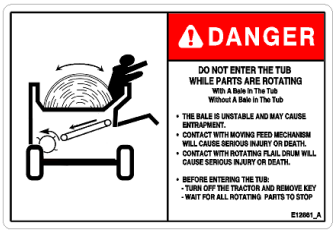
Do Not Enter the Tubs While Parts Are Rotating

- Stand in the tub and hold the center of one of the feeder bars.
- Lift the bar.
  - The chain should lift about ½" off the deck.
- Tighten the jam nuts on the front tub wall and middle wall adjustment bolts.



Adjust Front Feeder Chain Tension (Front Wall) 213140C

Adjust Front Feeder Chain Tension (Middle Wall) 213137



Check Tension of the Feeder Chain 212054

Adjust Rear Tub Feeder Chain Tension

Rear Tub Wall

- On the rear tub wall, loosen the nuts on the upper feeder chain bearing (1).
- Loosen the jam nut (2) on the adjustment bolt.
- Turn the adjustment nut (3) to change the chain tension.
- Measure the distance between the bolt tabs (4).

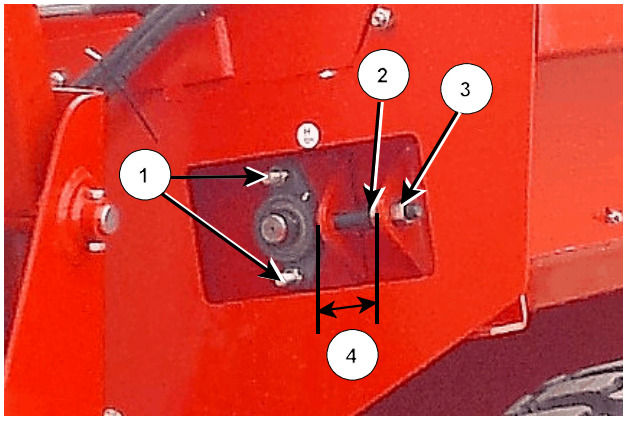
Middle Tub Wall

- On the middle tub wall, loosen the nuts on the upper rear feeder chain bearing.
- Loosen the jam nut on the adjustment bolt.
- Turn the adjustment nut to change the chain tension.
- Adjust the distance between the bolt tabs to be the same as the tabs on the rear wall.

Check Tension

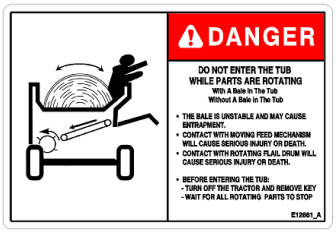
Do Not Enter the Tubs While Parts Are Rotating

- Stand in the tub and hold the center of one of the feeder bars.
- Lift the bar.
  - The chain should lift about ½" off the deck.
- Tighten the jam nuts on the rear tub wall and middle wall adjustment bolts.



Adjust Rear Feeder Chain Tension (Rear Wall) 213141C

Adjust Rear Feeder Chain Tension (Middle Wall) 213137



Check Tension of the Feeder Chain 212054

Adjust Belt Tension for Flail/Auger Drive

Shut down the tractor completely and set the parking brake.

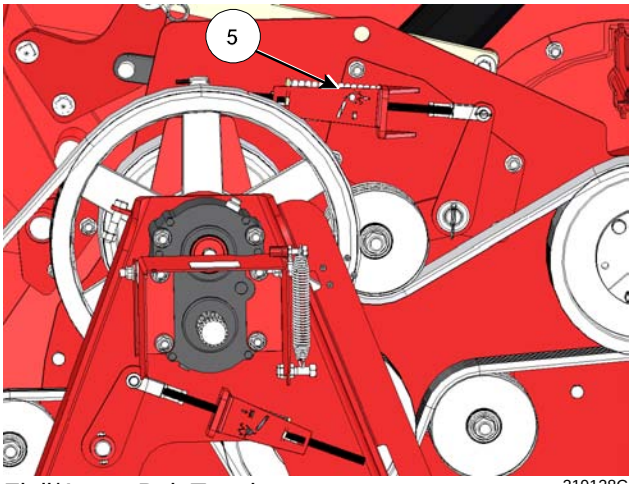
Disconnect the PTO and hydraulics from the tractor before doing any work.

The belt tension adjuster has a spring to keep the tension.

- The belt is tensioned from the factory.

To confirm adequate belt tension:

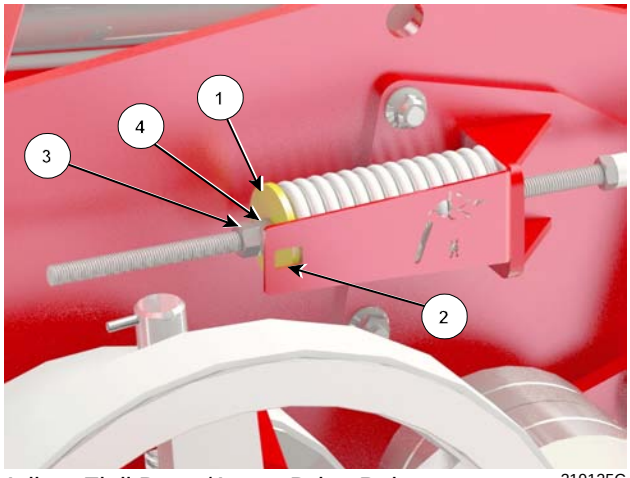
- Open the drive shield on the left side of the machine to access the flail/auger belt tensioner (5).
- Check if the spring washer (1) is showing in the cut out window (2). If it showing in the window then the belt tension is in the acceptable range.



Flail/Auger Belt Tensioner 219128C

To adjust belt tension:

- If the spring washer (1) is not showing in the window (2) then adjust by:
- Loosening the jam nut (3) on the threaded rod.
- Turn the nut (4) next to the spring washer to adjust the spring so it shows in the cut out window (2).
- Tighten the jam nut (3).



Adjust Flail Drum/Auger Drive Belt 219125C

Note: The information for adjustment of the feed chopper belt (if present) is given in the feed chopper Operator's Manual.

Changing the Flail/Auger Drive Belt

Note: Information on changing the feed chopper drive belt is given in the Feed Chopper Operator's Manual.

Removing the Main Drive Belt

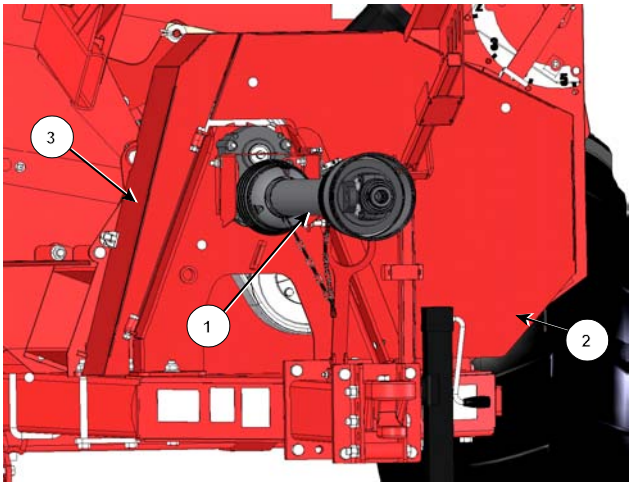
1. Disconnect and remove the driveline (1) for ease in changing the belt.

2. Open the drive shield on the left side (2) of the machine.

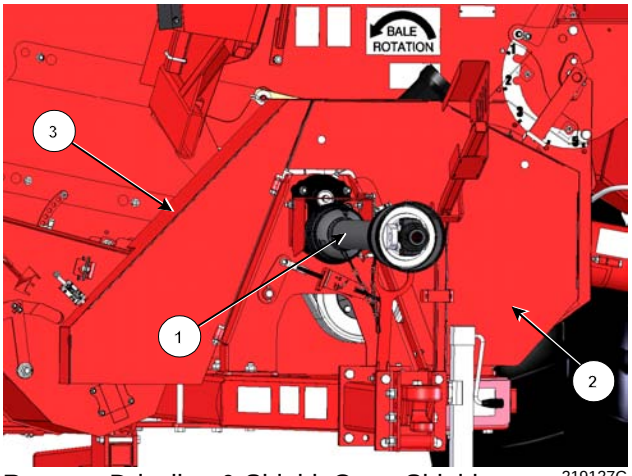
   - Leave this shield attached.

3. Remove the drive shield on the right side (3) of the machine.

   - Removing this shield will ease the belt replacement process.

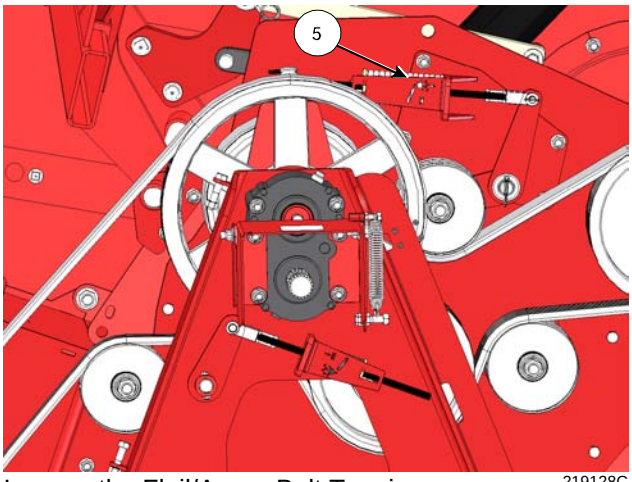


Remove Driveline & Shield, Open Shield
(No Feed Chopper Model Shown)
219126C



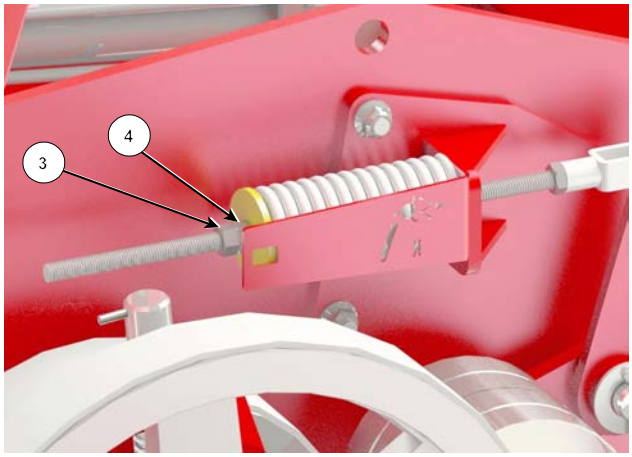
Remove Driveline & Shield, Open Shield
(Feed Chopper Model Shown)
219127C

4. Loosen the flail/auger drive belt tensioner (5).



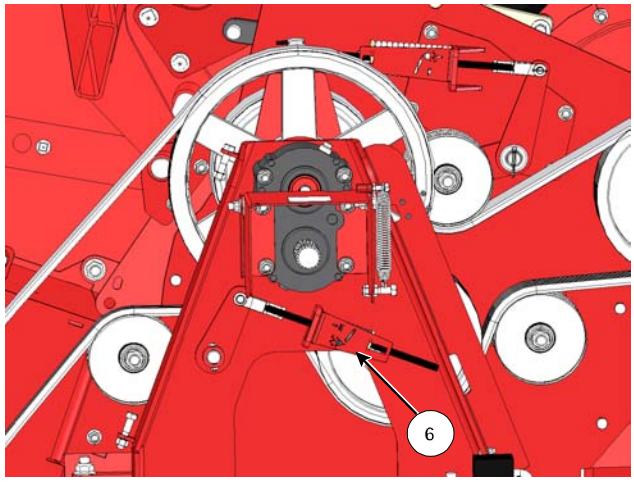
Loosen the Flail/Auger Belt Tensioner
219128C

- To loosen the belt tensioner:
  - Loosen the jam nut (3) on the threaded rod.
  - Turn the nut (4) next to the spring washer to remove the tension on the spring.
- Remove the drive belt from the drive sheaves.



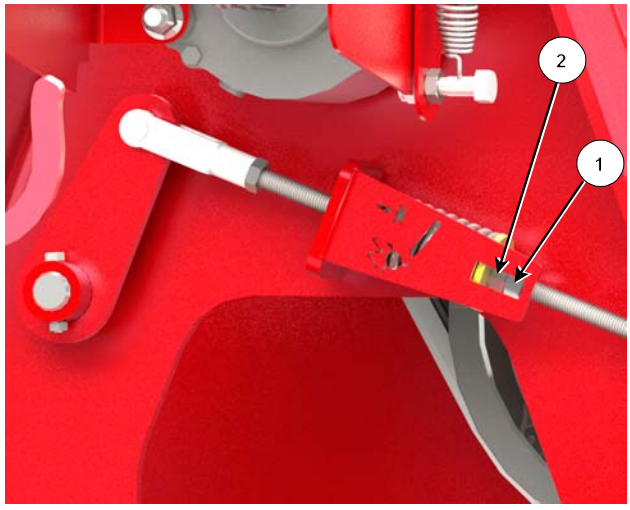
Loosen Flail/Auger Belt Tensioner 219125C2

5. If the feed chopper is present, loosen the chopper belt tensioner (6) located below the drive box.



Loosen the Feed Chopper Tensioner (If present) 219128C2

- To loosen the belt tensioner:
  - Loosen the jam nut (1) on the threaded rod.
  - Turn the nut (2) next to the spring washer to remove the tension on the spring.



Loosen the Feed Chopper Belt Tension 219130C

6. Remove the chopper drive belt from the chopper rotor sheave (4).
   - The belt can remain on the large sheave.

7. Remove the nuts (3) holding the gearbox support frame to the hitch.
   - Keep the bolt and nuts for re-use.

8. Move the flail/auger drive belt around the drive sheaves and the support to be around the base of the gearbox support.

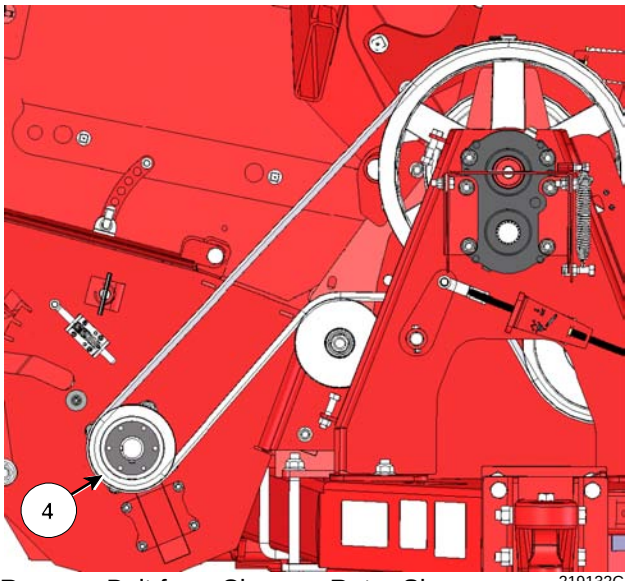
   - If the feed chopper is present, move the flail/auger drive belt over the feed chopper sheave and drive belt.

9. Place a pry bar under the tabs of the gearbox support. (See the diagram)

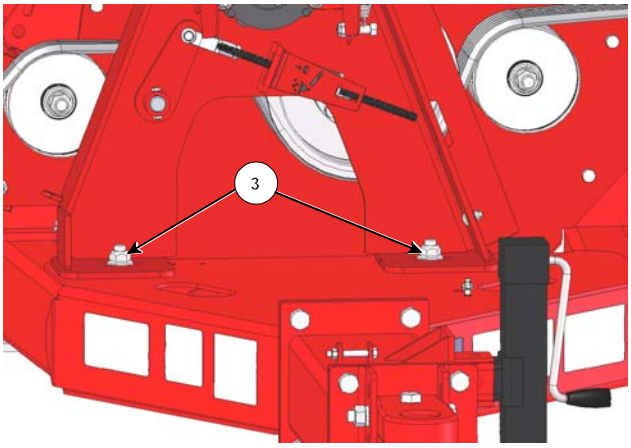
   - Lift the support enough to move the drive belt under the support.

   Note: Lifting the gearbox support too much may cause the drive shaft to come out of the bearing supporting the drive sheave.

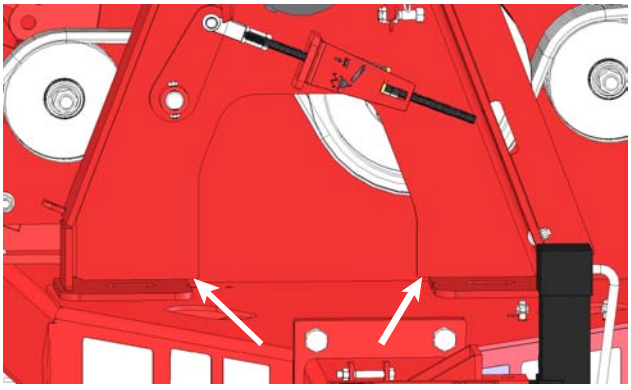
10. Remove the belt from the sheaves and the support.



Remove Belt from Chopper Rotor Sheave 219132C



Remove Fasteners on Gearbox Support Frame 219129C


Lift the Gearbox Support Under the Tabs
Move Belt Under the Support 219131C

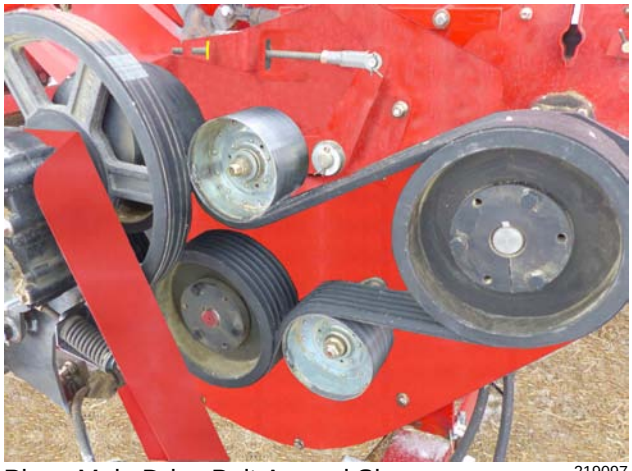
<u>Installing the Flail/Auger Drive Belt</u>

1. Slide the new drive belt under the gearbox support.

   - Use the pry bar under the support tabs to lift enough to move the belt under the support.

2. Move the flail/auger belt around the support.
   - Move the belt around the feed chopper sheave/belt if the feed chopper is present.

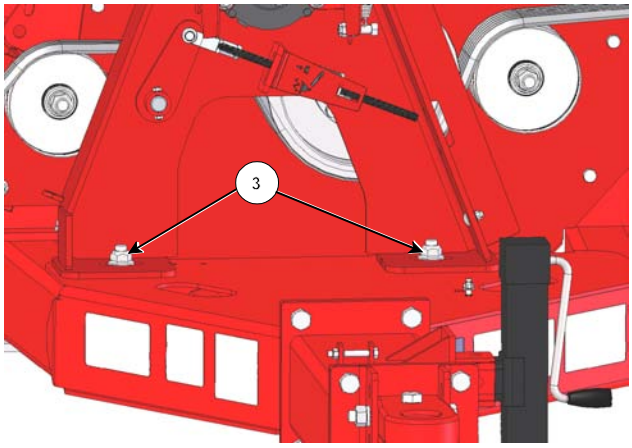
3. Place the belt around the main drive sheave, auger sheave, idler, flail sheave and tensioner.



Place Main Drive Belt Around Sheaves 219097

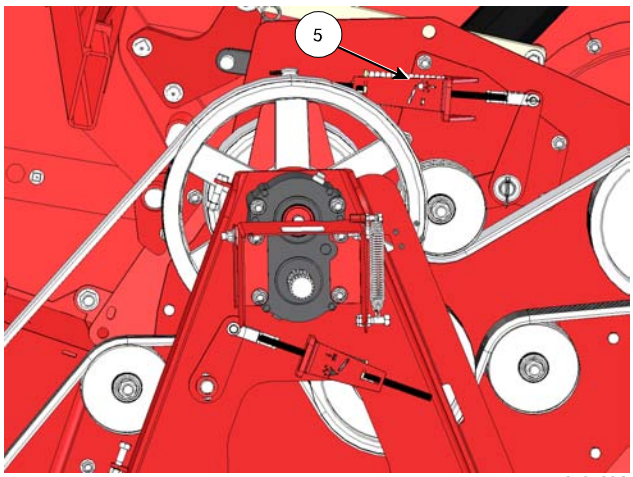
4. Place the bolts up through the hitch and tubes and fasten with the nuts (3).

    - Torque to 295 lbf (400 Nm).



Fasten the Gearbox Support Frame 219129C

5. Tighten the flail/auger belt tensioner (5).

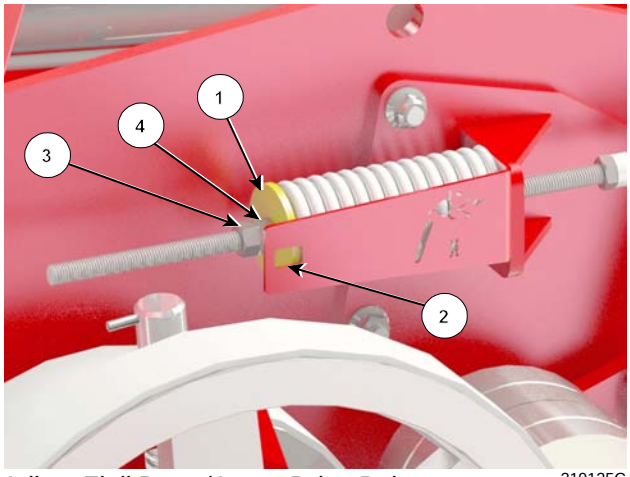


Tighten the Flail/Auger Belt Tensioner 219128C

To adjust flail/auger belt tension:

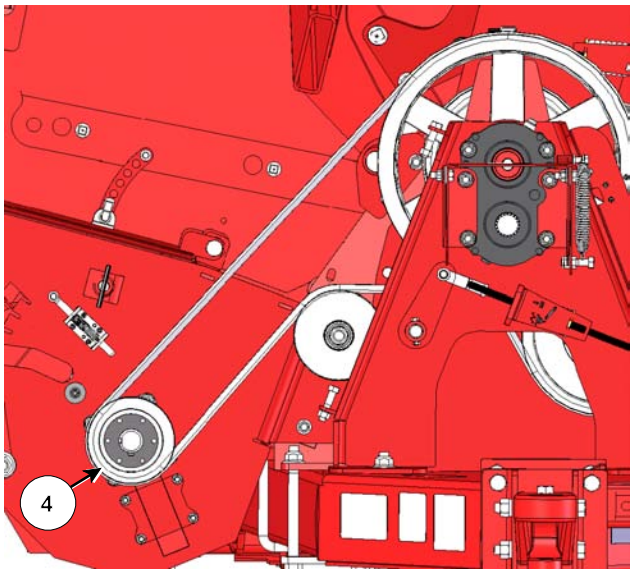
- Turn the nut (4) next to the spring washer (1) to adjust the spring so it shows in the cut out window (2).

- Tighten the jam nut (3) on the threaded rod.



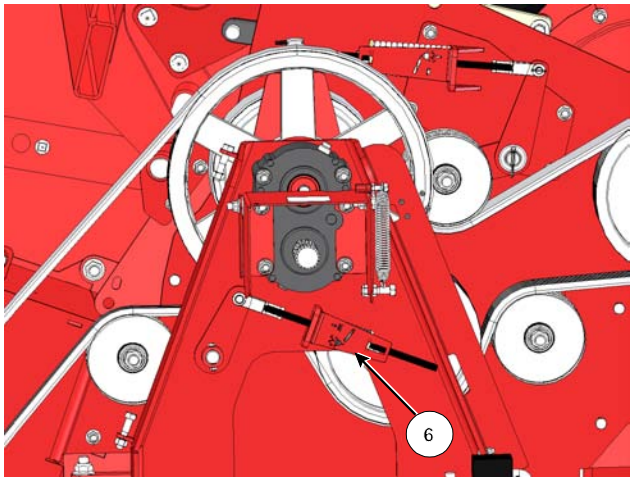
Adjust Flail Drum/Auger Drive Belt 219125C

6. Place the feed chopper belt (if present) back onto the chopper rotor sheave (4).



Place Belt Around Feed Chopper Rotor Sheave 219132C

7. Tighten the feed chopper belt tension (if present).

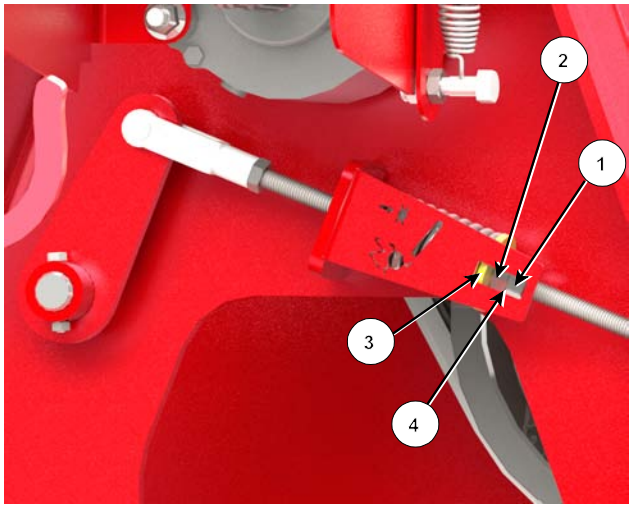


Tighten the Feed Chopper Tensioner (If present) 219128C2

To adjust feed chopper belt tension:

- Turn the nut (2) next to the spring washer (3) to adjust the spring so it shows in the cut out window (4).

- Tighten the jam nut (1).

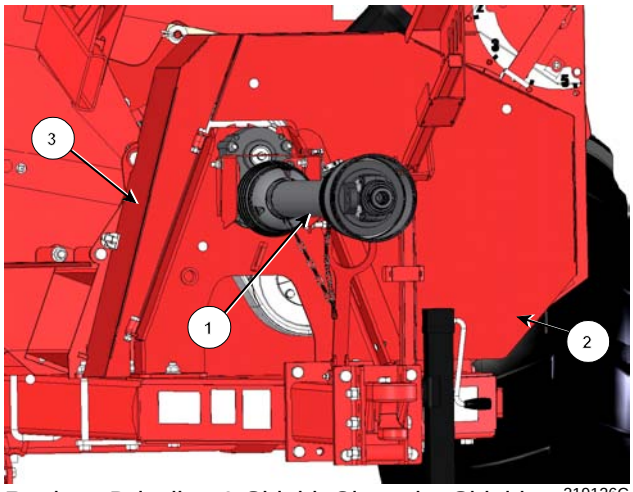


Adjust Feed Chopper Belt Tension 219130C2

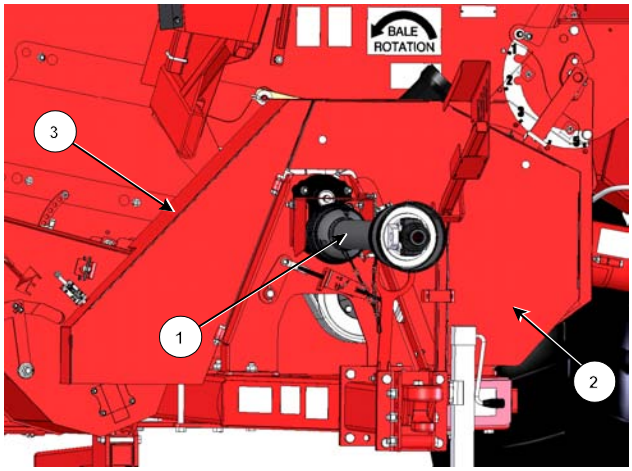
8. Place the right shield (3) back onto the support and fasten with the bolts.
   - Fasten with the spring clamp.

9. Close the left drive shield (2).
   - Fasten with the spring clamp.

10. Replace the driveline (1) onto the gearbox.



Replace Driveline & Shield, Close the Shield 219126C
(No Feed Chopper Model Shown)

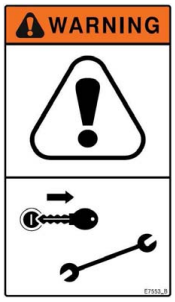


Replace Driveline & Shield, Open Shield 219127C
(Feed Chopper Model Shown)

Adjusting the Tub Bale Transfer Chains

Shut down the tractor completely and set the parking brake.

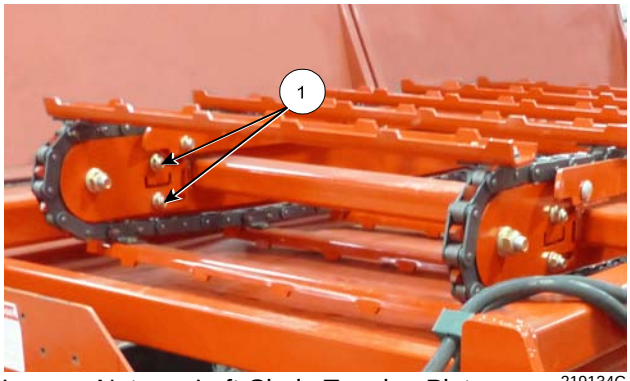
Disconnect the PTO and hydraulics from the tractor before doing any work.



1. Lower the transfer chain mechanism into the tub.

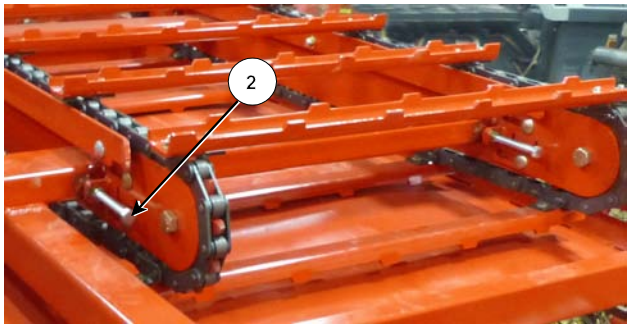
Left Transfer Chain Adjust

- Loosen the 2 nuts (1) holding the left chain tension plate.



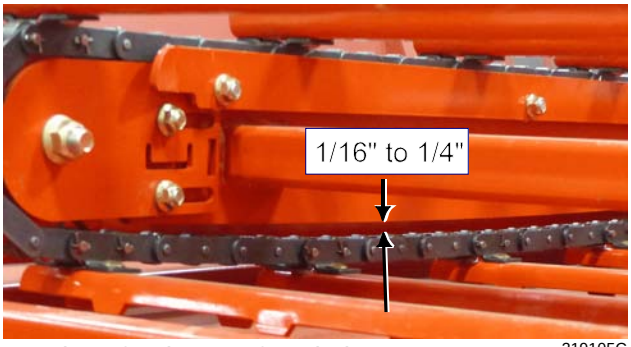
Loosen Nuts on Left Chain Tension Plate 219134C

- Turn the chain adjusting bolt (2) until the chain hangs 1/16" - 1/4" below the chain guide.



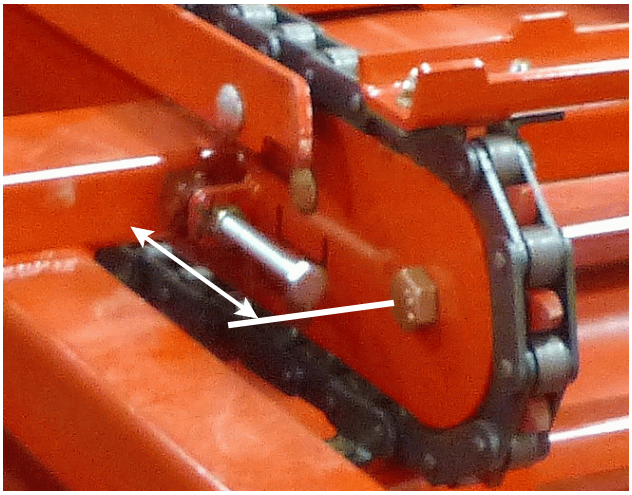
Turn Left Chain Adjusting Bolt 219133C

- Tighten the 2 nuts (1) holding the left chain tension plate.



Tension of Tub Transfer Chains 219105C

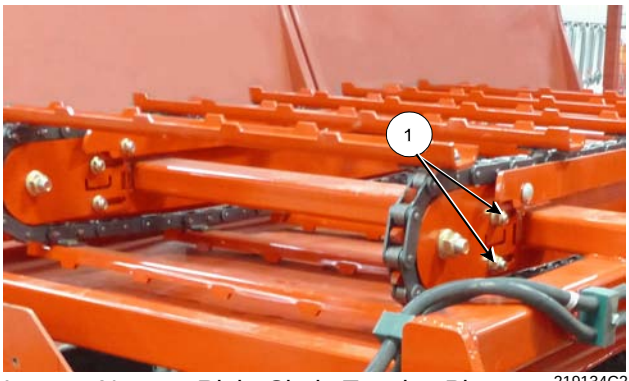
- Measure the distance from the square tube to the center of the sprocket bolt.
    - This distance will be used for adjusting the right transfer chain.



Measure the Distance After Chain Adjustment 219135C

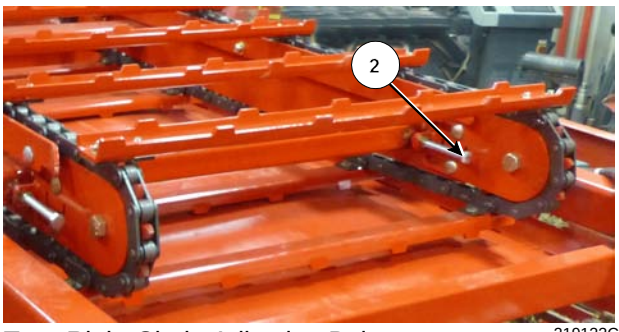
Right Transfer Chain Adjust

- Loosen the 2 nuts (1) holding the right chain tension plate.



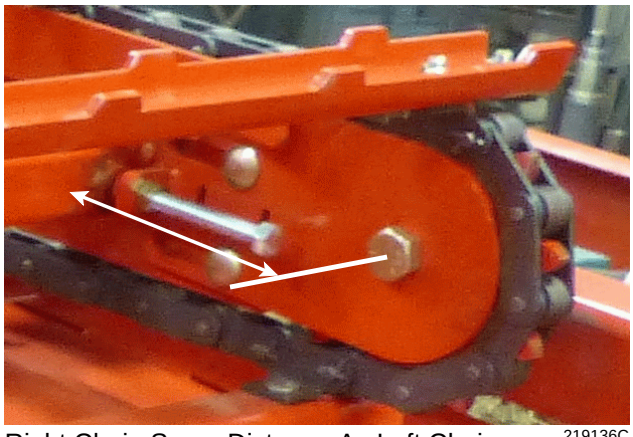
Loosen Nuts on Right Chain Tension Plate 219134C2

- Turn the chain adjusting bolt (2) until the distance from the square tube to the to the center of the sprocket bolt is the same as the distance measured on the left side.



Turn Right Chain Adjusting Bolt 219133C2

- Tighten the 2 nuts (1) holding the right chain tension plate.



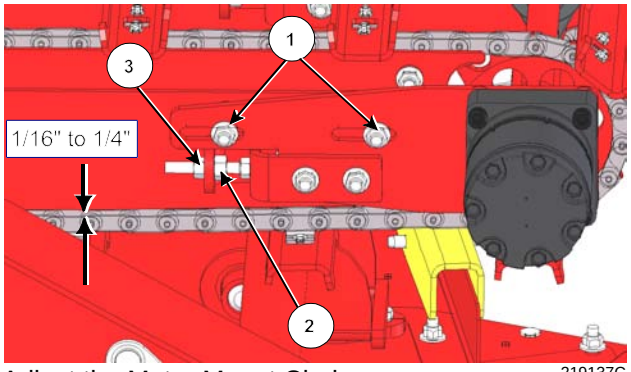
Right Chain Same Distance As Left Chain 219136C

Adjusting the Fork Bale Transfer Chains

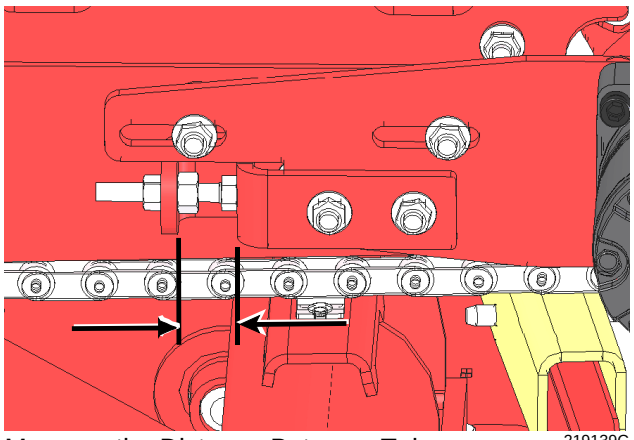
Shut down the tractor completely and set the parking brake. Disconnect the PTO and hydraulics from the tractor before doing any work.

Motor Mount Chain

1. Raise the forks to be horizontal.
2. Loosen the chain motor adjust nuts (1).
3. Loosen the jam nut (2) on the adjustment bolt.
4. Adjust the chain tension by turning the adjusting nut (3).
   - Turn the chain adjusting nut (3) until the chain hangs 1/16" - 1/4" below the chain guide.
5. Tighten the chain motor adjust nuts (1).
6. Measure the distance between the tabs for the bearing chain adjustment.

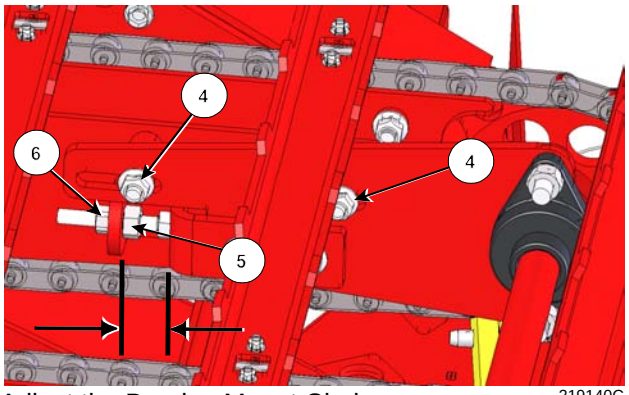


Adjust the Motor Mount Chain 219137C


Measure the Distance Between Tabs 219139C

Bearing Mount Chain

1. Raise the forks to be horizontal.
2. Loosen the 2 bearing chain adjust nuts (4).
3. Loosen the jam nut (5) on the adjustment bolt.
4. Turn the chain adjusting nut (6) until the distance between the adjustment tabs is the same as was measured on the motor mount chain adjustment.
   - Tighten the jam nut (5).
5. Tighten the 2 nuts (4) holding the right chain tension plate.



Adjust the Bearing Mount Chain 219140C

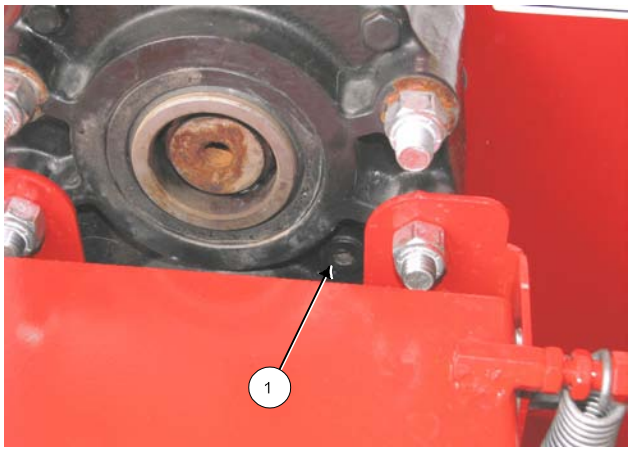
Visually Inspect Hydraulic Hoses/Fittings

Shut down the machine and replace the hydraulic hose assembly if any of the following conditions exist:

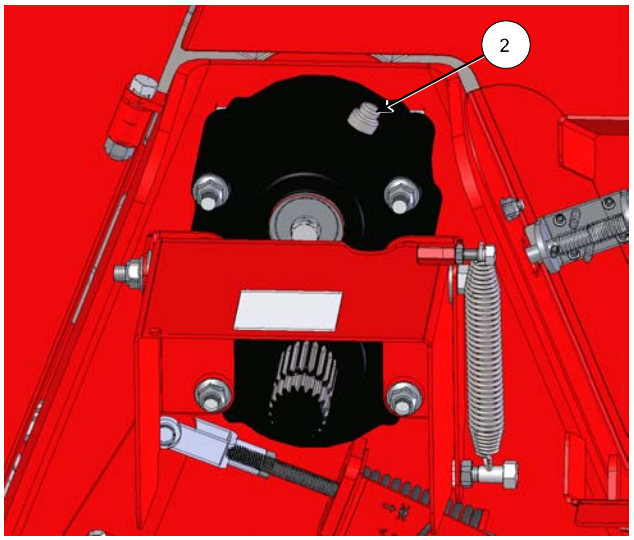
- Fitting slippage on hose.
- Damaged, cracked, cut or abraded cover (any reinforcement exposed).
- Hard, stiff, heat cracked or charred hose.
- Cracked, damaged or badly corroded fittings.
- Leaks at fitting or in hose.
- Kinked, crushed, flattened or twisted hose.
- Blistered, soft, degraded or loose cover.

Check the Fluid Level in the Gearbox

- Check the oil fluid level by removing the oil level plug (1) in the center of the gearbox.
    - The oil should be at the level of the plug.
    - If oil needs to be added, add through the breather (2) on the top of the gearbox.
        - Use gear oil Grade 80W90 that meets or exceeds API service classification GL-4.
    - Annually change the oil in the gearbox. (See Gearbox Oil Changing Procedures in this Section.)



Check Gearbox Oil Level 201225C



Add Oil Through Breather On Top of Gearbox 219145C

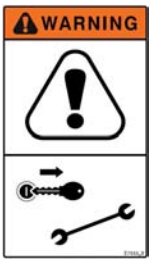
Gearbox Oil Changing Procedures

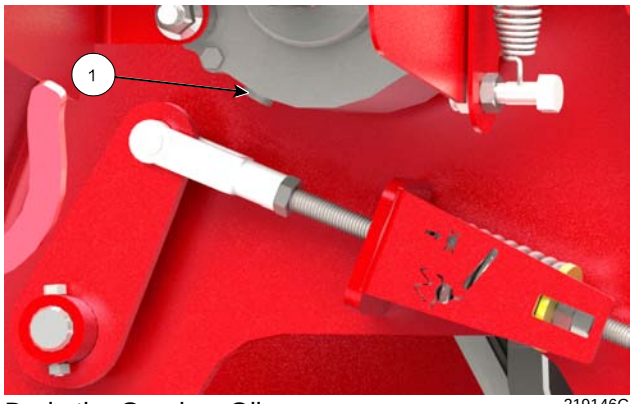
Change the oil annually and before storing the CFR 1251 for the season.

Before beginning, make sure the tractor is off and the PTO is disengaged. Disconnect the driveline from the tractor before doing any work.

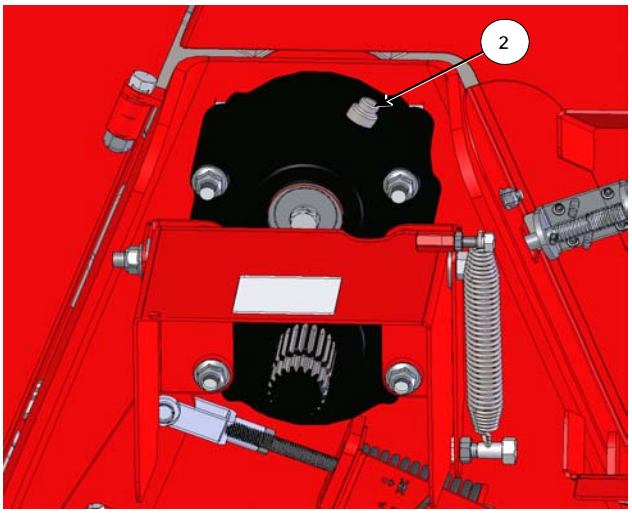
Securely block the CFR 1251 before any work is done to prevent the CFR 1251 from moving during servicing.

1. Drain the oil from the gearbox.
   - Remove the drain plug on the bottom of the gearbox (1) through the shield access cutout.
   - Catch the oil in a container.
   - Allow the oil to drain completely from the gearbox.
2. Replace the drain plug (1) and tighten.
3. Fill the gearbox.
   - Remove the breather (2).
   - Fill with 300 ml of 80W90 gear oil that meets or exceeds API service classification GL-4.
4. Check the oil level through the plug (3) in the center of the gearbox.
5. Replace the breather (2).

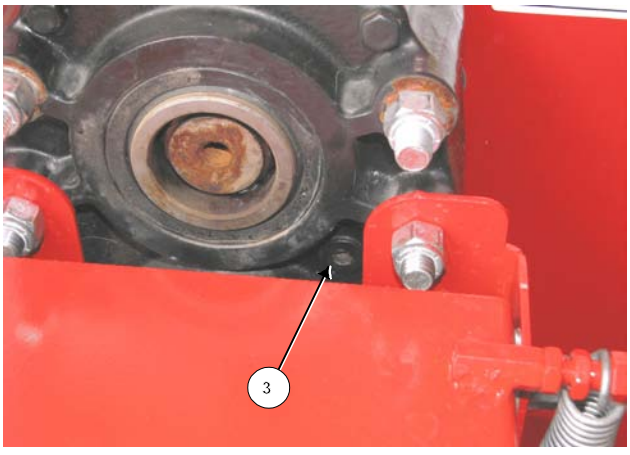




Drain the Gearbox Oil 219146C



Add Oil Through Breather On Top of Gearbox 219145C



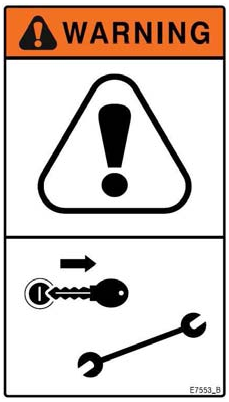
Check Gearbox Oil Level 201225C2

Flail Replacement Procedure

Replace flails that are broken or worn to the point that they will not process material properly.

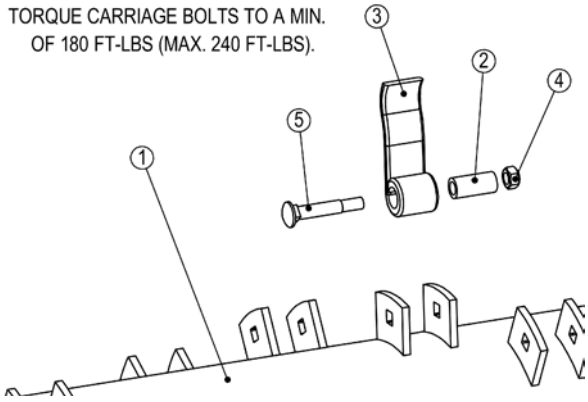
Before beginning, make sure the tractor is off and the PTO is disengaged. Disconnect the driveline from the tractor before doing any work.

Securely block the CFR 1251 before any work is done to prevent the CFR 1251 from moving during servicing.



1. Remove the flail to be replaced.
   - Remove the nut (4) and bolt (5) that holds the flail (3) to the drum (1).
2. Remove the pipe (2) inside the flail.
   - This pipe will be used again.
3. Remove the flail that is on the opposite side of the flail drum.

   Note: To maintain rotary balance, the flail on the opposite side of the drum must be replaced at the same time.
4. Install the 2 new flails with the pipe, bolt and nut between the tabs on the drum.
   - Ensure that the bent portion of the flail leads into the rotation of the drum.
5. Torque the nuts to minimum of 180 ft-lb (244 Nm) - maximum of 240 ft-lb (325 Nm).
6. Check that the flail freely moves between the tabs on the drum.



Flail Replacement 40524_B

Tires

Note: It is recommended to have the tires mounted by a tire technician.

- Check the condition of the tires.
- Mount the rim so that the air valve will be facing outward when mounted on the CFR 1251.
- Tire Pressure - Fill the tires to 27 psi (186 Kpa).
- Torque wheel bolts to 85-100 lbs ft (115 -135 Nm) dry.
- Transport speed should not exceed 25 mph (40 kmh).
- When replacing the tires, refer to the Specification section for the size and type of tires.

Tires 213091

6.0 STORING THE CFR 1251

Instructions for storing longer than a week:

1. Clean all the debris from the tub area and off the CFR 1251.

2. Park the CFR 1251 on level ground.

3. Lubricate all grease points. (See Maintenance Section).

Park on Level Ground 213095-1

4. Check for worn and damaged parts. Replace as needed.

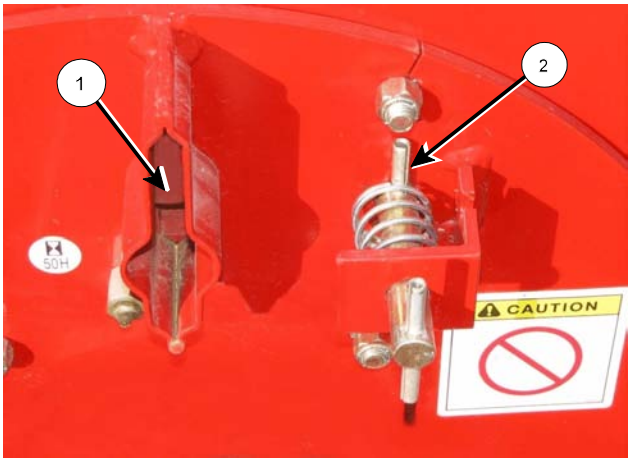
5. Touch-up the paint to prevent rusting.

6. Lock the CFR 1251 flail drum.

   - Turn the lock pin to release the roll pin from the slot.

   - Allow the spring to push the lock pin into the processing chamber.

   - Manually rotate the driveline until the lock pin snaps into place locking the flail drum.



Engage Flail Drum Lock 213121C

7. Remove any material that has built up around the feeder chain bearings.

    - Upper front tub wall
    - Upper rear tub wall
    - Upper middle wall has bearings for the front and rear tub

- They are accessed from the tub sidewalls.

- Remove material from the front upper feeder chain bearing.

Remove Material - Upper Front Bearing 213103

- Remove material from around the rear upper feeder chain bearing.

Remove Material - Upper Rear Bearing 213104

- Remove material from the upper bearings located on the middle wall between the front and rear tubs.

Remove Material - Middle Wall Bearings 213105

8. Oil the feeder chains in both tubs with a rust inhibiting oil or coating to prevent weathering.

Oil the Feeder Chains to Prevent Rusting 216100

Do not enter the tub while the feeder chains are moving. Injury and possible entrapment could occur from moving feeder chains,

- Stop the tractor and remove the key.
- Disconnect the driveline to prevent accidental starting of the flail drum.
- Enter the tub and oil the exposed chains.
- Exit the tub and advance the feeder chains to expose the non-coated portion of the chains.
- Stop the tractor and remove the tractor key.
- Enter the tub and oil the exposed portion of the chains.

9. Remove material that has built up around the rear tub transfer chain assembly.

   - Remove material from the transfer chains.

   - Raise the transfer chain assembly.

10. Oil the transfer chains with a rust inhibiting oil or coating to prevent weathering.

Do not enter the tub while the feeder chains or transfer chains are moving. Harm and possible entrapment could occur from moving chains.

   - Stop the tractor and remove the key.

   - Disconnect the driveline to prevent accidental starting of the flail drum.

   - Enter the tub and oil the exposed chains.

11. Lower the tub transfer into the tub.

Remove Material & Oil Chains 219100

Lower the Tub Transfer into the Tub 219142

12. Lower the forks to the ground.

13. Remove material from the transfer chains on the forks.

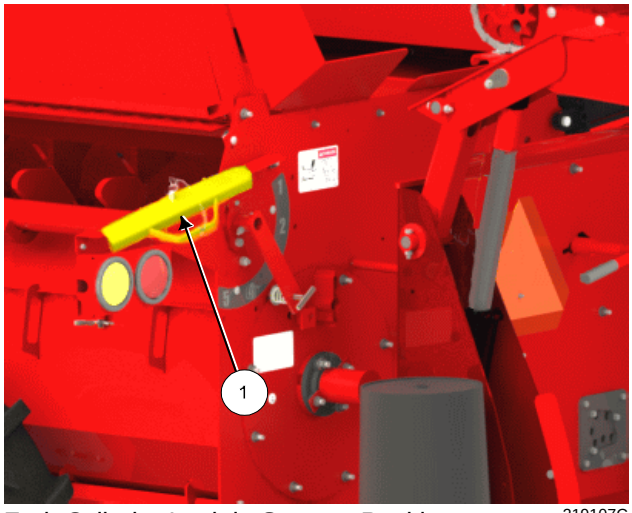
14. Oil the transfer chains on the forks with a rust inhibiting oil or coating to prevent weathering.

Do not approach the transfer chains while the chains are moving. Harm and possible entrapment could occur from moving chains.

   - Stop the tractor and remove the key.

Lower Forks -Remove Material & Oil Chains 219102

15. Fasten the fork cylinder lock (1) in the storage position.



Fork Cylinder Lock in Storage Position 219107C

16. Raise the discharge deflector door to the transport position.

    - The discharge deflector door is operated by a hydraulic cylinder.

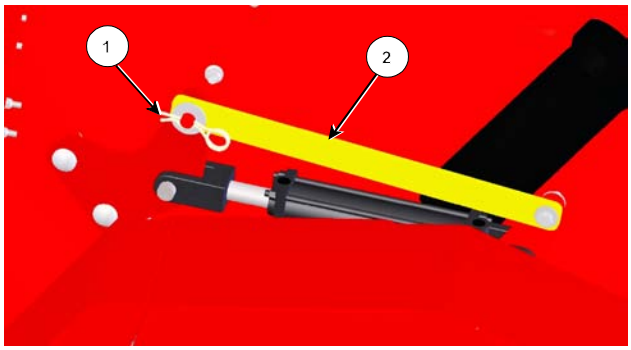
Discharge Door Raised 219090

17. Install the discharge deflector door transport lock.

    - Remove the clip pin (1).

    - Place the long flat (2) on to the connecting pin.

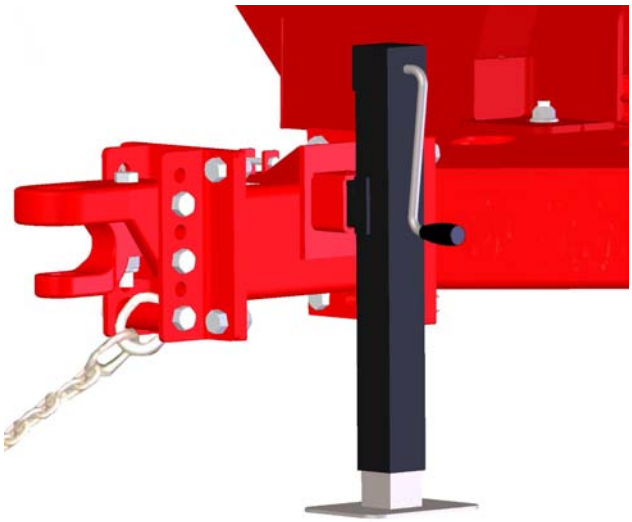
    - Replace the clip pin (1).



Deflector Door Lock 219064C

18. Place the jack onto the hitch.

    - Remove the jack from the storage position.
    - Pin the jack in place on the hitch.
    - Ensure that the jack is resting on solid level ground or resting on a wood block.
    - Raise the hitch until the weight is supported by the jack.

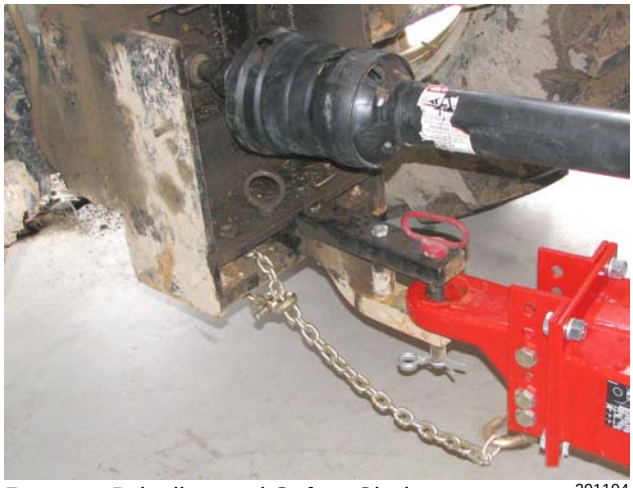


Lift Hitch with the Jack 219092

19. Remove the driveline from the tractor PTO shaft.

    - Place the PTO shaft on the PTO holder.

20. Disconnect the safety chain from the tractor.



Remove Driveline and Safety Chain 201194

21. Disconnect the hitch from the tractor.

    - Remove the hitch pin.

22. Relieve the pressure on the hydraulic hoses and disconnect them.

23. Disconnect the electrical connection.

Disconnect Hydraulic Hoses & Electrical 108008-1

24. Secure the hydraulic hoses and electrical connector to the hose holder on the hitch to keep them clean and off the ground

Hydraulic Hoses and Electrical In Holder 219141

25. Change the oil in the gearbox. See the Maintenance Section for the oil changing procedures.

    - Fill the gearbox to the oil level as outlined in the Maintenance Section.

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7.0 TROUBLESHOOTING

Symptom	Problem	Solution
Bale lifting problems	Forks do not raise	Check hydraulic connections and lines
	Bale tips off back of forks	Narrow forks for a better lift on bale
	Bale hung up on forks - not going into the tub	Cycle transfer chain to pull bale into tub
	Bale falls through forks	Adjust forks for bale size
	Single bale slides across the ground	Add bolt to the holes in the back of the forks. Push against another bale. Push uphill
	Fork tends to stab the bale	Do not lower the forks all the way down. Lower only until the fork tips are at ground level
Bale Transfer Chains	Fork and tub transfer chains do not rotate	Select a tub on switch box. Push and hold hydraulic lever to raise forks. When forks reach certain height, chains will begin to turn
		Check hydraulic pressure levels
	Tub transfer chains do not lower into tub	Select front tub on switch box. Push and hold hydraulic lever to raise forks. When forks reach certain height, chain assembly will lower into tub
		Check the electrical connection to the switch box

Symptom	Problem	Solution
	Tub transfer chains do not rise to storage position	Select rear tub on switch box. Push and hold hydraulic lever to raise forks. When forks reach certain height, chain assembly will rise to storage position
		Check electrical connection to switch box
		Remove buildup of material preventing it to rise to storage position
	Transfer chains do not turn	Check hydraulic connections and lines
	Bale hung up on forks, will not move	Fork tip may have stabbed the bale. If fork has stabbed a couple of twine strings, cut twine with utility knife to avoid bale from being shredded

Plugging in discharge area	Snow and ice on bales causing blockage in tub	Have flail drum rotating while loading bale to clear out discharge area
	Trying to “lift” thrown material too much	Reduce the lower discharge door height
		Reduce the speed of the feeder chain
		Change the deflector height on the discharge housing
	Blower	Check condition of the blower blades
	Discharge door	Position the discharge panel to direct the material flow
	Insufficient RPM of blower	Increase the RPM

Symptom	Problem	Solution
Material builds up on one side of bale in tub	Bale unwrapping in tub	Reverse direction of feeder chain to consume material buildup
Difficult to rotate bale in tub	Feeder chain not fully engaging bale	Increase aggression of flails to help rotate bale
		Direct feeder chain to move the bottom of the bale toward the flail drum
	Bale on forks contacting bale in tub	Lower the bale on the forks
Flail drum not turning	Flail drum lock engaged	Disengage drum lock
	Gearbox	Check gearbox
	Drive belt slipping	Adjust the tension of the drive belt
Auger/Blower Not Rotating	Drive belt slipping	Adjust the tension of the drive belt
	Gearbox	Check gearbox
	Material plugging	Remove material that prevents auger/blower from rotating
Feeder Chain not turning	SCV not supplying enough hydraulic flow	Increase the flow rate at the SCV
Not able to get sufficient throw distance	Discharge door is not raised	Raise the discharge door
	Wind reducing the throw	Throw with the direction of wind
	Deflector panel preventing “lift” of material	Adjust deflector panel

Symptom	Problem	Solution
Upper deflector door not operating	Hydraulic cylinder	Check hydraulic connection
		Check electric solenoid (if present)
	Discharge door transport lock	Remove door transport lock

8.0 CFR 1251 SPECIFICATIONS

Width

Base CFR Width	123" (3124 mm)
CFR With Feed Chopper™	123" (3124 mm)
CFR With MGIS™	140" (3556 mm)
CFR With Feed Chopper™ and MGIS™	140" (3556 mm)

Length

Transport CFR Length	310" (7874 mm)

Height

Transport Height	116" (2946 mm)

Weight (Empty)

Base CFR Weight	11750 lbs (5330 kg)
CFR With Feed Chopper™ Weight	12285 lbs (5572 kg)
CFR With MGIS™ Weight	12450 lbs (5647 kg)
CFR With Feed Chopper™ and MGIS™	13000 lbs (5897 kg)
Tongue Weight (Empty)	
Base CFR	2840 lbs (1288 kg)
CFR With Feed Chopper™	2965 lbs (1345 kg)
CFR With MGIS™	3005 lbs (1363 kg)
CFR With Feed Chopper™ and MGIS™	3140 lbs (1424 kg)

Gearbox rating	180 hp rating (134 kilowatt)
Constant Velocity Turning Range	Maximum 80 degrees

PTO Horsepower

	Minimum	Recommended
Base CFR	120 (89kW)	135 (101kW)
CFR With Feed Chopper™	160 (119kW)	175 (130kW)
CFR With MGIS™	120 (89kW)	135 (101kW)
CFR With Feed Chopper™ and MGIS™	160 (119kW)	175 (130kW)

Tires	21.5L x 16.1 (Inflate to 27 psi)

Gearbox Oil Capacity	300 ml

Highline New Equipment Limited Warranty Policy

One (1) Year / 12 Months - Parts and Labour

Highline Mfg. Ltd. (hereinafter "Highline") warrants this new product of Highline's manufacturer to be free from defects in material and workmanship, under normal use and service for one (1) full year after initial purchase/retail sale. Highline will warrant its product for one (1) year parts and labour, if performed by a qualified Dealer. This Limited Warranty shall apply only to complete machines of Highline's manufacture. Parts are covered by a separate Limited Warranty.

EQUIPMENT AND ACCESSORIES NOT OF HIGHLINE'S MANUFACTURE ARE WARRANTED ONLY TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY AND SUBJECT TO THEIR ALLOWANCE TO HIGHLINE ONLY IF FOUND DEFECTIVE BY SUCH MANUFACTURER.

During the Limited Warranty period specified above, any defect in material or workmanship in any warranted item of Highline Equipment not excluded below shall be repaired or replaced at Highline's option without charge by any authorized independent Highline Dealer. An authorized Dealer must make the warranty repair or replacement. Labour in accordance with Highline's labour reimbursement policy. Highline reserves the right to supply remanufactured replacement parts as it deems appropriate.

RETAIL PURCHASER RESPONSIBILITY

This Limited Warranty requires proper maintenance and periodic inspections of the Equipment as indicated in the Operator's Manual furnished with each new Equipment. The cost of routine or required maintenance and services is the responsibility of the retail purchaser. The retail purchaser is required to keep documented evidence that these services were performed. This Highline New Equipment Limited Warranty may be subject to cancellation if the above requirements are not performed.

EXCLUSIONS AND LIMITATIONS

The warranties contained herein shall NOT APPLY TO:

1. Any defect which was caused (in Highline's sole judgement) by other than normal use and service of the Equipment, or by any of the following:
    a. accident
    b. misuse or negligence
    c. overloading
    d. of reasonable and proper maintenance
    e. improper repair or installation
    f. unsuitable storage
    g. non-Highline approved alteration or modification
    h. natural calamities
    i. vandalism
    j. parts or accessories installed on Equipment which were not manufactured or installed by Highline authorized Dealers
    k. the elements
    l. collision or other accident.
2. Any Equipment whose identification numbers or marks have been altered or removed.
3. Any Equipment which any of the required or recommended periodic inspection or services have been performed using parts not manufactured or supplied by Highline or meeting Highline Specifications including, but without limitation, lubricants (oil, grease), belt lacings, and hydraulic fluids.
4. Any Equipment used in demonstrations not performed by a Highline Dealer. Warranty will be at the discretion of Highline for all other demonstration warranty.
5. New Equipment delivered to the retail purchaser in which the warranty registration has not been completed and returned to Highline within thirty (30) days from the date of purchase.
6. Any defect that was caused (in Highline's sole judgement) by operation of the Equipment not abiding by standard operating procedures outlined in the Operator's Manual.
7. Tire Limited Warranties and support are the responsibility of the respective product's manufacturer.
8. Transportation costs, if any, of transporting to the Highline Dealer.
9. In no event shall Highline's liability exceed the purchase price of the product.
10. Highline shall not be liable to any person under any circumstances for any incidental or consequential damages (including but not limited to, loss of profits, out of service time and damage to equipment which this equipment may be attached) occurring for any reason at any time.
11. Diagnostic and overtime labour premiums are not covered under this Limited Warranty Policy.

12. Depreciation damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions, misuse, and/or lack of proper protection during storage.
13. Accessory systems and electronics not of Highline's manufacture are warranted only to the extent of such manufacturer's respective Limited Warranty if any.
14. Wear items which are listed by product group below:

COMMON WEAR ITEMS

Roller chain, sprockets, clutches, shear bolts, clutch components, chains, gearbox housings bolts/torqued parts, flails, feed roller belting, coupler chain, DRV couplers, bogie wheels, apron tines and hoses, blades and blade pans, blade bolts and nuts, skid shoes, chain guards, clutches and clutch components.

PARTS WARRANTY

Parts replaced in the warranty period will receive the balance of the one year New Equipment Limited Warranty. Replacement parts after the original machine warranty are warranted to be free from defects of material for ninety (90) days or the part will be repaired or replaced, without labour coverage for removal and reinstallation.

EXCLUSION OF WARRANTIES

UNLESS OTHERWISE REQUIRED BY LAW, AND EXCEPT FOR THE WARRANTIES EXPRESSLY AND SPECIFICALLY MADE HEREIN, HIGHLINE MAKES NO OTHER WARRANTIES, AND ANY POSSIBLE LIABILITY OF HIGHLINE HEREIN UNDER IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HIGHLINE RESERVES THE RIGHT TO MODIFY, ALTER AND IMPROVE ANY PRODUCT WITHOUT INCURRING ANY OBLIGATION TO REPLACE ANY PRODUCT PREVIOUSLY SOLD WITH SUCH MODIFICATION. NO PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY, OR TO ASSUME ANY ADDITIONAL OBLIGATION ON HIGHLINE'S BEHALF.