

Bale Pro[®]

Complete Feed Ration
Feed Chopper[™] 1251

O p e r a t o r s M a n u a l



Feed Chopper for the BalePro[®] Complete Feed Ration 1251

Operator's Manual

For Serial No: FC12510014, FC12510024, FC12510044

Highline Manufacturing Limited
HWY #27, P.O. Box 307
Vonda, SK S0K 4N0
Canada
Phone: 306.258.2233
Fax: 306.258.2010
Toll Free: 1.800.665.2010

E13199V1

Highline Manufacturing Ltd.

Feed Chopper on the CFR1251 (FC 1251)

Highline Team Message

Congratulations on your purchase of the Feed Chopper for the Complete Feed Ration 1251 (FC 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 Feed Chopper. 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 Feed Chopper for the Complete Feed Ration 1251 as your machine of choice.

Highline Manufacturing Ltd.

Table of Contents

General Description of the Feed Chopper
Intended Use of the Feed Chopper

Section 1 - Safety

Safety Sign-off Form
Safety Alert Symbol
General Safety
Safety Decals
Safety Decal Locations

Section 2 - Operating the Feed Chopper

Operating With the Feed Chopper
Operating Without the Feed Chopper
Unplugging the Feed Chopper

Section 3 - Maintaining the Feed Chopper

Lubrication
Greasing the CFR 1251 Front Auger Bearing
Rotor Knife Replacement
Belt Tension Adjustment

Section 4 - Troubleshooting

This Page Left Blank

GENERAL DESCRIPTION OF THE FEED CHOPPER

The Feed Chopper (FC 1251) is an attachment to the Bale Pro[®] Complete Feed Ration 1251. When the Feed Chopper is engaged, it uses power from the drive of the CFR 1251 to run a belt drive for the Feed Chopper rotor.

When additional processing and chopping of feed material is desired, the Feed Chopper clutch is engaged and the Feed Chopper panel is moved to direct material from the CFR 1251 into the Feed Chopper. This further chops the material before discharging it. The CFR 1251 must be turned off when the Feed Chopper drive clutch is engaged and the discharge door is positioned.

When the Feed Chopper clutch is not engaged and when the Feed Chopper panel is in the by-pass position, the CFR 1251 discharges material without any additional chopping.

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

INTENDED USE OF THE FEED CHOPPER

The Feed Chopper is designed to further process and chop animal feed materials that have been initially processed from a round bale by the CFR 1251.

The Feed Chopper is intended for use in farming applications.

The Feed Chopper is intended for off road use only.

The Feed Chopper is intended for use in locations away from people who could be harmed by the discharged materials.

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

- Using the Feed Chopper in non-farming applications
- Using the Feed Chopper on public roads
- Using the Feed Chopper around people or in public places
- Chopping materials other than animal feed materials
- Chopping materials that have not been initially processed by the CFR 1251

Always use the Feed Chopper according to the instructions contained in this Operator's Manual and on the safety and instruction decals on the machine.

Perform regular maintenance and repair to ensure that the Feed Chopper operates safely and efficiently.

This Page Left Blank

SERIAL NUMBER

Your serial number is found on the serial number plate (1) attached to the Feed Chopper.



Serial Plate Location

216216C

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 the Feed Chopper 1251 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 operator's 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 Feed Chopper 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 dependant upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.
(Adapted from ASAE S474.1 Feb 04 - 5.2.5.1)
3. The Feed Chopper 1251 shall not be operated without all the guards in place.

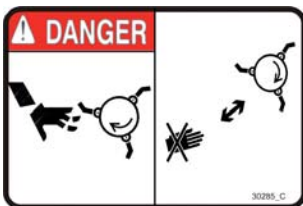
SAFETY DECALS

1. Keep the decals and signs clean and legible at all times.
2. Replace decals and signs that are damaged, missing or have become illegible.
3. Parts that have been replaced should display a current decal.
4. Decals are available from the 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 THE 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 driveline.



DO NOT CONTACT ROTATING BLADES

Rotating blades will cause serious injury or death.
Before servicing or adjusting, disengage power take off, shut off the tractor, remove key, set park brake.
Before servicing or adjusting, wait for all parts to stop rotating.
Keep guards in place and in good condition.



KEEP PEOPLE AND ANIMALS CLEAR OF THE DISCHARGE AREA

Discharge material exits at a high speed.
Discharged material will cause serious injury or death.
Stand clear of Feed Chopper when it is engaged.



DO NOT OPERATE WITH SHIELDS MISSING

Contact with the moving belt or sheaves 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.



CHECK CONDITION OF THE KNIVES BEFORE OPERATING

Check that all the knives are in place and in good condition.

If any vibration is detected during operation, immediately stop the machine and determine the source of the vibration before resuming.

Operating the Feed Chopper with knives missing or rotor out of balance could result in injury or death.



SHUTDOWN THE TRACTOR BEFORE DISMOUNTING TRACTOR

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



READ, UNDERSTAND AND FOLLOW SAFETY INSTRUCTIONS

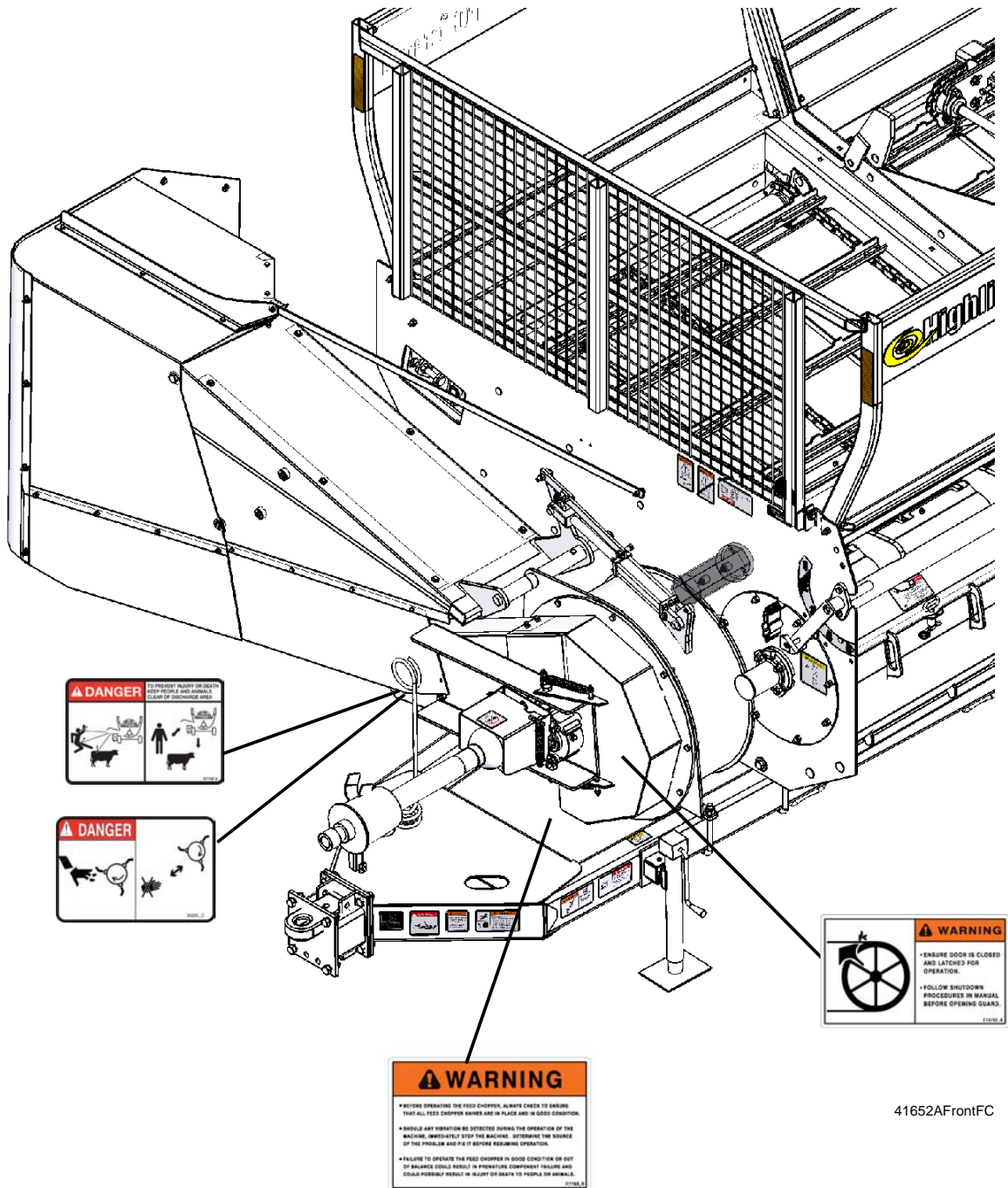
Read, understand and follow all instructions and safety messages included in this manual and on decals attached to the machine. These instructions and safety messages contain important information.

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.

SAFETY DECAL LOCATIONS



41652AFC

This Page Left Blank

2.0 OPERATING THE FEED CHOPPER

Operating With the Feed Chopper



Shut off the tractor engine and remove the key.



Wait for all components to stop rotating.

Do not place hands in the Chopper drive clutch area while the flail drum/auger is turning. Contact with the rotating large pulley engaged can cause serious injury.

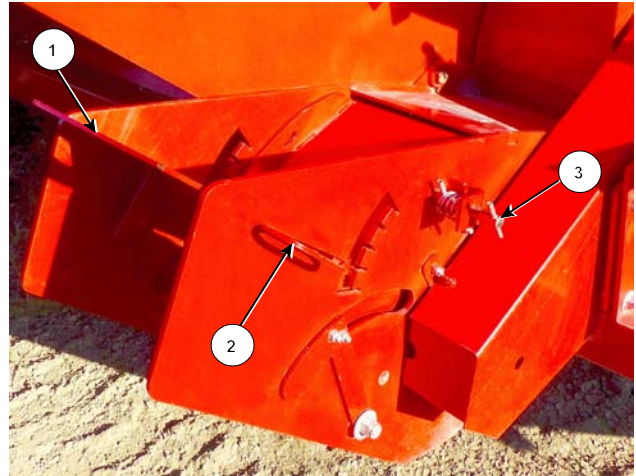


Do not place hands in the chopper when it is rotating. Contact with exposed rotating blades will cause serious injury or death.



Section 2 - Operating the CFR 1251 Feed Chopper

1. Put the blower discharge panel into the chopping position.
 - Pull the blower discharge panel (1) so the handle loop (2) is in the long slot.
 - This will move the rear door to direct material into the feed chopper and then lift the chopped material into the deflector door.
 - Fasten the panel in place with the pin in place in the rear panel (3).



Blower Discharge Panel Chopping Position

216207C

Note: When bedding, see the CFR 1251 Operator's Manual for putting blower panel into the bedding position.

Note: Before engaging the Feed Chopper drive clutch, the Feed Chopper panels must be positioned and locked in the "Chopping" position.

Serious damage to the Feed Chopper knives and panels will result if the drive clutch is engaged with the panel lowered. The rotating knives will hit the panel.



2. Open the drive clutch guard.
 - The guard is spring loaded.



Open the Drive Clutch Guard

213151

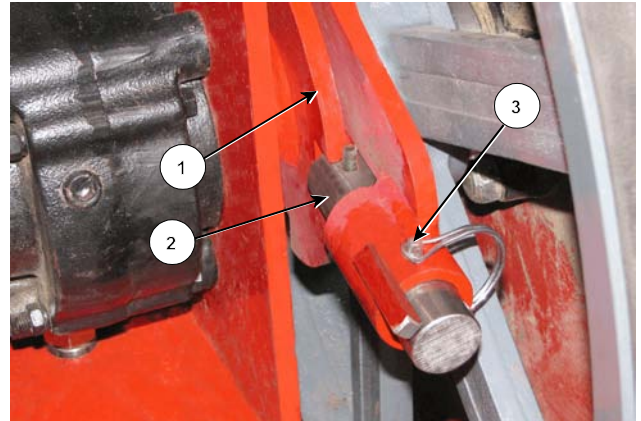
Section 2 - Operating the CFR 1251 Feed Chopper

3. Engage the chopper drive clutch.



Do not place hands in the Feed Chopper drive clutch area while turning. Contact with the rotating pulley or clutch pin/plate can cause serious injury.

- Rotate the pulley to align the clutch engagement plate (1) with the clutch pin (2).
- Remove the clip pin (3) and slide the clutch pin (2) into the engagement plate (1).
- Install the clip pin (3) through the clutch pin. Fasten in place.



Clutch Pin in the Engagement Plate

213152C

4. Close the feed chopper clutch guard.



Close Chopper Clutch Guard

213153

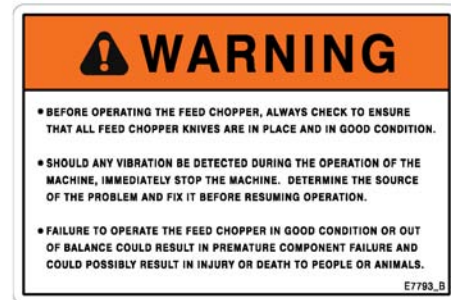
Section 2 - Operating the CFR 1251 Feed Chopper

5. Begin to process a bale in the CFR 1251.

6. The feed chopper will be driven by the belt drive and chop the processed material coming from the CFR1251 blower.



Should any vibration be detected during the operation of the feed chopper, immediately stop the machine. Determine the source of the problem and fix it before resuming operation.



7. Drive ahead slowly while operating the CFR 1251 /Feed Chopper.



Avoid discharging material in the area of people and animals.

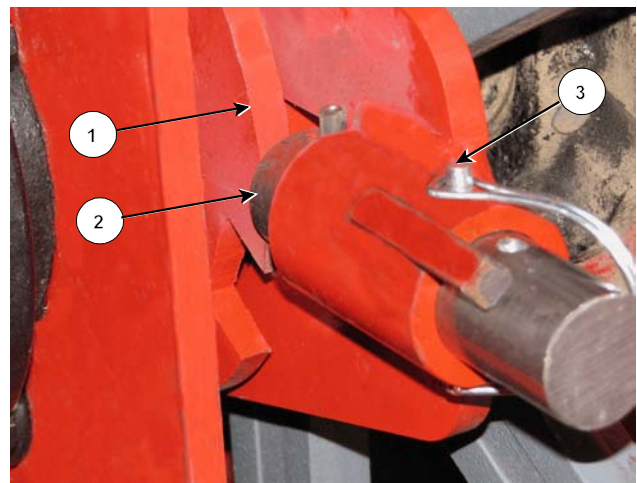


8. Disengage the chopper drive clutch when done processing.



Do not place hands in the Feed Chopper drive clutch area while turning. Contact with the rotating large pulley or clutch pin/plate can cause serious injury.

- Remove the clip pin (3) and slide the clutch pin (2) out of the engagement plate (1).
- Install the clip pin (3) through the clutch pin. Fasten in place.



Disengage Clutch Pin From Plate

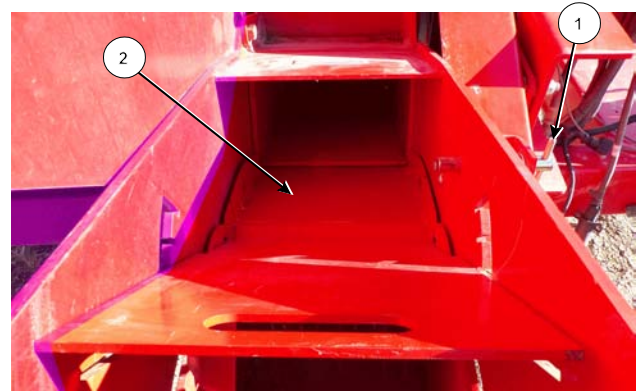
213154C

Section 2 - Operating the CFR 1251 Feed Chopper

Operating Without the Feed Chopper

For Bedding

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



Rear Door Covers Chopper

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.



Ensure Door is Below Blower Exit

2. Adjust the amount of discharge lift by sliding the front discharge bar into one of the slots on the curve.
 - The material can be discharged without any lift, with some lift or a large amount of lift.
 - The amount of lift will influence the distance the material is discharged.
 - Place the blower discharge panel (1) into the slots (2) on the arc for the desired amount of lift.



Adjust Door for Amount of Lift

Section 2 - Operating the CFR 1251 Feed Chopper

For Feeding

- 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.



Door in an Upper Slot For Feeding

216215C

Unplugging the Feed Chopper

1. Reduce the engine speed to idle.
2. Disengage tractor power take off (PTO).
3. Set the tractor park brake.

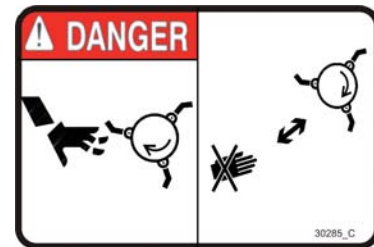


Shut off tractor engine and remove the key.



Wait for all components to stop rotating.

Do not place hands in the Feed Chopper while the rotor is turning. Contact with the rotating knives will cause serious injury.

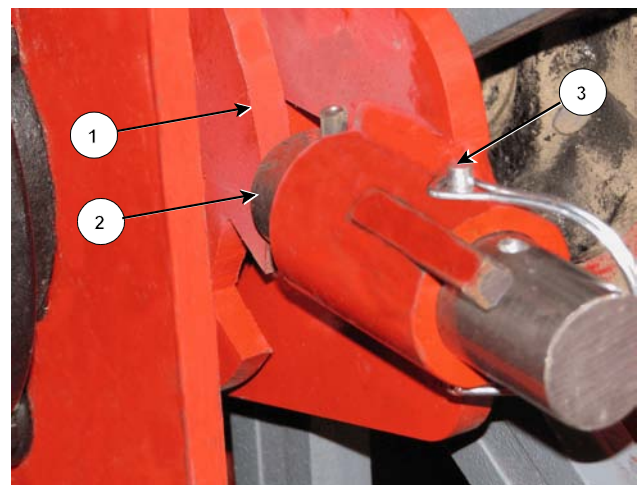


4. Disengage the chopper drive clutch.



Do not place hands in the Feed Chopper drive clutch area while turning. Contact with the rotating large pulley or clutch pin/plate can cause serious injury.

- Remove the clip pin (3) and slide the clutch pin (2) out of the engagement plate (1).
- Install the clip pin (3) through the clutch pin. Fasten in place.



Disengage Clutch Pin From Plate

213154C

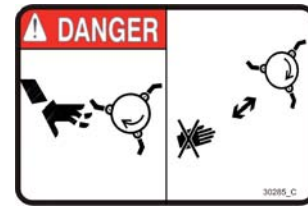
Section 2 - Operating the CFR 1251 Feed Chopper

5. Clear the chopping area and the knives.



Wait for all components to stop rotating.

Do not place hands in the Feed Chopper while the rotor is turning. Contact with the rotating knives will cause serious injury.



6. Remove material from the blower housing area.



Clear Chopping Area, Knives and Blower

213150

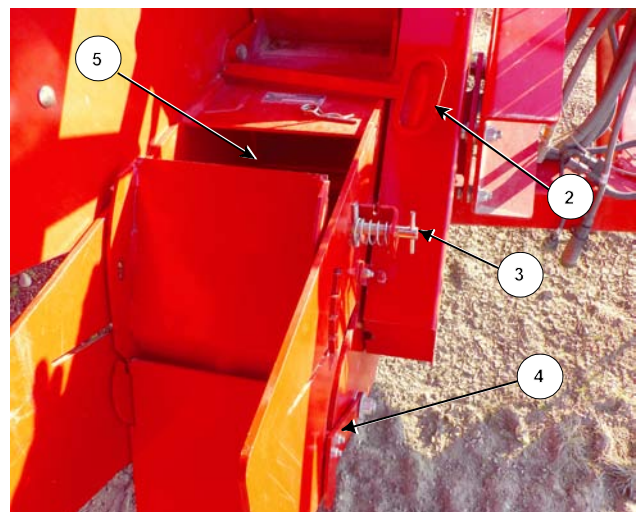
7. To clear the blower area -

- Remove the clip pin (1) from the bar under the discharge door.
- Remove the bar (2) by pulling it out by the handle loop.
- Pull the spring loaded pin (3) out of the slot in the rear panel.
- Pull on the front discharge door until the hinge (4) is at the bottom of the slot. This will open access to the blower area (5).
- Clean out the blower area (5).



Remove Clip Pin from Discharge Door Bar

216209C

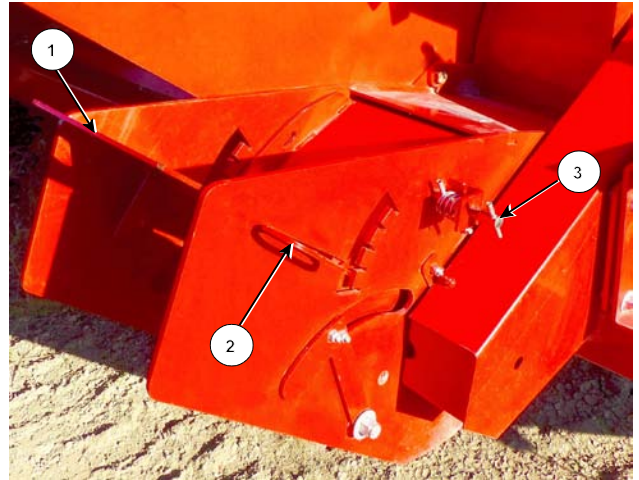


Clean Out the Blower Area

216210C

8. Replace the cover and door.

- Push the discharge door back to move the hinge towards the back of the slot.
- Pull the on the rear door pin lock (3) to compress the spring to allow the pin to enter the slot on the rear door.
- Align the front door (1) with the long slot.
- Push the bar (2) through the side panel into the channel on the bottom of the front door and through the other side panel.
- Fasten the bar with the clip pin.



Replace the Cover and Door

216207C

This Page Left Blank

3.0 MAINTAINING THE FEED CHOPPER

Lubrication

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

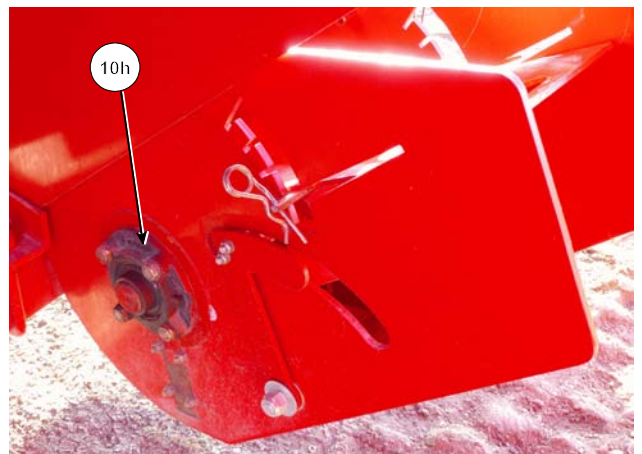
Every 10 Hours

- Lubricate 1 point on the chopper rotor front bearing.
 - Access the front grease point through the opening in the chopper drive guard.
- Lubricate 1 point on the chopper rotor rear bearing.
 - The rear bearing is located on the rear outside of the chopper housing.



Grease Front Rotor Bearing

216213C



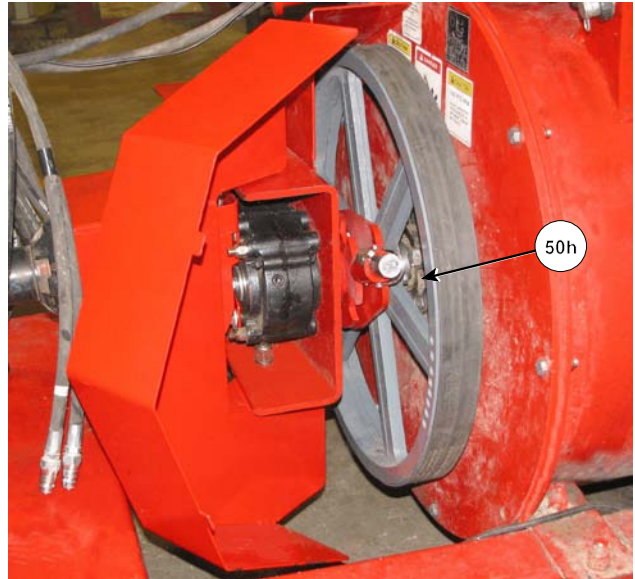
Grease Rear Rotor Bearing

216209C2

Section 3 - Maintaining the Feed Chopper

Greasing the CFR 1251 Front Auger Bearing (Every 50 hours)

- Lubricate 1 point on the front auger bearing at the front of the machine.
 - Access through the feed chopper clutch shield.



Grease Auger Front Bearing (Feed Chopper)

213151C

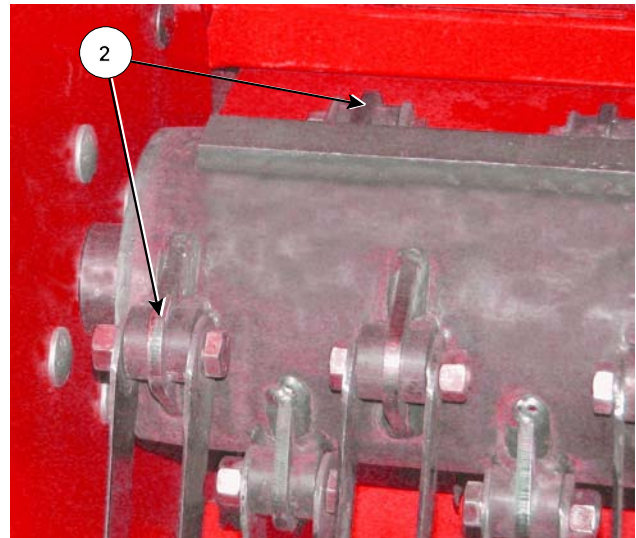
Rotor Knife Replacement

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

Four knives must be replaced at the same time.

Note: To maintain rotary balance, the set of knives on the opposite side of the rotor must be replaced at the same time. (2)

- Remove the nut and bolt holding the set of knives.
- Discard the set of old knives, the bolt and nut.
- Install the set of new knives using the new bolt and nut.



Replace Knife Set & Opposite Set

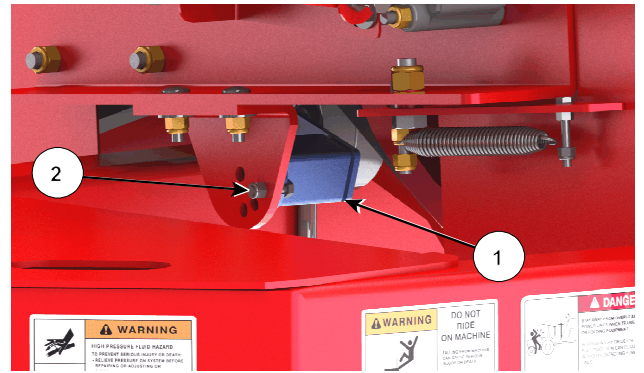
212094C

Section 3 - Maintaining the Feed Chopper

Belt Tension Adjustment

The belt tension adjuster (1) will adjust to keep the feed chopper belt tight.

If a different tension is needed, there are other holes in the mount bracket for the anti-rotation bolt (2) to be placed into.



Belt Tension Adjustment

213160C

This Page Left Blank

4.0 TROUBLESHOOTING

Operation

Symptom	Problem	Solution
Excessive Rotor Vibration	Broken knife.	Replace knives in pairs. Also replace knife pair on opposite side of the rotor to maintain rotational balance.
	Missing knives.	Replace knives in pairs. Also replace knife pair on opposite side of the rotor to maintain rotational balance.
	Foreign material lodged in chopper housing.	Remove foreign material.
		Check condition of knives. Replace knives as pairs and also replace knife pair on opposite side of rotor to maintain rotational balance.
		Check for damage to the rotor. Contact Highline for proper repair procedure.
	Failed rotor end bearing.	Check if rotor rotation feels rough. Replace failed bearing.
		Check for rotor side play. Replace failed bearing.
		Visually inspect bearing. Replace failed bearing.

Chopper Panel Does Not Fully Lower For Bedding Operation	Material buildup.	Remove material.
	Rear door sitting on knife	Move the knife.

Section 4 - Troubleshooting

Symptom	Problem	Solution
Rotor Does Not Spin	Drive clutch is not engaged.	Move the clutch engage pin to the Engaged Position. Ensure the drive pin is locked in position.
	Broken Drive Belt.	Replace the belt.
	Foreign material lodged in housing.	Remove foreign material to allow rotor to spin freely. Check condition of knives. Replace knives as pairs and also replace knife pair on opposite side of rotor to maintain rotational balance.
	Rotor bearing has seized.	Check bearings or replace.
Rotor Stops Spinning	Drive clutch pin has moved out and no longer is engaged with the drive plate.	Move the clutch engage pin to the Engaged Position. Ensure the drive pin is locked in position.
	Belt has come off the sheaves or tensioner.	Place the belt on the sheaves and the tensioner. Check the alignment of the sheaves and tensioner. Adjust if needed.
	Broken belt.	Replace the belt.
Drive Belt Loose	Tension bracket has allowed idler to move.	Check that the anti-rotation bolt on the tension bracket is in place. Replace the bolt.
	Belt has stretched.	Replace the belt.
		Move the tensioner bolt.

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.