

*Feed Chopper
on the
7000 Bale Pro*

**Operator's
Manual**



Highline Team Message

Congratulations on your purchase of the Feed Chopper for the 7000 Bale Pro 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 7000 Bale Pro as your machine of choice.

Sincerely,

*George MacKay
General Manager
Highline Manufacturing Ltd.*

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GENERAL DESCRIPTION OF THE FEED CHOPPER

The Feed Chopper is an attachment to the Bale Processor. When the Feed Chopper is engaged it uses power from the PTO driveline of the Bale Processor to run a belt drive for the Feed Chopper rotor.

When additional processing and chopping of feed material is desired, the Feed Chopper belt drive is engaged and the Feed Chopper door is moved to direct material from the Bale Processor into the Feed Chopper which further chops it before discharging it. The Bale Processor is turned off when the Feed Chopper drive is engaged and the discharge door is positioned.

When the Feed Chopper is not engaged and the Feed Chopper door is in the by-pass position, the Bale Processor discharges material without any additional chopping.

The operator of the Bale Processor/Feed Chopper is located in the tractor cab where they drive the tractor, control the speed of driving and the speed of operation of the Bale Processor/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 Bale Processor.

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 that are not near 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 included (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 Bale Processor

Always use the Feed Chopper 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 Feed Chopper operates safely and efficiently.

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SERIAL NUMBER

Your serial number is found on the serial number plate attached to the Feed Chopper on the left side of the top bar.

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

Section 1 - Safety

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 Highline Feed Chopper 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.

Section 1 - Safety

GENERAL SAFETY

1. Ensure that anyone who is going to operate, maintain or work near the Feed Chopper 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 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 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 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.



SHUTDOWN THE TRACTOR BEFORE DISMOUNTING TRACTOR

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



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.



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.

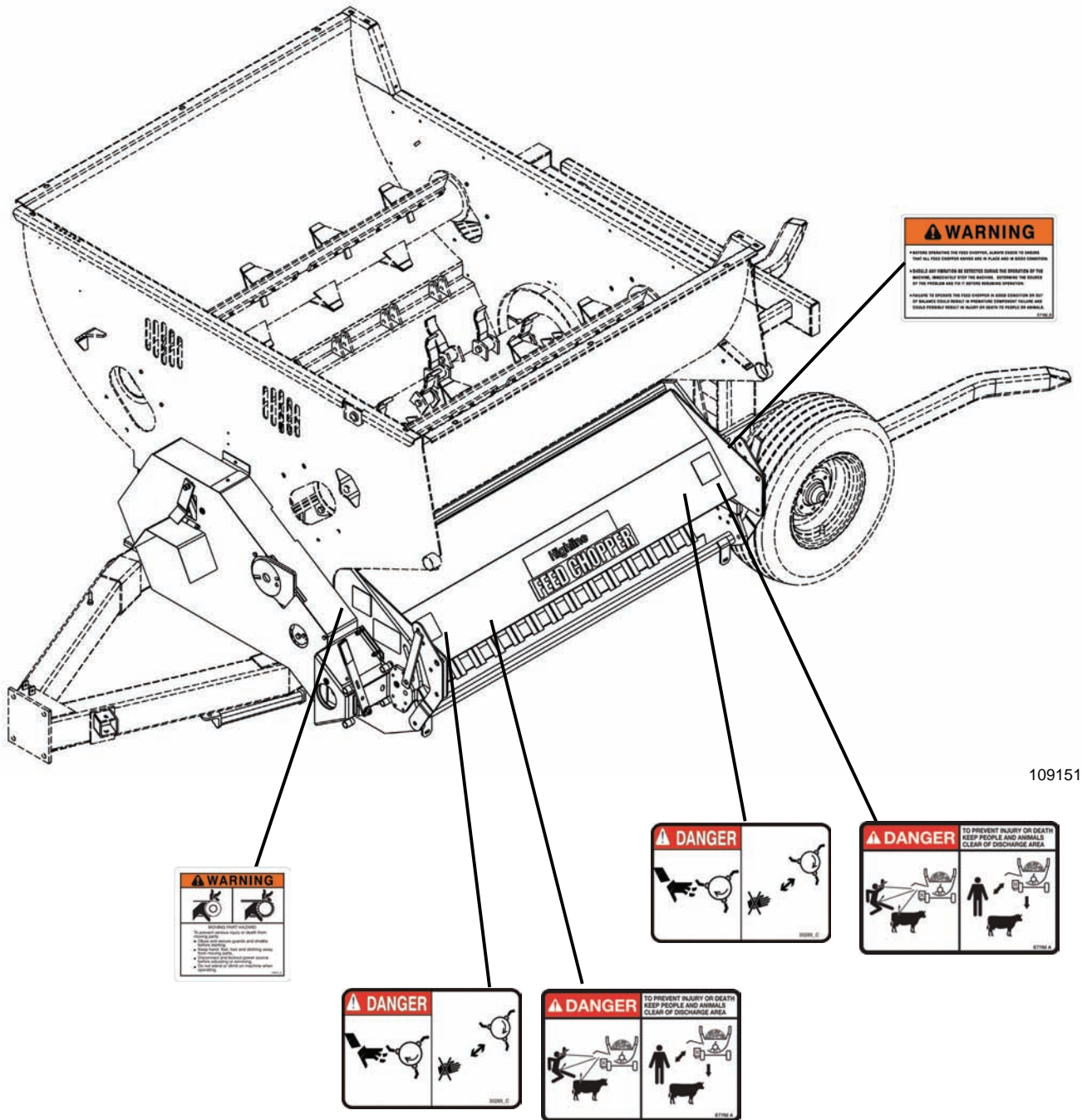
CHECK CONDITION OF THE KNIVES BEFORE OPERATING



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.

SAFETY DECAL LOCATIONS



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2.0 FEED CHOPPER PREPARATION

General Preparation

1. Park the tractor and Bale Processor on level ground.
 - Engage the tractor parking brake.



Park On Level Ground

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2. Shut off the tractor engine and remove the key.



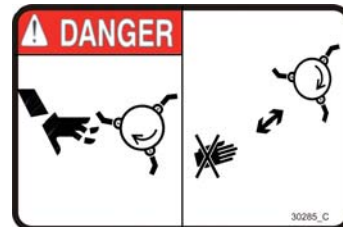
3. Check the condition of the knives.



Disconnect the PTO driveline from the tractor.

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

- a. Disengage the drive plate from the rotor sheave by moving the drive engagement handle towards the front of the machine.
- b. Spin the rotor by hand to check all the knives.
 - i. Check if they are broken or worn to the place that they would not process the material properly.
- c. See the Section "Maintaining the Feed Chopper" for knife replacement information.



Check Condition of the Knives

109130

Section 2 - Feed Chopper Preparation

4. Clear the rotor area of any material buildup.

a. Disconnect the discharge door supports by removing the hairpins and removing the door from the support holes.



Disconnect Discharge Door Supports

109131

b. Remove the discharge door by sliding the door hinge from the slots.

c. Clear the chopping area and the knives.

d. Check the condition of the rotor and the knife bolts.



Remove Discharge Door

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e. Remove twine or other materials that are wrapped around the end of the rotor shafts.

f. Replace the discharge door.

g. Connect to the door supports and fasten with the hairpins.



Remove Twine From Rotor Shaft

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Section 2 - Feed Chopper Preparation

5. Ensure all the drive shields are in place and in good repair.



The Feed Chopper shall not be operated without the driveline shields in place.



Ensure All Drive Shields Are In Place

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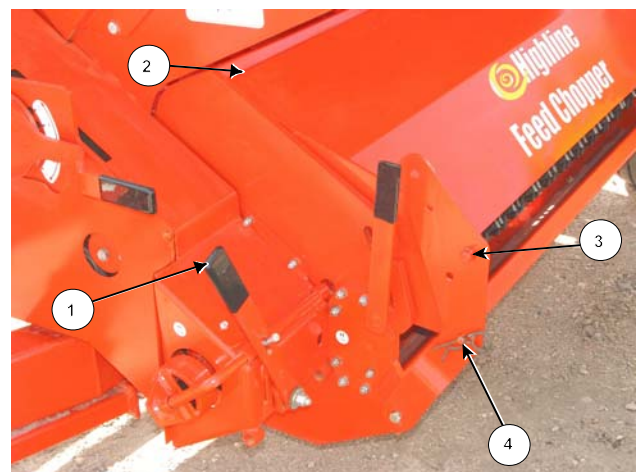
Discharge Door Setup For Feed Chopper Operation

The Feed Chopper door is set to direct material from the Bale Processor into the Feed Chopper rotor.

Note: The Chopper Drive must be disengaged to allow for door movement.

Move the drive engagement handle (1) towards the front of the machine to disengage the drive. Place the handle pin in the forward hole.

1. Place the door hinge rod at the bottom of the slot.
2. Rotate the door so the back of the door (2) is up against the Bale Processor tub.
3. Connect the door support with the door front pin in the middle large hole (3) and the small pin in the lowest small hole (4).
4. Fasten with the hairpin in the small pin.



Discharge Door Settings for Feed Chopping

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Discharge Door Setup For Bale Processor Operation Only

The Feed Chopper door is lowered to allow material from the Bale Processor to pass over the door and not have more chopping by going through the Feed Chopper.

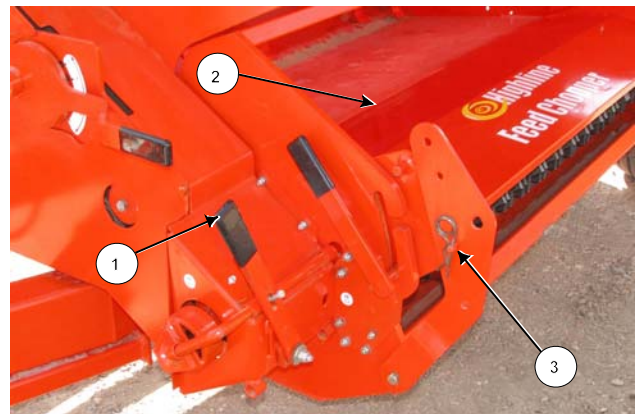
The door has 3 settings to allow for different heights of material discharge.

Setting 1 - No Additional Height Discharge

Note: The Chopper Drive must be disengaged to allow for door movement.

Move the drive engagement handle (1) towards the front of the machine to disengage the drive. Place the handle pin in the forward hole.

1. Place the door hinge rod at the bottom of the slot.
2. Lower the door to be flush with the bottom of the Bale Processor outlet (2).
 - a. Ensure the edge between the bale processor and the feed chopper inner flange is clear of debris.
 - b. The rotor must also be positioned with the knived sections at 90 degrees to the discharge door.
3. Connect the door support with the small pin in the 2nd from the bottom small hole (3).
4. Fasten with the hairpin in the small pin.



No Height Discharge Setting

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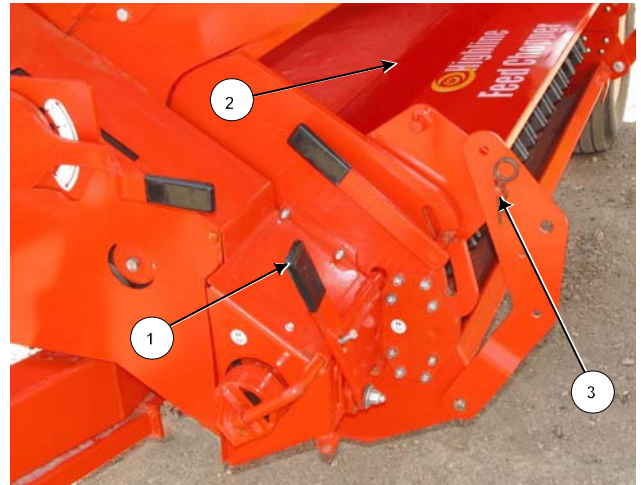
Section 2 - Feed Chopper Preparation

Setting 2 - Some Additional Height Discharge

Note: The Chopper Drive must be disengaged to allow for door movement.

Move the drive engagement handle (1) towards the front of the machine to disengage the drive. Place the handle pin in the forward hole.

1. Place the door hinge rod at the middle of the slot.
2. Lower the door to be flush with the bottom of the Bale Processor outlet (2).
3. Connect the door support with the small pin in the 3rd from the bottom small hole (3).
4. Fasten with the hairpin in the small pin.



Some Height Discharge Setting

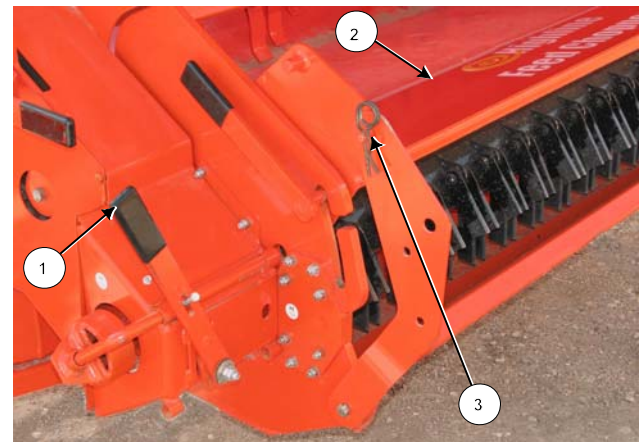
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Setting 3 - Maximum Height Discharge

Note: The Chopper Drive must be disengaged to allow for door movement.

Move the drive engagement handle (1) towards the front of the machine to disengage the drive. Place the handle pin in the forward hole.

1. Place the door hinge rod at the top of the slot.
2. Lower the door to be flush with the bottom of the Bale Processor outlet.
3. Connect the door support with the small pin in the 4th from the bottom small hole.
4. Fasten with the hairpin in the small pin.



Maximum Height Discharge

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4.0 MAINTAINING THE FEED CHOPPER

Lubrication

Lubricate all grease fittings with a quality lithium soap compatible E.P. grease meeting the N.L.G.I. #2 specifications and containing no more than 1% molybdenum disulfide.

Every 10 Hours

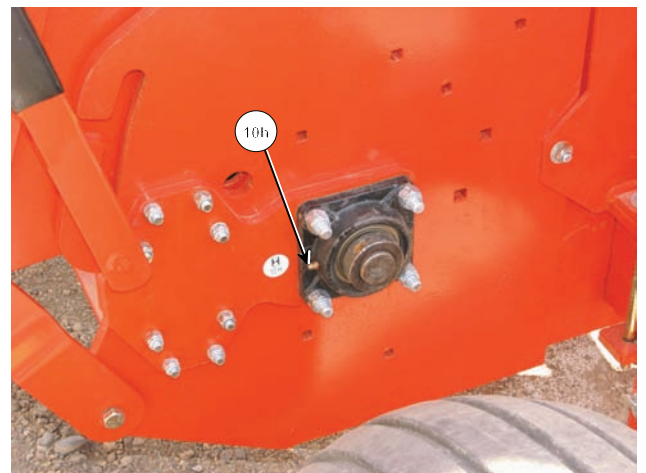
- Lubricate front rotor bearing. Access the grease point through the hole in the drive engagement cover.



Grease Front Rotor Bearing

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- Lubricate rear rotor bearing.



Grease Rear Rotor Bearing

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Section 4 - Maintaining the Feed Chopper

Every 50 Hours

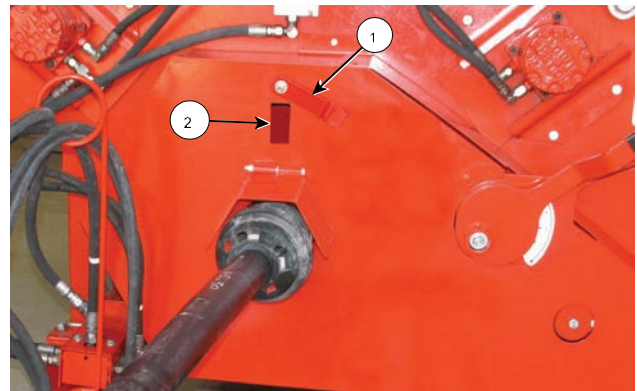
- Grease the drive engagement spline shaft.
 - From the bottom of the lower shield, spray the splined portion with a lithium based lubricating spray.



Grease Engagement Spline (Shown Shield Removed) 109142C

Greasing the Bale Pro Front Flail Drum Bearing

- To access the Bale Processor front flail drum bearing, rotate the access plate (1) in the Feed Chopper front shield to open the access hole (2).
 - The flail drum bearing can be greased through this access hole.



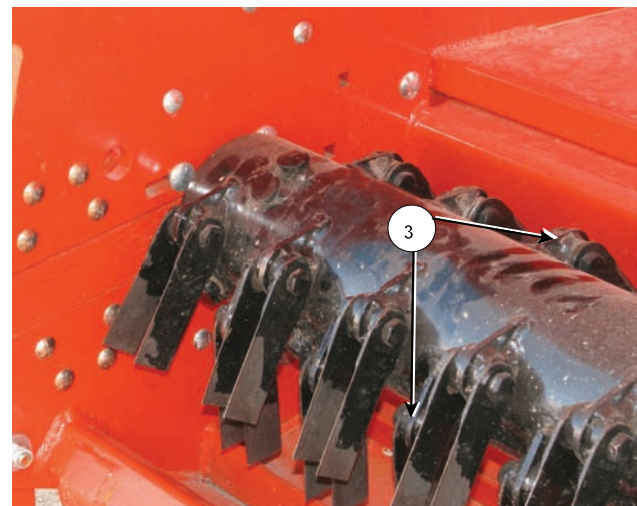
Grease Front Flail Drum Bearing 109146C

Knife Replacement

Replace knives that are broken or too worn to 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. (3)

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



Replace Knife Set & Opposite Set 109143C

5.0 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.

Section 5 - Troubleshooting

Symptom	Problem	Solution
Rotor Does Not Spin	Drive plate and sheave are not engaged.	Rotate the rotor by hand while moving the drive engagement handle. Align drive plate with sheave drive. Fully engage drive plate.
	Broken 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 and replace as needed.

Rotor Stops Spinning	Broken belt.	Replace the belt.
	Drive engage lever has moved to allow disengagement of drive.	Move the drive lever to engage the drive plate into the sheave drive. Place the lever into the lock hole in the drive housing.
	Drive plate not engaged in sheave - Drive bearing has moved - bearing locking collar has become loose or damaged.	Fully engage the drive plate into the sheave. Lock the drive bearing into position with the eccentric locking collar.

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.

