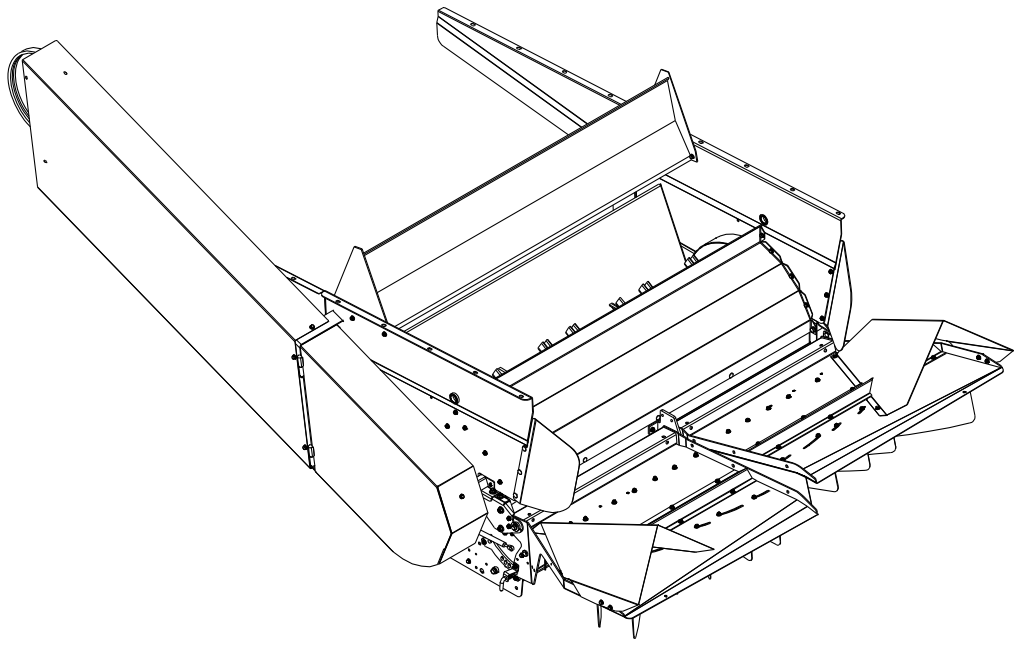
REDEKOP™
Straw and Chaff Management

New Holland
CX MAV CHOPPER
Complete Chopper Installation Guide



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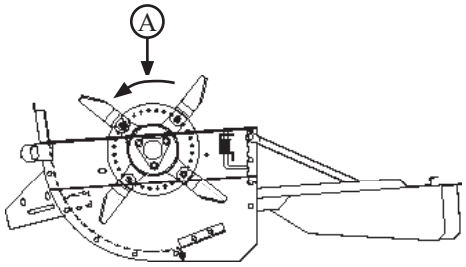
ROTOR BLADE

IMPORTANT! The paddle blades, located on the balance rings inside the chopper, must be installed in the direction shown (A). The straight edge of the blade cuts the air while the paddle trails behind & pushes the air.



1. The blades for your chopper must be installed as outlined.
Note: If blades are installed other than as directed, damage to the chopper may result or performance may be significantly reduced.

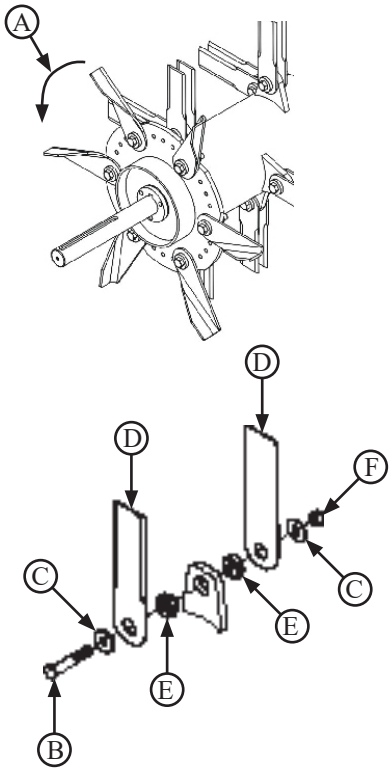
1) Always replace blades two pairs at a time, directly opposite each other through the center of the rotor. This should maintain rotor balance. **Never replace only one blade for wear or breakage.** You do not need to replace the corresponding two pairs on the other end of the rotor.

2) If a blade breaks and the chopper must be operated without a replacement then the damaged blade and the one directly opposite it must both be removed to maintain rotor balance.

3) Use only METRIC class 10.9 bolts (B) and class 10.9 DIN980V steel lock nuts (F) on the chopper rotor.

4) Use a torque wrench to tighten all M12 nuts to the recommended 69 ft-lb.

5) Always check for adequate clearance between the installed blades and the stationary knives. A minimum of 1/4" is required. Check clearance of all blades, even those that are not replaced. Do not operate the straw chopper unless this clearance is maintained for all blades.



A - Blade direction
B - Hex cap screw
C - Washer
D - Blade, straight
E - Bushing, straight blade
F - Lock nut

2. Assembly order for blade pairs (B to F).

Metric Bolt Torque Table

Property Class	8.8	8.8	10.9	10.9
Nominal Size & Thread Pitch	(Nm)	(Ft-lbs)	(Nm)	(Ft-lbs)
M6x1.00	8*	6	11	8
M8x1.25	19	14	27	20
M10x1.50	38	28	54	40
M12x1.75	66	49	94	69
M14x2.00	106	78	150	111
M16x2.00	164	121	233	172
M18x2.50	226	167	323	238
M20x2.50	319	235	457	337

*All values for dry, yellow zinc plated hardware

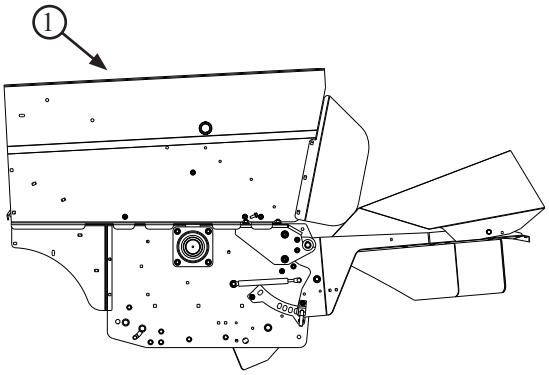
CAUTION: Always use METRIC class 10.9 bolts and class 10.9 DIN980V steel lock nuts when installing blades. Allowable torque range for blade mount nuts is 69 ft-lb.

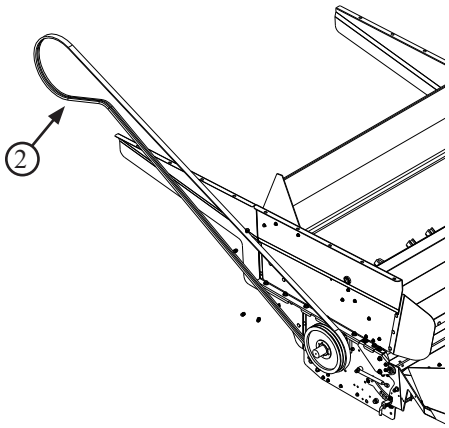
Torque values listed are for general use only, based on the strength of the bolt. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instruction for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

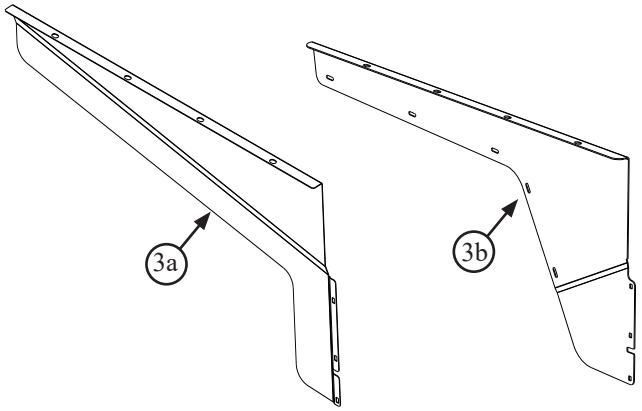
"Dry" means plain or zinc plated without any lubrication.

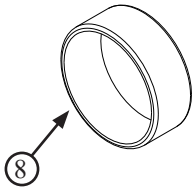
KIT CONTENTS

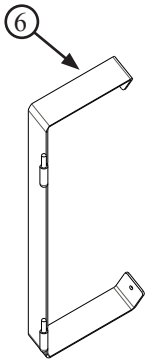
REF	ITEM NAME	ITEM DESCRIPTION	QTY
1	BASE	CHOPPER ASSY	1
2	BELT	BELT CR STRAW DOOR 225 L	1
3a	PANEL	CX FRONT SIDE (LT+RT)	2
3b	PANEL	CX800 FRONT SIDE (LT+RT) (required on CX8000 with serial number equal to or older then 311632051)	2
4	SHIELD	LOWER CX STR ONLY	1
5	DEFLECTOR	CX WINDROW LT	2
6	BRAKET	SHIELD MOUNT	1
7	BRACKET	SHIELD LATCH	1
8	BUSHING	REDEKOP TO NH DOOR	2
9	DEFLECTOR	CX WALL (from old chopper)	1

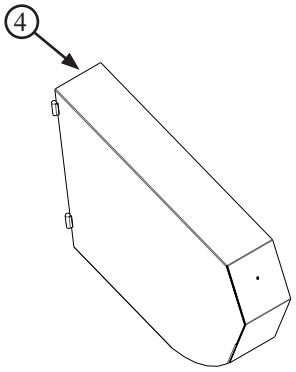


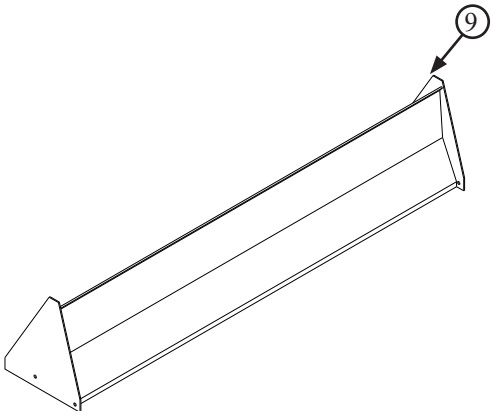


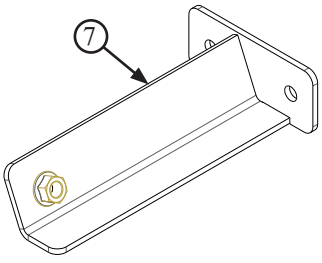


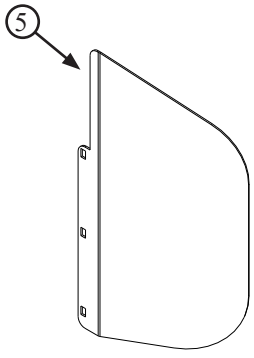












0 Safety

0.1 Introduction

0.1.1 IMPORTANT: Read through this instruction thoroughly and familiarize yourself with the machine before removing these components. Do not skip steps or perform them out of order.

This instruction manual explains the proper procedure for preparing the combine and removing the Factory Spreader Components in order to install the Redekop MAV Chopper

0.2 Recognize Safety Information

0.2.1 This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

0.3 Understand Signal Words

0.3.1 A signal word - DANGER, WARNING, or CAUTION - is used with the safety-alert symbol. DANGER identifies the most serious hazards.

WARNING or CAUTION safety signs are located near specific hazards or precautionary areas in this manual.

0.4 Follow Safety Instructions

0.4.1 Carefully read all safety messages in this manual and on your machine. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator’s manual.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your dealer.

Other languages are available for this machine. Please contact Redekop

0.5 Safe Operating Practices

0.5.1 DO NOT stand near combine when machine is running.

ALWAYS refer to your Combine Operator's Manual, and review Safety section before operating machine. The Combine Operator's Manual details safe operating practices that must be followed to protect you and others from accidental death and/or injury.

Operate machine only when all guards are correctly installed.

Before moving away, always check immediate vicinity of machine (e.g. for children). Ensure adequate visibility. Use the horn as a warning immediately before moving away.

When making turns, always take into consideration the width of the attachment and the fact that the rear end of the machine swings out. Attachments and ground conditions affect the driving characteristics of the combine.

Never leave machine unattended as long as engine is running.

0.6 Work In Ventilated Area

0.6.1 Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

0.7 Practice Safe Maintenance

0.7.1 Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet , and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

0.8 Avoid Contact With Moving Parts

0.8.1 Keep hands, feet and clothing away from power driven parts. Never clean, lubricate or adjust machine when it is running.

0.9 Avoid High-Pressure Fluids

0.9.1 Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

Replace worn or damaged hose assemblies immediately.

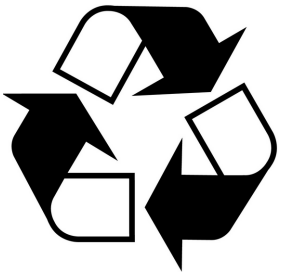
Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.

0.10 Dispose of Waste Properly



0.10.1 Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste includes such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

0.11 Use Proper Lifting Equipment

0.11.1 Lifting heavy components incorrectly can cause severe injury or machine damage.

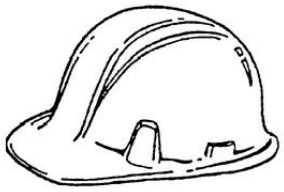
Follow recommended procedure for removal and installation of components in the manual.

Ensure lifting equipment is rated for the job

Ensure operator is appropriately licensed to operate lifting equipment

0.12 Personal Protective Equipment (PPE)

0.12.1 A Qualified Person designated by the employer, who is knowledgeable about and familiar with all relevant specifications and assembly instructions and is capable of identifying existing or potential hazards in surroundings or working conditions which may be hazardous or dangerous to employees shall determine appropriate Personal Protective Equipment required for this assembly.

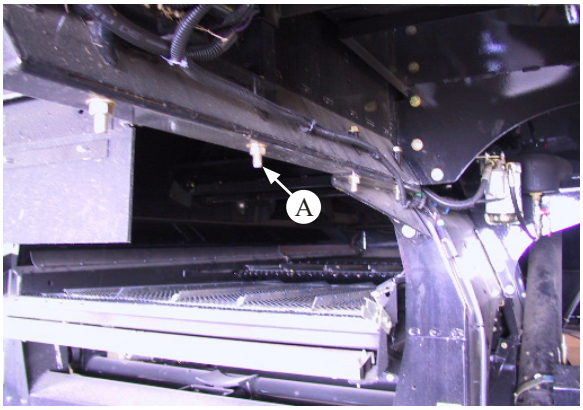


Personal Protective Equipment (PPE) are devices worn by the employees to protect against hazards in the environment. Examples include safety glasses, face shields, respirators, gloves, hard hats, steel-toe shoes, and hearing protection.

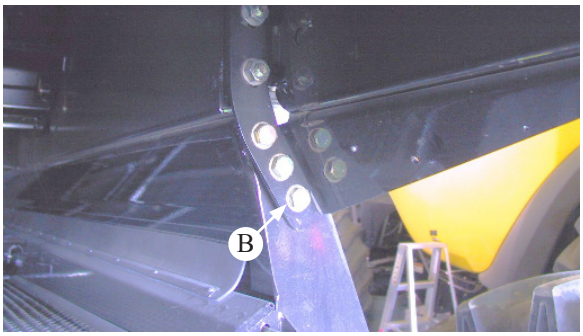
Torque Table		
Nominal Size	**Class 8.8**	**Class 10.9**
	Nm / (ft-lbs)	**Nm / (ft-lbs)**
M8 - flanged	**27 / (20)**	**39 / (29)**
- non flanged	**25 / (18)**	**35 / (26)**
M10 - flanged	**54 / (40)**	**57 / (42)**
- non flanged	**49 / (36)**	**70 / (51)**
M12 - flanged	**93 / (69)**	**134 / (98)**
- non flanged	**85 / (63)**	**121 / (90)**
M16 - flanged	**231 / (171)**	**331 / (244)**
- non flanged	**210 / (155)**	**301 / (222)**

Straw Chopper Install

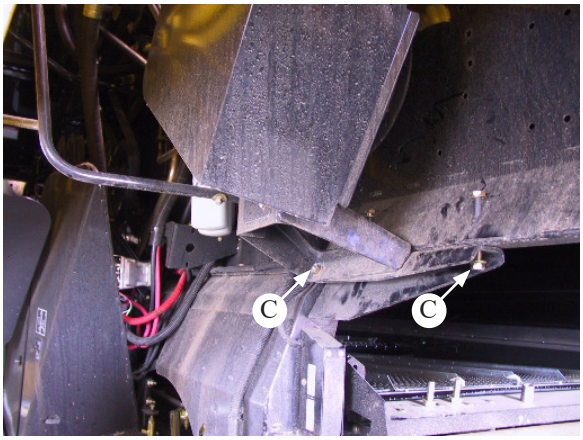
1. Remove 4 hood bolts (A) on both sides of combine.



2. Remove 3 gusset bolts (B) on both sides of combine.

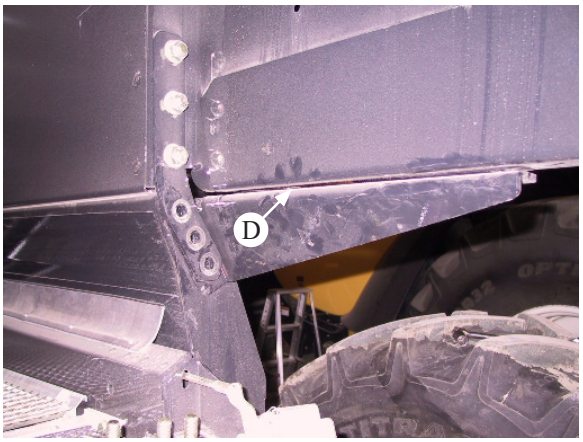


3. Remove 2 drive jackshaft weldment bolts (C).



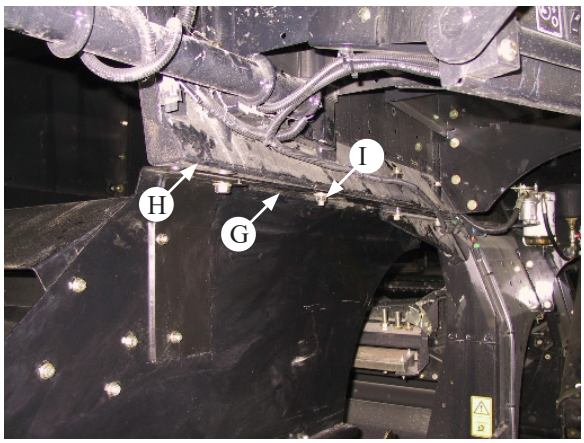
NOTE: For combines with factory draper. Remove Draper from inside of the combine. Also remove setting in the combine computer. Go to: Combine Info -> Residue -> Shut off or Uninstall Draper /Chaff spinners. To prevent low RPM warnings.

4. Spread hood gusset a minimum of 0.25” apart (D). Chopper flange must slide between plates for mounting.



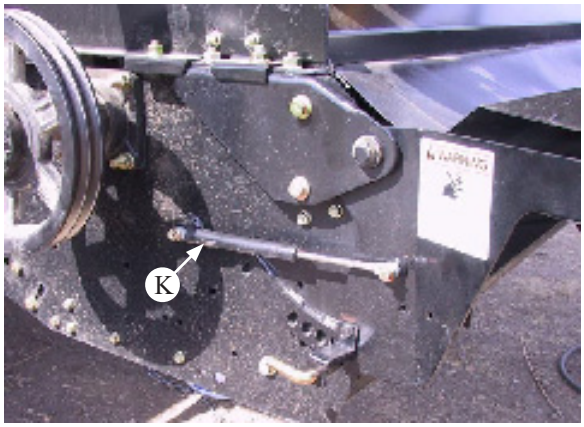
5. Place a second pallet under the MAV chopper and turn 90 degrees (E). Remove tailboard shipping brackets and rest tailboard against the loader to ensure it does not strike the combine during mounting. Raise chopper to the combine using a fork lift or front end loader (F) from the back.

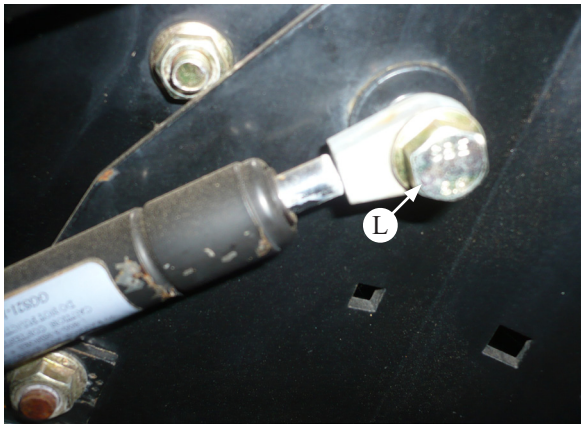
6. Slide upper chopper flange (G) along combine hood flange (H). Align hood flange holes with chopper flange slots and replace hood bolts (I) by using existing combine bolts:
8 pcs. - Bolts (I)
8 pcs. - Nuts
8 pcs. - Flat Washers



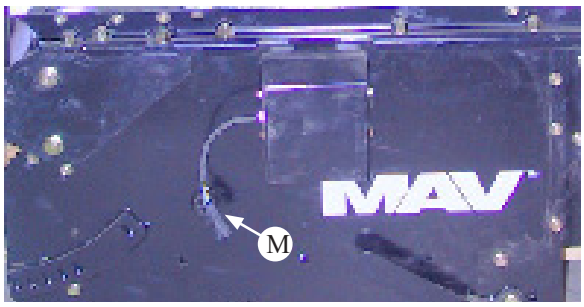
7. Replace bolts (J) in hood gusset and torque to specification. After gussets have been tightened, retorque hood bolts and jackshaft bolts.
6 pcs. - Bolts (J)
6 pcs.- Flat Washers

7. Mount gas shocks
2 - Gas Shock (K)
4 - Bolt, Flg M8 x 16 (L)

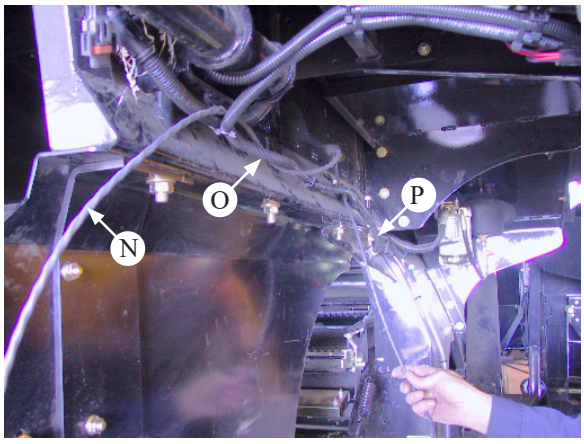




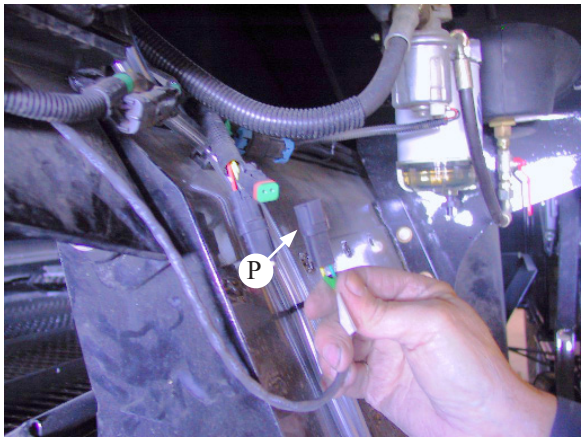
8. Plug the chopper speed sensor outlet (M) into the sensor wire extension provided in your kit.



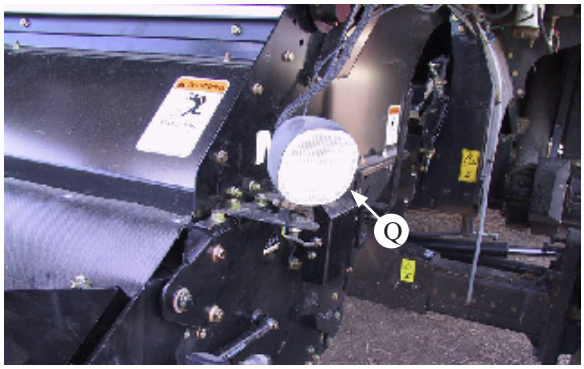
9. Route sensor wire extension (N) with main harnesses (O).



10. Remove plug from main wiring harness and connect speed sensor wire extension (P).



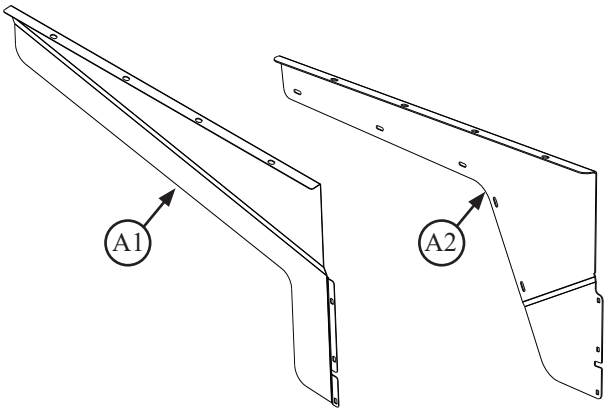
11. Attach individual flood lights (Q) to both sides of the chopper. Use an existing bolt on the chopper flange.



INSTALLATION OF FRONT SIDE PANELS

Front side panel (A2) is required on CX8000 with serial number equal to or older then 311632051

1. Slide front side panels (A) along combine hood flange (B)

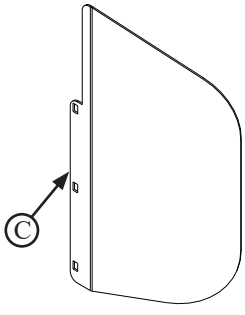


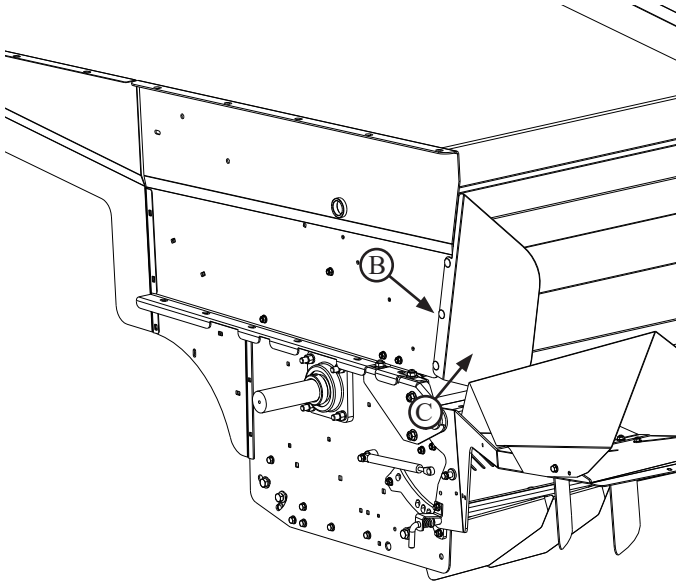
2. Fasten panels to combine rail using existing hardware

3. Fasten panels to chopper with:
M8 x 16 Flange Bolts x 6 pcs
M8 Flange Nuts x 6 pcs

INSTALLATION OF DEFLECTOR

1. Attach deflectors (C) to the upper rear side edge of chopper (B)
- both sides

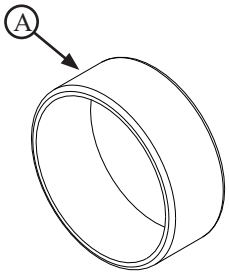


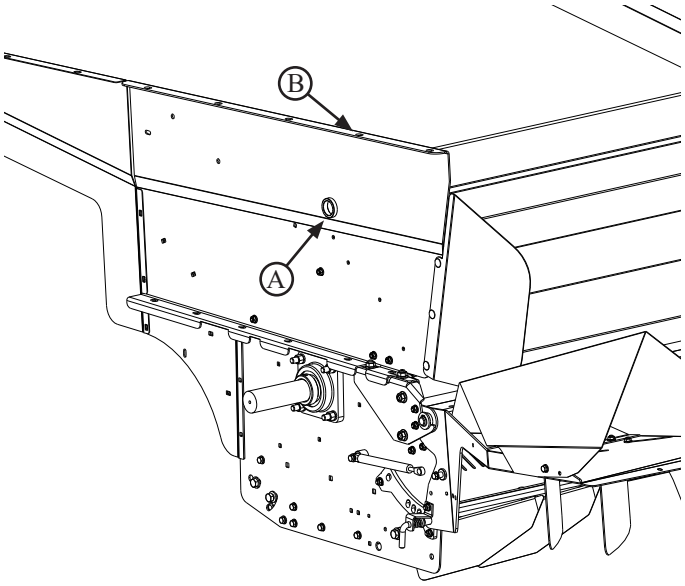


2. Fasten deflectors (A) with:
M8 x 16 Round head bolts x 6 pcs
M8 Flange Nuts x 6 pcs

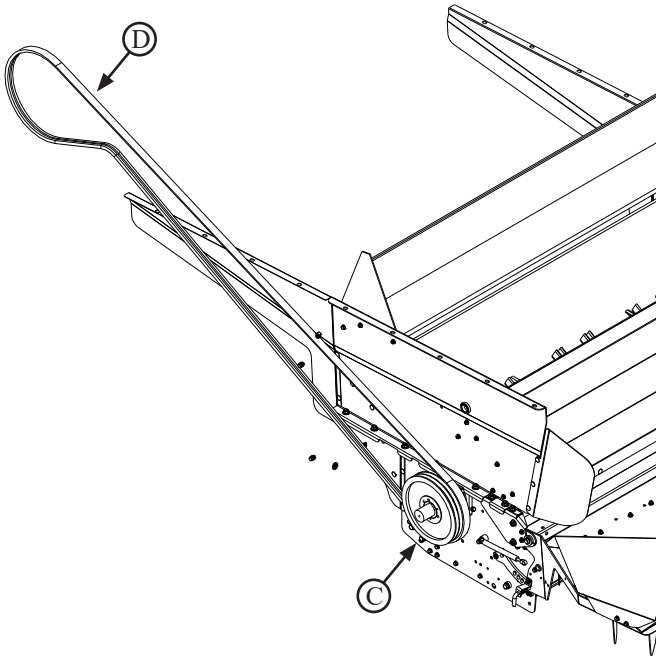
INSTALLATION OF DOOR BUSHINGS

1. Insert bushings (A) in hole in upper side panel of chopper (B).



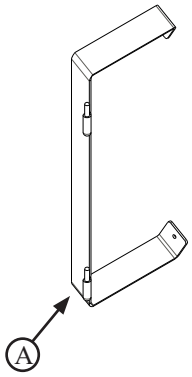


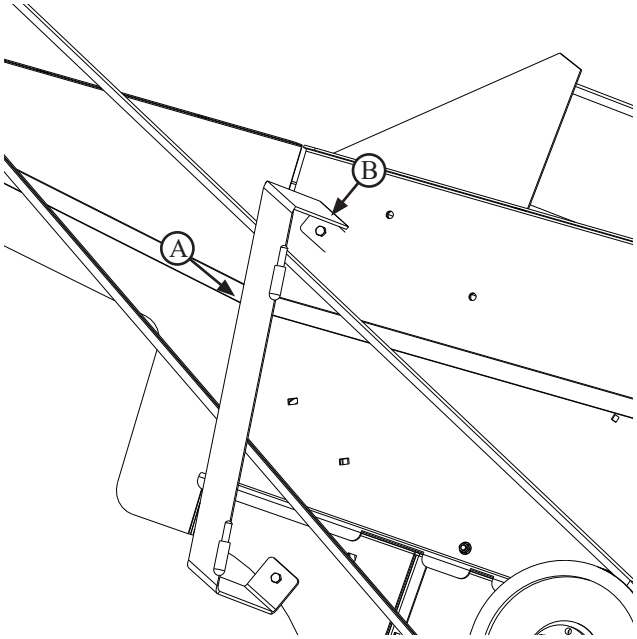
2. Assemble 11” chopper drive sheave (C) (See Appendix 2 for Pulley Install Instructions) and 2B225 belt (D). Ensure sheaves are aligned for smooth belt operation.
1 - Sheave SK 2B11
1 - Bushing SK 50 mm
1 - Keystock 14 mm x 9 mm



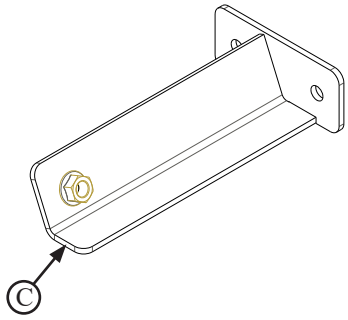
Assembly of Shield:

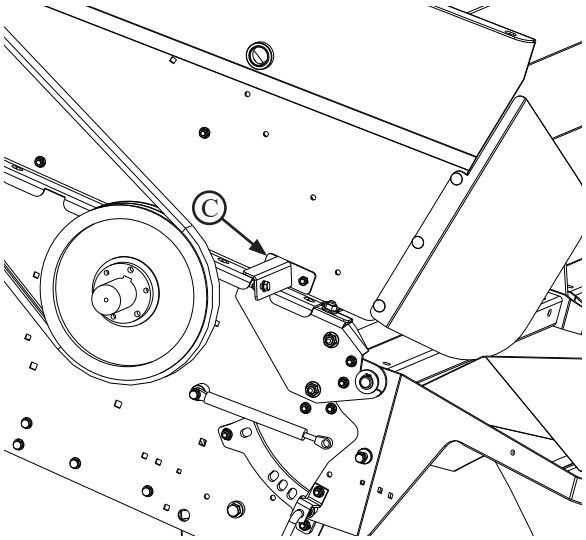
1. Mount bracket shield mount (A) to side panel of chopper into existing holes (B) with:
2 pcs. - Bolt, Hex M8 x 20
2 pcs. - Nut, Flg M8



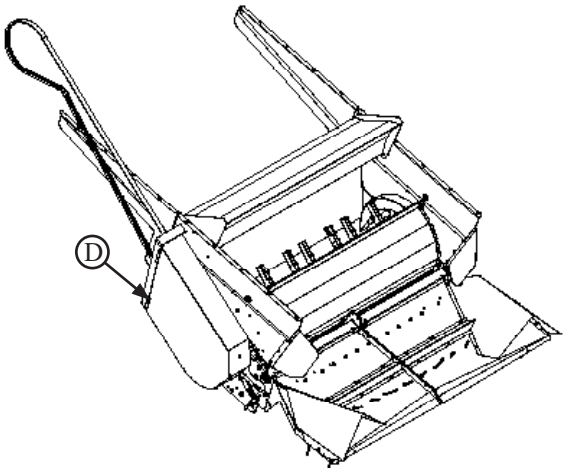


2. Mount Bracket Shield Latch (C) into existing holes with:
2 pcs. - Bolt, RH M8 x 16
2 pcs. - Nut, Flg M8





3. Install shield (D) into place with:
1 pc. - Bolt, Flange M8 x 20
1 pc. - Nut, Flg M8

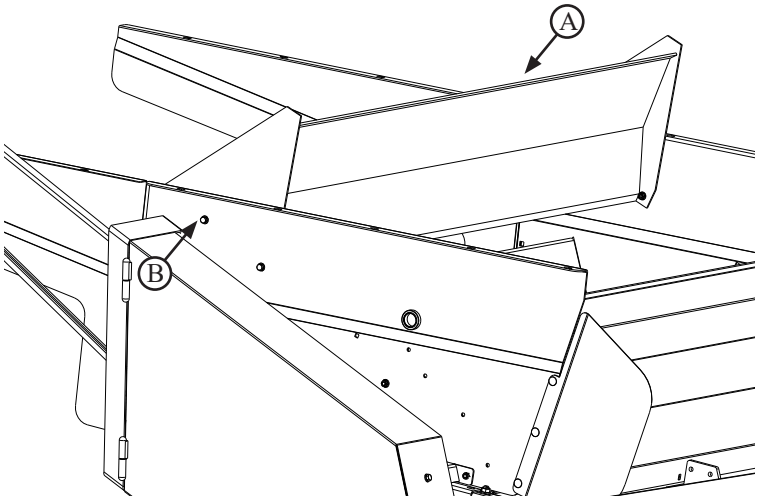


Note:
Check all fasteners to ensure they have been properly tightened. When starting chopper, be sure all people are clear of the rear of the combine.

Start threshing module in low speed & listen for clearance problems. If a knocking noise is heard stop machine immediately! Fix problem & repeat procedure. Progress to full power when everything is running smoothly at lower speeds.

Assembly of Wall Reflector:

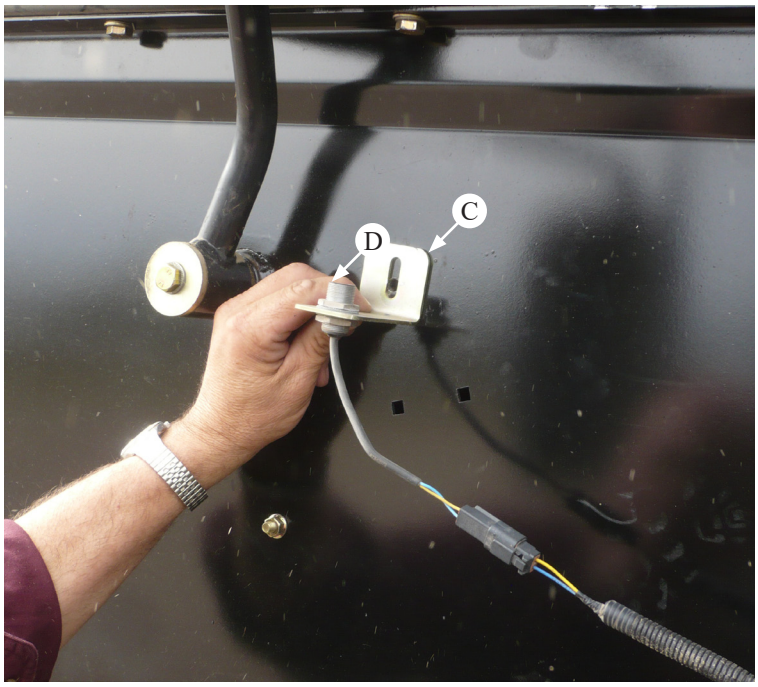
1. Mount reflector (A) to side panel of chopper into existing holes (B) with:
4 pcs. - Bolt, Hex M8 x 20
4 pcs. - Nut, Flg M8



Assembly of sensor:

Drill a hole for bracket (C).
Mount bracket with:
1 pc. - Bolt, Hex M8 x 16
1 pc. - Nut, Flg M8

Install sensor (D) in a place.



Appendix: 1 - Hardware Classification

B##	**Bolt - Imperial**	
	HEX	Bolt Hex Head
	FLG	Bolt Hex Flange Head
	RH	Bolt Round Head, Carriage
	CS	Bolt Countersunk
N##	**Nut - Imperial**	
	JAM	Nut, Jam
	LOCK	Nut, Lock
P##	**Pin - Imperial**	
	ROLL	Pin, Roll
	COT	Pin, Cotter
	HITCH	Pin, Hitch Clip
	LYNCH	Pin, Lynch
	CLEVIS	Pin, Clevis
	SPIROL	Pin, Spirol
W##	**Washer - Imperial**	
	FLAT	Flat
	LOCK	Helical Lock
	FEN	Fender Washer

B###M	**Bolt - Metric**	
	HEX	Bolt Hex Head
	FLG	Bolt Hex Flange Head
	RH	Bolt Round Head Carriage
	CS	Bolt Countersunk
N###M	**Nut - Metric**	
	JAM	Nut, Jam
	LOCK	Nut, Lock
P###M	**Pin - Metric**	
	ROLL	Pin, Roll
	COT	Pin, Cotter
	HITCH	Pin, Hitch Clip
	LYNCH	Pin, Lynch
	CLEVIS	Pin, Clevis
	SPIROL	Pin, Spirol
W###M	**Washer - Metric**	
	FLAT	Flat
	LOCK	Helical Lock
	FEN	Fender Washer

Description: BOLT HEX .5 X 1 GR5 UNC

Type = Hex
Diameter = 0.5 inch
Imperial Spec = GR5 UNC
Length = 1 inch

Hardware Diameter	Wrench Size
1/4in Hardware	7/16in
5/16 Hardware	1/2in
3/8 Hardware	9/16in
1/2 Hardware	3/4in
5/8 Hardware	15/16in

Description: BOLT HEX M8 X 40 C8.8

Type = Hex
Diameter = 8mm
Metric Spec = C8.8
Length = 40mm

Hardware Diameter	Wrench Size
M6 Hardware	10mm
M8 Hardware	13mm
M10 Hardware	15mm or 16mm
M12 Hardware	18mm or 19mm
M16 Hardware	24mm

Appendix 2 - Bushings

IMPORTANT: DO NOT USE LUBRICANTS IN THIS INSTALLATION

To Install Bushing:

1. Remove all paint, oil grease, etc. from tapered surface of bushing and bore of mating part.

2. See **Standard** mounting assembly - Figure 1.

NOTE: If bushing does not slide freely on shaft, wedge a screwdriver blade into the saw cut and the flange OD to open the bore of the bushing. Caution: Excessive wedging will split the bushing.

3. **Standard Mount** – Slide bushing on shaft, flange first. If using the setscrew, snug it against the key. **Excessive Torque will cause mating part to be eccentric.** Position mating part in place on bushing aligning drilled holes in mating part with tapped holes in bushing flange. Using lockwashers, install capscrews thru the mating hub and into the bushing flange. (**Note:** S bushings can only be Standard Mounted. Be sure the three tapped holes in the mating hub **do not** align near the bushing saw cut. If they do, rotate the bushing 60 degrees.).

4. **Use A Torque Wrench.** Tighten all capcrews evenly and progressively in rotation to the torque value listed in the table. **Excessive wrench torque, closing the gap between the bushing flange and mating hub, or the use of lubricants will break the mating hub.**

To Remove Bushing:

1. Loosen and remove all capscrews.

2. For **Standard Mount**, thread capscrews into tapped holes in mating part to jack against bushing flange. Tighten bolts evenly and progressively in rotation to separate the two components.

3. Loosen setscrew to slide bushing from shaft.

Standard Mounting

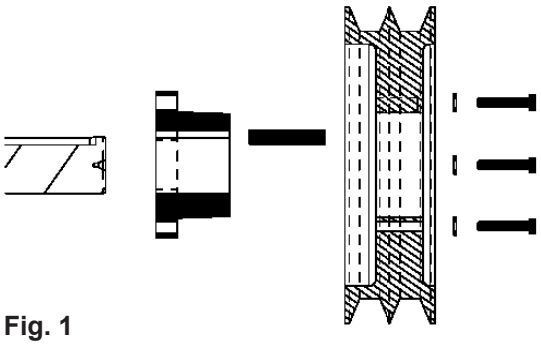


Fig. 1

Screw Tightening Information

Tapered Bushing	Size & Thread of Capscrew	Ft.-Lbs. To Apply With Torque Wrench
SK	5/16 - 18	15
SF	3/8 - 16	30

WARRANTY

Redekop Manufacturing Co., hereinafter referred to as “Manufacturer”, warrants each new Redekop Upgrade sold by the Manufacturer to be free from defects in material and workmanship, under normal use and service, for a period of one (1) year after the date of delivery to the original retail purchaser. The Manufacturer will, at its option, replace or repair, at the Manufacturer’s factory, or at a point designated by the Manufacturer, any part or parts which shall appear to the satisfaction of the Manufacturer upon inspection at such point, to have been defective in material or workmanship. This Warranty does not obligate the Manufacturer to bear any transportation charges in connection with the replacement of defective parts.

This Warranty shall not apply to any rotor which shall have been installed or operated in a manner not recommended by the Manufacturer; nor to any rotor which shall have been repaired, altered, neglected or used in any way which, in the Manufacturer’s opinion, adversely affects its performance; nor to any rotor in which parts not manufactured or approved by the Manufacturer have been used; nor to any accessories installed on the rotor where the accessory manufacturer has its warranty; nor to normal maintenance or replacement of normal service items.

Manufacturer reserves the right to modify, alter, and improve any rotor or parts without incurring any obligation to replace any rotor or parts previously sold with such modified, altered or improved rotor or part.

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This Warranty is effective only for the original purchaser.

Redekop Manufacturing Co.
Saskatoon, SK Canada