



John Deere
WTS MAV - 300
Rotor Upgrade Installation Guide

RD016-01_R2
APRIL 2011

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.

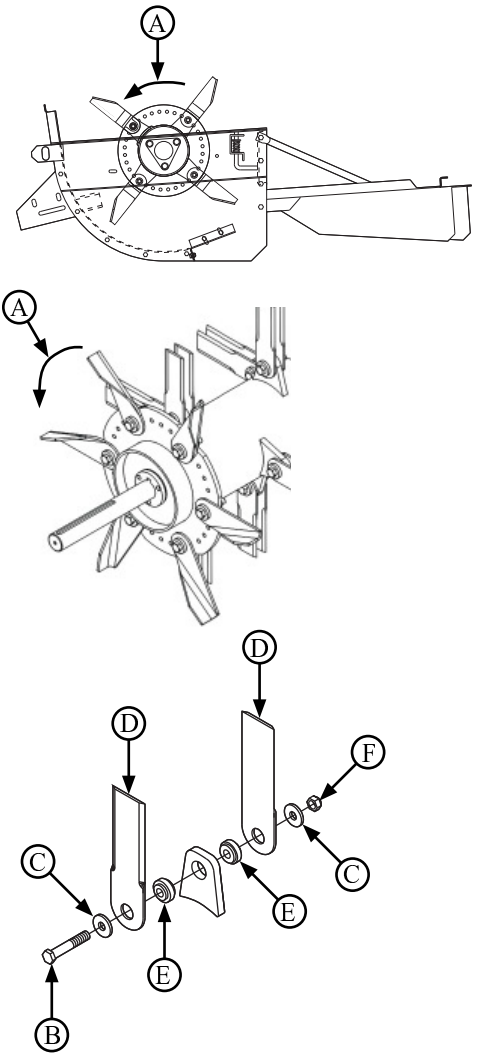
5) Always check for adequate clearance between the installed blades and the stationary knives. A minimum of 1/4" is required. Check clearance of all blades, even those that are not replaced. Do not operate the straw chopper unless this clearance is maintained for all blades.

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)
M6 x 1.00	8	6	11	8
M8 x 1.25	19	14	27	20
M10 x 1.50	38	28	54	40
M12 x 1.75	66	49	94	69
M14 x 2.00	106	78	150	111
M16 x 2.00	164	121	233	172
M18 x 2.50	226	167	323	238
M20 x 2.50	319	235	457	337

* All values for dry, yellow zinc plated hardware.



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



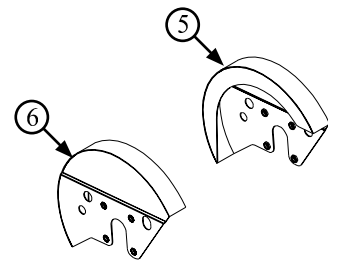
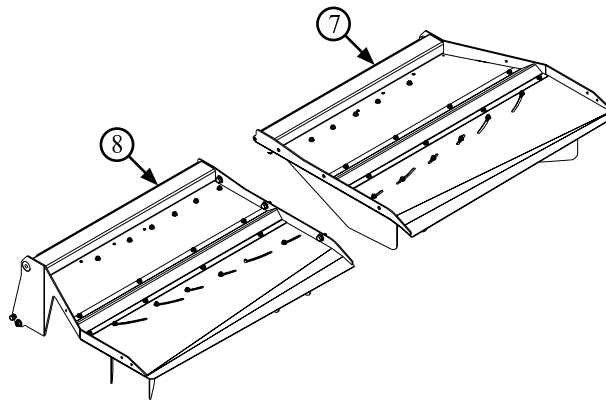
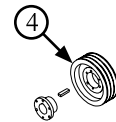
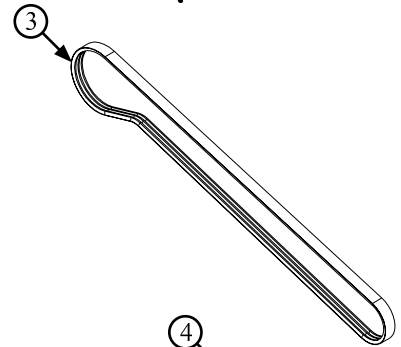
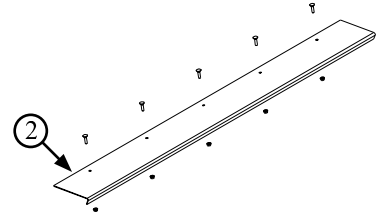
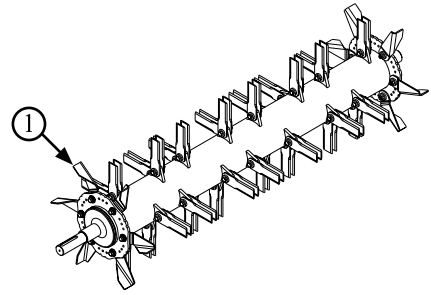
CAUTION: Always use METRIC class 10.9 bolts and class 10.9 DIN980V steel lock nuts when installing blades. Allowable torque range for blade mount nuts is 69 ft-lb.

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.

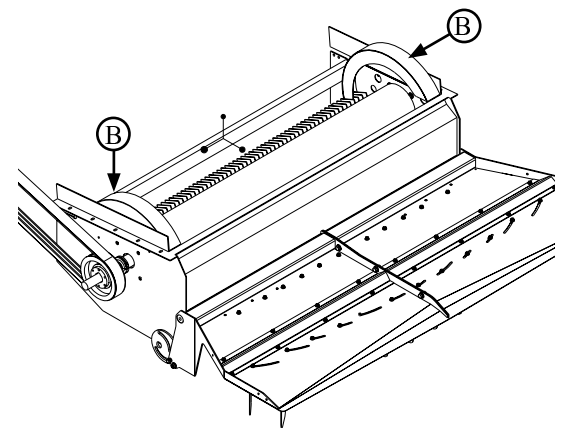
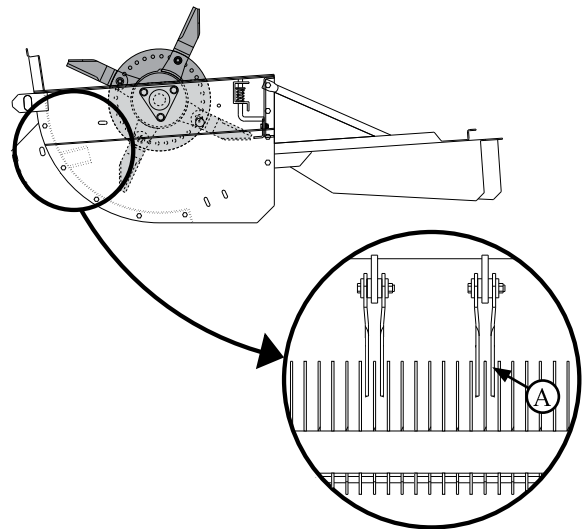
KIT CONTENTS

REF	ITEM NAME	ITEM DESCRIPTION	QTY
1	JD WTS	ROTOR ASSY	1
2	FLR EXT	FLOOR EXTENSION	1
3	BELT	BELT 3B 192L	1
4	SHEAVE	SHEAVE 3B 8.0 SK HS	1
4	BUSHING	BUSHING SK 45mm ID	1 / 2
5	SHROUD	SHROUD LEFT	1
6	SHROUD	SHROUD RIGHT	1
7	TBOARD	TAILBOARD L	1
8	TBOARD	TAILBOARD R	1
9	BOX		
	BOX 25 x 14 x 10d		1
	SPEED SENSOR		1
	HARDWARE BAG JD MAV		1



Rotor: (MAV WTS)

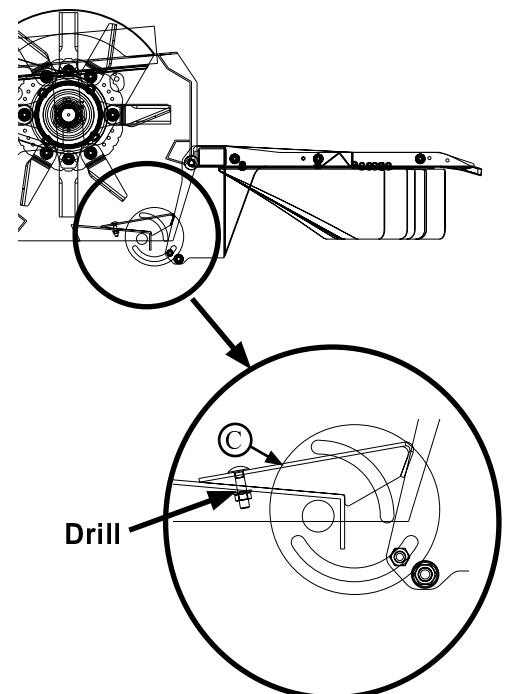
1. Remove the factory straw chopper from the combine.
2. Remove the drive pulley, the shaft speed sensor disk, and both lock collars from the straw chopper shaft.
3. Remove both bearings from the rotor.
-Try to avoid damaging the bearings as new bearings are not included in your retrofit kit.
4. Remove factory rotor from the chopper.
5. Install the Redekop upgrade rotor into the chopper housing making sure that the blades are centered between stationary blades as shown (A).
6. Bolt bearings into place using the Redekop fan shrouds with nuts attached. (B)



Before tightening the bearing lock collars, align the rotor so the rotor blades are centered between the stationary blades. After tightening lock collars, recheck each individual blade to ensure that there is adequate clearance between it and the stationary blades.

Floor Extension:

1. Hold the floor extension (C) in place against the end of the chopper floor as shown. Mark and drill holes in factory chopper floor to allow the floor extension to be placed as shown. (See Appendix 1 for hardware definitions)
2. Fasten the floor extension to the chopper floor .
5 - Bolt, RH M8 x 30
5 - Nut, Flg M8



Tailboards:

1. Remove factory tailboard by removing rod (A)

Note:

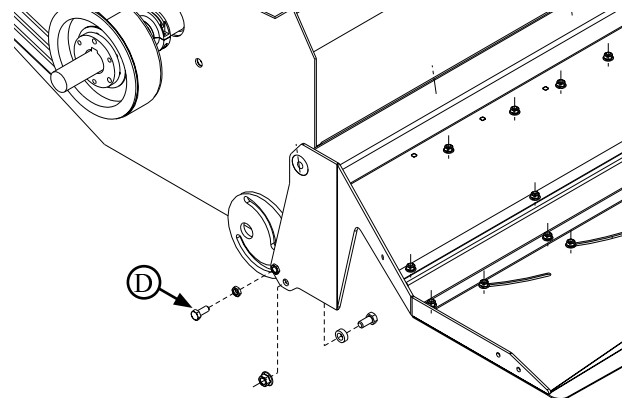
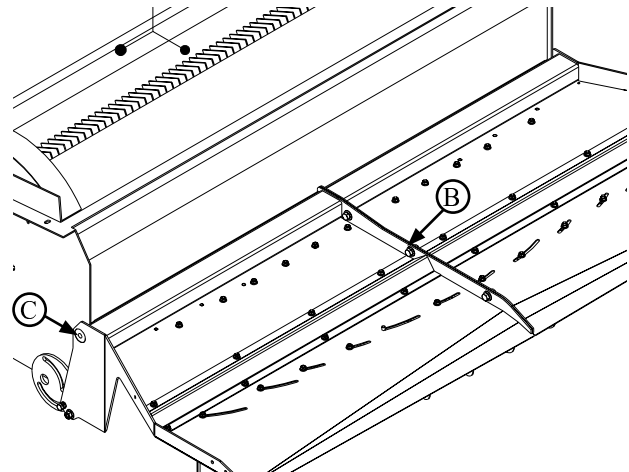
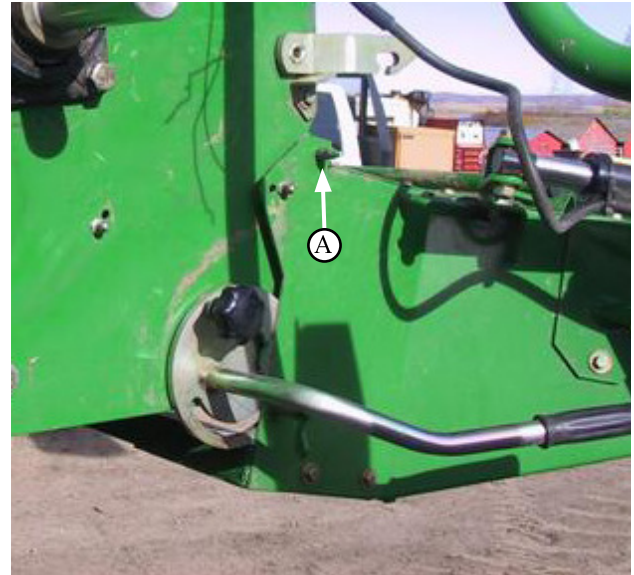
Sand any imperfections down on rod (A) for easier installation.

2. Bolt Redekop tailboards together in the center in 3 places. (B)
3 - Bolt, Flg M12 X 25
3 - Nut, Flg M12

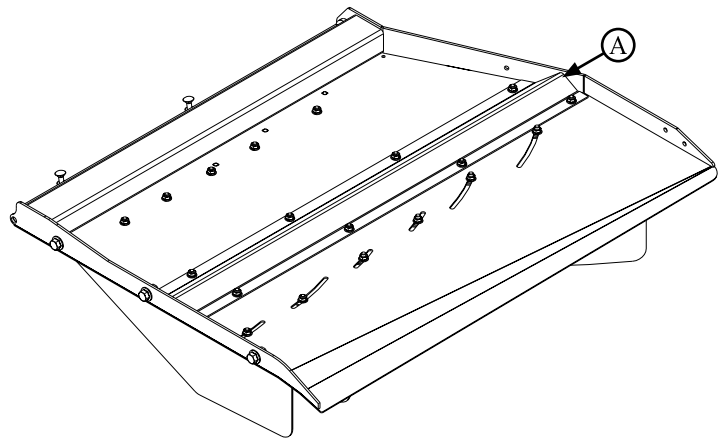
3. Install Redekop tailboard by reinserting factory rod into hole (C)

4. Install height adjustment cam hardware (D) on tailboard.

- 1 - Bolt, Hex M10 X 25
- 1 - Nut, Jam M10
- 1 - Bolt, Hex M12 X 25
- 1 - Spacer 5/16 L
- 1 - Nut, Flg M12

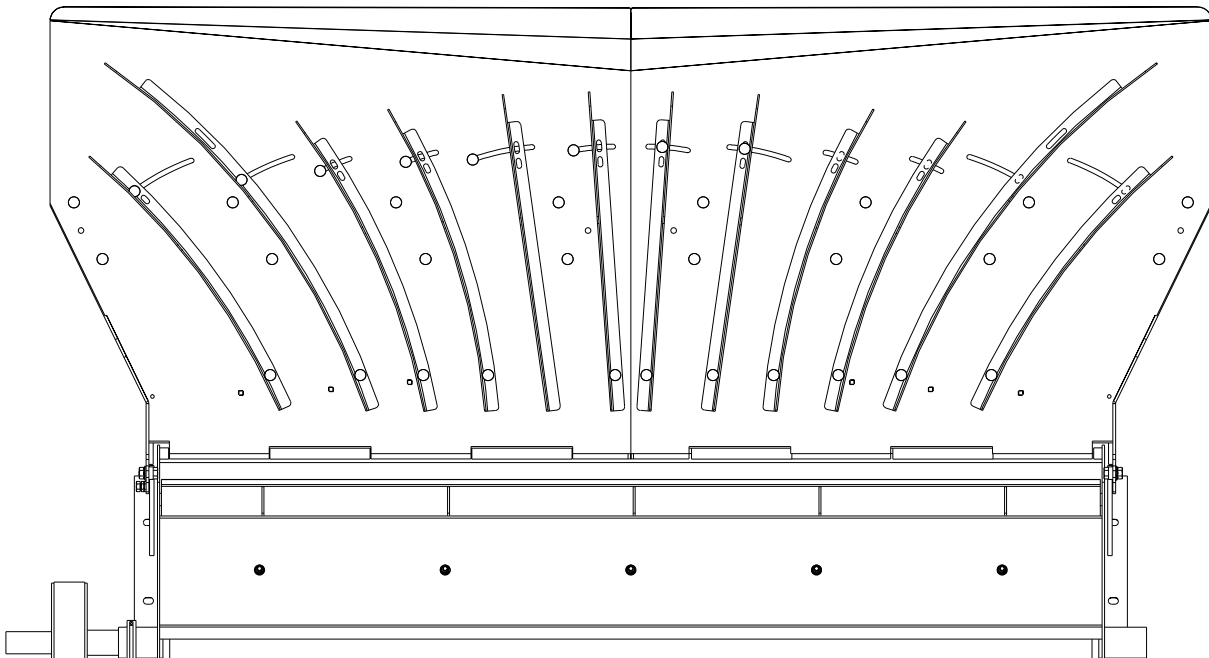


5. Install tailboard brace (A) on top of tailboard.
All round head bolts must be facing up to create
smooth surface on underside of tailboard.
8 - Bolt, Rh M8 X 16
8 - Nut, Flg M8



6. Install tailboard fins using diagram shown
below.
12 - Bolt, Rh M8 X 16
12 - Nut, Flg M8

Note:
For optimum spread results set tailboard fins
at the positions as shown in diagram below.



Reinstall Chopper:

1. Reinstall chopper onto combine using existing hardware.

Note:

Dust can build up in side channel causing difficulty lining up side mounting bolts on chopper. It is recommended that the plate with welded on nuts is removed and cleaned. Remove bolt (A) and loosen bolt (B) to tilt combine rear panel to access side channel. Using an air compressor blow dust from channel and reinsert plates.



Speed Sensor:

1. Take factory speed sensor and Redekop speed sensor and identify which halves have the magnets inserted in them, by inspecting the hole on the inner side of sensor. (B) Install the two halves with magnets on the rotor shaft.



2. Install drive pulley & belt. (See Appendix 2 for pulley instructions)
3. Reinstall shields.

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.

Appendix: I - 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 Imperial Spec = GR5 UNC
Diameter = 0.5 inch 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 Metric Spec = C8.8
Diameter = 8mm 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 - Taper Hub Installation

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 lock washers, 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

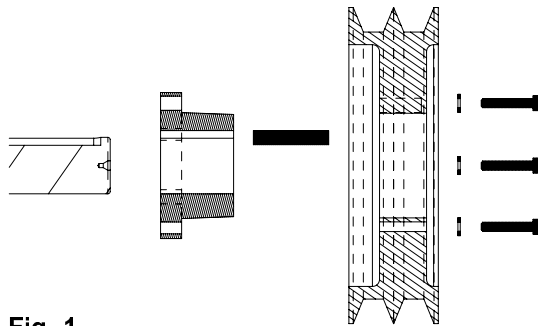


Fig. 1

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.

THIS WARRANTY, AND THE MANUFACTURER'S OBLIGATION HEREUNDER, IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED, OR OF FITNESS FOR A PARTICULAR PURPOSE, and all other obligations or liabilities, including special or consequential damages or contingent liabilities arising out of the failure of any rotor or part to operate properly. No person is authorized to give any other warranty or to assume any additional obligation on the Manufacturer's behalf unless made in writing and signed by an officer of the Manufacturer.

This Warranty is effective only for the original purchaser.

Redekop Manufacturing Co.
Saskatoon, SK Canada