REDEKOP™

MAV CHOPPER
JOHN DEERE X9

INSTALLATION MANUAL

PRODUCT NUMBER: **340-115W**

CD0361-01_R1

REDEKOP™


MAV

MAV Chopper

JD X9 Installation Manual

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0 Safety

0.1 Instructions

0.1.1 IMPORTANT: Read through this instruction manual thoroughly and familiarize yourself with the Seed Control Unit before installation of these components.



This instruction manual explains the proper procedure for installation of the Redekop Seed Control Unit. Do not skip steps or perform them out of order.

0.2 Recognize Safety Information

0.2.1 This is a safety-alert symbol. When you see this symbol on your straw chopper 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 Seed Control Unit 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 manual.

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

Keep your Seed Control Unit in proper working condition. Unauthorized modifications to the Seed Control Unit may impair the function and/or safety and affect the Seed Control Unit's life.

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

0.5 Safe Operating Practices



0.5.1 DO NOT stand near the straw chopper and Seed Control Unit when combine is running.

ALWAYS refer to your Combine Operator's Manual and review the 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 injury and/or death.

Operate Seed Control Unit only when all guards are correctly installed.

Before moving away, always check immediate vicinity of Seed Control Unit (e.g. for children). Ensure adequate visibility. Use a 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.

Never leave combine unattended as long as engine is running.

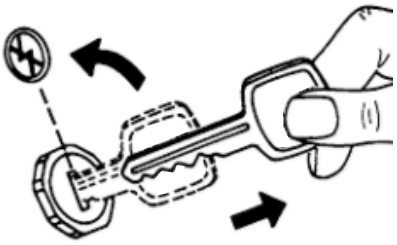
0.6 Work In Ventilated Area



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 Remove Key from Ignition



0.7.1 ALWAYS shut off combine engine prior to working on it.

Apply park brake, remove key and lock operators cab.

If the combine is equipped with an additional safety master power switch, turn this to the Power OFF position.

0.8 Block Wheels

0.8.1 Park the combine on level ground.

Always engage the park brake and block the combine wheels prior to working to prevent the combine from moving.



0.9 Practice Safe Maintenance

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

Never lubricate, service, or adjust Seed Control Unit while it is moving. Keep hands, feet and clothing away 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 Seed Control Unit.



0.10 Guards and Shields

0.10.1 Keep guards and shields in place at all times. Ensure that they are serviceable and maintained correctly.



0.11 Avoid Contact With Moving Parts

0.11.1 Keep hands, feet and clothing away from power driven parts. Never clean, lubricate or adjust Seed Control Unit when it is running.



0.12 Avoid High-Pressure Fluids



0.12.1 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.

0.13 Dispose of Waste Properly



0.13.1 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.

0.14 Use Proper Lifting Equipment



0.14.1 Lifting heavy components incorrectly can cause severe injury or Seed Control Unit damage.

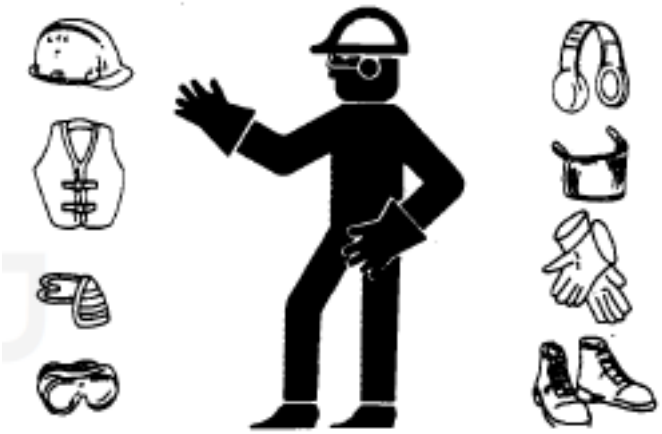
Follow recommended procedure for removal and installation of components in the manual.

Ensure lifting equipment is rated for the job

Ensure operator is appropriately licensed to operate lifting equipment

0.15 Personal Protective Equipment (PPE)

0.15.1 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. Wear close fitting clothing and safety equipment appropriate for the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

0.16 Sound Level

0.16.1 This product produces sound pressure levels in excess of 90 dB within 10m of discharge area.



Hearing protection is required!



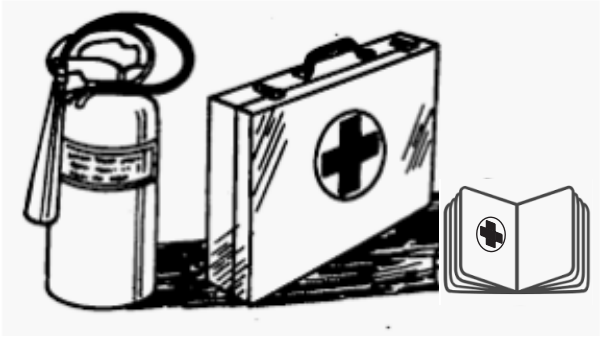
Interference with speech communication, acoustic signals is possible.

0.17 Prepare for Emergencies

0.17.1 Be prepared if a fire starts.

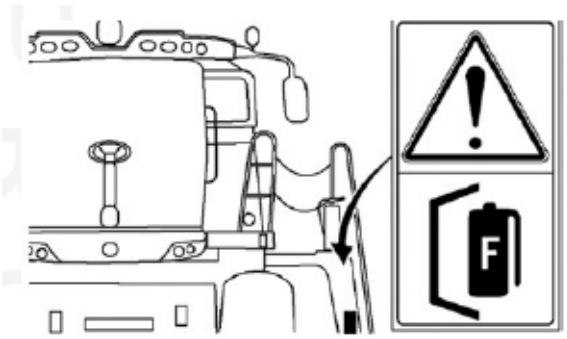
Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.



0.18 Fire Extinguisher

0.18.1 A 6 kg (15 lb) general-purpose fire extinguisher meeting national certification requirements must be installed on left side of operator's platform.



Maintain fire extinguisher to keep it in operating condition.

Make sure that the fire extinguisher is always ready for use. Refer to the fire extingisher's manual for instructions on how to operate it. Once extinguisher is operated - no matter how long - it must be recharged.

Keep the engine clean and free of dust, chaff and straw to prevent the possibility of fire.

0.19 Remove Accumulated Crop Debris



0.19.1 The build up of chaff and crop debris in the engine compartment, on the engine, near bearings and moving parts is a fire hazard. Check and clean these areas frequently.

0.20 In the Event of Fire

0.20.1 Stop work immediately at first sign of fire. This may be the smell of smoke or the sight of smoke or flames. Get off the machine immediately and move away from the fire.
DO NOT RETURN TO THE MACHINE OR FIRE!



CAUTION: AVOID PERSONAL INJURY!
If a fire is too far advanced, do not try to extinguish it. Call the fire department! DO NOT RETURN TO THE FIRE! The number one priority is safety. Always put the safety of the operator and bystanders first.

If a fire can be safely extinguished, proceed carefully and follow these guidlines:

1. Remove fire extinguisher from bracket and carry it to the area of fire.
2. Approach area of fire with your back to the wind.
3. Release the locking mechanism on fire extinguisher to allow discharge.
4. Hold extinguisher upright, pointing nozzle away from you and aim hose at base of the flames.
5. Squeeze the lever slowly and evenly to discharge fire extinguisher.
6. Move extinguisher nozzle side to side to cover the source of the fire evenly with extinguishing agent.

0.21 Safety Decals

Pictorial Safety Signs

At several important places on this machine, safety signs are affixed intending to signify potential danger. The hazard in identified by a pictorial in a warning triangle. An adjacent pictorial provides information on how to avoid personal injury. These safety signs and a brief explanatory text follow.

Hand Injury / Rotate Danger
RP1089
Risk of injury caused by rotating parts.



Projectile Hazard / Stand Clear
RP872
Stay clear of these components when the engine is running.



Caution / Check Service Manual
RP873
This operator's manual contains all important information necessary for safe machine operation. Carefully observe all safety rules to avoid accidents.



Keep Hands out of Belt Area / Rotate Danger
RP874
Do not touch any moving parts. Wait until all moving parts have stopped.



Kickback Hazard / Stand Clear
RP1086
Avoid personal injury. Kickback hazard when removing access panel.



Caution / Hearing Protection Required
RP1090
Use hearing protection whenever operating the machine



0.22 Information Decals

Redekop MAV Straw Chopper Serial Number Plate

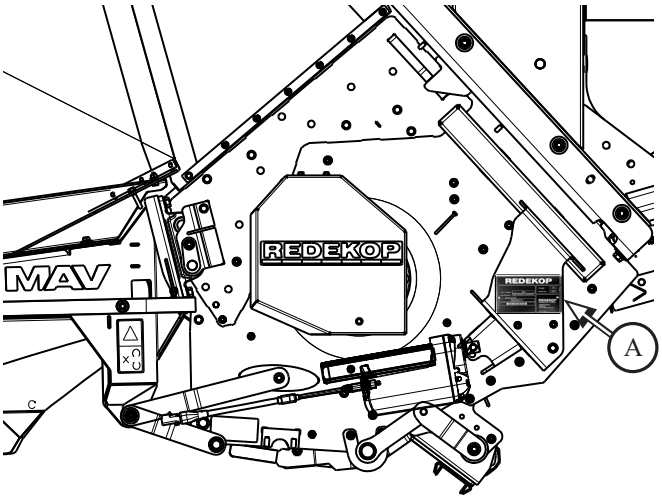


Grease Every 50 Hours
RP1092



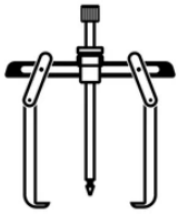
0.23 Serial Number

1. Redekop MAV Chopper serial number (**A**):
- located on the chopper sidewall, non-drive side



0.24 Special Tools Required

Gear puller for the gearbox and sheave.



Large torque wrench for retorquing the gearbox onto the MAV rotor shaft with a 46mm socket



T20 Torx bit
- required for section 3.1 and 4.1 speed sensor removal and installation



1 OEM Chopper and Tailboard Removal

1.1 OEM chopper and tailboard removal

See OEM chopper and tailboard removal manual CD0356-01 for removal procedure to install new MAV chopper

2 MAV Chopper Installation

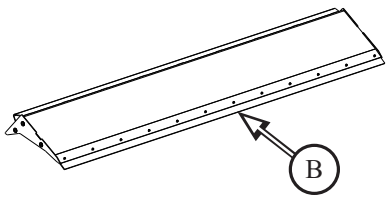
2.1 MAV Chopper Modifications for Combine Specific Residue Package

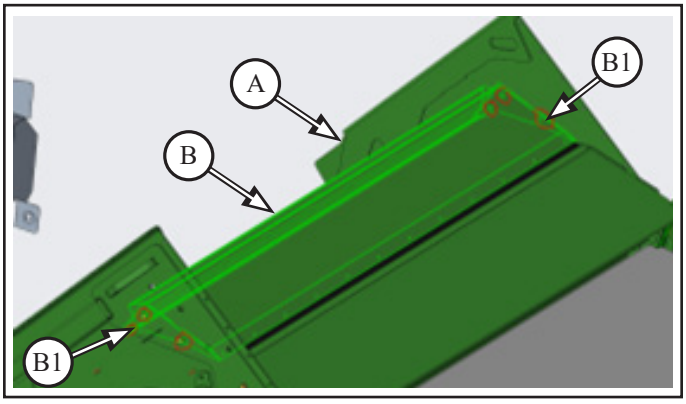
2.1.1 X9 without a Windrow Door

- no chopper modifications requred

2.1.2 X9 with a Windrow Door

2.1.2.1 Remove forward upper panel (**B**) from MAV chopper (**A**)
- not to be reused

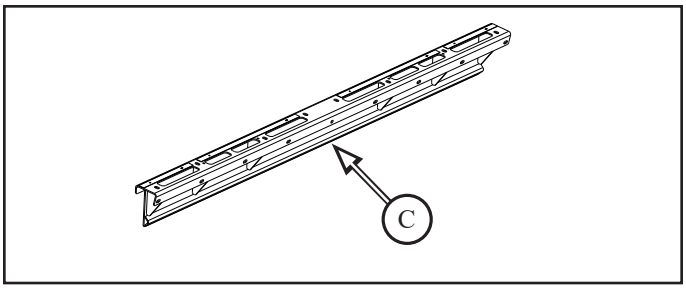




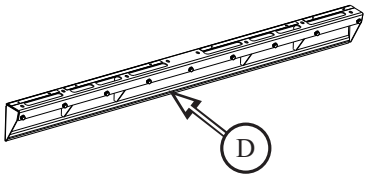
2.2 Backfeed Deflector Replacement - X9 with a Windrow Door

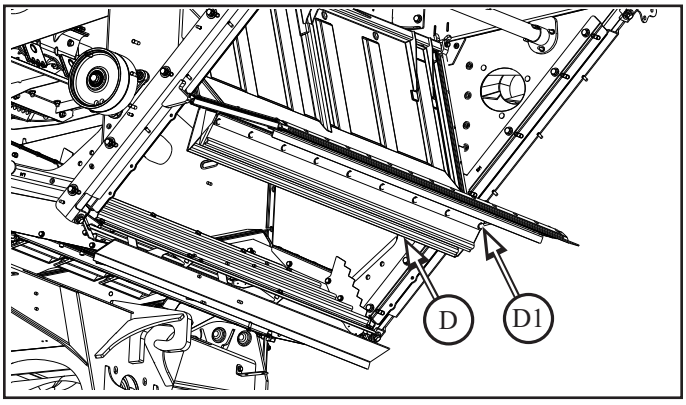
Parts List:

CD1632B Backfeed Deflector (**C**) Qty 1

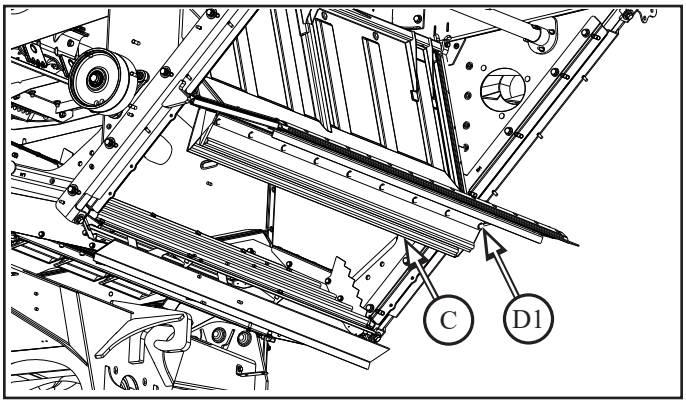


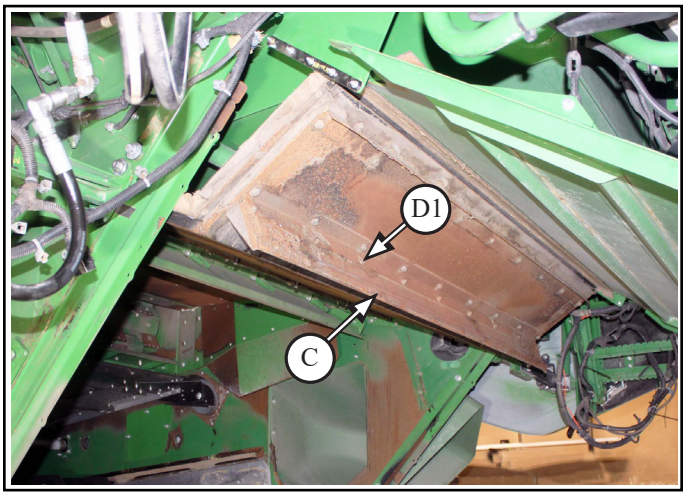
2.2.1 Remove OEM backfeed deflector (**D**) from the premium door on combine
- not to be reused
- mounting hardware (**D1**) x9 to be reused





2.2.2 Install new backfeed deflector (**C**) onto premium door on combine in place of the one removed in previous step, with:
- reuse mounting hardware (**D1**) x9





2.3 Straw Chopper Drive

2.3.1 OEM 2 Speed Gearbox Removal

Note:
XFC = Extra Fine Cut Chopper
FC = Fine Cut Chopper

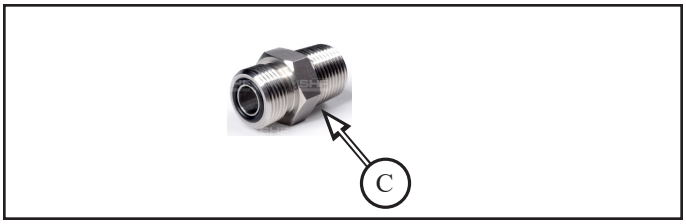
- If SCU is being installed, gearbox will not be need to be removed from combine, hydraulic line removal still required

- if combine is XFC, chopper drive sheave will be removed from gearbox and reused

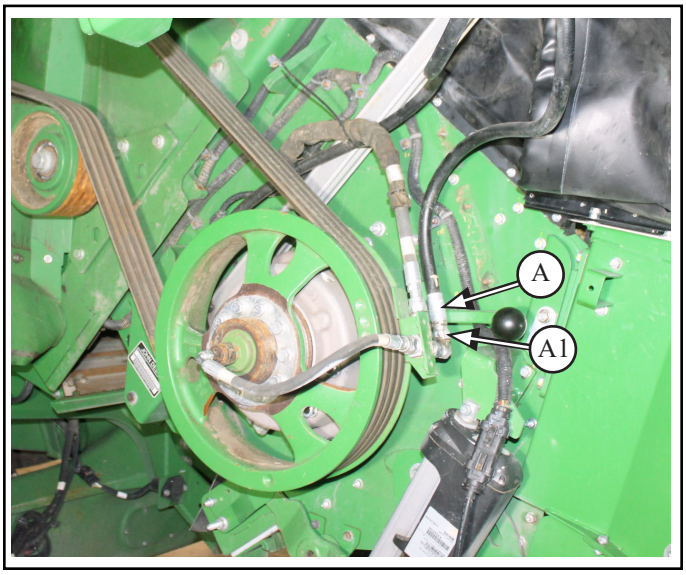
- if combine is FC, kit #340-116 will be required to be installed. Instructions are in Appendix 7.1

Parts List:
H28-0808 Fit Hyd Str 08 MORFS - 08 MORFS (**C**) Qty 1

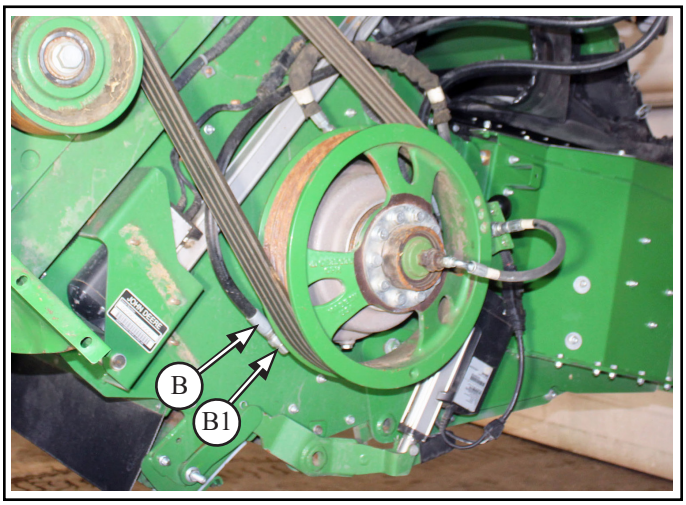
CD1094S Hardware Bag



2.3.1.1 Disconnect hydraulic hose (**A**)
- cap disconnected fitting (**A1**) on chopper with plastic cap from new hydraulic fitting (**C**)
- to be reinstalled

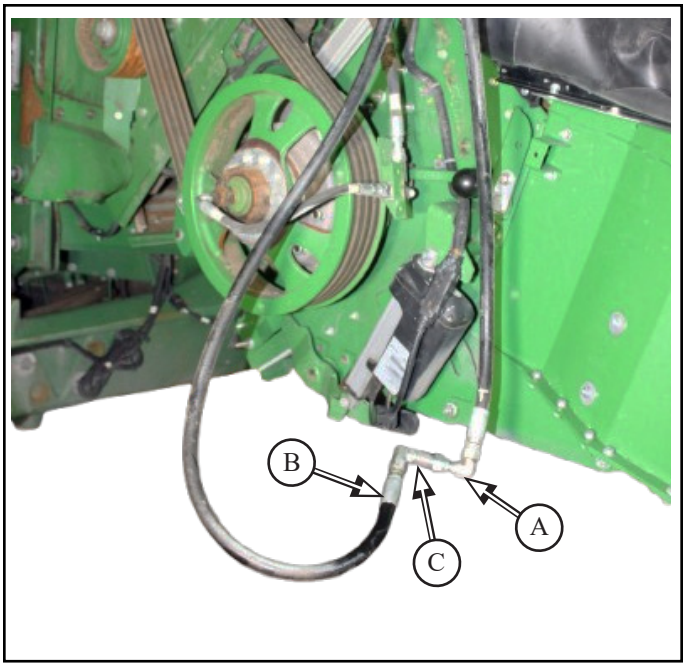


2.3.1.2 Disconnect hydraulic hose (**B**)
- cap disconnected fitting (**B1**) on chopper with plastic cap from new hydraulic fitting (**C**)
- to be reinstalled



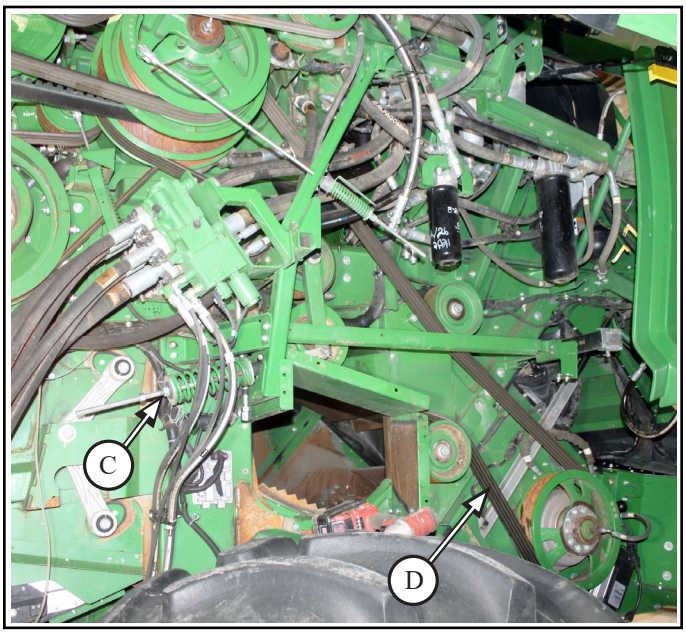
2.3.1.3 Connect hydraulic hoses (**A**) and (**B**) together with supplied connector fitting (**C**)

- use plastic caps off of fitting to seal disconnected fittings on chopper gearbox
- temporary



2.3.1.3.1 Tie hydraulic lines (**A** & **B**) up and out of the way
- temporary
- if installing a MAV Chopper with an SCU, these hydraulics can be tucked away and not reused

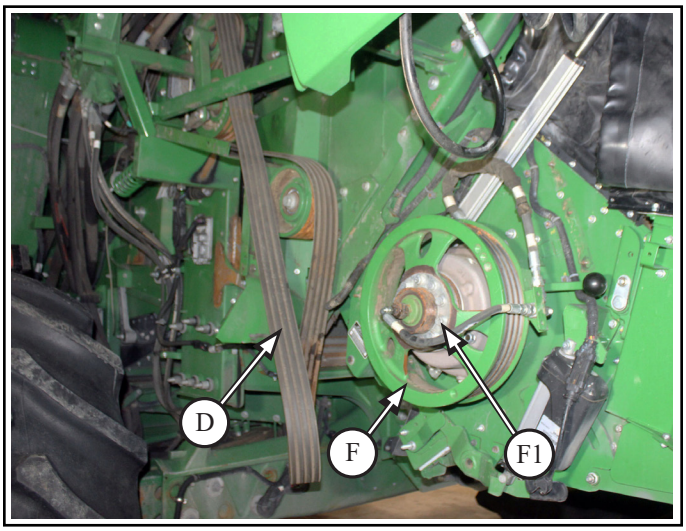
2.3.1.4 Loosen belt tensioner (**C**) to loosen drive belt (**D**)



2.3.1.5 Remove drive belt (**D**) from sheave (**F**)

2.3.1.6 If combine is XFC with an SCU - Remove sheave (**F**) from chopper
- to be reinstalled on new hub
- hardware (**F1**) to be reused

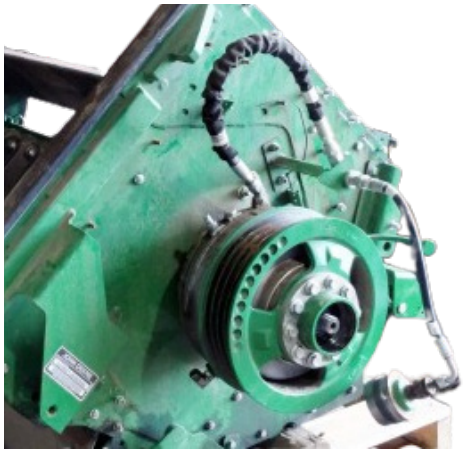
XFC - No change to sheave
FC - Change to sheave
- Drive Kit #340-116 required

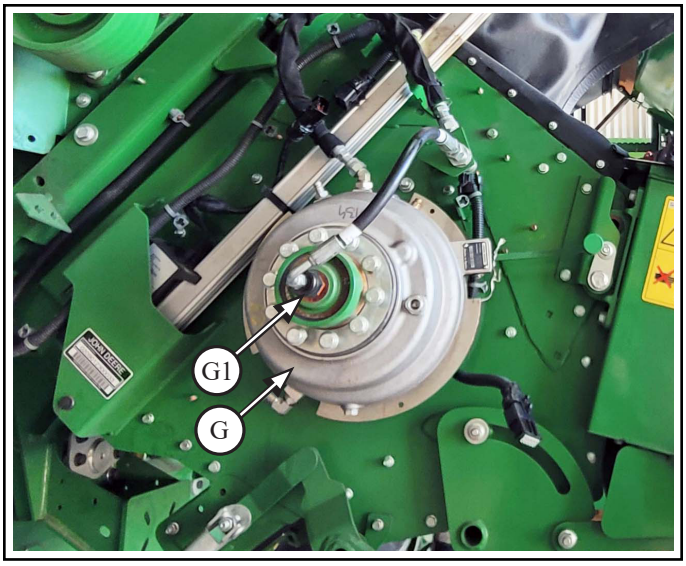


2.3.1.7 Removing OEM 2 speed gearbox (**G**) from OEM chopper, entails:

- removal of outer cap snapring
- removal of the outer cap
- removal of M30 locknut (46mm socket required)
- the use of a crosshead puller to remove the gearbox

- to be reinstalled on new chopper





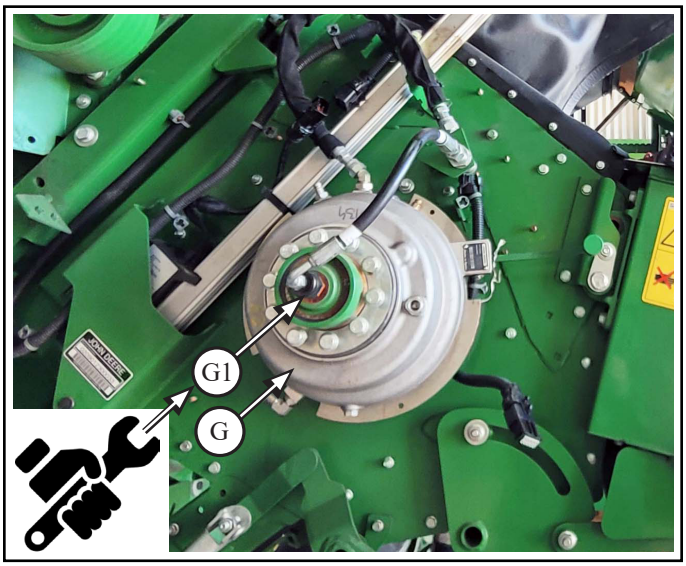
2.3.2 OEM 2 Speed Gearbox Installation

2.3.2.1 Install OEM 2 speed gearbox (**G**) to new chopper, with:

- reuse mounting hardware:
  - M30 locknut (**G1**) (follow torque procedure)
  - outer cap
  - outer cap snapring

Torque Procedure:

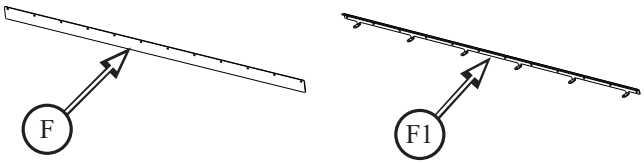
- Tighten nut to 100 NM (74 ft*lbs) +-20%
- Turn gearcase 4 full rotations CW in Neutral
- Retighten to 250 NM (184 ft*lbs) +-20%
- Turn gearcase 4 full rotations CW in Neutral
- Retighten to 400 NM (295 ft*lbs) +-20%

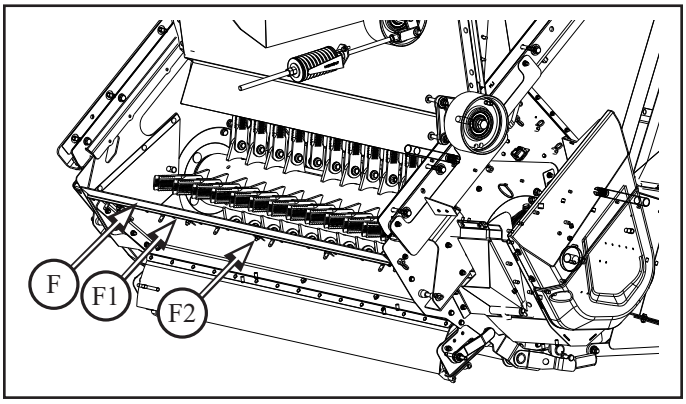


2.4 MAV Chopper Modifications - without SCU - if installing with an SCU, skip this section

2.4.1 Front OEM Chopper Floor Seal Relocation

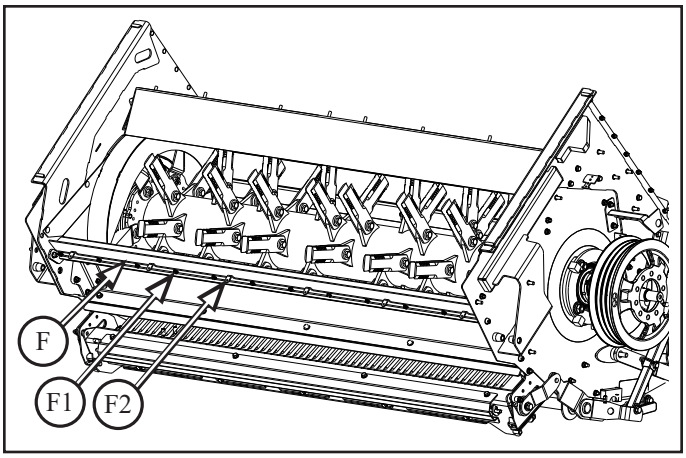
2.4.1.1 Remove front chopper floor seal (**F**) and mounting bracket (**F1**) from OEM chopper
- to be reinstalled onto new chopper
- mounting hardware (**F2**) x12 not to be reused





2.4.1.2 Install front chopper floor seal (**F**) and mounting bracket (**F1**) from OEM chopper to new chopper, with:
- M6 x 16 round head bolt and flange nut (**F2**) x12 (found in **CD1667S hardware bag**)

- ensure placement is the same as located on OEM chopper to align with sieve extension when chopper is lowered

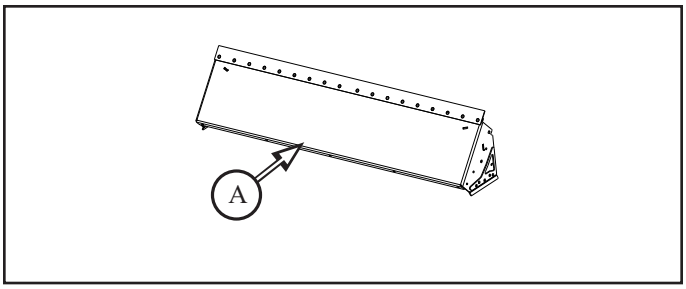


2.5 MAV Chopper Floor Replacement - with SCU
- easier to complete this step prior to installing MAV Chopper
- without SCU - skip this section

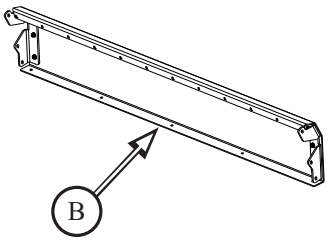
Parts List:
- located in SCU packaging

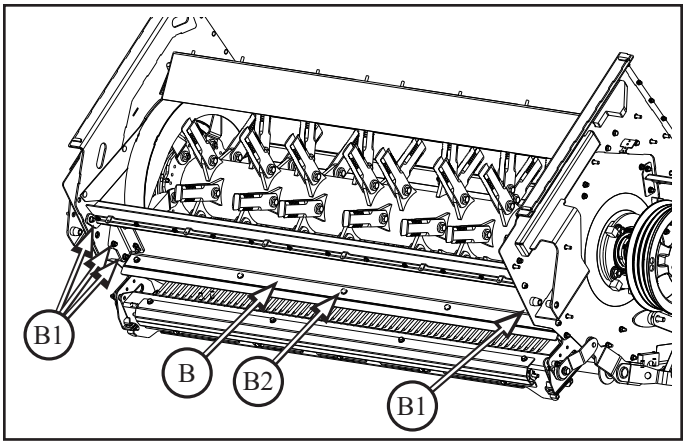
CD1168GA Straw Divider (**A**) Qty 1

- CD1168S Hardware Bag

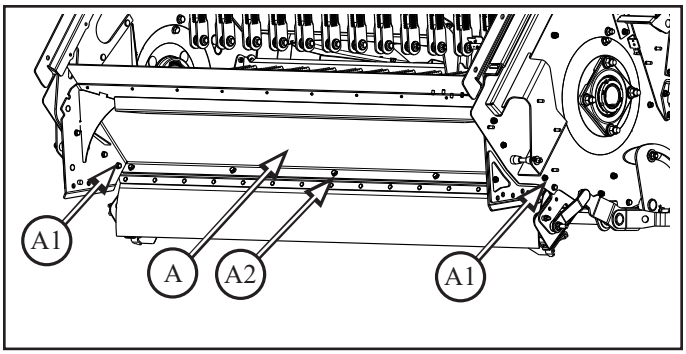


2.5.1 Remove chopper floor (**B**) from new MAV chopper
- not to be reused
- mounting hardware (**B1** & **B2**) will not be reused





2.5.2 Install new straw divider (**A**) to MAV chopper in place of floor just removed, with:
- M8 x 30 flange head bolt and flange nut (**A1**) x6
- M8 x 30 flange head bolt and flange nut (**A2**) x5



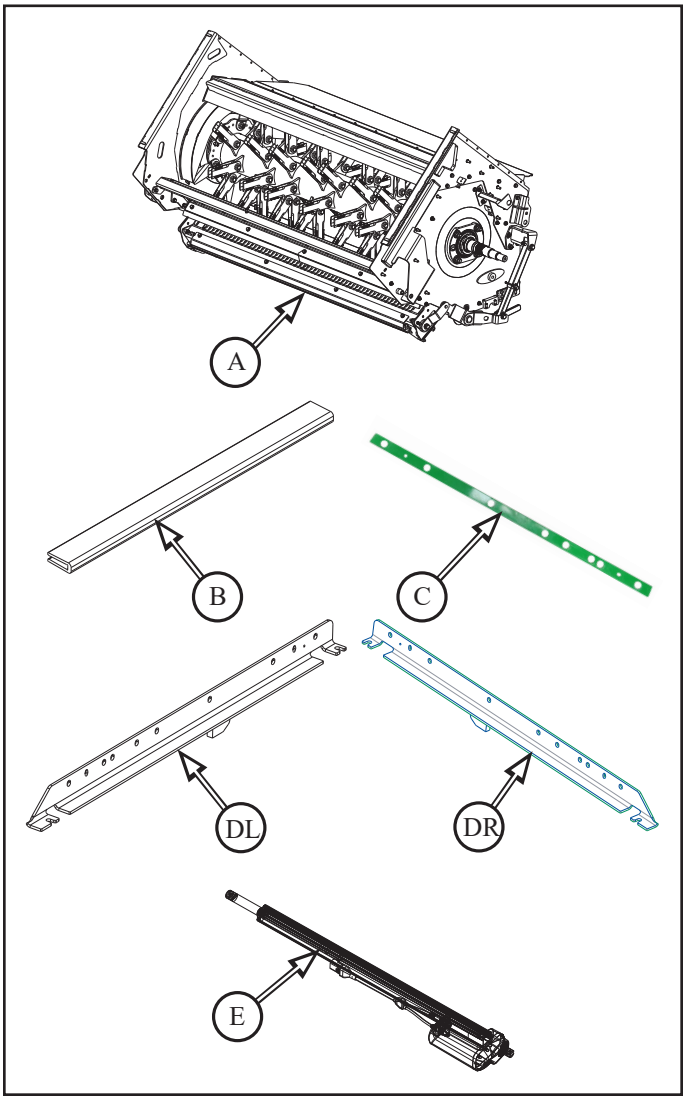
2.6 MAV Chopper Installation

Parts List:
CD1560GA X9 MAV Chopper (**A**)
Qty 1

CD1666S Hdw Bag

the following parts are not provided but are reused from the OEM combine:

OEM Slider JDX (**B**)	Qty 2
OEM Spacer Plate (**C**)	Qty 2
OEM Rail Chopper Slide Lt (**DL**)	Qty 1
OEM Rail Chopper Slide Lt (**DR**)	Qty 1
OEM Chopper Actuator (**E**)	Qty 2

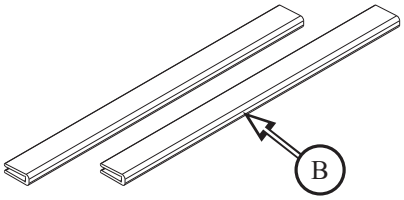


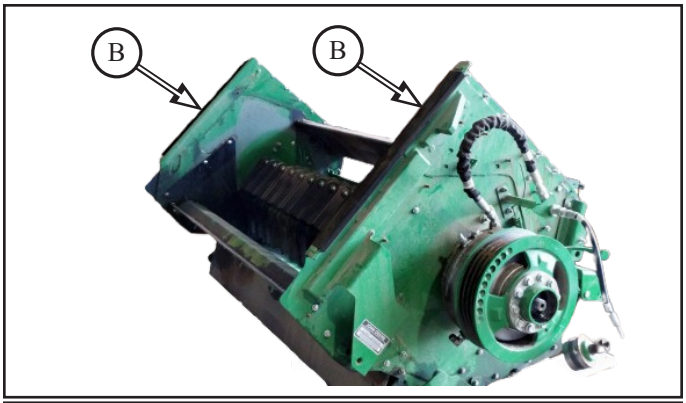


2.6.1 Ensure chopper actuators (**E**) are fully compressed before chopper installation

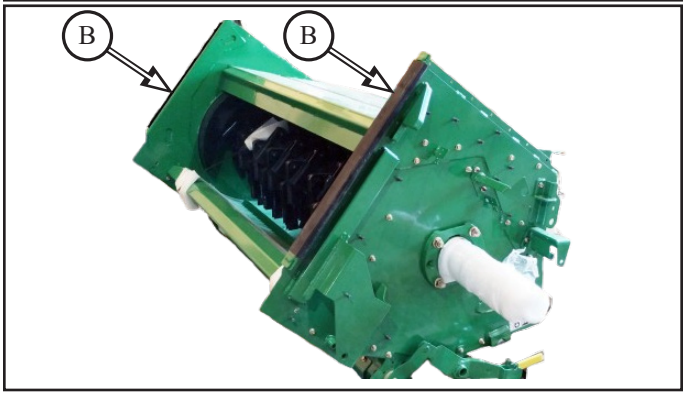
2.6.1.1 Reference section **6.1** for setting combine to chopper service mode on monitor to allow actuators to move

2.6.2 Remove chopper sliders (**B**) from OEM chopper
- to be reinstalled on MAV chopper

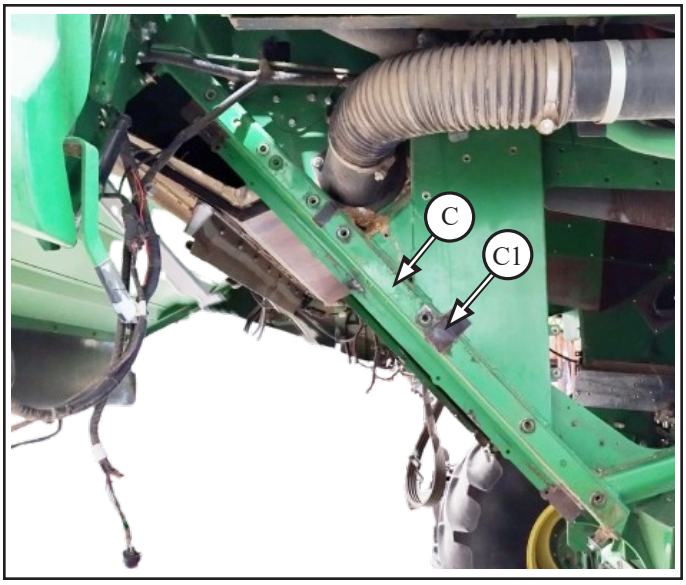




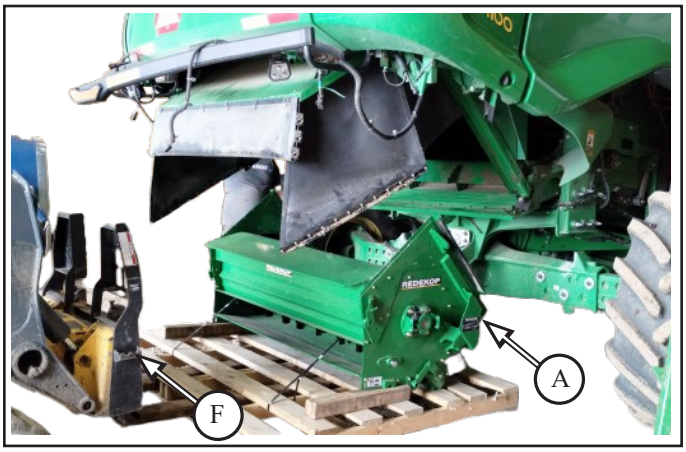
2.6.2.1 Install chopper sliders (**B**) from OEM chopper to new chopper side wall lip



2.6.3 Tape (**C1**) spacer plate (**C**) to combine channel where chopper will attach
- repeat for other side



2.6.4 Lift chopper (**A**) up into place with a forklift (**F**)
- ensure harnesses are not pinched

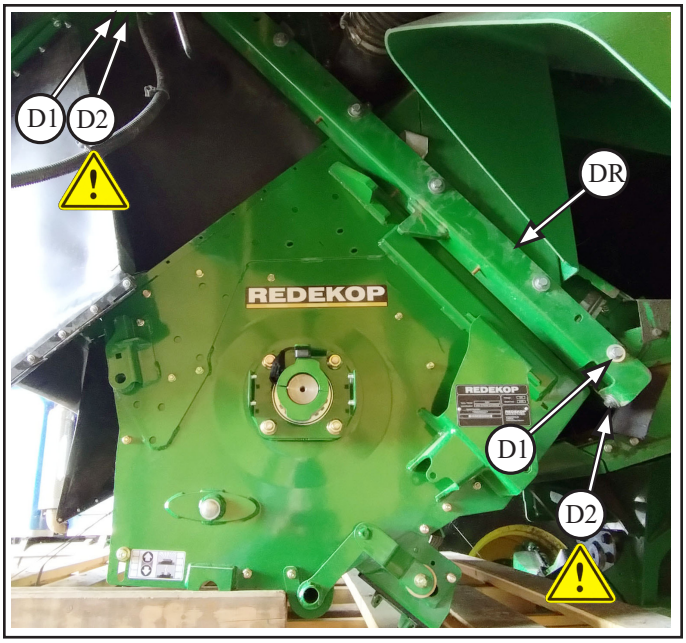


2.6.5 Install chopper slide rail (**DR**) under the plastic guide (**B**) on chopper. Ensure the spacer plate (**C**) is between slide rail and combine channel.

Important to install side rail hardware as directed below

Fasten with existing flatwashers and bolt hardware in the following order:

- hand tighten all hardware
- **D2** x2 tighten to specification
  - ensure rail is pulled tight against frame
- **D1** x2 tighten to specification
  - Verify that the chopper rail is flush to the side sheet
- Tighten all remaining hardware to specification

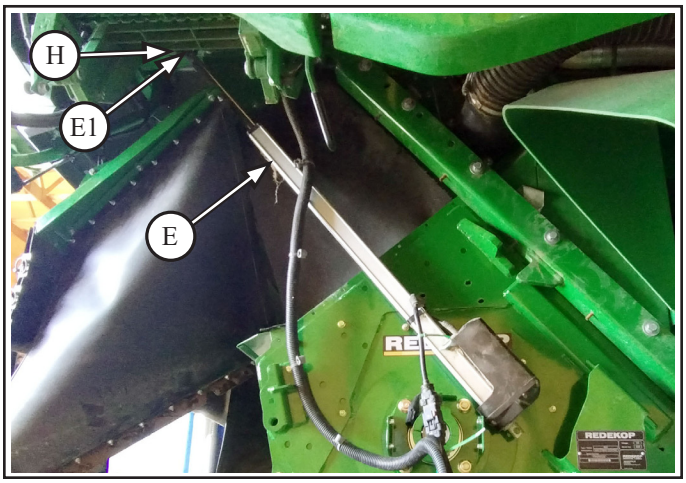


2.6.5.1 Repeat for left side

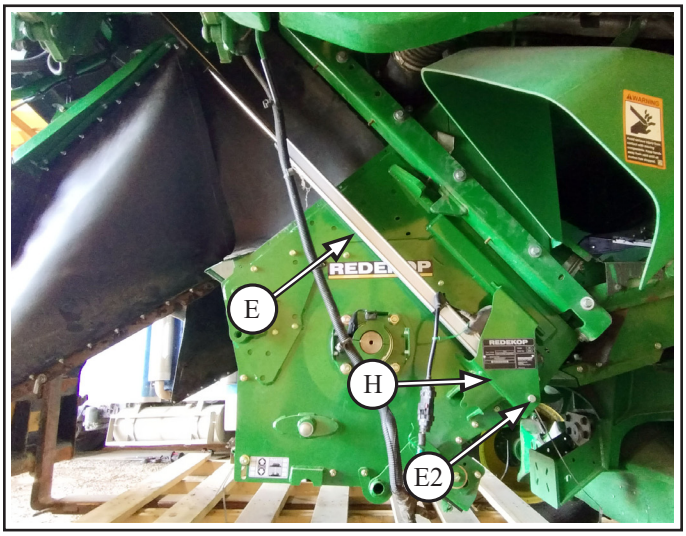
2.6.5.2 Remove forklift

2.6.6 Install OEM chopper actuator (**E**) into upper actuator mount (**H**) with motor end down, with:
- reuse mounting hardware (**E1**)

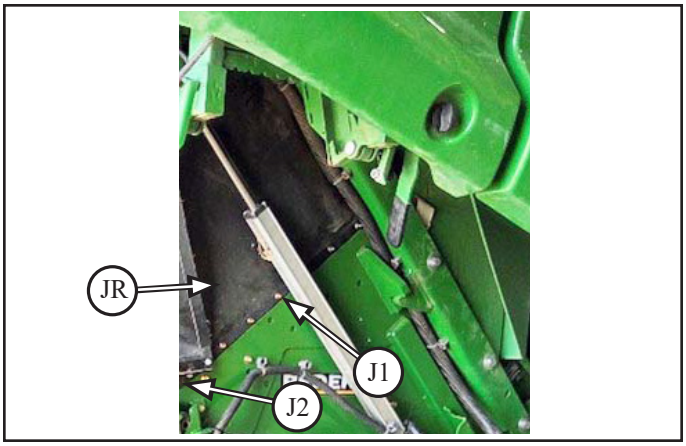
2.6.6.1 Repeat for other side



2.6.7 Extend actuator (**E**) in order it to align with hole (**E1**) in bottom mounting bracket (**H**), secure in place with:
- reuse mounting hardware (**E2**)
- both sides



2.6.8 Install bottom of side curtain (**JR**) onto chopper, with:
- M6 x 20 round head bolt and flange nut (**J1**) x6
- M6 x 20 flange head bolt (**J2**)
- both sides
    - located in CD1666S Hardware Bag

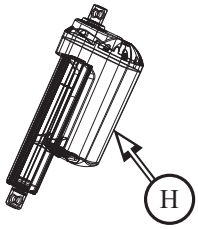


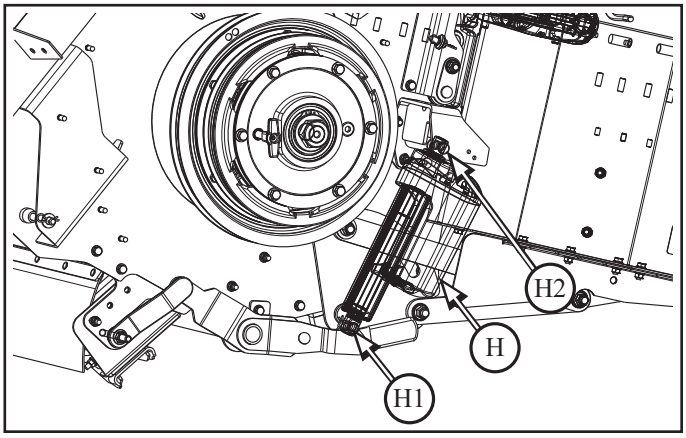
2.6.9 View with new chopper installed



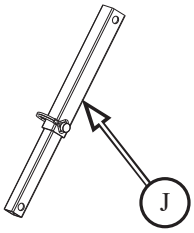
2.7 Actuated Knifebar ReInstallation
- Only if OEM Chopper has actuated knifebar option

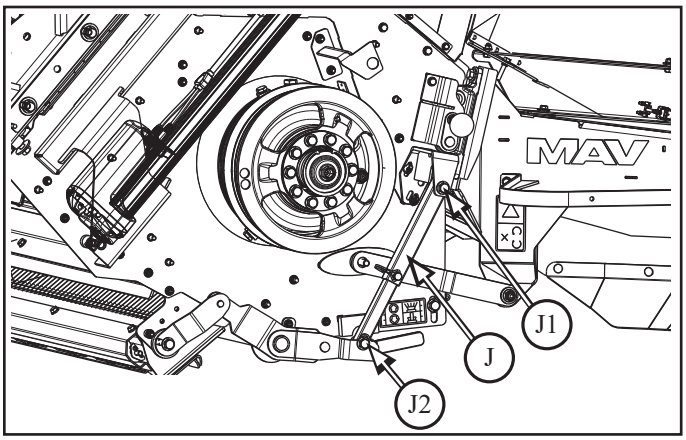
2.7.1 Remove the knifebar actuator (**H**) from OEM chopper
- to be reinstalled on new chopper
- mounting hardware (**H1**) to be reused
- mounting hardware (**H2**) will not be reused



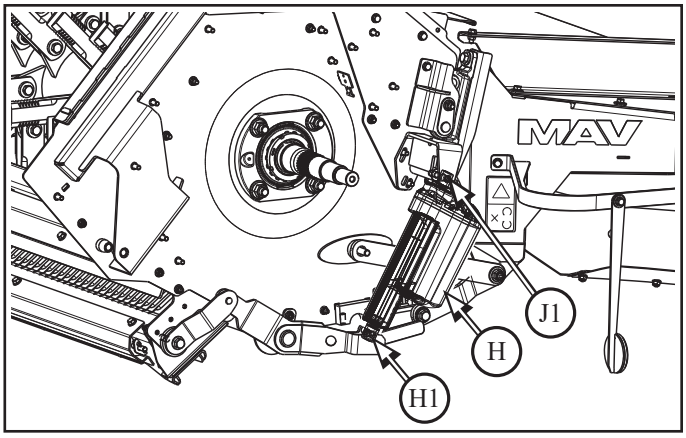


2.7.2 Remove the knifebar manual adjustment linkage (**J**) from new chopper
- not to be reused
- mounting hardware (**J1**) will be reused
- mounting hardware (**J2**) not to be reused





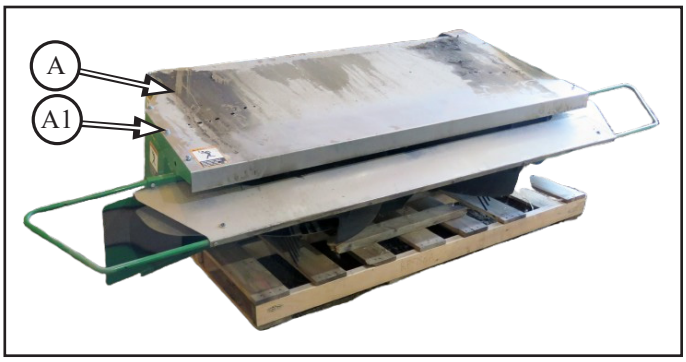
2.7.3 Install the OEM actuator (**H**) to new chopper, with:
- reuse mounting hardware (**J1**) for base of actuator
- reuse OEM mounting hardware (**H1**) for rod end of actuator



3 Tailboard Installation

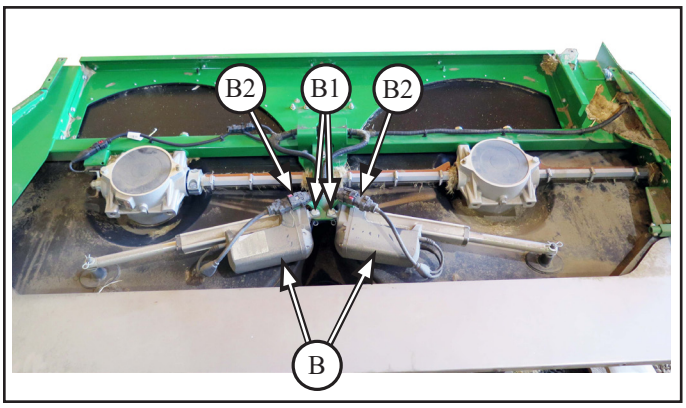
3.1 OEM Tailboard Parts Removal

3.1.1 Remove the top tailboard cover (**A**) from the OEM tailboard
- to be reinstalled onto tailboard once necessary parts have been removed
- mounting hardware (**A1**) to be reused to reinstall cover

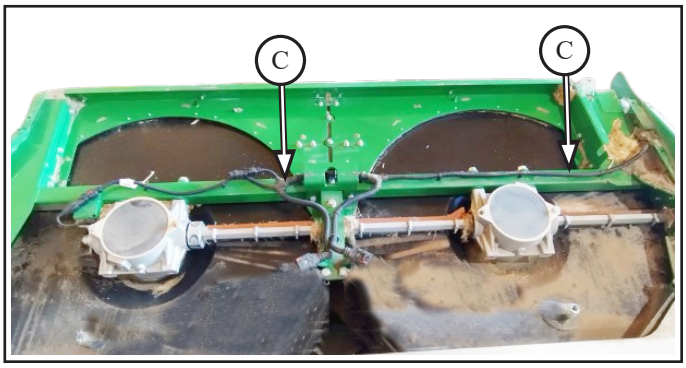


3.1.2 Disconnect connector (**B2**) x2 for tailboard fin adjustment actuator (**B**) x2

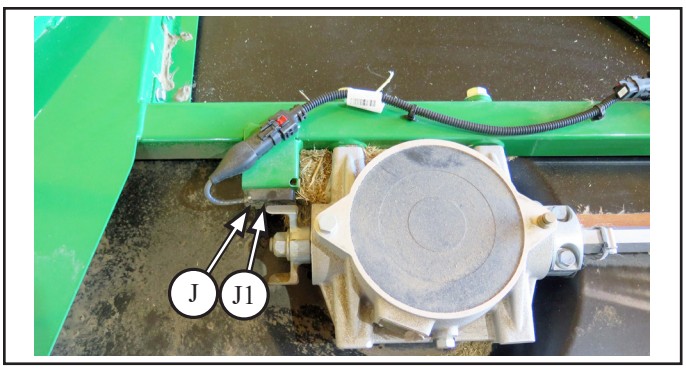
3.1.3 Remove tailboard fin adjustment actuator (**B**) x2 from OEM tailboard
- to be reinstalled on new tailboard
- mounting pins (**B1**) x2 for base to be reused



3.1.4 Remove tailboard adjustment actuator harness (**C**)
- to be reinstalled on new tailboard

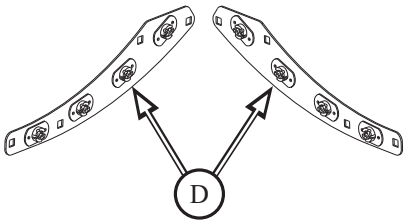


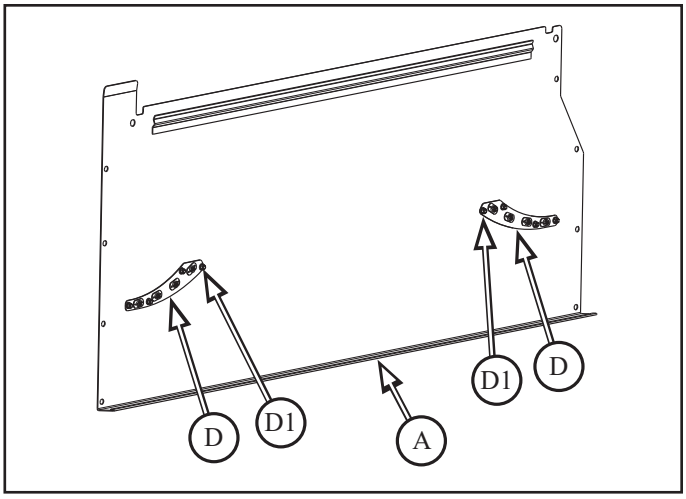
3.1.5 Remove speed sensor (**J**)
- use T20 Torx screw driver or bit for mounting hardware (**J1**)
- to be reinstalled on MAV chopper



3.1.6 If equipped with Windrow Door

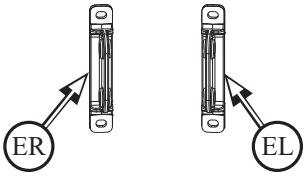
Remove curtain quick connect bracket (**D**) x2 from underside of OEM tailboard cover panel (**A**)
- to be installed on new tailboard cover panel
- mounting hardware (**D1**) x8 to be reused

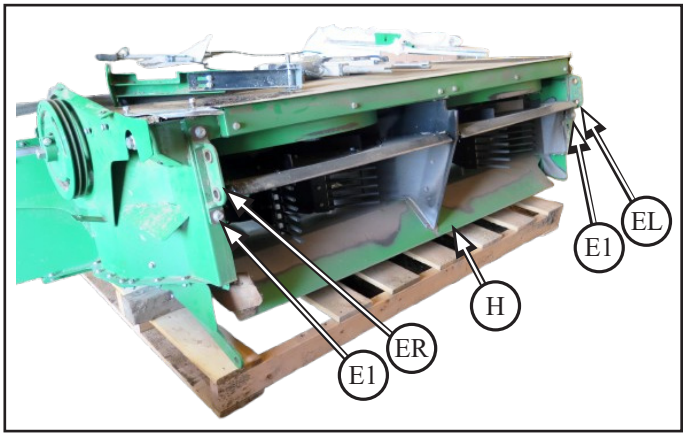




3.1.7 Remove tailboard cast pivot blocks (**EL** & **ER**) from front of OEM tailboard (**H**)
- to be reinstalled on new tailboard
- mounting hardware (**E1**) x4 will not be reused

- parts are identical, just need to be remounted correctly
- the flange is not centered, with offset towards the inside



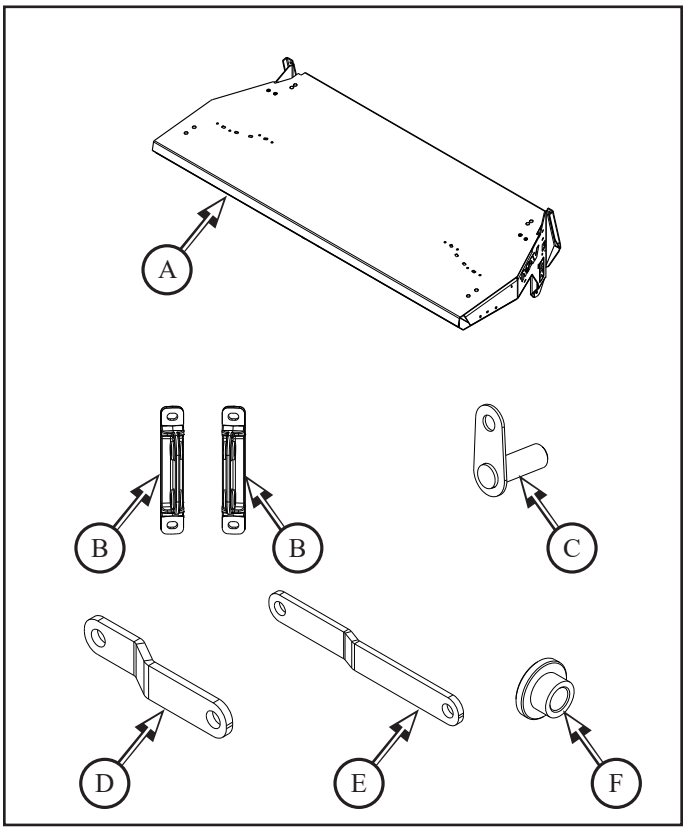


3.2 Tailboard Installation - with Actuated Tailboard

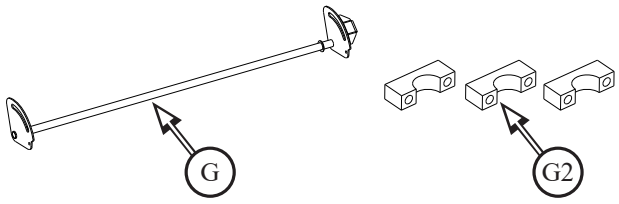
Parts List:

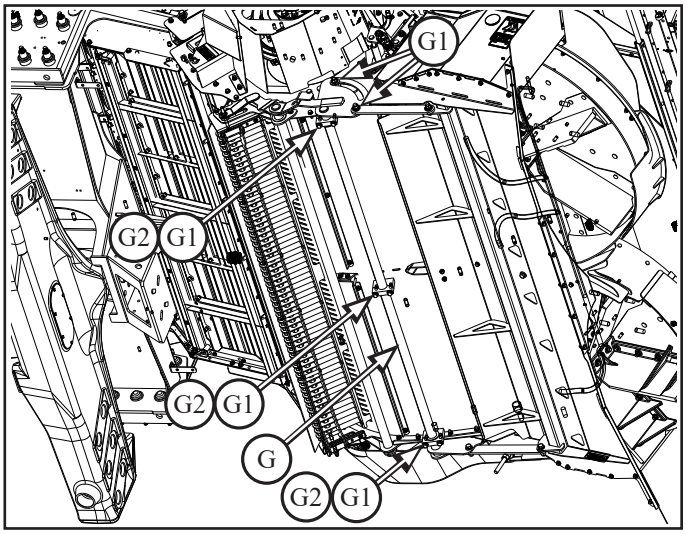
CD1561A	X9 MAV Tailboard Assy w/o Fins (**A**)	Qty 1
	OEM X9 TB Cast Pivot Block - Right (**B**)	Qty 2
CD996Z	Retaining Pin (**C**)	Qty 2
CD990G	Actuated TB Link (**D**)	Qty 2
CD993G	TB Link (**E**) - for non actuated	Qty 2
CD994Z	Bushing (**F**)	Qty 4

CD1561S Hardware Bag

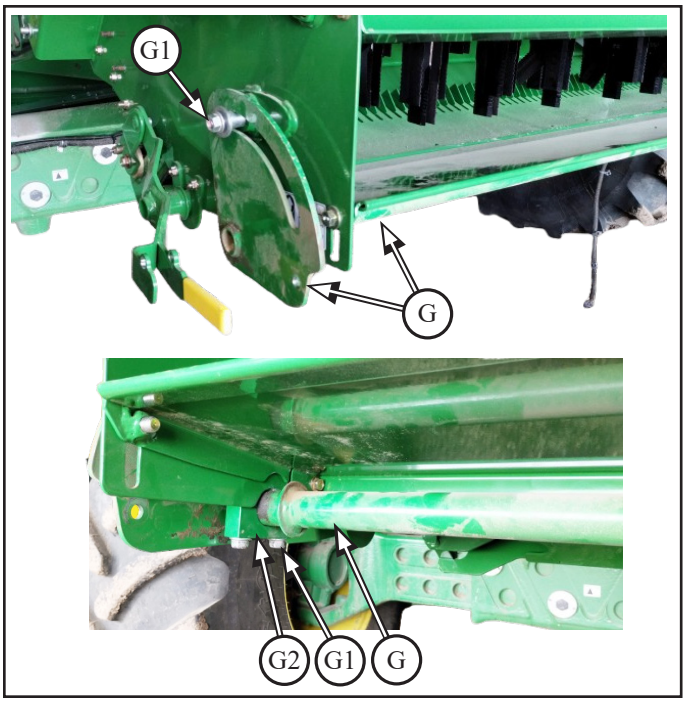


3.2.1 Remove the cross-rocker arm (**G**) from underneath OEM chopper and disconnect from linkages
- to be reinstalled on new chopper
- U-blocks (**G2**) and mounting hardware (**G1**) to be reused





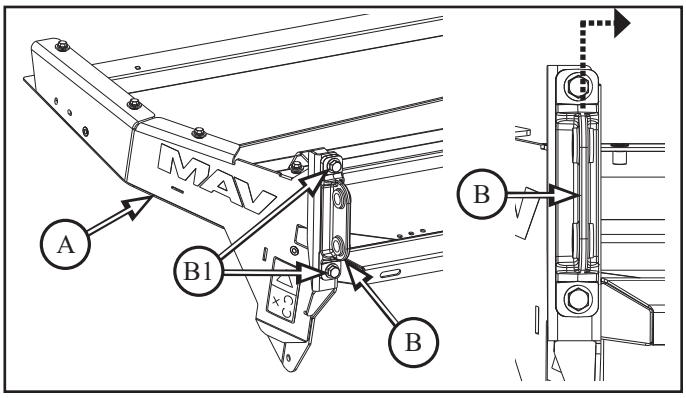
3.2.2 Install the cross-rocker arm (**G**) to underneath new chopper, with:
- reuse U-blocks (**G2**) and mounting hardware (**G1**)



3.2.3 Install tailboard cast pivot block (**B**) to right front of new tailboard (**A**), with:
- M12 x 35 flange head bolt and flange nut (**B1**) x2

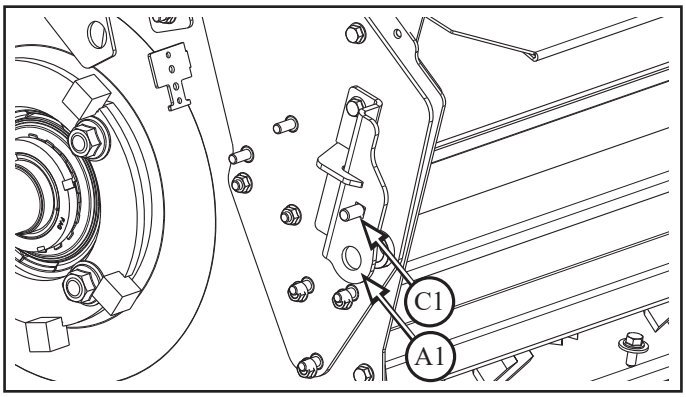
- **the flange is not centered, ensure the narrower offset is towards the inside**

3.2.3.1 Repeat for left side

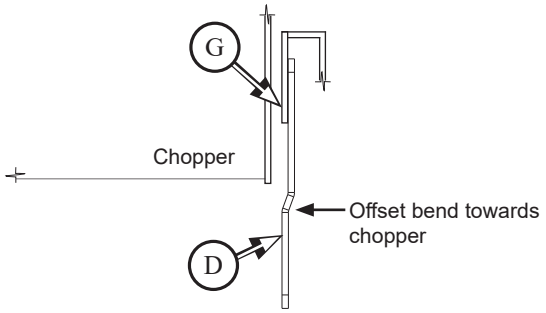


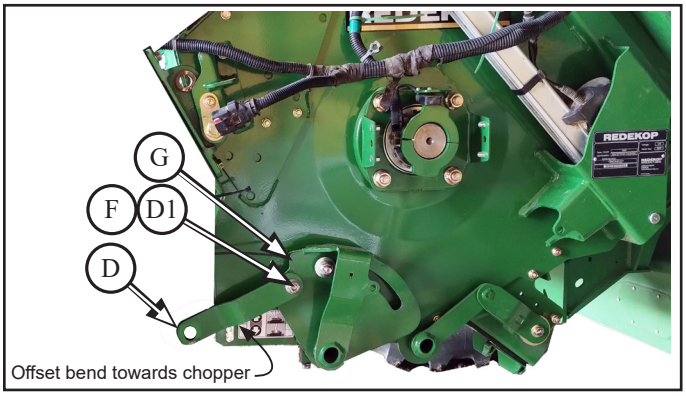
3.2.4 Insert M10 x 25 round head bolt (**C1**) for retaining the pin through inside of flange (**A1**) on chopper
- ensure head is on inside

3.2.4.1 Repeat for other side



3.2.5 Install actuated tailboard link (**D**) to cross-rocker arm (**G**), with:
- M12 x 40 flange head bolt, bushing (**F**) and flange nut (**D1**)
- ensure offset bend is inwards toward chopper
- both sides

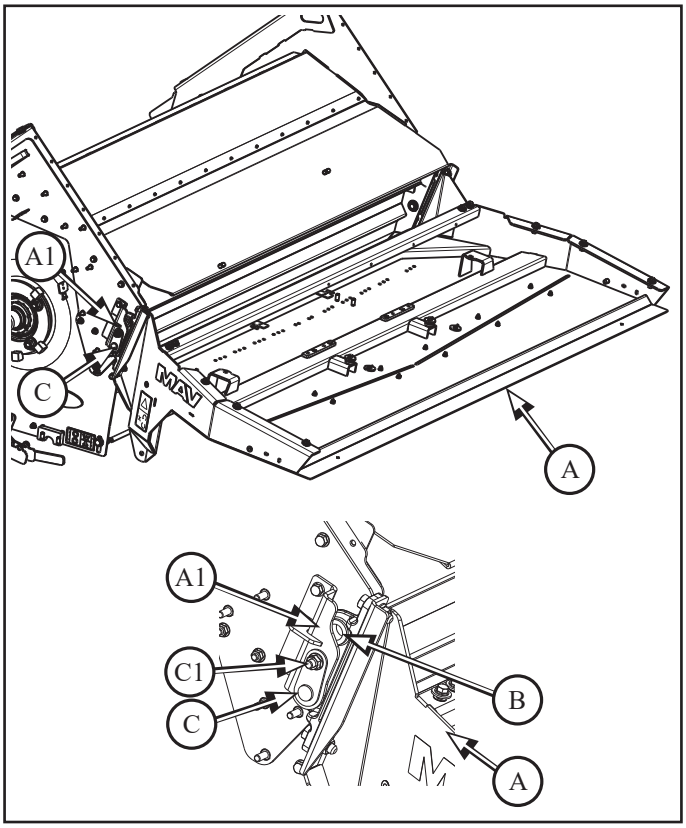




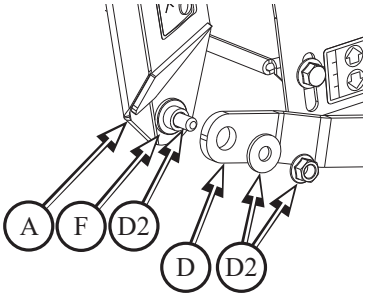
3.2.6 Install tailboard (**A**) to chopper

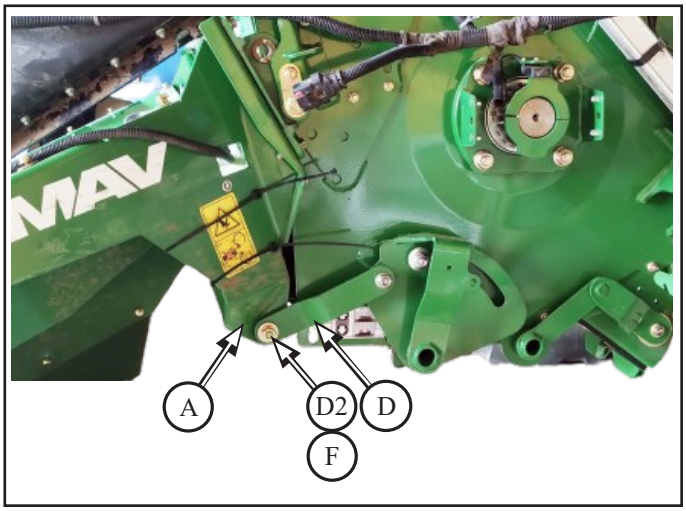
3.2.6.1 Slide cast pivot blocks (**B**) on tailboard into chopper flange (**A1**), in bottom hole, secure in place with:
- retaining pin (**C**) x2

3.2.6.2 Secure retaining pin (**C**) in place with:
- M10 flange nut onto bolt (**C1**) thru chopper flange (**A1**)
- both sides



3.2.7 Attach tailboard link (**D**) to tailboard (**A**), with:
- M12 x 40 flange head bolt, bushing (**F**), flange nut and flat washer (**D2**)
- head of bolt on inside of tailboard
- bushing (**F**) between tailboard and link
- flat washer backing flange nut
- both sides



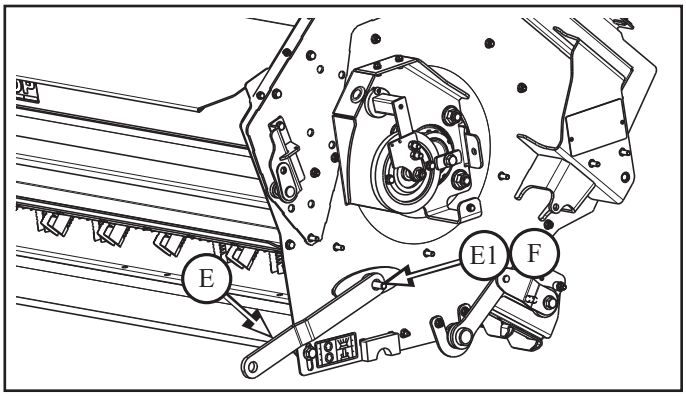


3.2.8 Install tailboard actuator (**B**) removed during disassembly to tabs (**A1 & G1**), with:
- reuse mounting hardware (**B1**) x2



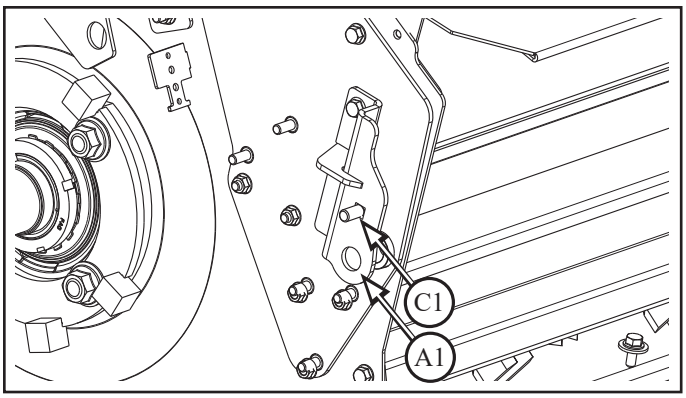
3.3 Tailboard Installation - with Non- Actuated Tailboard

3.3.1 Install non-actuated tailboard link (**E**) to chopper side wall, with:
- M12 x 55 round head bolt, bushing (**F**) and flange nut (**E1**)
  - head of bolt on inside of chopper
- both sides



3.3.2 Insert M10 x 25 round head bolt (**C1**) for retaining the pin through inside of flange (**A1**) on chopper
- ensure head is on inside

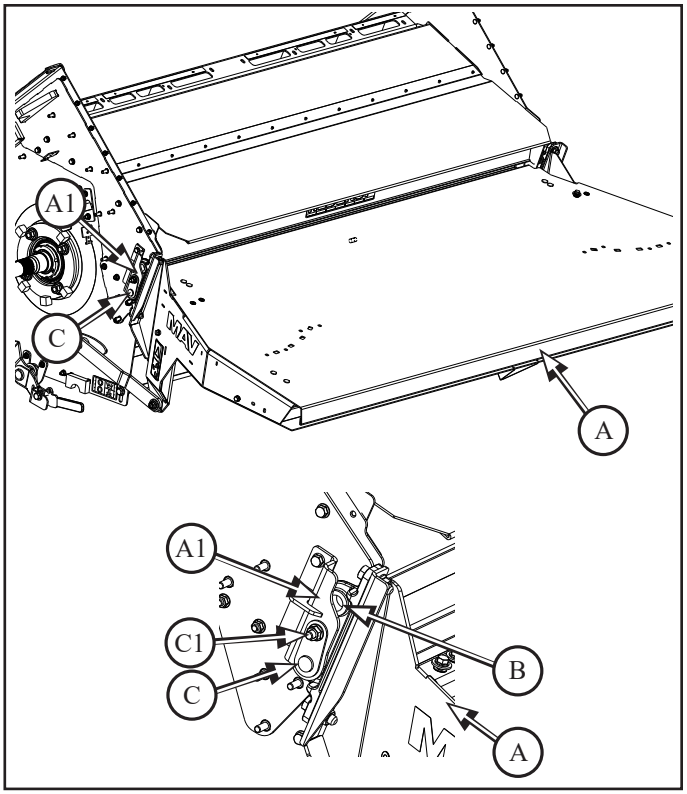
3.3.2.1 Repeat for other side



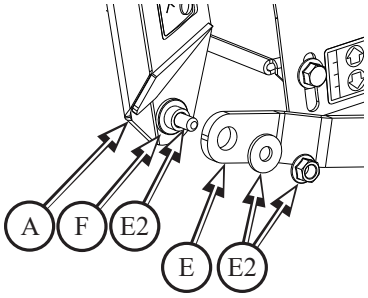
3.3.3 Install tailboard (**A**) to chopper

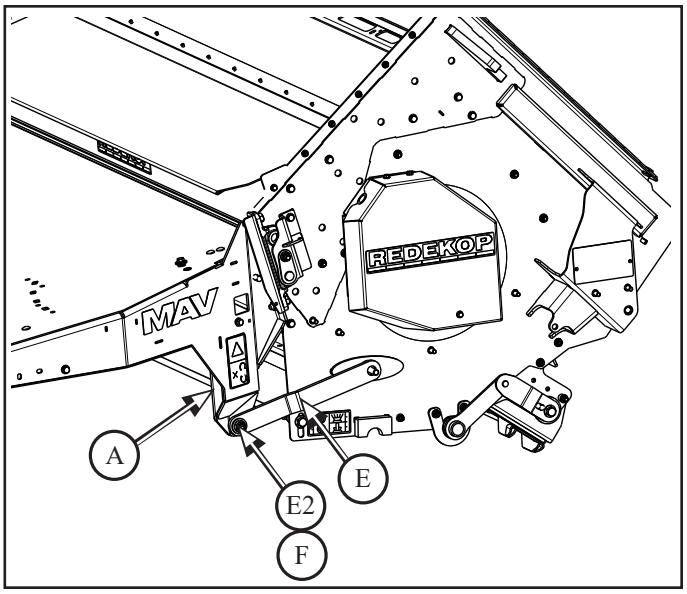
3.3.3.1 Slide cast pivot blocks (**B**) on tailboard into chopper flange (**A1**), in bottom hole, secure in place with:
- retaining pin (**C**) x2

3.3.3..2 Secure retaining pin (**C**) in place with:
- M10 flange nut onto bolt (**C1**) thru chopper flange (**A1**)



3.3.4 Attach tailboard links (**E**) to tailboard (**A**), with:
- M12 x 40 flange head bolt, bushing (**F**), flange nut and flat washer (**E2**)
- head of bolt on inside of tailboard
- bushing between tailboard and link
- flat washer backing flange nut
- both sides





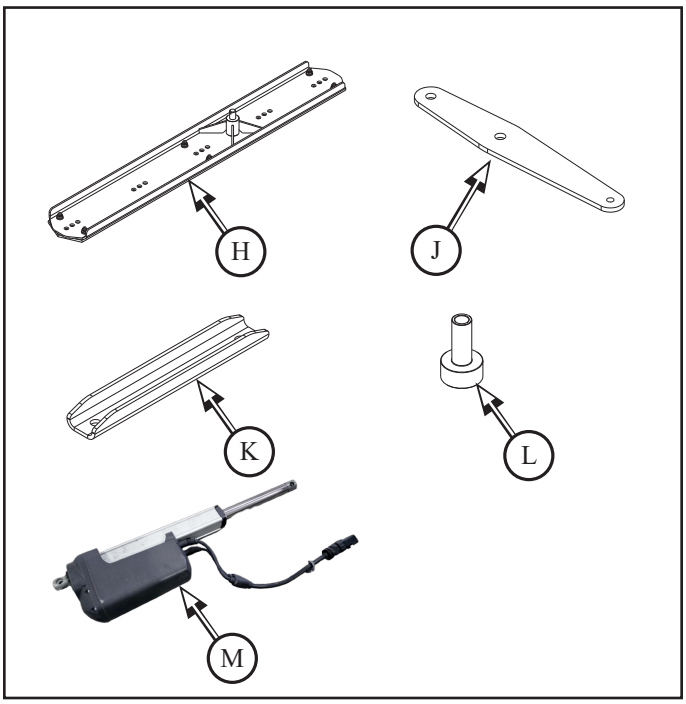
3.4 Tailboard Fin and Adjustment Installation

3.4.1 Tailboard Fin Adjustment Installation

Parts List:

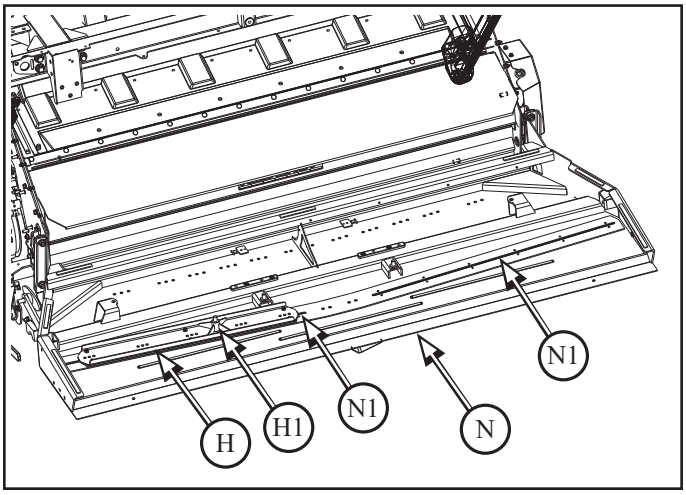
CD1597GA	Fin Adjustment Channel Assy (**H**)	Qty 2
CD1644G	Fin Adjustment Pivot Arm (**J**)	Qty 2
CD1643G	Channel Linkage Pivot (**K**)	Qty 2
CD1599Z	Pivot Bushing (**L**)	Qty 2
	OEM Actuator (**M**)	Qty 2

CD1598S Hardware Bag



3.4.1.1 Place fin adjustment channel assembly (**H**) x2 over slot (**N1**) x2 on top of tailboard (**N**)
- ensure pivot pin (**H1**) is towards the center of tailboard

Note: tailboard cover not shown for clarity



3.4.2 Tailboard Fin Installation

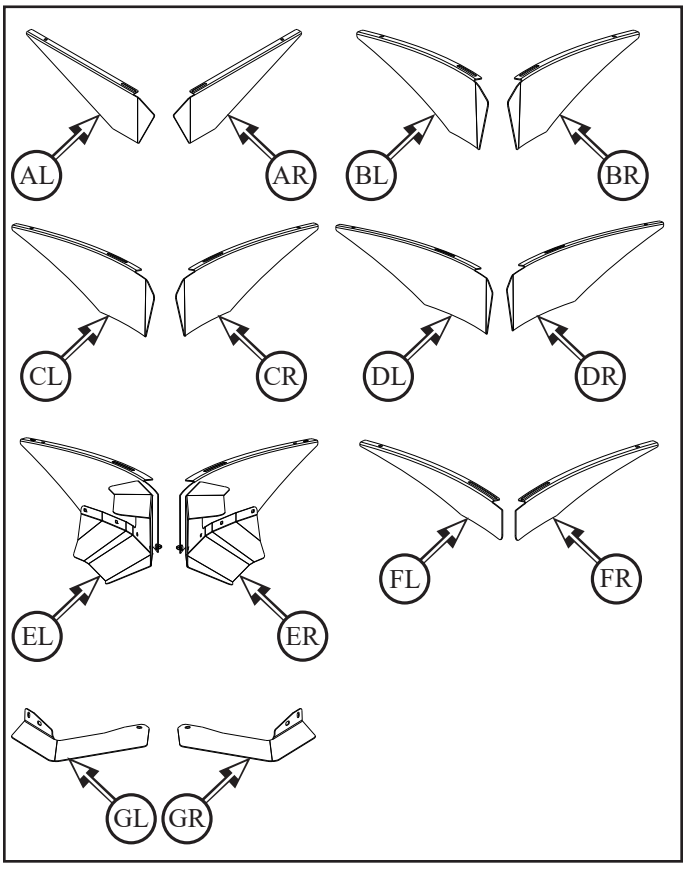
- Extra Wide Spread (15m / 50ft)

- if extra wide spread is not required, wide spread scooped fins have been supplied as an alternative, see section 3.4.3 for modification of (**EL** & **ER**) to the Wide Spread Fins

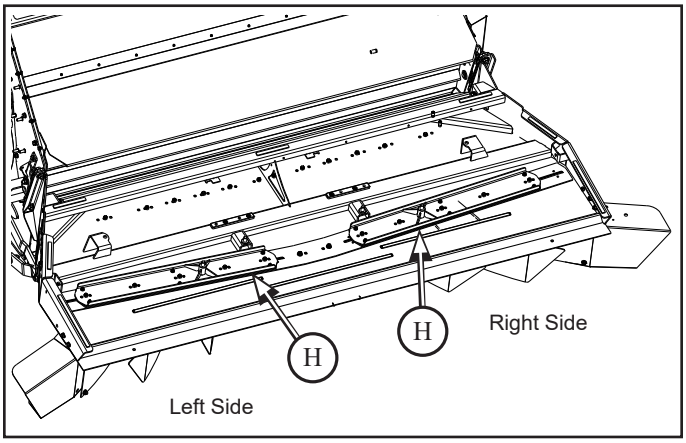
Parts List:

CD1578GL Fin Inner Lt (**AL**)	Qty 1
CD1578GR Fin Inner Rt (**AR**)	Qty 1
CD1579GL Fin Second Lt (**BL**)	Qty 1
CD1579GR Fin Second Rt (**BR**)	Qty 1
CD1592GL Fin Third Lt (**CL**)	Qty 1
CD1592GR Fin Third Rt (**CR**)	Qty 1
CD1593GL Fin Fourth Lt (**DL**)	Qty 1
CD1593GR Fin Fourth Rt (**DR**)	Qty 1
CD1594GAL Fin Extra Wide Spread Lt (**EL**)	Qty 1
CD1594GAR Fin Extra Wide Spread Rt (**ER**)	Qty 1
CD1596GL Fin Outer Lt (**FL**)	Qty 1
CD1596GR Fin Outer Rt (**FR**)	Qty 1
CG478GL Corner Extension Lt (**GL**)	Qty 1
CG478GR Corner Extension Rt (**GR**)	Qty 1

CD1578S Hardware Bag
CG478S Hardware Bag

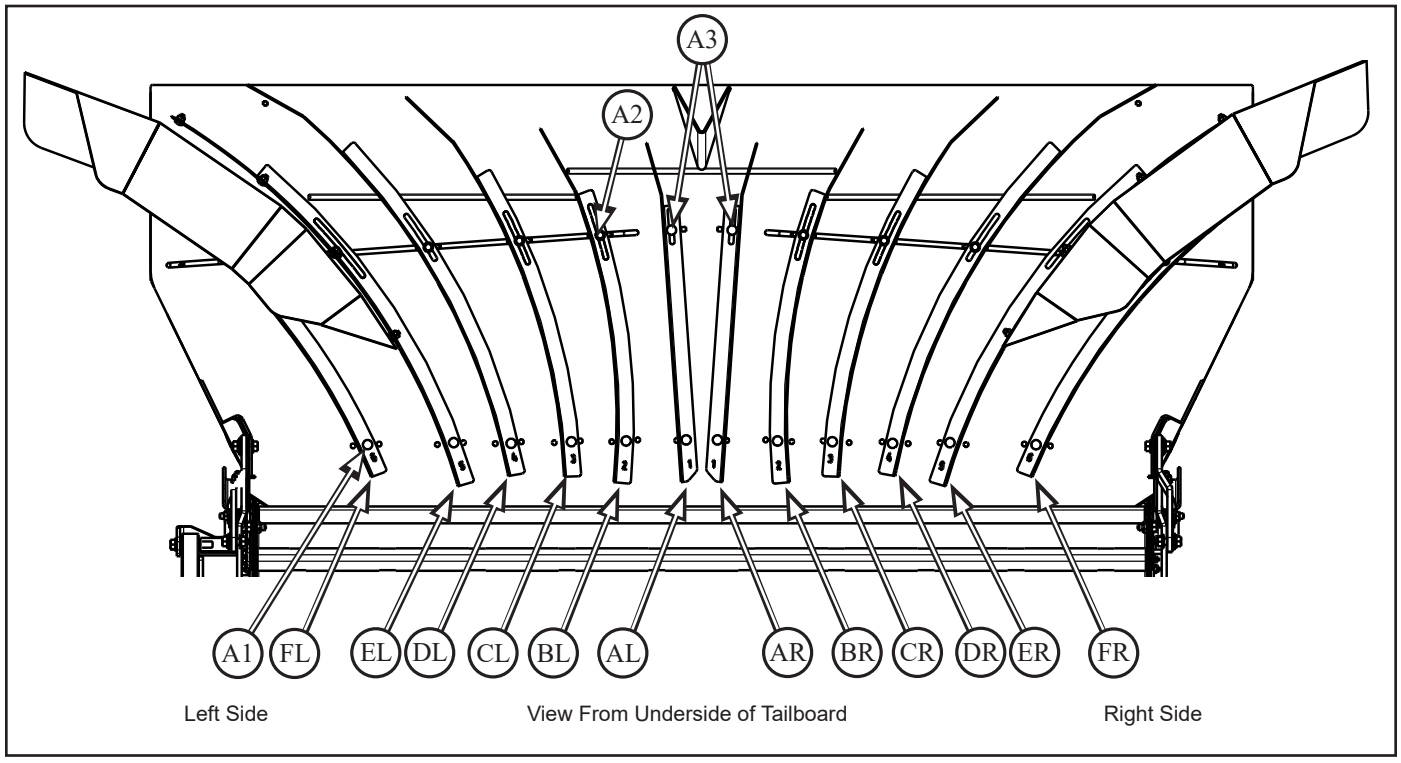


3.4.2.1 Install tailboard fins through middle set of mounting holes, as shown below, with:
- ensure head of bolt is on the underside of tailboard
- leave hardware loose at this stage



3.4.2.1.1 Install tailboard fins:
Front mount:
- M8 x 16 round head bolt and nylon locknut (**A1**) x12

Rear mount:
- M8 x 20 flange head bolt and nylon locknut (**A2**) x10
- through fin adjustment channel (**H**) except for 2 center fins (**AL** & **AR**)
- M8 x 20 round head bolt and flange nut (**A3**) x2



3.4.2.1.2 Center 2 fins **AL** & **AR** can be completely tightend down (**A1** & **A3**)

3.4.2.1.2 All other fins should be snugged (**A1** & **A2**) and then let off 1/4 turn to ensure they can slide without binding
- actuated motion will need to confirmed later in the installation

3.4.3 Wide Spread Fin Assembly

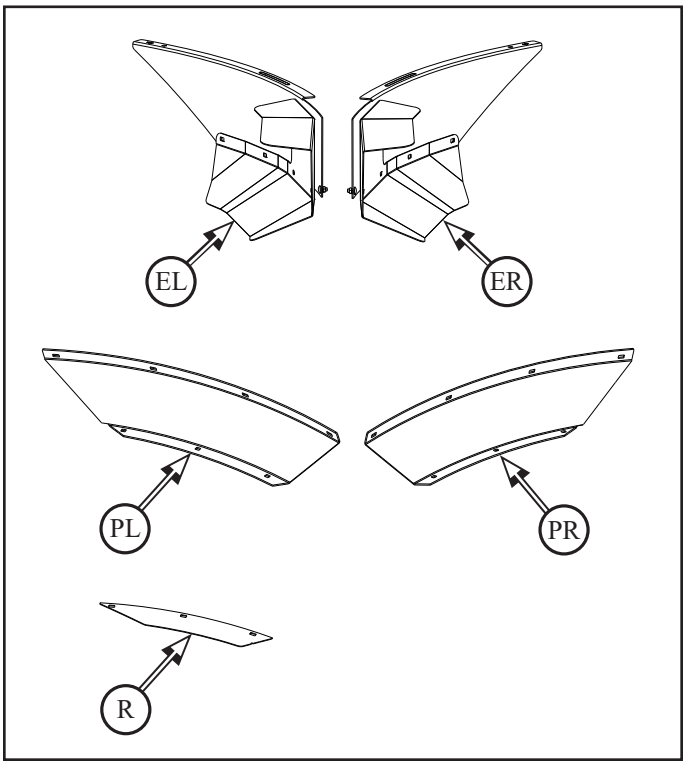
- this kit is provided to modify the extra wide spread fins to wide spread if the desired spread is 12m / 40ft or less

- this procedure can be completed while the extra wide spread fin assemblies are attached to the tailboard or prior to installation

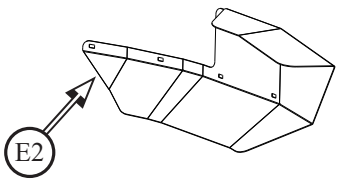
Parts List:

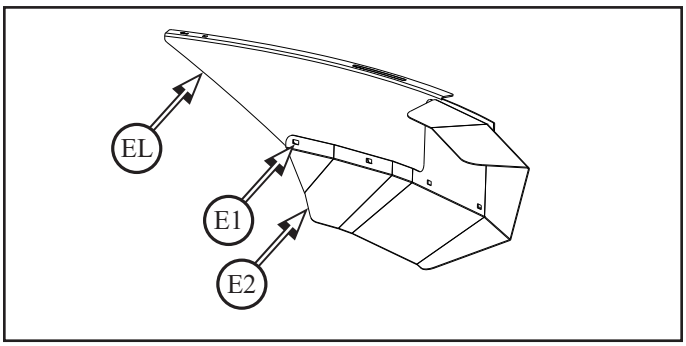
CD1594GAL	Fin Extra Wide Spread Lt (**EL**)	Qty 1
CD1594GAR	Fin Extra Wide Spread Rt (**ER**)	Qty 1
CG238GL	Fin Curve Base WS Lt (**PL**)	Qty 1
CG238GR	Fin Curve Base WS Lt (**PR**)	Qty 1
CG239G	Fin Deflector (**R**)	Qty 2

CD1533S Hardware Bag

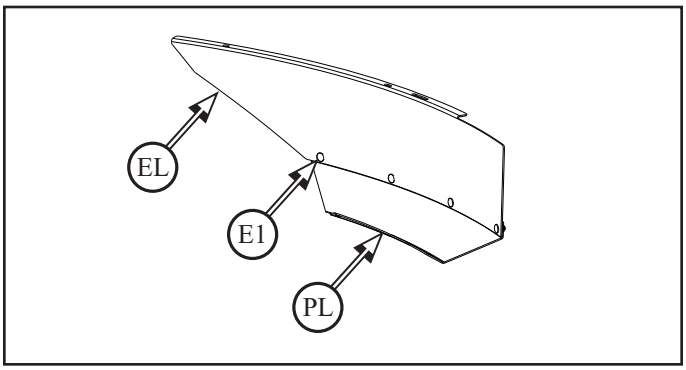


3.4.2.2 Remove extra wide scooped fin (**E2**) from left extra wide spread fin assembly (**EL**)
- mounting hardware (**E1**) x4 to be reused
- repeat for right fin

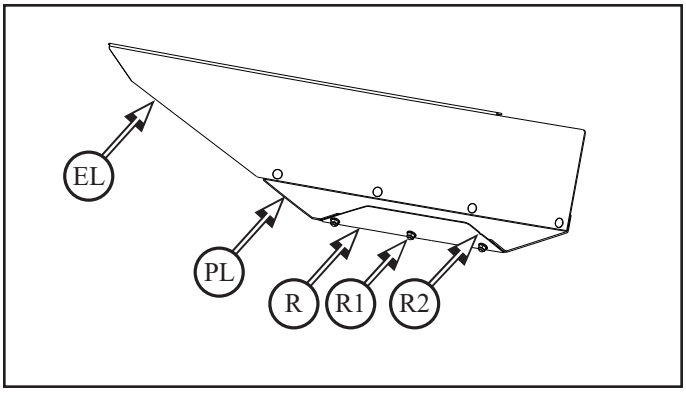




3.4.2.2 Install curved base fin (**PL**) to backside of left curved fin (**EL**), with:
- reuse mounting hardware (**E1**)



3.4.2.3 Install deflector fin (**R**) to backside of curved base fin (**PL**), with:
- M8 x 16 round head bolt and flange nut (**R1**) x3
- head of bolt on inside of fin
- ensure notch (**R2**) on deflector fin (**R**) is on the rear side

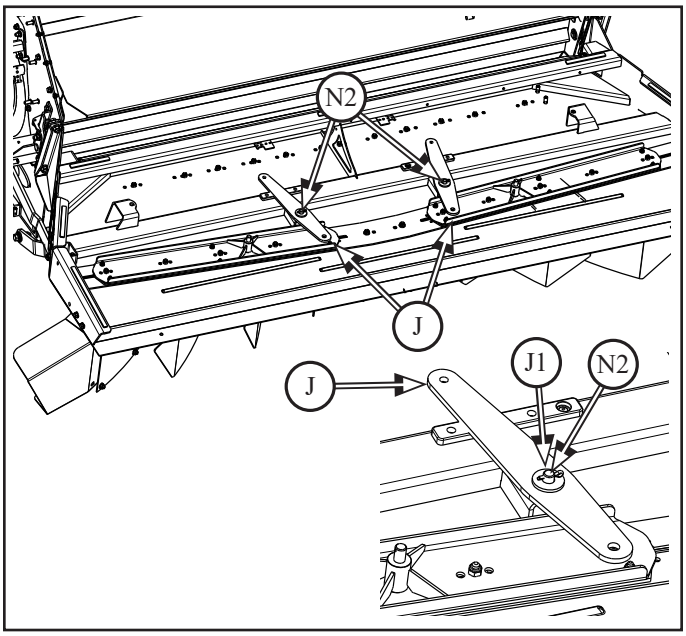


3.4.2.4 Repeat for right extra wide scooped fin assembly (**ER**)

3.4.2.5 Install new wide spread fin assemblies onto tailbard as per instructions above if not already installed

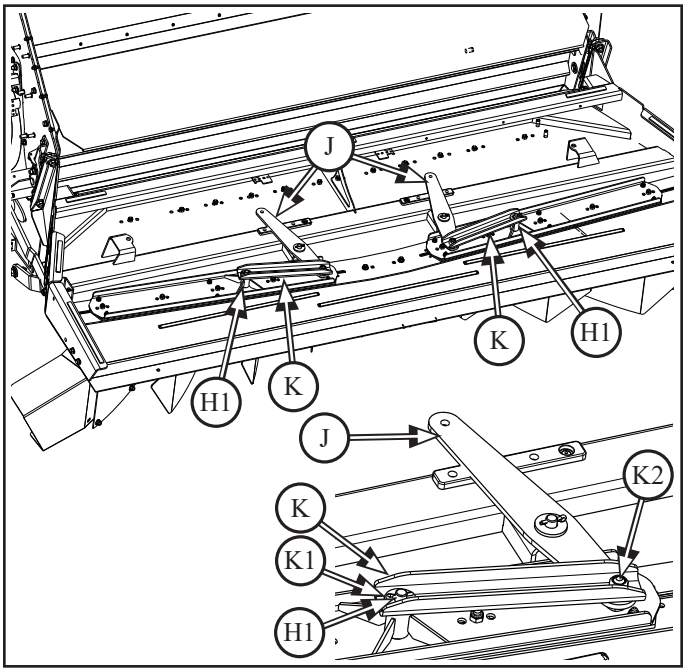
3.4.4 Tailboard Fin Adjustment Installation - Continued

3.4.4.1 Install pivot arm (**J**) x2 to pivot pin (**N2**) x2, with:
- M12 flat washer and cotter pin (**J1**) x2



3.4.4.2 Install channel link (**K**) to pivot pin (**H1**) on fin adjustment channel assembly (**H**), with:
- M12 flat washer and cotter pin (**K1**)
- both sides

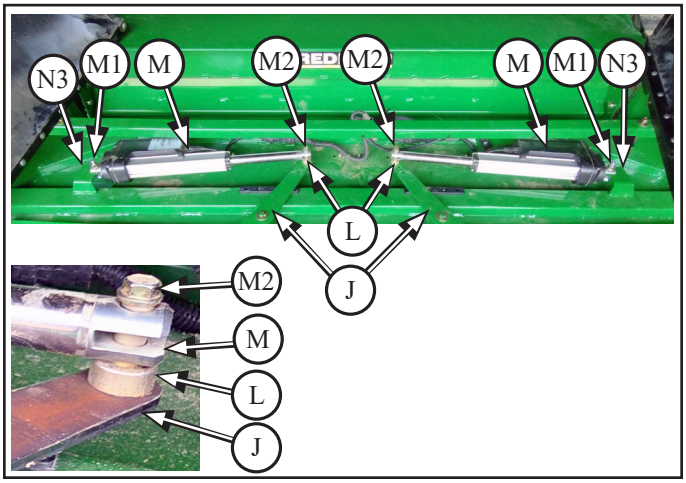
3.4.4.2.1 Connect channel link (**K**) to pivot arm (**J**), with:
- M12 x 25 flange head bolt and lock nut (**K2**)
- do not overtigthen locknut, allow for movement
- both sides



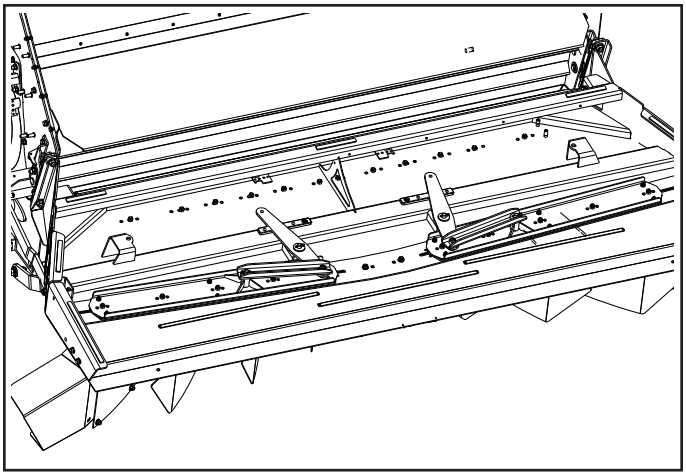
3.4.4.3 Install OEM actuator (**M**) previously removed from OEM tailboard to lug (**N3**), with:
- reuse mounting hardware (**M1**) for base

3.4.4.4 Attach rod of actuator (**M**) to pivot arm (**J**), with:
- pivot bushing (**L**) M8 x 60 flange head bolt, M8 flat washer and flange nut (**M2**)
- both sides

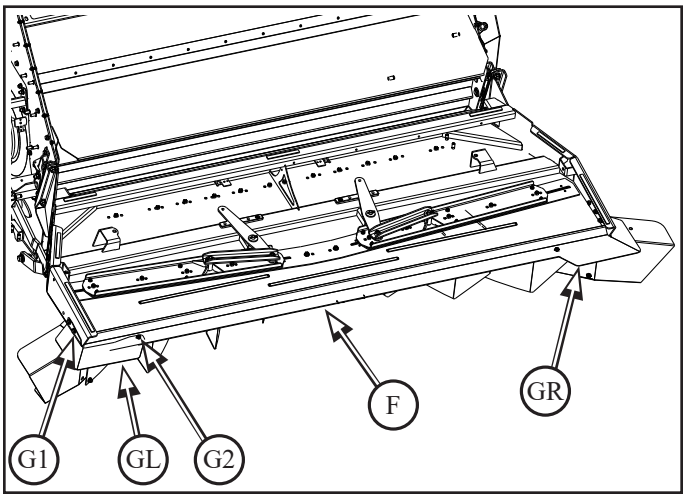
- if fins are to difficult to move by hand, they can be loosened and retightened or attaching rod end of actuator can be done once actuators have been plugged into the combine



3.4.4.5 Tighten all mounting hardware



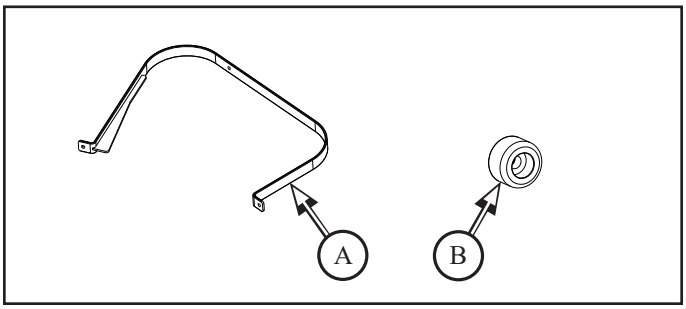
3.4.4.6 Install left corner extension (**GL**) to left corner of tailboard (**F**), with:
- M8 x 20 flange head bolt and flange nut (**G1**) x2
- M8 x 16 round head bolt and flange nut (**G2**)
- both sides



3.5 Tailboard Guard Installation

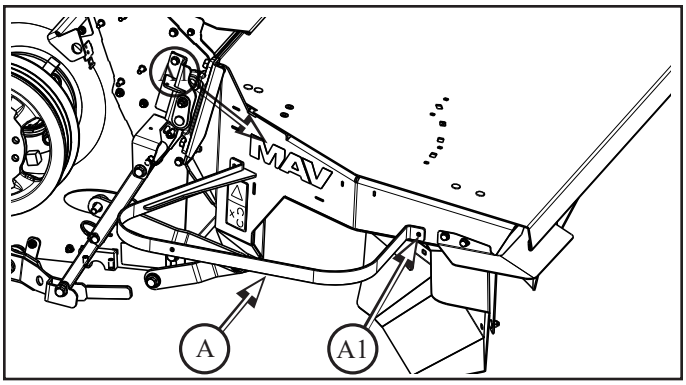
Parts List:

CS171G Guard (**A**)	Qty 2
RP1825 Bumper (**B**)	Qty 1
CD1608S Hardware Bag	

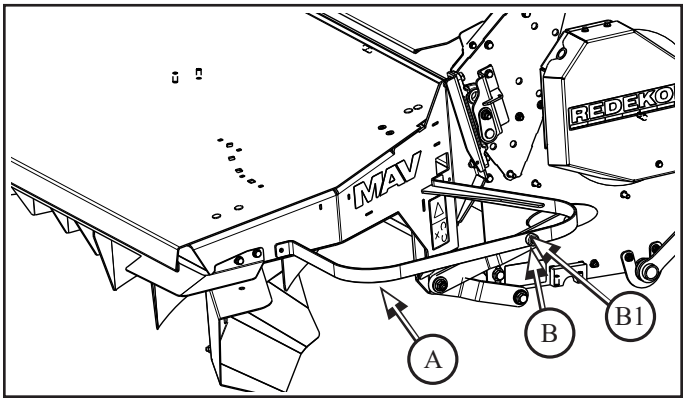


3.5.1 Install tailboard guard (**A**) to side of tailboard, with:
- M8 x 25 flange head bolt (**A1**) x2

3.5.2 Repeat for other side



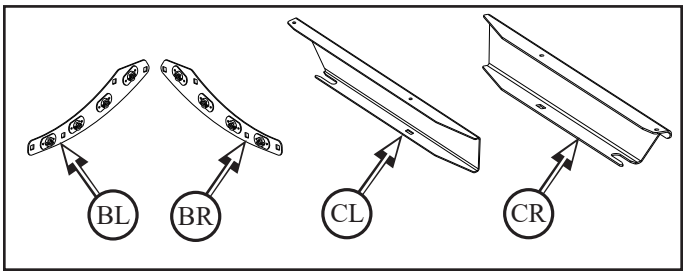
3.5.3 Install rubber bumper (**B**) to right tailboard guard (**A**), with:
- M6 x 20 hex head bolt and flange nut (**B1**)



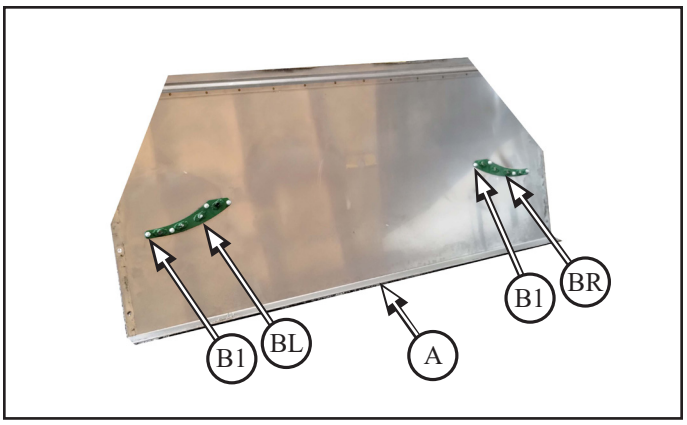
3.6 Tailboard Cover Panel Installation
- With Premium Residue Package

Parts List:

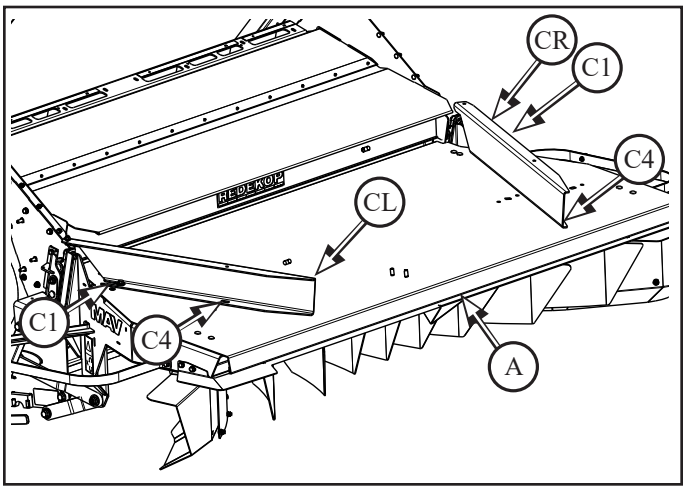
	OEM Curtain Quick Connect Bracket (**B**)	Qty 2
CD1608GL	Windrow Offset Bracket - Lt (**CL**)	Qty 1
CD1608GR	Windrow Offset Bracket - Rt (**CR**)	Qty 1
CD1608S	Hardware Bag	

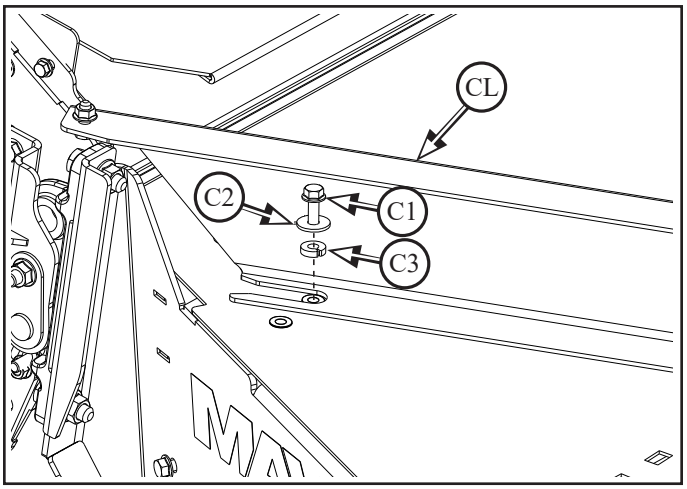


3.6.1 Install curtain quick connect bracket (**BL** & **BR**) to underside of tailboard cover panel (**A**), with:
- reuse mounting hardware (**B1**)

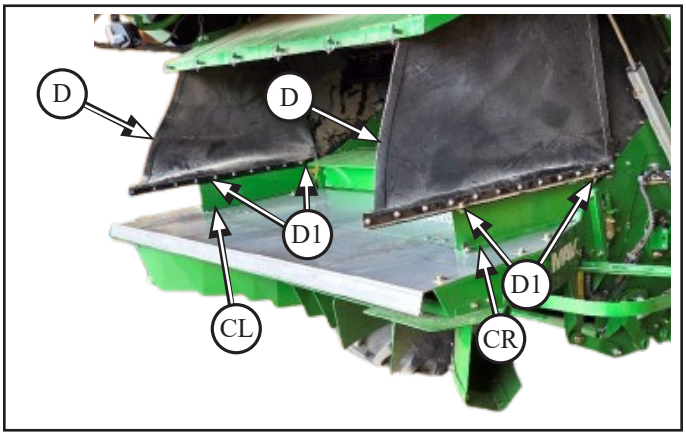


3.6.2 Install windrow offset bracket (**CL** & **CR**) to top side of new cover panel (**A**), with:
- M8 x 20 flange head bolt (**C1**), bushing (**C3**) and flat washer (**C2**)
- remove 1/4 turn quick connect latch (**C4**) x2 from the curtain and install to bottom of offset bracket
- both sides
- with the 1/4 turn latch not engaged, offset brackets should be able to be removed
- removing the offset brackets will be required to open tailboard cover





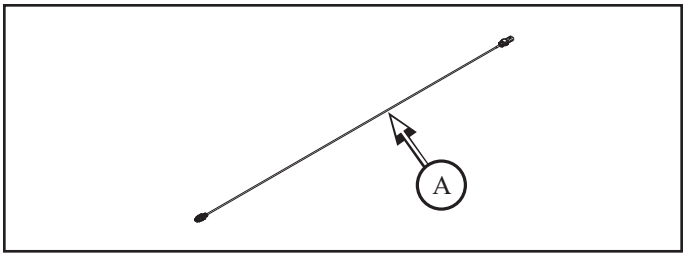
3.6.3 Install windrow curtain (**D**) to top of windrow offset brackets (**CL** & **CR**), with:
- M8 x 20 flange head bolt, M8 flat washer and flange nut (**D1**) x2
- both sides



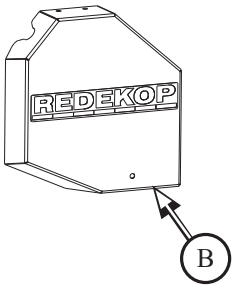
4 Electrical Installation

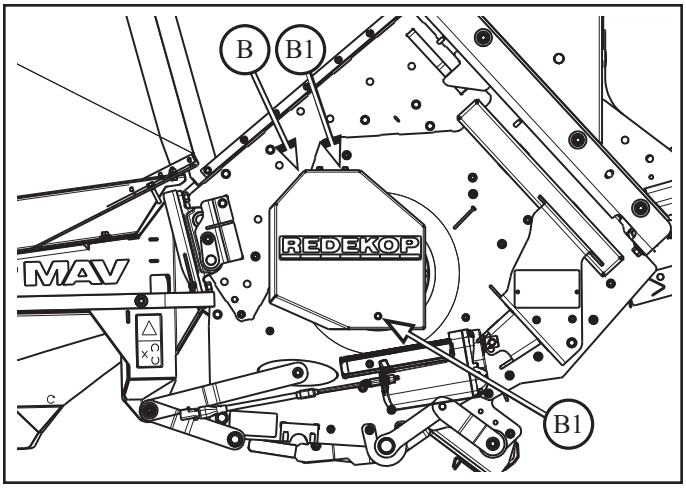
4.1 OEM Speed Sensor Installation

Parts List:
RP1780 Speed Sensor Extension Harness (**A**) Qty 1

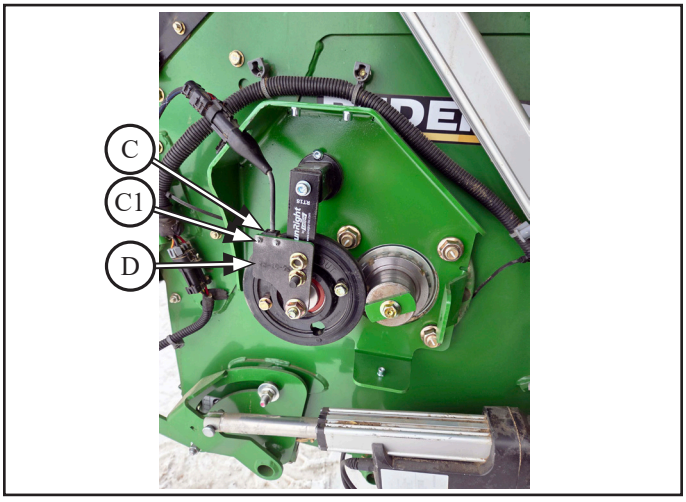


4.1.1 Remove speed sensor shield (**B**)
- to be reinstalled
- mounting hardware (**B1**) to be reused

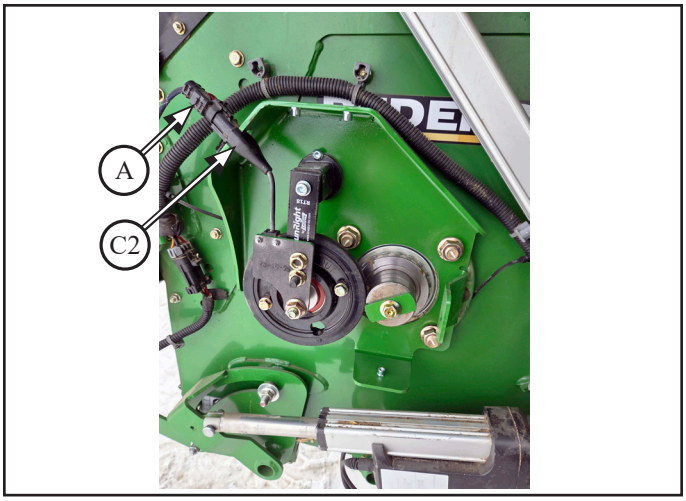




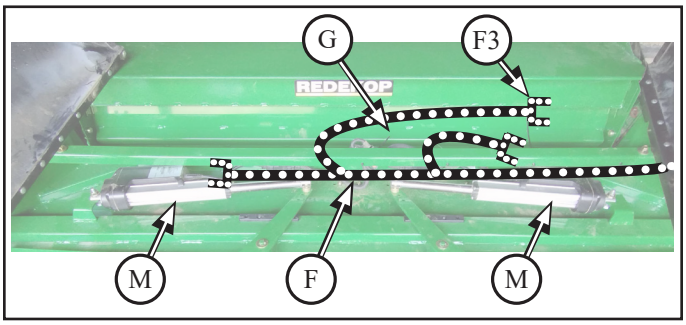
4.1.2 Install OEM speed sensor (**C**) to sensor mounting plate (**D**) on bogey wheel arm, with:
- reuse mounting hardware (**C1**)
- T20 Torx bit required
- can remove sensor mount plate (**D**) to make mounting easier if necessary



4.1.3 Connect speed sensor extension harness (**A**) to the speed sensor connector (**C2**)

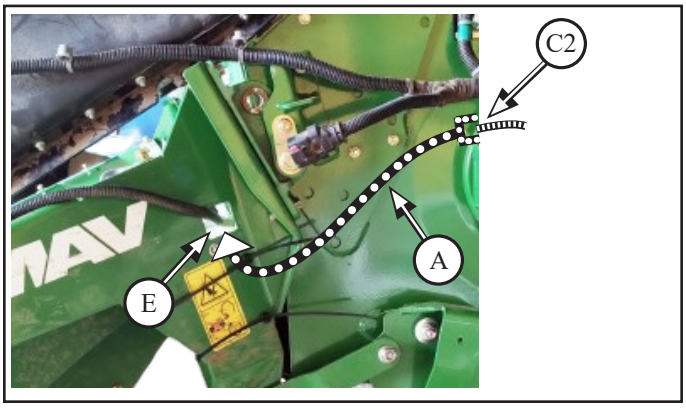


4.1.4 Install OEM tailboard actuator (spreader) harness (**F**) and connect to actuators (**M**) x2
- run harness (**F**) through access hole in right side of tailboard and connect to main harness
- connector (**F3**) used for speed sensor extension connection
- there are several tabs with holes (**G**) along the cross support to use to tie up the harness

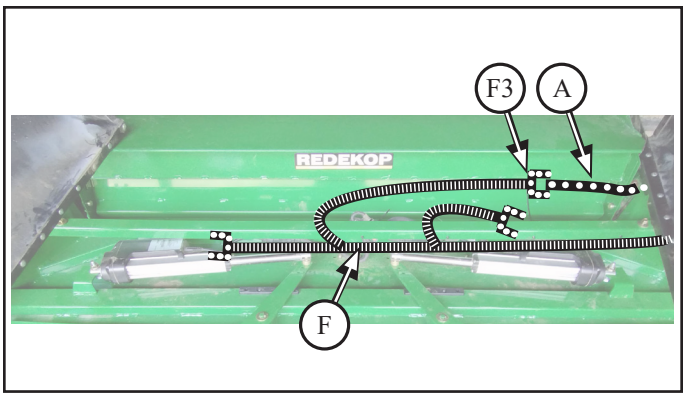


4.1.5 Run speed sensor extension harness (**A**) through access hole (**E**) in tailboard

4.1.5.1 Tie up harnesses close to the cast pin blocks, if they are to low, material can damage them during operation



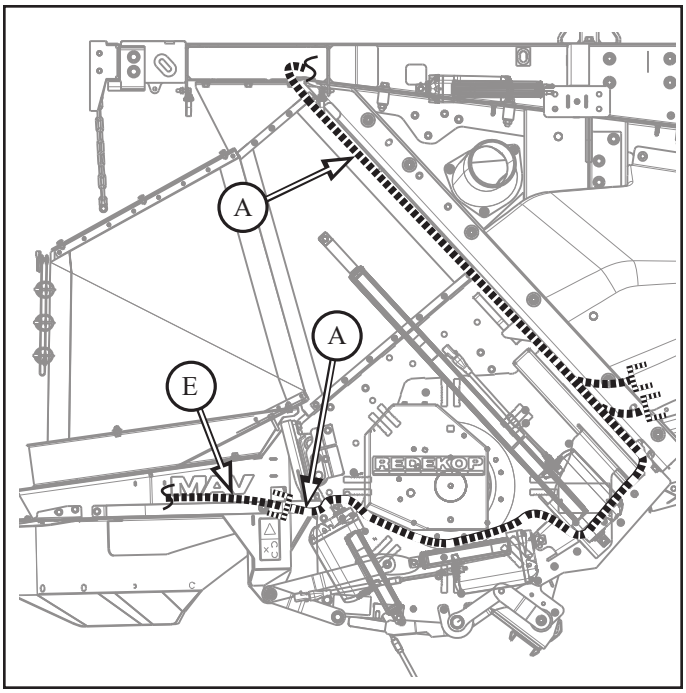
4.1.6 Connect speed sensor extension harness (**A**) to actuator harness pigtail (**F3**)



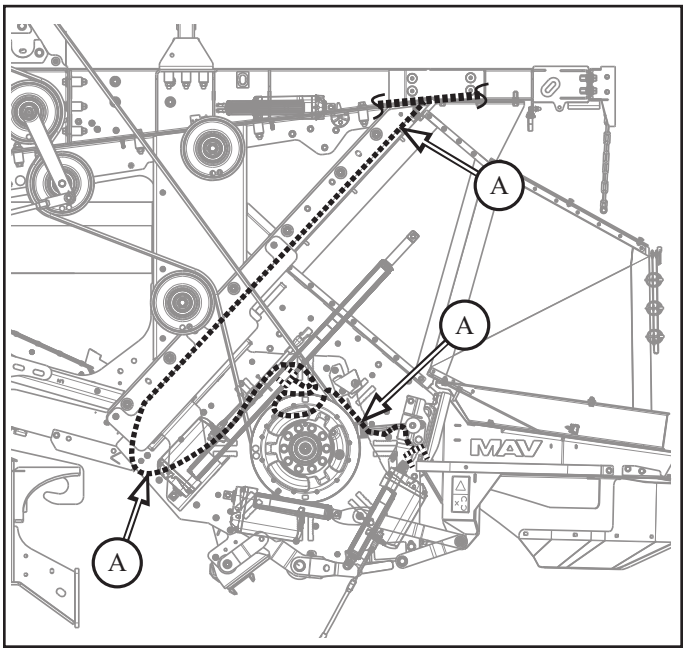
4.2 OEM Harness Installation

4.2.1 Run OEM harness (**A**) down right side rail, along housing to spreader
- use studs on sidewall to secure harness in place

4.2.2 Connect OEM spreader harness (**E**) to (**A**)

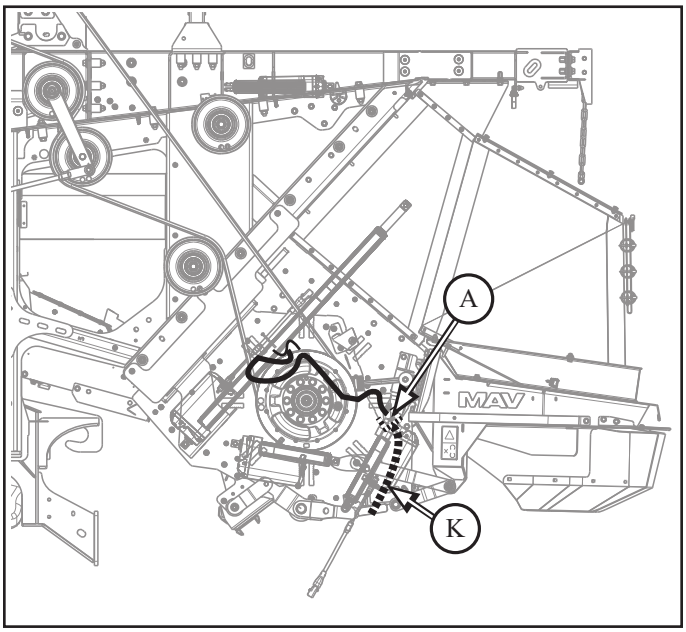


4.2.3 Run OEM harness (**A**) down left side rail, along housing to spreader
- use studs on sidewall to secure harness in place



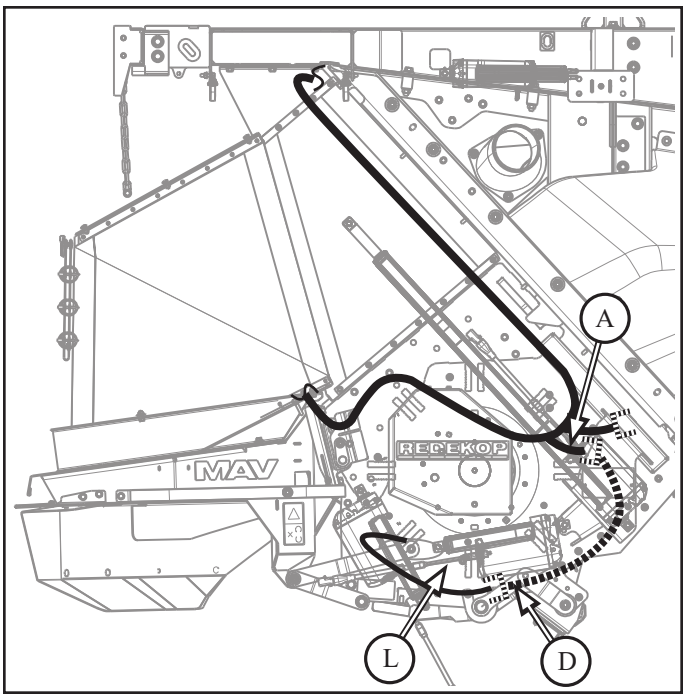
4.3 Knifebar Actuator Harness (if equipped) Installation

4.3.1 Connect knifebar actuator harness (**K**) to OEM harness connector (**A**)



4.4 Actuated Tailboard Harness (if equipped) Installation

4.4.1 Connect actuated tailboard harness (**D**) to OEM harness connector (**A**) and actuator (**L**)

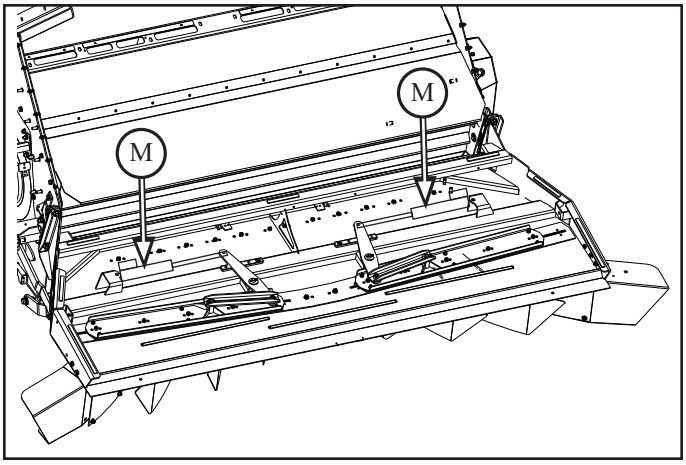


4.4.2 Use cable tie straps and P-clips to secure all harnesses to existing frame members, harnesses or hydraulic lines.

Route and secure harnesses in such a way that they are not damaged with movement of chopper and components.

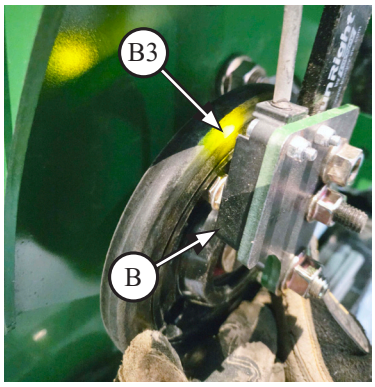
4.5 Test Tailboard Fin Actuators

4.5.1 Test run tailboard fin actuators (**M**) to ensure tailboard fins move freely



4.6 Speed Sensor Operation Verification

4.6.1 When speed sensor (**B**) is connected and running, a yellow light (**B3**) will be illuminated to indicate that is is sensing the bolt. Wheel can be rotated to confirm bolt offset to ensure sensor won't be damaged during operation.

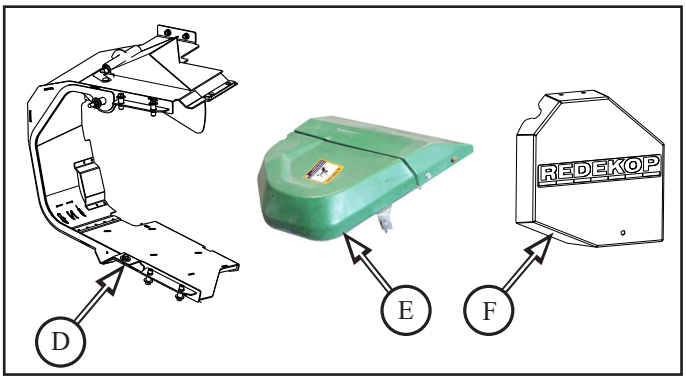


5 Shielding Installation

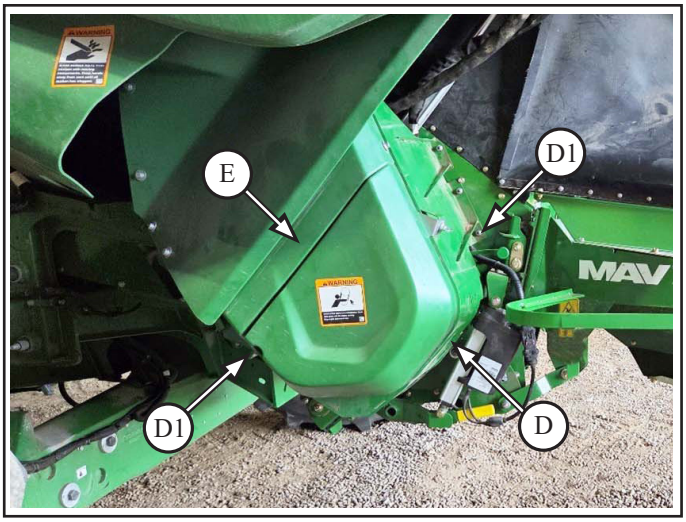
5.1 Shield Installation

Parts List:

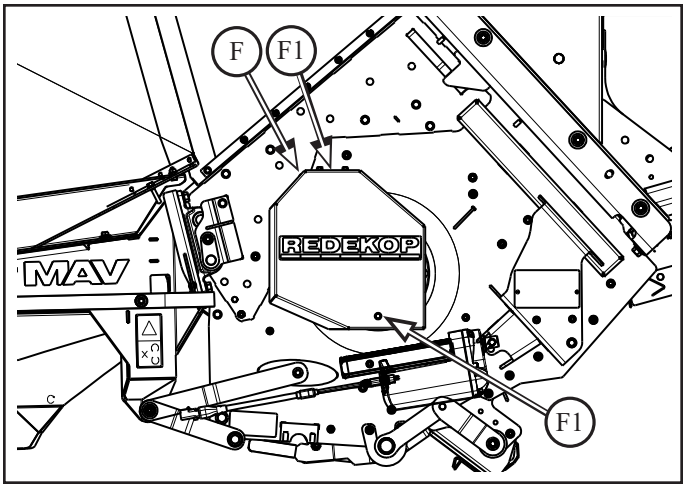
	OEM Drive Guard JDX (**D**)	Qty 1
	OEM Drive Shield (**E**)	Qty 1
CD1657GA	Speed Sensor Shield (**F**)	Qty 1



5.1.1 Install drive shield assembly (**E** & **D**) onto left side mounting plates of MAV housing, with:
- reuse hardware (**D1**) x4
- ensure harness does not get pinched when installing drive shield
  - adjust wiring as necessary



5.1.1 Install speed sensor shield (**F**), with:
- reuse mounting hardware (**F1**)



6 Monitor

6.1 Changing Monitor to Chopper Service Mode
To allow actuators to move for chopper installation

6.1.1 Select Menu (**A**)



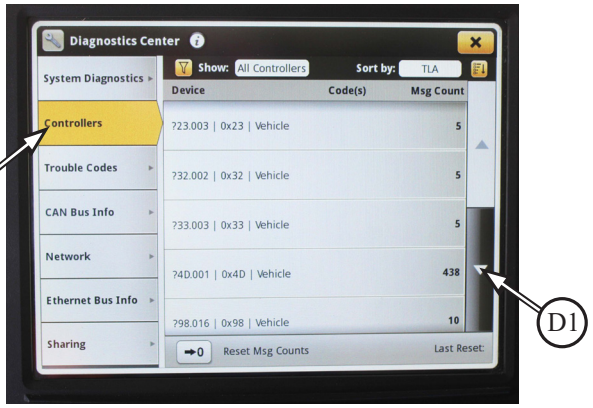
6.1.2 Select System (**B**)

6.1.3 Select Diagnostics Center (**C**)

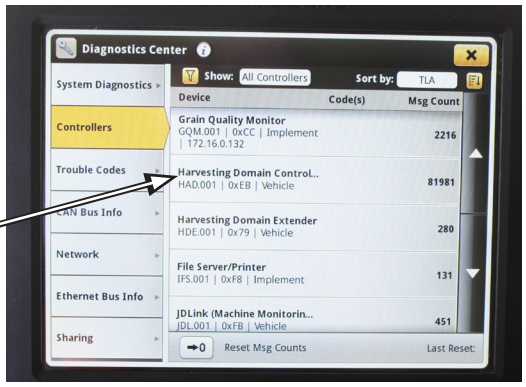


6.1.4 Select Controllers (**D**)

6.1.5 Scroll down (**D1**)

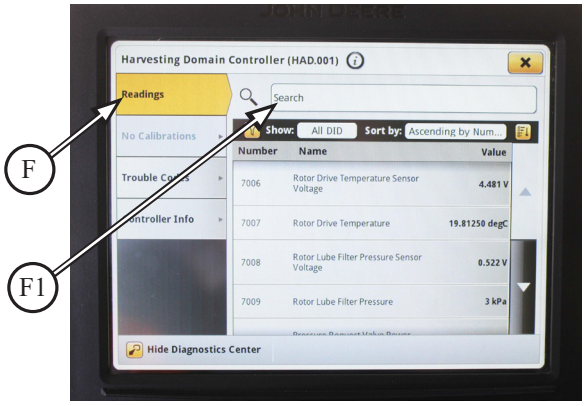


6.1.6 Select Harvesting Domaine Controller (**E**)



6.1.7 Stay on Readings Tab (**F**)

6.1.8 Select Search (**F1**)

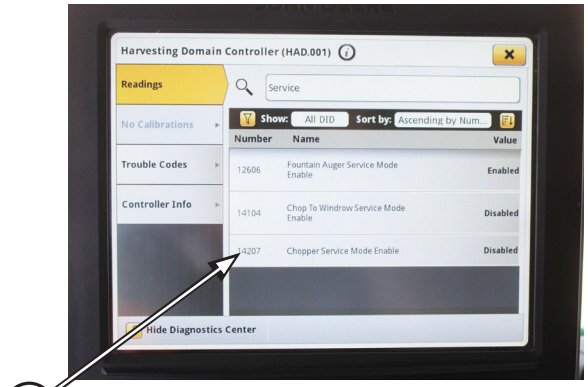


6.1.9 Type in SERVICE (**G**)

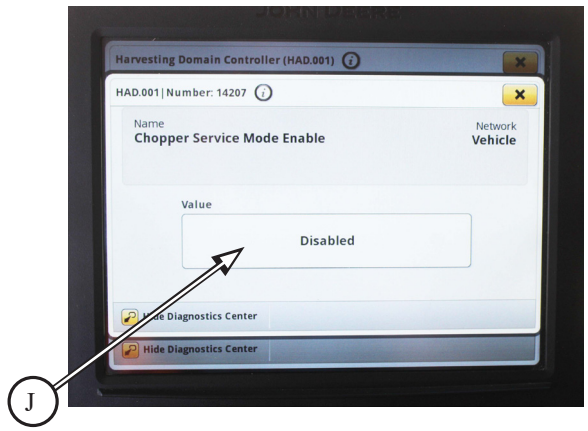
6.1.10 Select OK (**G1**)



6.1.11 Select Chopper Service Mode Enable (**H**)

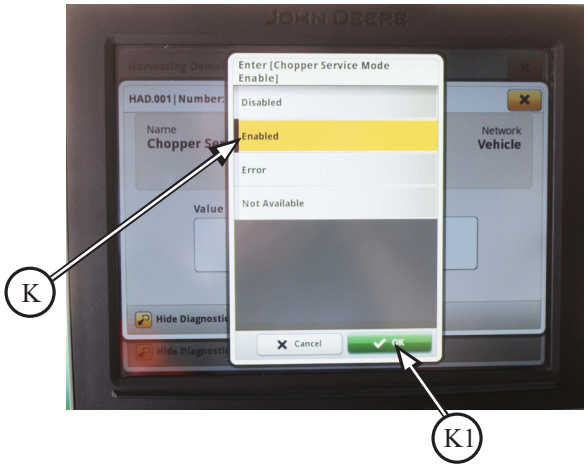


6.1.12 Select Disabled (**J**)

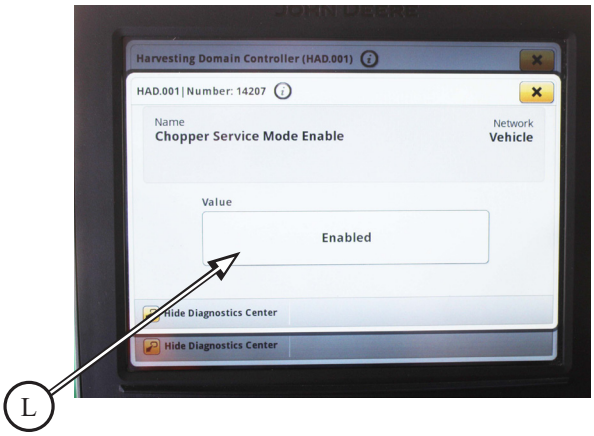


6.1.13 Select Enabled (**K**)

6.1.14 Select OK (**K1**)



6.1.15 Screen displaying Chopper Service Mode Enabled (**L**)



6.1.16 Leave combine key in ON position in order to operate actuators

7 Appendix

7.1 Drive Kit 340-116 Installation

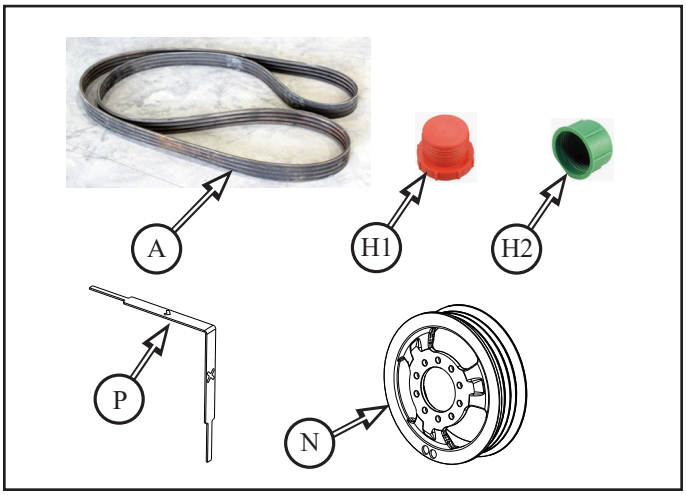
7.1.1 Replace OEM Chopper Drive Belt

If machine is a FC machine, Drive Kit 340-116 will need to be obtained to make thses changes

If OEM chopper is not a 3000 rpm XFC unit, replace drive belt with shorter drive belt (**A**). Double check by comparing part number on existing belt against part number on belt in package. If the part number on the existing belt is HXE124276, change as per instructions below.

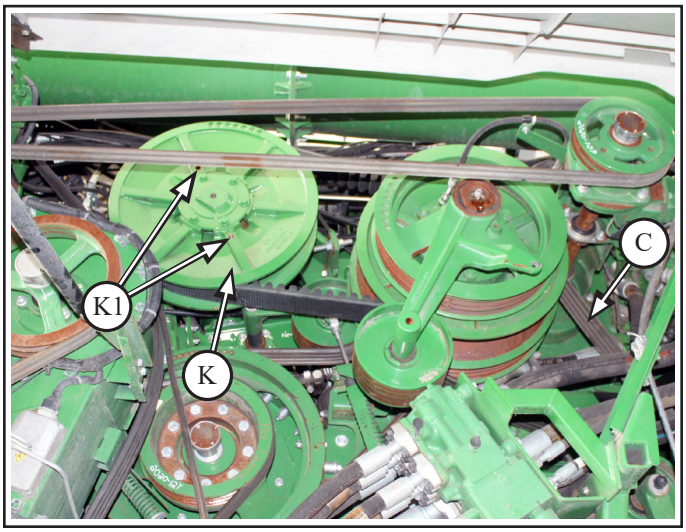
Parts List:

HXE124215 Drive Belt (**A**)	Qty 1
RP1387 Plug Threaded Plastic 9/16-18 ORFS (**H1**)	Qty 1
RP1386 Cap Protector Plastic 9/16-18 ORFS (**H2**)	Qty 1
CD1040-01 Feeler Gauge 10mm JDX (**P**)	Qty 1
HXE168720 Sheave 4HB (**N**)	Qty 1

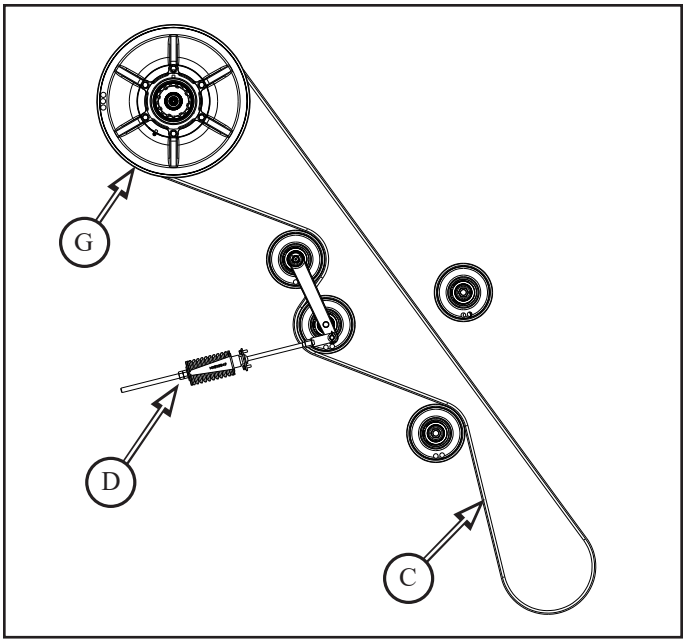


7.1.2 Move auger (**B**) out slightly (as shown) for more access to variable drive belt (**C**) removal and variable drive (**K**) mounting hardware (**K1**)



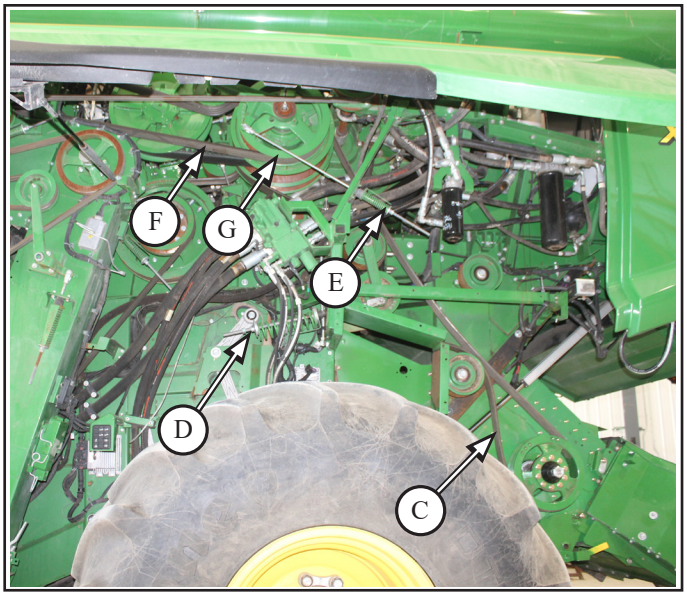


7.1.3 Take note or chopper drive belt (**C**) routing for reference upon installing new belt (**A**)



7.1.4 Ensure belt tensioner (**D**) for chopper drive belt (**C**) is loose

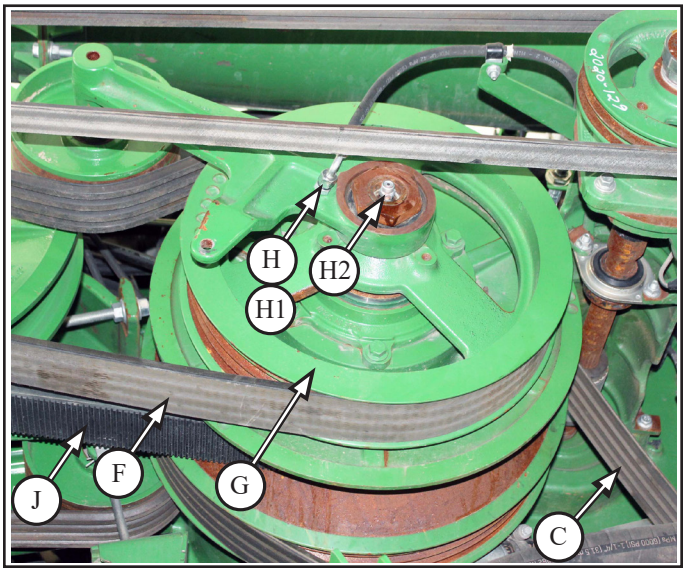
7.1.5 Loosen belt tensioner (**E**) for drive belt (**F**)



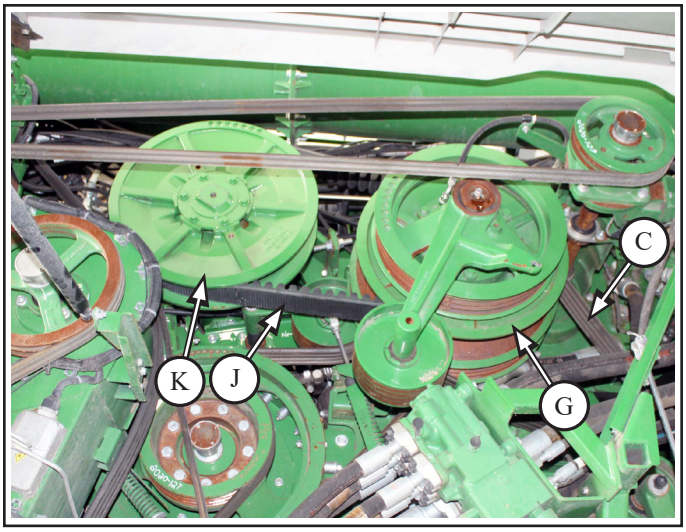
7.1.6 Remove hydraulic line (**H**) from center of driver sheave (**G**)
- to be reinstalled upon completion of belt change

7.1.6.1 Install caps (**H1** & **H2**) to hydraulic line (**H**) and fitting on driver sheave (**G**) to prevent leaking of oil.
- to be removed upon completion of belt change

7.1.6.2 Remove upper drive belt (**F**) from driver sheave (**G**) in order to replace chopper drive belt (**C**)
- to be reinstalled upon completion of belt change

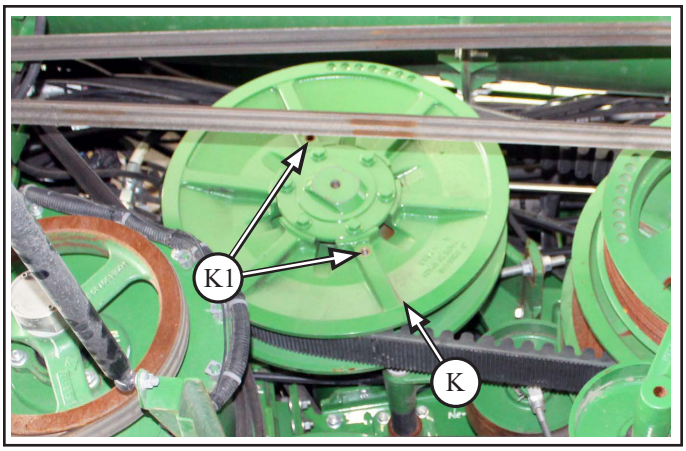


7.1.7 Procedure to loosen/remove upper drive belt (**J**) from driver sheave (**G**):



7.1.7.1 Loosen front nut (**L1**) on eyebolt (**L**) as much as possible

7.1.7.2 Loosen variable drive mount hardware (**M1**) x4
! **DO NOT REMOVE** !
- keep hardware loose in slots for adjustment



7.1.7.3 Tighten rear nut (**L2**) on eyebolt (**L**) to move variable drive mount rearwards as far as possible

7.1.7.4 Install M12 x 80 full thread bolt (**K1**) x2 into driven sheave (**K**)
- tighten to split driven variable sheave to make belt removal easier

7.1.7.5 Remove drive belt (**J**) from driver sheave (**G**)

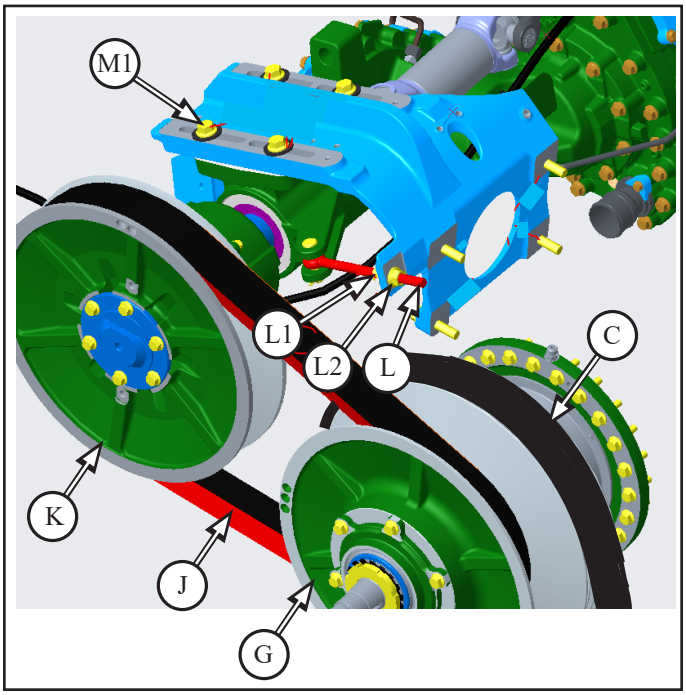
7.1.7.6 Remove chopper drive belt (**C**)

7.1.7.7 Install new chopper drive belt (**A**) to back of driver sheave (**G**)

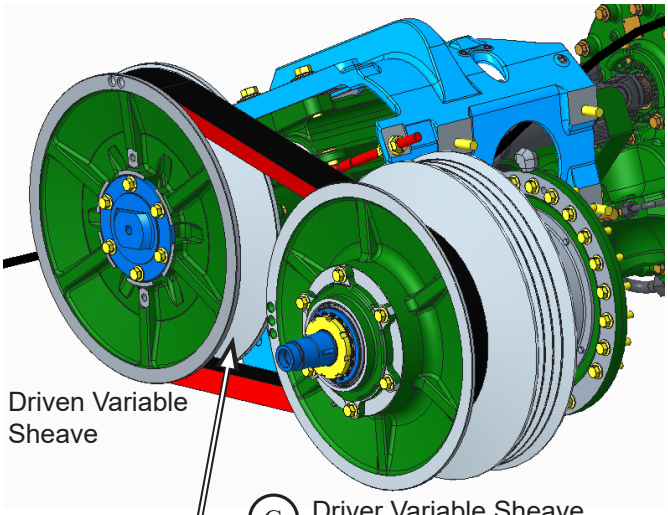
7.1.7.8 Reinstall drive belt (**J**) to driver sheave (**G**)

7.1.7.9 Remove bolts (**K1**) used to pry variator apart

7.1.7.10 Tighten/adjust eyebolt (**L1** & **L2**) to obtain gap on driven sheave (**K**) to 10+-1mm
- rotate sheaves by hand to help set the driven sheave (**K**) gap accurately. Driver sheave (**G**) must be fully open to set driven sheave gap
- see below for procedure to correctly measure sheave gap

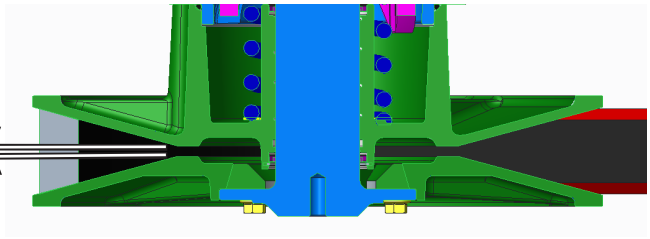


7.1.7.11 How to correctly measure the sheave gap:



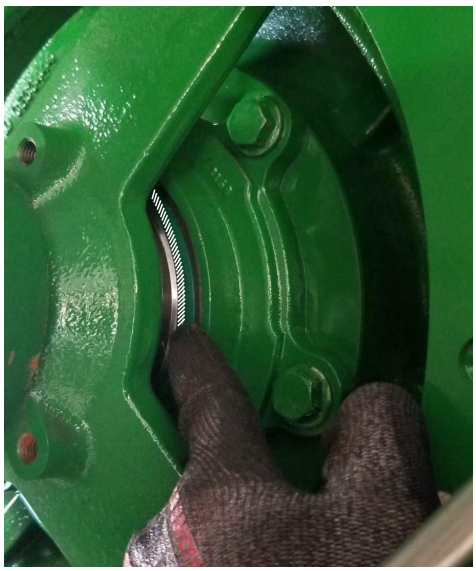
K Driven Variable Sheave

G Driver Variable Sheave



Driven Sheave Gap = 10+-1mm
(with driver variable sheave fully open)

Measure sheave gap between sheave halves on driven variable sheave. Use feeler gauge (**P**) as per go/no go instructions below



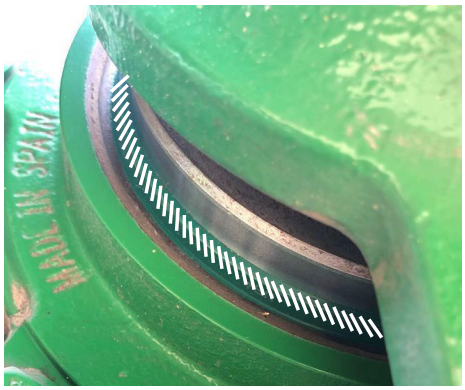
Driver Sheave fully open

Green seal lip is very close to the end of the metal cylinder. This is fully open.

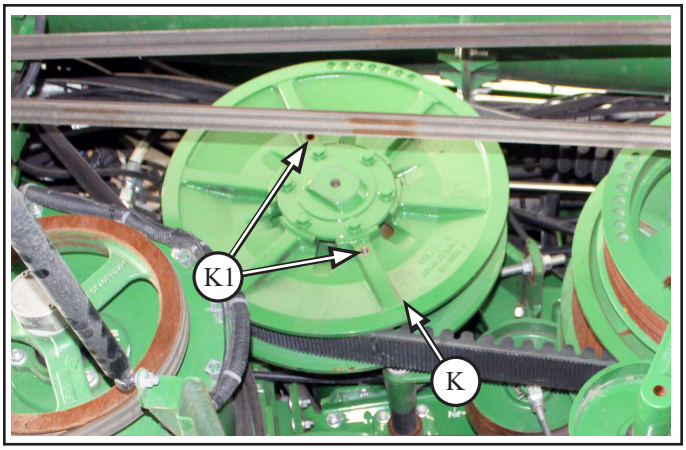


Driver Sheave not fully open

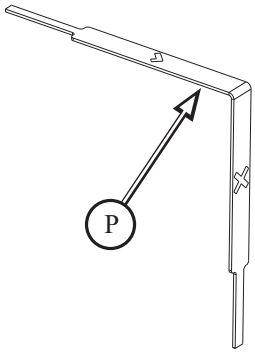
Green seal lip (hatched area in photo) is not to the end of the metal cylinder.



7.1.7.12 Use feeler gauge (**P**) to check gap to ensure 10mm space has been maintained



7.1.7.12.1 Feeler Gauge (**P**) go/no go
- adjust eyebolt (**L**) accordingly



7.1.7.12.2 Go:

- if 9mm end (✓) fits in between sheave halves

and

- if 11mm end (X) does not fit in between sheave halves

No Go:

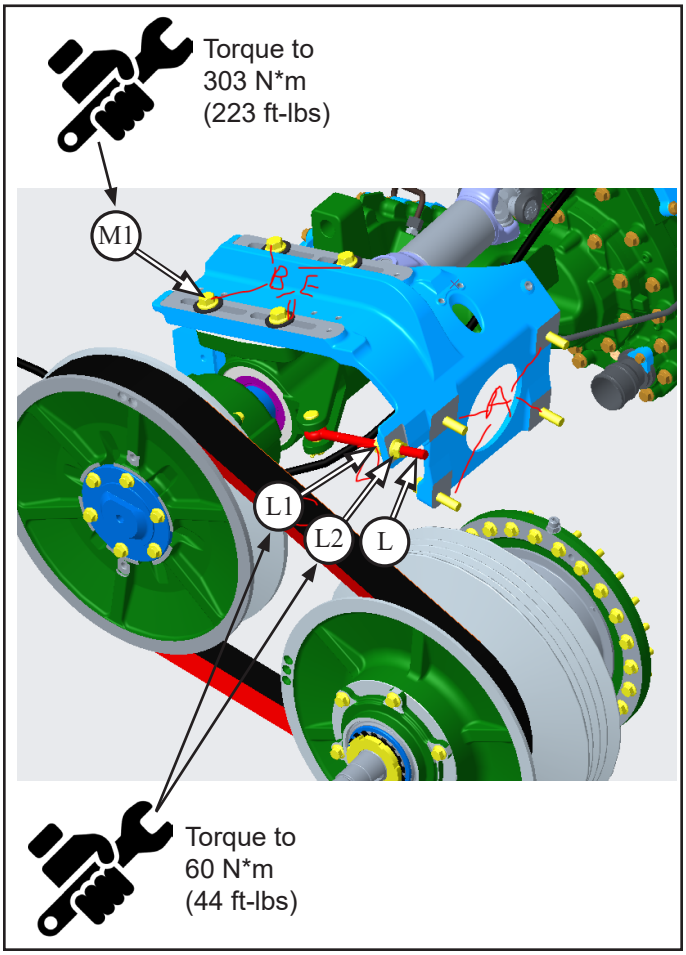
- if 9mm end (✓) does not fit in between sheave halves

or

- if 11mm end (X) fits in between sheave halves

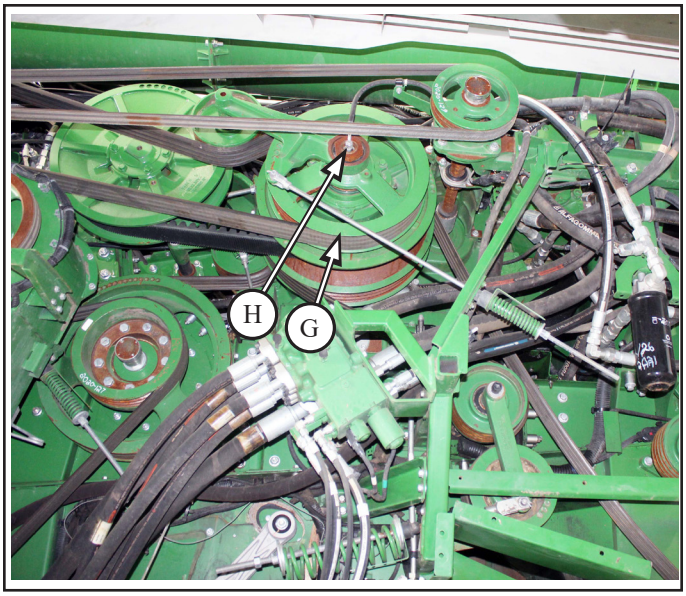
7.1.7.13 Torque variable drive mount hardware (**M1**) x4 to 303 Nm (223 ft-lb) +- 20%

7.1.7.14 Tighten nuts (**L1** & **L2**) on eyebolt (**L**)
- Torque to 60 Nm (44 ft-lb) +- 20%

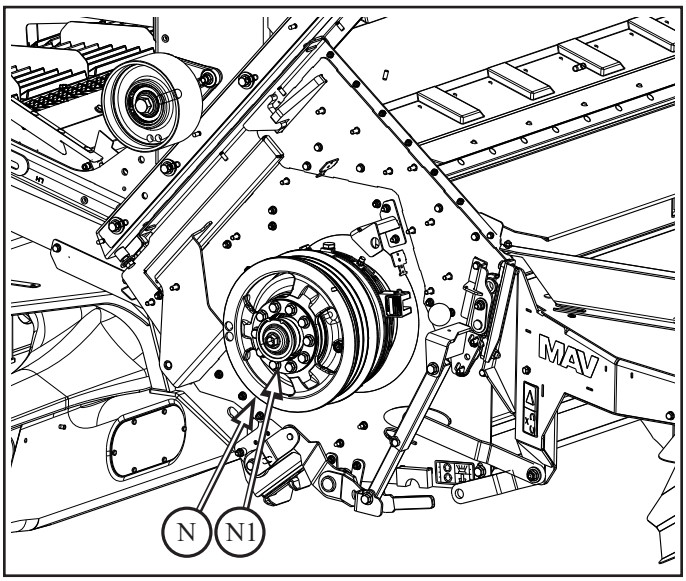


7.1.7.15 Remove hydraulic caps (**H1** & **H2**) from hydraulic line (**H**) and fitting on driver sheave (**G**)

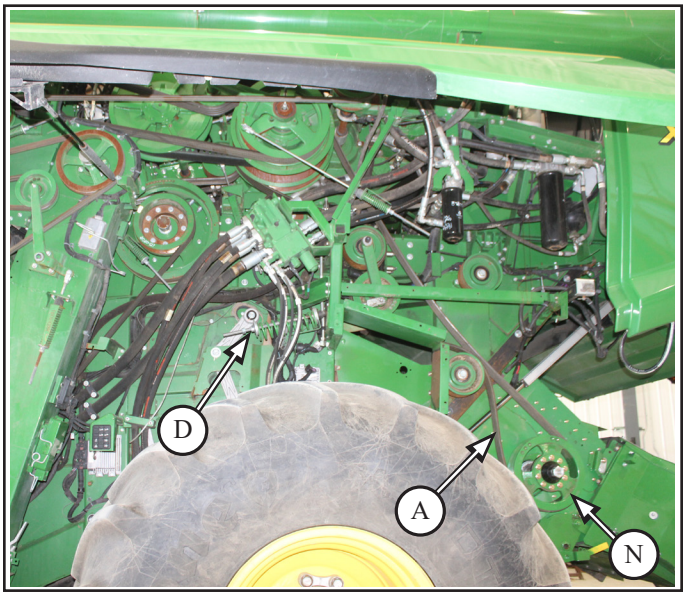
7.1.7.15.1 Re-install hydraulic fitting (**H**) to upper sheave (**G**)



7.1.8 Install new chopper drive sheave (**N**) to gearbox on chopper rotor, with:
- reuse mounting hardware (**N1**)

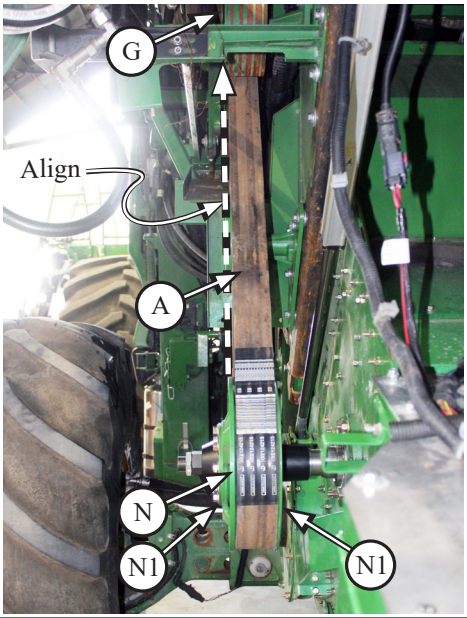


7.1.9 Route new chopper drive belt (**A**) around tensioner and pulleys and install onto new chopper sheave (**N**)



7.1.10 Ensure chopper sheave (**N**) is aligned with upper drive sheave (**G**)
- adjust with shims (**N1**) as required

7.1.10.1 Tighten belt tensioner (**D**) for chopper drive belt with chopper fully lowered



8 Final Installation Checklist



8.1 All tools removed from tires and inside of combine



8.2 All tools removed from straw chopper and tailboard



8.3 All misc hardware removed from inside of combine, tires and straw chopper



8.4 Check to ensure all mounting hardware is in place and tight for each of the following:
- check back to manual for torque specifications

8.5 ☐ Rotate Chopper rotor by hand to ensure it rotates freely and blade clearances

	Installed/Modified	Torqued	
8.6 XFC Sheave on OEM gearbox	☐	☐	
8.6.1 OEM Deere gearbox mount bolt		☐	
8.6.2 Chopper drive belt	☐	☐ Tensioned	☐ Aligned
8.7 Chopper mount side rails	☐	☐	

8.8 ☐ Knifebar moves freely

8.9 ☐ Chopper actuators have full range of motion

8.10 ☐ Chopper speed sensor is installed

8.10.1 ☐ Chopper speed sensor light is on when target is in reading position with no interferance

8.11 ☐ Chopper speed sensor shield is installed

8.12 ☐ Drive shields installed

8.13 ☐ Tailboard fin actuators cycled through full range of motion without issue

8.14 ☐ Harnesses secured

8.14.1 ☐ Harnesses routed to allow for movement

8.14.2 ☐ Harnesses installed with no pinch point and avoids moving parts and abrasive edges

8.15 ☐ Hydraulic fittings and lines - all tight with no leaks

8.16 ☐ Ran in low speed upon startup and listened for clearance problems

8.17 ☐ Run in high speed @ operative engine speed

8.18 ☐ Check seal fitment from chopper to sieve extension (section 2.4.1.2)

Completed By: _____ **Date:** _____

CAUTION

Check that all tools and loose hardware have been removed from the combine and SCU before running SCU

CAUTION

Check all fasteners to ensure they have been properly tightened

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)

CAUTION

Wear Hearing Protection during operation

CAUTION

When starting chopper, be sure all people are clear of the rear of the combine

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

REDEKOP MANUFACTURING

1.866.REDEKOP (1.866.733.3567)

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For additional and the most up to date Manuals:

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