

MacDon™

**Model FD75 FlexDraper®
with
CA25 Combine Adapter**

**UNLOADING and
ASSEMBLY INSTRUCTIONS
for
NORTH AMERICAN SHIPMENTS**

INTRODUCTION

This instructional manual describes the unloading, set-up, and pre-delivery requirements for the MacDon FD75 FlexDraper[®] with a CA25 Combine Adapter for North America.

Use the Table of Contents to guide you to specific areas.

Retain this instruction for future reference.

CAREFULLY READ ALL THE MATERIAL PROVIDED BEFORE ATTEMPTING TO UNLOAD, ASSEMBLE, OR USE THE MACHINE.



MACDON FD75 FLEXDRAPER[®] WITH CA25 ADAPTER

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GENERAL SAFETY

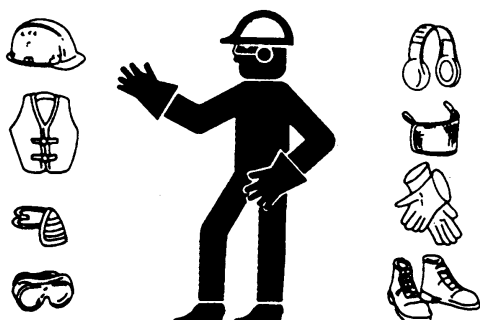


CAUTION

The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.

- Protect yourself.
- When assembling, operating, and servicing machinery, wear all the protective clothing and personal safety devices that **COULD** be necessary for the job at hand. Don't take chances.

You may need:



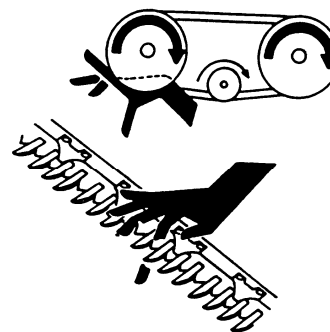
- a hard hat
- protective shoes with slip resistant soles
- protective glasses or goggles
- heavy gloves
- wet weather gear
- respirator or filter mask



- hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs (A) or ear plugs (B) protects against objectionable or loud noises



- Provide a first-aid kit for use in case of emergencies.
- Keep a fire extinguisher on the machine. Be sure the extinguisher is properly maintained and be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when the Operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.
- Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
- Keep hands, feet, clothing, and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.



- Keep all shields in place. Never alter or remove safety equipment. Make sure driveline guards can rotate independently of the shaft and can telescope freely.

SAFETY

- Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.
- Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.
- Stop engine, and remove key from ignition before leaving Operator's seat for any reason. A child or even a pet could engage an idling machine.



- Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.
- Keep machinery clean. Do not allow oil or grease to accumulate on service platforms, ladders, or controls. Clean machines before storage.
- Never use gasoline, naphtha, or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover sharp or extending components to prevent injury from accidental contact.

RECOMMENDED TORQUES

RECOMMENDED TORQUES

A. GENERAL

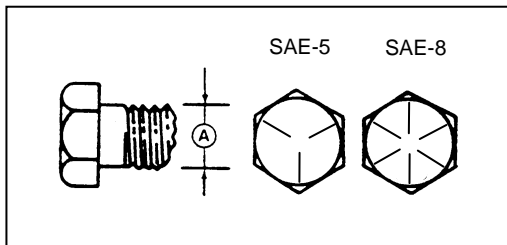
The tables shown below give correct torque values for various bolts and cap screws.

- Tighten all bolts to the torques specified in chart unless otherwise noted throughout this manual.
- Check tightness of bolts periodically, using bolt torque chart as a guide.
- Replace hardware with the same strength bolt.
- Torque figures are valid for non-greased or non-oiled threads and heads unless otherwise specified. Do **not** grease or oil bolts or caps crews unless specified in this manual.
- When using locking elements, increase torque values by 5%.

B. SAE BOLTS

Bolt dia. "A" (in.)	Nc bolt torque*			
	SAE-5		SAE-8	
	lb-ft	N-m	lb-ft	N-m
1/4	9	12	11	15
5/16	18	24	25	34
3/8	32	43	41	56
7/16	50	68	70	95
1/2	75	102	105	142
9/16	110	149	149	202
5/8	150	203	200	271
3/4	265	359	365	495
7/8	420	569	600	813
1	640	867	890	1,205

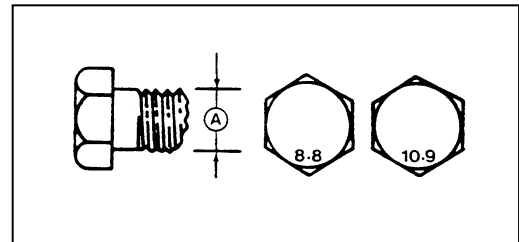
* Torque categories for bolts and cap screws are identified by their head markings.



C. METRIC BOLTS

Bolt dia. "A"	Std coarse bolt torque*			
	8.8		10.9	
	lb-ft	N-m	lb-ft	N-m
M3	0.4	0.5	1.3	1.8
M4	2.2	3	3.3	4.5
M5	4	6	7	9
M6	7	10	11	15
M8	18	25	26	35
M10	37	50	52	70
M12	66	90	92	125
M14	103	140	148	200
M16	166	225	229	310
M20	321	435	450	610
M24	553	750	774	1,050
M30	1,103	1,495	1,550	2,100
M36	1,917	2,600	2,710	3,675

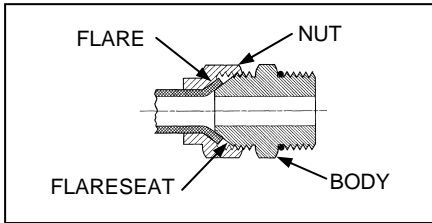
* Torque categories for bolts and cap screws are identified by their head markings.



RECOMMENDED TORQUES

D. HYDRAULIC FITTINGS

FLARE TYPE

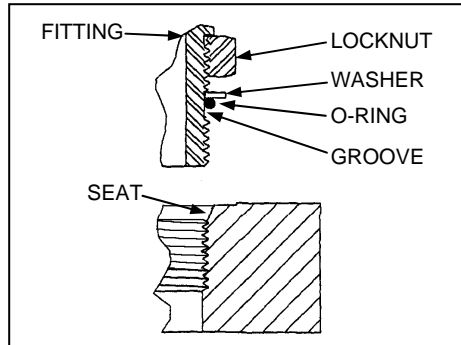


- d. Check flare and flare seat for defects that might cause leakage.
- e. Align tube with fitting before tightening.
- f. Lubricate connection, and hand-tighten swivel nut until snug.
- g. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body, and with the second, tighten the swivel nut to the torque shown.

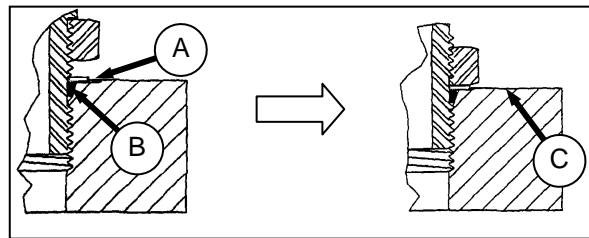
SAE no.	Tube Size O.D. (in.)	Thd Size (in.)	Nut size across flats (in.)	Torque Value*		Recommended turns to tighten (after finger tightening)	
				lb-ft	N-m	Flats	Turns
3	3/16	3/8	7/16	6	8	1	1/6
4	1/4	7/16	9/16	9	12	1	1/6
5	5/16	1/2	5/8	12	16	1	1/6
6	3/8	9/16	11/16	18	24	1	1/6
8	1/2	3/4	7/8	34	46	1	1/6
10	5/8	7/8	1	46	62	1	1/6
12	3/4	1-1/16	1-1/4	75	102	3/4	1/8
14	7/8	1-3/8	1-3/8	90	122	3/4	1/8

* Torque values shown are based on lubricated connections as in re-assembly.

O-RING TYPE



- a. Inspect O-ring and seat for dirt or obvious defects.



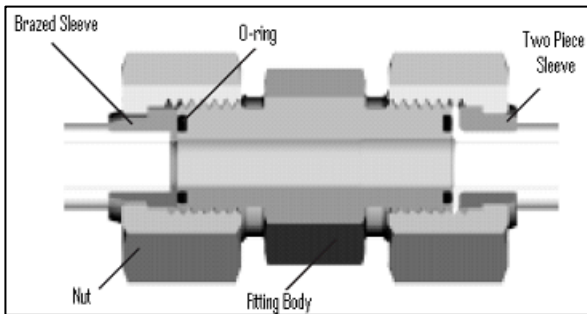
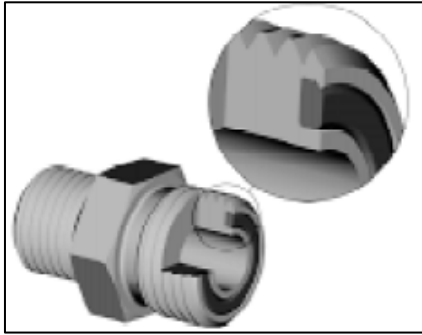
- b. On angle fittings, back off the lock nut until washer (A) bottoms out at top of groove (B) in fitting.
- c. Hand-tighten fitting until back up washer (A) or washer face (if straight fitting) bottoms on part face (C), and O-ring is seated.
- d. Position angle fittings by unscrewing **no more than one turn**.
- e. Tighten straight fittings to torque shown.
- f. Tighten angle fittings to torque shown in the following table, while holding body of fitting with a wrench.

SAE no.	Thd Size (in.)	Nut size across flats (in.)	Torque Value*		Recommended turns to tighten (after finger tightening)	
			lb-ft	N-m	Flats	Turns
3	3/8	1/2	6	8	2	1/3
4	7/16	9/16	9	12	2	1/3
5	1/2	5/8	12	16	2	1/3
6	9/16	11/16	18	24	2	1/3
8	3/4	7/8	34	46	2	1/3
10	7/8	1	46	62	1-1/2	1/4
12	1-1/16	1-1/4	75	102	1	1/6
14	1-3/16	1-3/8	90	122	1	1/6
16	1-5/16	1-1/2	105	142	3/4	1/8
20	1-5/8	1-7/8	140	190	3/4	1/8
24	1-7/8	2-1/8	160	217	1/2	1/12

* Torque values shown are based on lubricated connections as in re-assembly.

RECOMMENDED TORQUES

O-RING FACE SEAL (ORFS) TYPE HYDRAULIC FITTINGS



- a. Check components to ensure that the sealing surfaces and fitting threads are free of burrs, nicks, and scratches, or any foreign material.
- b. Apply lubricant (typically Petroleum Jelly) to O-ring and threads. If O-ring is not already installed, install O-ring. Align the tube or hose assembly.
- c. Ensure that flat face of the mating flange comes in full contact with O-ring.
- d. Thread tube or hose nut until hand-tight. The nut should turn freely until it is bottomed out. Torque fitting further to the specified number of F.F.F.T ("Flats From Finger Tight"), or to a given torque value in the table shown in the opposite column.

NOTE

If available, always hold the hex on the fitting body to prevent unwanted rotation of fitting body and hose when tightening the fitting nut.

- e. When assembling unions or two hoses together, three wrenches will be required.

SAE no.	Thd Size (in.)	Tube O.D. (in.)	Torque value*		Recommended turns to tighten (after finger tightening)**	
			lb-ft	N-m	Tube nuts	Swivel & hose
3	***	3/16	---	---	---	---
4	9/16	1/4	11-12	14-16	1/4-1/2	1/2-3/4
5	***	5/16	---	---	---	---
6	11/16	3/8	18-20	24-27	1/4-1/2	1/2-3/4
8	13/16	1/2	32-35	43-47		
10	1	5/8	45-51	60-68		
12	1-3/16	3/4	67-71	90-95		1/3-1/2
14	1-3/16	7/8	67-71	90-95		
16	1-7/16	1	93-100	125-135		
20	1-11/16	1-1/4	126-141	170-190		
24	2	1-1/2	148-167	200-225	---	---
32	2-1/2	2	---	---	---	---

* Torque values and angles shown are based on lubricated connection, as in re-assembly.

** Always default to the torque value for evaluation of adequate torque.

*** O-ring face seal type end not defined for this tube size.

CONVERSION CHART

CONVERSION CHART

Quantity	Inch-pound units		Factor	Si units (metric)	
	Unit name	Abbr.		Unit name	Abbr.
Area	acres	acres	$\times 0.4047 =$	hectares	ha
Flow	US gallons per minute	gpm	$\times 3.7854 =$	liters per minute	L/min
Force	pounds force	lbf	$\times 4.4482 =$	Newtons	N
Length	inch	in.	$\times 25.4 =$	millimeters	mm
	foot	ft	$\times 0.305 =$	meters	m
Power	horsepower	hp	$\times 0.7457 =$	kilowatts	kW
Pressure	pounds per square inch	psi	$\times 6.8948 =$	kilopascals	kPa
			$\times .00689 =$	megapascals	MPa
Torque	pound feet or foot pounds	lb-ft	$\times 1.3558 =$	newton meters	N·m
	pound inches or inch pounds	lbf·in. or in·lbf	$\times 0.1129 =$	newton meters	N·m
Temperature	degrees Fahrenheit	°F	$(°F - 32) \times 0.56 =$	Celsius	°C
Velocity	feet per minute	ft/min	$\times 0.3048 =$	meters per minute	m/min
	feet per second	ft/s	$\times 0.3048 =$	meters per second	m/s
	miles per hour	mph	$\times 1.6063 =$	kilometers per hour	km/h
Volume	US gallons	US gal.	$\times 3.7854 =$	liters	L
	ounces	oz.	$\times 29.5735 =$	milliliters	ml
	cubic inches	in. ³	$\times 16.3871 =$	cubic centimeters	cm ³ or cc
Weight	pounds	lb	$\times 0.4536 =$	kilograms	kg

UNLOADING AND ASSEMBLY

STEP 1. UNLOAD HEADER



CAUTION

To avoid injury to bystanders from being struck by machinery, do not allow persons to stand in unloading area.



CAUTION

Equipment used for unloading must meet or exceed the requirements specified below. Using inadequate equipment may result in chain breakage, vehicle tipping or machine damage.

Lifting vehicle	
Minimum Lifting Capacity *	9,000 lb (4,082 kg)
Minimum Fork Length	78 in. (1,981 mm)

* At 48 in. (1,220 mm) from back end of forks.

IMPORTANT

Forklifts are normally rated for a load located 24 inches (610 mm) from back end of the forks.

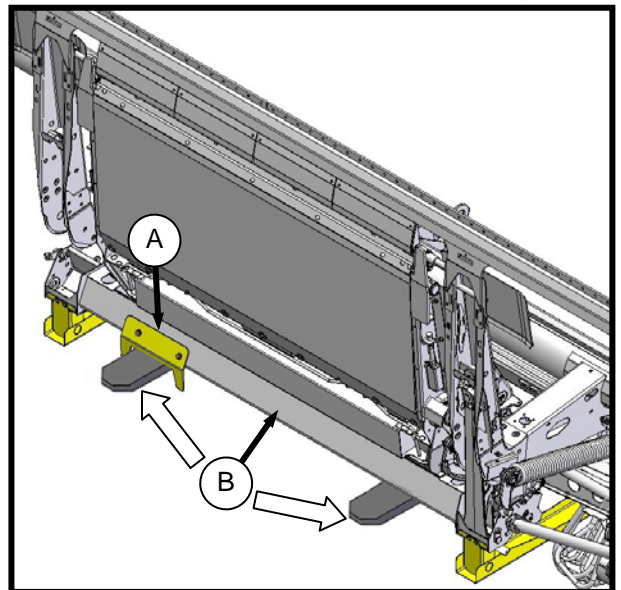
To obtain forklift capacity at 48 inches (1,220 mm), check with your forklift distributor.

- a. Move trailer into position, and block trailer wheels.
- b. Lower trailer storage stands.



CAUTION

Avoid lifting the second header and ensure the forks do not interfere with the shipping frame. If the forks contact the second header, damage to the headers may occur.



- c. Approach the header, and line up one fork with guide (A) under adapter frame.
- d. Slide forks underneath shipping support (B) of header as far as possible without contacting the shipping support of opposite header.
- e. Remove hauler's tie down straps and chains.



WARNING

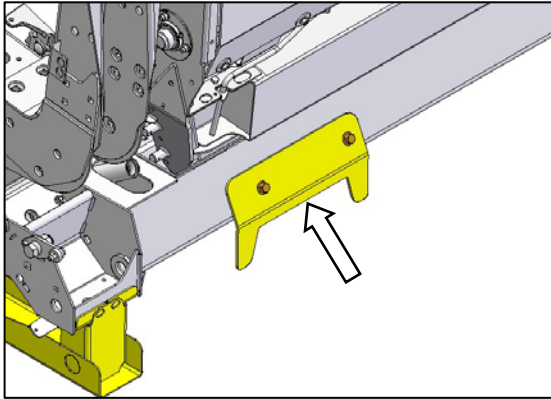
Be sure forks are secure before moving away from load. Stand clear when lifting.

- f. Slowly raise header off deck.
- g. Back up until unit clears trailer, and slowly lower to 6 in. (150 mm) from ground.
- h. Take header to storage or set up area.
- i. Repeat above steps for second header.
- j. Check for shipping damage and missing parts.

UNLOADING AND ASSEMBLY

STEP 2. LOWER HEADER

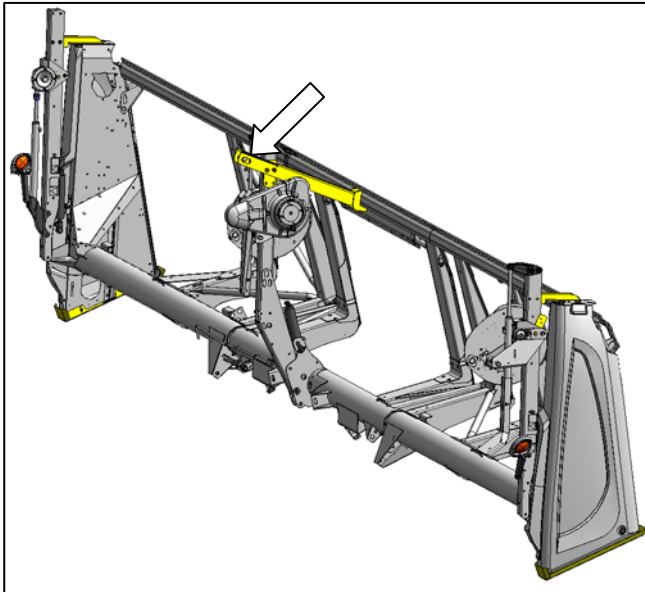
Reposition header in preparation for assembly and set-up as follows:



- Remove fork guide from adapter lower frame.
- Choose an area with level ground.
- Drive lifting vehicle to approach header from its underside.

IMPORTANT

Do **not** lift at cutterbar when unloading from trailer. This procedure is only for laying the machine over into working position.

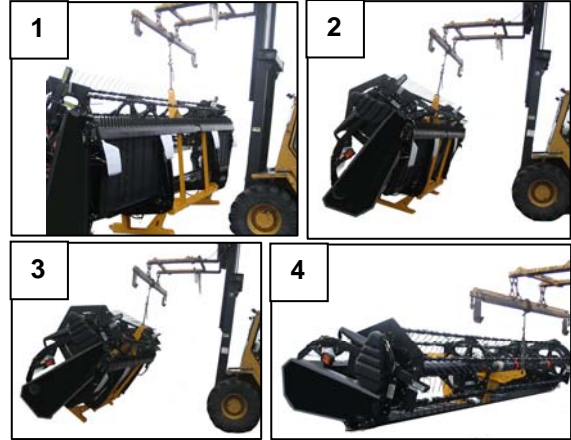


- Attach chain to shipping support at center reel arm. (Combine adapter not shown.)

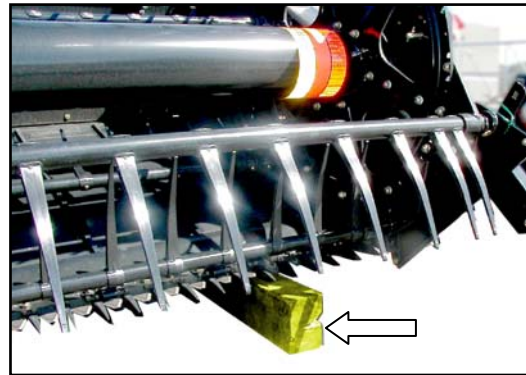


CAUTION

Stand clear when lowering, as machine may swing.



- Back up **SLOWLY** while lowering forks until header rests on the ground.



- Place 6 inch (150 mm) blocks under each end and center of cutterbar, and lower header onto blocks.
- Remove chain.

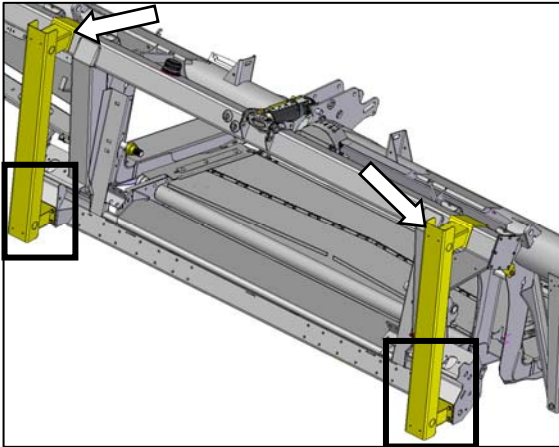
UNLOADING AND ASSEMBLY

STEP 3. REMOVE SHIPPING STANDS

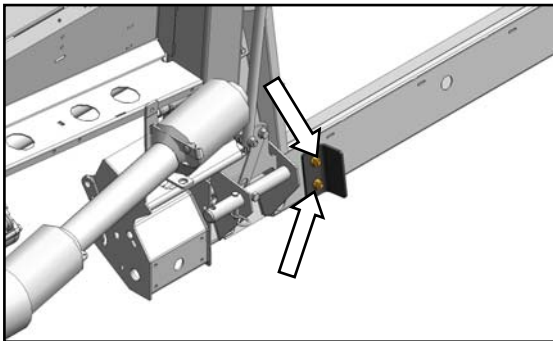
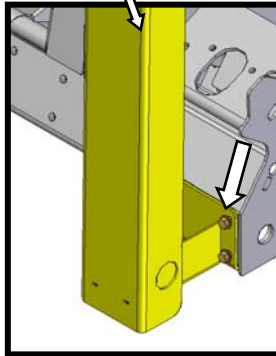
The removable stands are painted yellow.

NOTE

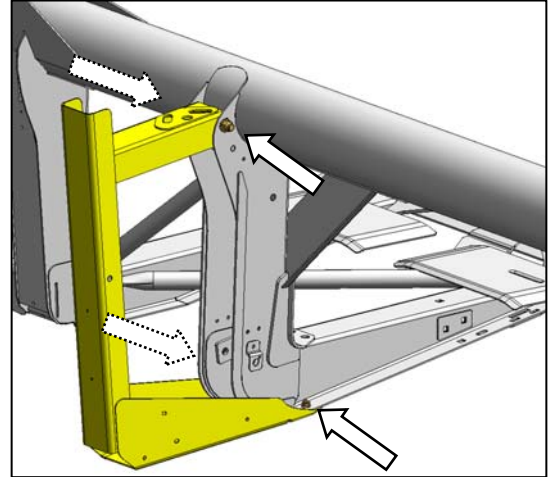
Unless otherwise specified, discard stands, and all shipping material and hardware.



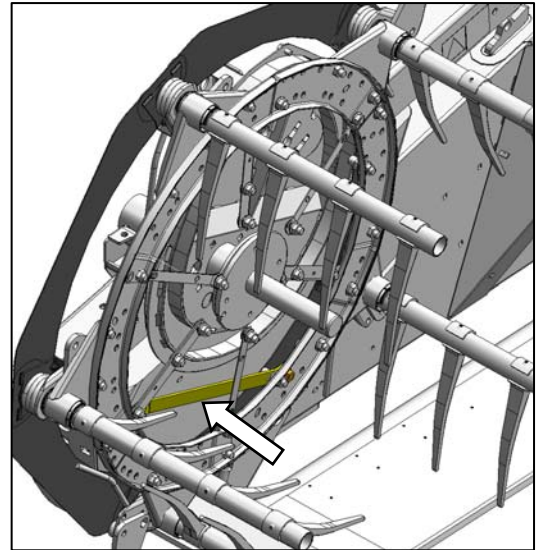
- a. Remove four bolts at the base of the two adapter frame stands, and lift shipping stands off adapter.



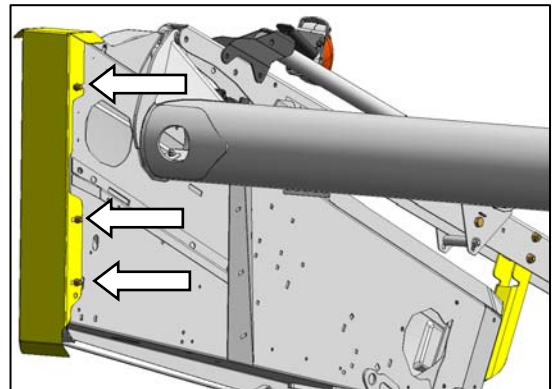
- b. Remove two bolts from bracket on bottom of adapter frame, and remove bracket.



- c. Remove four bolts in each shipping stand on outboard header legs, and remove stands.



- d. Remove reel anti-rotation brace between reel and endsheet.



- e. Loosen three bolts in each end shield stand, and remove stands. Hardware can be removed when header end shields are opened.

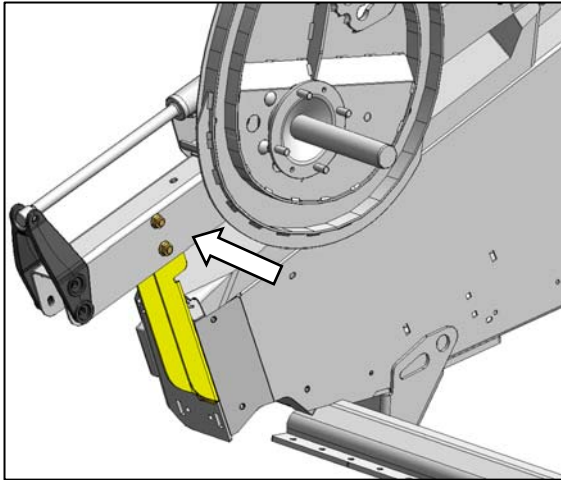
UNLOADING AND ASSEMBLY

STEP 4. INSTALL REEL LIFT CYLINDERS

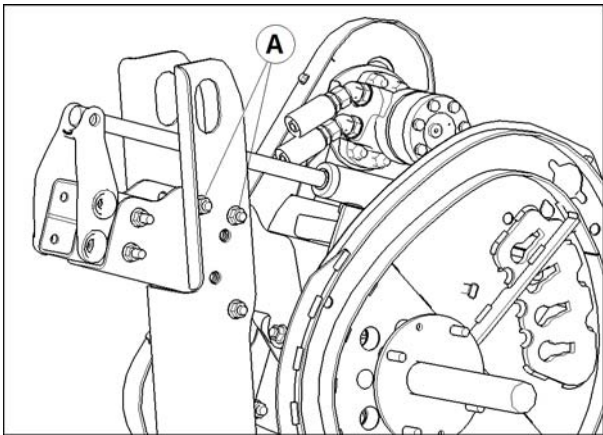


CAUTION

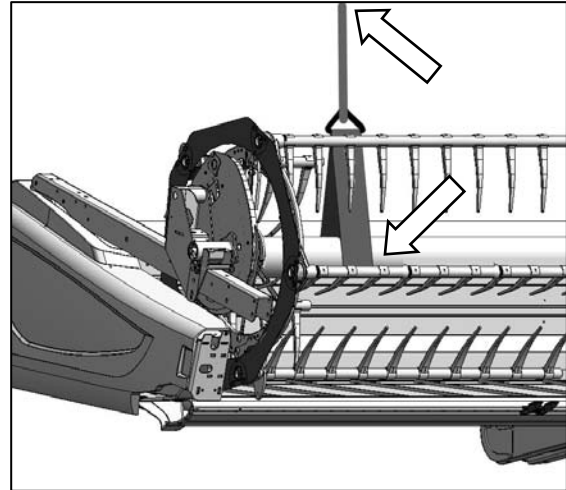
Braces on reel arms keep reel from sliding forward. Do not remove.



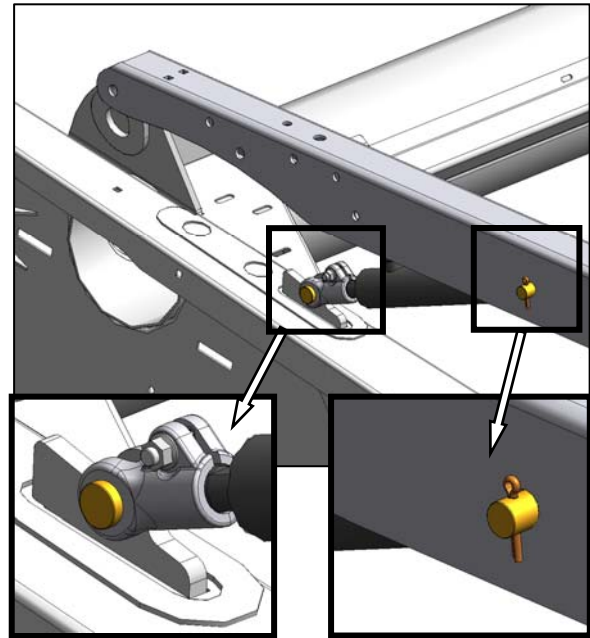
- a. Remove two top bolts on outboard reel arm support - both ends.



- b. Remove two top bolts (A) on center reel arm support.



- c. Position sling around the reel tube close to outboard end of reel, and attach sling to a forklift (or equivalent).
- d. Remove shipping wire/banding from cylinder, and remove pins from lug and arm.
- e. Lift reel so that reel lift cylinder mounting holes line up with lug on endsheet and hole in reel arm.



RH SHOWN - LH OPPOSITE

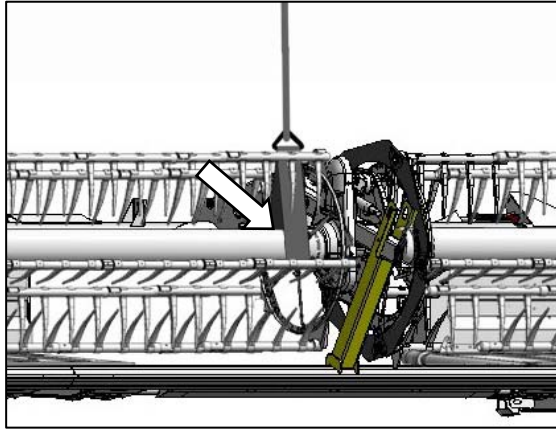
- f. Secure cylinder to endsheet and reel arm with pins as shown.

NOTE

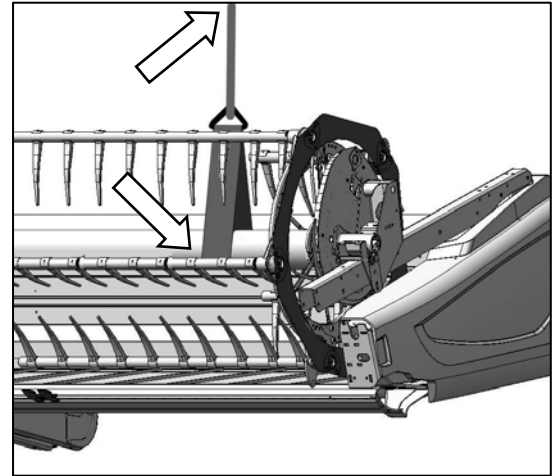
Cotter pin outboard at reel arm; cotter pin inboard at endsheet.

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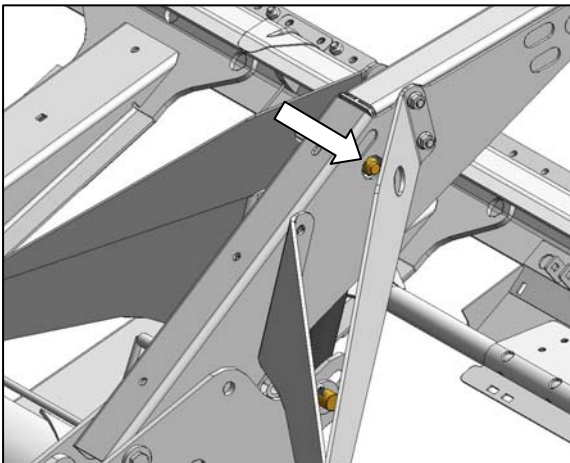
UNLOADING AND ASSEMBLY



- g. Remove sling, and reposition around reel tube near reel center support arm.
- h. Remove shipping wire/banding from center reel lift cylinder, and remove socket head bolt and nut from cylinder rod.
- i. Lift reel so that hole in center lift cylinder rod lines up with mounting hole in reel arm.

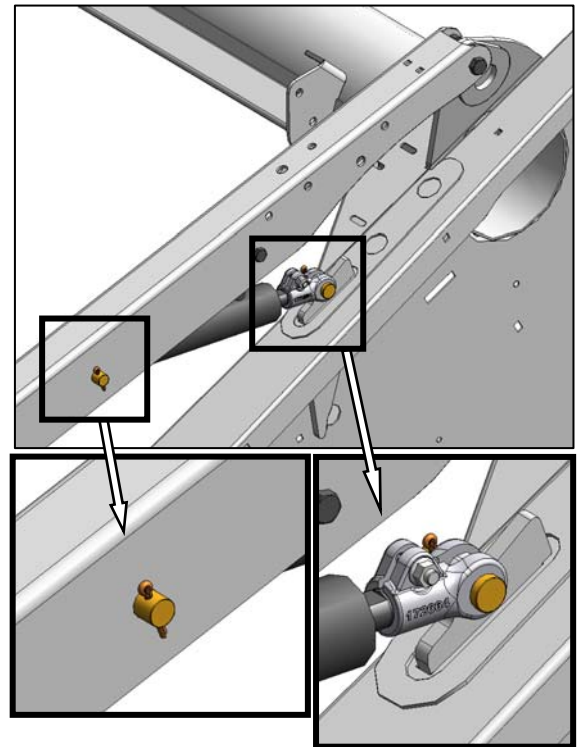


- k. Remove sling, and reposition around reel tube near opposite outboard reel arm.
- l. Remove shipping wire/banding from cylinder, and remove pins from lug and arm.
- m. Lift reel so that reel lift cylinder mounting holes line up with lug on endsheet and hole in reel arm.



CENTER CYLINDER

- j. Attach cylinder to reel arm with socket head bolt and nut as shown. Access hardware through holes in reel arm braces.



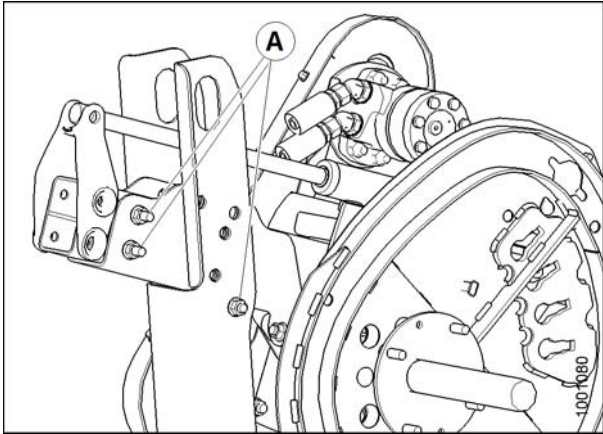
- n. Secure cylinder to endsheet and reel arm with pins as shown.

NOTE

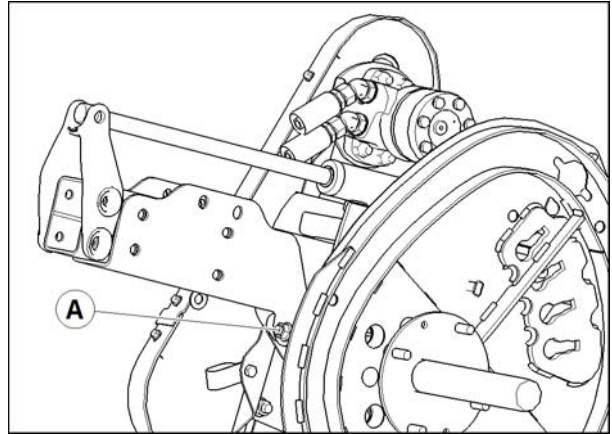
Cotter pin outboard at reel arm; cotter pin inboard at endsheet.

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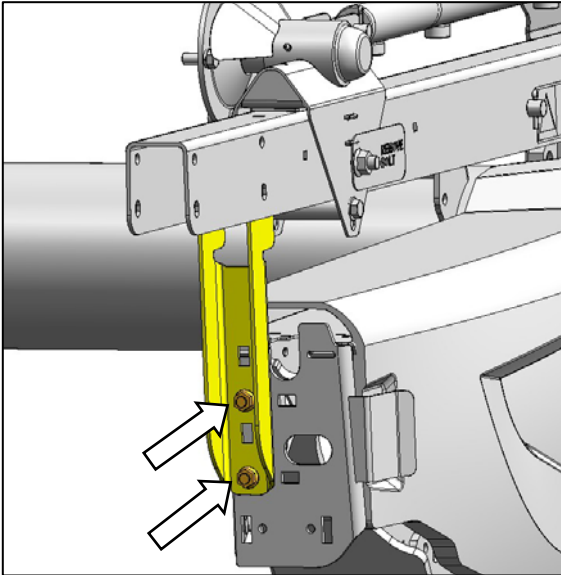
UNLOADING AND ASSEMBLY



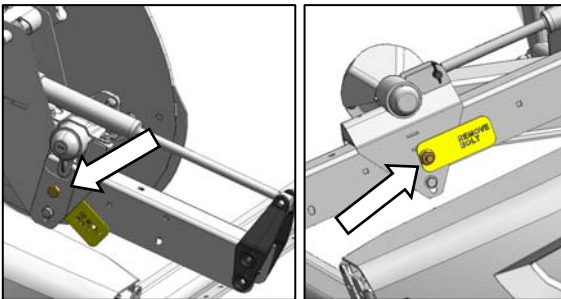
- o. Remove the three remaining bolts (A). Disengage center reel arm shipping support from cutterbar, and remove.



- r. Remove bolt (A) locking reel fore-aft position at center reel arm, and remove center reel arm shipping channel.



- p. Remove two bolts from reel arm supports at endsheet, and remove support. Repeat at other side.



- q. Remove bolts and tags locking reel fore-aft position at outer reel arms.

PRE-DELIVERY CHECKS

STEP 5. INSTALL REEL SPEED SENSOR

NOTE

This step is **not** applicable to CASE-IH or New Holland combines. Proceed to **STEP 6. INSTALL OPTIONS.**

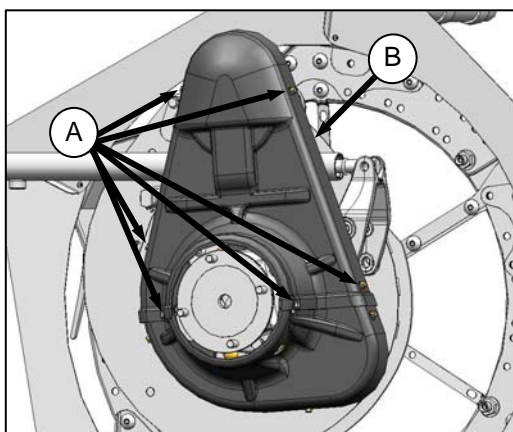


CAUTION

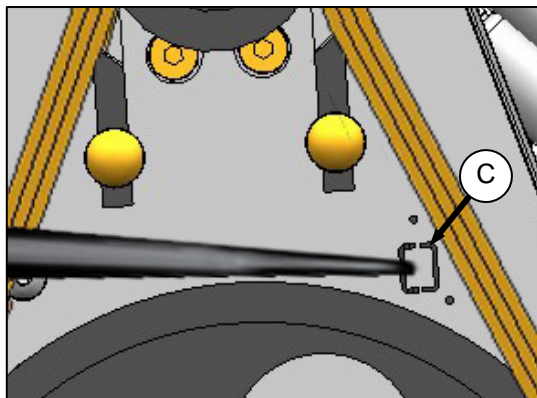
To avoid personal injury, before servicing header or opening drive covers:

- Fully lower the header. If necessary to service in the raised position, always engage lift cylinder stops.
- Stop engine, and remove key.
- Engage park brake.

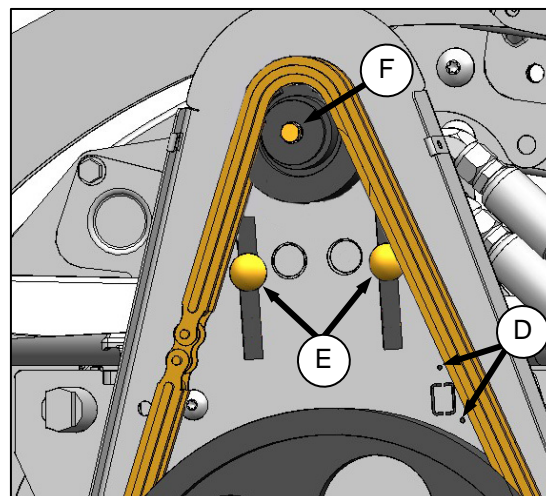
A. REMOVE COVER



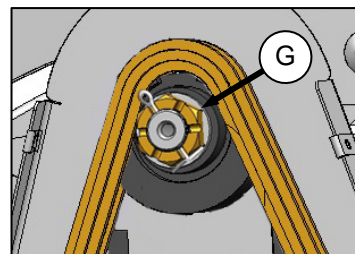
- Remove six screws (A) and then remove drive upper cover (B).
- Clean grease from work area.



- Remove knock-out (C) in chain case for wire harness routing.

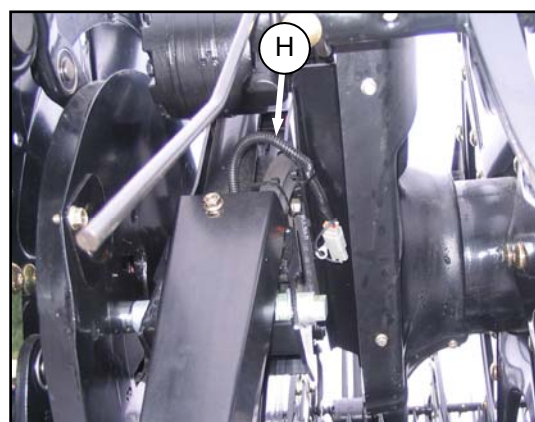


- If necessary, clean up holes (D) with a 1/8 in. (3.2 mm) drill.
- Remove bolts (E) in chain case.
- Remove bolt, lock washer and flatwasher from drive motor shaft at (F).



NOTE

If high torque sprocket is installed, remove cotter pin, castle nut (G), and flat washer.

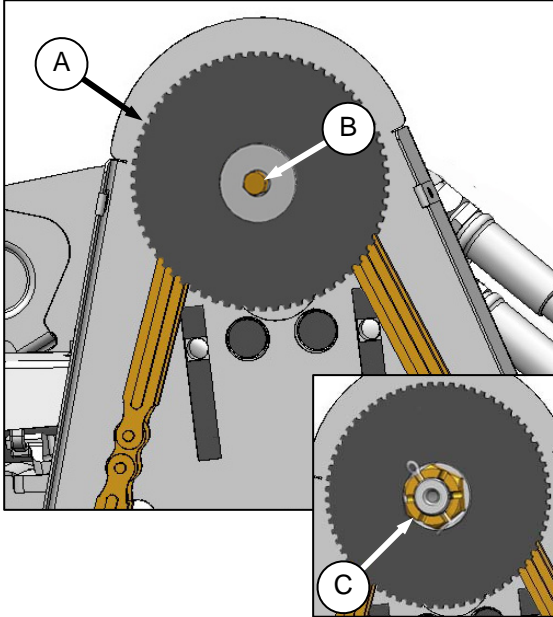


- Retrieve existing harness (H) from reel center arm.
- Proceed to procedure **B, C, or D** depending on your particular combine.

PRE-DELIVERY CHECKS

B. JOHN DEERE SENSOR INSTALLATION

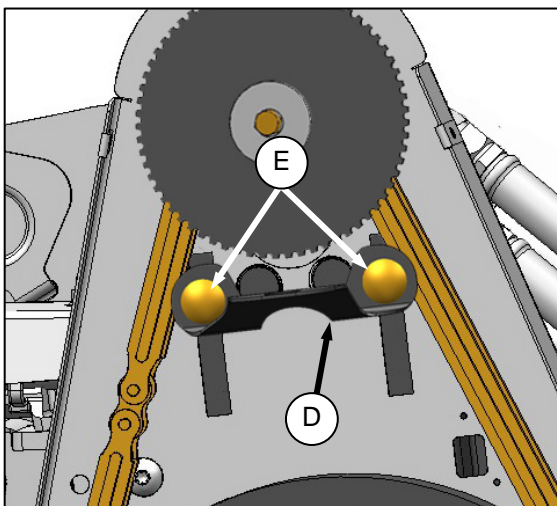
- Perform A. REMOVE COVER.
- Retrieve speed sensor kit from combine completion package.



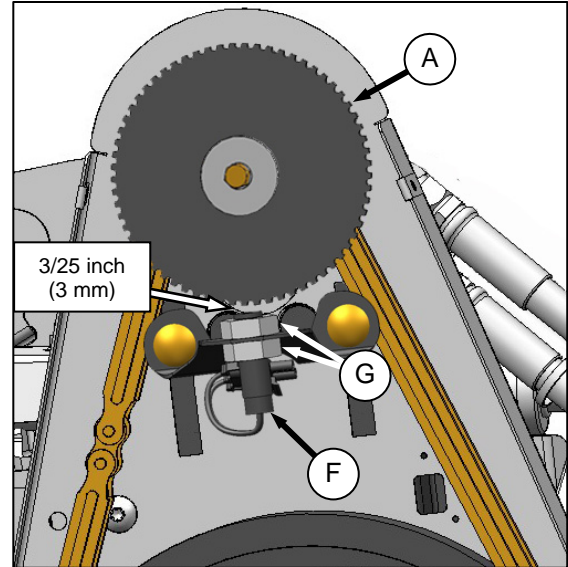
- Position speed sensor disc (A) on shaft, and re-install bolt, lock washer and flatwasher at (B). Torque to 18 lb-ft (24 N·m).

NOTE

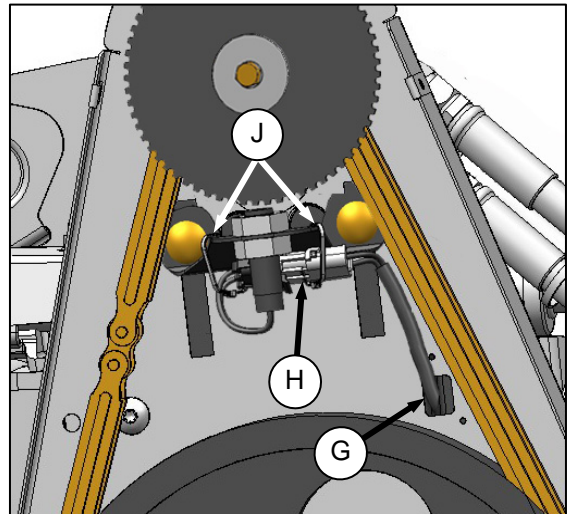
If high torque sprocket is installed, install flat washer, castle nut, and cotter pin (C).



- Locate bracket (D) on chain case, and re-install bolts (E). Torque to 75 lb-ft (102 N·m).



- Remove top nut on sensor (F) and locate sensor in bracket (D). Re-install nut.
- Adjust gap between sensor (F) and disc (A) to 3/25 in. (3 mm) with nuts (G). Tighten nuts.



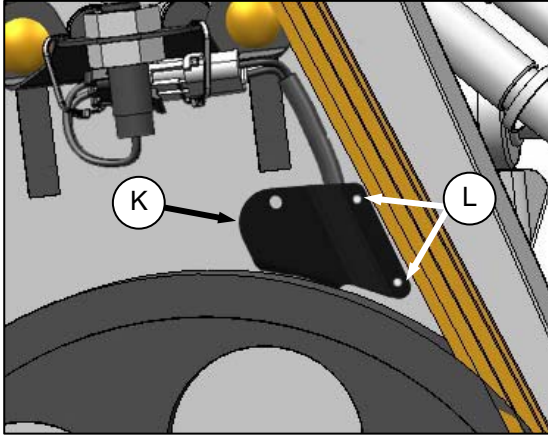
- Feed male connector on harness (G) through hole in chain case.
- Connect female end to sensor connector (H).
- Secure harness to support (D) with two cable ties (J).

(continued next page)

PRE-DELIVERY CHECKS

IMPORTANT

Ensure harness is clear of chain and sprockets, and that motor can be moved up and down fully in slots without damaging harness.



- j. Locate cover (K) over harness, align holes, and attach to chain case with two rivets (L).
- k. Proceed to **E. INSTALL COVER.**

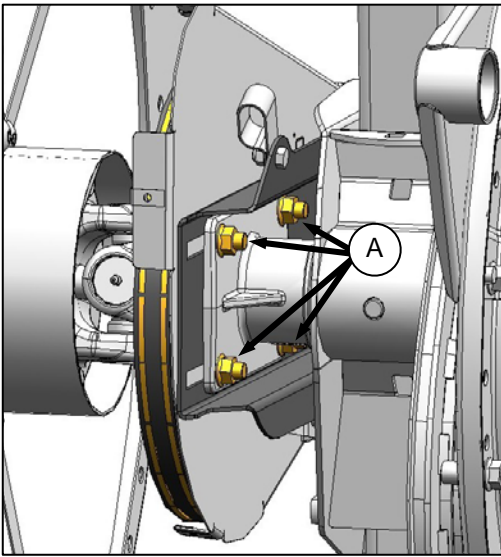
PRE-DELIVERY CHECKS

C. CAT LEXION 500 AND 700 SERIES SENSOR INSTALLATION

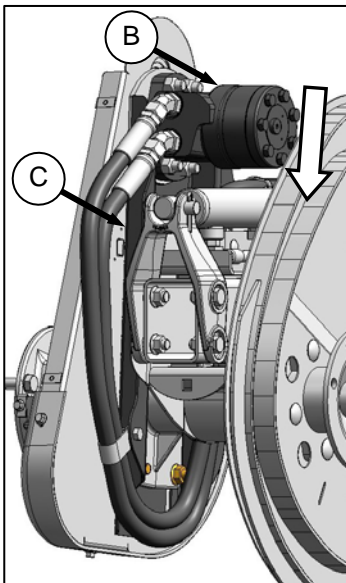
- Retrieve speed sensor kit from combine completion package. The contents are bagged and wired to the header.
- Remove cover. See **A. REMOVE COVER.**

IMPORTANT

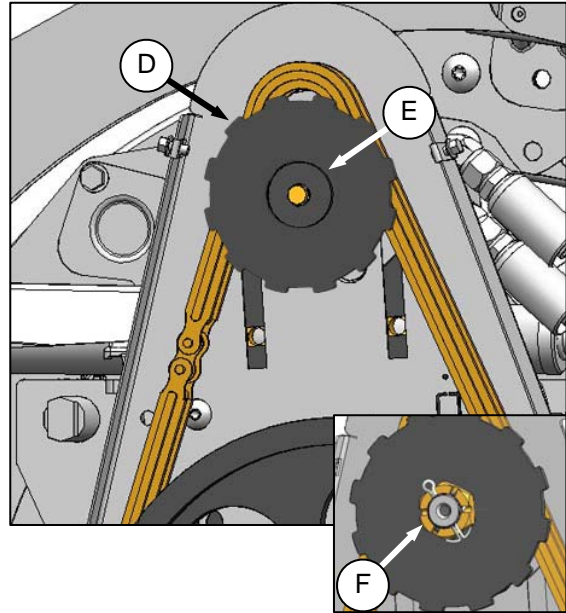
The following steps c. and d. are required to establish the amount of slack in the harness, and to determine the harness location on the cover, so that when the drive chain is loosened, the harness or sensor will not be damaged.



- Loosen four bolts (A) on chain case.



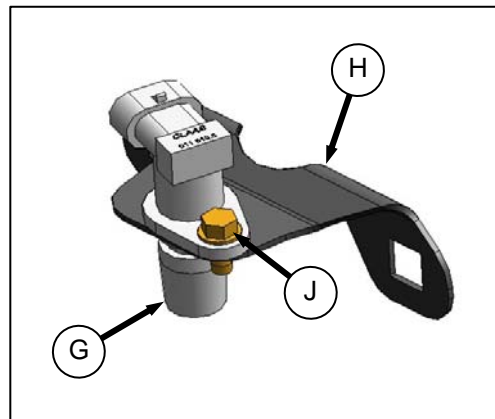
- Slide motor (B) and motor mount (C) down towards reel shaft until drive chain is loose.



- Position speed sensor disc (D) on shaft, and re-install bolt, lock washer and flatwasher at (E). Torque to 18 lb-ft (24 N·m).

NOTE

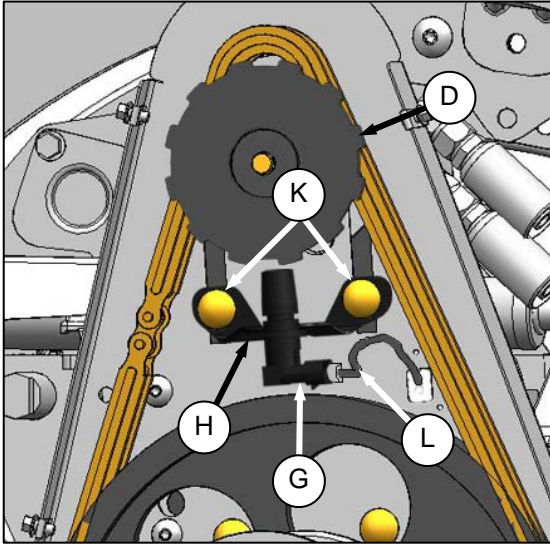
If high torque sprocket is installed, install flat washer, castle nut, and cotter pin (F).



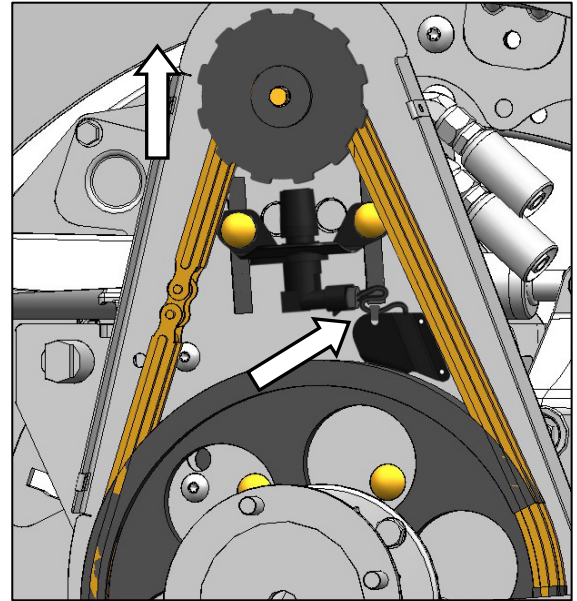
- Assemble sensor (G) in support (H) and secure sensor with 1/4 in. x 0.5 self-tapping screw (J).

(continued next page)

PRE-DELIVERY CHECKS

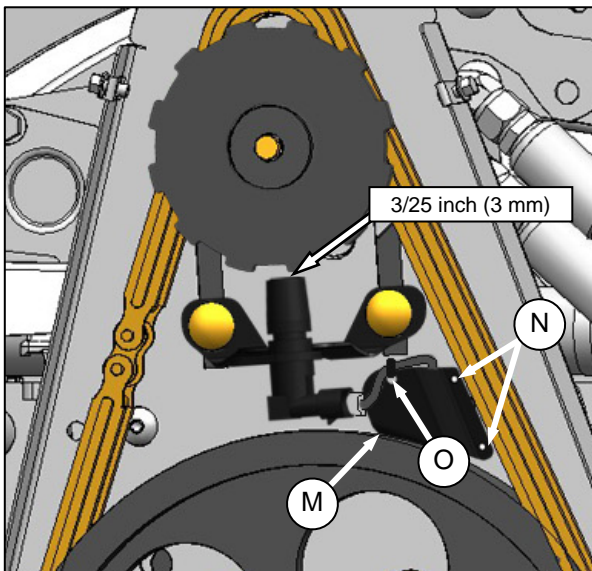


- g. Locate support (H) on chain case, and re-install bolts (K) removed in STEP A. If required, bend support so that sensor just clears the disc (D).
- h. Install nuts on bolts (K), but do **not** tighten.
- i. Adjust gap between sensor (G) and disc (D) to 3/25 inch (3 mm) by bending support.
- j. Retrieve wiring harness (L) from kit and feed connector through hole in chain case. Route to existing harness on reel arm.
- k. Connect other end to sensor (G).

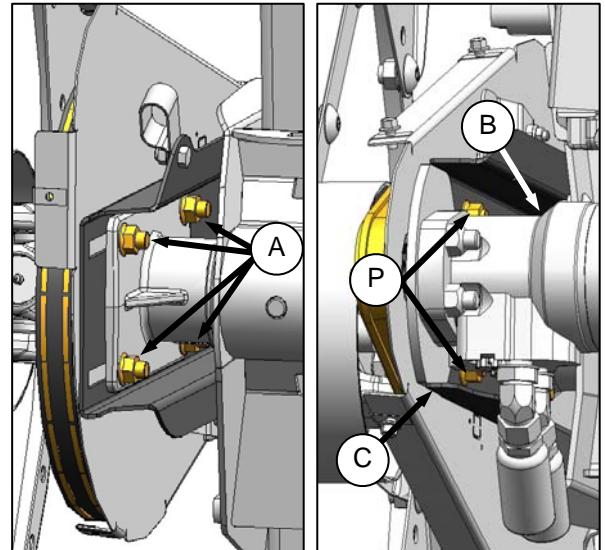


IMPORTANT

Ensure harness is clear of chain and sprockets, and that motor can be moved up and down fully in slots without damaging harness.



- l. Locate shield (M) over harness, align holes, and attach to chain case with two rivets (N).
- m. Secure harness (L) to shield (M) with cable tie (O) exactly as shown.

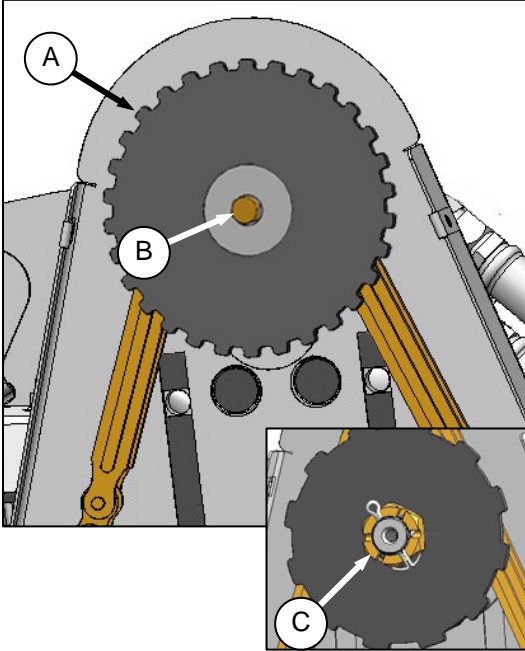


- n. Slide motor (B) and motor mount (C) up away from reel shaft. Check that there is sufficient slack in sensor harness so that sensor or harness is not damaged.
- o. Tighten chain so that hand force deflects the chain approximately 1/8 inch (3 mm). Tighten nuts (A) and (P) to 75 lb-ft (102 N·m).
- p. Proceed to **E. INSTALL COVER.**

PRE-DELIVERY CHECKS

D. AGCO SENSOR INSTALLATION

- Perform **A. REMOVE COVER**.
- Retrieve speed sensor kit from combine completion package. The contents are bagged and wired to the header.



- Position speed sensor disc (A) on shaft, and re-install bolt, lock washer and flat washer at (B). Torque to 18 lb-ft (24 N·m).

NOTE

If high torque sprocket is installed, install flat washer, castle nut, and cotter pin (C).

NOTE

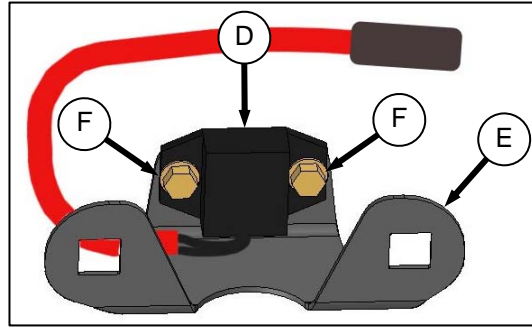


2-WIRE SENSOR

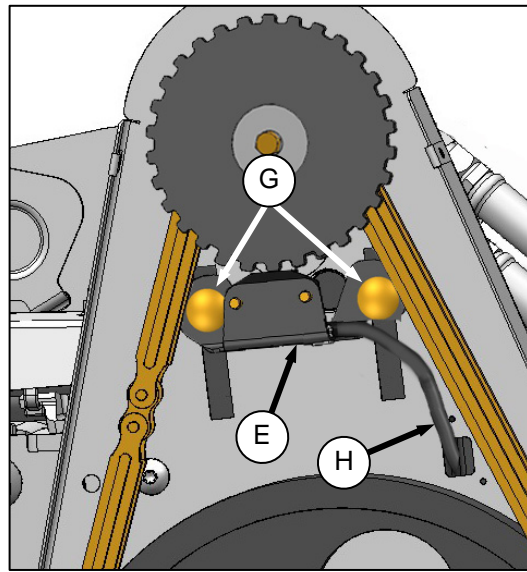
3-WIRE SENSOR

Install 2-wire sensor for Gleaner R and S Series and for AGCO 2008 and prior model combines. Install 3-wire sensor for all other AGCO models (2009 and newer model combines).

- Assemble sensor (D) to support (E) with self-tapping screws (F).



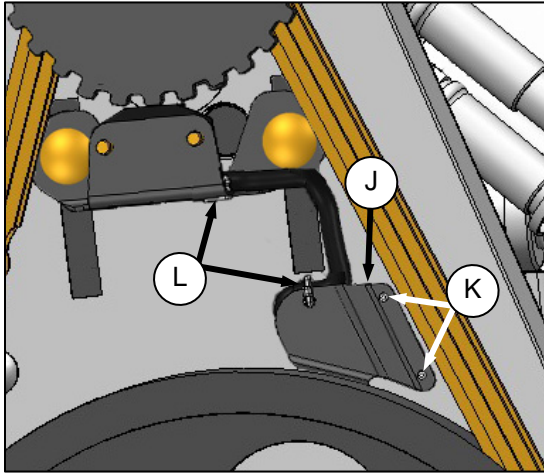
- Locate support (E) on chain case, and re-install bolts (G). Torque to 75 lb-ft (102 N·m).



- Route connector end of sensor harness (H) through hole in drive case as shown.

(continued next page)

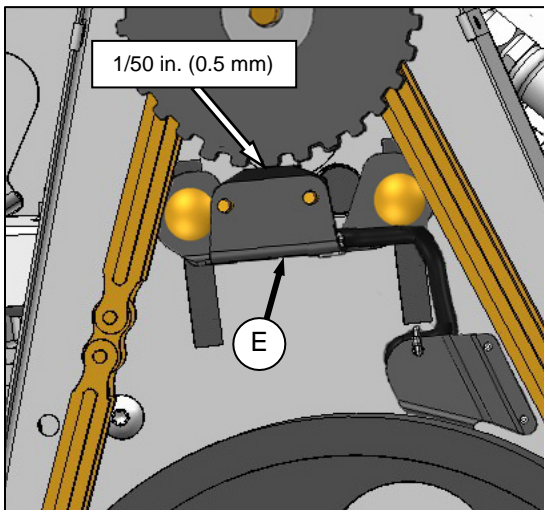
PRE-DELIVERY CHECKS



- g. Locate cover (J) over harness, align holes and attach to chain case with two rivets (K).
- h. Secure harness to cover (J) and support with cable ties (L) exactly as shown.

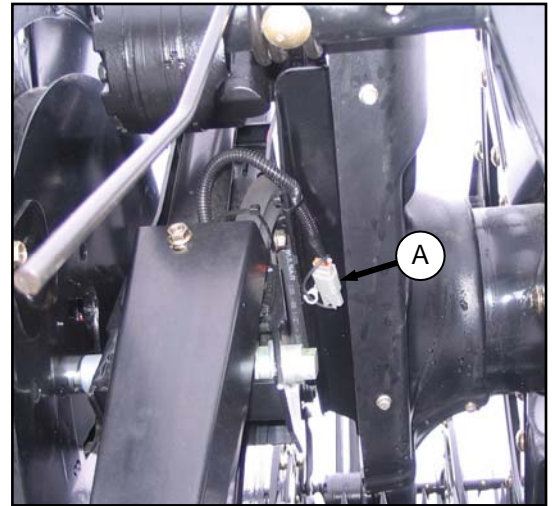
IMPORTANT

Ensure harness is clear of chain and sprockets, and that motor can be moved up and down fully in slots without damaging harness.

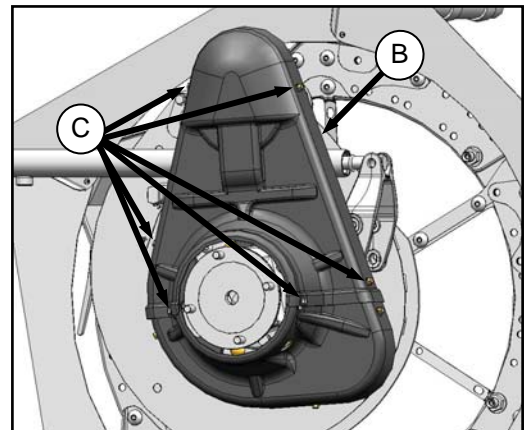


- i. Adjust gap between sensor and disc to 1/50 inch (0.5 mm) by bending support (E).
- j. Proceed to **E. INSTALL COVER**.

E. INSTALL COVER



- a. Attach sensor connector to existing harness (A) behind chain case.



- b. Position cover (B), and install six screws (C).

STEP 6. INSTALL OPTIONS

Retrieve kits supplied as options with the header, and install in accordance with installation instructions supplied in each kit.

PRE-DELIVERY CHECKS

STEP 7. SET-UP ADAPTER

A. FILLER CAP



- a. Remove filler cap from bag.

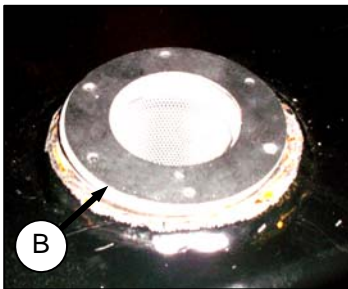


- b. Remove yellow shipping cover (A) from adapter frame. Discard cover. Keep screws.

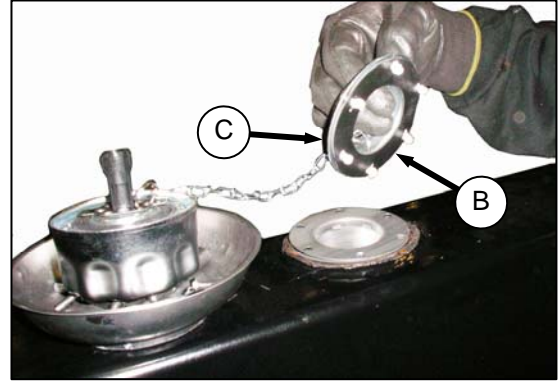


CAUTION

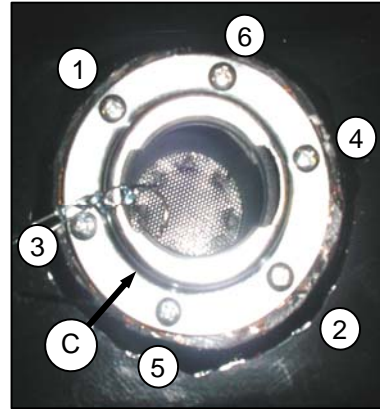
Cap may be under pressure. Allow pressure to equalize by lifting cap slightly with some of the screws remaining.



- c. There are two gaskets—one on either side of the filler strainer flange. Remove the top gasket (B) for use in step d.



- d. Place gasket (B) that was removed from the top of the filler strainer onto filler cap neck (C), and align holes.
- e. Install #10-32 screws on filler cap neck (C), pressing screws through the gasket (B).
- f. Apply Loctite® #565 (or equivalent) to screws.



- g. Place filler cap neck (C) (complete with screws) over opening, aligning the machine screws with the threaded holes.
- h. Carefully thread in the machine screws using a cross pattern (see photo above) to prevent cross threading of tapped holes.
- i. Repeat pattern to gradually tighten screws to 31 lbf-in. (3.5 N·m).



- j. Install filler cap (A).

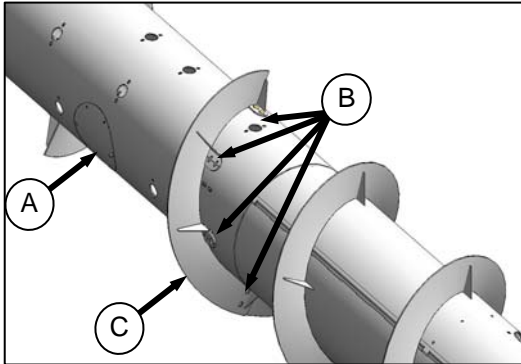
PRE-DELIVERY CHECKS

B. FLIGHTING EXTENSIONS

Flighting extension kits may have been supplied with your header to improve feeding in certain crops such as rice. They are **not** recommended in cereal crops.

APPLICABLE COMBINES: All except New Holland CR960, 9060, 970, 9070, and 9080.

If necessary, remove auger flighting extensions as follows.



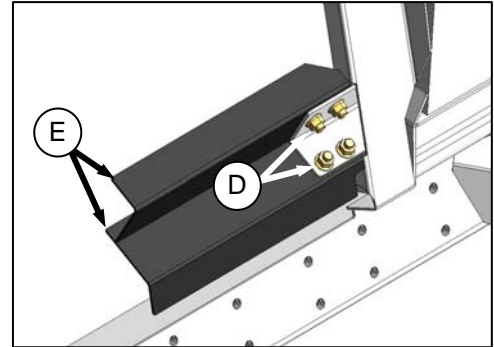
- Remove access cover (A).
- Remove eight bolts (B), washers, and nuts that secure flighting extension (C) to auger, and remove extension.
- Repeat for other flighting extension.
- Re-install access cover (A).

C. STRIPPER BARS

Stripper bar kits may have been supplied with your header to improve feeding in certain crops such as rice. They are **not** recommended in cereal crops.

APPLICABLE COMBINES: All except New Holland CR960, 9060, 970, 9070, and 9080.

If necessary, remove auger stripper bars as follows:



- Remove four bolts (D) and nuts securing bars (E) to adapter frame, and remove bars.
- Repeat for opposite set of stripper bars.

PRE-DELIVERY CHECKS

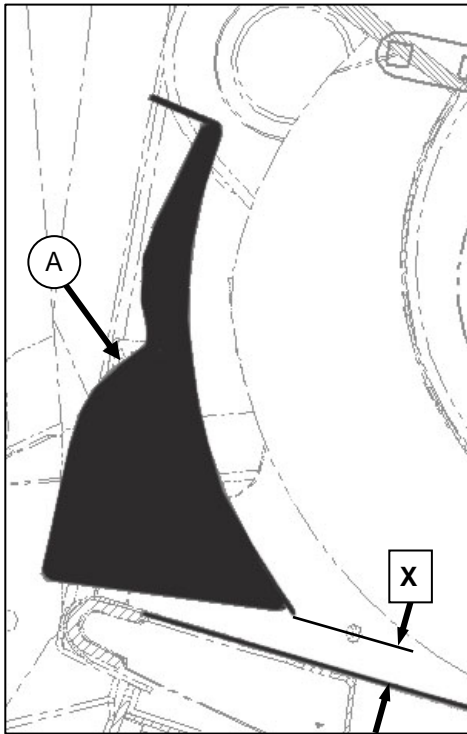
D. CR FEEDER DEFLECTORS

For New Holland CR 960, 9070, and 9080 combines, feeder kits have been installed on adapter at the factory to improve feeding into the feeder house. They may also have been installed as an option on older machines. If necessary, they can be removed.

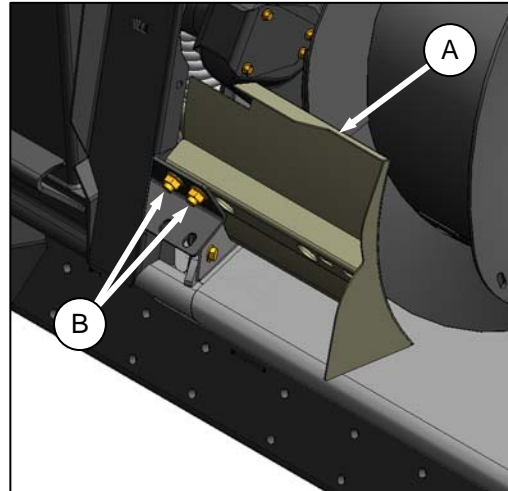
CA25 adapters for the CR Models listed have short feeder kits installed at the factory. Long feeder kits are provided for narrow feeder house combines, and are dealer-installed to replace short feeder kits.

Combine model	Feeder house size	Feeder kit size
CR970, 9070, 9080	Wide	Short: 200 mm
CR960, 9060, 940, 9040	Narrow	Long: 325 mm

If required, replace the feeder deflectors as follows:



- Determine position of existing deflector (A) by measuring gap 'X' between deflector forward edge and pan.



LH SHOWN, RH OPPOSITE

- Remove two bolts (B) and nuts securing deflector (A) to adapter frame, and remove deflector.
- Position replacement deflector, and secure with bolts (B) and nuts. Maintain dimension 'X' from existing deflector for replacement deflector.
- Repeat for opposite deflector.
- After attaching header to combine, extend center-link fully, and check gap between deflector and pan. Maintain 7/8 in. (22 mm) +/- 1/8 in. (3 mm).

PRE-DELIVERY CHECKS

STEP 8. ATTACH TO COMBINE

Refer to specific section for your combine.

COMBINE	SECTION
CASE IH	A
JOHN DEERE 60, 70, and S-SERIES	B
LEXION	C
NEW HOLLAND	D
AGCO	E

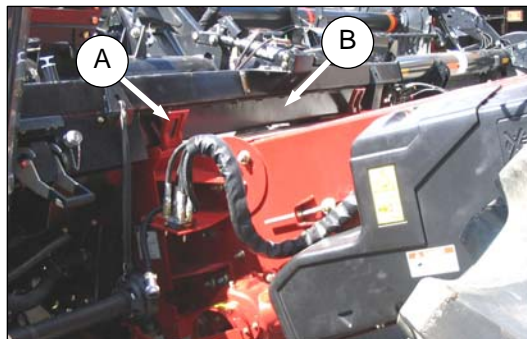
NOTE

Kits are available to allow attachment to Case 23 and 25 Series Combines, as well as John Deere 50 Series Combines. See your MacDon Dealer.

IMPORTANT

Ensure that applicable functions (AHHC, Draper Header Option, Hydraulic Center-link Option, Hydraulic Reel Drive, etc.) are enabled on the combine and combine computer. Failure to do so may result in improper header operation.

A. CASE IH 7010, 8010, 7120, 8120, 5088, 6088, 7088

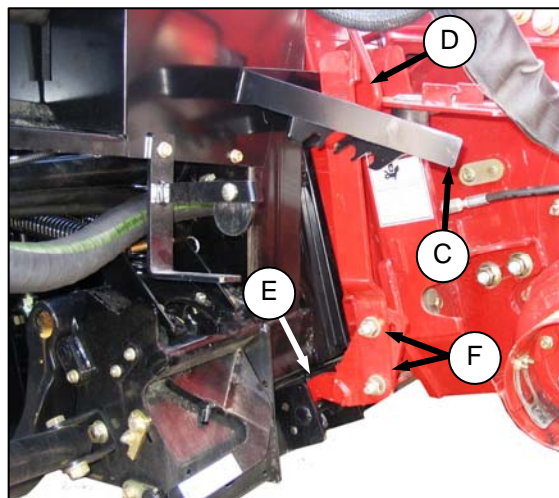


- Slowly drive combine up to adapter until feeder house saddle (A) is directly under the adapter top cross member (B).
- Raise feeder house slightly to lift adapter, ensuring feeder saddle is properly engaged in adapter frame.



CAUTION

Stop engine, and remove key from ignition before leaving Operator's seat for any reason. A child or even a pet could engage an idling machine.

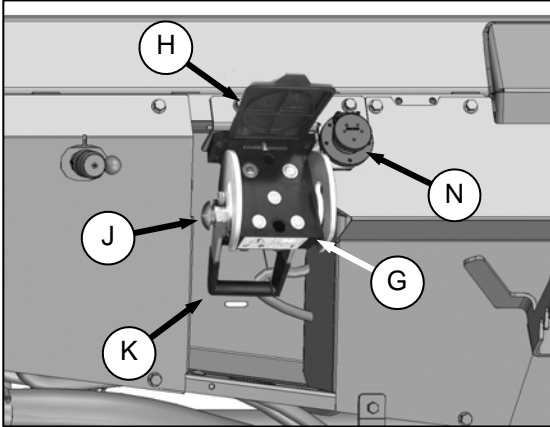


- Lift lever (C) on adapter at left side of feeder house, and push handle (D) on combine to engage locks (E) on both sides of the feeder house.
- Push down on lever (C) so that slot in lever engages handle to lock handle in place.
- If lock (E) does not fully engage pin on adapter when (C) and (D) are engaged, loosen bolts (F), and adjust lock as required. Re-tighten bolts.

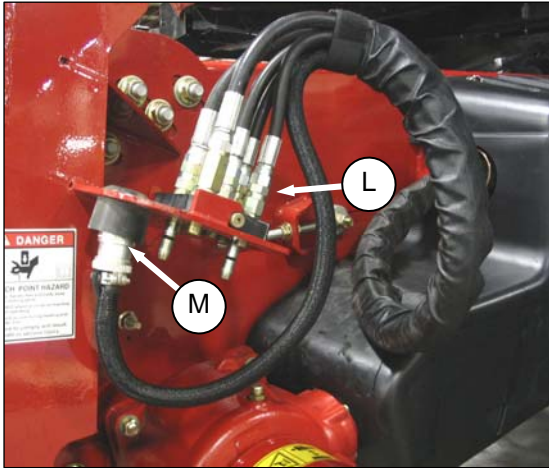
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PRE-DELIVERY CHECKS

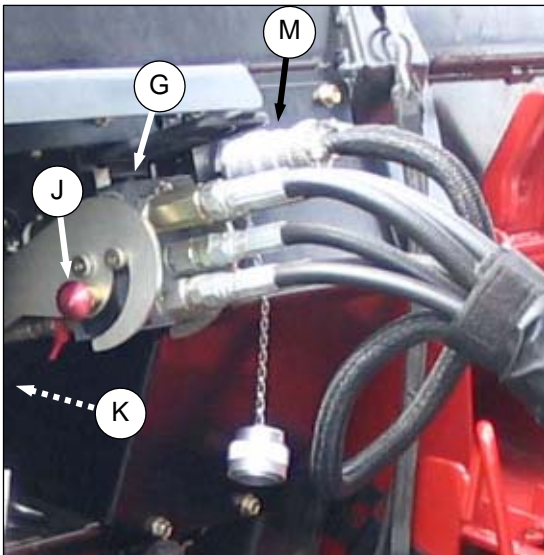
- f. Connect combine hydraulic quick coupler to receptacle (G) on adapter as follows:



1. Open cover (H).
2. Push in lock button (J), and pull handle (K) to full open position.



3. Remove coupler (L) from combine, and clean mating surfaces.



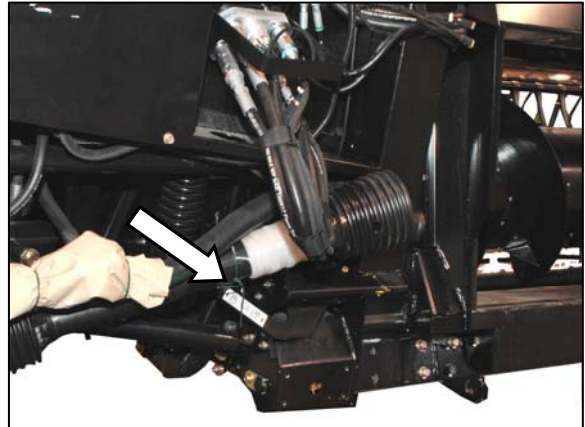
4. Position onto adapter receptacle (G), and push handle (K) to engage coupler pins into receptacle.

5. Push handle to closed position until lock button (J) snaps out.

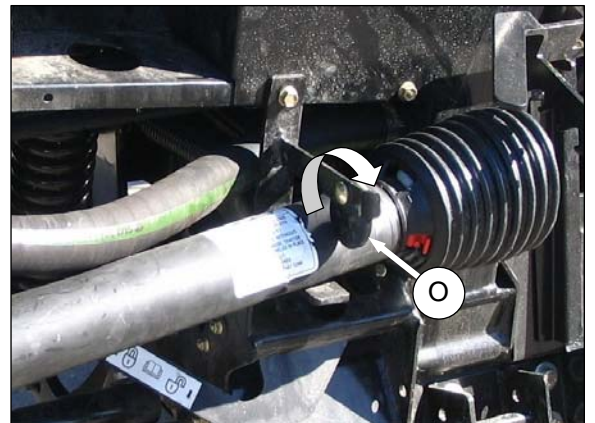
- g. Remove cover on adapter electrical receptacle (N). See illustration in opposite column.

- h. Remove electrical connector (M) from storage cup on combine, and route to adapter receptacle.

- i. Align lugs on connector with slots in receptacle, push connector onto receptacle, and turn collar on connector to lock it in place.



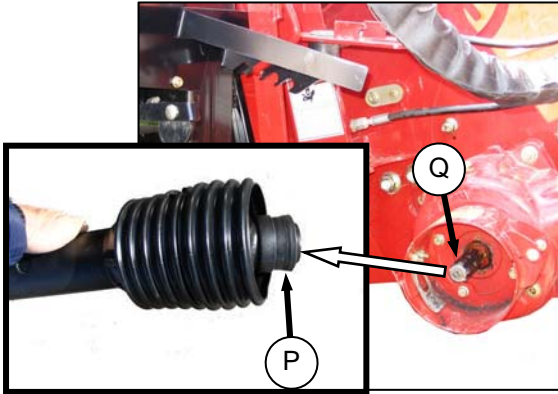
- j. Remove shipping wire from driveline and float lock lever.



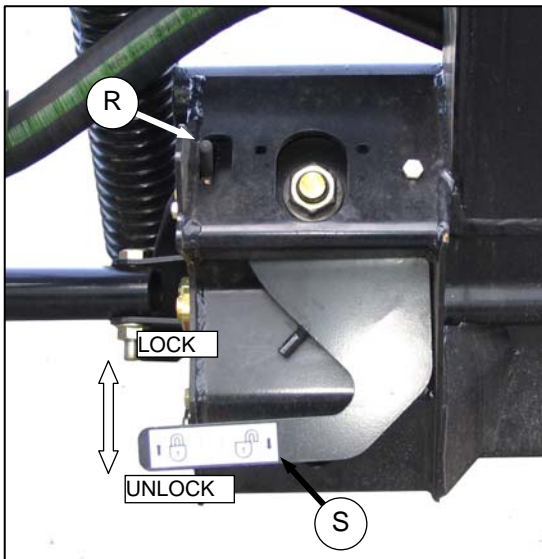
- k. Rotate disc (O) on adapter driveline storage hook, and remove driveline from hook.

(continued next page)

PRE-DELIVERY CHECKS



- I. Pull back collar (P) on end of driveline, and push onto combine output shaft (Q) until collar locks.

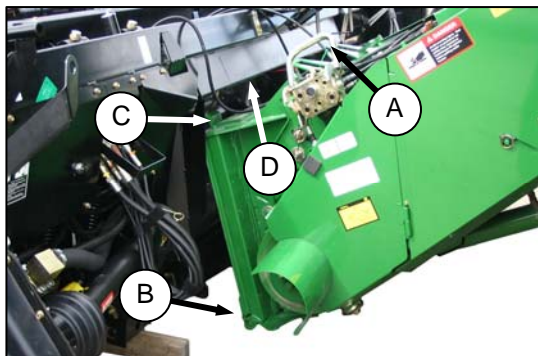


- m. Disengage both adapter float locks by moving latch (R) away from adapter, and moving lever (S) at each lock to lowest position.
- n. Proceed to **STEP 10. ATTACH CAM ARMS** (page 39).

PRE-DELIVERY CHECKS

B. JOHN DEERE 60, 70, AND S SERIES

Contour Master, Level Land

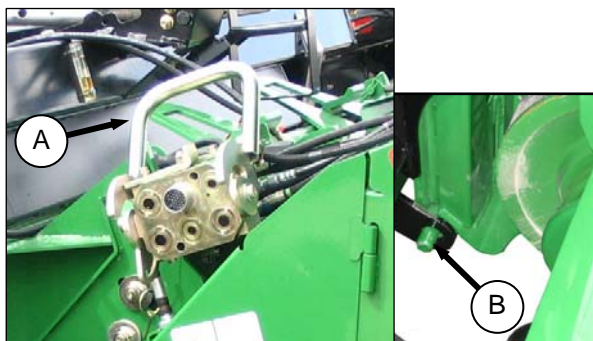


- Push handle (A) on combine coupler toward feeder house to retract pins (B) at bottom corners of feeder house.
- Slowly drive combine up to adapter until feeder house saddle (C) is directly under the adapter top cross member (D).
- Raise feeder house to lift adapter, ensuring feeder saddle is properly engaged in adapter frame.
- Raise or lower header until slightly off the ground.

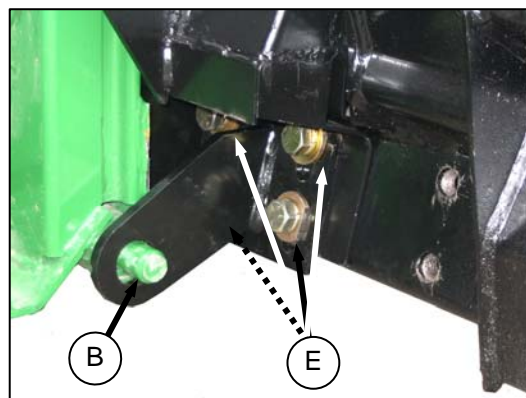


CAUTION

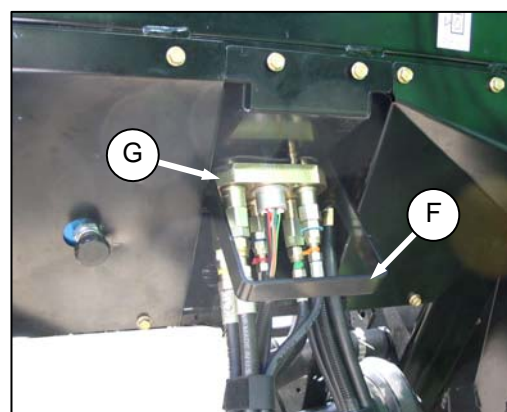
Stop engine, and remove key from ignition before leaving Operator's seat for any reason. A child or even a pet could engage an idling machine.



- Pull handle (A) to engage pins (B) in adapter.



- Check that bolts (E) on adapter brackets are tight.
- If pins (B) do **not** fully engage adapter brackets, loosen bolts (E), and adjust bracket as required. Re-tighten bolts.
- Remove blocks from under cutterbar.
- Start engine, and lower header.

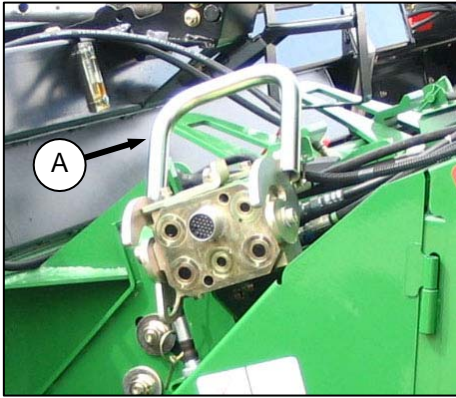


- Pull handle (F) on adapter to release coupler (G) from storage position. Remove coupler, and push handle back into adapter to store.

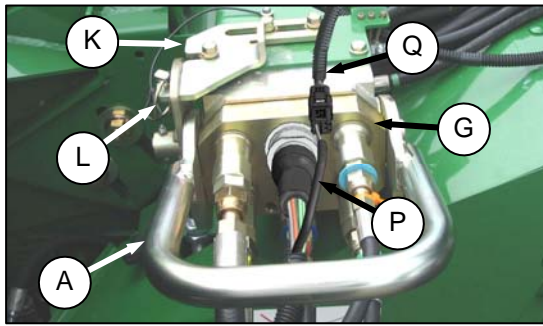
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PRE-DELIVERY CHECKS

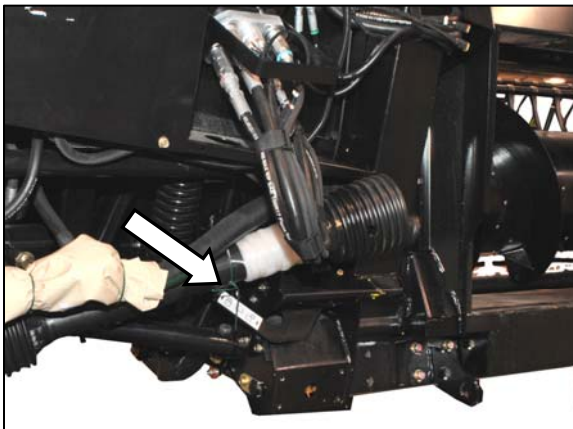
k. Attach coupler (G) to combine as follows:



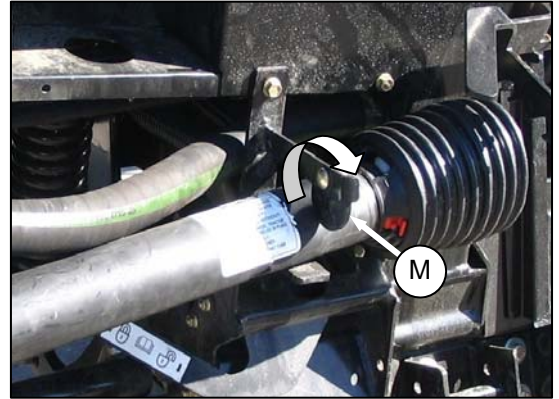
1. Handle (A) should be in the nearly up position. Clean receptacle.



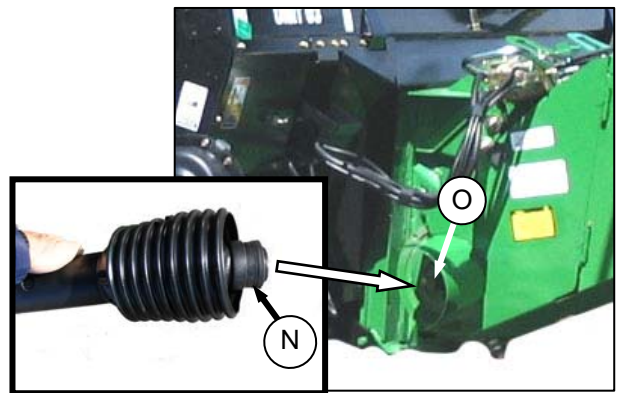
2. Locate coupler (G) onto receptacle, and pull handle (A) so that lugs on coupler are engaged into handle.
3. Pull handle to full horizontal position as shown.
4. Slide latch (K) to lock handle in position, and secure with lynch pin (L).
5. If adapter is equipped with reel fore-aft/header tilt selector, connect harness (P) to combine connector (Q).



- l. Remove shipping wire from driveline and float lock lever.



- m. Rotate disc (M) on adapter driveline storage hook, and remove driveline from hook.

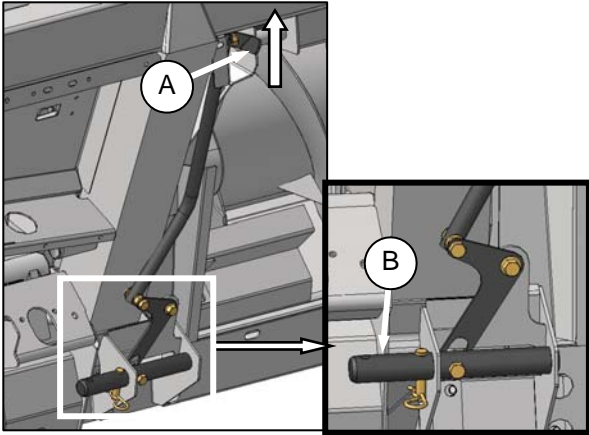


- n. Pull back collar (N) on end of driveline, and push onto combine output shaft (O) until collar locks.
- o. Proceed to **STEP 10. ATTACH CAM ARMS** (page 39).

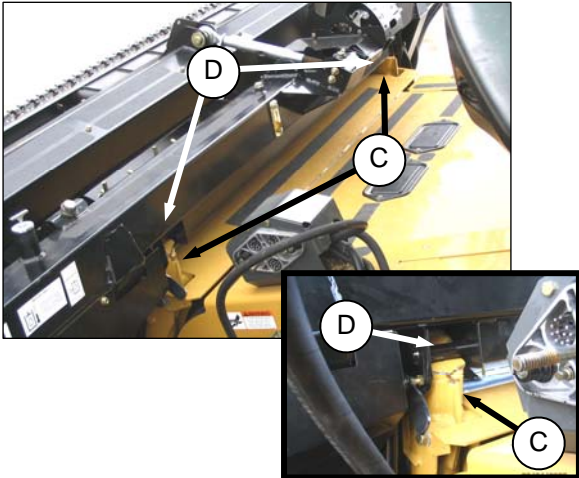
PRE-DELIVERY CHECKS

C. CAT LEXION 500, 700 SERIES

CAT Lexion 500(R), 700 combines



- Handle (A) on the adapter should be in raised position, and pins (B) at bottom corners of adapter retracted.
- Slowly drive combine up to adapter until feeder house is directly under the adapter top cross member.

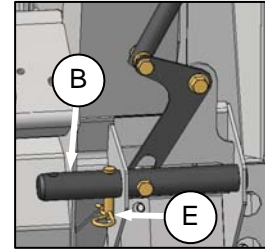


- Raise feeder house to lift adapter, ensuring feeder house posts (C) are properly engaged in adapter frame (D).
- Position header slightly off the ground.

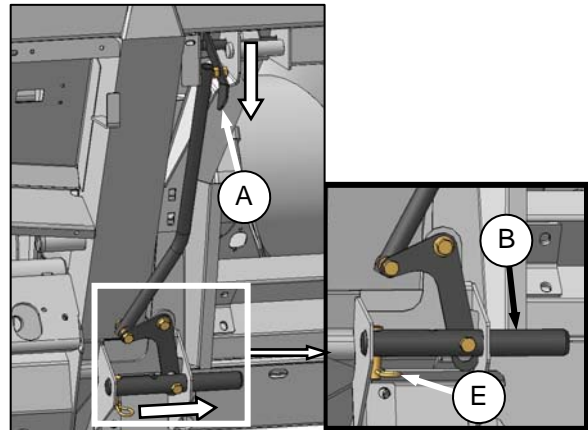


CAUTION

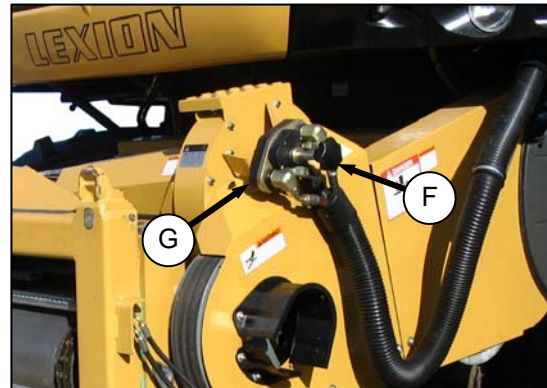
Stop engine, and remove key from ignition before leaving Operator's seat for any reason. A child or even a pet could engage an idling machine.



- Remove locking pin (E) from adapter pin (B).



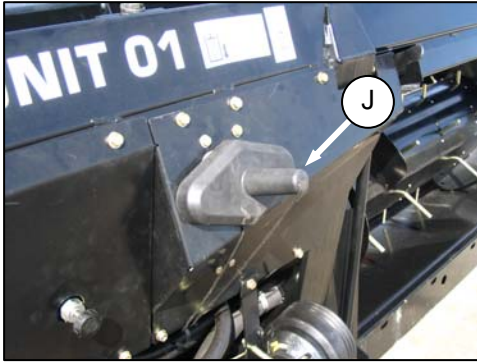
- Lower handle (A) to engage adapter pins into feeder house. Re-insert locking pin (E), and secure with hairpin.
- Remove blocks from under cutterbar.
- Start engine, and lower header. Shut down the combine.



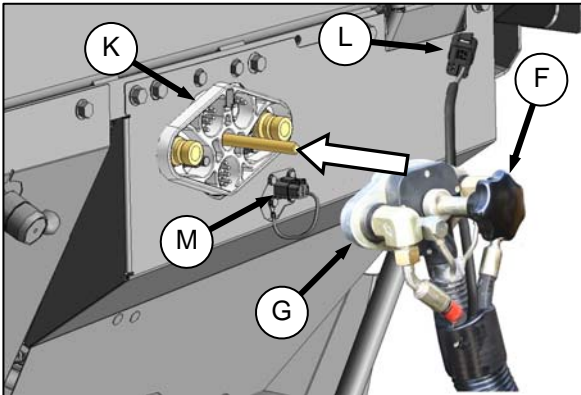
- Unscrew knob (F) on combine coupler (G) to release coupler from combine receptacle.

(continued next page)

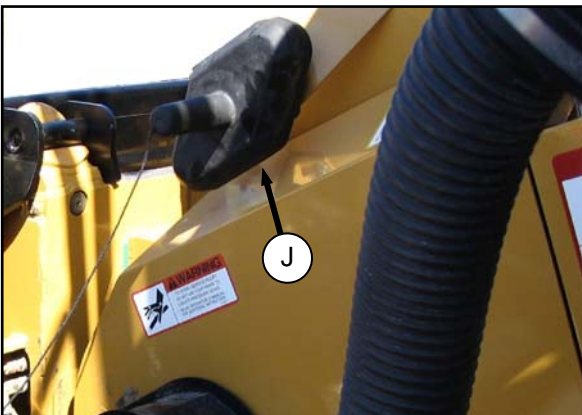
PRE-DELIVERY CHECKS



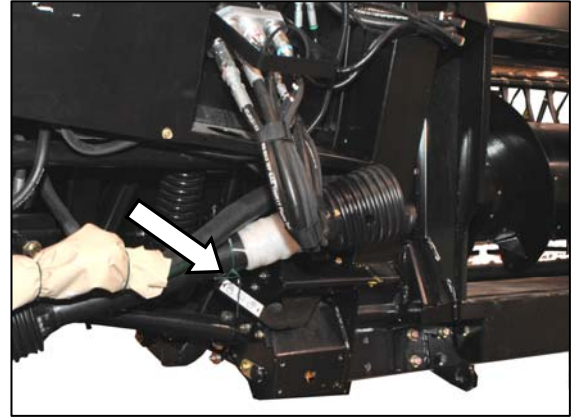
- j. Remove cover (J) from adapter receptacle.



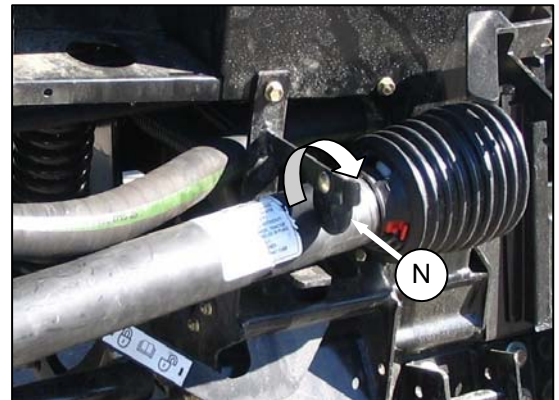
- k. Clean mating surface of coupler (G), and locate onto adapter receptacle (K).
 l. Turn knob (F) to secure coupler to receptacle.
 m. Connect combine harness (L) to reel fore-aft/header tilt selector receptacle (M).



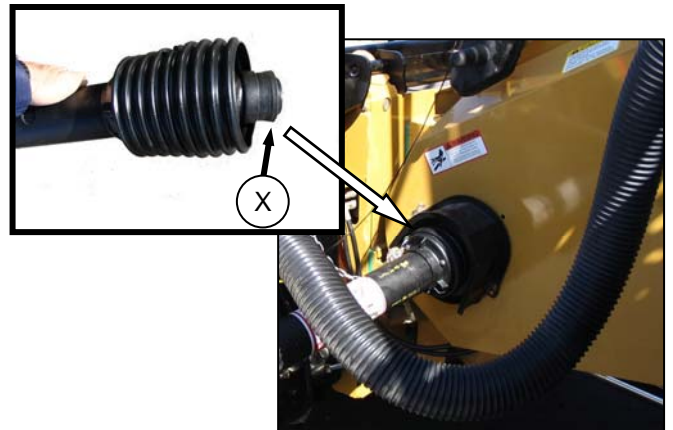
- n. Place cover (J) on combine receptacle.



- o. Remove shipping wire from driveline and float lock lever.



- p. Rotate disc (N) on adapter driveline storage hook, and remove driveline from hook.

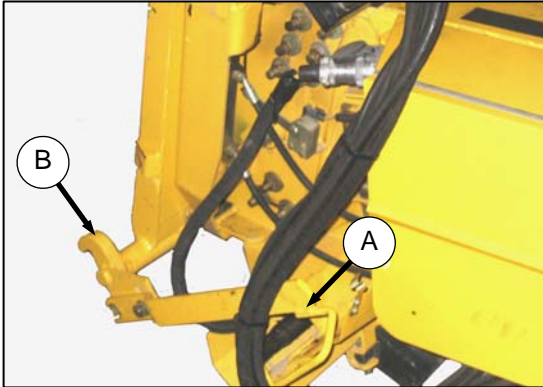


- q. Pull back collar (X) on end of driveline, and push onto combine output shaft until collar locks.
 r. Proceed to **STEP 10. ATTACH CAM ARMS** (page 39)

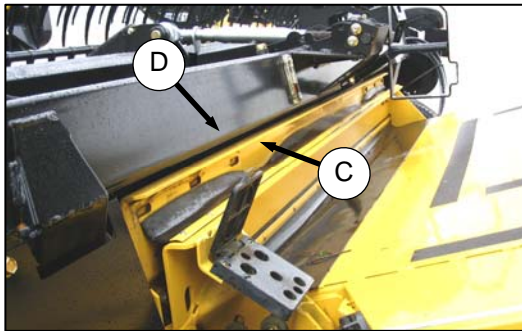
PRE-DELIVERY CHECKS

D. NEW HOLLAND CR, CX SERIES

CR, CX Series



- a. Ensure handle (A) is positioned so that hooks (B) can engage adapter.

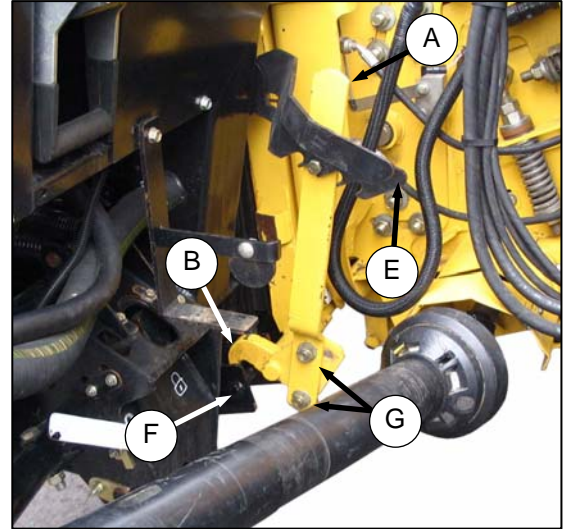


- b. Slowly drive combine up to adapter until feeder house saddle (C) is directly under the adapter top cross member (D).
- c. Raise feeder house to lift adapter, ensuring feeder saddle is properly engaged in adapter frame.



CAUTION

Stop engine, and remove key from ignition before leaving Operator's seat for any reason. A child or even a pet could engage an idling machine.

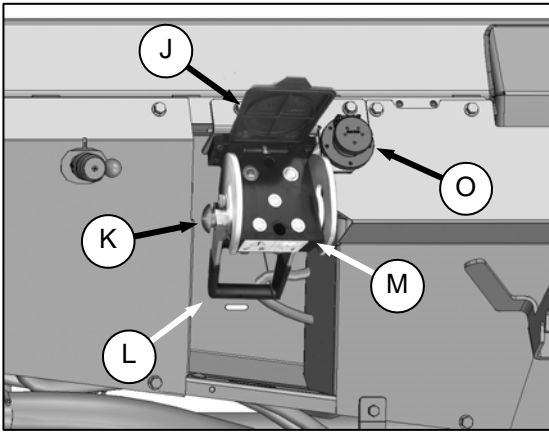


- d. Lift lever (E) on adapter at left side of feeder house, and push handle (A) on combine so that hooks (B) engage pins (F) on both sides of the feeder house.
- e. Push down on lever (E) so that slot in lever engages handle to lock handle in place.
- f. If hook (B) does **not** fully engage pin on adapter when (A) and (E) are engaged, loosen bolts (G), and adjust lock as required. Re-tighten bolts.

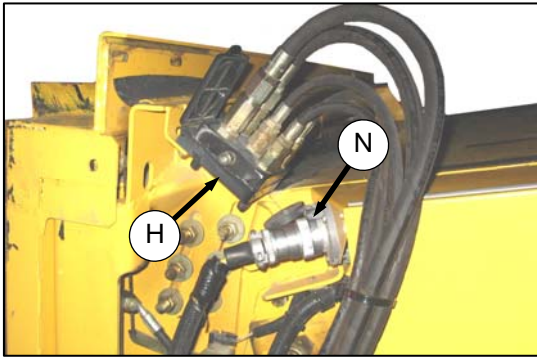
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PRE-DELIVERY CHECKS

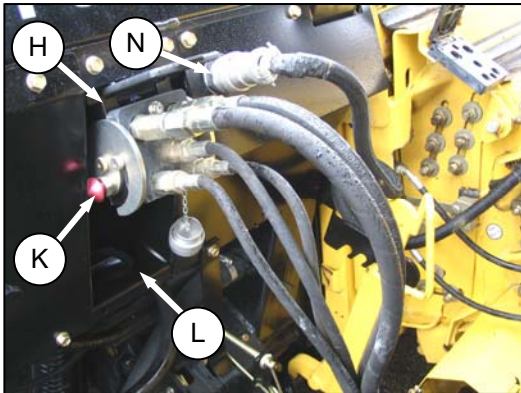
g. Connect to receptacle on adapter as follows:



1. Open cover (J).
2. Push in lock button (K), and pull handle (L) halfway up to open position.



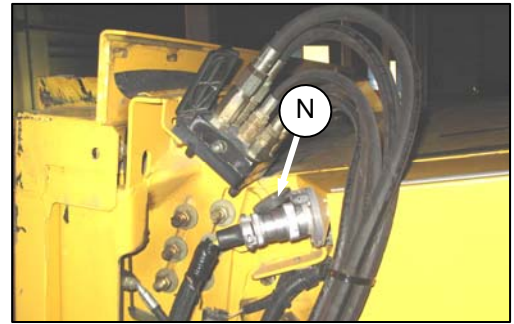
3. Remove hydraulic quick coupler (H) from storage plate on combine.



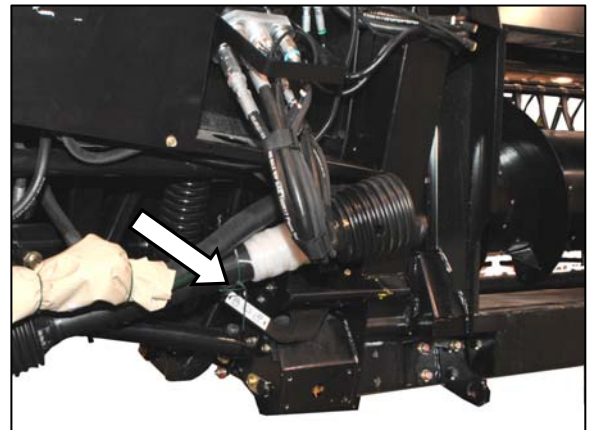
4. Position coupler onto adapter receptacle (M), and push handle (L) to engage pins into receptacle.
5. Push handle (L) to closed position until lock button (K) snaps out.

h. Attach combine electrical connector (N) to adapter as follows:

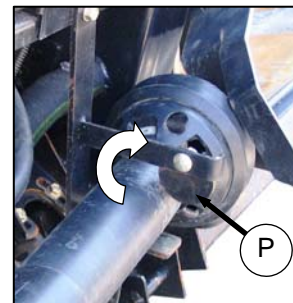
1. Remove cover on adapter electrical receptacle (O).



2. Remove connector (N) from combine.
3. Align lugs on connector (N) with slots in adapter receptacle (O), and push connector onto receptacle. Turn collar on connector to lock it in place.



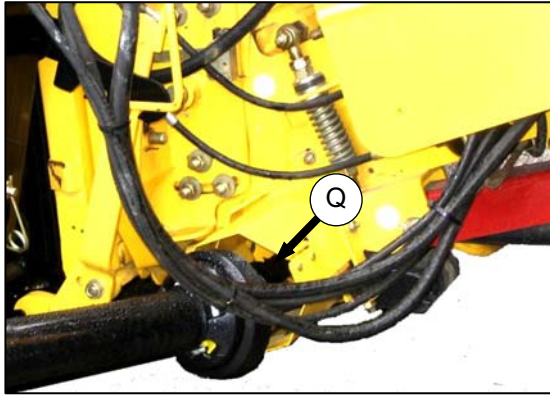
i. Remove shipping wire from driveline and float lock lever.



j. Rotate disc (P) on adapter driveline storage hook, and remove driveline from hook.

(continued next page)

PRE-DELIVERY CHECKS

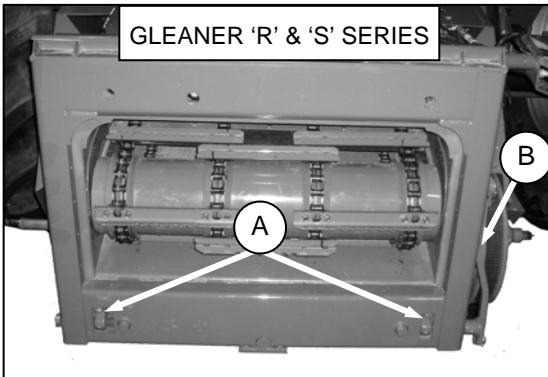
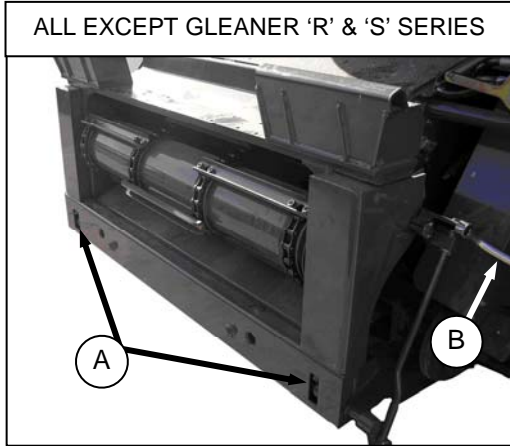


- k. Pull back collar on end of driveline, and push onto combine output shaft (Q) until collar locks.
- l. Proceed to **STEP 10. ATTACH CAM ARMS** (page 39).

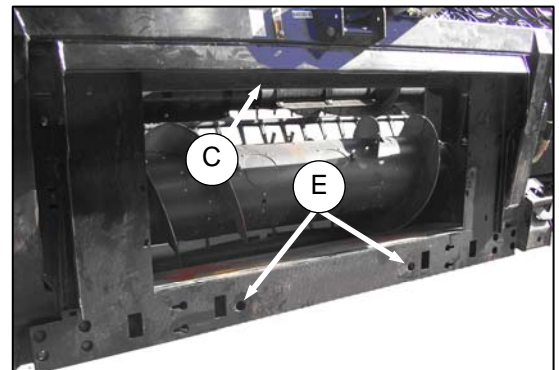
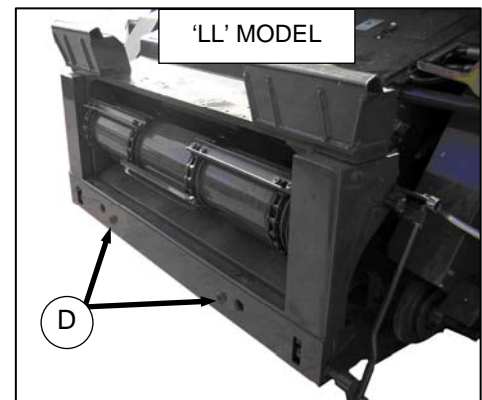
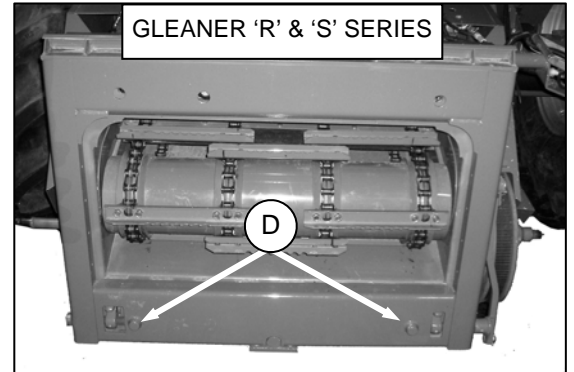
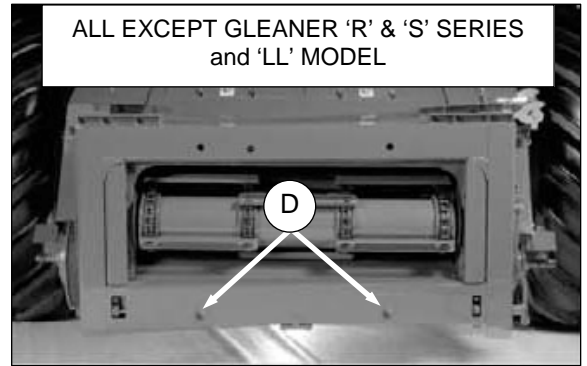
PRE-DELIVERY CHECKS

E. AGCO

Gleaner R Series and S Series
Challenger 660, 670, and 680B
Massey 9690, 9790, and 9895



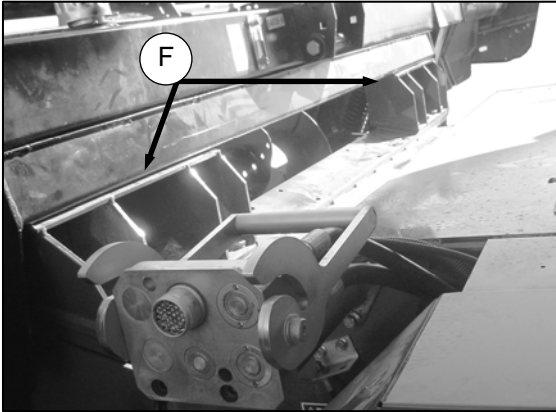
- a. Retract lugs (A) at base of feeder house with lock handle (B).



- b. Slowly drive combine up to adapter until feeder house is directly under the adapter top cross member (C), and alignment pins (D) are aligned with holes (E) in adapter frame.

(continued next page)

PRE-DELIVERY CHECKS

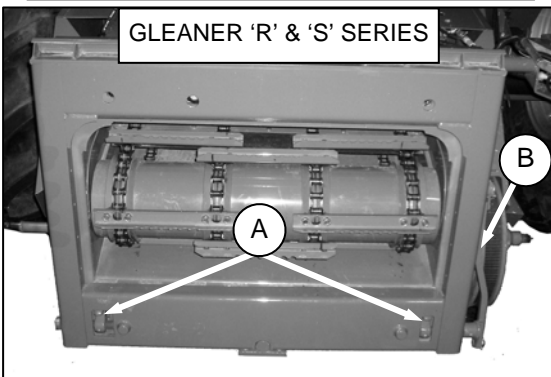
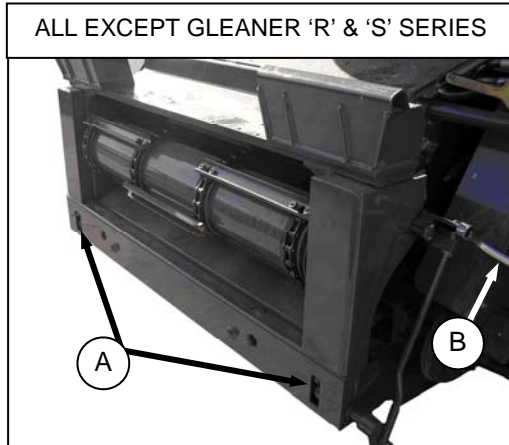


- c. Raise feeder house to lift adapter, ensuring feeder house saddle (F) and alignment pins are properly engaged in adapter frame.
- d. Raise header slightly off the ground.



CAUTION

Stop engine, and remove key from ignition before leaving Operator's seat for any reason. A child or even a pet could engage an idling machine.



- e. Engage lugs (A) with adapter using lock handle (B).
- f. Remove blocks from under cutterbar.

- g. Start engine, and lower header. Shut down the combine.

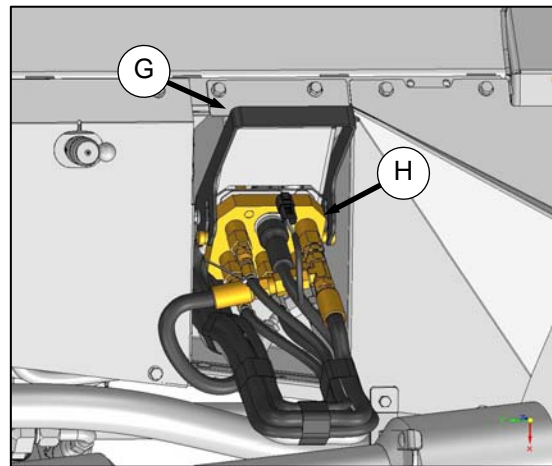
NOTE

The CA25 Combine Adapter is equipped with a multi-coupler that connects to the combine. If your combine is equipped with individual connectors, a multi-coupler kit (single-point connector) must be installed.

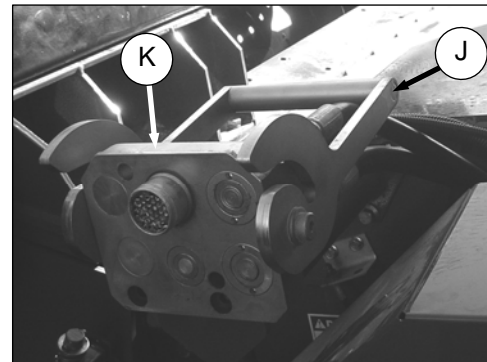
The kits are available through your AGCO Dealer, and include installation instructions.

Combine	AGCO kit#
Challenger	71530662
Massey	71411594
Gleaner R/S Series	71414706

- h. Connect adapter hydraulic quick coupler to combine receptacle as follows:



1. Raise handle (G) to release coupler (H) from adapter.

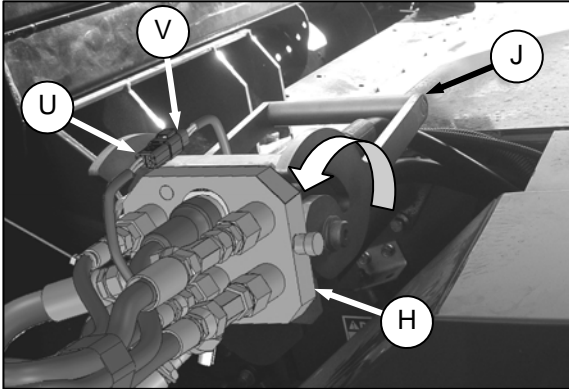


2. Push handle (J) on combine to full open position.

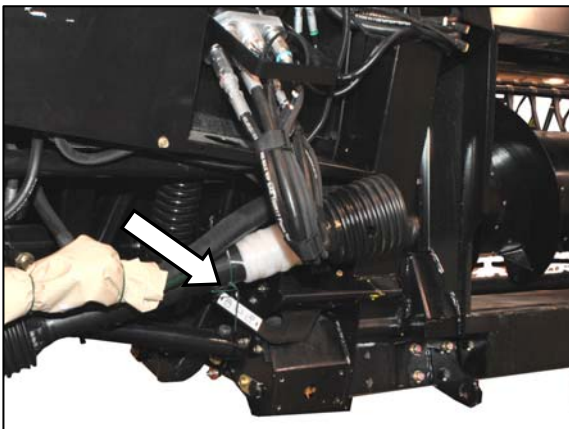
(continued next page)

PRE-DELIVERY CHECKS

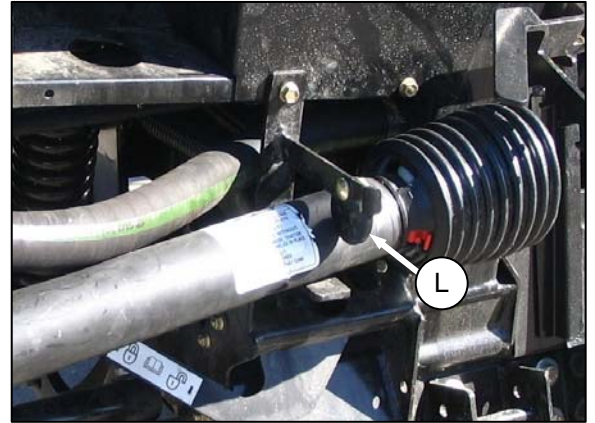
3. Clean mating surfaces of coupler and receptacle if necessary.



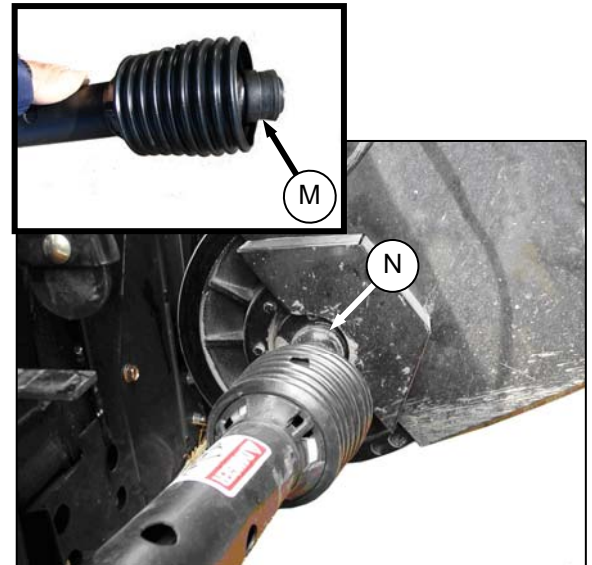
4. Position coupler (H) onto combine receptacle (K), and pull handle (J) to fully engage coupler into receptacle.
5. Connect reel fore-aft/header tilt selector harness (U) to combine harness (V).



- i. Remove shipping wire from driveline and float lock lever.



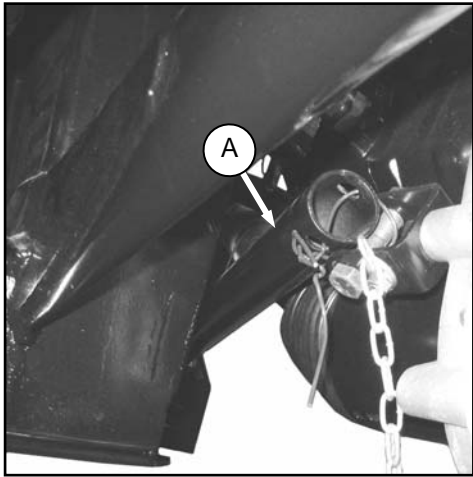
- j. Rotate disc (L) on adapter driveline storage hook, and remove driveline from hook.



- k. Pull back collar (M) on end of driveline, and push onto combine output shaft (N) until collar locks.
- l. Proceed to **STEP 10. ATTACH CAM ARMS** (page 39).

PRE-DELIVERY CHECKS

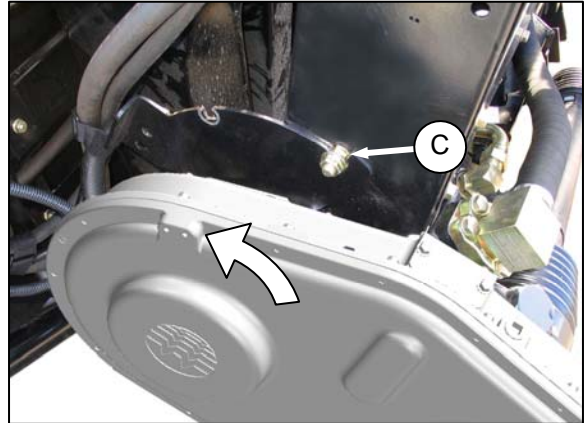
STEP 9. RE-POSITION GEARBOX



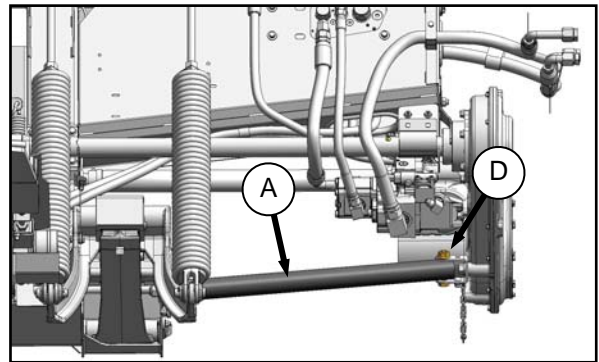
- a. Remove shipping wire and wrapping on brace, and swing brace (A) clear of gearbox.



- b. Loosen nut (B), and move bolt out of shipping position slot.



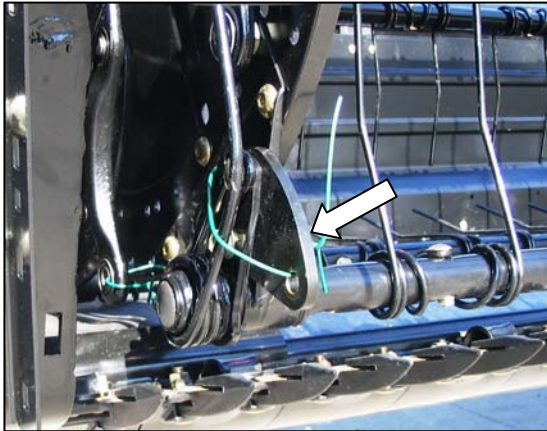
- c. Rotate gearbox, and move bolt into working position slot (C). Tighten nut.
d. Remove bolt and nut from bracket on gearbox.



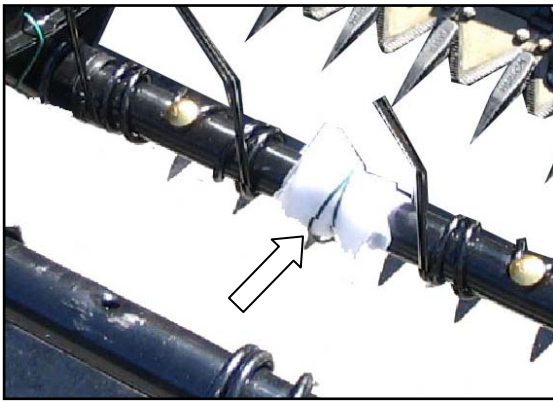
- e. Position brace (A) inside bracket, and re-install bolt (D) and nut.

PRE-DELIVERY CHECKS

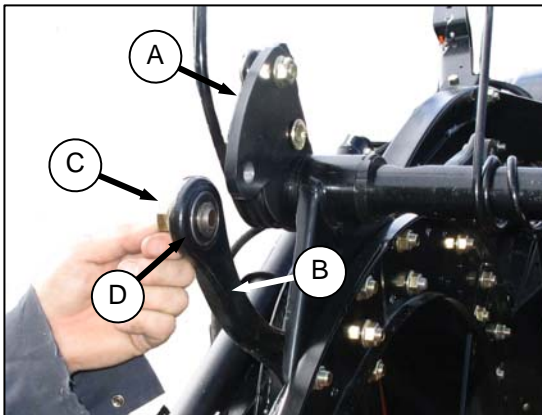
STEP 10. ATTACH CAM ARMS



- a. Manually rotate reel until the tine bars with the disconnected cam links are accessible.
- b. Remove shipping wire (if not already removed).



- c. Remove bag of hardware from tine bar. It contains hardware for cam links and endshields.



- d. Rotate tine bar crank (A), and position link (B) until attachment holes in bar crank and link are approximately aligned.

- e. Install bolt (C) in link, and position shim (D) on bolt so that shim is between link and tine bar crank.

NOTE

Bolts are pre-coated with Loctite®, so no further locking method is required.

- f. Re-align link and tine bar crank, and thread in the bolt (C).
- g. Repeat for remaining tine bars, and torque bolts to 120 lb-ft (165 N-m).



- h. Position pitch at #4 to access bolt after rotating the reel. Reposition reel to #2 when done.

NOTE

This is only done on right hand reel.

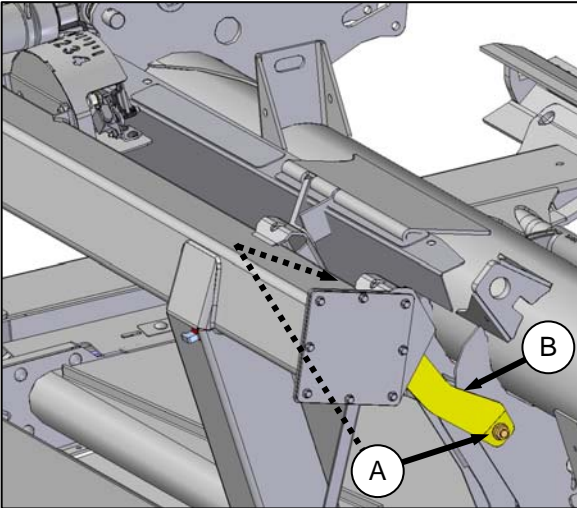
PRE-DELIVERY CHECKS

STEP 11. REMOVE SHIPPING SUPPORTS

The removable supports are painted yellow. Refer to illustrations, and remove the remaining supports as follows:

NOTE

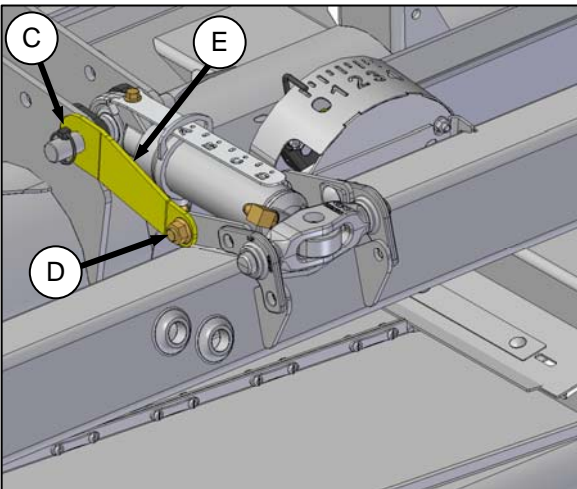
Unless otherwise specified, discard supports, and all shipping material and hardware.



- a. Remove two bolts (A), and remove strap (B) from both sides of center frame.

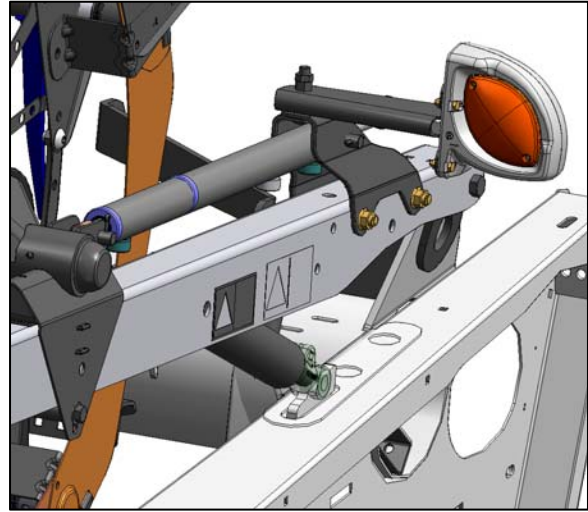
NOTE

If strap is difficult to remove, lift on one end of header to release the load on the strap so that bolts can be removed.



- b. Remove lynch pin (C), nut and bolt (D), and remove shipping brace (E).
- c. Re-install lynch pin (C).

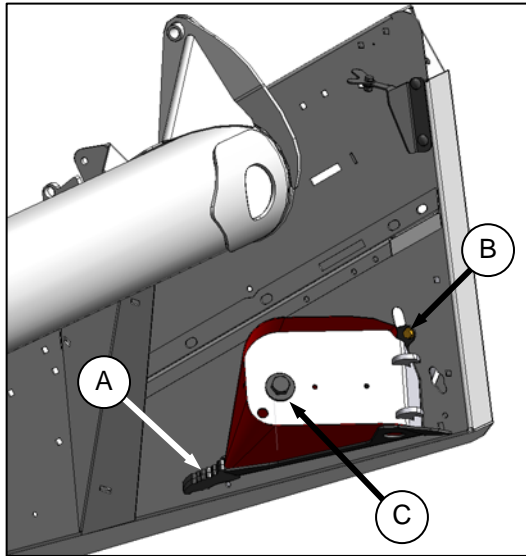
STEP 12. POSITION TRANSPORT LIGHTS



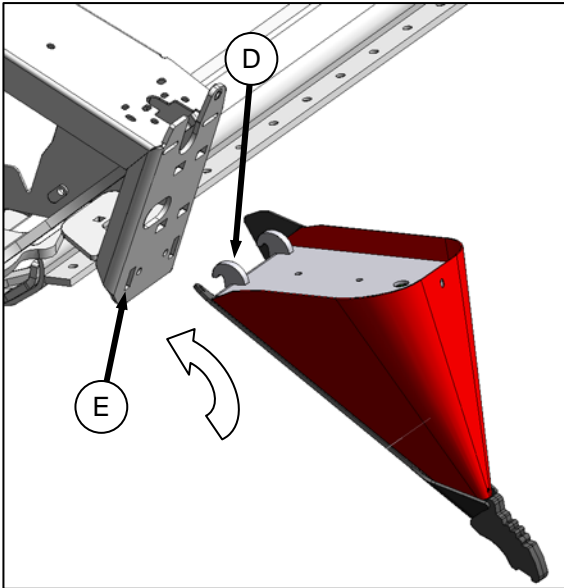
- a. Position light perpendicular to header. Lights are located on each of the outboard reel arms.

PRE-DELIVERY CHECKS

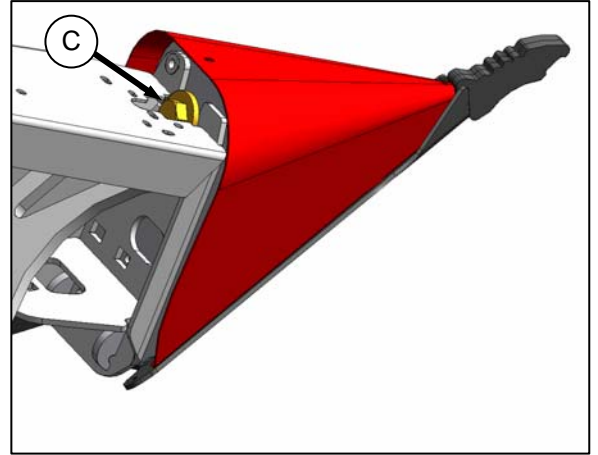
STEP 13. INSTALL CROP DIVIDERS



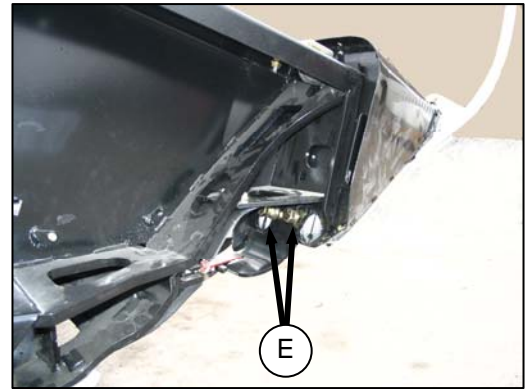
- a. Dividers are stored on inboard side of endsheets. To remove, support the divider and remove shipping wire at front end (A). Then, remove bolt (B).
- b. Remove bolt and washer at (C).



- c. Position crop divider as shown by locating lugs (D) in slots (E) in endsheet.



- d. Lift forward end of divider up to endsheet, and install washer and bolt at (C).



- e. Check that divider does **not** move laterally. Adjust bolts (E) as required to tighten divider, and remove lateral play when pulling at divider tip.

PRE-DELIVERY CHECKS

STEP 14. PRE-DELIVERY CHECKS



WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.

IMPORTANT

To avoid machine damage, check that no shipping dunnage has fallen into machine.

- a. Perform the final checks as listed on the **Pre-Delivery Checklist** (yellow sheet attached to this instruction) to ensure the machine is field-ready. Refer to following pages for detailed instructions as indicated on the Checklist.

IMPORTANT

The machine has been set at the factory, and should require no further adjustments. However, perform the following checks to ensure your machine will provide maximum performance. Adjustments should be made only if absolutely necessary, and in accordance with the instructions in this manual.

- b. The completed Checklist should be retained either by the Operator or the Dealer.

A. TIRE PRESSURE: TRANSPORT AND STABILIZER WHEEL OPTIONS

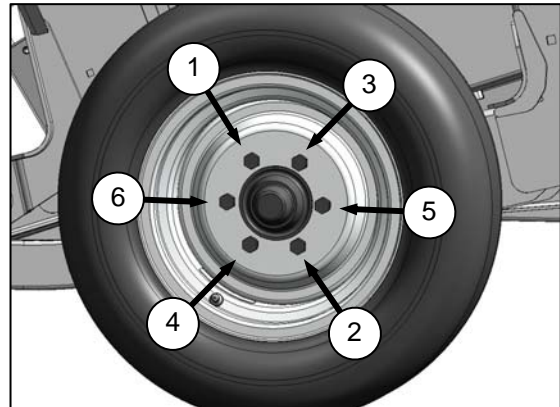
Check tire inflation pressure. If necessary, inflate as per following table:

Size	Load range	Pressure
ST205/75 R15	D	65 psi (448 kPa)
	E	80 psi (552 kPa)

IMPORTANT

Do **not** exceed maximum pressure specified on tire sidewall.

B. WHEEL BOLT TORQUE: TRANSPORT AND STABILIZER WHEEL OPTIONS



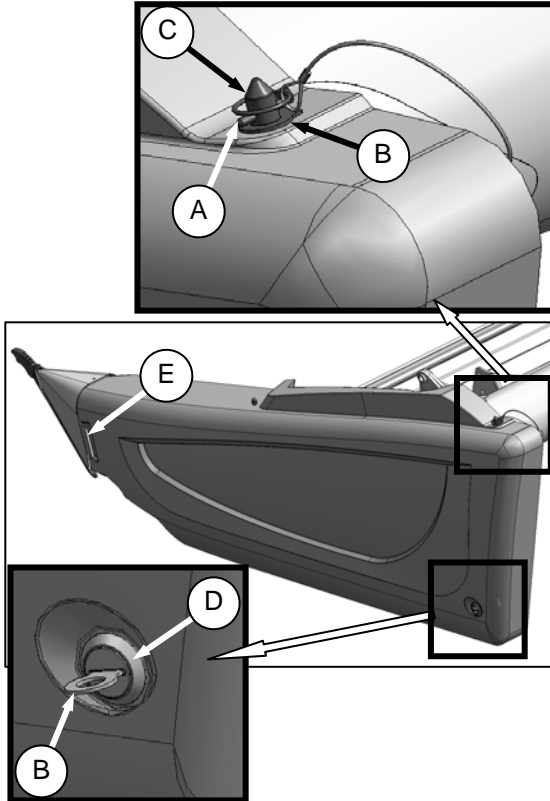
Check wheel bolt torque is 80–90 lb-ft (110–120 N·m). Refer to bolt tightening sequence illustration above.

PRE-DELIVERY CHECKS

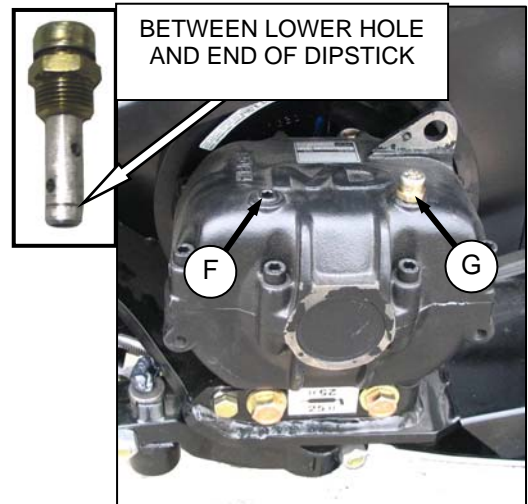
C. SICKLE DRIVE BOX

For access to sickle drive box(es), endshield(s) must be fully opened.

- a. To open endshield(s):



1. Remove lynch pin (A), and tool (B) from pin (C) at top rear of endshield.
2. Use tool (B) to unlock latch (D) at lower rear corner of endshield.
3. Lift shield at aft end to clear pin (C).
4. Swing shield out and away from header while maintaining forward pressure to prevent shield from slipping out of tab (E) at front of endsheet.
5. Carefully disengage front of shield from tab (E), and swing front of shield away from header.

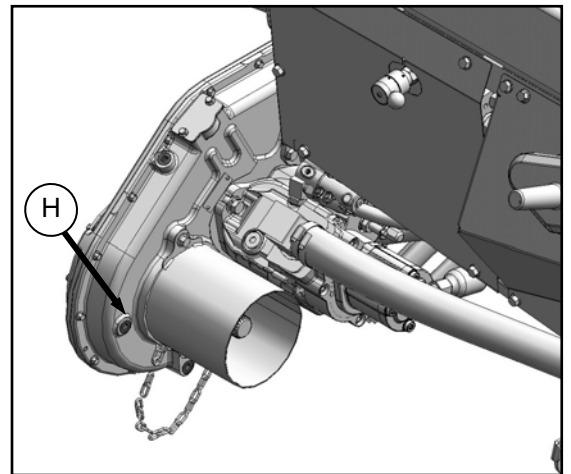


SICKLE DRIVE BOX (CHECK OIL LEVEL WITH TOP OF SICKLE DRIVE BOX HORIZONTAL)

- b. Position of plug (F) and breather (G) at sickle drive box **must** be as shown above.
- c. Check oil level.
- d. Leave endshield(s) open.

D. GEARBOX OIL

- a. Set cutterbar to working position.

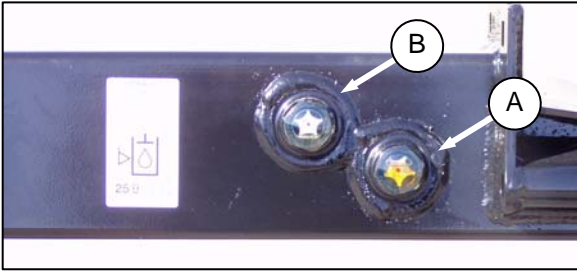


- b. Remove plug (H). Level should be to bottom of hole.

PRE-DELIVERY CHECKS

E. HYDRAULIC RESERVOIR

Check oil level at sights (A) and (B) with cutterbar just touching ground. Check when oil is cold, and with center-link retracted.



Nominal: Normal Terrain: Maintain level so lower sight (A) is full, and upper sight (B) is empty.

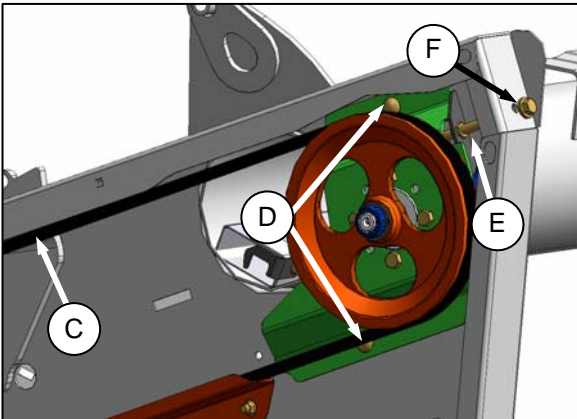
NOTE

When ambient temperatures are above 95°F (35°C), to prevent overflow at breather under operating temperatures, it may be necessary to lower oil level slightly.

F. SICKLE BELT TENSION

NOTE

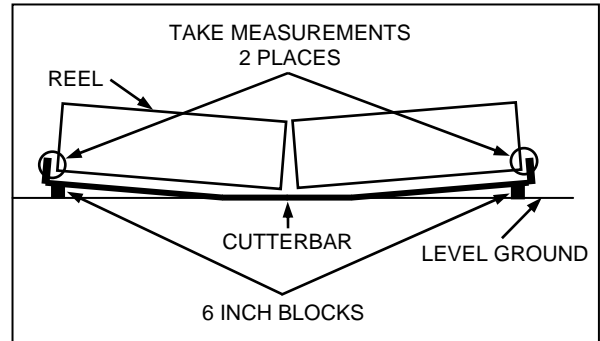
The sickle drive is identical on both sides of the header.



- A force of 20 lbf (80 N) should deflect belt (C) 3/4 in. (18 mm) at mid-span.
- If necessary, adjust tension as follows:
 - Loosen two bolts (D) on sickle drive mounting bracket and jam nut (E).
 - Turn adjuster bolt (F) to move drive motor until tension is achieved.
 - Tighten jam nut (E) and bolts (D) on drive mounting bracket.
- Close endshield(s).

G. REEL CENTERING

- Raise header, shut down combine, and engage header lift cylinder stops.



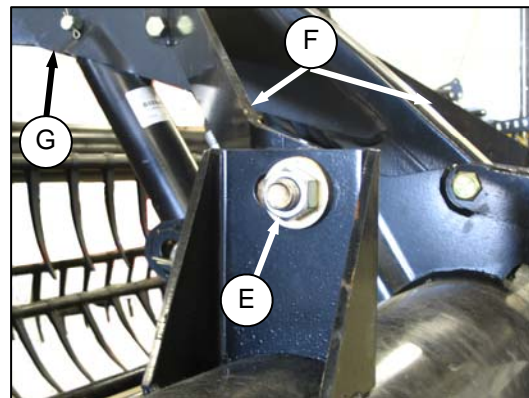
- Place two 6 inch (150 mm) blocks at ends of cutterbar.
- Disengage float locks and header lift cylinder locks.
- Start combine, and lower header fully, allowing it to flex into 'full smile' mode.
- Shut down engine.



WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.

- Measure clearance between reels and both endsheets. The clearances should be the same if the reels are centered.
- If required, center the reels as follows:



- Loosen bolt (E) on each brace (F).
- Move forward end of center support arm (G) laterally as required to center both reels.
- Tighten bolts (E), and torque to 265 lb-ft (359 N·m).

PRE-DELIVERY CHECKS

H. DRAPER TENSION

Raise header, and shut down engine. Engage header lift props.



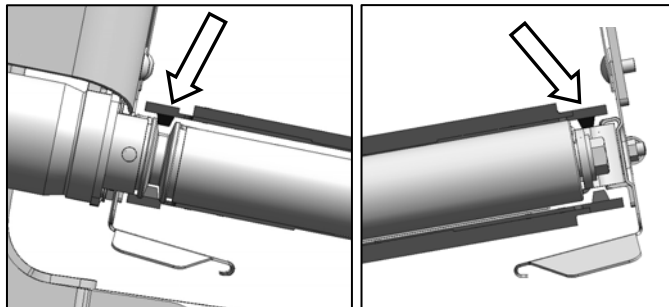
WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.



CAUTION

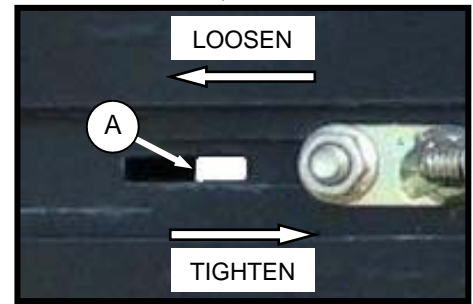
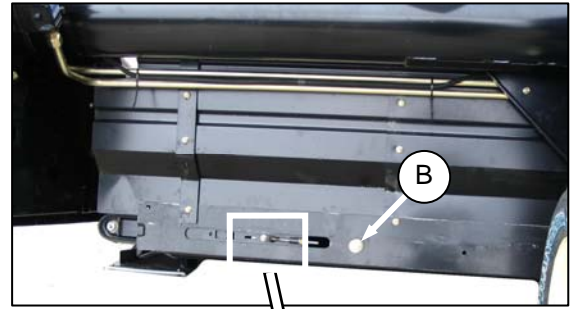
Engage header lift cylinder stops before working under header.



DRIVE ROLLER -
ONE END

IDLER ROLLER -
BOTH ENDS

- a. Check that draper guide (the rubber track on underside of draper) is properly engaged in groove of drive roller, and that idler roller is between the guides.



- b. Draper tension should be just enough to prevent slipping, and keep draper from sagging below cutterbar. The white bar (A) should be about halfway in the window.
- c. If required, set draper tension as follows:
1. **Turn bolt (B) clockwise (tighten)** and white indicator bar (A) will move inboard in direction of arrow to indicate that draper is tightening.
 2. **Turn bolt (B) counter clockwise (loosen)** and white indicator bar (A) will move outboard in direction of arrow to indicate that draper is loosening.
 3. Adjust until bar is about halfway in window.

PRE-DELIVERY CHECKS

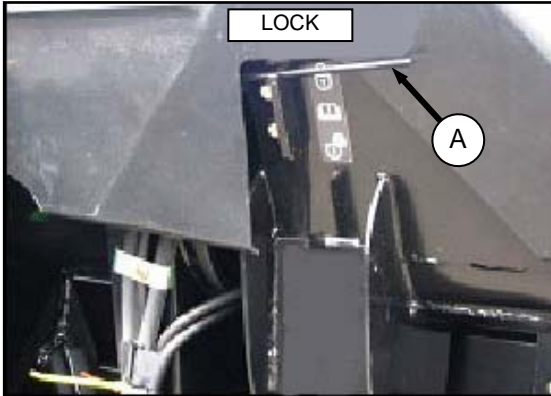
I. HEADER MAIN FLOAT

Checking and Adjusting Float

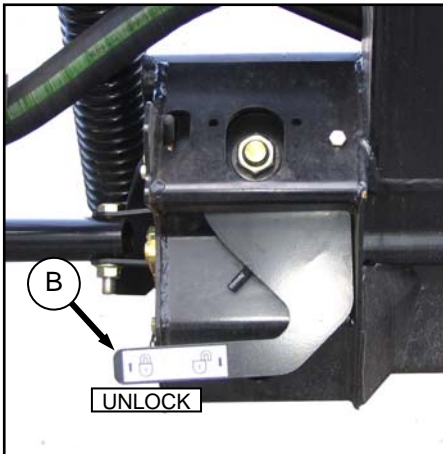


CAUTION

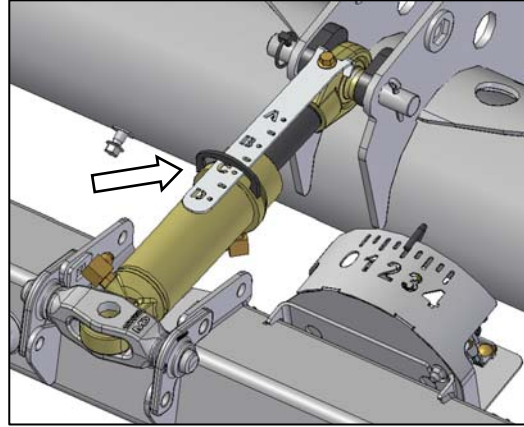
Stop engine, and remove key from ignition before leaving Operator's seat for any reason. A child or even a pet could engage an idling machine.



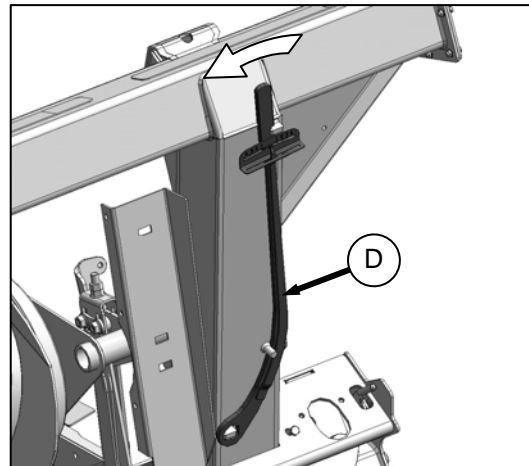
- a. If adjusting FD75 FlexDraper® header main float, ensure both **wing** float locks (A) are engaged. Spring handle is in LOCK position.



- b. Ensure both **header** float lock levers (B) are down (UNLOCK).



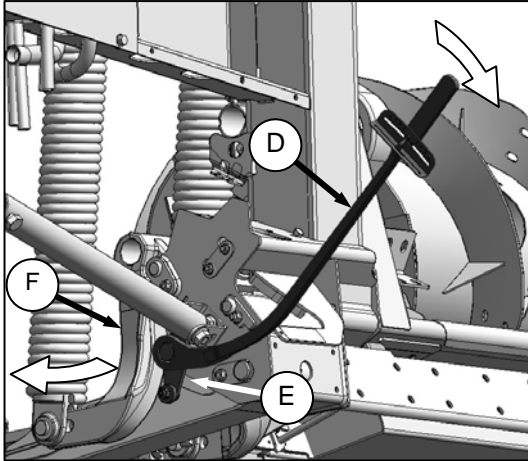
- c. Set center-link to mid-range (near "C" on cylinder indicator). Cutterbar should be 8–12 inches (200–300 mm) off the ground.
- d. If header is equipped with stabilizer wheels or slow speed transport wheels, raise them off the ground so they are supported by the header.



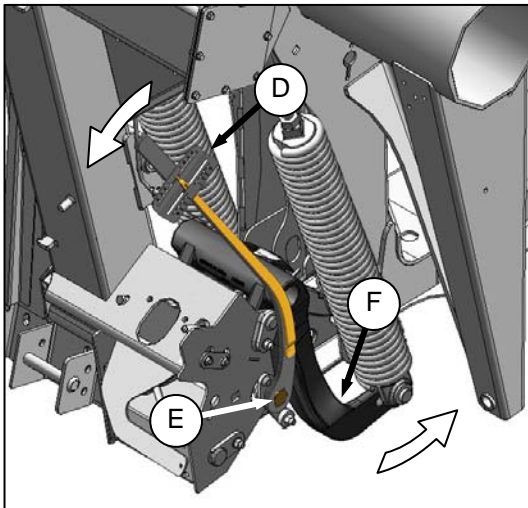
- e. Remove special torque wrench (D) from storage position at RH side of adapter frame. Pull slightly in direction shown to disengage wrench from hook.

(continued next page)

PRE-DELIVERY CHECKS

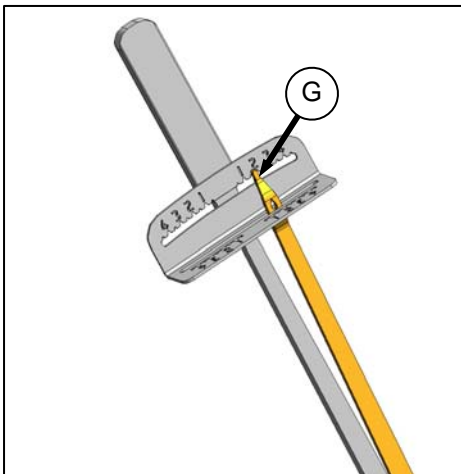


LEFT SIDE



RIGHT SIDE

- f. Place torque wrench (D) onto float setting indicator (E). Note position of wrench for checking RH or LH side.
- g. Push down on wrench to rotate bell crank (F) forward.

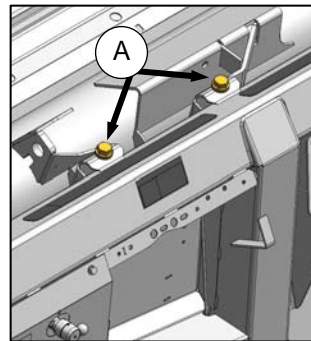


- h. Continue pushing down on the wrench until indicator (G) has reached a maximum reading, and started to drop off. Note the maximum reading. Repeat for opposite side.

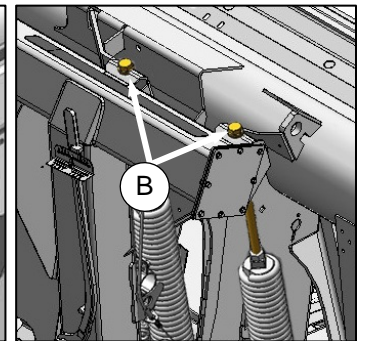
Use the table below as a guide for float settings:

Header width	Torque settings	
	Cutting on the ground	Cutting off the ground
30 and 35 FT	2	2-1/2
40 and 45 FT	2-1/2	3

- i. If reading on wrench is **high**, float is **heavy**. If reading on wrench is **low**, float is **light**.



LEFT SIDE FLOAT



RIGHT SIDE FLOAT

1. To **increase** float (lighten the header), **tighten** bolts (A) and (B) at both sides of adapter.
2. To **decrease** float (increase header weight), **loosen** the bolts (A) and (B).

IMPORTANT

- For single knife headers, adjust the float so the wrench reading is equal for both sides.
- For 40 and 45 FT double knife headers, adjust the float so that wrench reading is equal for both sides, and then loosen **both** right hand springs **two turns**.

IMPORTANT

Turn each bolt pair equal amounts. After adjustment has been made, repeat torque wrench reading procedure.

(continued next page)

PRE-DELIVERY CHECKS

IMPORTANT

Proper float adjustment in accordance with the above is critical to maintain proper wing balance when cutting on the ground.

IMPORTANT

To avoid frequent breakage of sickle components, scooping soil, or soil build-up at cutterbar in wet conditions, header float should be set as light as possible without causing excessive bouncing.

IMPORTANT

When float setting is light, it may be necessary to use a slower ground speed to avoid excessive bouncing and leaving a ragged cut.

IMPORTANT

The stabilizer wheels may be used in conjunction with main float to minimize bouncing at the header ends and control cut height when cutting off the ground. Refer to the operator's manual for details.

NOTE

If adequate header float cannot be achieved using all of the available adjustments, an optional heavy duty spring is available. See your MacDon Dealer or parts catalog for ordering information.

J. WING BALANCE

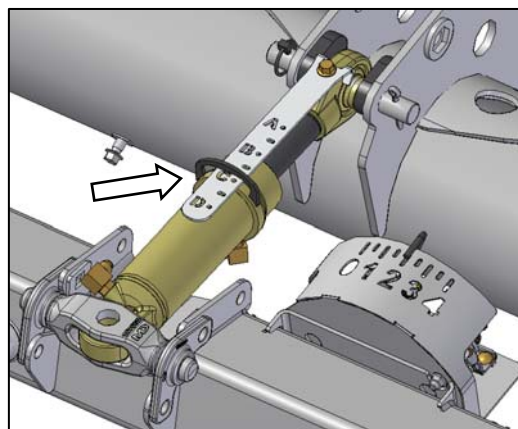
If a wing has a tendency to be too light or too heavy, wing balance may require adjusting.

Check and balance header wings as follows:

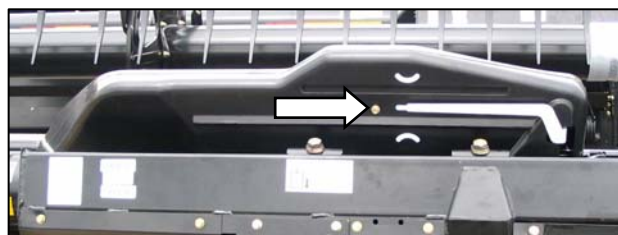


WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.



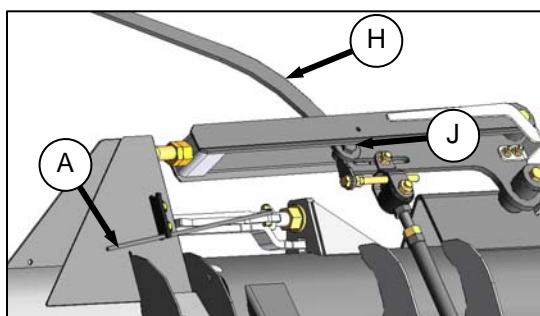
- Adjust header tilt cylinder so that indicator is between B and C.
- Raise header until the cutterbar is 6–10 in. (152–254 mm) off the ground.
- Stop engine, and remove key.
- Move transport/stabilizer wheels so that they are supported by header. Refer to instructions provided with the transport/stabilizer system.



- Remove linkage cover on the side that needs adjustment: Remove screw, and rotate cover upward until inboard end can be lifted off.

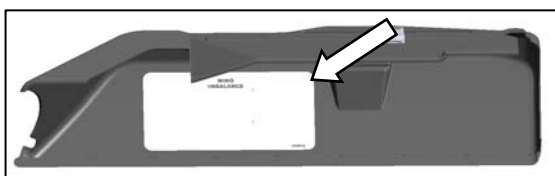
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PRE-DELIVERY CHECKS



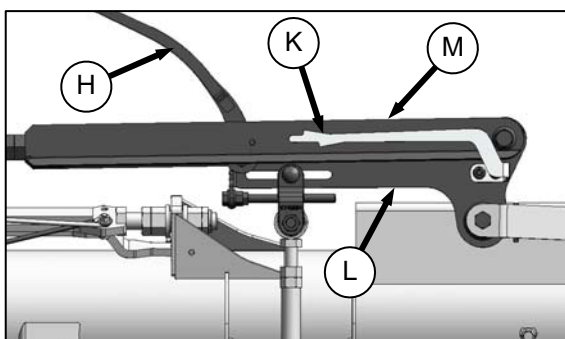
- f. Move spring handle (A) to lower position (C) to UNLOCK the wing float.
- g. Place torque wrench (H) (from adapter frame) on bolt (J).

NOTE

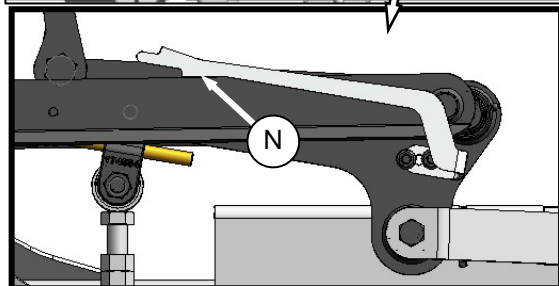
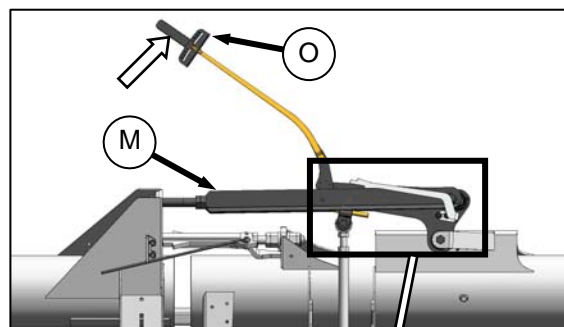


See decal inside each linkage cover.

- h. Check that pointer (K) is properly positioned as follows:

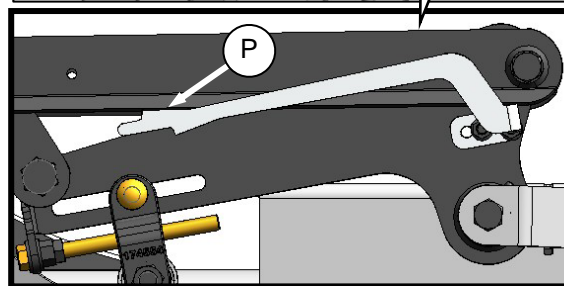
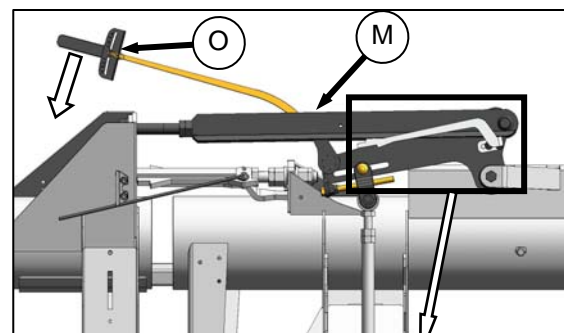


- i. Use wrench (H) to move bell crank (L) so that lower edge of bell crank is parallel to top link (M). Check that pointer (K) is lined up with the top link (M). Bend pointer if necessary.



WING UP

- j. Use wrench to move wing upward so that pointer lower alignment tab (N) lines up with upper edge of top link (M). Note indicator reading (O) on wrench.



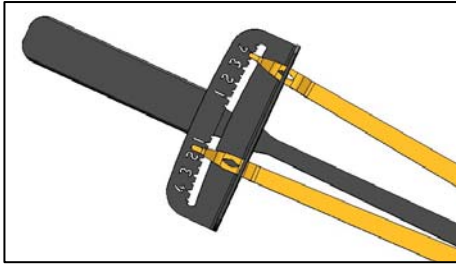
WING DOWN

- k. Likewise, move wing downward so that pointer upper alignment tab (P) lines up with lower edge of top link (M). Note indicator reading (O) on wrench.
- l. If readings are within one increment, the wing is balanced.

(continued next page)

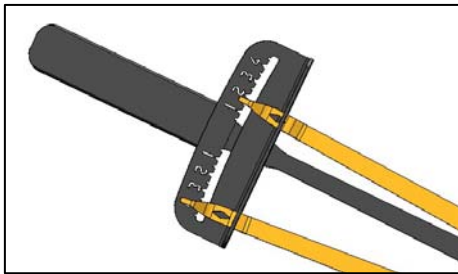
PRE-DELIVERY CHECKS

- m. If readings are outside the one increment range, the wing is either too light or too heavy.



TOO LIGHT

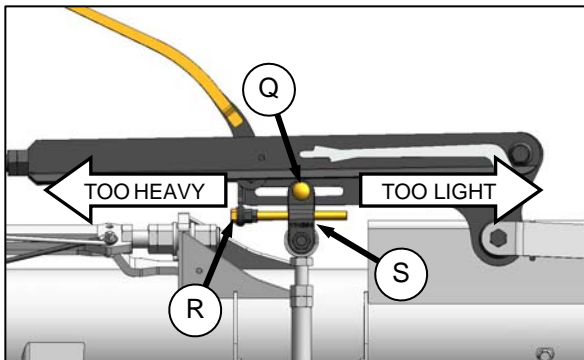
1. If the indicator range is as shown above, the wing is too light.



TOO HEAVY

2. If the indicator range is as shown above, the wing is too heavy.

- n. Adjust the wing balance if required, as follows:

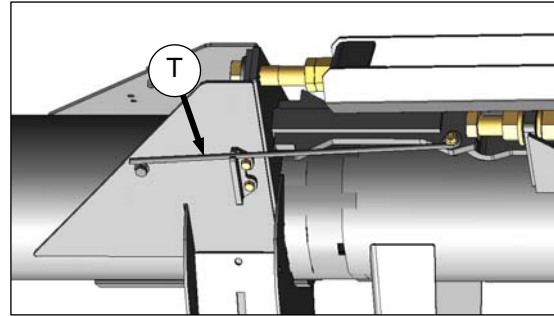


1. Loosen clevis nut (Q).

IMPORTANT

Do **not** loosen nuts on adjuster bolt (R).

2. If the wing is too heavy, turn adjuster bolt (R) to move clevis (S) outboard.
 3. If the wing is too light, turn adjuster bolt (R) to move clevis (S) inboard.
- o. Repeat steps i. to k. to check adjustments.
- p. Adjust clevis position if necessary until indicator readings are within one increment.
- q. Tighten clevis nut (Q).



- r. Move spring handle (T) to upper position to LOCK the wing float.
- s. Replace linkage cover and wrench.

PRE-DELIVERY CHECKS

J. SKID SHOE SETTINGS

If optional skid shoes are installed, check and adjust if necessary as follows:



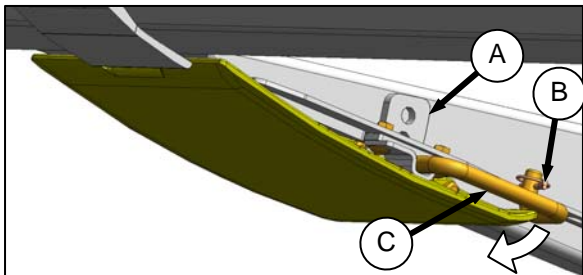
WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.

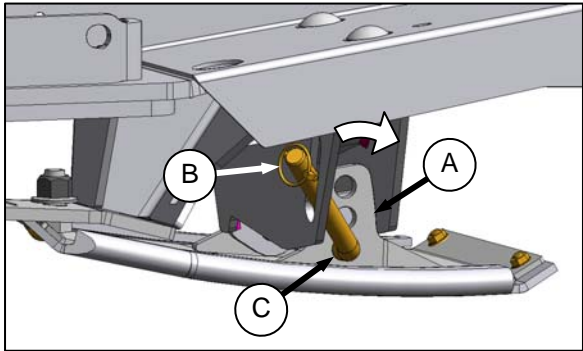


CAUTION

Engage header lift cylinder stops before working under header.



INNER SKID SHOE

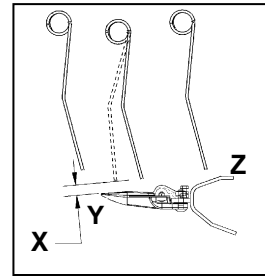
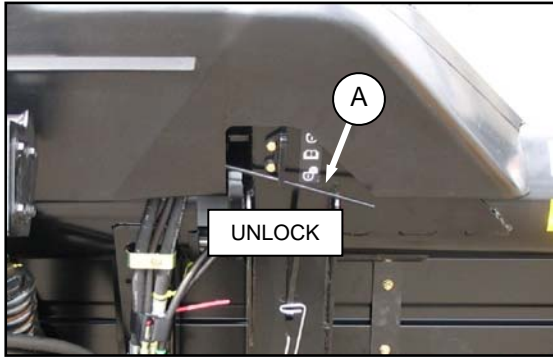


OUTER SKID SHOE

- a. Note the hole positions on the adjuster legs (A) on each skid shoe. They should be the same.
- b. If necessary, adjust as follows:
 1. Remove lynch pin (B).
 2. Hold shoe, and remove pin (C) by disengaging frame, and then pulling away from shoe.
 3. Raise or lower skid shoe to desired position using holes in support as a guide.
 4. Re-insert pin (C), engage in frame, and secure with lynch pin (B).
 5. Check that all skid shoes are adjusted to the same position.

PRE-DELIVERY CHECKS

K. REEL TINE TO CUTTERBAR CLEARANCE



- a. Place spring handle (A) in lower slot to unlock the wings.



CAUTION

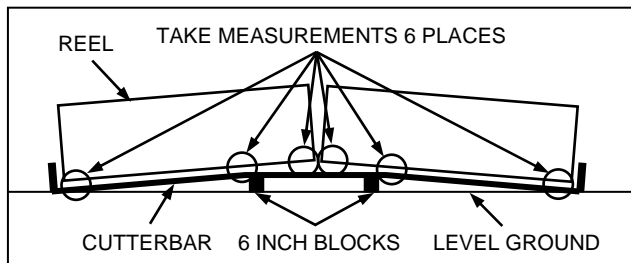
Engage header lift cylinder stops before working under header.



WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.

- b. Raise header, shut down combine, and engage header lift cylinder stops.



- c. Place two 6 inch (150 mm) blocks just inboard of wing flex points.
 d. Disengage header lift cylinder locks, start combine, and lower header fully, allowing it to flex into 'full frown' mode.

- e. Measure clearance 'X' at ends of each reel.

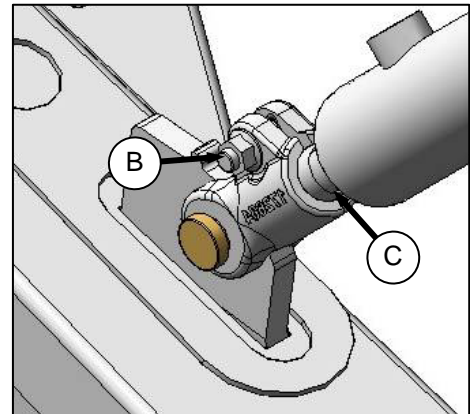
NOTE

The reel has been adjusted at the factory to provide more clearance at the center of the reel than at the ends (frown) to compensate for reel flexing.

- f. Measure the clearance 'X' at both flex locations.
 g. Check all possible points of contact between points 'Y' and 'Z'. Depending on reel fore-aft position, minimum clearance can occur at guard tine, hold-down or cutterbar.

The finger to guard/cutterbar clearance with reels fully lowered is 0.78 +/- 0.12 in. (20 +/- 3 mm) measured **at both ends of each reel, and at the cutterbar flex locations** with the reel in 'full frown' mode.

- h. If necessary, adjust outside arms as follows:

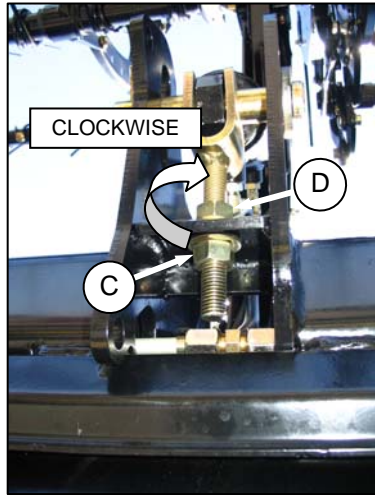


1. Loosen bolt (B).
2. Turn cylinder rod (C) counter clockwise to raise reel and increase clearance to cutterbar, or clockwise to decrease.
3. Tighten bolt (B).
4. Repeat at opposite side.

(continued next page)

PRE-DELIVERY CHECKS

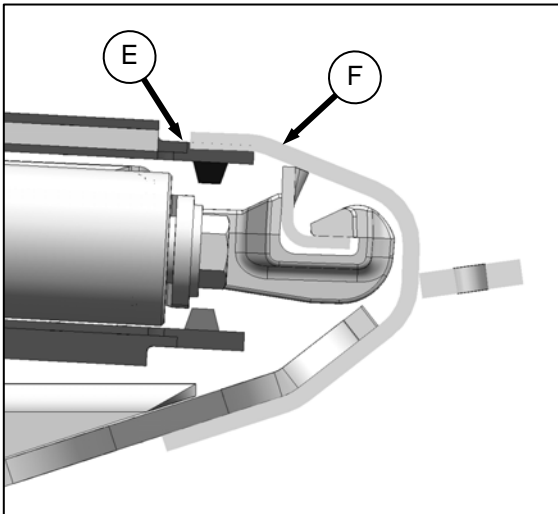
- i. If necessary, adjust center arm as follows:



LOOKING UP
AT ARM UNDERSIDE

1. Loosen nut (C).
2. Turn nut (D) clockwise to raise reel and increase clearance to cutterbar, or counter clockwise to decrease.
3. Tighten bolt (C).

L. DRAPER SEAL

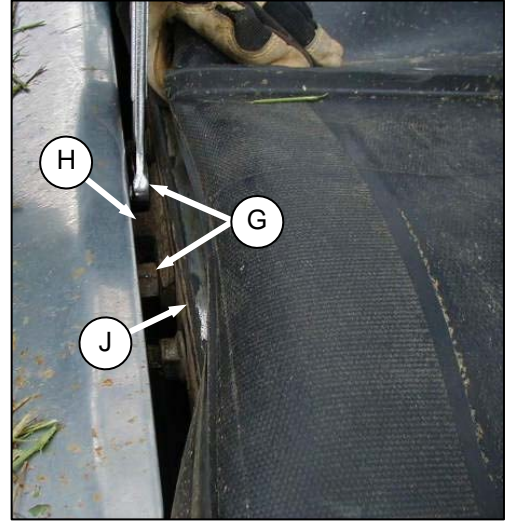


- a. Check deck height so that draper (E) runs just below cutterbar (F) with maximum 1/32 in. (1 mm) gap, or with draper deflected down slightly (up to 1/16 in. (1.5 mm)) to create a seal.

NOTE

Measurement is at supports with header in working position, and decks slid fully ahead.

- b. Loosen tension on drapers. Refer to sub-step H. *DRAPER TENSION*.



- c. Lift draper up at front edge past cutterbar.
- d. Loosen two lock nuts (G) one-half-turn only on deck support (H). There are two to four supports per deck, depending on header size.
- e. Tap deck (J) to lower deck relative to supports to achieve the setting recommended above. Tap support (H) using a punch to raise deck relative to support.
- f. Tighten deck support hardware (G).
- g. Tension drapers. Refer to sub-step H. *DRAPER TENSION*.

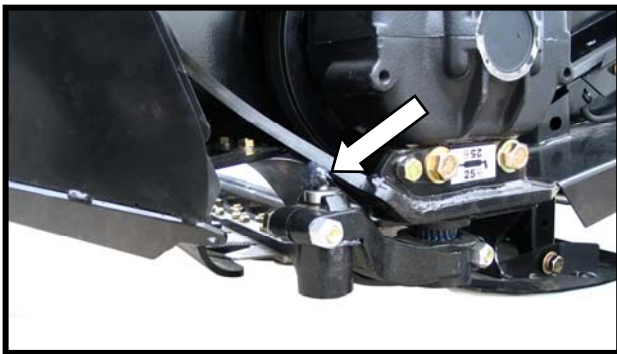
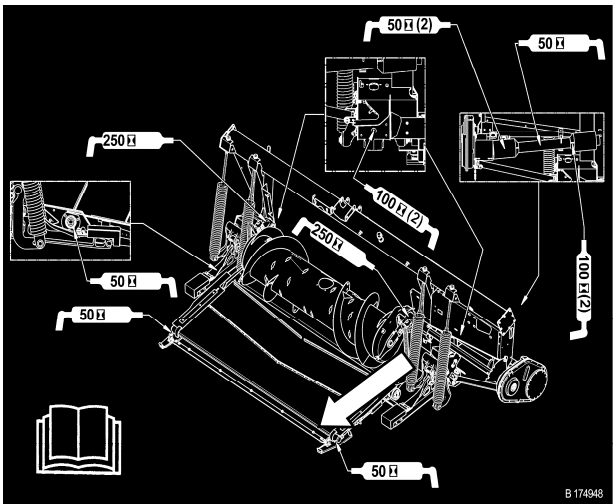
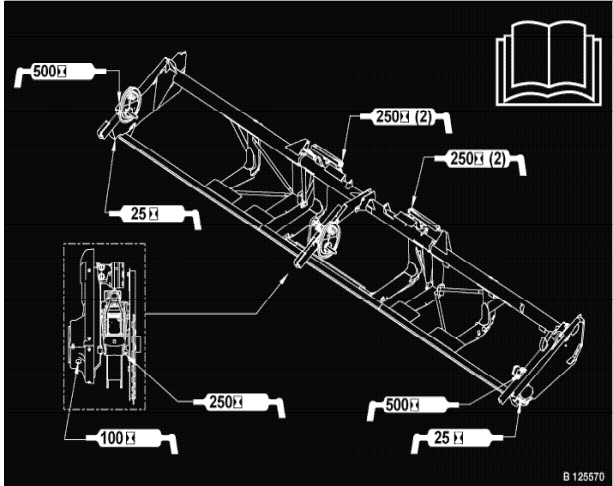
PRE-DELIVERY CHECKS

M. LUBRICATE HEADER

Refer to master grease decals (shown opposite) provided on the header and adapter back frames, and use the illustrations on the following pages to identify the various locations requiring lubrication.

- Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
- Inject grease through fitting with grease gun until grease overflows fitting, except where noted.
- Leave excess grease on fitting to keep out dirt.
- Replace any loose or broken fittings immediately.
- If fitting will **not** take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.
- Use clean grease as specified (except where noted):

High Temperature Extreme Pressure (EP2) Performance With 1% Max Molybdenum Disulphide (NLGI Grade 2) Lithium Base



SICKLE HEAD
(SINGLE KNIFE - 1 PLC)
(DOUBLE KNIFE - 2 PLCS)

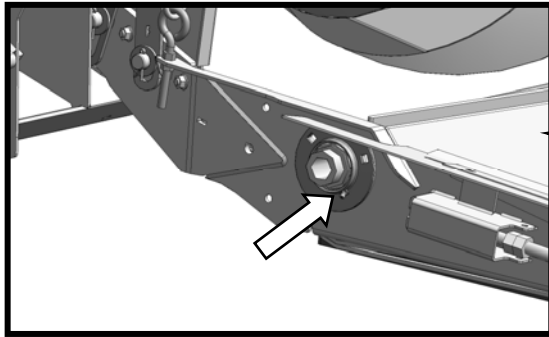


To prevent binding and/or excessive wear caused by sickle pressing on guards, do **not** over grease. If more than 6 to 8 pumps of the grease gun are required to fill the cavity, replace the seal in the sickle head.

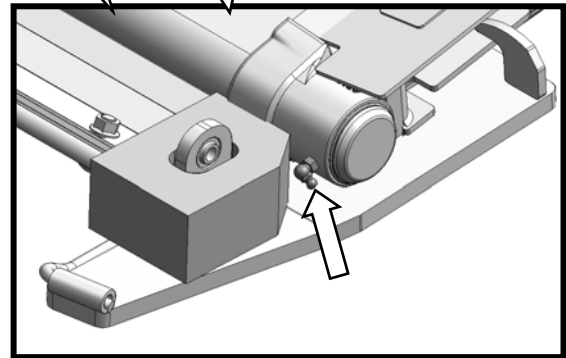
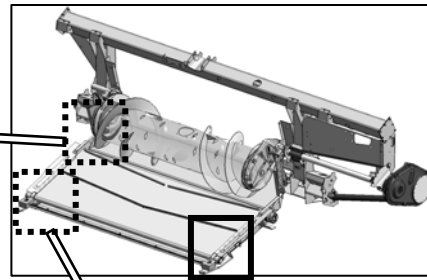
Check for signs of excessive heating on first few guards after greasing. If required, relieve pressure by depressing check-ball in grease fitting.

PRE-DELIVERY CHECKS

Lubrication Points (cont'd)

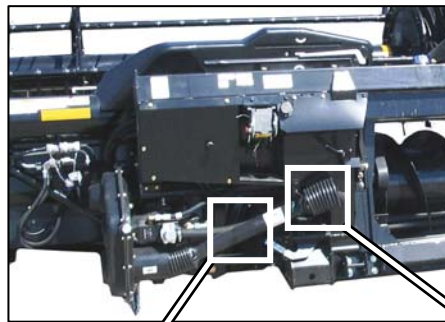
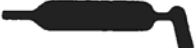


DRIVE ROLLER BEARING



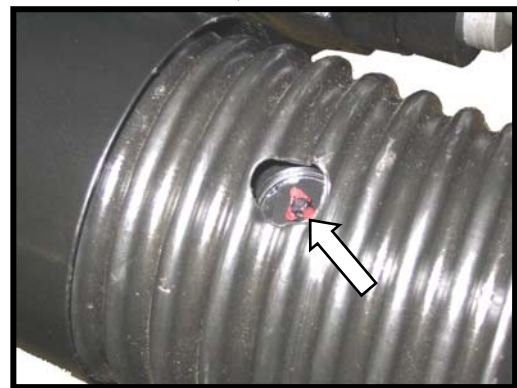
IDLER ROLLER
BOTH SIDES

High Temperature Extreme Pressure (EP2) Performance With 1% Max Molybdenum Disulphide (NLGI Grade 2) Lithium Base



10% MOLY GREASE IS RECOMMENDED FOR DRIVELINE SHAFT SLIP JOINT ONLY

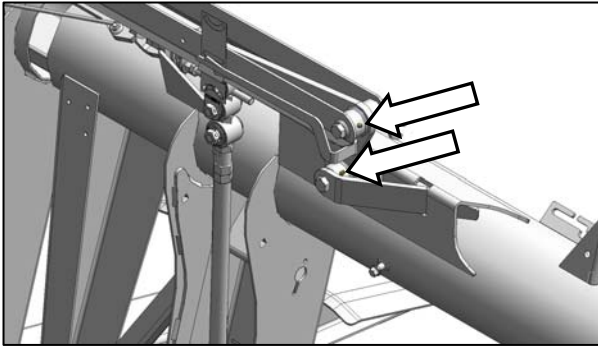
DRIVELINE SLIP JOINT



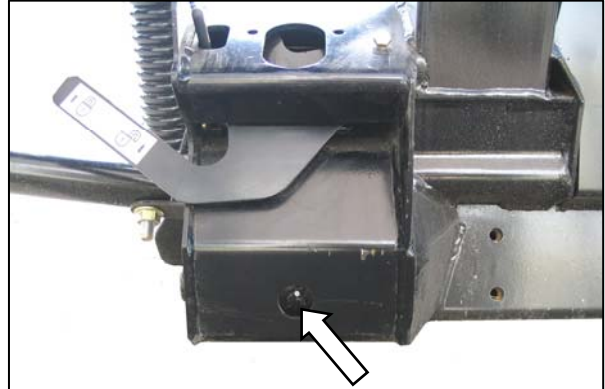
DRIVE UNIVERSAL - 2 PLCS

PRE-DELIVERY CHECKS

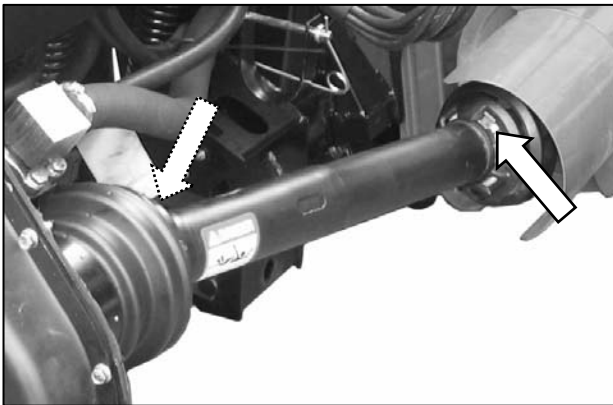
Lubrication Points (cont'd)



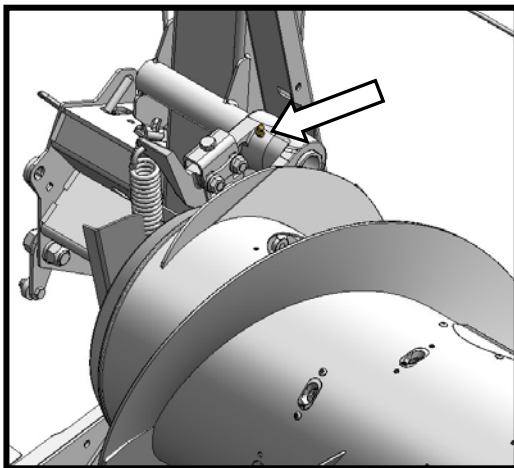
FLEX LINKAGE (2 PLCS) - BOTH SIDES



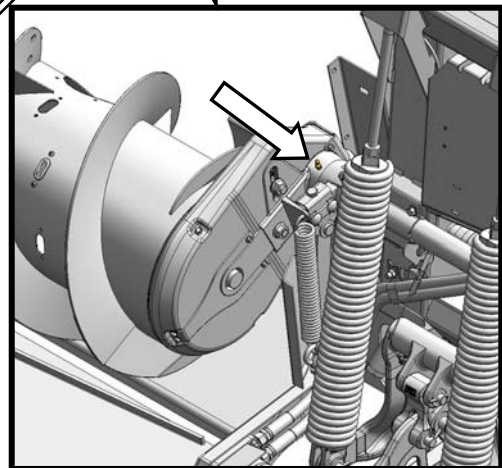
FLOAT PIVOT - 2 PLCS



DRIVELINE GUARD - 2 PLCS



AUGER PIVOT

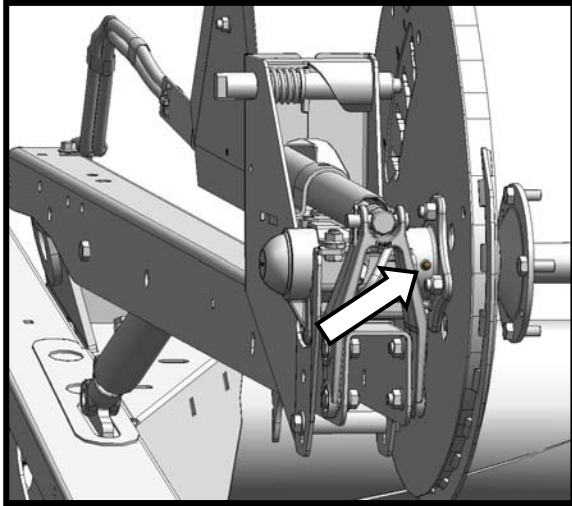


AUGER PIVOT

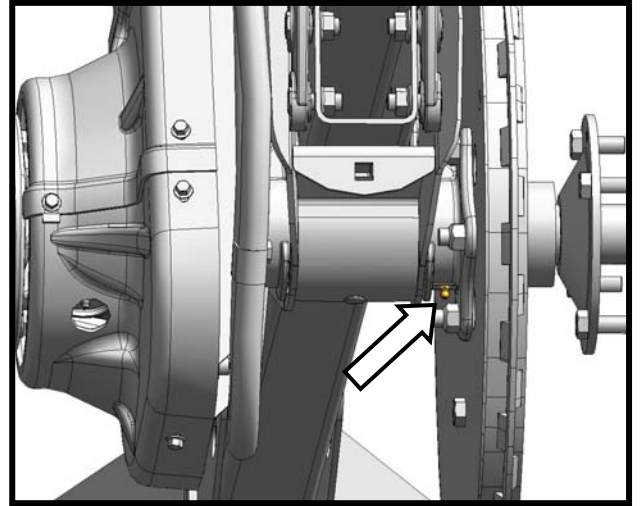
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PRE-DELIVERY CHECKS

Lubrication Points (cont'd)




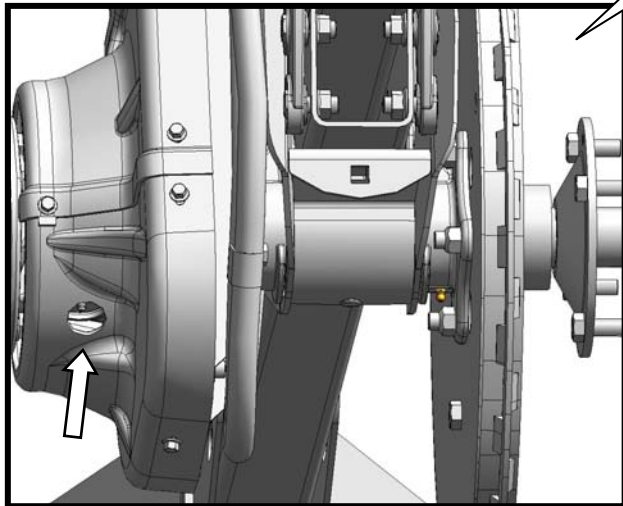
REEL SHAFT RH BEARING (1 PLC)



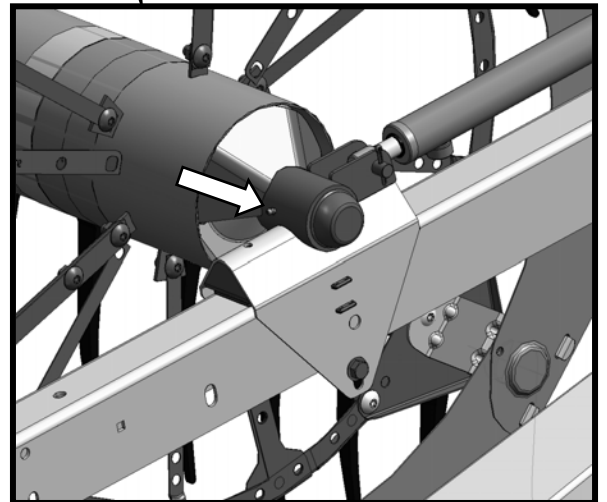
REEL CENTER BEARING (1 PLC)



High Temperature Extreme Pressure (EP2) Performance With 1% Max Molybdenum Disulphide (NLGI Grade 2) Lithium Base

REEL UNIVERSAL (1 PLC)



REEL SHAFT LH BEARING (1 PLC)

U-JOINT HAS AN EXTENDED LUBRICATION CROSS AND BEARING KIT. STOP GREASING WHEN GREASING BECOMES DIFFICULT OR IF U-JOINT STOPS TAKING GREASE. **OVERGREASING WILL DAMAGE U-JOINT.** 6-8 PUMPS IS SUFFICIENT AT FIRST GREASE (FACTORY). DECREASE GREASE INTERVAL AS U-JOINT WEARS AND REQUIRES MORE THAN 6 PUMPS.

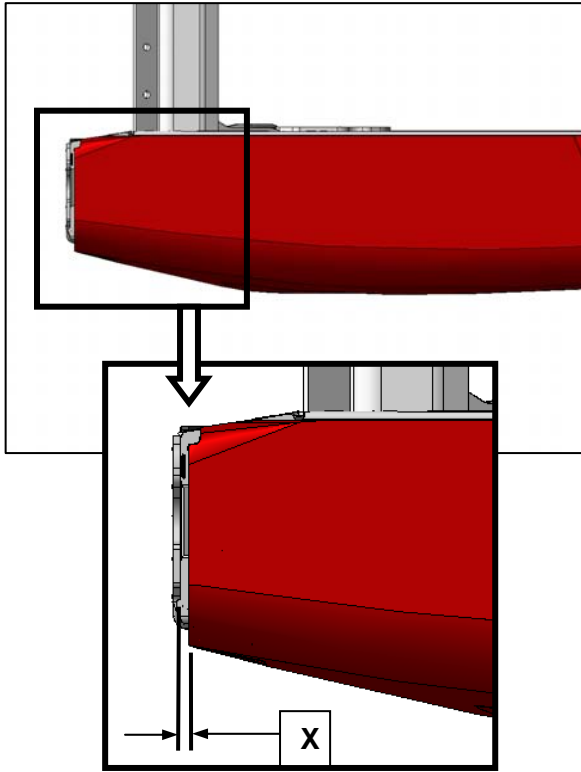
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PRE-DELIVERY CHECKS

N. ENDSHIELDS

NOTE

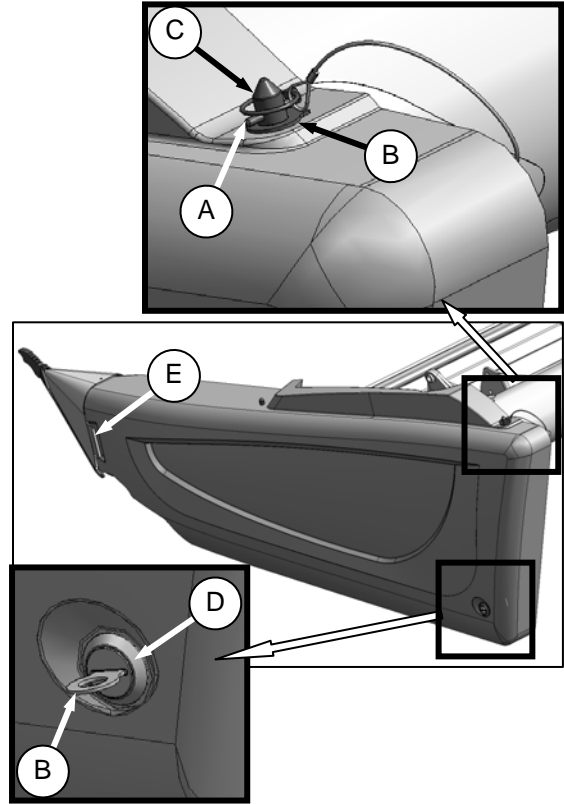
Plastic endshields are subject to expansion or contraction depending on large temperature variations. Position of top pin and lower catch can be adjusted to compensate for dimensional changes.



- a. Check gap 'X' between front end of shields and header frame, and compare against values in chart below.

Temperature Degrees °F (°C)	Gap 'X' Inches (mm)
25 (-4)	1-1/10 (28)
45 (7)	1 (24)
65 (18)	64/81 (20)
85 (29)	16/25 (16)
105 (41)	1/2 (12)
125 (52)	8/25 (8)
145 (63)	4/25 (4)
165 (89)	0

- b. If necessary, open endshield, and adjust the gap as follows:
1. Open endshield.

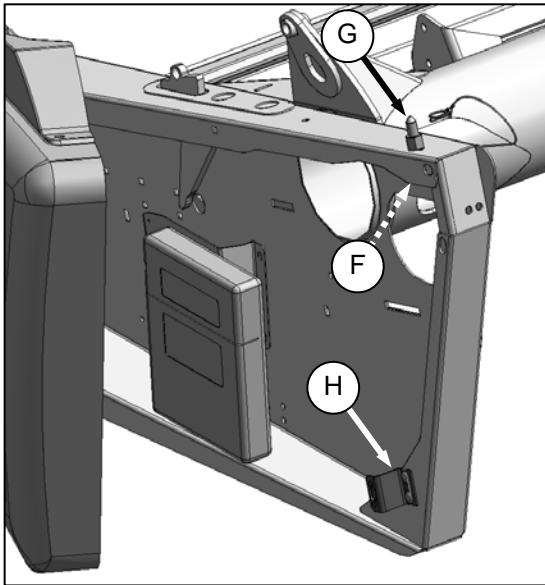


2. Remove lynch pin (A), and tool (B) from pin (C) at top rear of endshield.
3. Use tool (B) to unlock latch (D) at lower rear corner of endshield.
4. Lift shield at aft end to clear pin (C).
5. Swing shield out and away from header while maintaining forward pressure to prevent shield from slipping out of tab (E) at front of endsheet.

(continued next page)

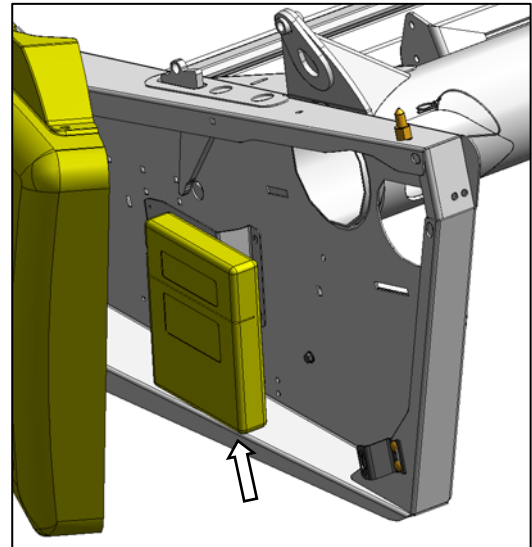
PRE-DELIVERY CHECKS

6. Adjust gap:



- i. From inside endsheet, loosen nut (F) on pin (G).
 - ii. Close endshield and adjust position to achieve the gap 'X' between the front end of shield and header frame in accordance with chart on previous page.
7. Open endshield, and tighten nut (F).
 8. Check for a snug fit between top of shield and header frame, and full engagement of endshield on pin (G). If necessary, loosen bolts on catch (H) and adjust catch as required to reposition shield.
 9. Tighten bolts on catch (H).
 10. Close endshield.

O. OPERATOR'S MANUAL AND PARTS CATALOGS



Check case contents. The manual case is located inside the LH endshield.

- a. Open the left endshield, and remove plastic tie on manual case.
- b. Check that case contains the following manuals:



- FD75 FlexDraper Operator's Manual - MD #169595.
- FD75 FlexDraper Parts Catalog - MD #169597.
- CA25 Combine Adapter Parts Catalog - MD #169598.
- FD75 FlexDraper Quick Card - MD #169601.

HEADER RUN-UP

STEP 15. RUN-UP THE HEADER

- a. Start combine, raise header fully, and engage header lift cylinder locks. Shut down combine, and remove key.



WARNING

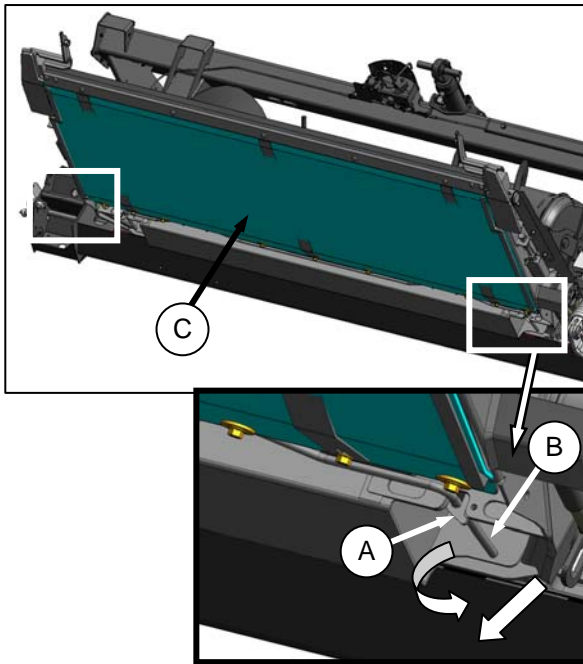
Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.



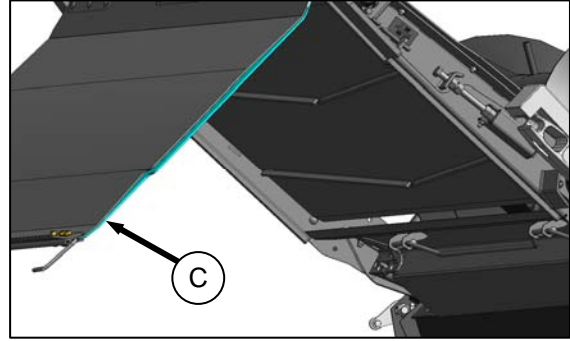
CAUTION

Engage header lift cylinder stops before working under header.

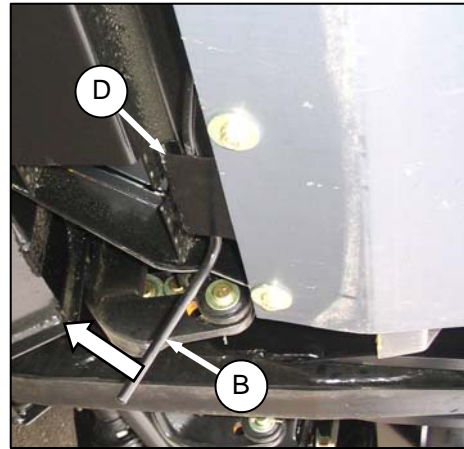
- b. Lower poly pan under adapter, and check for shipping materials/debris that may have fallen under adapter draper:



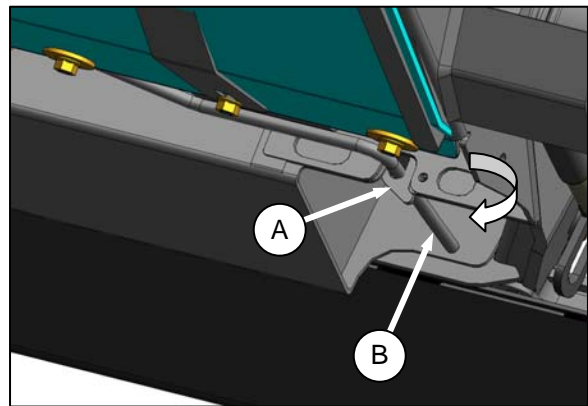
- c. Rotate latches (A) to unlock handle (B).
- d. Hold pan (C), and rotate handle (B) to release pan. Lower pan to expose draper.



- e. Check and remove debris from pan (C) and draper.



- f. Raise pan, and rotate handle (B) so that rod engages clips (D) on pan.



- g. Push handle (B) into slot, and secure with latches (A).

(continued next page)

HEADER RUN-UP



CAUTION

Never start or move the machine until you are sure all bystanders have cleared the area.



CAUTION

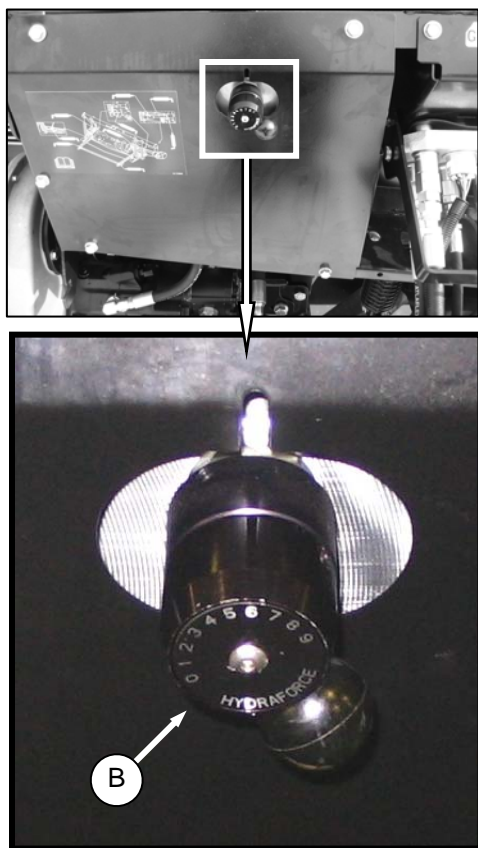
Clear the area of other persons, pets etc. Keep children away from machinery. Walk around the machine to be sure no one is under, on, or close to it.



CAUTION

Before investigating an unusual sound or attempting to correct a problem, shut off engine, engage parking brake, and remove key.

- i. Ensure feeder house variable speed is set to minimum.
- j. Start combine, and run the machine slowly for 5 minutes, watching and listening FROM THE OPERATOR'S SEAT for binding or interfering parts.
- k. Run the machine at operating speed for 15 minutes. Listen for any unusual sounds or abnormal vibration.
- l. Perform run-up check as listed on **Pre-Delivery Checklist** (yellow sheet attached to this instruction) to ensure the machine is field-ready.



- h. Check that Flow Control (B) is factory set to position "6" as shown above. If required, turn knob so that setting lines up with slot in panel.

NOTE

Reel and side drapers will not operate until oil flow fills the lines.

HEADER RUN-UP

STEP 16. POST RUN-UP ADJUSTMENTS

The following adjustments may be necessary after the run-up:



WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.

A. KNIFE

- a. Check guards for signs of heating during run-up due to insufficient clearance between guard and sickle. If heating is evident, proceed as follows:



1. Check gap between knife head and pitman arm. A business card should slide easily through the gap. If not, then adjust gap by loosening bolt and tapping knife head with a hammer. Re-tighten bolt.

- b. Adjust guard alignment as follows: The guard straightening tool (MD # 140135) is available from your MacDon Dealer.



UPWARD ADJUSTMENT

1. To adjust guard tips upwards, position tool as shown, and pull up.



DOWNWARD ADJUSTMENT

2. To adjust tips downward, position tool as shown, and push down.

HEADER RUN-UP

B. KNIFE SPEED

The header knife drive is driven by the adapter mounted hydraulic pump. Knife drive speed is factory-set for a feeder house speed of 575 rpm for CNH and John Deere adapters, and 780 rpm for AGCO and Lexion adapters.

IMPORTANT

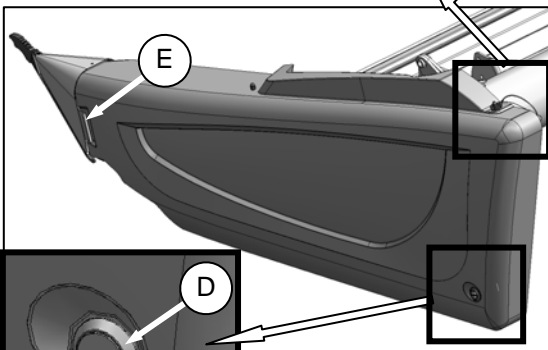
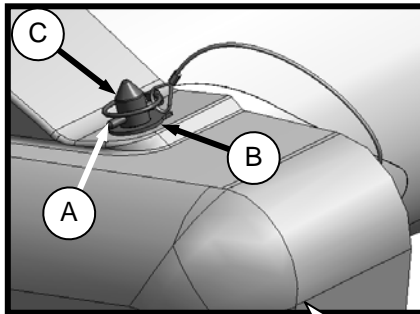
For variable speed feeder houses, this will be the **minimum** speed setting. To operate variable speed feeder house at greater than minimum speed, flow to the knife drive motor must be reduced to prevent excessive speeds which could result in premature knife failure.



WARNING

Stop combine engine, and remove key before making adjustments to machine. A child or even a pet could engage the drive.

- Stop combine engine, and remove key from ignition.
- Open LH endshield:



- Remove lynch pin (A), and tool (B) from pin (C) at top rear of endshield.

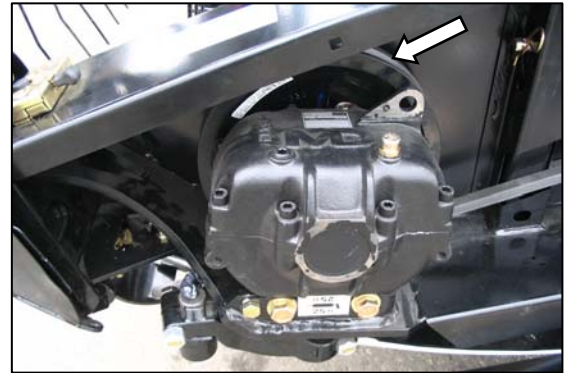
- Use tool (B) to unlock latch (D) at lower rear corner of endshield.
- Lift shield at aft end to clear pin (C).
- Swing shield out and away from header while maintaining forward pressure to prevent shield from slipping out of tab (E) at front of endsheet.
- Carefully disengage front of shield from tab (E), and swing front of shield away from header.



WARNING

Ensure bystanders are clear before starting.

- Start combine engine, engage header drive, and run combine at operating rpm.



- Have someone check the rpm of sickle drive box pulley using a hand held tachometer.
- Shut down combine, and close endshield.
- Compare actual pulley rpm with values in the following chart:

Header size	Recommended Knife Drive Speed Range (rpm)	
	Single Knife	Double Knife
30 FT	550–650	--
35 FT	550–600	--
40 FT	525–600	550–650
45 FT	N/A	

- If adjustment to sickle drive box pulley rpm is necessary, contact your MacDon Dealer or refer to the header technical manual.

NOTES

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CUSTOMERS

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DEALERS

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Printed in Canada

Model FD75 FlexDraper® / CA25 Combine Adapter Pre-Delivery Checklist – North America

Perform these checks prior to delivery to your customer. **Adjustments are normally not required as the machine is factory-assembled and adjusted.** If adjustments are required, refer to the appropriate page number in this manual. The completed checklist should be retained either by the Operator or the Dealer.



CAUTION: Carefully follow the instructions given. Be alert for safety related messages which bring your attention to hazards and unsafe practices.

Header Serial Number: _____ Adapter Serial Number: _____

✓	ITEM	PAGE
	Check for shipping damage or missing parts. Be sure all shipping dunnage is removed.	---
	Check for loose hardware. Tighten to required torque.	5
	Check tire pressure (Transport/Stabilizer Option).	42
	Check wheel bolt torque (Transport/Stabilizer Option).	42
	Check sickle drive box breather position.	43
	Check sickle drive box box lube level.	43
	Check adapter gearbox lube level.	43
	Check hydraulic reservoir lube level before and after run-up.	44
	Check sickle drive belt(s) tension.	44
	Check reel centered between header endsheets (header in full smile).	44
	Grease all bearings and drivelines.	54–57
	Check side draper tension.	45
	Check draper seal.	53
	Check wing balance.	48
	Check header main float.	46
	Check reel tine to cutterbar clearance.	52
	Check skid shoes are evenly adjusted at a setting appropriate for first crop.	51
	Check fitment of endshields.	58
	Ensure feeder house variable speed is set to minimum.	---
RUN-UP PROCEDURE		60
	Check hydraulic hose and wiring harness routing for clearance when raising or lowering header and reel.	---
	Check lights are functional.	40
	Check knife speed.	63
POST RUN-UP CHECK. STOP ENGINE.		62
	Check knife sections for discoloration caused by misalignment of components.	62
	Check for hydraulic leaks.	---
	Check that manual storage case contains operator's manual and parts catalogs.	59

Date Checked: _____

Checked by: _____