



Model 872 COMBINE ADAPTER

For 962 & 972 Headers on:

- **John Deere 7720, 8820, 9500, 9600,
50 Series & CTS Combines**
- **Case 1400, 1600, 2100 & 2300 Series**
- **Agco: Gleaner R62 & R72 Combines**
- **New Holland TR & TX Combines**
- **Cat Lexion 450, 460, 465, 470, 475, 480
& 485 Combines**

OPERATOR'S MANUAL

INTRODUCTION

This Manual contains information on the adapter which is required to allow attachment of the MacDon Model 962 and 972 Harvest Header to the various models of combines (see list on cover).

NOTE: This supplement does not provide all the information required to operate the header. It must be used in conjunction with your Harvest Header and Combine Operator's Manuals.

CAREFULLY READ ALL MANUALS TO BECOME FAMILIAR WITH RECOMMENDED PROCEDURES BEFORE ATTEMPTING TO UNLOAD, ASSEMBLE OR USE THE MACHINE.

This manual is divided into sections on: Safety, Attaching and Detaching the Header, Operation and Maintenance/Service. In addition, Assembly and Adapter Mounting Instructions for each type of combine are found at the back of this book.

Use the Table of Contents and the Index to guide you to specific areas. Study the Table of Contents to familiarize yourself with how the material is organized.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your dealer if you need assistance, information or additional copies of the manual.

NOTE: Right hand (R/H), and Left hand (L/H) designations are determined from the operators position, facing forward.

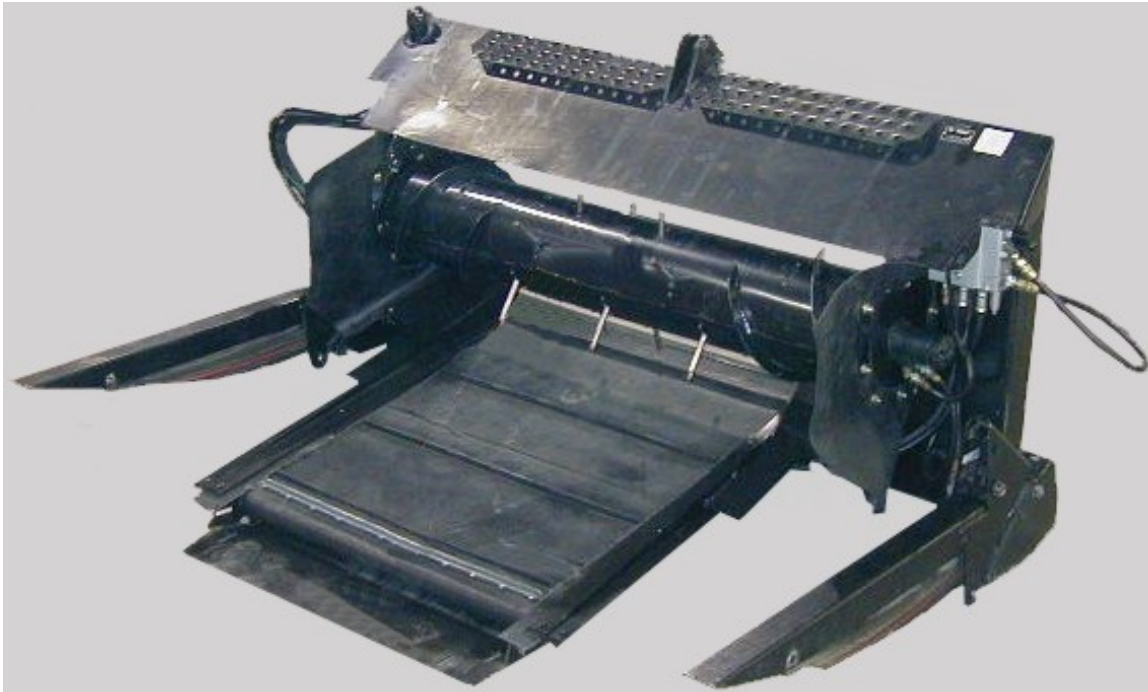


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SPECIFICATIONS

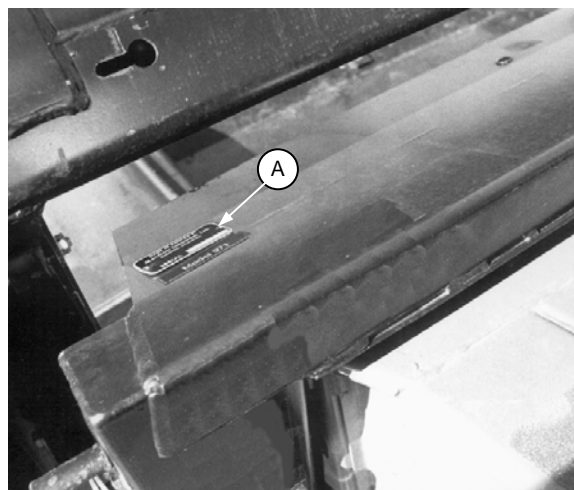
FEED DRAPER DRIVE	Hydraulic: Pump driven from right side of feeder house, reversible with combine feeder chain
FEED DRAPER SPEED	522 to 652 feet/min. (159 to 199 metres/min.) varies with combine
FEED DRAPER MATERIAL	Self-tracking rubber coated polyester fabric with rubber slats
FEED DRAPER WIDTH:	
John Deere & New Holland TX, Cat Lexion 460, 465, 480 & 485.....	55.9 inches (1420 mm)
Case 80 & 88 Series, Cat Lexion 450, 470 & 475.....	45.5 inches (1155 mm)
Case 60 & 66 Series, Gleaner, & New Holland TR.....	38.4 inches (975 mm)
RETRACTING TINE DRUM DRIVE	Hydraulic: Pump driven from right side of feeder house, reversible with combine feeder chain
RETRACTING TINE DRUM SPEED	173 to 216 RPM, varies with combine
RETRACTING TINE DRUM DIA.	
John Deere & New Holland TX, Cat Lexion 460, 465, 480 & 485.....	12 inches (300 mm)
Case, Gleaner, New Holland TR & Cat Lexion 450, 470 & 475.....	11" (280 mm) with 1 ¼" (32 mm) flighting on ends
HEADER SIDE DRAPER DRIVE	Hydraulic: Pump driven from right side of feeder house
HEADER SICKLE DRIVE	Mechanical: Driveline from left side of feeder house
HEADER FLOTATION	7 inches (175 mm) vertical and 4.5° lateral
HEADER REEL DRIVE	Hydraulic from combine oil supply

SERIAL NUMBER LOCATION

Record the serial number in the space provided.

872 Combine Adapter: _____

Plate (A) is located on left side of adapter frame.



COMBINE ADAPTER SERIAL PLATE

NOTE: When ordering parts and service, be sure to give your dealer the complete and proper serial number.

SAFETY

SAFETY ALERT SYMBOL



This safety alert symbol indicates important safety messages in this manual and on safety signs on the header.

This symbol means:
ATTENTION !
BECOME ALERT !
YOUR SAFETY IS INVOLVED !

Carefully read and follow the safety message accompanying this symbol.

Why is SAFETY important to you?

- 3 BIG REASONS
- ACCIDENTS DISABLE AND KILL
 - ACCIDENTS COST
 - ACCIDENTS CAN BE AVOIDED

SIGNAL WORDS

Note the use of the signal words DANGER, WARNING, and CAUTION with safety messages. The appropriate signal word for each message has been selected using the following guidelines:



DANGER – Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING – Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. It is also used to alert against unsafe practices.



CAUTION – Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It is also used as a reminder of good safety practices.

SAFETY

SAFETY SIGNS

- The safety signs below appear on the combine adapter.
- Keep safety signs clean and legible at all times
- Replace safety signs that are missing or become illegible.
- If original parts on which a safety sign was installed are replaced, be sure the repair part also bears the current safety sign.
- Safety signs are available from your Dealer Parts Department.

To install safety signs:

1. Be sure the installation area is clean and dry.
2. Decide on the exact location before you remove the decal backing paper.
3. Remove the smaller portion of the split backing paper.
4. Place the sign in position and slowly peel back the remaining paper, smoothing the sign as it is applied.
5. Small air pockets can be smoothed out or pricked with a pin.

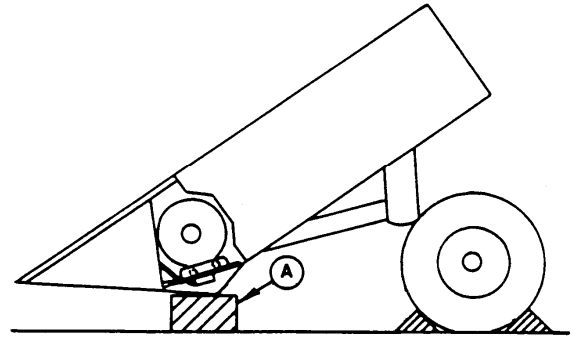
Rest header on ground or engage mechanical locks before going under unit.



HEADER ATTACHING & DETACHING

ATTACHING HEADER TO COMBINE AND ADAPTER

1. Attach adapter to combine feeder housing. See "Adapter Mounting Instruction" at back of book.
NOTE: If header has been previously attached to windrower, remove linkage supports from header lower legs. Connector shaft on header back tube may remain installed.
2. Choose an area that is as level as possible, and place supports (A) at both ends of cutterbar. For 962 Headers use 6" (150 mm) blocks. For 972 Headers use 2x4 (40 mm) blocks.



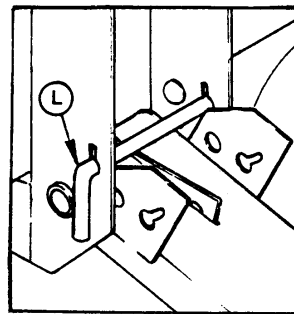
BLOCK CUTTERBAR

3. For 962 headers with gauge wheels, block both wheels front and rear, and be sure gauge wheel pins are in stand position (L), both sides, to support rear of header.

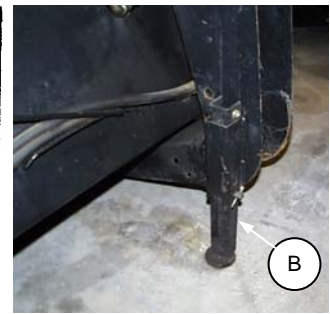
For 972 headers and 962 headers without gauge wheels, be sure header stand (B) is secure in the down position. For 962 Headers only, place a 4 inch (100 mm) block under stand.



CAUTION: Be sure area is clear of bystanders before starting engine.



GAUGE WHEELS - 962



HEADER STAND - 972

4. Slowly drive combine forward, aligning float leaf springs under header legs, until top link can be connected. Connect top link (C).

NOTE: For headers with hydraulic top link, see instruction in "Unloading & Assembly" section.

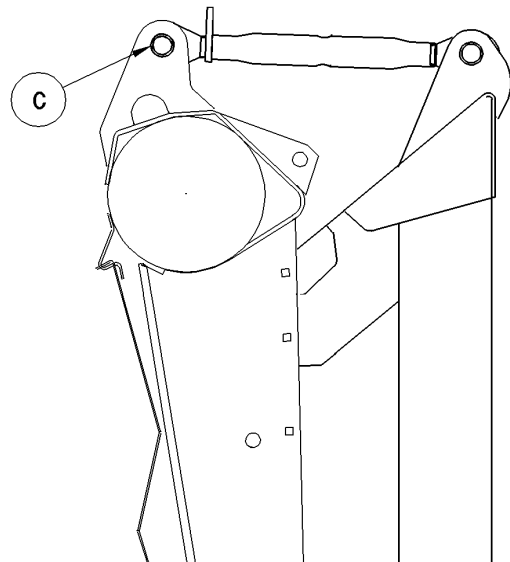


CAUTION: Always connect top link before raising header.

IMPORTANT: Take care not to crush hydraulic hoses when driving into header.

IMPORTANT: For 972 Headers, when driving into header, align notches in adapter feed pan with retainers welded to cutterbar. Ensure that pan goes under the retainer and on top of cutterbar. The feeder house can be raised to lower the front edge of the pan, and vice versa. In soft ground conditions, a length of 2x4 under the pan will prevent scooping dirt

5. Raise adapter slowly, making sure float leaf springs engage in header legs. Continue to lift until header is fully raised. Stop engine and remove key.



CONNECT TOP LINK BEFORE LIFTING



DANGER: To avoid bodily injury from fall of raised header, engage header lift cylinder stops when working on or around raised header. See your

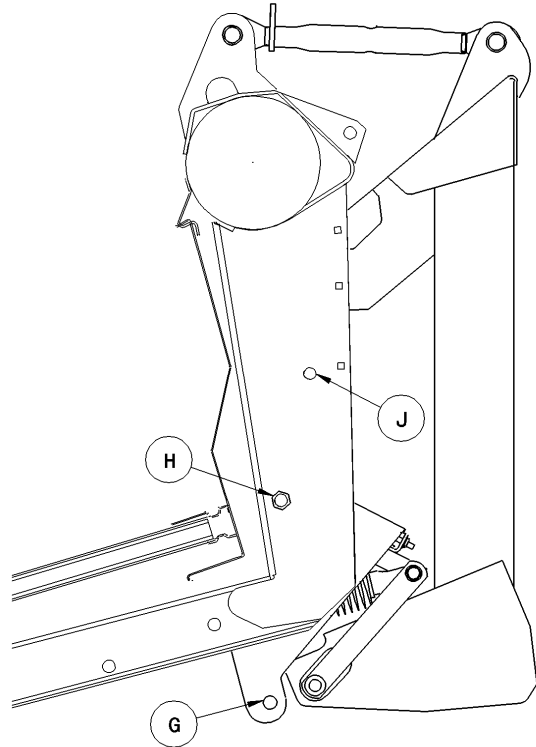
HEADER ATTACHING & DETACHING

ATTACHING HEADER TO COMBINE AND ADAPTER (continued)

6. Remove $\frac{3}{4}$ x 7 $\frac{1}{2}$ " bolt and lock nut from storage position (J) (or, on first use, from shipping position [G]) and install to lock adapter to header at (H). Move clevis pin from float lockout position (G) to storage position (J). Install split ring to capture clevis pin.

NOTE: It may be necessary to rock header by lifting at divider to properly position float frame at header leg joint.

Repeat at other leg.



PIN FROM FLOAT LOCKOUT TO STORAGE

7. Install sickle driveline on combine feeder house shaft. Ensure driveline locking mechanism engages. See your combine Operator's Manual.



DANGER: Entanglement with rotating driveline will cause serious personal injury or death. Keep all driveline shields in place. Close all hinged covers.



ATTACH DRIVELINE

HEADER ATTACHING & DETACHING

ATTACHING HEADER TO COMBINE AND ADAPTER (continued)

8. Make the hydraulic line connections:

Reel drive pressure and return lines: Connect two hoses between header and combine.

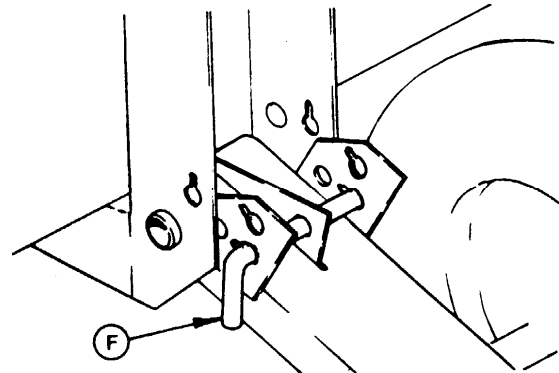
Reel lift line: Connect one hose between header and combine.

Draper drive pressure and return lines: Connect two hoses between header and adapter.

NOTE: As an aid in connecting hydraulics, the following colour coding has been used:
ORANGE - Draper Drive Pressure
BLUE - Draper Drive Return
YELLOW - Reel Drive Return

Reel fore-aft lines (if equipped): Connect two hoses between header and combine.

9. Connect wiring harness between header and combine. **NOTE:** A harness adapter is supplied with adapter completion package.
10. For 962 headers with gauge wheels, remove pins at gauge wheels and place in field position (F). See "Cutting Height" in Header Operator's Manual to choose between alternate field positions. (For headers with gauge wheel/transport option, gauge wheel support is not exactly as illustrated. See decal at support.) **NOTE:** Rotate pin to align roll pin with key slot for removal and installation. Roll pin locks inside to secure the position.

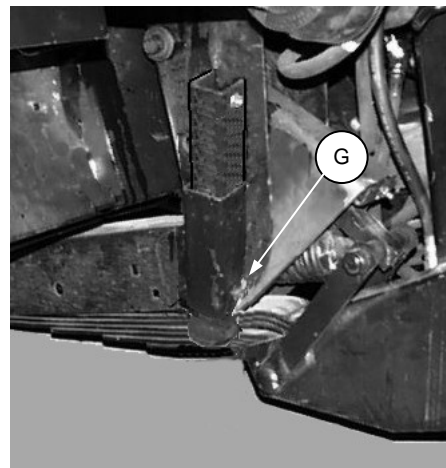


962 GAUGE WHEELS - FIELD POSITION

11. For 972 headers and 962 headers without gauge wheels, raise header stand to storage position (G).
12. For 972 Headers, for initial setting, set header at flattest angle (shortest top link length) and float header up. Ensure that feed pan is as far forward as possible and tighten pan hardware.

STEPS 13 to 16 ARE FOR 962 HEADERS ONLY.

13. Place 6" (150 mm) block under front of adapter feeder pan. Ensure all feed pan-to-cutterbar anchors are removed or turned sideways to prevent damage to anchors when cutterbar is lowered. Adjust feed pan fully forward for initial setting. (See next page.)
14. Disengage header lift cylinder stops and slowly lower header until adapter feed pan rests on block, and cutterbar rests on feed pan.



HEADER STAND - STORAGE POSITION

HEADER ATTACHING & DETACHING

ATTACHING HEADER TO COMBINE AND ADAPTER (continued)

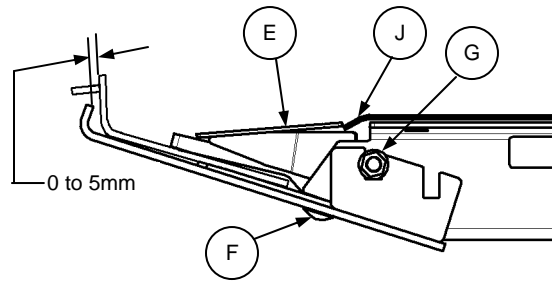
15. Install anchors to clamp feed pan to cutterbar as shown.
16. Check for 0 to 5 mm (3/16 inch) clearance between front of adapter feed pan and cutterbar. Adjust clearance as follows:
 - a. Raise the header. Stop engine and remove key.



DANGER: To avoid bodily injury from fall of raised header, engage header lift cylinder stops when working on or around raised header. See your Combine

Operator's Manual for details.

- b.
 - Loosen bolts (F) and (G).
 - Adjust feed pan clearance to cutterbar to 0 to 5 mm (3/16 inch).
 - Tighten bolts (F) and (G).
 - Remove all blocks, disengage header lift cylinder stops and lower header to ground.
 - Ensure that outside anchors (E) are installed as shown, with rubber seal (J) under top plate of anchor.



SIDE VIEW
ADJUST FEED PAN - 962 HEADER

HEADER ATTACHING & DETACHING

DETACHING HEADER FROM COMBINE AND ADAPTER

Using this procedure, adapter will remain attached to the combine. This would be appropriate when header is to be used as a windrower. Instructions for detaching both header and adapter from combine are given on page 12.

1. Choose a level area. Lower the reel and raise the header. Stop engine and remove key.



DANGER: To avoid bodily injury from fall of raised header, engage header lift cylinder stops when working on or around raised header. See your Combine Operator's Manual for details.



DANGER: Wait for all movement to stop. A rotating driveline can cause entanglement resulting in serious personal injury or death.

2. Disconnect driveline from feeder house shaft and store at bracket (A) on header left leg.
3. Disconnect hydraulic lines:
 - Reel lift between header and combine.
 - Reel drive pressure and reel return between header and combine.
 - Draper return (blue) and draper drive pressure (orange) between adapter and header.
 - Reel fore-aft hoses between header and combine (if equipped).

IMPORTANT: Couple or cap all lines to prevent hydraulic system contamination except as noted in Warning below. Be sure header stored hoses and combine stored hoses are not entangled.

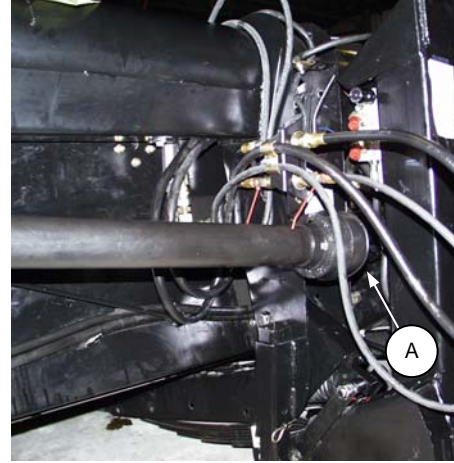


WARNING: For headers with hydraulic reel fore-aft, never connect the fore-aft couplers to each other. This would complete the circuit and allow the reel to creep forward in transport, resulting in instability.

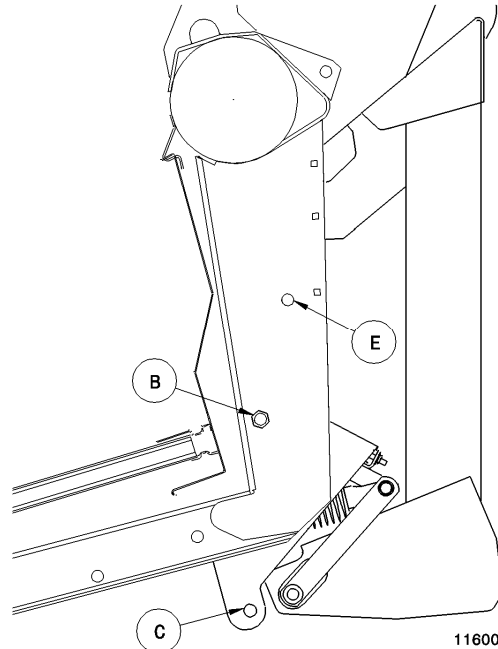
4. Disconnect wiring harness between header and combine.
5. Remove split ring and clevis pin from storage position (E) and install in float lockout position (C). Remove $\frac{3}{4}$ X 7 $\frac{1}{2}$ " bolt and lock nut from adapter lock position (B) and place in storage position (E). Repeat at other leg.
6. Remove plastic wear strip from under adapter pan, if equipped. Leave wear strip attached to clips on cutterbar.

STEPS 7 TO 12 ARE FOR 962 HEADERS ONLY. FOR 972 HEADERS, GO TO STEP 13.

7. Set 6" (150 mm) blocks under the adapter feeder pan.
8. Disengage header lift cylinder stops and lower header so feeder pan rests on blocks.
9. Loosen and rotate cutterbar anchors (D) away from cutterbar.

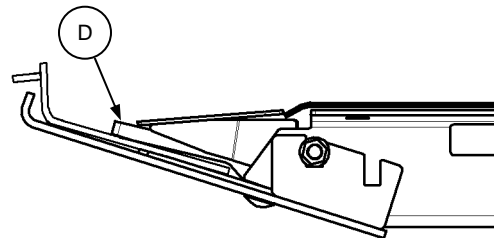


STORE DRIVELINE



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ENGAGE FLOAT LOCK-OUT AND
MOVE BOLT TO STORAGE POSITION



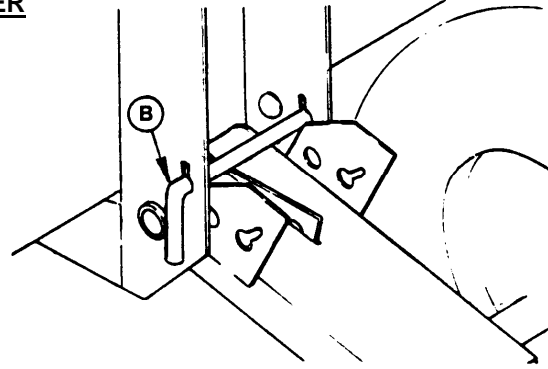
RELEASE CUTTERBAR ANCHORS –
962 HEADERS

HEADER ATTACHING & DETACHING

DETACHING HEADER FROM COMBINE AND ADAPTER (continued)

10. Raise header and engage header lift cylinder stops.
11. Move 6" (150 mm) blocks from under adapter feeder pan to the outside, about 18" (450 mm) from each end of header.
12. For 962 headers with gauge wheels, remove pins at gauge wheels and place in stand position (B). Block both gauge wheels.

For 962 headers without gauge wheels, lower header stand and place a 4 inch (100 mm) block beneath stand.



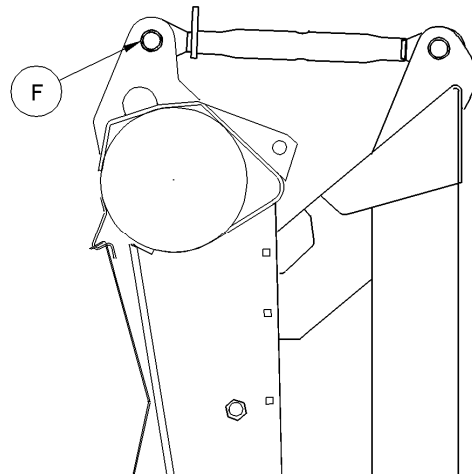
962 GAUGE WHEELS - STAND POSITION

13. For 972 Headers, lower header stand (E). Place a 2x4 under stand only if required for stability on soft ground. Place 2x4's (40 mm blocks) under cutterbar, about 18" (450 mm) from each end of header.



HEADER STAND - LOWERED

14. Disengage header lift cylinder stops and lower header onto blocks. Lower adapter until top link is loose. Detach top link (F).
15. Lower adapter until float leaf springs are clear of header legs and slowly back away from header.



DISCONNECT TOP LINK

HEADER ATTACHING & DETACHING

DETACHING HEADER AND ADAPTER FROM COMBINE

Using this procedure, adapter will remain attached to the header. This would be appropriate when detaching header for transport. Instructions for detaching header only from adapter and combine are given on page 10.

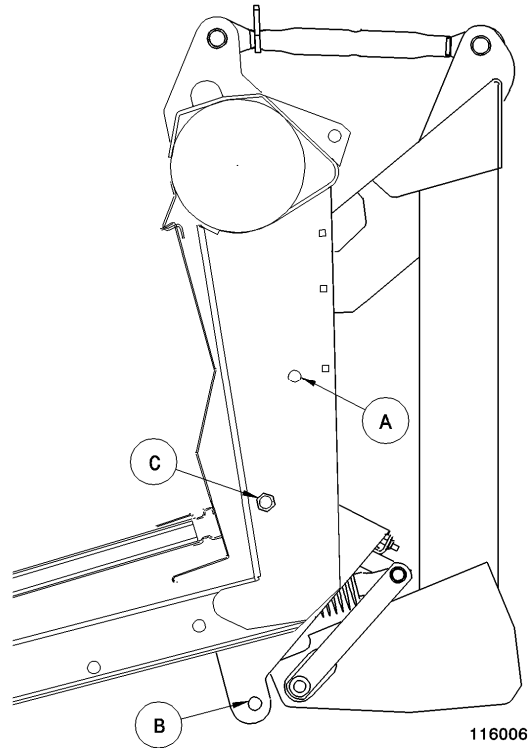
1. Choose a level area. Lower the reel and raise the header. Stop engine and remove key.



DANGER: To avoid bodily injury from fall of raised header, engage header lift cylinder stops when working on or around raised header. See your Combine Operator's Manual for details.

2. Remove split ring and clevis pin from storage position (A) and install in float lockout position (B). Repeat at other leg. Note that bolt in adapter lock position (C) remains in place.
3. Disconnect hydraulic lines between header and combine:
 - Reel drive pressure line.
 - Reel drive return line.
 - Reel lift line.
 - Reel fore-aft lines (if equipped).

NOTE: For units with hydraulic center link, before disconnecting cylinder hoses, turn off oil flow at shut-off valve. This allows easier reattachment of couplers at combine. Remember to restore oil flow at shut-off valve before next use.



INSTALL PIN IN LOCKOUT POSITION

IMPORTANT: Couple or cap all lines to prevent hydraulic system contamination except as noted in Warning below. Be sure header stored hoses and combine stored hoses are not entangled.



WARNING: For headers with hydraulic reel fore-aft, never connect the fore-aft couplers to each other. This would complete the circuit and allow the reel to creep forward in transport, resulting in instability.

4. Disconnect wiring harness between header and combine.



DANGER: Wait for all movement to stop before approaching driveline. A rotating driveline can cause entanglement resulting in serious personal injury or death.

5. Disconnect driveline from combine feeder house output shaft and store at header left leg.
6. Disconnect pump from combine feeder house output shaft and store on adapter. See Mounting Instruction for your make of combine at back of book.

NOTE: Wear gloves when handling pump.



DISCONNECT AND STORE DRIVELINE

7. Disengage the header lock system. See Mounting Instruction for your make of combine at back of book.
8. Disengage header lift cylinder stops, start engine and lower header to ground.
9. Slowly back combine away from header.

HEADER ATTACHING & DETACHING

ATTACHING HEADER AND ADAPTER TO COMBINE

1. If applicable, block both gauge wheels front and rear (B).

NOTE: Choose an area that is as level as possible.



CAUTION: Be sure area is clear of bystanders before starting engine.

2. Drive combine slowly forward and engage feeder house lifting device in adapter top cross member. See Mounting Instruction for your make of combine at back of book for details.
3. Raise header, stop engine and remove key.



DANGER: To avoid bodily injury from fall of raised header, engage header lift cylinder stops when working on or around raised header. See your Combine Operator's Manual for details.

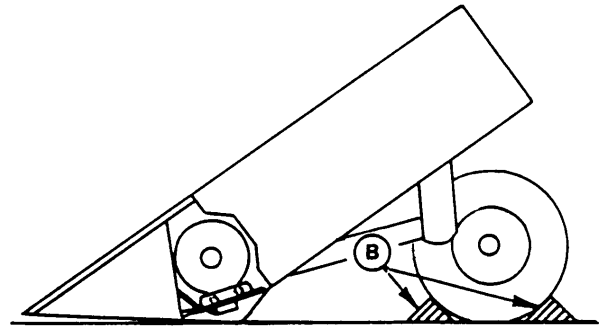
4. Connect feeder house lock system at bottom of adapter. See Mounting Instruction for your make of combine at back of book.
5. Install sickle driveline on L/H feeder house output shaft. Ensure driveline locking mechanism engages. See your combine Operator's Manual.



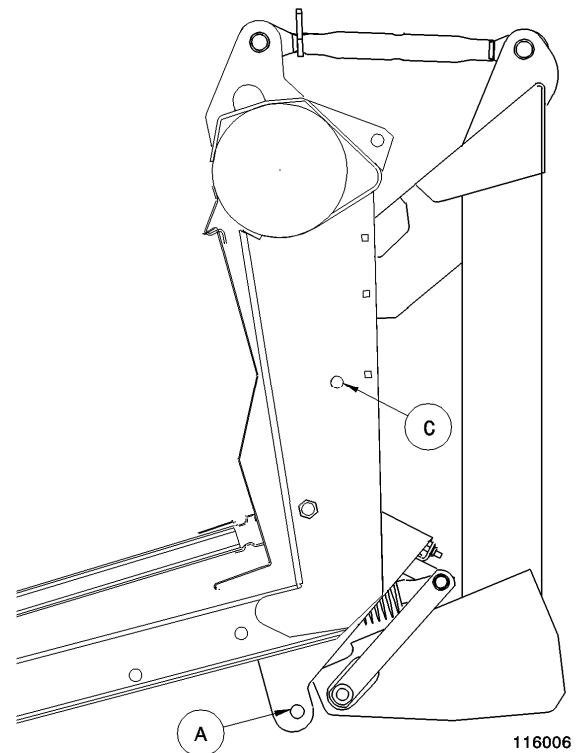
DANGER: Entanglement with rotating driveline will cause serious personal injury or death. Keep all driveline shields in place.

6. Connect hydraulic lines between header and combine:
 - Reel drive pressure line.
 - Reel drive return line.
 - Reel lift line.
 - Reel fore-aft lines (if equipped).
7. Connect wiring harness between header and combine.
8. Remove split ring and clevis pin from float lockout position (A) and install in storage hole (C). Repeat at other leg.
9. Install pump on R/H feeder house output shaft. See Mounting Instruction for your make of combine at back of book.

NOTE: Wear gloves when handling pump.
10. Disengage header lift cylinder stops and lower header.



BLOCK GAUGE WHEELS



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REMOVE PIN FROM FLOAT LOCKOUT

OPERATION

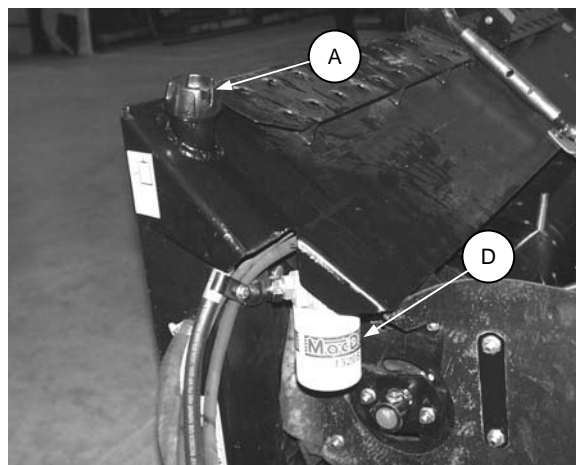
BREAK-IN PERIOD

1. Run drapers slowly for 5 minutes to fill hydraulic lines, then check oil level at (A). Maintain level between LOW and FULL when oil is cold.

NOTE: Breather screw on cap (A) has been tightened for shipping. Loosen screw before operating adapter.

NOTE: When ambient temperatures are above 35° C (95° F), maintain oil level in the low portion of the range to prevent overflow at breather under operating temperatures.

2. Change the hydraulic oil filter (D) on combine adapter after 50 hours operation and every 250 hours thereafter.
3. Change gearbox oil after 50 hours operation and every 1000 hours or 3 years thereafter.



CHECK HYDRAULIC OIL LEVEL
CHANGE OIL FILTER & GEARBOX OIL

See "Break-In Period" in Header Operator's Manual for further information on break-in maintenance.

DRAPER SPEED CONTROL

Speed of the header drapers is adjusted at the flow control on the combine adapter. Rotate flow control knob (C) to a number suited to the crop. The higher the number, the faster the draper speed. The settings in the chart are recommended for optimum feeding capacity.

NOTE: If sufficient draper speed cannot be achieved, a possible cause is low relief pressure. See "Flow Control Relief Pressure" in Maintenance/Service section.

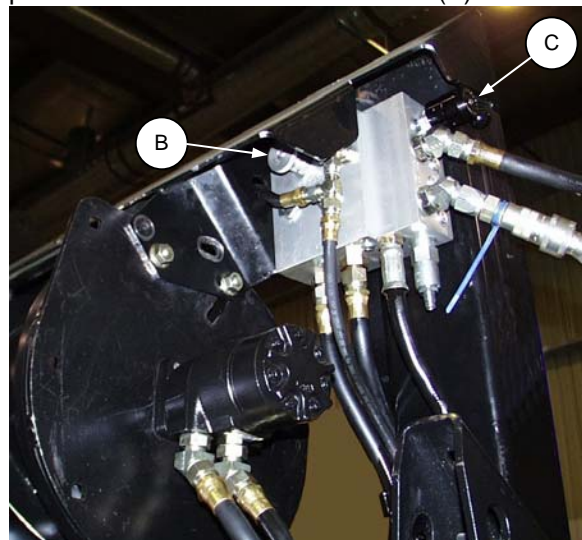
Needle Valve: When laying a windrow, turn needle valve control (B) fully open to stop flow to the feed draper and drum.

NOTE: Valve must be fully open to prevent rotation of feed draper and drum when oil is cold. It may also be necessary to secure drum to prevent rotation.

For a complete list of steps to convert to windrowing mode, see "End Delivery" in the Operation section of your Header Operator's Manual.

When straight cutting and experiencing plugging at the rear of the feeder deck, turn control (B) to slow feed draper and drum.

NOTE: Slowing feed draper and drum too much will cause feeding problems. Turn needle valve control (B) in 1/16 turn increments.



DRAPER SPEED CONTROL

CROP	DIAL NO.
Barley	3
Beans, Edible	4
Canola	3
Flax	5
Lentils	3
Milo	3
Oats	3
Peas	3
Rice	5
Safflowers	4
Soybeans	5
Sunflowers	4
Wheat	3

OPERATION

HEADER FLOTATION

IMPORTANT:

To avoid:

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

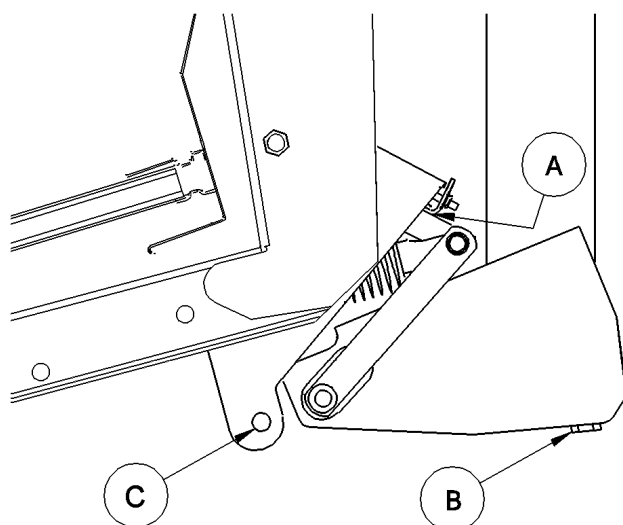
To check header float:

1. Raise feeder house and engage lift cylinder stops.
2. Be sure float lock out pins are removed from position (C).
3. Disengage lift cylinder stops and lower header so the cutterbar is 1 to 6 inches (25 to 150 mm) above the ground.

NOTE: When cutterbar is in the range from 0 to 16 inches (400 mm) off ground, float arm should touch or be within $\frac{1}{4}$ inch (6 mm) of angle at (A). If gap at (A) is greater than $\frac{1}{4}$ inch, float is set too light, causing the header to float up.

NOTE: Header gets lighter and gap at (A) increases when steepening header angle. Adjust float after changing header angle or reel fore-aft position. *For best float, gap at (A) should never exceed $\frac{1}{4}$ inch (6 mm).*

4. With cutterbar 1 to 6 inches (25 to 150 mm) above the ground, grasp the crop divider rod and lift up. Under normal conditions it should require 50 to 70 lbs. force (220 to 310 N) to lift cutterbar off ground at either end. If adjustment is required, proceed as follows:



FLOAT ADJUSTMENT

To adjust header float:

1. Raise feeder house and engage lift cylinder stops.
2. Tighten bolts (B) at both sides of adapter to increase float (which makes header lighter when lowered to ground).
Loosen bolts to decrease float (which makes header heavier when lowered).

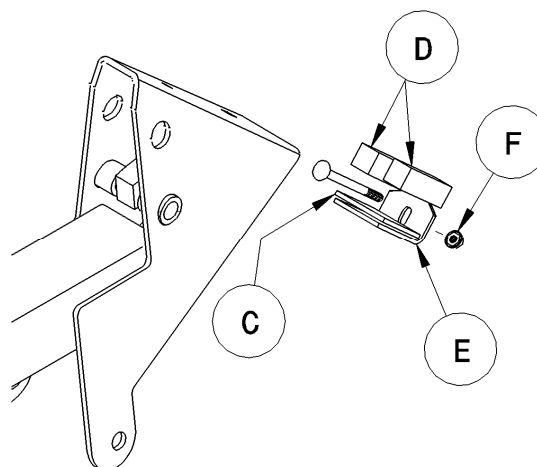
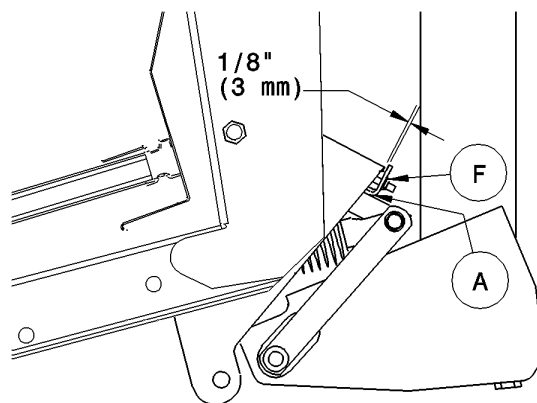
IMPORTANT: For 21 ft. 972 headers only. If header still has excess float with float adjustment bolt fully backed off, it may be necessary to remove the 3rd leaf spring from the top on both sides of the adapter to provide proper floatation. See Unloading and Assembly section for removal instructions.

OPERATION

HEADER LEVELLING

Adjust header levelling with header at the flattest angle. See Header Angle, below.

1. With header on level ground, lower header so cutterbar is 2 to 4 inches (50 to 100 mm) off the ground.
2. Check level of header by measuring cutterbar to ground at both ends.
3. To lower cutterbar on one end, remove a shim (C) from between rubber pads (D) and angle (E). Adjust shim quantity side to side, placing from 0 to 2 shims to level header. To add or remove a shim:
 - Lower cutterbar to ground and continue lowering feeder house so gap at (A) increases.
 - Remove nut (F) and add or remove shim(s) as required.
 - Reassemble, maintaining 1/8 inch (3 mm) between angle and float support as shown.



HEADER LEVELLING

HEADER ANGLE

The header (or guard) angle can be adjusted from 15° to 20° below horizontal. (Actual angle may vary with combine set-up.)

See Combine Operator's Manual for header levelling and additional header angle adjustments.

IMPORTANT: The flat header angle (15°) is recommended for normal conditions. A flatter header angle reduces sickle section breakage and reduces soil scooping or build-up at the cutterbar in wet conditions. Use a steeper angle to cut very close to the ground, or in down crop for better lifting action.

IMPORTANT: Always check adapter drum clearance to header frame after adjusting header angle. Flattening the header angle will reduce the clearance to the drum fingers.

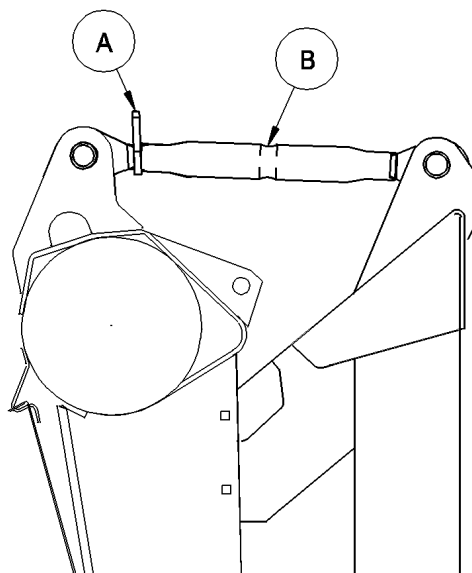
IMPORTANT: Header flotation gets lighter as header angle increases, and must be readjusted. See "Header Flotation", on page 15.

To adjust header angle with mechanical link:

1. Lower cutterbar to ground and continue lowering to drop feeder house another 2 to 5 inches (50 to 125 mm).
2. Back off the locking collar (A) on top link turnbuckle.
3. Using a punch in hole in turnbuckle (B), turn to adjust header angle.

**Longer top link = steeper header angle
(= lighter float)**

4. At desired adjustment, tighten locking collar (A) securely against turnbuckle to fix the position.



HEADER ANGLE MECHANICAL ADJUSTMENT

HEADER ANGLE HYDRAULIC ADJUSTMENT

An optional kit is available which allows adjustment of header angle from the combine cab by means of a hydraulic cylinder.

See "Unloading and Assembly" section for information on assembly and use of this option.

OPERATION

WIDENING THE DELIVERY OPENING: Case, Gleaner & New Holland TR Combines:

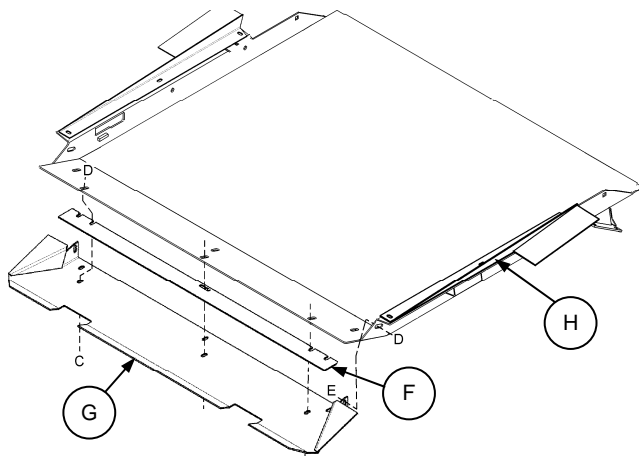
In conditions where severe “bridging” is occurring (bulky crop being thrown across the opening), widen the header side draper opening to allow the crop to fall onto the feed draper. See “Delivery Opening” in your Header Operators’ Manual for procedure. To achieve smooth feeding after widening opening, add outboard tines to the adapter drum. See “Tine Installation”, page 24.

Combine Model	New Delivery Opening	Qty. of tines to be added to drum
Case 60 & 66 Series, Gleaner, NH-TR	1060 mm (41.7")	2 per side (4 total)
Case 80 & 88 Series	1260 mm (49.6")	1 per side (2 total)

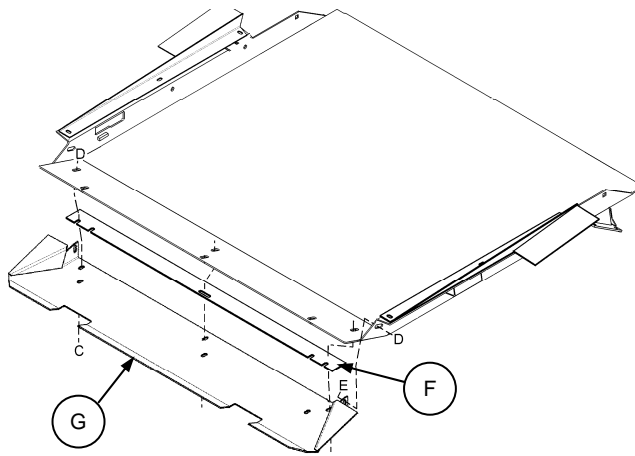
WINDROWING WITH THE COMBINE

To convert to windrowing mode (delivering crop to the end of the header) see “End Delivery” in the Operation section of your Header Operator’s Manual.

972 Feed Pan: Ground Clearance Adjustment



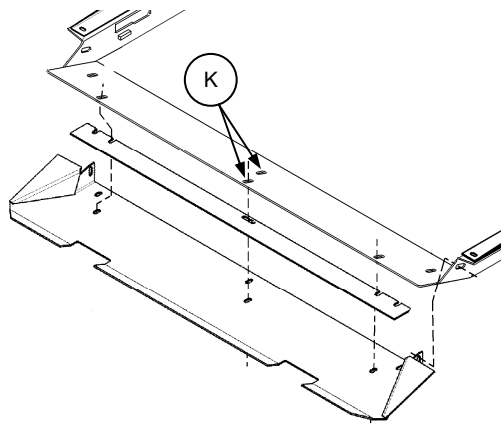
Assembled for Maximum Ground Clearance



Assembled for Windrowing with a Combine

Spacer plate (F) is factory assembled for best ground clearance, with plate (F) mounted to the forward set of holes in pan (G) as shown above left. When windrowing with the combine and in certain other conditions, clearances may be such that the header drapers catch on the deck or on angle (H). If so, move spacer plate (F) to rear set of holes in pan (G) as shown above right. To reposition spacer plate (F), proceed as follows:

- Remove two center bolts (K) and loosen bolts at outside ends of pan.
- Slide spacer out (forward) and slide it in from the back onto the loosened bolts.
- Replace the two center bolts, exchanging positions so the 1 ¼ bolt again goes through the spacer plate.
- Exchange positions of the bolts at outside ends of pan so the 1 ¼ bolts go through spacer plate.



MAINTENANCE/SERVICE

SERVICE PROCEDURES



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

1. Fully lower header and reel. If it is necessary to service in the raised position, first engage header lift cylinder stops and reel props.
2. Disengage header drive clutch.
3. Stop engine and remove key.
4. Engage park brake.
5. Wait for all moving parts to stop.
6. Park on level surface when possible. Block wheels securely. Follow all recommendations in your Combine Operator's Manual.
7. Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.
8. Wear protective shoes with slip resistant soles, a hard hat, protective glasses or goggles and heavy gloves.
9. Be prepared if an accident should occur. Know where the first aid kit and fire extinguisher are located and how to use them.
10. Keep the service area 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.
11. Use adequate light for the job at hand.
12. Replace all shields removed or opened for service.
13. Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design or safety requirements.
14. Keep the machine clean. Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.

RECOMMENDED LUBRICANTS

GREASE

SAE Multi-Purpose High Temperature Grease with Extreme Pressure (EP) Performance and containing at least 1.5% molybdenum disulphide.

Also acceptable is an SAE Multi-Purpose Lithium Base Grease.

HYDRAULIC OIL

Use single grade trans-hydraulic oil. If an oil brand from the recommended list is not available, use 15W40 engine oil.

The following oil company and equipment manufacturer brand names are **recommended**:

Petro Canada Duratran

Case IH Hy-Tran Plus®

John Deere Quatrol® J20C

Agco Power Fluid 821XL

GEARBOX OIL

SAE 85W-140 gear lubricant (API Service Classification GL-5)

CAPACITIES

Adapter Gearbox - 450 mL (15 U.S. oz.)

Adapter Hydraulic System (Draper Drive)

Full system: 25 litres (6.6 U.S. gals.)

Tanks only: 17 litres (4.5 U.S. gals.)

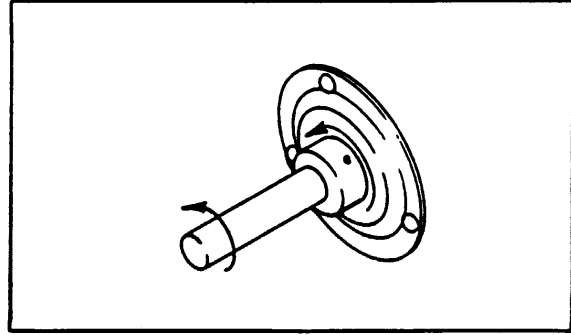
STORING AND HANDLING LUBRICANTS

Your machine can operate at top efficiency only if clean lubricants are used. Contaminant in lubricants is the most likely cause of bearing and hydraulic system failure. Use clean containers to handle all lubricants. Store lubricants in an area protected from dust, moisture and other contaminants. Keep hydraulic couplers and connectors clean.

MAINTENANCE/SERVICE

SEALED BEARING INSTALLATION

1. Clean shaft and coat with rust preventative.
2. Install flangette, bearing, flangette and lock collar. The locking cam is only on one side of the bearing.
3. Install and tighten the flangette bolts.
4. When the shaft is located correctly, lock the lock collar with a punch. The collar should be locked in the same direction the shaft rotates. Tighten the set screw in the collar.
5. Loosen the flangette bolts on the mating bearing one turn and re-tighten. this will allow the bearing to line up.



TIGHTEN COLLAR IN DIRECTION
SHAFT ROTATES

GREASING THE ADAPTER

See "Recommended Lubricants" in this section for recommended greases.

The adapter has four greasing points as shown on the following page. Use the hour meter in the combine cab and the "Maintenance Checklist" provided to keep a record of scheduled maintenance.

Procedure:

1. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
2. Inject grease through fitting with grease gun until grease overflows fitting.
3. Leave excess grease on fitting to keep out dirt.
4. Replace any loose or broken fittings immediately.
5. If fitting will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

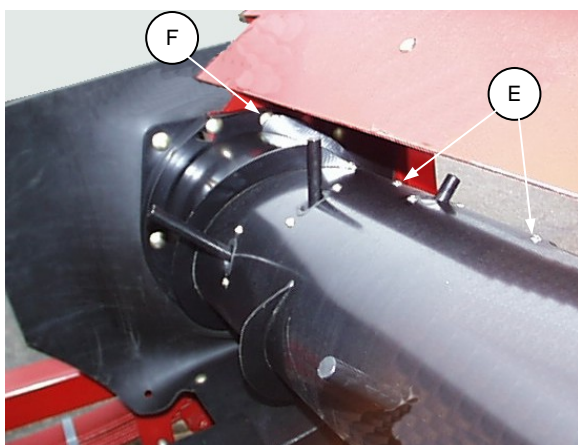
MAINTENANCE/SERVICE

GREASING THE ADAPTER (continued)

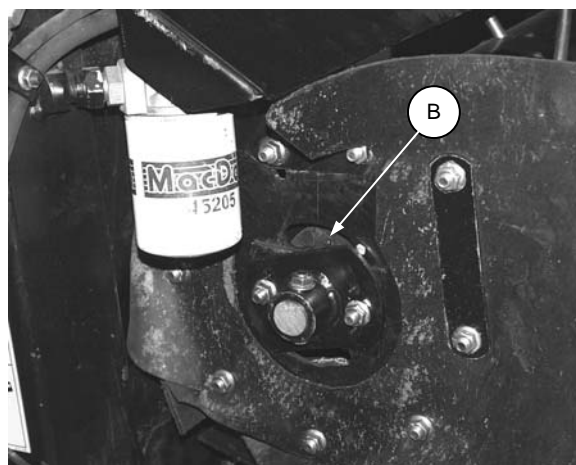
100 Hours or Annually:

1. Drum Bearing (B) - one fitting

For access to grease zerk, turn drum until drum access cover screws (E) are aligned with the long fore-aft adjustment slot (F) (approximately at the 1 o'clock position, viewed from the center of the adapter).



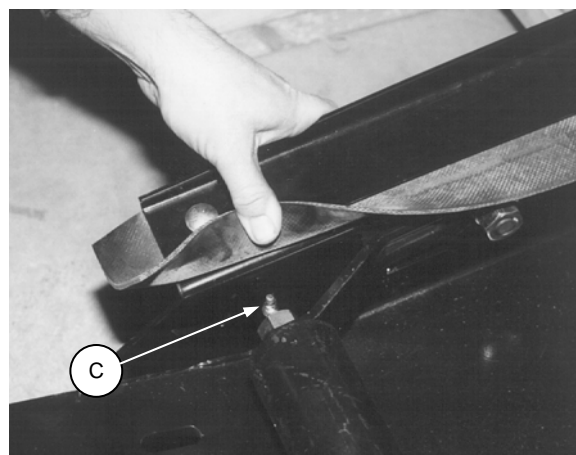
ALIGN COVER SCREWS WITH SLOT
FOR ACCESS TO DRUM BEARING ZERK



DRUM BEARING

2. Feed Draper Idler Roller Bearings (C) - two fittings

Replace bearings every 500 hours or annually.

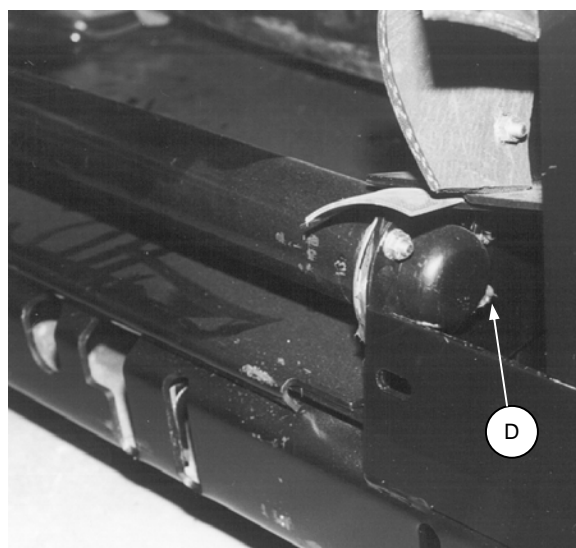


FEEDER DRAPER IDLER ROLLER BEARINGS

3. Feeder Draper Drive Roller Bearing (D) - one fitting

NOTE: To avoid damage to bearing seal, when greasing drive roller bearing use a single slow stroke of grease gun.

Replace bearing every 500 hours or annually.



FEEDER DRAPER DRIVE ROLLER BEARING

MAINTENANCE/SERVICE

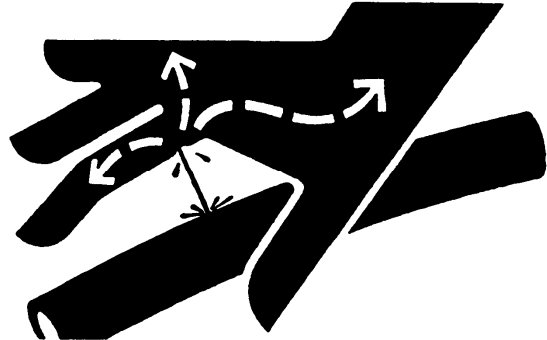
HYDRAULIC SYSTEM

Hydraulic Hoses and Lines

Check hydraulic hoses and lines daily for signs of leaks.



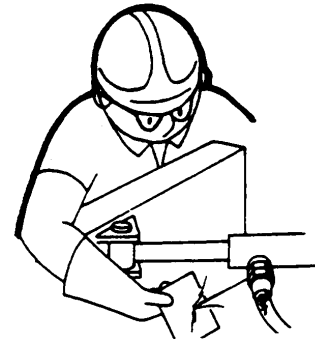
WARNING: Avoid high-pressure fluids. Escaping fluid can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles that eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. IF ANY fluid is injected into the skin, a doctor familiar with this type of injury must surgically remove it within a few hours or gangrene may result.



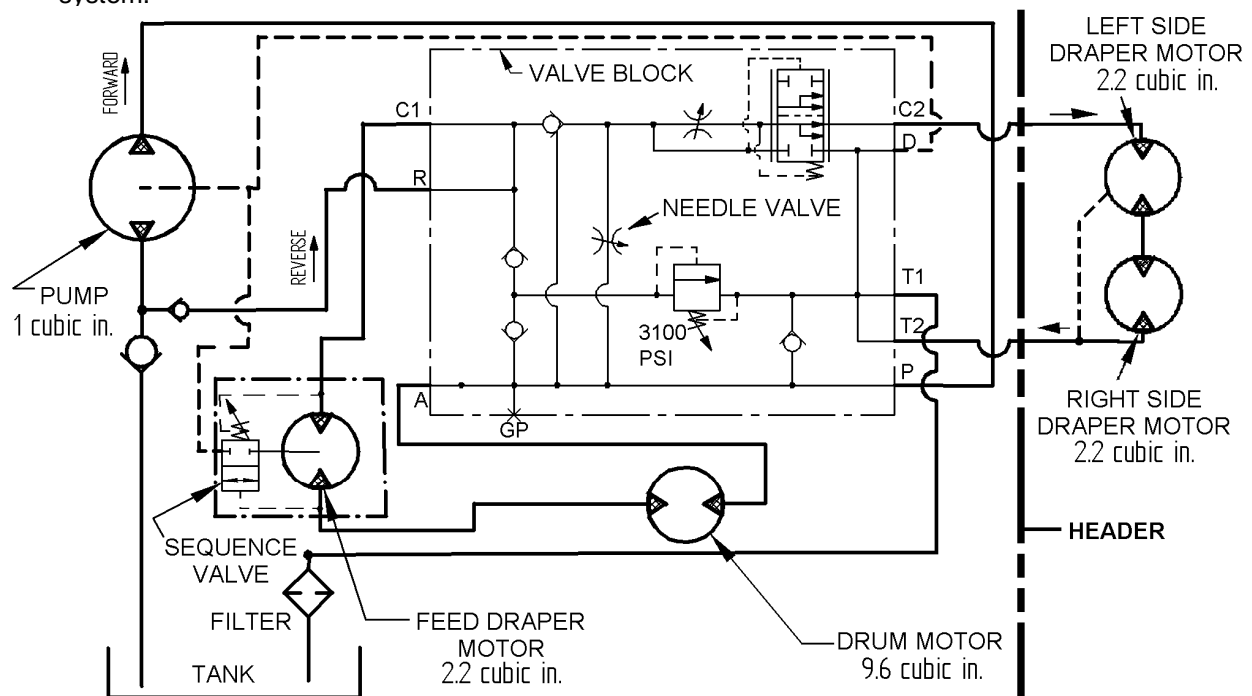
AVOID HIGH PRESSURE FLUIDS

IMPORTANT:

- Ensure all hydraulic couplings are fully engaged before operating header.
- Keep hydraulic coupler tips and connectors clean. Dust, dirt, water and foreign material are the major causes of hydraulic system damage.
- To prevent improper mixing of oils:
If header is to be switched back and forth from combine to windrower, change oil in windrower tractor (or Bi-Directional Tractor) hydraulic system to match combine hydraulic system.



CHECK PROPERLY FOR LEAKS



COMBINE ADAPTER HYDRAULIC SCHEMATIC

MAINTENANCE/SERVICE

HYDRAULIC SYSTEM (continued)

Hydraulic Oil

The combine adapter's hydraulic system provides oil for the draper and feed drum drives.

Check oil level every 25 hours at dipstick (A). Maintain level between "LOW" and "FULL" marks when oil is cold.

Capacity:

- Full system: 25 litres (6.6 U.S. gallons)
- Tanks only: 17 litres (4.5 U.S. gals.)

Type – See recommended lubricants, page 18.

NOTE: When ambient temperatures are above 35° C (95° F), maintain oil level in the low portion of the range to prevent overflow at breather under operating temperatures.

Change hydraulic oil every 1000 hours or 3 years

To change hydraulic oil:

1. Remove dipstick cap (A).
2. Remove plug (B) at right reservoir and hose (E) at left reservoir.

NOTE: A drain pan with a capacity of 15 litres (4 U.S. gallons) will be required for each reservoir.

3. Replace the hydraulic oil filter. See below.
4. Replace plug (B) and hose (E) and fill the reservoirs through female coupler (D) from a pressurized oil source.

NOTE: Do not use cap port (A) to fill system. Oil will not reach left reservoir. If a pressurized source of oil is not available, pump oil from right reservoir to left as follows:

- Fill R/H reservoir with oil through cap port (A).
 - Run the adapter pump until feed drum stops turning.
 - Re-fill R/H reservoir.
 - Repeat procedure until oil level in R/H reservoir remains between LOW and FULL on dipstick.
5. Replace cap (A).

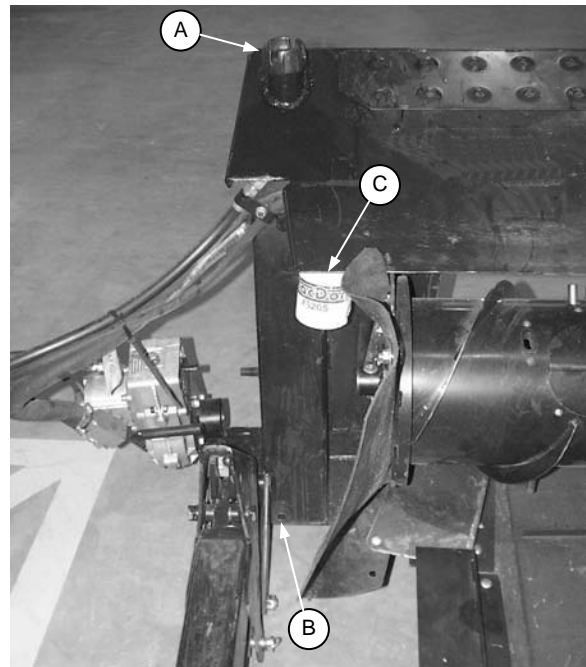
Hydraulic Oil Filter

Change hydraulic oil filter (C) after the first 50 hours operation and every 250 hours thereafter.

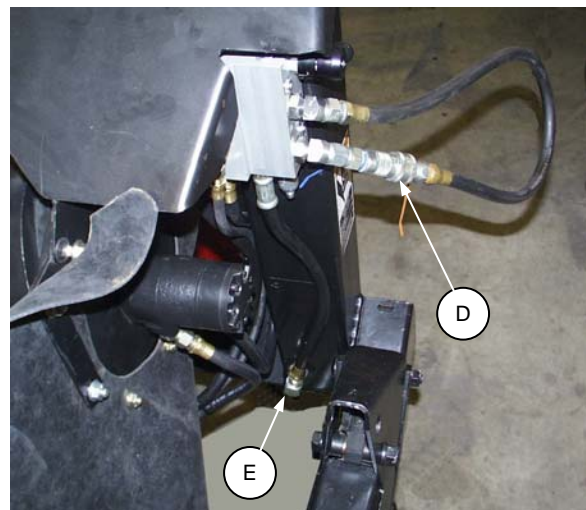
To change:

1. Clean around the filter head.
2. Remove the filter and clean the gasket surface of the filter head.
3. Apply a thin film of clean oil to the gasket on the new filter.
4. Install the new filter. Turn the filter onto the mount until the gasket contacts the filter head. Tighten the filter an additional 1/2 to 3/4 turn by hand.

IMPORTANT: Do not use a filter wrench to install the filter. Over-tightening can damage gasket and filter.



RIGHT HYDRAULIC RESERVOIR



LEFT HYDRAULIC RESERVOIR

MAINTENANCE/SERVICE

HYDRAULIC SYSTEM (continued)

Flow Control Relief Pressure

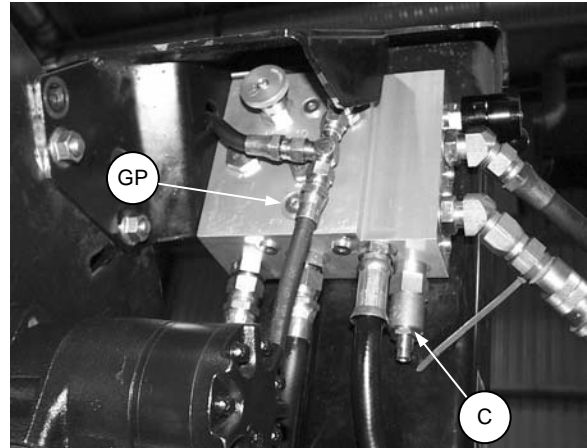
A possible cause of insufficient draper speed is low relief pressure.

To check relief pressure:

1. Attach a 5000 psi (34.5 MPa) pressure gauge in gauge port (GP) of valve block.
2. Install a needle valve between the orange colour coded male coupler on adapter and the orange colour coded female coupler on header.
NOTE: Using the needle valve built into the valve block will **not** check relief pressure.
3. Set flow control knob to number 6 on dial.
4. Run combine engine at operating speed.
5. Engage header drive.
6. Close needle valve until flow stops. Pressure reading should be 3100 psi (21.4 MPa).



WARNING: To avoid bodily injury from bursting hoses and/or exploding components, do not exceed 3250 psi pressure (22.4 MPa). Do not continue closing needle valve if pressure exceeds 3250 psi (22.4 MPa).



FLOW CONTROL RELIEF ADJUSTMENT

If relief pressure requires adjustment:

1. Loosen jam nut (C).
2. Turn relief screw until relief pressure is correct.
3. Tighten jam nut.

GEARBOX LUBRICATION

Change gearbox oil every 1000 hours or 3 years.

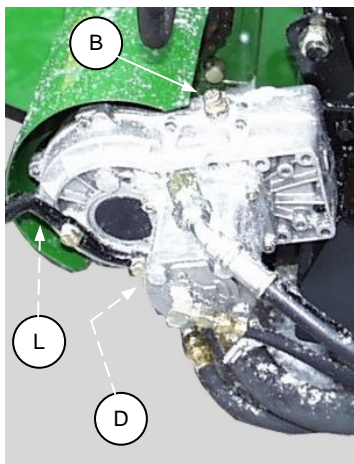
Box capacity: 450 mL (15 U.S. oz.)

Lubricant: SAE 85W-140 gear lube (API Service Classification GL-5).

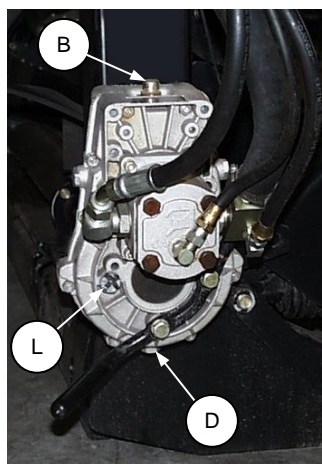
Breather plug – (B)

Level plug – (L)

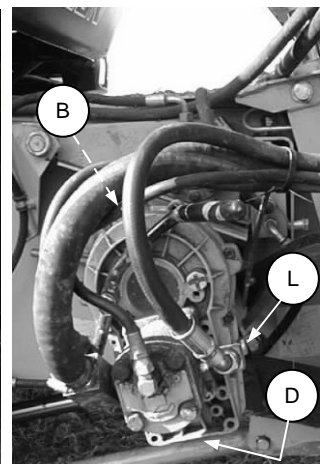
Drain plug – (D)



NH, JD Contour Master
& JD 50 Series Level Land



CASE, GLEANER & JD
Level Land prior to 50 Series



CAT LEXION

MAINTENANCE/SERVICE

RETRACTING TINE DRUM

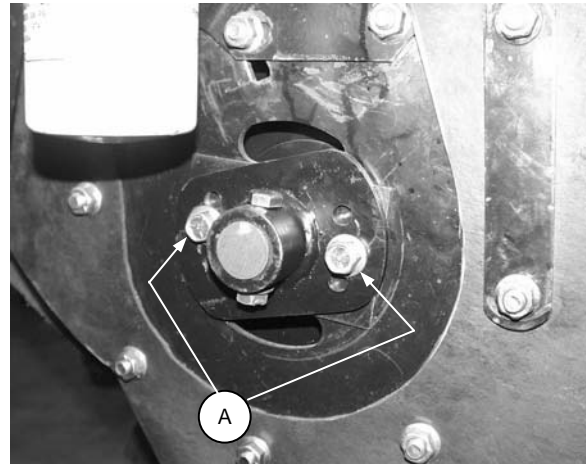
Tine Pitch Adjustment

Tines should be fully extended on the front side of the drum and full retracted on the rear (feeder house) side.

Tine pitch can be adjusted to change the aggressiveness of the tines. More aggressive tine pitch means the tines stay extended for longer as they approach the feed chain on the combine. Less aggressive means the tines retract sooner.

IMPORTANT: Always maintain a minimum 3/8" (10 mm) clearance to header with top link fully retracted.

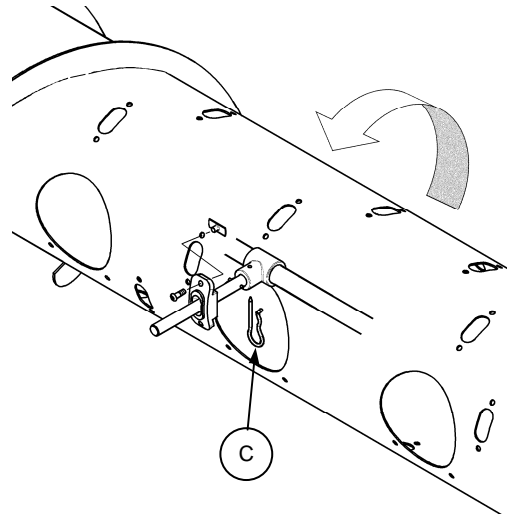
To adjust tine pitch, reposition bolts (A) in cam plate at right side of adapter. Angling the cam plate further up at the front decreases tine aggressiveness. Angling the cam plate down at the front increases tine aggressiveness.



TINE PITCH ADJUSTMENT

Tine Installation

Depending on deck size, some tines may have been removed from the drum at the factory to suit the recommended header side draper opening size. Should header side draper opening be widened to suit bulky crops, install tines on outer ends of drum as required to aid feeding. Always check clearances after adding tines, and maintain 2" (50 mm) gap from tines to side drapers. When adding or replacing tines, install hair-pin (C) as shown, with head leading in direction of drum rotation and clamping side of pin inboard.



TINE INSTALLATION

Drum Fore-Aft Adjustment

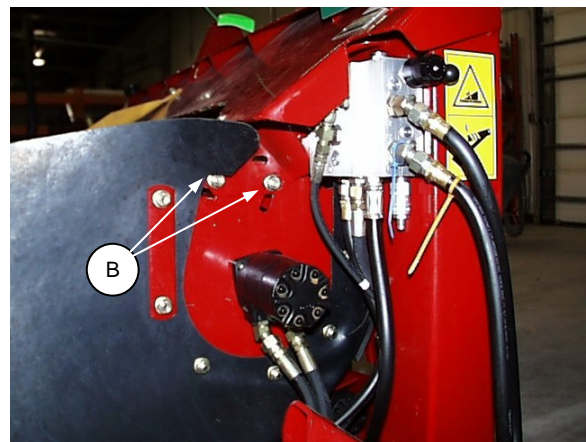
To adjust drum fore-aft position, loosen two mounting bolts (B) each side and swing drum forward in rear slot. Tighten bolts to secure the position. In general, there should be 1 to 2 inches (25 to 50 mm) clearance between adapter drum and combine feed drum, with combine feed drum floated up.

NOTE: For best performance, dust shields should be removed from combine whenever possible. If dust shields are not removable, adapter drum should be within 1/4 to 3/4 inches (6 to 19 mm) of the dust shield.

NOTE: Always check drum clearance to header frame after adjusting header angle. Flattening the header angle will reduce the clearance to the drum fingers.

Windrowing – When laying a windrow out the end of the header, move the drum back to clear header backsheet when it is moved across the center opening. In some cases it will be necessary to also remove one row of tines from drum to provide adequate clearance. See page 14 for procedure to stop drum rotation when windrowing, and secure drum if necessary.

For a complete list of steps to convert to windrowing mode, see "End Delivery" in the Operation section of your Header Operator's Manual.



DRUM FORE-AFT ADJUSTMENT

MAINTENANCE/SERVICE

MAINTENANCE SCHEDULE

The following maintenance schedule is a listing of periodic maintenance procedures, organized by service intervals. For detailed instructions, see the specific headings in Maintenance/Service section. Use "Recommended Lubricants" as specified under that heading.

Service Intervals

The recommended service intervals are in hours of operation. Use the hour meter in the combine to indicate when the next service interval has been reached.

IMPORTANT: Recommended intervals are for average conditions. Service the adapter more often if operated under adverse conditions (severe dust, extra heavy loads, etc.).

Regular maintenance is the best insurance against early wear and untimely breakdowns. Following this schedule will increase machine life.

Where a service interval is given in more than one time frame, e.g. "100 hours or Annually", service the machine at whichever interval is reached first.



CAUTION: Carefully follow safety messages given under "Service Procedures".

AT FIRST USE: See "Break-In Period" in Operation section.

10 HOURS OR DAILY

1. Check hydraulic hoses, lines and components for leaks
-

25 HOURS

1. Check hydraulic oil level at reservoir
-

100 HOURS OR ANNUALLY *

1. Grease drum bearing
 2. Grease feed draper idler roller bearings
 3. Grease feed draper drive roller bearing
 4. Check gearbox lubricant level
-

250 HOURS

1. Change hydraulic oil filter
-

500 HOURS OR ANNUALLY *

1. Change feed draper roller bearings
-

1000 HOURS OR 3 YEARS

1. Change hydraulic oil in reservoir
2. Change gearbox lubricant

* It is recommended that Annual Maintenance be done prior to start of operating season.

MAINTENANCE RECORD

Adapter Serial No.

Combine this record with the record in the Harvest Header Operator's Manual.

See Maintenance/Service section for details on each procedure. Copy this page to continue record.

ACTION:		4 - Check				λ - Lubricate				σ - Change							
	Hour Meter Reading:																
	Serviced By:																
	Maintenance Procedure																
	BREAK-IN	See "Break-In Period" in Operation section for checklist.															
	10 HOURS OR DAILY																
4	Hydraulic Hoses and Lines																
	25 HOURS																
4	Hydraulic Oil Level																
	100 HOURS OR ANNUALLY																
λ	Drum Bearing																
λ	Feed Draper Idler Roller Brgs.																
λ	Feed Draper Drive Roller Brg.																
4	Gearbox Lubricant Level																
	250 HOURS																
σ	Hydraulic Oil Filter																
	500 HOURS OR ANNUALLY																
σ	Feed Draper Roller Bearings																
	1000 HOURS OR 3 YEARS																
σ	Hydraulic Oil																
σ	Gearbox Lubricant																

TROUBLESHOOTING

<u>SYMPTOM</u>	<u>PROBLEM</u>	<u>SOLUTION</u>	<u>REF.</u>
HYDRAULICS Insufficient draper speed.	Speed control set too low.	Increase control setting.	14
	Relief pressure too low.	Increase relief pressure to recommended setting.	23
	Combine header drive too slow	Adjust to correct speed for combine model	*
FEEDING Adapter drum back-feeds.	<u>JD, Case, NH & Cat:</u> Dust shield on front of feeder house.	Remove dust shield	*
	Drum tine pitch too aggressive, not releasing crop.	Decrease tine pitch aggressiveness at cam plate.	24
	Side drapers running too fast, piling material in center of feeder draper.	Reduce header side draper speed.	14
	Adapter drum too far from front drum of feeder house.	Swing drum back or move feeder house drum forward. (Check clearance with feeder house drum fully floated.)	24 **
	Build-up of material at corners of feeder house.	Adjust feeder deck rear deflectors to eliminate corners.	31
	Improper header delivery opening.	Cut or add to header side drapers for proper opening.	31
	<u>JD & Gleaner:</u> Feeder chain running too slow.	Run feeder chain at high speed.	*
	<u>John Deere:</u> Equipped with feeder chain with 4 pitches per bar.	Replace with 6 pitch per bar feeder chain, or remove every other bar.	*
	<u>Case, NH:</u> Feeder house face plate set too steep.	Adjust feeder house face plate.	*
	<u>Case:</u> Stone retarding drum installed, or smooth feeder chain bars installed.	Install standard drum or fill slots in stone retarding drum, or install serrated feed chain bars.	****
	<u>NH-TR, Cat:</u> Stone ejection roll set too low.	Adjust roll position.	*
	Adapter drum speed too fast with respect to combine feed drum	Adjust adapter needle valve slightly (1/16 turn) to slow feed draper and drum.	14
Hesitation in flow of bulky crop.	Header angle too flat.	Steepen header angle.	16
	Reel too far back.	Move reel forward on support arms.	***
	Header opening too small. Bulky crop is "bridging" across opening.	Widen header opening and install outer tines in drum.	17
	<u>Case:</u> Stone retarder blocks interfering with crop flow.	Adjust blocks to minimum height.	**
	Side drapers running too fast, piling material in center of feeder draper.	Reduce header side draper speed.	14
	Feed chain drum too low.	Move drum to corn position.	**

* See "Preparing the Combine" under Mounting Instruction for your Combine Manual at back of this book

** See your Combine Manual / *** See your Header Operator's Manual / **** See your Combine Dealer

TROUBLESHOOTING

<u>SYMPTOM</u>	<u>PROBLEM</u>	<u>SOLUTION</u>	<u>REF.</u>
FEEDING (continued) Adapter drum wraps crop. Crop backs up or hesitates on feed draper.	Crop susceptible to wrapping. E.g. flax	Adjust drum tine pitch to decrease aggressiveness	24
	Adapter drum speed too fast with respect to combine feed drum.	Adjust adapter needle valve slightly (1/16 turn) to slow feed draper & drum.	14
	Feed draper/drum speed too fast.	Reduce feed draper/drum speed.	14
	Feed chain drum too low.	Move drum to corn position.	**
	Heavy crop plugging between adapter drum & feed draper	<u>962 Header</u> : Raise drum. Check clearance to header before operating.	*
Crop back feeds on center feed draper	Relief pressure too low.	Increase relief pressure to recommended setting.	23
	See also" Adapter drum back-feeds", pg. 27		
	Excessive clearance from combine feed drum to adapter feed draper.	Add feeder chain links to achieve less clearance between combine feed drum and adapter feed draper. To prevent damage, ensure a 1-2" (25-50 mm) clearance between combine drum and adapter drum. (Combine drum floated up).	**
	Feed draper/drum speed too fast with respect to combine feed drum	Adjust adapter needle valve slightly (1/16 turn) to slow feed draper and drum.	14
	Side drapers back-feed.		
Side drapers back-feed.	Side drapers running too slow in heavy crop.	Increase draper speed.	14
	Adapter drum tines too close to header side drapers.	Remove tines at ends of drum to maintain 2" (50 mm) gap to draper.	24
	Side drapers improperly set with respect to feed draper.	Center side draper drive rollers over feed draper side deflectors.	31
Crop is thrown across opening and under opposite side draper.	Side drapers running too fast in light crop.	Reduce draper speed.	14
	Excessive overlap of feeder draper.	Center side draper drive rollers over feed draper side deflectors.	31
Hesitation in crop flow at sides of feeder house.	Rear deflector fins set too wide.	Set fins approximately 1/2" (13 mm) inside feeder house opening. Ensure clearance to feed draper connector slat.	31
FLOTATION			
Combine feeder housing pushes dirt when trying to pick up down crop.	Feeder housing lowered too far, eliminating header float.	Raise feeder housing until float linkage bottoms, change header to steeper angle to pick up down crop.	16
	Float too light, header legs do not rest on stops.	Adjust to heavier float.	15
Cutterbar does not float or pushes dirt.	Float set too heavy.	Adjust to lighter float.	15
	Float lockout not disengaged.	Raise header, disengage float lockout.	7
Excessive vibration of adapter and header.	Feed pan clearance to cutterbar is incorrect.	Adjust feed pan clearance.	9
* - See your Combine Adapter Dealer. ** - See your Combine Operator's Manual.			

ATTACHMENTS

PLASTIC WEAR STRIPS

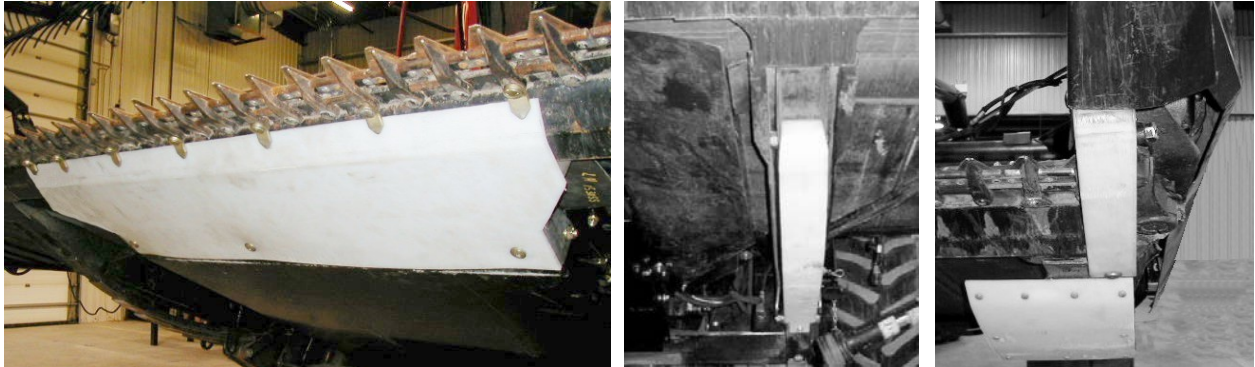
WholeGoods order no:

B4270 – Case 60 & 66 Series, Gleaner, New Holland TR

B4271 – Case 80 & 88 Series, Cat Lexion 450, 470 & 475

B4272 – John Deere, New Holland TX, Cat Lexion 460, 465, 480 & 485

For use with 972 Header in conditions where soil adheres to steel. Plastic wear strips attach to feed pan skid plate, adapter leaf springs and header skid shoes. Installation instructions are included with kit.



PLASTIC WEAR STRIPS

FLOAT OPTIMIZER

WholeGoods order no:

B4415 – Case 2300 Series and AFX

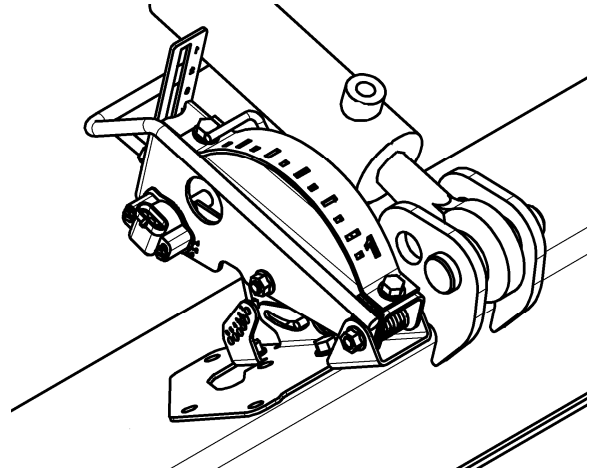
B4498 – New Holland CR/CX

B4499 – John Deere 50 Series

B4500 – John Deere prior to 50 Series

B4416 – Cat Lexion

For use in conjunction with Auto Header Height Control option on Case, New Holland and John Deere combines, and with the Header Flotation option on Cat combines. This attachment includes a potentiometer that sends a signal to the combine to allow maintaining a consistent cutting height and optimum adapter float as the header follows ground contours.



VISUAL FLOAT INDICATOR

WholeGoods order no: B4502

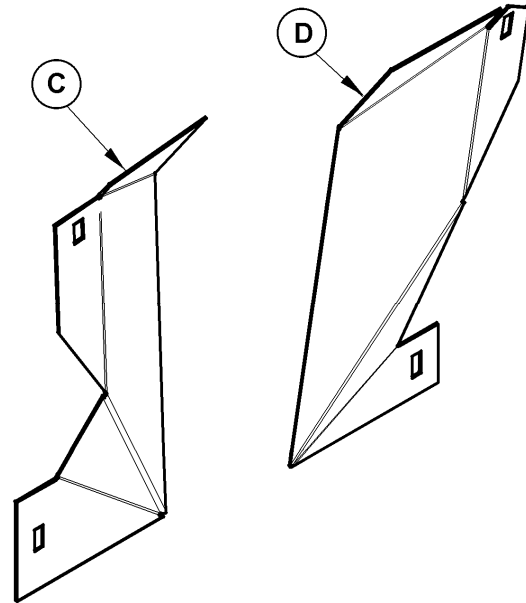
Provides the operator with a visual indication that the cutterbar is on the ground and the header is in a “floating” condition. Similar to Float Optimizer above, but without potentiometer for auto height control.

ASSEMBLY

INSTALL 962 HEADER COMPLETION PARTS

NOTE: This page applies to Model 962 Header only.

1. Deck backsheet extensions (C) and (D) are in the Header Completion package that came with the Combine Adapter. These are installed at the delivery opening.
Install extension (C) on left side of delivery opening and (D) on right side. Extensions mount to rear of deck backsheet with 3/8 x 3/4 bolts and flange locknuts. Install hardware with bolt heads on draper side.

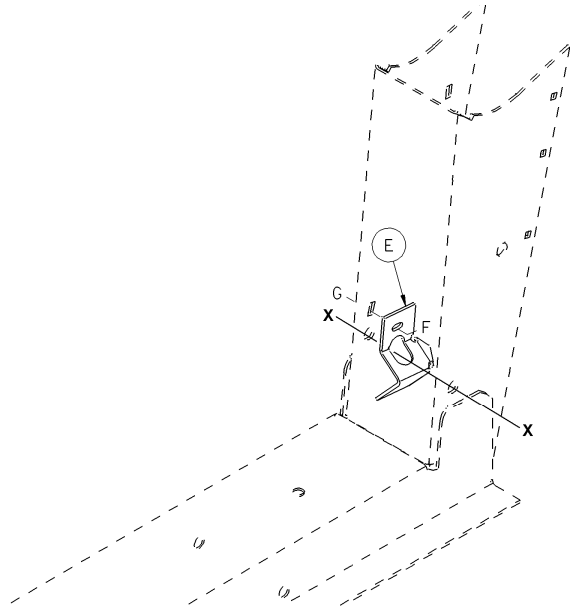


2. Retainers (E) are shipped with the Combine Adapter. These are installed inside header center legs to secure header to adapter when full float is reached. Retainers also restrict side movement.

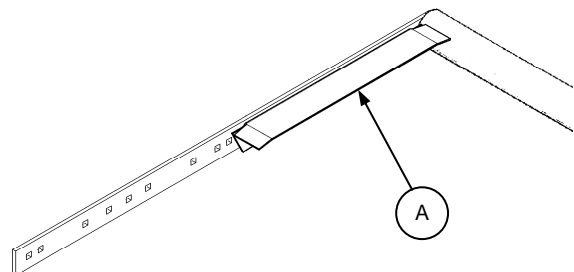
Install retainer (E) at inside of left center leg, using existing 0.41 x 0.81" slot. Secure with 3/8 x 3/4 carriage bolt (F) and flange locknut (G). When tightening, ensure that header pin fits freely through leg and retainer at (X).

NOTE: L/H leg is shown. Retainer (E) mounts to leg side wall closest to center delivery opening. Left and right retainers (E) are different. Be sure they are correctly positioned.

Repeat at right center leg.



3. **For delivery openings of 41.7" (1060 mm) and smaller**, install draper supports (A) at cutterbar side of idler roller bars using 3/8 x 3/4 carriage head bolts and flange nuts.
For larger openings, remove supports (A), if installed.



ASSEMBLY

INSTALL HEADER SIDE DRAPERS & SET DECK DEFLECTORS

1. Connect side drapers according to your Header Operator's Manual or Set-Up Instructions.
IMPORTANT: Cut off any excess flap only after drapers have been connected and tensioned and overlap at sides of feed draper deck has been checked.
2. For proper feeding in most crops, the **header side draper idler rollers** should be set to an opening of:
59.5" (1510 mm) for wide deck adapters: John Deere 9600/9610/9650 and Cat 460 & 480 Series
53.5" (1360 mm) for wide deck adapters: John Deere STS/CTS/9500/9510 and New Holland TX
49.6" (1260 mm) for mid-size deck adapters: Cat 450 & 470 Series
41.7" (1060 mm) for mid-size deck adapters: Case 80 & 88 Series
37.4" (950 mm) for narrow deck adapters on 972 Headers: Case 60 & 66 Series, Gleaner & New Holland TR
33.9" (860 mm) for narrow deck adapters on 962 Headers: Case 60 & 66 Series, Gleaner & New Holland TR

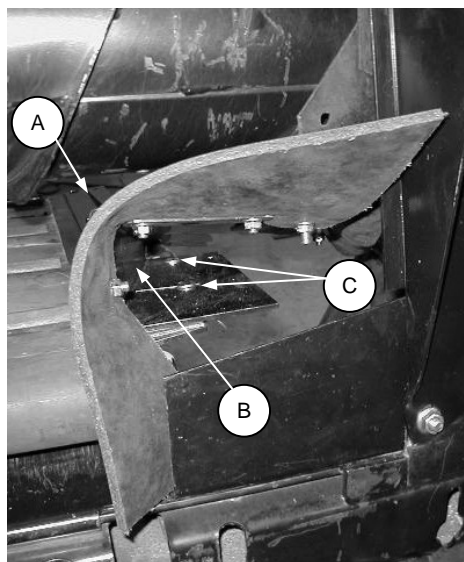
In some cases, actual opening size will be varied by re-positioning deck on one side to properly overlap and align with feed draper. See plasticized Set-Up card provided.

NOTE: Side deflectors (A) and rear deflectors (B) are factory set for an opening width to correspond to the feeder house opening for a specific model of combine, according to the following chart.

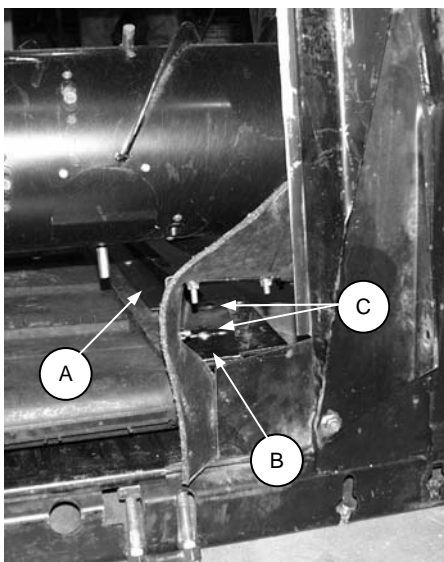
The rear vertical edge of the deflectors (B) should just fit inside feeder house opening. If factory setting is not correct for your model of combine, loosen two bolts (C) and adjust rear of deflector to suit feeder house opening.

COMBINE MAKE & MODEL	REAR DEFLECTORS OPENING WIDTH
Case 60 & 66 Series	37" (940 mm)
Case 80 & 88 Series	43.7" (1110 mm)
John Deere 9600, 9610, 9650 *	60.2" (1530 mm)
JD CTS/STS, Contour Master, 9500 & 9510 *	54.9" (1395 mm)
New Holland TR & Gleaner	38.2" (970 mm)
New Holland TX *	54.9" (1395 mm)
Cat Lexion 450 & 470 Series	47.6" (1210 mm)
Cat Lexion 460 & 480 Series *	59" (1500 mm)

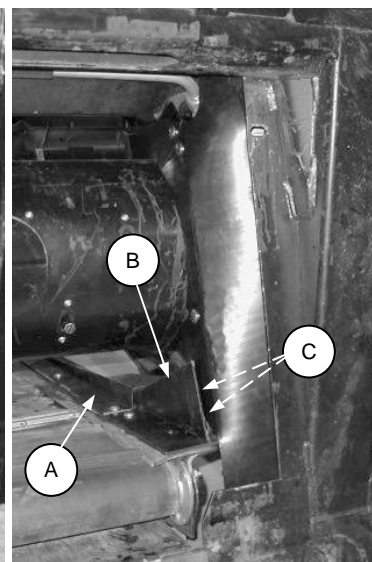
NOTE: For wide deck adapters (those with * above), the rear deflector setting is dictated by the position of the plastic closure panel. See page 34.



NARROW DECK ADAPTERS



MID-SIZE DECK ADAPTERS



WIDE DECK ADAPTERS

ASSEMBLY

ADAPTER PREPARATION

1. Remove shipping brace (painted yellow) and parts strapped to adapter.
 2. Install pump in storage position. (See Mounting Instruction for your combine, beginning on page 37.)
- NOTE:** Wear gloves when handling pump.

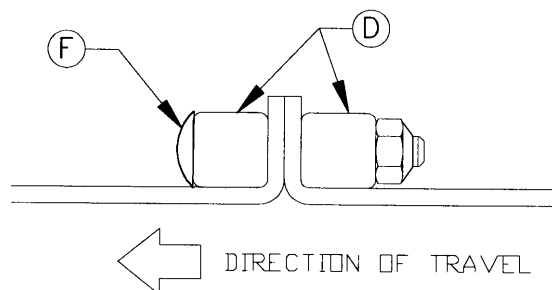
INSTALL FEED DRAPER ON COMBINE ADAPTER

1. Loosen nut (G), both sides, and pull up on idler roller to rotate to position (A). Nut (G) must be loose enough that idler arm easily passes by adjusting rod (J).

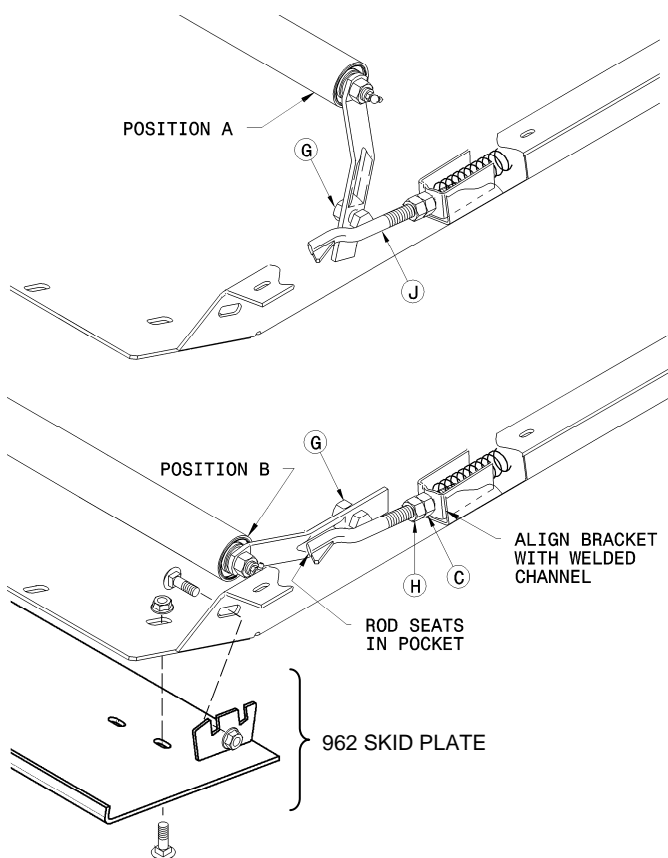
NOTE: Rod (J) may come out of position when lifting idler roller. It will return to proper position when roller is moved to working position (B). Try moving idler roller from position (A) back to working position (B). If roller does not pivot over, loosen bolt (G) further. When nut (G) is properly loosened, pull roller up to position (A) for installation of draper.

2. Install feed draper on adapter rollers, ensuring belt on underside seats properly on left side of both rollers.
3. Pre-install screws (F) in connector slat. Screws fit tightly into slat holes. To install, support slat on both sides of hole and hammer screw into hole. Position connector slats (D) as shown with heads leading in direction of travel.

4. Apply draper tension as follows:
 - a. With nut (G) loosened per step 1, swing roller from position (A) to working position (B), standing on ends of roller if necessary. Take care not to damage roller or draper seal.
 - b. Back off nut (H) and adjust position of nut (C) to align bracket with welded channel as shown. This position provides proper spring tension. Tighten nut (H) against nut (C) to secure the position. Repeat at other side.
 - c. Tighten nut (G), both sides, ensuring that formed end of adjusting rod seats properly in pocket formed into idler arm and that rod is positioned at bottom of cut-out in side of pan.



FEEDER DRAPER CONNECTION



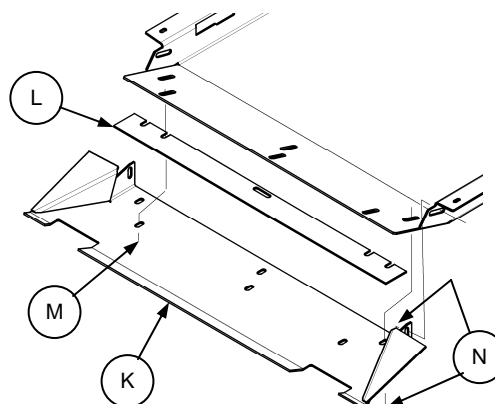
APPLY DRAPER TENSION & INSTALL 962 SKID PLATE

INSTALL SKID PLATE ON ADAPTER FEED PAN

962 Header – Attach skid plate to adapter feed pan, using $\frac{1}{2} \times 1$ carriage bolts and flange nuts as shown. Position hardware at front of slots and leave finger tight. When attaching to header, adjust clearance to cutterbar as described on page 9.

972 Header – Attach pan (K) and spacer plate (L) to adapter feed pan, using three $\frac{1}{2} \times 1 \frac{1}{4}$ carriage bolts (M) and lock nuts to attach through spacer plate. Elsewhere use $\frac{1}{2} \times 1$ carriage bolts (N) and lock nuts to attach pan (K) to adapter feed pan. Slide pan (K) forward and finger tighten hardware to lightly clamp parts.

NOTE: Spacer plate (L) can be repositioned if more clearance to header drapers is required. See page 17.

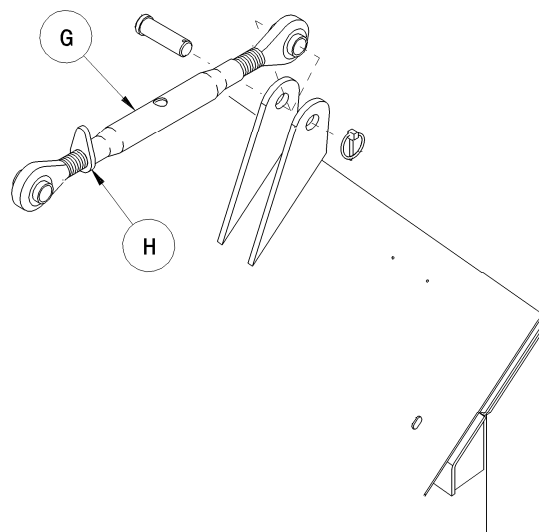


INSTALL SKID PLATE – 972 HEADERS

ASSEMBLY

ATTACH CENTER LINK

For mechanical center link (G), attach to adapter frame with clevis and lynch pins as shown, with locking collar (H) forward and pointing upward.



MECHANICAL CENTER LINK

For hydraulic center link:

- 1) Attach quick-couplers (not included in cylinder kit) matching the type on your combine to end of hoses.

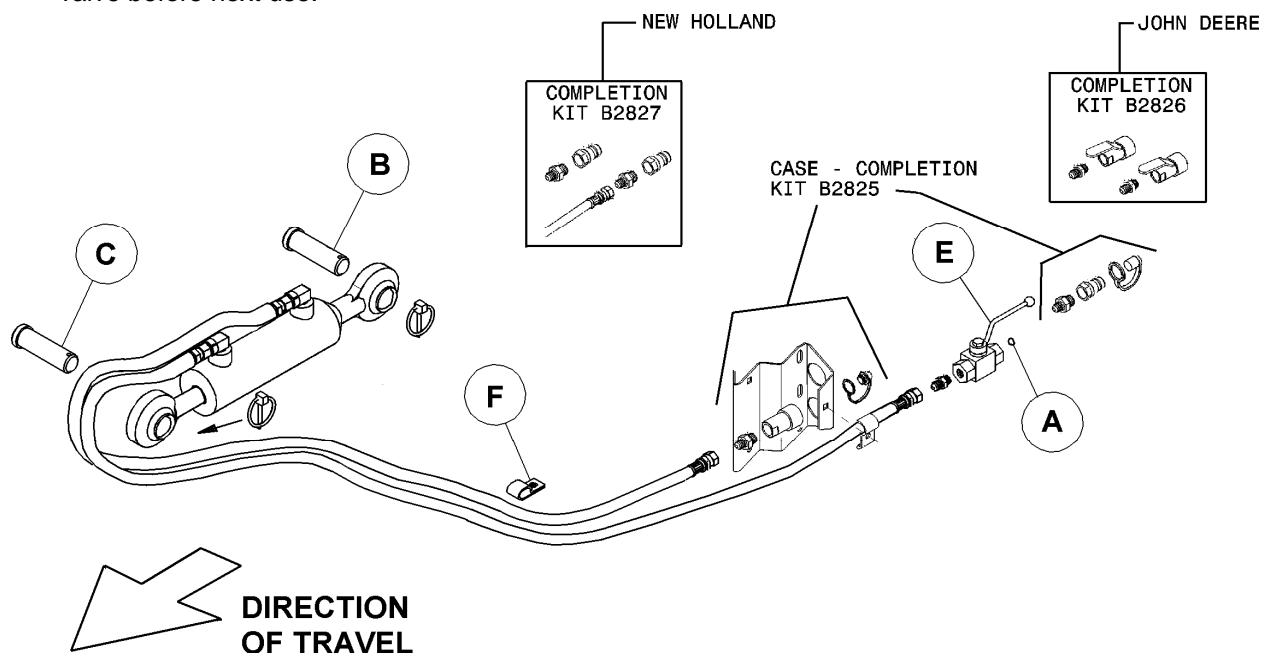
NOTE: Coupler completion kits are available for each combine. See completion kit numbers in illustration below.

Use the O-ring (A) (provided in cylinder kit) on the 3/8 tube thread of the selected adapter fitting. This connects into shut-off valve for proper seal.

- 2) Attach cylinder assembly as follows:

- a) Orient cylinder with hoses routed towards header.
- b) Attach cylinder to adapter with 1-inch dia. clevis pin (B) and lynch pin.
- c) With adapter connected to combine, connect couplers to combine hydraulics.
- d) Drive combine close enough to header and extend or retract cylinder to allow attaching cylinder to header with 1-inch dia. clevis pin (C) and lynch pin.
- e) Route hoses along header tube and secure with clamp (F), using 3/8 x 3/4 carriage bolt and nut for 962 header and 3/8 x 5/8 thread rolling screw for 972 header.

- 3) When detaching adapter from combine, before disconnecting quick couplers, turn off oil flow at shut-off valve (E). This allows easier reattachment of couplers at combine. Remember to restore oil flow at shut-off valve before next use.



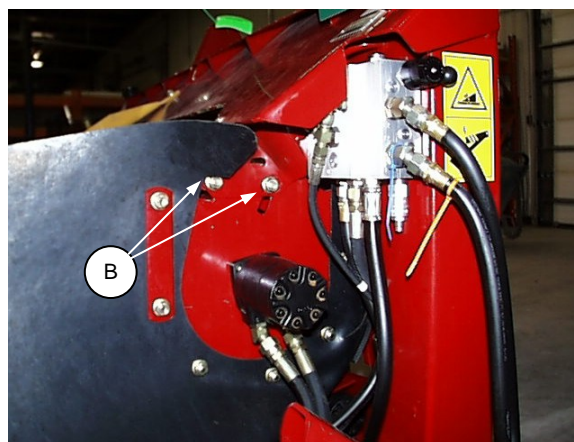
ASSEMBLY

POSITION THE RETRACTING TINE DRUM

Adapters (except JD Contour Master and Gleaner) are shipped with drum fore-aft position at dimension (X or Y) shown in chart. This is measured from the adapter frame leg to the center of the drum. This position ensures clearance to the combine feeder house.

IMPORTANT: For best performance, when adapter is attached to combine, ensure that clearance between adapter drum and combine feed drum ranges from 1 to 2 inches (25 to 50 mm), *with combine feed drum floated up*. Rotate adapter drum rearward if required to achieve this dimension. For JD Contour Master rotate drum forward so $Y = 8 \frac{1}{4}"$ (210 mm) to clear welded dust shields. For Gleaner, rotate drum back so $X = 3.9"$ (100 mm).

To adjust drum fore-aft position, loosen two mounting bolts (B) each side and swing drum fore-aft in rear slot. Tighten bolts to secure the position.

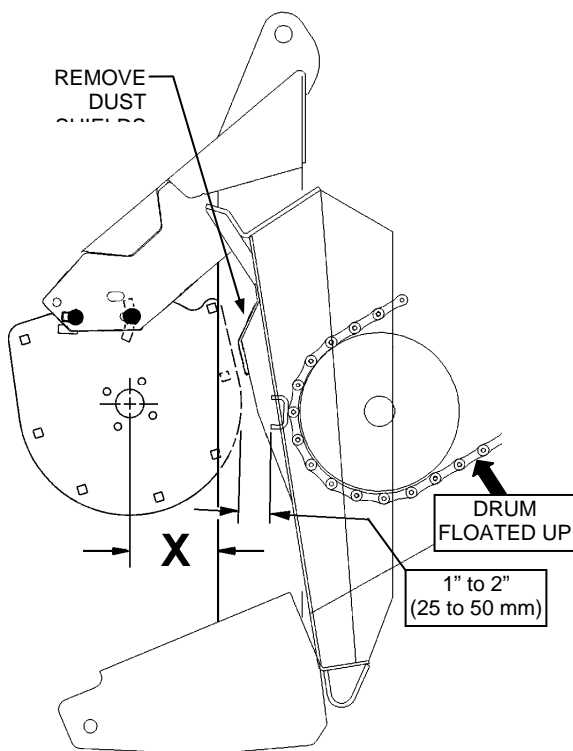


DRUM FORE-AFT ADJUSTMENT

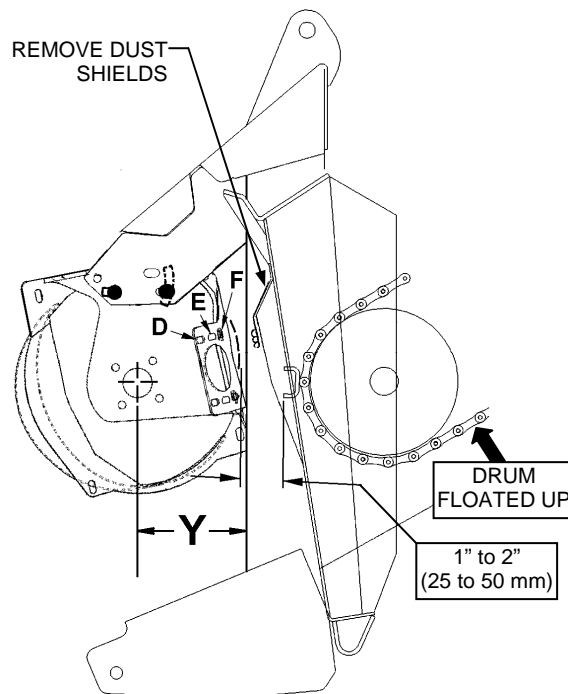
Combine Make & Model	Dimension X
Case	5.9" (150 mm)
New Holland TR	6.5" (165 mm)
Gleaner R62 & R72	3.9" (100 mm)
Cat – Lexion 450, 470 & 475	4.1" (105 mm)

Combine Make & Model	Dimension Y	Panel*
John Deere Level Land, CTS, STS	6.9" (175 mm)	D
John Deere Contour Master	$8 \frac{1}{4}"$ (210 mm)	F
John Deere 9600, 9610, 9650	6.9" (175 mm)	F
New Holland TX	6.9" (175 mm)	D
Cat – Lexion 460, 465, 480 & 485	6.3" (160 mm)	E

* **NOTE:** Panel positions D, E & F indicate hardware positioning for securing plastic closure panels.



RTD POSITIONING – NARROW & MID-SIZE DECKS



RTD POSITIONING – WIDE DECKS

IMPORTANT: With opening sizes required for some combines, to avoid damage to header, it will be necessary to remove one tine from each end of retracting tine drum. See plasticized Set-Up card provided.

ASSEMBLY

ELECTRICAL HARNESS

Attach electrical harness extension, (shipped with adapter) to your header wiring harness. This allows connection to combine harness for operation of amber lights on header.

NOTE: For combines that do not have a harness connector for feeder house attachments, order Wiring Harness (MacDon Part No. 40435), and splice into combine harness as follows:

Dark Blue Wire: to L/H turn signal circuit

Light Blue Wire: to R/H turn signal circuit

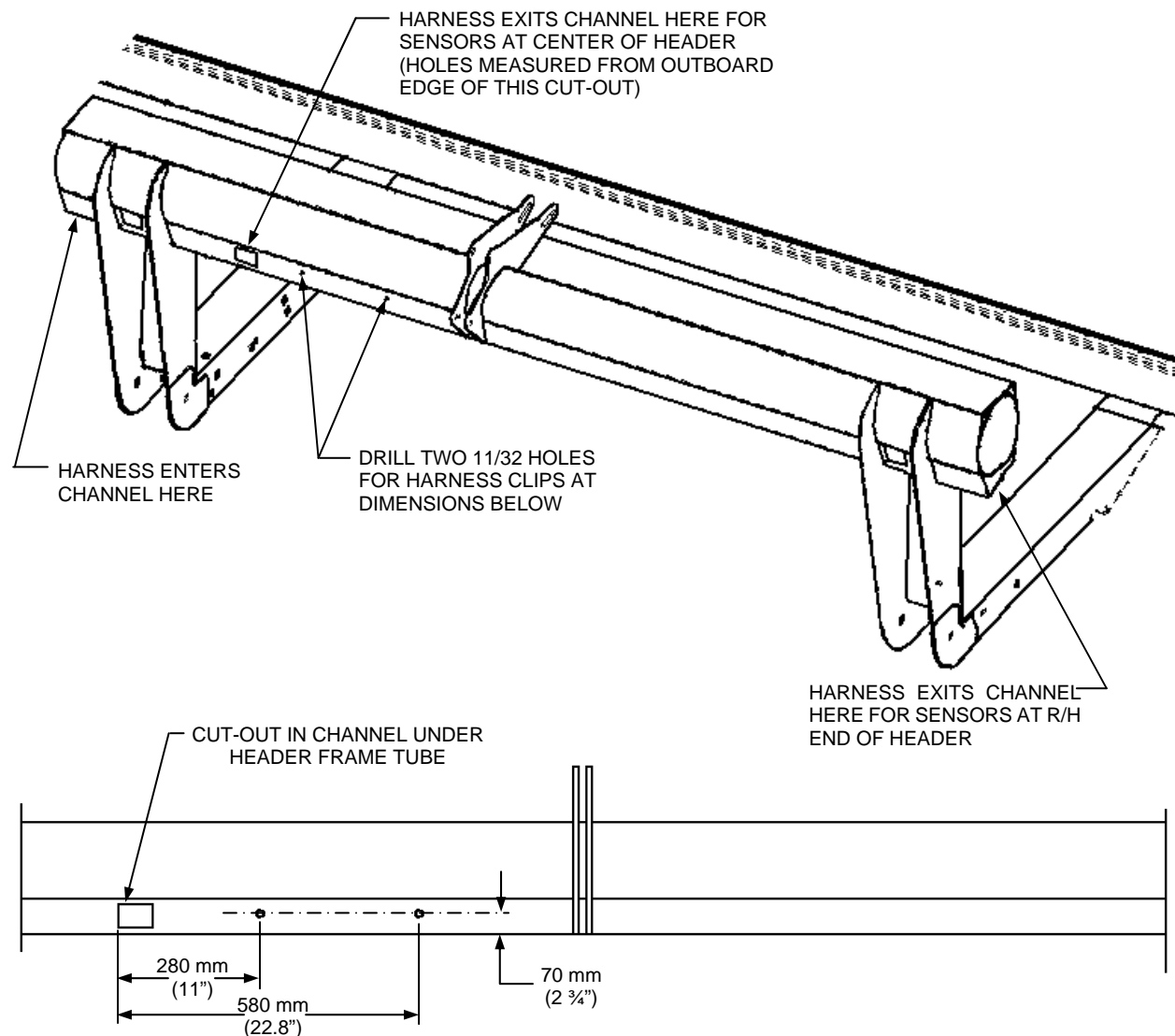
Black Wire: to Ground

NOTE: If combine will be used with Hydraulic Deck Shift Header for end delivery windrowing, order B-2407 Harness and Support for deck shift switch. Installation instructions are included with the package. The deck shift switch is supplied with the Hydraulic Deck Shift Header.

NOTE: Some combine adapter wiring harnesses are supplied with circuits for special functions such as:

- Reel Speed Sensor
- Reel Height Sensor
- Header Height Sensor

The routing of these harnesses for 962 and 972 Headers is described on the Installation Instructions provided with the sensor kits. For 972 headers, holes for harness clips are not provided in some headers. For these headers, drill two 0.343" (11/32") holes as shown below:



ASSEMBLY

ATTACH ADAPTER TO COMBINE

Attach combine adapter to feeder housing of combine. See Mounting Instructions for your particular make of combine on the following pages:

John Deere - page 37

Case IH - page 42

Gleaner - page 48

New Holland - page 55

Cat Lexion – page 62

NOTE: If a combine is not available, adapter can be attached to header with use of a forklift. See instruction on page 68.

ATTACH HEADER



CAUTION: Read the Operator's Manuals carefully to familiarize yourself with procedures and controls before attaching header to combine.

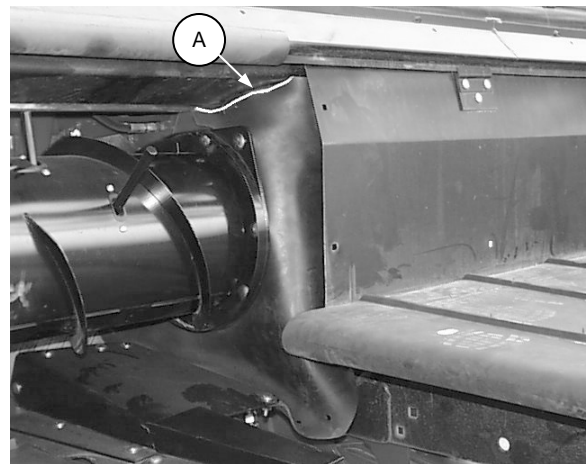
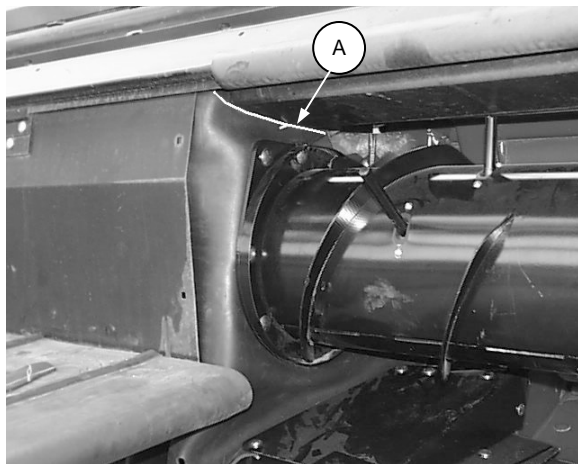
NOTE: Hydraulic hose lengths and couplings are provided based on the latest available information from combine manufacturers. Should these not be suitable for a particular model or production series, modify or purchase the necessary components.

See page 6 for "Attaching Header to Combine".

See Header Operator's Manual for assembly instructions not related to the adapter.

ADJUSTMENTS & CHECKS

1. Remove steel backsheet extensions for all 972 Headers. For 972 Headers on Case, New Holland TR, Gleaner, or Cat 450/470/475 combines (11" Retracting Tine Drum), trim rubber closure flaps at (A) to fit the shape of the header back tube. **NOTE:** Trim with center link adjusted to shortest operating position.



TRIM CLOSURE FLAPS ON 972 HEADERS
Case, New Holland TR, Gleaner, or Cat 450/470/475

2. Check that feed draper rear roller moves up and down freely.
3. Run drapers slowly for 5 minutes to fill hydraulic lines, then check oil level at adapter reservoir.

Perform final adjustments and checks as listed on the "Pre-Delivery Checklist" (yellow inserts) in this manual and the Header Operator's Manual to ensure the machine is field-ready.

Adapter Mounting Instructions for John Deere Combines

PREPARING THE HEADER

1. Mount reel lift coupler assembly (F) to outside of left header leg with two 3/8 NC x 3/4 carriage bolts and flange nuts as shown.

Connect header reel lift hose to reel lift coupler assembly (F).

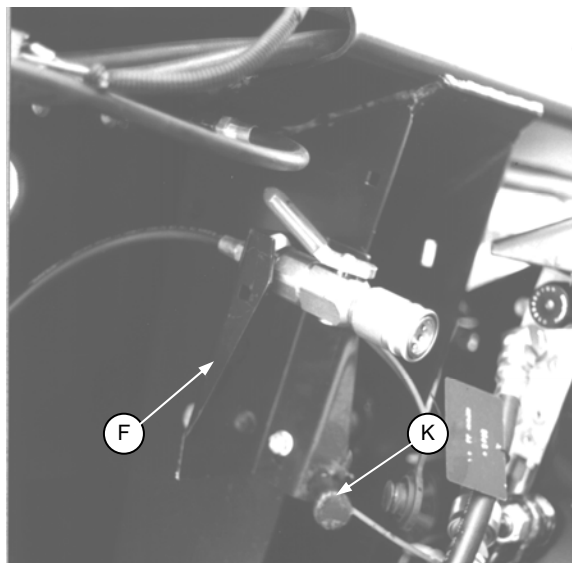
962 Header only: Attach reel lift hose (from header completion package) at left of delivery opening as follows:

For 30' headers the reel lift hose connects to hydraulic line (D).

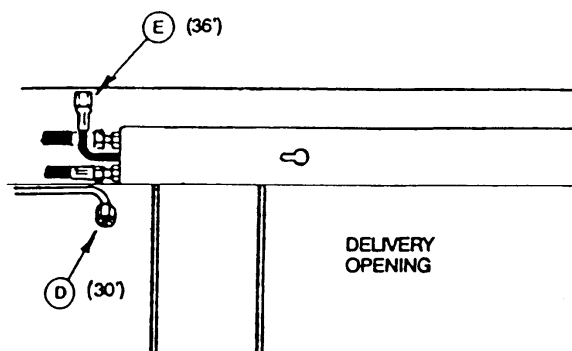
For 36' headers the reel lift hose connects to hose (E).

2. Attach driveline supplied with adapter to header sickle drive shaft. Secure clamp yoke to shaft with 1/2 NC hardware provided.

For storage, attach other end of driveline to anchor (K) provided on reel lift coupler mounting bracket (F) installed in step 1.



INSTALL REEL LIFT COUPLER



INSTALL REEL LIFT HOSE - 962 HEADER

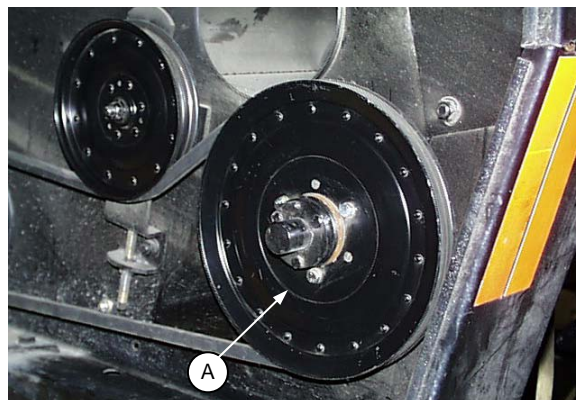
3. Single Sickle:
Bolt the sheet metal pulley (A) provided with the adapter on the sickle drive pulley (962) or drive hub (972) at the left end sheet, using three 3/8 x 1 bolts with lock washers.

Double Sickle 972:

See 972 Operators Manual "Unloading and Assembly" section.

4. Install wiring harness extension provided with adapter onto header wiring harness.

NOTE: Two harnesses are provided. The harness with the small diameter connector is for combines prior to 50 Series. The harness for 50 Series combines has a larger diameter connector. If combine does not have an electrical connector, see page 35.



INSTALL SICKLE DRIVE PULLEY

Adapter Mounting Instructions for John Deere Combines

PREPARING THE ADAPTER

1. Level Land Prior to 50 series Feeder House: Install pump torque arm support (A) to bolt welded to R/H frame member of adapter using 3/4" locknut at (K). Orient support as shown.

Contour Master and 50 series Level Land Feeder House: Install pump torque arm support (B) to bolt welded to R/H frame member of adapter using 3/4" locknut at (L). Orient support as shown.

NOTE: For 9650 Combine, bolt torque arm (C) (with two bends) to existing torque arm using three M12 x 30 bolts.

2. Attach locking channels (H) to adapter frame, using locking bar (J) between channel and lock nuts. Install channels with single-hole leg outboard and narrower clearance to bottom on two-hole leg as shown.

NOTE: Lock pins at bottom of combine feeder house engage these channels. Adjust position of channels (H) by loosening hardware and sliding channels up and down for proper alignment.

3. Level Land Prior to 50 series Feeder House: Attach shield (D) to left side of adapter frame with 5/16 x 3/4" flange bolt and nut.

NOTE: Install nut "upside down", that is, with serrated flange down, so flats of hex engage in slot in adapter frame.

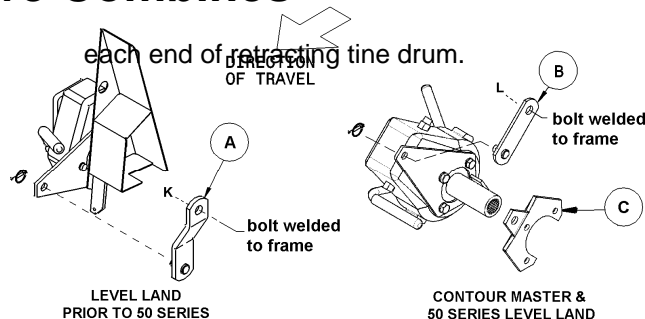
NOTE: For 9600 and 8820 combines, shield (G) is not required. Remove prior to installation of shield (D). Swing shield (D) forward for end transport situations.

4. Contour Master only: Add float range limiters to prevent damage to the retracting tine drum and/or header side drapers when operating at flat header angles. See instruction on page 71.

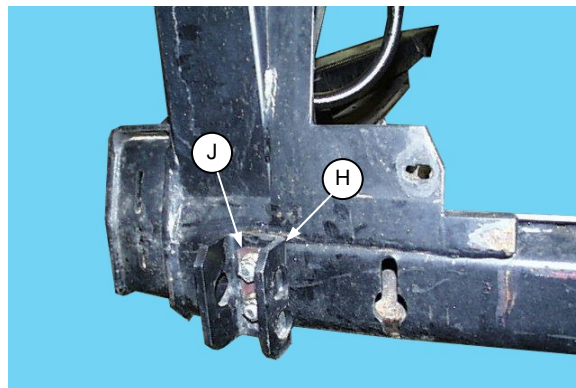
5. Contour Master only: Trim plastic closure panels as shown at right (shaded area). Leave panels off of adapter until just before adapter is completely installed in header.

6. Contour Master only: Move retracting tine drum forward from the factory installed position to as shown on page 34. **NOTE:** To avoid damage to the tine drum and/or combine, leave drum mounting hardware loose until the combine/adapter/header package is fully together. Adjust center link (connecting header to adapter) to minimum length, float header up, then tighten drum mounting hardware.

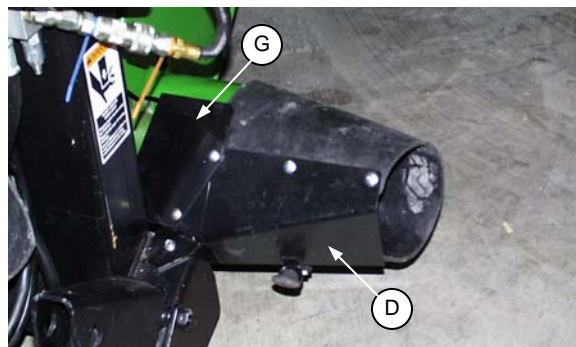
7. 9500/10, CTS/II, STS and CTS 50 Series: To avoid damage to header, remove one tine from



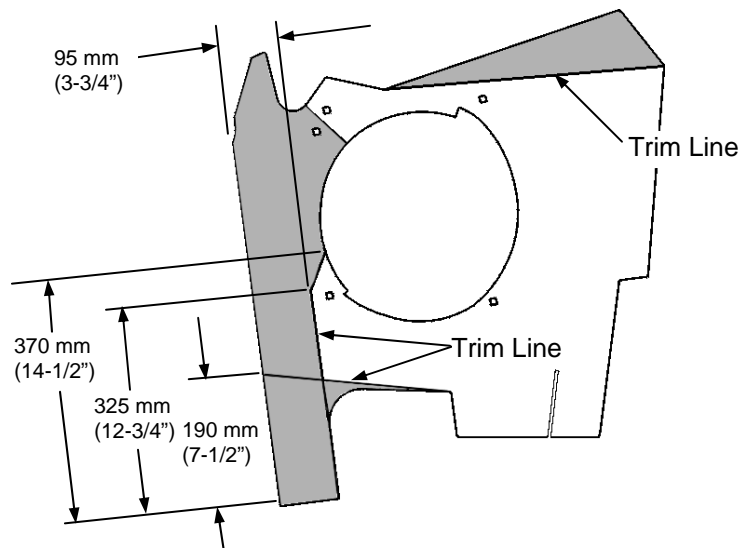
INSTALL PUMP TORQUE ARM SUPPORT



INSTALL LOCKING CHANNELS



ATTACH L/H SHIELD: LEVEL LAND

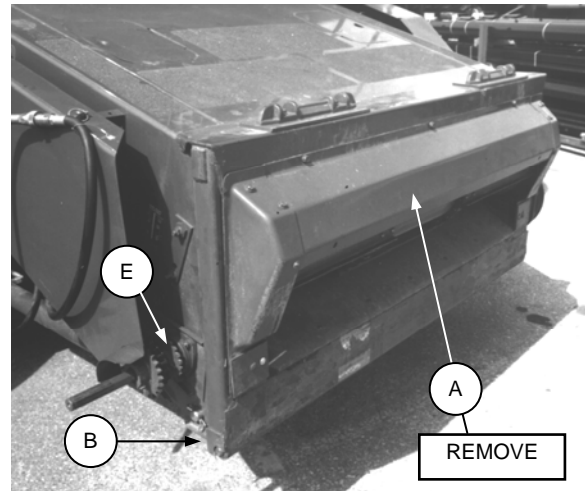


TRIM PLASTIC PANELS CONTOUR MASTER ONLY

Adapter Mounting Instructions for John Deere Combines

PREPARING THE COMBINE

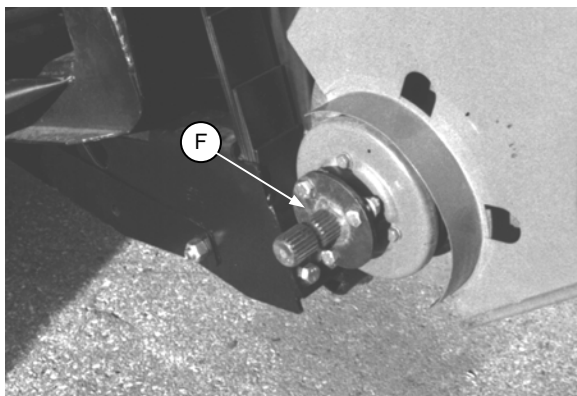
1. Check with Combine dealer to ensure combine is equipped with tire size, rear ballast etc. to carry larger headers.
2. **IMPORTANT:** To prevent damage to feeder house and/or adapter feed drum, remove all feeder house dust shields (A), closure panels etc. that are removable.
NOTE: Contour master dust shield is not removable. The adapter feed drum must be moved forward to compensate for this. See page 34. Contour master filler plates (G) should be removed.
3. Lock pin (B) both sides must be in retracted position before attaching adapter.
4. For models with variable speed feeder house drive, set header output shaft speed to 520 rpm.
5. Set feeder chain to high speed. For older combines, additional chain links will be required to move chain to larger sprocket at (E). On newer combines the adjustment range allows for this repositioning. Refer to Combine Operator's Manual.
6. Contour Master: To improve performance, move feeder chain as far forward as possible by adding links.
7. Adjust combine feed drum height to GRAIN position. Refer to Combine Operator's Manual.
8. Level Land Prior to 50 Series Feeder House: Attach spline shaft provided with adapter to feeder house L/H output drive as follows:
7720, 9500, 9510 & CTS
 - a. Remove existing sprocket coupler.
 - b. Ensure that the three 3 inch long bolts (C) are just tight enough to eliminate gaps between parts, but no tighter.
 - c. Position spline shaft & clamp assembly onto shaft and tighten the two 4-½ inch long bolts (D) evenly to 80 ft.lbs. (110 N·m).
 - d. Tighten the three 3 inch long bolts (C) to 80 ft.lbs. (110 N·m).8820, 9600 & 9610
 - a. Remove the three 3 inch long bolts connecting spline shaft (F) to clamp halves.
 - b. Attach spline shaft (F) directly to sprocket with three ½ x 1-¼ bolts and flange nuts provided.



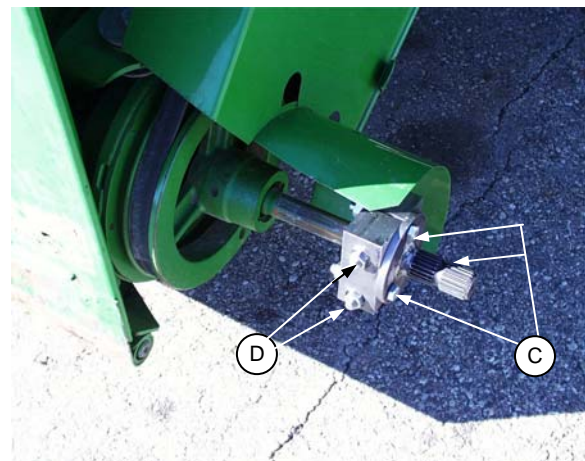
LOCK PINS RETRACTED



REMOVE CONTOUR MASTER
COMBINE FILLER PLATES



LEVEL LAND PRIOR TO 50 SERIES:
8820, 9600 & 9610
ATTACH SPLINE SHAFT



LEVEL LAND PRIOR TO 50 SERIES:
7720, 9500, 9510 & CTS - ATTACH
SPLINE SHAFT & CLAMP

Adapter Mounting Instructions for John Deere Combines

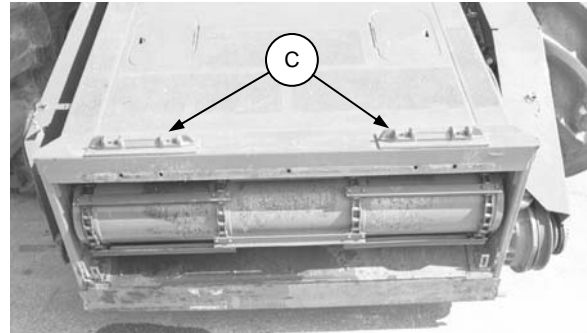
ATTACHING ADAPTER TO COMBINE

1. Slowly drive combine up to adapter until lift lugs (C) are directly under adapter top cross member.
2. Raise feeder house to lift adapter, ensuring lift lugs are properly engaged. Raise adapter fully.

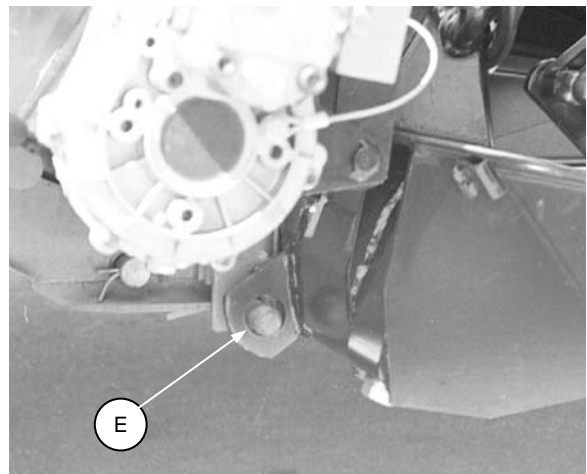


WARNING: To avoid bodily injury or death from unexpected start-up or fall of raised attachment; stop engine, remove key and engage lift cylinder stop before proceeding with hook-up.

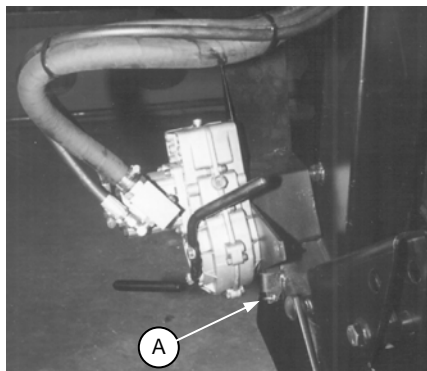
3. Engage lock pins (E) in adapter brackets, both sides.
4. Install pump as follows:
NOTE: Wear gloves when handling pump.
- a. Remove pump from storage position (A) on adapter and slide pump onto R/H feeder house output shaft.
NOTE: The first time the pump is installed, hoses may have to be loosened for proper alignment. Tighten hoses after installation.
- b. Engage pump torque arm on support arm on adapter and secure with lynch pin at (B).
NOTE: For 9650 combine, ensure torque arm (C) with 2 bends has been added to pump assembly. See page 38, Step 1.
5. Tighten combine feeder chain and check clearances. See page 39, step 5.



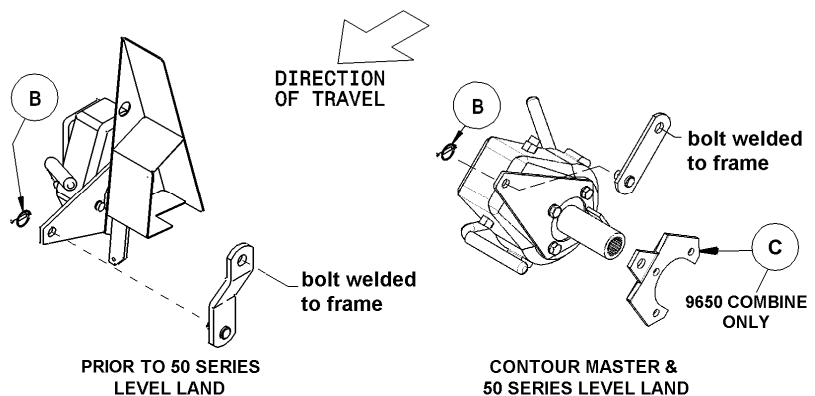
ALIGN LIFT LUGS UNDER ADAPTER FRAME



ENGAGE LOCK PINS - BOTH SIDES



PUMP STORAGE ON ADAPTER



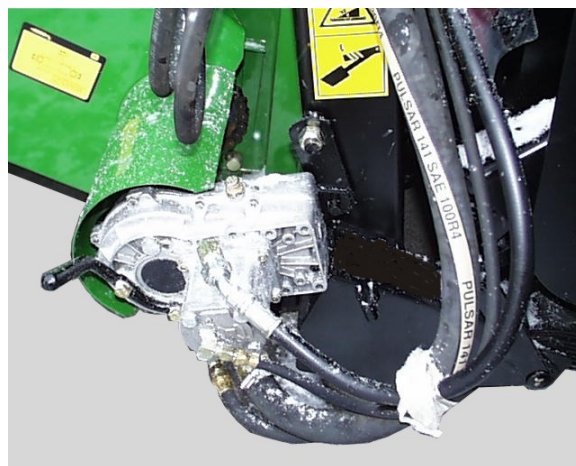
PUMP IN WORKING POSITION

Adapter Mounting Instructions for John Deere Combines

ATTACHING ADAPTER TO COMBINE (continued)



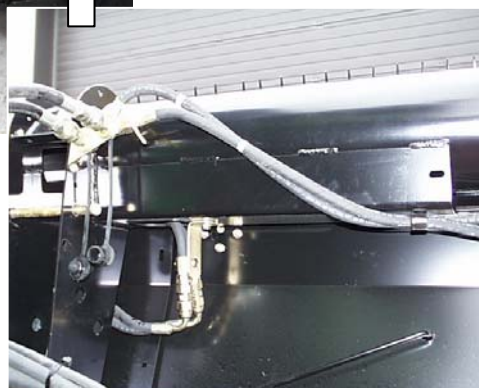
COMBINE TO HEADER CONNECTIONS -
LEFT SIDE



PUMP MOUNTING –
CONTOUR MASTER & 50 SER. LEVEL LAND



PUMP MOUNTING – PRIOR TO 50 SERIES &
COMBINE TO HEADER CONNECTIONS, R/H SIDE



Adapter Mounting Instructions for Case IH Combines

PREPARING THE HEADER

1. Attach the reel drive plumbing as follows:

962 Headers: (see next page for 972)

- a. 30 ft. 962 Header: Remove the existing mount for the reel drive couplers at right header leg. Remove the two hoses connecting the couplers to steel lines.

36 ft. 962 Header: Detach the two rear hoses inside center reel arm (connected to hoses leading to the reel drive motor). Remove rear hoses, couplers and mounting plate.

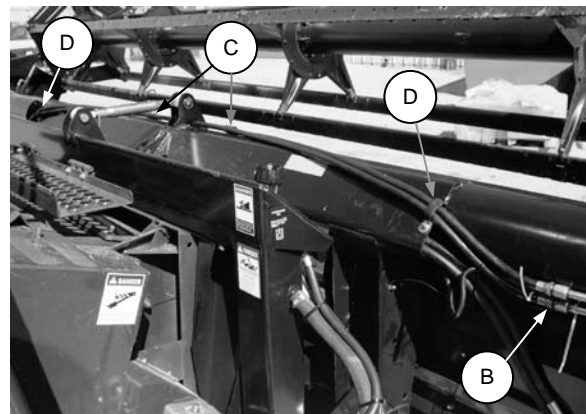
- b. Attach the reel drive mounting plate (A), provided with the adapter, to the left header leg with two 3/8 x 3/4 carriage bolts and flange nuts.
- c. Route reel drive hoses from assembly (A) as follows:

30' 962 Header - Attach hoses to lines at (B), matching yellow cable ties. Route hoses along back tube as shown and secure with four clamps. Use two 3/8 x 5/8 hex washer head machine screws at (C) and two 3/8 x 3/4 carriage bolts at (D). (Use one carriage bolt from reel drive coupler mounting plate removed above. Other parts and hardware supplied with header completion package.)

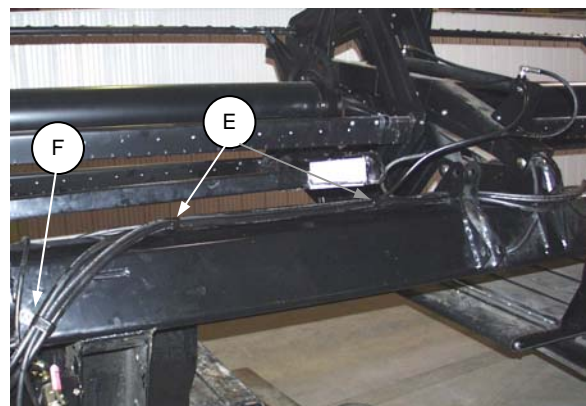
36' 962 Header - Attach hoses to hoses inside center reel arm leading to the reel drive motor, matching yellow cable ties. Route hoses along back tube as shown and secure with three clamps. Use two 3/8 x 5/8 hex washer head machine screws at (E) and one 3/8 x 3/4 carriage bolt at (F).



ATTACH REEL DRIVE MOUNTING PLATE
TO HEADER L/H LEG



ROUTE REEL DRIVE HOSES – 30' 962



ROUTE REEL DRIVE HOSES – 36' 962

Adapter Mounting Instructions for Case IH Combines

PREPARING THE HEADER

1. Attach the reel drive plumbing as follows:

972 Headers: (see previous page for 962)

- a. Headers with 2-Arm Reel: Remove the existing mount for the reel drive couplers at right header leg. (Remove the two elbows along with the couplers and mount.)

Headers with 3-Arm Reel: Detach the two hoses at the reel drive motor, and remove the couplers and mounting plate.

- b. Route reel drive hoses from assembly (A) (provided with the adapter) as follows:

Headers with 3-Arm Reel - Attach hoses to reel drive motor. Hose with yellow cable tie goes to bottom port of motor. Route hoses along back tube and secure with clamps and hardware provided with header completion package, similar to 962 36' Header shown on previous page.

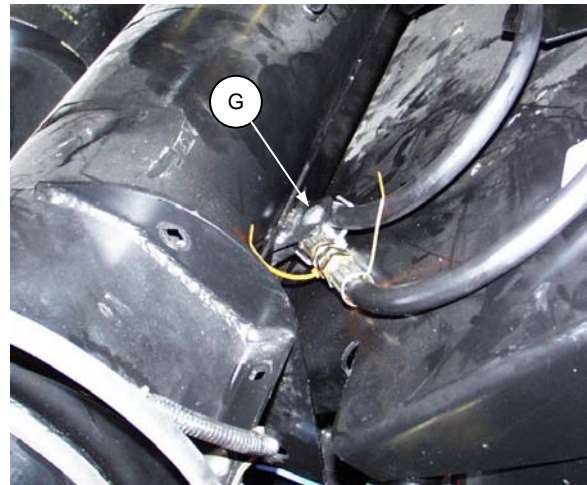
Headers with 2-Arm Reel

- Hydraulic Deck Shift Headers only: Route hose from mounted coupler between deck shift hoses and L/H header leg.

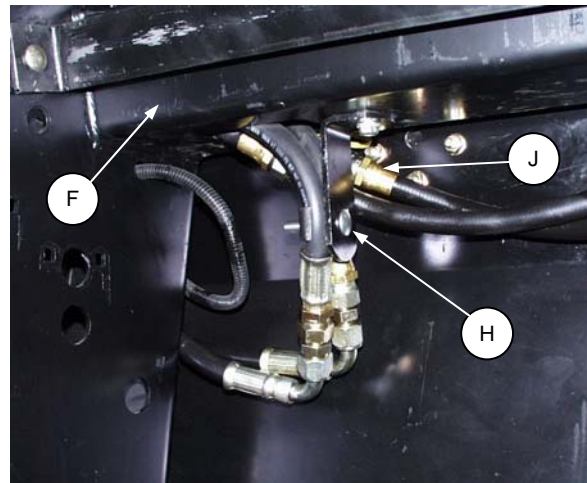
- All 2-Arm Headers: Remove the draper drive hose clamps (H), both sides, and clamp (G) to allow reel drive hoses to be guided past. Push hoses through channel (F) across header opening to the R/H side. This will be easier if hoses being pushed through are at back of channel (F) (rearward of other hoses in channel). Connect to header reel drive hoses at (J), matching the yellow cable ties. After connection, pull hoses back through on L/H side to position shown in bottom photo. Pull excess header hose on R/H side toward reel drive for best appearance.

- Replace clamps (H) and (G) on draper drive hoses.

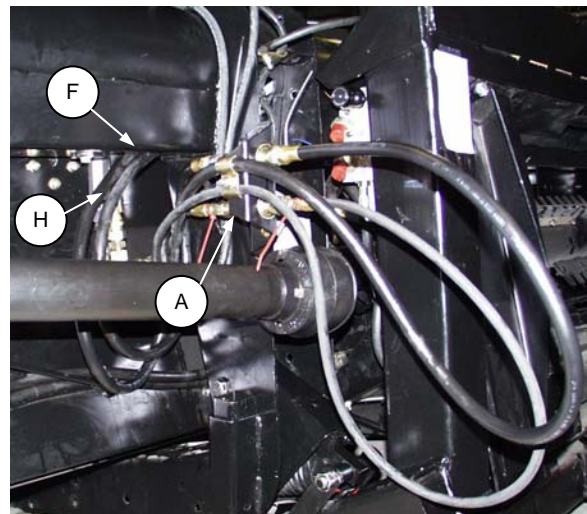
- c. Attach the reel drive mounting plate (A) to the left header leg with two 3/8 x 3/4 carriage bolts and flange nuts.



REMOVE DRAPER DRIVE HOSE CLAMP



REEL DRIVE HOSES – R/H SIDE



ATTACH REEL DRIVE MOUNTING PLATE
TO HEADER L/H LEG

Adapter Mounting Instructions for Case IH Combines

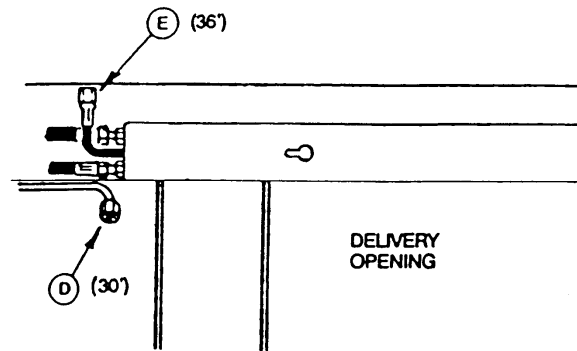
PREPARING THE HEADER (continued)

2. Connect the male coupler with 1/4 NPT adapter (from combine adapter package) to the reel lift hose on the header.

962 Header only: Attach reel lift hose (from header completion package) at left of delivery opening as follows:

For 30' headers the reel lift hose connects to hydraulic line (D).

For 36' headers the reel lift hose connects to hose (E).



INSTALL REEL LIFT HOSE - 962 HEADER

3. Attach driveline supplied with adapter to header sickle drive shaft. Secure clamp yoke to shaft with 1/2 NC hardware provided.

For storage, attach other end of driveline to anchor (K).



DRIVELINE STORAGE LOCATION

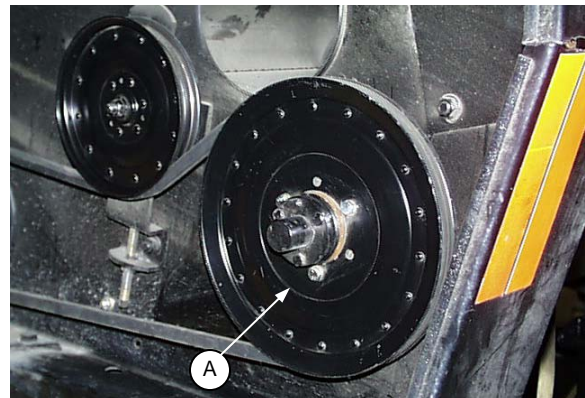
4. Single Sickle:
Bolt the sheet metal pulley (A) provided with the adapter on the sickle drive pulley (962) or drive hub (972) at the left end sheet, using three 3/8 x 1 bolts with lock washers.

Double Sickle 972:

See 972 Operators Manual "Unloading and Assembly" section.

5. Install wiring harness extension provided with adapter onto header wiring harness.

NOTE: If combine does not have an electrical connector, see page 35.



INSTALL SICKLE DRIVE PULLEY

Adapter Mounting Instructions for Case IH Combines

PREPARING THE ADAPTER

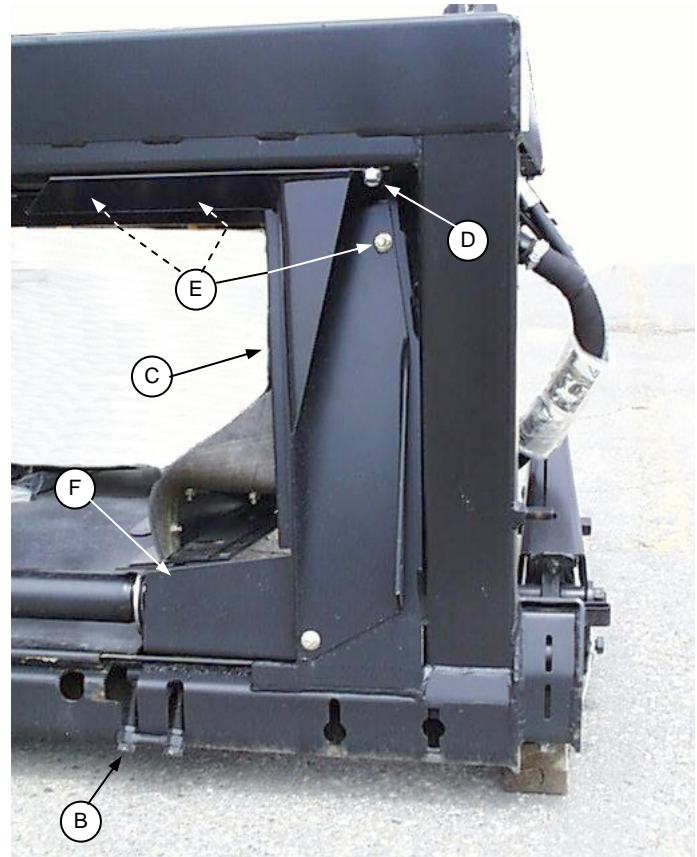
1. Install feeder house support (C) (from adapter package) onto the adapter frame with one 1/2 x 1 flange bolt at (D) and three 1/2 x 1 carriage bolts and flange nuts at (E). Repeat at other side.

NOTE: For attachment to top beam, engage carriage bolts in keyhole slots.

2. Attach filler (F) with one 1/2 x 1 1/4 carriage bolt and flange nut. Repeat at other side.

NOTE: Filler (F) shown is for 60 & 66 Series Combines. A similar, shorter piece is used with the mid size deck used with 80 & 88 Series Combines

3. Install lower latch pivot bars (B) in adapter frame. Ensure pivot pin is installed inside frame in high position as shown.

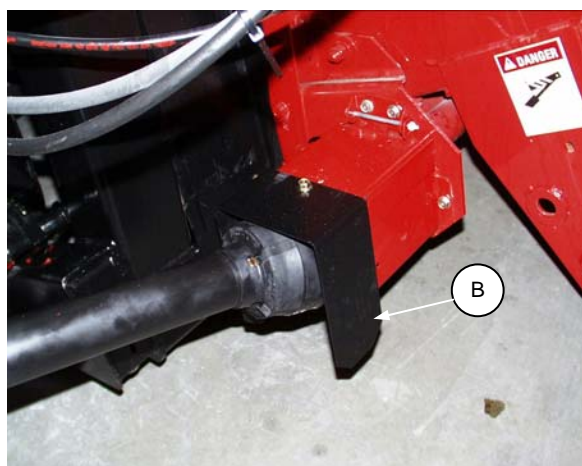


INSTALL ADAPTER COMPLETION PARTS

Adapter Mounting Instructions for Case IH Combines

PREPARING THE COMBINE

1. Check with Combine dealer to ensure combine is equipped with tire size, rear ballast etc. to carry larger headers.
 2. For 36 foot header on 1460, 1480, 1660 and 1680 combines, install optional third feeder house lift cylinder. Order numbers:
Feed House Lift Cylinder Kit: Kind - 172, Code - 1092
Accumulator Kit: Kind - 172, Code - 1084
 3. **Remove dust shield across top of feeder house** opening to allow positioning of adapter feed drum as shown on page 34.
 4. Remove shield from R/H feeder house output shaft and replace with shield (A) and drive arm support (D) provided with adapter. This shield can be hinged out of the way for MacDon adapter and swung back into place for pick-up header.
- NOTE:** For narrower feeder house combines (1640, 1644, 1660, 1666, 2166 and 2366) also install shield extension (E).
5. Install shield (B) on L/H feeder house output shaft shield with 3/8 x 5/8 flange bolt and nut as shown.



L/H SHIELD

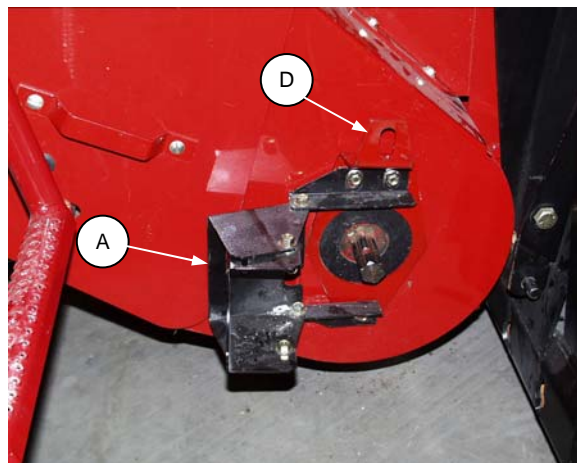
6. Set feeder house face plate, feeder chain and drum height as shown on Quick Reference Card.

ATTACHING ADAPTER TO COMBINE

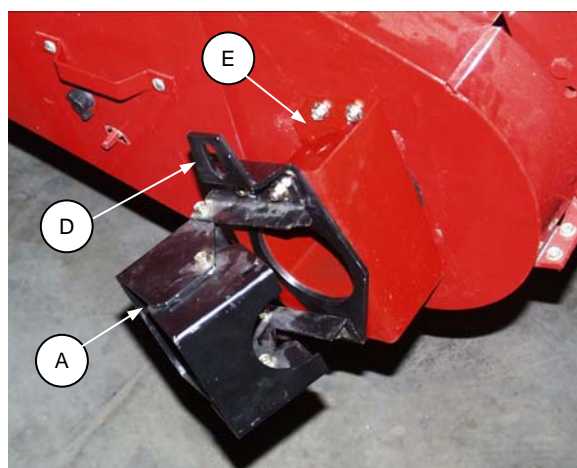
1. Slowly drive combine up to adapter until feeder saddle (C) is directly under adapter top cross member.
2. Raise feeder house to lift adapter, ensuring feeder saddle is properly engaged in adapter frame. Raise adapter fully.



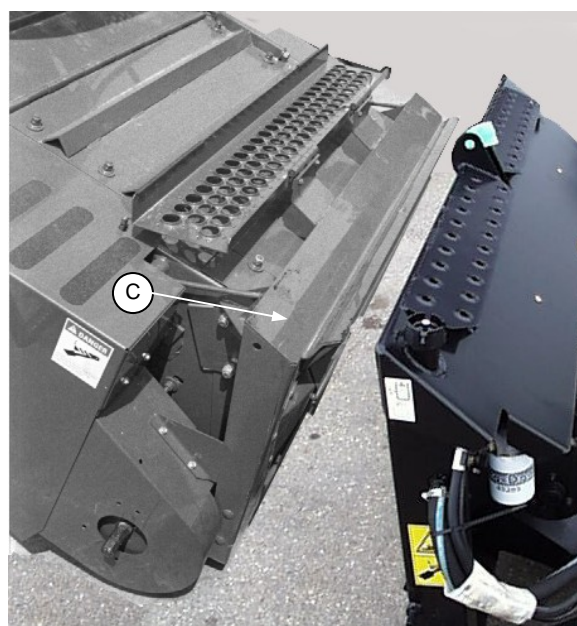
WARNING: To avoid bodily injury or death from unexpected start-up or fall of raised attachment; stop engine, remove key and engage lift cylinder stop before proceeding with hook-up.



HINGED R/H SHIELD



HINGED R/H SHIELD – NARROW FEEDERS

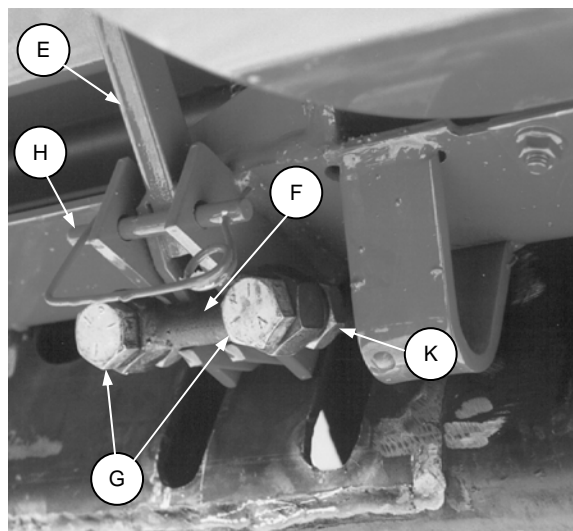


ALIGN FEEDER SADDLE UNDER
ADAPTER FRAME

Adapter Mounting Instructions for Case IH Combines

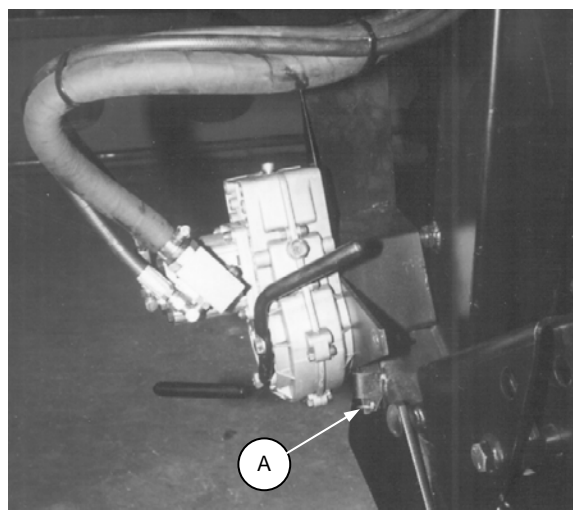
ATTACHING ADAPTER TO COMBINE (continued)

3. Lower latch handle (E) (one each side of feeder house) to hook pivot bar (F). Lift handle to over-center position to lock. It should take 40 to 50 lbs. force (180 to 220 N) to move handle over-center. Adjusting the torque of bolts (G) will vary the handle force required. When handle force is correct, tighten jam nuts (K).
4. Install pin (H) as shown to secure the latch handle in locked position.

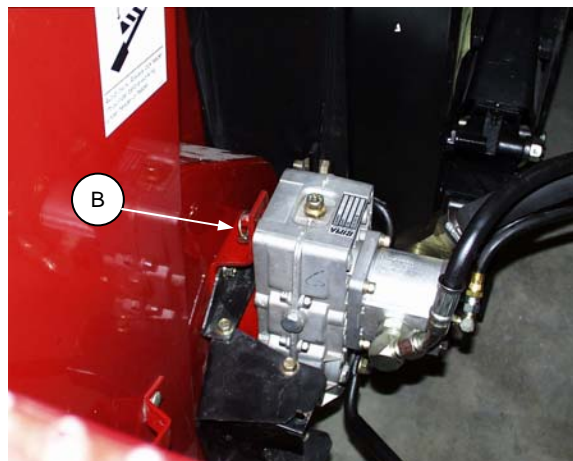


ENGAGE LOCKS - BOTH SIDES

5. Install pump as follows:
NOTE: Wear gloves when handling pump.
 - a. Remove pump from storage position (A) on adapter and slide pump onto R/H feeder house output shaft.
- NOTE:** The first time the pump is installed, hoses may have to be loosened for proper alignment. Tighten hoses after installation.
- b. Engage pump torque arm on support arm on adapter and secure with lynch pin at (B).



PUMP STORAGE ON ADAPTER



PUMP IN WORKING POSITION

Adapter Mounting Instructions for Gleaner Combines

PREPARING THE HEADER

1. Attach the reel drive plumbing as follows:

962 Headers: (see next page for 972)

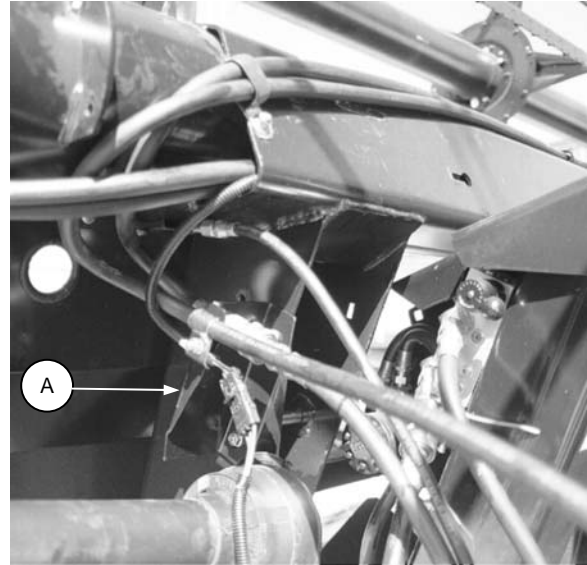
- a. 30 ft. 962 Header: Remove the existing mount for the reel drive couplers at right header leg. Remove the two hoses connecting the couplers to steel lines.

36 ft. 962 Header: Detach the two rear hoses inside center reel arm (connected to hoses leading to the reel drive motor). Remove rear hoses, couplers and mounting plate.

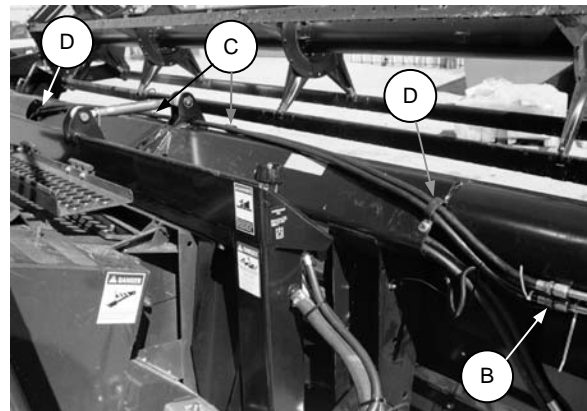
- b. Attach the reel drive mounting plate (A), provided with the adapter, to the left header leg with two 3/8 x 3/4 carriage bolts and flange nuts.
- c. Route reel drive hoses from assembly (A) as follows:

30' 962 Header - Attach hoses to lines at (B), matching yellow cable ties. Route hoses along back tube as shown and secure with four clamps. Use two 3/8 x 5/8 hex washer head machine screws at (C) and two 3/8 x 3/4 carriage bolts at (D). (Use one carriage bolt from reel drive coupler mounting plate removed above. Other parts and hardware supplied with header completion package.)

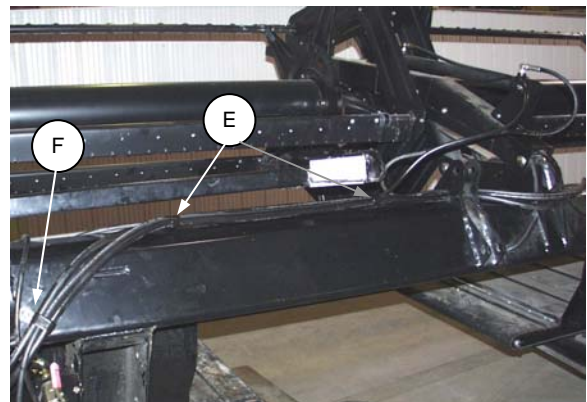
36' 962 Header - Attach hoses to hoses inside center reel arm leading to the reel drive motor, matching yellow cable ties. Route hoses along back tube as shown and secure with three clamps. Use two 3/8 x 5/8 hex washer head machine screws at (E) and one 3/8 x 3/4 carriage bolt at (F).



ATTACH REEL DRIVE MOUNTING PLATE
TO HEADER L/H LEG



ROUTE REEL DRIVE HOSES – 30' 962



ROUTE REEL DRIVE HOSES – 36' 962

Adapter Mounting Instructions for Gleaner Combines

PREPARING THE HEADER

1. Attach the reel drive plumbing as follows:

972 Headers: (see previous page for 962)

- a. Headers with 2-Arm Reel: Remove the existing mount for the reel drive couplers at right header leg. (Remove the two elbows along with the couplers and mount.)

Headers with 3-Arm Reel: Detach the two hoses at the reel drive motor, and remove the couplers and mounting plate.

- b. Route reel drive hoses from assembly (A) (provided with the adapter) as follows:

Headers with 3-Arm Reel - Attach hoses to reel drive motor. Hose with yellow cable tie goes to bottom port of motor. Route hoses along back tube and secure with clamps and hardware provided with header completion package, similar to 962 36' Header shown on previous page.

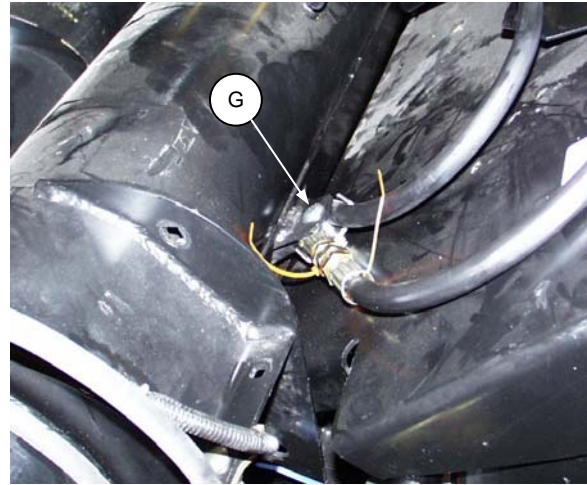
Headers with 2-Arm Reel

- Hydraulic Deck Shift Headers only: Route hose from mounted coupler between deck shift hoses and L/H header leg.

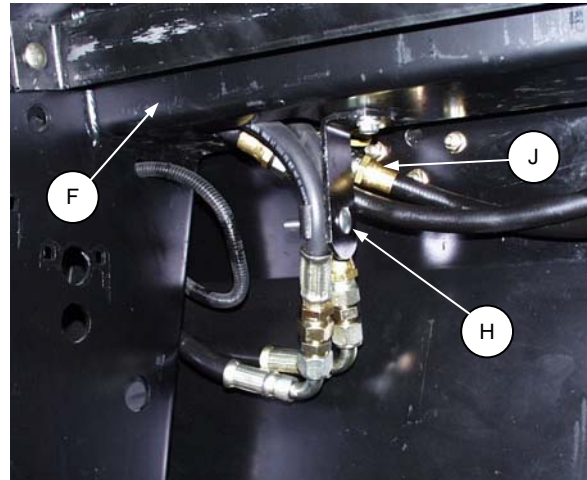
- All 2-Arm Headers: Remove the draper drive hose clamps (H), both sides, and clamp (G) to allow reel drive hoses to be guided past. Push hoses through channel (F) across header opening to the R/H side. This will be easier if hoses being pushed through are at back of channel (F) (rearward of other hoses in channel). Connect to header reel drive hoses at (J), matching the yellow cable ties. After connection, pull hoses back through on L/H side to position shown in bottom photo. Pull excess header hose on R/H side toward reel drive for best appearance.

- Replace clamps (H) and (G) on draper drive hoses.

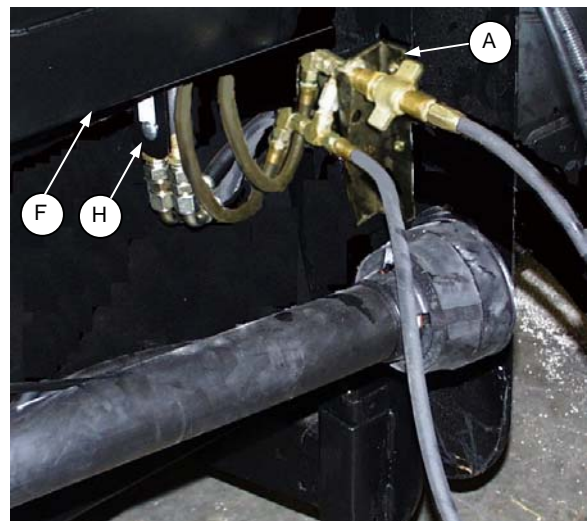
- c. Attach the reel drive mounting plate (A) to the left header leg with two 3/8 x 3/4 carriage bolts and flange nuts.



REMOVE DRAPER DRIVE HOSE CLAMP



REEL DRIVE HOSES – R/H SIDE



TO HEADER L/H LEG

Adapter Mounting Instructions for Gleaner Combines

PREPARING THE HEADER (continued)

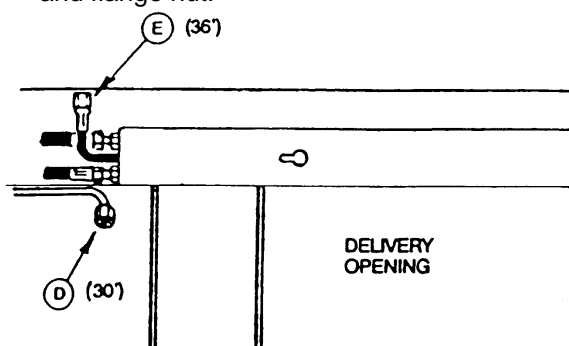
2. Connect the 1/4 NPT male coupler assembly (from combine adapter package) to the reel lift hose on the header.

NOTE: Install reel drive holder (H) in retracted position (shown), unless combine hose is not long enough to attach. Check this with header on ground. In this case, a second hole is provided in holder (H) to install in an extended position.

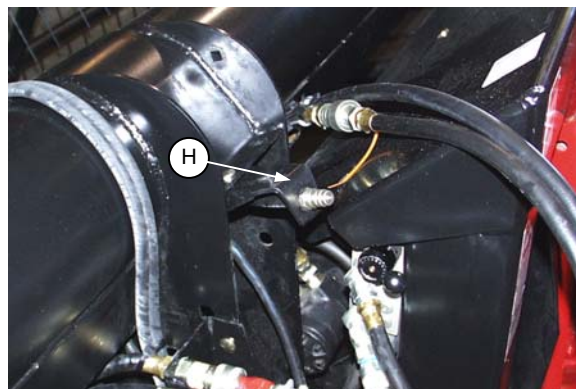
972 Header: Remove existing reel lift hose clamp at left header leg and attach coupler assembly at this location.

962 Header: Attach reel lift hose (from header completion package) at left of delivery opening as follows: For 30' headers the reel lift hose connects to hydraulic line (D). For 36' headers the reel lift hose connects to hose (E).

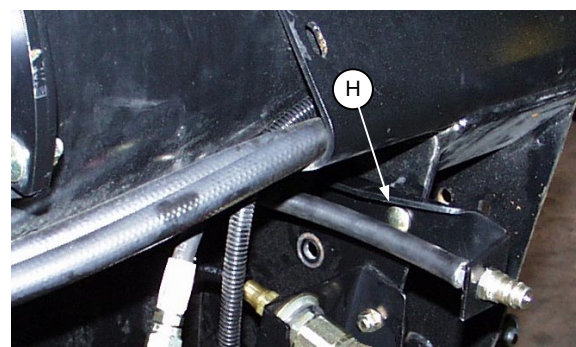
Secure coupler assembly to left header leg by attaching holder (H) with 3/8 x 3/4 carriage bolt and flange nut.



INSTALL REEL LIFT HOSE – 962 HEADER



INSTALL REEL LIFT COUPLER ASSEMBLY
972 HEADER



INSTALL REEL LIFT COUPLER ASSEMBLY
962 HEADER

3. Attach driveline supplied with adapter to header sickle drive shaft. Secure clamp yoke to shaft with 1/2 NC hardware provided.

For storage, attach other end of driveline to anchor on reel drive couplers mounting plate installed in step 1.

4. Single Sickle:

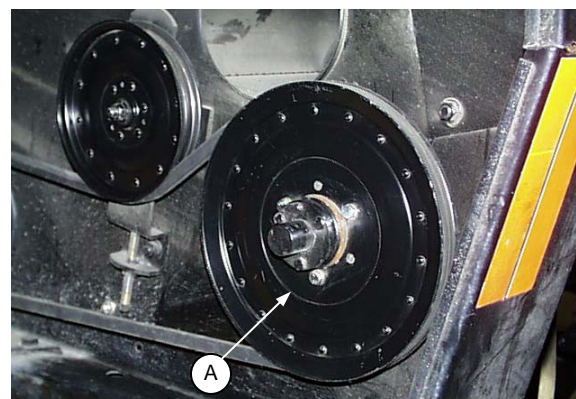
Bolt the sheet metal pulley (A) provided with the adapter on the sickle drive pulley (962) or drive hub (972) at the left end sheet, using three 3/8 x 1 bolts with lock washers.

Double Sickle 972:

See 972 Operators Manual “Unloading and Assembly” section.

5. Install wiring harness extension provided with adapter onto header wiring harness.

NOTE: If combine does not have an electrical connector, see page 35.



INSTALL SICKLE DRIVE PULLEY

Adapter Mounting Instructions for Gleaner Combines

PREPARING THE ADAPTER

1. Install upper beam (1) (from adapter package) onto the adapter frame with two 1/2 x 1 flange bolts (E) (one each side) and four 1/2 x 1 carriage bolts (C) and flange nuts (D) (two each side).

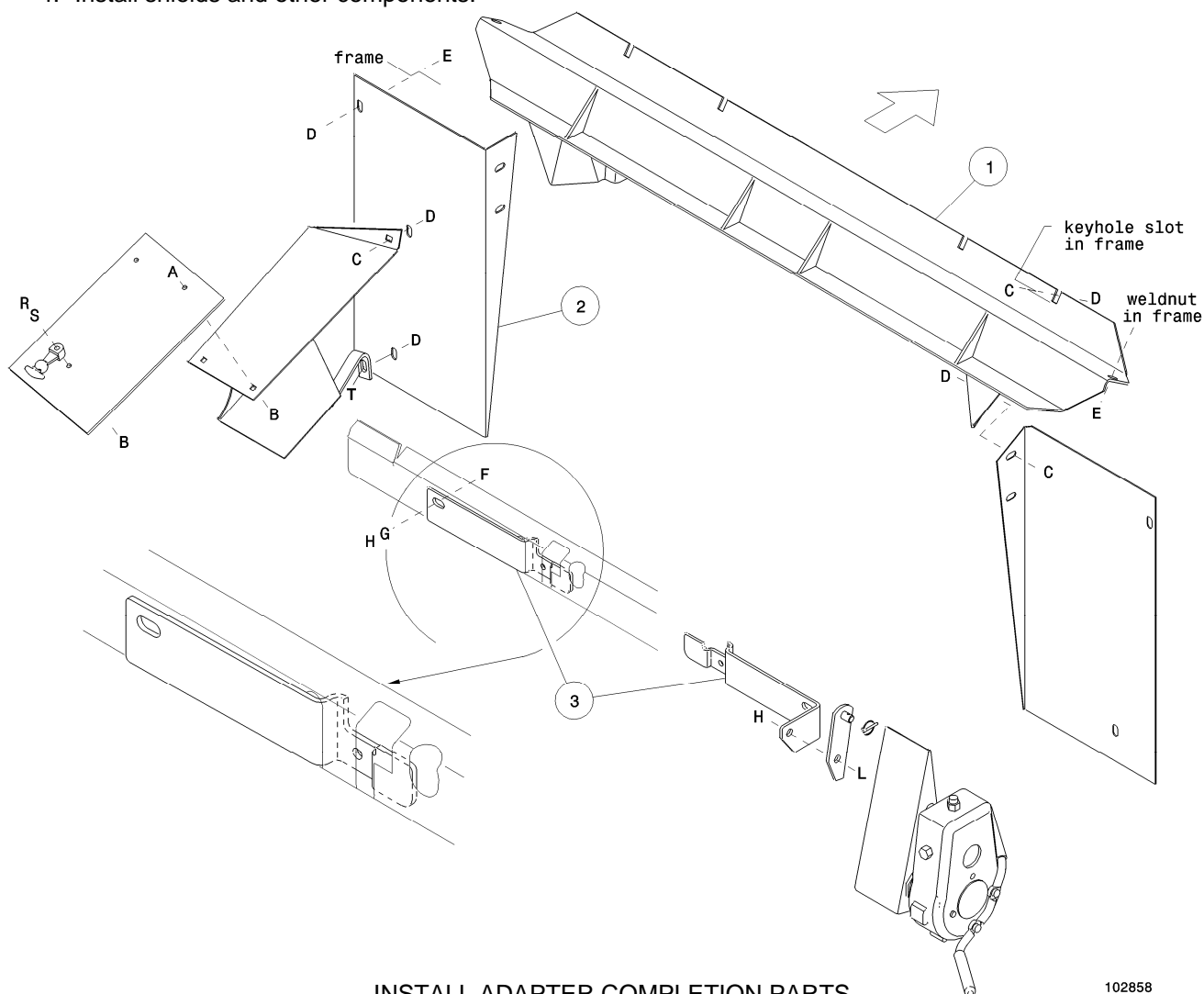
NOTE: For attachment to adapter at top beam, engage carriage bolts (C) in keyhole slots.

2. Attach left member (2) with three 1/2 x 1 carriage bolts (C), one 1/2 x 1 flange bolt (E) and flange nuts (D). Repeat at right side.

3. Insert lower latch support (3) into oblong slot in adapter frame as shown. Secure with 5/8 x 1-1/2 carriage bolt (F), flat washer (G) and nut (H). Repeat at other side.

4. Install shields and other components.

A	BOLT – round head, sq. neck, 3/8 NC x 3/4 in.
B	NUT - lock, smooth flange, 3/8 NC dist. thread
C	BOLT - round hd. short sq. nk, 1/2 NC x 1"
D	NUT - lock, smooth flange, 1/2 NC dist. thread
E	BOLT - flange head, 1/2 NC x 1 inch
F	BOLT - rnd. hd. sq. neck, 5/8 NC x 1-1/2 inch
G	WASHER - flat, 21/32 inch I.D.
H	NUT - lock, 5/8 NC distorted thread
L	BOLT - hex head, 5/8 NC x 1-1/2 inch
R	BOLT - hex head, 3/8 NC x 1-1/2 inch
S	WASHER - flat, 13/32 inch I.D.
T	BOLT – round head, sq. neck, 1/2 NC x 1-1/4"



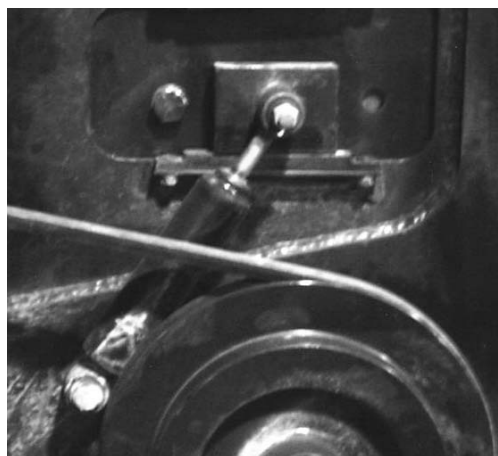
INSTALL ADAPTER COMPLETION PARTS

102858

Adapter Mounting Instructions for Gleaner Combines

PREPARING THE COMBINE

1. For R62 combines, check with Combine dealer to ensure combine is equipped with tire size, rear ballast etc. to carry larger headers.
2. Rotate feeder house latches back into the feeder house.
3. Adjust R/H pivot shaft drive for grain. Position belt on small drive sheave (top) and large drive sheave (bottom).
4. Adjust feed conveyor drum height to small grains position as per combine operators manual.
5. Pre 1997 combines, tilt feeder house face plate $\frac{3}{4}$ of the way back towards the cab. For 1998 and newer the faceplate is rigid and cannot be tilted.
6. For models with variable speed feeder house drive, set header output shaft speed to 620 rpm.



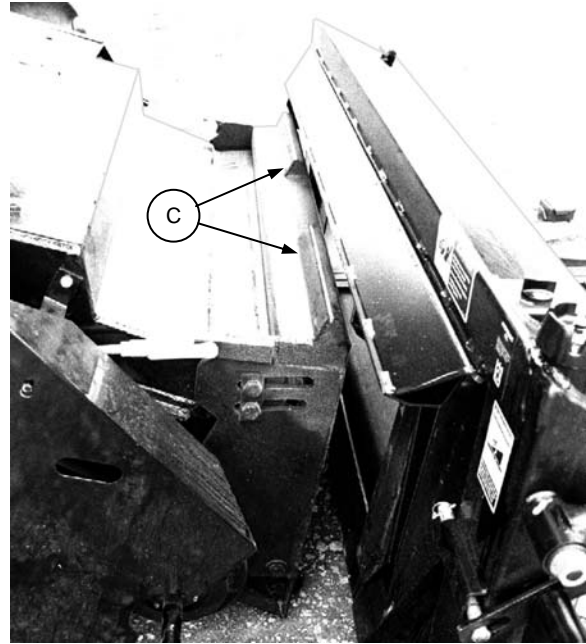
Adapter Mounting Instructions for Gleaner Combines

ATTACHING ADAPTER TO COMBINE

1. Slowly drive combine up to adapter until feeder house truss hooks (C) are directly under adapter top cross member.
2. Raise feeder house to lift adapter, ensuring truss hooks are properly engaged in adapter frame. Raise adapter fully, allowing the lower pins to penetrate the holes in the adapter back.

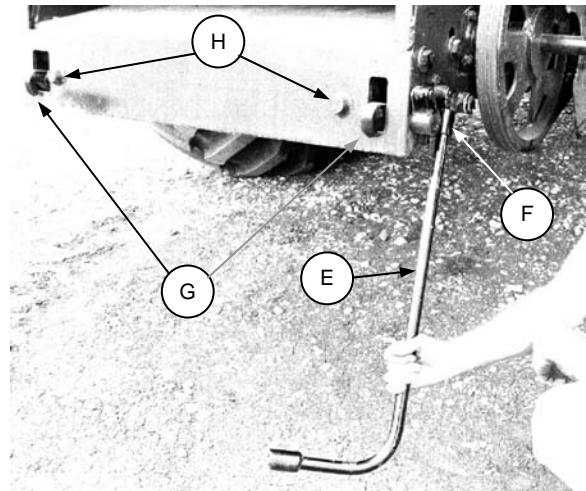


WARNING: To avoid bodily injury or death from unexpected start-up or fall of raised attachment; stop engine, remove key and engage lift cylinder stop before proceeding with hook-up.



ALIGN TRUSS HOOKS
UNDER ADAPTER FRAME

3. Insert concave door tool (E) in latch socket (F) and rotate latch clockwise to lock hooks (G) into the adapter frame (both sides). MAKE CERTAIN that the latch is rotated over-center to securely lock the hooks. If it does not latch, check to determine if the lower pins (H) are seated in the adapter back. If not, place a block under the left end of the adapter and lower the adapter to reseat the pins. Re-latch the hooks.
4. Raise the adapter and lower it against the ground a few times to settle the adapter on the feeder housing.



LOCK HOOKS INTO ADAPTER FRAME
BOTH SIDES

Adapter Mounting Instructions for Gleaner Combines

ATTACHING ADAPTER TO COMBINE (continued)

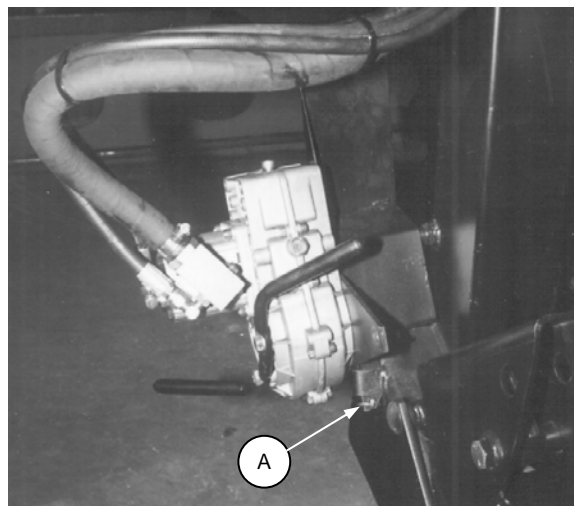
5. Install pump as follows:

NOTE: Wear gloves when handling pump.

- a. Remove pump from storage position (A) on adapter and slide pump onto R/H feeder house output shaft.

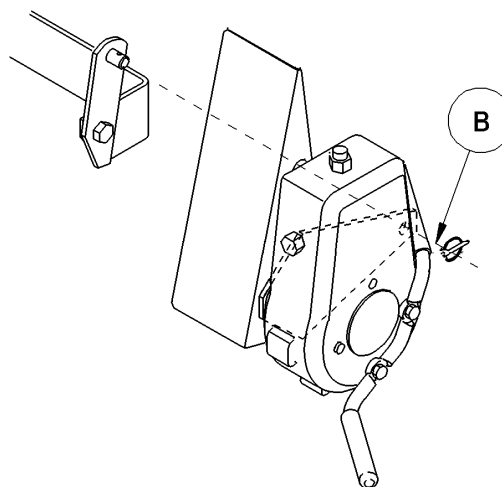
NOTE: The first time the pump is installed, hoses may have to be loosened for proper alignment. Tighten hoses after installation.

- b. Engage pump torque arm on support arm on adapter and secure with lynch pin at (B).



PUMP STORAGE ON ADAPTER

6. Float the feeder house front drum up and check for interference with adapter feed drum. If so, remove a link from the feeder chain and move the front drum back. Re-tighten chain and check clearance again.



PUMP IN WORKING POSITION

Adapter Mounting Instructions for New Holland Combines

PREPARING THE HEADER

1. Attach the reel drive plumbing as follows:

962 Headers: (see next page for 972)

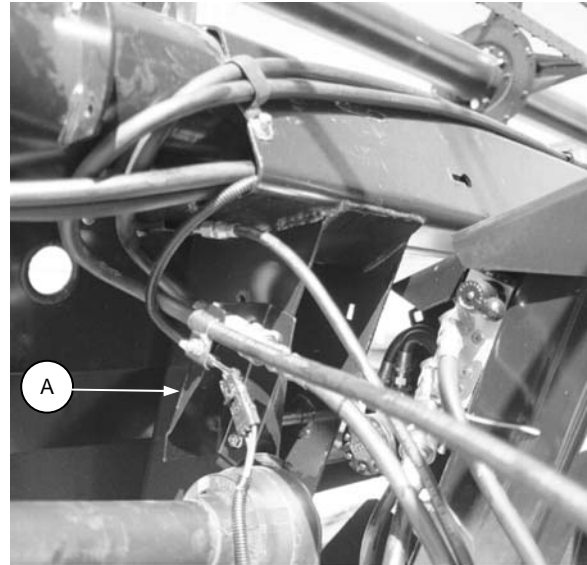
- a. 30 ft. 962 Header: Remove the existing mount for the reel drive couplers at right header leg. Remove the two hoses connecting the couplers to steel lines.

36 ft. 962 Header: Detach the two rear hoses inside center reel arm (connected to hoses leading to the reel drive motor). Remove rear hoses, couplers and mounting plate.

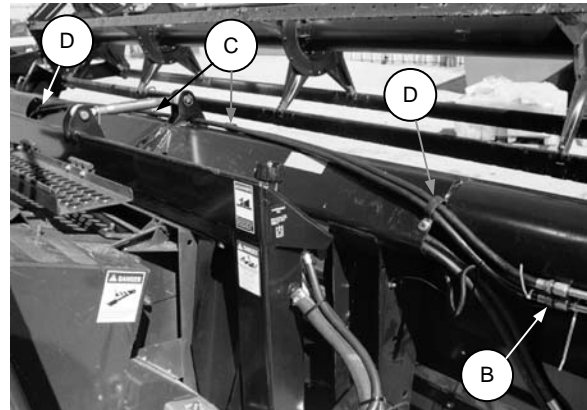
- b. Attach the reel drive mounting plate (A), provided with the adapter, to the left header leg with two 3/8 x 3/4 carriage bolts and flange nuts.
- c. Route reel drive hoses from assembly (A) as follows:

30' 962 Header - Attach hoses to lines at (B), matching yellow cable ties. Route hoses along back tube as shown and secure with four clamps. Use two 3/8 x 5/8 hex washer head machine screws at (C) and two 3/8 x 3/4 carriage bolts at (D). (Use one carriage bolt from reel drive coupler mounting plate removed above. Other parts and hardware supplied with header completion package.)

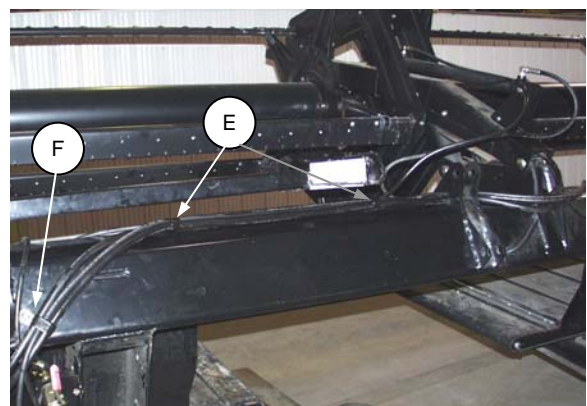
36' 962 Header - Attach hoses to hoses inside center reel arm leading to the reel drive motor, matching yellow cable ties. Route hoses along back tube as shown and secure with three clamps. Use two 3/8 x 5/8 hex washer head machine screws at (E) and one 3/8 x 3/4 carriage bolt at (F).



ATTACH REEL DRIVE MOUNTING PLATE
TO HEADER L/H LEG



ROUTE REEL DRIVE HOSES – 30' 962



ROUTE REEL DRIVE HOSES – 36' 962

Adapter Mounting Instructions for New Holland Combines

PREPARING THE HEADER

1. Attach the reel drive plumbing as follows:

972 Headers: (see previous page for 962)

- a. Headers with 2-Arm Reel: Remove the existing mount for the reel drive couplers at right header leg. (Remove the two elbows along with the couplers and mount.)

Headers with 3-Arm Reel: Detach the two hoses at the reel drive motor, and remove the couplers and mounting plate.

- b. Route reel drive hoses from assembly (A) (provided with the adapter) as follows:

Headers with 3-Arm Reel - Attach hoses to reel drive motor. Hose with yellow cable tie goes to bottom port of motor. Route hoses along back tube and secure with clamps and hardware provided with header completion package, similar to 962 36' Header shown on previous page.

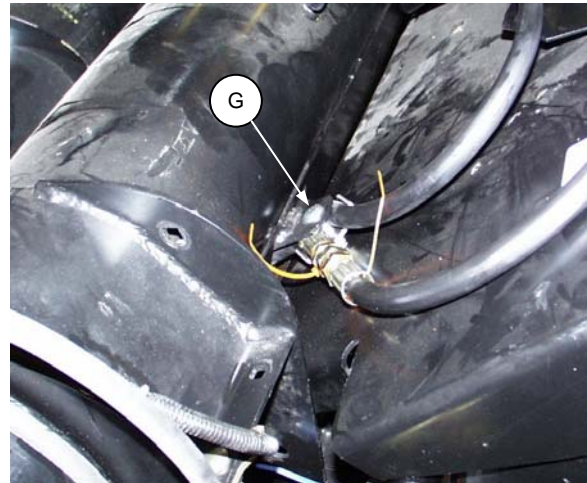
Headers with 2-Arm Reel

- Hydraulic Deck Shift Headers only: Route hose from mounted coupler between deck shift hoses and L/H header leg.

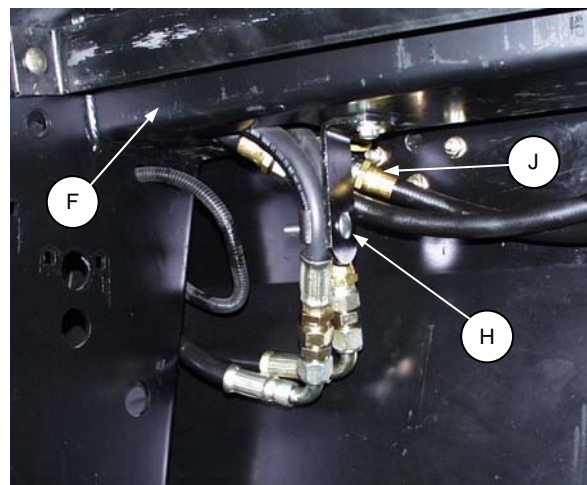
- All 2-Arm Headers: Remove the draper drive hose clamps (H), both sides, and clamp (G) to allow reel drive hoses to be guided past. Push hoses through channel (F) across header opening to the R/H side. This will be easier if hoses being pushed through are at back of channel (F) (rearward of other hoses in channel). Connect to header reel drive hoses at (J), matching the yellow cable ties. After connection, pull hoses back through on L/H side to position shown in bottom photo. Pull excess header hose on R/H side toward reel drive for best appearance.

- Replace clamps (H) and (G) on draper drive hoses.

- c. Attach the reel drive mounting plate (A) to the left header leg with two 3/8 x 3/4 carriage bolts and flange nuts.



REMOVE DRAPER DRIVE HOSE CLAMP



REEL DRIVE HOSES – R/H SIDE



ATTACH REEL DRIVE MOUNTING PLATE
TO HEADER L/H LEG

Adapter Mounting Instructions for New Holland Combines

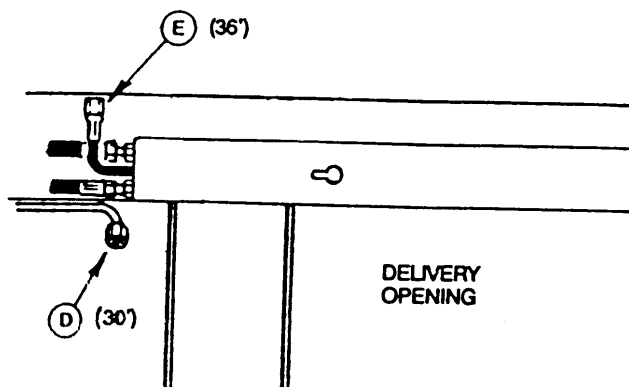
PREPARING THE HEADER (continued)

2. Connect the 1/4 NPT male coupler (from combine adapter package) to the reel lift hose on the header.

962 Header only: Attach reel lift hose (from header completion package) at left of delivery opening as follows:

For 30' headers the reel lift hose connects to hydraulic line (D).

For 36' headers the reel lift hose connects to hose (E).



INSTALL REEL LIFT HOSE - 962 HEADER

3. Attach driveline supplied with adapter to header sickle drive shaft. Secure clamp yoke to shaft with 1/2 NC hardware provided.

For storage, attach other end of driveline to anchor (K).



DRIVELINE STORAGE LOCATION

4. Single Sickle:

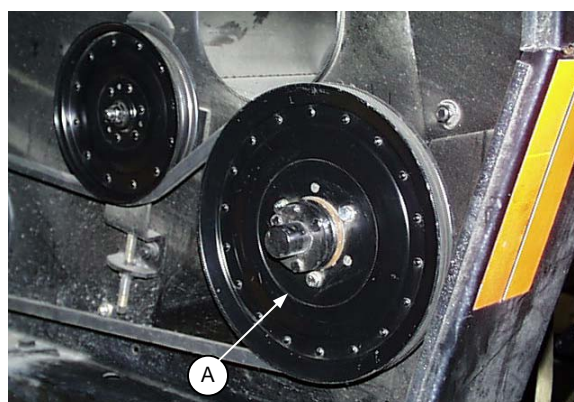
Bolt the sheet metal pulley (A) provided with the adapter on the sickle drive pulley (962) or drive hub (972) at the left end sheet, using three 3/8 x 1 bolts with lock washers.

Double Sickle 972:

See 972 Operators Manual "Unloading and Assembly" section.

5. Install wiring harness extension provided with adapter onto header wiring harness.

NOTE: If combine does not have an electrical connector, see page 35.



INSTALL SICKLE DRIVE PULLEY

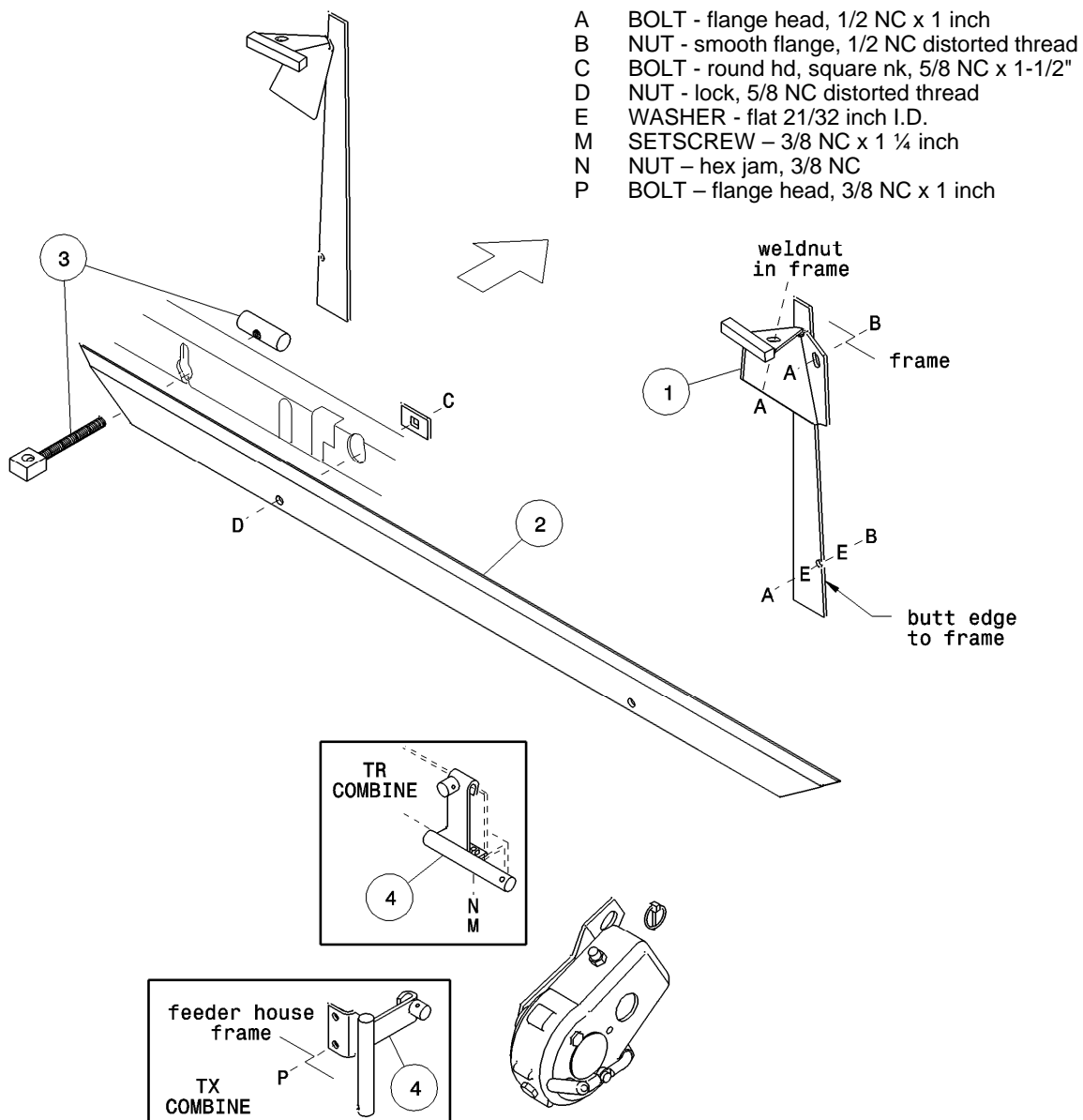
Adapter Mounting Instructions for New Holland Combines

PREPARING THE ADAPTER

1. Install feeder house guide (1) (from adapter package) onto the adapter frame with hardware shown. Repeat at other side.
2. Install lower feeder house beam (2) with hardware shown. Position bolts against the bottom of the slots in frame.
3. Install lower latch eyebolt assemblies (3) in adapter frame.
4. Attach gearbox support (4) to combine feeder house as shown.

NOTE: Orientation of support depends on combine model.

5. For TR Combines only, add float range limiters to prevent damage to the retracting tine drum and/or header side drapers when operating at flat header angles. See instruction on page 71.

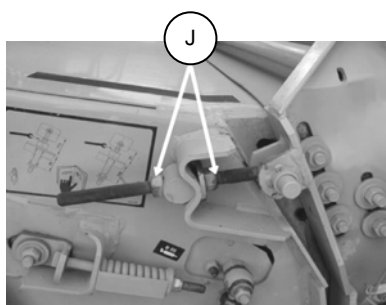
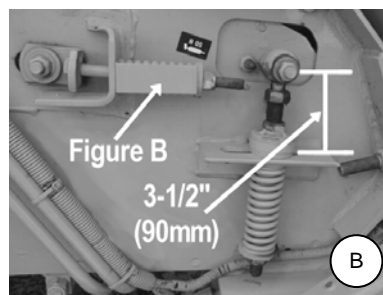
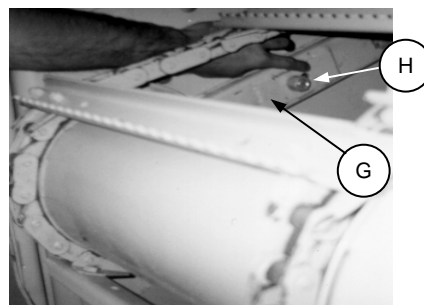
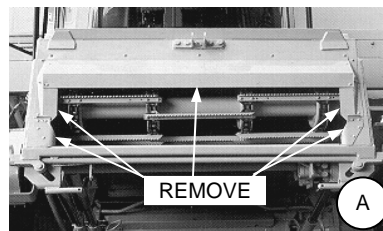


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Adapter Mounting Instructions for New Holland Combines

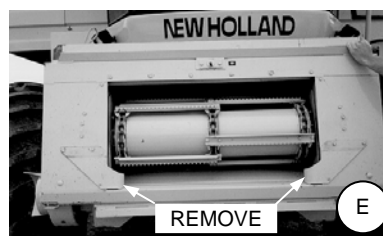
PREPARING THE TX COMBINE

1. For all TX model combines, check with Combine dealer to ensure combine is equipped with tire size, rear ballast etc. to carry larger headers.
2. **IMPORTANT:** To prevent damage to feeder house and/or feed drum and draper, remove dust shields (top, side and bottom), auger stripper bars, and closure strips from front of feeder house. (Fig. A)
3. Install feeder plate extension (G). Move feeder bottom shaft to the front hole (Cereal Position) (H).
4. Adjust the bottom shaft float to 3-1/2" (90mm). Adjust the feeder chain tension according to the gauge on the spring. (Fig. B)
5. For models with variable speed feeder house drive, set header output shaft speed to 575 rpm.
6. Attach gearbox support (item 4 on previous page) to feeder house with hardware shown. Note proper orientation for TX combine.
7. If equipped adjust feeder house faceplate rearward approximately $\frac{3}{4}$ of the way back using adjusting nuts (J).



PREPARING THE TR COMBINE

1. For TR86, TR87, TR88 model combines, check with Combine dealer to ensure combine is equipped with tire size, rear ballast etc. to carry larger headers.
2. **IMPORTANT:** To prevent damage to feeder house and/or feed drum and draper, remove dust shields (top, side and bottom), auger stripper bars, and closure strips from front of feeder house. (Fig E)
3. For models with variable speed feeder house drive, set header output shaft speed to 575 rpm.
4. Adjust front drum height to Small Grains position. See Combine Operator's Manual.
5. Adjust feeder house faceplate rearward (towards the cab) to mid-position. See Combine Operator's Manual.
6. Adjust stone ejection roll to raised position. See Combine Operator's Manual.
7. Attach gearbox support (item 4 on previous page) to feeder house with hardware shown. Note proper orientation for TR combine.



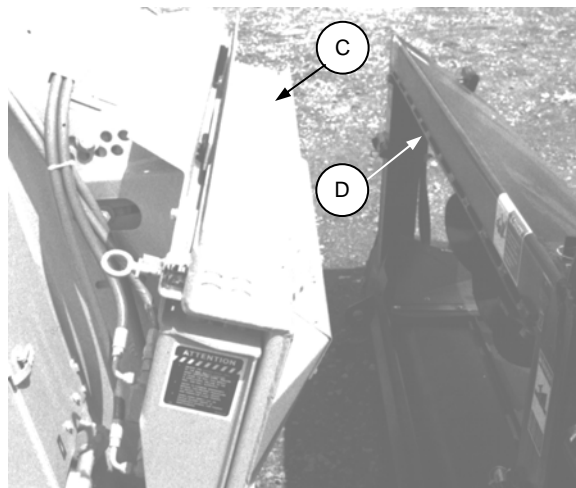
Adapter Mounting Instructions for New Holland Combines

ATTACHING ADAPTER TO COMBINE

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

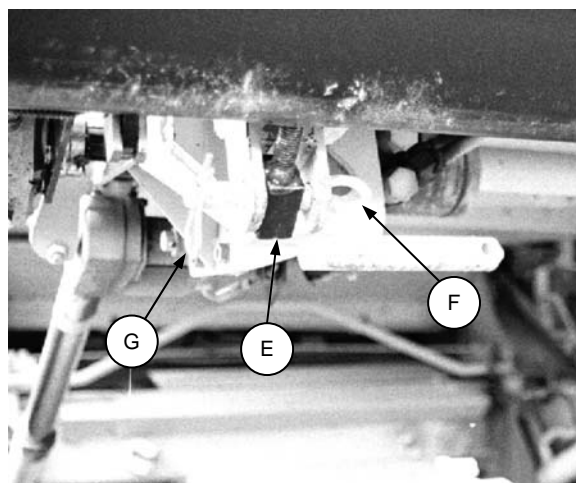


WARNING: To avoid bodily injury or death from unexpected start-up or fall of raised attachment; stop engine, remove key and engage lift cylinder stop before proceeding with hook-up.

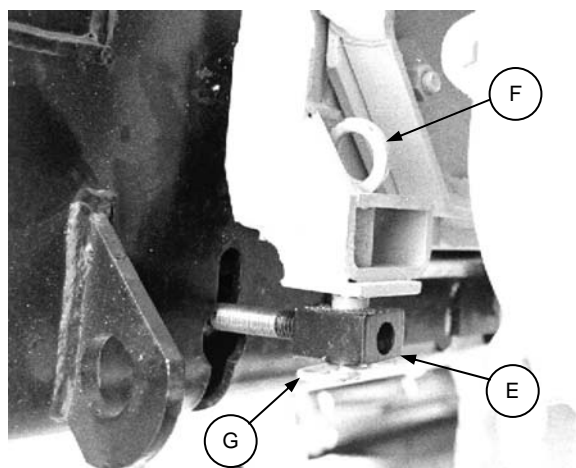


ALIGN FEEDER SADDLE UNDER
ADAPTER FRAME

3. Raise eye bolt (E) up to feeder house. Turn eye bolt (E) until pin (F) on feeder house lines up with hole in eye bolt (E).
4. Install pin (F) through feeder house frame and eye bolt (E). Lock with hair pin (G).



ENGAGE LOCK PINS - BOTH SIDES (TX)



ENGAGE LOCK PINS - BOTH SIDES (TR)

Adapter Mounting Instructions for New Holland Combines

ATTACHING ADAPTER TO COMBINE (continued)

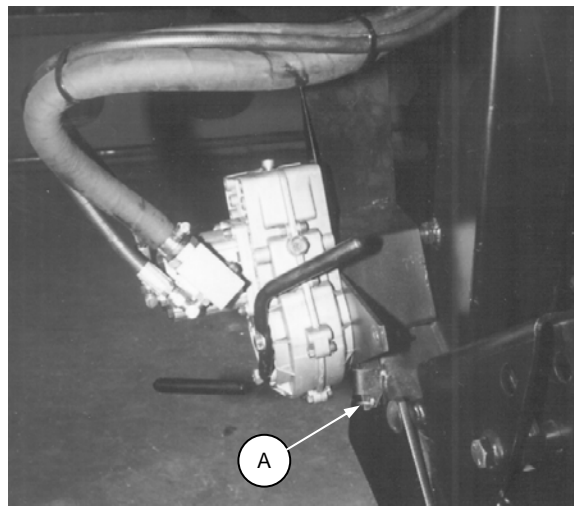
5. Install pump as follows:

NOTE: Wear gloves when handling pump.

- a. Remove pump from storage position (A) on adapter and slide pump onto R/H feeder house output shaft.

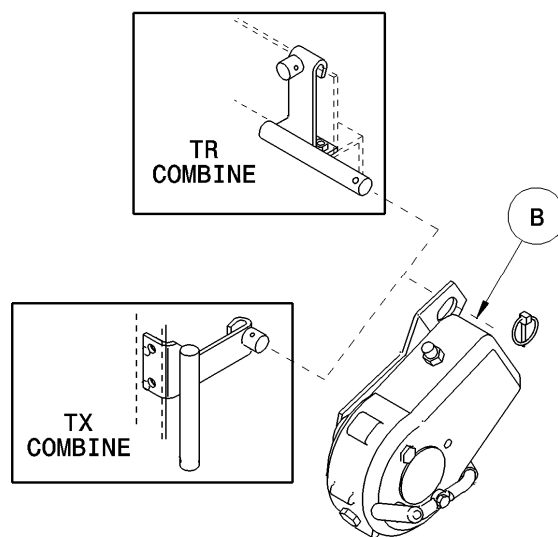
NOTE: The first time the pump is installed, hoses may have to be loosened for proper alignment. Tighten hoses after installation.

- b. Engage pump torque arm on support pin on adapter and secure with lynch pin at (B)



PUMP STORAGE ON ADAPTER

6. Float the feeder house front drum up and check for interference with adapter feed drum. If so, remove a link from the feeder chain and move the front drum back. Re-tighten chain and check clearance again.

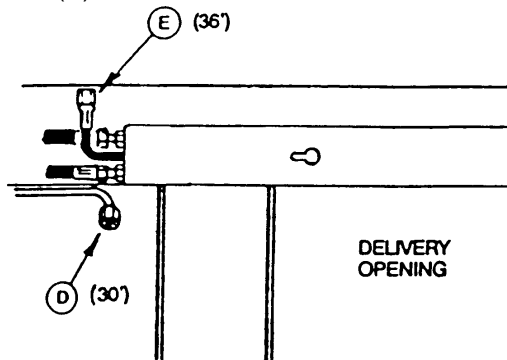


PUMP IN WORKING POSITION

Adapter Mounting Instructions for Cat Lexion Combines

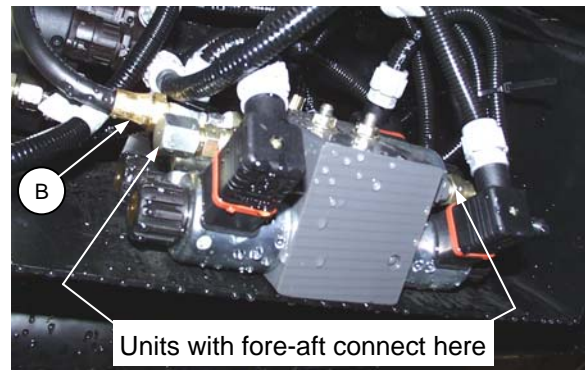
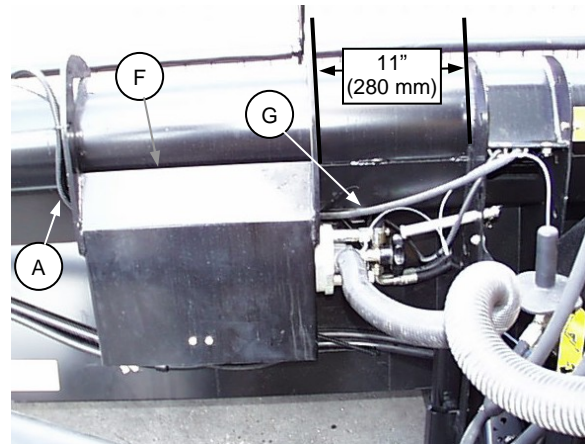
PREPARING THE HEADER

1. Prior to assembly of reel, install auto reel speed and height sensors using instructions packaged with kit. See page 67 for harness connection at multi-link. Route harness (A) from auto speed & height sensors as shown on instructions.
2. Clamp control box (F) to header tube using the $\frac{1}{2}$ x 4 inch bolt at both sides of box. Position box 280 mm (11 inches) away from left header lift leg as shown.
3. Route header reel lift hose (G) *through opening at top of control box* and connect to reel lift fitting (B). Coil excess hose inside control box cover.
962 Header only: Attach reel lift hose (from header completion package) at left of delivery opening as follows:
For 30' headers the reel lift hose connects to hydraulic line (D).
For 36' headers the reel lift hose connects to hose (E).

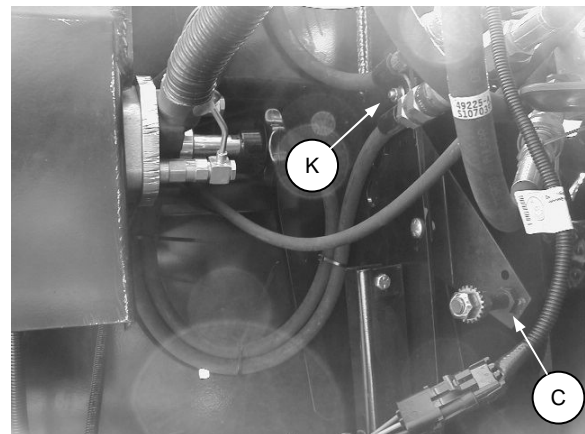


INSTALL REEL LIFT HOSE - 962

4. For newer combines with reel drive on left side of feeder house, install the Left Side Reel Drive Kit provided with the Adapter completion package. Instructions specific to this installation are packaged with the kit.
5. Install driveline support (C) to inside of left header leg with two $\frac{3}{8}$ x $\frac{3}{4}$ carriage bolts and flange nuts. **NOTE:** For 972 Headers on combines with reel drive hoses on left side of feeder house, also install reel drive hose holder (K) from Left Side Reel Drive Kit. Substitute top bolt with 1" long bolt provided in kit.
6. Attach driveline supplied with adapter to header sickle drive shaft. Secure clamp yoke to shaft with $\frac{1}{2}$ NC hardware provided.
For storage, attach other end of driveline to anchor (C).



ATTACH CONTROL BOX



INSTALL DRIVELINE STORAGE BRACKET –
(LEFT SIDE REEL DRIVE SHOWN)

Adapter Mounting Instructions for Cat Lexion Combines

PREPARING THE HEADER (continued)

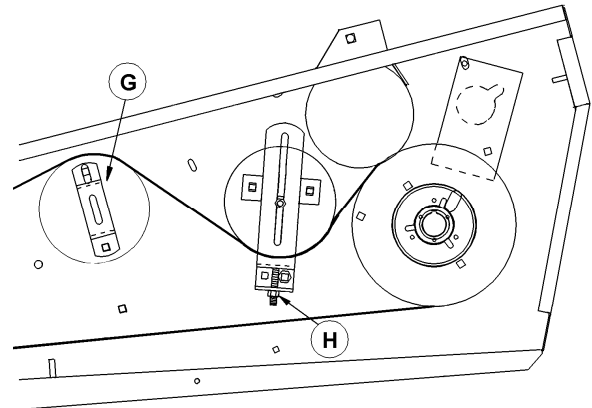
7. Prepare sickle drive as follows:

962 Header only: Replace the existing sickle drive belt with belt provided with adapter.

972 Header only: Move idler (G) to raised position shown. Belt provided with adapter is not used. Move nut (H) on idler adjusting bolt to lower position shown.

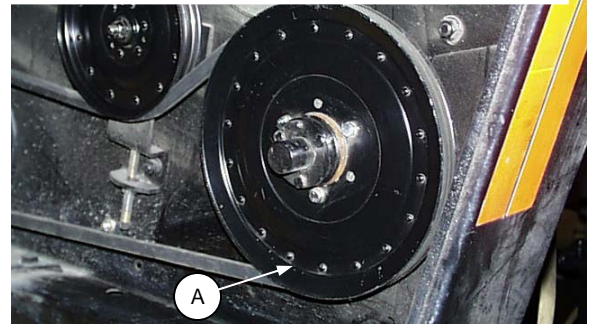
962 & 972 Single Sickle Headers: Bolt the sheet metal pulley (A) provided with the adapter on the sickle drive pulley at the left end sheet, using three 3/8 x 1 bolts with lock washers.

Double Sickle 972: See 972 Operators Manual "Unloading and Assembly" section for pulley positioning.

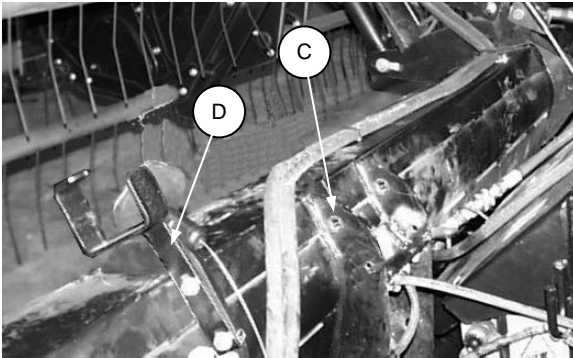


MOVE IDLER PULLEY – 972 HEADER

8. Install wiring harness connector provided with adapter into header wiring harness.
9. For 972 Headers with transport option, move hitch pole storage bracket from header leg (C) to control box (D).



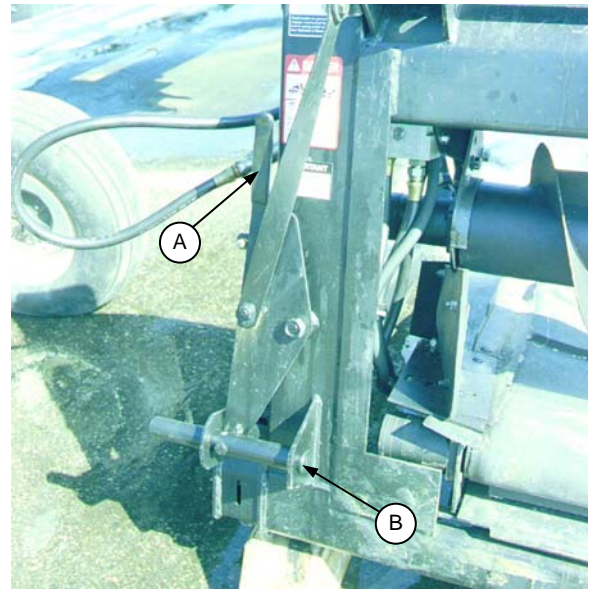
INSTALL SICKLE DRIVE PULLEY



MOVE TRANSPORT BRACKET FROM (C) TO (D)

PREPARING THE ADAPTER

1. Release spring-loaded pin and push handle (A) inward to retract lower pins (B). This also rotates upper latches to raised position.

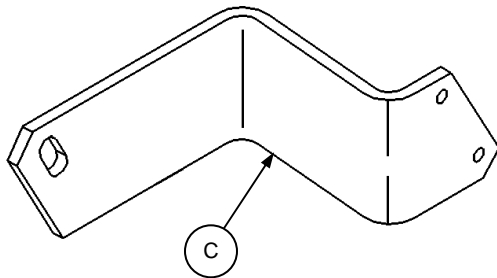


LOWER PINS RETRACTED

Adapter Mounting Instructions for Cat Lexion Combines

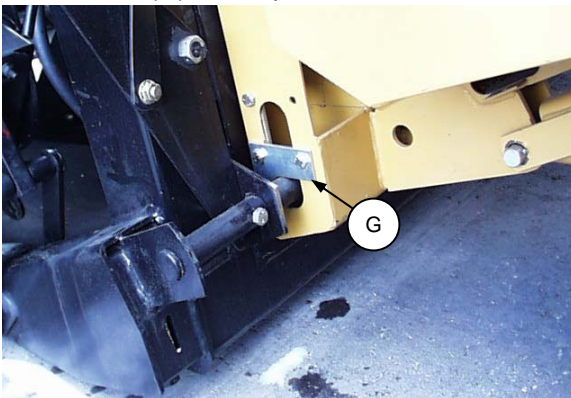
PREPARING THE COMBINE

1. Check with Combine dealer to ensure combine is equipped with tire size, rear ballast etc. to carry larger headers.
2. Combine must be equipped with reel drive pump.
3. Install pump torque arm support (D) to right side of combine feeder house using 3/8 x 1-inch flange head bolts and nuts. Use straight support (D) shown in photo for models 460/465 and 480/485. Use offset support (C) shown in illustration below for models 450/470/475.



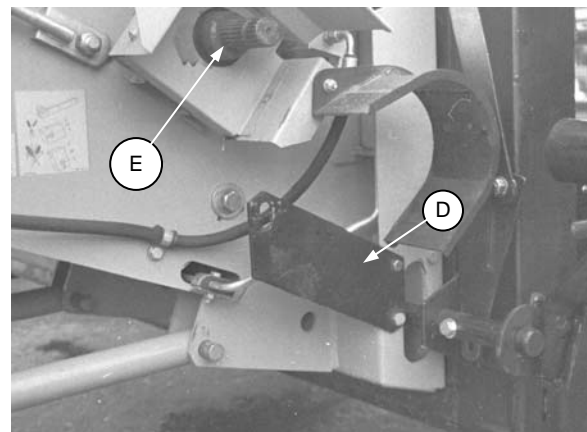
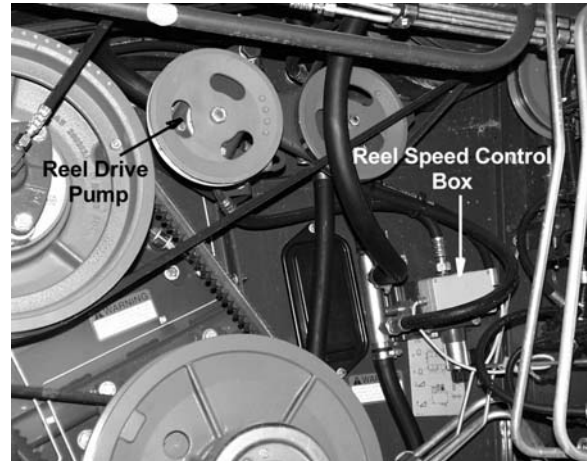
PUMP SUPPORT ARM (450/470/475 MODELS)

4. Remove dust shields (3) from feeder house.
 5. Set variable speed header drive at 750 RPM, measured at shaft (E).
 6. Check that auto-contour cylinders on the feeder house are level and showing about 1-½ inches (38 mm) of the cylinder.
- NOTE:** For CAC feeder houses, remove bars (G) at float slot, both sides. For non-CAC feeder houses, bars (G) are required.

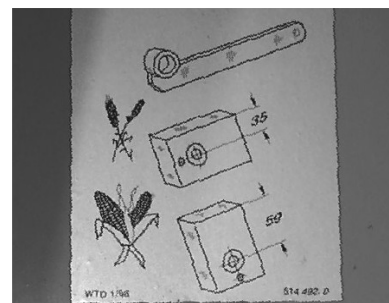
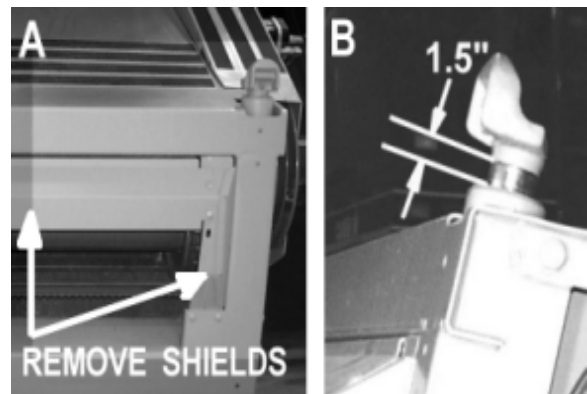


REMOVE BARS – C.A.C. FEEDER

7. Set feeder house lift cylinder springs to match weight of header.
8. Set feeder house drum to grain position as shown at right.



INSTALL PUMP SUPPORT ARM
(460/465 AND 480/485 MODELS)



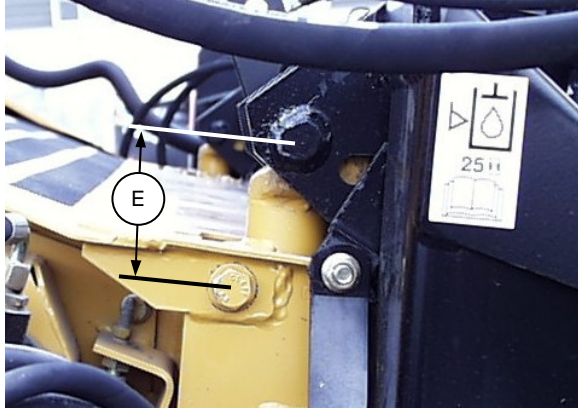
Adapter Mounting Instructions for Cat Lexion Combines

ATTACHING ADAPTER TO COMBINE

1. Slowly drive combine up to adapter until lift lugs (C) are hooked behind upper latches on adapter.

NOTE: For non-CAC feeder houses, check that dimension (E) is 148 mm (5.83"). This dimension may be 103 mm (4.05"). If so, modify header mounts per Service Bulletin 9943, or order kit B4208 from your MacDon Dealer.

2. Raise feeder house to lift adapter, ensuring lift lugs

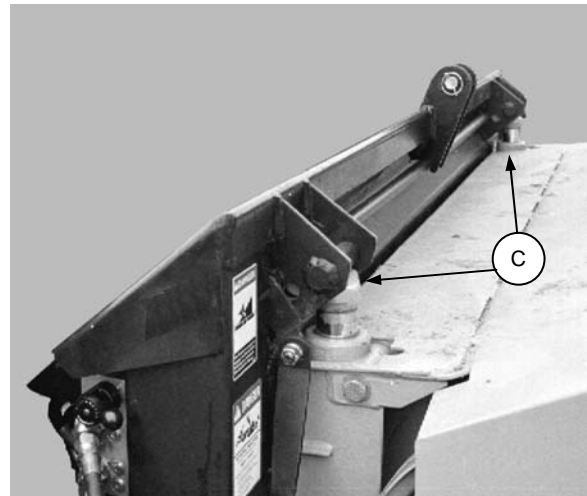


CHECK DIMENSION – NON C.A.C. FEEDER
are properly engaged. Raise adapter fully.

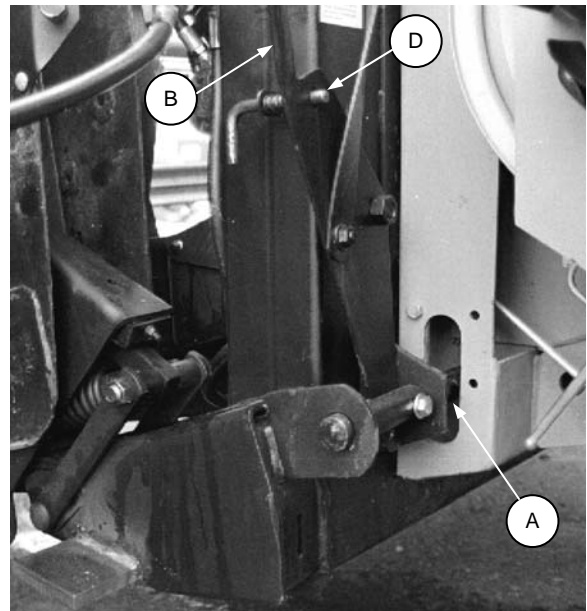


WARNING: To avoid bodily injury or death from unexpected start-up or fall of raised attachment; stop engine, remove key and engage lift cylinder stop before proceeding with hook-up.

3. Release spring-loaded pin and pull handle (B) outward to engage lower pins (A). Release spring-loaded pin to engage in slot (D).



ENGAGE LUGS BEHIND UPPER LATCHES



ENGAGE LOCK PINS

Adapter Mounting Instructions for Cat Lexion Combines

ATTACHING ADAPTER TO COMBINE (continued)

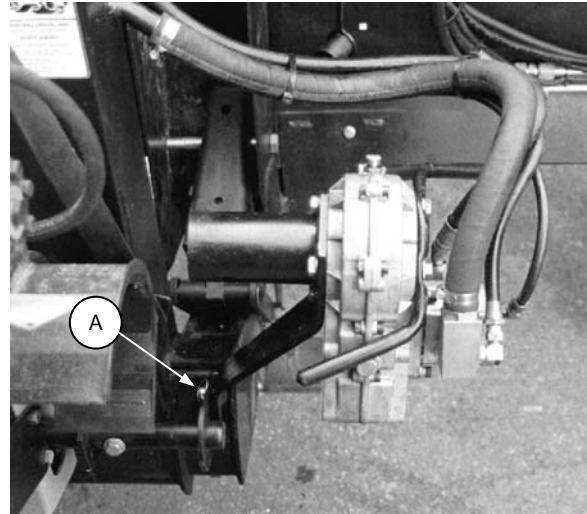
4. Install pump as follows:

NOTE: Wear gloves when handling pump.

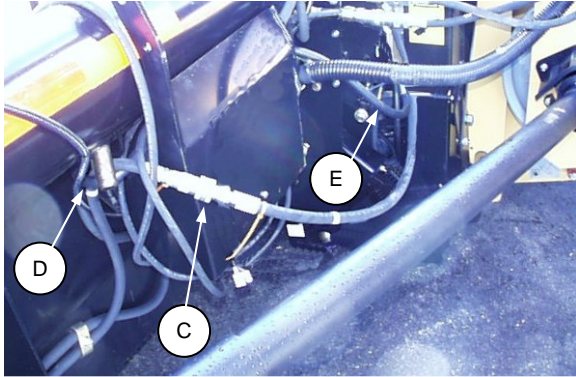
- a. Remove pump from storage position (A) on adapter and slide pump onto R/H feeder house output shaft.

NOTE: The first time the pump is installed, hoses may have to be loosened for proper alignment. Tighten hoses after installation.

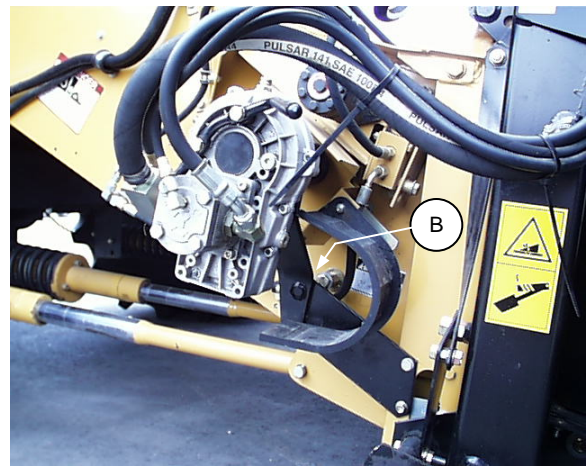
- b. Engage pump torque arm on support arm on combine and secure with lynch pin at (B).
5. Tighten combine feeder chain and check clearances.



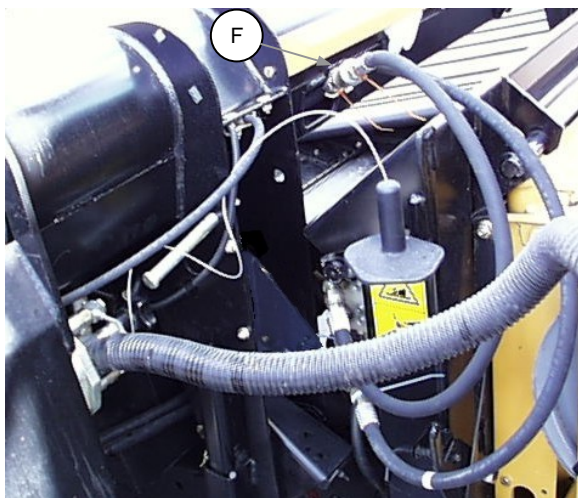
PUMP STORAGE ON ADAPTER



DRAPER DRIVE HOSE CONNECTIONS – 962
Pass draper drive pressure hose (C) through loop of reel lift hose at (D) to prevent hoses dragging. Pass draper drive return hose (E) between header and control box to connect at adapter.



PUMP IN WORKING POSITION



DRAPER DRIVE HOSE CONNECTIONS – 972
Draper drive pressure hose connects at (F)

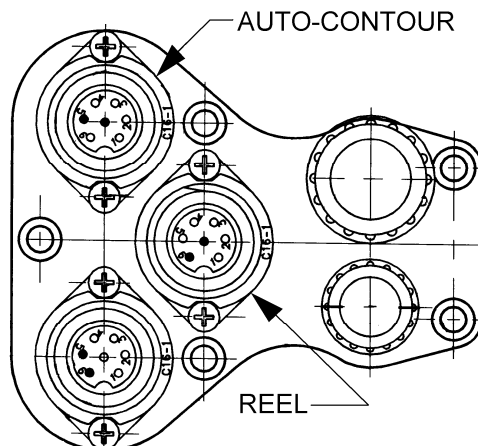


COMBINE TO HEADER CONNECTIONS –
RIGHT SIDE REEL DRIVE ON 972 SHOWN

Adapter Mounting Instructions for Cat Lexion Combines

TROUBLESHOOTING

<u>SYMPTOM</u>	<u>PROBLEM</u>	<u>SOLUTION</u>	<u>REF.</u>
Reel will not lift but hydraulic lines from combine flex when up/down button is pressed.	Multi-Link connector not threaded on completely or too loose.	Tighten multi-link connector.	
	Pressure and return improperly connected.	Correct hydraulic hose connections: The multi-block port closest to the hanger hook connects to the "T" port on valve block..	
Reel speed shows 0.0 in cab.	Reel speed sensor not picking up on sprocket.	Set sensor as follows: Turn sensor in until it touches a sprocket tooth, then back it off $\frac{3}{4}$ of a turn. If sensor is unable to touch sprocket, bend bracket as required.	
	Reel speed sensor is improperly wired.	Plug wiring harness from reel sensors into the middle port of the three ports in the multi-block. See below	
Unable to manually change reel speed, but getting a reel speed read-out in the cab.	Fuse blown in combine.	Check fuses carefully.	
Fuse in combine continues to blow when changing reel speed or height	A wire is grounding out.	Inspect header sensors and complete wiring harness	
		Disassemble multi-block and inspect internal wires.	
		Check wiring in combine.	



AUTO REEL SPEED/HEIGHT AND AUTO CONTOUR PORT CONNECTIONS

Attaching Adapter to Header Without Combine

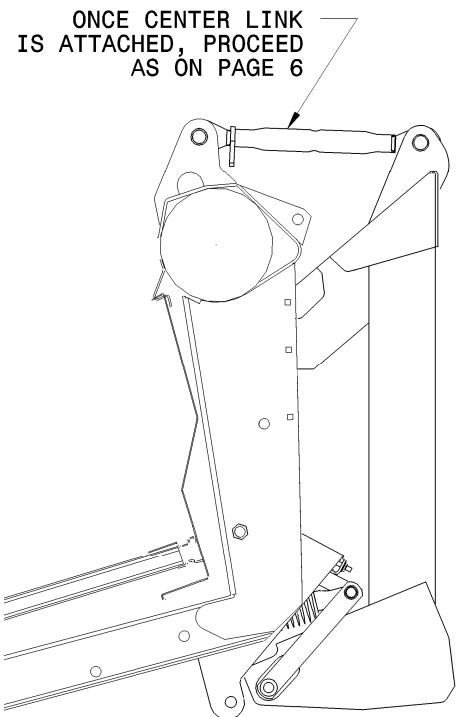
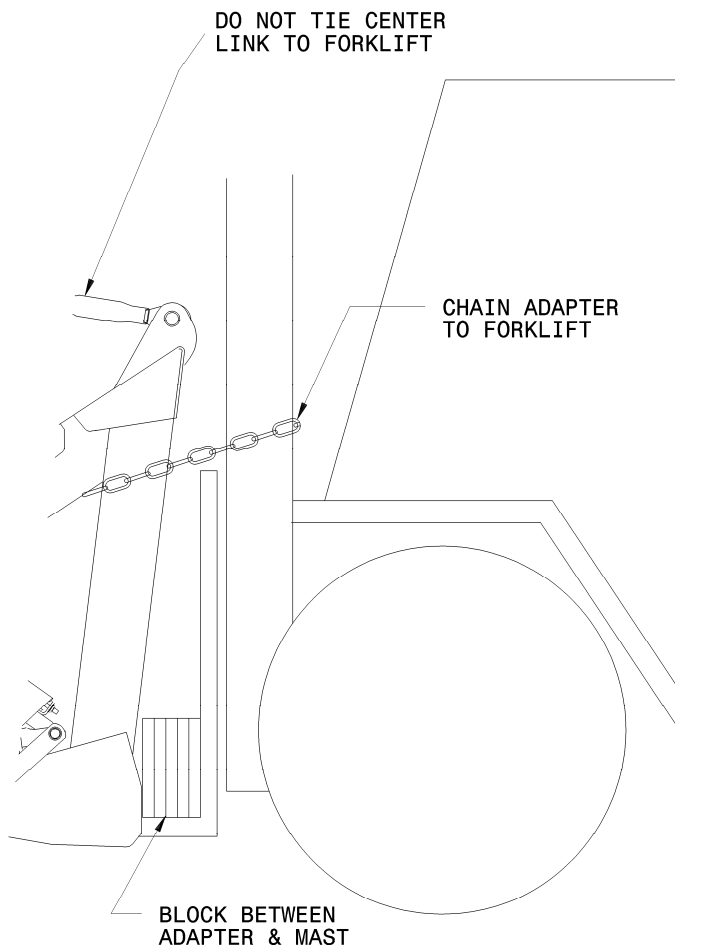
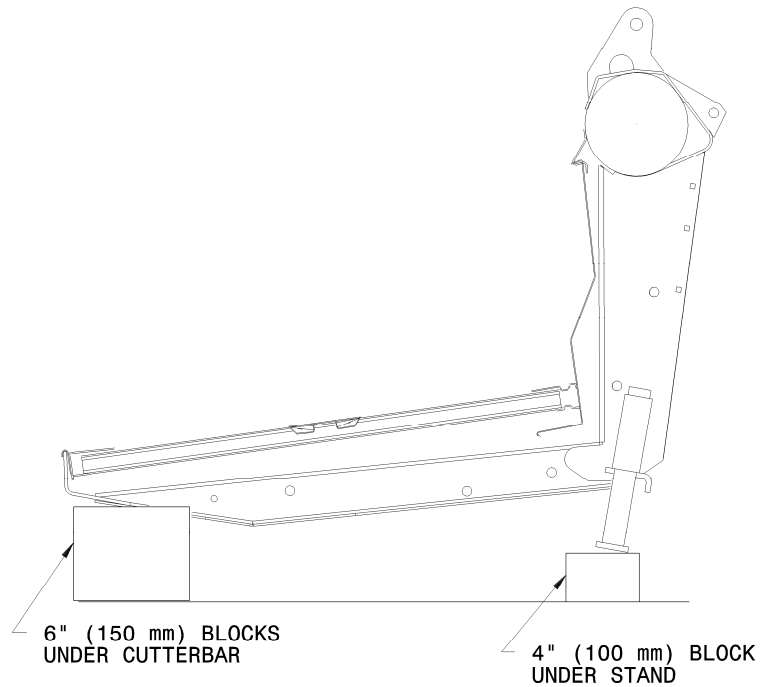
1. Block header as shown, with 6" (150 mm) blocks under cutterbar (just outboard of center legs), and a 4" (100 mm) block under header stand.

NOTE: When placing block under stand, position it outboard, so that viewed from back of header the block does not extend inboard where it will interfere with the adapter entering the header leg.

2. Chain the adapter to forklift mast and block at bottom between adapter and mast as shown below.

NOTE: Do not tie center link to forklift.

3. Drive forklift forward to insert adapter into header. If necessary, extend center link to allow connection to header. Readjust center link length after hook-up. Once the center link is attached, proceed with attachment as described on page 6.



116006

FLOAT SPRING REMOVAL or INSTALLATION

The adapter is equipped with 8 float (leaf) springs per side. There are two situations where it may be necessary to change the number of leaf springs per side:

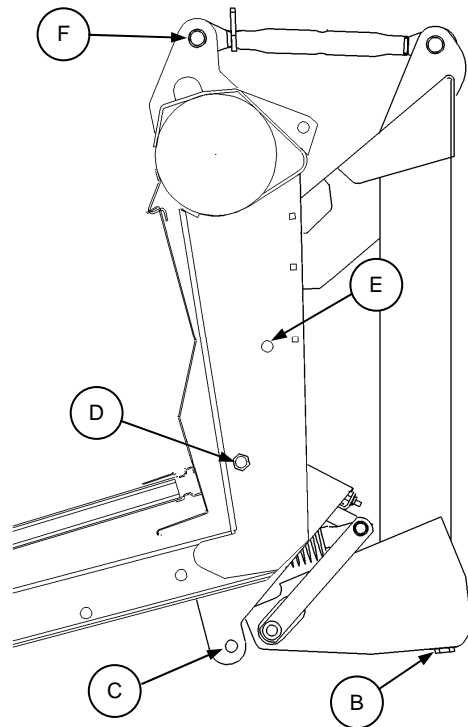
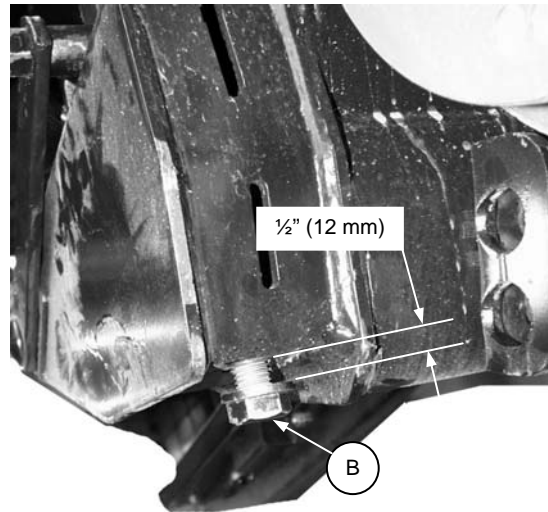
- A. For the 21' 972 Header, 8 springs may cause header float to be excessive even when the float adjustment screw is fully backed off. In this case it may be necessary to remove the third float spring from the top on both sides of the adapter.
- B. To ensure adequate float for 30' 972 double knife and 36' 972 single knife & double knife headers, a 9th float spring per side should be installed. The springs (provided with the header) are duplicates of the third float spring from the top on both sides of the adapter. It may be necessary to cut away a portion of the float spring pockets on the adapter frame to make room for the additional spring.

To remove or install float springs, proceed as follows:



CAUTION: Spring removal and installation must be done with adapter removed from header and leaf springs unloaded (stored energy released). The first steps of this procedure will safely unload leaf spring energy after removing adapter from the header.

1. Parked on a level area, raise header to maximum height and engage stops on feeder house cylinders.
2. Back off bolt (B) until 1/2" (12 mm) thread is exposed. This unloads tension on the leaf springs. Repeat at other side of adapter.
3. Lower jack stand at left header leg.
4. Disengage feeder house cylinder stops and lower header to the ground. Raise reel to maximum height. Stop engine.
5. Engage reel props. Disconnect all hydraulic lines, wiring harness, and driveline to isolate header from adapter and combine. (Remove plastic wear strip from feed pan if necessary.)
6. Remove 3/4 x 7-1/2" bolts (D) which lock adapter into header. Do not lock out float by installing any pin at position (C). Store the float lock-out pins at (E).
7. Raise header enough to position 2x4 blocks (40 mm) under cutterbar at outward sides of adapter.
8. Lower header onto blocks. Remove center link pin (F). It may be necessary to rotate link to allow removal.



FLOAT SPRING REMOVAL or INSTALLATION

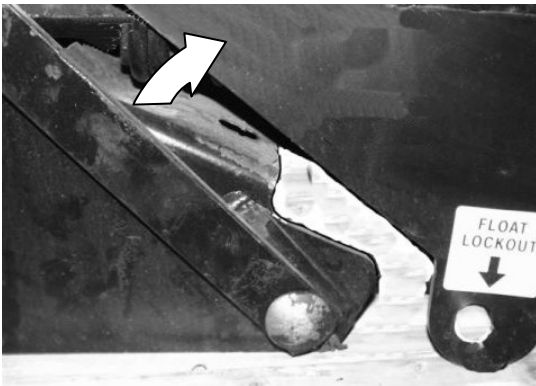
9. Lower adapter to clear header and slowly back adapter out of header.
10. Raise adapter to comfortable working height and support with jack stands.
11. Remove bolt (A) at front of leaf spring assembly.
12. Swing up tip of frame leg to clear springs and place a stand to support leg.
13. Completely remove bolt (B), which was loosened in Step 2.

NOTE: Step 14 refers to removing an existing leaf spring for 21' 972 Headers, For adding a 9th leaf spring, go to Step 15.

14. Remove top three springs from assembly until third leaf spring can be completely removed. Discard third spring from top and reinstall top two springs.

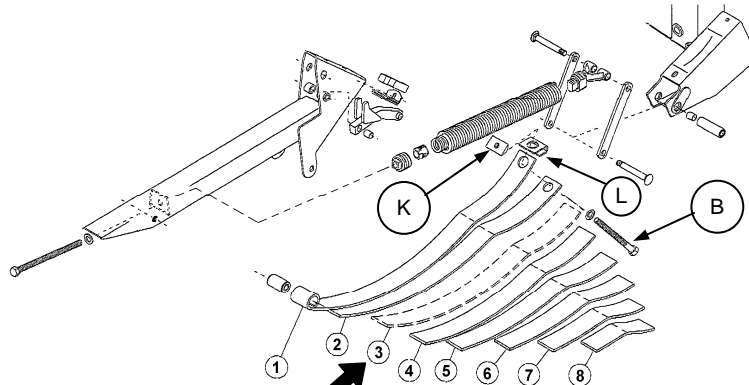
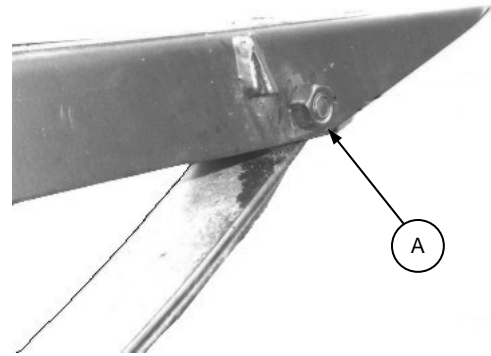
NOTE: Steps 15 & 16 refer to adding a 9th leaf spring for 30' & 36' headers. For 21' Headers, go to Step 17.

15. Remove all leaf springs from frame pocket. Pivot the frame leg forward to expose frame pocket. Cut away ½" (12 mm) of material at (H). **IMPORTANT:** Some 2002 Production combine adapters have had the ½" of material removed from the frame pocket at the factory. Before cutting away any material from the frame pocket, be sure the entire slot (M) is visible. If some of the slot has been cut away, do not

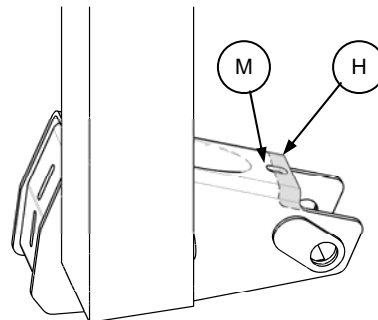


PIVOT FRAME LEG UP TO EXPOSE POCKET

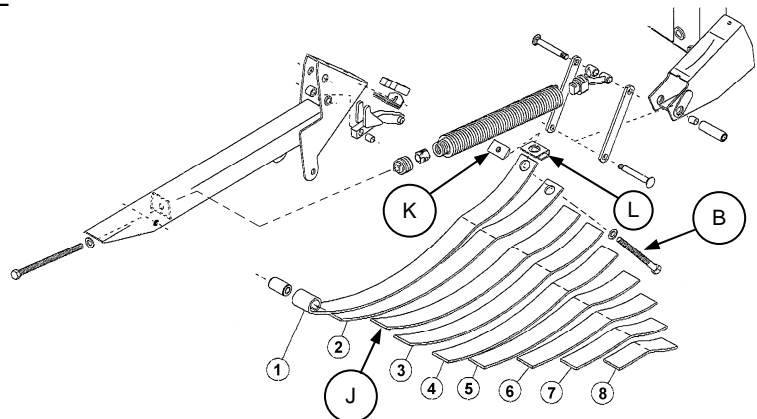
- remove any further material.
16. Re-assemble leaf springs, including the extra spring (J) positioned between existing springs 2 & 3 as shown at right.
17. Carefully reinstall float adjusting bolt (B) into special nut (K) with tip of leaf springs raised and looking in inspection slot at rear of frame. Be sure clip (L) is engaged on two top springs. Reattach front of leaf spring assembly with bolt (A).
18. Repeat steps 11 to 17 at other side of adapter.
19. Re-install adapter into header and adjust float. See "Header Flotation" in Operation section.



REMOVING 3rd SPRING – 15' 972 HEADER



REMOVE ½" (12 mm) FROM FRAME POCKET IF FULL SLOT (M) IS VISIBLE



ADDING 9th SPRING – 30' & 36' HEADERS

Installing Float Range Limiters for John Deere 50 Series, Contour Master & New Holland TR Combines

Float range limiter shims must be installed on the adapter when used with John Deere 50 Series* & Contour Master* or New Holland TR** Model Combines to prevent damage to retracting tine drum and/or header side drapers caused by contact when operating at flat header angles.

* **NOTE:** John Deere 50 Series and Contour Master have one float limiter shim per side factory installed.

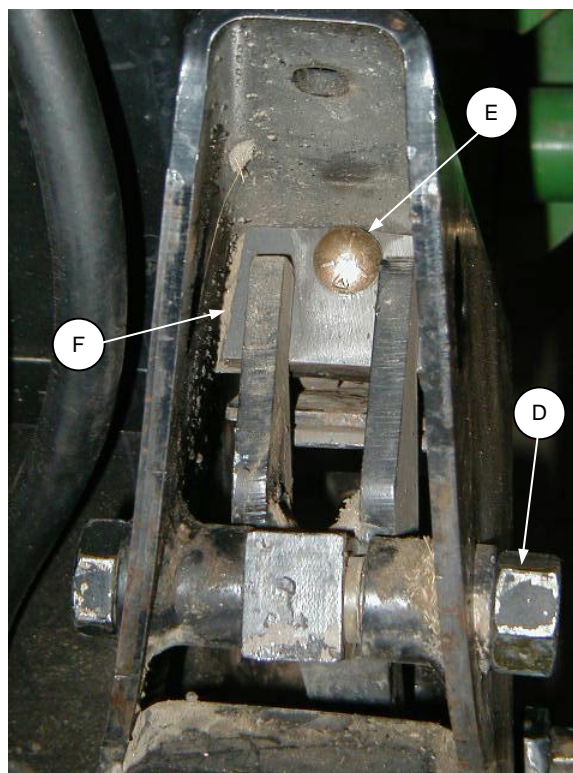
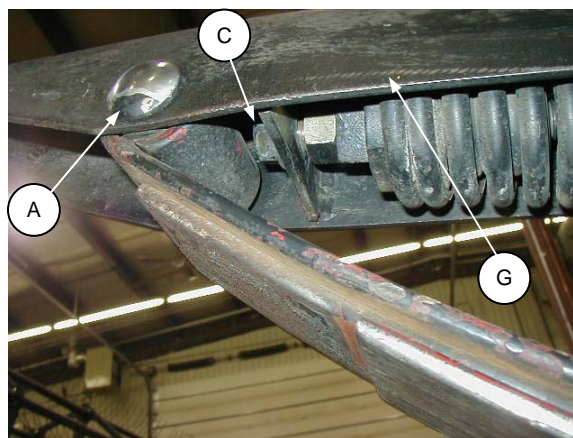
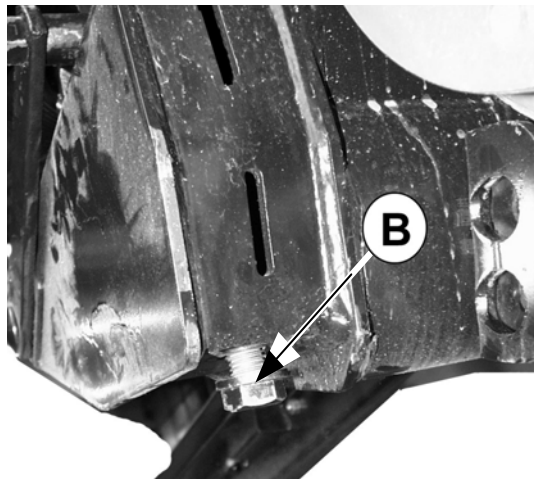
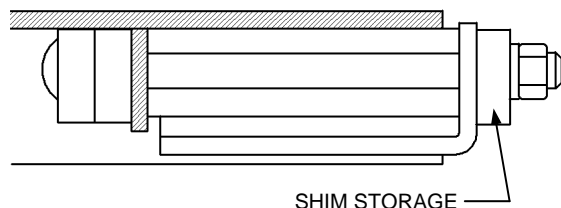
** **NOTE:** On the New Holland TR, the tine drum can be moved back toward the feeder house to reduce the number of shims required to eliminate the contact noted above. If this is done, check clearance to the feed chain before operating. (See initial positioning of tine drum in the Assembly section.)

Install float range limiter shims as follows:

1. Remove the adapter from the header with the leaf springs unloaded (stored energy released). Follow the procedure detailed in Steps 1 – 11 on previous two pages.
2. Back off the float adjustment screw (B) until hardware (A) at front of springs loosens.
3. Remove hardware (A), and raise float leg (G) away from the leaf spring assembly.
4. Loosen coil spring by removing front bolt (C).
5. At back end, remove hardware securing top end of float arm at (D).
6. Remove 4 ½" long bolt at (E) retaining the angle which captures the rubber upper stops.
7. Install two or three shims (F) as desired (see note below for details) and reassemble the upper stop assembly using the 5 ½" long bolt at (E) in place of the 4 ½" .
8. Reassemble top end of float arm, ensuring bushing remains in hole in arm.
9. Reassemble coil spring and leaf springs to float leg.
10. Repeat procedure at other adapter float leg.
11. Engage float lock-out pins by installing adapter into header or compressing leaf springs. See spring compression procedure in Tech Manual.

NOTE:

- Two shims provides 6 inches (150 mm) of float, but when operating at flat header angles (less than 1" (25 mm) of thread at both ends of mechanical center link), damage can occur to the side drapers from contact with the retracting tine drum supports. This will occur when the drum is moved forward because of the dust shield on the feeder house.
- Three shims limits the float to 4" (100 mm) and ensures no contact between drum supports and side drapers at the flattest header angles.
- If two shims are used, store the third shim between the nut and upper stop angle as shown below.



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