

Shelbourne

REYNOLDS

CVS, CSD, RSD, & RVS

NORTH AMERICA

OPERATORS MANUAL

2018 AND ON - ORIGINAL INSTRUCTIONS



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STRIPPER HEADER

MACHINE IDENTIFICATION

STRIPPER HEADER SERIAL NUMBER _____
STRIPPER HEADER MACHINE NUMBER _____
ADAPTOR PLATE ASSEMBLY **196555** _____
DRIVE KIT **196549** _____
HYDRAULIC FITTING KIT **KIT-** _____
OPTIONAL KITS _____

The following manuals can be ordered from your Shelbourne Reynolds dealer or downloaded from the Parts and Service section of the Shelbourne Reynolds website

www.shelbourne.com

STRIPPER HEADER PARTS MANUAL	MAN- _____	
PRE-DELIVERY & SETUP MANUAL	MAN-01905	
DRIVE & ADAPTOR PLATE MANUALS	Massey Ferguson	MAN-03172
	Claas / CAT	MAN-03173
	John Deere	MAN-03174
	New Holland	MAN-03175
	Laverda	MAN-03176
	Gleaner / Challenger	MAN-03177
	Case IH	MAN-03178

Use the following procedure to ensure the correct parts are ordered for the machine.

ALWAYS QUOTE THE MACHINE AND SERIAL NUMBERS WHEN ORDERING SPARE PARTS

Refer to the front pages of the parts list section (machine assemblies) and select the correct machine assembly, matching the machine number above.

Use the sub assembly numbers and descriptions to find the area of the machine for which your part is required. The year and/or serial number of the machine may determine the correct sub assembly. Find the sub assembly parts listing using the sub assembly number. The number will be printed in the top left-hand corner; the sub-assemblies are in numerical order.

Having found the correct parts list, you will find the corresponding drawing by either looking at the facing page or progressing through the manual to the next drawing. The drawings indicate the components by item numbers, which you will find, are repeated in the left-hand side of your parts listing, and therefore referring to the correct part.

DEALER PRE-DELIVERY / INSTALLATION CHECK AND WARRANTY REGISTRATION – STRIPPER HEADER
DEALERS PRE-DELIVERY / INSTALLATION CHECK
IMPORTANT Δ

All items listed below must be checked, and adjusted if necessary. The person conducting the inspection should tick each item in the space provided, indicating whether or not adjustments were required. In the event of additional work being needed, details should be given in the additional work / discrepancy box, located at the bottom of this sheet, or on a separate sheet if required. When the inspection is complete, THIS FORM MUST BE COPIED & RETURNED TO: - Shelbourne Reynolds within 30 days of delivery to customer, otherwise the invoice date to the dealer will be deemed to be the start date for the warranty period.

SERIAL NUMBER: MACHINE NUMBER:

MODEL: COMBINE MODEL:

PLEASE TICK APPROPRIATE COLUMN FOR EACH ITEM UNDERTAKEN

Dealer Pre Customer Delivery / Installation / Commissioning	Checks OK	Adjusted
Is the header set correctly for the combine?		
Is the combine set up for the header?		
Install header onto the combine.		
Install the monitor kit into the combine.		
Check monitor works correctly – Including the alarm function.		
Check the auger is adjusted correctly.		
Ensure the auger chain is tensioned correctly.		
Check VS/HTD drive is adjusted correctly		
Ensure the spare pulley is fitted to right hand end of header (CSD, RSD, XCS & XRS only).		
Remove the transport and forklift brackets from the header.		
Check adaptor plate, ensure header is pitched correctly.		
Ensure the header is greased.		
Check gearbox oil levels.		
Adjust skids.		
Install crop markers.		
Check in general the tightness of fasteners.		
Ensure that all safety guards and decals are fitted.		
Run up header, on CVS, RVS and XCV, adjust rotor speed from minimum to maximum.		
Check marker lights work correctly (if fitted).		
Check crop deflector works correctly, fully up and fully down, and height indicator is fitted.		
Adaptor plate turnbuckles adjusted, header tilts freely (XCV, XCS & XRS only).		
Adaptor plate springs adjusted, header sits level (XCV, XCS & XRS only).		
Gauge wheels fitted (XCV & XCS only).		
Crop deflector center support adjusted (XCV42 & XCS42 only)		
Check paint work and finish.		
Ensure that an operator's manual is supplied with the machine.		
Additional Comments:		
Dealer Representative's Name:		Date:

Customer Instruction	Actioned
Explain the correct setting & operation of the machine to the customer.	
Ensure the maintenance schedule is explained to the customer.	
Ensure the oil level, lubrication & grease points are indicated to the customer.	
Ensure all safety precautions & warning decals are explained to the customer.	
Ensure the warranty policy is explained to the customer.	
Ensure that the operator's manual is handed to the customer.	
Additional Comments:	
Dealer Representative's Name: Date:	

For specific details please refer to the operator's manual.

TERMS AND CONDITIONS OF SALE AND WARRANTY

GENERAL

- 1. Read these entire Terms and Conditions of Sale and Warranty before using this product. If the terms are not acceptable, return the product at once, unused, and the purchase price will be refunded.**
- 2. New machine warranty** - Shelbourne Reynolds Engineering Ltd. and Shelbourne Reynolds Inc. (Shelbourne) warrant, for 12 months after the date of first use by the original purchaser of a new Stripper Header from Shelbourne or authorised Shelbourne dealer, that this product shall be free from defects in material, or workmanship. Under this warranty, Shelbourne will repair or replace, at its option, any covered part that is found to be defective during the applicable warranty term. Damage caused to the header by ingestion of foreign objects (i.e. non-harvestable crop), including no-till residue such as corn stalks, will be considered wear and tear and is not covered under this warranty. Normal wear and tear is excluded. Warranty service must be performed by a dealer or service center authorized by Shelbourne.
- 3.** This warranty will become available to you when you have paid for the equipment and returned a completed Dealer Pre-Delivery / Installation and Warranty Registration Form (provided at the beginning of this manual).
- 4.** This warranty is transferable to subsequent owners, provided the machine is re-registered with Shelbourne and delivered, serviced, and inspected in accordance with Shelbourne's recommendations for a new machine. To re-register, please contact your nearest Shelbourne dealer (see www.shelbourne.com/5/dealer-locator) or call Shelbourne at (785) 462-6299.
- 5. New parts warranty** - Shelbourne further warrants that if any genuine Shelbourne part proves to be defective in material or workmanship within 6 months of fitment by an authorised Shelbourne dealer Shelbourne will repair or replace the defective part without charge. Damage caused to the header by ingestion of foreign objects (i.e. non-harvestable crop), including no-till residue such as corn stalks, will be considered wear and tear and is not covered under this warranty.

USE AND MAINTENANCE

- 6.** To maintain the benefit of the warranty throughout the 12-month period, you must have the machine serviced in accordance with Shelbourne's recommendations and use the machine properly. You must provide the machine for inspection, and if, upon inspection, the machine appears to have been either misused, overloaded, improperly operated, neglected, not properly maintained, altered, or repaired without Shelbourne's consent, the warranty will not be valid. (If you require any guidance as to use, please contact your dealer.)

MAKING A WARRANTY CLAIM

- 7.** If you discover a defective product or part, you should contact the dealer from which you purchased the product within seven days of discovery. **DO NOT USE**

THE PRODUCT AFTER DISCOVERY OF THE DEFECT. Failure to observe either of these obligations will invalidate the warranty as applied to that defect. Shelbourne will not be liable for any repairs carried out without its prior consent to the work being done. The submission of a claim is not a guarantee of payment.

8. The dealer will notify Shelbourne of your claim. If investigation reveals a defect covered by this warranty, Shelbourne will replace or repair (at Shelbourne's sole discretion) the defective part or product. Alternatively, Shelbourne may arrange for the dealer to perform this work.
9. Any decision reached by Shelbourne (including whether a warranty claim is valid and, if so, what remedial action is proper) is final. Any parts on which a warranty claim is allowed must be returned to Shelbourne if Shelbourne requests and if so, such parts become the property of Shelbourne.

DISCLAIMERS OF WARRANTY AND LIMITATIONS OF LIABILITY

9. **OTHER THAN THE EXPRESS WARRANTY PROVIDED ABOVE, THERE ARE NO EXPRESS WARRANTIES ASSOCIATED WITH THIS PRODUCT. TO THE EXTENT PERMITTED BY STATE LAW, NEITHER SHELBOURNE NOR ITS DEALERS MAKE ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**
10. **TO THE EXTENT PERMITTED BY STATE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SHELBOURNE AND ITS DEALERS, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES, OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY, STATUTE, OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE REPAIR OR REPLACEMENT AS OUTLINED ABOVE. TO THE EXTENT PERMITTED BY STATE LAW, NEITHER SHELBOURNE NOR ITS DEALERS SHALL BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

ARBITRATION

11. **MANDATORY ARBITRATION OF DISPUTES**
 - (a) **EXCEPT AS SPECIFICALLY PROVIDED BELOW, ANY CLAIM, CONTROVERSY, OR DISPUTE OF ANY KIND BETWEEN YOU AND SHELBOURNE AND/OR ITS EMPLOYEES, AGENTS, OR DEALERS, WHETHER BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY, STATUTE, OR OTHERWISE, WILL BE RESOLVED BY FINAL AND BINDING ARBITRATION AS PRESCRIBED IN THIS SECTION 11. SUCH DISPUTES WILL NOT BE RESOLVED BY A JUDGE OR JURY IN COURT.**
 - (b) **NO DISPUTE WITH SHELBOURNE MAY BE JOINED WITH ANOTHER LAWSUIT, OR IN AN ARBITRATION WITH A DISPUTE OF ANY OTHER PERSON, OR RESOLVED ON A CLASS-WIDE BASIS.**

(c) Notwithstanding the above, you have the right to take any dispute that qualifies for small claims court to such small claims court.

(d) The arbitration process established by this Section 11 shall be governed by the Federal Arbitration Act (FAA), 9 U.S.C §§ 1-16. The arbitration shall be conducted under the Commercial Arbitration Rules of the American Arbitration Association (AAA), or as otherwise agreed by the parties. If an arbitration hearing is necessary, it will be conducted in Denver, Colorado by one arbitrator selected under AAA rules by the parties, cooperating with one another in good faith. Information about the arbitration process and the AAA arbitration rules and fees are available at www.adr.org.

(e) Any issues or disputes regarding the applicability, validity, or scope of this Section 11 shall be resolved by binding arbitration pursuant to AAA procedures.

(f) Any required fees and costs will be paid by the parties as provided by AAA rules or as required by applicable law, but the arbitrator will have the power to apportion such costs as he or she deems appropriate.

(g) The arbitrator's decision and award shall be final and binding, and judgment on the award rendered by the arbitrator may be entered in any court with jurisdiction.

(h) Any arbitration shall remain confidential. Neither you nor Shelbourne may disclose the existence, content, or results of any arbitration or award, except as may be required by law, or to confirm and enforce an award.

MISCELLANEOUS

12. No person or persons are authorized to alter, modify, or enlarge these Terms and Conditions on behalf of Shelbourne.
13. On occasion, we may, to preserve goodwill, repair or replace parts even though they are not defective. Accordingly, Shelbourne's agreeing to repair or replace a part cannot in any circumstance be deemed an admission that it was defective.
14. Shelbourne shall not be liable for any failure to comply with any part of these warranties where such failure is due to circumstances beyond its reasonable control, including difficulty in obtaining materials or replacement parts.
15. Shelbourne and its dealers reserve the right to make a reasonable charge for additional work done at your request that does not relate to a defective product or part.

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SECTION 1

INTRODUCTION

1.1 FOREWORD

This manual will assist the operator in setting, operating and servicing the Shelbourne Reynolds (Shelbourne) **CVS, CSD, RSD and RVS** Stripper Header as well as providing important safety information. This manual should be used in conjunction with the combine manufacturer operator's manual (CMOM).

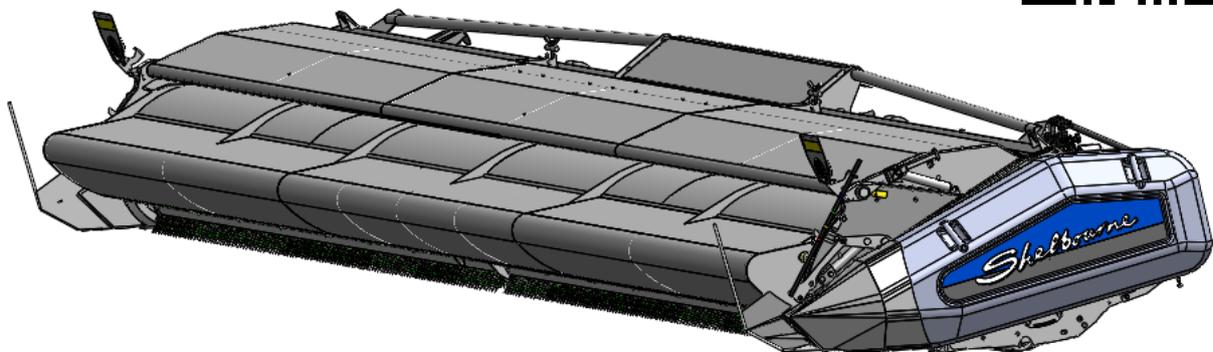
CAREFULLY READ THIS MANUAL BEFORE ATTEMPTING TO SET OR OPERATE THIS MACHINE

Keep this manual handy for frequent reference and to pass onto new operators or owners. A storage tube for this manual is located on the rear of this machine.

THIS MANUAL DOES NOT PROVIDE INFORMATION FOR UNLOADING, UNSTACKING AND ASSEMBLING THIS MACHINE. CONTACT SHELBOURNE FOR INFORMATION ON THIS.

The Stripper Header has been tested in a wide range of crops and crop conditions. The use of this manual, the Shelbourne Combine Settings Guide and the CMOM should ensure the Stripper Header and combine harvest efficiently and obtain favorable throughputs and loss levels in particular crops and field conditions.

The Shelbourne Combine Settings Guide is available as an app, the link to download it can be found at www.shelbourne.com/combinesettings, or by scanning the QR code below.



1.2 IMPROVEMENTS AND CHANGES

Shelbourne is continually improving its products to meet the customers' needs and therefore Shelbourne reserves the right to make improvements and changes when practical to do so, without incurring any obligation to make changes and additions to equipment which has been sold previously.

1.3 SERVICE PARTS

Use genuine Shelbourne spare parts on Shelbourne machinery to ensure maximum life and best performance. These are available through your Shelbourne dealer.

When ordering spare parts always quote the model, serial number and machine number.

1.4 MACHINE IDENTIFICATION

The serial and machine numbers of the Stripper Header are located on the rear left hand corner of the machine.

The image shows a black identification plate with white text and fields. At the top, the 'Shelbourne' logo is written in a cursive font, with 'REYNOLDS' in a bold, sans-serif font below it. Underneath, the company name 'SHELBOURNE REYNOLDS ENGINEERING LTD, STANTON, SUFFOLK, UK. IP31 2AR.' is printed, along with the telephone number 'TEL: +44 (0)1359 250415' and the website 'WWW.SHELBOURNE.COM'. A CE mark is visible on the left side. The plate contains several input fields for identification: 'SERIAL NO.' and 'TYPE M/C NO.' at the top; 'DESIGNATION', 'YEAR', 'MAX TOTAL WEIGHT', 'UNLADEN WEIGHT', 'FRONT AXLE LOAD', 'REAR AXLE LOAD', and 'DRAWBAR MAX LOAD' in the middle and bottom sections. A central instruction reads 'FOR SPARES QUOTE BOTH SERIAL NO. AND MACHINE NO.'. At the bottom right, the contact information for 'SHELBOURNE REYNOLDS INC.' is provided, including 'PO BOX 607, COLBY, KANSAS 67701, USA. PH: 785-462-6299'. Two circular punch holes are located on the left and right sides of the plate.

Shelbourne
REYNOLDS

SHELBOURNE REYNOLDS ENGINEERING LTD, STANTON, SUFFOLK, UK. IP31 2AR.
TEL: +44 (0)1359 250415 WWW.SHELBOURNE.COM

CE

SERIAL NO. TYPE M/C NO.

FOR SPARES QUOTE BOTH SERIAL NO. AND MACHINE NO.

DESIGNATION YEAR

MAX TOTAL WEIGHT UNLADEN WEIGHT

FRONT AXLE LOAD REAR AXLE LOAD

DRAWBAR MAX LOAD

SHELBOURNE REYNOLDS INC.
PO BOX 607, COLBY,
KANSAS 67701, USA. PH: 785-462-6299

SECTION 2

SAFETY PROCEDURES

2.1 ACCIDENT PREVENTION



The following safety instructions are applicable for all sections of this manual.

Accident programs can only prevent accidents with the co-operation of the persons responsible for the operation of the equipment.

For the safety of yourself and others, operate equipment with care and do not take unnecessary risks, which could cause an accident.

Please read all safety instructions contained in this operator's manual with the utmost care and also observe all safety signs attached to the Stripper Header. Follow these instructions to prevent accidents. These instructions must also be made available to all other users. You are advised to refrain from any working methods which may be hazardous.

All relevant accident prevention regulations governing the operation of agricultural machinery, as well as other generally acknowledged health and safety regulations and road traffic regulations must be strictly observed.

The CMOM safety precautions should also be adhered to when using a Shelbourne Stripper Header.

The 'Safe Stop' procedure is mentioned throughout this manual. It is extremely dangerous to carry out any work on a machine while it is under power. The most important safety measure is to follow the Safe Stop procedure before carrying out any maintenance or adjustments, including dealing with a blockage or other problem:

The procedure is as follows:

- Put the handbrake on.
- Make sure the controls are in neutral (equipment made safe).
- Stop the engine.
- Remove the key

The following procedures will also need to be carried out as instructed in this manual.

- Lower the header onto the ground or fully raise and engage the combine's feeder house cylinder lock
- Fully lower the crop deflector or fully raise and engage the crop deflector safety stop

2.2 SAFETY ALERT SYMBOL



This safety alert symbol indicates an important safety message in this manual and on safety signs on the machine.

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? ACCIDENTS DISABLE AND KILL
ACCIDENTS COST
ACCIDENTS CAN BE AVOIDED

2.3 SAFETY SIGNS

The safety signs appear on the Stripper Header at the locations shown in Section 2.6.

- 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 Shelbourne dealer.

2.4 SAFETY SIGN INSTALLATION

If a safety sign needs to be replaced, use the following procedure.

- Be sure the installation area is clean and dry.
- Decide on the exact location before you remove the decal backing paper.
- Peel away one end of the backing paper exposing an area of the self-adhesive backing.
- Carefully place the sign in position allowing the exposed backing to fix to the part, correctly and smoothly.
- Slowly peel back the rest of the backing paper, smoothing the sign as it is applied.
- Small air pockets can be smoothed out or pricked with a pin.

2.5 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:



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

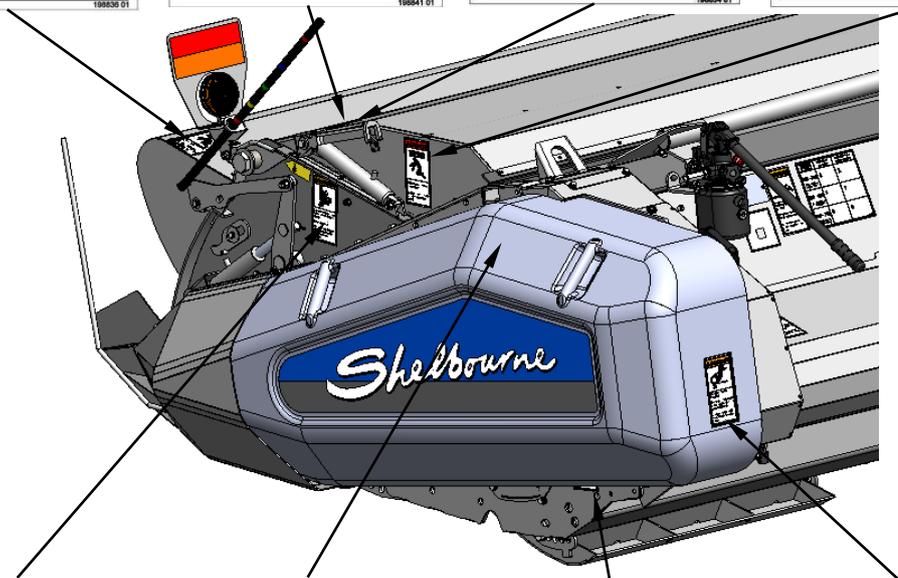
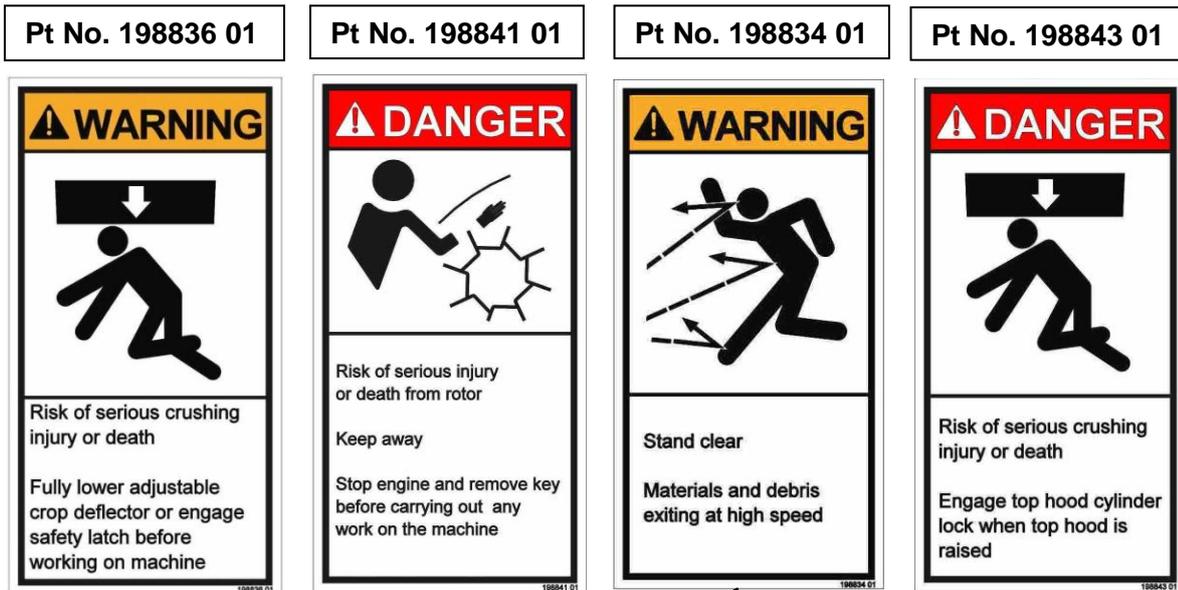


Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. It is also used to alert against unsafe practices.



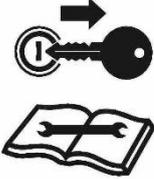
Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It is also used as a reminder of good safety practices.

2.6 SAFETY SIGN LOCATION



Pt No. 198840 01

⚠ DANGER



Risk of serious injury or death

Stop engine and remove key before carrying out any work on the machine

198840 01

Pt No. 198838 01

⚠ CAUTION



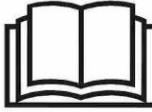
Do not run stripping rotor over 1000 rpm

Do not run auger over 200rpm

198838 01

Pt No. 199011 01

⚠ WARNING



Read the operators manual before use

Follow all safety instructions

If you do not have a manual, obtain one from your dealer

199011 01

Pt No. 198842 01

⚠ DANGER



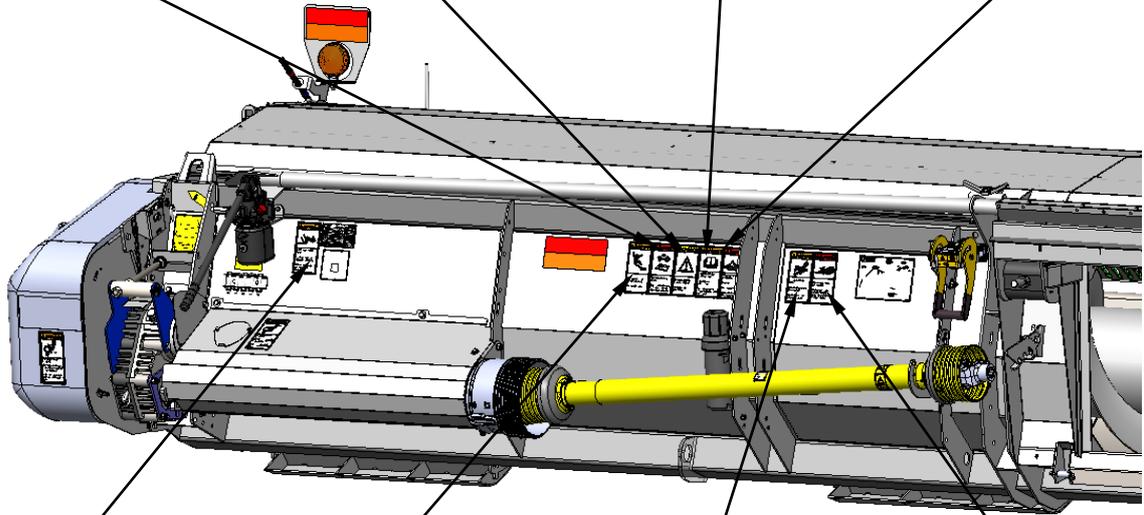
Rotating driveline can cause death

Keep away

Secure guard both ends

Do not hang driveline on chain, use correct support

198842 01



Pt No. 198839 01

⚠ WARNING



Rotating auger under top hood

Do not open top hood while engine is running

Failure to comply could result in death or serious injury

198839 01

Pt No. 198835 01

⚠ WARNING



Risk of serious injury or death from falling

Do not climb on machine

198835 01

Pt No. 198832 01

⚠ WARNING



High pressure fluid hazard

Keep all components in good condition

Do not exceed system pressure of 225 bar

198832 01

Pt No. 198844 01

⚠ DANGER



Risk of serious crushing injury or death

Engage feeder house cylinder lock or fully lower to ground before working on machine

198844 01

Pt No. 198833 01

WARNING



Risk of serious injury from adjustable crop deflector mechanism

Keep hands clear

Fully lower crop deflector or engage safety latch before working on machine

198833 01

Pt No. 198841 01

DANGER



Risk of serious injury or death from rotor

Keep away

Stop engine and remove key before carrying out any work on the machine

198841 01

Pt No. 198834 01

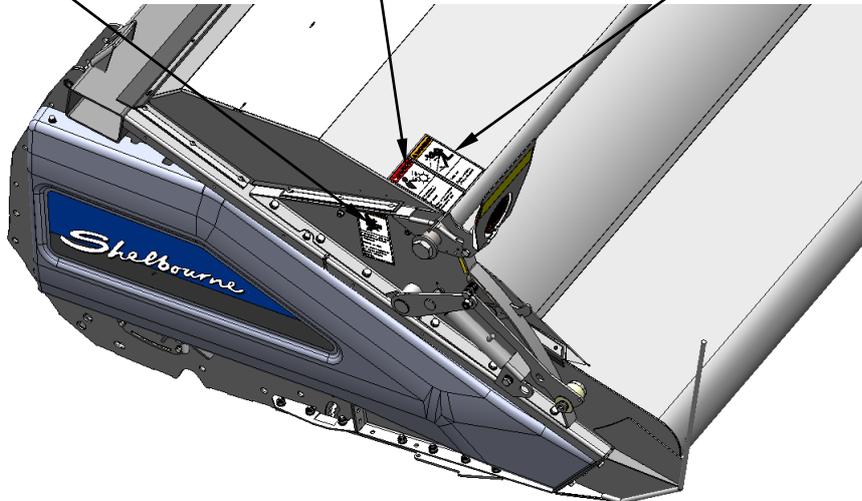
WARNING



Stand clear

Materials and debris exiting at high speed

198834 01



DANGER




ROTATING DRIVE SHAFT
CONTACT CAN CAUSE DEATH
KEEP AWAY!

DO NOT OPERATE WITHOUT-

- ALL DRIVE SHAFT GUARDS, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
- DRIVE SHAFT SECURELY ATTACHED AT BOTH ENDS
- DRIVE SHAFT GUARDS THAT TURN FREELY ON DRIVE SHAFT
- READ OPERATOR'S MANUAL

DO NOT USE PTO ADAPTORS

DANGER



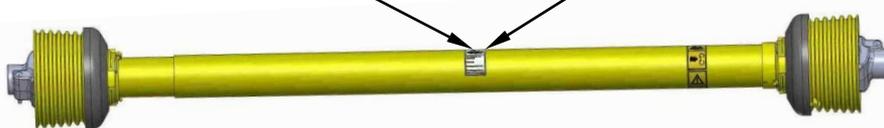
GUARD MISSING
DO NOT OPERATE

DANGER

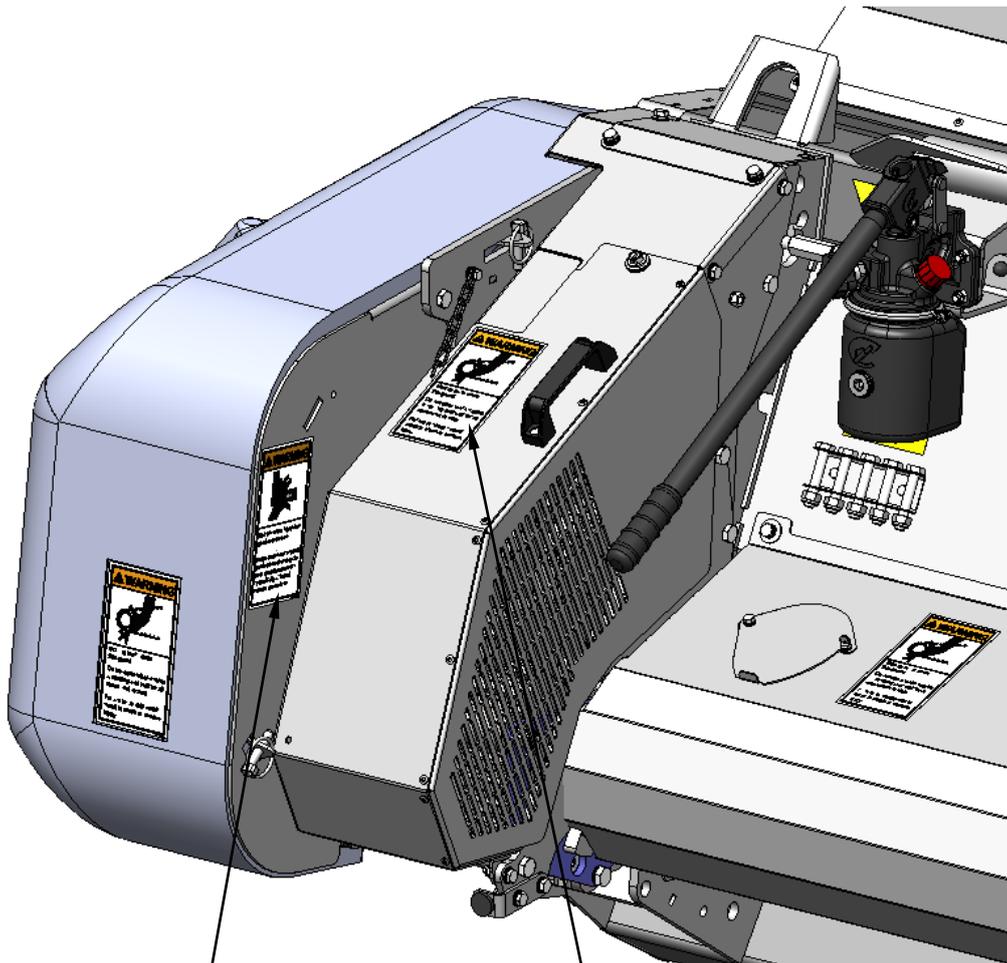


GUARD MISSING
DO NOT OPERATE

DANGER



Hydraulically actuated variable speed (HAVS) drive option only



Pt No. 292013 01

⚠ WARNING



Risk of serious injury from gearbox movement

Keep hands clear of pinch points when changing the rotor speed range on the hydraulically actuated variable speed drive

292013 01

Pt No. 198837 01

⚠ WARNING



Moving parts under this guard

Do not open while engine is running and wait for all movement to stop

Failure to comply could result in death or serious injury

198837 01

2.7 ACCIDENT PREVENTION WHEN PREPARING AND ADJUSTING THE STRIPPER HEADER FOR USE

Read the operator's manual thoroughly

Ensure bystanders are at a safe distance when the Stripper Header is being moved or suspended above the ground while lifting.

Use the forklift brackets correctly when moving the Stripper Header with a forklift and ensure that the forklift has sufficient capacity to lift the machine.

Use the designated identified lifting points when lifting from overhead, and ensure that the slings / chains are rated accordingly, and that the angle of the slings / chains are set in accordance with lifting regulations.

Do not climb on the Stripper Header when attaching lifting slings or chains. Use approved steps in order to reach the lifting points.

Keep bystanders at a safe distance and wear Personal Protective Equipment (PPE) such as gloves to reduce the effect of pinching fingers and handling sharp parts, when preparing and adjusting the combine and header.

Employ suitable manual handling techniques when lifting components and PTO shafts. Ensure appropriate lifting equipment is used for heavier items.

Never work underneath a Stripper Header that is not properly supported. Ensure appropriate stands are placed under the machine, and never rely on the forklift alone.

Support the crop deflector with suitable stands or charge the hydraulic system when removing shipping bolts.

Check hydraulic components before charging the crop deflector. Ensure hoses are in good condition, joints are tight and the coupler is correctly installed.

When fitting the crop markers, header stands and brackets or removing the crop deflector shipping bolts, ensure bystanders are kept at a safe distance, avoid working underneath the Stripper Header and ensure appropriate stands are placed under the machine.

Ensure that the rotor does not rotate freely when fitting the crop markers, header stands and brackets to prevent finger entrapment.

Ensure the crop deflector stop latch is engaged or the crop deflector is fully lowered or adequately supported before fitting the crop deflector indicator.

Follow the Safe Stop procedure before connecting / adjusting the threaded adjuster bolt and while fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive.

Be aware of potential pinch points while the gearbox pivots when connecting / adjusting the threaded adjuster bolt on the hydraulically actuated variable speed drive.

Be aware of potential pinch points and when fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive.

Be cautious of hot drive components when connecting / adjusting the threaded adjuster bolt and when fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive. Use suitable PPE, such as gloves.

2.8 ACCIDENT PREVENTION WHEN ATTACHING AND DETACHING THE STRIPPER HEADER TO THE COMBINE

Read the operator's manual thoroughly.

The weight and size of the Stripper Header will influence the stability and maneuverability of the combine. Ensure that the combine is capable of handling the Stripper Header safely and maintaining stability. Consult the CMOM.

Ensure that the combine has sufficient capacity to lift the Stripper Header and the correct adaptor plate is fitted.

Follow the Safe Stop procedure when leaving the combine cab and before latching/unlatching the header onto the combine.

The Stripper Header should be parked on level, firm ground for attaching and detaching. Ensure that the header stands are correctly lowered. Always raise the header stands once header is reattached.

Observe the position of all bystanders in the area and ensure that they are at a safe distance.

Warn bystanders by sounding the horn several times before starting the engine and moving.

Follow the procedure described in this manual and the CMOM for header attachment and detachment.

Inspect the Stripper Header and combine prior to operating the machine and ensure that no person is working on or inside the machines.

Ensure that the feeder house cylinder lock is engaged before attempting to work in the vicinity of the Stripper Header when attaching or detaching.

Check that all the locking pins/points are fully engaged and the Stripper Header is safely and securely attached.

If parking the Stripper Header onto a trailer ensure it is correctly located and secured to the trailer before removing from the combine.

Use suitable PPE, such as overalls, gloves, goggles and face/dust masks when attaching and detaching the Stripper Header to the combine to prevent exposure to dust.

Wear suitable PPE, such as safety footwear, when working on the machine.

2.9 ACCIDENT PREVENTION WHEN USING THE HYDRAULIC SYSTEM

Read the operator's manual thoroughly.

Due to the possibility of oil contamination on your hands it is recommended to use PPE, gloves, when handling hydraulic hose connectors.

Follow the Safe Stop procedure before connecting or disconnecting the hydraulic coupler.

Ensure that the feeder house cylinder lock is engaged or the machine is fully lowered to the ground and the Stripper Header is locked to the combine before connecting or disconnecting the hydraulic coupler.

The crop deflector must be all the way down or supported on the safety stop when connecting or disconnecting the hydraulic coupling.

Ensure that the combine hydraulic system is at zero pressure before connecting the hydraulic coupling.

Keep bystanders at a safe distance when operating the hydraulic system.

Hydraulic systems can generate extremely high pressures. All piping, hoses and connections must therefore be checked regularly for leakage and visible external damage.

Ensure that the combine does not generate more than 225 bar (3263 psi) of pressure.

Use proper and thorough means of searching for leakage and repair all damage immediately.

Regularly inspect the condition of all hydraulic hoses and replace any damaged hoses.

Spurting hydraulic oil can cause injuries and possible risk of fire. Seek medical advice immediately in the event of injury.

2.10 ACCIDENT PREVENTION WHEN USING THE PTO SHAFT

Read the operator's manual thoroughly.

In conjunction with the following safety measures, always refer to the safety manual supplied separately with the PTO shaft.

Ensure that the Safe Stop procedure is implemented prior to attaching, detaching, greasing, servicing or changing the shear bolt on the PTO shaft.

Keep the PTO shaft horizontal during handling to prevent the halves from sliding apart, which could cause injury or damage the guarding.

Use suitable means to move heavy PTO shafts and employ suitable manual handling techniques.

Use only the PTO shaft, which is supplied with the Stripper Header and is intended for use with the Stripper Header.

Ensure that it is fitted with the prescribed protective equipment (protective tube and funnel-shaped PTO shaft guard must be fitted).

Be aware of the risk of pinching your fingers / hand between the guard and the end yoke of the PTO shaft.

Do not modify the length of the supplied PTO shaft, guard cones and tubes. Ensure that the PTO shaft is fitted with the correct yoke for the combine. Do not use PTO adaptors.

Ensure the guards are secured in such a way that they cannot rotate with the shaft and the PTO guard safety chains are fitted and secure.

Before starting work ensure the PTO end yokes are properly engaged.

Be absolutely sure there is nobody standing in dangerous proximity to the Stripper Header when you switch on the PTO shaft. Contact with the PTO shaft can cause death.

Do not wear loose clothing or jewelery that could become entangled with the driveline and tie back long hair.

2.11 ACCIDENT PREVENTION WHEN INITIALLY INSTALLING THE STRIPPER HEADER ONTO THE COMBINE

Read the operator's manual thoroughly.

Read the CMOM prior to installing the Stripper Header and working on the combine.

Ensure that the Safe Stop procedure is implemented prior to installing the monitor unit, working on, inspecting or adjusting the Stripper Header or combine.

Use the combine access steps when climbing onto the combine as advised in CMOM or use approved steps to gain access when installing the monitor unit into the combine.

Use suitable personal protective equipment (PPE) such as gloves when installing monitor unit, combine grates, working on or adjusting the Stripper Header or combine and be cautious of sharp edges.

Employ suitable manual handling techniques when lifting the combine grates or ensure appropriate lifting equipment is used and ensure grates are safely supported.

Use suitable PPE, such as overalls, gloves, goggles and face/dust masks when working on, adjusting or inspecting the Stripper Header or combine to prevent exposure to dust.

The monitor unit should be installed by experienced personnel. Isolate power and identify wire polarity before installation. Consult CMOM before commencing installation.

Ensure that the feeder house cylinder lock is engaged, all the locking pins/points are fully engaged and the Stripper Header is safely and securely attached to the combine before attempting to work on the machine and when possible lower the machine fully to the ground.

Be aware of pinch points when adjusting the adaptor plate and keep fingers clear. Ensure the Stripper Header is lowered to the ground before adjusting the adaptor plate.

Take care when adjusting the combine.

Inspect the hood hand pump hydraulic system prior to use and ensure that bystanders are at a safe distance when raising the hood.

Always use the hood cylinder safety stop whenever the hood is raised.

Use approved steps or the combine access ladder to gain access to the auger trough. Do not climb on the machine.

Take care while in the auger trough checking auger clearances as surfaces can be slippery. Ensure that no one is in the auger trough and hands and limbs are clear before adjusting auger.

Be cautious of hot drive components when adjusting the auger at the left hand end or inspecting the machine and use suitable PPE, such as gloves.

Ensure the crop deflector stop latch is engaged or the crop deflector is fully lowered before working on or inspecting the machine.

Read the CMOM prior to operating the machine.

Ensure all guards are in place and secured and the hood is closed before starting the machine.

Inspect the Stripper Header and combine prior to operating the machine, warn bystanders by sounding the horn several times before starting the engine and ensure bystanders are at a safe distance.

Ensure the crop deflector hydraulic system is inspected and maintained.

Ensure rotor is prevented from turning when working in close proximity to the rotor.

Be careful when adjusting the gearbox position to prevent finger crushing.

During maintenance, only rotate the drives manually using a wrench. Position the wrench on the central bolt of the pulley and rotate it clockwise. Do not touch the belt, chain or pulley while the drives are rotating as there is a risk of hand / finger entanglement.

Wear suitable PPE, such as safety footwear when working on the machine.

2.12 ACCIDENT PREVENTION WHEN OPERATING THE MACHINE

Read the operator's manual thoroughly.

Read the CMOM prior to operating the machine.

The Stripper Header must not be put into operation until the user has been given proper initial instructions either by the dealer or by a Shelbourne Reynolds representative.

It is the owner's responsibility to ensure that anybody else who uses the machine is competent and has received instructions or training.

Inspect the Stripper Header and combine prior to operating the machine and ensure that no person is working on or inside the machines. Warn bystanders by sounding the horn several times before starting the engine and ensure bystanders are at a safe distance.

Ensure all guards are in place and secured and the hood is closed before starting the machine. Replace or repair any damaged or missing guards immediately. Do not operate machine with guards removed or open.

Do not permit anyone other than the operator to ride in the combine, except suitably trained personnel, for periods of training or short periods of observation. Do not allow riders on the combine or header.

Keep children away from and off the machine at all times

Ensure that the Safe Stop procedure is implemented prior to working on the machine or when leaving the combine cab.

In the event of a malfunction, immediately cease operation and implement the Safe Stop procedure.

Inspect hydraulic components prior to use and ensure that they are maintained.

When operating the Stripper Header ensure that the combine cab doors and windows are closed. If this is not possible or when working on the machine use suitable PPE, such as overalls, gloves, goggles and face/dust masks.

Be aware of and avoid overhead power lines and pylons when operating the combine.

Ensure that the combine is capable of safely handling the Stripper Header and remains stable when operating.

Inspect machine for signs of wear or component failure and remove crop material from heat generating components in order to reduce the possible risk of fire.

Use the hood cylinder safety stop whenever the hood is raised.

Use approved steps or the combine access ladder to gain access to the auger trough, do not climb on the machine and take care while in the auger trough checking auger clearances as surfaces can be slippery.

Keep hands clear of pinch points and use suitable PPE, such as gloves, when working on the machine or clearing blockages from the auger or rotor to prevent contact with sharp objects and edges.

Ensure that the combine feeder house cylinder lock is engaged or the machine is fully lowered to the ground before attempting to work on the machine.

Check to ensure all the locking pins/points are fully engaged and the Stripper Header is safely and securely attached to the combine before attempting to work on the machine.

Ensure the crop deflector stop latch is engaged or the crop deflector is fully lowered before working on or clearing blockages from the machine.

Be aware of the risk of pinching your fingers / hand between the guard and the end yoke of the PTO shaft and ensure it is correctly supported when changing the shear bolt.

Support the skids or rollers adequately when adjusting and employ suitable manual handling techniques when lifting and use suitable PPE such as gloves.

Be cautious of hot drive components when adjusting or changing the CSD and RSD rotor speed and use suitable PPE, such as gloves.

Be careful when fitting drive belt to prevent finger crushing and employ suitable manual handling techniques when lifting parts, such as pulleys.

Wear suitable PPE, such as safety footwear when working on the machine.

Follow the Safe Stop procedure before connecting / adjusting the threaded adjuster bolt and while fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive.

Be aware of potential pinch points while the gearbox pivots when connecting / adjusting the threaded adjuster bolt on the hydraulically actuated variable speed drive.

Be aware of potential pinch points and when fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive.

Be cautious of hot drive components when connecting / adjusting the threaded adjuster bolt and when fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive. Use suitable PPE, such as gloves.

2.13 FIRE PREVENTION WHEN OPERATING THE MACHINE

The header must be inspected periodically throughout the harvest day. Build-up of crop material and other debris must be removed to ensure proper machine function and to reduce the potential damage to the machine and possible risk of fire.

Check rotor ends for foreign material wrap and check adjustment on the anti-wrap plates

Check auger trough is clear and free of foreign objects.

Check auger slip clutch for wear.

Check drive belt for wear and adjustment.

Check condition of all drive bearings.

Be prepared if a fire starts. Keep a fire extinguisher within easy reach of the Stripper Header/combine, along with a first aid kit.

Have an emergency action plan in place, providing all personnel with the appropriate training.

2.14 ACCIDENT PREVENTION WHEN TRANSPORTING STRIPPER HEADER

Read the operator's manual and CMOM thoroughly.

When transporting the Stripper Header on a trailer use a Shelbourne approved trailer and use a towing vehicle with sufficient capacity.

If parking the Stripper Header onto a trailer ensure it is correctly located and secured to the trailer before removing from the combine.

Ensure the crop deflector is fully lowered.

Ensure that all braking systems and lighting systems on the combine or towing vehicle and trailer (if using a trailer) are in full working order and that they can be fully and correctly operated.

Before travelling with the Stripper Header on the highway clear the machine of loose dust/debris.

Prior to travelling on the highway, fully raise the crop deflector and engage the crop deflector safety stop. Disconnect the hydraulic connections and PTO shaft from the combine, to prevent inadvertent operation.

Do not permit anyone other than the operator to ride in the combine, except suitably trained personnel, for periods of training or short periods of observation. Do not allow riders on the combine or header.

Fully secure guards, covers, PTO shafts, hydraulic couplings and other components before travelling on the highway.

Road traffic regulations must be observed when taking the Stripper Header on roads, paths and other public places.

Observe the maximum permissible width for road transport and fit all necessary safety signs and guards.

2.15 ACCIDENT PREVENTION WHEN CARRYING OUT MAINTENANCE, CLEANING & STORAGE

Read the operator's manual thoroughly.

Ensure that the Safe Stop procedure is implemented prior to working on the machine or leaving the combine cab.

Ensure that the combine feeder house cylinder lock is engaged or the machine is fully lowered to the ground before attempting to work on the machine.

Check to ensure all the locking pins/points are fully engaged and the Stripper Header is safely and securely attached to the combine before attempting to work on the machine.

Ensure the crop deflector stop latch is engaged or the crop deflector is fully lowered before working on the machine.

Be cautious of hot drive components when maintaining and cleaning the machine and use suitable PPE, such as gloves.

Do not work around the machine in loose clothing that might get caught in moving parts.

Use suitable PPE, such as overalls, gloves, goggles and face/dust masks when working on the Stripper Header to prevent exposure to dust.

Use suitable PPE, such as gloves, when working on the Stripper Header. Be cautious of sharp edges and keep hands clear of pinch points.

Be aware of the risk of pinching your fingers / hand between the guard and the end yoke of the PTO shaft and ensure it is correctly supported when connecting or disconnecting.

Ensure all guards are in place and secured and the hood is closed before starting the machine. Replace or repair any damaged or missing guards immediately.

Be careful when turning the drive belt or adjusting the gearbox position in order to prevent finger crushing.

Do not put your hand between pulley sheaves, use a wooden block to securely wedge the pulleys if required during maintenance.

Use suitable PPE, such as gloves, to prevent contact with oil.

During maintenance, only rotate the drives manually using a wrench. Position the wrench on the central bolt of the pulley and rotate it clockwise. Do not touch the belt, chain or pulley while the drives are rotating as there is a risk of hand / finger entanglement

Use approved steps or the combine access ladder to gain access to the auger trough. Do not climb on the machine, as surfaces may be slippery when wet and/or dusty.

Take care while in the auger trough when checking auger clearances, clearing a blockage or cleaning as surfaces can be slippery.

If the header is equipped with end clean out covers these can be removed while cleaning the auger trough. Before removing the end clean out covers lower the header fully to the ground, then employ the 'safe stop procedure'.

Do not remove the end clean out covers with the auger chain removed, as the auger is likely to rotate freely and cause an unexpected pinch point.

Do not run the header with the end clean out covers removed.

Keep hands and fingers clear of the auger if the end clean out covers are removed and the drives are being manually rotated by another person.

Follow the recommended precautions as advised by pressure/hot washing or air compressor equipment manufacturers when using this equipment to clean the Stripper Header.

If parking the Stripper Header onto a trailer ensure it is correctly located and secured to the trailer before removing from the combine.

The Stripper Header should be parked on level firm ground.

Do not climb on or over parked or stored machines.

Wear suitable PPE, such as safety footwear when working on the machine.

Inspect the hood hand pump hydraulic system prior to use and ensure that bystanders are at a safe distance when raising the hood.

Use the hood cylinder safety stop whenever the hood is raised.

Follow the Safe Stop procedure before connecting / adjusting the threaded adjuster bolt and while fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive.

Be aware of potential pinch points while the gearbox pivots when connecting / adjusting the threaded adjuster bolt on the hydraulically actuated variable speed drive.

Be aware of potential pinch points and when fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive.

Be cautious of hot drive components when connecting / adjusting the threaded adjuster bolt and when fitting / removing the spacers between the pulley sheeves on the hydraulically actuated variable speed drive. Use suitable PPE, such as gloves.

2.16 NOISE EMISSIONS

Sound pressure level measured at operator's seat in combine cab.	Just combine running. (full operating speed)	Combine door closed.	74 dB(A)
		Combine door open.	92 dB(A)
	Combine and Stripper Header running. (full operating speed)	Combine door closed.	74 dB(A)
		Combine door open.	92 dB(A)

Sound pressure levels measured all around the combine and Stripper Header at a distance away of 1 meter and a height of 1.6 meters ranged from 96 -104 dB (A).

(The above test results were obtained using a randomly selected / modern combine).

If the door or window of the combine is open while operating, it is recommended that personal hearing protectors are worn to protect the operator.

2.17 INTENDED USE

The Stripper Header is based on state-of-the-art technology and is manufactured in accordance with recognized safety requirements. Nevertheless the use of the header does not preclude the risk of injury to the user or third parties and/or the risk of damage to the header itself or to other materials or items of equipment.

Always make sure that the Stripper Header is in a technically perfect condition and that it is used properly and for its intended purpose and entirely in accordance with the instructions given in this manual. Any malfunctions or defects which might affect the safe operation of the header must be immediately eliminated.

The Stripper Header will be mounted to a combine harvester and operated from the cab seating position.

The Stripper Header must be used, maintained and repaired only by persons who are familiar with its working and have been made fully conversant with the risks involved.

Original equipment manufacturer (OEM) replacement parts and accessories from Shelbourne have been specially designed for use with the Stripper Header. Accessories not supplied by Shelbourne have not been tested and approved. The installation and/or the use of non-Shelbourne products may under certain circumstances have a negative influence on the given design features of the header and may therefore adversely affect its safe and reliable operation and your safety. Shelbourne cannot therefore be held liable for damage or injury caused by the use of non-OEM replacement parts or accessories.

The Stripper Header is intended for use on typical farms and to be employed in harvesting cereal and rice crops. Any uses other than those for which the header is intended, such as transportation, will automatically exempt Shelbourne or the Shelbourne dealer from liability in respect of ensuing damage. Such cases of improper use will therefore be entirely at the user's own risk.

All relevant accident prevention regulations, as well as other generally acknowledged health and safety regulations and road traffic regulations must be strictly observed.

Improper use also comprises failure to observe the instructions given in this operator's manual and the manufacturer's maintenance and servicing requirements.

2.18 NO LIABILITY FOR CONSEQUENTIAL DAMAGE

Even though the Stripper Header has been manufactured with the utmost care and you are using it properly, fluctuations and interruptions in performance may still occur.

It is the duty of the operator/user to ensure that foreign objects, e.g. stones, metal objects etc. are not allowed to enter the header. Failure to observe this may result in damage to the header and/or injury to the operator/user and/or damage to the combine.

Neither Shelbourne nor its dealers shall be liable for any consequential damage.

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SECTION 3

SPECIFICATION & DESCRIPTION

3.1 DESCRIPTION

The Stripper Header consists of a main frame (a), which is connected to the combine via an interchangeable adaptor plate (b). Different adaptor plates are available to suit various models of popular combines. The adaptor plate can be adjusted to alter the pitch of the Stripper Header. The main frame supports all the other components.

At the front of the machine is the stripping rotor (c), which harvests the crop. Smaller machines have one rotor, whereas larger machines have two rotors supported by a central division plate. The rotors are fitted with a patented anti wrap system. Above the stripping rotor is the crop deflector (d), which deflects the unstripped crop to create a seal in front of the stripping rotor. The crop deflector position is adjusted by the combine's hydraulic (reel raise/lower or fore/aft) system and is connected via a hydraulic coupling (f). A color coded indicator (e), provides a visual position guide of the crop deflector to the operator.

The harvested crop is guided, via the underside of the crop deflector to the auger trough (g), where the auger (h) transports the crop to the adaptor plate. The auger has spiral flights and runs at a fixed speed, nominally 190rpm. Bolt on auger paddles (i), in the center of the auger, propel the crop into the combine via an opening in the adaptor plate. The auger is protected by a slip clutch (j).

The auger and auger trough are covered by the hood (k) which pivots and is raised by a hydraulic cylinder, operated via a hand pump (t) in order to allow access.

A PTO shaft (l), fitted with a shearbolt, connects the output drive from the combine to the Stripper Header gearbox (m). The gearbox can be fitted with different drive ratios to suit different models of combines. The drive is transferred to the stripping rotor by one of three different belt drive systems (n). Variable speed drive is fitted to CVS and RVS models and offers variable rotor speed, between approximately 430 and 830 rpm. The speed is controlled from the combine cab. CSD and RSD models are fitted a HTD (cogged) belt drive. The rotor speeds can be altered in defined steps by changing the combinations of the input and output pulleys attached to the gearbox and stripping rotor or by changing combine header drive shaft speed on combines fitted with a variable speed feeder house.

The left hand end drive guard (o) covers the auger and rotor drive and can be opened in order to gain access for maintenance. A rotor and auger speed monitor provides an in cab display with a semi-automatic alarm set feature in order to monitor performance. The sensors for this system are protected by the right hand end guard (p). A fixed marker rod type divider (q), positioned at each end of the stripping rotor provides a visual guide to the width of the Stripper Header.

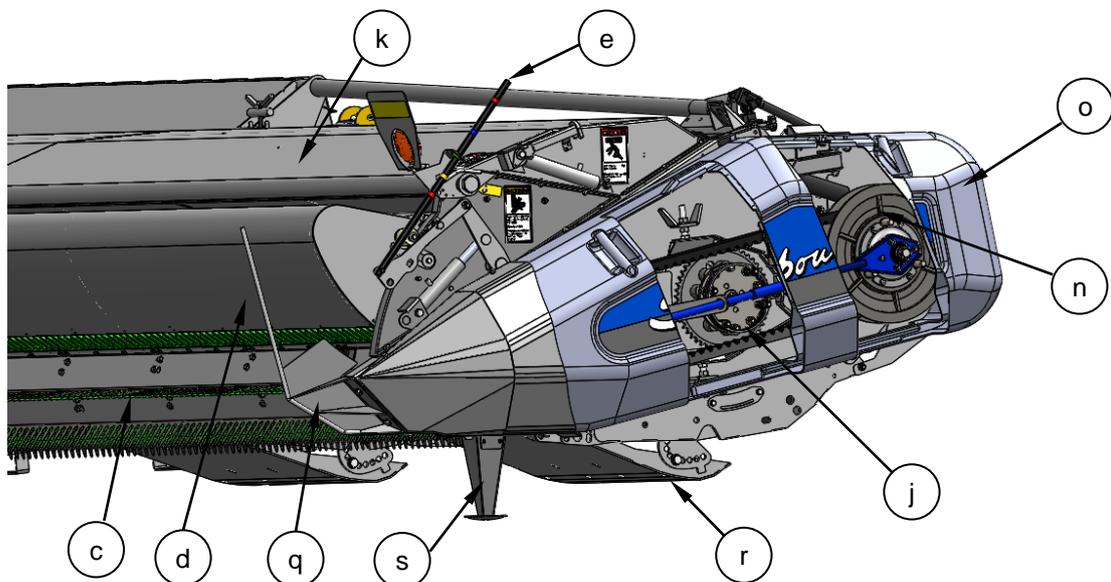
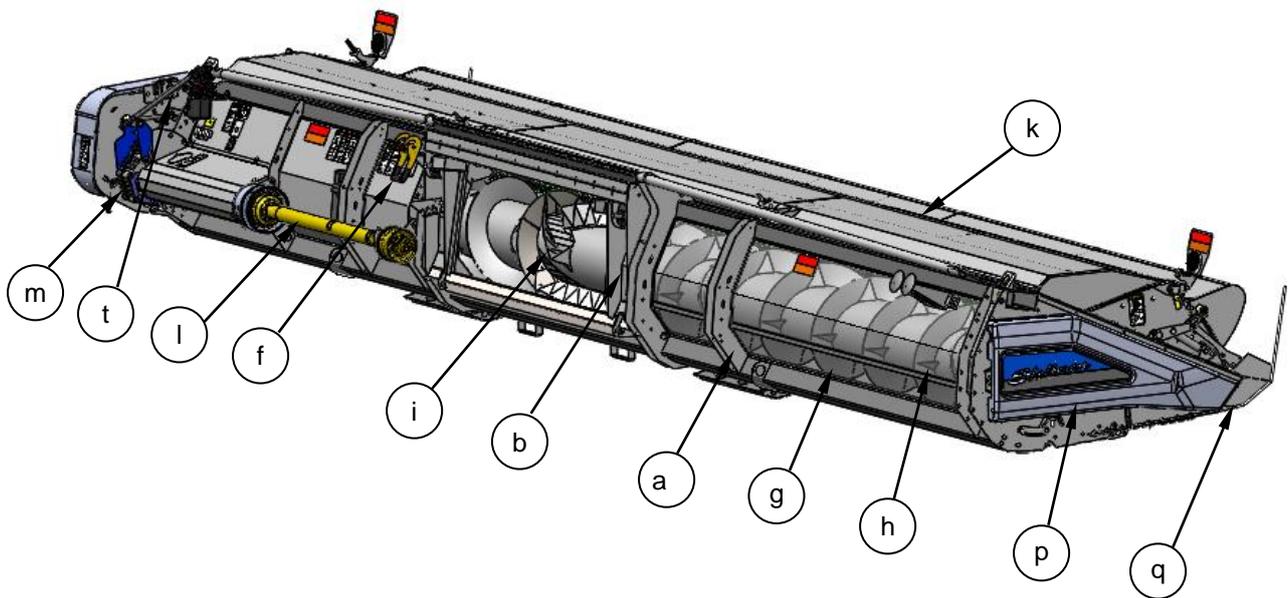
Adjustable skids (r), positioned underneath the header prevent the stripping rotor from contacting the ground. An optional roller system is available. Belly pans can be fitted to the underside of the machine in the center to protect the auger trough when working over levees.

Detachable header stands (s) are fitted underneath the front corners of the mainframe

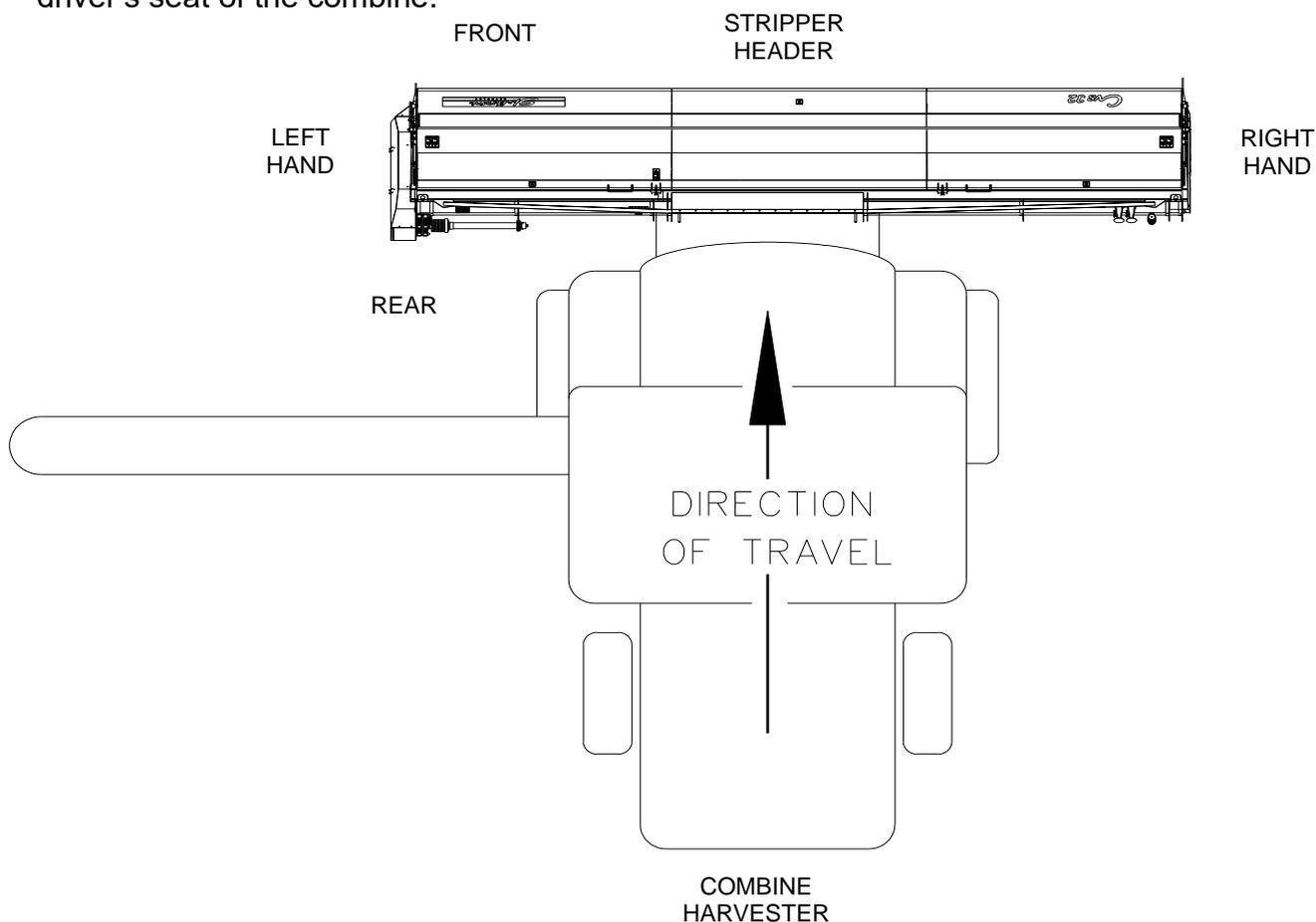
and are required when the Stripper Header is unhitched from the combine onto the ground.

Three of the larger Stripper Headers are offset to the right hand of the combine to improve the balance of the Stripper Header, the offset is as follows:

- CVS//RSD/RVS 24 = 200mm (7 7/8")
- CVS//RSD/RVS 28 = 300mm (11 3/16")
- CVS/CSD/RSD/RVS 32 = 400mm (15 3/4")

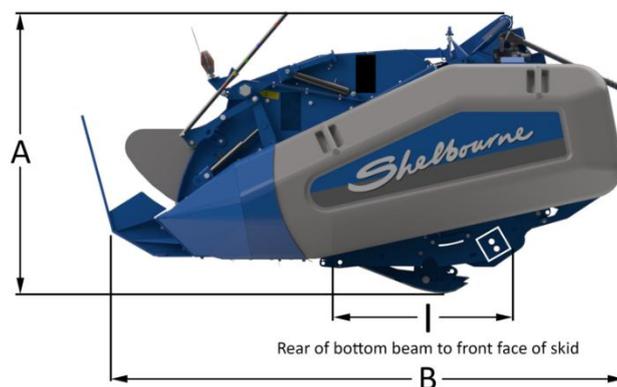
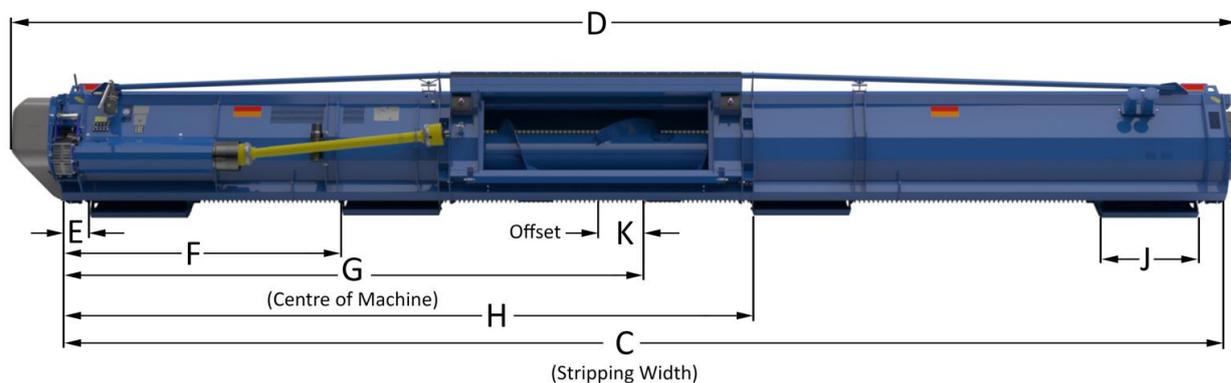


Right, left, front and rear of the machine are termed in this manual as viewed from the driver's seat of the combine.



3.2 TECHNICAL SPECIFICATION

Sizes and weights of machines are as follows: (all dimensions and weights are approximate).



Model	A	B	C	D	E	Weight
CVS/CSD 12 RSD 12	1223mm 4'	2240mm 7'4"	3600mm 11'10"	4060mm 13'4"	23mm 1"	1600kg 3530lbs
CVS/CSD 16 RSD/RVS 16	1223mm 4'	2240mm 7'4"	4800mm 15'9"	5270mm 17'4"	190mm 9"	1850kg 4080lbs
CVS 18** RSD/RVS 18	1223mm 4'	2240mm 7'4"	5400mm 17'9"	5870mm 19'3"	190mm 9"	1920kg 4230lbs
CVS/CSD 20 RSD/RVS 20	1223mm 4'	2240mm 7'4"	6000mm 19'8"	6470mm 21'3"	190mm 9"	2100kg 4630lbs
CVS 22** RSD/RVS 22	1223mm 4'	2240mm 7'4"	6600mm 21'8"	7070mm 23'2"	190mm 9"	2230kg 4920lbs
CVS/CSD 24 RSD/RVS 24	1223mm 4'	2240mm 7'4"	7200mm 23'7"	7670mm 25'2"	190mm 9"	2350kg 5180lbs
CVS/CSD 28 RSD/RVS 28	1223mm 4'	2240mm 7'4"	8400mm 27'7"	8870mm 29'1"	190mm 9"	2930kg 6460lbs
CVS/CSD 32 RSD/RVS 32	1223mm 4'	2240mm 7'4"	9600mm 31'6"	10070mm 33'	190mm 9"	3080kg 6790lbs

Model	F	G	H	I	J	K
CVS/CSD 12 RSD 12	n/a	1805mm 5'11"	n/a	755mm 2'6"	800mm 2'7"	n/a
CVS/CSD 16 RSD/RVS 16	n/a	2412mm 7'11"	n/a	755mm 2'6"	400mm 1'4"	n/a
CVS 18 RSD/RVS 18	n/a	2712mm 8'11"	n/a	755mm 2'6"	800mm 2'7"	n/a
CVS/CSD 20 RSD/RVS 20	n/a	3012mm 9'11"	n/a	755mm 2'6"	800mm 2'7"	n/a
CVS 22 RSD/RVS 22	n/a	3312mm 10'10"	n/a	755mm 2'6"	800mm 2'7"	n/a
CVS/CSD 24 RSD/RVS 24	n/a	3612mm 11'10"	n/a	755mm 2'6"	800mm 2'7"	200mm 7 7/8"
CVS/CSD 28 RSD/RVS 28	1796mm* 5'11" *	4212mm 13'10"	5228mm* 17'2" *	755mm 2'6"	800mm 2'7"	300mm 11 3/16"
CVS/CSD 32 RSD/RVS 32	2296mm* 7'6" *	4812mm 15'9"	5728mm* 18'10" *	755mm 2'6"	800mm 2'7"	400mm 15 3/4"

*RSD/RVS28 and RSD/RVS32 are fitted with two outer skids only

**CVS/RSD/RVS18 & CVS/RSD/RVS20 models not available from 2021 and on.

For complete details of the correct sizes and fitting for the combine on which the Stripper Header is intended to be used, please contact your Shelbourne dealer.

SECTION 4

TRANSPORTATION



Refer to Section 2 for accident prevention information

To prevent damage to the Stripper Header, the machine should be moved by one of the following methods:

- Attaching to a combine (see Section 5).
- Using a forklift underneath the header.
- Overhead lifting by slinging the machine.
- On a trailer which supports the header in the correct positions.

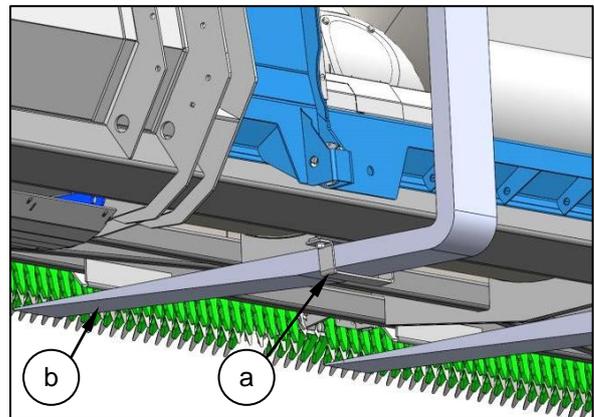
4.1 FORKLIFT METHOD



Refer to Section 2.7 for accident prevention information

Ensure that the forklift has sufficient capacity to lift the Stripper Header. The machine weight is shown on the serial number plate and also Section 3.2 of this manual. The rated capacity needs to be at 750mm (30") from the back end of the tine.

Approach the header from the rear and slide the forks underneath the rear beam into the straps (a) and underneath the forklift support plates (b). This will ensure that the tine does not contact the stripping rotor. Use a piece of wood to prevent the rear of the tine carriage contacting the adaptor plate.



Slowly raise the forklift mast and tilt backwards.

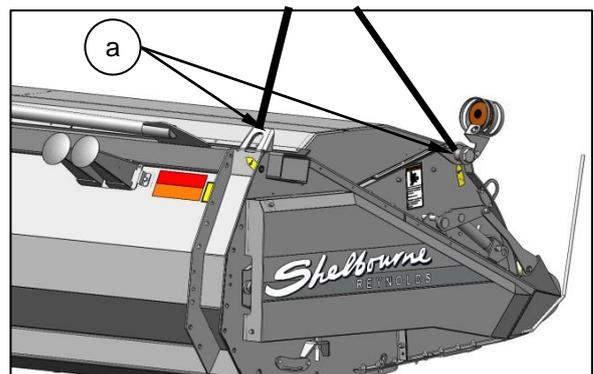
4.2 OVERHEAD LIFTING METHOD



Refer to Section 2.7 for accident prevention information

Use sling points when lifting the machine from overhead. There are two sling points on the right hand end (a) and two in the same position on the left hand end.

Adjust the slings accordingly to lift the header squarely.



4.3 MOVING WITH TRAILER



Refer to Section 2.14 for accident prevention information

The Stripper Header can be transported with a Shelbourne approved trailer that supports the machine suitably to prevent accidents and reduce the risk of damage.

The Stripper Header should be supported under the rear bottom beam on either side of the adaptor plate opening (a).

The front of the Stripper Header should be supported at the ends as well as at least one point in the center. The support should be at the front of the skids (b) or under the front lower mainframe beam.

Do not support the Stripper Header on the rotor or the header stands.

Ensure that the Stripper Header is securely attached to the trailer either with the locking pins provided or with suitable straps.

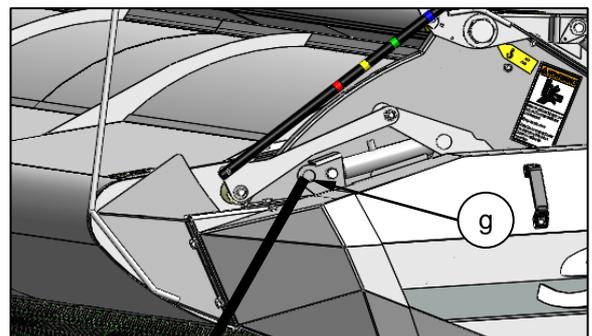
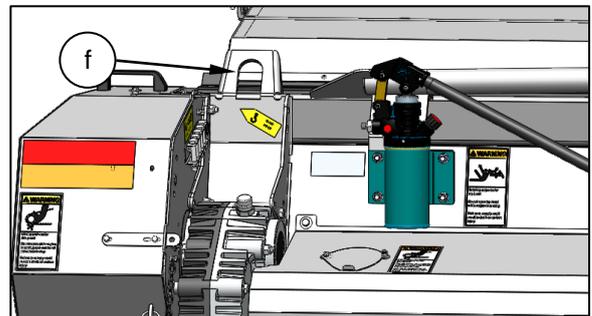
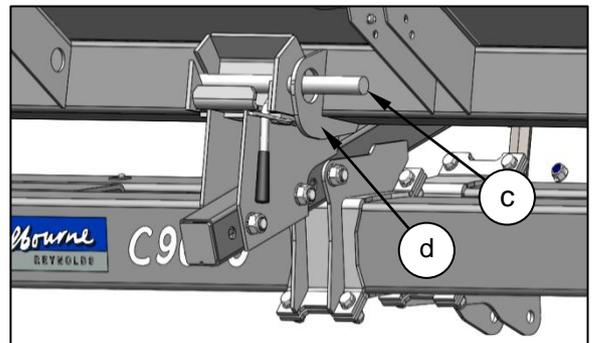
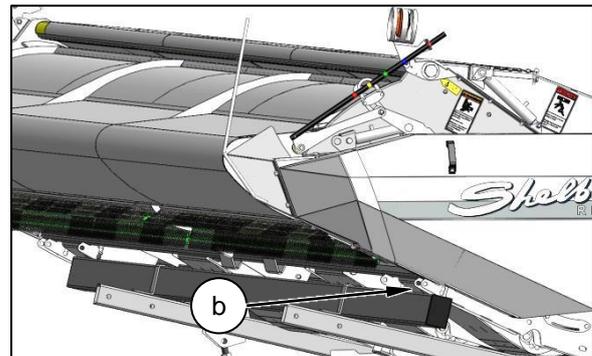
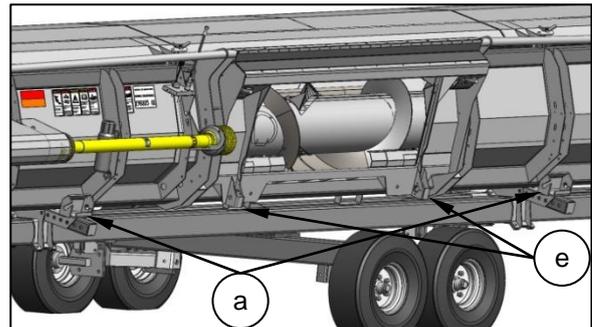
If the trailer is equipped with locking pins ensure the pin (c) is engaged in the fixing plate (d). There are pins either side of the adaptor plate.

If the Stripper Header has to be secured to the trailer with straps or ropes use the following tie down points.

Fix straps to either side of the lower beam of the adaptor plate (e), using the combine latching points. These straps can be secured diagonally to prevent the machine from sliding along the trailer.

Secure the machine at each end using the lifting points (f) on the rear beam and tie down points (g) at the front of the machine.

Route straps so that they do not lie across guards or other sharp components that could damage the strap.



SECTION 5

HEADER ATTACHMENT / DETACHMENT



Refer to Sections 2.8, 2.9 and 2.10 for accident prevention information

The Stripper Header is configured to different models of combine at the factory. This manual contains information for the combines listed below.

Use this information in conjunction with the CMOM.

Please contact your Shelbourne dealer and consult the CMOM for information relating to attaching a Stripper Header to other models and makes of combine not listed below.

John Deere 60, 70 & S series.

John Deere 50 & earlier series.

Case IH 10, 20, 30, 40, 50, 60 and 88 series.

Case IH 2100, 2300, 2500 & earlier series.

New Holland CR and CX.

Claas/CAT Lexion.

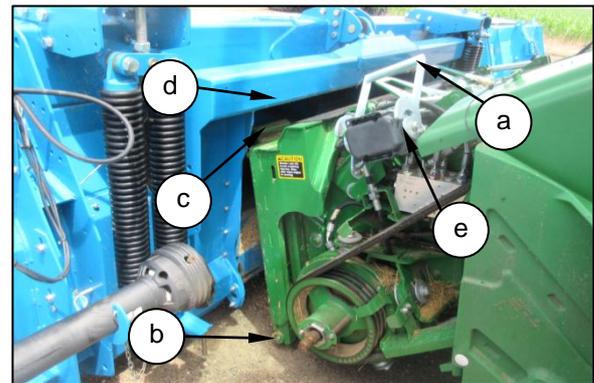
AGCO.

5.1 HEADER ATTACHMENT

The following section contains instructions for attaching the Stripper Header to the combine harvester.

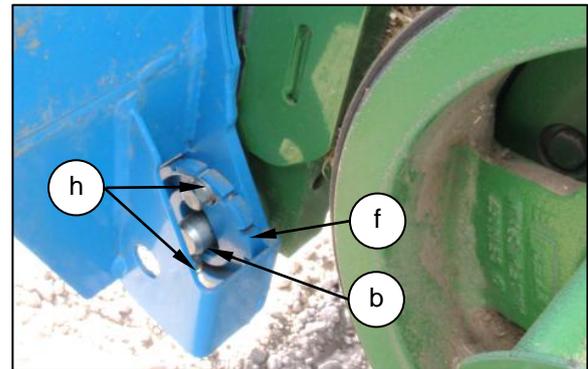
5.1.1 John Deere 60, 70 & S series

Push the handle (a) up, on the combine multicoupler (e) towards the feeder house to fully retract the pins (b) at the bottom corners of the feeder house.



Drive the combine slowly forward, ensuring the feeder house is centered and parallel with the adaptor plate opening, until the feeder house saddle (c) is directly under the adaptor plate top beam (d).

Raise the feeder house to lift the header, ensuring that the feeder saddle is properly engaged in the adaptor plate, then fully raise the header.



Stop the machine and implement the safe stop procedure



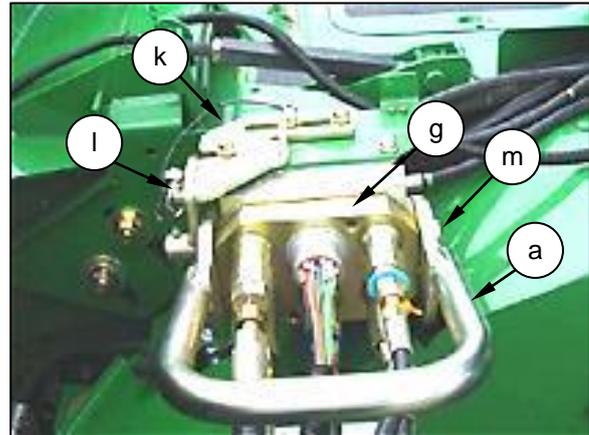
Engage the combine's feeder house cylinder lock

Pull down handle (a) to engage the locking pins (b) in the adaptor plate. Ensure the pins (b), on both sides of the feeder house, are fully engaged and protrude from the adjuster plate (f). To adjust this, slacken the bolts (h) and rotate the adjuster plate (f). Re-tighten the bolts. Adjust this to ensure the locking pins (b) do not have too much movement in the adjuster plate (f).



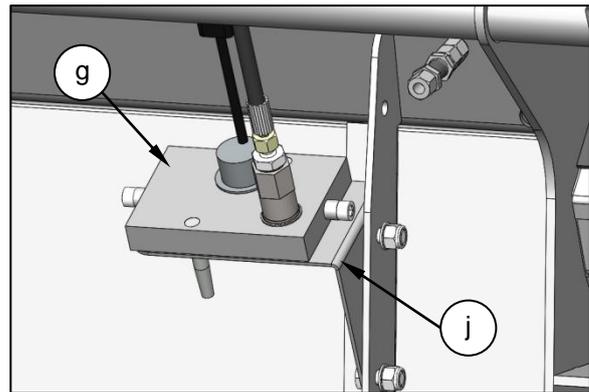
Push up the multicoupler handle (a) to the "nearly up position", remove the plastic cover (n) from combine multicoupler (e) and clean the multicoupler face.

Remove the coupler (g) from the storage bracket (j) on the header and locate it onto the receptacle multicoupler on the feeder house. Pull the handle (a) to a horizontal position so that the dowels are engaged into the handle radial slots.



Ensure the button (m) engages to lock the handle (a) or slide latch (k) across and secure with the linchpin (l).

Store the plastic cover (n) on the storage bracket (j).



Connect the PTO shaft and monitor electrical connectors, then remove the header stands, as described in Section 5.1.10



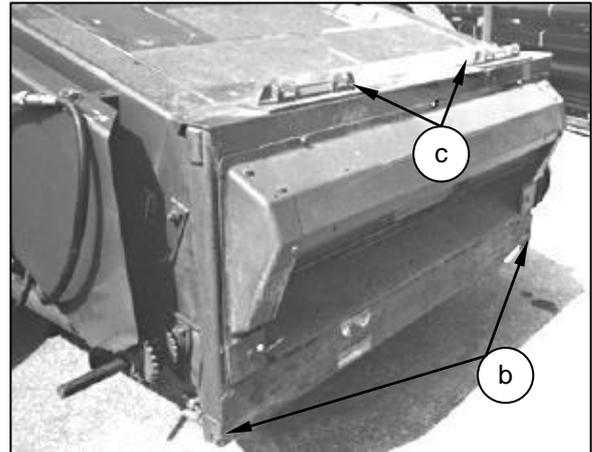
Refit all guards



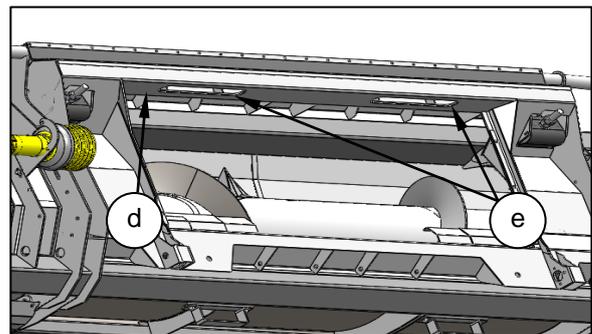
5.1.2 John Deere 50 & earlier series

Retract the pins (b) at the bottom corners of the feeder house, consult the CMOM.

Drive the combine slowly forward, ensuring the feeder house is centered and parallel with the adaptor plate opening, until the feeder house (c) is directly under the adaptor plate top beam (d).



Raise the feeder house to lift the header, ensuring that the pivot blocks (c) are properly seated in the pockets (e) in the adaptor plate top beam, then fully raise the header.



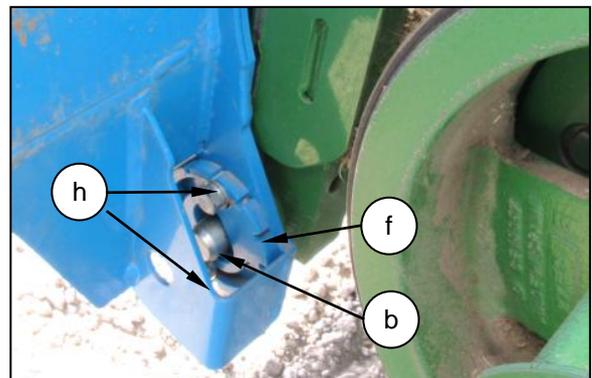
Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock

Engage the locking pins (b) in the adaptor plate, see CMOM.

Ensure the pins (b), on both sides of the feeder house, are fully engaged and protrude the adjuster plate (f). To adjust this, slacken the bolts (h) and rotate the adjuster plate (f).



Re-tighten the bolts. Adjust this to ensure the locking pins (b) do not have too much movement in the adjuster plate (f).

Remove the wiring harness (g) from its storage position on the feeder house and connect to plug (j) on the back of the Stripper Header.

Disconnect the reel lift hose (k) from the quick coupler and install the dust cap (l) on the coupler.

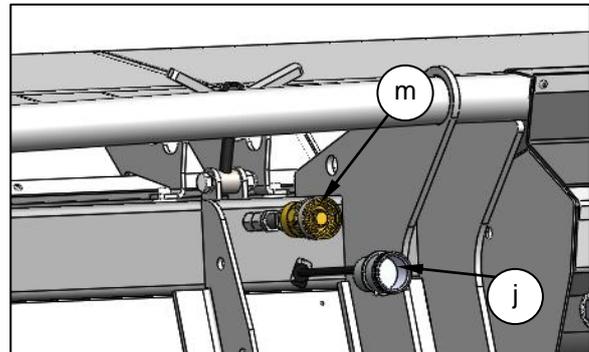
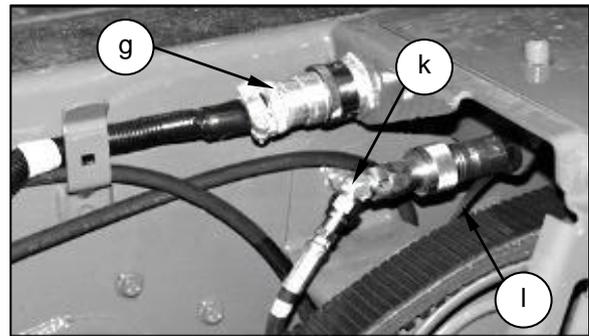
Remove the dust cap from the hydraulic quick coupler (m) on the rear of the header, clean mating pieces and connect the reel lift hose (k).

Connect the PTO shaft and monitor electrical connectors, then remove the header stands, as described in Section 5.1.10

SS



Refit all guards



5.1.3 PTO Shaft Connectors

John Deere 8820, 9600 & 9610.

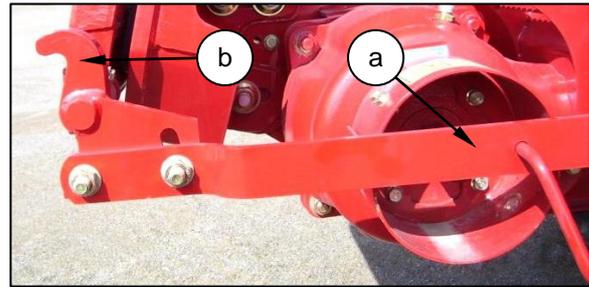
To fit a direct coupled PTO shaft to these combine models a drive adaptor has to be fitted to the header drive sprocket. Contact your Shelbourne Dealer, ref. (KIT-00975).

John Deere 9510, 9500, CTS & 7720.

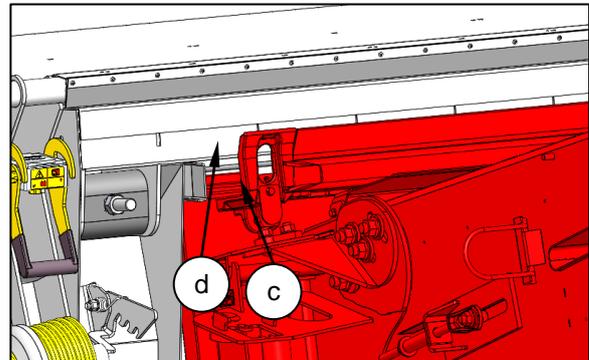
To fit a direct coupled PTO shaft to these combine models the header drive sprocket has to be removed and a groove needs to be filed into the hexagonal shaft to accept the PTO yoke's quick release mechanism. Contact your Shelbourne Dealer, ref. Bulletin TSB-01051 and grinding jig kit (KIT-00978).

5.1.4 Case IH 10, 20, 30, 40, 50, 60 & 88 series

Ensure the handle (a) is positioned so that the hooks (b) can engage in the adaptor plate.



Drive the combine slowly forward, ensuring the feeder house is centered and parallel with the adaptor plate opening, until the feeder house saddle (c) is directly under the adaptor plate top beam (d).



Raise the feeder house to lift the header, ensuring that the feeder saddle is properly engaged in the adaptor plate, then fully raise the header.



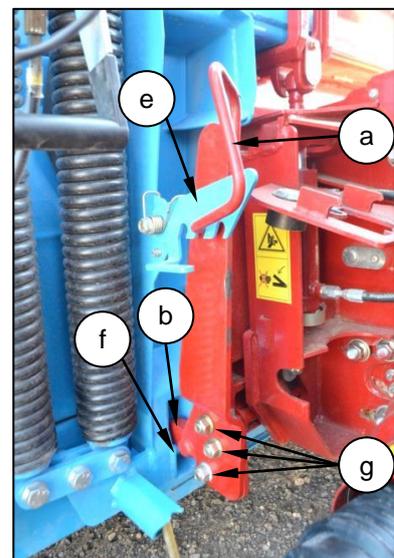
Stop the machine and implement the safe stop procedure



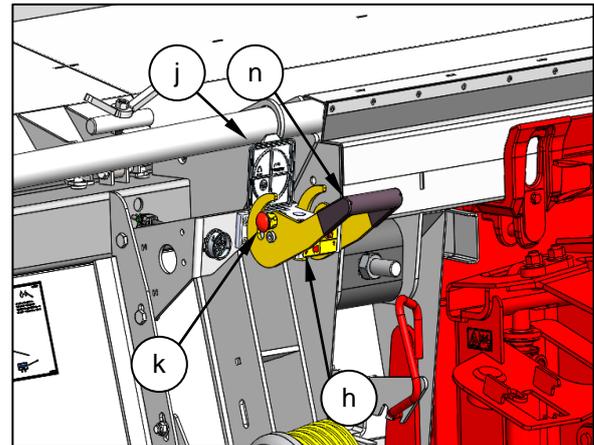
Engage the combine's feeder house cylinder lock

Push the handle (a) towards the header to engage the hooks (b) on both sides of the feeder house. Ensure a slot in the locking plate (e) engages in the handle to lock the handle in place.

If the hooks (b) do not fully engage the pins (f) on the adaptor plate when the handle (a) and the locking plate (e) are engaged, loosen the bolts (g) and adjust the hooks as required, so that some resistance is felt when the locking plate (e) is engaged with the handle (a). Retighten bolts.

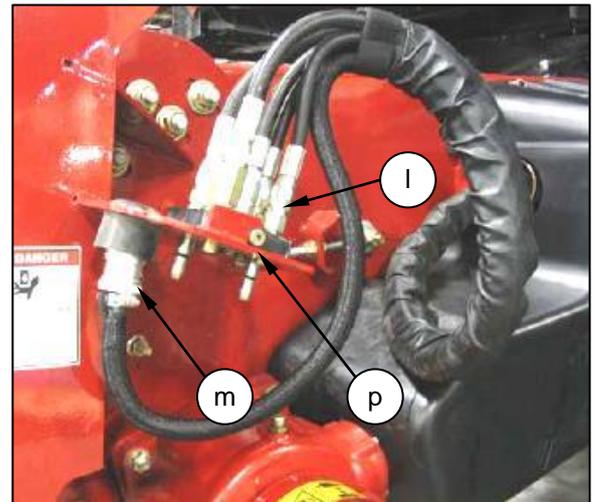


To connect the combine hydraulic quick coupler (l) to the header multicoupler (h), open the cover (j), then depress the red button (k) and raise the handle (n) up to the “fully open” position.



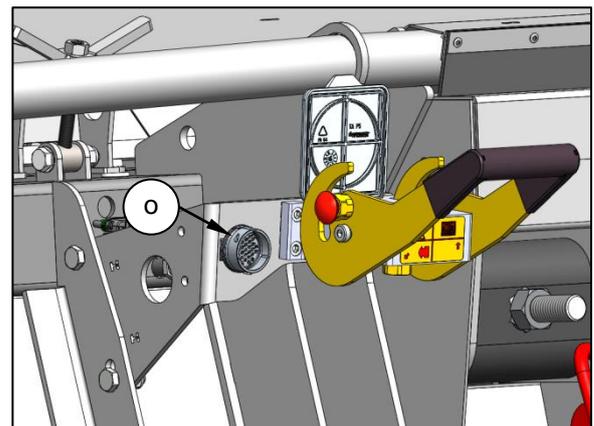
Remove the combine coupler (l) from its storage position (p) and clean the mating surfaces.

Position the combine coupler (l) onto the header multicoupler (h) and lower the handle (n) to engage the pins.



Push the handle (n) down to the “closed position” until the red lock button (k) snaps out.

Remove the electrical connector (m) from its storage position on the feeder house and connect to the plug (o) on the rear of the Stripper Header. To do this align the lugs on the connector with the slots in the plug, push together and turn the collar on the connector to lock it in place.



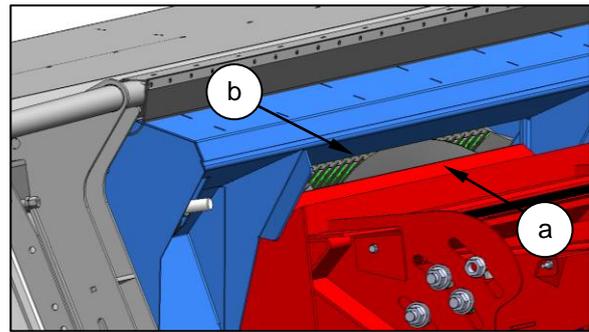
Connect the PTO shaft and monitor electrical connectors, then remove the header stands, as described in Section 5.1.10.



Refit all guards

5.1.5 Case IH 2100, 2300, 2500 & earlier series

Drive the combine slowly forward, ensuring the feeder house is centered and parallel with the adaptor plate opening, until the feeder house saddle (a) is directly under the adaptor plate top beam (b).



Raise the feeder house to lift header, ensuring that the feeder saddle is properly engaged in the adaptor plate, then fully raise the header.

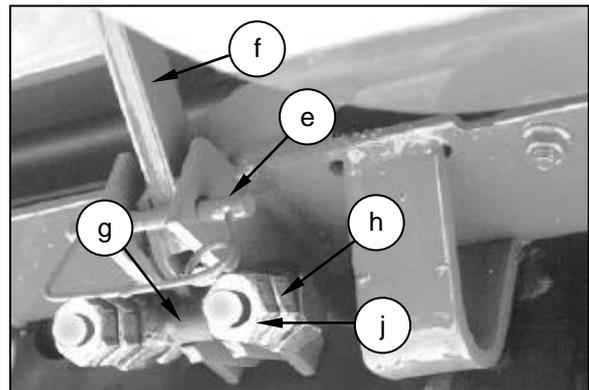


Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock

Remove the pins (e) and lower the latch handles (f) (one on each side of feeder house underside) to hook the latch (g).

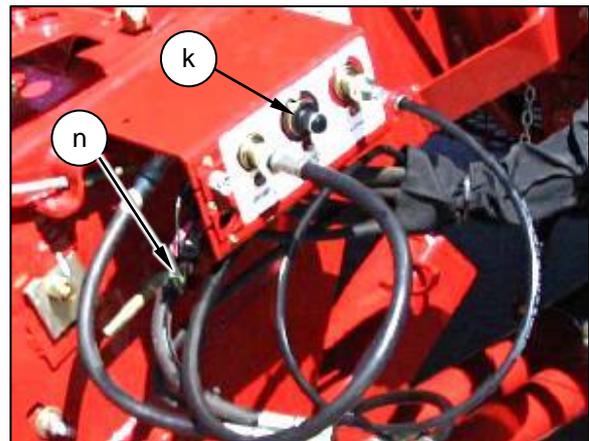


Lift the handles (f) to the "over center position" to lock. The force required to over center the handle should be 180-220 Nm (40-50 lbf). Adjust the nuts (h) on the fixing bar to vary force required on handle.

Tighten the lock nuts (j) when the force is correct.

Fit the pins (e) to secure the latch in "lock position".

Remove the plug from the reel lift coupler (k) on the combine, clean the mating pieces and connect the header crop deflector hose (l) to the combine connector (k).



Connect the header 3 pin electrical cable connector (m) to the combine electrical connector (n).



Connect the PTO shaft and monitor electrical connectors, then remove the header stands, as described in Section 5.1.10.



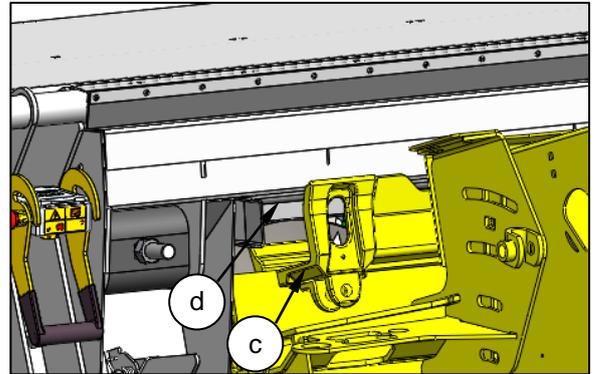
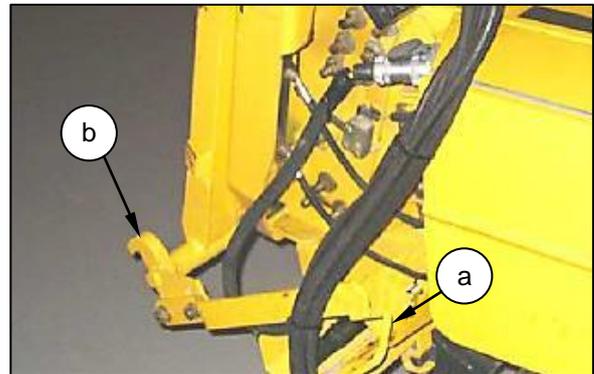
Refit all guards

5.1.6 New Holland CR, CX

Ensure the handle (a) is positioned so that the hooks (b) can engage in the adaptor plate.

Drive the combine slowly forward, ensuring the feeder house is centered and parallel with the adaptor plate opening, until the feeder house saddle (c) is directly under the adaptor plate top beam (d).

Raise the feeder house to lift the header, ensuring that the feeder saddle is properly engaged in the adaptor plate, then fully raise the header.



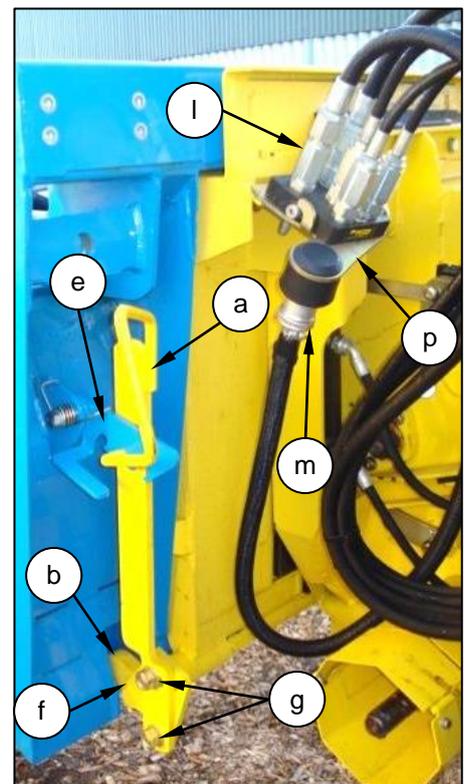
Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock

Push the handle (a) towards the header to engage the hooks (b) on both sides of the feeder house. Ensure a slot in the locking plate (e) engages in the handle to lock the handle in place.

If the hooks (b) do not fully engage the pins (f) on the adaptor plate when the handle (a) and the locking plate (e) are engaged, loosen the bolts (g) and adjust the hooks as required, so that some resistance is felt when the locking plate (e) is engaged with the handle (a). Retighten bolts.



To connect the combine hydraulic quick coupler (l) to the header multicoupler (h), open the cover (j), then depress the red button (k) and raise the handle (n) up to the “fully open” position.

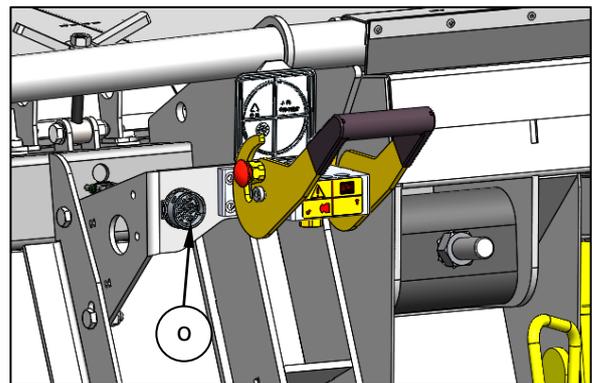
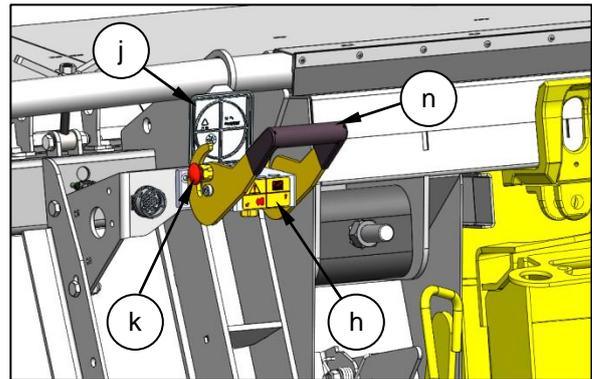
Remove the combine coupler (l) from its storage position (p) and clean the mating surfaces.

Position the combine coupler (l) onto the header multicoupler (h) and lower the handle (n) to engage the pins.

Push the handle (n) down to “closed position” until the red lock button (k) snaps out.

Remove the electrical connector (m) from its storage position (p) on the feeder house and connect to the plug (o) on the rear of the Stripper Header. To do this align the lugs on the connector with the slots in the on plug, push together and turn the collar on the connector to lock it in place.

Connect the PTO shaft and monitor electrical connectors, then remove the header stands, as described in Section 5.1.10.

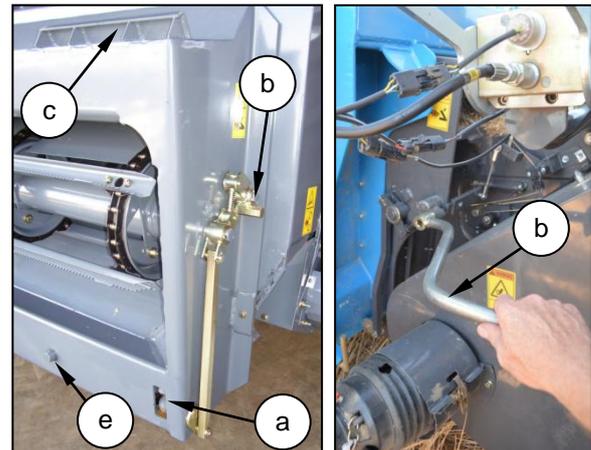


Refit all guards

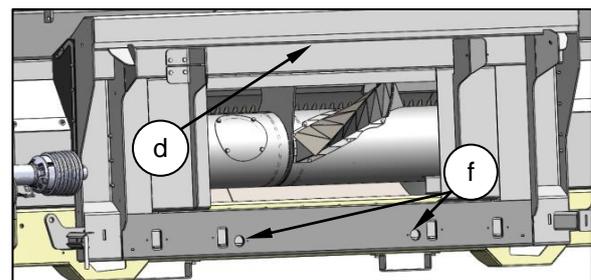
5.1.7 AGCO

Retract the hooks (a) at the base of the feeder house with the lock handle (b).

Drive the combine slowly forward, ensuring the feeder house is centered and parallel with the adaptor plate opening, until the feeder house hooks (c) are directly under the adaptor plate top beam (d) and lower pins (e) are aligned with sockets (f) in the adaptor plate.



Raise the feeder house to lift the header, ensuring that the feeder house hooks (c) are properly engaged in the adaptor plate thus allowing the lower pins (e) to penetrate the sockets (f), then fully raise the header.



Stop the machine and implement the safe stop procedure

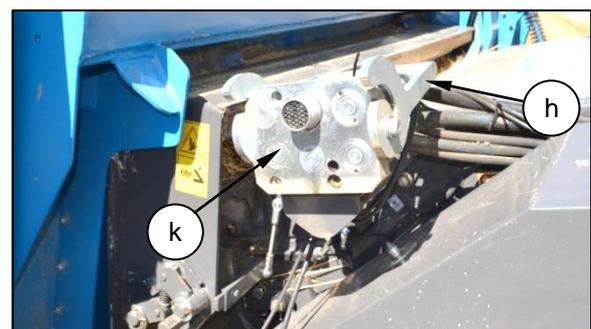


Engage the combine's feeder house cylinder lock

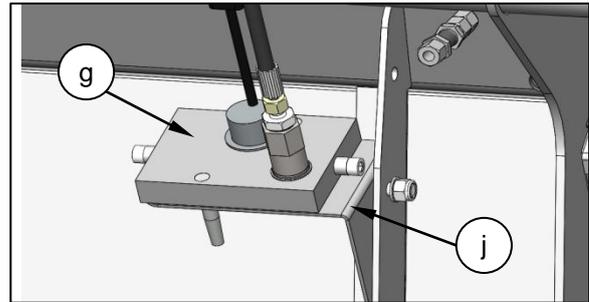
Use the handle (b) to engage the hooks (a) into the adaptor plate, ensure that the handle (b) is rotated to the "over center position" to securely lock the hooks (a).

Remove the handle (b) and store in the appropriate position on the feeder house.

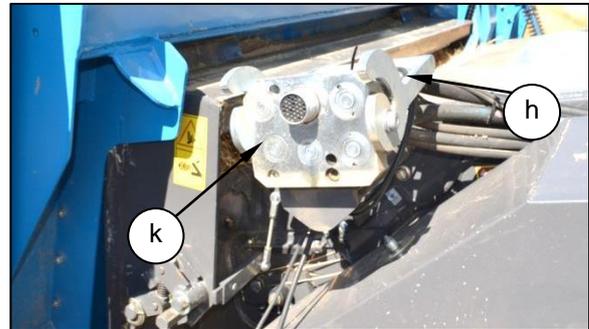
Push the multicoupler handle (h) up to the "fully open position".



Remove the coupler (g) from its storage bracket (j) on the header and clean both multicoupler faces.

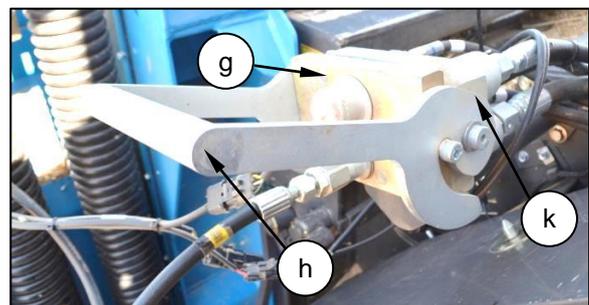


Locate the coupler (g) onto the receptacle multicoupler (k) on the feeder house. Pull the handle (h) down to fully engage the coupler (g).

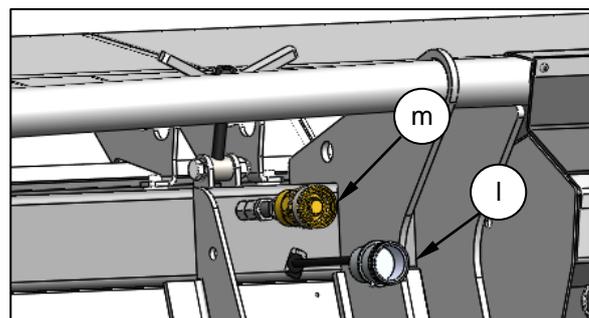


If the combine is not fitted with a multicoupler the hydraulic and electrical couplers will have to be connected separately.

Remove the dust cap from the hydraulic quick coupler (m) on the rear of the header and connect the combine reel lift hose.



Then connect the combine wiring harness to the plug (l) on the back of the Stripper Header.



Connect the PTO shaft and monitor electrical connectors. Then remove the header stands, as described in Section 5.1.10.



Refit all guards

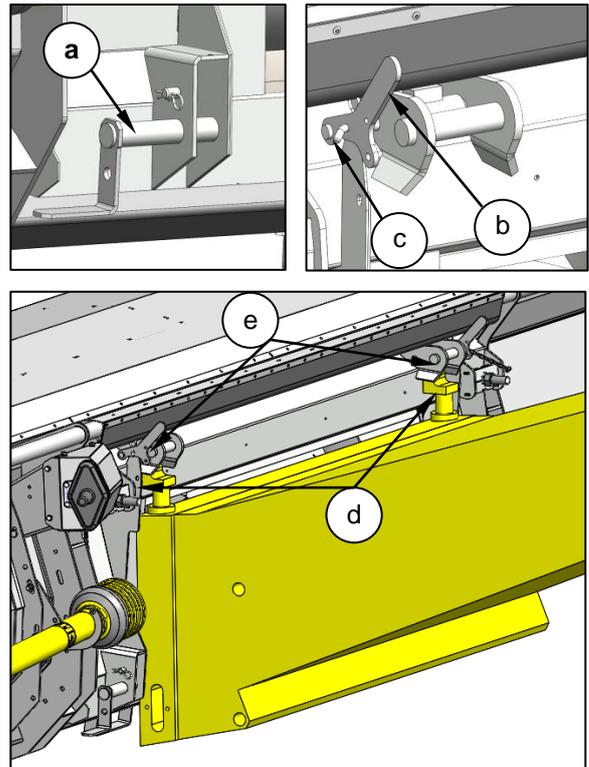
5.1.8 Claas/CAT Lexion

Retract the lower locking pins (a) so that the feeder house opening is unobstructed.

Raise the levers (b) and secure in the “up position” using pins (c).

Drive the combine slowly forward, ensuring the feeder house is centered and parallel with the adaptor plate opening, until the feeder house hooks (d) are directly under the adaptor plate latching pins (e).

Raise the feeder house to lift the header, ensuring that the feeder house hooks (d) are properly engaged in the adaptor plate, then fully raise the header.



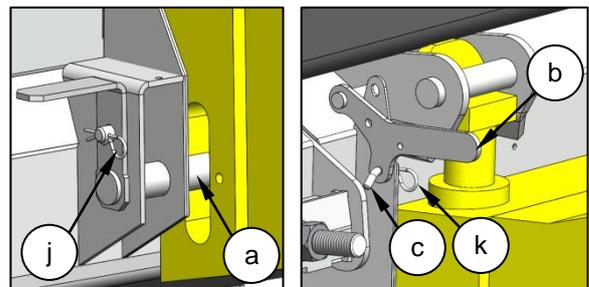
Stop the machine and implement the safe stop procedure



Engage the combine’s feeder house cylinder lock

Insert the lower locking pins (a), on both sides of the feeder house, into the feeder house slots and secure with the R clips (j).

Remove the pin (c) and lower the levers (b), secure the levers (b) in the “lower position” with the pins (c) and secure with the R clips (k).



Unscrew the knob (f) on the combine coupler (g) and remove the coupler from its storage position (h).

Remove the cover (l) from the header hydraulic coupler (m) and clean both mating surfaces.

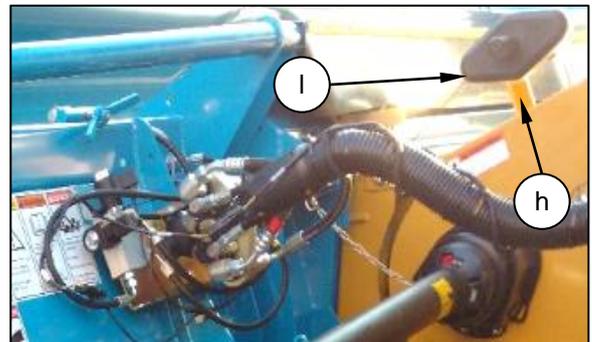
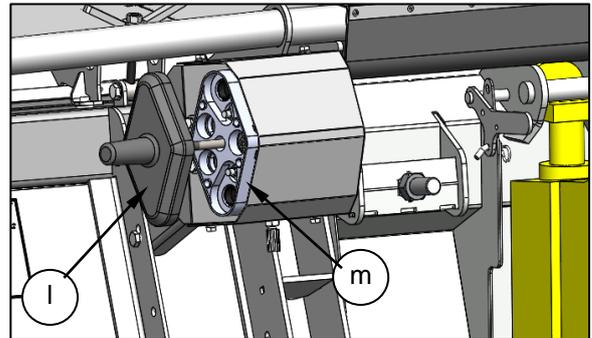
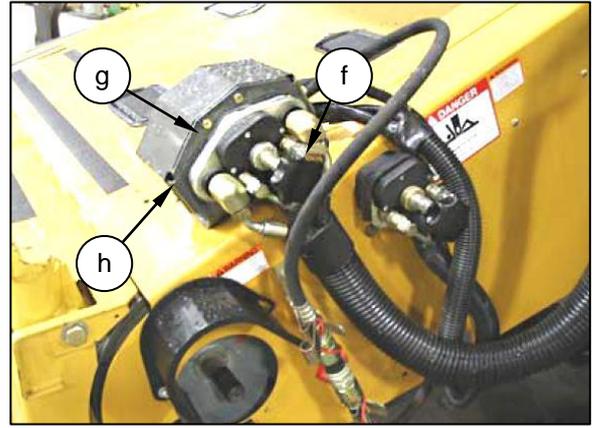
Locate the combine coupler (g) onto the header hydraulic coupler (m) and screw the knob (f) to secure.

Place the cover (l) on the combine storage bracket (h).

Connect the PTO shaft and monitor electrical connectors, then remove the header stands, as described in Section 5.1.10.



Refit all guards



5.1.9 Other makes and models of combine

Consult your Shelbourne dealer and the CMOM for information on attaching the Stripper Header to other makes and models of combines not mentioned in this manual.

5.1.10 Header attachment: all combines

The following points are typical for all models of combine.

Once the Stripper Header has been securely attached to the combine fully raise the header.



Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock

When fitting the PTO shaft to the combine, remove the shaft (e) from its storage bracket (g), slide the collar (i) towards the left hand end of Stripper Header and slide the PTO shaft onto the combine output shaft until the collar has locked.

Check that the locking collar has engaged properly on the shaft.

Ensure that the PTO guard retaining chain (j) is either attached to the storage bracket (g) or another fixed part of the Stripper Header or combine. If necessary reposition the storage bracket (g) to ensure it does not come into contact with the PTO shaft (e) when the Stripper Header is laterally tilted.

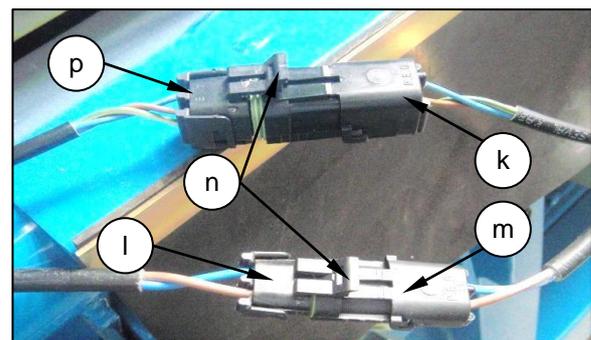
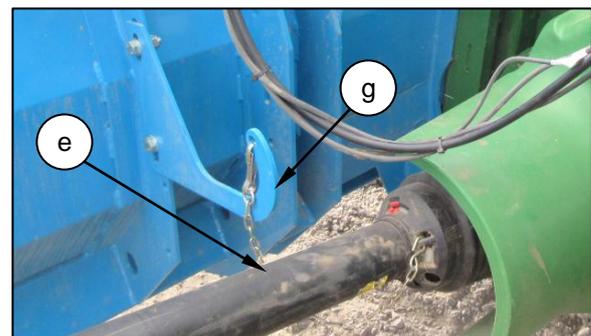
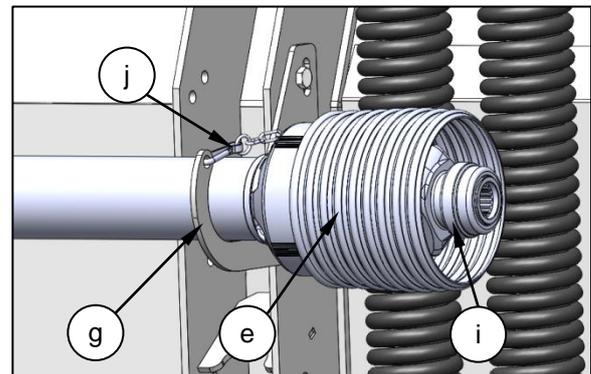


Refit all guards

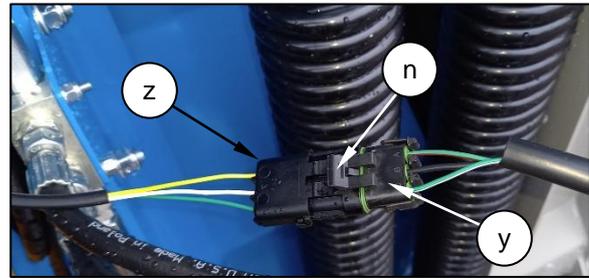
The plugs that connect the monitor display unit to the loom on the Stripper Header need to be connected. Connect the four pin plug (p) and socket (k) together.

Connect two pin plug (l) and socket (m) which supplies power to the variable speed linear actuator on CVS and RVS CAVS machines or to the header valve on CVS and RVS HAVS machines fitted to John Deere X9 and Claas combines

Ensure that the tab (n) is engaged to prevent the connectors from coming apart.

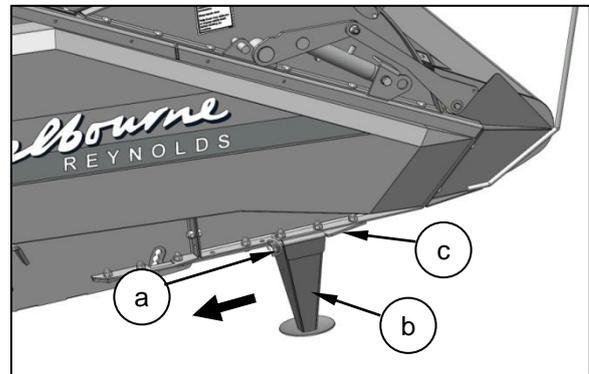


On John Deere X9 ,S7 and T5/6 combines fitted with Shelbourne light loom kit connect three pin combine plug (y) to header socket (z)

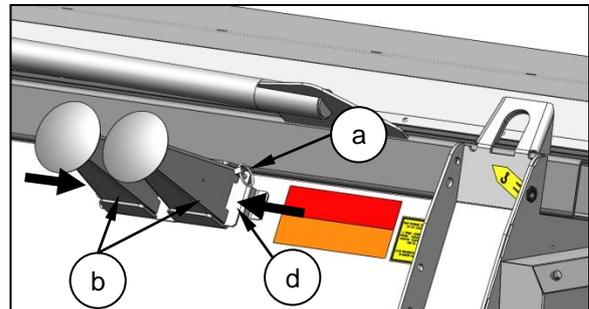


Ensure that the tab (n) is engaged to prevent the connectors from coming apart

Remove the header stands located on the front corners on the underside of the mainframe. Remove the linchpin (a) and slide the header stand (b) backwards, towards the combine until it comes off its mounting, divider plate (c).



The header stands can then be stored on a bracket on the rear (right hand side) of the header. Slide each stand (b) onto the bracket (d) and secure in place with the linchpin (a).



Remove the feeder house cylinder lock.

5.2 HEADER DETACHMENT

5.2.1 Header detachment all combines

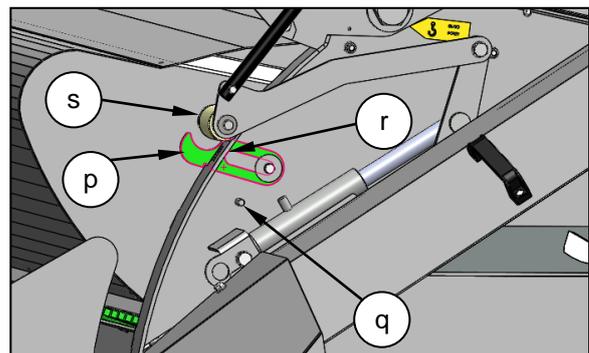
The following points are typical for all models of combine

Before detaching the Stripper Header choose a level area with firm ground to park the header. Fully lower the crop deflector, or lower onto the safety stop. This will relieve the pressure on the hydraulic coupling.

To engage the crop deflector safety stop, lower the header to the ground, then fully raise the crop deflector.

 **Stop the machine and implement the safe stop procedure**

Lift the safety stop (p) from its rest (q) and slide it through the slot in the side plate (r). The stop has a notch which should then rest on the slot in the side plate. Lower the crop deflector so its roller (s) touches onto the safety stop.



Fully raise the header.



Stop the machine and implement the safe stop procedure



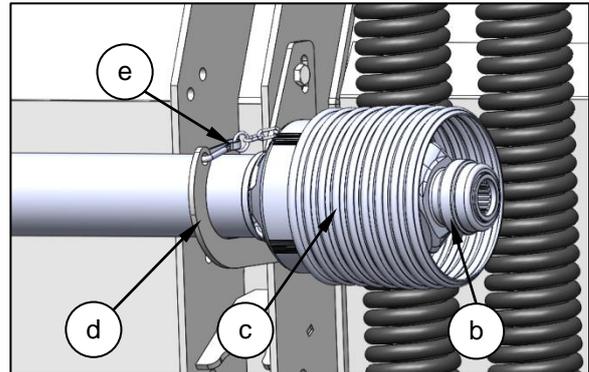
Engage the combine's feeder house cylinder lock

Detach the PTO shaft from the combine.

Ensure that the PTO guard retaining chain (e) is not attached to the combine.

Slide the collar (b) towards the left hand end of the Stripper Header and slide the PTO shaft (c) off the combine output shaft.

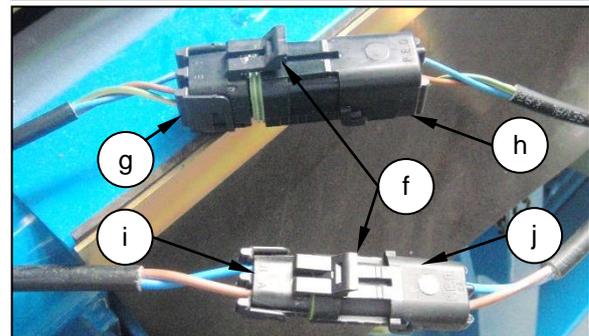
Place PTO shaft in the storage bracket (d).



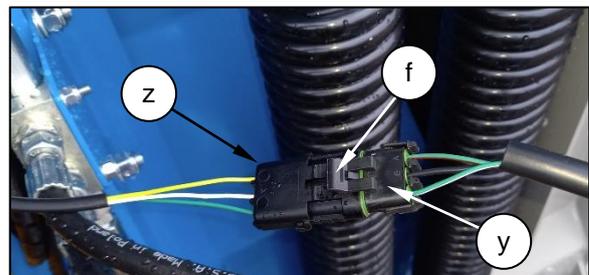
Refit all guards

Disconnect the plugs that connect the monitor display unit and the loom on the Stripper Header.

Raise the tab (f) and pull the plug (g) and socket (h) apart. Repeat the process for the plug (i) and socket (j) if fitted.

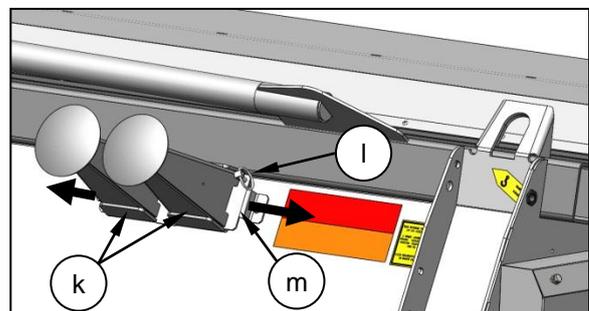


Secure the disconnected cables to prevent damage occurring.



On John Deere X9, S7 and T5/6 combines fitted with Shelbourne light loom kit raise the tab (f) and pull the plug (y) and socket (z) apart.

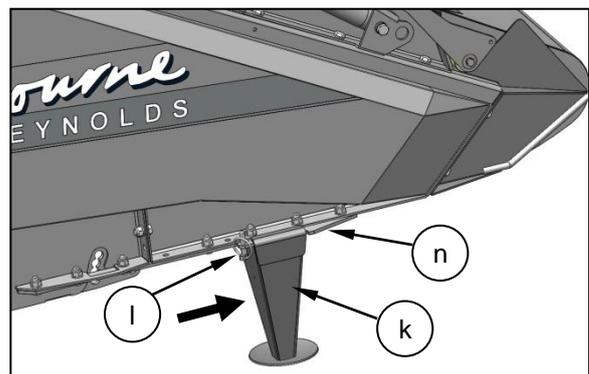
Secure the disconnected cables to prevent damage occurring



Attached the header stands.

The header stands (k) are stored on the rear (right hand side) of the Stripper Header. Remove the linchpin (l) and slide the stands off each end of the bracket (m).

Fit one header stand (k) to both front corners (underside) of the Stripper Header, slide the header stand forwards, onto the dividing plate (n) from the rear of the machine. Secure in position by fitting the linchpin (l).



5.2.2 John Deere 60, 70 & S series

Fit the header stands and disconnect the PTO shaft and monitor electrical connectors and ensure the crop deflector is lowered as described in Section 5.2.1.

Fully raise the header.

 **Stop the machine and implement the safe stop procedure**

 **Engage the combine's feeder house cylinder lock**

 **Refit all guards**

Remove the plastic cover (n) from the storage bracket (j).

Remove the linchpin (l) and slide the latch (k) across or pull the pin (m) and fully raise the handle (a) up and towards the feeder house.

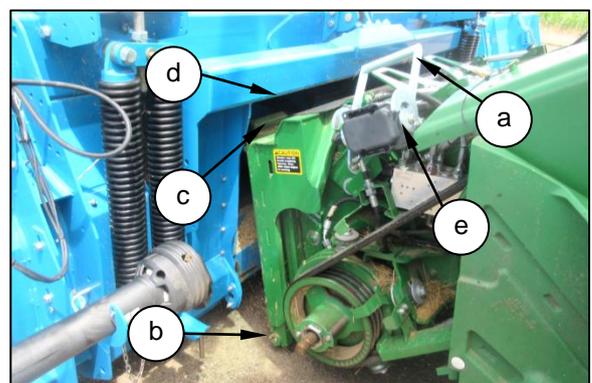
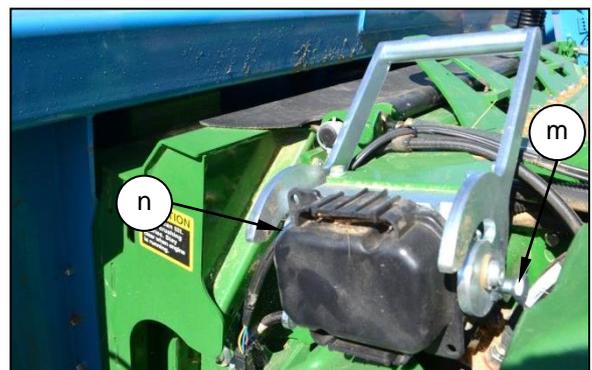
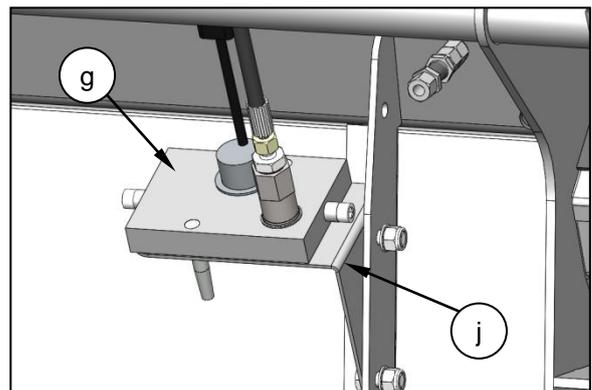
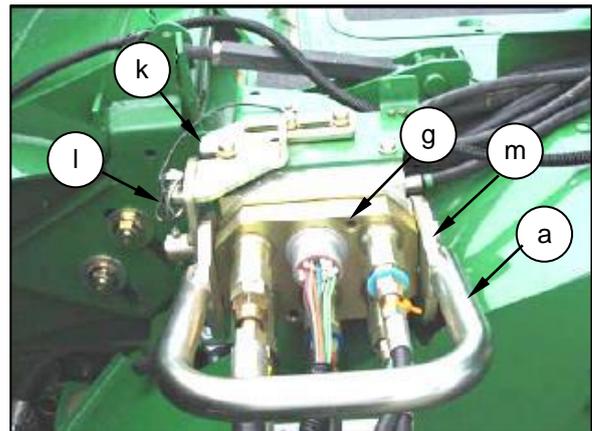
Remove the coupler (g) from the combine multicoupler (e) and locate in the header storage bracket (j). Fit the plastic cover (n) onto the combine multicoupler.

Ensure the pins (b) are fully retracted from the adaptor plate.

Remove the feeder house cylinder lock.

Lower the feeder house until the saddle (c) disengages and clears the adaptor plate top beam (d).

Slowly back the combine away from the header.



5.2.3 John Deere 50 & earlier series

Fit the header stands and disconnect the PTO shaft and monitor electrical connectors and ensure the crop deflector is lowered as described in Section 5.2.1.

Fully raise the header



Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock



Refit all guards

Disconnect the wiring harness (a) from the plug (b) on the back of the Stripper Header and place in the combine storage bracket.

Disconnect the reel lift hose (c) from the header quick coupler (d) and store on the combine.

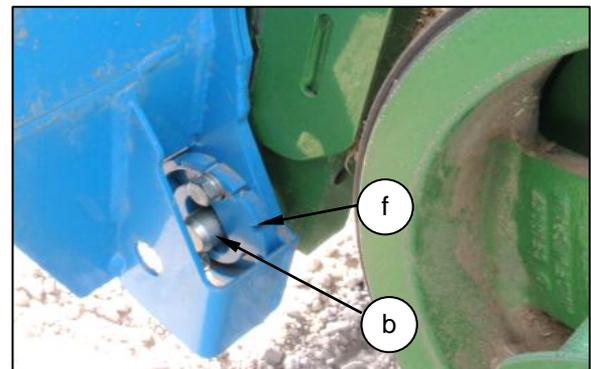
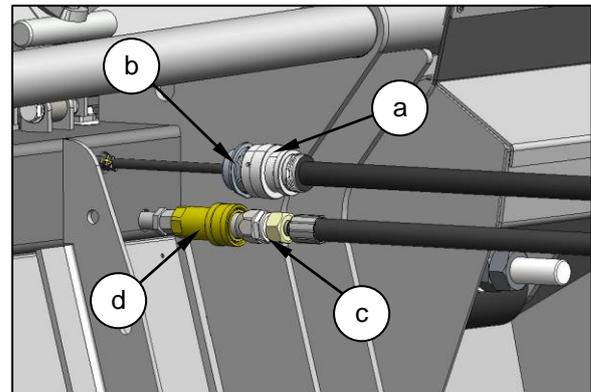
Refit all the dust covers.

Ensure the pins (b) are fully retracted from the adaptor plate (f).

Remove the feeder house cylinder lock.

Lower the feeder house until the pivot blocks disengage from the adaptor plate top beam pockets.

Slowly back the combine away from the header.



5.2.4 Case IH 10, 20, 30, 40, 50, 60 & 88 series

Fit the header stands and disconnect the PTO shaft and monitor electrical connectors and ensure the crop deflector is lowered as described in Section 5.2.1.

Fully raise the header



Stop the machine and implement the safe stop procedure

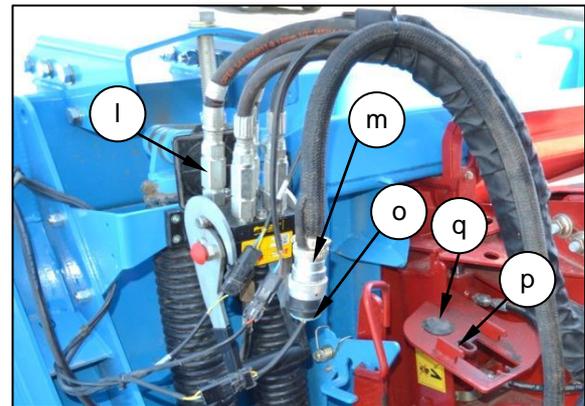


Engage the combine's feeder house cylinder lock



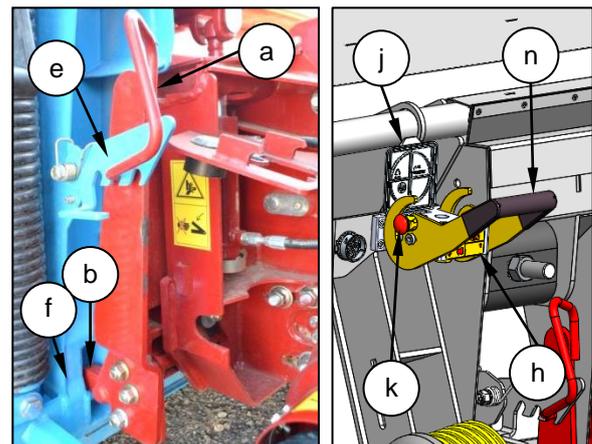
Refit all guards

Disconnect the combine electrical connector (m) from the header plug (o), and place it in the storage cup (q) on the combine.



Depress the red button (k) on the header multicoupler (h) and raise the handle (n) to release the combine quick coupler (l).

Place the combine quick coupler (l) in the storage bracket (p) on the combine.

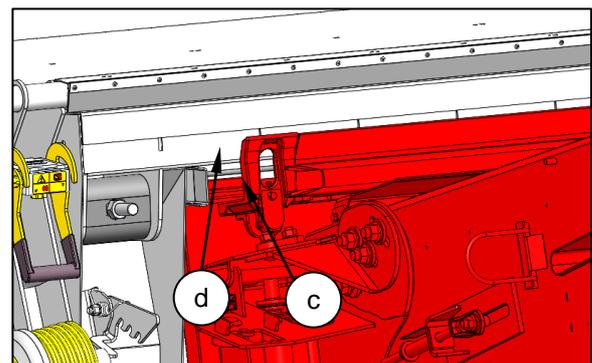


Close the cover (j) on the header multicoupler and lower the handle (n) to the "closed position".

Lift the locking plate (e), pull and lower the handle (a) to disengage the hooks (b) from the pins (f).

Remove the feeder house cylinder lock.

Lower the feeder house until the saddle (c) is disengaged with the adaptor plate top beam (d).



Slowly back the combine away from the header.

5.2.5 Case IH 2100, 2300, 2500 & earlier series

Fit the header stands and disconnect the PTO shaft and monitor electrical connectors and ensure the crop deflector is lowered as described in Section 5.2.1.

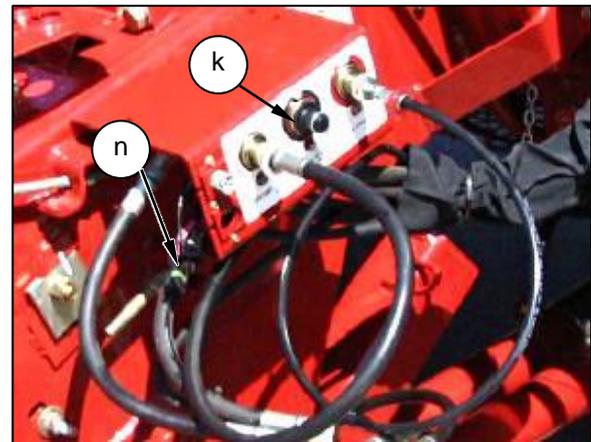
Fully raise the header

-  **Stop the machine and implement the safe stop procedure**
-  **Engage the combine's feeder house cylinder lock**
-  **Refit all guards**

Disconnect the header electrical connector (m) from the combine connector (n).



Remove the header crop deflector hose (l) from the combine reel lift connector (k) and refit the plug.

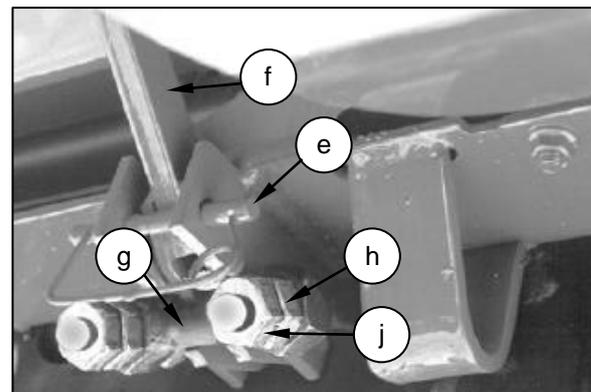


Remove the pins (e) and lower the latch handles (f) (one on each side of feeder house underside) to disengage the latches (g).

Raise the latch handles (f) to the "storage position" and secure with the pins (e).

Remove the feeder house cylinder lock.

Lower the feeder house until it is disengaged from the adaptor plate top beam.



Slowly back the combine away from the header.

5.2.6 New Holland CR, CX

Fit the header stands and disconnect the PTO shaft and monitor electrical connectors and ensure the crop deflector is lowered as described in Section 5.2.1.

Fully raise the header

-  **Stop the machine and implement the safe stop procedure**
-  **Engage the combine's feeder house cylinder lock**
-  **Refit all guards**

Disconnect the combine electrical connector (m) from the header plug (o), and place in the storage cup (q) on the combine.

Depress the red button (k) on the header multicoupler (h) and raise the handle (n) to release the combine quick coupler (l).

Place the combine quick coupler (l) in the storage bracket (p) on the combine.

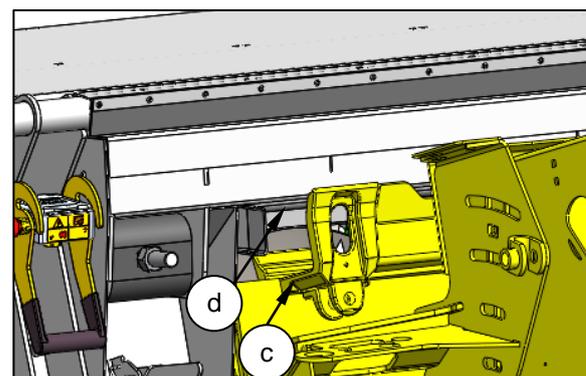
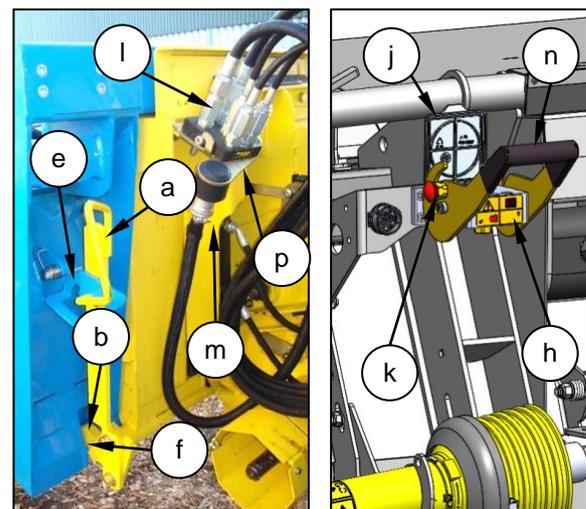
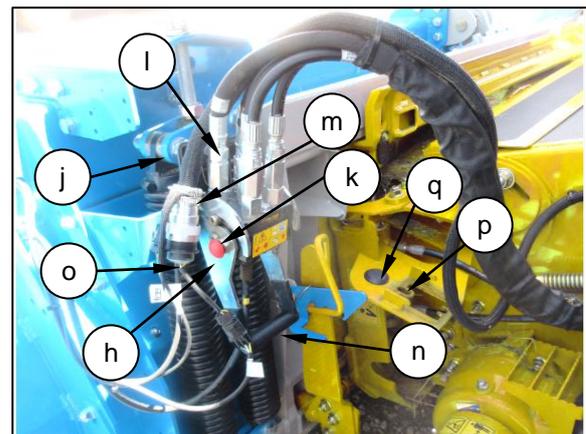
Close the cover (j) on the header multicoupler and lower the handle (n) to the "closed position".

Lift the locking plate (e), pull and lower the handle (a) to disengage the pins (f) and the hooks (b).

Remove the feeder house cylinder lock.

Lower the feeder house until it is disengaged from the adaptor plate top beam (d).

Slowly back the combine away from the header.



5.2.7 AGCO

Fit the header stands and disconnect the PTO shaft and monitor electrical connectors and ensure the crop deflector is lowered as described in Section 5.2.1.

Fully raise the header



Stop the machine and implement the safe stop procedure

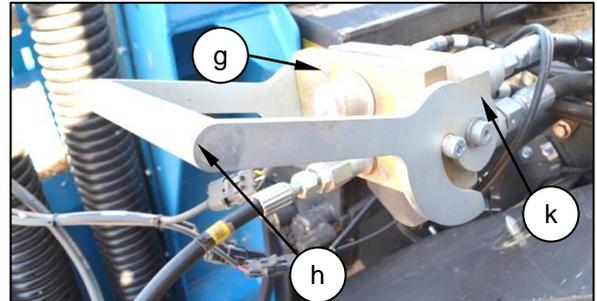


Engage the combine's feeder house cylinder lock

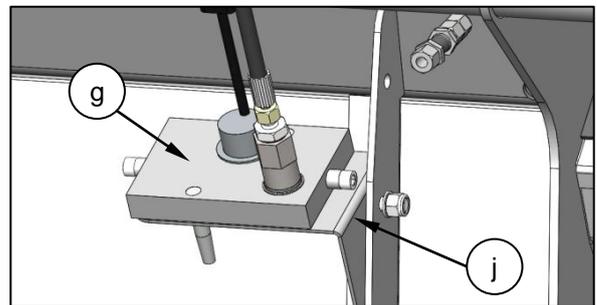


Refit all guards

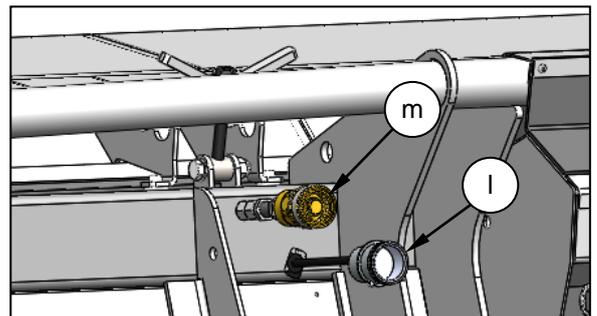
Push the multicoupler handle (h) to the "fully open position", remove the coupler (g) and place it in the storage bracket (j) on the header.



If the machine is not fitted with a multicoupler remove the combine reel lift hose from the hydraulic quick coupler (m) on the rear of the header and refit the dust cap.



Disconnect the combine wiring harness from the electrical plug (l) on the back of the Stripper Header.

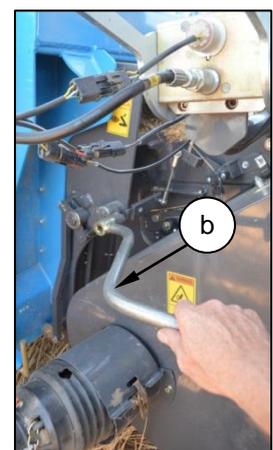
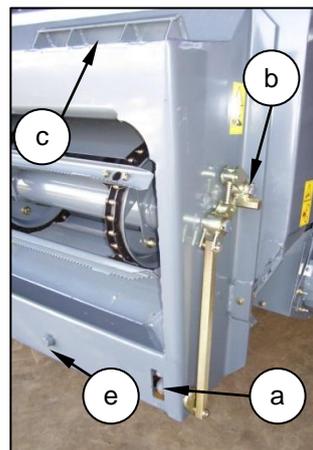


Fit the handle (b) and rotate to retract the hooks (a) from the adaptor plate, remove the handle (b) and store in the appropriate position on the feeder house.

Remove the feeder house cylinder lock.

Lower the feeder house until it is disengaged from the adaptor plate top beam.

Slowly back the combine away from the header.



5.2.8 Claas/CAT Lexion

Fit the header stands and disconnect the PTO shaft and monitor electrical connectors and ensure the crop deflector is lowered as described in Section 5.2.1.

Fully raise the header

-  **Stop the machine and implement the safe stop procedure**
-  **Engage the combine's feeder house cylinder lock**
-  **Refit all guards**

Remove the cover (l) from the combine storage bracket (h).

Unscrew the knob (f) on the combine coupler (g) and remove the coupler from the header.

Locate the combine coupler (g) on the combine storage position (h) and screw the knob (f) to secure.

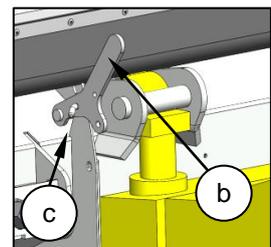
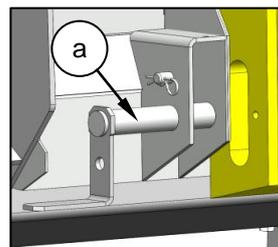
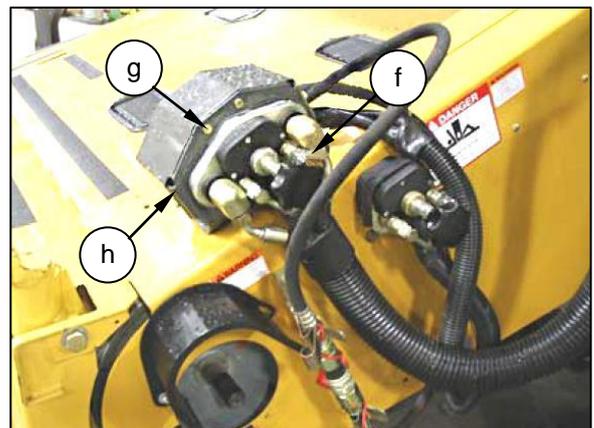
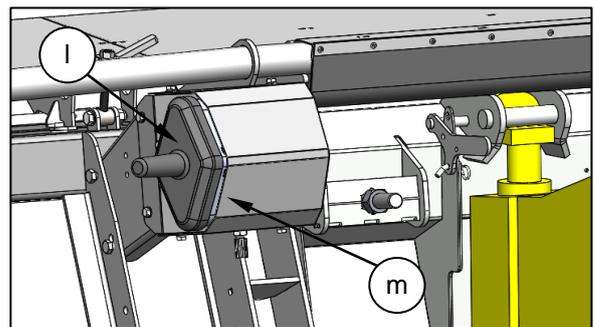
Fit the cover (l) on the header hydraulic coupler (m).

Retract the lower locking pins (a) and raise the lever (b) and secure in the "up position" using the pin (c).

Remove the feeder house cylinder lock.

Lower the feeder house until it is disengaged from the adaptor plate.

Slowly back the combine away from the header.



SECTION 6 STRIPPER HEADER PREPARATION & ADJUSTMENTS

Prior to delivery the Stripper Header will have been set up and pre-delivery inspected (PDI) by your Shelbourne dealer, however there are some set up tasks and further adjustments that may need to be carried out prior to use.



Refer to Sections 2.7 and 2.11 for accident prevention information

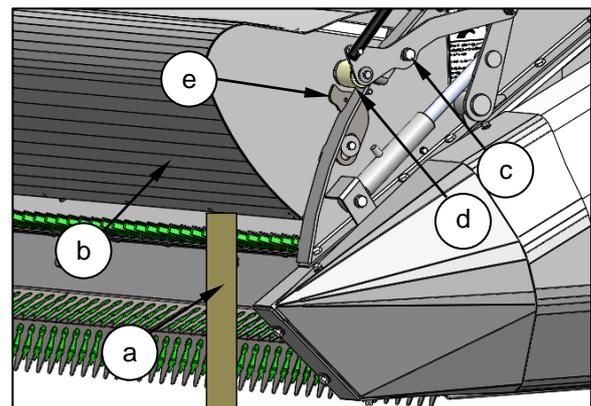
6.1 REMOVING CROP DEFLECTOR SHIPPING BRACKETS

The shipping brackets that secure the crop deflector need to be removed from each end of the machine before use. With the Stripper Header attached to the combine, lower the Stripper Header to the floor.



Stop the machine and implement the safe stop procedure

Place suitable supports (a) underneath each end of the crop deflector (b) to take the weight off the shipping bolt (c).



Remove the shipping bolt (c) and its spacers and washers. The nut for this is fixed.

Repeat the process with the shipping bolt at the other end of the machine.

Charge the crop deflector hydraulic system and raise the crop deflector by operating the combine's reel raise or reel fore/aft function.

Remove support (a) and disengage the crop deflector safety stop (d), then fully lower the crop deflector by operating the combine's reel lower or reel fore/aft function.

6.2 FITTING OF CROP MARKERS

Crop markers need to be fitted to the front left hand and right hand corners.



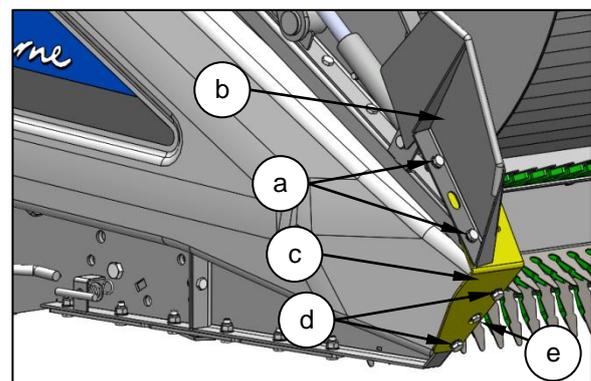
Raise the crop deflector and engage the safety stop

Lower the Stripper Header to the ground.



Stop the machine and implement the safe stop procedure

Remove the crop marker (b) from the shipping bracket (c), by removing fasteners (a). Remove the shipping bracket (c) from the Stripper Header by removing fasteners (d), retain the fasteners, there are captive nuts welded to the mainframe for these fasteners.

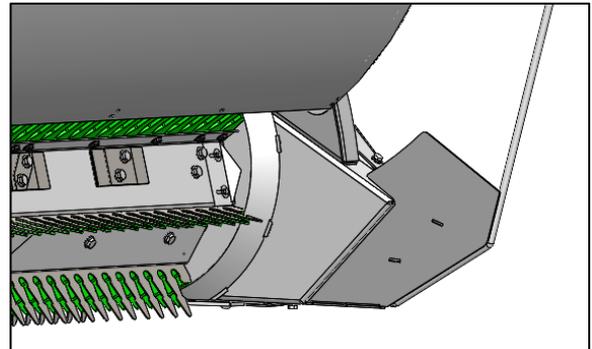
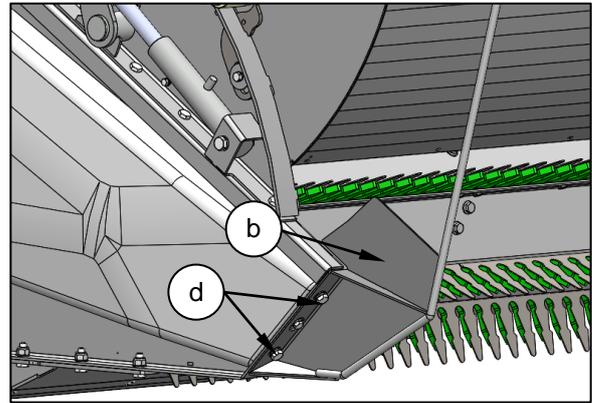


There is no need to remove the right hand guard fastener (e).

Position the crop marker (b) as shown and secure in place by refitting the fasteners (d).

Repeat this process on the left hand end and fit the left hand crop marker.

Occasionally, for shipping, both of the crop markers may be fitted to the right hand end shipping bracket (c). When this is the case ensure that the crop markers are fitted to the correct end of the machine,



6.3 REMOVAL OF FORKLIFT BRACKETS

Before operation the forklift brackets located underneath the center of the Stripper Header need to be removed.

With the Stripper Header connected to the combine, fully raise the Stripper Header and engage the combine's feeder house cylinder lock.



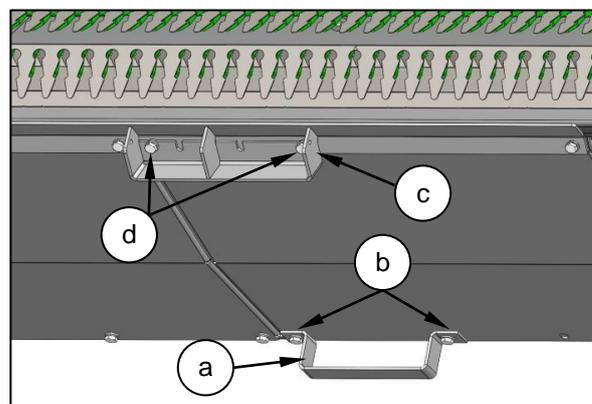
Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock

The rear strap (a) is removed by removing the fasteners (b). Refit the fasteners after the strap is removed.

On RSD and RVS machines the front stop plate (c) is removable. Loosen the fasteners (d) and remove the support plate. Retighten the fasteners. Keep the forklift brackets in a safe place so they can be refitted if the Stripper Header ever needs to be moved with a forklift.



6.4 ADJUSTING THE SKIDS

Most Stripper Headers are supplied with two adjustable outer skids and depending on the model width an additional one or two inner skids. The skids come into contact with the ground when working at low levels. The skid height can be adjusted to vary the clearance between the stripping rotor and the ground, to prevent damage to the stripping rotor.

With the Stripper Header connected to the combine, fully raise the Stripper Header and engage the combine's feeder house cylinder lock.

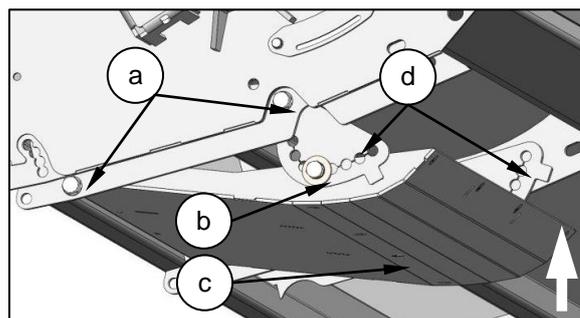


Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock

Slacken bolts (a & b) on each side of the skid (c). Support the rear of the skid and remove the bolt (b) on one side of the skid. Ensuring the rear of the skid is fully supported remove the bolt (b) on the other side of the skid.



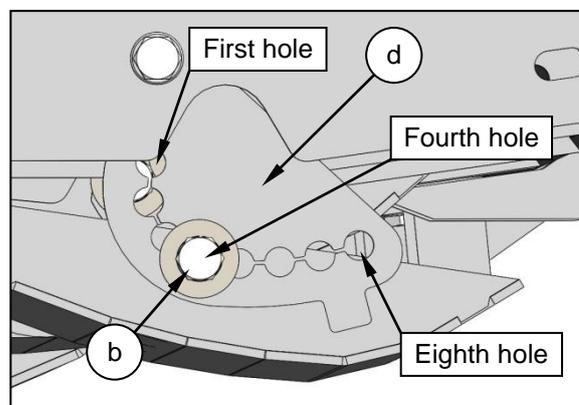
Lower the skid to the desired position and then refit bolt (b) aligning it with the required hole in the skid adjuster plate (d) and the skid. Repeat the process on the other side of the skid, ensuring that the same hole is used in both skid adjuster plates. Fully tighten all bolts (a & b) on both sides of the skid.

Repeat the process on the other skids, ensuring that both outer skids are adjusted to the same height. Inner skids should be set two positions higher than outer skids.

6.5 ADJUSTING THE ADAPTOR PLATE

The pitch of the Stripper Header may need to be adjusted to suit the combine, this is done by altering the angle of the adaptor plate. The adaptor plate is set in a standard position which should suit the majority of combines. The combine feeder house faceplate may also need adjusting, consult the CMOM for this.

Park the Stripper Header and combine on level concrete. Adjust the outer skids as described in Section 6.4, so that bolt (b) is in the fourth hole in the skid adjuster plate (d).

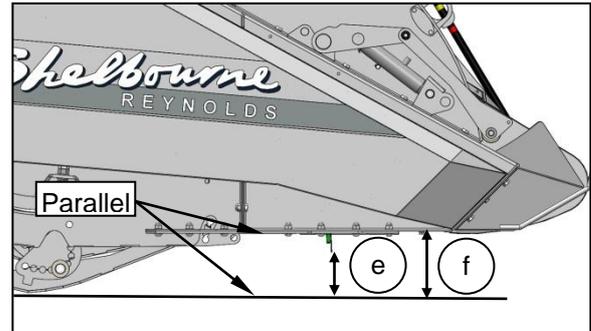


Lower the Stripper Header so that the outer skids touch the concrete.



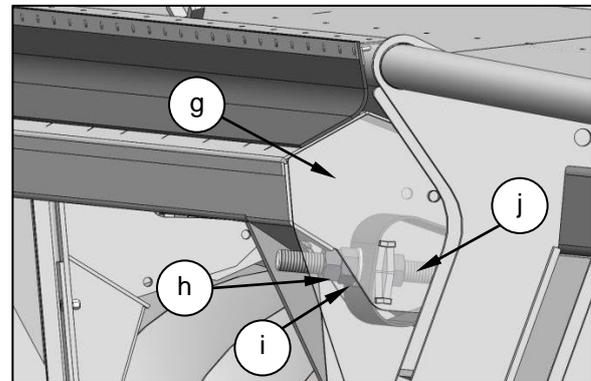
Stop the machine and implement the safe stop procedure

Check the pitch adjustment. The side plates of the header should be parallel to the ground or tilted back very slightly. This should equate to an approximate clearance (e) of 100mm (4") between the stripping rotor finger and the ground and (f) 150mm (6") between the bottom of the side plate and the ground.



If adjustment is required the adaptor plate (g) angle will need to be changed.

Loosen the outer nuts (h & i) slightly on either side of the adaptor plate. If the front of the Stripper Header needs to be pitched up more adjust the inner nut (j) towards the front of the Stripper Header (either side of adaptor plate). Then adjust the outer nut (i) in the same direction. It may be necessary to adjust the nut on either side of the adaptor plate a few turns at a time.



Once the required pitch has been achieved adjust inner nuts (j) to the adaptor plate and tighten outer nuts (i) fully. Tighten lock nuts (h). Ensure that the adjustment is the same either side of the adaptor plate. If the Stripper Header needs to be pitched down follow the same procedure, except wind nuts (h, i & j) towards the combine. Do not unthread the nuts off of the bolt as this will cause the Stripper Header to fall.

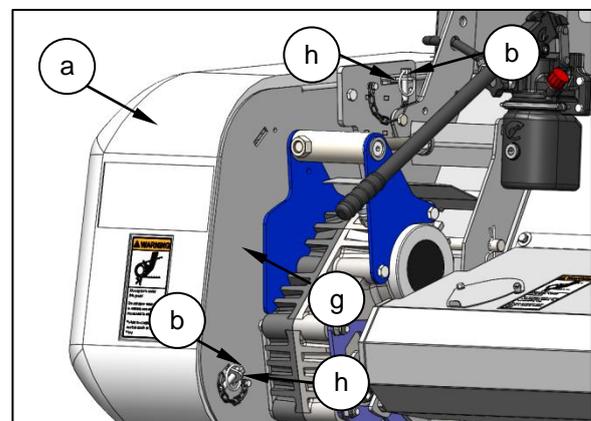
6.6 DRIVE AND IDLE END GUARDS

In order to perform some adjustment, maintenance and lubrication tasks, access inside the left hand end drive guard and the right hand end idle guard may be required

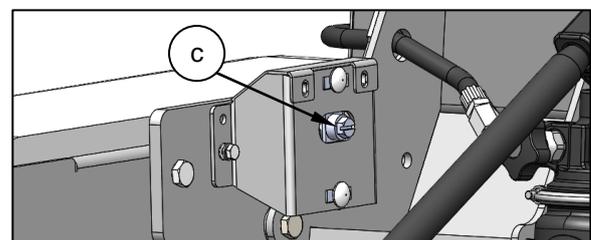
 **Stop the machine and implement the safe stop procedure**

6.6.1 Opening the left hand end drive guard

To open the left hand end drive guard (a) remove the lynch pins (b) from the locating plates (h)

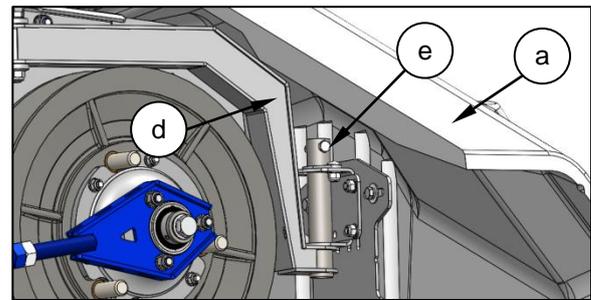


If fitted, turn the slam latch bolt (c) counterclockwise (anticlockwise) to release the guard.



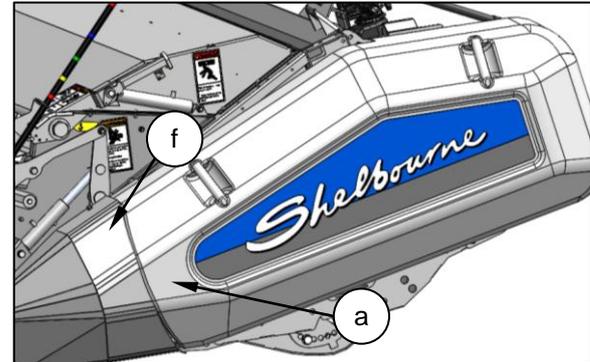
The rear of the guard can be pivoted outwards and swung open on its arm (d).

If greater access is required the guard (a) can be lifted off of the arm (d) by removing fasteners (e).



6.6.2 Closing the left hand end drive guard

If removed, refit the guard (a) onto the arm (d) and refit fasteners (e). Swing the guard (a) to its closed position and locate the front into the fixed corner guard (f). Push the rear of the guard towards the mounting plate (g) so that the locating plates (h) pass through the mounting plate (g). Refit the lynch pins (b) into the locating plates (h). If a slam latch (c) is fitted ensure that the locating plate (h) has securely latched into it.



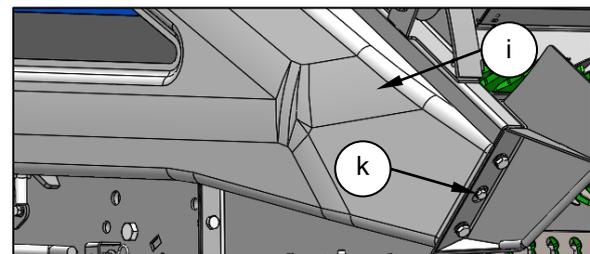
6.6.3 Removing the right hand end idle guard

For occasional adjustments the right hand end idle guard (i) may need to be removed. To do this remove the fasteners (j & k) and lift the guard away.



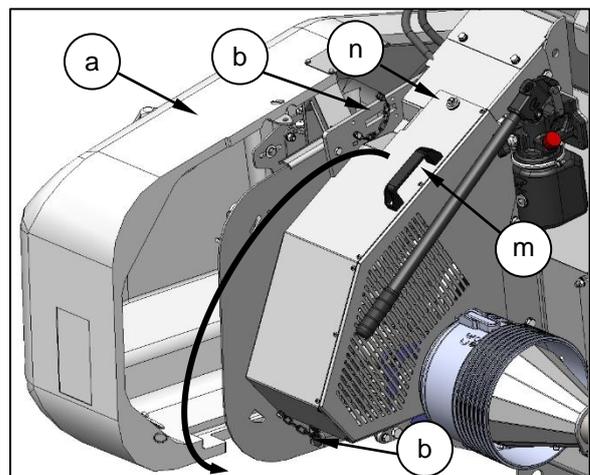
6.6.4 Refitting the right hand end idle guard

Reposition the guard (i) onto the side of the Stripper Header. Fitting the front fastener (k) first will ease the refitting process. Refit the remaining fasteners (j), securing the guard.



6.6.5 Opening the gearbox guard (CVS HAVS drive only)

Before opening the gearbox guard (m) the left-hand end drive guard (a) must be opened. Then turn the $\frac{1}{4}$ turn fastener (n) counterclockwise (anticlockwise) and raise the gearbox guard allowing it to pivot backwards until it rests against the stop.



6.6.6 Closing the gearbox guard (CVS HAVS drive only)

Pivot and close the gearbox (m), ensure that lynch pins (b) and chains do not become trapped. Then turn the $\frac{1}{4}$ turn fastener (n) clockwise to secure the guard and close the left-hand end drive guard.

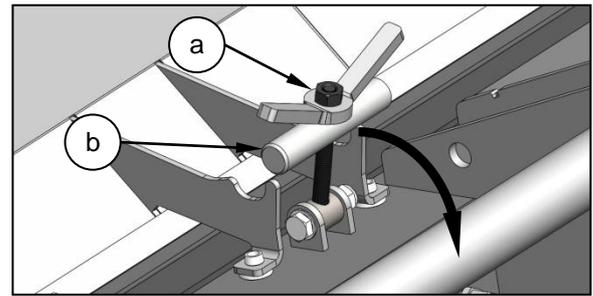
6.7 ADJUSTING THE AUGER CLEARANCE

Before use, especially if the adaptor plate has been adjusted, the auger clearance must be checked. The Stripper Header must be attached to the combine and lowered to the ground.

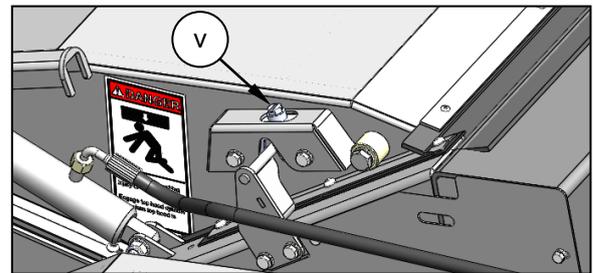


Stop the machine and implement the safe stop procedure

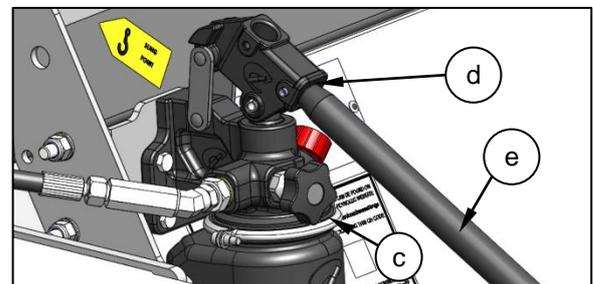
Open the hood. To do this, unwind the two retaining nuts (a) counterclockwise (anticlockwise) and release the retaining bars (b).



Where fitted, turn the slam latch bolt (v) counterclockwise (anticlockwise) to release the hood.



Turn tap (c) fully clockwise on the hand pump (d). Operate the hand pump handle (e) and fully raise the hood (f).

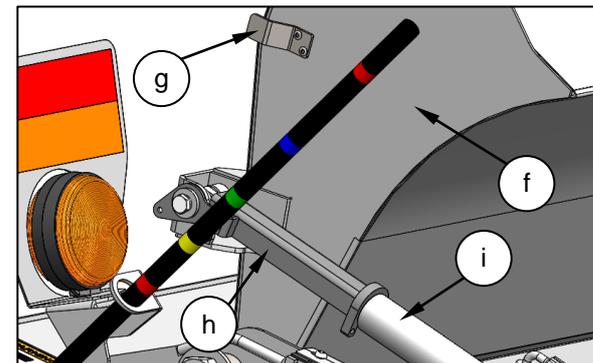


Lift the ram stop (h) from its support (g) allowing the ram stop to drop into position. Ensure the ram stop is fully lowered and engaged on the hydraulic ram (i).

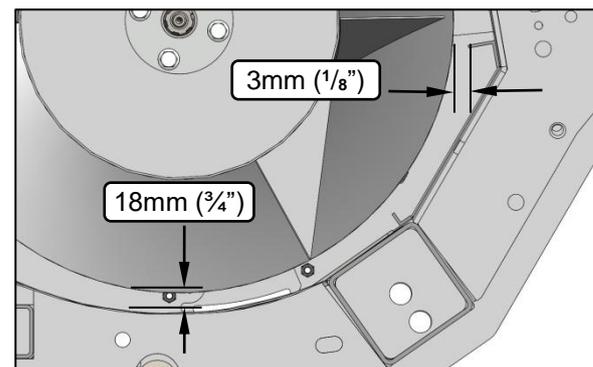


Use the hood ram stop

Check that there is clearance between the auger flight and paddles and the combine feeder house. If this is too close then the adaptor plate may need to be adjusted as described in Section 6.5.



Check the auger flight clearance. There should be a gap of 18mm ($\frac{3}{4}$ ") between the flight and the bottom of the auger trough and 3mm ($\frac{1}{8}$ ") between the auger flight and rear scraper.



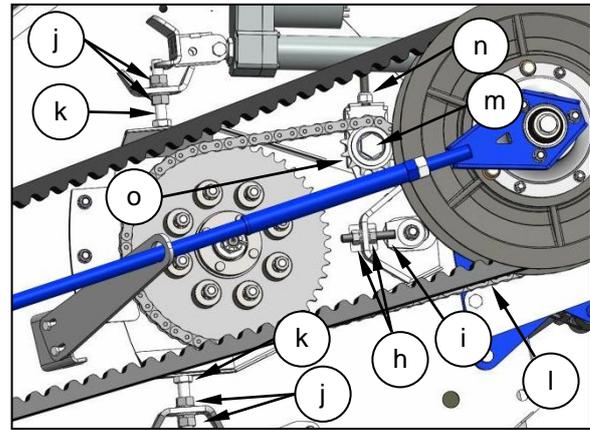
Adjust the auger equally at both ends in order to get the correct clearance, both the end guards will need to be removed.

To move the auger forwards or backwards, wind the nuts (h) along the adjuster (i).

To move the auger up and down, wind the nuts (j) on the setscrews (k).

It may be necessary to tension or slacken the auger drive chain (l). Slightly slacken the idler spindle (m), then turn the nut (n) to raise or lower the idler sprocket (o). Fully tighten the idler spindle (m) ensuring that the chain does not become too tight.

Adjust the auger at the other end, ensure the nuts (h & j) are fully tightened and refit all guards.



6.8 MONITOR

The Stripper Header is supplied with a monitor kit and combine loom. This connects to the wiring loom already installed on the Stripper Header.

The monitor and combine loom should be installed by your Shelbourne dealer.

6.8.1 Head Unit

Confirm with the machine operator on where to mount the head unit (a) in the cab. The head unit must not restrict the view out of the cab, nor impede the use of the controls, but must be easy to view and within reach from the operator's seat.

With the use of the suction cup (j) the head unit can be fitted to clean glass or other non-porous surfaces in the combine cab. If not using the suction cup consult the combine manufacturer operator's manual or dealer representative for guidance of suitable places to mount the head unit.

The head unit is fitted with a flying lead with a 12-way "Qikmate" connector (b) onto the junction box lead. It is supplied with a mounting kit comprising the following parts.

- 1 x Long Bracket (c)
- 1 x Short Bracket (d)
- 3 x Clamping Knobs (e)
- 1 x Cover Plate (f)
- 1 x Mounting Plate (g)
- 2 x Self-Tapping Screws (h)
- 1 x Mounting Pad (i)
- 1 x Suction Cup (j)



6.8.2 Head Unit Mounting

The instrument mount is designed to offer maximum flexibility in positioning the head unit, either from the right hand side of the cab, from the dashboard or from an overhead position.

Snap the cover plate into the recess of the long bracket (it only fits one way).



Assemble the two brackets, and mounting plate with clamping knobs, and attach to the head unit. Each pivot point on the mounting bracket can be indexed to angle the head unit in relation to the mounting plate.

Either the long or short bracket can be attached to the head unit, whichever gives the most suitable orientation. Place the mounting pad underneath the mounting plate.

Having established the orientation for the bracket, fix the mounting plate to the cab with the self-tapping screws provided.



Do not drill into a ROPS or FOPS frame.

If fixing the mounting plate to plastic e.g. the dashboard or other cab molding, it is recommended to use M4 screws with large diameter washers to strengthen the mounting point.

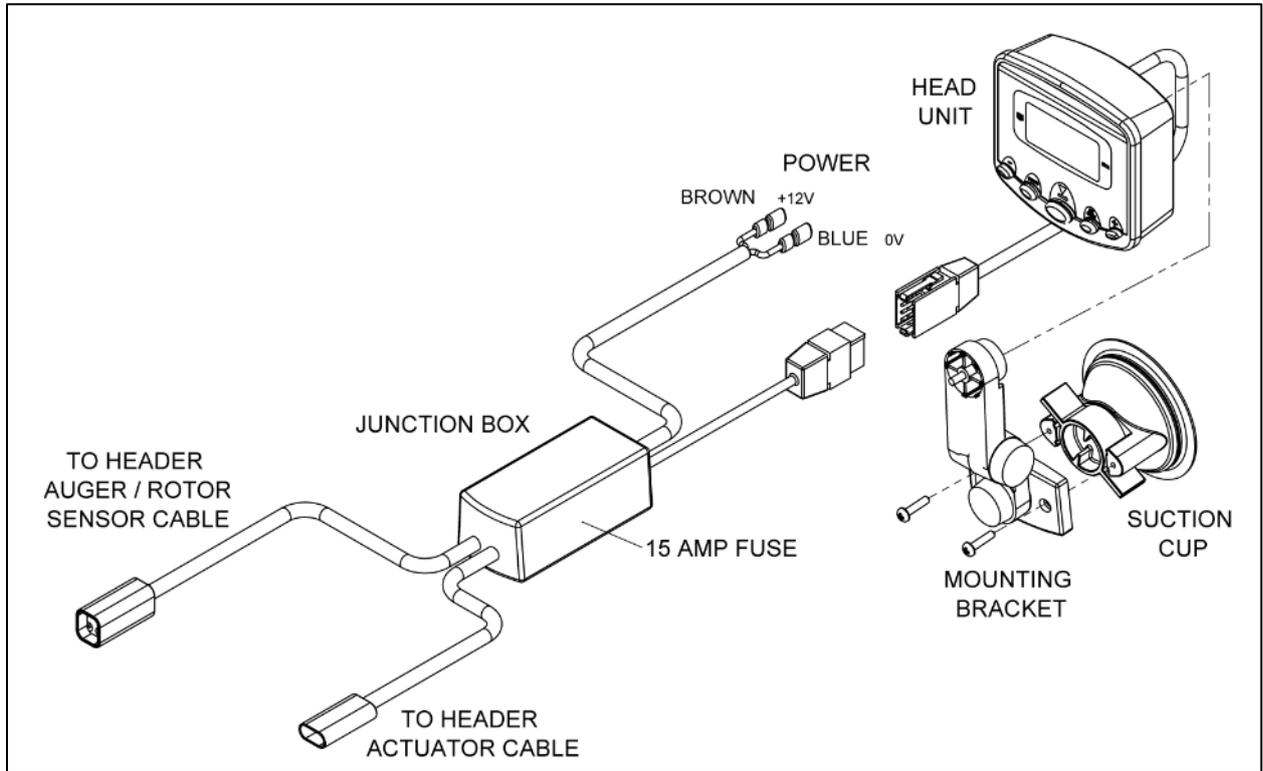
If using the suction cup (j) screw this to the mounting plate (g). Ensure the mounting surface is clean, place the suction cup on the surface and twist the latches to secure. The mounting surface needs to be flat, so avoid curved sections of cab glass. It is the owner's/operator's responsibility to regularly check that the suction cup is still firmly mounted, as suction may be lost over a period of time and refit if required. Remove the suction cup when the machine is to be unused for a period of 48 hours or longer to prevent damage to the monitor if suction is lost..

Do not attempt to adjust the mounting bracket assembly without sufficiently slackening off the clamping knobs, as this could damage the bracket.

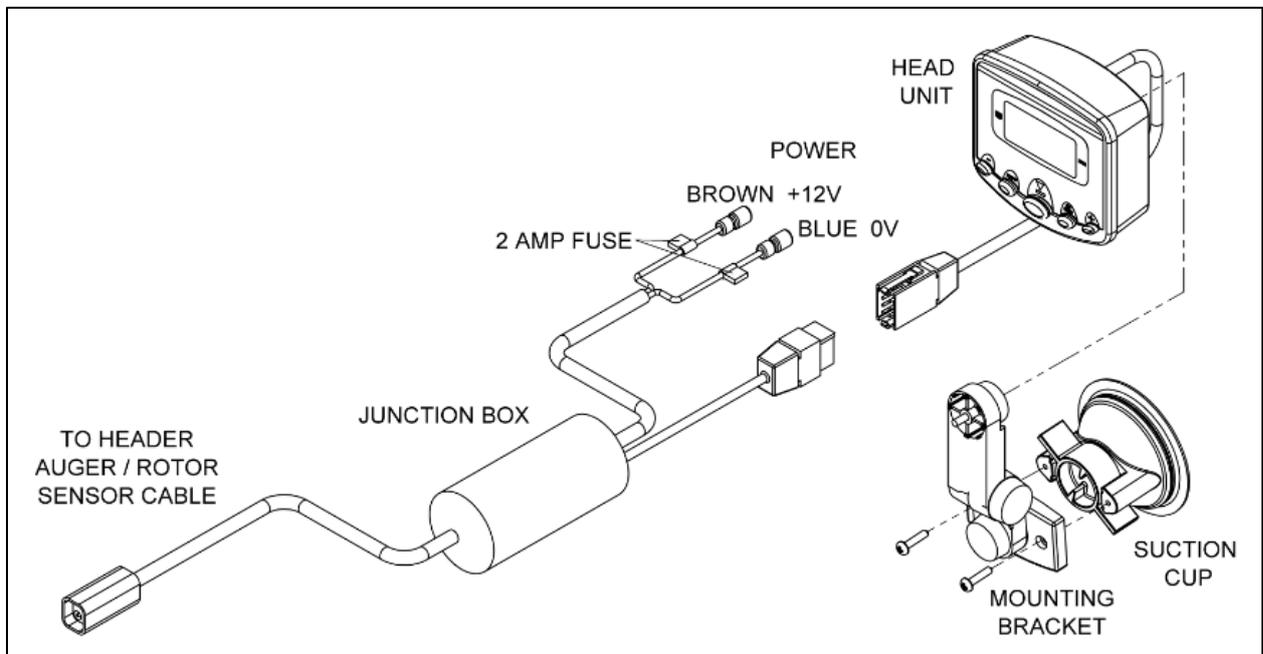
6.8.3 Combine Loom

There are two different combine looms depending on the Stripper Header model.

CVS and RVS model looms have a rectangular junction box with four cables. A fused 15 amp power supply is required to operate the variable speed actuator. A 15 amp blade fuse is located on the PCB in the junction box.



CSD and RSD models are supplied with a loom which has a cylindrical enclosed junction box with three cables. Two inline 2 amp blade fuses are positioned in the power cable and protect the system.



6.8.4 Junction Box

The junction box is not sealed. It must be located where it will be protected from excessive moisture and dirt. It is typically positioned on the cab floor underneath the right hand console.

6.8.5 Power Supply

The monitor operates from a 12V DC supply.

Route the power lead back to a switched, fused point, e.g. auxiliary connection, power strip (John Deere), back of the ignition switch or the fuse box.

Connect the brown wire of the power supply lead to +12V. On CVS or RVS models, if the supply fused rating is not known an in-line fuse holder should be fitted with a 15 amp fuse, to protect the power lead.

On some John Deere models when connecting a CVS/RVS loom to the power strip it may be necessary to connect to the permanent +12V instead of the switched +12V in order to operate the variable speed linear actuator.

The current draw on the head unit is insignificant but it is recommended to disconnect the power supply when storing the combine.

Connect the 0V terminal (blue) to the ground connection, bodywork or chassis. Ensure the body work connection is onto bare metal and that the connection point gives a good grounding path to the battery.

6.8.6 Cable Routing

Route the cables (two on a CVS/RVS, one on a CSD/RSD) neatly out of the cab, down the combine elevator to the feeder house. Typically the cables can be routed through access holes in the cab floor and then neatly secured. The two or four way connectors on the end of the cables can be removed with a special tool to enable the cable to pass through smaller holes.

Ensure there is enough slack in the cables to allow the combine elevator to be fully lowered without damaging the cables and that cables are secured and clear of pinch points. Check that the cables are not contacting any components that will get hot when the combine is working and thus cause damage.

Leave approximately 300mm (12") of free cable at the left hand side of the feeder house to attach to the connectors on the Stripper Header.

It is likely that the cables will be longer than required. Excess cable should be neatly coiled up and secured underneath the cab.

Tidy all the cables inside the cab and avoid excess cable to eliminate trip hazards. Cables can be routed underneath floor mats and inside cab moldings.

6.9 CROP DEFLECTOR HEIGHT INDICATOR

The crop deflector height indicator rod will need to be fitted. This can be fitted to either side of the Stripper Header.



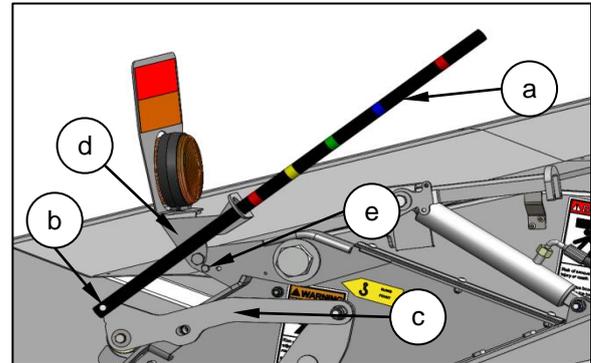
Raise the crop deflector and engage the safety stop



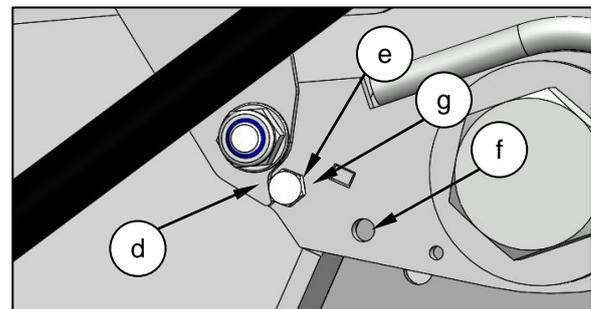
Stop the machine and implement the safe stop procedure

Remove the cable tie securing the indicator rod (a) for transport.

Rotate the light mounting bracket (d) to its upright position. Remove fastener (e) from shipping hole (f) and fit into hole (g). Rotate the light mounting bracket (d) forwards so it stops against fastener (e)



Remove the bolt (b) securing the indicator rod to the link arm (c). Thread the end of the indicator rod through the light mounting bracket (d). Bolt the indicator rod back onto the link arm.



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Refer to Section 2.11 for accident prevention information

Contact your Shelbourne dealer for further advice when preparing your combine.

7.1 COMBINE REQUIREMENTS

When using the Stripper Header, the following features are required on the combine, (Some of these features may already be fitted as standard).

1. Certain makes and model of combine require a maize/corn header drive kit as in some crops and conditions the conventional cutterbar header drive will not be able to transmit sufficient power. The corn/maize header drive kit will increase the power available to drive the Stripper Header.
2. Combine grain loss monitors, mainly on the sieves.
3. De-awner, concave or grate blanking plates, as well as alternative grates/concaves.
4. Lights on the top corners of cab for night work. The lights which are mounted at the bottom of the cab are designed to throw the light through the conventional cutterbar header reel, but as the Stripper Header has a crop deflector, the light cannot shine through it. The operator will require light in front of the crop deflector where the crop enters the header.
5. A straw chopper will be useful for dealing with straw intake in laid and lodged crops.
6. The Stripper Header tends to be heavier than a conventional cutterbar header so some combines may require an additional or larger feeder house lift cylinder.

The following adjustments need to be checked and carried out:-

7.2 HEADER LOWERING SPEED

The Stripper Header is heavier than most types of conventional cutterbar headers, therefore, when on the combine, it may lower at a very fast speed unless adjusted.

When set correctly, the header will gently lower to the ground without banging on the skids. Header damage can be caused if the drop is too fast.

Refer to the CMOM for adjustment of the header lowering speed.

7.3 COMBINE HEADER SELECTION

Most makes of combine do not automatically recognize the header type, in which case manually select the grain platform option. It may be necessary to select the manual reel option as the Stripper Header does not use this hydraulic function. With CSD and RSD Stripper Headers if the combines is fitted with a variable speed feeder house ensure that the selected header type enables this function. Refer to the CMOM when selecting the header.

John Deere combines will automatically recognize the type of header that is attached this is prescribed by the electrical connector wiring within the multicoupler. Typically the CVS & RVS will be identified as *Rigid Platform*. CSD and RSD will identify as *Corn Head* which will enable variable speed feeder house function.

7.3.1 Header Width

The Stripper Header stripping width will need to be set on the combine for the auto guidance to work, see Dimension C in Section 3.2, refer to the CMOM when setting working width and track width.

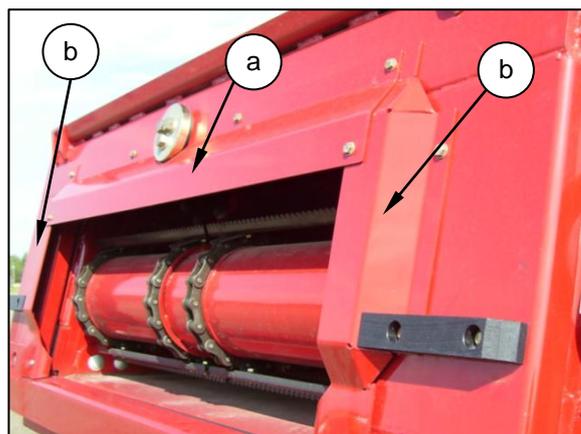
On a John Deere combine when the Stripper Header is identified as a *Corn Head* or *Row Crop Head* the header width can only be set via number of rows and row width. To do set the number of rows and row width as per below table.

Stripper Header Model	Stripping Width		Number of Rows	Row Width	
	m	ft		cm	in
CSD/RSD16	4.8m	15.75ft	10	48cm	19 in
CSD/RSD20	6.0m	-	10	60cm	-
	-	19.68 ft	9	-	26 in
CSD/RSD24	7.6m	24.93 ft	10	76cm	30 in
CSD/RSD28	8.4m	27.56ft	10	84cm	33 in
CSD/RSD32	9.6m	-	10	96cm	-
	-	31.50ft	21	-	18 in

7.4 COMBINE FRONT ELEVATOR DUST SHIELD

In most situations the combine front elevator dust shields (a & b) can be left in place. If the center section (a) of the elevator dust shield has to be removed the outer side deflectors (b) should be left in place. It may be necessary to bolt or self-tap the top of the two side deflectors so they are secured firmly to the front of the feeder house.

Some elevator dust shields may need to be removed altogether as they are built into the header adaptor plate itself.



7.5 FRONT FEEDER CHAIN POSITION

Typically the combine front feeder chain drum should be in the down position when used with a Stripper Header. Occasionally to improve feeding it may be necessary to raise the front feeder chain drum into the top (corn/maize) position. Consult CMOM for instructions on how to do this.

7.6 LEVELLING THE HEADER

The header should be parallel with the front axle of the combine. If it is not, then it should be adjusted according to the CMOM, as the adjustment method is the same as that for a conventional cutterbar.

7.7 HEADER HEIGHT INDICATOR

This should be set as described in the CMOM.

7.8 HEADER ENGAGEMENT CALIBRATION

On some models of combine it is possible to calibrate the header drive engagement so that the stripping rotor starts smoothly; this reduces the likelihood of breaking a shearbolt on start up. Consult the CMOM for instruction on how to do this.

7.9 THRESHING, SEPARATING AND CLEANING SYSTEM ADJUSTMENT

As there is less straw intake with a Stripper Header in most crop conditions it will typically be necessary to run the drum and concave (conventional) or rotor and grates (rotary) with minimum clearances as there is less bulk of crop to thrash. On certain models of combine it may be necessary to centralize the concaves also.

Refer to the CMOM to reduce this clearance and reset the stops.

In order to assist threshing and separation, blanking plates, closure plates and/or different concaves/grates may be required depending on combine model and crop. In order to get an even distribution of material across the combine pre separator and sieves, particularly on single rotor machines, it may be necessary to fit separator closure plates on one side and remove all hillside plates which restrict lateral movement of material and adjust deflectors.

Due to the higher concentration of grain and chaff on the sieves when using a Stripper Header, typically the combine will be operated with the sieves more open and with a higher fan speed.

Refer to the CMOM when making adjustments to the threshing, separating and cleaning system.

Refer to the Shelbourne Stripper Header Combine Settings Guide for recommended settings and combine configuration.

7.10 COMBINE MODEL

The Stripper Header drive system, adaptor plate, hydraulic coupler and electrical plug are tailored to the specified combine model.

If changing combine model consult your Shelbourne dealer.

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SECTION 8

FIELD OPERATION

Refer to Section 2.12 for accident prevention information

As the Stripper Header does not feed much straw into the combine the combine settings may vary from those used with a conventional cutterbar.

Please refer to the Shelbourne Stripper Header Combine Settings Guide for the settings of certain components of the Stripper Header, adjustments and set up for a range of popular combines in various crops. The guide is available as an app, the link to download it can be found at www.shelbourne.com/combinesettings, or by scanning the QR code below. Hard copies are available from your Shelbourne dealer.



It is impractical to give the settings for every crop variety and conditions in the various soil types and weather conditions, thus the settings given in the Shelbourne Combine Settings Guide are initial settings to be used as a starting point.

For further information please contact your Shelbourne dealer.

Field adjustment details are only given for the Stripper Header. For combine adjustment procedures use the CMOM.

8.1 FIELD ADJUSTMENTS

8.1.1 Crop markers

Markers are of the fixed type with a rod merely as a visual aid to ensure you harvest with the full width of the header. They are fixed in an optimum position and therefore do not require adjusting.

8.1.2 Header height

The height of the header is adjusted from the combine cab by the operator using the combine's header height control.

8.1.3 Crop deflector

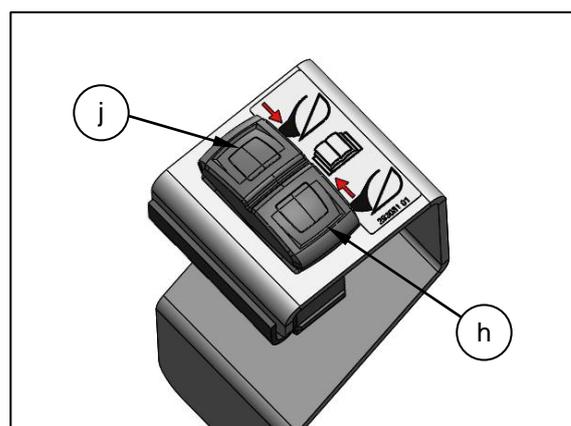
The crop deflector is adjusted hydraulically by the operator from the combine cab. With the exception of John Deere X9 combines not fitted with a header controller unit (HCU), the crop deflector is controlled using the combine's conventional header reel raise/lower or fore/aft control.

All combine makes and models of Stripper Header use the combine reel raise to raise the crop deflector and reel lower to lower the crop deflector, other than those listed in the table below and John Deere X9 combines not fitted with an HCU

Combine Make	Stripper Header		Combine Reel Function	
	Models	Year	Crop Deflector Raise	Crop Deflector Lower
John Deere	CSD	2022 & On	Reel Aft	Reel Fore
John Deere	RSD	2022 & On	Reel Aft	Reel Fore
Claas	All	2021 & On	Reel Fore	Reel Aft

John Deere X9 combines that are not fitted with a HCU are fitted with a Shelbourne JD X9 hyd loom and switch kit which is mounted beside the operator's control console and is used for adjusting the crop deflector.

The toggle switch operates the combine's reel control valves. To raise the crop deflector, press the rear of the toggle switch (h), to lower the crop deflector the front of the toggle switch (j) is pressed.



The position of the crop deflector is shown by the color coded indicator rod.

8.1.4 Stripping rotor speed

CSD and RSD machines have a fixed drive arrangement; the stripping rotor speed can be set at different speeds by changing the pulley combination or by changing combine header drive shaft speed on combines fitted with a variable speed feeder house. See Section 9.4 for details on how to adjust the rotor speeds on CSD and RSD machines.

CVS & RVS machines are equipped with a variable speed drive arrangement which enables the operator to alter the rotational speed of the stripping rotor from the combine cab.

There are two types of variable speed drive set-ups. The cam actuated variable speed (CAVS) or the hydraulically actuated variable speed (HAVS).

The cam actuated variable speed (CAVS) enables the operator to change the rotational speed of the stripping rotor from approximately 430rpm to 830 rpm. With this set-up the rotor speed is adjusted electrically from the cab using the Shelbourne monitor. The speed may be increased or decreased at any time during field operation to suit the crop conditions by simply pressing the + button (a) to increase rotor speed or the - button (b) to decrease the rotor speed.

NOTE: The electrical actuator used to adjust the speed on the CAVS set-up has no limit switches; therefore, if the rotor speed does not change within a 3 second period, the output will switch off and remain off until the +/- button is released and pressed again. This is designed to prevent the circuit/actuator from being damaged when the limit is reached.



The hydraulically actuated variable speed set-up (HAVS) enables the operator to adjust the rotational speed of the stripping rotor from the cab within three speed ranges

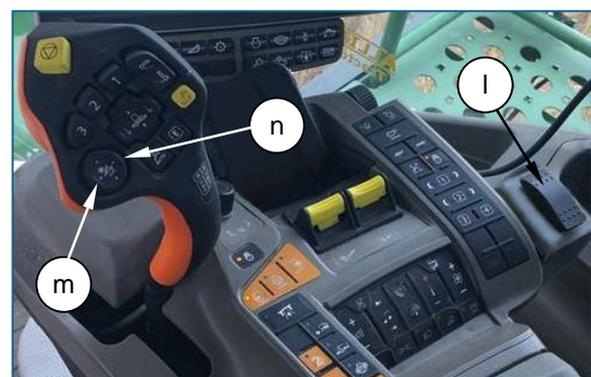
The control of the HAVS differs depending on which combine is being used.

For all makes and models of combine, other than Claas, JD X9, S7, T5 & T6, the rotor speed is varied by pressing the reel forward/back buttons on the combine's multi-function control lever. To increase the rotor speed, press the reel forward button and to decrease the rotor speed press the reel back button.

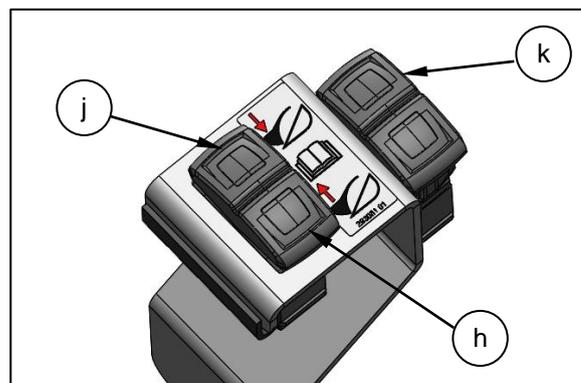
If the header is fitted to a Claas combine the rotor speed is varied by simultaneously pressing the reel raise button located on the combine's multi-function control lever together with the + button (a) on the Shelbourne monitor to increase the rotor speed or by simultaneously pressing the reel lower button and the - button (b) to decrease the rotor speed

NOTE: Due to the programming of the Shelbourne monitor, if the rotor speed does not change within a 3 second period of pressing the +/- button, the output will switch off and remain off until the +/- button is released and pressed again.

If the header is fitted to a JD X9 combine which is equipped with a header controller unit (HCU), or a JD S7, T5/6 combine, a Shelbourne diverter valve toggle switch and loom may be fitted besides the operator's control console. The rotor speed is varied by simultaneously pressing the diverter valve toggle switch (l) and the reel forward button (m) to increase the rotor speed or by simultaneously pressing diverter valve toggle switch and the reel back button (n) to decrease the rotor speed.



If the header is fitted to a JD X9 combine, which is fitted with a Shelbourne JD X9 hyd loom and switch kit for adjusting the crop deflector, then the rotor speed is operated by simultaneously pressing the diverter valve toggle switch (k) and the crop deflector raise toggle switch (h) to increase the rotor speed or by simultaneously pressing diverter valve toggle switch (k) and the crop deflector lower toggle switch (j) to decrease the rotor speed.



With the HAVS set-up the operator must preselect one of three different speed ranges before harvesting to best suit the crop type and conditions.

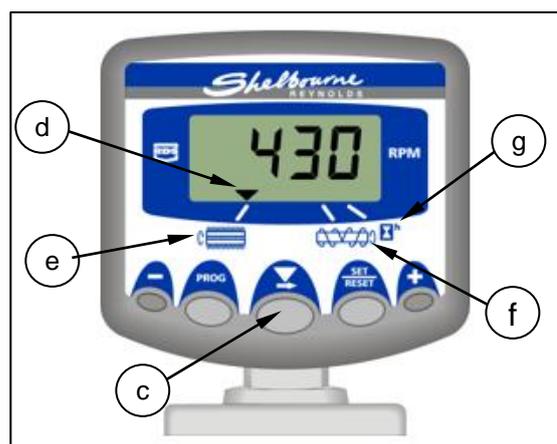
For instructions on how to change the rotor speed range on the HAVS drive set-up refer to section 9.3.6.

8.1.5 Monitor

The monitor displays the rotational speed of the stripping rotor and auger, as well as the working hours.

Pressing and releasing the select channel button ▼ (c) will advance the display, the channel indicator (d) highlighting the current displayed channel, rotor speed (e), auger speed (f) and working hours (g). The working hours are displayed for 10 seconds before returning to display the rotor speed.

The monitor is fitted with an audible alarm. As the speed of the rotor and/or auger reduces, due to overload or blockage, the alarm will sound, warning the driver to slow down, stop or raise the header. The rotor alarm emits an intermittent tone, whereas the auger alarm emits a continuous tone. The channel indicator will automatically indicate whether the rotor or auger has reduced speed during operation and the display will flash, showing the relevant speed.



The alarm will continue to sound until either the correct speed is restored, or the

PROG, ▼ or **SET/RESET** buttons are pressed.

Auger Speed Alarm

The auger speed is monitored to alert the driver that the auger is blocked. The alarm speed is factory set at 100 rpm.

Rotor Speed Alarm

Monitoring the rotor speed enables the driver to gauge the effort required by the rotor to strip the crop. By correctly setting the audible alarm speed, the torque limiter shearbolt can be prevented from shearing.

The rotor alarm speed value is adjusted semi-automatically (auto-set feature) using a percentage value, this is factory set at 8%; therefore, the alarm will sound when the rotor speed drops by 8% of auto set value

8.1.6 Auto setting the rotor alarm speed

The rotor alarm speed needs to be auto set whenever the stripping rotor speed has been changed. This should be set with the machine running, out of the crop. Use the following procedure:

1. PRESS the  button to select the rotor speed channel.
2. With the rotor running at the normal “no load” speed (not in work), PRESS and HOLD the  button for 5 seconds.
3. The display will then show “**AUto**” and the auto-calibration commences.
4. RELEASE the  button.
5. WAIT for 5 seconds. The display will then show “**DonE**”. The instrument then calculates the appropriate alarm speed and saves it to memory.

NOTE: If you change the rotor speed the above steps will need to be repeated to auto-calibrate the rotor alarm speed.

8.1.7 Setting rotor speed alarm percentage drop

If after auto setting the alarm speed the shearbolt breaks before the audible alarm is heard, then the rpm warning value is too low. This can be changed by reducing the rotor speed drop percentage figure. This is done as follows:

The factory default setting is 8%. Range: 0 to 30%.

1. PRESS the  button to select the rotor speed channel.
2. PRESS and HOLD the **PROG** button for 3 seconds to display the % factor currently set.
3. Continue HOLDING the **PROG** button and PRESS  to select the digit to change.
4. HOLD  to change the selected digit.
5. RELEASE  to select the next digit and repeat as above, otherwise simply release both buttons. The instrument will then return to the normal display mode.

8.1.8 Manually setting rotor alarm speed

Alternatively the rotor alarm speed can be set manually, with the following procedure:

The rotor must be stopped.

1. PRESS the  button to select the appropriate channel to program..
2. PRESS and HOLD the  button for 3 seconds to display the alarm speed currently set for that channel.
3. Continue to HOLD the  button and PRESS  to select the digit to change.
4. HOLD  to change the selected digit.
5. RELEASE  to select the next digit and repeat as above, otherwise simply release both buttons, and the display will return to the normal mode.

8.1.9 Testing the alarms

The alarms can be tested by running the combine / header at full engine speed, then reducing the engine rpm of the combine. When the speed of the rotor and auger falls below the threshold the alarms will sound both audibly and visually as described in section 8.1.5. Alarm function should be checked daily.

8.1.10 Working hours

The working hours can be reset to zero as follow.

1. PRESS the  button to select the  channel, to display the working hours.
2. PRESS and HOLD the  button for 5 seconds, the unit will then beep.
3. The display will reset to **0.0**.

8.1.11 Power on reset

"ProG" on the display indicates the instrument memory has been corrupted. You can attempt a "Power-On Reset".

1. Switch the power supply off.
2. PRESS and HOLD the three middle buttons (**PROG**, , ) and switch the power on.

If the instrument can recover itself, it will perform a short self-test routine and return to the normal display. If not, then the instrument must be returned for servicing or replacement.

NOTE: All alarm settings will be reset to the factory default values.

8.2 HARVESTING WITH THE STRIPPER HEADER

To get optimum performance from your Stripper Header the operator should follow the procedures and checks of operation:

Ensure that all the necessary procedures of preparation for use described in this manual have been carried out.

Set the combine and header to the Shelbourne Stripper Header Combine Settings Guide for the particular crop to be harvested.

8.2.1 Engaging the drive

In order to prevent the PTO shaft shearbolt from shearing when engaging the header drive, follow the procedure below:

- Run the combine engine at idle speed.
- If the header engagement is manual, engage the drum of the combine and then gently operate the lever to engage the Stripper Header, avoiding snatch in the drive.
- If the combine is fitted with electric or hydro-electric clutch engagement, the header drive should be engaged before the separator, causing the combine separator and the header to engage at the same time, thus reducing the snatch in the header drive line.
- Increase combine engine speed to the working rpm.

8.2.2 Stripping rotor speed setting

The minimum speed should be selected to ensure that all grain/seed is stripped from the ear of the crop. Consequently crops that are hard to thrash will require higher rotor speeds and vice versa.

Crops that are prone to wrapping, such as Linseed, may require a higher rotor speed to prevent them from becoming wrapped around the rotor.

It is unnecessary to run the rotor faster than that required to strip the crop, as this only causes the machine to intake more straw and will also reduce the life of the stripping elements.

8.2.3 Auger Speed

The operating speed of the auger should be between 150-200rpm. It is important that speed doesn't exceed 200rpm as this may result in damage.

8.2.4 Crop deflector

The crop deflector is usually set first and then the header height is adjusted to suit.

The crop deflector setting is an important adjustment to ensure optimum performance of the Stripper Header.

When correctly set (along with the header height) in standing crop, the front nose of the crop deflector should deflect crop below it, the top of the crop being level to 100mm (4")

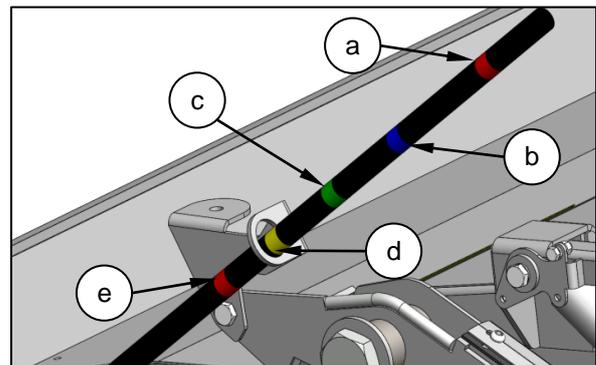
below the top of the nose, therefore creating a seal between the crop and the lower edge of the crop deflector.

When correctly set in laid crops, the front nose of the crop deflector should ride over the top of the crop, the aim being not to push the crop down any further but to close the gap at the front to prevent grain losses.

When harvesting laid and standing crop in the same pass, lower the crop deflector to recover the laid crop, therefore pushing over the standing crop, so it becomes laid.

The height indicator, fitted to either the left or right hand side, will assist the operator to set the crop deflector in the best position for various crop conditions as described below.

	COLOR	CROP
a	Upper Red (fully down)	Laid crops (grass, clover)
b	Blue	Lodged crops
c	Green	Short crops
d	Yellow	Normal Operation
e	Lower Red	Very tall crops
f	Above Lower Red (fully up)	Servicing only



8.2.5 Header height setting

The header height will need to be continually adjusted to suit the crop height as the machine travels across the field.

When correctly set in standing crops the heads of the crop should be approximately level with the top to 100mm (4") below the top of the crop deflector.

When working in laid crops the header should be allowed to float over the ground contours using the header skids and combine header float system. Do not exert too much of the header weight onto the skids as this will cause the skids to dig into the ground.

If harvesting short crops it might be necessary to raise the skids, see Section 6.4, to allow the stripping rotor to operate close to the ground without the skids digging in. However, the rotor will be at greater risk of being damaged by ground contact.

The aim is to carry the rotor as high as possible to reduce the amount of straw intake, but it must be low enough to lift and remove heads which may be attached to stems low down in the crop, e.g., bent over stems. Be sure that the crop deflector is set, so that the seal is maintained between the crop and the lower edge of the crop deflector.

8.2.6 Forward speed

The Stripper Header is capable of very fast forward speeds due to its rotary action, unlike a conventional cutterbar.

The forward speed will depend on the following:

1. Crop ripeness
2. Moisture level
3. Standing or laid
4. Levelness of the field
5. Power available to drive the rotor
6. Combine capacity
7. Crop yield

Normal operating speeds in standing crops are expected to be between 4 - 12 km/h (2.5 - 7.5 mph). In laid crops the speed may be slower.

8.2.7 Harvesting a sample

Harvest approximately 50 meters (150') of crop, at a comfortable forward speed.

Then stop the machine and look at the stripped crop for the following:

- Check that all grain is stripped from the heads.
- Check that there are no heads which have been missed low down in the crop.

NOTE: The Stripper Header will not recover pre-harvest losses.

- Check combine sieve and straw walker or rotor losses.

NOTE: Do not do this from behind the combine where you have just stopped. The check should be carried out in an area where there has been continuous crop flow through the machine, where the combine was still moving.

- Check header losses:

NOTE: This should again not be carried out where the machine has just stopped. An easy check is to back the combine away from the crop. Look in the area 2 - 3 meters (6-10') back from where the header stopped, but before you get to the area where the combine sieves have blown out unwanted material.

- Check the grain sample for cleanliness and cracked grains.

Adjust combine and header to correct the results and repeat checks until the results are satisfactory.

Reset monitor alarm if stripping rotor speed has been changed.

8.3 USEFUL HARVESTING TIPS

8.3.1 During operation

When operating the machine in the field it is important to keep the Stripper Header crop deflector and header height to the correct settings to suit the crop as it varies across the field. This means the operator will have to raise and lower the header and crop deflector continually to suit the crop. If the crop is very even then very little adjustment will be necessary. If the crop is very uneven then the operator will have to adjust the header to suit the conditions much more frequently.

Use the combine grain loss monitors to determine the forward speed, unless the field is too rough or if the stripping rotor power requirement is high. This can occur in unripe or damp crops, and should be indicated by the audible alarm on the monitor, before the shearbolt shears.

8.3.2 Laid crops

When harvesting laid crops, it will be necessary to operate with the rotor as close to the ground as possible, but without digging up dirt. This is achieved by floating the header on the skids. When set correctly, the skids will prevent the rotor from touching the ground. To keep header losses to a minimum, it may be preferred in dry laid cereal crops (not rice) to approach by harvesting either across or towards the way of lay. Losses will increase if harvesting with the way of lay as the rotor is unable to lift the heads of the crop off the ground. However, if harvesting standing crop and small patches are laid, e.g., at headlands, these patches can be harvested with the way of lay providing that the header and crop deflector are lowered enough.

When operating in laid crops, forward speed will be limited due to higher straw intake, and higher rotor power requirement.

8.3.3 Laid and standing crops

There will be occasions where standing and laid crop will need to be harvested in the same pass. In these situations the header should be lowered down to lift and recover the laid crop, consequently the standing crop will be pushed down as well.

8.3.4 Monitor audible alarm

When operating the machine, it will be noted that the power required to drive the rotor depends mainly on forward speed and the height of the rotor from the ground.

- i.e. The closer the rotor is to the ground, the more the power requirement and hence the rotor speed will slow.
The faster the forward speed, the more the power requirement and hence the rotor speed will slow.

If the shearbolt breaks before the audible warning is heard, then the rpm warning value should be changed; see Sections 8.1.6 and 8.1.7.

The setting value is determined by operating the machine in work and, gradually increasing the forward speed, closely watching the rotor rpm, until the shearbolt shears or the combine becomes overloaded and the output shaft speed drops.

8.4 UNBLOCKING THE AUGER

The auger may become blocked up, which could be caused by a foreign object, poor feeding to the combine elevator, incorrectly adjusted auger or unsuitable harvesting conditions. When the auger becomes blocked the auger torque limiter (slip clutch) will release, or possibly the PTO shaft shearbolt will shear. In either situation the audible monitor alarm will sound and the monitor display will show 0. The auger slip clutch slipping will also be audible. If the auger slip clutch is allowed to continually slip, then it may cause potential damage to the machine and possible risk of fire.

Stop forward motion, disengage the header drive and reduce the combine engine speed to idle. If the shearbolt has broken it will need to be replaced; see Section 8.6. It may be possible to release the blockage by reversing the auger. To do this engage the combine header drive reverser; refer to the CMOM. Run the header in reverse for a few seconds and disengage the header drive reverser. Engage the header drive, run the header and see if the blockage has cleared.

If the auger blocks again it may be caused by a foreign object or too large a lump of material to feed. In this case reverse the header drive for a few seconds.



Fully lower the Stripper Header to the ground



Stop the machine and implement the safe stop procedure

Raise the hood.



Use the hood ram stop

Remove the foreign object or large lump of material; it may be possible to spread the lump of material within the auger trough.

Lower the hood and run the header, if the auger blocks again repeat the above procedure as there may be further lumps of material or foreign objects.

Before continuing harvesting inspect the auger, auger trough and combine elevator for any signs of damage. It may be necessary to adjust the auger clearance.



Close and secure the hood

8.5 UNBLOCKING THE ROTOR

The rotor can become blocked if material or a foreign object, such as wire, wraps around it or a large foreign object is picked up. When the rotor becomes blocked the rotor drive belt will slip or the PTO shaft shearbolt will shear. In either situation the audible monitor alarm will sound and the monitor display will show 0.

Stop forward motion, disengage the header drive and reduce the combine engine speed to idle. If the shearbolt has broken it will need to be replaced; see Section 8.6.

Fully raise the header.



Stop the machine and implement the safe stop procedure



Engage the combine's feeder house cylinder lock

Disconnect the PTO shaft from the combine.

Inspect the stripping rotor and remove any material or foreign objects that have become wrapped round or jammed in the rotor.

Inspect the rotor, stripping fingers and crop deflector for damage, then straighten or replace any bent or broken stripping fingers; see Section 9.6. If the stripping rotor or any of the panels are bent then it may be necessary to replace them. Contact your Shelbourne dealer.

Remove feeder house cylinder lock and lower the header to the ground and raise the hood.



Use the hood ram stop

Remove any foreign objects that could have entered the auger trough.

Lower the hood, reconnect the PTO shaft.



Close and secure the hood and refit all guards

Run the header. If the header operates noisily or with excessive vibration stop the header and contact your Shelbourne dealer.

8.6 REPLACING THE SHEARBOLT

The Stripper Header drive system is protected from overload and subsequent damage by a shear bolt located at the header end of the input PTO shaft.

When a shearbolt fails, drive is lost to both the auger and the rotor, the monitor will display 0 on both the rotor and auger channels and the audible alarm should sound, provided the alarm speed thresholds have been met. Consequently if a shearbolt is broken on start up the alarm may not sound.

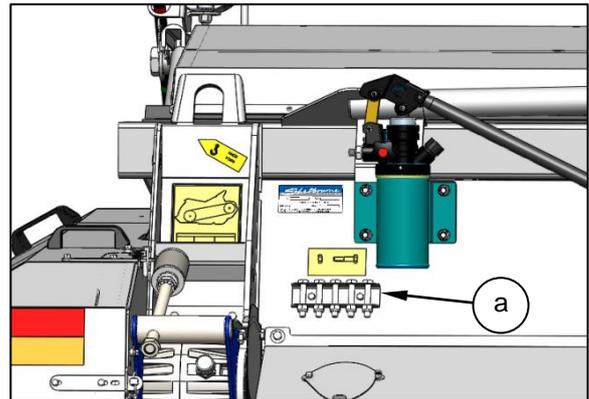
If the shearbolt fails it must be replaced. Use only genuine Shelbourne shearbolts, part number BLTA10384.



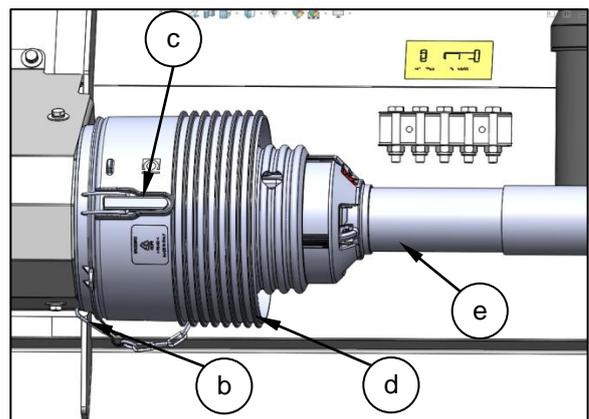
Stop the machine and implement the safe stop procedure

Before replacing the shearbolt, ascertain the reason for the shearbolt failing, inspect the machine and clear any blockages if required.

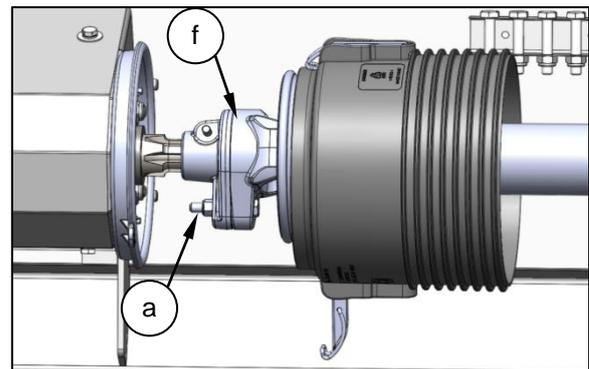
Spare shearbolts (a) are stored on the rear left hand end of the mainframe, beside the hand pump.



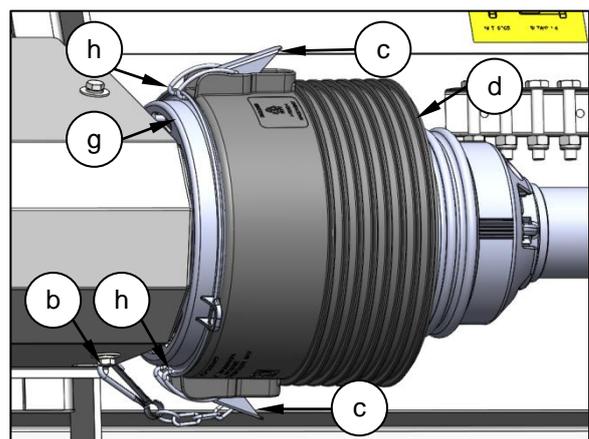
Disconnect the left hand end PTO guard retaining chain (b) from the header. Lift the lever (c) to disengage the two clips (h) and slide Implement Input Connection (IIC) shield (d) over the PTO shaft (e) to reveal the PTO shear bolt clutch (f).



Remove any remnants of the broken shearbolt, align the two halves of the PTO shear bolt clutch (f) and fit a new shearbolt (a), fully tighten the locking nut.



Refit the IIC shield (d), locate it into mounting plate (g). Locate the two clips (h) into the groove on the mounting plate (g) and over center the levers (c) to lock the shield in place



Reconnect the left hand end PTO guard retaining chain (b) to the header



Replace any guards that were removed when replacing the shearbolt

8.7 TRANSPORTING HEADER



Refer to Section 2.14 for accident prevention information

Depending on local laws and traffic regulations, the Stripper Header can either be transported on the combine, or on a Shelbourne approved trailer.

Fully secure guards, covers, PTO shafts, hydraulic couplings and other components before travelling on the highway.

Before travelling on the highway clear the machine of loose dust/debris.

8.7.1 Transporting on the combine

Highway regulations must be observed when taking the Stripper Header on roads, paths and other public places. Observe the maximum permissible width for road transport and ensure all necessary lighting, markings, warning signs and guards are fitted and are clean, visible and in full working order.

To prevent damage to the crop deflector, fully raise the crop deflector and engage the crop deflector safety stop. Disconnect the hydraulic connections and PTO shaft from the combine when travelling on the highway, to prevent inadvertent operation

Ensure that the header is securely latched onto the combine.

No person other than the operator may be allowed to ride in the combine. Do not allow riders on the combine or header.

Travel speeds should be such that complete control and machine stability are maintained at all times.

Use amber flashing warning lights when travelling on the highway, except where such use is prohibited by law. Adjust the lights so they are clearly visible to other road users.

Follow all recommended procedures in the CMOM for transporting the header.

8.7.2 Transporting on a trailer

When transporting the Stripper Header on a trailer use a Shelbourne approved trailer and a towing vehicle with sufficient capacity; refer to Section 4.3.

Ensure the header is correctly located and secured to the trailer before removing from the combine; refer to Section 4.3. Fully lower the crop deflector.

Ensure that all braking systems and lighting systems on the combine or towing vehicle and trailer are in full working order and that they can be fully and correctly operated.

Highway regulations must be observed when towing the header on public highways.

Reduce speeds on rough or undulating or sloping ground.

Follow all recommended procedures in the trailer manufacturer operator's manual for transporting the header.

8.8 TROUBLE SHOOTING CHARTS

PROBLEM	CAUSE	REMEDY
Grain left in stripped heads.	Rotor rotation speed too slow.	Speed up the rotor. (see Section 8.1.4).
	Stripping elements worn or broken.	Check elements, replace if necessary. (see Sections 9.6.2 & 9.6.3).
	Rotor too high when harvesting crop.	Lower header.
	Crop deflector too low, pushing the crop away from the stripping rotor.	Lift the crop deflector.
	Rotor drive belt slipping causing loss of rotor speed.	Reduce forward speed. Lift the header.
Heads unstripped at division plate between the rotors.	Rotor clearances and element clearance to the division plate incorrect.	Adjust center stripping fingers as close as possible to the division plate. (see Section 9.6.4).
	Stripping fingers broken off at division plate.	Replace the element (see Sections 9.6.3 & 9.6.4).
	Fingers at division plate worn.	Replace the element (see Sections 9.6.3 & 9.6.4).
	Vee strip bent out of shape (RVS/RSD models).	Straighten strip or replace.
Excessive shedding of seeds at side of machine.	Header side guards badly bent or worn.	Replace or repair.
	Marker dividers are too aggressive.	Remove dividers.

PROBLEM	CAUSE	REMEDY
Crop wrapping around rotor.	Rotor rotation too slow.	Speed up the rotor (see Section 8.1.4).
Material not feeding to the header auger.	Auger trough or spill plate covered in mud.	Remove mud and clean.
	Damage to auger trough or spill plate.	Rectify damage & contact your dealer if necessary.
Auger slip clutch slipping.	Auger blocked by foreign object.	Clear blockage.
	Auger too low in auger trough.	Adjust the auger clearance. (see Section 6.7).
	Auger slip clutch spring tension incorrectly set.	Re-adjust springs. (see Section 9.1).
Irregular feeding into feed elevator.	Elevator feed chain too low at entrance.	Raise chain. (See CMOM).
	Elevator feed chain too far away from auger.	Move auger back or move elevator chain forward. (see Section 6.7).
	Crop building up under dust cover.	Remove the center section of the elevator dust cover.

PROBLEM	CAUSE	REMEDY
Excessive shelling of seeds at header.	Rotor too high in relation to the ground.	Lower header.
	Crop deflector too high.	Lower crop deflector.
	Crop deflector too low.	Lift crop deflector.
	Crop is laid and leaning away from direction of travel.	Approach crop from different angle.
	Forward speed too slow.	Increase forward speed.
Grain sample not properly cleaned.	No concave blanking plates fitted.	Fit concave blanking plates (See CMOM).
	Concave to drum clearance not close enough.	Adjust clearance (See CMOM).
	Bottom sieve open too wide.	Close the sieve slightly. (See CMOM).
	Drive speed too slow.	Increase drive speed (See CMOM).
Excessive cracked grain in grain sample.	Combine drum/rotor too fast.	Reduce drum/rotor speed (See CMOM).
	Concave set too close to drum/rotor.	Increase drum to concave clearance (See CMOM).
	Concave blanking plates fitted.	Remove plates one set at a time (See CMOM).
	Bottom sieve not open enough.	Open bottom sieve.

PROBLEM	CAUSE	REMEDY
Grain loss over the sieves.	Sieves blocked.	Increase air blast. (See CMOM).
	Top sieve blocked, air blast full.	Close top sieve slightly. (See CMOM).
	Too much air blast from the cleaning fan.	Reduce air blast or increase forward speed if possible to load more material onto the sieves (See CMOM).
	Excessive short straw on the sieves.	1. Reduce drum speed. 2. Open concave. 3. Remove concave blanking plates (See CMOM).
	For other causes see CMOM.	
PTO shearbolt torque limiter operating excessively.	Rotor hitting the ground.	Raise header.
	Forward speed too fast.	Reduce forward speed.
	Crop too unripe.	Allow crop to ripen.
	Rotor rotating too slow.	Increase rotor speed. (See Sections 8.1.4).
PTO shearbolt torque limiter operating before monitor alarm warning heard.	Audible warning device rpm value set too slow.	Check value setting (see Section 8.1.5).
		Check if alarm is functioning. If the above is correct see Sections 8.1.6 & 8.1.7.

PROBLEM	CAUSE	REMEDY
Crop wrapping in rotor ends and center.	Anti-wrap plates out of adjustment.	Adjust (see Section 9.6.5).
	Anti-wrap plates not fitted.	Fit anti-wrap plates.
	Center vee strip worn (RSD/RVS models).	Replace vee strip. Add vee strip (CVS/CSD models).
Excessive back feed from feed elevator.	Combine feed chain too low.	Raise combine front feed roller. (see CMOM).
	Combine cylinder speed too slow.	Speed up combine cylinder.
	Distance of feed elevator to auger too wide.	Move feed chain forward. (see CMOM).

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SECTION 9

ADJUSTMENTS AND MAINTENANCE



Refer to Section 2.15 for accident prevention information

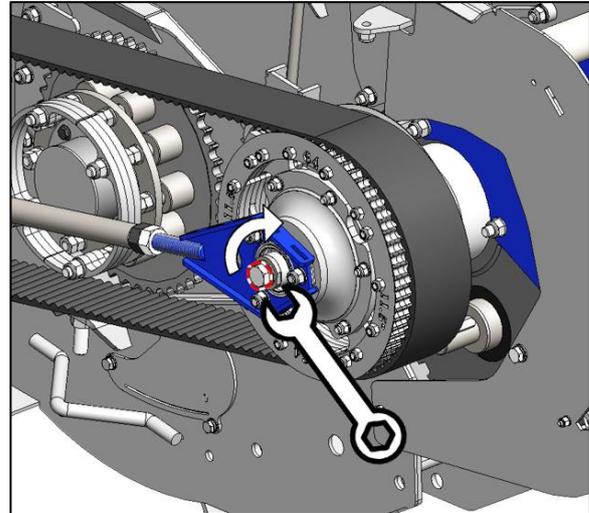


Video and further instructions are available for some maintenance tasks by scanning this QR code.

Certain maintenance tasks will require the drives to be manually rotated to achieve the correct set-up.

During these tasks the drives should never be rotated by placing your hands or fingers onto the drive belts, chains or pulleys as there is a high risk of hand / finger pinching and entanglement.

To rotate the drives manually, position a wrench on the central bolt of the of the pulley and rotate it clockwise.



9.1 AUGER SLIP CLUTCH SETTING

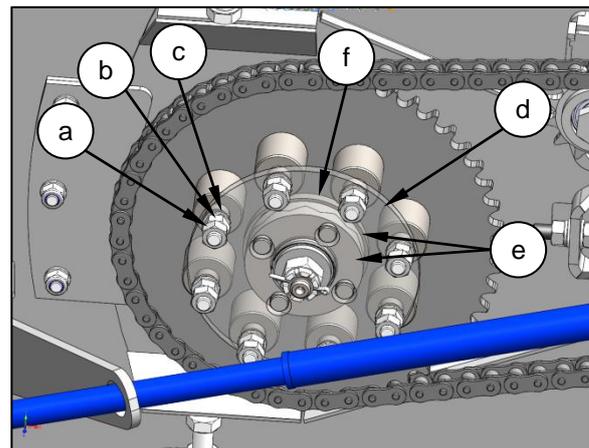
All Stripper Headers have a ten spring clutch arrangement. The spring length is pre-set by a spacer to a length of 50mm (2”).



Stop the machine and implement the safe stop procedure

To check the adjustment of the springs, loosen the outer locknut on each stud (a), then turn the inner nut (b) until the spring is compressed to the length of the spacer. Then tighten the outer locknut.

If the clutch has slipped excessively the clutch plate teeth may be worn, in which case the clutch plates will need replacing.



Loosen and remove the outer locknut (a) then loosen and remove the inner nut (b) and washer (c). The drive disc (d) can now be removed exposing the two clutch plates (e).

Replace the clutch plates with two new ones, ensuring the four pegs locate into the clutch hub (f) and drive disc when refitted. Fit the nuts and washers and adjust as described above.

It may also be necessary to replace the thrust washer located behind the clutch hub (f). To do this the auger slip clutch will need to be removed and stripped, contact your Shelburne dealer



Replace all guards

9.2 CHAIN TENSIONING

The auger drive chain is fitted with an adjustable idler sprocket, so that the chain can be correctly tensioned.

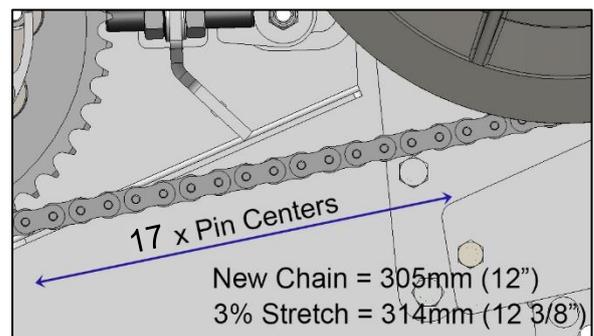
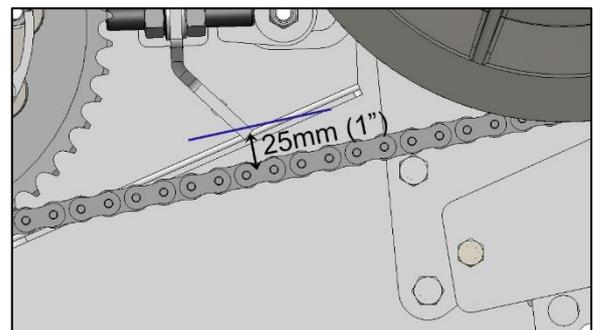
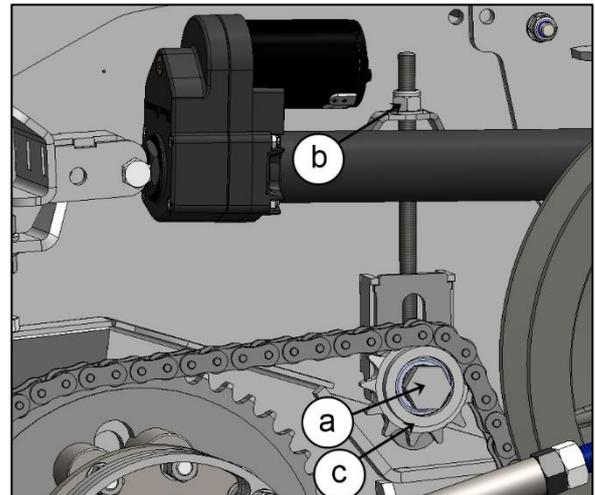
 **Stop the machine and implement the safe stop procedure**

To adjust the tension, slightly loosen the idler spindle (a), then turn the nut (b) on the adjusting stud to raise the idler sprocket (c) to correctly tension chain giving 25mm (1") of movement by hand on the lower span between the auger and drive sprocket. When complete, tighten the idler spindle (a), check that the chain tension does not increase as the idler spindle is tightened.

 **Replace all guards**

The chain should be replaced once the length has increased by 3%. This can be calculated by measuring the chain when taught between 17 pin centers (16 links). A new chain would measure 305mm (12") and 3% stretch 314mm (12 3/8")

NOTE: Over tensioning could result in auger drive shaft failure/damage and failure to replace worn chain could lead to premature wear of sprockets.



9.3 VARIABLE SPEED ADJUSTMENT

9.3.1 Variable speed adjustment (CAVS drive)

 **Position a wrench on the central bolt of the pulley to rotate the drives**
Do not touch the belt, chain or pulleys while the drives are rotating.

The CAVS rotor drive uses a Cam mechanism to open and close the drive pulley, this system coupled with spring compensation and a variable pressure device located on the front rotor pulley ensures exact tensioning of the drive belt regardless of operating conditions, which will in return prolong belt life.

When at rest it may appear that there is excessive slack on the top side of the belt, after running the rotor at idle speed the tension will automatically return, provided the belt maximum and minimum range is set correctly as described in Section 9.3.2.

It is **very important** to ensure that the variable speed pulleys are greased as specified, see Section 10.4.1. A lack of lubrication will prevent the pulleys from sliding freely and this will prohibit the belt tensioning system from functioning correctly.

If the belt slips or a loss of drive to the rotor is experienced, contact your Shelbourne dealer immediately as operating the header under these circumstances will damage the drive belt.

9.3.2 Drive belt position adjustment (CAVS drive)

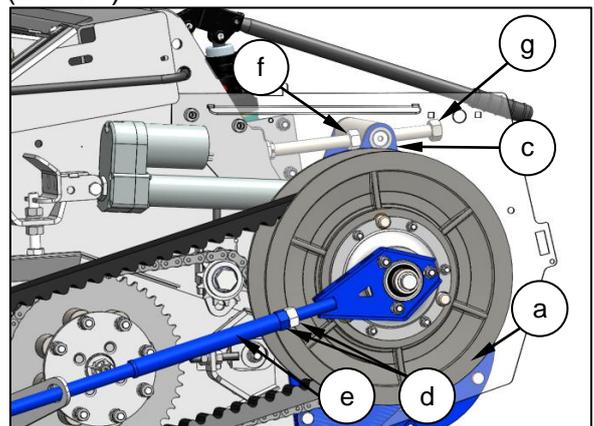
The maximum and minimum rotor speed is pre-set on delivery with a speed range of approximately 430 to 830 rpm, this is altered by pivoting the gearbox pulley.

As the belt wears during use the gearbox position may need to be adjusted in order to maintain the correct speed range. Adjustment may also be required after servicing or maintenance work has been carried out.

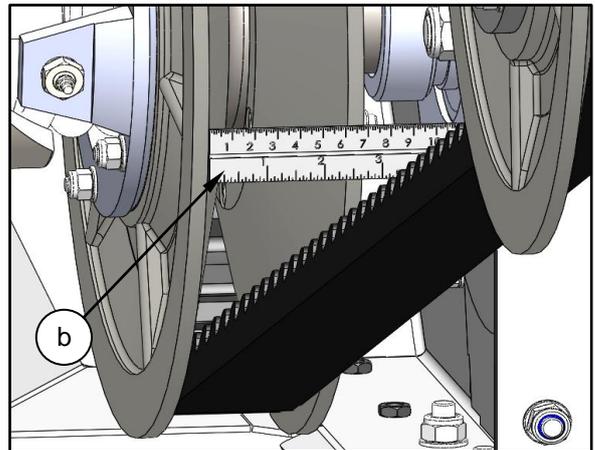
The top surface of the drive belt **must never** protrude above the outer diameter of the pulley.

To adjust the position of the belt:

1. Run the machine at idle and slow the rotor speed to minimum using the monitor, (see Section 8.1.4). This will fully open the gearbox pulley sheaves (a).
2.  **Stop the machine and implement the safe stop procedure**
3. Open the left-hand drive guard and measure the gap between the rotor pulley sheaves (b). This should measure 61mm (2 ¹³/₃₂").
4. To achieve the correct gap the gearbox pulley will need to be moved by pivoting the gearbox (c). Loosen the tie rod locking nut (d) and fully slacken the tie rod adjuster (e). Loosen the locking nut (f) and turn the gearbox adjuster rod (g). This will pivot the gearbox and gearbox pulley, forcing the rotor pulley sheaves to open or close. Tighten the locking nut (f).



5.  **Refit the guard.**
6. Run the machine at idle and speed the rotor up to maximum and then back to minimum using the monitor.
7.  **Stop the machine and implement the safe stop procedure.**



8. Repeat steps 3, 4, 5, 6 & 7 until the required gap of 61mm (2 13/32") is achieved.
9. The tie rod now needs to be adjusted. Run the machine at idle and speed the rotor up to maximum using the monitor.

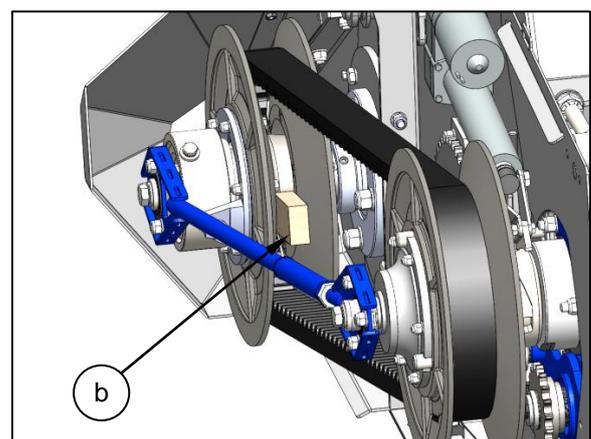
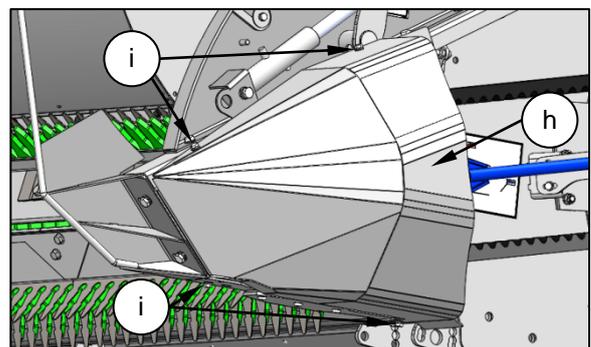
10.  **Stop the machine and implement the safe stop procedure.**

11. Disconnect the PTO shaft from the combine.
12. Turn on the electrical power to the monitor (**Do not run the header**) and operate the monitor as if slowing the rotor speed to minimum; see Section 8.1.4. This will allow the gearbox pulley sheaves to be fully opened. The belt will now be slack.
13. Turn the tie rod adjuster (e) until it just touches, then give it another 1/6 turn and tighten the lock nut (d).

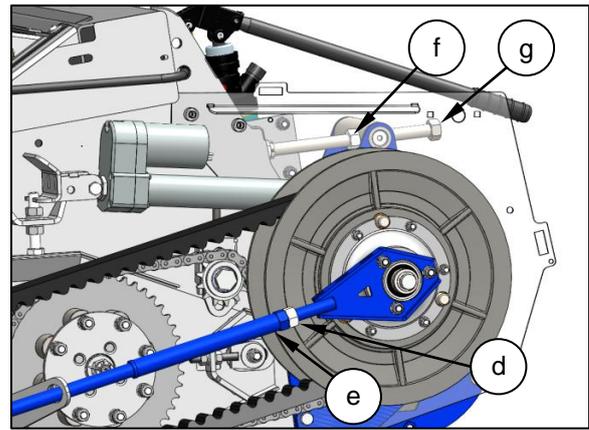
14.  **Replace all guards.**

9.3.3 Changing the CVS & RVS drive belt (CAVS drive)

1. Run the machine at idle and speed the rotor up to maximum using the monitor.
2.  **Stop the machine and implement the safe stop procedure.**
3. Disconnect the PTO shaft from the combine.
4. Open the left-hand drive guard.
5. Remove the fixed corner guard (h) by removing the four fasteners (i).
6. Wedge a 25mm (1") thick hard wood block (b) between the two inner flat surfaces on the inside of the rotor pulley sheaves.



- Loosen the tie rod locking nut (d) and fully slacken the tie rod adjuster (e). Loosen the locking nut (f) and turn the gearbox adjuster rod (g) counter-clockwise (anticlockwise) to allow the pulley to move all the way forward.



-  Turn on the electrical power to the monitor (**Do not run the header**) and operate the monitor as if slowing the rotor speed to minimum; see Section 8.1.4. This will allow the gearbox pulley sheaves to be fully opened. The belt will now be slack.
- Ensure that the wooden block is wedged securely between the rotor pulley sheaves and remove the belt, first from the rotor pulley, then from the gearbox pulley.

 **Do not put hands between pulley sheaves.**

- Fit the new drive belt, first to the gearbox pulley and then to the rotor pulley. Ensure that the belt is fitted with the directional arrow pointing in the direction that the belt will travel.
- Remove the block placed in the front pulley.
- Adjust the gearbox pulley and tie rod as described in Section 9.3.1 to correctly set the belt. Refit the PTO shaft.
- If it was not possible to wedge a wooden block between the rotor pulley sheaves prior to the belt being removed, the rotor pulleys can be pried apart using a suitable bar and a wooden block can be installed before fitting the new belt.
- Refit the fixed corner guard (h), with the four fasteners (i). Adjust the guard so that the left-hand drive guard fit snugly inside it. Close the left-hand drive guard.

 **Replace all guards.**

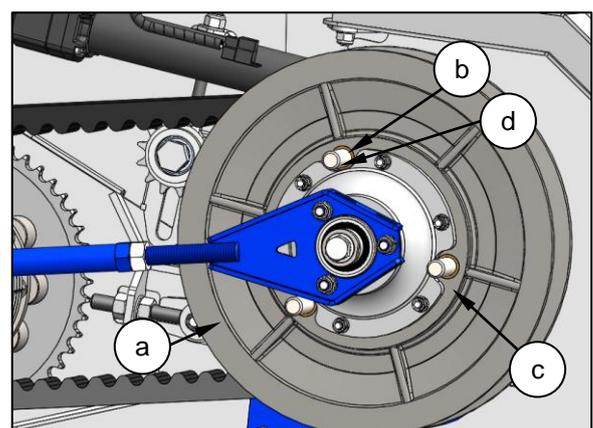
9.3.4 Inspecting the gearbox pulley (CAVS drive)

The wear bushes and pins in the gearbox pulley should be regularly inspected for wear.

Run the machine at idle and speed the rotor speed to maximum using the monitor, (see Section 8.1.4). This will fully close the gearbox pulley sheaves (a).

 **Stop the machine and implement the safe stop procedure.**

Inspect the three wear bushes (b). They should be replaced before the pulley sheave (c) begins to wear. Inspect pulley pins (d) for excessive wear.



To replace bushes and pins the gearbox pulley will need to be removed and stripped, contact your Shelburne dealer.

 **Replace all guards.**

9.3.5 Inspecting the cam bearings (CAVS drive)

The gearbox pulley cam and actuator cam bearings should be regularly inspected.

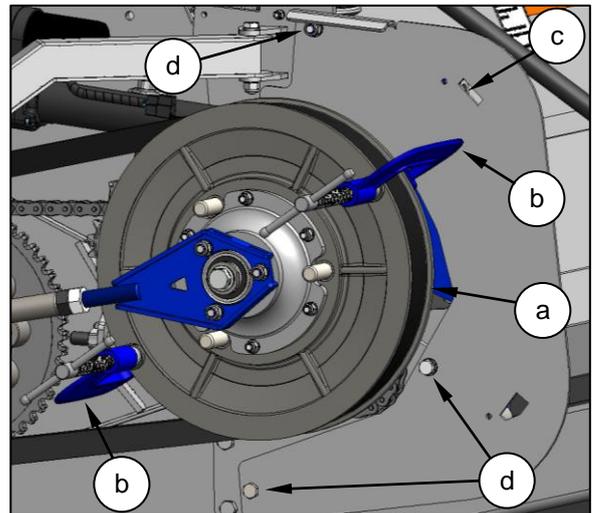
Run the machine at idle and speed the rotor speed to maximum using the monitor, (see Section 8.1.4). This will fully close the gearbox pulley sheaves (a).

 **Stop the machine and implement the safe stop procedure**

Open and remove the left-hand end drive guard, as detailed in Section 6.10.1.

Attach two G-clamps (b) to either side of the pulley, ensure not to over tighten the clamps, they are only to hold the rear pulley from opening itself under the belt tension.

Remove the guard mounting plate (c) by removing fasteners (d).



Turn on the electrical power to the monitor

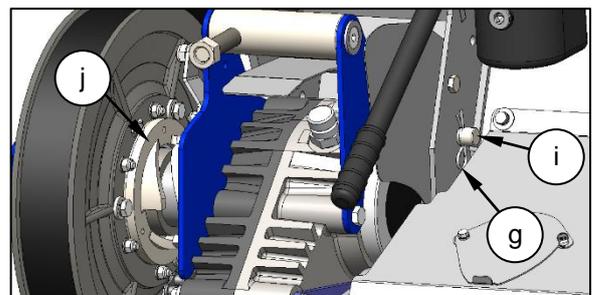
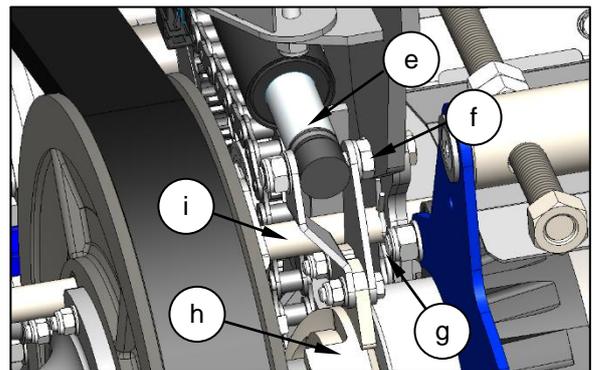
 **(Do not run the header)**

Operate the monitor as if slowing the rotor speed to minimum; see Section 8.1.4. This will retract the actuator (e).

Retract the actuator sufficiently to remove fastener (f). The actuator can be tied up out of the way.

The actuator cam (h) assembly is now free to rotate within approximately 120° of rotation.

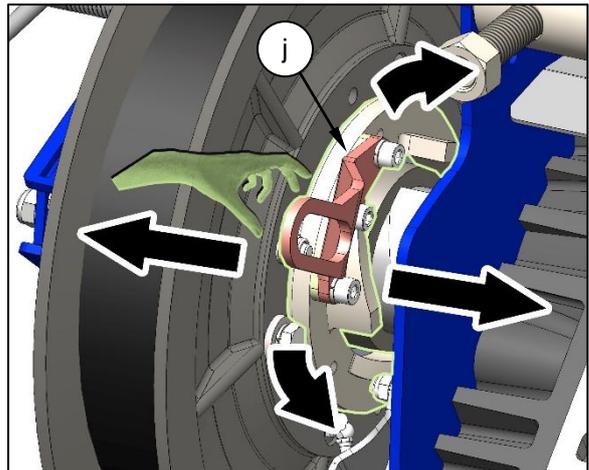
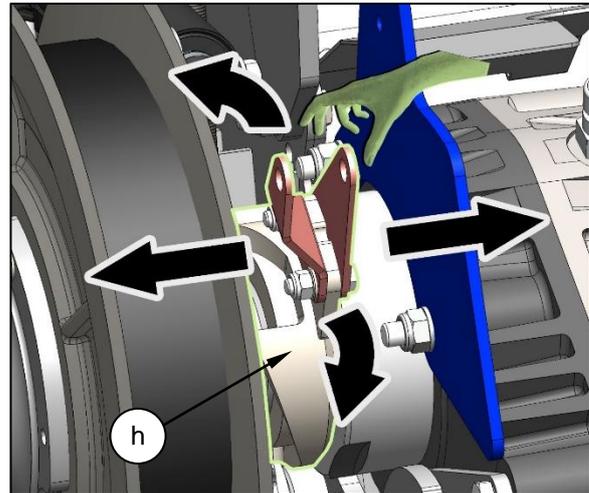
To free the static cam (j), remove R-clips (g) either side of the cam retaining bar (i). Slide cam retaining bar (i) out so that the pulley static cam (j) is free to rotate.



Both cams (h & j) are free to rotate to check for smooth rotation and wear in the bearings.

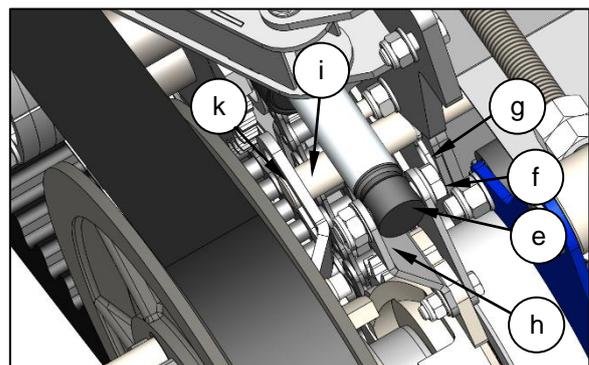
Check bearings for radial movement as well as any side shift movement, if the bearings run rough or there is side movement then contact your dealer to replace them immediately.

 **If failed bearings are not changed it may cause potential damage to the machine and possible risk of fire**



Refit the cam retaining bar (i) ensuring it slides into slot in static cam arm (k). Refit both R-clips (g) to secure the cam retaining bar (i)

Reattach the actuator (e) to the actuator cam (h) using fastener (f). Refit the guard mounting plate (c) using fasteners (d)

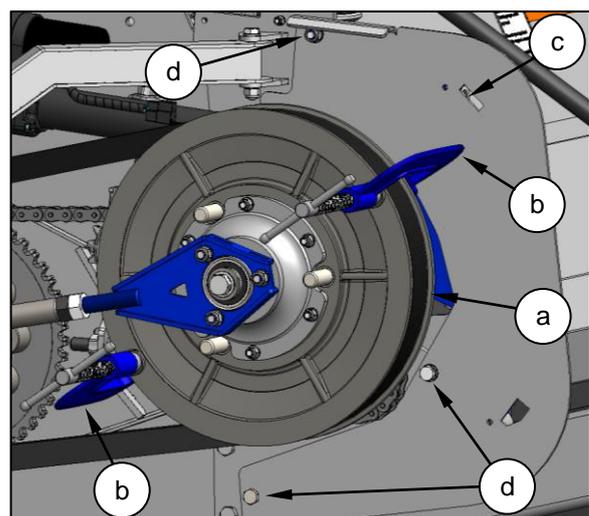


Remove two G clamps (b)

Refit and close the left-hand end drive guard, as detailed in Section 6.10.2

 **Replace all guards**

Run the machine through its speed range with the monitor. Check and if necessary, adjust the drive belt position, see Section 9.3.2



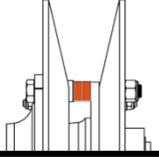
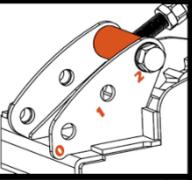
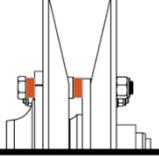
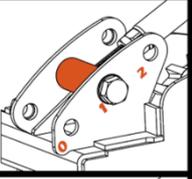
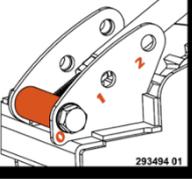
9.3.6 Variable speed adjustment (HAVS drive)

 **Position a wrench on the central bolt of the pulley to rotate the drives**
Do not touch the belt, chain or pulleys while the drives are rotating.

 **Risk of serious injury from gearbox movement. Keep hands clear of pinch points.**

The three different speed ranges are achieved by setting together both the hydraulic ram position attached to the gearbox bracket and the number of spacers positioned between the pulley sheaves on the rear gearbox pulley.

The approximate speed ranges achievable are shown in the information chart below:

APPROXIMATE ROTOR SPEED RANGE (rpm)	NUMBER OF SPACERS	GEARBOX RAM HOLE POSITION
430 - 580 (CLAAS ONLY) 500-690	2 	2 
500 - 690 (CLAAS ONLY) 580-800	1 	1 
660 - 790 (CLAAS ONLY) 740-900	0 	0 

The HAVS rotor drive uses a hydraulic ram to pivot the gearbox. When the ram is extended or retracted it alters the pulley centers to vary the speed of the rotor. This mechanism coupled with spring compensation and a variable pressure device located on the front rotor pulley ensures exact tensioning of the drive belt regardless of operating conditions.

When at rest it may appear that there is excessive slack on the top side of the belt, after running the rotor at idle speed the tension will automatically return, provided the belt maximum and minimum range is set correctly as described in Section 9.3.7.

It is **very important** to ensure that the front variable speed pulley is greased as specified, see Section 10.4.1. A lack of lubrication will prevent the pulley from sliding freely and this will prohibit the belt tensioning system from functioning correctly.

If the belt slips or a loss of drive to the rotor is experienced, contact your Shelbourne dealer immediately as operating the header under these circumstances will damage the drive belt.

9.3.7 Drive belt position adjustment (HAVS drive)

The speed range position and the maximum and minimum rotor speed is pre-set on delivery.

As the belt wears during use the gearbox position may need to be adjusted to maintain the correct speed range. Adjustment may also be required after servicing or maintenance work has been carried out.

The top surface of the drive belt **must never** protrude above the outer diameter of the pulley.

To adjust the position of the belt:

1. Run the machine at idle and increase the rotor speed to max (see Section 8.1.4). The hydraulic ram (a) should be fully extended.

NOTE: The belt position can be checked while in any of the three different speed ranges.

2.  **Stop the machine and implement the safe stop procedure**

3. Open the left-hand drive guard and measure the gap between the front rotor pulley sheaves (b). This should measure 84-86mm (3 3/8").

4. If adjustment is required, open the gearbox guard and loosen the locknut (c). Turn the rod of the ram (d) to adjust the length of the threaded adjuster (e) this will cause the gearbox to pivot and alter the front and rear pulley centers.

NOTE:

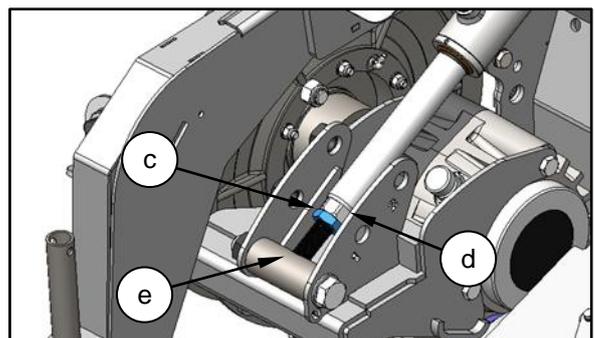
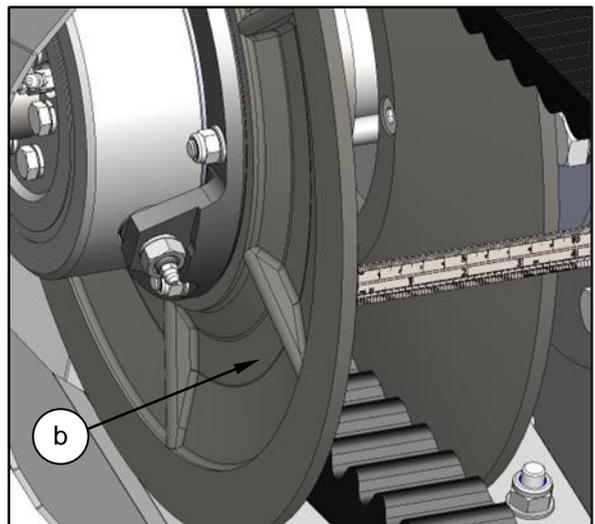
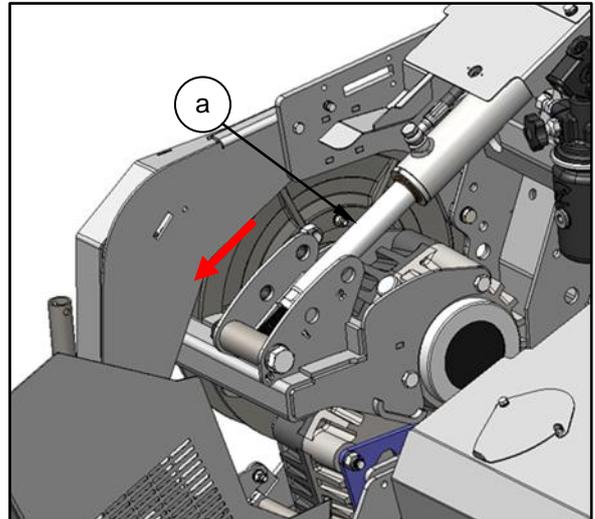
If the pulley gap >84-86mm shorten the thread length of the adjuster.

If the pulley gap <84-86mm lengthen the thread length of the adjuster.

5.  **Close all guards securely.**

6. Run the machine for a few seconds.

7.  **Stop the machine and implement the safe stop procedure.**



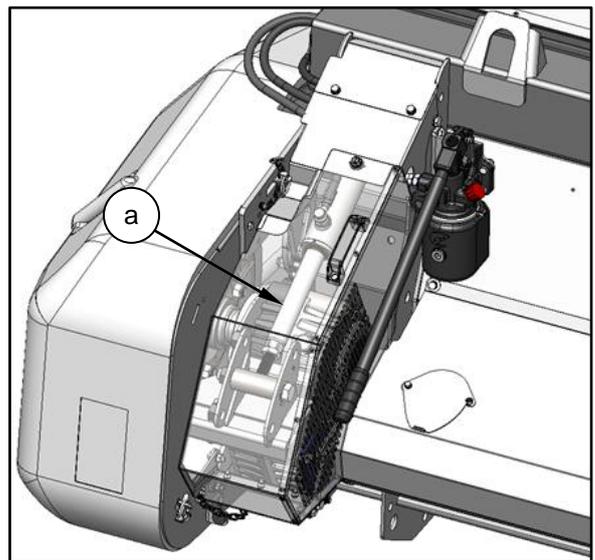
8. Open the left-hand drive guard and re-measure the gap between the front rotor pulley sheaves (b). This should measure 84-86mm (3 3/8"). If the gap is within tolerance go to step 9, if adjustment is still required repeat steps 4-7.
9. Lock the threader adjuster (e) with the lock nut (c) against the rod of the ram (d).

 **Close all guards securely.**

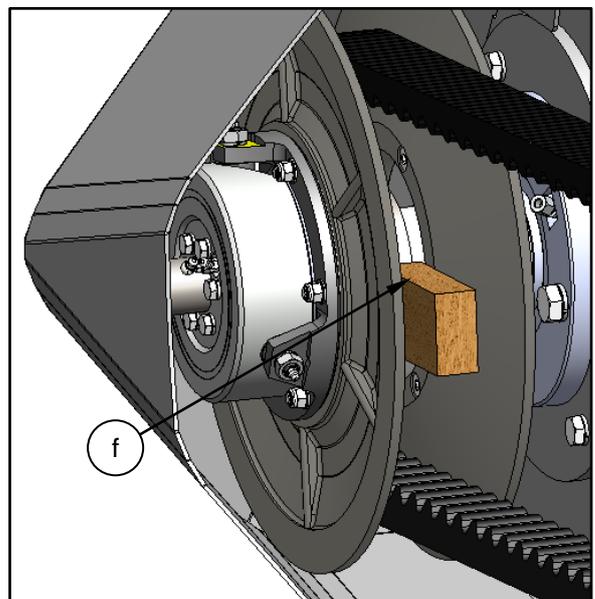
9.3.8 Changing the rotor speed range on the HAVS drive.

To change the rotor speed range, follow the instructions below:

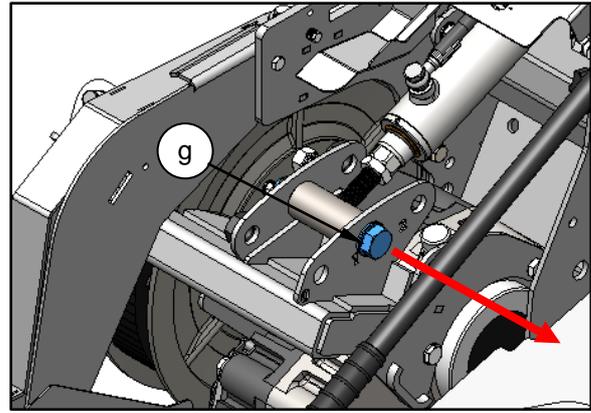
1. Run the machine at idle and increase the rotor speed to max (see Section 8.1.4). The hydraulic ram (a) should be fully extended.
2. Stop the drive to the header, wait until the rotor is stationary, then decrease to min rotor speed (**do not run the header**). The hydraulic ram (a) should be retracted.
3.  **Stop the machine and implement the safe stop procedure.**



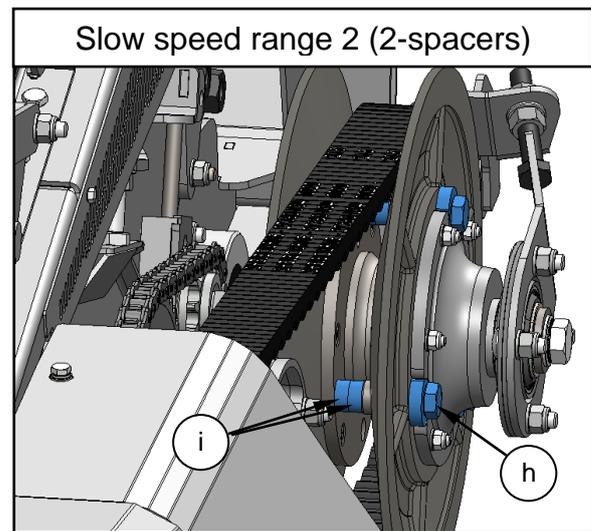
4. Open and remove the LH drive guard (see section 6.10.1), and then open the gearbox guard.
5. Wedge a 25mm (1") thick hard wood block (f) between the two inner flat surfaces on the inside of the front rotor pulley sheaves.
6.  **If the header has been running, components such as the gearbox, belt and pulley sheaves may be hot. Always wear suitable gloves when carrying out this task.**



- Remove the pivot bolt (g) from the gearbox bracket.



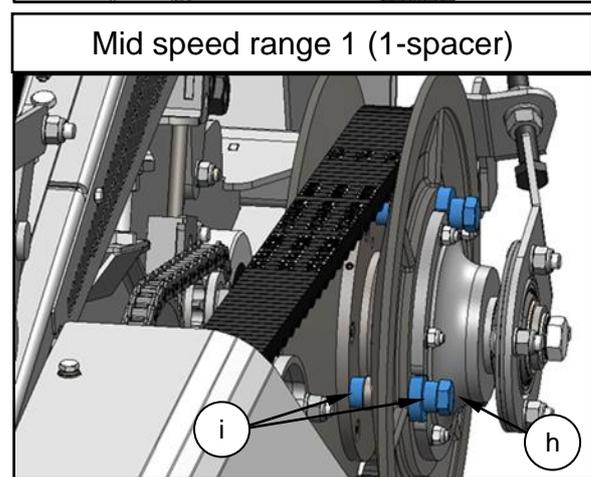
- Remove the three nuts & bolts (h) from the rear pulley and gather the spacers (i).



- Re-fit the bolts (h) with the required number of spacers (i) between the pulley sheaves.

NOTE:

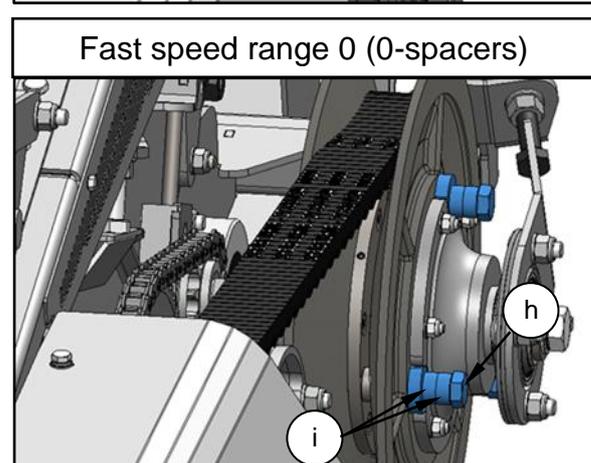
The spacers (i) that are not fitted between the pulley sheaves are fitted under the head of the bolt (h)



- Tighten the three nuts & bolts (h)

NOTE:

Ensure the drive belt is loose between the pulley sheaves and doesn't pinch against the side of the pulley while tightening the three nuts & bolts.



If the header has been running, components such as the gearbox, belt and pulley sheaves may be hot. Always wear suitable gloves when carrying out this task.

11. Re-fit the ram to the gearbox bracket using bolt (g)

Important – Ensure the ram is positioned in the correct hole location number corresponding with the number of spacers fitted between the pulley sheaves.

If slow speed range (2 spacers) is required, the gearbox will have to be manually pulled backwards to align the ram boss with hole '2'. This should be possible with the belt still slack.

If fast speed range (0 spacers) is required, the hydraulic ram will need to be extended to align the threaded adjuster with hole '0' in the gearbox bracket.

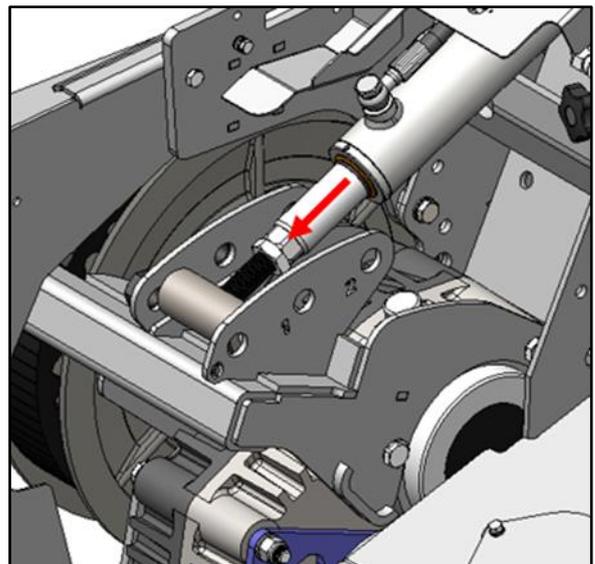
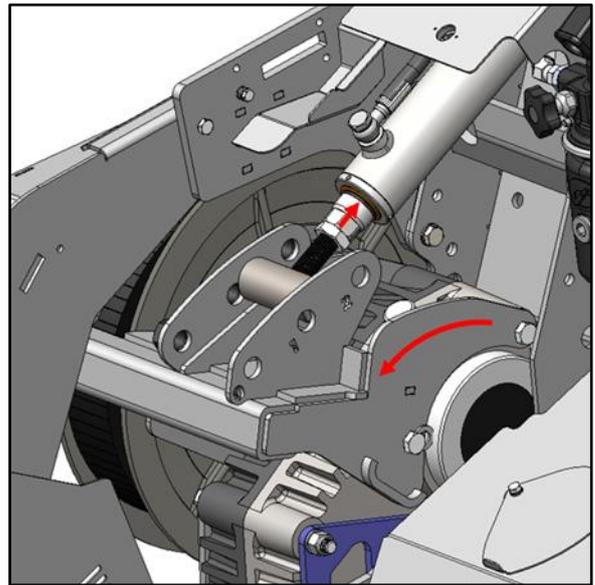
Before extending the ram:



Ensure nobody else is standing close to the header and combine.

Start the combine engine. **DO NOT** run the combine's thresher or header drive.

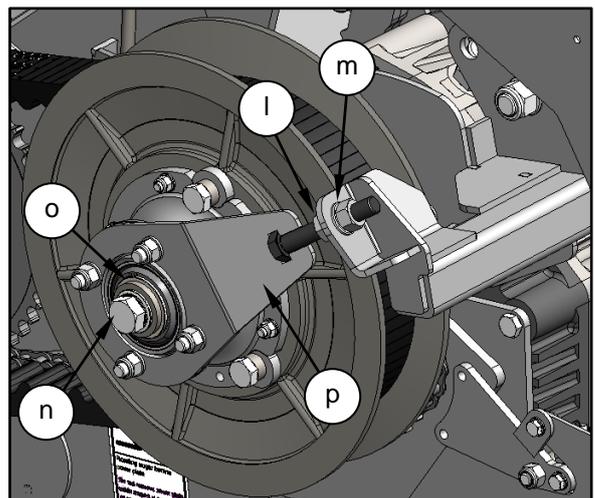
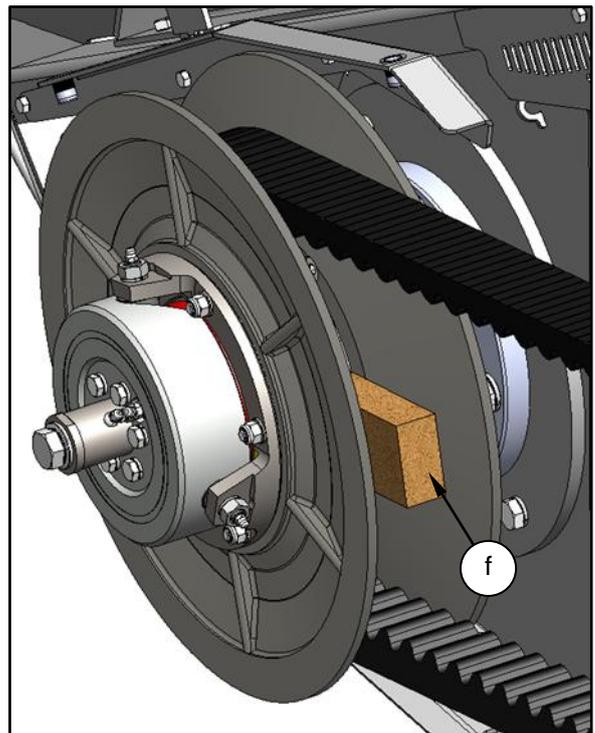
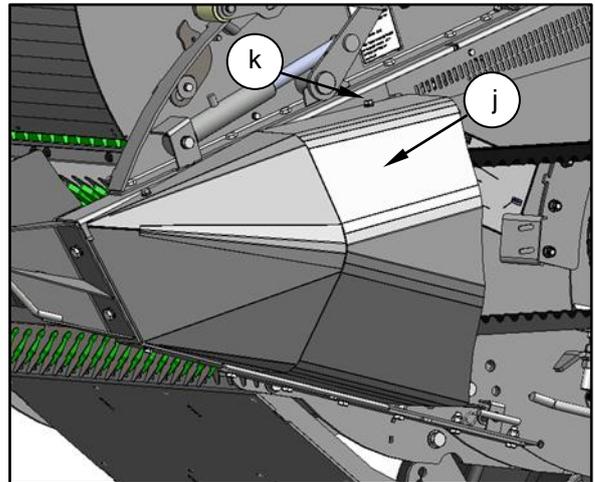
Operate the Reel Forward function, or the method described in section 8.1.4 to extend the ram until the threaded adjuster aligns with hole '0' in the gearbox bracket.



12. Remove the wooden block from the front pulley.
13. Close the gearbox guard, re-attach and close the LH drive guard.
14. Run the Combine and header. Operate the stripping rotor speed through its full speed range. Stop the header and combine while at MAX rotor speed (Ram fully extended).
15.  **Stop the machine and implement the safe stop procedure.**
16. Check and adjust the belt position and front rotor pulley gap as described in section 9.3.7.

9.3.9 Changing the CVS/RVS belt (HAVS drive)

1. Run the machine at idle. Operate the Reel Forward function, or the method described in section 8.1.4 to extend the ram (max rotor speed).
2. Stop the drive to the header, wait until the rotor is stationary, then decrease to min rotor speed (**do not run the header**). The hydraulic ram should be retracted.
3.  **Stop the machine and implement the safe stop procedure.**
4. Disconnect the PTO shaft from the combine.
5. Open the left-hand drive guard.
6. Remove the fixed corner guard (j) by removing the four fasteners (k).
7. Wedge a 25mm (1") thick hard wood block (f) between the two inner flat surfaces on the inside of the rotor pulley sheaves.
8. Loosen the tie rod locking nut (l) and remove the locking nut (m). Remove the fixing screw (n) and the spacer (o) and slide the tie rod and bearing (p) off the gearbox shaft.

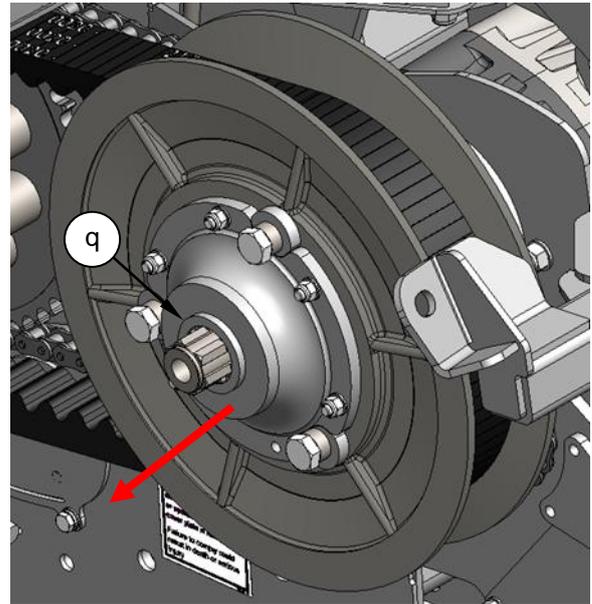


9. Remove the spacer (q) and slide the rear gearbox pulley assembly off the gearbox shaft and carefully lower it to the ground. At this stage the belt will remain inside the pulley sheaves.



Employ suitable manual handling techniques when lifting the rear pulley.

10. Remove the rear gearbox pulley from the belt. Ensure that the wooden block is wedged securely between the rotor pulley sheaves and remove the belt from the rotor pulley.



Do not put hands between pulley sheaves.

11. Fit the new drive belt, first to the rotor pulley and then to the rear gearbox pulley, while its stationary on the ground. Ensure that the belt is fitted with the directional arrow pointing in the direction that the belt will travel.
12. Carefully lift the rear gearbox pulley, with the belt laying loosely inside the pulley sheaves and slide it back onto the gearbox shaft.



Employ suitable manual handling techniques when lifting the rear pulley.

13. Remove the wooden block placed in the front pulley.



Do not put hands between pulley sheaves.

14. Replace the spacer (q) and the bearing and tie rod (p), lock off the locking nuts (l) and (m) and re-fit the spacer (o) and fixing screw (n).
15. Refit the fixed corner guard (j), with the four fasteners (k). Adjust the guard so that the left-hand drive guard fits snugly inside it. Close the left-hand drive guard.



Replace all guards

17. Run the Combine and header. Operate the stripping rotor speed through its full speed range. Stop the header and combine while at MAX rotor speed (Ram fully extended).
18.  **Stop the machine and implement the safe stop procedure.**
19. Check and adjust the belt position and front rotor pulley gap as described in section 9.3.7.

9.4 HTD STEP DRIVE MACHINES

The CSD and RSD Stripper Header is fitted with a HTD (cogged) belt. The belt is tensioned by pivoting the gearbox and moving the position of the gearbox (input) pulley.

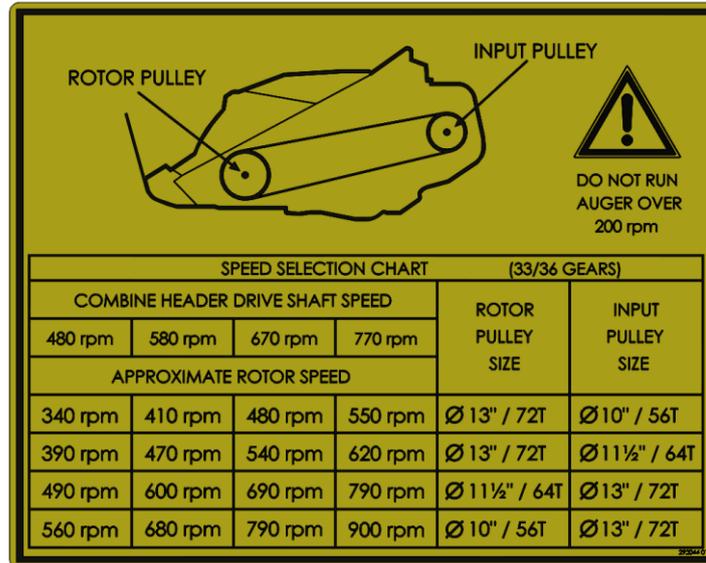
The rotor speed is altered by fitting different pulley combinations.

Note: Combines fitted with a variable speed feeder house may have the ability to adjust the rotor speed by approximately 170rpm with adjustments to the combine header drive shaft speed. If this function is used it is important that the auger speed doesn't exceed 200rpm which may result in damage.

The speeds and pulley combinations are shown in the following charts. This is displayed as a decal on the machine.

Not all the pulley sizes displayed above are supplied as standard with the CSD and RSD Stripper Header, but are available from your Shelbourne dealer.

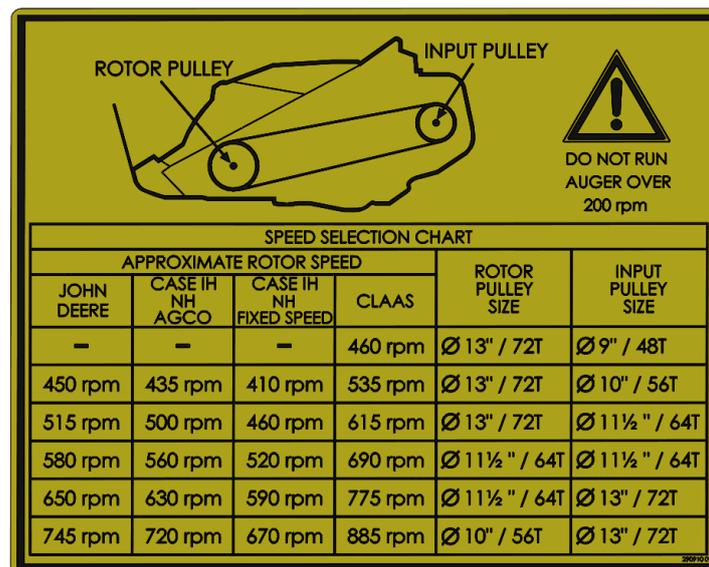
CSD Speed Chart



The gearbox on CSD Stripper Headers is fitted with a 33 tooth input gear and a 36 tooth output pinion gear.

CSD Stripper Headers fitted on combines without a variable speed feeder house will most likely be fitted with the same gears as RSD Stripper Headers, so should use the RSD Speed Chart

RSD Speed Chart



The rotor speeds are approximate and are dependent on the combine feeder house output shaft speed and the correct gear combinations being fitted inside the gearbox. These are shown in the table below for RSD Stripper Headers

Combine Make	Output Shaft Speed	Gearbox Input Gear	Gearbox Output Pinion Gear
John Deere	500 rpm	37 teeth	32 teeth
Case IH	610 rpm	33 teeth	36 teeth
New Holland	610 rpm	33 teeth	36 teeth
AGCO	610 rpm	33 teeth	36 teeth
Claas	752 rpm	33 teeth	36 teeth

9.4.1 Tensioning the drive belt – HTD drive

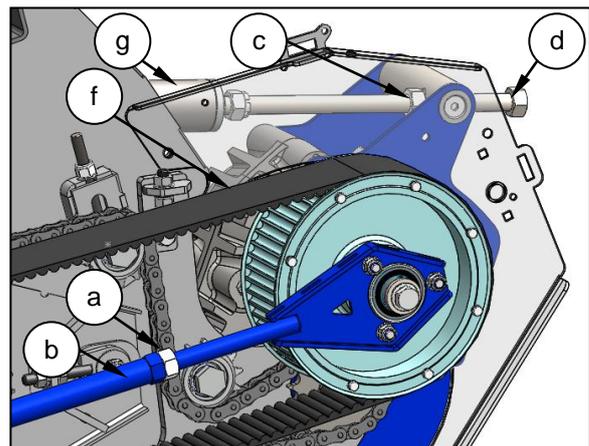
The tension of the HTD drive belt is indicated by the spacer tube which fits over the spring on the gear box adjuster. The belt should be tensioned so that the spring is compressed to the same length as the spacer tube. It should still be possible to rotate the spacer tube.

To adjust the belt tension.

 **Stop the machine and implement the safe stop procedure**

 **Position a wrench on the central bolt of the pulley to rotate the drives**
Do not touch the belt, chain or pulleys while the drives are rotating.

1. Open the left hand guard, then loosen the tie rod locking nut (a) and slacken the tie rod adjuster (b).
2. Loosen the locking nut (c) and turn gearbox adjuster rod (d). Turning clockwise will tension the belt as the gearbox pivots moving the input pulley.
3. Once the spring is compressed to the length of the spacer tube (n), tighten the locking nut (c).
4. Turn the tie rod adjuster (b) until it just touches, then give it another $\frac{1}{6}$ turn and tighten lock nut (a).



5.  **Replace all guards**

NOTE: If the belt tracks to one side and tries to climb the pulley contact your Shelbourne dealer

9.4.2 Changing the belt – HTD drive

To change the belt.

 **Stop the machine and implement the safe stop procedure**

 **Position a wrench on the central bolt of the pulley to rotate the drives**
Do not touch the belt, chain or pulleys while the drives are rotating.

1. Open the left hand guard, then loosen the tie rod locking nut (a) and fully slacken the tie rod adjuster (b).
2. Loosen the locking nut (c) and turn the gearbox adjuster rod (d) counterclockwise (anticlockwise). This will pivot the gearbox forward, slackening the belt.

3. Remove the belt (f) and fit the new belt.
4. Tension the belt and adjust the tie rod according to Section 9.4.1.
5.  **Replace all guards**

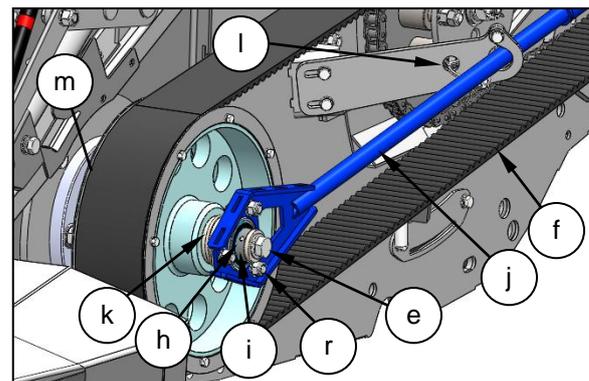
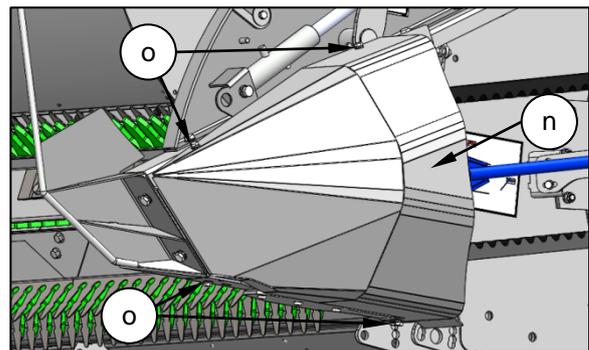
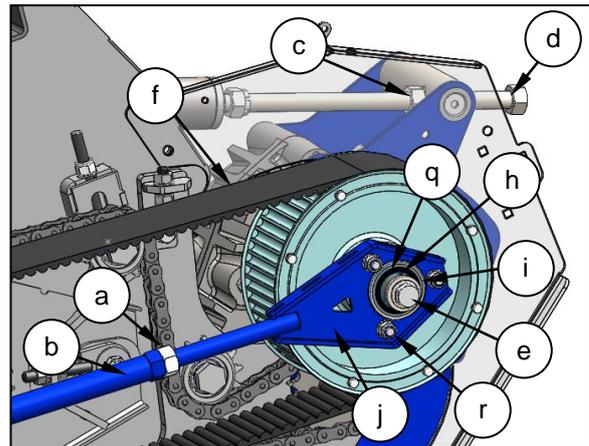
9.4.3 Changing the rotor speeds – HTD drive

The rotor speed is altered as follows by changing the pulley size ratios. This may require changing either the rotor or gearbox pulley, or both.

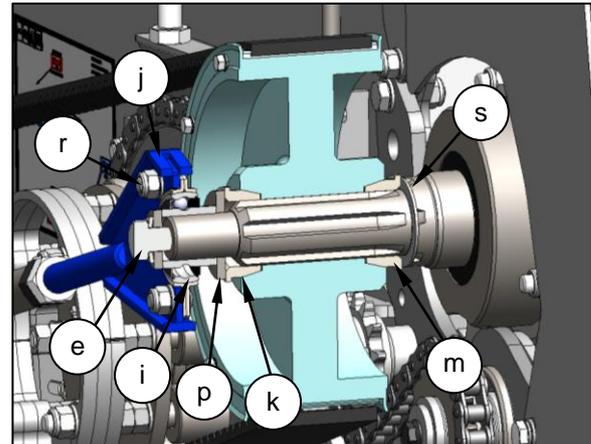
 **Stop the machine and implement the safe stop procedure**

 **Position a wrench on the central bolt of the pulley to rotate the drives
Do not touch the belt, chain or pulleys while the drives are rotating.**

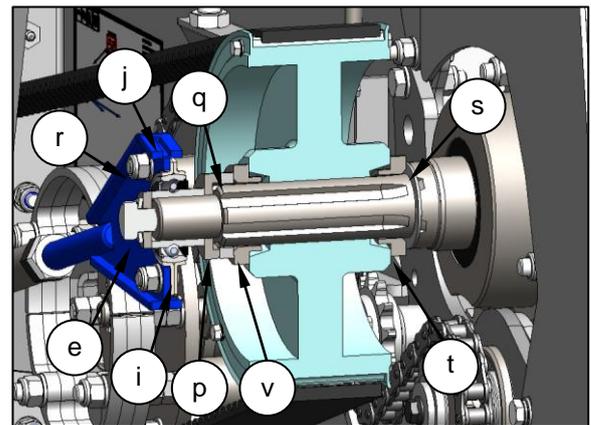
1. Disconnect the PTO shaft from the combine and open the left hand drive guard.
2. Slacken the pulley securing bolts (e) as required. Only slacken according to the pulley being changed.
3. Loosen the tie rod locking nut (a) and fully slacken the tie rod adjuster (b).
4. Loosen the lock nut (c), and then turn the threaded adjuster (d) counterclockwise (anticlockwise). This will rotate the gearbox forward and slacken the belt. Remove the belt (f).
5. If changing the rotor pulley, remove the fixed corner guard (n) by removing the four fasteners (o).
6. Remove the D pin (l) so the tie rod can be released. Then slacken the grub screws (h) securing the tie rod bearing (i), later Stripper Headers fitted with hexagonal bore tie rod bearings do not have grub screws. Slightly loosen the tie rod bearing fasteners (r).



7. Remove the required pulley securing bolts (e) and associated washers, then remove the tie rod bearing (i) and tie rod (j) from either, or both of the shafts.



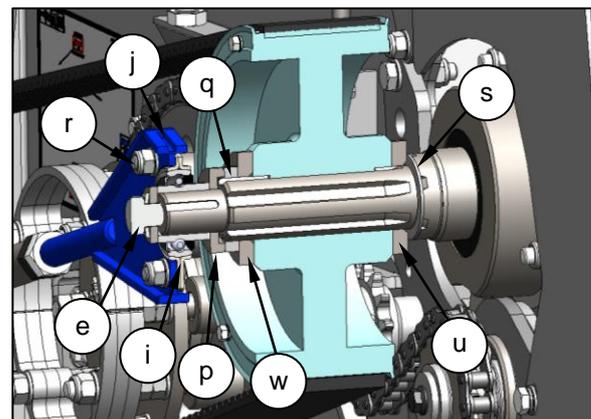
8. Remove the washer (p), outer shim (q), if fitted and tapered collar (k), this may require a light tap with a hammer. On later Stripper Headers the tapered collars (k & m) have been replaced by either stepped washers (t & v) or flat washers (u & w) and can have shims (q & s) on both side of the gearbox pulley. Later Stripper Headers with hexagonal tie rod bearing do not have washer (p) fitted



9. Remove the required pulley. Ensure that the inner tapered collar (m), stepped washer (t) or flat washer (u) and any shims (s) are left on the shaft and not removed with the pulley.

10. Fit the correct pulleys in order to get the desired speed.

11. Refit the tapered collar (k), stepped washer (v) or flat washer (w), shim (q) and washer (p). On later Stripper Headers the gearbox pulley washer (p) has a counterbore, so ensure it is fitted the correct way around.



12. Refit the tie rod bearing (i) and tie rod (j) then tighten the tie rod bearing fasteners (r). If the shaft has a keyway groove align the longer tie rod bearing grub screw (h) so it locates into the groove on the shaft and tighten the grub screws (h).

13. Fit the pulley securing bolts (e) with associated washers to both the rotor and gearbox pulleys. Refit the tie rod retainer and secure with D pin (l).

14. Refit the belt (f) and lightly tension, then reconnect the PTO shaft to the combine.

15. Remove the pulley securing bolts (e) and tie rod bearing grub screws (h) and apply thread lock, then refit and fully tighten the pulley securing bolts (e) and tie rod bearing grub screws (h).

16. Tension drive belt and adjust tie rod as described in Section 9.4.1.

17. Refit the fixed corner guard (n), with the four fasteners (o). Adjust the guard so that the left hand drive guard fits snugly inside. Close the left hand drive guard.
18. Check the tightness of the pulley securing bolts (e) and tie rod bearing grub screws (h) after first 10 hours of use and after changing the pulleys, then after every 50 hours of use. If necessary remove, apply thread lock and retighten.

19.  Replace all guards

9.4.4 HTD Drive Alignment

The drive is aligned at the factory so that when the machine runs the belt tracks lightly to the inside (gearbox side) of the pulley.

This is achieved by shimming the pulleys and adjusting the pitch of the gearbox.

Contact your Shelbourne dealer if the drive needs to be aligned.

9.5 ROTOR & AUGER SPEED SENSORS

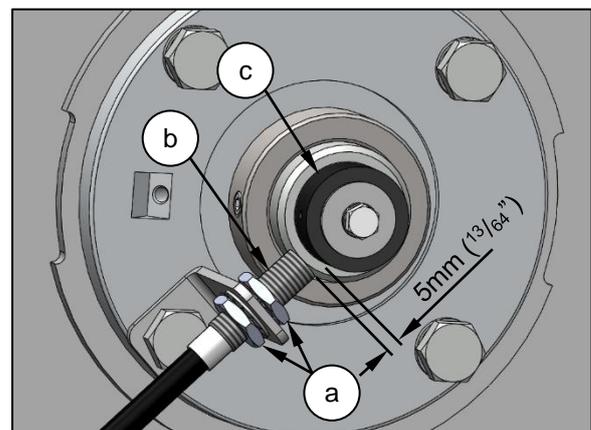
It may be necessary to adjust the rotor or auger speed sensors if the sensor fails to detect the magnet.

 Stop the machine and implement the safe stop procedure

Remove the right hand end idle guard

Loosen locking nuts (a) Adjust the locking nuts (a) so that the gap between the sensor (b) and the magnet (c) is 5mm ($13/64$ ”).

Ensure the sensor (b) is aligned centrally to the magnet (c). Tighten the locking nuts (a)



 Replace all guards

9.6 STRIPPING ROTOR

 Refer to Section 2.15 before working in or inspecting the stripping rotor

9.6.1 Stripping elements

The stainless steel seed saver stripping elements and plastic backing fingers are sectioned into 600mm (24”) lengths, and secured with four bolts to allow replacement of individual sections. The stainless steel element can be fitted with the formed cups pointing upwards (aggressive), for tougher stripping crops, or with the formed cups pointing downwards (non-aggressive), for easier stripping crops.

9.6.2 Stripping element wear

After typical use, particularly in short crops, some of the individual stainless steel seed saver fingers may be bent. In order to ensure the efficiency of the stripping rotor it is advisable to inspect daily and straighten any bent fingers.

The plastic backing fingers have a memory and will return to their original shape after deflection; however if they are damaged or remain deflected they will need to be replaced.

If a single finger breaks off a section of a stripping element, the other fingers on the other rows around the rotor will compensate for it and stripping will still be just as efficient. If a few fingers break off in the same area around or along the rotor, then these stripping element sections should be replaced.

After a period of time the stainless steel seed saver will begin to show signs of wear. The rate of wear will vary according to crop type, soil type, crop conditions, rotor speed and many other factors. The wear will typically occur in the bottom of the keyhole or at the tip of the finger at the folded up flange. At a certain point the wear will be detrimental to the stripping rotor efficiency and will need to be replaced.

Contact your Shelbourne dealer for advice on stripping element wear.

All rows of elements do not have to be replaced at the same time. However, it is important that at least four opposing rows have good shaped elements for effective stripping. The selected rows must be opposite each other to keep the rotor in balance.

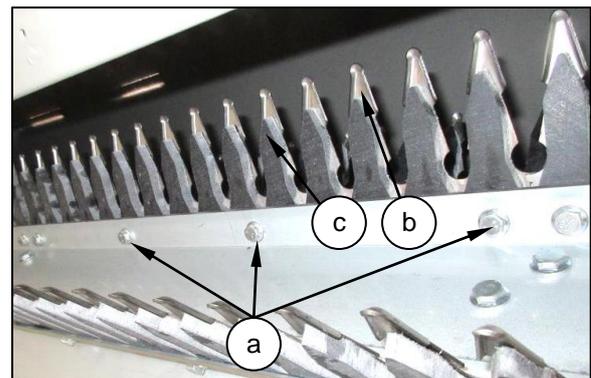
9.6.3 Replacing stripping elements

-  **Stop the machine and implement the safe stop procedure**
-  **If the machine is on the combine, fully raise the Stripper Header and engage the combine's feeder house cylinder lock**
-  **Raise the crop deflector and engage the safety stop**

Remove the four bolts (a) securing the element (b) and backing finger (c), and pull from the rotor. Each section can be clearly seen by the joints.

NOTE: Remove and replace no more than two rows of elements from the rotor at a time, tightening as they are changed, to prevent holes becoming misaligned and the rotor becoming out of balance.

It may be necessary to slacken the end bolt of the neighboring elements to ease element removal.



Place the new section in position, ensuring formed cups are pointing in the correct direction. If it is difficult to push into the rotor, it may be tapped into place with a small bar in the bottom of the keyhole.

If the plastic backing fingers are not being replaced, these should be flipped over when fitting the new stainless steel elements.

Replace the four bolts, torque the bolts to 34Nm (25lb/ft)

NOTE: Serrated flange locking bolts must be used to secure the element sections.

Do not remove the rotors from the header without consulting your dealer.

9.6.4 Center finger adjustment

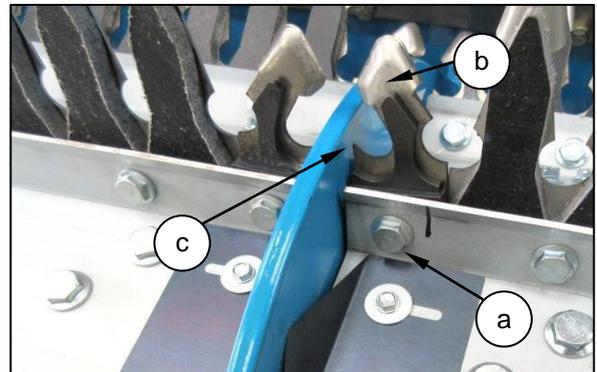
At adjoining rotor ends there is a short single adjustable stripping finger. If grain is being left unstripped in line with the rotor joints only, then the single finger may need adjusting.

 **Stop the machine and implement the safe stop procedure**

 **Fully raise the Stripper Header and engage the combine's feeder house cylinder lock**

 **Raise the crop deflector and engage the safety stop**

1. Disconnect the PTO shaft from the combine.
2. Slightly loosen the bolt (a), move the single finger (b) so that it is just clear of the division plate (c).
3. Tighten the bolt (a) and spin the rotor a complete revolution, to check that the single finger (b) does not rub the division plate (c).
4. If the finger rubs repeat steps 2 & 3, but with a slightly larger gap between the finger and the division plate.
5. Repeat this process on all the other short single stripping fingers, ensuring that they do not rub the division plate.



NOTE: Ensure all bolts are fully tightened.

9.6.5 Anti-wrap plates

Both ends of each rotor are fitted with spring anti-wrap plates on alternate panels around the rotor to help to prevent the crop entering and wrapping in the rotor ends.

The spring anti-wrap plates are pre-set at the factory. If further adjustment is required, follow the procedure below.



Stop the machine and implement the safe stop procedure

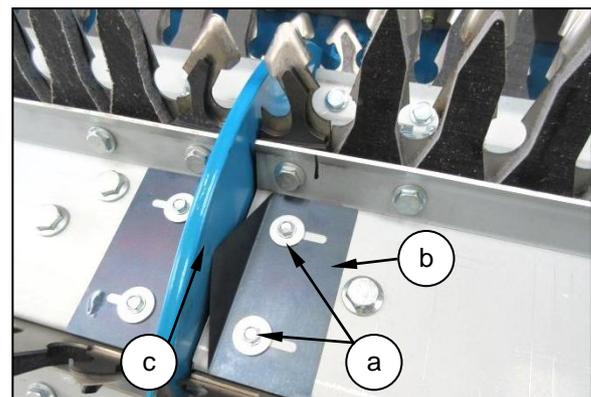


Fully raise the Stripper Header and engage the combine's feeder house cylinder lock



Raise the crop deflector and engage the safety stop

1. Slightly loosen the two screws (a) securing the anti-wrap plate (b).
2. Slide the anti-wrap plate until the tip just touches the side plate or division plate (c).
3. Slide the anti-wrap plate in a further 2mm, ($1/16''$) to apply slight spring pressure.
4. Tighten the two securing screws (a).
5. Repeat steps 1-4 for the other anti-wrap plates.



9.6.6 Rotor cleanout (2025 & On RSD only)

Two panels on each rotor have inspection holes, fitted with a cover plate, on each end. This allows access to the rotor ends for inspection and the removal of any crop that may have entered into and wrapped inside the rotor ends.



Stop the machine and implement the safe stop procedure

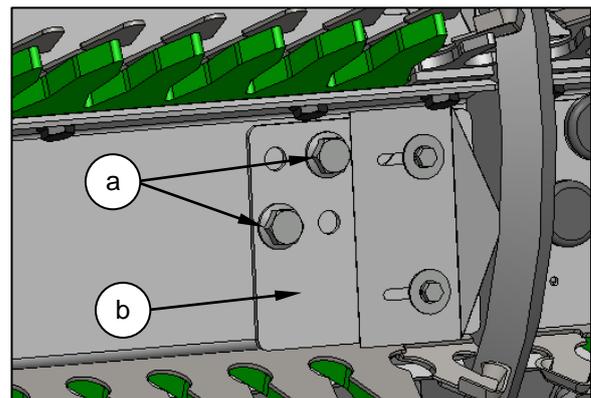


Fully raise the Stripper Header and engage the combine's feeder house cylinder lock



Raise the crop deflector and engage the safety stop

Remove the two bolts (a) securing the inspection hole cover plate (b). Inspect and remove any material that is wrapped inside the rotor ends. Refit the cover plate (b) and retaining bolts (a)



Repeat the process at both ends of each rotor.

9.7 RECOMMENDED TORQUES FOR FASTENERS

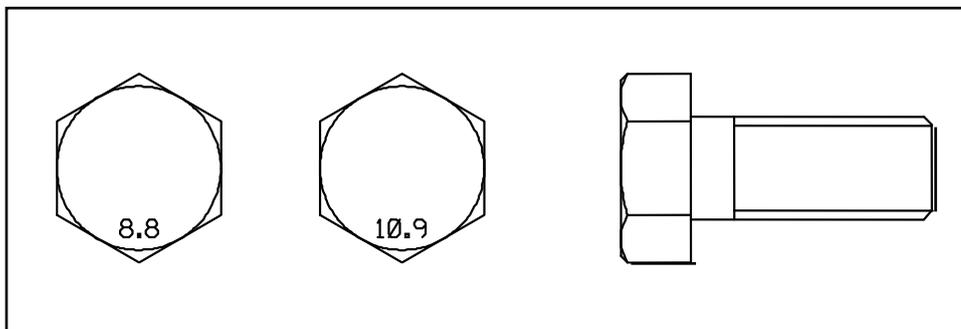
The table shown below gives correct torque values for various fasteners.

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

METRIC FASTENERS (COARSE / STANDARD THREAD)

THREAD DIAMETER.	WRENCH SIZE (mm)	BOLT TORQUE / GRADE*			
		8.8		10.9	
		Nm	lbf ft	Nm	lbf ft
M5	8	6	4	9	7
M6	10	10	7	15	11
M8	13	25	18	35	26
M10	17	50	37	70	52
M12	19	90	66	125	92
M16	24	225	166	310	229
M20	30	435	321	610	450
M24	36	750	553	1050	774

*Torque categories for fasteners are identified by their head markings



9.8 PREVENTING THE BUILD UP OF CROP MATERIAL

It is recommended to clean out crop material from inside the left hand end drive guard, the fixed corner guard and around the gearbox daily, to avoid potential damage to the machine and possible risk of fire

-  **Fully lower the Stripper Header to the ground**
-  **Stop the machine and implement the safe stop procedure**
-  **Replace all guards**

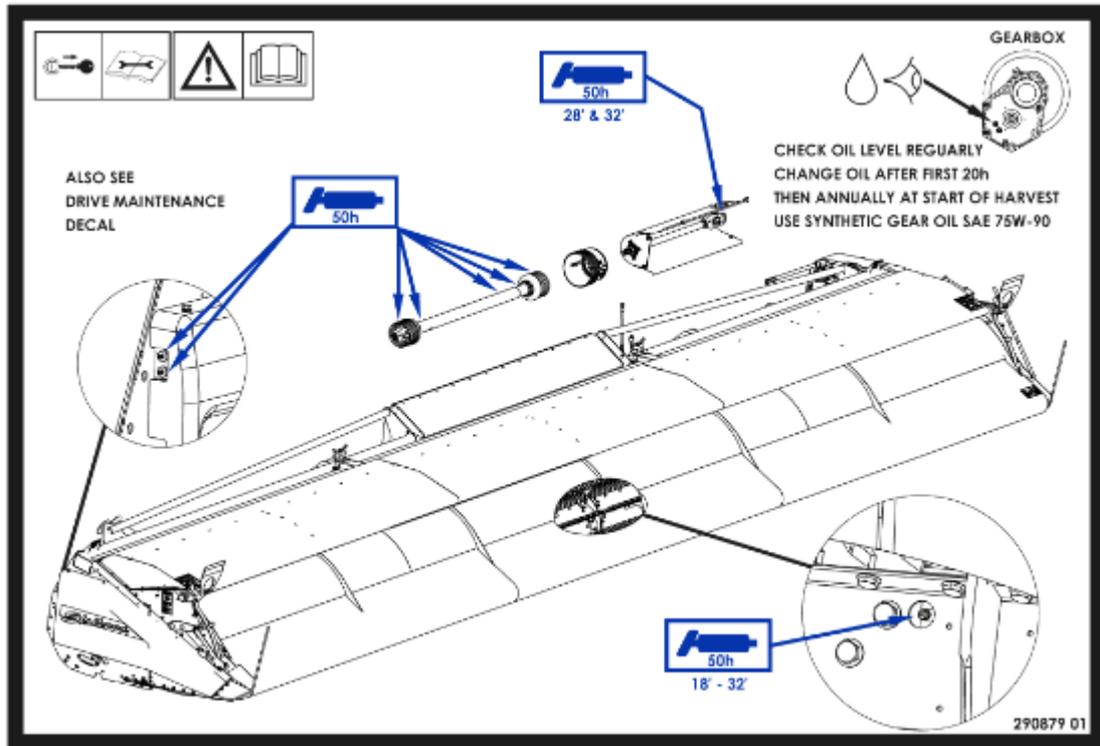
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SECTION 10

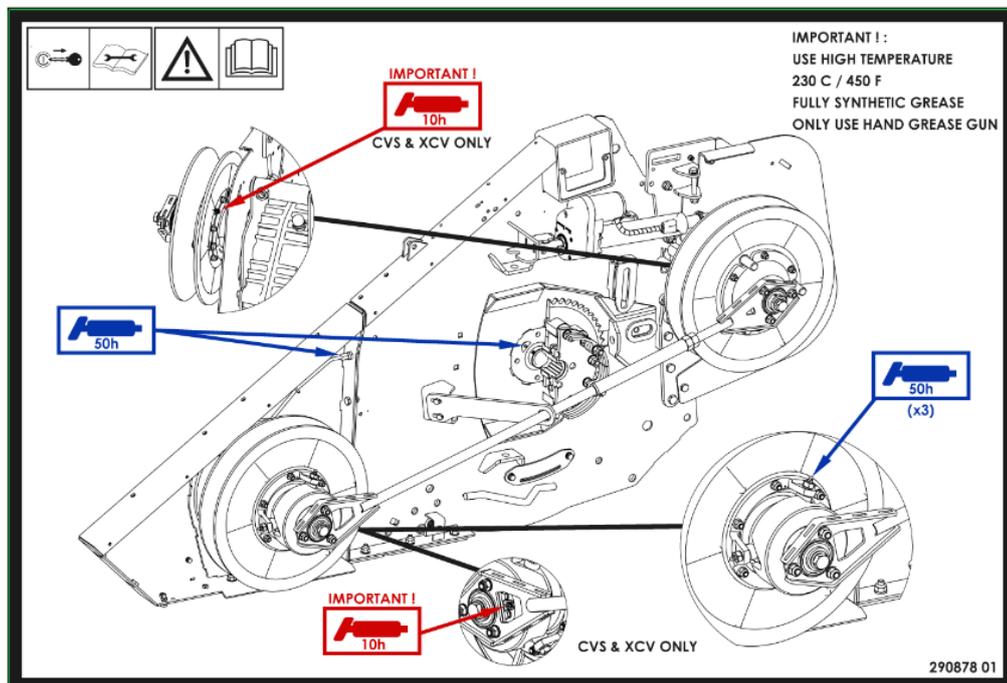
LUBRICATION

⚠ Refer to Section 2.15 for accident prevention information

All Stripper Headers are supplied with two lubrication decals. One is located on the rear left hand side of the Stripper Header main frame. This decal displays the common grease points and gearbox oil information.



A second decal is fitted under the left hand drive guard and indicates the grease points on the variable speed drive pulleys (CVS & RVS only) and the left hand rotor and auger bearings.



10.1 AUGER DRIVE CHAIN

 **Stop the machine and implement the safe stop procedure**

The auger drive chain should be lubricated daily. Open the left hand drive guard and use an aerosol chain lubricant or SAE 90 gear oil. Take care not to get lubricant on the rotor drive belt or pulleys.

 **Refit all guards**

10.2 PIVOT POINTS

All pivot points which may become stiff from corrosion should be occasionally oiled.

10.3 INPUT GEARBOX

 **Stop the machine and implement the safe stop procedure**

The gearbox oil level should be checked daily. There are two versions of the gearbox with the sight glass and drain plug in different positions.

To add oil to the gearbox remove the breather filler cap (d) and pour oil through the filler hole. Once the required amount of oil has been added refit the breather filler cap.

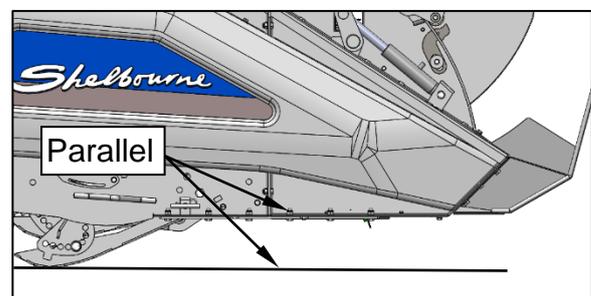
NOTE: Only use fully synthetic gear oil, grade SAE 75W-90.

Brands of oil recommended are: Total SYN FE 75W90
 BP Energear SHX SAE 75W-90
 Mobilube SHC SAE 75W-90.

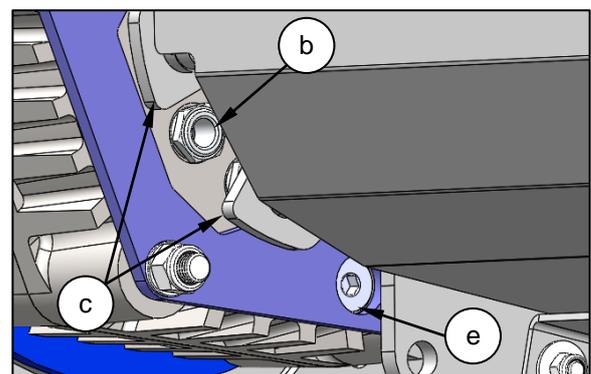
Shelbourne oil part number is OIL-0005A.

10.3.1 Side position sight glass & drain plug gearbox

Check the oil with the Stripper Header lowered near to the ground with the machine side plate parallel to the ground. In this position the sight glass should be at least half covered in oil. If no oil is visible fill until the sight glass is just covered.



View the oil level in the sight glass (b) that is most visible through the viewing area (c).



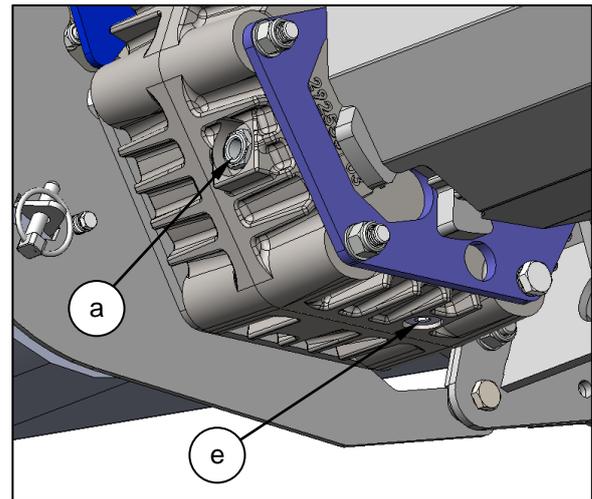
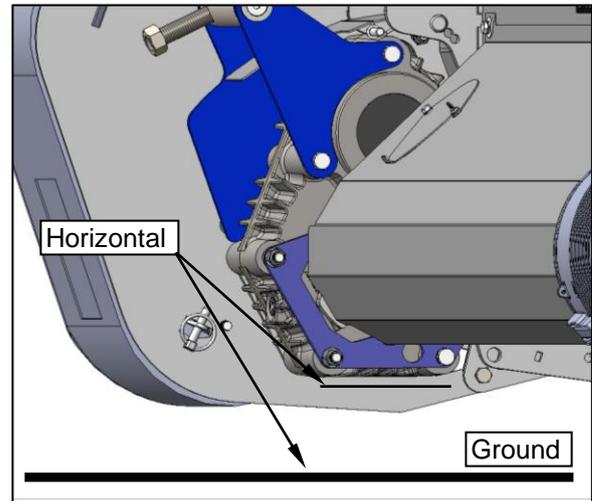
10.3.2 Rear position sight glass & bottom drain plug gearbox

 **Stop the machine and implement the safe stop procedure**

To check the oil level the bottom face of the gearbox needs to be horizontal to the ground. This can be simply done when the Stripper Header is fitted to a combine by raising or lowering the feeder house as required. If not then remove the drive belt from the rear pulley and then rotate the pivoting gearbox, refer to Section 9.3.1 and 9.4.1 for the procedure on pivoting the gearbox and adjusting the belt.

In this position the sight glass (a) should be at least half covered in oil. If no oil is visible fill until the sight glass is just covered.

To add oil to the gearbox, remove the breather filler cap (d) and pour oil through the filler hole. Once the required amount of oil has been added refit the breather filler cap.



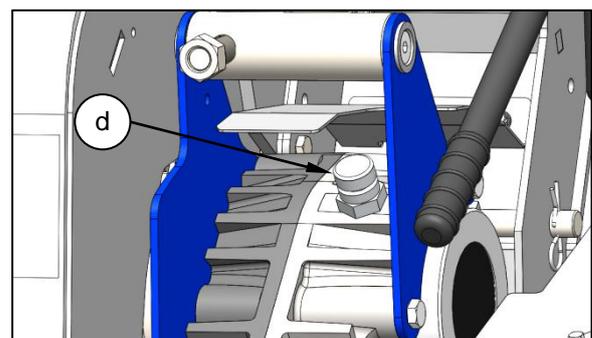
10.3.3 Changing gearbox oil

After the first 20 hours of use the oil should be drained from the gearbox and replaced with the recommended type. Oil should then be changed annually at the start of the harvesting season.

It is recommended to drain the oil from the gearbox when the oil is still warm as it will drain more easily.

Adjust the Stripper Header height so that the drain plug (e) is in its lowest position. The gearbox may need to be pivoted in order to access the drain plug, this may be done by raising or lowering the header on the combine or refer to Sections 9.3.1 and 9.4.1 for the procedure on pivoting the gearbox and adjusting the belt.

Remove the breather filler cap (d) and then remove the drain plug (e) and drain the oil into a suitable container. Dispose of the oil correctly and safely.



Check the magnetic drain plug (e) for signs of metal filings; if excessive filings are found consult your Shelbourne dealer.

Refit and tighten the drain plug (e), then add the specified amount of the recommended oil. Refit the breather filler cap (d).

If the gearbox has been adjusted, readjust the belt, as described in Section 9.3.1 and 9.4.1

Input Gearbox Capacity	Liters	Pints	Gallons	Quart
	1.00	1.67 UK 2.00 USA	0.21 UK 0.25 USA	0.84 UK 1.00 USA

10.4 GREASING

There are a number of grease points that require regular lubrication. These are also displayed on the maintenance sticker on the rear of the Stripper Header.

10.4.1 Ten hour greasing

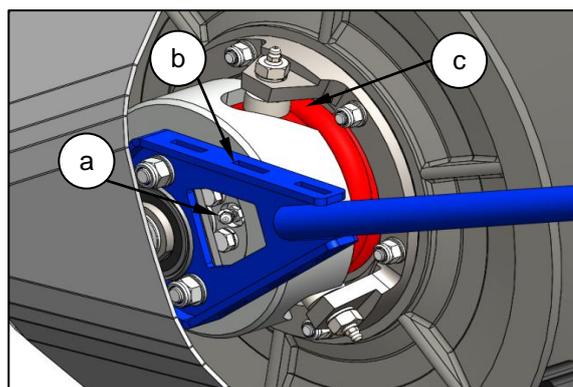
Grease the following points at 10 hour intervals;

 **Stop the machine and implement the safe stop procedure**

 **Position a wrench on the central bolt of the pulley to rotate the drives
Do not touch the belt, chain or pulleys while the drives are rotating.**

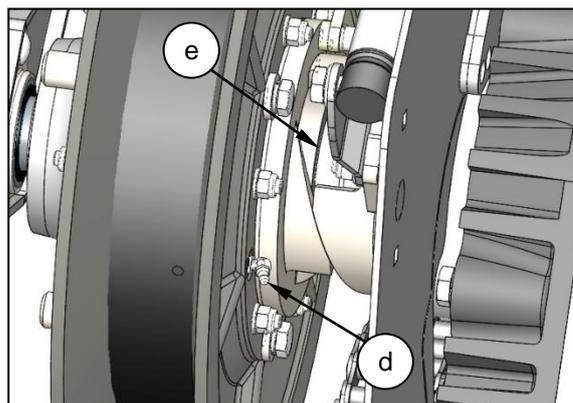
1. Rotor variable speed pulley sheaves.
(CVS & RVS Only).

Open the left hand drive guard and rotate the pulley with a wrench on the central bolt of the pulley until the grease point (a) is aligned with the hole in the tie rod (b). Grease the rotor pulley until fresh grease is expelled through the breather hole into the spring area (c).



2. Gearbox variable speed pulley sheaves
(CVS & RVS Only).

Rotate the pulley with a wrench on the central bolt of the pulley until the grease point (d) is accessible from the rear. Grease the gearbox pulley until fresh grease is expelled into the cam area (e).



 **Refit all guards**

NOTE: After every greasing operate the variable speed drive through the complete speed range in order to distribute the grease.

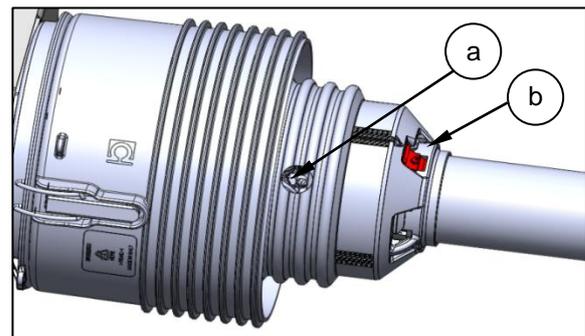
NOTE: Only use hand grease guns.

NOTE: Only use high temperature (230°C / 450°F) fully synthetic grease on the variable speed pulley sheaves. Consult your Shelbourne dealer for grease details.

10.4.2 50 hour greasing

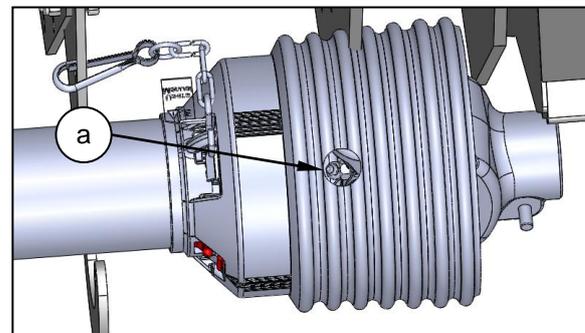
Grease the following at 50 hour intervals;

-  **Stop the machine and implement the safe stop procedure**
-  **Position a wrench on the central bolt of the pulley to rotate the drives Do not touch the belt, chain or pulleys while the drives are rotating**

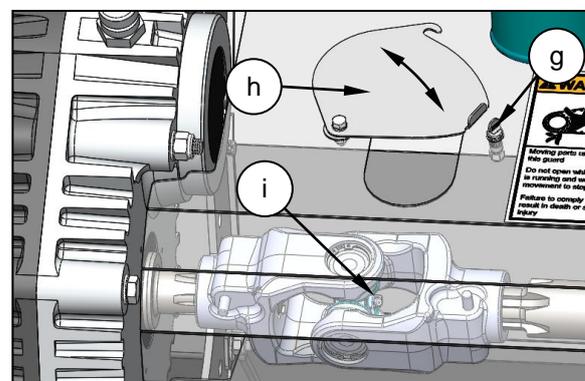


1. Drive line, universal joints.

Grease the universal joint at each end of the PTO shaft through the opening in the guard (a) and the guard bearing (b) in accordance with the PTO manufacturer's instructions.



Machines over 7.2m (24') have an additional grease point. Turn the fastener (g) and open the rear guard inspection cover (h). Rotate the driveline with a wrench on the central bolt of the pulley until the grease (i) point is accessible through the inspection hole. Once this has been greased close the inspection cover (h) and secure with fastener (g).



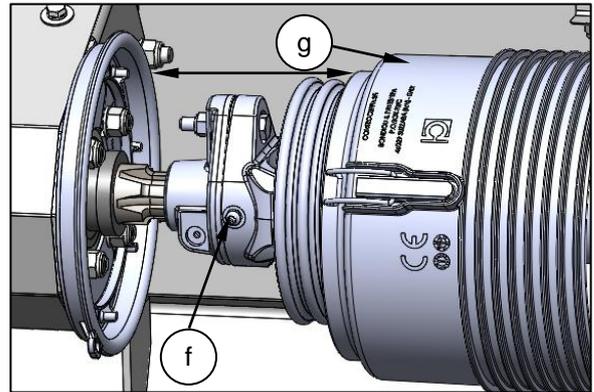
 **Refit all guards**

2. Shearbolt clutch.

Grease the shearbolt clutch grease point (f) at the machine end of the PTO shaft in accordance with the PTO manufacturer's instructions. To do this it will be necessary to open the IIC shield (g). See Section 8.6 for instruction.

Refit the IIC shield (g), see Section 8.6.

 **Refit all guards**

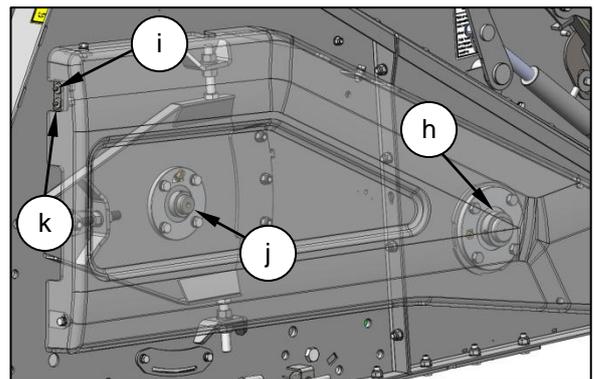


3. Right hand end rotor bearing.

Grease the right hand end rotor bearing (h) from the upper grease point (i), located at the rear of the right hand guard.

4. Right hand end auger bearing.

The right hand end auger bearing (j) is greased from the lower grease point (k), located at the rear of the right hand guard.

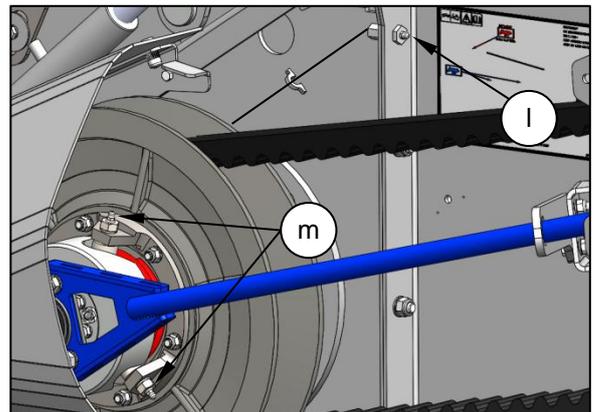


5. Left hand end rotor bearing.

Open the left hand drive guard. The grease point (l) is located on mainframe side sheet.

6. Cam follower bearings.(CVS & RVS only)

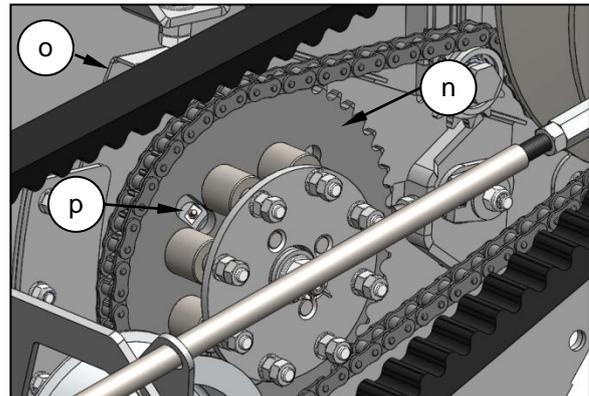
Three cam follower bearings are located on the rotor variable speed pulley. Rotate the pulley with a wrench on the central bolt of the pulley to access all three grease points (m).



7. Left hand end auger bearing.

The left hand auger bearing is located behind the auger clutch (n). Rotate the auger clutch with a wrench on the central bolt of the rotor drive pulley until one of the access holes lines up with the grease point on the bearing (p).

On 2025 model Stripper Headers the left-hand end auger bearing can be greased via remote grease point (o)



 **Refit all guards**

8. Rotor ball coupling (machines with two rotors only).

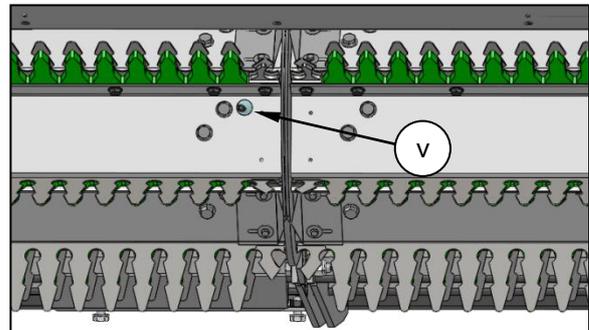
 **Fully raise the Stripper Header and engage the combine's feeder house cylinder lock**

 **Raise the crop deflector and engage the safety stop**

 **Stop the machine and implement the safe stop procedure**

The grease point is located on the left hand end on the right hand stripping rotor. Turn the stripping rotor until the grease hole plug (v) is visible. Remove the plug and grease the ball coupling liberally.

Refit the grease hole plug.



9. Center rotor bearing (2025 & On RSD Only)

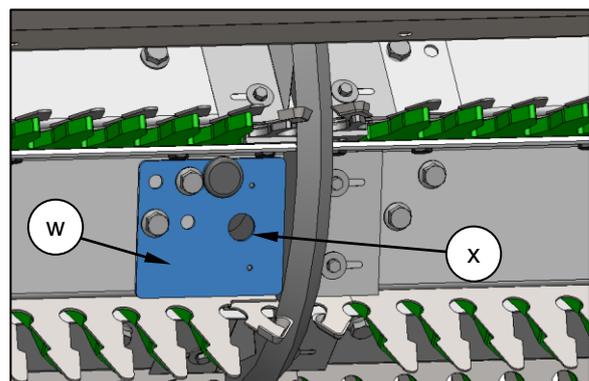
 **Fully raise the Stripper Header and engage the combine's feeder house cylinder lock**

 **Raise the crop deflector and engage the safety stop**

 **Stop the machine and implement the safe stop procedure**

The grease point is located on the left hand end of the right-hand stripping rotor. Turn the stripping rotor until the inspection panel cover plate (w) is vertical. Remove the grease hole plug (x) and grease the center rotor bearing liberally.

Refit the grease hole plug

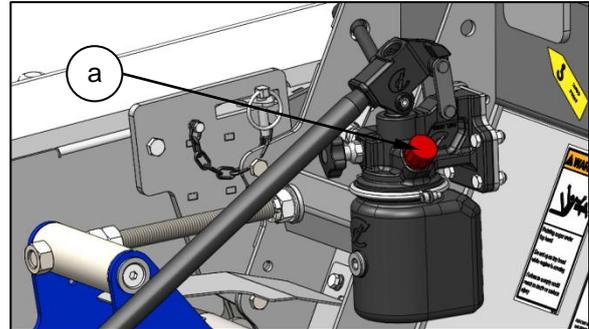


10.5 HYDRAULIC HAND PUMP

The hydraulic hand pump (used for raising and lowering the top hood) is located at the rear left hand side of the Stripper Header.

 **Stop the machine and implement the safe stop procedure**

The oil reservoir will occasionally need topping up with oil. When filling the reservoir ensure that the top hood is fully lowered, remove the red oil filler cap (a) and fill through the filler hole.



Refit the oil filler cap.

Hand Pump Capacity	Liters	Pints	Gallons	Quart
	1.00	1.76 UK 2.11 USA	0.22 UK 0.26 USA	0.88 UK 1.06 USA

Use 46W hydraulic oil, TOTAL EQUIVIS ZS 46 or equivalent.

SECTION 11

STORAGE OF THE HEADER

The procedure below should be followed prior to off-season storage of your Stripper Header, to preserve and protect your machine.

⚠ Refer to Section 2.15 for accident prevention information

1. If removing the Stripper Header from the combine, support on a trailer, or on firm level ground using the header stands.
2. On CVS and RVS machines slow the rotor speed to minimum to reduce the belt tension; see Section 8.1.4.
3. On CSD & RSD machines pivot the gearbox fully forward to remove the tension from the drive belt, see section 9.4

⚠ Stop the machine and implement the safe stop procedure

⚠ Fully raise the Stripper Header and engage the combine's feeder house cylinder lock or lower the Stripper Header to the ground

⚠ Raise the crop deflector and engage the safety stop

⚠ Do not run the header with the end cover plates removed.

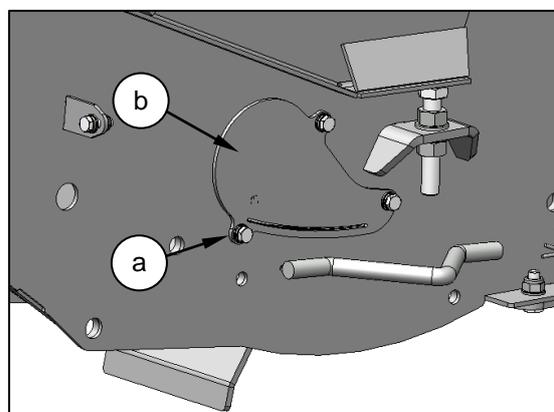
⚠ Do not remove the end cover plates with the auger chain removed as the auger is likely to rotate freely and cause an unexpected pink point.

⚠ Keep hands and fingers clear of the auger if the end clean out covers are removed and the drives are being manually rotated by another person.

4. Thoroughly clean the interior and exterior of the header, as any chaff, straw, grain and dirt left on the machine will draw moisture and cause corrosion as well as attract rodents.

To fully clean the auger trough, the cover plates can be removed at each end of the header.

To do this remove three off securing bolts (a) and remove the end cover plates (b). Ensure the end cover plates and fixings are refitted after cleaning.



5. Clean and lubricate the auger drive chain.
6. Dismantle the auger slip clutch, inspect and clean before reassembly. It may be necessary to replace the auger clutch plates; see Section 9.1. When reassembling, leave the springs slack for storage.

7. Lubricate the machine thoroughly as described in the lubrication section of this manual; see Section 10.
8. Coat all the bright parts with paint or anti-rust preservative to protect them.

NOTE: Do not put oil, paint, preservative, etc. on the plastic backing fingers as it may damage them.

9. Fully lower the crop deflector.
10. Store the header in a dry place protected from the weather and rodents. Both ends of the top beam (d) may need to be blocked up to deter rodents and prevent them from damaging the wires located within the beam.

