

CASE IH 2020 PRODUCTIVITY GUIDE



GENERAL INFORMATION

INTRODUCTION

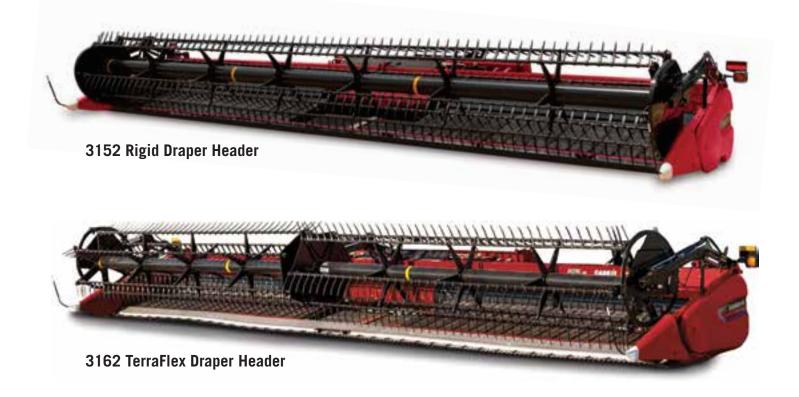
For 43 years, Case IH Axial-Flow® combines have evolved into the most productive and efficient harvesting machines on the market. Over the years, advancements put to the test in thousands of hours of harvest have resulted in tremendous gains in combine efficiency, capacity and reliability. The demand for wider and more efficient headers has continued to grow right along with combine capacity. Meanwhile crop yields, and material volume, have increased over the years. These combined factors mean that an ever-larger volume of material must be gathered and fed smoothly into these grain-hungry combines. Without high-capacity, high-efficiency headers, combine capacity can go unused and combine performance may diminish as a result. The bottom line is, a state-of-the-art combine deserves a state-of-the-art header.

The greatest challenges in feeding Axial-Flow combines are when harvesting small grains or soybeans with a cutterbar platform. To maximize the productivity of an Axial-Flow combine is when it is matched to a Case IH draper header. More and more producers and custom harvesters are switching to flex and rigid draper headers. The smooth crop flow of a draper header significantly enhances feeding, allowing operators to often move up one size over a traditional auger header. In addition to cutting a wider swath, ground speed can be increased with the improvement in feeding efficiency.

Because crop flow is more efficient, the "heads-first" feeding characteristic of draper headers provides a smooth, natural flow into the Axial-Flow combine rotor, further enhancing combine threshing capacity.

A wide selection of draper headers are available for all Case IH Axial-Flow combines. Headers are compatible with all combine series and specific adapters are used to mate the header with the combine.

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GENERAL INFORMATION

INTRODUCTION (CONTINUED)

The currently available Case IH rigid draper header model 3152 series II is available in 25, 30, 35, 40, and 45 foot widths. The rigid headers are well-suited to harvesting standing crops such as wheat and other small grains.

Current 3162 TerraFlex™ series II draper headers include 30, 35, 40, and 45 foot models. The flex headers are right at home in crops such as soybeans, requiring a ground-hugging flexible cutterbar. The TerraFlex headers can also be locked in a rigid configuration for harvesting standing small grains.

Case IH TerraFlex draper headers are adaptable to numerous crops, yields and combine capacities. Draper headers are used in a wide variety of conditions around the world, and are the product of years of proven experience in wheat, mustard, canola, barley, lentils, lupines, oats, peas, milo, flax, grass seeds, pinto beans, safflower, alfalfa, millet, soybeans, rice and sunflowers.

Draper headers promote a uniform heads first feeding of crop into the combine. Smooth even crop flow enhances combine capacity. A wide range of available cutting widths allow the operator to maximize combine performance, harvesting more of what they grow.

On-the-go header tilt adjustment tailors sickle guard angle for unmatched performance in different crop types and terrain.

Self-tracking draper belts, with a special tightening system, enable full-length draper alignment. Draper belts maintain consistent speed with reliable crop flow and long service life.

Other features such as the integrated automatic Header Height Control provide a seamless match to the combine, in order to keep draper headers cutting cleanly right down to the ground. Optional exclusive in-cab deployable slow speed transport

systems on some headers makes moving from one field to the next quick and easy.

The 3162 TerraFlex series II draper head is suited to large acreages and rolling terrain. With the CentraCut™ center knife drive design and a true flexible cutterbar, the 3162 is able to shave the ground and put more grain in the tank in comparison to competitive units. Model year 2019 features adjustable airbag suspension for additional floatation. The cam action reel provides smooth sweeping action to gently lift crop up and convey it across the cutterbar and onto the draper belt. The extra wide in-feed belts match the throughput capacity of the Axial-Flow combine. The seed saving design of the flexible cutterbar plates and draper belts allow you to save more grain and harvest more of what you grow.

Traditionally, great attention is devoted toward combine threshing and separating adjustments during a performance evaluation. The operator wants the crop to be thoroughly threshed and cleaned, and every kernel delivered to the grain tank. The impact of incorrect header settings and operation can have a significant effect on harvesting efficiency, and ultimately customer operating profitability.

The Operator's Manual is the best tool to assist operators in evaluating performance, isolating issues and identifying adjustments to best suit the machine in specific operating conditions. This Productivity Guide addresses the most common questions operators have affecting draper headers. It may be used in conjunction with the Operator's Manual to quickly and accurately evaluate and adjust to a wide variety of conditions in which draper header excel.



SAFETY

Combines and draper headers employ the use of aggressive gathering, cutting and conveying components that could potentially injure operators or bystanders. The operator must understand and recognize this potential and be constantly aware of their responsibility to keep harvest time a safe and productive season. The best way to assure safe operation is to remember the basic safety rules which apply to all machine operation, and specifically to harvesting equipment. The specific rules of safe operation are included in the machine's Operator's Manual and should be reviewed prior to each season of use. The basic rules for combine and combine header operation are:

- When servicing the machine, make accidental contact or entanglement with moving parts impossible by disengaging all drives and stopping the engine before starting service work. This rule applies to all circumstances such as adjustment, repairs, or unplugging the machine. Keep the work area clean and free of hazards.
- Prior to working under or near the combine header, either lower the header completely to the ground, or raise the header completely and lower the header safety stop or stops on the combine feeder lift cylinders (see figure 4.1).

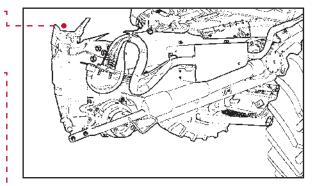


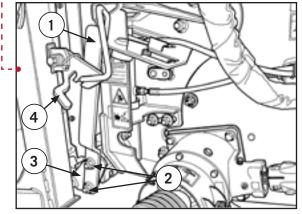
Figure 4.1

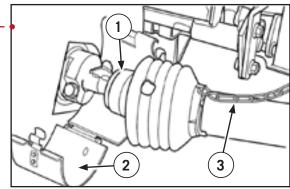
- **DO NOT** go under the *feeder* OR *header* without the safety stop engaged AND the header securely latched to the combine feeder.
- Make sure the area around the machine is clear of other workers, vehicles, equipment, and tools before starting the combine or header. Leave the cab door open and sound the horn as a warning to others, then wait a few seconds for response before starting the machine.
- During operation, maintain the safest possible work environment by keeping all guards and shields in place and in good condition as intended by the manufacturer. **DO NOT** allow riders on the machine.
- Observe and be knowledgeable of the warning decals placed on the machine in specific areas. See your Case IH dealer for replacement decals, should they become damaged or worn and unreadable.
- To maintain optimal steering control and machine balance. the rear axle of the combine must be adequately ballasted according to the size and weight of the header. Refer to Operator's Manuals for minimum ballasting requirements for specific combine and header configurations. Operating conditions such as hilly or uneven terrain may require additional ballast for best control.
- When transporting the machine on public roads, at any time of day, make sure all safety warning lights provided with the machine and/or required by local statute are functioning properly for maximum visibility of the machine to other motorists. Make sure the (SMV) slow-moving vehicle sign is clean, in good condition and visible to the rear of the machine. Observe the rules of the road and be a good neighbor. When safe to do so, move over and allow traffic to pass.
- Remove the header and transport on a trailer to reduce obstruction to other traffic, and for overall safer transport. A few minutes to remove and properly transport the head, even a short distance, is better that spending hours dealing with an accident or an eternity living with the consequences.

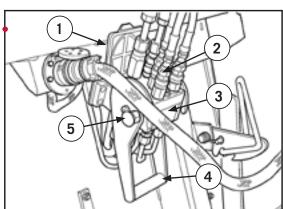
HEADER INSTALLATION

- 1. Make sure the feeder cradle is clean -
- 2. Position the combine to align feeder and header opening
- 3. Hook on the header, and raise the feeder to lift head
- 4. Attach quick-attach lever (1) so that the hooks (3) are in full contact with pins. If not, adjust lever (1) with bolts (2) so that some resistance is felt when latch (4) is engaged over lever (1).
- **5.** Connect header drive shaft **(1)**, and close the cover over the coupling (2)
- 6. Connect PTO shaft chains to correct mounts on header frame (3)
- 7. Clean hydraulic coupler surfaces to prevent dirt from entering the hydraulic system
- 8. To connect the quick-release coupler, open cover (1), bring the combine hydraulic block (2) to the header hydraulic block (3) and turn down handle (4) until lock (5) jumps into its security groove
- 9. Connect electrical connector plug









OPERATION

1. CUTTERBAR FLOTATION

(Ops Manual Section 5)

This portion will review the process regarding how to check cutterbar flotation and adjust if necessary.

1.1 Checking Cutterbar Floatation

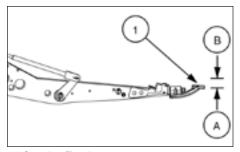
- Raise the header until the cutterbar is approximately 305 mm (12 in.) off of the ground
- Press the guard (1) down to the bottom of its range (A) and release
- Tip of the guard (1) should rebound 5-20 mm (0.2-0.8 in) (B) above the lowest point. This is an initial starting point for flotation and can be fined tuned as needed.
- This action should be performed at each runner arm to ensure consistency across the cutterbar

1.2 Manual Flotation Adjustment (If equipped)

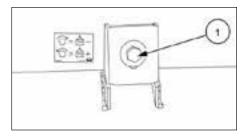
- Turn bolt (1) to adjust flotation
 - Clockwise to remove weight from the cutterbar (decrease ground pressure)
 - Counter clockwise to add weight to the cutterbar (increase ground pressure)
- · Keep in mind each point of adjustment will have some effect on the flotation setting of the neighboring runner arm. It's recommended to start in the center of the header and work towards the outside when adjusting cutterbar floatation. It's best practice to check this adjustment twice.
- · Ground pressure too high:
 - If the cutterbar skids are pushing dirt and trash, the ground pressure is too high
 - Spring tension should be increased to provide more lift to the cutterbar
- Ground pressure too low:
 - If the cutterbar rides up over stubble, bounces excessively, or will not float down in low spots, the ground pressure is too low
 - Spring tension should be decreased to provide less lift to the cutterbar

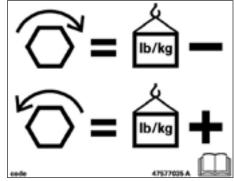
1.3 In-Cab Flotation Adjustment (If equipped)

- Position float indicator at #0 position (Older models may be equipped with a different decal, position the float indicator to the #4 position)
- With float position indicator at '0', ensure the header is fully raised and that the feeder lift cylinder safety stop is lowered
- Adjust the turnbuckle (2) as needed to correctly set the flotation on the support arm (3) next to center and tighten the jam nut (1) on the turnbuckle when finished
- Starting in the center and working outwards, adjust remaining turnbuckles as necessary
- Lastly, lower the header until the cutterbar is approximately 305 mm (12 in.) off of the ground and validate that the initial float setting mentioned earlier is achieved (Section 1.1)
- · Ground pressure too high:
 - If the cutterbar skids are pushing dirt and trash, the ground pressure is too high
 - Hydraulic pressure should be increased to provide more lift to the cutterbar
- Ground pressure too low:
 - If the cutterbar rides up over stubble, bounces excessively, or will not float down in low spots, the ground pressure is too low
 - Hydraulic pressure should be decreased to provide more ground pressure to the cutterbar



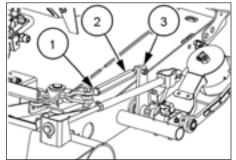
1.1 Cutterbar Flotation





1.2 Manual Flotation Adjustment





1.3 In-cab Adjustments

1.4 Air Bag Suspension for Center Knife Drive (If equipped)

Model year 2019 and newer headers feature an airbag flotation system for the center knife drive. This option can be added to earlier produced headers with kit part number 51519017. It is important to note that the airbag system is only for the center knife drive and any adjustments here will only affect flotation in the center of the head.

- Refer to Section 5 in the Ops Manual for complete instructions
- Ensure the header is fully raised and that the feeder lift cylinder safety stop is lowered
- The bottom bracket for the air bag is positioned using an adjusting bolt (1). Tighten the bolt (1) to raise the lower surface (A) of the bracket until it is level with the frame (B) as a minimum or slightly above.
- Should the air bag brackets push material during operation, the distance between surface (A) and surface (B) at the point indicated between the arrows can be increased to 20 mm (3/4 in.) at maximum. Ensure that the adjustments for the air bag brackets on both the left and right side of the center section are equal.

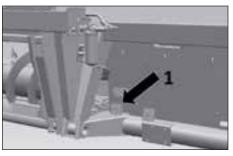
Note: Air pressure within the system may have changed during these mechanical adjustments.

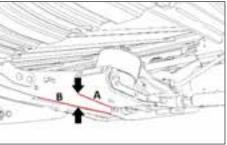
- Pressure can be removed from the system at the relief valve (1), and pressure can be added to the system via an external air source at the fill valve (2). The recommended starting pressure is 3.8 bar (55 psi), but the air pressure may be raised or lowered as needed to provide the desired flotation force at the center section of the cutterbar.
 - Increase the air pressure to provide lighter flotation in soft or muddy fields, or fields with stones
 - Reduce the air pressure to increase the weight of the cutterbar on the ground to limit bouncing in rough fields and hard ground

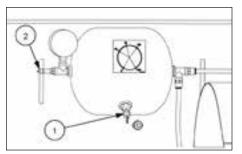
Note: The flotation at the center of the cutterbar is controlled by the air pressure within the system. Adjustment of the standard manual flotation system or the optional in-cab flotation system will not notably affect the flotation force at the center of the cutterbar.

1.5 Cutting Performance

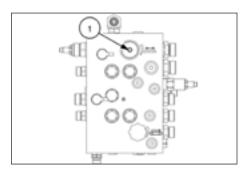
- If knife stalls or crop pushes, check knife speed start with knife drive at full speed, and reduce if field conditions allow
- Check for broken knife sections or excessive wear and replace as required







1.4 - Air Bag Suspension for Center Knife Drive



1.5 Cutting Performance

2. AUTO-HEADER HEIGHT CONTROL (AHHC) SENSORS AND CALIBRATION

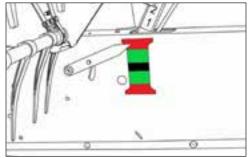
2.1 Flex Mode – Cutting on the Ground

(Ops Manual Section 5)

- Manual Float Adjust Ensure the flex arms are in the unlocked position, allowing cutterbar system to flex
- In-Cab Float Adjustment Ensure the flex arms are in the unlocked position, allowing cutterbar system to flex, and that the float indicator is at the "0" position (or #4 for some older models)
- Ensure the AHHC sensors are enabled in the display (Home Screen > Toolbox > Head 2)
- Ensure an AHHC calibration has been properly performed (Home screen > Calibrations > Header)
- As a best practice, AHHC sensors should be re-calibrated:
 - At the start of every season
 - Any time a sensor is replaced
 - Any time weight is added or removed from the header
 - · Any time there is changeover between the on-ground AHHC system or the optional off-ground AHHC system

2.2 Header Height Indicator

- · During operation, the height indicator scale will indicate the header height and position of the cutterbar within the float range
- For most operating conditions, set the height so the pointer is in line with the center black mark on the scale. When operated in this position the flexible cutterbar will have 76.2 mm (3 in.) of upward float to ride over high spots in the field and 76.2 mm (3 in.) of downward float to ride down into low spots in the field.
- The combine AHHC system will adjust the header height to maintain the selected position as the cutterbar floats up and down during field operation



2.2 Header Height Indicator

Field Operation

- For soft or moist soil conditions the header indicator can be set at a lower position on the scale. Operating the indicator at a lower position will reduce cutterbar ground pressure.
- Ground pressure can be increased or decreased by adjusting the cutterbar flotation setting

Note: Be sure to differentiate between cutterbar flotation and combine AHHC performance.

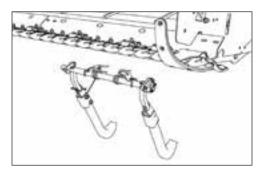
2.3 Rigid Mode – Cutting Above the Ground (Ops. Manual Section 5)

- 3162 Ensure flex arms are pinned in rigid position (In-Cab adjustment lock cutterbar in #6 position and then pin arms)
- 3152/3162 Ensure "off ground sensor arms" are un-pinned and in field mode
- 3152/3162 Ensure "off ground sensor arms" harness is properly connected

1. Make sure the electrical connectors labeled "LH HT/TILT" and "RH HT/TILT" are plugged into the outer sensor assemblies and securely connected

Center Sets

2. Make sure the electrical connectors labeled "LC HEIGHT" and "RC HEIGHT" are plugged into the inner sensor assemblies and securely connected



2.3 Off Ground Sensor Arms

3. GAUGE WHEELS (IF EQUIPPED)

The purpose of the gauge wheels is to provide stabilization to the draper header while cutting crop in rigid mode. The wheels which are fixed to the header frame act as a cushion for the header.

• The wheels can be adjusted to improve header stability depending on crop harvesting requirements

4. FORE/AFT TILT

Ops Manual Section 5

- If required, this header can be tilted fore/aft to achieve the optimum cutterbar angle. On the multifunction handle press Shift + Reel Fore/Aft to adjust.
- For average conditions, operate with the cutterbar in the middle position indicated at the "3" position
- If the header is pushing material and debris at the cutterbar, tilt the head back
- If the cutterbar is cutting high, or the back of the head is contacting the ground, tilt the head forward



(Ops Manual Section 5)

5.1 Reel Height Setting

- In a standing crop, the reel should be adjusted so that the reel tine bars contact approximately the top 1/3 of the crop
- In laid crops, the reel must be lowered to pick up the crop so it can be cut cleanly by the cutter bar

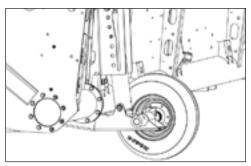
5.2 Reel Tine to Knife Clearance

The clearance between the reel tines and the knife, when the reel is fully retracted and lowered, is factory-set. However, should adjustment be necessary, proceed as follows:

- Adjust the reel fore/aft position, so that the lowest tine bar is centered over the knife
- Loosen the jam nut (1) on each of the reel lift cylinders
- Ensure the cutter bar is in its highest point in flex mode or locked in rigid mode
- Lower the reel completely, i.e. with the reel lift cylinders fully retracted. Adjust the reel lift cylinder shaft (2) so that the reel tines are 50 mm (2 in.) from the cutter bar. Check the measurement at several places across the
- Tighten the jam nuts (1) on both sides when adjustment is correct

NOTE: Do not exceed 63 mm (2.5 in) of exposed threads or the eye bolt may be threaded out of the cylinder causing the reel to fall.

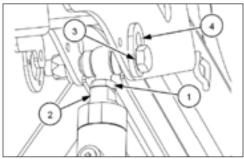
NOTE: Bolt should be in bottom hole (3) for plastic tines and top hole (4) for steel tines.



3. Gauge Wheels



4. Fore/Aft Tilt



5.2 Reel Tine to Knife Clearance

OPERATION

5. REEL POSITION (CONTINUED)

(Ops Manual Section 5)

5.3 Reel Fore/Aft Setting

In average crop conditions, adjust reel fore/aft setting to 5 on indicator decal.

- · Additional adjustment may be necessary to get reel finger ends close to hump in front of floors
- In laid crops it will be necessary to move the reel forwards and to incline the reel tines towards the feed auger to pick up the crop before it is cut

5.4 Reel Tine Pitch

Angle (A) of the reel tine pitch can be adjusted for more or less aggressive feeding. To do this:

- Loosen three bolts (B) and rotate cam (C) forward or backward to achieve desired position
- Tighten three bolts (B) when correct position is acquired
- · Repeat on opposite side of head to match

6. FEED AUGER

(Ops Manual Section 5)

- The feed auger position is adjustable vertically
- The auger trough clearance must be adjusted to produce a positive feed without threshing or bunching the crop or smashing the straw

To adjust the auger height:

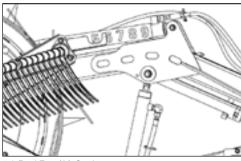
- 1. Loosen the two bolts (1) on either side of the auger
- 2. Loosen the two float bolts (2) on either side of the auger
- 3. Use wood blocks or other suitable prying device to raise or lower the auger
- 4. Tighten the two lower mount bolts (3)
- 5. Tighten the two upper float bolts (4)

NOTE: Be sure to adjust the two sides evenly.

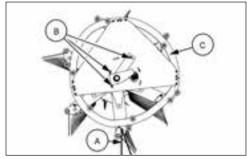
NOTE: If auger float is desired, leave space between the upper float bolt block and the auger arm.

After completing the auger height adjustment:

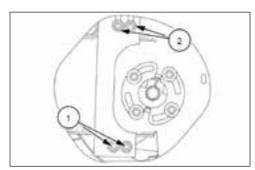
- Rotate the auger to ensure clearance between the auger flighting and the header floor, also ensure the finger clearance to the header floor. Minimum clearance is 24 mm (0.9 in).
- Check clearance above the auger. Auger can be adjusted high enough that the auger fingers can come in contact with the frame above the auger causing damage to the auger fingers and frame.
- If crop bunches under the auger and does not feed evenly to the center of the header, the auger-to-trough clearance should be reduced to gain better contact with the crop. This condition normally exists when the crop is light and little material is being fed into the auger.
- · When harvesting heavy crops or crops infested with large weeds, the auger-totrough clearance should be increased to allow room for the material to move under the auger.



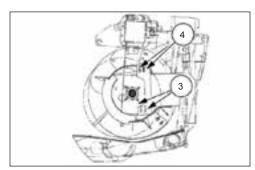
5.3 Reel Fore/Aft Setting



5.4 Reel Tine Pitch



6. Feeder Auger - Steps 1 & 2



6. Feeder Auger-Steps 4 & 5

6.1 Auger Finger Timing

- To adjust finger timing proceed as follows:
 - Loosen the four nuts (highlighted in red) on the right-hand side of the auger
 - Turn the center adjuster hex (1) to the desired finger position
 - Tighten the four nuts when adjustment is complete

NOTE: When looking from the right-hand side of the header, the fingers should be fully retracted at the 7 to 8 o'clock position as a starting point.

NOTE: If crop carries over the auger, adjust finger timing so that the fingers are retracted sooner.

6.2 Auger Speed

- · Auger speed can only be changed by exchanging sprockets on the head
- An optional 38 tooth driven sprocket is available to increase auger speed by 12%
- An optional 47 tooth driven sprocket is available to decrease auger speed by 9%

Standard sprocket combination

(Drive - 11 tooth Driven - 43 tooth 147 RPM)

Speed up sprocket combination

(Drive - 11 tooth Driven - 38 tooth 166 RPM)

Slow down sprocket combination

(Drive - 11 tooth Driven - 47 tooth 135 RPM)

7. BELT FEEDING

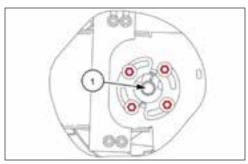
(Ops Manual Section 5)

7.1 Belt Adjustment

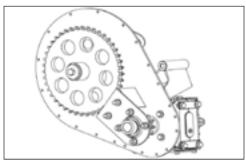
 If needed, belt tracking can be adjusted. Please consult Section 5 of the Operators Manual for complete details and procedures

7.2 Belt Speed

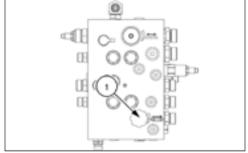
 Side draper belt speed can be increased or decreased to adjust how the header feeds the combine. Adjustments are made at the valve block (1).
Proper lateral belt speed is attained when a single, even windrow converges onto the infeed belts.



6.1 Auger Finger Timing



6.2 Auger Speed



7.2 Belt Speed

OPERATION

8. REEL DRIVE

(Ops Manual Section 5)

8.1 Chain Tension

- Loosen the nuts (1) located on the back side of the reel drive bracket that hold the hydraulic motor mounting flanges
- · Loosen jam nut (2) then adjust tension as needed
- Tighten the bolts (1) to 100 Nm (73.8 lb/ft). Tighten jam nut (2)
- · Recheck chain tension with bolts tightened

NOTE: The chain tension is correct with 6 - 10 mm (0.24 - 0.39 in.) deflection from gravity in the top run of the chain.

8.2 Reel Drive Sprocket

• "Reel Drive Sprocket Kit" P/N 47476879 is available for tougher harvest conditions that may cause the reel to stall

9. HOW TO PROPERLY OPERATE THE HEADER TRANSPORT

For complete setup and operation of the on board header transport system. please reference the Operator's Manual - Section 4.

10. IN-FIELD MAINTENANCE CHECKS

(Ops Manual Section 6—Maintenance)

Every 10 hours/daily:

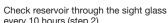
- 1. Lubricate the reel drive chain
- 2. Check oil level in hydraulic reservoir fluid level-main and expansion. To properly check oil in the main reservoir, use the lateral tilt feature on the combine feeder house to tilt the right hand end of the header down. Ensure that the reservoir sight glass is still covered in this position. Add oil accordingly.
- 3. Inspect knife drive and remove debris



Lube reel chain drive every 10 hours

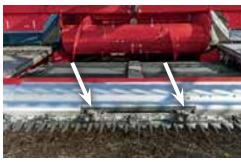
every 10 hours (step 2)



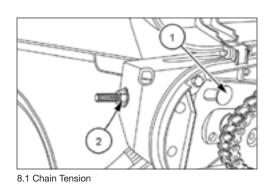


Every 25 hours:

- · Grease knife head bearings
- Grease gauge wheel assembly 3 grease points (If equipped)



Grease knife head bearings every 25 hours



10. IN-FIELD MAINTENANCE CHECKS (CONTINUED)

(Ops Manual Section 6—Maintenance)

Every 50 hours:

- Grease fittings
 - Reel bearings
 - Header drive PTO
 - Auger drive PTO

After the first 50 hours:

- Change oil in:
 - Pump drive gearbox
 - Center knife drive
- Change the hydraulic oil filter

Every 600 hours/annually:

(Ops Manual Section 6—Maintenance)

- Change oil:
 - Center knife drive
 - Auger drive chain case
 - Pump drive gearbox
 - · Hydraulic reservoir



Check oil level every 50 hours



Change Knife Drive oil level every 600 hours or every year



Change auger drive chain case every 600 hours or every year

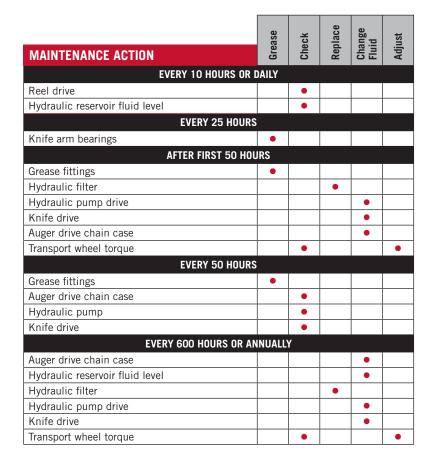


Change Gearbox oil level every 600 hours or every year

MAINTENANCE

HEADER DRIVE TOOL

A knife drive tool is provided with every header stored in the back of the header on the left hand side. Install the tool into the knife drive head bolt, then pushing against the knife head will aid in moving the knife inside the cutterbar to help in removal and installation of broken guard and knife sections. The other end of the tool is used to help lock the cutterbar from float to rigid operation.





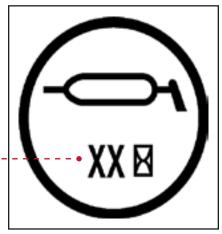
Header drive tool



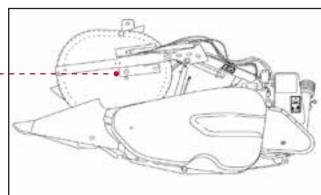
Header drive tool unlocking suspension

GREASE FITTINGS

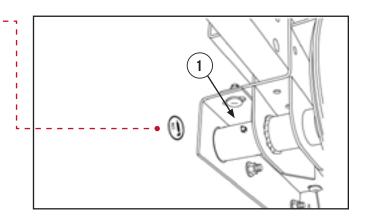
Grease fittings on the machine that are indicated with a grease decal have the time interval indicated. - - - - -



50 hour interval – left-hand side. - - - - - -

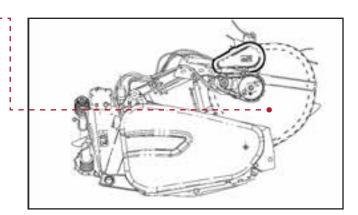


Reel bearing (1). - - - - - - - - - -

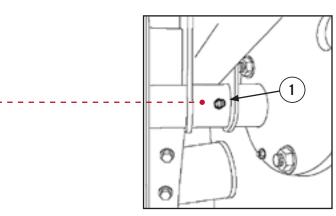


MAINTENANCE

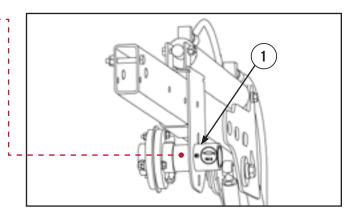
50 hour interval – right-hand side. - - - -



Reel bearing (1). - - - - - - - - - -



Center reel bearing (1), split reel equipped heads only. - - -



50 hour interval – Header drive PTO. - - -Header drive PTO joint and guarding. Refer to decal (1). -

HYDRAULIC FILTER

WARNING

Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.

- 1. Disengage all drives
- 2. Engage parking brake
- 3. Lower all attachments to the ground, or raise and engage all safety locks
- 4. Shut off engine
- 5. Remove key from key switch
- 6. Switch off battery key, if installed
- 7. Wait for all machine movement to stop

Failure to comply could result in death or serious injury.

WARNING

Pressurized hydraulic fluid can penetrate the skin and cause severe injuries.

Hydraulic fluid can also infect a minor cut or opening in the skin. Serious infection or reaction can result without immediate medical treatment. If injured by leaking fluid, see your doctor immediately. Failure to comply could result in death or serious injury.

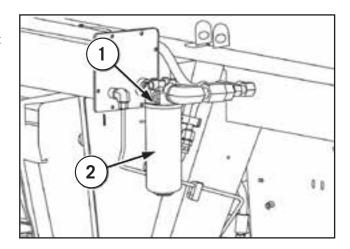
- 1. Clean the area around the filter base (1)
- 2. Place a suitable container under the filter (2) to catch any lost oil for proper disposal

NOTE: The lines are equipped with check valves to prevent the reservoir from draining while the filter is removed.

- 3. Remove the old filter
- 4. Ensure the old gasket has been removed from the filter head
- 5. Apply a thin coating of oil on the new filter gasket
- 6. Install the new filter

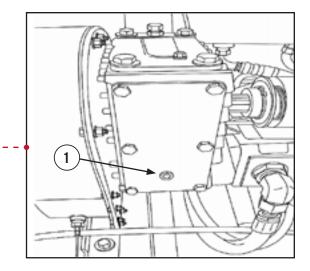
NOTICE: Hand tighten only. The use of tools will over-tighten the filter, potentially causing leaks.

7. Check the reservoirs and fill if necessary

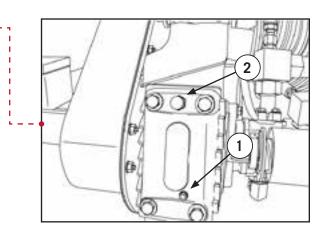


GEARBOX

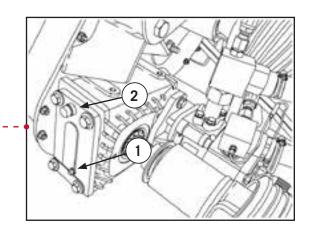
- 1. Remove the drain plug (1) drain the used oil into - - a suitable container
- 2. Install the drain plug and tighten



- **3.** Remove the check plug **(1)** -----
- 4. Remove the breather (2)



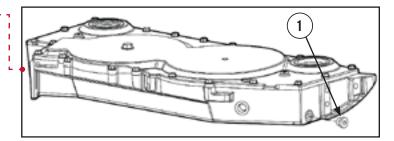
- 5. Fill with approximately 1.9 L (4 U.S. pt) of CASE IH AKCELA GEAR 135 H EP 80W-90 until oil runs from check bolt hole (1) - - -
- 6. Install check plug and tighten
- 7. Install breather plug (2) and tighten



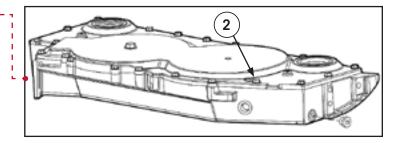
MAINTENANCE

KNIFE DRIVE

- 1. Remove the drain plug (1) and drain the oil into - a suitable container
- 2. When the oil is completely drained install and tighten the drain plug (1)



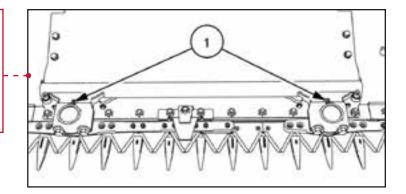
- **3.** Remove the fill plug **(2)** -----
- 4. Fill oil in the gearbox through plug hole (2)
- 5. Check the oil level as described in Section 6-41 of the Operator's Manual



Gearbox capacity: 6 L (1.6 U.S. gal).

Use CASE IH AKCELA GEAR 135 H EP 80W-90, or an oil meeting the following specifications:

- API GL-5
- MIL-L-2105D
 - The torque of the knife head bolts, clearance specifications of the knife head, and guard placement in the center of the header are critical items. Please refer to Section 6 of the Operator's Manual to ensure these specifications are met when changing out a knife assembly.



NOTES

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SAFETY NEVER HURTS!™ Always read the Operator's Manual before operating any equipment. Inspect equipment before using it, and be sure it is operating properly. Follow the product safety signs, and use any safety features provided. CNH America LLC reserves the right to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions and illustrative material herein are as accurate as known at time of publication, but are subject to change without notice. Availability of some models and equipment builds varies according to the country in which the equipment is used.