



12" Cross Auger for New Holland 880-840CF Headers:

**25 ft (ASM # 406495); 30ft (# 406496);
35ft (# 406497); 40ft (# 406498);
45ft (# 406499) Direct Drive
OPERATOR'S HANDBOOK AND PARTS MANUAL**

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REV 1

-Part No. 405926

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2. SAFETY

SAFETY ALERT SYMBOL

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

The Safety Alert symbol identifies important safety messages on the Ag Shield Cross auger and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.



3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

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

- DANGER** - An immediate and specific hazard which **WILL** result in severe personal injury or death if the proper precautions are not taken.
- WARNING** - A specific hazard or unsafe practice which **COULD** result in severe personal injury or death if proper precautions are not taken.
- CAUTION** - Unsafe practices which **COULD** result in personal injury if proper practices are not taken, or as a reminder of good safety practices.

2.1. SAFETY OVERVIEW

YOU are responsible for the **SAFE** operation and maintenance of your Ag Shield Cross auger. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the canola pusher be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the canola pusher.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Cross auger owners must give operating instructions to operators or employees before allowing them to operate the Cross auger, and at least annually thereafter per OSHA regulation 1928.57.
- The most important safety device on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think SAFETY! Work SAFELY!

2.2. GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, adjusting the Cross auger.
2. Only trained competent persons shall operate the cross auger. An untrained operator is not qualified to operate the machine.



3. Have a first-aid kit available for use should the need arise and know how to use it.

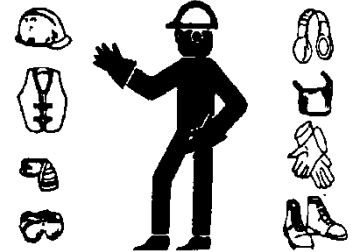


4. Have a fire extinguisher available for use should the need arise and know how to use it.



5. Do not allow riders.

6. Wear appropriate protective gear. This list includes but is not limited to:



- A hard hat
 - Protective shoes with slip resistant soles
 - Protective glasses or goggles
 - Heavy gloves
 - Hearing protection
7. Stop the engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
 8. Review safety related items with all personnel.

2.3. MAINTENANCE SAFETY

1. Review the Operators Manual and all safety items before working with, maintaining or operating the Cross auger.
2. Stop the tractor engine, place all controls in neutral, set park brake, remove ignition key, wait for all moving pads to stop before servicing, adjusting, or repairing.
3. Before applying pressure to a hydraulic system, make sure all components are tight and that steel lines, hoses and couplings are not damaged.
4. Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.
5. Keep hands, feet, clothing and hair away from all moving and/or rotating parts.
6. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
7. Place stands or blocks under the frame before working beneath the machine.

2.4. HYDRAULIC SAFETY

1. Always place all tractor hydraulic controls in neutral before dismounting.
2. Make sure that all components in the hydraulic system are kept in good condition and are clean.
3. Replace any worn, cut, abraded, flattened or crimped hoses and steel lines.
4. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tape, clamps or cements. The hydraulic system operates under extremely high-pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.
5. Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
6. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.

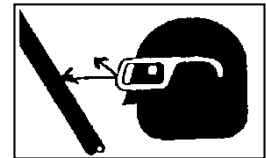
7. Before applying pressure to hydraulic system make sure that all connections are tight and that all hoses and fittings are in good condition.
 1. slip and you could be badly hurt or killed.

2.5. STORAGE SAFETY

1. Store unit in an area away from human activity.
2. Do not permit children to play on or around the stored Cross auger.

2.6. TRANSPORT SAFETY

1. Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when operating the Cross auger in the field and/or on the road.
2. Check with local authorities regarding machinery transport on public roads. Obey all applicable laws and regulations.
3. Always travel at a safe speed. Use caution when making corners or meeting traffic.



4. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic. Daybreak and dusk are particularly dangerous and pilot vehicles are recommended.
5. Ensure that the trailer is hitched positively to the towing vehicle. Always use a safety chain between the trailer and the tractor.
6. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder, if permitted by law.
7. Always use hazard warning flashers on the Cross auger when transporting unless prohibited by law.

2.7. REFUELING SAFETY

1. Handle fuel with care. It is highly flammable.



2. Do not refuel the machine while smoking or when near open flame or sparks.

3. Stop engine before refueling. Clean up spilled fuel before restarting engine.

2.8. TIRE SAFETY

1. Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion, which may result in serious injury or death.
2. Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
3. Have a qualified tire dealer or repair service perform required tire maintenance.
4. Operate the tires at the pressures, loads, and speeds suggested by the manufacturer.

2.9. OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before using.
2. Stop engine place all controls in neutral, set park brake, remove ignition key, wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Before conditioning a field, be familiar with all potential hazards: trees, rocks ditches, gullies, etc. Plan your route to avoid hazards. Keep Cross auger width in mind when maneuvering to avoid obstacles.
4. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
5. Keep all shields and guards in place when operating.
6. Do not allow riders on the Cross auger or tractor during operation or transporting.
7. Clear the area of all bystanders, especially children, before starting.

8. Stay away from machine when folding deflectors. Keep others away.
9. Before applying pressure to the hydraulic system, make sure all components are tight and that steel lines, hoses and couplings are not damaged.
10. Review safety instructions annually

2.10. CROSS AUGER SAFETY

The cross auger has sufficient power to sever limbs and cause serious to fatal injury. Always stop the cross auger before dismounting. Always be certain that no one is in front of combine header Shield before engaging the auger drive.

When greasing the auger, do so with the combine motor shut off and the park brake securely set.

Never attempt to help the crop move along the canvases with a wrench or other item that might get into the auger and draw the wrench holder into the auger.

2.11. SAFETY DECALS

Become familiar with these decals and the hazards they are marking.



part #113522

part #113524



part # 113552

3.Setup from Shipping Mode

Operator's handbook for Ag Shield Cross auger to fit on to a New Holland header

Please note that the colors in the instructions refer to the **manual** page colors, **not the actual color** the kit parts are painted

Installation sequence and dimensions for a 30 FT New Holland Header

3.1. RIGHT END MOUNT

1. Lift the end plastic and bolt the end mount part number 406624 using the existing top holes. bolt together using the 3/8" x 1-1/4" bolts using a washer on each side. **DO NOT FINAL TIGHTEN**

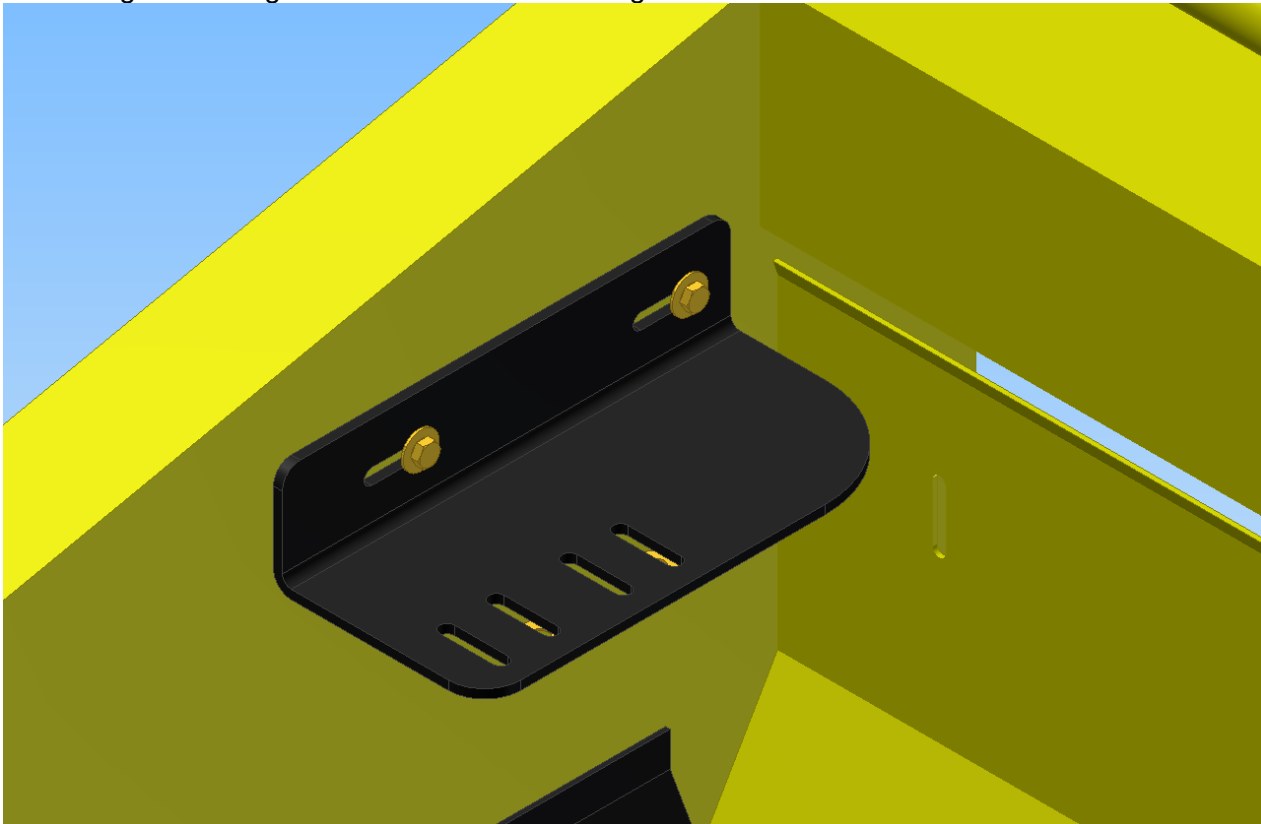


FIGURE 1 NEW HOLLAND RH END MOUNT 406624

3.2. LEFT END MOUNTING PROCEDURE

The left mount is installed in a similar fashion as the right ---observe the photos below use the same length 3/8" x 1-1/4" bolts and mount the LH end mount part number 406631

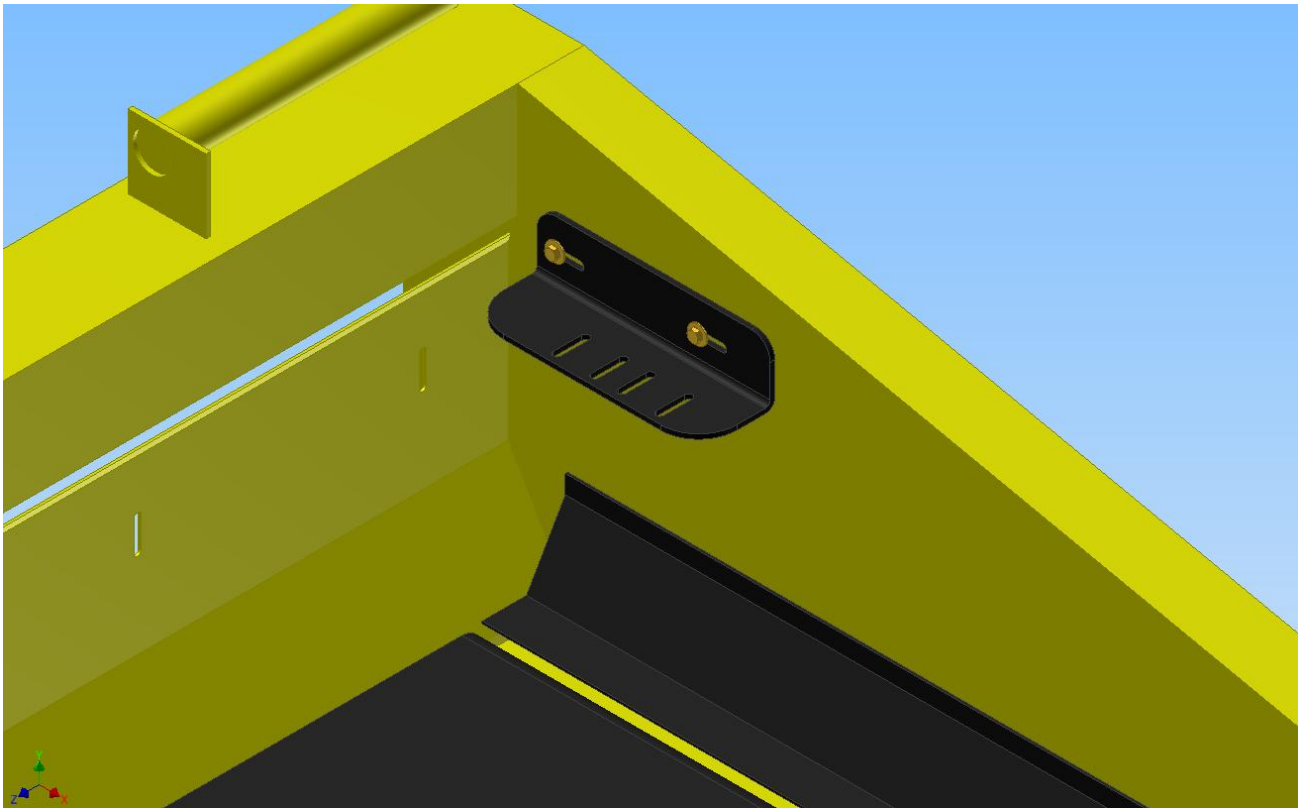


FIGURE 2 LH END MOUNT BOLTED IN PLACE 406631

3.3. CENTER MOUNT

The center mount requires two holes to be drilled into LH and RH ear of the New Holland Header.

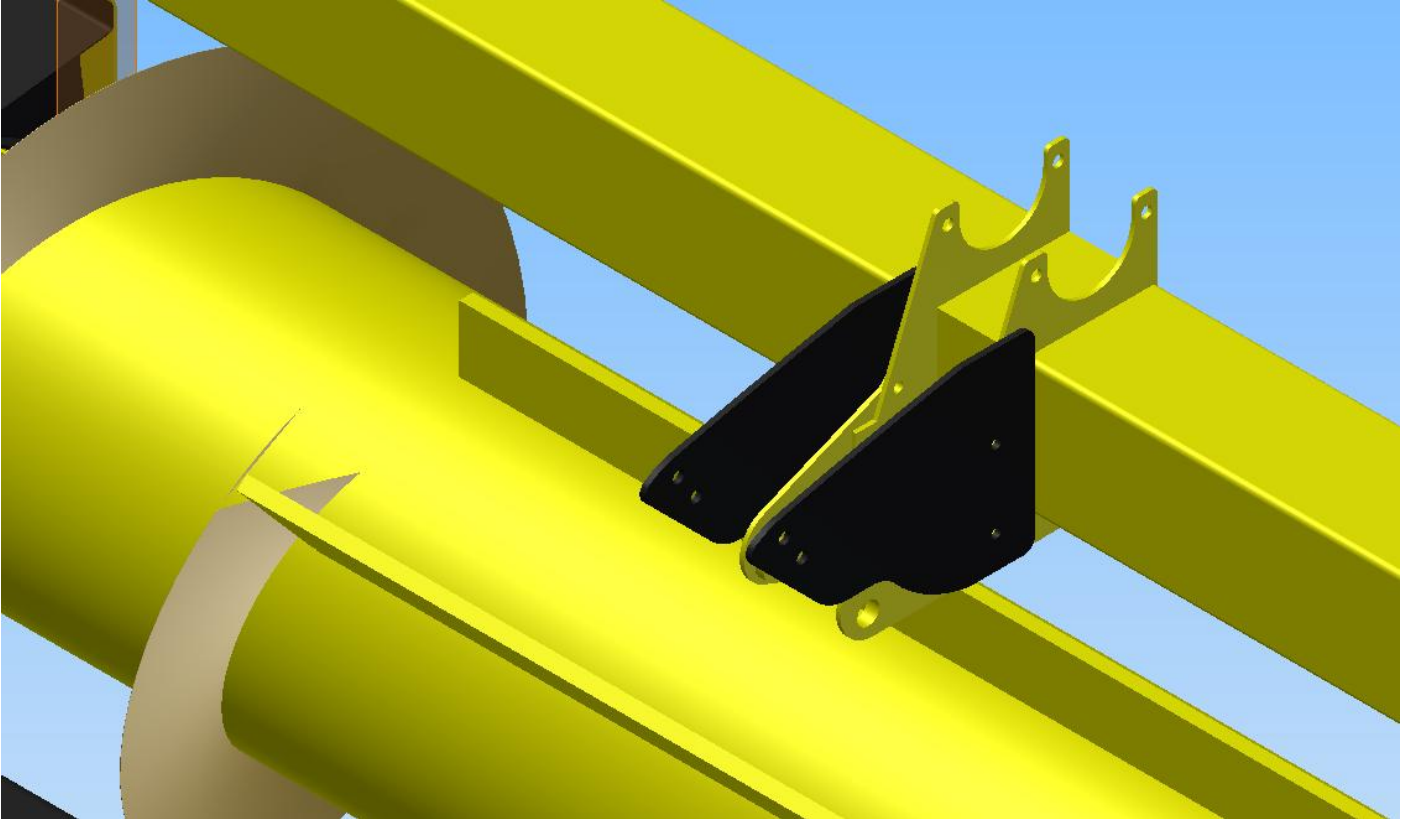


FIGURE 3 CENTER MOUNT BOLTED IN PLACE 406631

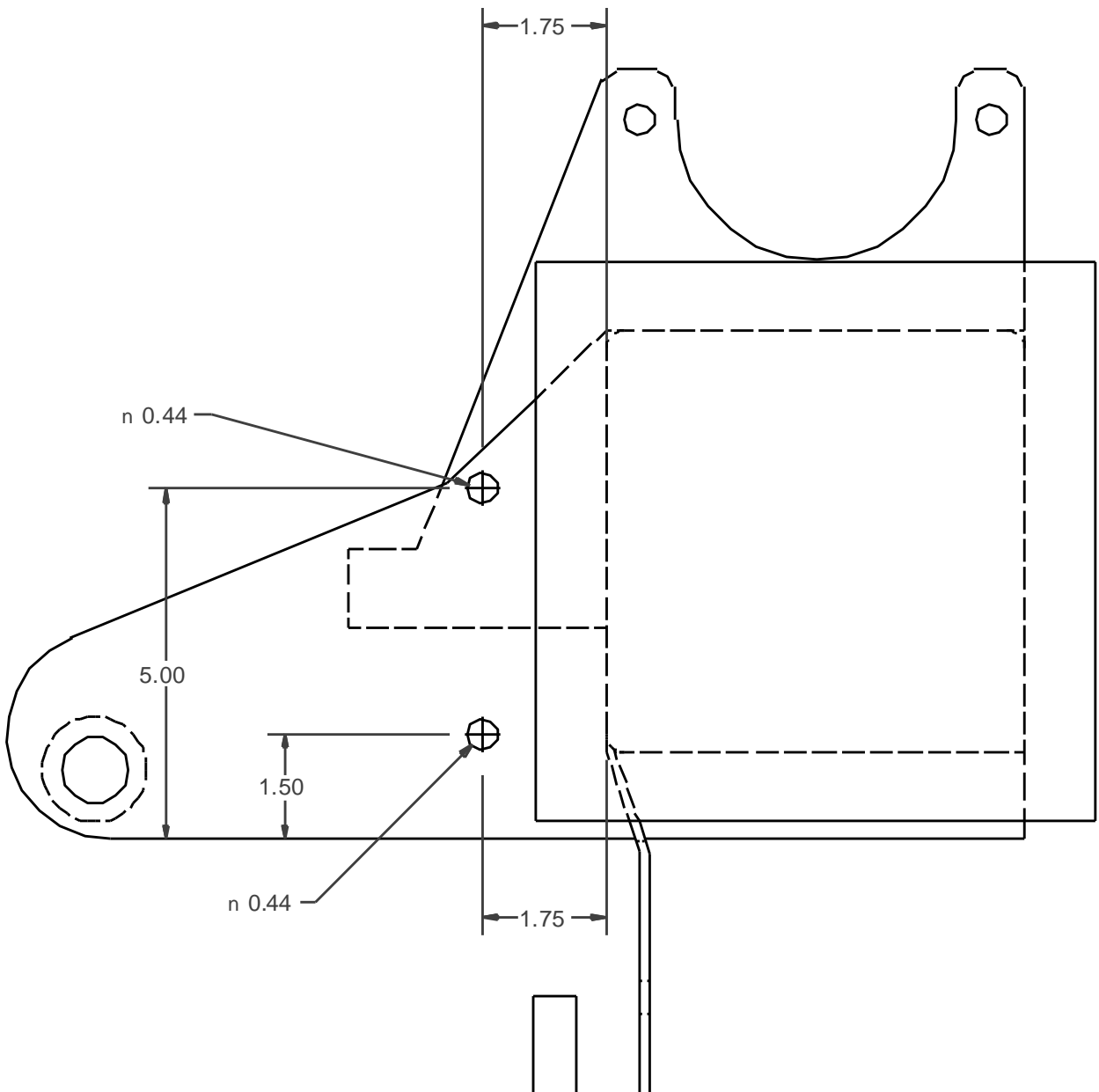
The center mount can be used as a template to mark the holes for where to drill. Place the center mount plate against the ear on the header, move the center mount plate as close to the square tube as possible, Drill the holes for a 7/16" bolt to fit through.

Bolt the center mount to the header frame using the 7/16 bolts, nut and washer.



New Holland 840-880 Center mount hole locations.

Use the center mount to mark the hole spacings.

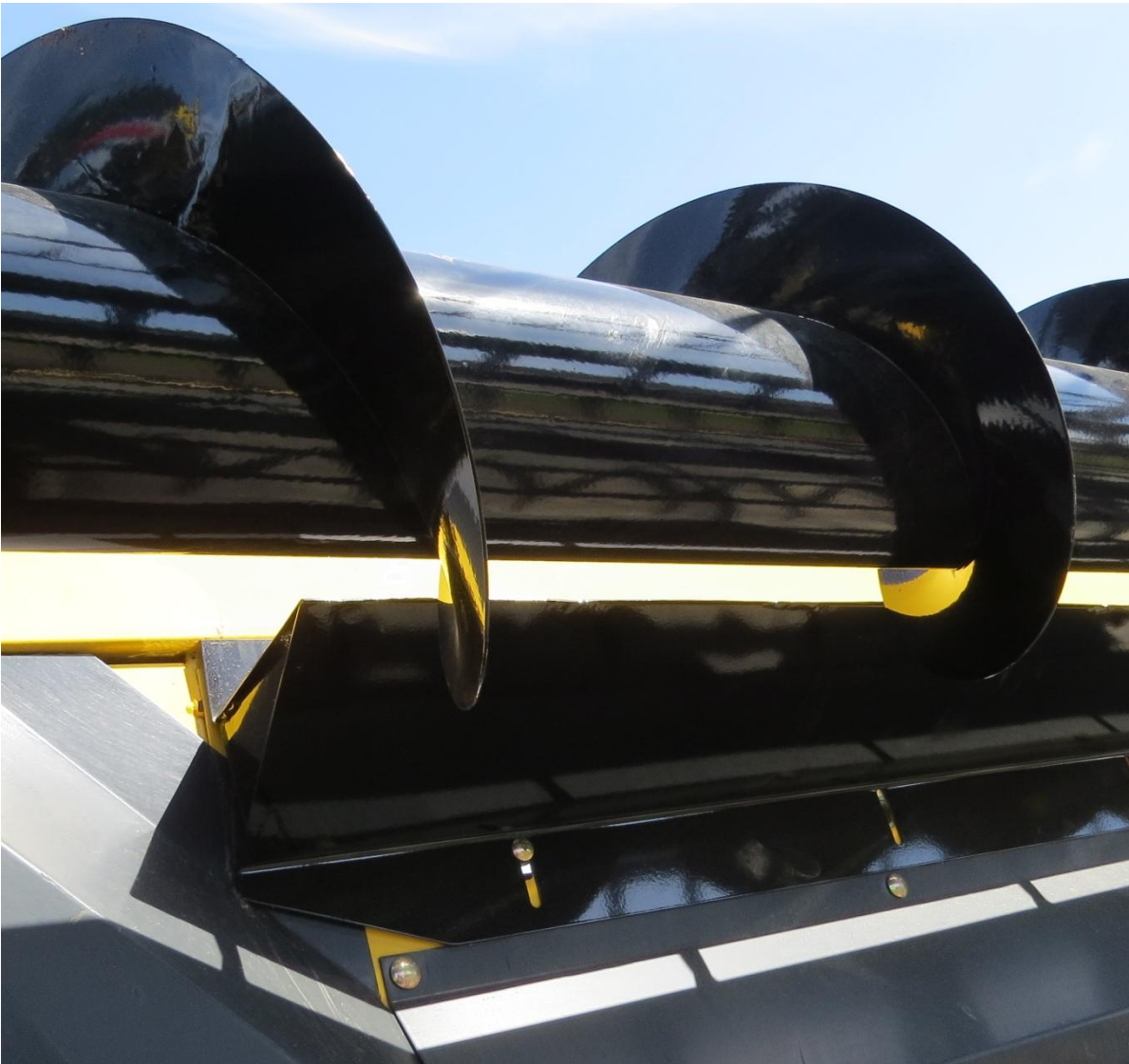


4. Stripper Bar Installation

- 1) All Ag Shield augers now come with a stripper bar to help prevent crop from wrapping on the auger, as well as to provide a cleaner transfer of crop to the center of the header.
- 2) Put the stripper bar on before the auger has been installed. Some parts of the stripper bar will not be accessible if the auger is installed first.







Hold stripper bar up to the back board and line up the slots in the stripper bar with the slots on the header (every second hole will suffice) Some holes may not be able to drill through because of electrical or hydraulic systems. PLEASE DOUBLE CHECK BEFORE DRILLING.

A magnet will help hold one end if installing alone.

Make sure before drilling that the drill will not damage anything behind the back board (hyd fittings hoses etc)

Drill 3/8" holes in the middle of the slot in the back board.

Set the stripper bar to sit on the bottom edge of the backboard.

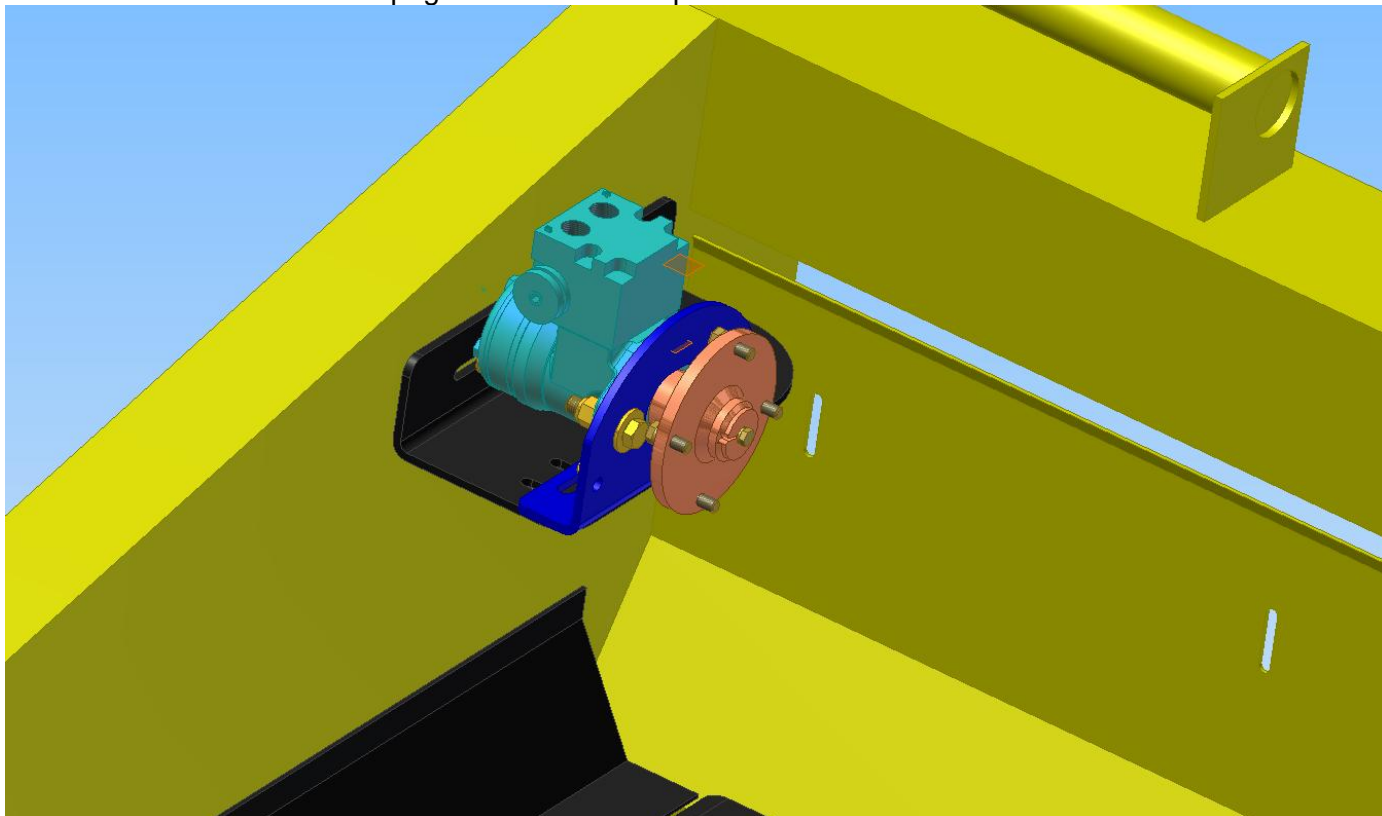
Tighten the stripper bar to the back board. For both the top and bottom. the top edge will fit under the square tube.

Apply Silicone to the empty slots so that water will not become an issue.

Start in the center and work towards the end of the header. Mark and cut off extra stripper bar for end pieces outer pieces will overlap inner pieces by 1/2".

4.1. RH MOTOR MOUNT END

Refer to the Parts breakdown page for a detailed exploded view of the RH end mount.



Mount the motor and shim to the motor mount plate
put the 4 x 3/8" x 1 bolts with lock washers into the direct drive mount.
mount the direct drive to the motor shaft securing with the 1/4" bolt.

4.2. RH AUGER

place the lock collar and bearing onto the shaft of the RH auger and the sprocket with key way.



Bolt the end of the auger to the direct drive end
rest the bearing on the center mount.

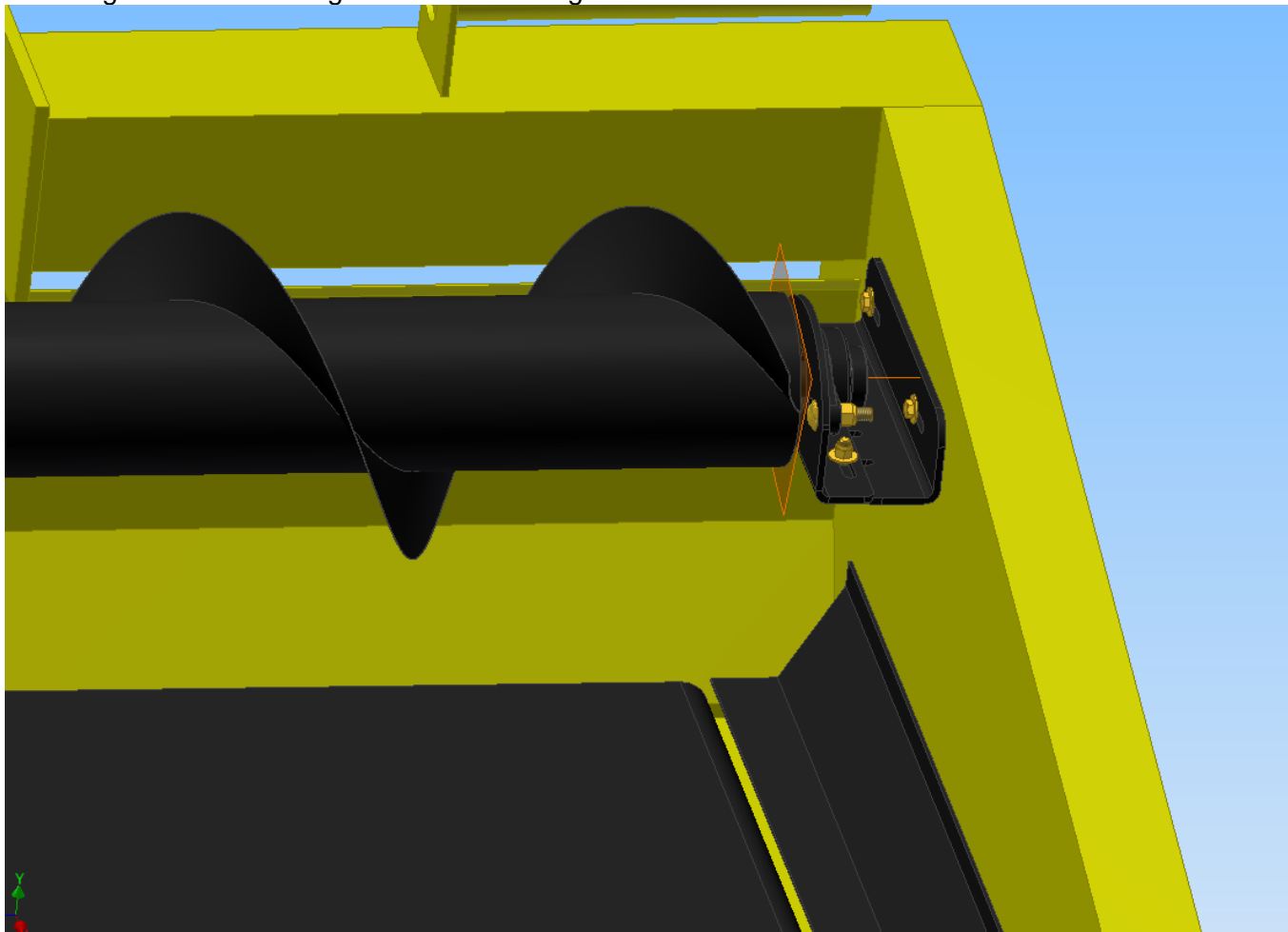
4.3. LH AUGER INSTALL

see parts break down of the LH auger end. place lock collar and bearing onto center shaft along with sprocket and key way.

bolt the bearing to the mount plate using the 1/2" carriage head bolts. DO NOT FINAL TIGHTEN.

Bolt the bearing mount plate to the LH end mount plate using the 3/8" bolts. DO NOT FINAL TIGHTEN.

Slide auger into the bearing mount and bearing.

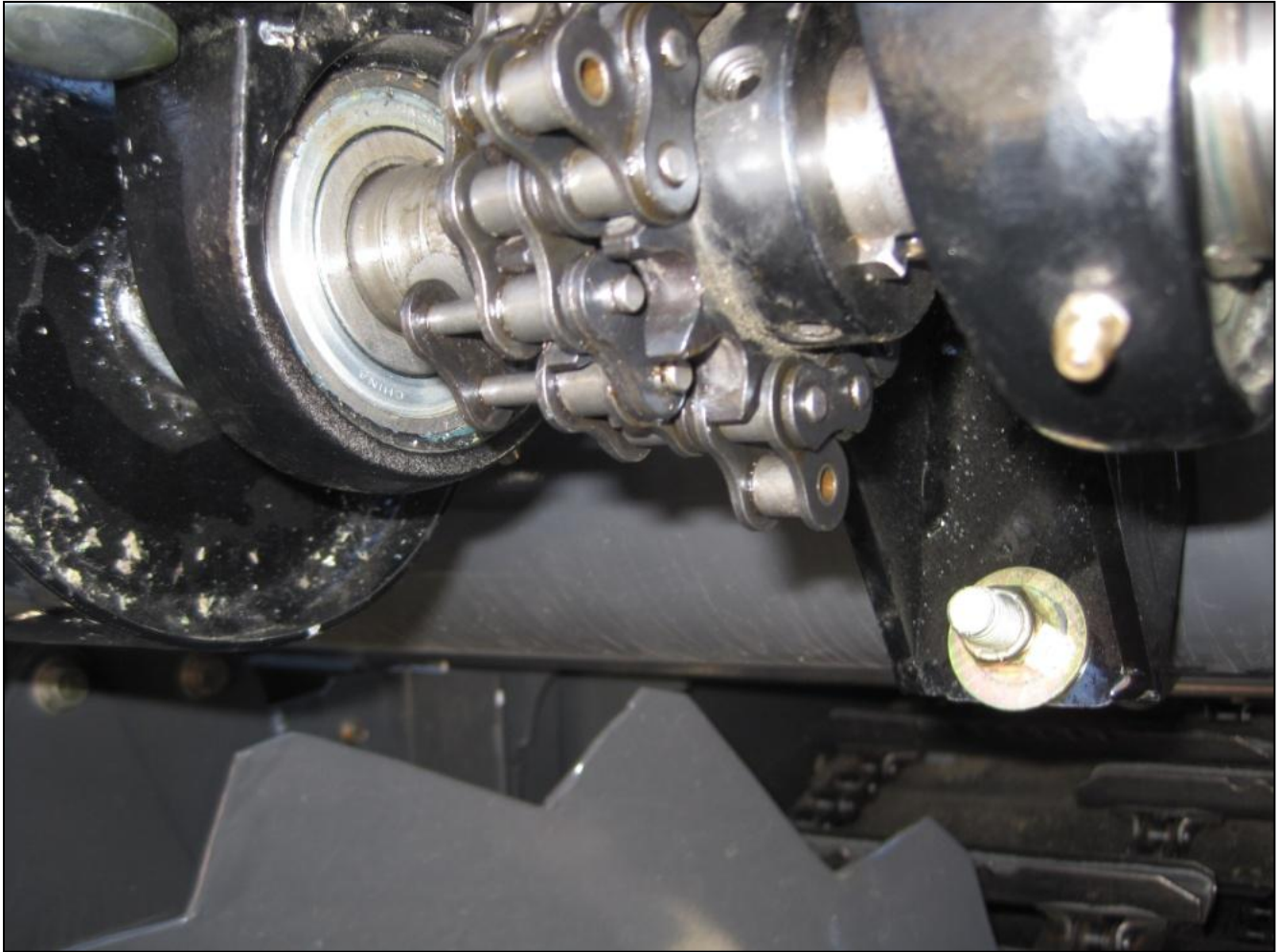


Rest center bearing on center mount.

Do not final tighten.

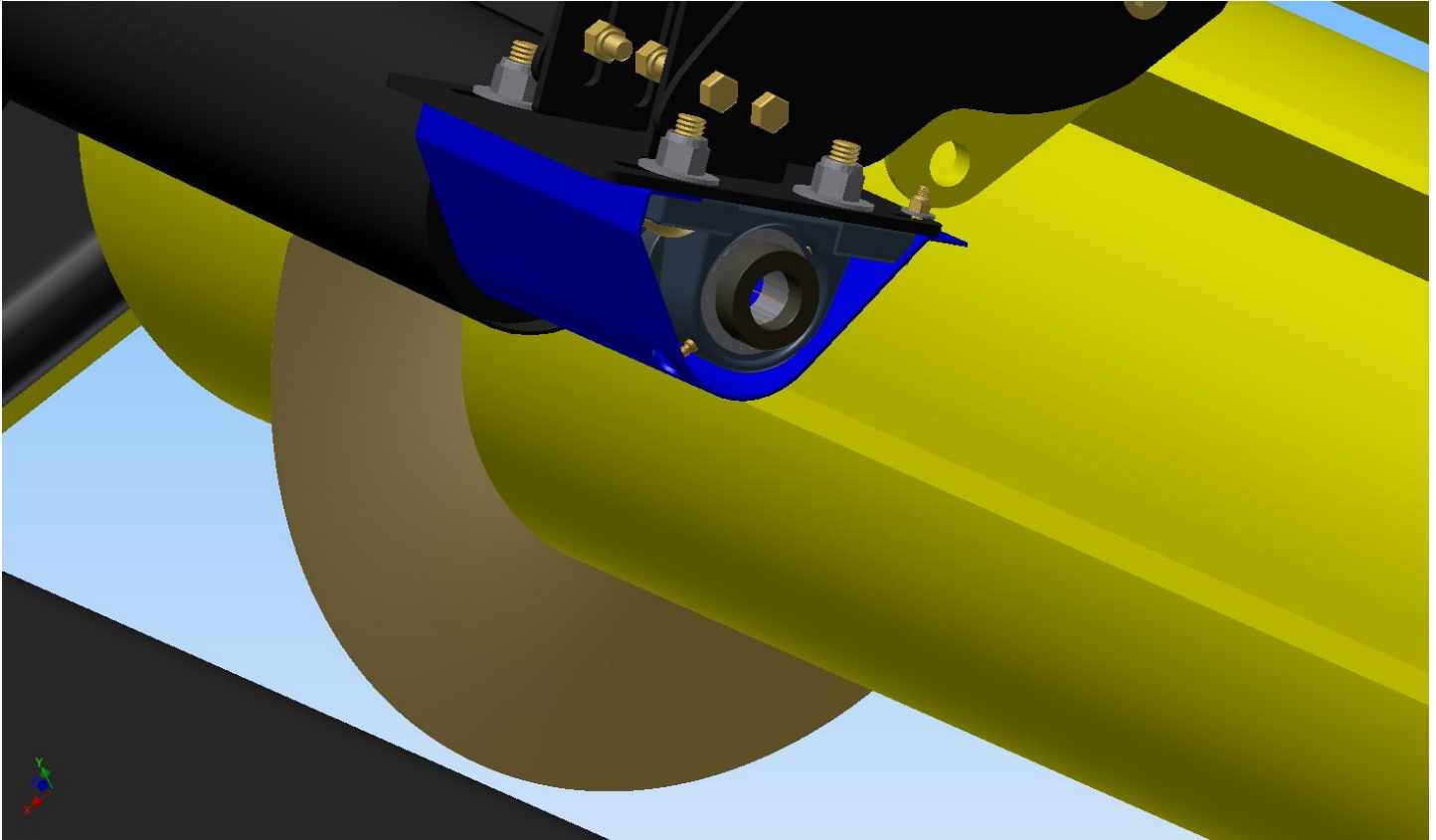
4.4. CENTER MOUNT CHAIN COUPLERS

Bolt the bearings to the center mount using the carriage bolts.
Install the chain coupler onto the sprockets.



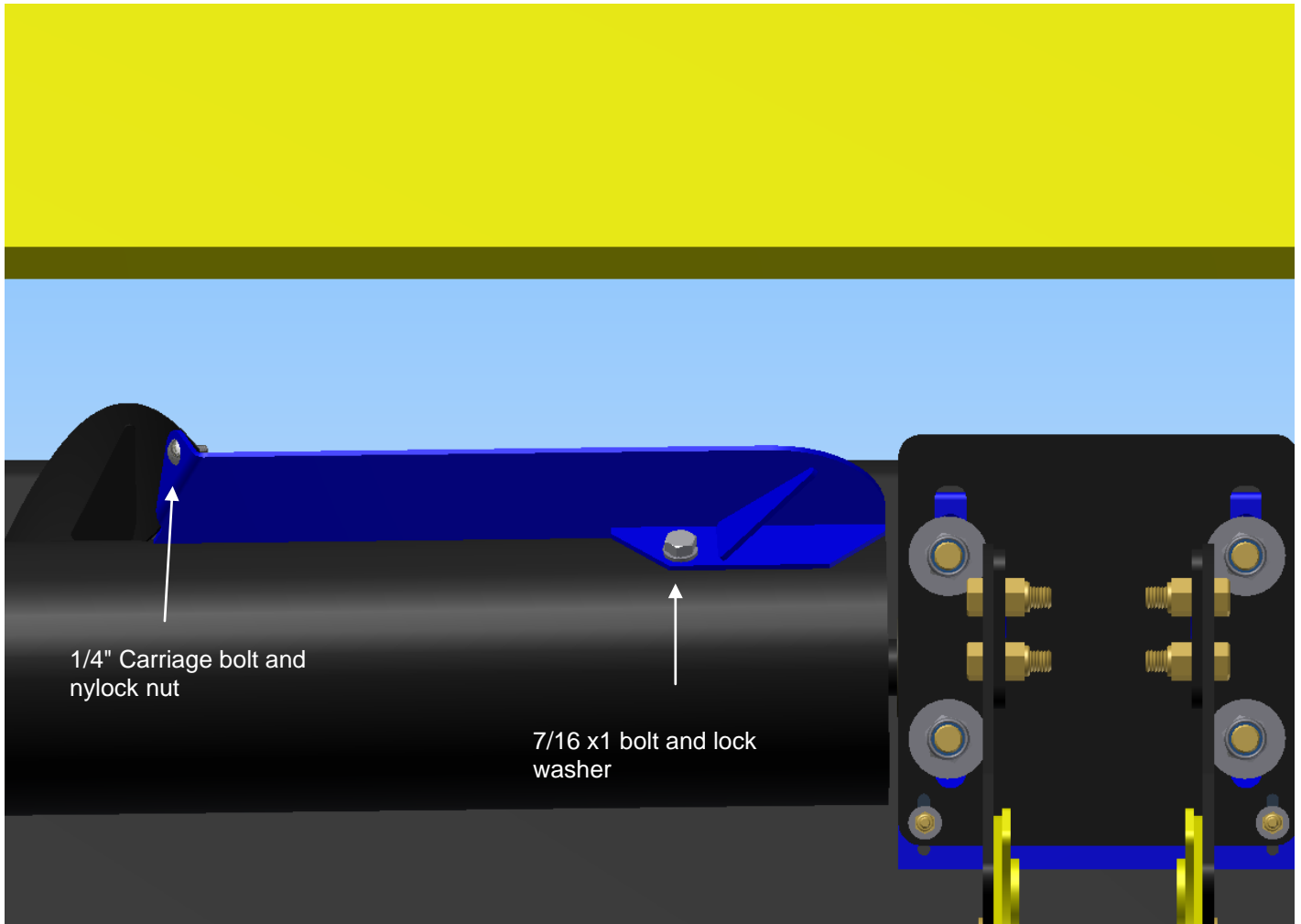
After center chain coupler has been put on. final tighten all bolts.

4.5. CENTER MOUNT PLASTIC FOR 30-35 FT



Install the center plastic.(shown as blue piece in model) not actual color.
Insert the plastic between the bearing pillow block and the center plate.(loosen the center bearings to create slack and insert the plastic.)

4.6. SWEEP BACK PADDLE INSTALLATION TOP VIEW



Bolt the paddle to the auger using the 7/16" x 1" bolt and Lock washer, A threaded insert will be in the auger at the center end.

Using the 1/4" Carriage head bolt to secure the paddle to the flying.

4.7. HYDRAULIC HOSE ATTACHMENT.



Remove fitting from the return side of the Canvas motor located at the center of the header on the RH side. Attach the Ag Shield Hose to the 90 degree fitting on the canvas motor. Run the hose through the back of the header and into port B on the Ag Shield Motor.

Connect the remaining hose the hose that was removed from the canvas motor. Run the hose through the back of the header and into port A on the Ag Shield motor, this will return the fluid back to tank.

Spin the auger by hand before applying any Hydraulic fluid, to make sure it does not come in contact with bolt heads or the back board of the header. or the stripper bar.

Test direction of rotation to be down on the front of the auger, and set speed of the canvas and Knives, and use the flow control supplied to set the auger flighting speed to be 5% or slightly greater than the canvases. For speed setting see section 5 operations.

4.8. HYDRAULIC MOTOR WITH FLOW CONTROL



View of Hydraulic motor with flow control

If wrapping occurs, Slow the auger down using the flow control.



Run the hoses through the slots in the back of the header



Ag shield fitting onto the return port of the canvas motor. Ag shield fitting to the hose that was removed from the return port on the canvas motor.

5. OPERATIONS



DANGER

**Stay clear of auger
whenever it is running**

5.1. FIELD SETTING THE CROSS AUGER

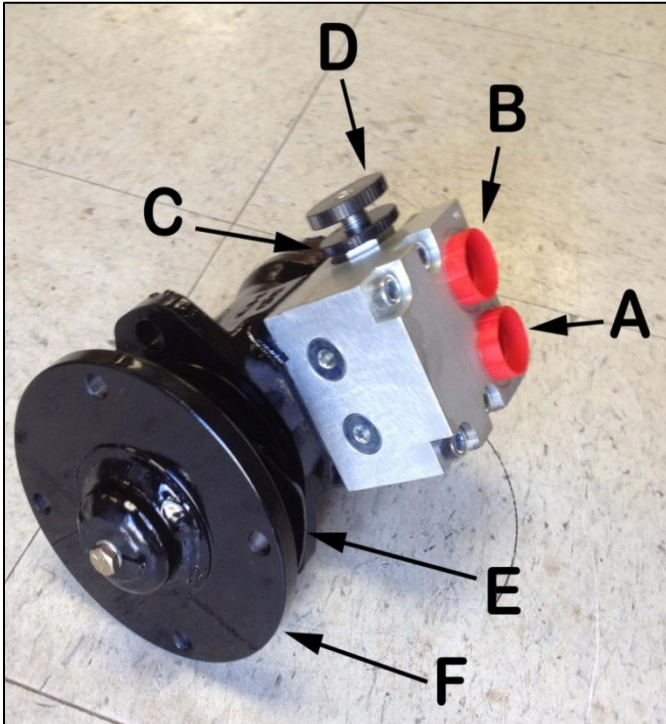


FIGURE 4 SAUER MOTOR SPEED CONTROL

Terminology

- A:** Return or tank line
- B:** Pressure line
- C:** Lock wheel
- D:** Auger speed adjustment
- E:** Shim for hydraulic motor mount
- F:** Direct driver motor adapter

Cross augers can only be adjusted for speed of rotation. In many conditions, the correct speed for many crops would be to have the flighting advancing the crop along the canvas 5% or slightly faster than the canvas speed. To increase auger speed, loosen lock wheel A counterclockwise, rotate adjust valve C clockwise, relock the valve by turning A clockwise. Closing this valve reduces the bypass of oil around the hydraulic motor. To slow down the rpm of the auger, rotate adjust valve C counterclockwise.

Observe the auger from the combine cab or swather operating platform. Focus your eye on one auger flighting and compare to a particular canvas slat. The auger can be adjusted to run at the same rate in feet per minute. As desired, slightly increase the cross auger to have it pulling ahead faster than the canvas.

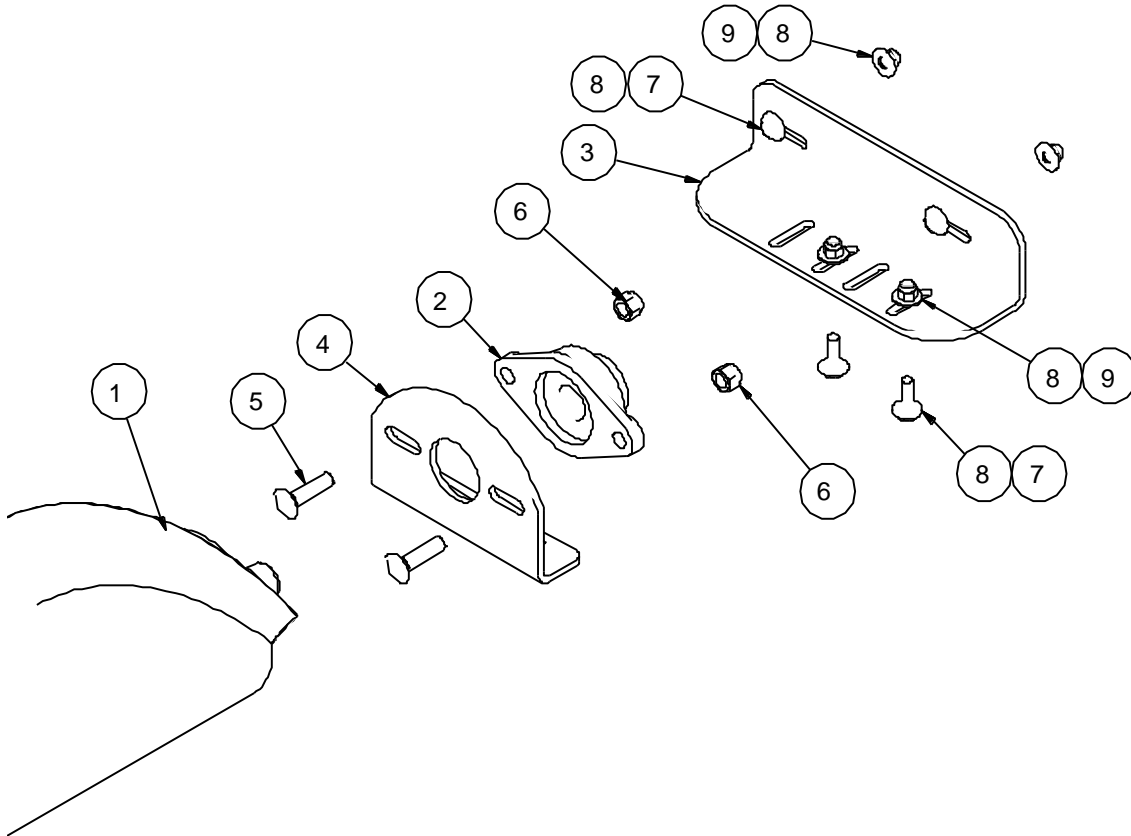
In peas, augers can often be operated at a very slow speed--- 30% of canvas speed, and still feed as much crop into combine. When augers turn slower, there are fewer tendencies to wrap.

If wrapping occurs at the center of the header, try removing one or both of the bolts on paddles – In some conditions the paddles are an advantage, in some conditions the paddles are a disadvantage.

5. Cross Auger Parts

5.1. NEW HOLLAND LH END MOUNT

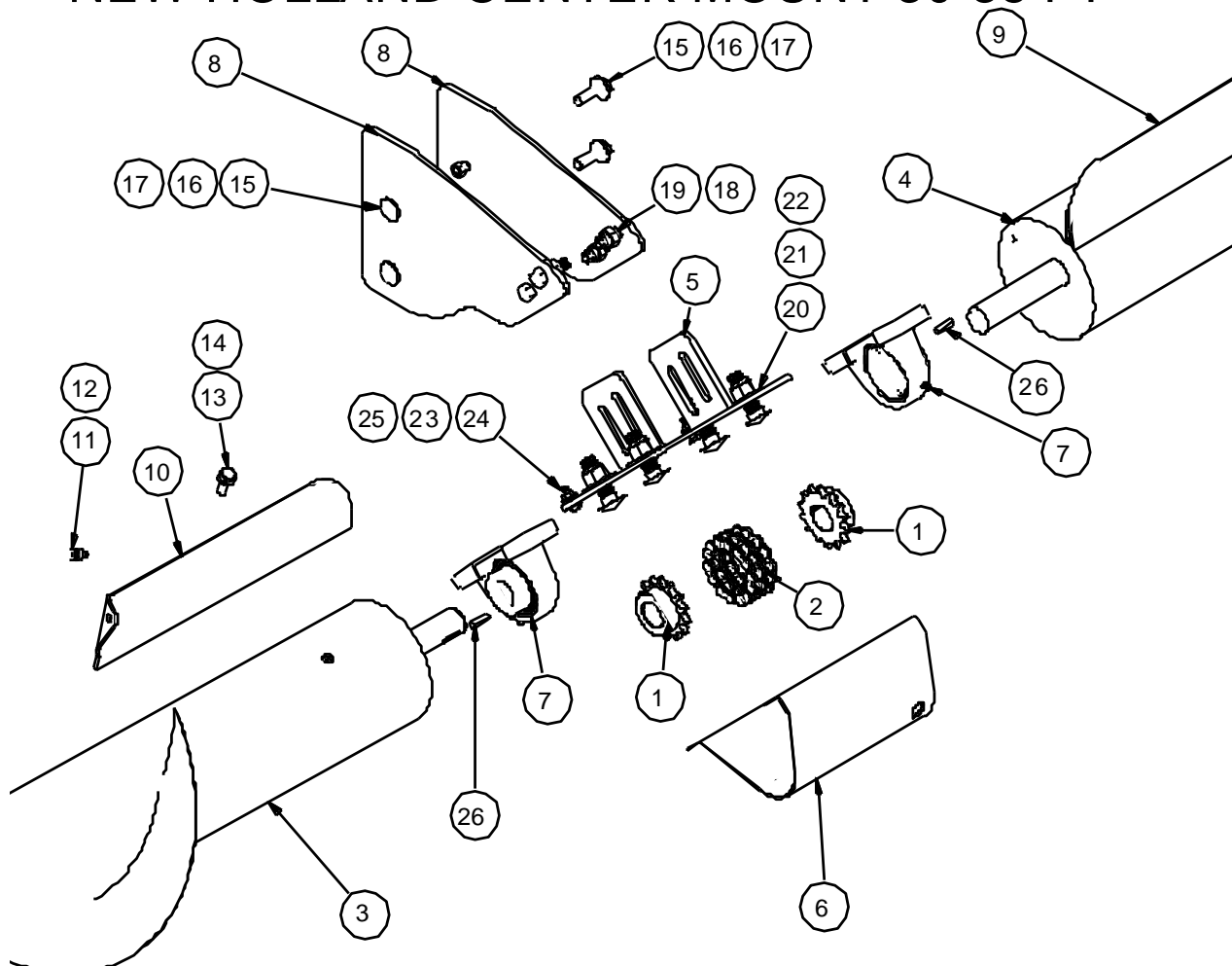
NEW HOLLAND 840-880 CF LH END MOUNT



ITEM	QTY	PART NUMBER
1	1	406560 NH 880 840 CF 30FT auger wldt LH dir drv
2	1	114483 Bearing 1.25 in FL207 2 bolt flat flg
3	1	406631 NH 880 840 CF end mount
4	1	406632 NH 880 840 CF LH bearing mount
5	2	100943 carriage bolt 1-2 X 2 NC
6	4	102125 nut nylok 1/2" nc gr5 pltd
7	8	100603 bolt 3-8 X 1 1-4 gr5 pltd nc
8	16	101105 flat washer 3/8"
9	8	102123 nut nylok 3/8" nc gr5 pltd

5.2. CENTER MOUNT NEW HOLLAND 30-35 FT

NEW HOLLAND CENTER MOUNT 30-35 FT

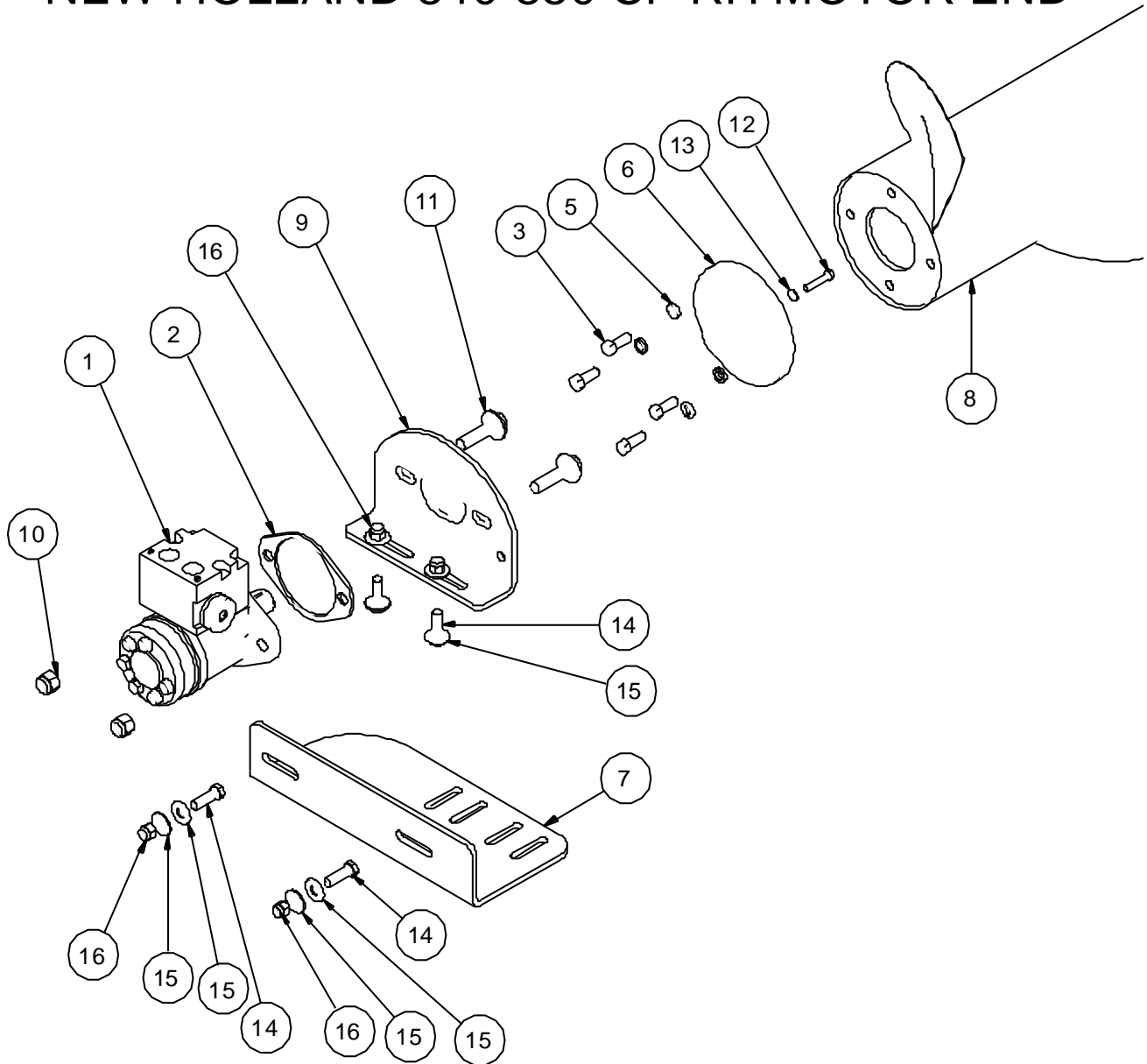


ITEM	QTY	PART NUMBER	ITEM	QTY	PART NUMBER
1	2	114468 chain coupler 1-1/4" ID	11	2	100966 Carriage Bolt 1-4 X 3-4 NC
2	1	114469 CHAIN	12	2	102121 nut nylok 1/4" nc gr5 pltd
3	1	406573 NH 880 840 CF 35FT auger wldt RH dir drv	13	2	100660 bolt 7-16 X 1 gr5 pltd nc
4	1	406570 NH 880 840 CF 35FT auger wldt LH dir drv	14	2	101142 lock washer 7-16
5	1	406640 NH 880 840 Center bearing weldment	15	4	100661 BOLT 7 16 X 1 12NC
6	1	406706 New Holland 880-840 40-45 ft plastic guard	16	4	101114 washer flat 7 16
7	2	114471 Pillow Block Bearing Assy P207-SA207	17	4	102124 NUT 7 16 NYLOC NC
8	2	408583 center bearing gusset newholland 840 30-35 FT	18	4	100702 bolt 1/2nc 1 1/2 gr5 pltd hex
9	1	405726 flap bolt on wldt 3in LH	19	4	102125 1/2" nylock
10	1	405725 flap bolt on wldt 3in RH	20	4	101107 flat washer 5/8"
			21	4	102127 nut nylok 5/8" nc gr5 pltd
			22	4	100965 carriage bolt 5/8" X 2- 1/4" nc
			23	2	102099 nut 1 4 nc nylock SS
			24	2	100403 bolt 1/4nc x 1 gr5 pltd hex
			25	3	101103 flat washer 1/4"
			26	2	405361 key 1/4" x 1/4" x 1"

For 40-45 ft Center mount Substitute 408583 with 406626.

5.3. RH END MOUNT NEW HOLLAND

NEW HOLLAND 840-880 CF RH MOTOR END



1	1	117170 motor with flow control 5.9 danfoss	9	1	408111 hyd motor mt macdon dirdrv
			10	4	102125 nut nylok 1/2" nc gr5 pltd
2	1	407271 shim hyd motor mt AGCO 9250	11	2	101106 flat washer 1/2"
			12	1	100404 HEX HD BOLTS 1 4 NC X 1 1 4
3	4	100602 bolt 3/8"ncC x 1" gr5 pltd hex	13	1	101144 washer lock 1/4
4	1	101145 lock washer 3/8"	14	8	100603 bolt 3-8 X 1 1-4 gr5 pltd nc
5	3	101145 washer lock 3/8"	15	16	101105 flat washer 3/8"
6	1	407105 direct drive motor adapter wldt	16	8	102123 nut nylok 3/8" nc gr5 pltd
7	1	406624 NH840C RH motor mount			
8	1	406563 NH 880 840 CF 30FT auger wldt RH dirdrv			

6. WARRANTY

1. Ag Shield Manufacturing warrants each new Ag Shield CrossAuger to be free from factory defects in material and workmanship under normal use and service, when set up and operated in accordance with factory instructions for one year from the date of delivery to the original purchaser.
2. Ag Shield's obligation under this warranty is limited to the supplying of replacement parts which are defective due to factory workmanship or material.
3. Your Ag Shield Dealer is responsible for providing warranty labour. Credit for required labour is specifically agreed to on an individual case basis.
4. The warranty is void on any unit which has been tampered with, or modified in any way not authorized in writing by the factory.
5. This warranty is void on any unit which is subject to misuse, negligence or accident, or which has had the serial number tampered or removed.
6. A "Warranty Claim Form" (sample at end of handbook) must be submitted to Ag Shield with returned parts in order for parts to be considered for warranty examination.
7. A warranty registration page from the front of this manual must be returned to the factory in order to qualify for warranty examination.
8. All returned parts must be sent to the factory freight prepaid, and warranty parts will be returned to you freight collect.
9. Replacement parts shipped pending receipt of parts for examination will be invoiced, and remain on your account until such time as examination indicates that a credit for those parts be issued or that payment is due.
10. Parts not returned for warranty examination within 30 days must be paid for at that time. Ag Shield will immediately reimburse any cash paid for items that are later determined defective.
11. Warranty terms and conditions are subject to provincial and state legislation.

6.1. WARRANTY CLAIM FORM

Ag Shield Mfg
 Box 9, Benito,
 MB, R0L 0C0
 ph 800-561-0132
 fax 204-539-2130
 ph 204-539-2000i

Dealer			Ag Shield Mfg Box 9, Benito, MB, R0L 0C0 ph 800-561-0132 fax 204-539-2130 ph 204-539-2000i			End User		
Address						Address		
City	State/Province	Zip/Postal				City	State/Province	Zip/Postal
DATE OF SALE	DATE FAILED	REPAIR DATE	ACRES/HOURS	MODEL	SERIAL NUMBER			
LABOUR HOURS	LABOUR RATE	LABOUR AMOUNT	PARTS MUST BE RETURNED TO BENITO MB FREIGHT PREPAID TO BE CONSIDERED FOR WARRANTY. DATE SHIPPED					
QUANTITY ITEM	PART NUMBER	DESCRIPTION	PRICE EACH	TOTAL PRICE	DESCRIBE THE CAUSE OF FAILURE AND CORRECTIVE ACTION TAKEN	APPROVE /REJECT		
1								
2								
3								
4								
5								
6								
7								
8								
I CERTIFY THAT THE INFORMATION IS ACCURATE AND THAT THE PARTS WERE REPLACED ON THE MACHINE			PARTS		DATE PARTS RECD	RECD BY		
			LABOUR		ITEMS TO SUPPLIERS			
			TOTAL					

