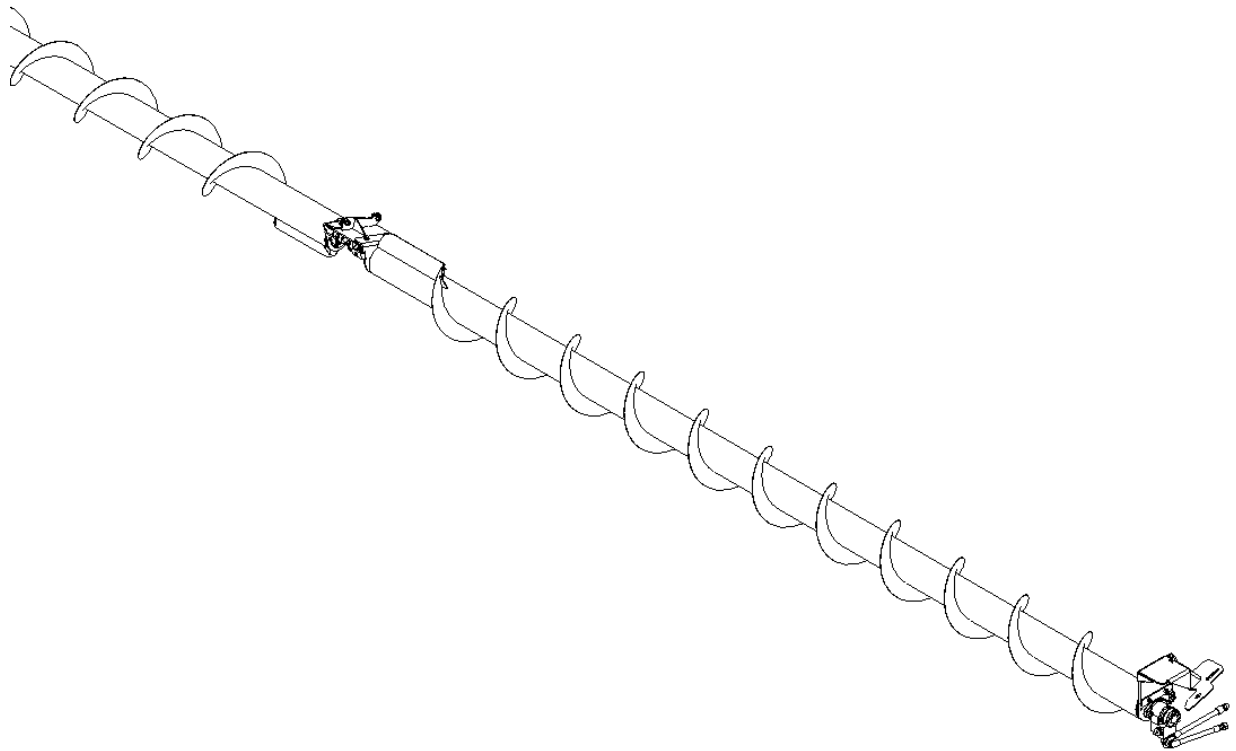


AG SHIELD

12" CROSS AUGER

OPERATOR'S MANUAL



Ag Shield Manufacturing
Box 9, Benito, Manitoba R0L 0C0
Phone 800-561-0132 or 204-539-2000
Fax 204-539-2130
Email address: sales@agshield.com
Web site at www.agshield.com

30 FT Macdon FD (ASM part# 410030)
35 FT Macdon FD (ASM part# 410035)
36 FT Macdon 974 (ASM part # 410036)
40 FT Macdon FD (ASM part# 410040)
45 FT Macdon FD (ASM part# 410045)



AG SHIELD LTD.

BOX 9, BENITO, MANITOBA CANADA R0L 0C0
Phone 1-800-561-0132 or 204-539-2000 Fax 204-539-2130
www.agshield.com E-mail: sales@agshield.com

Warranty Registration Form - Warranty registration must be filled out by the dealer at the time of delivery, and emailed, faxed, or mailed to Ag Shield within 10 days of customer invoice to validate warranty.

Machine type-e.g. ReCon, LandRoller	Model - e.g, 400 or 12- 46- 3	Delivery Date
Serial Number e.g. 1815125	Size - e.g. 7 ft or 46 ft	Options
Additional Serial Number e.g. 1415103	Size - e.g. 7 ft or 46 ft	Options

Customer Name	Phone Number
Mailing Address	City
State / Province	Country
Postal Zip code	Email Address for service & updates- required

enter X Customer agrees that the equipment was complete with all parts in good working order except as noted below, that the customer has received the owner's handbook, and the customer has been thoroughly instructed in the use of it. Customer agrees that they have been instructed in the care, adjustments, the safe operation of the machine, and the applicable warranty policy.

Dealer Name	Phone Number
Mailing Address	City
State / Province	Country
Postal Zip Code	Email Address for service & updates- required

enter X Dealer agrees to have thoroughly instructed the customer on the above described equipment, including the contents of the Owner's Handbook, equipment care, adjustments, safe operation, and applicable warranty policy.

Dealer Sales Person Name	Cell Phone Number
Mailing Address	City
State / Province	Country
Postal Zip code	Email Address for service & updates- required

1. TABLE OF CONTENTS

1.	TABLE OF CONTENTS	5
2.	INTRODUCTION AND SIGN-OFF FORM	6
3.	SAFETY.....	7
3.1.	SAFETY OVERVIEW	8
3.2.	GENERAL SAFETY	8
3.3.	MAINTENANCE SAFETY	9
3.4.	HYDRAULIC SAFETY	9
3.5.	STORAGE SAFETY.....	9
3.6.	TRANSPORT SAFETY	9
3.7.	REFUELING SAFETY.....	10
3.8.	TIRE SAFETY	10
3.9.	OPERATING SAFETY	10
3.10.	CROSS AUGER SAFETY.....	10
3.11.	SAFETY DECALS	11
4.	SETUP FROM SHIPPING MODE.....	12
4.1.	MACDON 974 INSTALL INSTRUCTIONS.....	22
4.2.	HYDRAULIC INSTALLATION	32
4.3.	HYDRAULICS FOR MACDON 974 OUTBOARD CANVAS	33
4.4.	HYDRAULICS FOR MACDON HEADER WITH TIN COVER	34
4.5.	HYDRAULICS FOR MACDON HEADER WITH TIN COVER	35
4.6.	HYDRAULIC MOTOR HOSE INSTALL	36
4.7.	HYDRAULIC HOSE INSTALLATION FOR FD1 SERIES	37
4.8.	STRIPPER BAR INSTALLATION.....	38
5.	OPERATIONS	39
5.1.	FIELD SETTING THE CROSS AUGER	39
6.	CROSS AUGER PARTS FOR MACDON FD 30-45 FT MODELS	40
6.1.	LEFT END MOUNT AND DIRECT DRIVE MOTOR	40
6.2.	RIGHT END ASSEMBLY	42
6.3.	CENTER ASSEMBLY AND MOUNT	43
6.4.	CENTER ASSEMBLY AND MOUNT	44
6.5.	CENTER PADDLE ASSEMBLY	45
7.	WARRANTY	50

2.INTRODUCTION AND SIGN-OFF FORM

Congratulations! on your choice of an Ag Shield cross auger. This equipment has been designed and manufactured to meet the harvesting needs of the discerning farmers and custom harvesters.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the combine driver's seat and facing in the normal direction of travel.

Ag Shield follows the general safety standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Ag Shield Cross auger must read and clearly understand ALL Safety, Operating, and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Review this information annually before season start-up. Make these reviews of safety and operation a standard practice for all your equipment. An untrained operator is **not qualified** to operate this machine.

A sign off sheet is provided for your record keeping showing that all personnel who will be working with the equipment have read and understood the information in the Operators Handbook and have been instructed in the operation of the equipment.

SIGN-OFF FORM

DATE	OPERATORS SIGNATURE	EMPLOYERS SIGNATURE

3. 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.

3.1. 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 Ag Shield Auger 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 auger.

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!

3.2. 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 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.

3.3. MAINTENANCE SAFETY

1. Review the Operators Manual and all safety items before working with, maintaining or operating the Cross auger.
2. Stop the Combine /Swather 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.

3.4. HYDRAULIC SAFETY

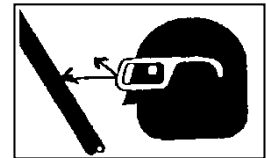
1. Always place all Combine /Swather hydraulic controls in neutral before dismounting.
2. Make sure that all components in the hydraulic system are kept in good condition and are clean.
3. Replace any worn, cut, abraded, flattened or crimped hoses and steel lines.
4. Do not attempt any makeshift repairs 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.

3.5. 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.

3.6. 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. 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.
6. Always use hazard warning flashers on the Cross auger when transporting unless prohibited by law.

3.7. 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.

3.8. 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.

3.9. 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 Harvesting 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 Combine / Swather during operation or transporting.
7. Clear the area of all bystanders, especially children, before starting.

8. Before applying pressure to the hydraulic system, make sure all components are tight and that steel lines, hoses and couplings are not damaged.
9. Review safety instructions annually

3.10. 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.

3.11. SAFETY DECALS

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



part #113522

part #113524



part # 113552

4. Setup from Shipping Mode

Operator's handbook for Ag Shield Cross auger to fit on to a 30-45 ft MacDon FD header

Figure 1 FD 35 ft header overview with asm cross auger installed	12
Figure 2 Direct Drive Motor Installation	13
Figure 3 LH auger center BEARING, SPROCKET and paddle	14
Figure 4 Center mount on inside of rh center reel mount	14
Figure 5 LH end front view macdon FD KIT	15
Figure 6 Top view of left end mount	15
Figure 7 LH auger center mount front view	16
Figure 8 LH auger center mount top view	16
Figure 9 RH auger with bearing mount, sprocket and paddle	17
Figure 10 RH auger outer end view with lock collar flush to end of shaft	17
Figure 11 RH end front view macdon fd kit	18
Figure 12 RH end top view macdon fd kit	18
Figure 13 RH auger mounted on center mount front view	19
Figure 14 RH auger mounted on center mount top view	19
Figure 15 Dual sprocket with chain coupler installed on lh auger	20
Figure 16 Dual sprocket with chain coupler installed on rh auger	20
Figure 17 dual sprocket with two chain couplers	21
Figure 18 Center guard rear view	21
Figure 19 Center guard mounted on center mounts	22
Figure 20 2011 Hydraulic hoses on FD70 / Case 2162	32
Figure 21 Canvas return hose left side of center	34
Figure 22 Hose attachment from Bottom up	35
Figure 23 Hydraulic hose layout complete	36
Figure 24 hydraulic set up for fd1 series headers	37
Figure 25 Sauer Motor speed control	39

Installation sequence

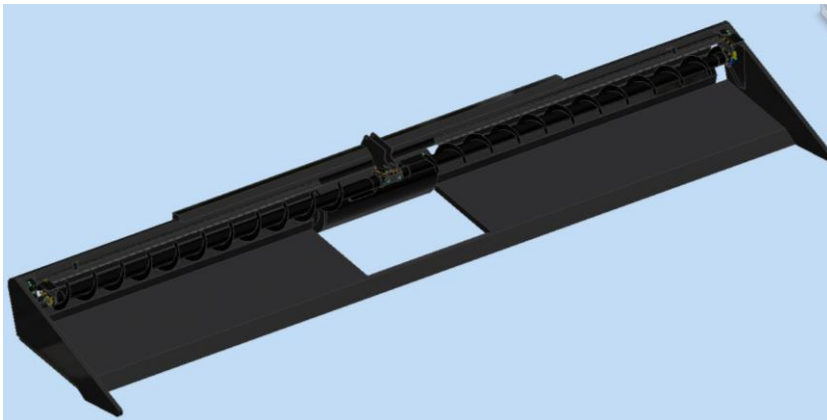
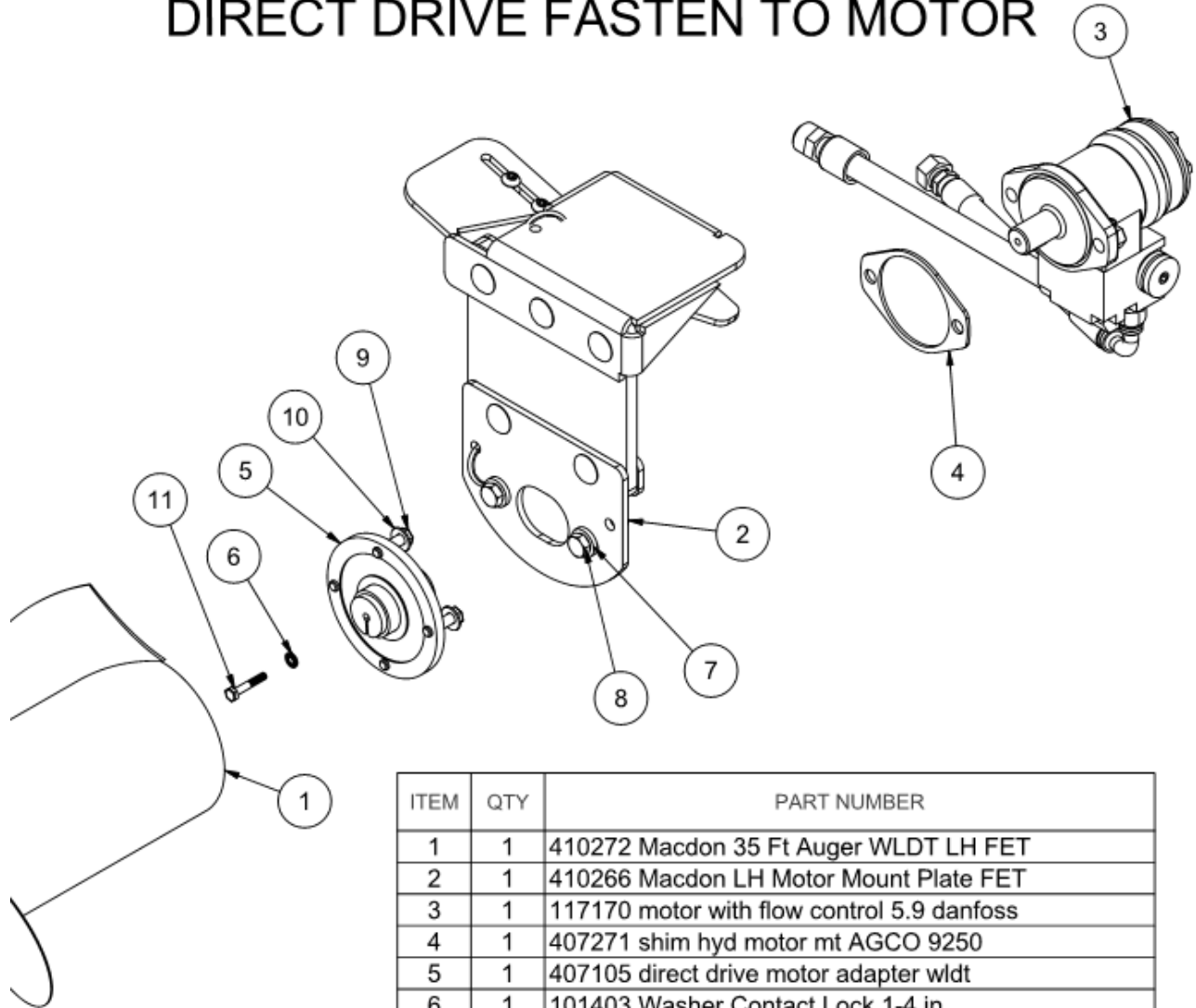


FIGURE 1 FD 35 FT HEADER OVERVIEW WITH ASM CROSS AUGER INSTALLED

ALL COLOURED PARTS ARE FOR MANUAL REFERENCE ONLY, THEY DO NOT REFLECT THE ACTUAL COLOUR OF THE PARTS IN YOUR KIT.

AUGER #	LENGTH	LH	RH
410030	30	410300	410303
410035	35	410272	410269
410040	40	410293	410290
410045	45	410306	410309

DIRECT DRIVE FASTEN TO MOTOR



ITEM	QTY	PART NUMBER
1	1	410272 Macdon 35 Ft Auger WLDT LH FET
2	1	410266 Macdon LH Motor Mount Plate FET
3	1	117170 motor with flow control 5.9 danfoss
4	1	407271 shim hyd motor mt AGCO 9250
5	1	407105 direct drive motor adapter wldt
6	1	101403 Washer Contact Lock 1-4 in
7	4	101304 Washer Hardened 1-2 in F436
8	2	100703 bolt 1-2 X 2 gr5 pltd nc
9	4	100603 bolt 3 8NCx1 1 4 gr5 hex pltd
10	4	101405 Washer Contact Lock 3-8 in
11	1	100405 bolt 1/4nc 1 1/2 gr5 pltd hex

- 1) Ensure keystone is in motor shaft.
- 2) Place Agco shim onto the hydraulic motor.
- 3) Bolt the motor to 410266 using the 1/2" bolts.
- 4) Insert the 4 x 3/8" bolts and lock washers into the direct drive hub 407105
- 5) Insert the 407105 onto the motor shaft.
- 6) Bolt the 407105 to the motor shaft using the 1/4" bolt and lock washer.
- 7) Bolt the 407105 to the auger end plate using the 3/8" bolts.

FIGURE 2 DIRECT DRIVE MOTOR INSTALLATION

1. Install the Direct drive hub onto the Hydraulic Motor
2. Install the Direct drive hub onto the Auger

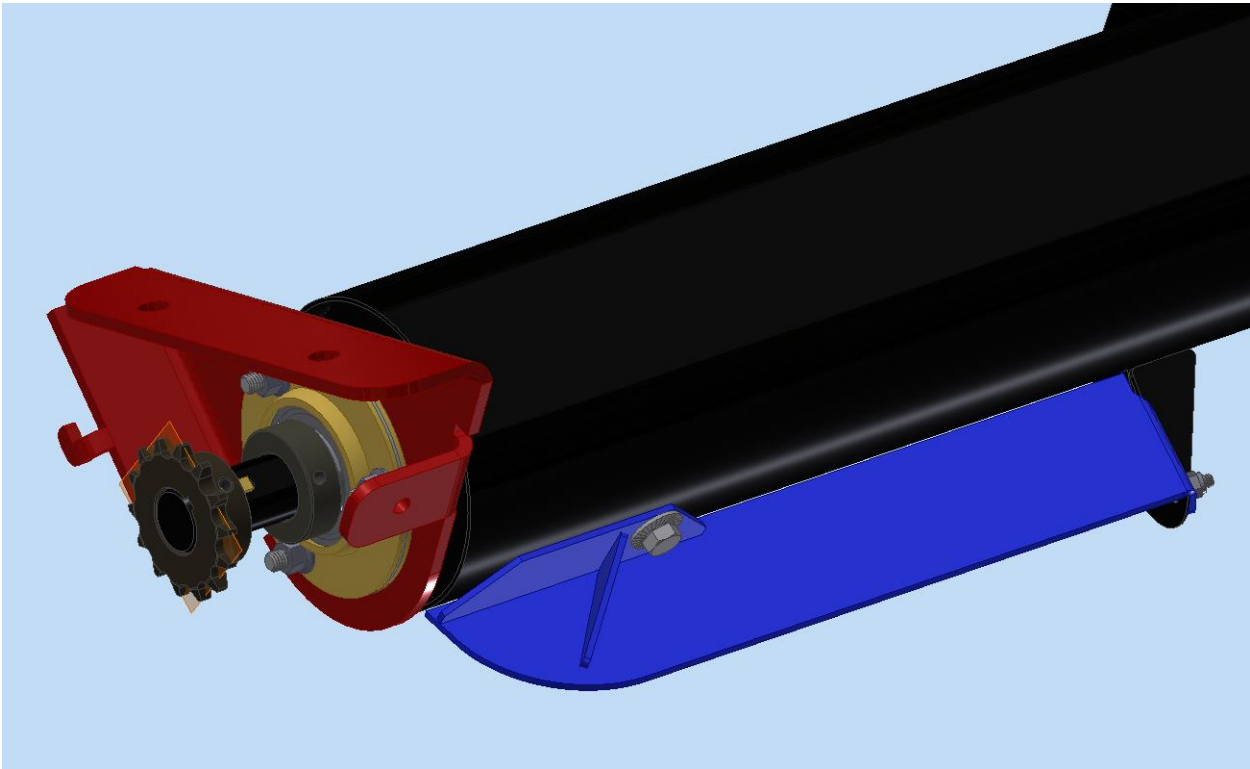


FIGURE 3 LH AUGER CENTER BEARING, SPROCKET AND PADDLE

3. Slide the center bearing mount onto the LH auger. Insert the key into the keyway and place the sprocket onto the shaft, flush with the end of the shaft. Bolt the paddle onto the auger. (see parts break down for fasteners)



FIGURE 4 CENTER MOUNT ON INSIDE OF RH CENTER REEL MOUNT

4. Bolt the Center mount to the inside of the RH plate for the center reel cylinder.

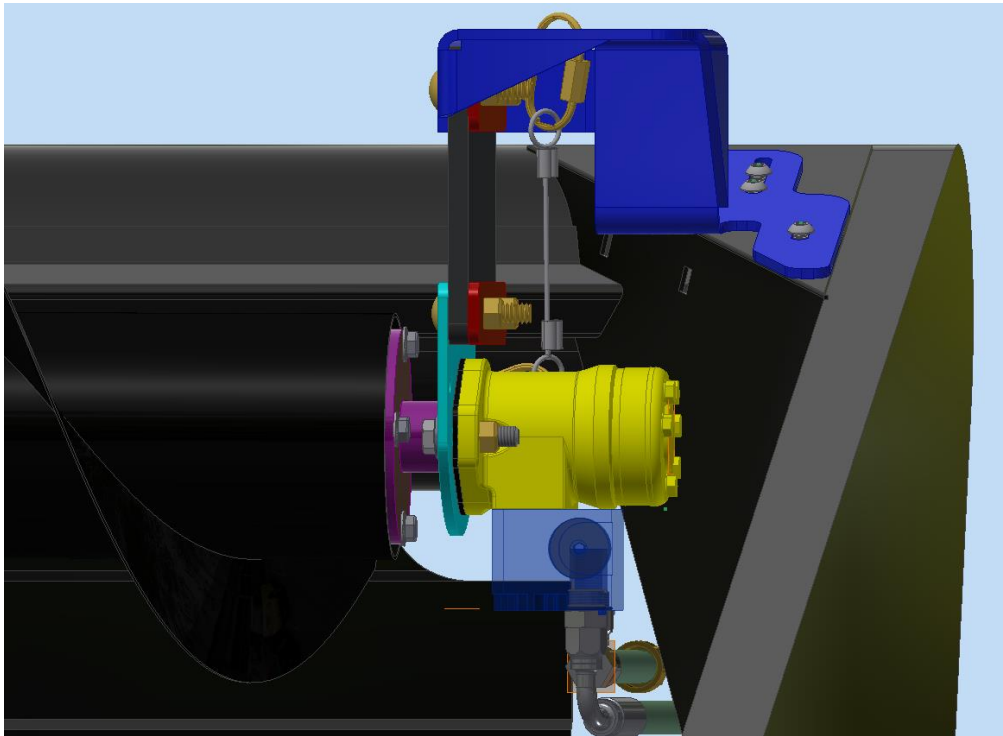


FIGURE 5 LH END FRONT VIEW MACDON FD KIT

5. Hang the LH outer end of auger using the 3/8" button head screw and 3/8" flange nut. Some headers will have three slots some will only have two. On headers with Key hole shaped slots, position the bolt in the narrow section of the key hole.
6. If header is in rigid mode, ensure rubber flex mount is straight up and down. If in flex mode, make end mount flush to the outer edge of the corner mount on the header.

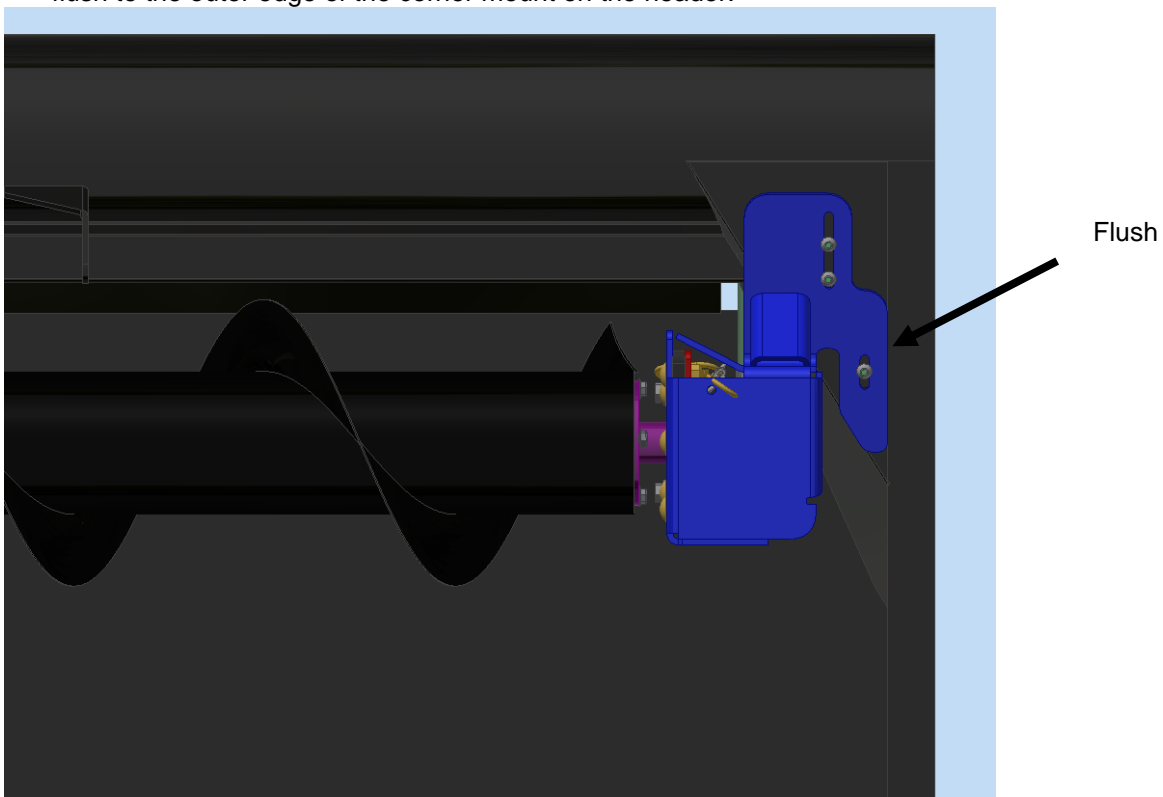


FIGURE 6 TOP VIEW OF LEFT END MOUNT

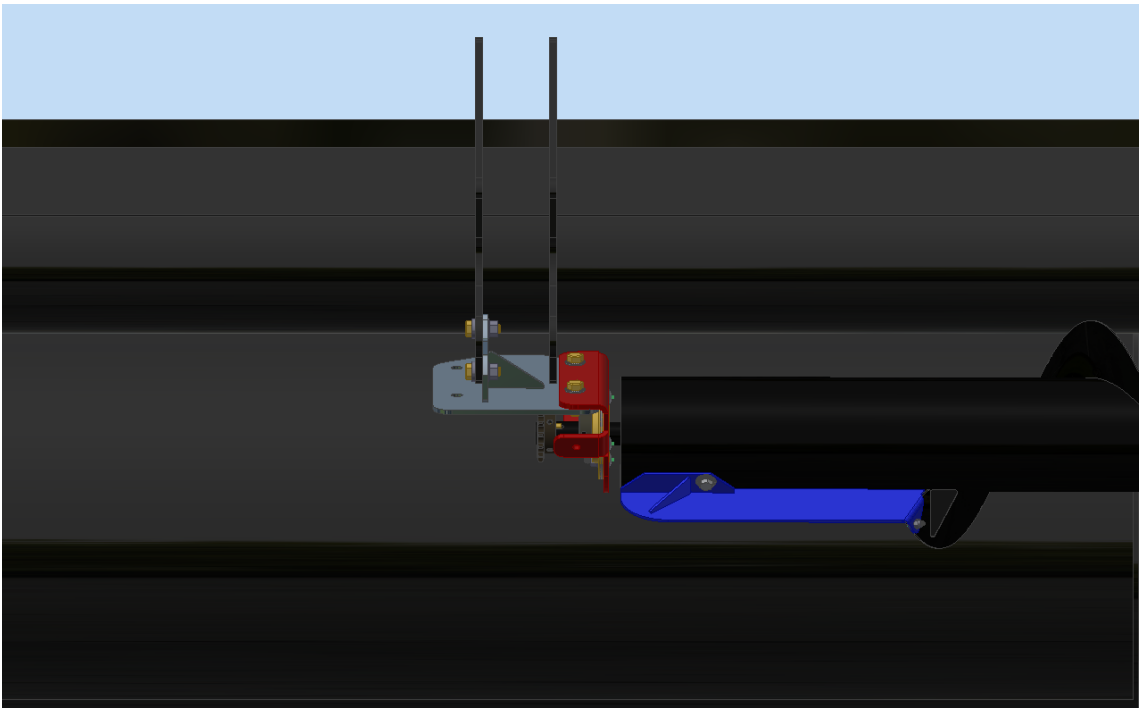


FIGURE 7 LH AUGER CENTER MOUNT FRONT VIEW

7. Hang the LH auger in the center using the 1/2" bolts and contact washers.

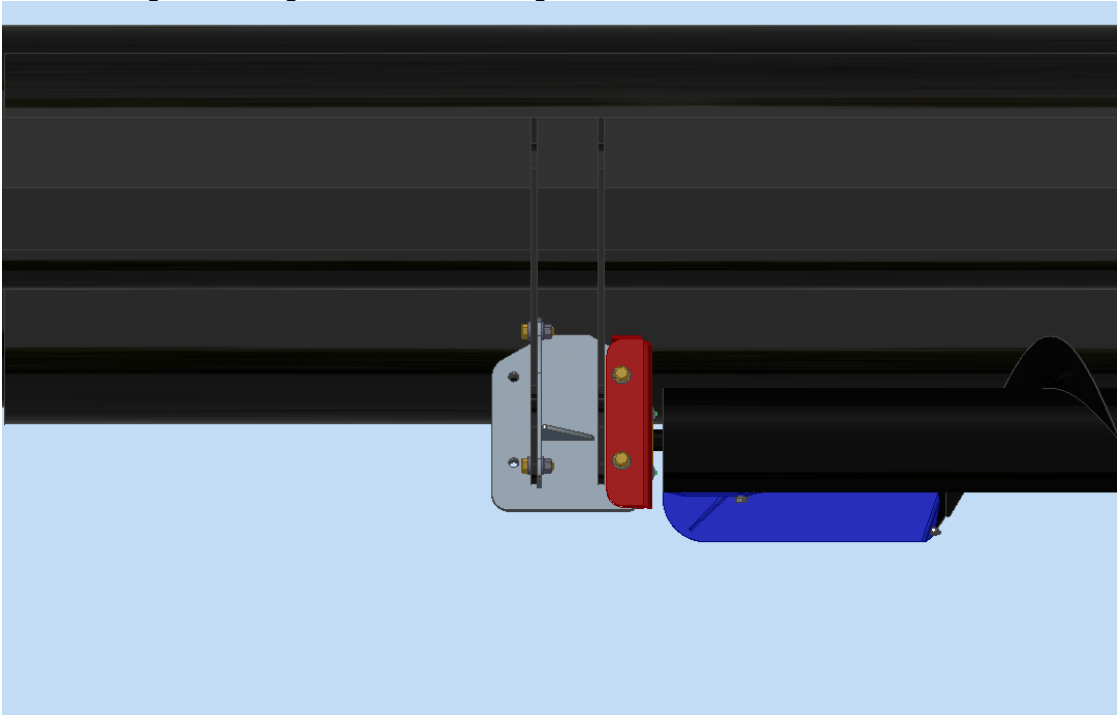


FIGURE 8 LH AUGER CENTER MOUNT TOP VIEW

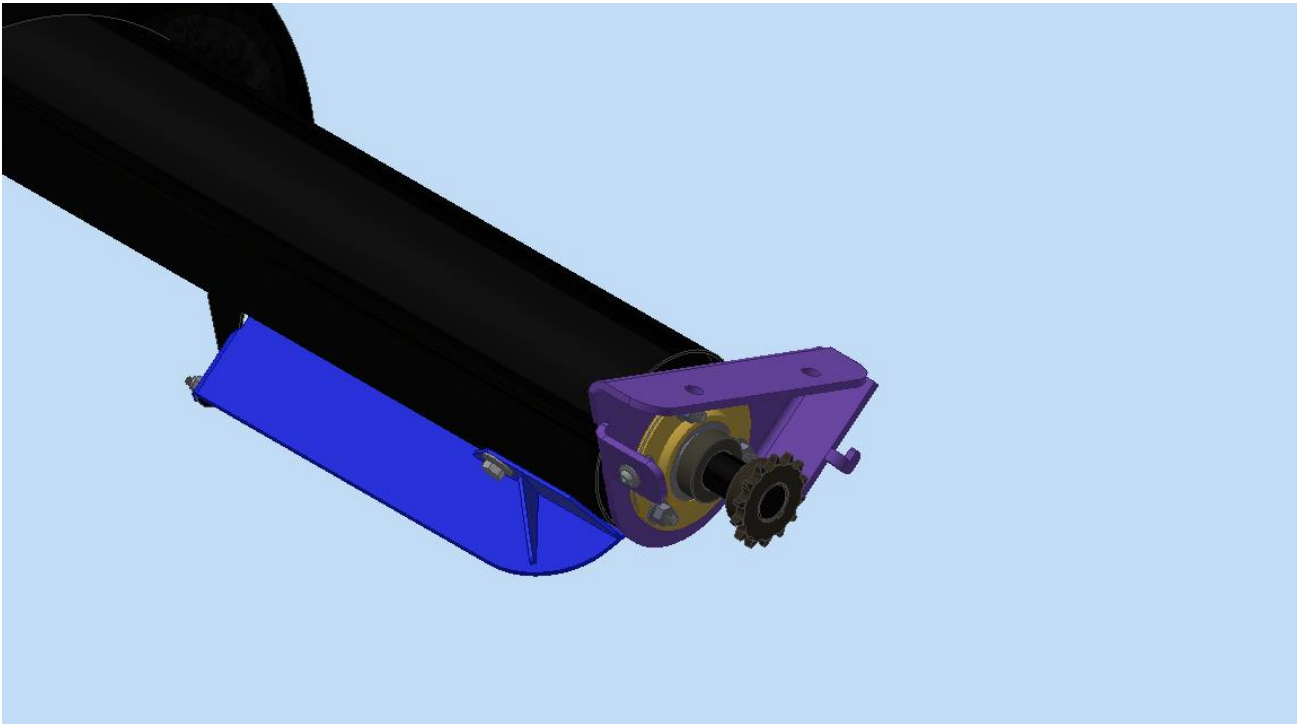


FIGURE 9 RH AUGER WITH BEARING MOUNT, SPROCKET AND PADDLE

8. Slide the RH bearing mount onto the RH auger, insert the key into the keyway. Place sprocket flush with end of shaft. Bolt the paddle to the auger as well. (see parts breakdown for fasteners)

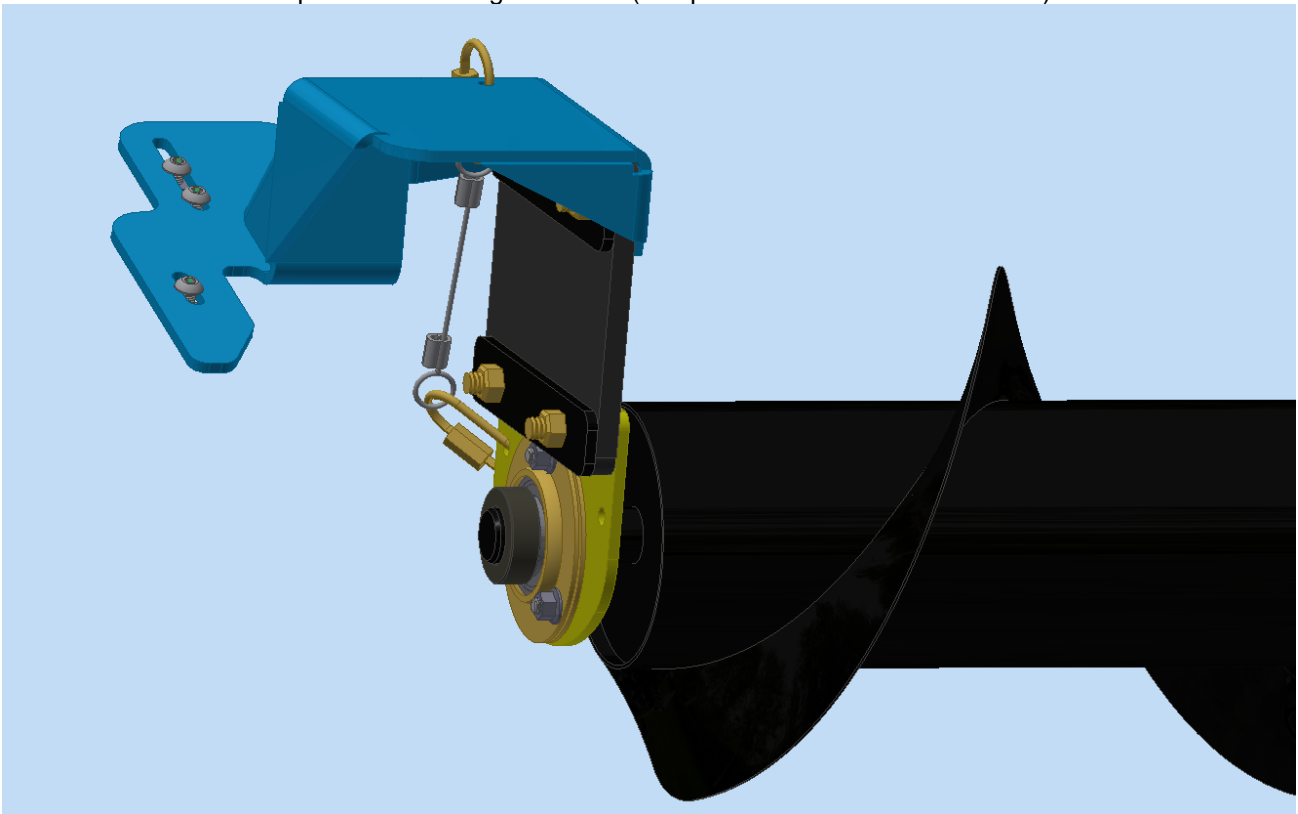


FIGURE 10 RH AUGER OUTER END VIEW WITH LOCK COLLAR FLUSH TO END OF SHAFT

9. Slide the RH end mount onto the auger and snug the locking collar onto the shaft to prevent the auger from falling out of the bearing. Locking collar should be flush to the chamfer edge on auger shaft.

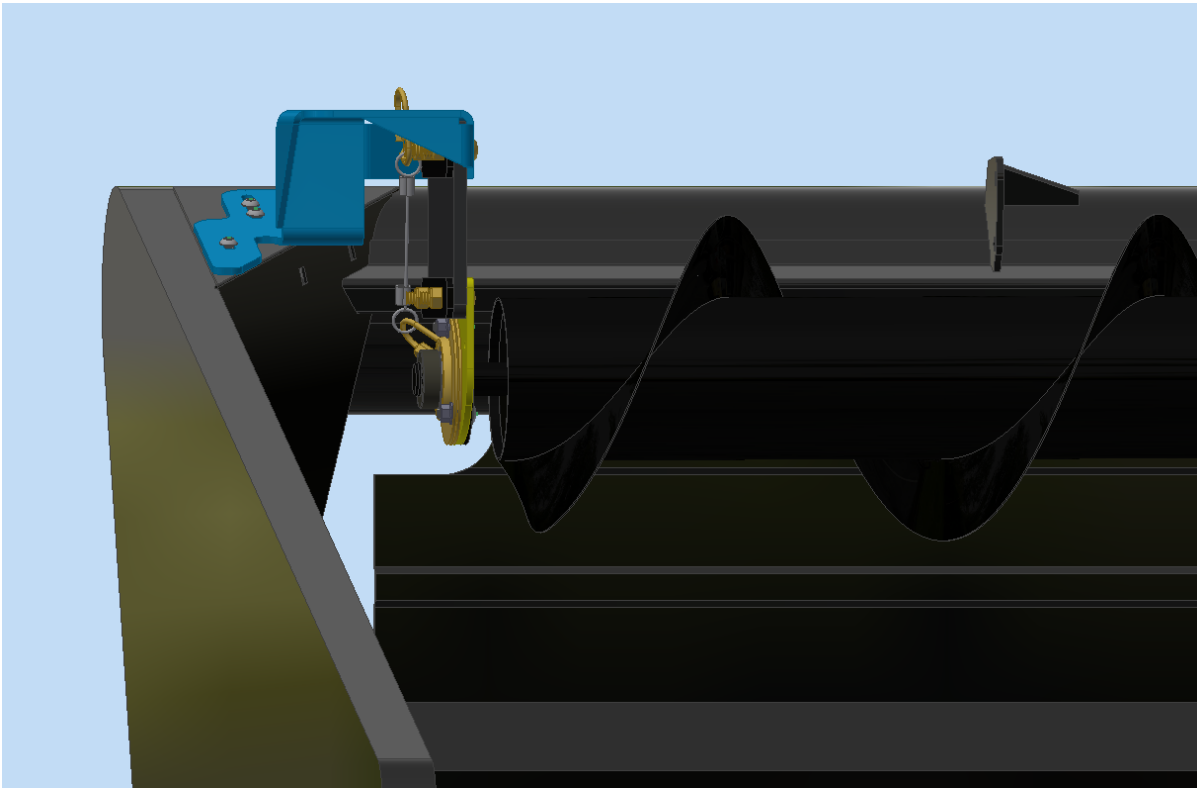


FIGURE 11 RH END FRONT VIEW MACDON FD KIT

10. Mount the RH auger onto the header using the 3/8" button head screws and 3/8" flange nuts.

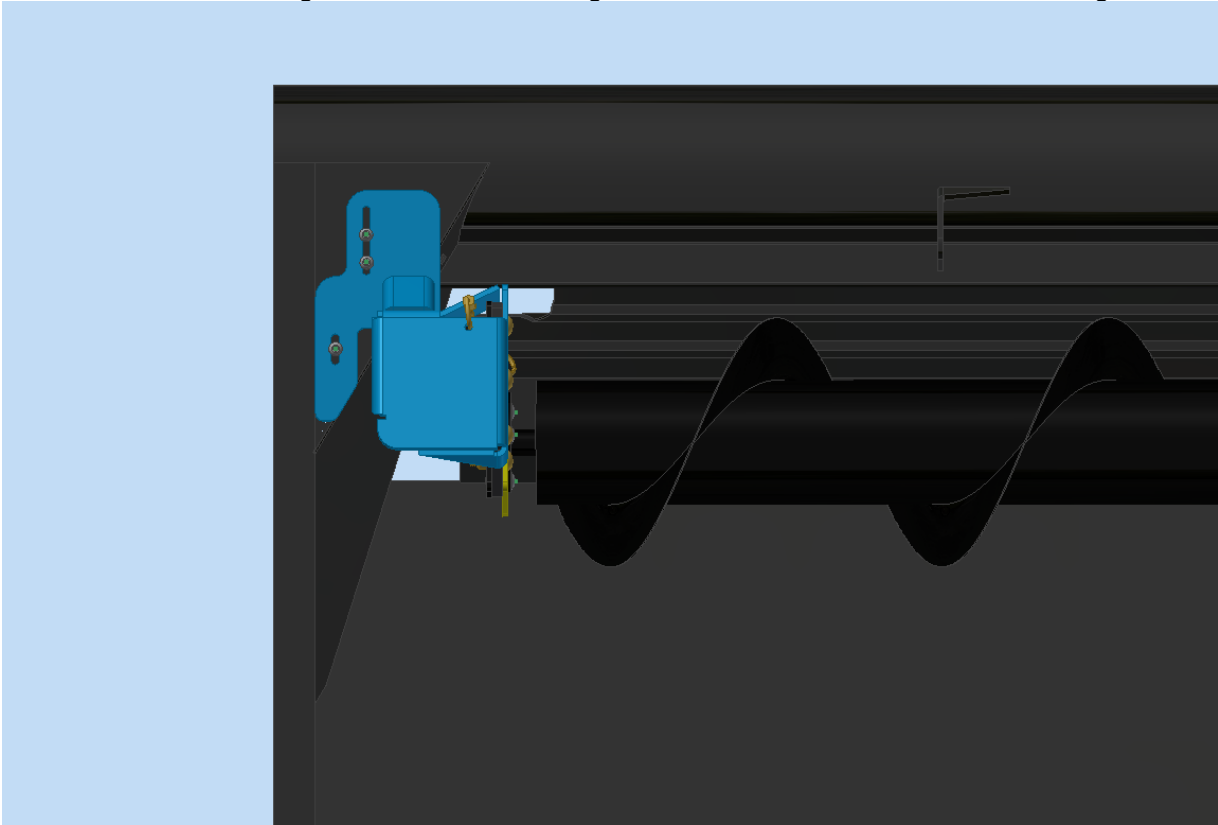


FIGURE 12 RH END TOP VIEW MACDON FD KIT

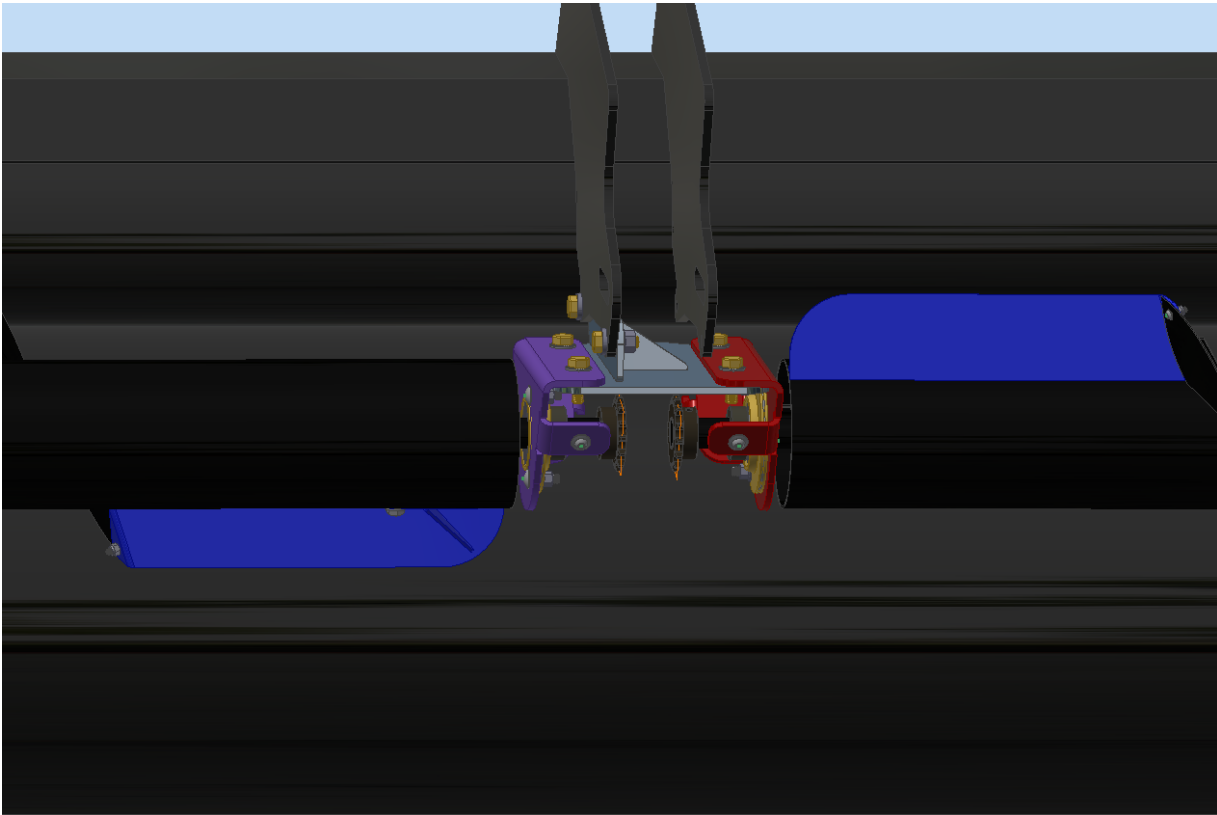


FIGURE 13 RH AUGER MOUNTED ON CENTER MOUNT FRONT VIEW

11. Hang the RH auger in the center using the 1/2" bolts and contact washers.

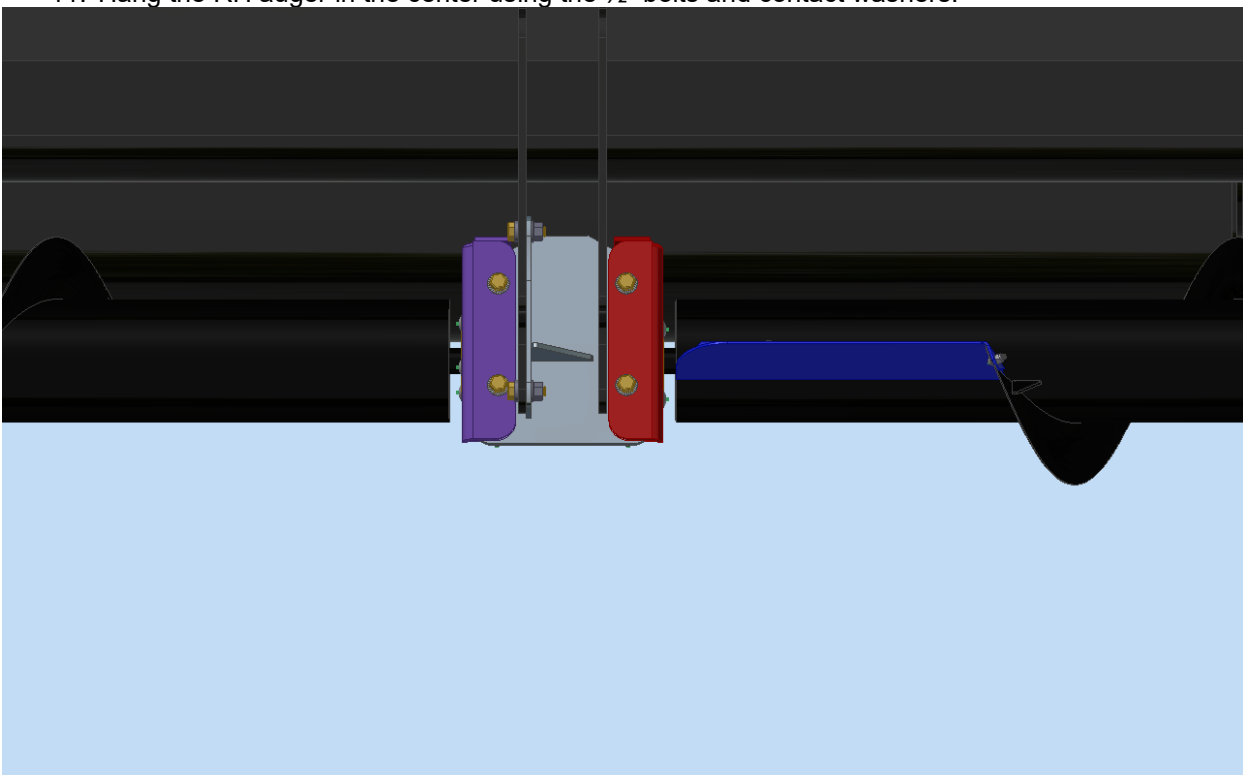


FIGURE 14 RH AUGER MOUNTED ON CENTER MOUNT TOP VIEW

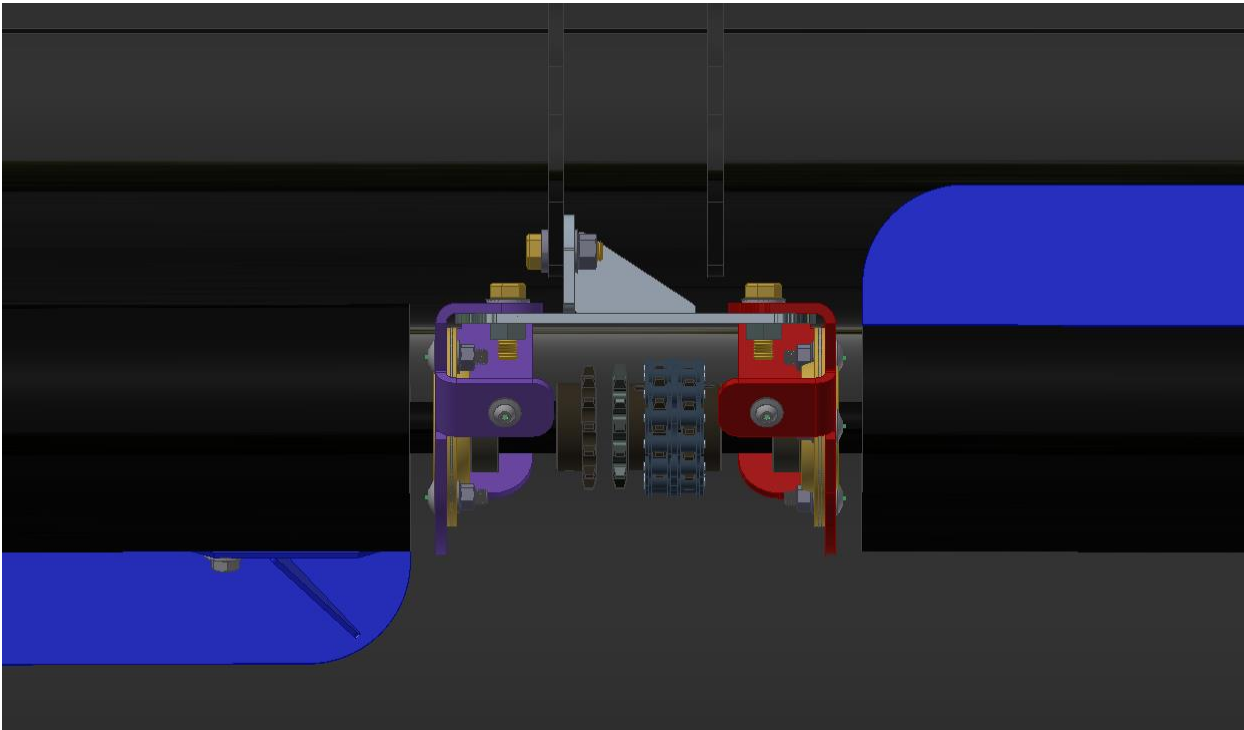


FIGURE 15 DUAL SPROCKET WITH CHAIN COUPLER INSTALLED ON LH AUGER

12. Place the dual sprocket between the two sprockets and secure to the LH auger using the chain coupler.

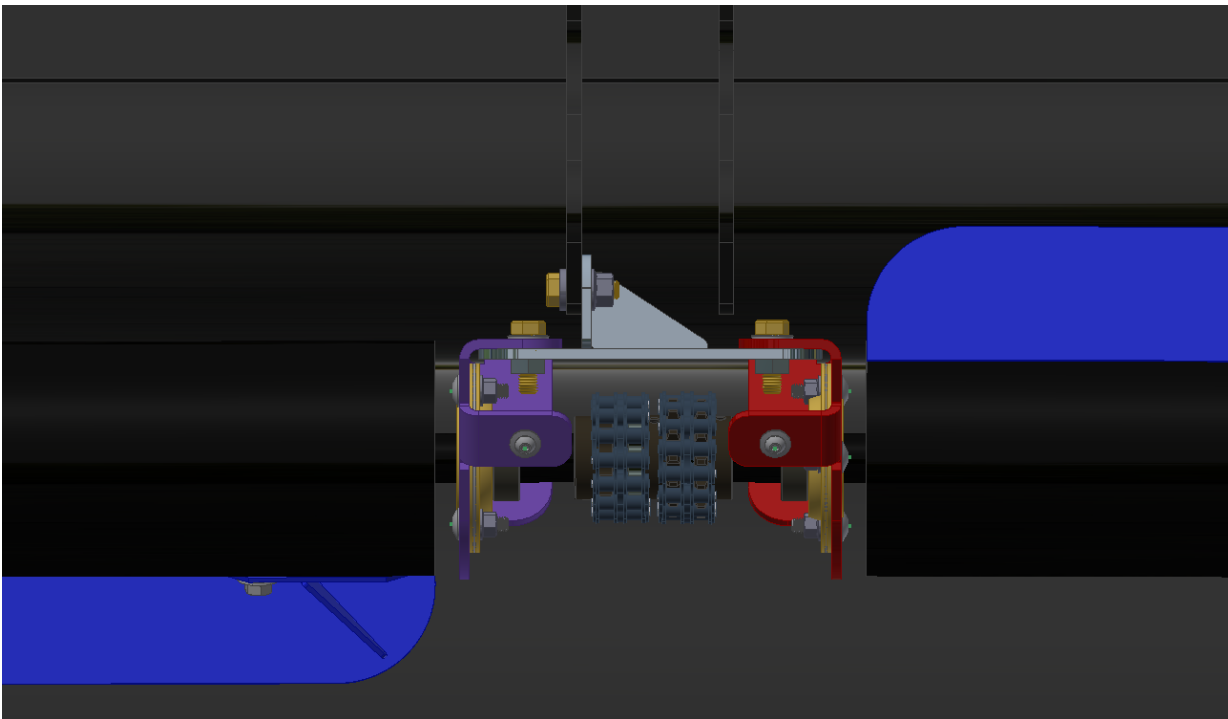


FIGURE 16 DUAL SPROCKET WITH CHAIN COUPLER INSTALLED ON RH AUGER

13. Use the second chain coupler in the kit to secure the RH auger to the dual sprocket.
14. Depending on your header center reel mount spacing will determine how much gap to leave from the auger to the bearing mount face.
15. Once chain coupler has been secured to the sprockets. Adjust the gap on each side to be even. Lock the locking collars in place.

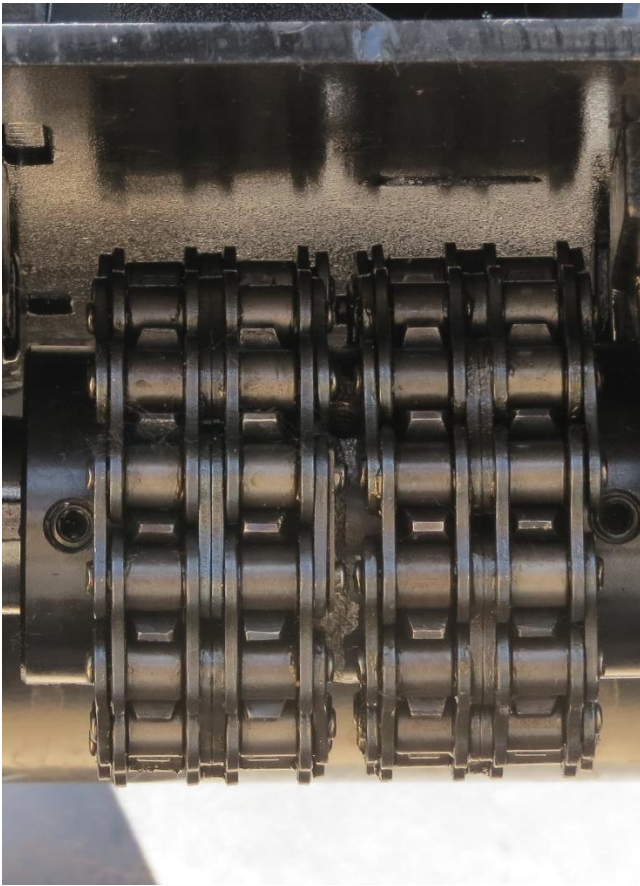


FIGURE 17 DUAL SPROCKET WITH TWO CHAIN COUPLERS

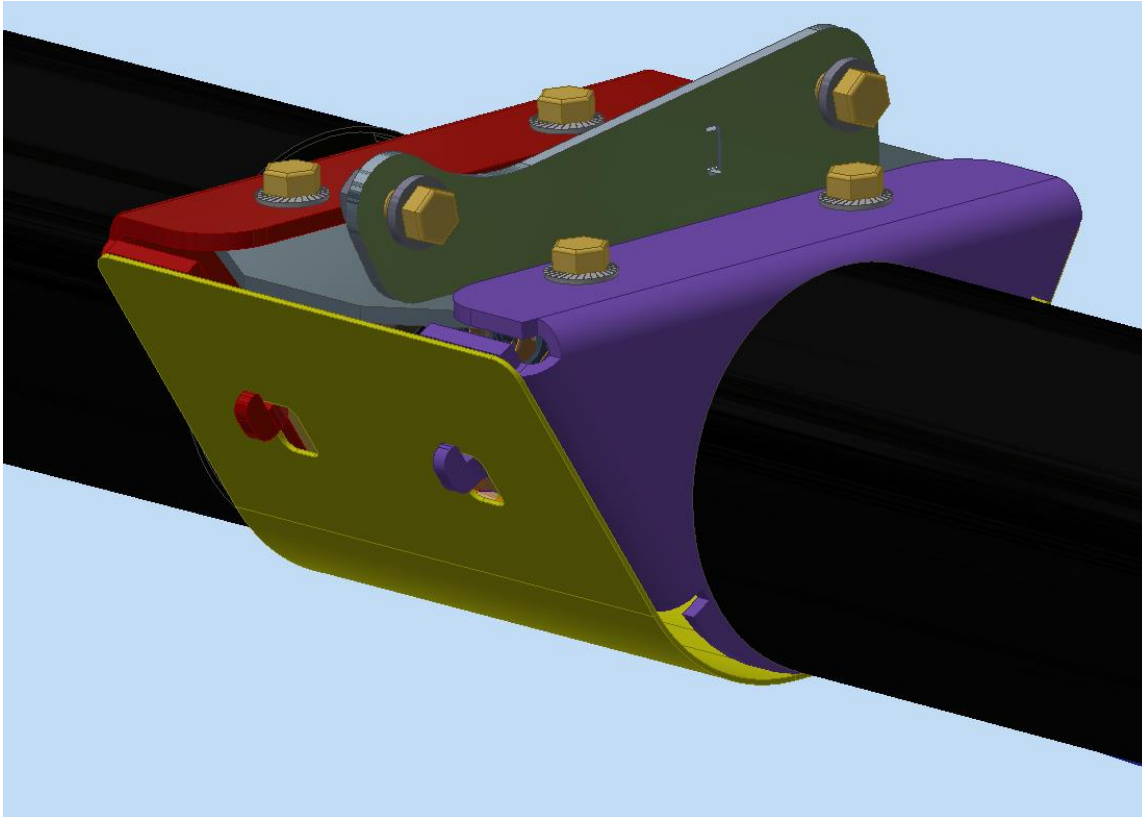


FIGURE 18 CENTER GUARD REAR VIEW

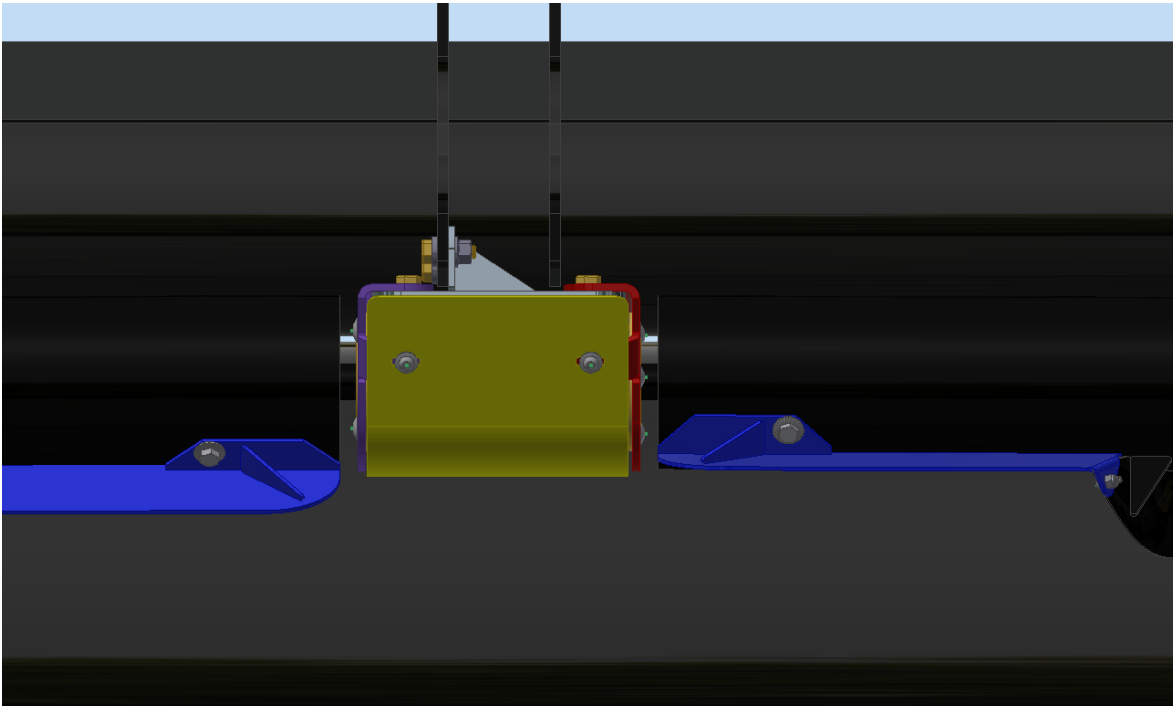


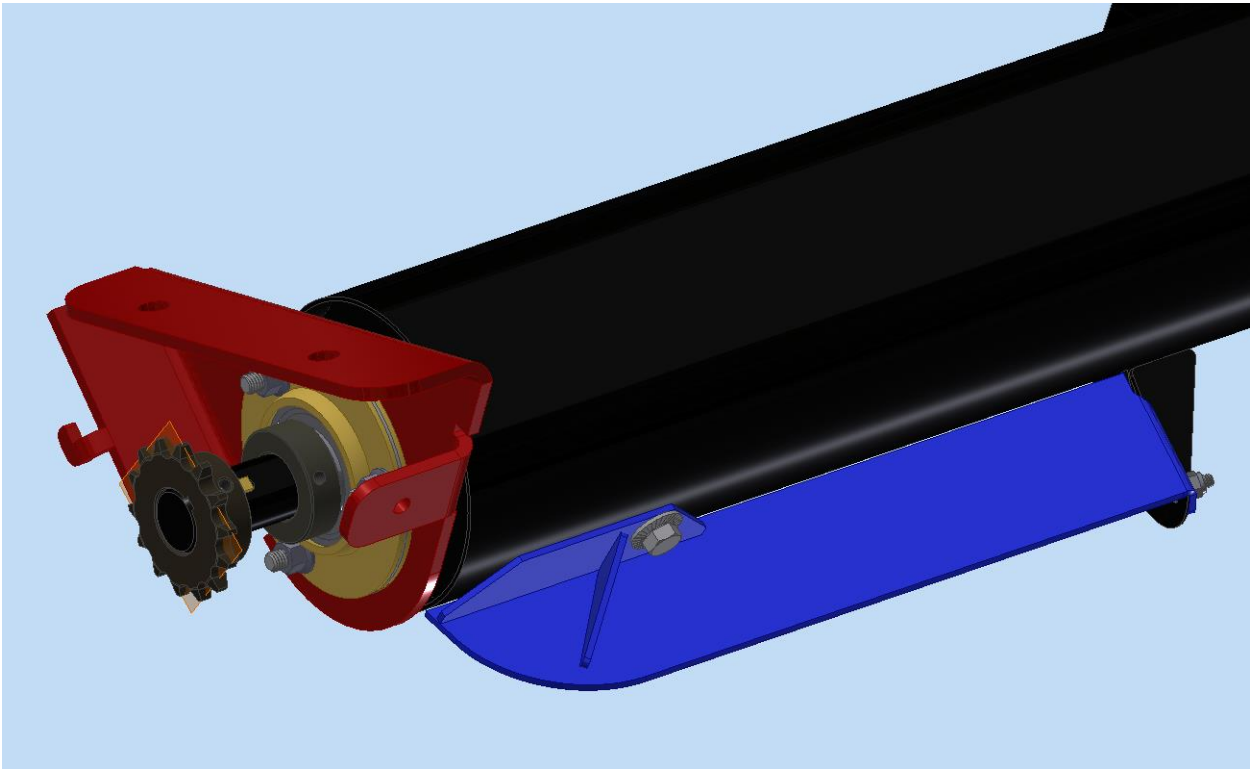
FIGURE 19 CENTER GUARD MOUNTED ON CENTER MOUNTS

16. Guide the center mount onto the tabs on the rear of the center mount. Slide the center mount down until it contacts the bottom of the tab.
17. Position the center mount guard slots over the center mount holes. Use the 5/16" button head screws and contact lock washer to secure center mount to the bearing mounts.

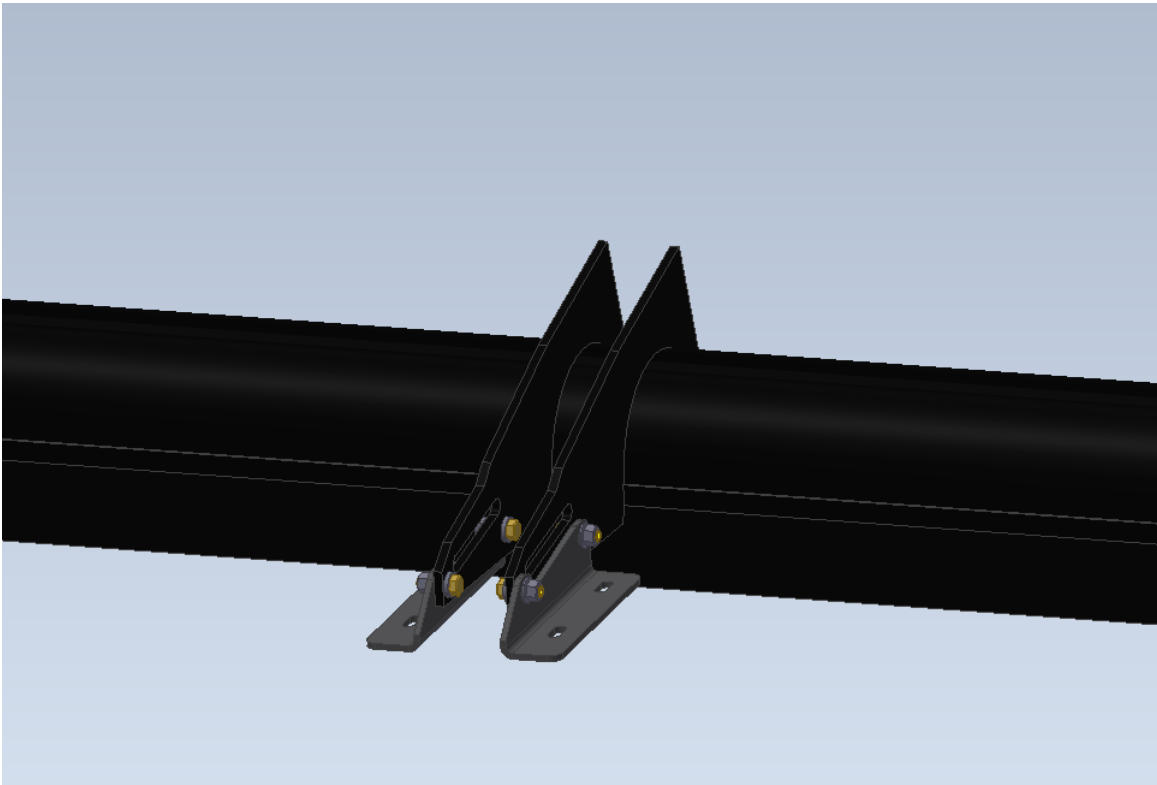
1. **Raise the center drum on the header as high as it will go, with the header tilted back, and check for clearance between the auger and the drum fingers.**
2. **Adjust the auger accordingly to have clearance between the auger flighting and paddle vs. the drum and fingers.**

4.1. MACDON 974 INSTALL INSTRUCTIONS

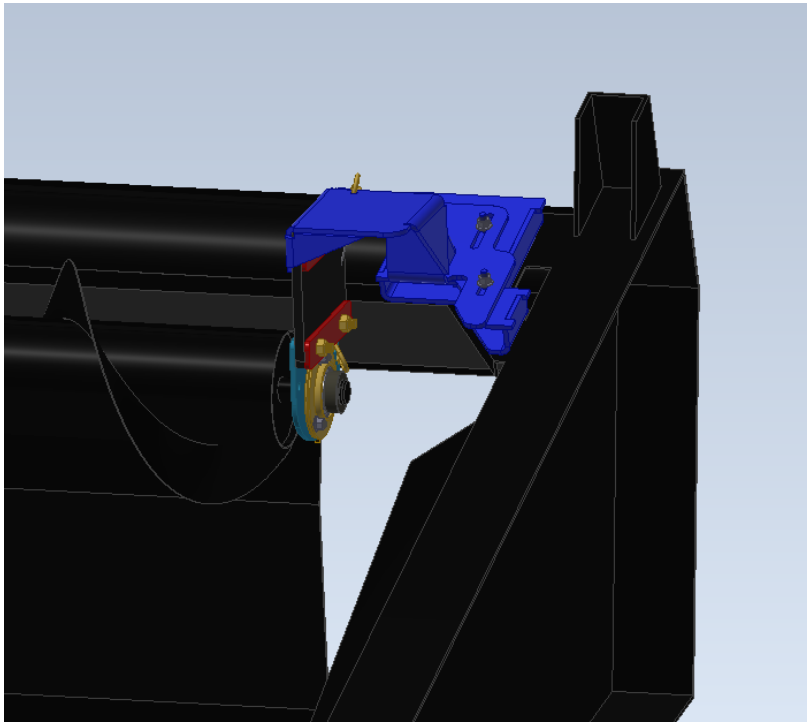
Refer to the Direct drive fasten to motor page for mounting the motor to the drive hub. On a 974 header the drive end is on the opposite side as the FD1 series. It is critical that the 1/4" bolt is used to hold the drive hub to the motor shaft.



Slide the center bearing mount onto the LH auger. Insert the key into the keyway and place the sprocket onto the shaft, flush with the end of the shaft. Bolt the paddle onto the auger. (see parts break down for fasteners)

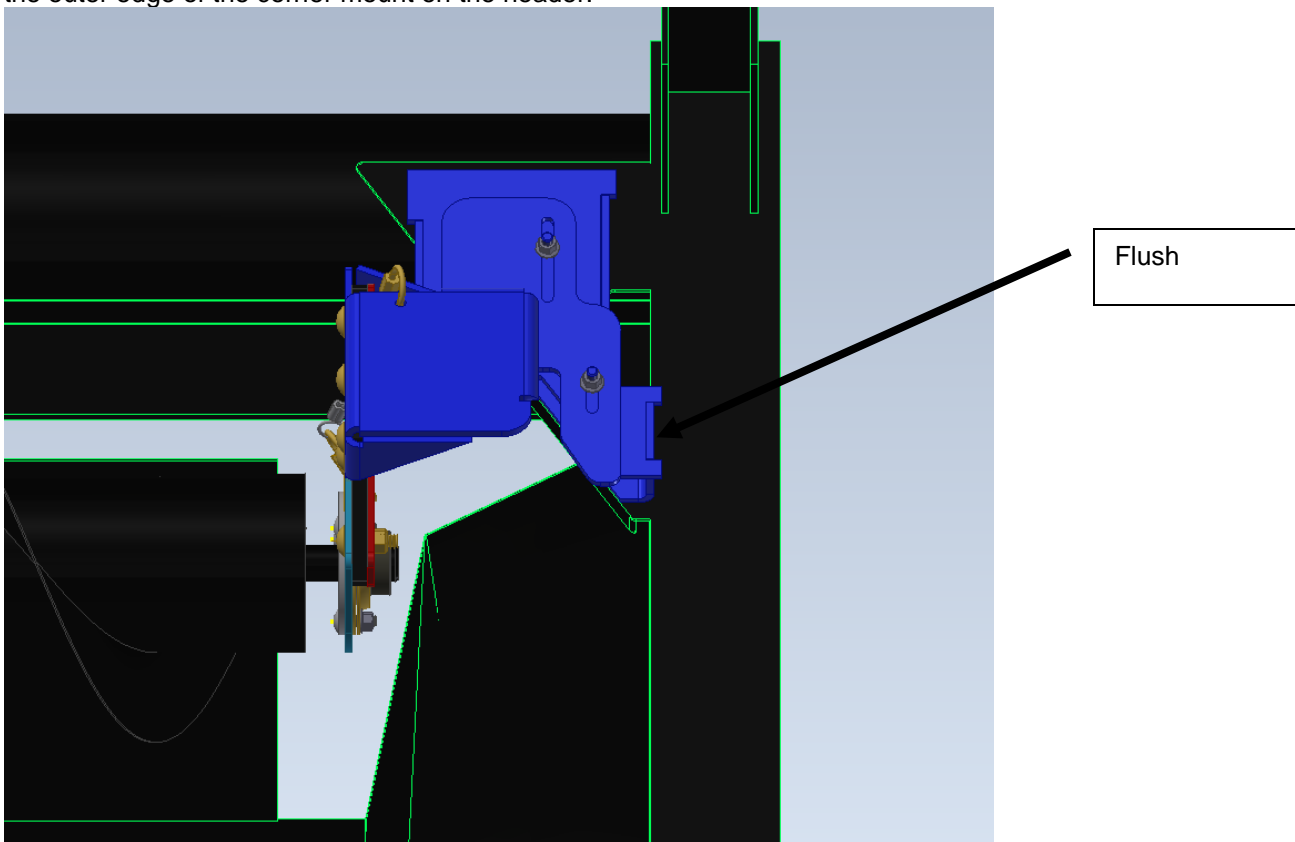


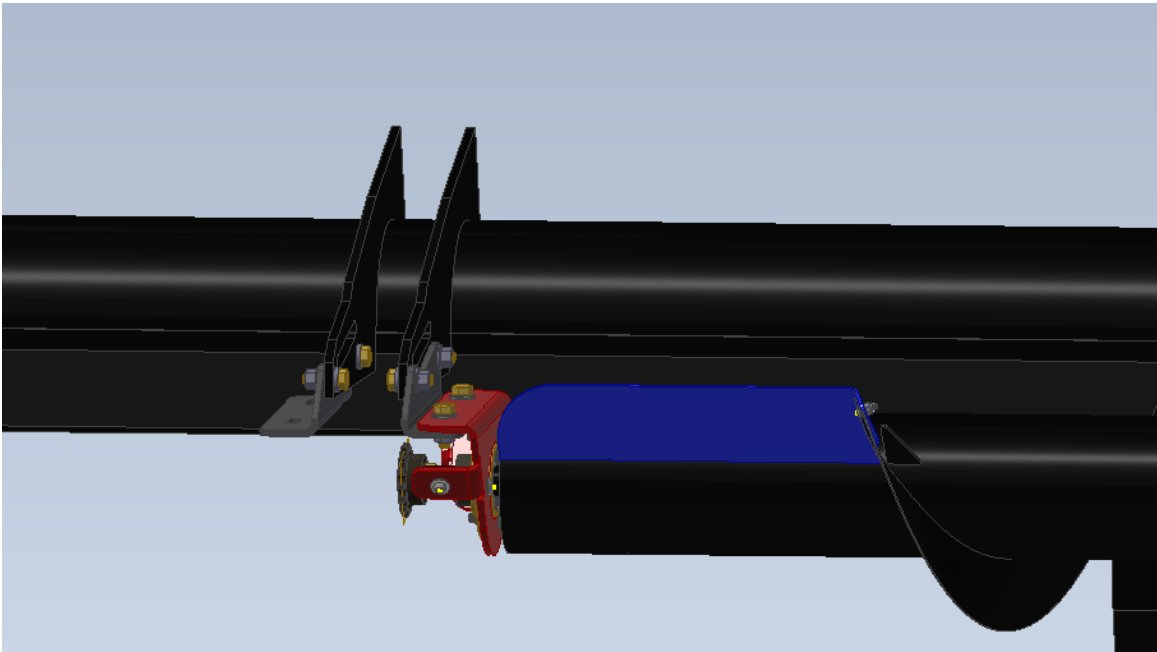
Bolt the Center mounts to the outside of the mounts for the center reel cylinder.



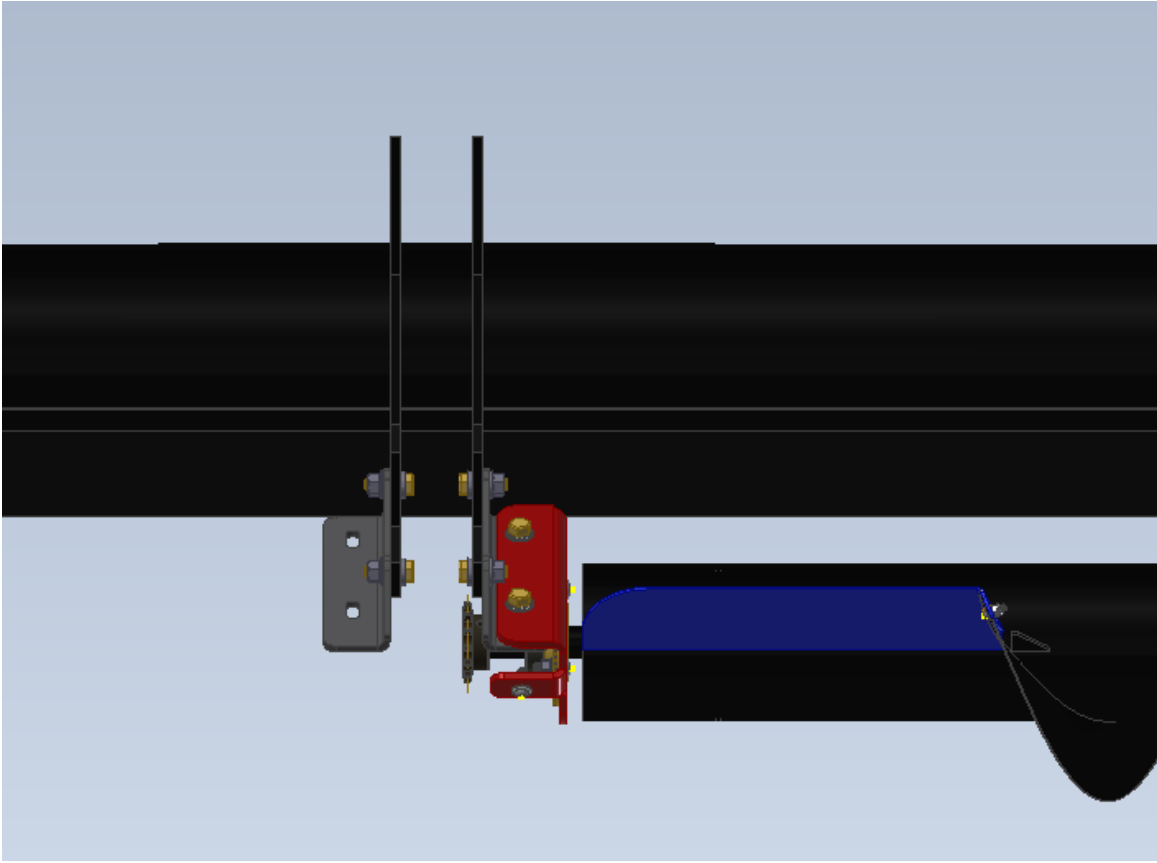
Hang the LH outer end of auger using the 3/8" button head screw and 3/8" flange nut. Some headers will have three slots some will only have two. On headers with Keyhole shaped slots, position the bolt in the narrow section of the keyhole.

If header is in rigid mode, ensure rubber flex mount is straight up and down. If in flex mode, make end mount flush to the outer edge of the corner mount on the header.

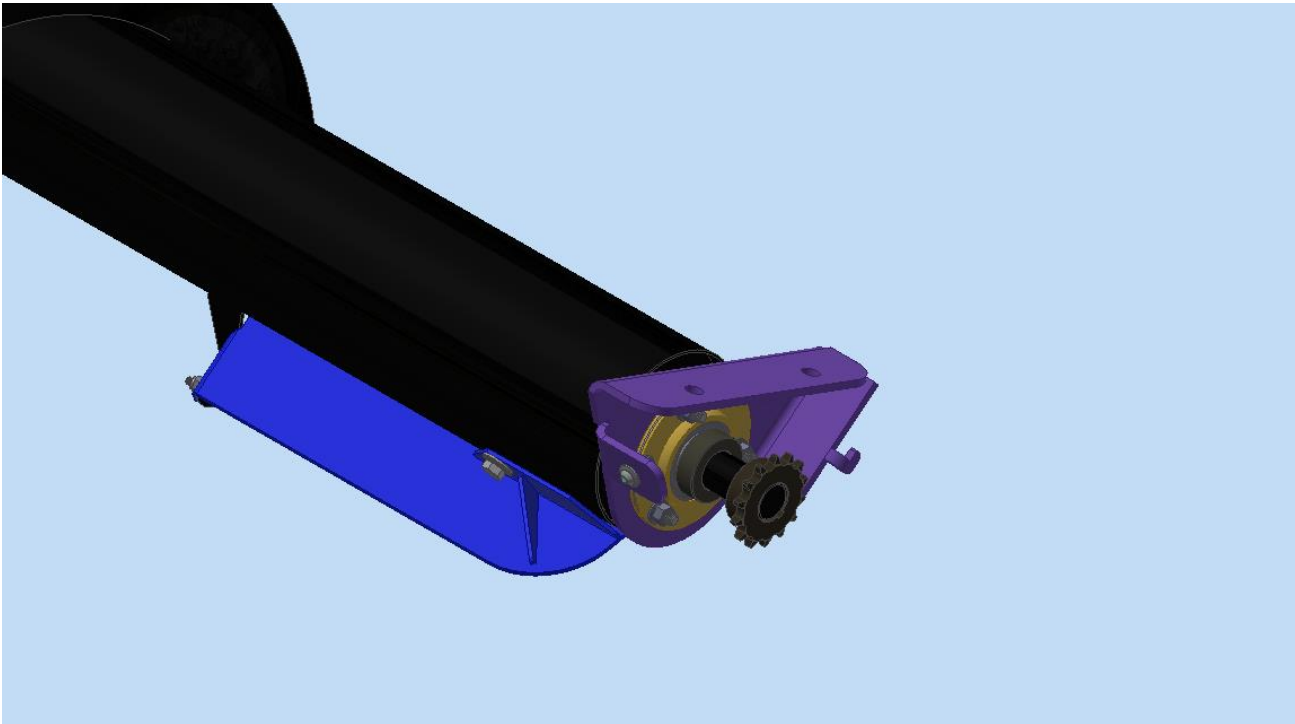




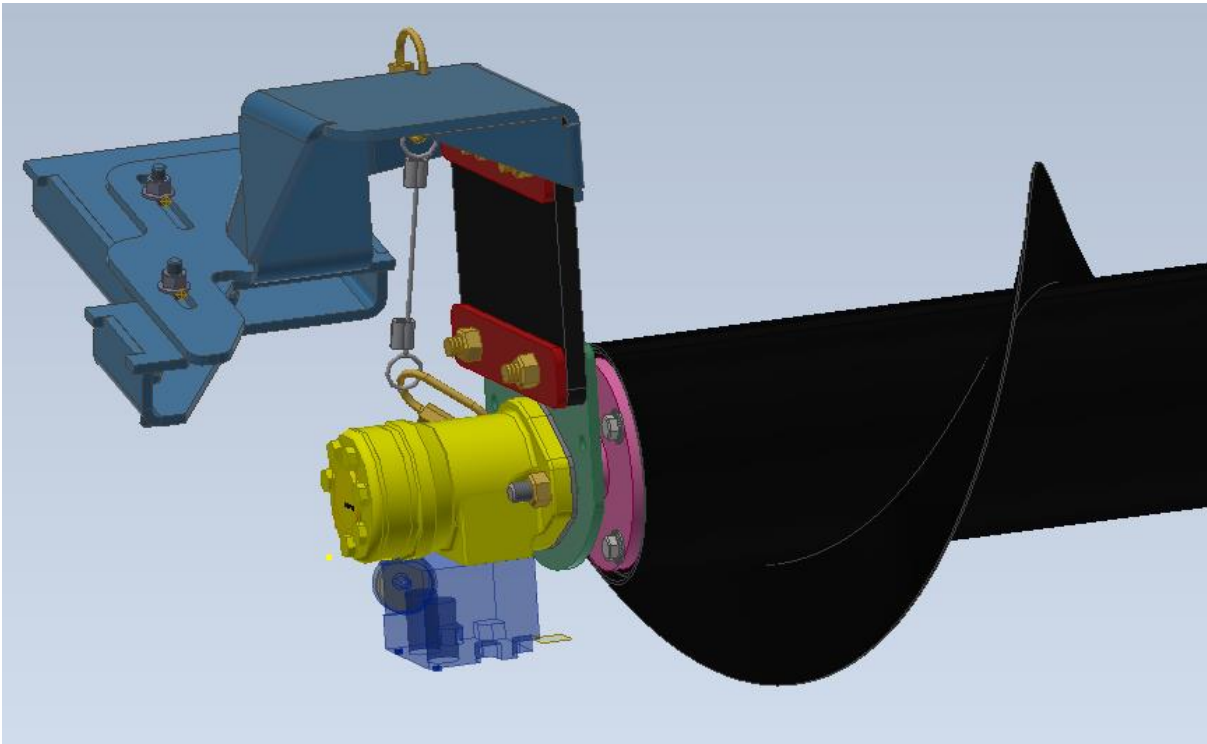
Hang the LH auger in the center using the 1/2" bolts and contact washers.



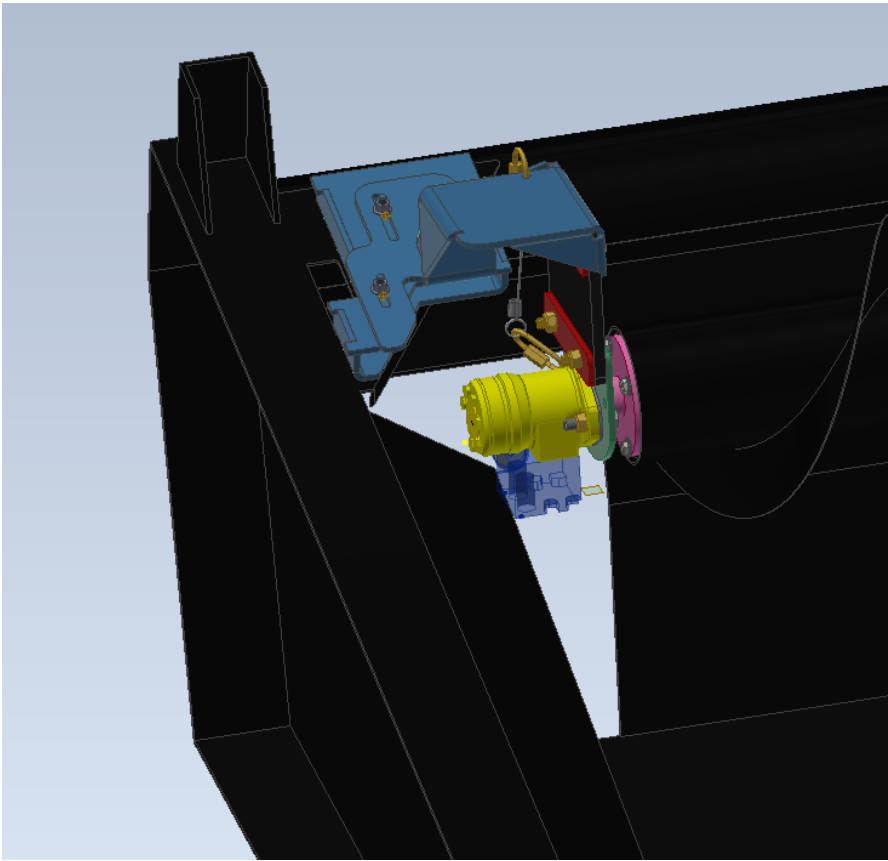
Top View of LH center mount



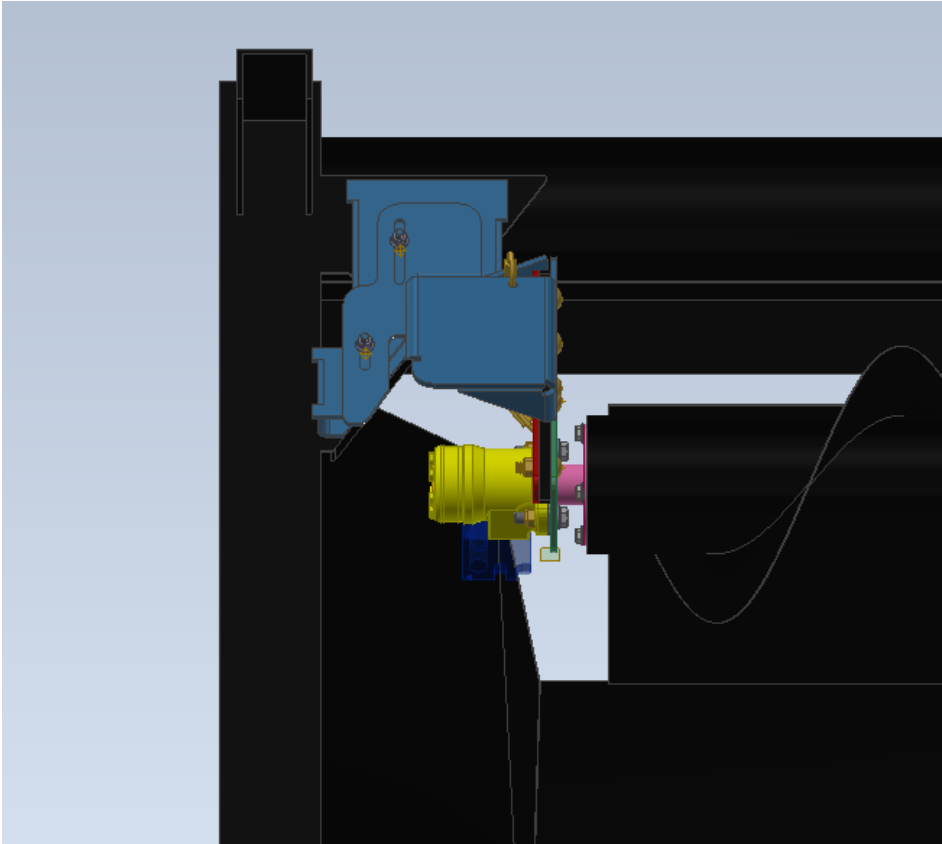
Slide the RH bearing mount onto the RH auger, insert the key into the keyway. Place sprocket flush with end of shaft. Bolt the paddle to the auger as well. (see parts breakdown for fasteners)



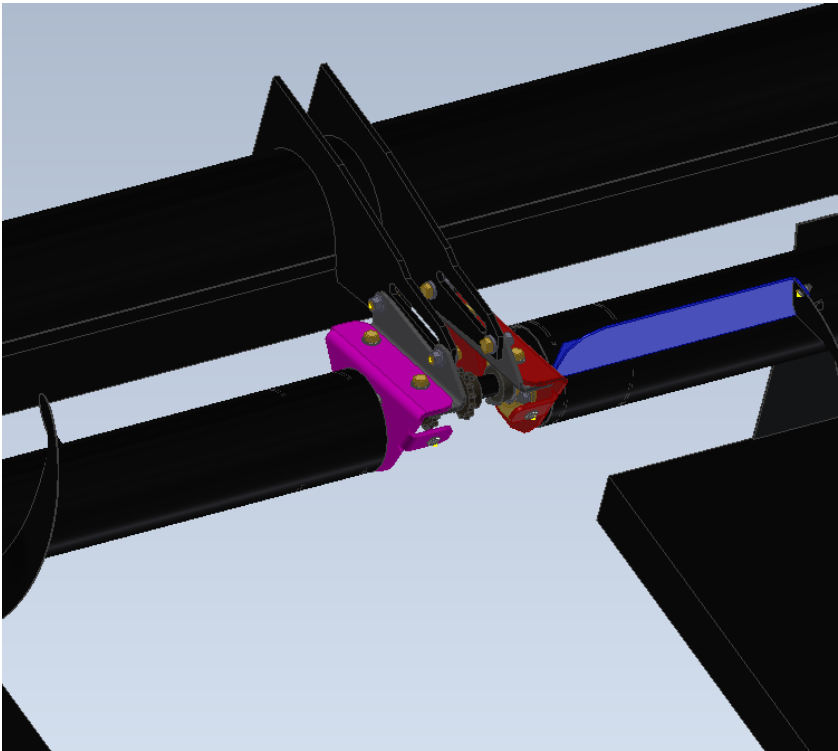
View of end mount with motor assembled onto Auger.



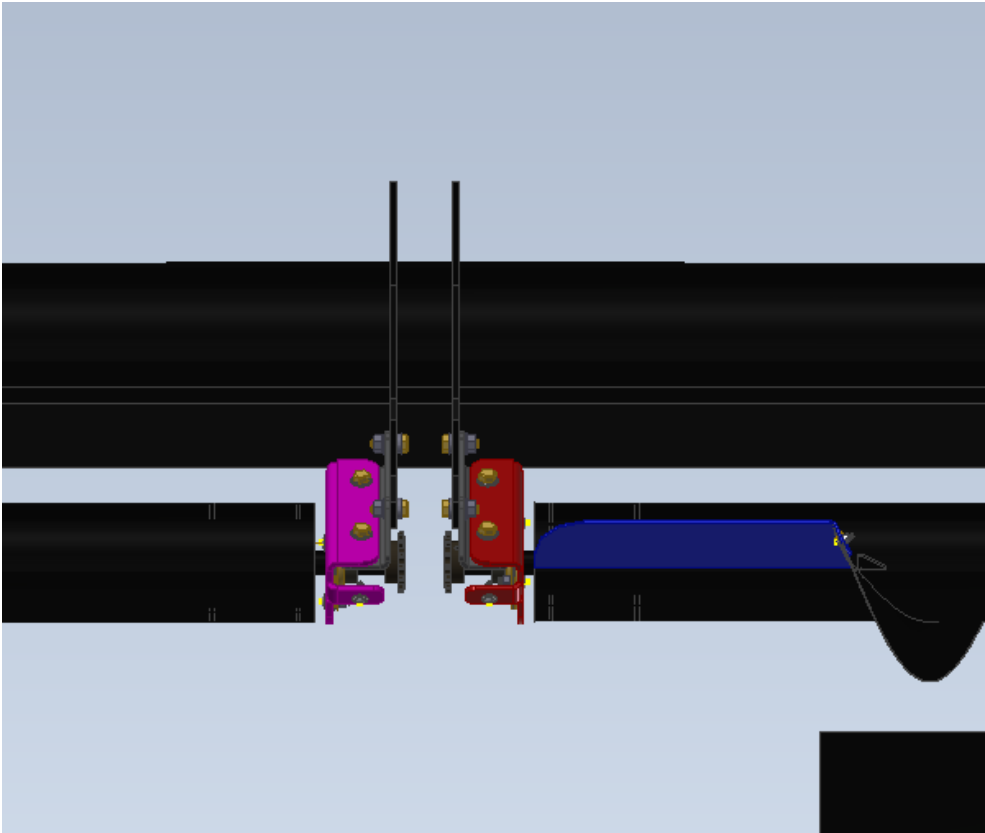
Mount the RH auger onto the header using the 3/8" button head screws and 3/8" flange nuts.



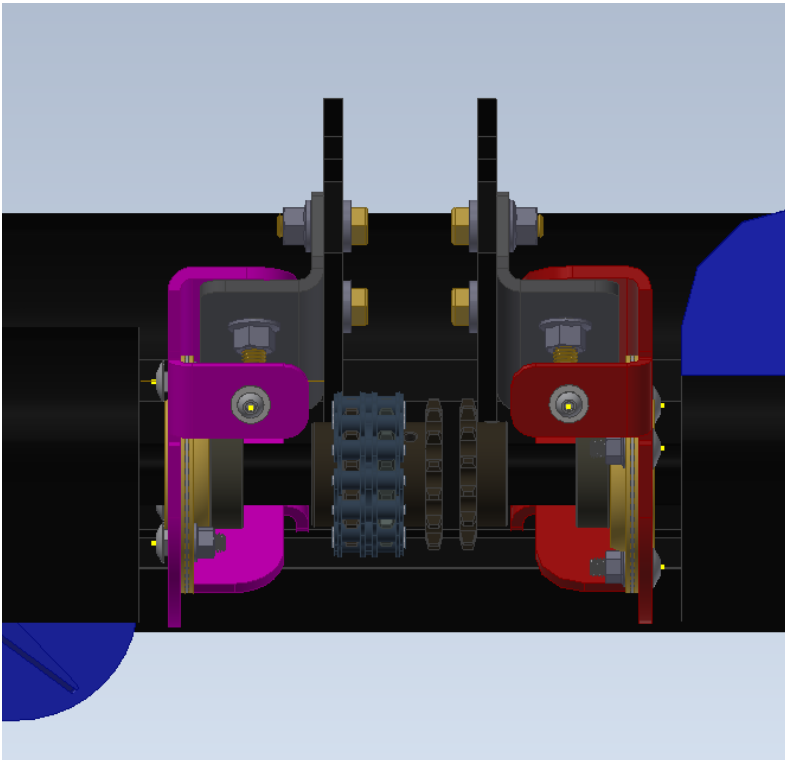
Top View of RH end mount with motor



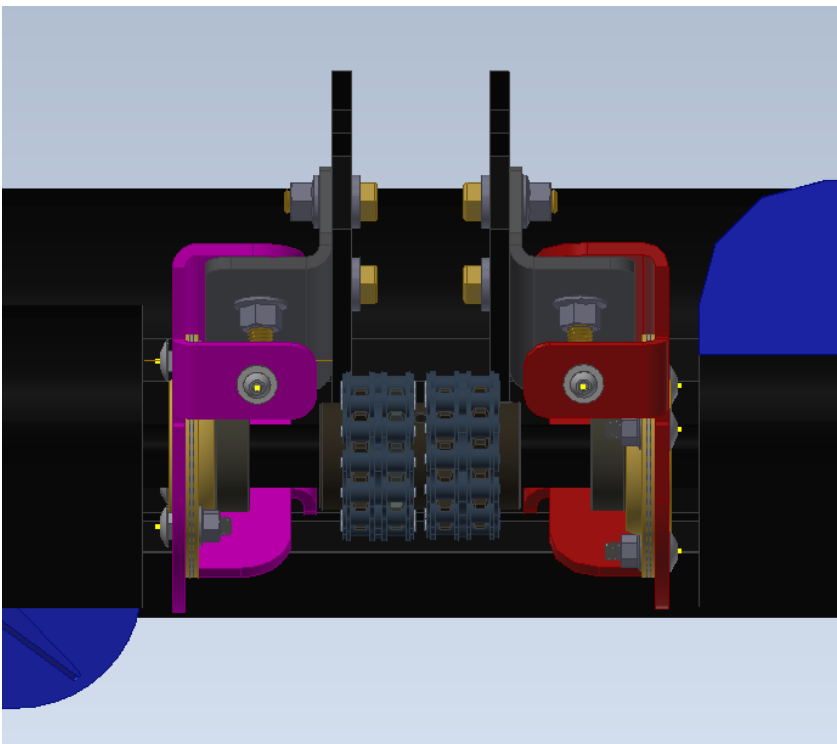
Hang the RH auger in the center using the 1/2" bolts and contact washers.



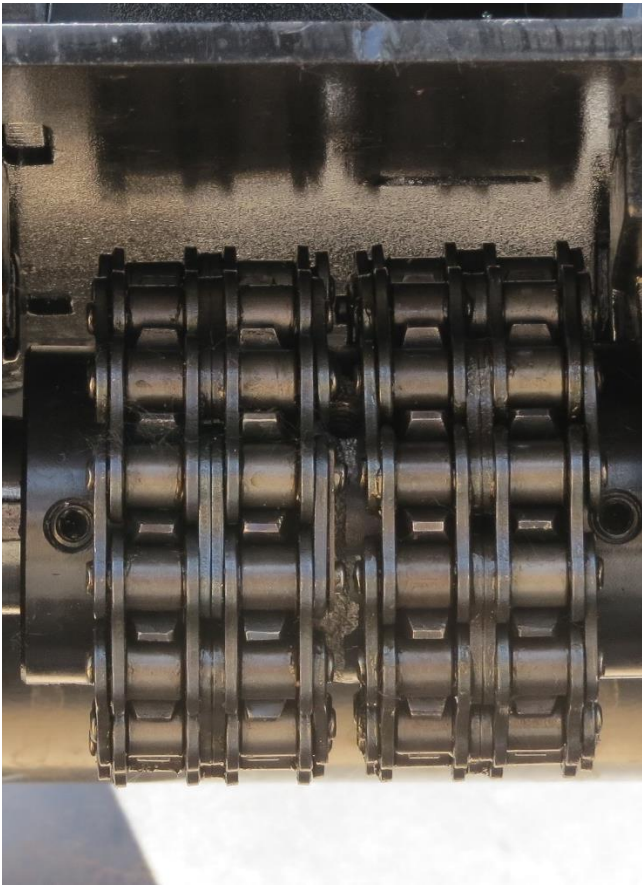
Top view of RH center mount.



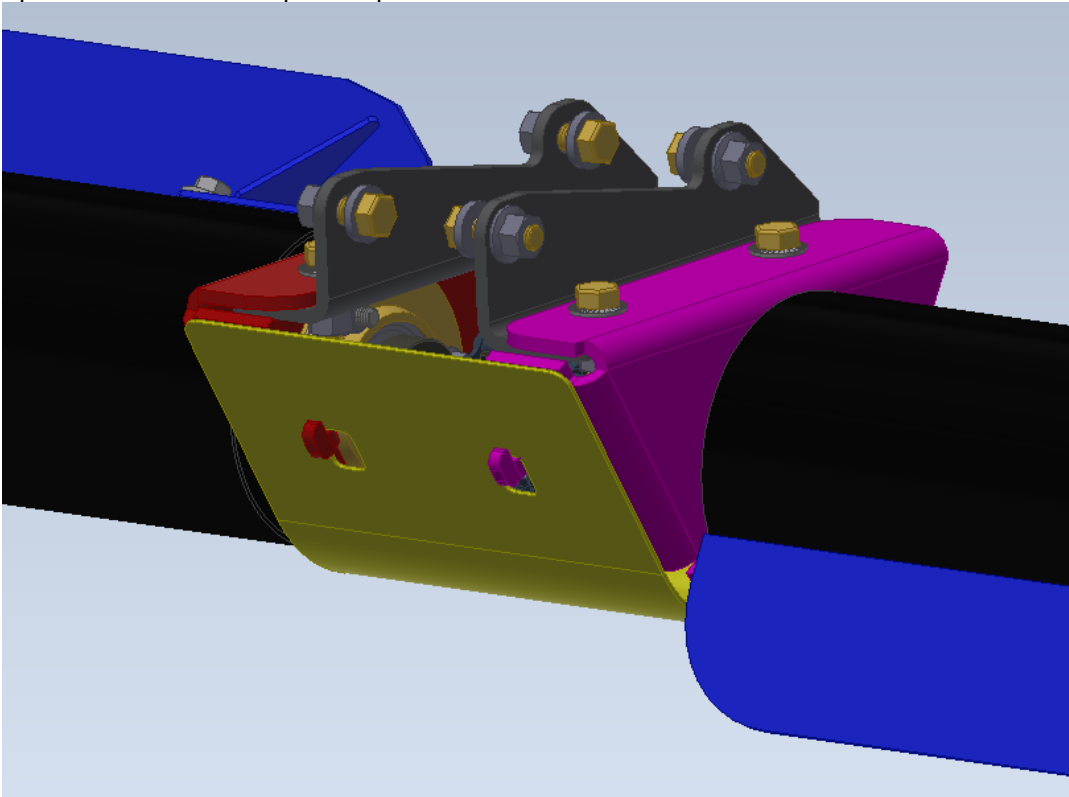
Place the dual sprocket between the two sprockets and secure to the RH auger using the chain coupler.



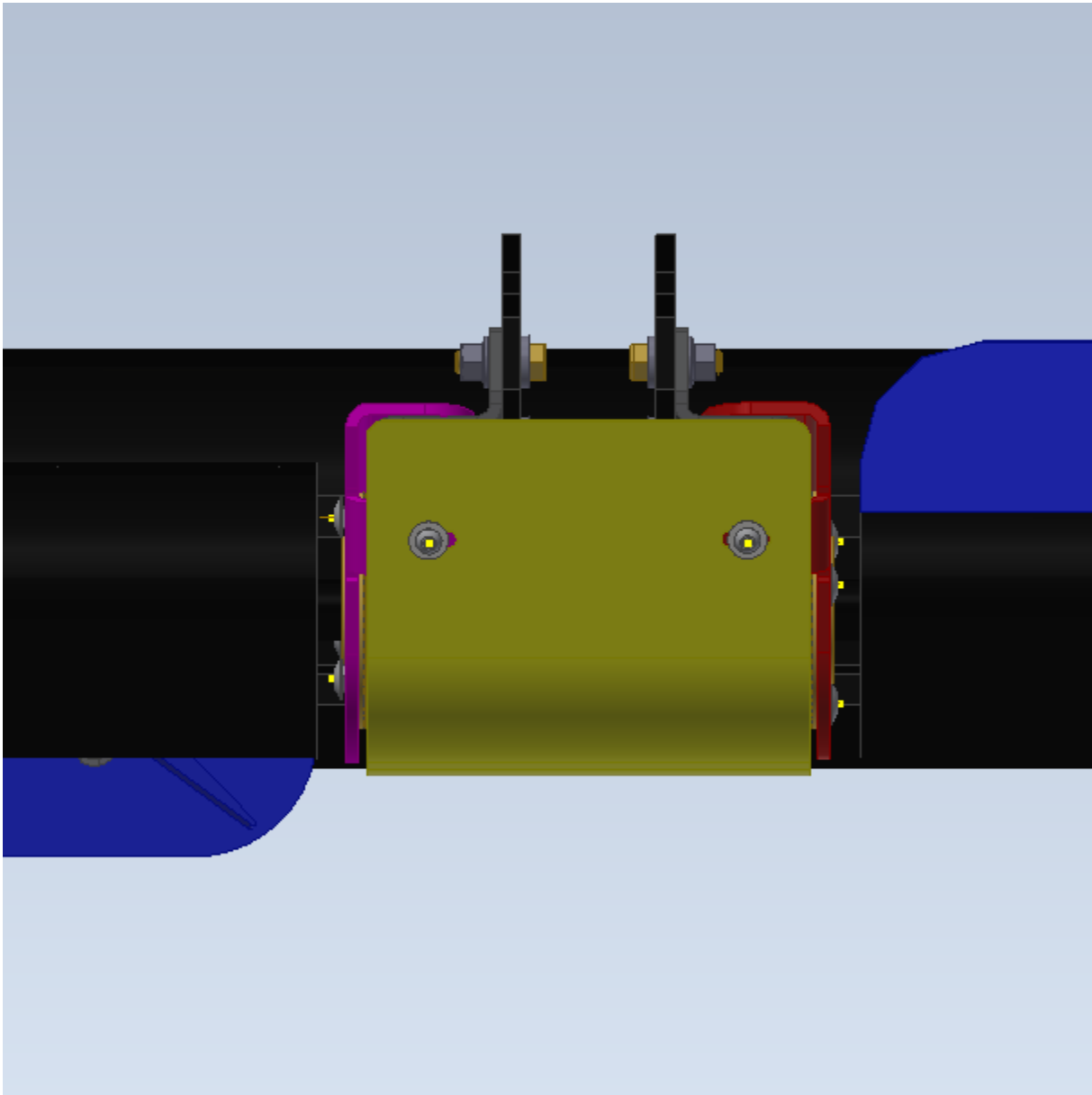
Use the second chain coupler in the kit to secure the RH auger to the dual sprocket. Depending on your header center reel mount spacing will determine how much gap to leave from the auger to the bearing mount face. Once chain coupler has been secured to the sprockets. Adjust the gap on each side to be even. Lock the locking collars in place.



Sprocket with chain couplers in place.



Center Guard Rear View



Guide the center mount onto the tabs on the rear of the center mount. Slide the center mount down until it contacts the bottom of the tab.

Position the center mount guard slots over the center mount holes. Use the 5/16" button head screws and contact lock washer to secure center mount to the bearing mounts.

Raise the center drum on the header as high as it will go, with the header tilted back, and check for clearance between the auger and the drum fingers.

Adjust the auger accordingly to have clearance between the auger flighting and paddle vs. the drum and fingers.

4.2. HYDRAULIC INSTALLATION

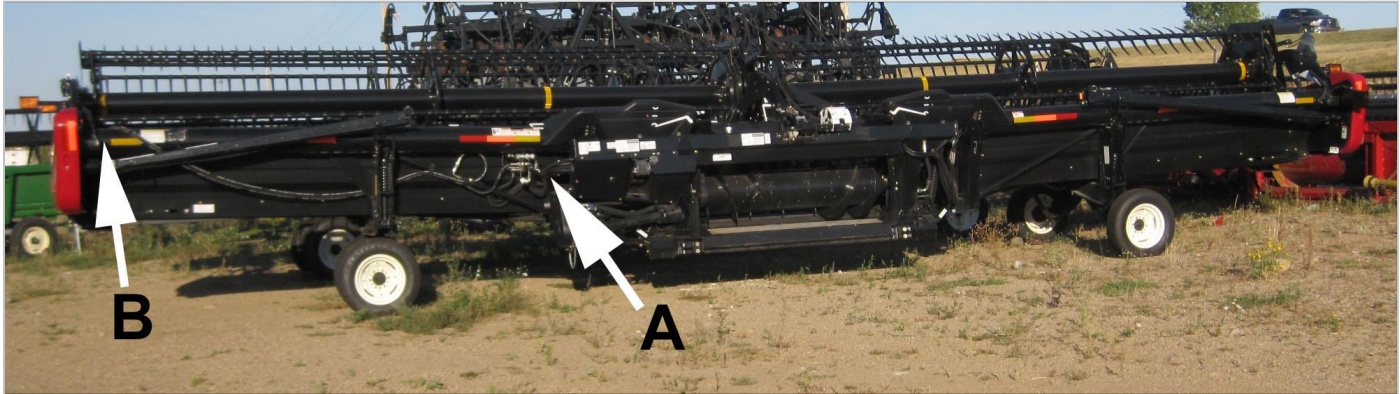


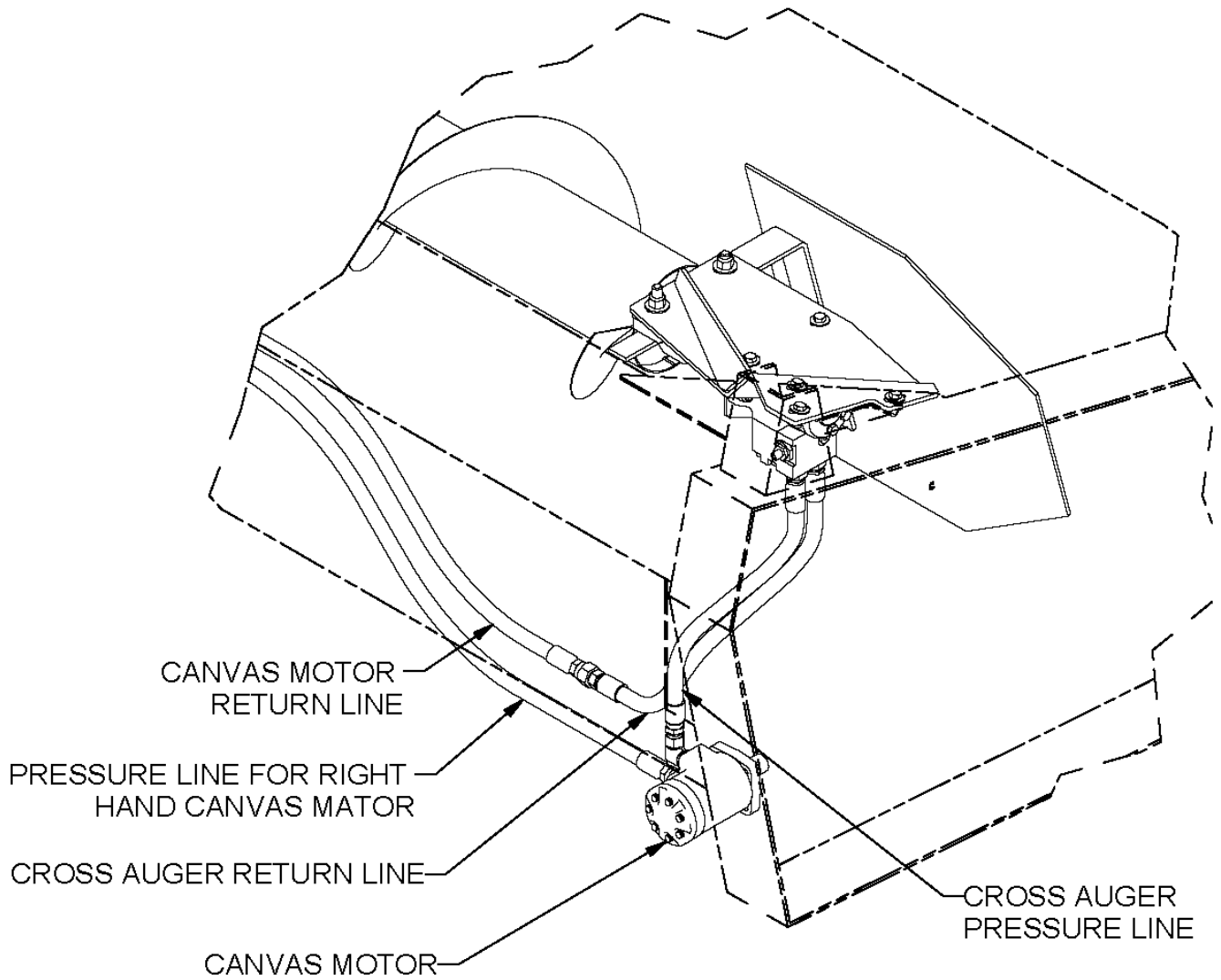
FIGURE 20 2011 HYDRAULIC HOSES ON FD70 / CASE 2162

The auger drive pressure hose runs from the return line from the right-hand canvas drive motor **at A** to the Ag Shield auger motor **at B** – and the return hose runs from the forward port of the motor back to the fitting to which the canvas motor was originally attached. The hoses extend the series loop of motors by one additional motor.

1. Install the hydraulic hoses as follows:
2. Disconnect hose end “A” from the fitting “B” The pressure hose “A” comes from the return line from the right-hand canvas motor
3. Connect the Ag Shield Pressure hose to the hose end A,
4. Connect the other end of pressure hose to the rear port of the motor. (The oil will take the long way around the motor, and exit out the front port of motor)
5. Connect the Ag Shield “Return” hose to forward port of motor
6. Connect the other end of the return hoses to the fitting B in photo above, the right-hand canvas motor return is shown in picture. The return hose comes from the forward port of Ag Shield cross auger motor, and returns to the #12 JIC male tee left open at B
7. Test direction of rotation to be down on the front of the auger, and set speed of the reel, and use the flow control supplied to set the auger speed to be 5% or slightly greater than the canvases- see Operations Section 5 for more info

4.3. HYDRAULICS FOR MACDON 974 OUTBOARD CANVAS

MACDON 974 FLEX CROSS AUGER HYDRAULIC DRIVE PLUMBING



4.4. HYDRAULICS FOR MACDON HEADER WITH TIN COVER

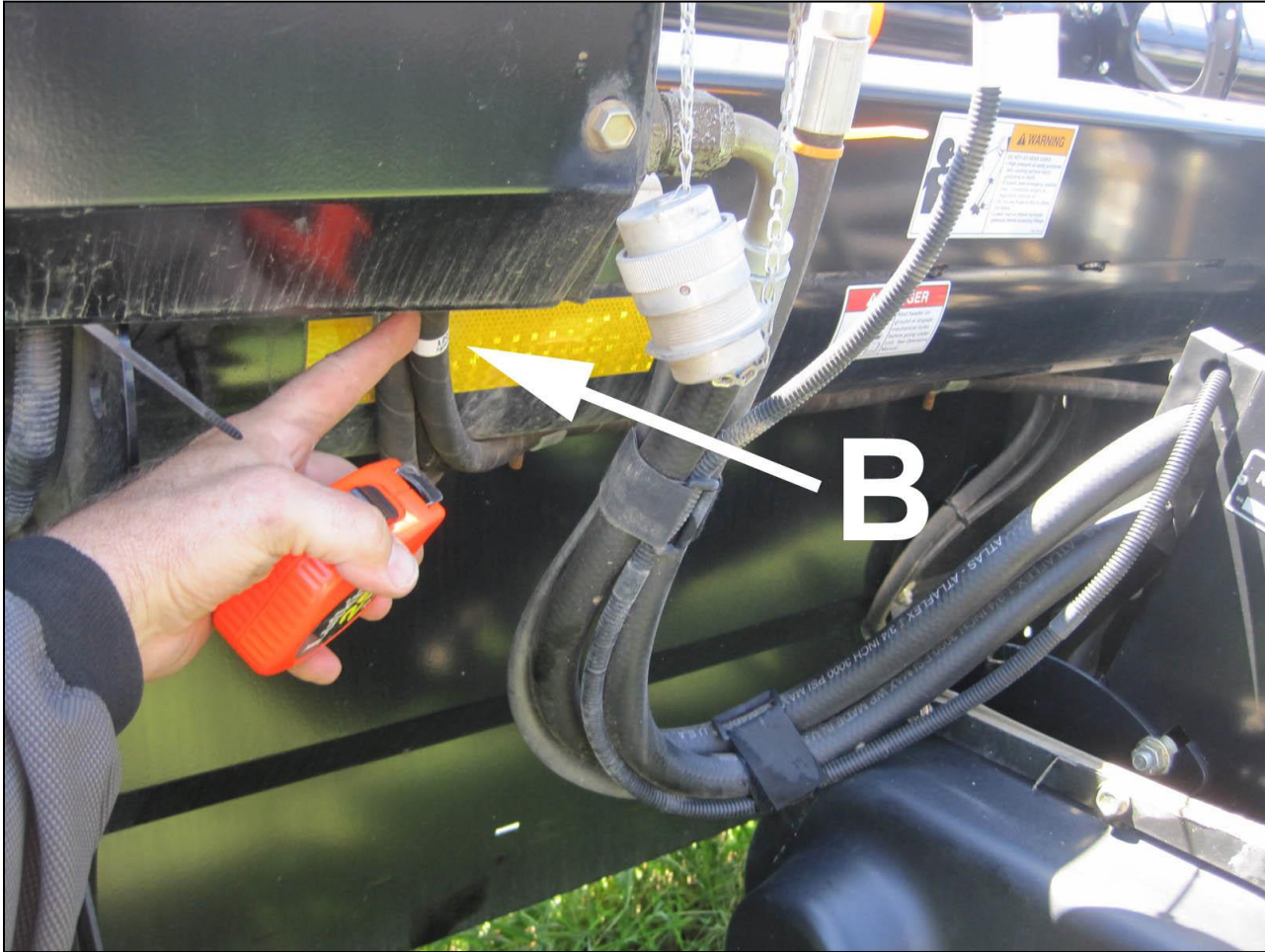


FIGURE 21 CANVAS RETURN HOSE LEFT SIDE OF CENTER

4.5. HYDRAULICS FOR MACDON HEADER WITH TIN COVER

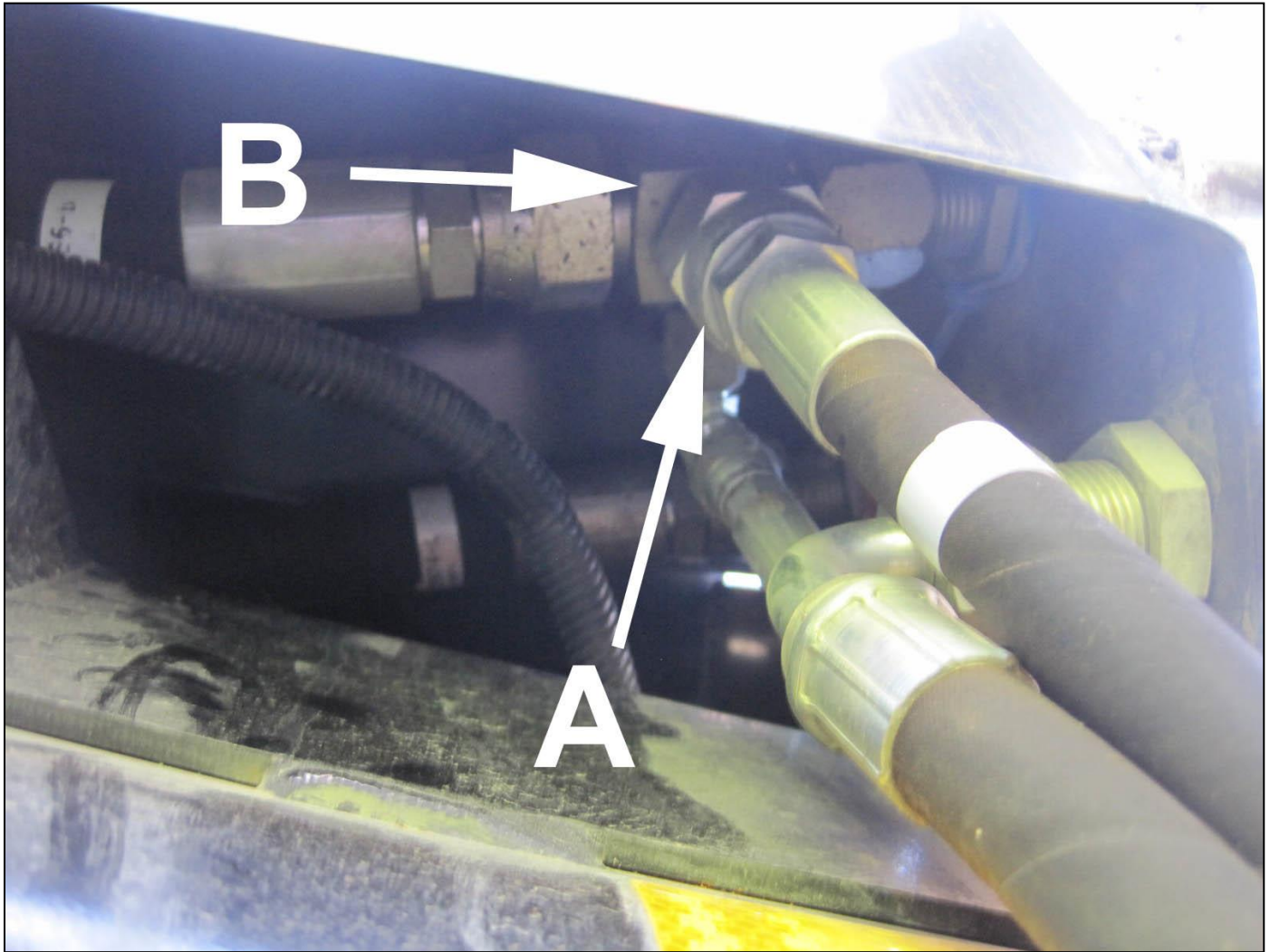


FIGURE 22 HOSE ATTACHMENT FROM BOTTOM UP

1. Remove the tin cover from the header to gain access to the return line from the RH canvas motor.
2. Remove the large straight #12 female fitting from the bottom of the "T"
3. Insert the ag shield #12MJIC end into the #12 FJIC
4. Route that hose to the ag shield motor port B
5. Attach the ag shield #12FJIC onto the bottom of the "T"
6. Route that hose to port A on the Ag Shield motor
7. Tighten all fittings.
8. Install tin back onto the header.

4.6. HYDRAULIC MOTOR HOSE INSTALL

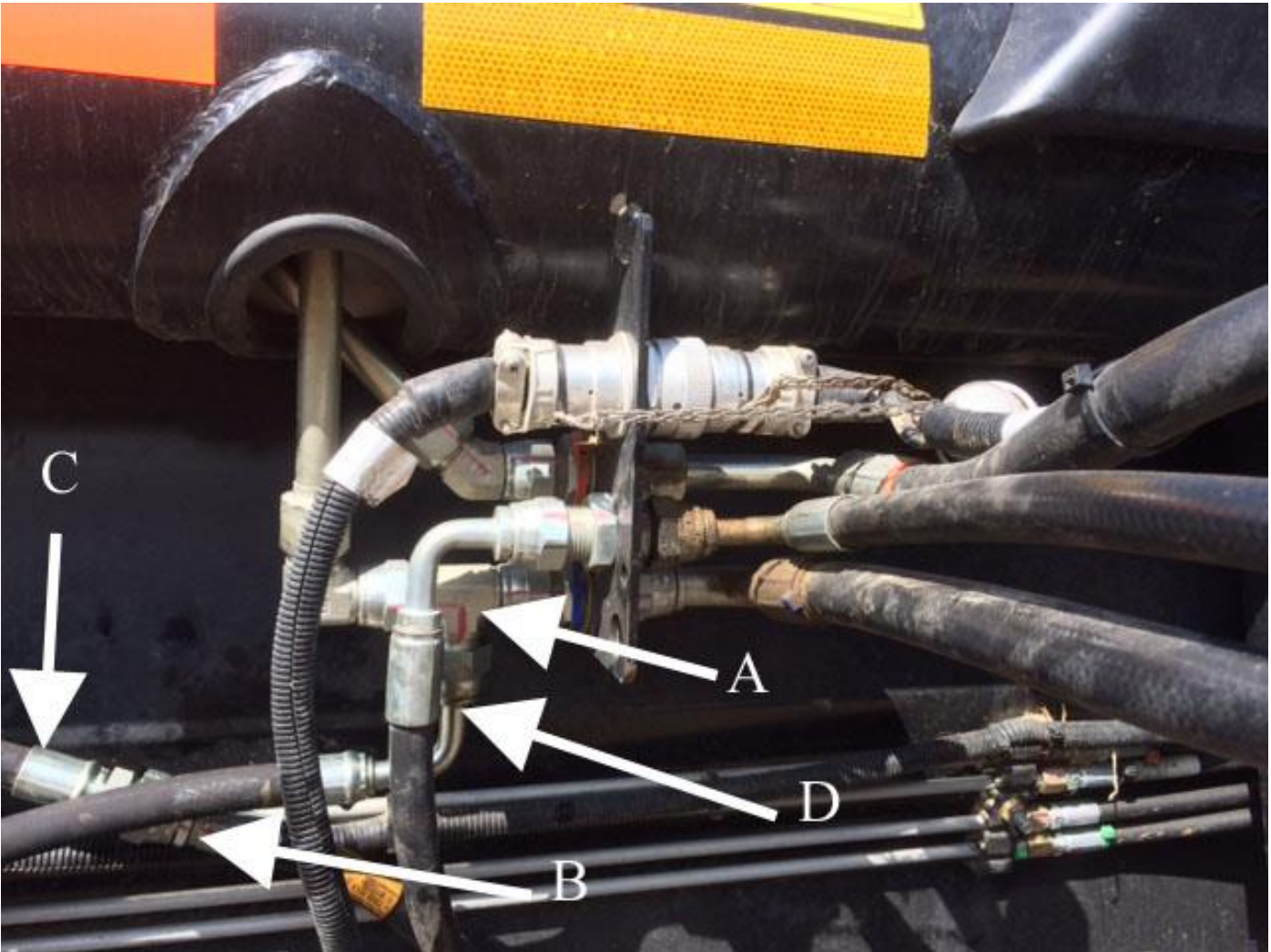


FIGURE 23 HYDRAULIC HOSE LAYOUT COMPLETE

1. Remove hose (B) from the bottom of the Tee (A)
2. Connect Hose (C) to hose (B) and route to Port B on the Ag Shield auger motor.
3. From Port A on Ag shield motor connect the hose to the bottom of the T (D)

4.7. HYDRAULIC HOSE INSTALLATION FOR FD1 SERIES

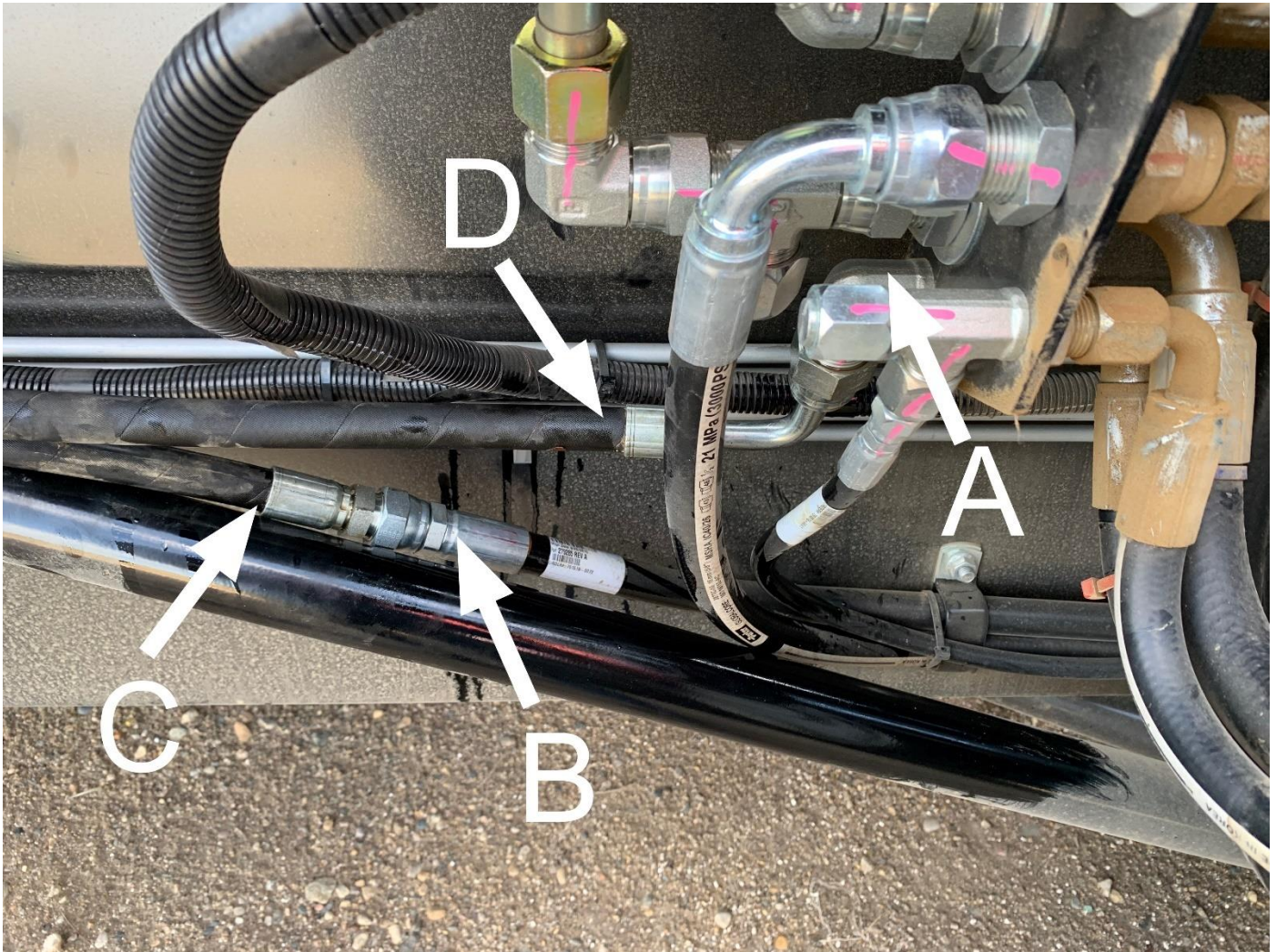


FIGURE 24 HYDRAULIC SET UP FOR FD1 SERIES HEADERS

1. Remove hose (B) from the bottom of the fitting (A)
2. Connect Hose (C) to hose (B) and route to Port B on the Ag Shield auger motor.
3. From Port A on Ag shield motor connect the hose (D) to the bottom of the Fitting (A)

4.8. 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 last after the auger has been installed and tested. This will ensure the height of the auger does not change after the stripper bar height has been set.
- 3) Flex the header into the frown position before installing the stripper bar.



- 3) Hold stripper bar up to the back board and mark the holes in the middle of the slot (every second hole will be fine)
- 4) A magnet will help hold one end if installing alone.
- 5) Make sure before drilling that the drill will not damage anything behind the back board (hyd fittings hoses etc.)
- 6) Drill 3/8" holes in the middle of the slot in the back board.
- 7) Set the stripper bar to be 1/4" below the flighting.
- 8) Tighten the stripper bar to the back board.

5. OPERATIONS



DANGER

Stay clear of auger whenever it is running

5.1. FIELD SETTING THE CROSS AUGER

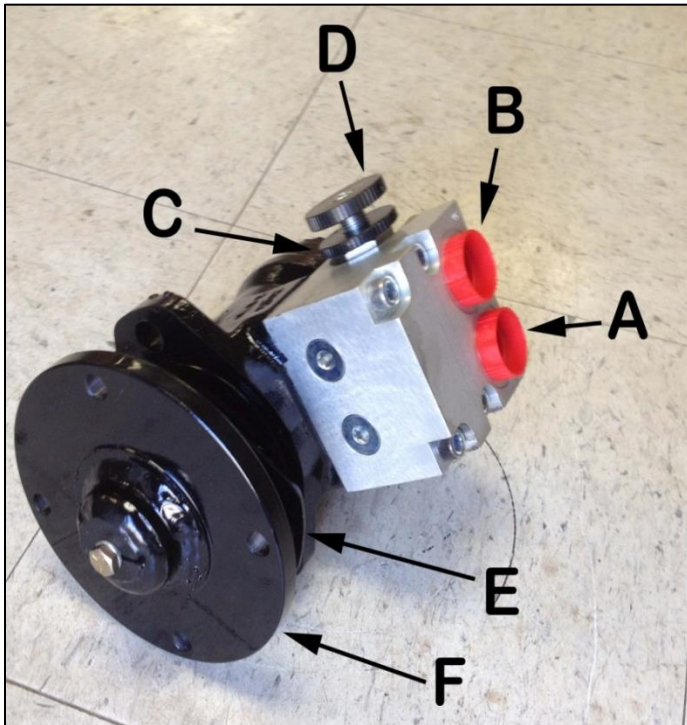


FIGURE 25 SAUER MOTOR SPEED CONTROL

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 D counterclockwise.

Observe the auger from the combine cab or Swather operating platform. Focus your eye on one auger flighting and compare to a 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.

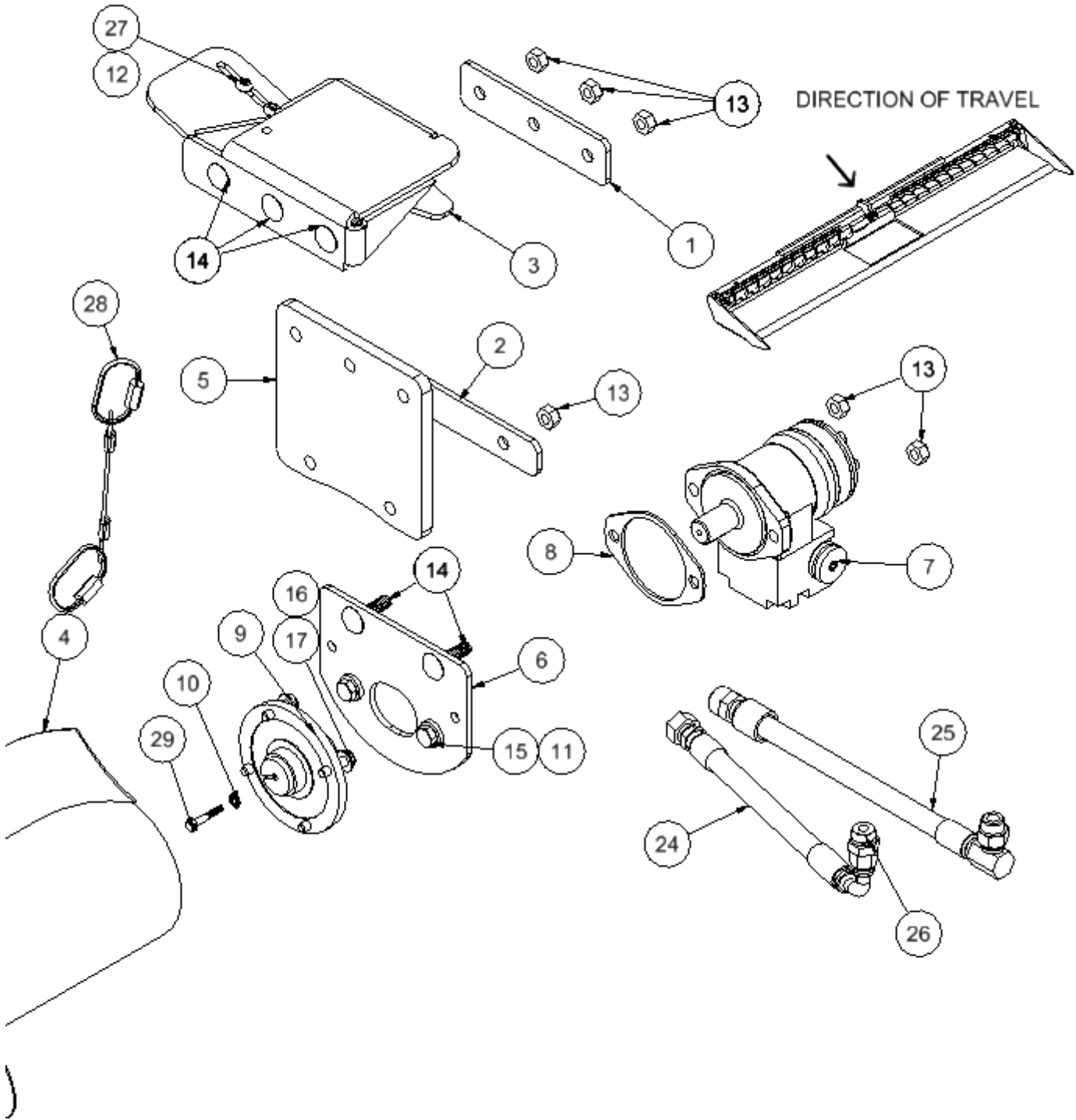
In peas, augers can often be operated at a very slow speed--- 30% of canvas speed, and still feed as much crop into combine. When augers turn slower, there are fewer tendencies to wrap.

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

6. CROSS AUGER PARTS FOR MACDON FD 30-45 ft MODELS

6.1. LEFT END MOUNT AND DIRECT DRIVE MOTOR

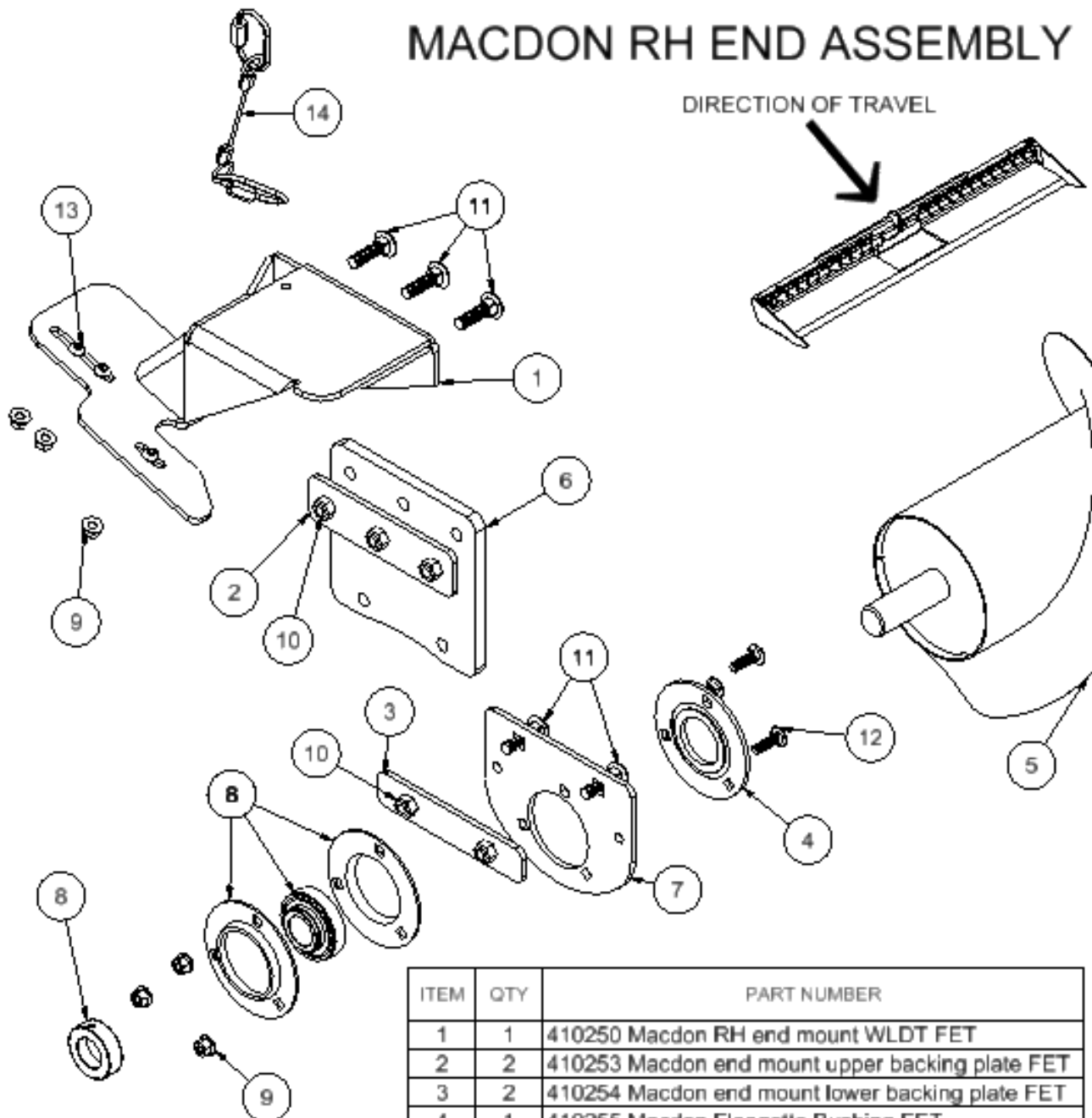
MACDON LH END ASSEMBLY



MACDON LH END ASSEMBLY PARTS LIST

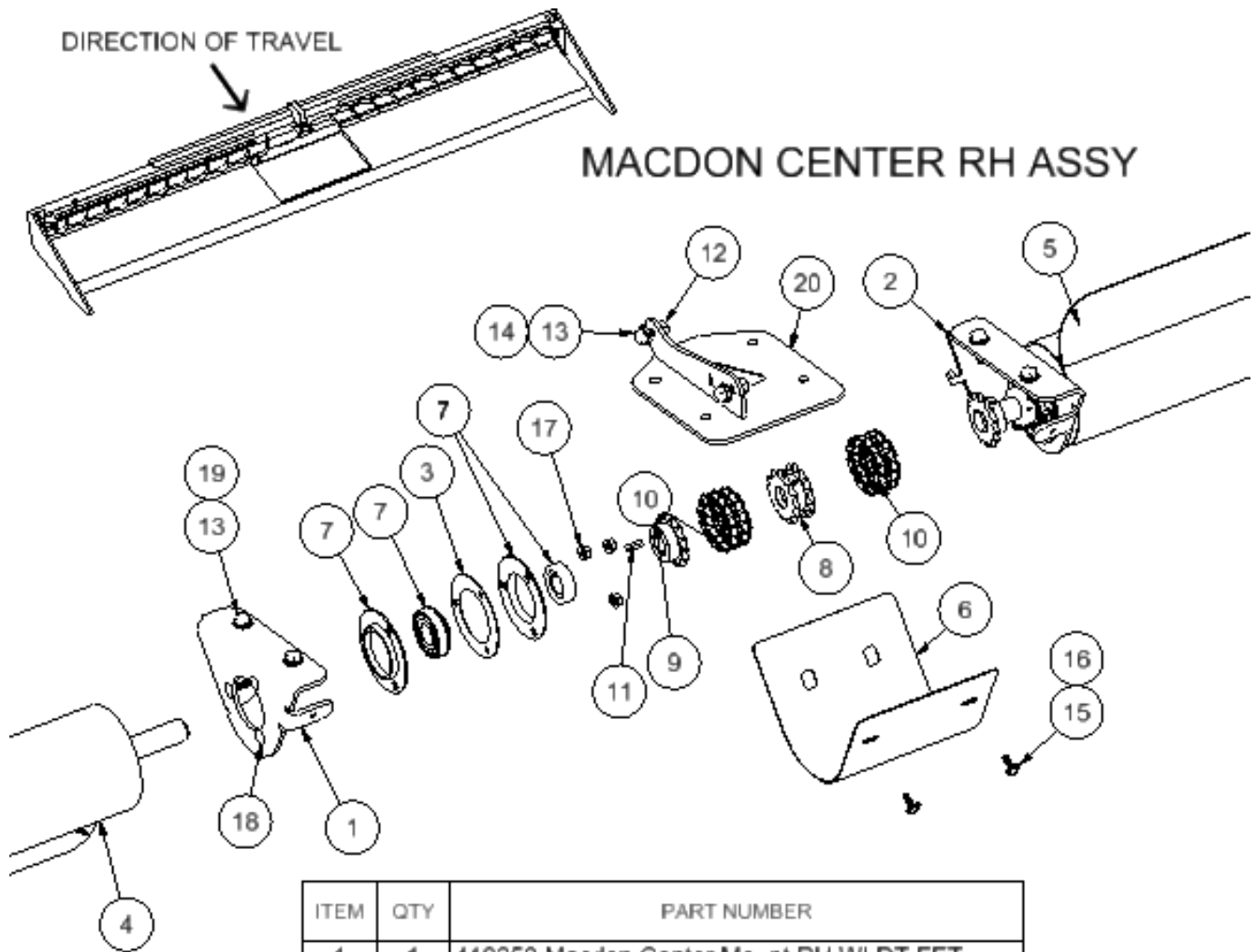
ITEM	QTY	PART NUMBER
1	2	410253 Macdon end mount upper backing plate FET
2	2	410254 Macdon end mount lower backing plate FET
3	1	410267 Macdon LH End Mount WLDT FET
4	1	410272 Macdon 35 Ft Auger WLDT LH FET
5	2	410257 Macdon Rubber End Mount FET
6	1	410266 Macdon LH Motor Mount Plate FET
7	1	117170 motor with flow control 5.9 danfoss
8	1	407271 shim hyd motor mt AGCO 9250
9	1	407105 direct drive motor adapter widt
10	1	101403 Washer Contact Lock 1-4 in
11	4	101304 Washer Hardened 1-2 in F436
12	15	102202 Nut Flange Top Lock 3-8 G
13	12	102146 nut 1 2 stover lock
14	10	100944 Carriage Bolt 1-2 x 1 3-4 in
15	2	100703 bolt 1-2 X 2 gr5 pltd nc
16	4	100603 bolt 3 8NCx1 1 4 gr5 hex pltd
17	4	101405 Washer Contact Lock 3-8 in
18	1	405726 flap bolt on widt 3in LH
19	2	100660 bolt 7-16 X 1 gr5 pltd nc
20	2	101801 Bolt Button Head 1-4 x 3-4 in
21	2	102121 nut nylok 1/4" nc gr5 pltd
22	1	405725 flap bolt on widt 3in RH
23	1	410275 macdon center bearing hanger widt
24	1	118831 hose 08 138 12FJICS90 x 08FJIC
25	1	118836 hyd hose 08 134in x 12MJIC x 08MORB90
26	1	117984 ADAPTER STR 10MORB X 08 MJIC
27	6	101823 Bolt Button Head 3-8 x 1 1-4 in
28	2	410280 End Mount Cable Assy
29	1	100405 bolt 1/4nc 1 1/2 gr5 pltd hex
30	2	101406 Washer Contact Lock 7-16 in

6.2. RIGHT END ASSEMBLY



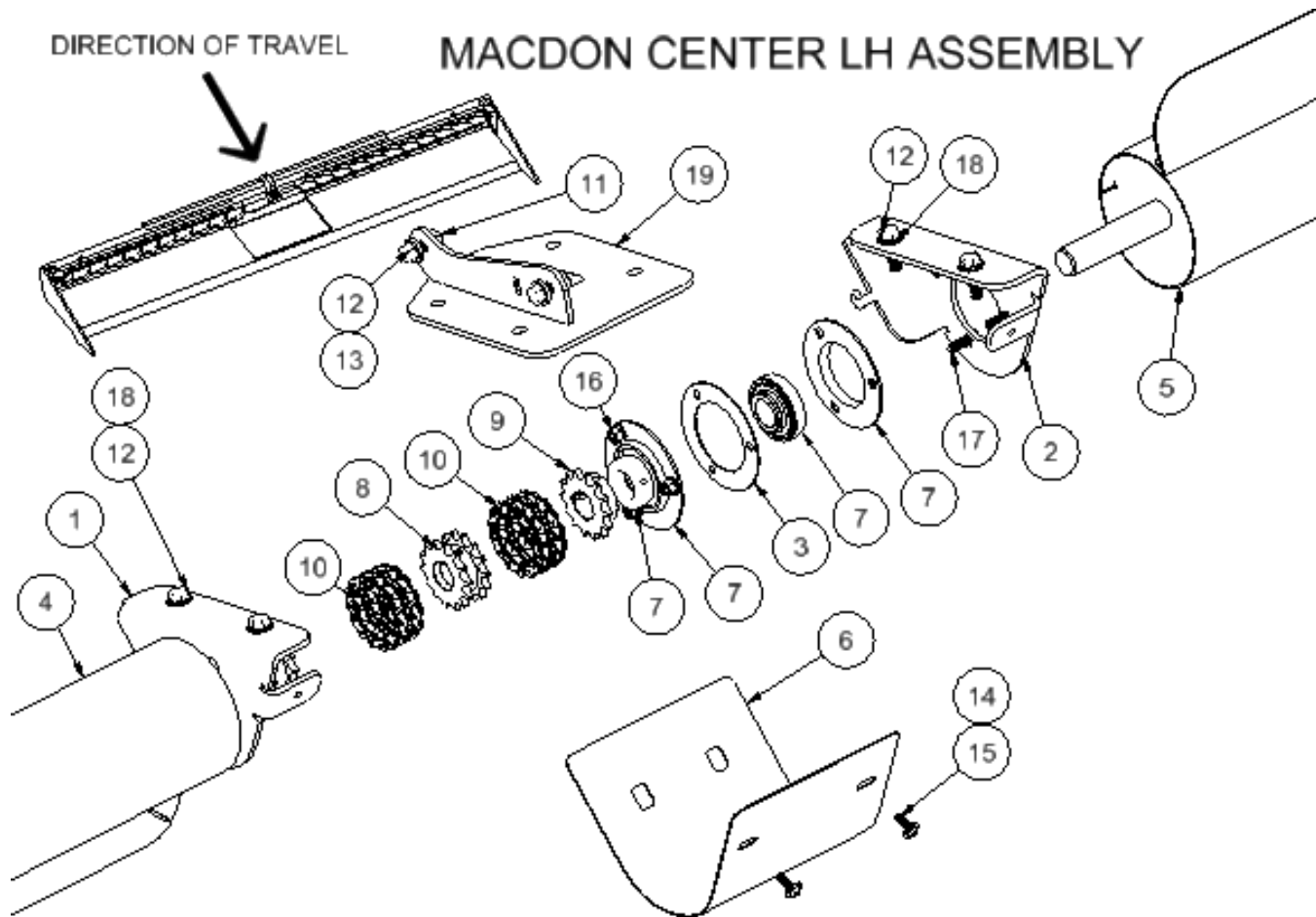
ITEM	QTY	PART NUMBER
1	1	410250 Macdon RH end mount WLDT FET
2	2	410253 Macdon end mount upper backing plate FET
3	2	410254 Macdon end mount lower backing plate FET
4	1	410255 Macdon Flangette Bushing FET
5	1	410269 Macdon 35 Ft Auger WLDT RH FET
6	2	410257 Macdon Rubber End Mount FET
7	1	410256 Macdon RH bearing mt plate FET
8	3	114487 207 flangette bearing assy
9	15	102202 Nut Flange Top Lock 3-8 G
10	12	102146 nut 1 2 stover lock
11	10	100944 Carriage Bolt 1-2 x 1 3-4 in
12	9	100980 Carriage Bolt 3-8 x 1 1-4
13	6	101823 Bolt Button Head 3-8 x 1 1-4 in
14	2	410280 End Mount Cable Assy

6.3. CENTER ASSEMBLY AND MOUNT



ITEM	QTY	PART NUMBER
1	1	410258 Macdon Center Mount RH WLDT FET
2	1	410260 Macdon Center Mount LH wldt FET
3	2	410265 Macdon Flangette Shim Plate FET
4	1	410269 Macdon 35 Ft Auger WLDT RH FET
5	1	410272 Macdon 35 Ft Auger WLDT LH FET
6	1	410262 Macdon Center Main Guard FET
7	3	114487 207 flangette bearing assy
8	1	410278 double chain coupler sprocket
9	2	114468 chain coupler 1-1/4" ID
10	2	114469 Coupler Chain 2R No50
11	2	405361 key 1/4" x 1/4" x 1"
12	2	102204 Nut Flange Top Lock 1-2 in G
13	6	100702 bolt 1/2nc 1 1/2 gr5 pltd hex
14	4	101304 Washer Hardened 1-2 in F436
15	2	101404 Washer Contact Lock 5-16 in
16	2	101812 Bolt Button Head 5-16 x 1
17	15	102202 Nut Flange Top Lock 3-8 G
18	9	100980 Carriage Bolt 3-8 x 1 1-4
19	4	101407 Washer Contact Lock 1-2 in
20	1	410275 macdon center bearing hanger wldt

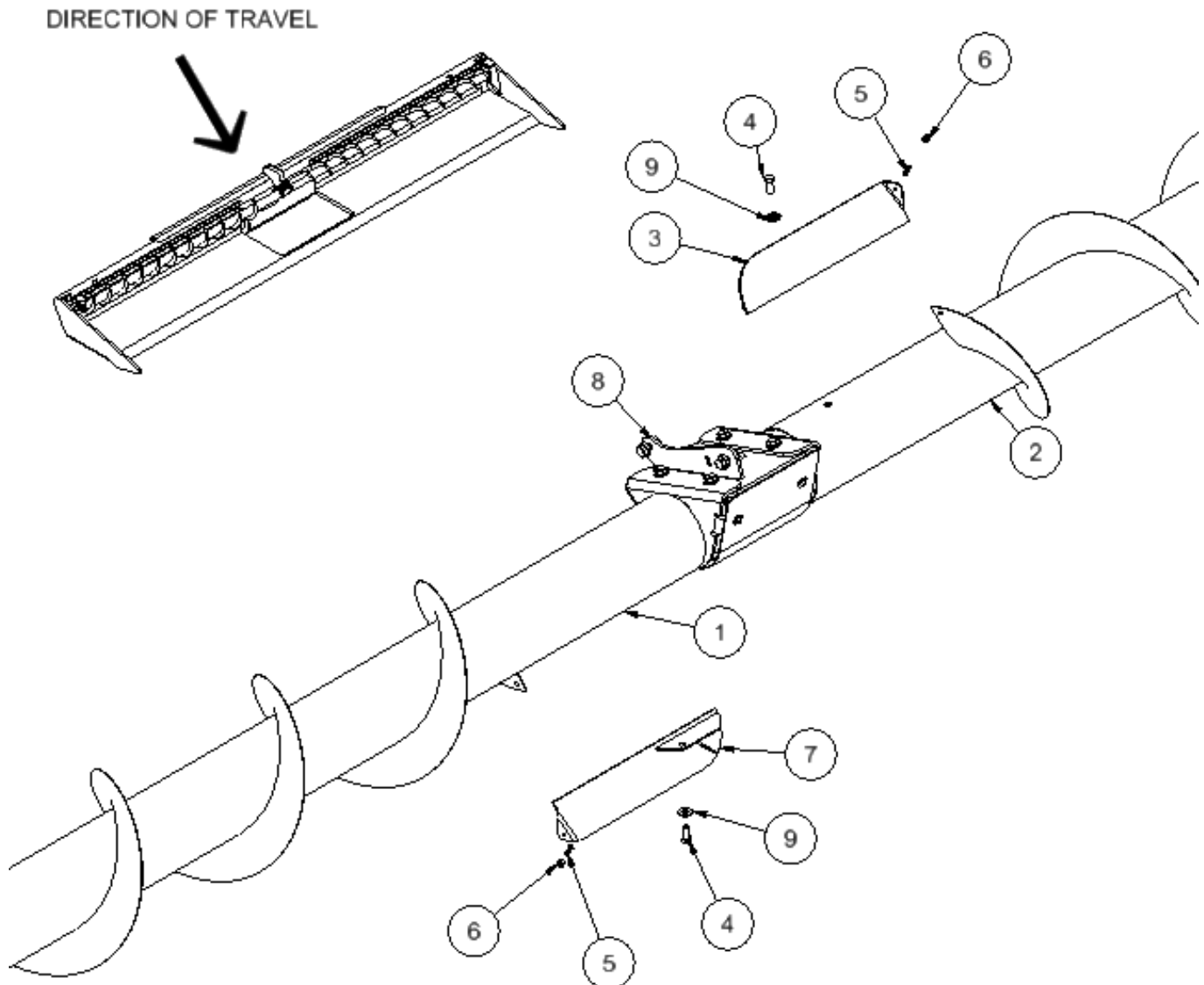
6.4. CENTER ASSEMBLY AND MOUNT



ITEM	QTY	PART NUMBER
1	1	410258 Macdon Center Mount RH WLDT FET
2	1	410260 Macdon Center Mount LH wldt FET
3	2	410265 Macdon Flangette Shim Plate FET
4	1	410269 Macdon 35 Ft Auger WLDT RH FET
5	1	410272 Macdon 35 Ft Auger WLDT LH FET
6	1	410262 Macdon Center Main Guard FET
7	3	114487 207 flangette bearing assy
8	1	410278 double chain coupler sprocket
9	2	114468 chain coupler 1-1/4" ID
10	2	114469 Coupler Chain 2R No 50
11	2	102204 Nut Flange Top Lock 1-2 in G
12	6	100702 bolt 1/2nc 1 1/2 gr5 pltd hex
13	4	101304 Washer Hardened 1-2 in F436
14	2	101404 Washer Contact Lock 5-16 in
15	2	101812 Bolt Button Head 5-16 x 1
16	15	102202 Nut Flange Top Lock 3-8 G
17	9	100980 Carriage Bolt 3-8 x 1 1-4
18	4	101407 Washer Contact Lock 1-2 in
19	1	410275 macdon center bearing hanger wldt

6.5. CENTER PADDLE ASSEMBLY

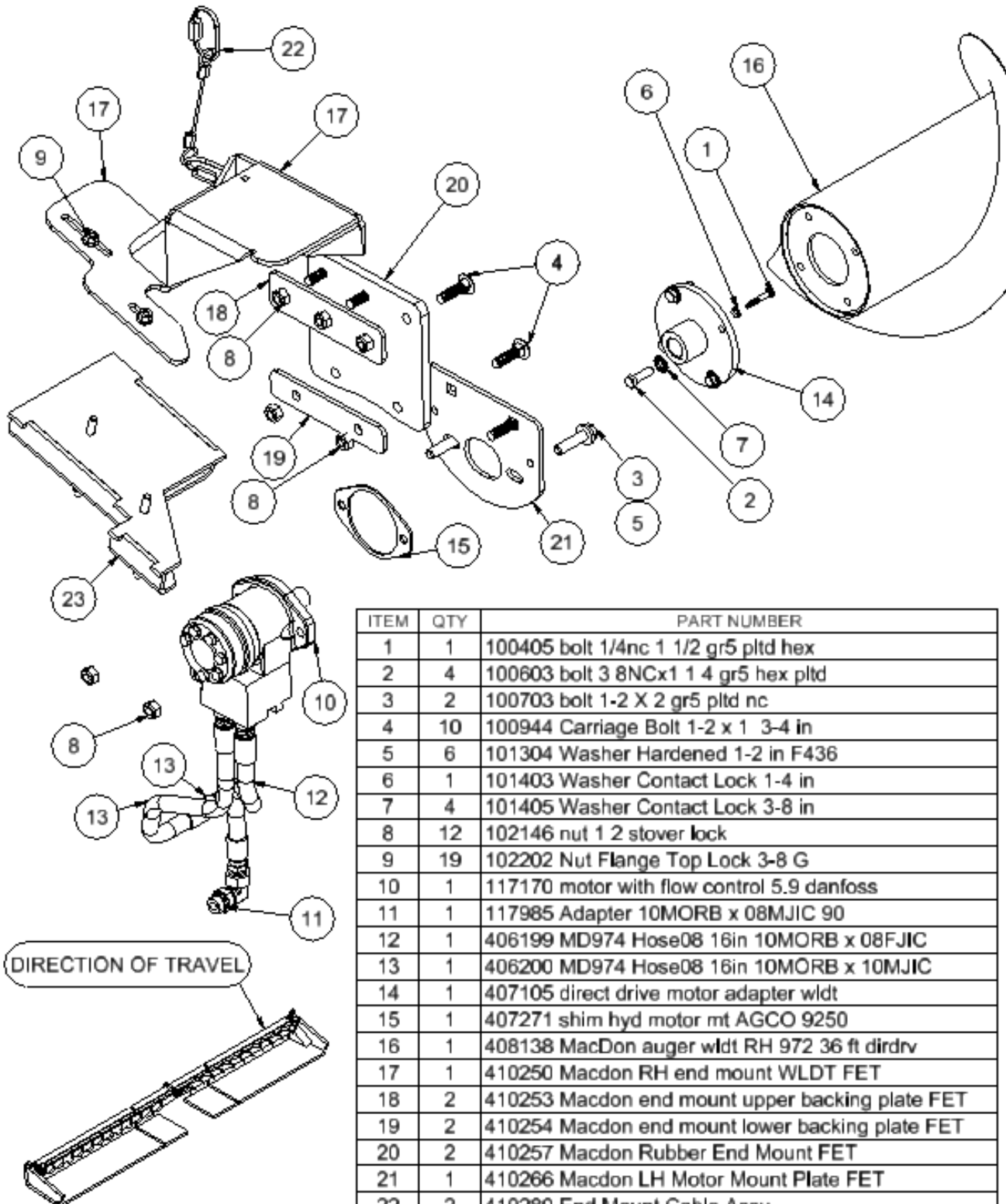
CENTER PADDLE ASSEMBLY



ITEM	QTY	PART NUMBER
1	1	410269 Macdon 35 Ft Auger WLDT RH FET
2	1	410272 Macdon 35 Ft Auger WLDT LH FET
3	1	405726 flap bolt on wldt 3in LH
4	2	100660 bolt 7-16 X 1 gr5 pltd nc
5	2	101801 Bolt Button Head 1-4 x 3-4 in
6	2	102121 nut nylok 1/4" nc gr5 pltd
7	1	405725 flap bolt on wldt 3in RH
8	1	410275 macdon center bearing hanger wldt
9	2	101406 Washer Contact Lock 7-16 in

6.6. MD 974 RH END

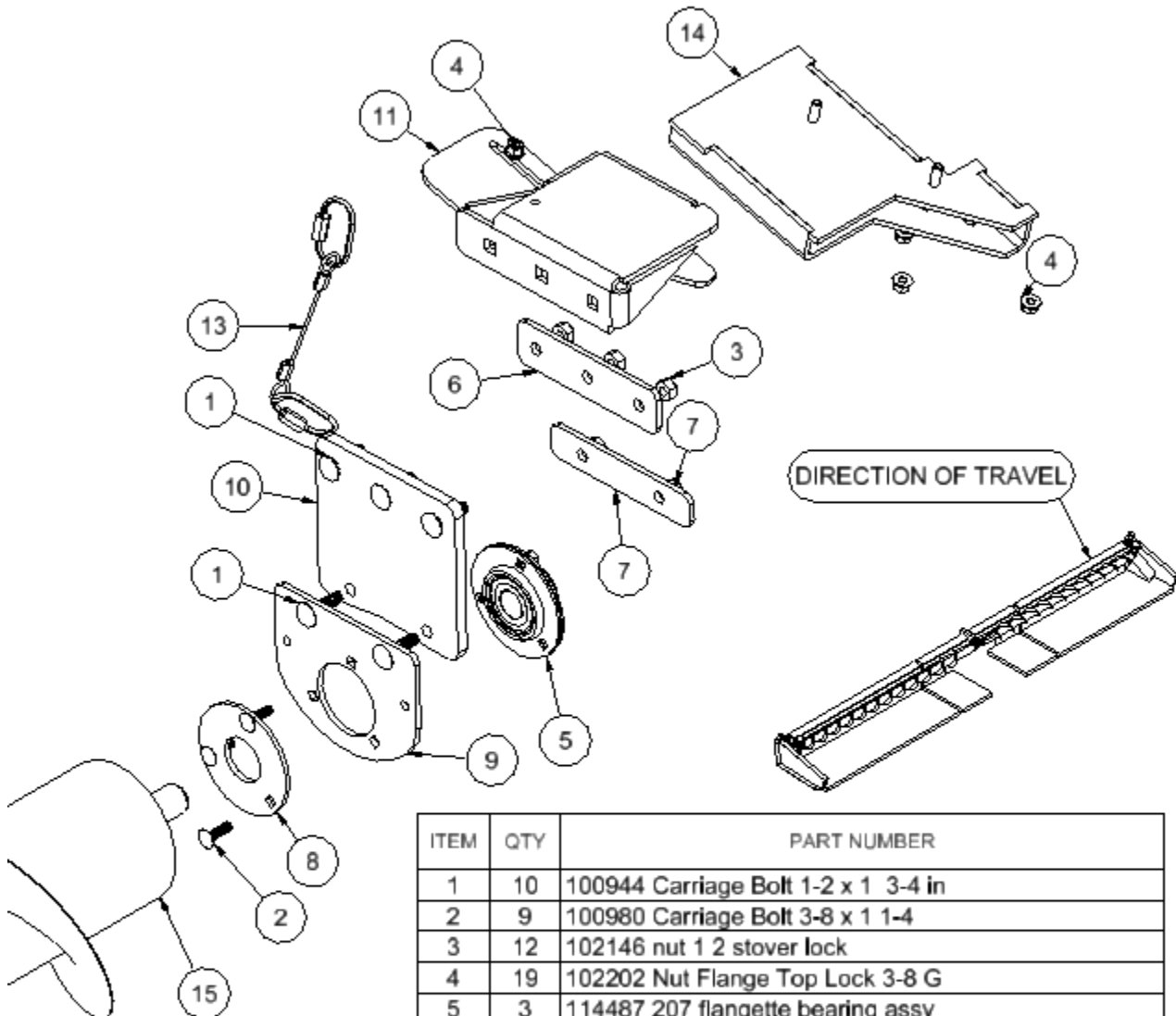
MD 974 36 FT RH END



ITEM	QTY	PART NUMBER
1	1	100405 bolt 1/4nc 1 1/2 gr5 pltd hex
2	4	100603 bolt 3 8NCx1 1 4 gr5 hex pltd
3	2	100703 bolt 1-2 X 2 gr5 pltd nc
4	10	100944 Carriage Bolt 1-2 x 1 3-4 in
5	6	101304 Washer Hardened 1-2 in F436
6	1	101403 Washer Contact Lock 1-4 in
7	4	101405 Washer Contact Lock 3-8 in
8	12	102146 nut 1 2 stover lock
9	19	102202 Nut Flange Top Lock 3-8 G
10	1	117170 motor with flow control 5.9 danfoss
11	1	117985 Adapter 10MORB x 08MJIC 90
12	1	406199 MD974 Hose08 16in 10MORB x 08FJIC
13	1	406200 MD974 Hose08 16in 10MORB x 10MJIC
14	1	407105 direct drive motor adapter wldt
15	1	407271 shim hyd motor mt AGCO 9250
16	1	408138 MacDon auger wldt RH 972 36 ft dirdrv
17	1	410250 Macdon RH end mount WLDT FET
18	2	410253 Macdon end mount upper backing plate FET
19	2	410254 Macdon end mount lower backing plate FET
20	2	410257 Macdon Rubber End Mount FET
21	1	410266 Macdon LH Motor Mount Plate FET
22	2	410280 End Mount Cable Assy
23	1	410322 Macdon 97X RH end mount spacer wldt

6.7. MD 974 LH END

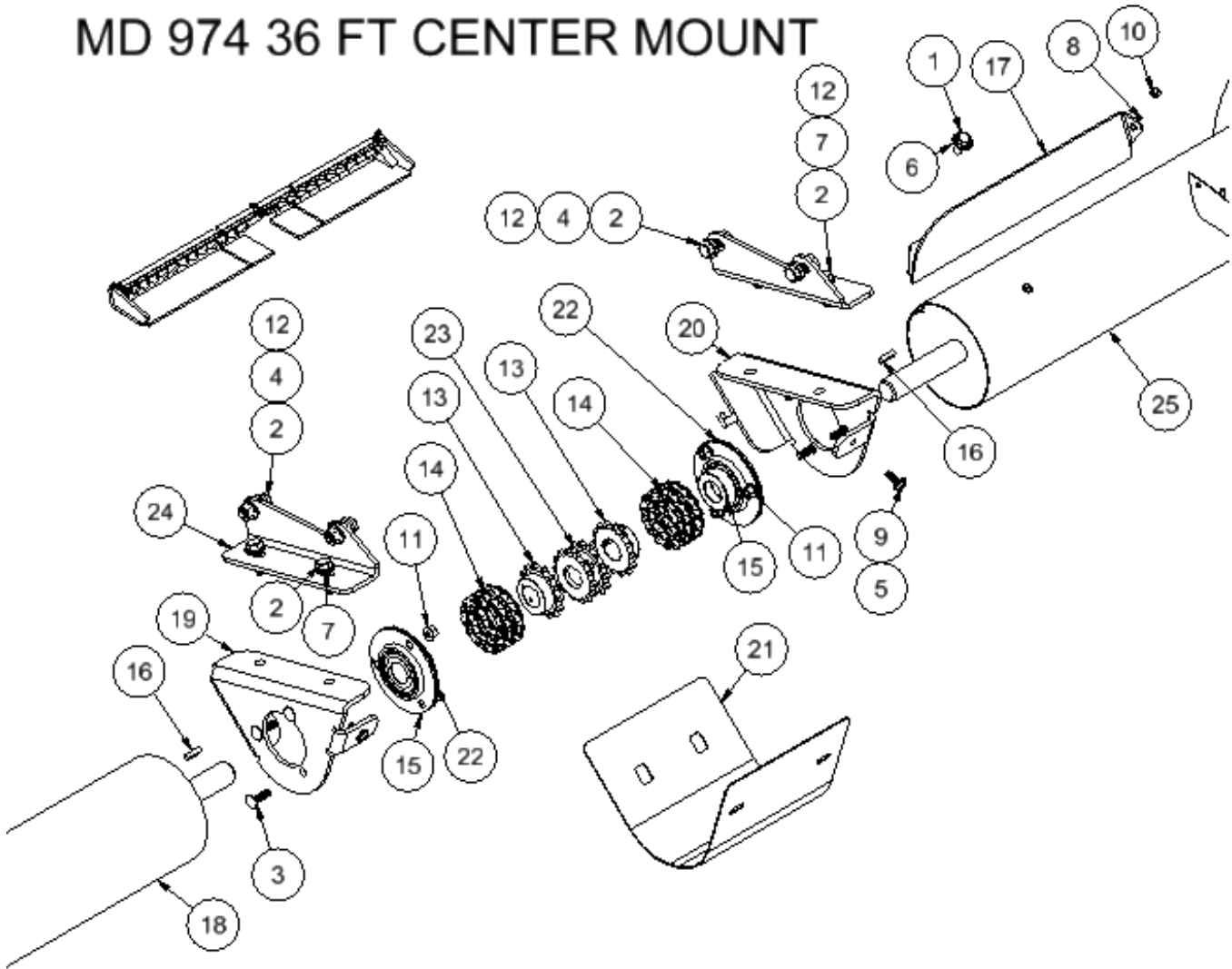
MD 974 36 FT LH END



ITEM	QTY	PART NUMBER
1	10	100944 Carriage Bolt 1-2 x 1 3-4 in
2	9	100980 Carriage Bolt 3-8 x 1 1-4
3	12	102146 nut 1 2 stover lock
4	19	102202 Nut Flange Top Lock 3-8 G
5	3	114487 207 flangette bearing assy
6	2	410253 Macdon end mount upper backing plate FET
7	2	410254 Macdon end mount lower backing plate FET
8	1	410255 Macdon Flangette Bushing FET
9	1	410256 Macdon RH bearing mt plate FET
10	2	410257 Macdon Rubber End Mount FET
11	1	410267 Macdon LH End Mount WLDT FET
12	1	410278 double chain coupler sprocket
13	2	410280 End Mount Cable Assy
14	1	410322 Macdon 97X RH end mount spacer wldt_MIR
15	1	410327 MD 97X 36 FT LH auger wldt

6.8. MD 974 CENTER SECTION

MD 974 36 FT CENTER MOUNT



ITEM	QTY	PART NUMBER	ITEM	QTY	PART NUMBER
1	2	100660 bolt 7-16 X 1 gr5 pltd nc	16	2	405361 key 1/4" x 1/4" x 1"
2	8	100702 bolt 1/2nc 1 1/2 gr5 pltd hex	17	1	405726 flap bolt on wldt 3in LH
3	9	100980 Carriage Bolt 3-8 x 1 1-4	18	1	408138 MacDon auger wldt RH 972 36 ft dirdrv
4	6	101304 Washer Hardened 1-2 in F436	19	1	410258 Macdon Center Mount RH WLDT FET
5	2	101404 Washer Contact Lock 5-16 in	20	1	410260 Macdon Center Mount LH wldt FET
6	2	101406 Washer Contact Lock 7-16 in	21	1	410262 Macdon Center Main Guard FET
7	4	101407 Washer Contact Lock 1-2 in	22	2	410265 Macdon Flangette Shim Plate FET
8	2	101801 Bolt Button Head 1-4 x 3-4 in	23	1	410278 double chain coupler sprocket
9	2	101812 Bolt Button Head 5-16 x 1	24	1	410325 MD 97X Center Hanger plate_MIR
10	2	102121 nut nylok 1/4" nc gr5 pltd	25	1	410327 MD 97X 36 FT LH auger wldt
11	19	102202 Nut Flange Top Lock 3-8 G			
12	8	102204 Nut Flange Top Lock 1-2 in G			
13	2	114468 chain coupler 1-1/4" ID			
14	2	114469 Coupler Chain 2R No 50			
15	3	114487 207 flangette bearing assy			

PAGE INTENTIONALLY LEFT BLANK

7. WARRANTY

1. Ag Shield Manufacturing warrants each new Ag Shield cross auger 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 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.



BOX 9, BENITO, MANITOBA CANADA R0L 0C0
 Phone 1-800-561-0132 or 204-539-2000 Fax 204-539-2130
www.agshield.com E-mail: sales@agshield.com

WARRANTY CLAIM FORM

Dealer		End User				
Address		Address				
City	State/Prov.	Zip/Postal	City	State/Prov.	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			
Quantity Item	Part #	Description	Price Each	Total Price	Describe The Cause Of Failure And Corrective Action Taken	Approve /Reject
I certify that the information is accurate and That the parts were replaced on the machine			PARTS		Date Parts Rec'd	Rec'd By
			LABOUR		Items To Suppliers	
			TOTAL			

SHADED AREAS AG SHIELD USE ONLY – PLEASE ADD DETAILS FOR ITEM NUMBER ON BACK

ITEM

ITEM
