MacDon

FM100
Float Module

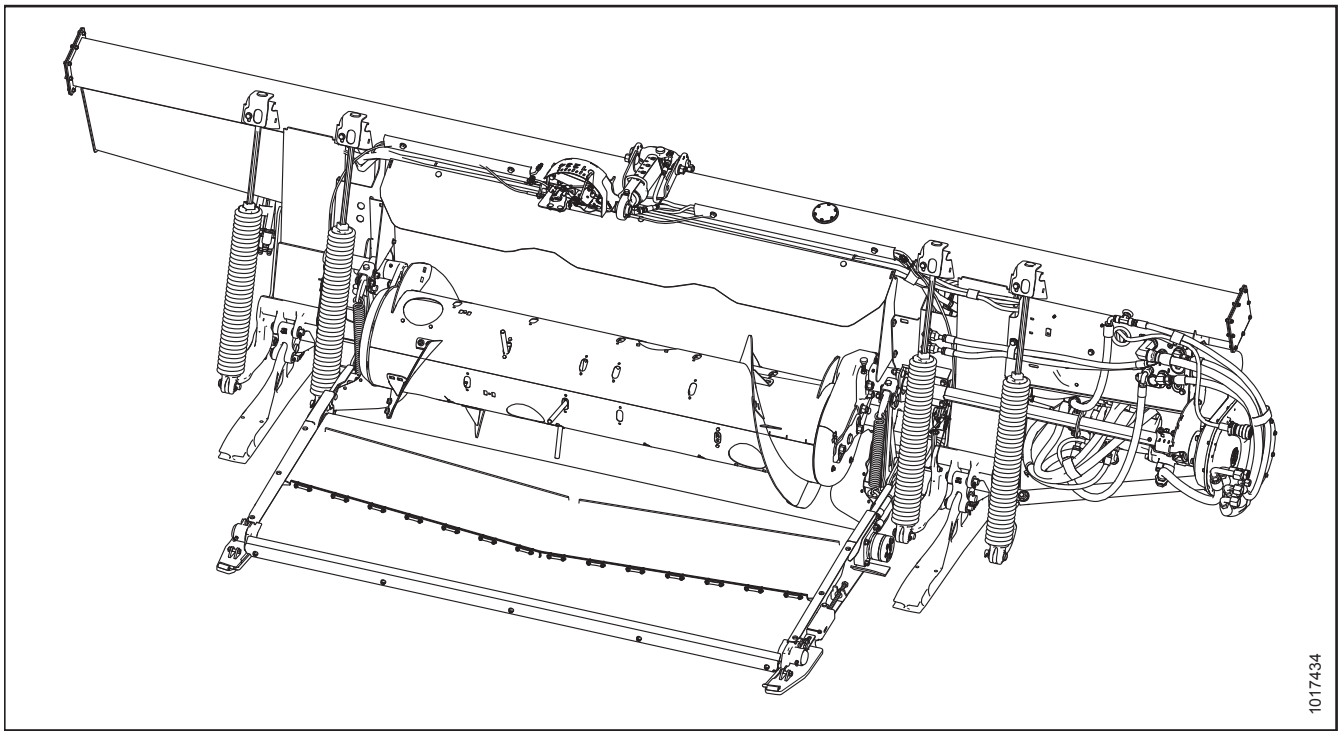
Right Auger Support Bar Service Kit (MD #308134)
Installation Instructions

214577 Revision B

Original Instruction

The harvesting specialists.

FM100 Float Module



Published in April 2019.

Introduction

The right auger support bar used on MacDon FM100 Float Modules changed between model year 2017 and model year 2018. The new bar has a slightly different shape and therefore requires a different right auger cover. If you want to replace the bar on an older float module, you will also need to replace the right auger cover. The bar and the cover are provided in the Right Auger Support Bar Service kit (MD #308134).

NOTE:

The updated auger support bar allows for installation of the Bumper kit (MD #B6600), but in order to install the kit, the left auger arm must also be updated on model year 2016 and 2017 float modules. To update the left auger arm, order the Left Auger Arm Service kit (MD #308133).

This document explains how to install the kit. A list of parts included in the kit is provided in Chapter *2 Parts List, page 5*.

Installation time

Installation time for this kit is approximately 3 hours.

Conventions

The following conventions are used in this document:

- Right and left are determined from the operator's position. The front of the float module is the side that faces the crop; the back of the float module is the side that connects to the combine.
- Unless otherwise noted, use the standard torque values provided in the header operator's manual and technical manual.

NOTE:

Keep your MacDon publications up-to-date. The most current version of this instruction can be downloaded from our Dealer-only site (*https://portal.macdon.com*) (login required).

NOTE:

This document is currently available in English only.

List of Revisions

At MacDon, we're continuously making improvements, and occasionally these improvements affect product documentation. The following list provides an account of major changes from the previous version of this document.

Summary of Change	Location
Added explanations of IMPORTANT and NOTE.	*1.1 Signal Words, page 1*
Replaced right auger support bar MD #301987 with bar MD #308850 in parts list and illustration.	*2 Parts List, page 5*
• Inserted part number of the right auger support bar (MD #308850), and updated several illustrations to show the new bar. • Added IMPORTANT note explaining that the timing plates on the ends of the auger **MUST** both be in the same position.	*3.2 Replacing Right Auger Support Bar and Cover, page 11*

Introduction i
List of Revisions ii

Chapter 1: Safety 1

1.1 Signal Words 1
1.2 General Safety 2

Chapter 2: Parts List 5

Chapter 3: Installation Instructions 7

3.1 Removing Feed Auger 7
3.2 Replacing Right Auger Support Bar and Cover 11
3.3 Installing Feed Auger 15

Chapter 1: Safety

1.1 Signal Words

Three signal words, **DANGER**, **WARNING**, and **CAUTION**, are used to alert you to hazardous situations. Two signal words, **IMPORTANT** and **NOTE**, identify non-safety related information. Signal words are selected using the following guidelines:

DANGER

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

WARNING

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

CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may be used to alert against unsafe practices.

IMPORTANT:

Indicates a situation that, if not avoided, could result in a malfunction or damage to the machine.

NOTE:

Provides additional information or advice.

1.2 General Safety

CAUTION

The following general farm safety precautions should be part of your operating procedure for all types of machinery.

Protect yourself.

- When assembling, operating, and servicing machinery, wear all protective clothing and personal safety devices that could be necessary for job at hand. Do **NOT** take chances. You may need the following:
  - Hard hat
  - Protective footwear with slip-resistant soles
  - Protective glasses or goggles
  - Heavy gloves
  - Wet weather gear
  - Respirator or filter mask
- Be aware that exposure to loud noises can cause hearing impairment or loss. Wear suitable hearing protection devices such as earmuffs or earplugs to help protect against loud noises.

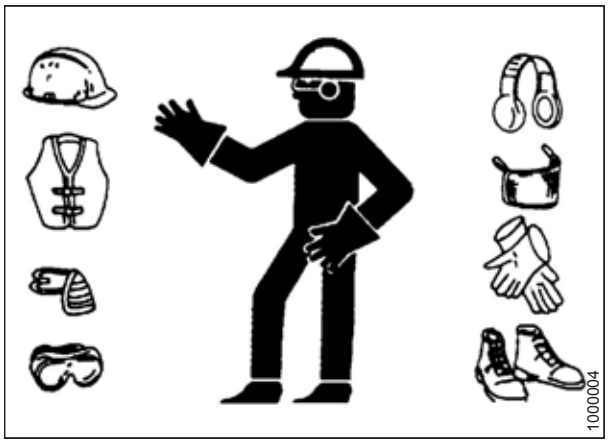


Figure 1.1: Safety Equipment

Figure 1.2: Safety Equipment

- Provide a first aid kit in case of emergencies.
- Keep a properly maintained fire extinguisher on the machine. Be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when the operator is tired or in a hurry. Take time to consider safest way. **NEVER** ignore warning signs of fatigue.

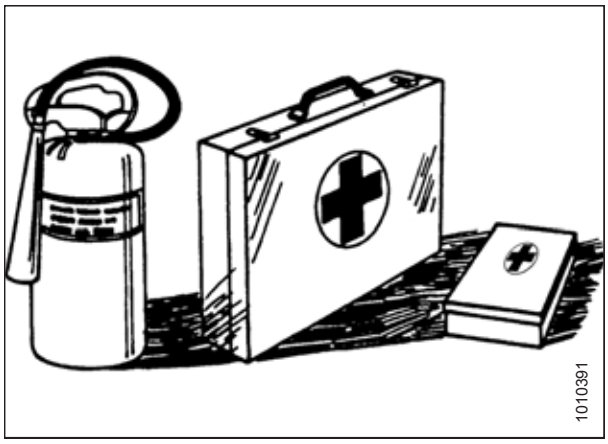


Figure 1.3: Safety Equipment

- Wear close-fitting clothing and cover long hair. **NEVER** wear dangling items such as scarves or bracelets.
- Keep all shields in place. **NEVER** alter or remove safety equipment. Make sure driveline guards can rotate independently of shaft and can telescope freely.
- Use only service and repair parts made or approved by equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.

Figure 1.4: Safety around Equipment

- Keep hands, feet, clothing, and hair away from moving parts. **NEVER** attempt to clear obstructions or objects from a machine while engine is running.
- Do **NOT** modify machine. Unauthorized modifications may impair machine function and/or safety. It may also shorten machine's life.
- To avoid injury or death from unexpected startup of machine, **ALWAYS** stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

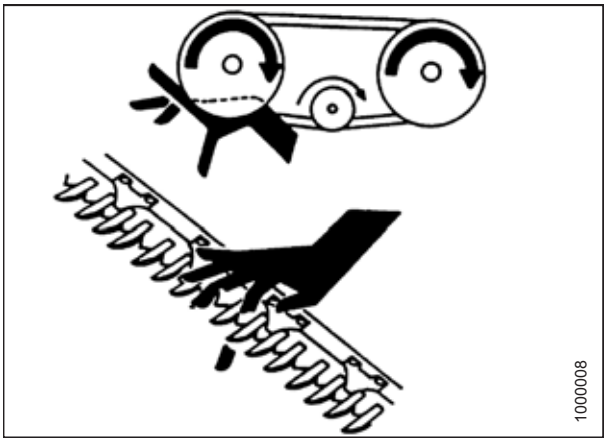


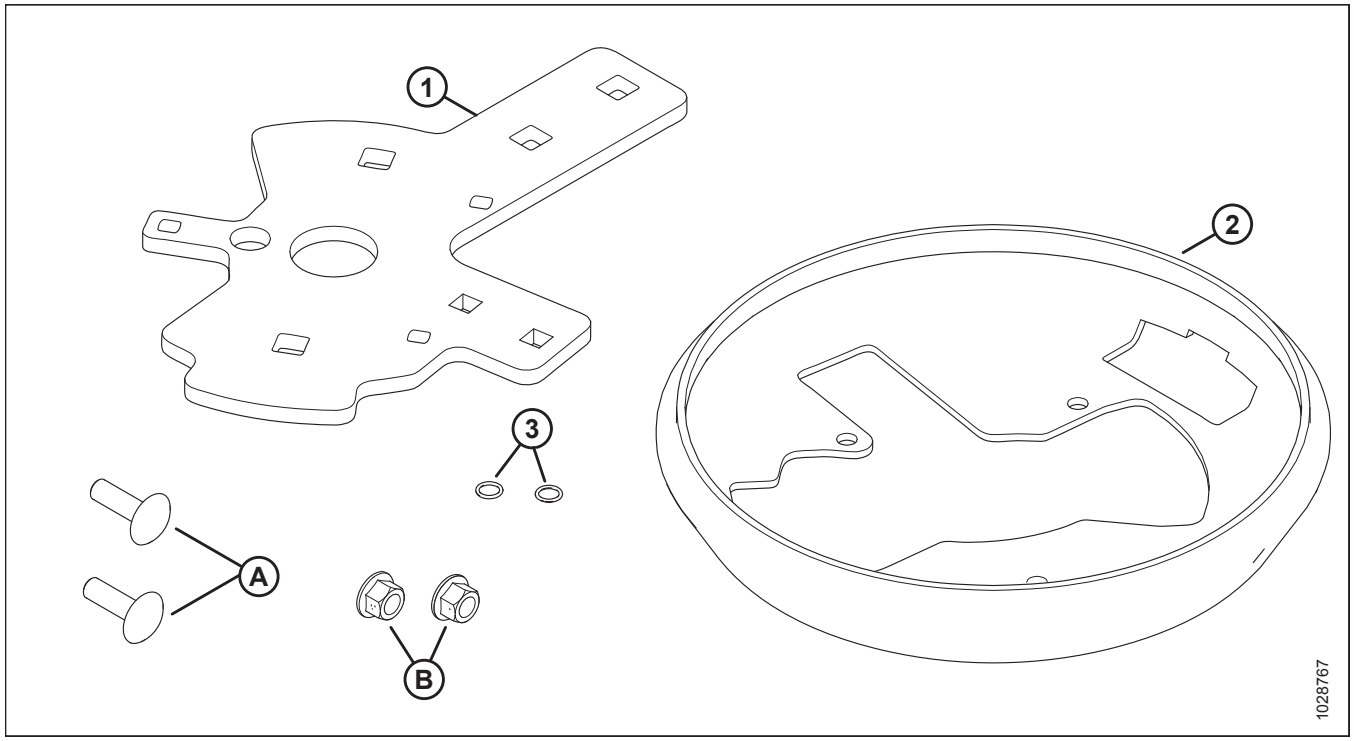
Figure 1.5: Safety around Equipment

- Keep service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.
- Keep work area well lit.
- Keep machinery clean. Straw and chaff on a hot engine is a fire hazard. Do **NOT** allow oil or grease to accumulate on service platforms, ladders, or controls. Clean machines before storage.
- **NEVER** use gasoline, naphtha, or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.
- When storing machinery, cover sharp or extending components to prevent injury from accidental contact.

Figure 1.6: Safety around Equipment

Chapter 2: Parts List

The following parts are included in this kit:



Ref	Part Number	Description	Quantity
1	308850	BAR – RH AUGER SUPPORT	1
2	301994	COVER – AUGER END CAP, RH	1
3	183204	O-RING – HNBR, COLOR GREEN	2
A	135900	BOLT – RHSN TFL M12 X 1.75 X 40-8.8-AA1J	2
B	136431	NUT – HEX FLG CTR LOC M12 X 1.75-10	2

Chapter 3: Installation Instructions

To install the right auger support bar and right auger end cap cover provided in the kit, follow these procedures in order.

NOTE:

It is not necessary to remove the float module from the header, but it does make installation of the kit easier. Instructions for removing the float module from the header are available in the header operator's manual and technical manual.

3.1 Removing Feed Auger

To remove the feed auger from the float module, follow these steps:

WARNING

To avoid bodily injury or death from unexpected start-up or fall of raised machine, always stop engine, remove key, and engage safety props before going under machine for any reason.

NOTE:

Unless otherwise stated, retain all parts for reassembly.

1. To provide more room for working, if the float module is installed in a header, position the reel up and forward, and engage the reel safety props.
2. Shut down the engine, and remove the key from the ignition.

   NOTE:

   The side flap deflectors have been removed for illustration purposes.
3. Place wooden blocks (A) under the auger to prevent the auger from dropping onto the feed draper and damaging it.

   NOTE:

   The illustration at right shows the float module alone, not installed in a header. You can perform this procedure with the float module installed in a header, or detached from the header.

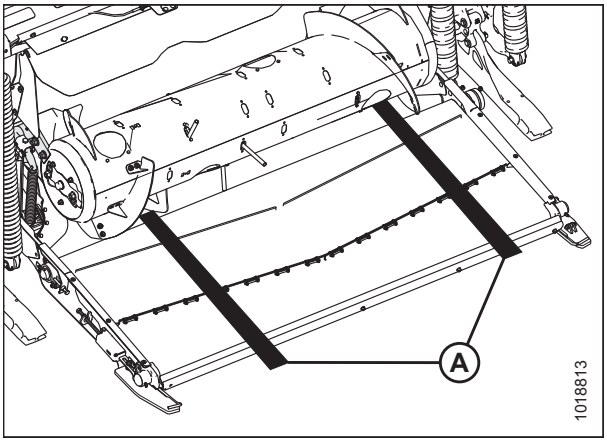


Figure 3.1: Blocks under the Auger

4. On the left side of the auger, remove four bolts (A) and inspection panel (B).
5. Remove the bolt and clamp (C) that hold the two covers (G) and (H) together.
6. Remove the two bolts and washers (D) that secure the bottom cover.
7. Remove bolts (E) and remove cover retainer (F).
8. Rotate top (G) and bottom (H) covers forward to remove.

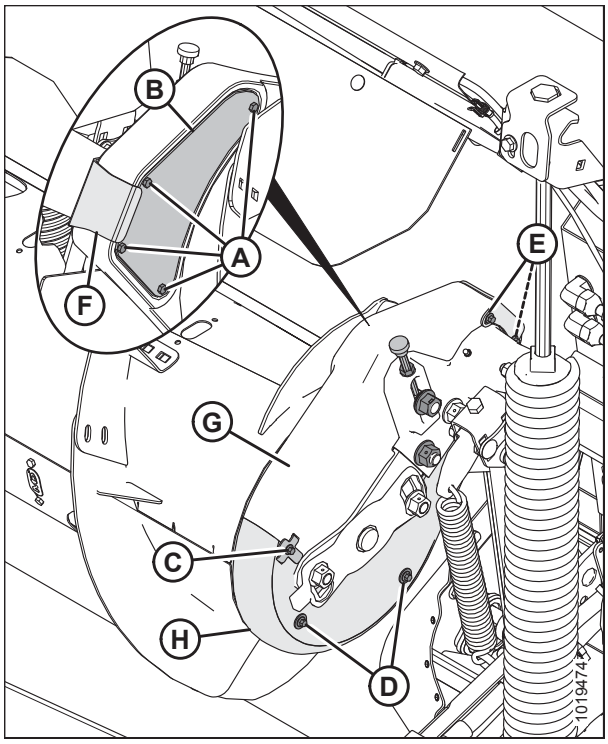


Figure 3.2: Left Side of Auger

9. Loosen jam nut (C) and turn thumbscrew (D) counterclockwise to release the bolt holding sprocket (B) and preventing it from being raised up to release chain tension.

   IMPORTANT:

   Do **NOT** loosen thin nut (E) on the inboard side of the idler sprocket spindle.

10. Loosen idler sprocket nut (A), and raise sprocket (B) to the uppermost position to release the tension on the chain. Tighten nut (A) to hold sprocket in place.
11. Remove screw (F) and washer (G).

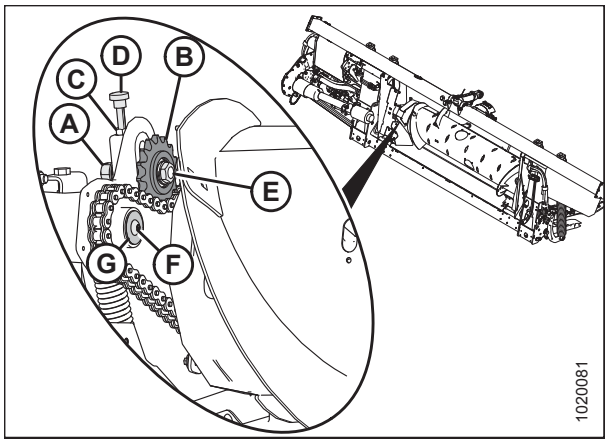


Figure 3.3: Auger Drive

12. Remove two bolts and nuts (A).

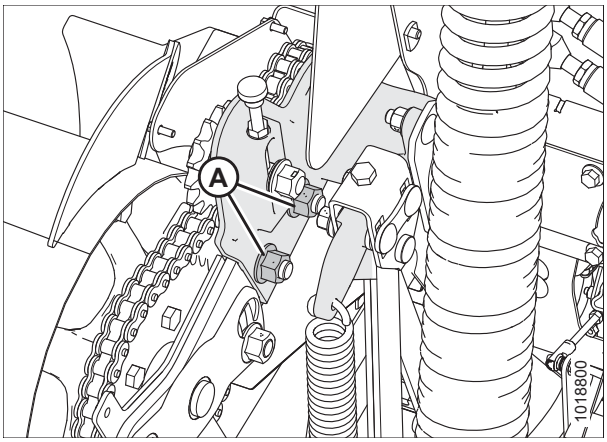


Figure 3.4: Auger Support – Left

13. Remove two nuts (A).

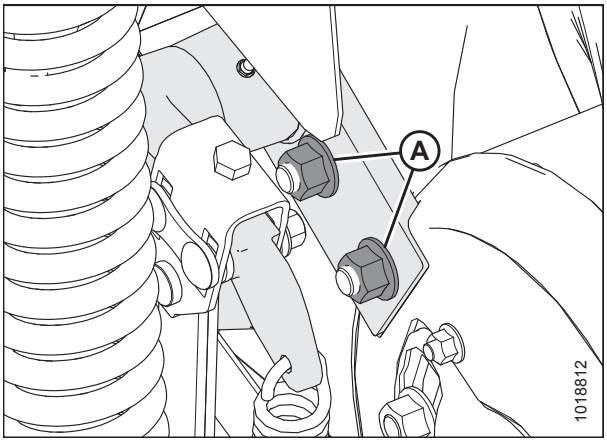


Figure 3.5: Auger Support – Right

14. Use a pry bar at location (A) between auger support arm (C) and auger pivot (B). Pry the auger to the right.

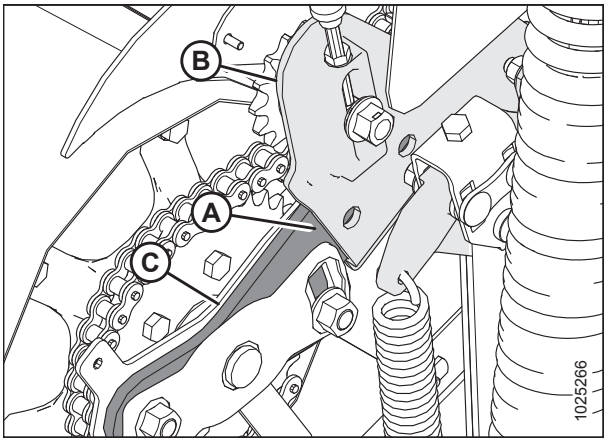


Figure 3.6: Auger Support – Left

NOTE:

Once the drum starts sliding to the right, the drive sprocket will fall off.

NOTE:

Chain removed from illustration for clarity.

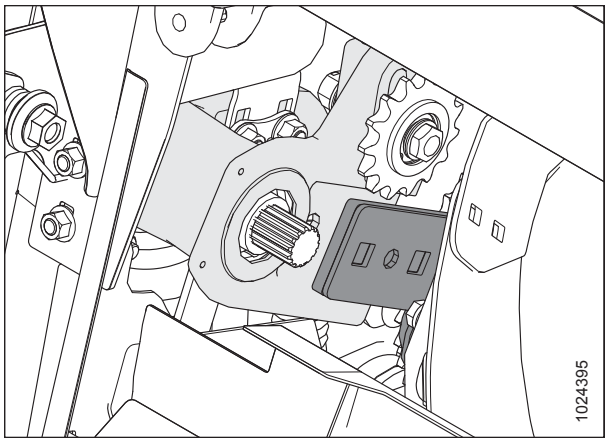


Figure 3.7: Auger Drive – View from Behind

15. Use a pry bar between the right support bar and right auger pivot (B) to slide the auger drum to the left, and then slide bolts (A) out of the pivot.

NOTE:

The right support bar is not visible in the illustration at right as it extends from the auger behind pivot (B). It is connected to the pivot with bolts (A).

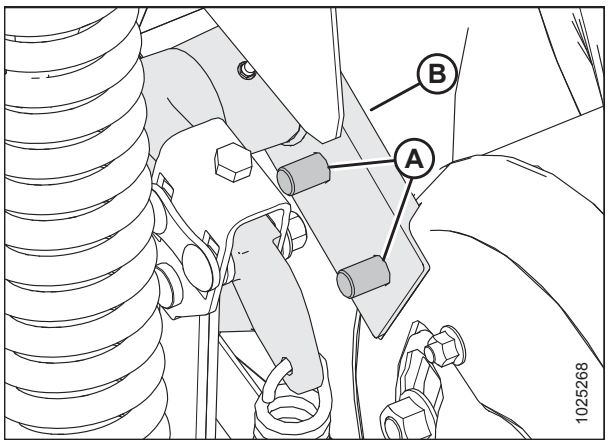


Figure 3.8: Auger Support – Right Side

16. Place feed auger (A) and chain on a workbench.

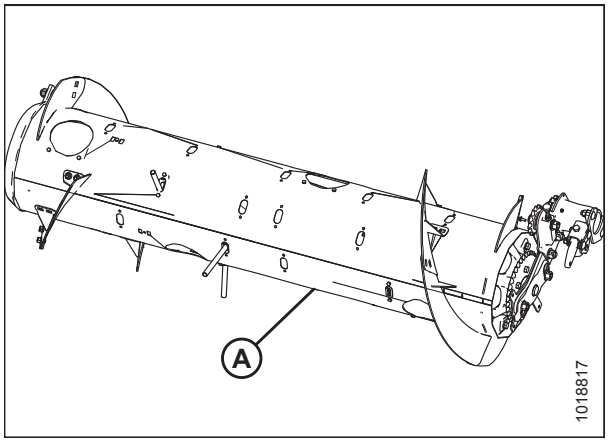


Figure 3.9: Auger

3.2 Replacing Right Auger Support Bar and Cover

1. Remove the three nuts (A) that secure the auger end cap cover (B) to the right assembly. The bolts and O-rings can remain in place. Retain nuts for reassembly.
2. Remove right cover (B) and discard.

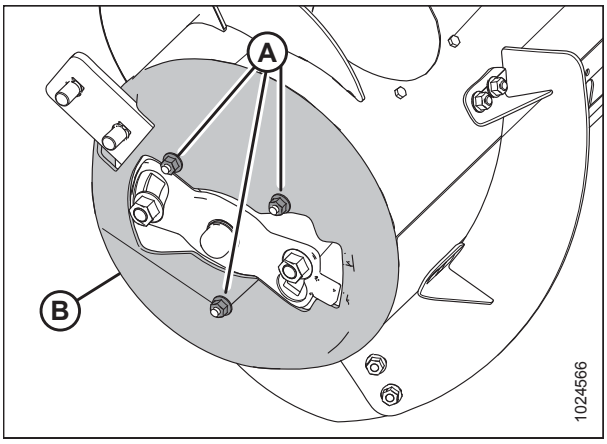


Figure 3.10: Right End of Feed Auger

3. Remove cap (A) and nuts (B). Retain for reassembly.

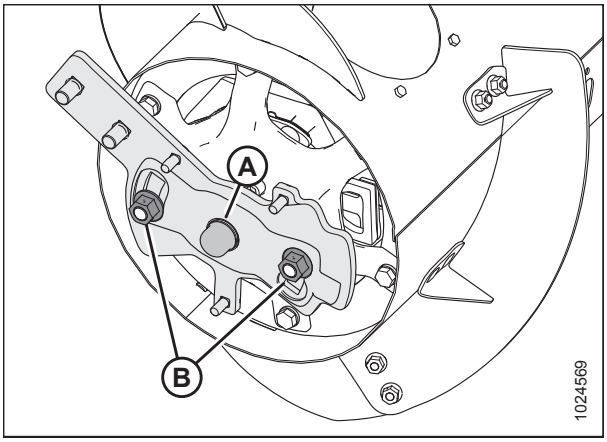


Figure 3.11: Right End of Feed Auger with Cap Cover Removed

4. Remove nut (A). Retain for reassembly.

   NOTE:

   In the illustration at right, the clutch assembly is shown separate from the rest of the feed auger for clarity.

5. Remove timing plate (B). Retain for reassembly.
6. Remove square key (C). Retain for reassembly.
7. Remove right auger support bar (D).

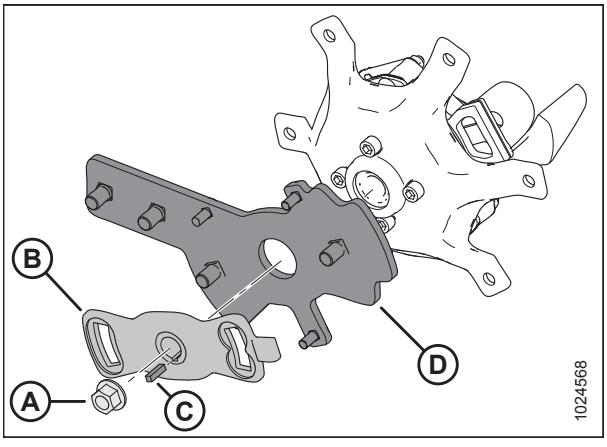


Figure 3.12: Clutch Assembly

8. From the right auger support bar remove bolts (A), O-rings (B), bolts (C), O-rings (D), and bolts (E). Discard auger support bar and retain bolts and O-rings for reassembly.

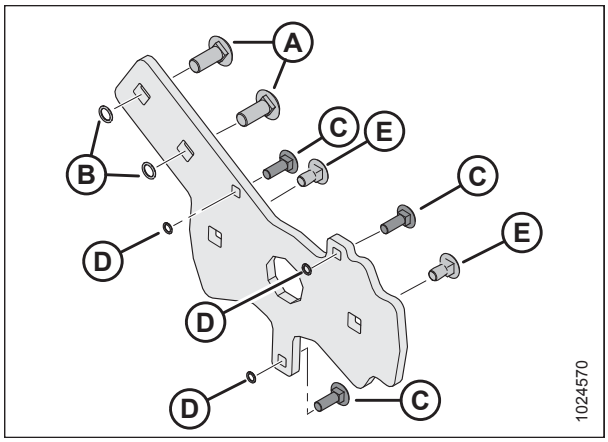


Figure 3.13: Right Auger Support Bar and Attached Hardware

9. Insert the two bolts (A), retained from Step *8, page 12*, through the two square holes in the new auger support bar (B) (MD #308850) on either side of the round center hole, as shown in the illustration at right.
10. Insert three bolts (C) through the small square holes in auger support bar (B) and secure in place with O-rings (D), as shown in the illustration at right. Bolts and O-rings are retained from Step *8, page 12*.

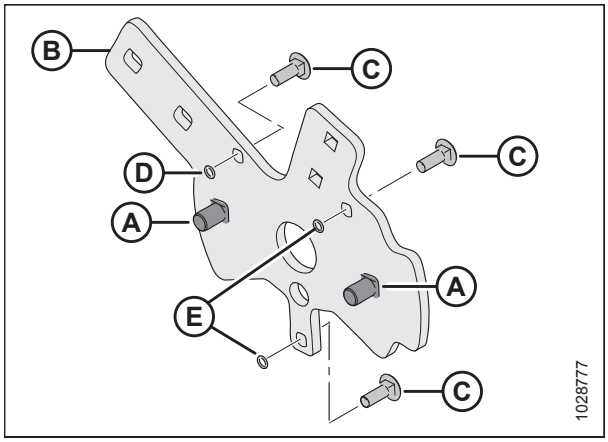


Figure 3.14: Bolts Installed in New Right Auger Support Bar

11. Insert two bolts (A) through the remaining large square holes in auger support bar (B) and secure in place with O-rings (C). Bolts and O-rings are retained from Step *8, page 12*.
12. Insert two M12 carriage bolts (D) (MD #135900) through the remaining two square holes in the auger support bar (B), and secure in place with two green O-rings (E) (MD #183204) and two M12 hex nuts (F) (MD #136431). Bolts, O-rings, and nuts are provided in the kit.

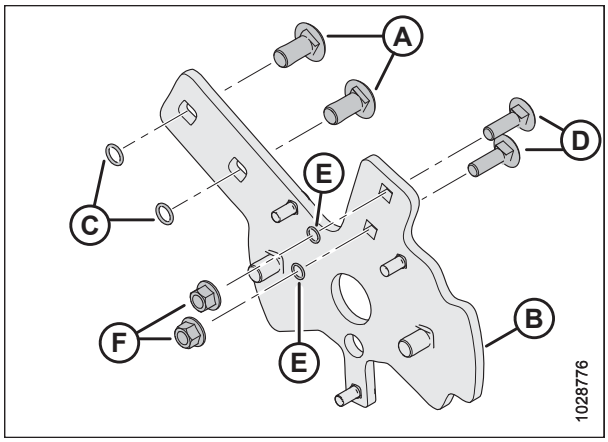


Figure 3.15: More Bolts Installed in New Right Auger Support Bar

13. Position the new right auger support bar (A) over the auger shaft (B) in place of the old right auger support bar.
14. Reinstall square key, retained from Step *6, page 11*, in auger shaft.

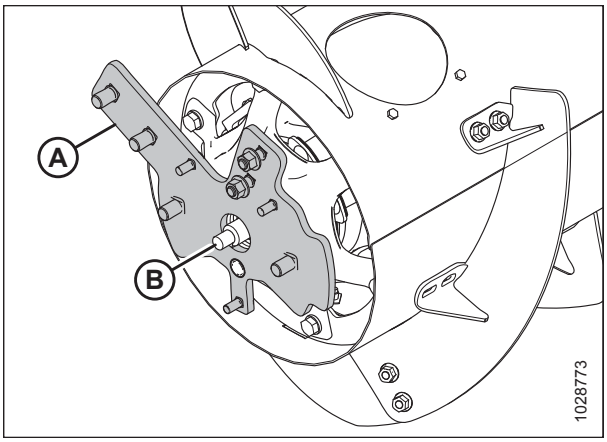


Figure 3.16: New Right Auger Support Bar Installed

15. Position timing plate (A), retained from Step *5, page 11*, over the auger shaft and on top of the right auger support bar. The holes in the sides of the timing plate fit over the bolts at locations (B). Secure in place with retained nuts. Ensure timing plate is in the same position as the timing plate on the left end of the auger.

    IMPORTANT:

    The timing plates on the right and left ends of the auger **MUST** be placed in the same position. Severe damage will occur if the auger is used while one timing plate is in position A and the other is in position B.
16. Torque nuts to 92–138 Nm (68–102 lbf·ft).

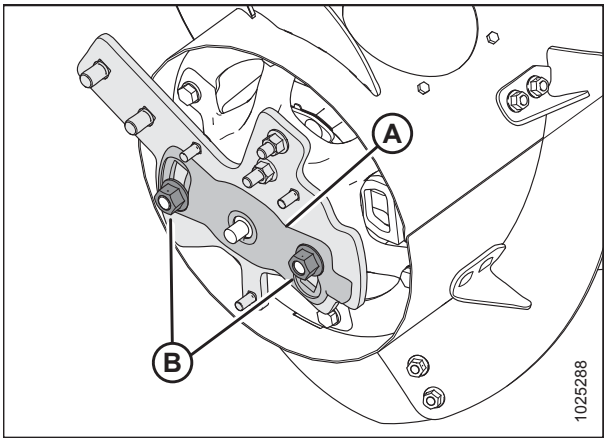


Figure 3.17: Timing Plate Installed

17. Apply medium-strength threadlocker (Loctite® 243 or equivalent) to the auger shaft threads, and then reinstall nut (A) (retained from Step *4, page 11*).
18. Torque nut (A) to 170 Nm (126 lbf·ft).

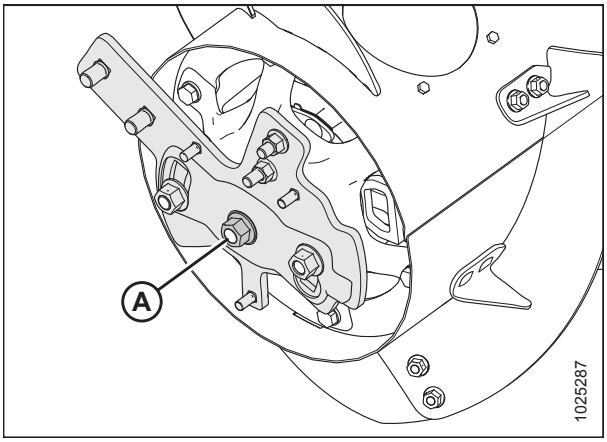


Figure 3.18: Nut Reinstalled on Auger Shaft

19. Reinstall cap (A) (retained from Step *3, page 11*).
20. Install new right auger end cap cover (B) (MD #301994) and secure in place with three nuts (C). The cover is provided in the kit; the nuts are retained from Step *1, page 11*.

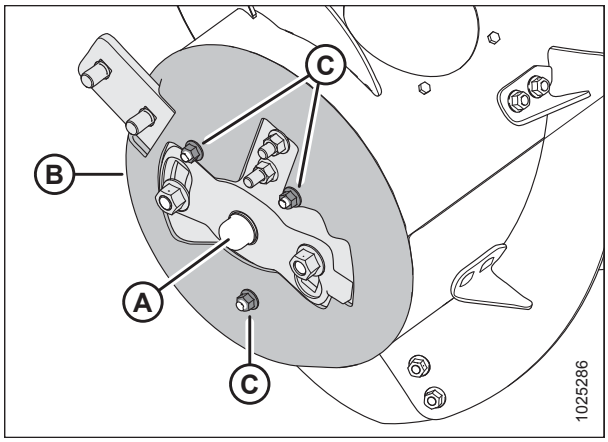


Figure 3.19: Cap and New Right Auger End Cap Cover Installed

3.3 Installing Feed Auger

To reinstall the feed auger in the float module, follow these steps:

WARNING

To avoid bodily injury or death from unexpected start-up or fall of raised machine, always stop engine, remove key, and engage safety props before going under machine for any reason.

1. Place the auger on the wooden blocks (A) on the feed draper.

   NOTE:

   The side flap deflectors have been removed for illustration purposes.

   NOTE:

   The illustration at right shows the float module not installed in a header. You may be installing the feed auger in a stand-alone float module or in a float module installed in a header.

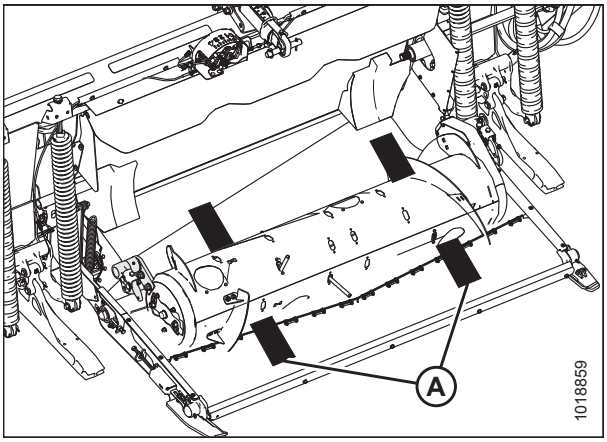


Figure 3.20: Blocks under the Auger

2. Align right pivot (B) and the auger mount support. Secure in place with two nuts (A).

   NOTE:

   The auger mount support is not visible in the illustration at right as it extends from the auger behind pivot (B).

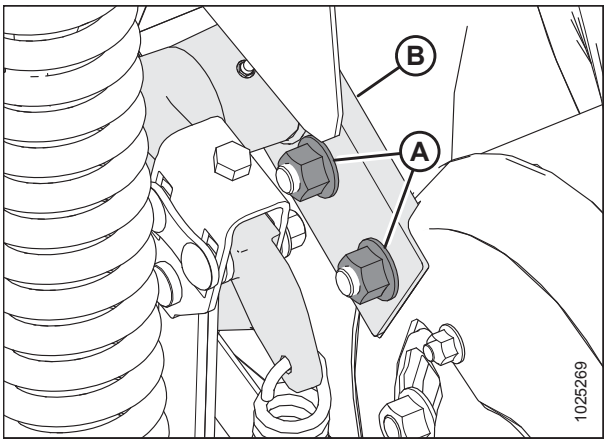


Figure 3.21: Auger Support – Right Side

3. Install the endless chain onto sprocket (B) on the left side of feed auger (A).

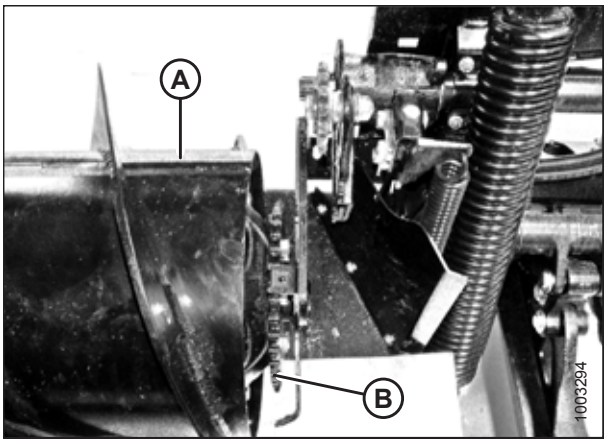


Figure 3.22: Auger Drive – Left Side

4. Place drive sprocket (A) into chain (B) and align the sprocket onto the shaft.

   NOTE:

   The shoulder of drive sprocket (A) should face the auger.

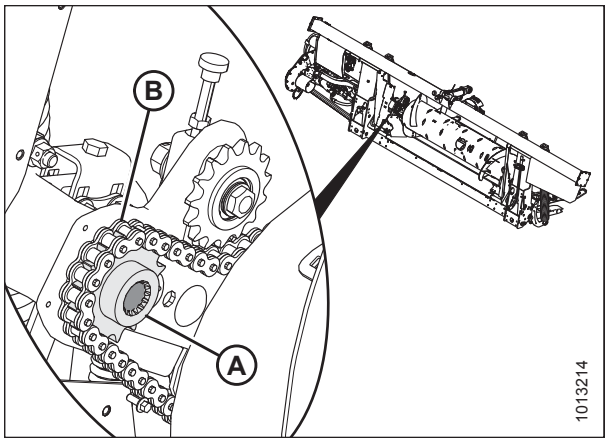


Figure 3.23: Auger Drive

5. Align the holes in the auger pivot (B) with the holes in the left auger support (C). Secure together with two bolts and nuts (A).
6. Remove the blocks from under the auger.

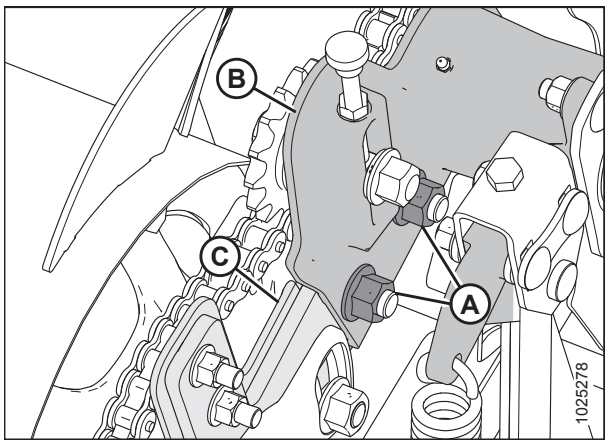


Figure 3.24: Auger Support – Left Side

7. Rotate the auger in reverse to take up the slack in the lower strand of the chain.

   IMPORTANT:

   Do **NOT** loosen thin nut (C) on the inboard side of the idler sprocket spindle.

8. Turn adjuster thumbscrew (D) clockwise to move idler sprocket (B) until it is **FINGER TIGHT ONLY.**

   NOTE:

   Do **NOT** overtighten.

9. Tighten idler nut (A) and torque to 258–271 Nm (190–200 lbf·ft).

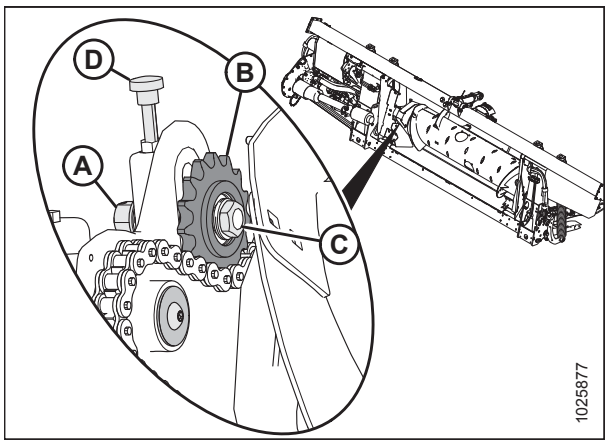


Figure 3.25: Auger Drive

10. Tighten jam nut (A).
11. Apply medium-strength threadlocker (Loctite® 243 or equivalent) to threads of screw (B).
12. Install washer (C) and secure it with screw (B).

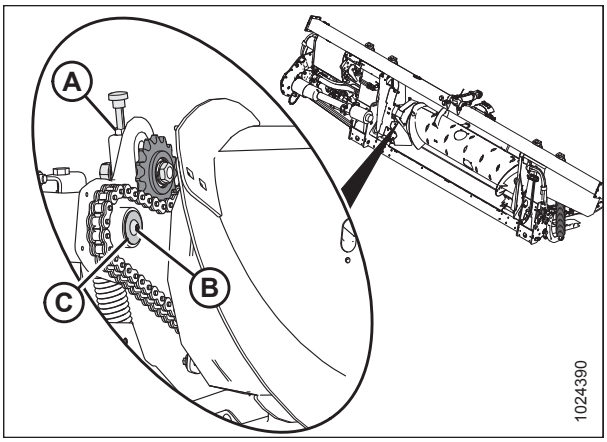


Figure 3.26: Auger Drive

13. Position bottom cover (H), and secure with two bolts (D).
14. Position top cover (G). Secure top and bottom cover with clamp and bolt (C).
15. Install inspection panel (B) and secure with four bolts (A). Tighten bolts (A) and torque to 2.7–4.1 Nm (24–36 lbf·in).
16. Install cover retainer (F) and secure with two bolts (E).

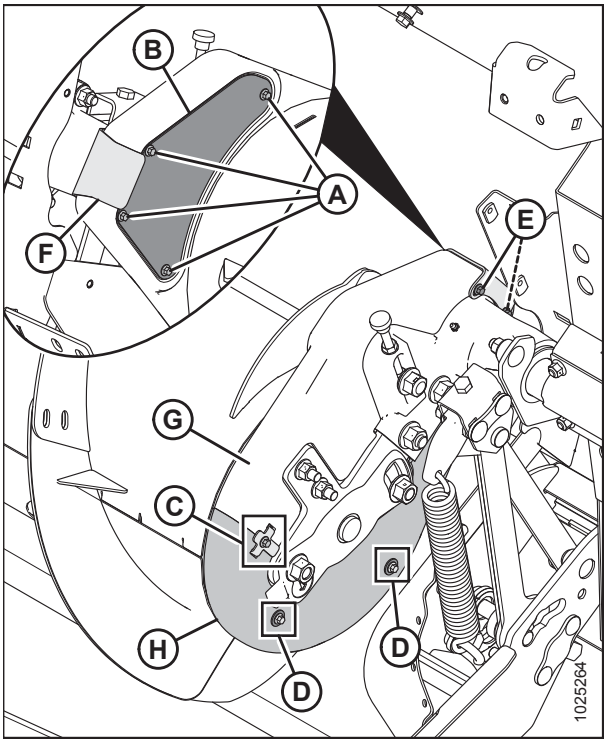


Figure 3.27: Auger Drive – Left Side

MacDon

MacDon Industries Ltd.
680 Moray Street
Winnipeg, Manitoba
Canada R3J 3S3
t. (204) 885-5590 f. (204) 832-7749

MacDon, Inc.
10708 N. Pomona Avenue
Kansas City, Missouri
United States 64153-1924
t. (816) 891-7313 f. (816) 891-7323

MacDon Australia Pty. Ltd.
A.C.N. 079 393 721
P.O. Box 103 Somerton, Victoria, Australia
Australia 3061
t.+61 3 8301 1911 f.+61 3 8301 1912

MacDon Brasil Agribusiness Ltda.
Rua Grã Nicco, 113, sala 404, B. 04
Mossunguê, Curitiba, Paraná
CEP 81200-200 Brasil
t. +55 (41) 2101-1713 f. +55 (41) 2101-1699

LLC MacDon Russia Ltd.
123317 Moscow, Russia
10 Presnenskaya nab, Block C
Floor 5, Office No. 534, Regus Business Centre
t. +7 495 775 6971 f. +7 495 967 7600

MacDon Europe GmbH
Hagenauer Strasse 59
65203 Wiesbaden
Germany

CUSTOMERS
MacDon.com

DEALERS
Portal.MacDon.com

Printed in Canada