

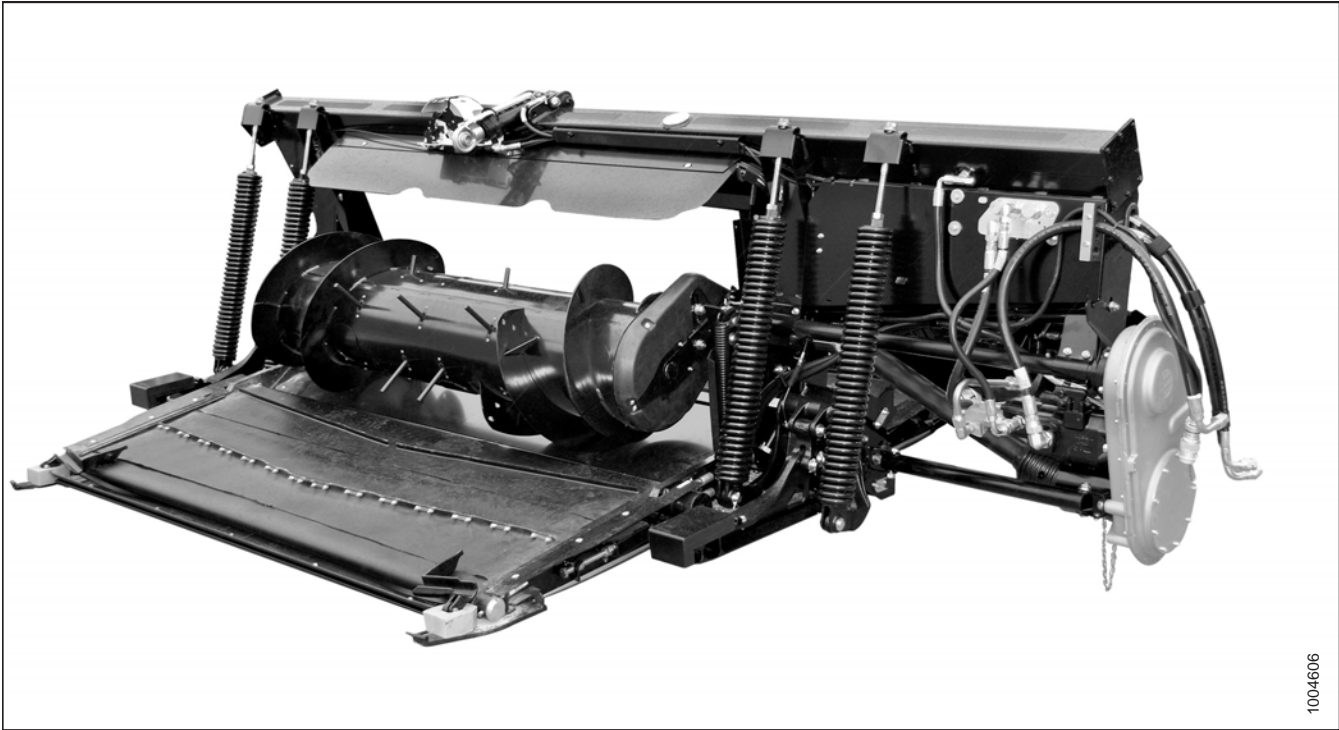
CA20, CA25, and FM100 Combine Adapters and Float Modules

CE Chain Removal Instructions

214923 Revision A

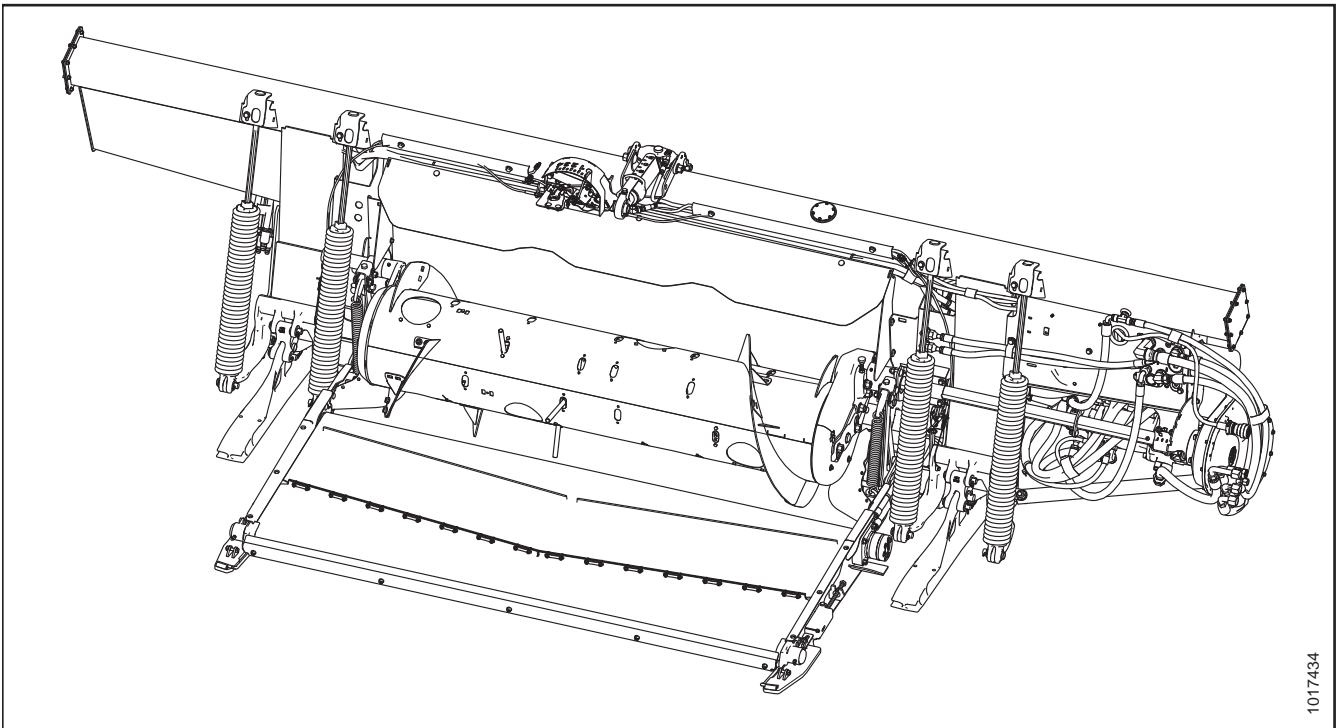
Original Instruction

CA25 Combine Adapter



1004606

FM100 Float Module



1017434

Introduction

Safety chains have been added to driveline halves and guards sold by MacDon Parts. These parts can be used to replace damaged driveline halves and guards on all MacDon CA20 and CA25 Combine Adapters and FM100 Float Modules. If servicing a driveline not originally equipped with safety chains, the chain on the replacement part needs to be removed first to prevent damage to the guard caused by only one half of the guard rotating during operation. This document explains who needs to remove the chains, and how to install the replacement parts.

The kit should include one driveline half or guard, with attached safety chain, and a copy of this instruction.

Installation time

Installation time for this kit is approximately 30 minutes.

Conventions

The following conventions are used in this document:

- Right and left are determined from the operator's position. The front of the header is the side that faces the crop; the back of the header 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.

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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.

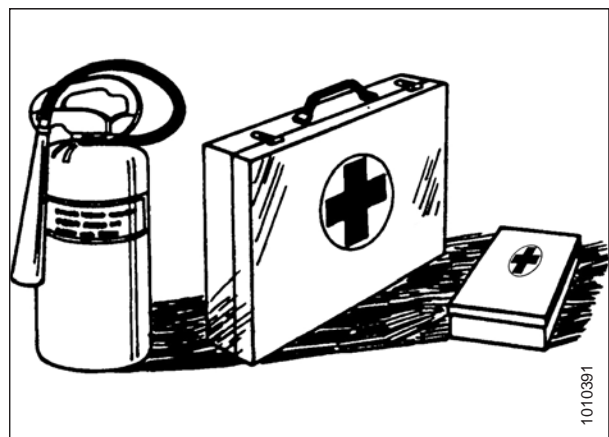


Figure 1.3: Safety Equipment

SAFETY

- 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.

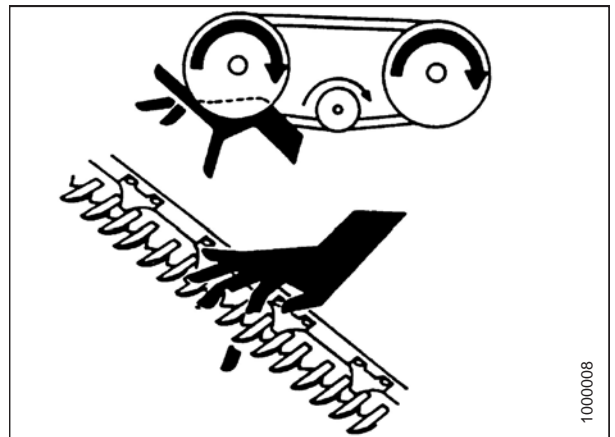


Figure 1.5: Safety around Equipment

- 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.

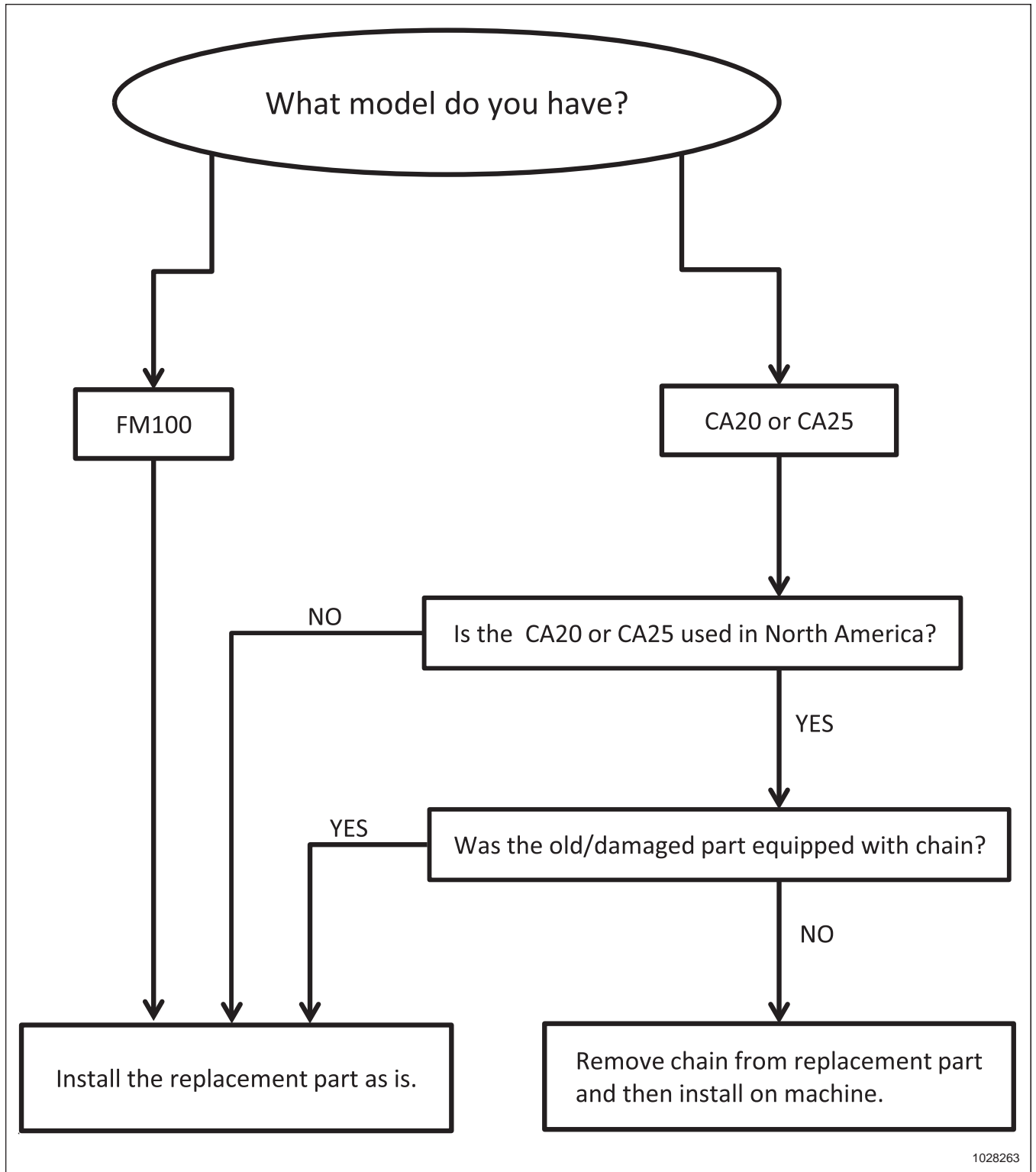


Figure 1.6: Safety around Equipment

Chapter 2: Installation Instructions

Refer to the following flowchart to determine if your model requires chain removal.

Figure 2.1: Driveline Flowchart



INSTALLATION INSTRUCTIONS

2.1 Removing Driveline

Refer to the correct topic below for your model:

- [2.1.1 Removing Driveline – FM100, page 6](#)
- [2.1.2 Removing Driveline – CA20 and CA25, page 7](#)

2.1.1 Removing Driveline – FM100

WARNING

To avoid injury or death from unexpected start-up of machine, always stop engine and remove key from ignition before leaving operator's seat for any reason.

1. Shut down the combine, and remove the key from the ignition.
3. Loosen two bolts (C), and remove driveline shield (B).
4. Detach safety chain (A) (if equipped) from chain (D) on the driveline shield. Do **NOT** disconnect chain (D).
5. Pull the quick disconnect collar to release the driveline yoke, and pull the driveline off the gearbox shaft.

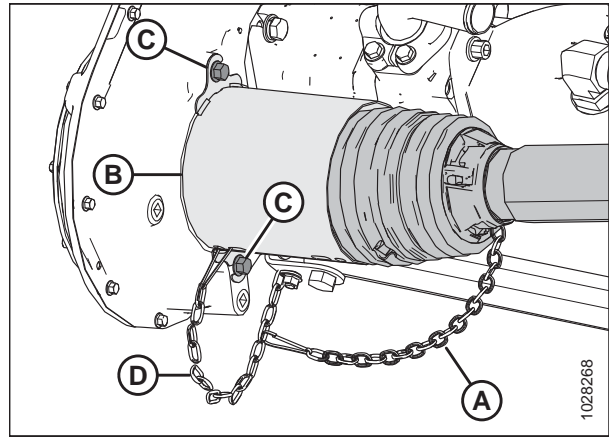


Figure 2.2: Float Module End of Driveline

6. Pull driveline collar (A) away from power take-off (PTO) support (B). Slide yoke (C) off support bracket (B), and release collar (A).

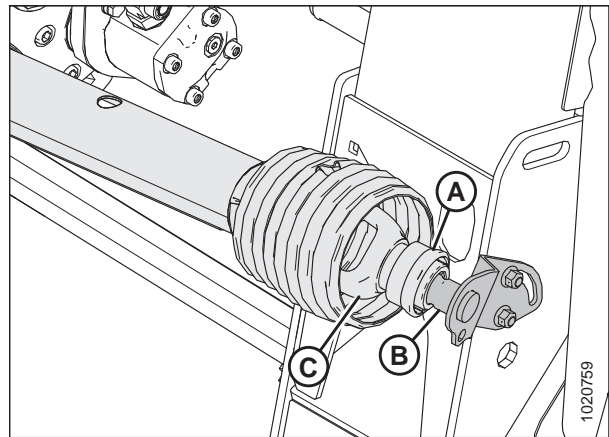


Figure 2.3: Combine End of Driveline

2.1.2 Removing Driveline – CA20 and CA25

WARNING

To avoid injury or death from unexpected start-up of machine, always stop engine and remove key from ignition before leaving operator's seat for any reason.

1. Remove the two nuts (A) securing the shield (B) to the gearbox.
2. Slide the shield (B) over the driveline shield to expose the quick disconnect on the gearbox. Do **NOT** disconnect the tether (C), if equipped.
3. Pull the quick disconnect collar to release the driveline yoke, and pull the driveline off the shaft.
4. Slide the shield (B) off the driveline.

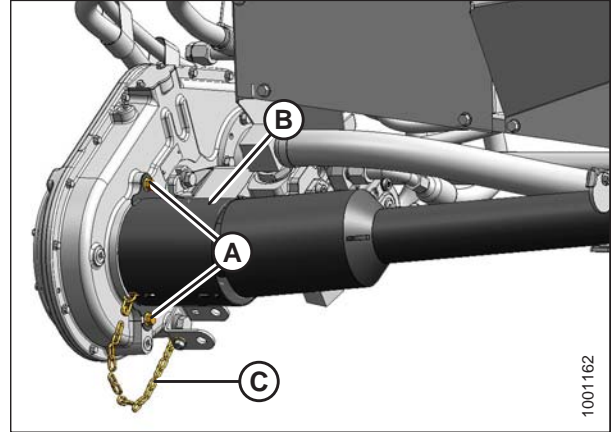


Figure 2.4: Adapter End of Driveline

5. Rotate the disc (A) on the adapter driveline storage hook, and remove the driveline from the hook.

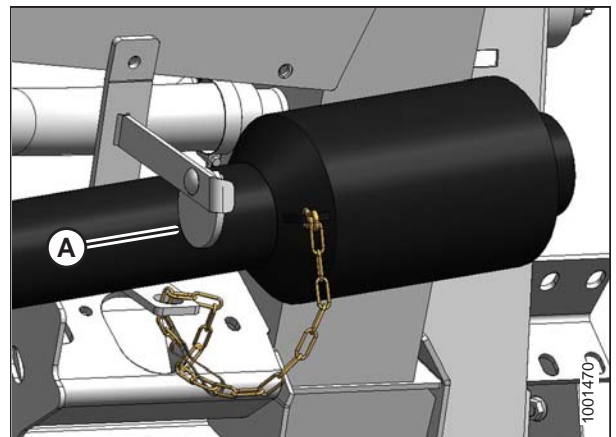


Figure 2.5: Combine End of Driveline

2.2 Removing Driveline Guard

1. Slide the two halves of the driveline shaft apart.
2. On the guard being replaced, use a slotted screwdriver to release grease fitting/lock (A).



Figure 2.6: Driveline Guard

3. Rotate the driveline guard locking ring (A) counterclockwise using a screwdriver until the lugs (B) line up with the slots in the guard.
4. Pull the guard off the driveline.

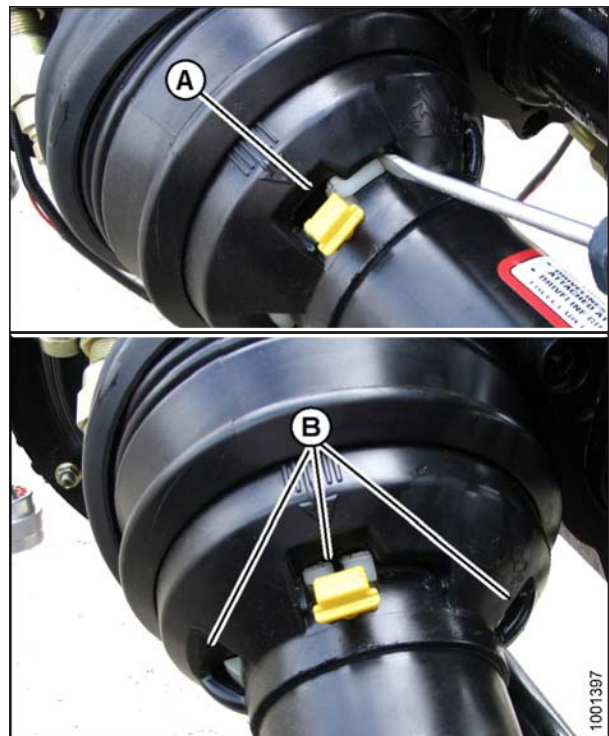


Figure 2.7: Driveline Guard

2.3 Installing Driveline Guard

1. Slide the guard onto the replacement driveline, and line up the slotted lug on the locking ring (A) with the arrow (B) on the guard.



Figure 2.8: Driveline Guard

2. Push the guard onto the ring until the locking ring is visible in the slots (A).

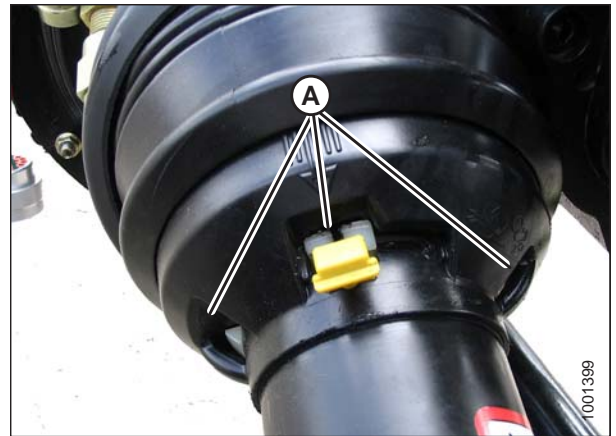


Figure 2.9: Driveline Guard

3. Use a slotted screwdriver to rotate ring (A) clockwise and lock ring in guard.



Figure 2.10: Driveline Guard

INSTALLATION INSTRUCTIONS

4. Push the grease fitting (A) back into the guard.
5. Grease the driveline.



Figure 2.11: Driveline Guard

6. Assemble the driveline.

IMPORTANT:

The splines are keyed to align the universals. Align weld (A) with the missing spline (B) when assembling. Failure to align the halves of the shaft can cause excessive vibration and feed auger/gearbox failures.

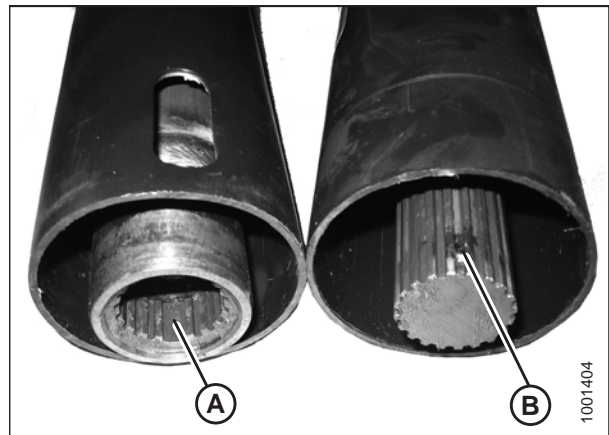


Figure 2.12: Driveline

2.4 Installing Driveline

Refer to the correct topic below for your model:

- [2.4.1 Installing Driveline – FM100, page 11](#)
- [2.4.2 Installing Driveline – CA20 and CA25, page 13](#)

2.4.1 Installing Driveline – FM100

WARNING

To avoid injury or death from unexpected start-up of machine, always stop engine and remove key from ignition before leaving operator's seat for any reason.

IMPORTANT:

If the combine output shaft splines match the float module input shaft splines, ensure the driveline is installed with the shorter guard (A) at the combine end and the longer guard (B) at the float module gearbox end.

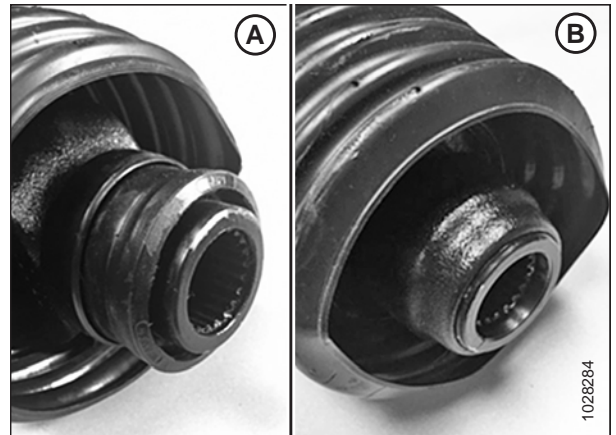


Figure 2.13: Driveline Halves

1. Position the combine end of driveline (A) onto storage support (B). Pull back collar (C) on the driveline and slide the driveline onto the support until it locks in place. Release collar (C).
2. For drivelines equipped with safety chains, attach chain (D) at the combine end to driveline storage support (B).

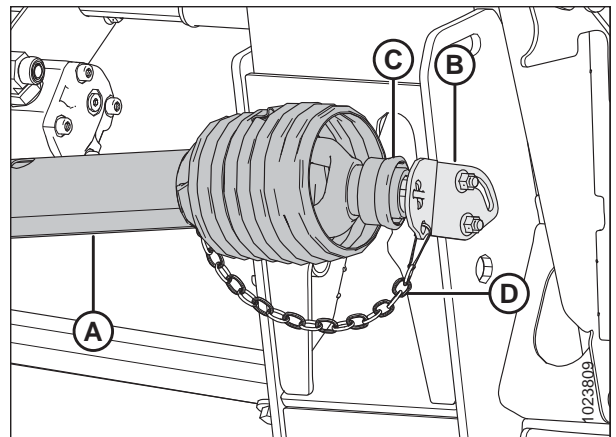


Figure 2.14: Combine End of Driveline

INSTALLATION INSTRUCTIONS

3. Slide shield (A) over driveline (B).
4. Position the driveline quick disconnect onto the float module gearbox shaft, pull back the collar, and slide it onto the shaft until it locks in place. Release the collar.
5. Position shield (A) on the gearbox and secure with bolts (C).
6. For drivelines equipped with safety chains, attach chain (D) at the module end to chain (E) on the shield.

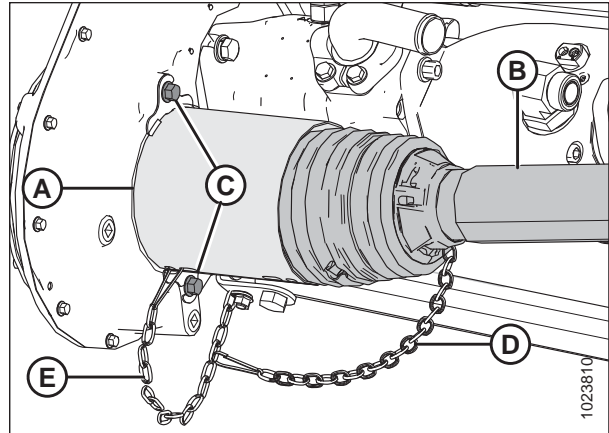


Figure 2.15: Float Module End of Driveline

2.4.2 Installing Driveline – CA20 and CA25

DANGER

To avoid bodily injury or death from unexpected start-up of machine, always stop engine and remove key from ignition before leaving operator's seat for any reason.

IMPORTANT:

If the combine output shaft splines match the adapter input shaft splines, ensure the driveline is installed with the shorter guard (A) at the combine end and the longer guard (B) at the adapter gearbox end.

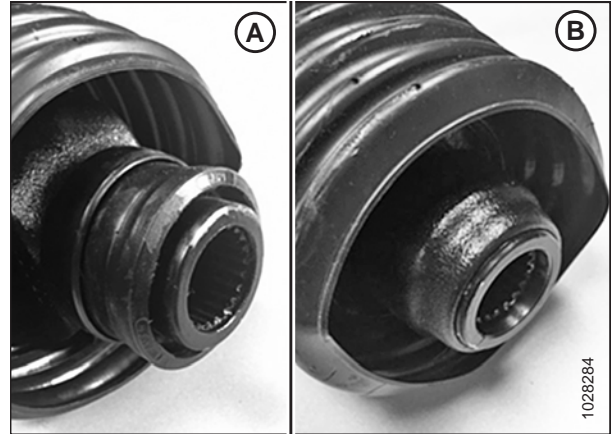


Figure 2.16: Driveline Halves

1. Slide the driveline into the hook (A) so the disc (B) drops and secures the driveline.

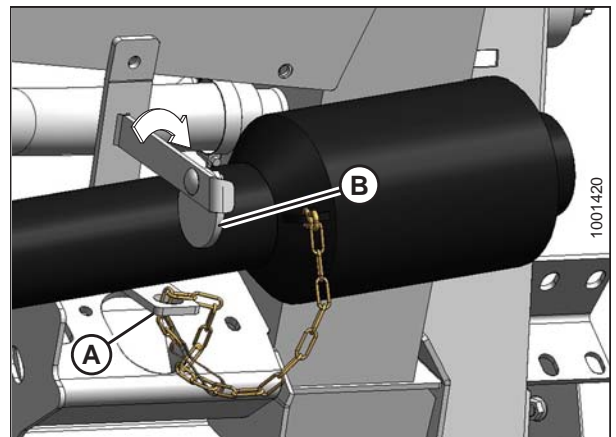


Figure 2.17: Combine End of Driveline

2. Slide the shield (B) over the driveline.
3. Position the driveline quick disconnect onto the adapter gearbox shaft, pull back the collar, and slide onto the shaft until the yoke locks onto the shaft. Release the collar.
4. Position the shield (B) on the gearbox and secure with nuts (A).
5. Connect the opposite end to the combine if necessary.

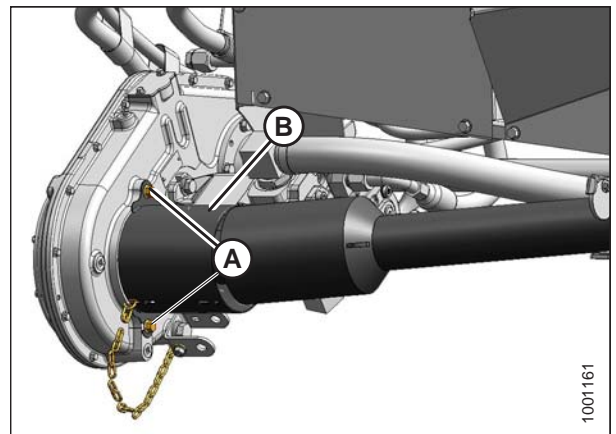


Figure 2.18: Adapter End of Driveline

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