

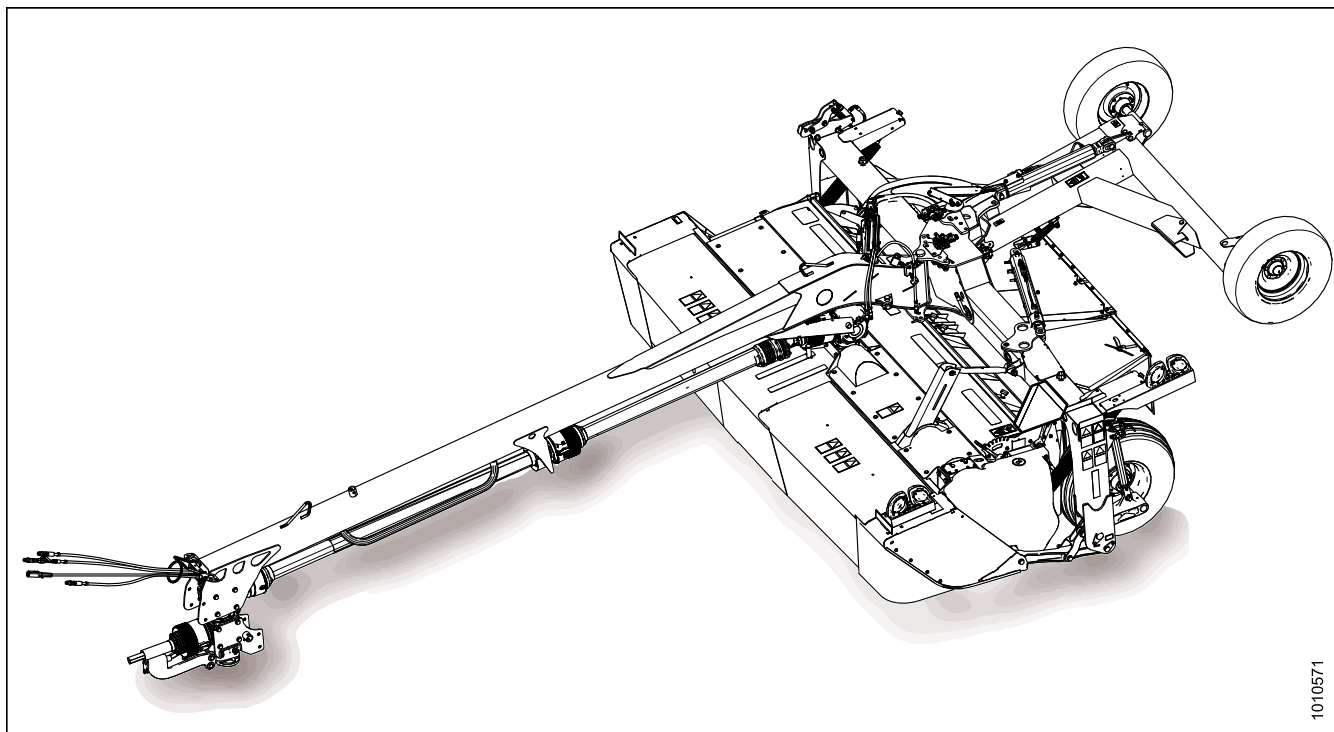
# **R1 PT Series Disc Mowers**

Transport Pin Kit (MD #259258) Installation Instructions

214748 Revision A

Original Instruction

R1 PT Series Disc Mower



1010571

Published January 2019

## Introduction

The Transport Pin kit (MD #259258) is used to replace damaged transport pins on model year 2018 and earlier MacDon R1 PT Series Disc Mowers.

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 4 hours.

### **Conventions**

The following conventions are used in this document:

- Right and left are determined from the operator's position. The front of the disc mower is the side that faces the crop.
- Unless otherwise noted, use the standard torque values provided in the disc mower 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 are general farm safety precautions that 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 for use in case of emergencies.
- Keep a fire extinguisher on the machine. Be sure fire extinguisher is properly maintained. Be familiar with its proper use.
- Keep young children away from machinery at all times.
- Be aware that accidents often happen when Operator is tired or in a hurry. Take time to consider safest way. **NEVER** ignore warning signs of fatigue.

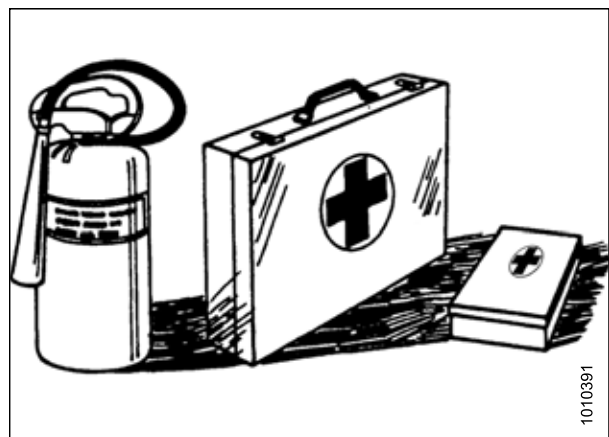


Figure 1.3: Safety Equipment



## 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 bodily 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.

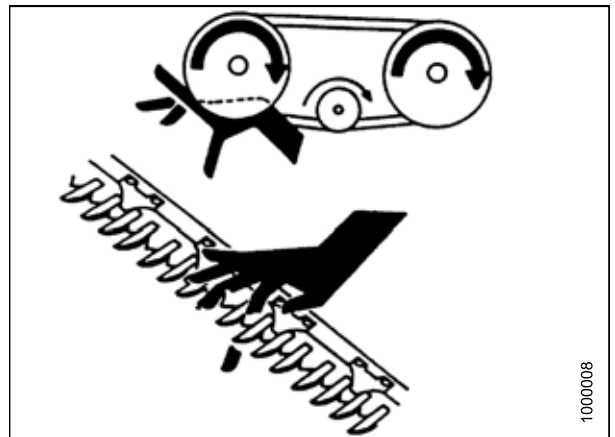


Figure 1.5: Safety around Equipment

- 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

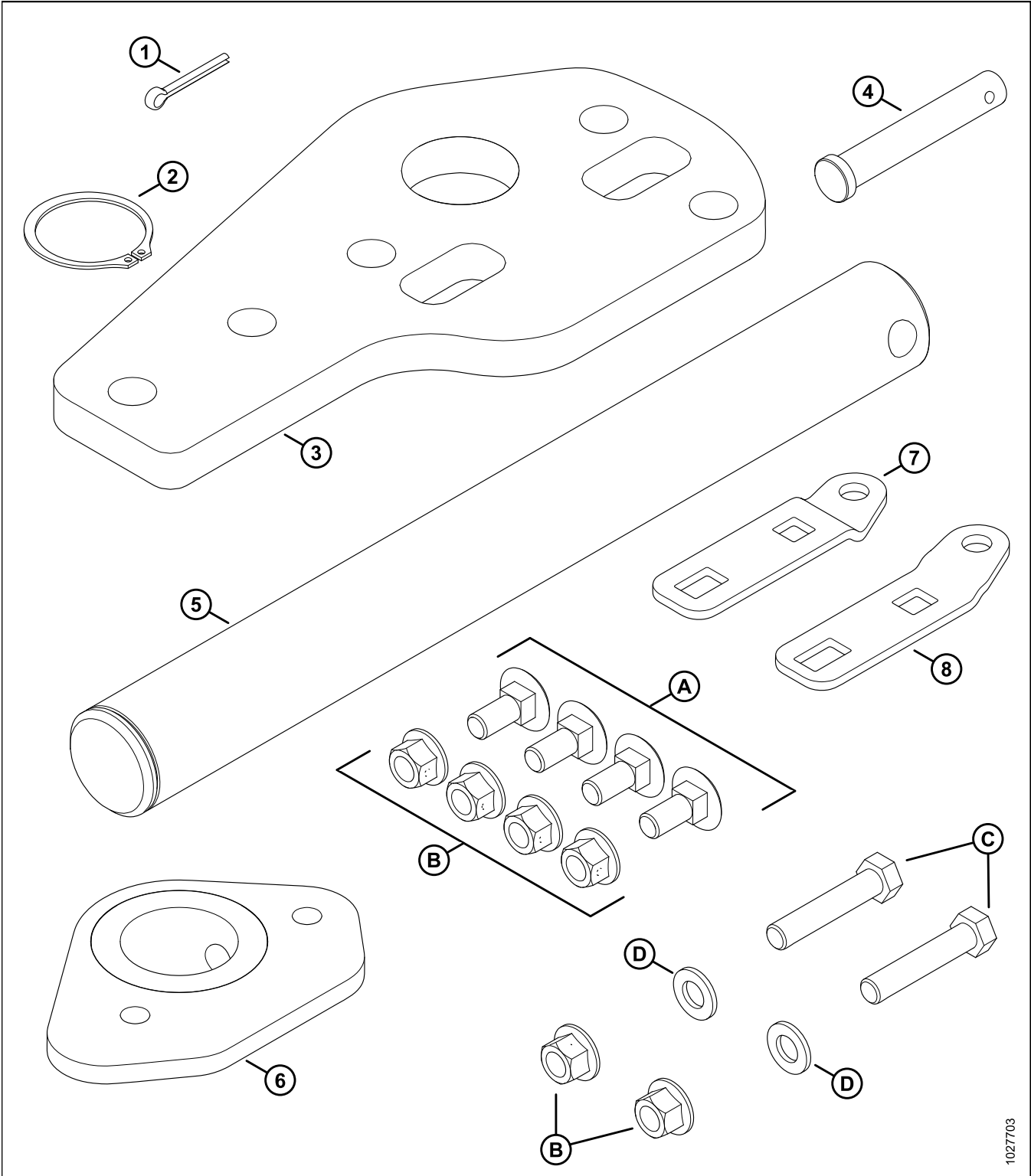


## Chapter 2: Parts List

The following parts are included in this kit:

PARTS LIST

Figure 2.1: Parts Included in the Transport Pin Kit



1027703

**PARTS LIST**

<b>Ref</b>	<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
1	18608	PIN – COTTER 3/16 DIA X 1.5 ZP	1
2	18899	RING – EXT RETAINING	1
3	259095	PLATE – MACHINED	1
4	19958	PIN – CLEVIS	1
5	259086	PIN – MACHINED	1
6	259105	PIN SUPPORT	1
7	259329	PLATE – MOUNT, LH	1
8	259268	PLATE – MOUNT, RH	1
A	184667	BOLT – RHSN M12 X 1.75 X 30-8.8-AA1J	4
B	136431	NUT – HEX FLG CTR LOC M12 X 1.75-10	6
C	237316	BOLT – HEX HD TFL M12 X 1.75 X 60-8.8-AA1J	2
D	184714	WASHER – FLAT REG M12-300HV	2



# Chapter 3: Installation Instructions

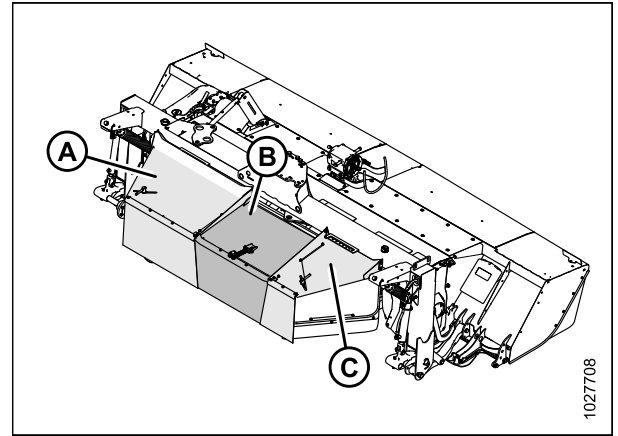
To install the Transport Pin kit, follow these procedures in order:

## 3.1 Installing Mounting Plates – Mowers with Finger Conditioners

If a finger conditioner is installed on the mower, there are three covers at the back of the mower. Mounting plates are needed to lower the center cover (B) so that it doesn't interfere with the new transport pin. To install the mounting plates provided in the kit, follow these steps:

**NOTE:**

Mounting plates are only required on mowers with finger conditioners. If you are replacing the transport pin on a mower that is not equipped with a finger conditioner, proceed to [3.2 Replacing Transport Pin, page 12](#).



**Figure 3.1: Mower with Finger Conditioner Installed**

A - Left Cover

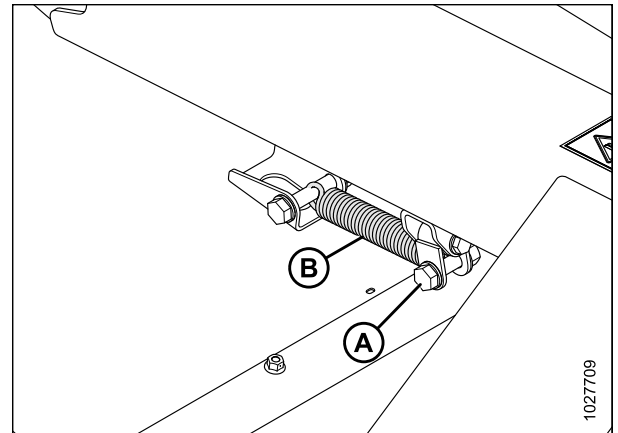
B - Center Cover

C - Right Cover

1. On the center cover at the rear of the disc mower, remove hardware (A) securing extension spring (B) to the bottom of the transport frame. Retain spring and hardware for reinstallation.

**NOTE:**

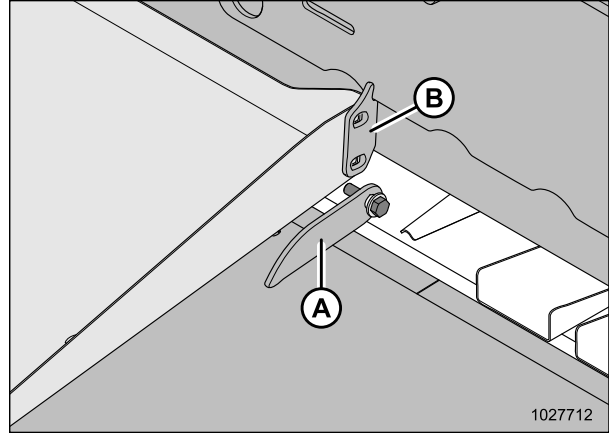
The spring is under tension and it holds the center cover up. Support the center cover before disconnecting the spring.



**Figure 3.2: Extension Spring on Center Cover**

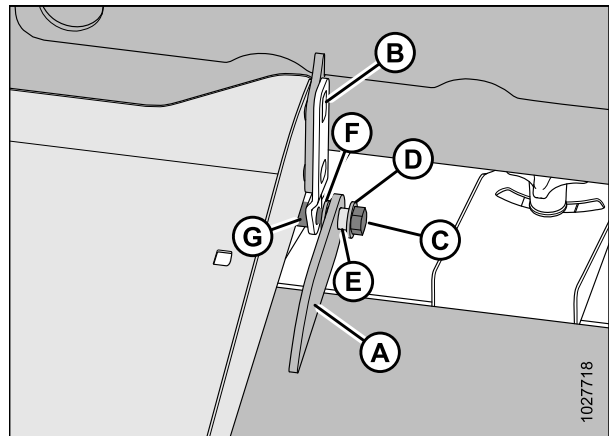
## INSTALLATION INSTRUCTIONS

2. In the left front corner of the center cover, remove the hardware (bolt, washers, spacer, and nut) securing center cover pivot plate (A) to carrier frame mount plate (B). Retain hardware for reinstallation.

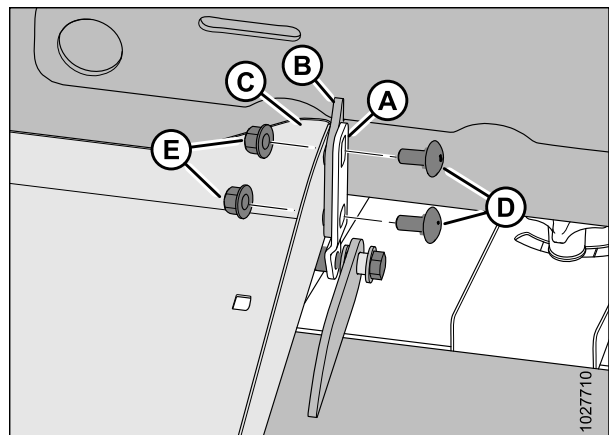


**Figure 3.3: Connection Between Center Cover and Carrier Frame – Left Side is Shown; Right Side is Opposite**

3. Secure the center cover pivot plate (A) to left mount plate (B) (MD #259329) with the retained hardware. Order parts as follows:
  - a. M12 hex head bolt (C) (bolt head should face inboard as shown in the illustration)
  - b. Hardened washer (D)
  - c. Spacer (E)
  - d. Center cover pivot plate (A)
  - e. Flat washer (F)
  - f. Left mount plate (B)
  - g. M12 hex flange lock nut (G)
4. Secure left mount plate (A) to the left carrier frame mount plate (B) and the left cover (C) with two M12 carriage bolts (D) (MD #184667) and two M12 hex flange lock nuts (E) (MD #136431).
5. Repeat Steps 2, page 10 to 4, page 10 on the right side of the center cover with the right mount plate (MD #259268).



**Figure 3.4: Front Left Corner of Center Cover – Right Corner is Opposite**



**Figure 3.5: Front Left Corner of Center Cover – Right Corner is Opposite**



## INSTALLATION INSTRUCTIONS

6. Reattach extension spring (B) to the link bracket on the bottom of the transport frame using the retained hardware (A).

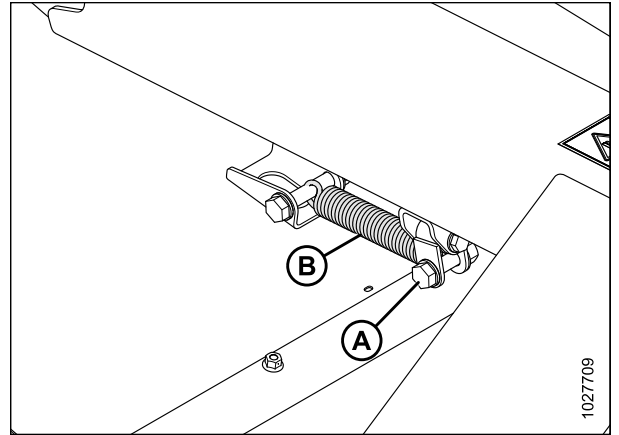


Figure 3.6: Extension Spring on Center Cover

## 3.2 Replacing Transport Pin

To replace the transport pin, follow these steps:

**NOTE:**

Some parts have been removed from the illustrations for clarity.

1. **Model year 2018 mowers only:** Locate transport cover (A), in the middle of the carrier frame, to the rear of the hitch.
2. **Model year 2018 mowers only:** Remove hardware (B) securing transport cover (A) to cover support, and then remove transport cover. Retain cover and hardware for reassembly.

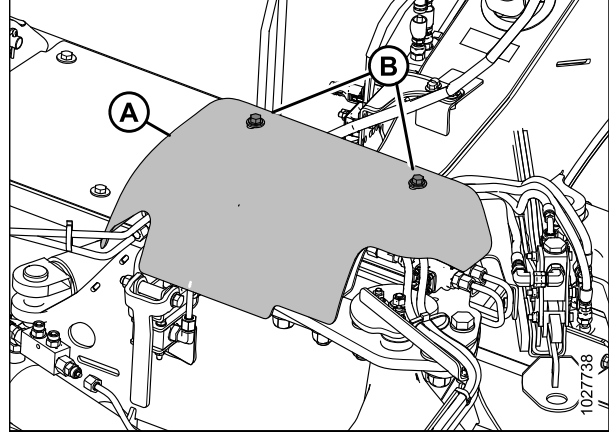


Figure 3.7: Transport Cover – Model Year 2018 Only

3. **Model year 2018 mowers only:** Remove hardware (A) securing cover support (B) to the transport plate (C), and then move cover support aside. Retain hardware for reinstallation.
4. **Model year 2018 mowers only:** Unplug connectors (D) and (E) from the lighting module on the cover support.

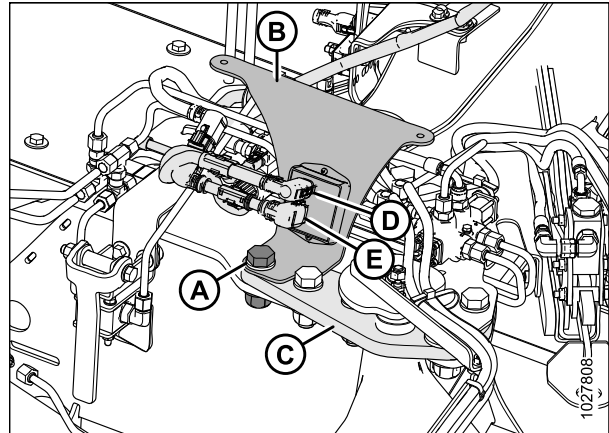


Figure 3.8: Cover Support – Model Year 2018 Only

5. Remove hardware (A) securing top bar (B) to middle bar (C). Retain hardware for reinstallation.

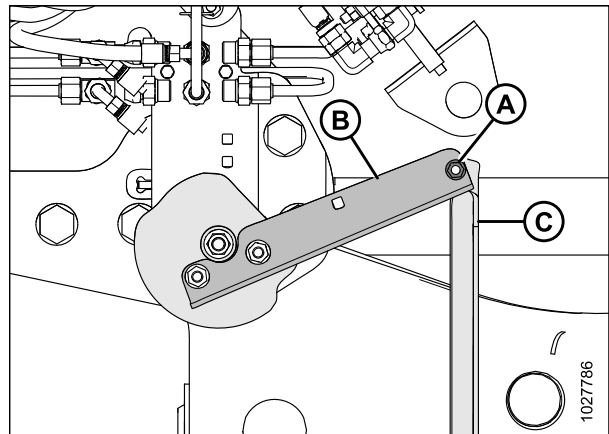


Figure 3.9: Cam Plate Linkage – View from Above

## INSTALLATION INSTRUCTIONS

6. Remove hardware (B) securing cam plate (A) to mount plate (C), and then set aside the cam plate, attached top bar, and hardware for later reinstallation.

**NOTE:**

Do **NOT** detach the top bar from the cam plate. If you do, the cam angle must be reset upon reassembly.

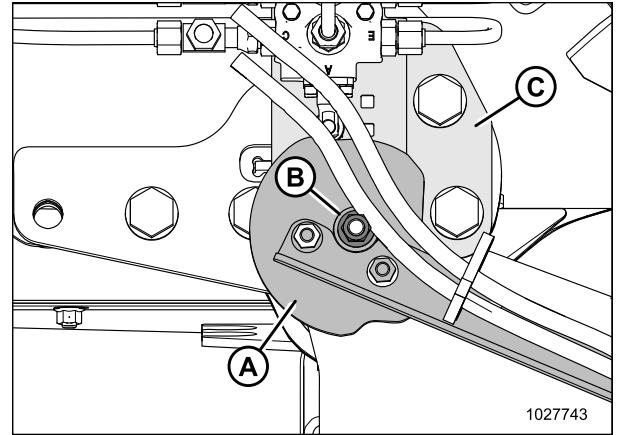


Figure 3.10: Cam Plate Linkage – View from Above

7. Remove hardware (A) securing pivot bracket and switch lever (B) to support bracket, and then remove pivot bracket and switch lever. Retain all parts for reinstallation.

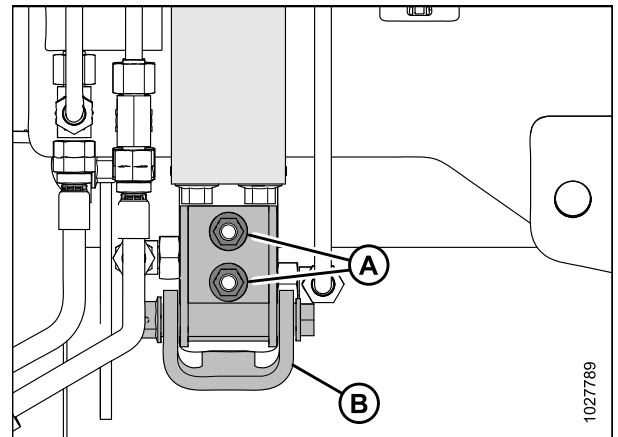


Figure 3.11: Switch Assembly – View from Above

8. Remove hardware (A) securing switch valve support brackets (B) and (C).

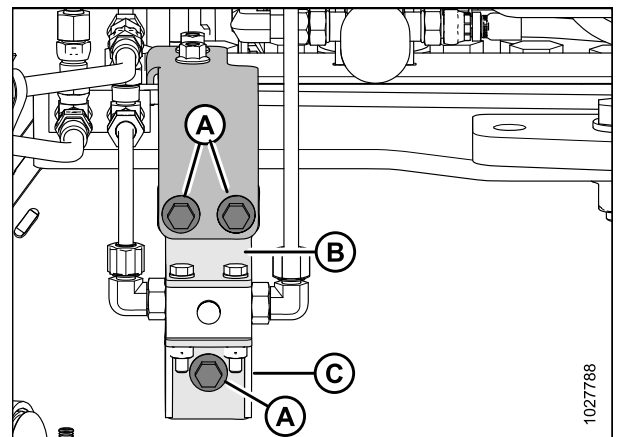


Figure 3.12: Switch Assembly with Pivot Bracket and Switch Lever Removed – View from Rear

## INSTALLATION INSTRUCTIONS

9. Disconnect hydraulic lines at locations (A) and (B), then remove switch valve assembly (C). Retain switch valve assembly for reinstallation.

### IMPORTANT:

Cap disconnected hydraulic lines and hoses to prevent dirt or debris from entering the hydraulic system.

10. Disconnect hydraulic hoses at locations (D) and (E).

### NOTE:

Mark hoses before disconnecting them to ensure that you reconnect them in the correct locations.

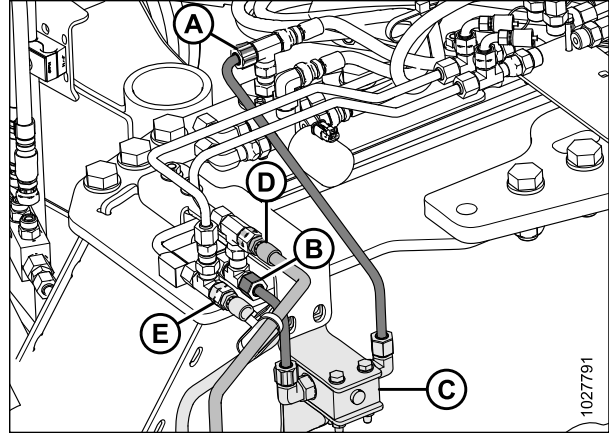


Figure 3.13: Hydraulic Connections

11. Remove hardware (A), and then remove support bracket (B). Retain all parts for reinstallation.

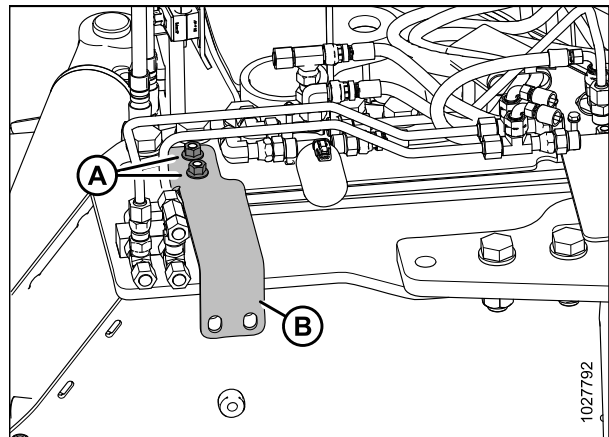


Figure 3.14: Support Bracket

12. Remove hardware (A) securing mount plate (B) to the carrier frame, and then move the mount plate out of the way along with any hoses sitting on the plate. Retain hardware for reinstallation.

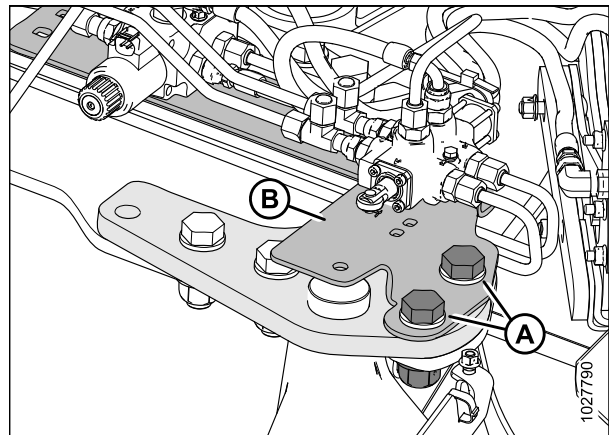


Figure 3.15: Transport Hydraulics on Mount Plate

## INSTALLATION INSTRUCTIONS

### CAUTION

The transport frame is heavy. Support the frame so that it can't move before proceeding.

- Support transport frame so it can't move when the old transport pin is removed.
- Remove hardware (A) securing transport plate (B) to the carrier frame and remove old transport plate and pin (they are welded together).

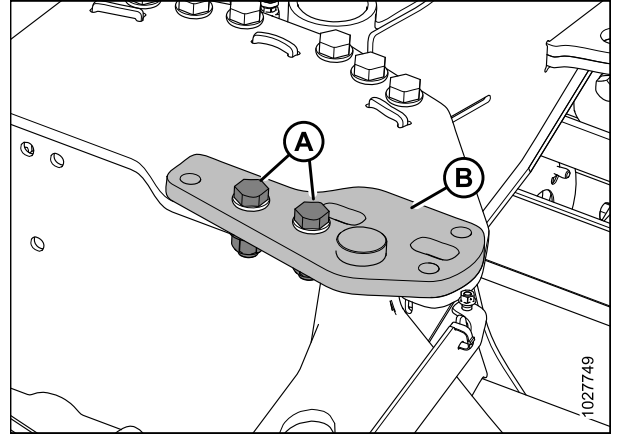


Figure 3.16: Old Transport Plate and Pin

- Insert new transport pin (A) (MD #259086) through the hole in the transport arm. Install new plate (B) (MD #259095) over the pin, and use retaining ring (C) (MD #18899) to prevent the pin from falling through the plate.
- Secure plate (B) to the carrier frame with bolts (D), washers (E), and nuts (F) retained from Step 14, page 15.
- Orient transport pin (A) so that a clevis pin can be installed through the pin and pin support. Secure in place with clevis pin (G) (MD #19958) and cotter pin (H) (MD #18608).

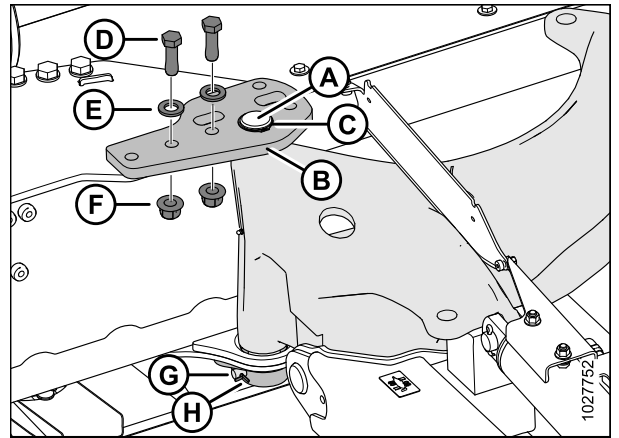


Figure 3.17: New Transport Plate and Pin Installed

- Attach pin support (A) (MD #259105) to the bottom of the carrier frame, beneath the transport pin, with two M12 hex head bolts (B) (MD #237316), two M12 flat washers (C) (MD #184714), and two M12 hex flange lock nuts (D) (MD #136431). Drill holes if necessary.

#### NOTE:

Only one set of hardware shown in the illustration. The other set is hidden behind the transport tube.

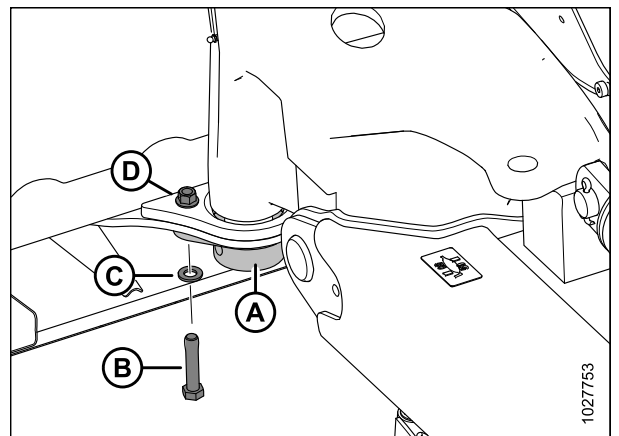


Figure 3.18: Pin Support

## INSTALLATION INSTRUCTIONS

19. Reinstall mount plate (A) using hardware (B) retained from Step 12, page 14.

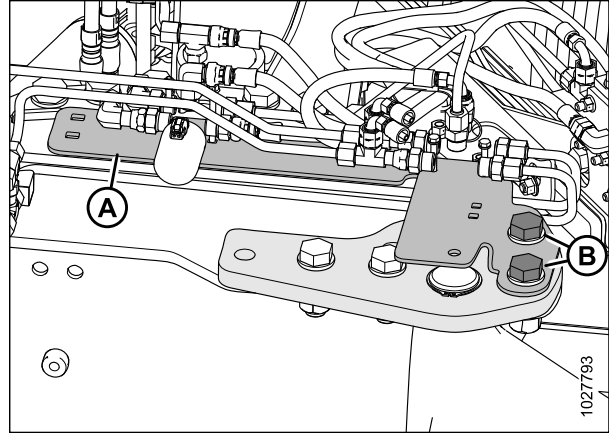


Figure 3.19: Mount Plate Reinstalled

20. Reinstall support bracket (B) using hardware (A) retained from Step 11, page 14.

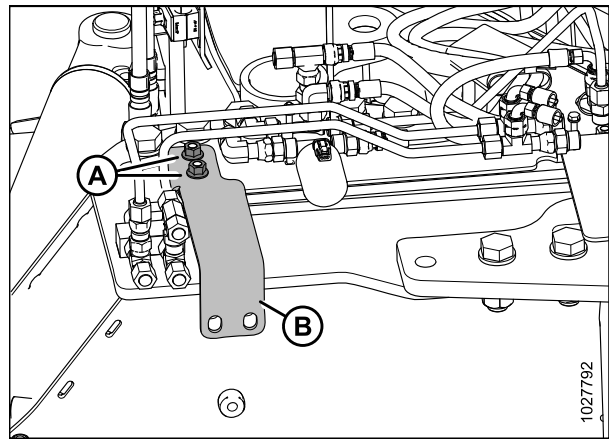


Figure 3.20: Support Bracket

21. Reconnect hydraulic lines at locations (A) and (B), and reposition switch valve assembly (C) below the support bracket.
22. Reconnect hydraulic hoses at locations (D) and (E).

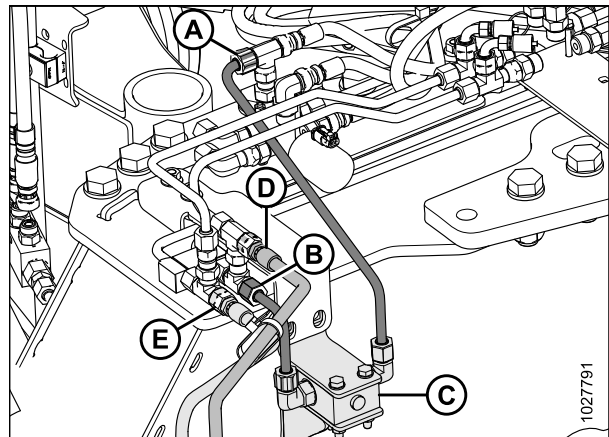


Figure 3.21: Hydraulic Connections

## INSTALLATION INSTRUCTIONS

23. Reinstall switch valve support brackets (B) and (C) using hardware (A) retained from Step 8, page 13.

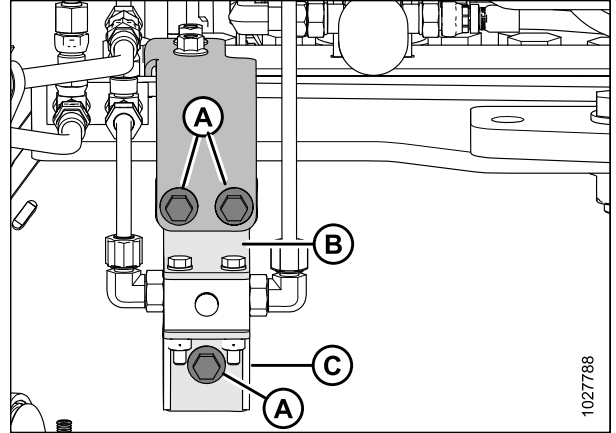


Figure 3.22: Switch Assembly with Pivot Bracket and Switch Lever Removed – View from Rear

24. Reinstall pivot bracket and switch lever (B) using hardware (A) retained from Step 7, page 13.

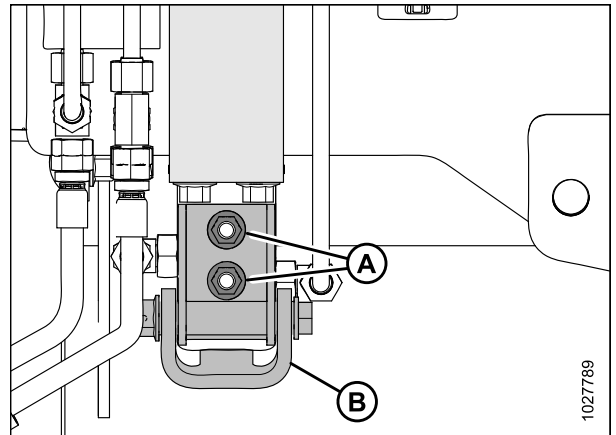


Figure 3.23: Switch Assembly – View from Above

25. Reinstall cam plate linkage (A) using hardware (B) retained from Step 6, page 13.

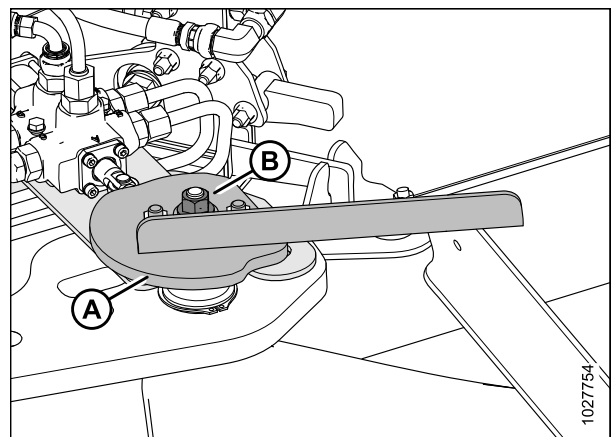


Figure 3.24: Cam Plate Reinstalled

## INSTALLATION INSTRUCTIONS

26. Reattach top bar (B) to middle bar (C) with hardware (A) retained from Step 5, page 12.

**NOTE:**

If the hardware securing the top bar to the cam plate was loosened or adjusted, the cam angle will need to be reset.

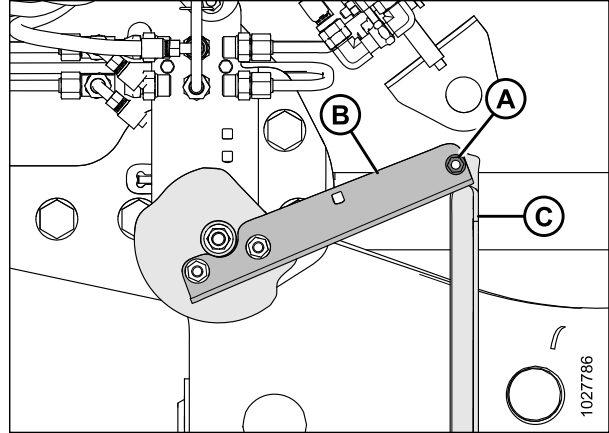


Figure 3.25: Cam Plate Linkage – View from Above

27. **Model year 2018 only:** Reinstall cover support (A) (removed in Step 3, page 12) on plate with retained hardware (B).
28. **Model year 2018 only:** Reattach connectors to lighting module on cover support (A).

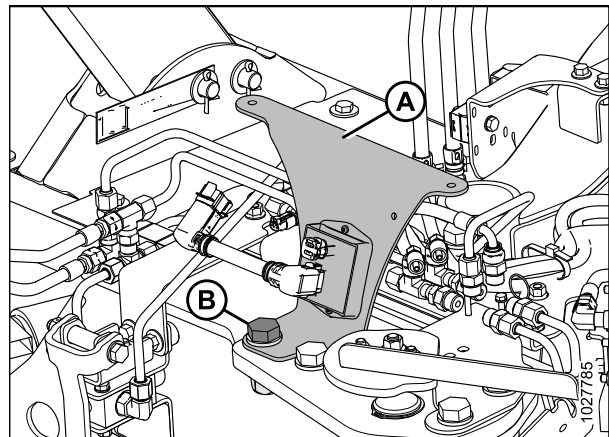


Figure 3.26: Cover Support Reinstalled – Model Year 2018 Only

29. **Model year 2018 only:** Reinstall transport cover (A) and secure to cover support with hardware (B) retained from Step 2, page 12.
30. To check that the transport system is still set up correctly, convert the mower from field to transport mode, and then back again. For instructions, refer to the mower operator's manual.

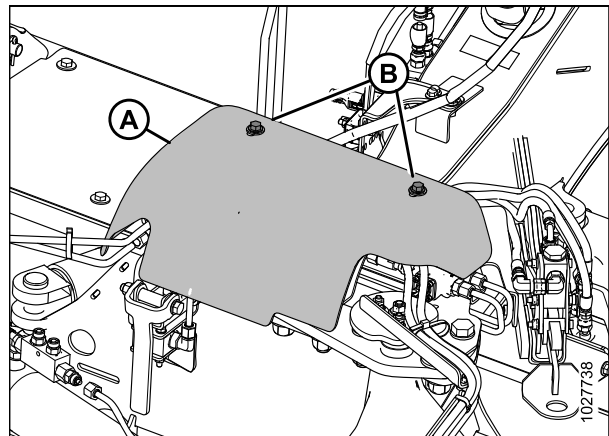


Figure 3.27: Transport Cover Reinstalled – Model Year 2018 Only





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