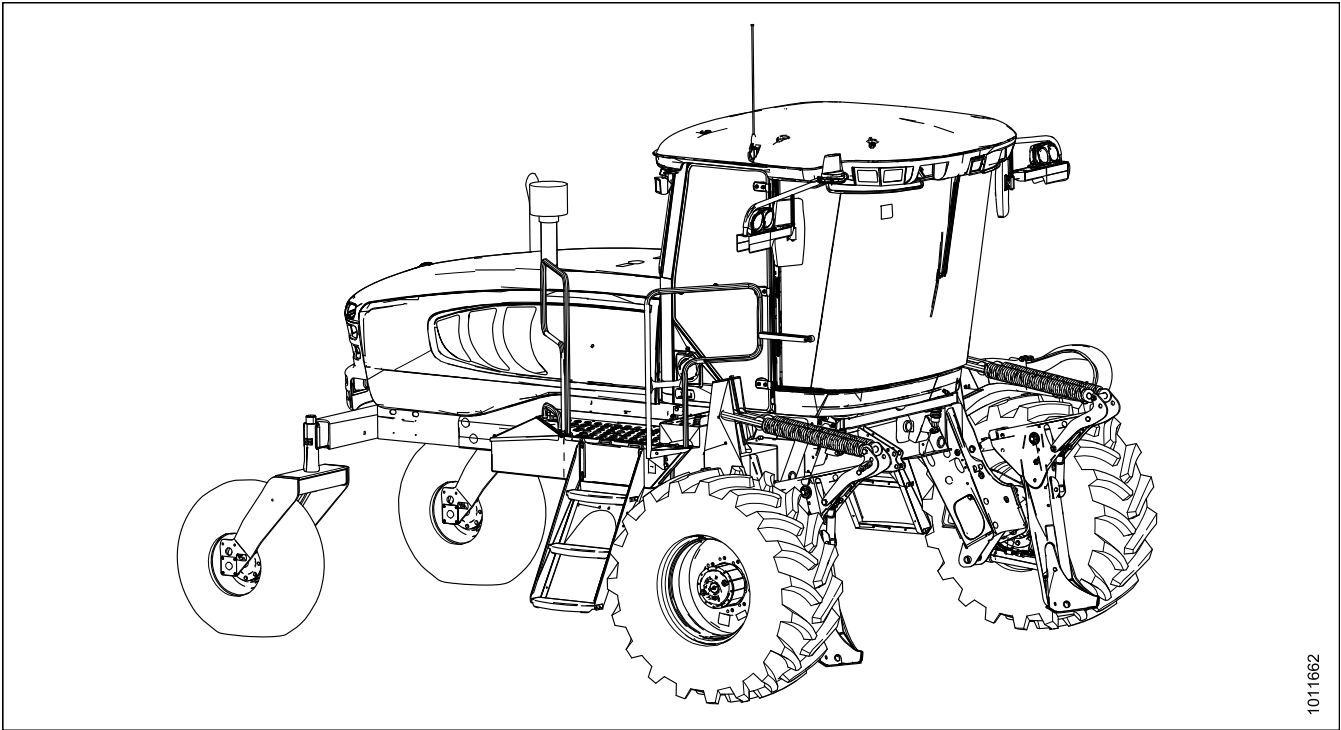


M Series Self-Propelled Windrower

Screen Cleaner Motor Kit (MD #167589)
Installation Instruction

147827 Revision D
Original Instruction

M155E4 Self-Propelled Windrower



1011662

Published in September 2017

Introduction

This document explains how to install the Screen Cleaner Motor kit on the following M Series Self-Propelled Windrowers:

- All M100, M150, and M200 windrowers
- All 2017 Model Year and earlier M105, M155, M155E4, and M205 windrowers

This kit includes a new wiring harness and a harness adapter that allows the operation of both an original and a replacement screen cleaner motor. A list of the parts included in this kit is provided in Chapter [2 Parts List, page 5](#).

Installation Time

This kit will take approximately 1 hour to install.

Conventions

The following conventions are used in this document:

- Right and left are determined from the operator's position, facing forward with the windrower in cab-forward position.
- Unless otherwise noted, use the standard torque values provided in the windrower's 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 not currently available in any language except English.

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 troubleshooting instructions.	3.4 Troubleshooting, page 13

TABLE OF CONTENTS

Introduction.....	i
List of Revisions	iii
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 Screen Cleaner Motor and Wiring Harness.....	7
3.2 Installing Replacement Screen Cleaner Motor and Wiring Harness.....	9
3.3 Adjusting Screen Cleaner Rotor to Screen Clearance	12
3.4 Troubleshooting	13

1 Safety

1.1 Signal Words

Three signal words, **DANGER**, **WARNING**, and **CAUTION**, are used to alert you to hazardous situations. 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.

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.

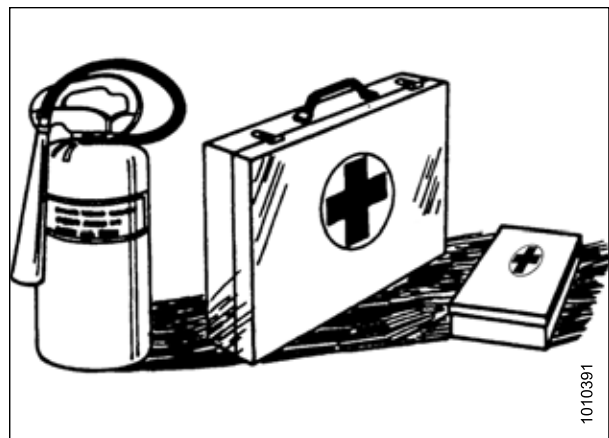


Figure 1.3: Safety Equipment

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.

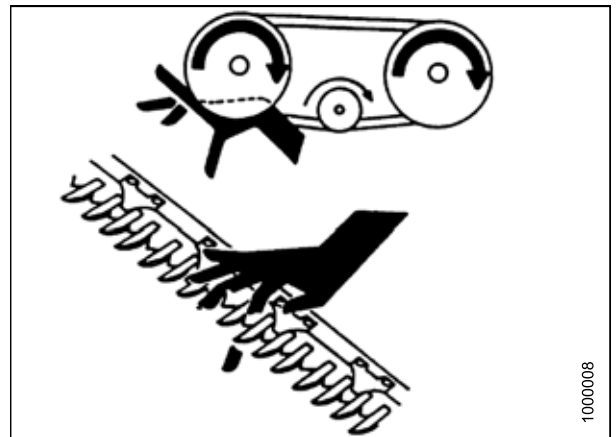


Figure 1.5: Safety around Equipment

- 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.

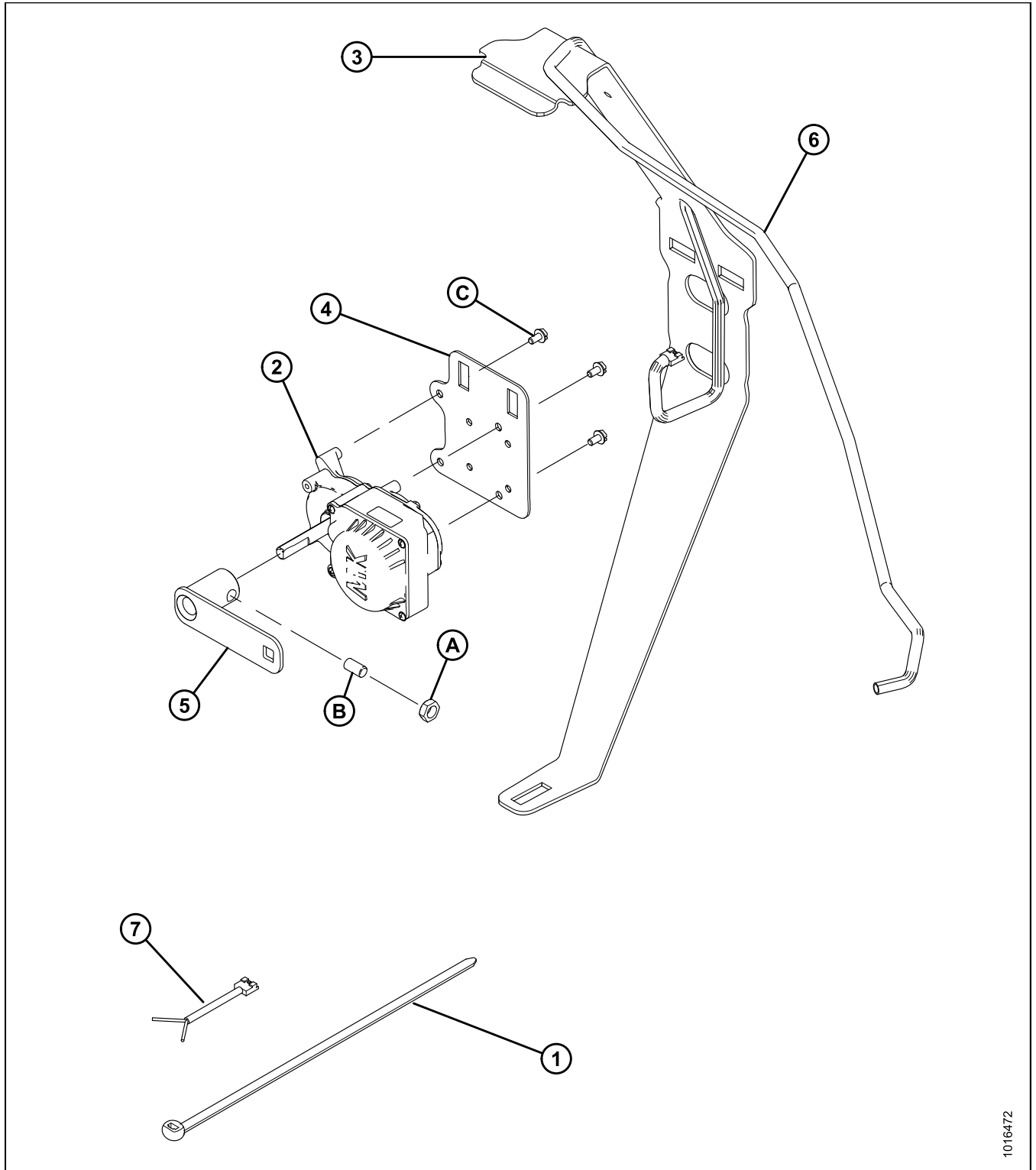


Figure 1.6: Safety around Equipment

2 Parts List

The following parts are included in this kit.

Figure 2.1: Screen Cleaner Motor Kit Parts



1016472

PARTS LIST

Ref	Part Number	Description	Quantity
	167589	ASSEMBLY – SCREEN CLEANER MOTOR KIT	
1	30753	FASTENER – CABLE TIE (BLACK)	1
2	167570	MOTOR – ELECTRIC	1
3	167584	STRAP – MOTOR SUPPORT	1
4	167585	SUPPORT – MOTOR	1
5	167586	SHAFT – DUCT DRIVE, WELDT	1
6	167713	HARNESS – SCREEN CLEANERS	1
7	167714	ADAPTER – SCREEN CLEANER WIRE	1
A	18664	NUT – HEX JAM 3/8–16 UNC GR 5 ZP	1
B	18709	SCREW – SET HEX SOC CUP PT 3/8 NC X 5/8 LG	1
C	252261	SCREW – HEX W HD MACH SLOT #10-24 UNC X 3 X 8–GR2–AA3L	4

3 Installation Instructions

To replace a damaged screen cleaner motor, do the following procedures:

3.1 Removing Screen Cleaner Motor and Wiring Harness

CAUTION

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

1. Stop engine and remove the key from ignition.
2. Open the hood. Refer to windrower operator's manual.
3. Open the cooler box screen. Refer to windrower operator's manual.
4. Disconnect main wiring harness connection (A).
5. Remove seven wiring harness clips (B) and retain for reassembly.
6. Remove cable tie, black motor cover, and O-rings from each motor (D). Retain O-rings for reassembly.
7. Disconnect the two wires that go to each motor, and remove wiring harness (E).
8. Remove the mounting strap of the damaged motor by removing the bottom bolt (C), then unhinge the strap at the top. Retain hardware for reassembly.

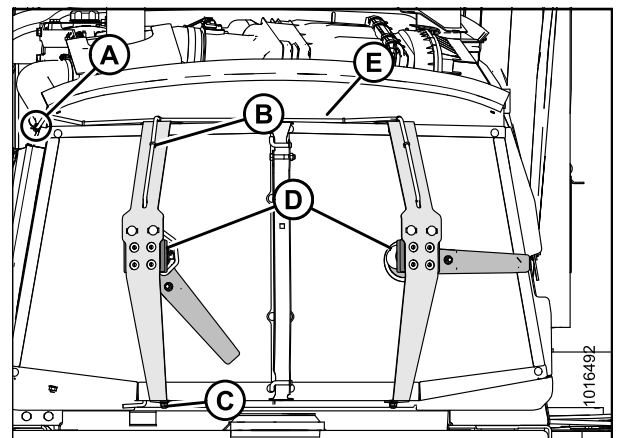


Figure 3.1: Screen Cleaners

9. Loosen the jam nut (A), remove the setscrew (B), and remove the screen cleaner duct (C) assembly.
10. Loosen bolt (D) to remove duct from motor shaft (E). Retain duct and hardware for reassembly.

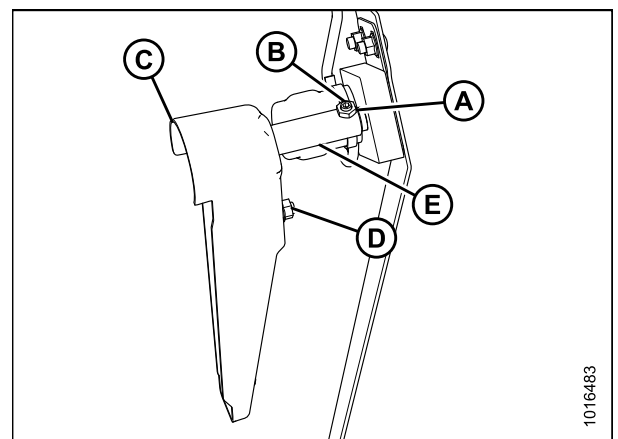


Figure 3.2: Screen Cleaner Assembly

INSTALLATION INSTRUCTIONS

11. Remove two bolts and nuts (A), and separate motor assembly from motor strap. Retain hardware for reassembly.

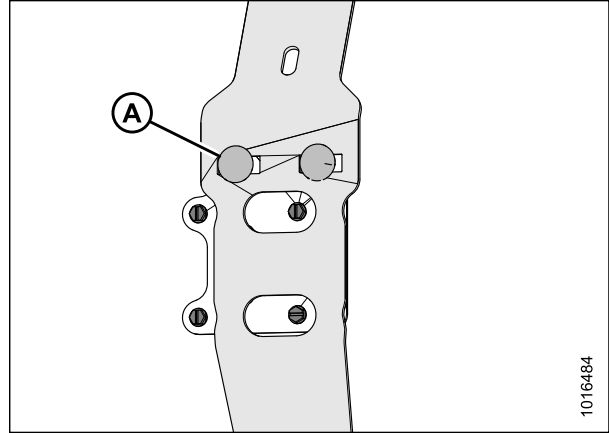


Figure 3.3: Screen Cleaner Assembly

3.2 Installing Replacement Screen Cleaner Motor and Wiring Harness

IMPORTANT:

Bolting of motor to plate is different for left motor mount (A) and right motor mount (B). The correct motor mount orientation is necessary to get the right alignment and adjustment.

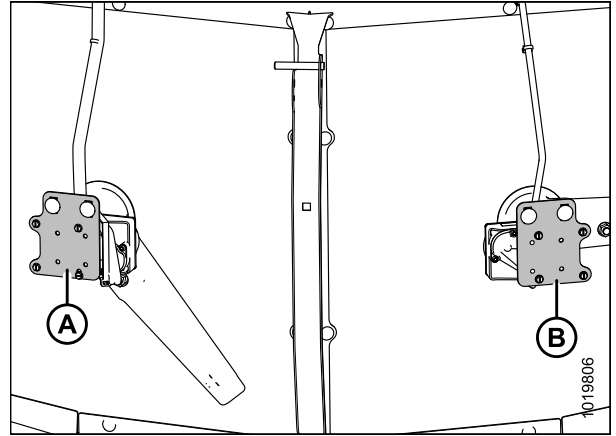


Figure 3.4: Motor Mount Orientation

1. Attach motor (A) (MD #167570) to motor support (B) (MD #167585) using four screws (C) (MD #252261). All parts provided in the kit.

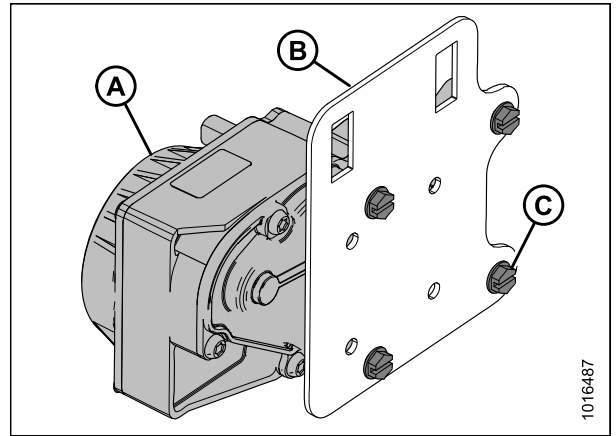


Figure 3.5: Motor Mount for the Right Side

2. Attach motor assembly to motor support strap (A) (MD #167584) provided in the kit using bolts (B) retained in Step 11, page 8.

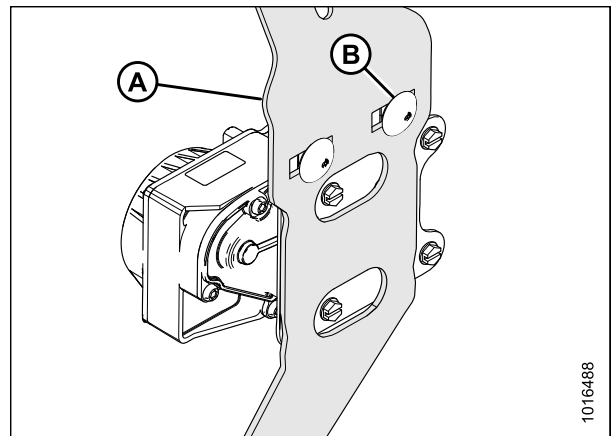


Figure 3.6: Motor Attached to Support Strap

INSTALLATION INSTRUCTIONS

3. Apply corrosion inhibitor inside shaft (A).
4. Attach shaft (A) provided in the kit to duct using retained hardware from Step 10, page 7.

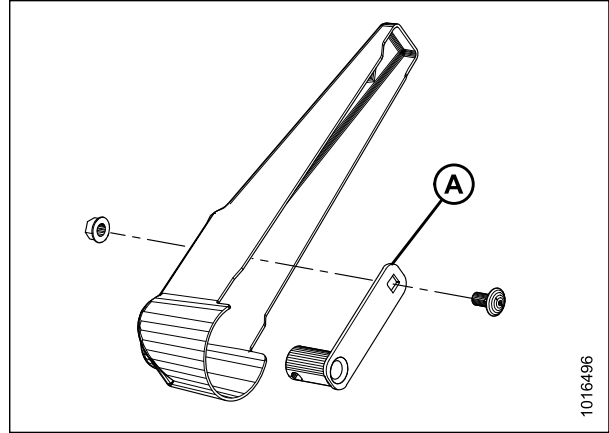


Figure 3.7: Screen Duct and Motor Shaft

5. Apply corrosion inhibitor to setscrew (A) before installing.
6. Attach duct assembly to new motor using setscrew (A) and jam nut (B) provided with the kit. Make sure the setscrew (A) is seated on the flat side of motor shaft. Tighten jam nut (B).
7. Set the clearance (C) from the motor housing to the end of the screen cleaner duct shaft to 14–19 mm (9/16–3/4 in.).

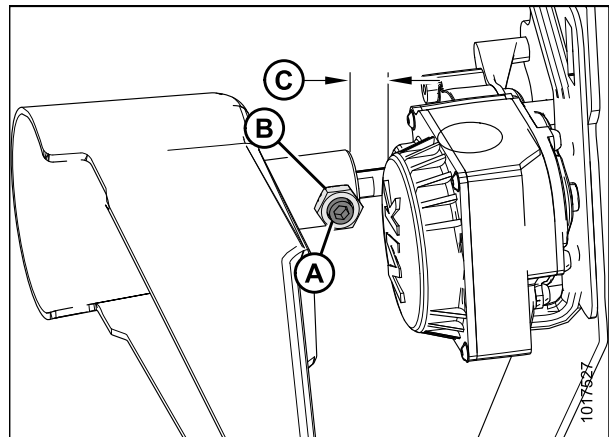


Figure 3.8: Screen Cleaner Assembly

8. Hinge the bracket (A) at the top and install the bottom bolt (B) using hardware retained in Step 8, page 7.

NOTE:

Apply silicone to the hinged area at the top of the plastic screen cleaner duct weldment.

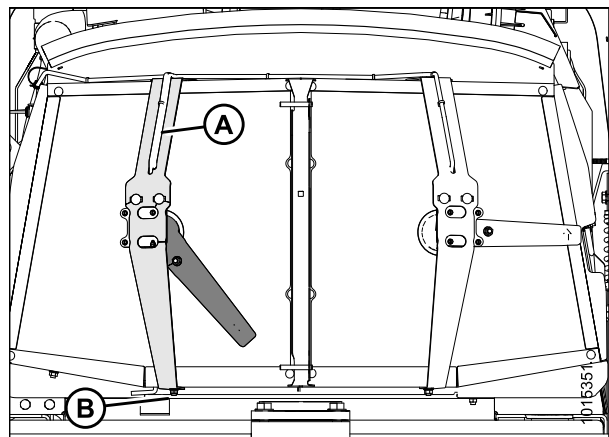


Figure 3.9: Screen Cleaners

INSTALLATION INSTRUCTIONS

9. Install new harness (B) (MD #167713) using clips (A) retained from Step 5, [page 7](#).

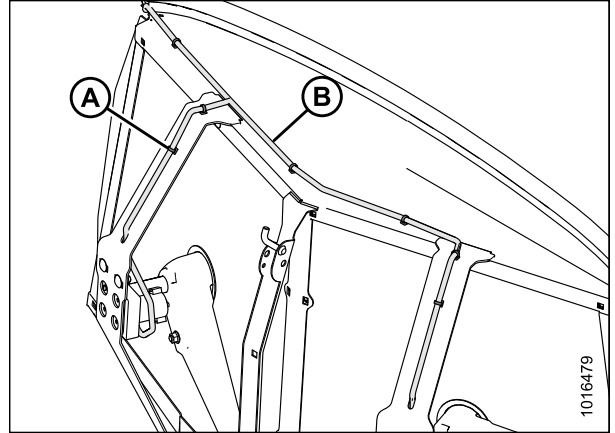


Figure 3.10: Screen Cleaner Motor Harness

10. Apply electrical grease to the motor electrical terminal (A).
11. Connect new harness to the motor.

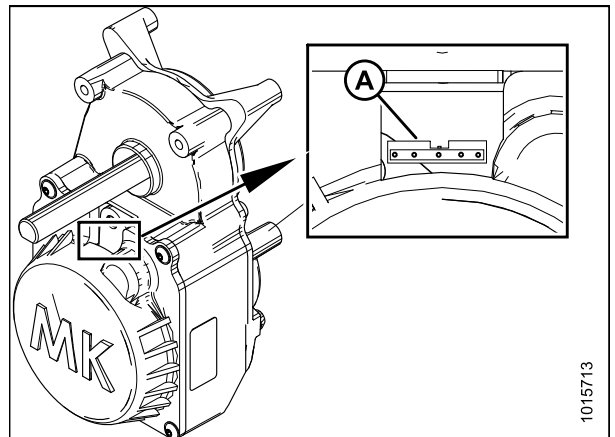


Figure 3.11: Screen Cleaner Motor

12. Route harness adapter (A) between bolts (B) on mounting strap.

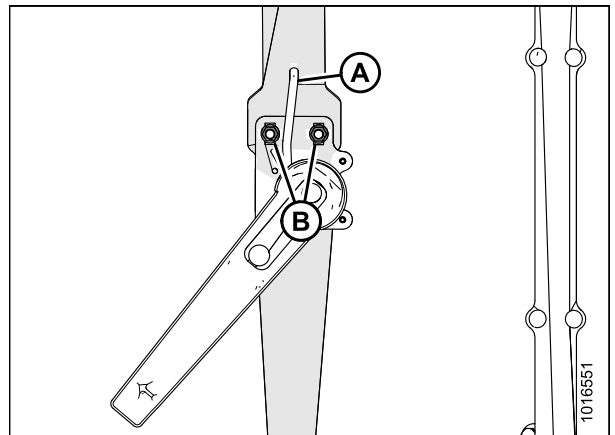


Figure 3.12: Wiring Harness Adapter

13. Reconnect main harness connection.
14. If you need to adjust the screen cleaner duct clearance, refer to [3.3 Adjusting Screen Cleaner Rotor to Screen Clearance, page 12](#).
15. Close the cooler box screen. Refer to your windrower operator's manual.
16. Close the hood. Refer to your windrower operator's manual.

3.3 Adjusting Screen Cleaner Rotor to Screen Clearance

Check clearance between trailing edge of screen cleaner rotor (A) and screen. It should be 1–8 mm (1/64–1/8 in.) at all locations when rotating.

⚠ DANGER

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

NOTE:

Screen cleaner rotors rotate counterclockwise and may touch screen as long as they continue to rotate.

1. Shut down the engine and remove the key.
2. Open the hood. Refer to your windrower operator's manual.
3. Loosen nut (B) on motor support (C).
4. Move support in or out until duct is 2–6 mm (1/16–1/4 in.) from screen near the center.
5. Retighten nut (B).
6. Loosen the two motor mount nuts (D).
7. Move motor/duct assembly (E) to obtain 1–8 mm (1/64–1/8 in.) gap to screen at full rotation of the rotor.
8. Retighten nuts (D) on motor mount.
9. Close the hood. Refer to your windrower operator's manual.
10. Start engine and ensure that the sweepers continue to rotate with no contact.

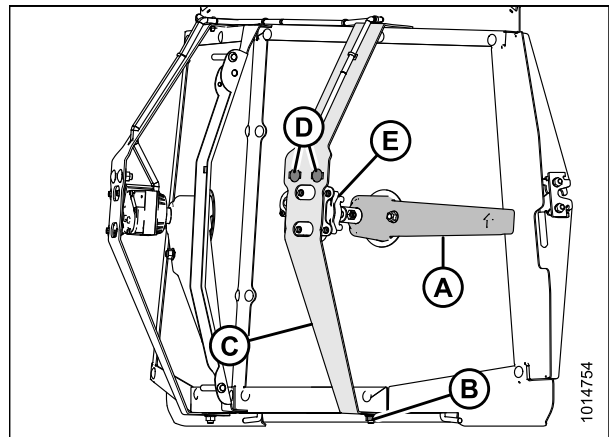


Figure 3.13: Screen Cleaner

INSTALLATION INSTRUCTIONS

3.4 Troubleshooting

If overheating occurs due to screen fouling, the screen sweeps should be adjusted as follows:

1. Loosen bolt (A), and adjust screen sweep (B) so clearance to screen mesh (C) is the same in all positions. Tighten bolt (A).

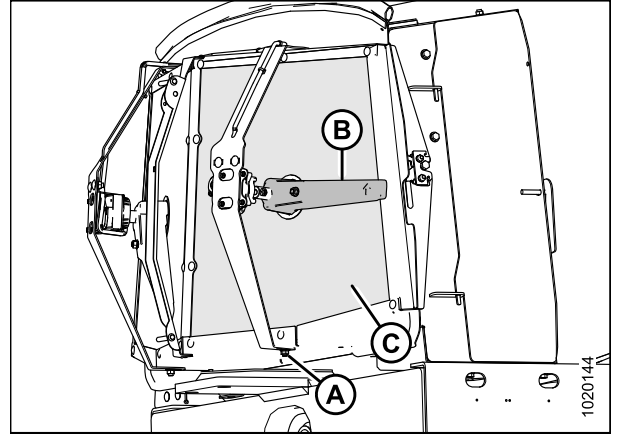


Figure 3.14: Cooling System

2. Loosen jam nut and set screw (A).
3. Adjust screen sweep (B) so that it contacts the screen mesh (C) in all positions. Tighten jam nut and set screw (A).

NOTE:

The screen may interfere with sweep as long as the sweep moves freely during operation. The amperage per motor must not exceed 180 mA.

For 2017 model year and older windrowers: If uneven screen surfaces prevent proper screen cleaning, order replacement screens MD #167983 and MD #167984.

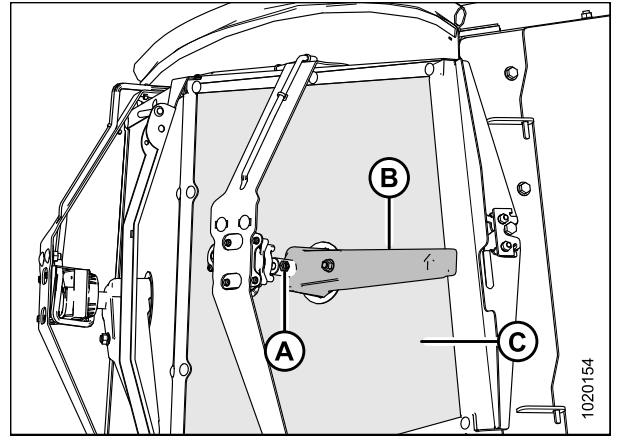


Figure 3.15: Cooling System

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 243, Suite 3, 143 Main Street
Greensborough, Victoria, Australia 3088
t. 03 9432 9982
f. 03 9432 9972

MacDon Brasil Agribusiness Ltda.

Rua Grã Nicco, 113, sala 202, B. 02
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

CUSTOMERS

MacDon.com

DEALERS

Portal.MacDon.com

Trademarks of products are the marks of their respective manufacturers and/or distributors.

Printed in Canada