

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Power Flow™
for 54C, 54D, 62C and 62D Mowers

OMM145652 E9
OPERATOR'S MANUAL



JOHN DEERE

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Previous Editions

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North American Version

Litho in U.S.A.

INTRODUCTION

Introduction

Using Your Operator's Manual

Read this entire operator's manual, especially the safety information, before operating.

This manual is an important part of your machine. Keep all manuals in a convenient location so they can be accessed easily.

Use the safety and operating information in the attachment operator's manual, along with the machine operator's manual, to operate and service the attachment safely and correctly.

If your attachment manual has a section called Preparing the Machine, it means that you will have to do something to your tractor or vehicle before you can install the attachment. The Assembly and Installation sections of this manual provide information to assemble and install the attachment to your tractor or vehicle. Use the Service section to make any needed adjustments and routine service to your attachment.

If you have any questions or concerns with the assembly, installation, or operation of this attachment, see your local John Deere dealer or call the John Deere Customer Contact Center at 1-800-537-8233 for assistance.

Warranty information on this John Deere attachment can be found in the warranty that came with your John Deere tractor or vehicle.

Product Identification

Product Compatibility

The POWER FLOW™ is compatible with the 54C, 54D, 62C and 62D mower decks.

Record Identification Numbers

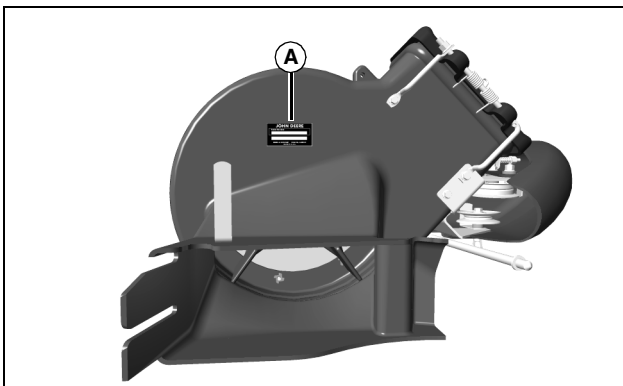
POWER FLOW™

54C, 54D Series High Performance Serial No. (010001 -)

62C, 62D Series High Performance Serial No. (010001 -)

If you need to contact an Authorized Service Center for information on servicing, always provide the product model and serial number.

You will need to locate the model and serial number for the POWER FLOW and record the information in the spaces provided below.



MX10017

DATE OF PURCHASE:

DEALER NAME:

DEALER PHONE:

PRODUCT SERIAL NUMBER (A):

Safety Labels



Understanding The Machine Safety Labels

The machine safety labels shown in this section are placed in important areas on your machine to draw attention to potential safety hazards.

On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards.

The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol.

Safety Label Location



M118454, MX10016

Operate blower with entire grass catcher in place.

WARNING - M118454



M118454

Rotating Blade -Thrown Objects

- Operate blower with entire grass catcher in place.

Safety

Read Safety in Machine Operator's Manual

Read the general safety operating precautions in your machine operator's manual for additional safety information.

Operating Safely

Read, understand and follow all instructions in this attachment manual, the machine operator's manual and safety signs on equipment before

SAFETY

starting.

Use proper front ballast. Remove ballast when the material collection system is removed.

Hopper extends beyond machine. Be aware of surrounding objects when making short turns.

Do not operate material collection system unless entire grass catcher is fastened in place with hopper cover securely latched.

Do not let anyone ride on the mower or material collection system. Riders are subject to injury such as being struck by foreign objects or being thrown off. Riders may obstruct the operator's view and cause a collision.

Before bag removal or installation:

- Stop mower.
- Disengage mower or PTO.
- Stop engine and remove key.
- Wait for engine and all moving parts to stop before leaving the operator seat.

Before backing up machine:

- Stop machine.
- Look behind hopper for children.
- Keep bystanders away when unloading material collection system.

Operate safely on slopes:

- Empty bags when they are half full.
- Do not operate on steep slopes.
- Before turning, slow down.
- Avoid sudden starts and stops.
- Do not park machine with material collection system on slopes.

Bag Maintenance:

- Bag is subject to wear and deterioration.
- Check bag frequently; replace when necessary.
- Use John Deere bag or equivalent to comply with safety specifications.
- Do not leave clippings in bags overnight.

Parking Safely

1. Stop machine on a level surface, not on a slope.
2. Disengage mower blades or any other attachments.
3. Lower attachments to the ground.
4. Lock the park brake.
5. Stop the engine.
6. Remove the key.
7. Wait for engine and all moving parts to stop before you leave the operator's seat.
8. Close fuel shut-off valve, if your machine is equipped.
9. Disconnect the negative battery cable or remove the spark plug wire(s) (for gasoline engines) before servicing the machine.

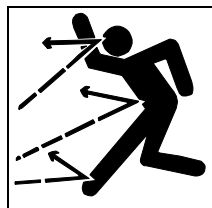
Protect Children

- Tragic accidents can occur if the operator is not alert to the presence of children. Keep children indoors when the machine and attachment are operated and under the watchful care of another responsible adult.

- Never assume that children will remain where you last saw them. Stay alert to the presence of children. Turn the machine off if a child enters the work area.

- Do not let children or an untrained person operate the machine.

- Do not carry or let children ride on any attachment or machine even with the attachment off. Do not tow children in a cart or trailer.



Avoid Injury From Thrown Objects

- When operating the vehicle with the MCS attachment installed make sure all chutes and hoses are securely in place. Keep hopper closed or MCS in operating position.

- Stop the engine and wait for all moving parts to stop before removing or lifting any attachment components.

- Avoid injury from impeller blades and thrown objects. Remove attachment when operating vehicle in side discharge mode. Make sure deflector shield is in place on mower deck if attachment is removed.



Avoid Injury From Rotating Blades

- Keep hands and feet away from rotating blades and blower assembly when engine is running.

- Stop engine and wait for moving parts to stop before servicing components.

- Do not operate MCS or blower unless all attachment components are in place and latched.

Practice Safe Maintenance

- Only qualified, trained adults should service this machine.
- Understand service procedure before doing work. Keep area clean and dry.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Never lubricate, service or adjust the machine or attachment while it is moving. Keep safety devices in place and in working condition. Keep hardware tight.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.
- Lower any attachment completely to the ground or to an existing attachment mechanical stop before servicing the attachment. Disengage all power and stop the engine. Lock park brake and remove the key. Let machine cool.
- Disconnect battery or remove spark plug wire (for gasoline engines) before making any repairs.
- Before servicing machine or attachment, carefully release pressure from any components with stored energy, such as hydraulic components and springs.
- Release hydraulic pressure by lowering attachment or cutting units to the ground or to a mechanical stop and move hydraulic control levers.
- Securely support any machine or attachment elements that must be raised for service work. Use jack stands or lock service latches to support components when needed.
- Never run engine unless park brake is locked.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Replace all worn or damaged safety and instruction decals.

ASSEMBLY

- Check all hardware at frequent intervals to be sure the equipment is in safe working condition.
- Do not modify machine or safety devices. Unauthorized modifications to the machine or attachment may impair its function and safety.

Assembly

Identify Parts

NOTE:

- If application requires an optional **Power Flow Attachment Kit**, the assembly instructions and a list of parts will be included with the kit.
- **Mounting Kit is required if installing on 54D or 62D Mower Decks.** See your John Deere dealer for ordering information.

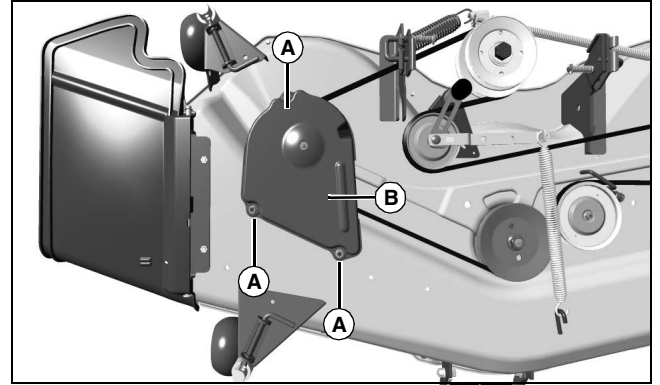


MX10054b, MX10054c, MX10038, MX10751

Qty.	Description
1	POWER FLOW (A)
1	Rear Baffle Plate (B)
1	Double Sheave (C)
1	Wire Form Support Shield Rod (D)
1	Blower Belt Shield (E)
1	Formed Front Mounting Bracket (F)
2	Bolt, M8x16
2	Flanged Bolt, M8x25
2	Flanged Bolt, M6x25
2	Flanged Locknut, M6
4	Locknut, M8

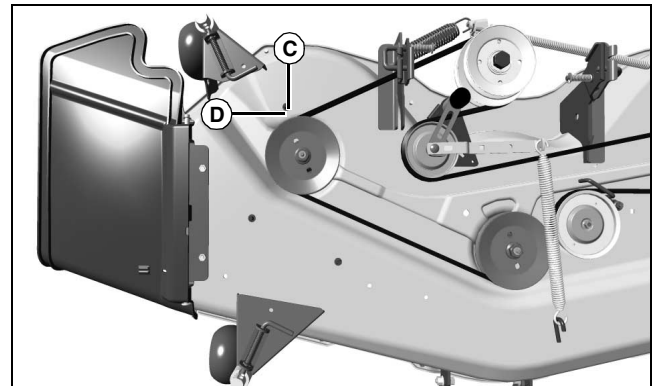
Qty.	Description
3	Washer, M6
1	Spring

Modify Mower Deck Belt Shield



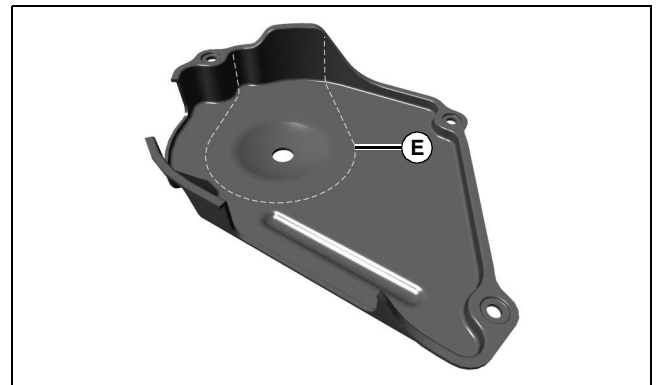
MX10040

1. Remove three flanged locknuts (A).
2. Remove deck belt shield (B).



MX10041

3. Remove retainer (C) and bolt (D).

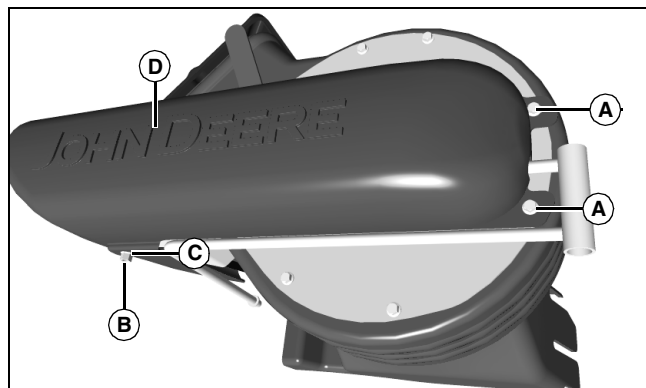


MX10042

4. Locate embossed cutout line (E) on bottom of deck belt shield.
5. Cut out embossed area.

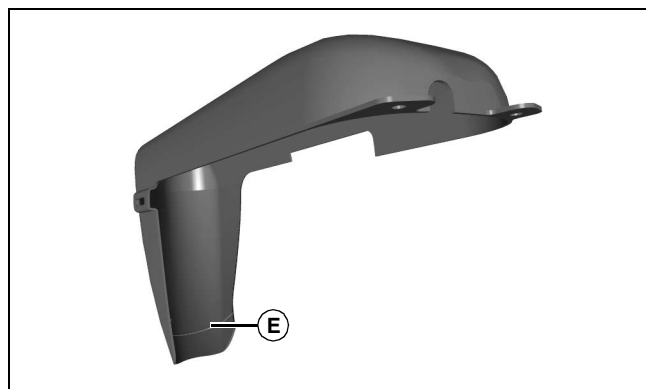
ASSEMBLY

Modify Shields



MX10029

1. Remove two bolts (A), nut (B) and washer (C) attaching belt shield (D) to POWER FLOW.

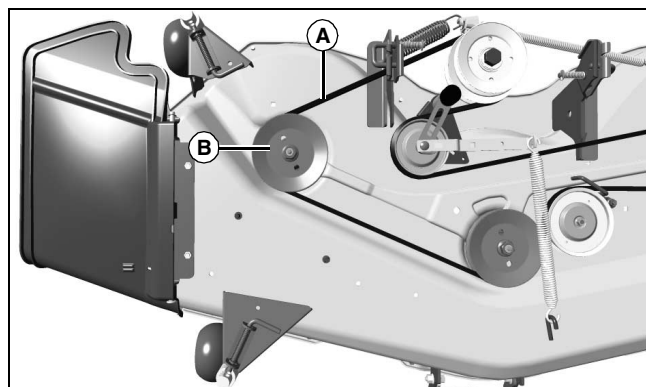


MX10749

2. Locate embossed cut line (E) on belt shield. Cut along line and remove section.
3. Install belt shield on POWER FLOW using two bolts (A), washer (C) and nut (B).

Install Double Sheave

1. Disengage PTO.

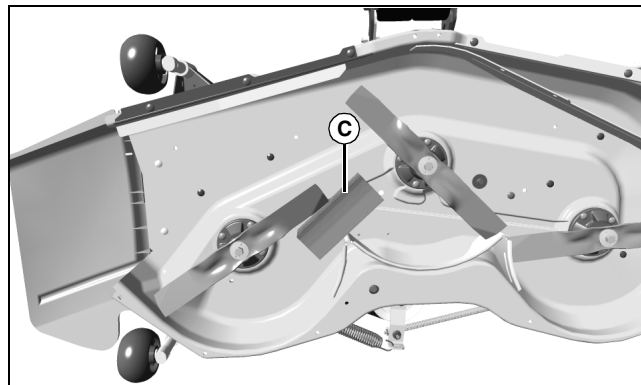


MX10045

2. Remove mower deck belt (A) from right spindle sheave (B). Inspect and replace belt if needed.



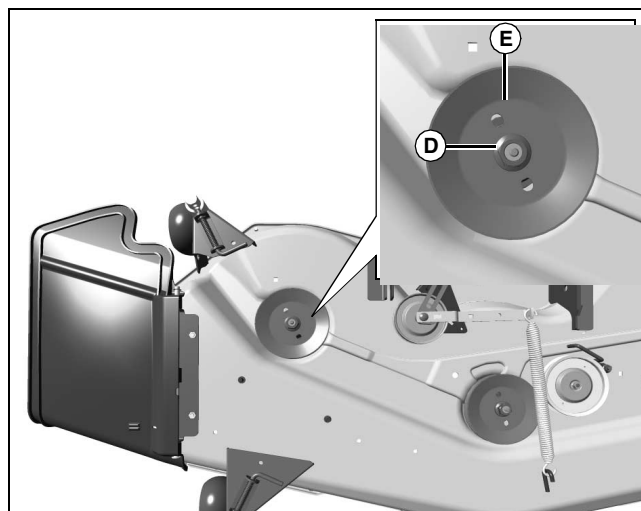
CAUTION: Avoid injury! Blades are sharp. Always wear gloves when handling blades or working near blades.



MX10046

3. Wedge a block of wood (C) between outer edge of blade and deck opening to prevent blade from turning.

NOTE: Support the blade and spindle shaft assembly. After the flanged spindle nut is removed, the entire blade and spindle assembly is free to fall out.

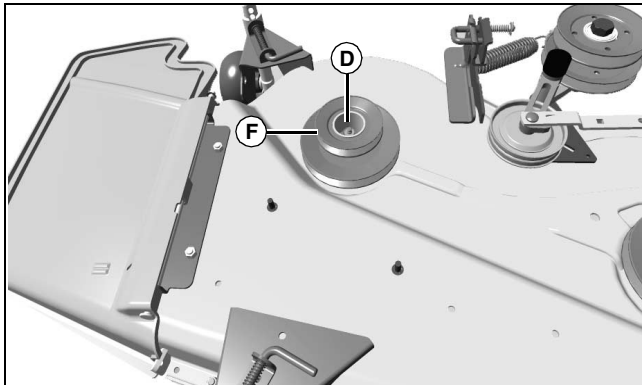


MX10035, MX10047

4. With blade held stationary against wood block, remove and keep flanged spindle nut (D). Remove right spindle sheave (E).

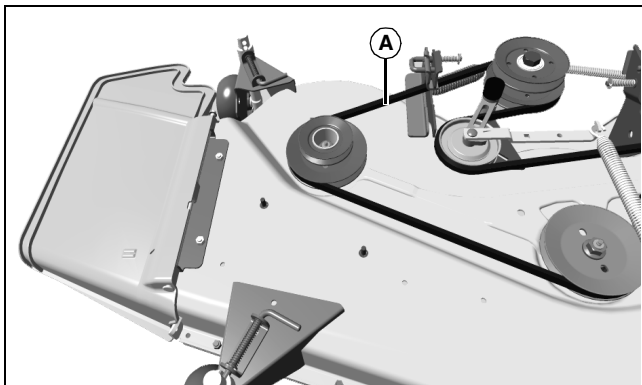
ASSEMBLY

IMPORTANT: Avoid damage! Tightening flanged spindle nut against blade cap screw may damage cap screw and spindle threads. Use a pipe wrench or other suitable device to hold double sheave stationary while tightening flanged spindle nut.



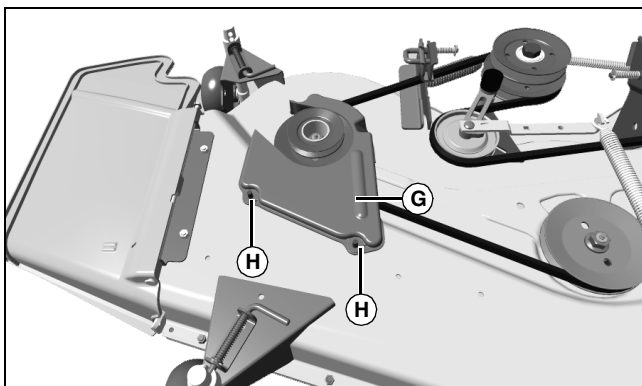
MX10032

5. Install double sheave (F) on spindle shaft with large pulley against deck.
6. With blade held stationary against wood block, install flanged spindle nut (D) and tighten to 163 N•m (120 lb-ft).



MX10048

7. Install original mower deck belt (A) in lower groove of double sheave.



MX10049

8. Install modified mower deck belt shield (G) on two bolts (H). Install two original flanged locknuts.
9. Safely unblock and lower mower deck to ground.
10. Clean and store right spindle sheave for use if POWER FLOW and double sheave are removed.

Install Rear Baffle Plate

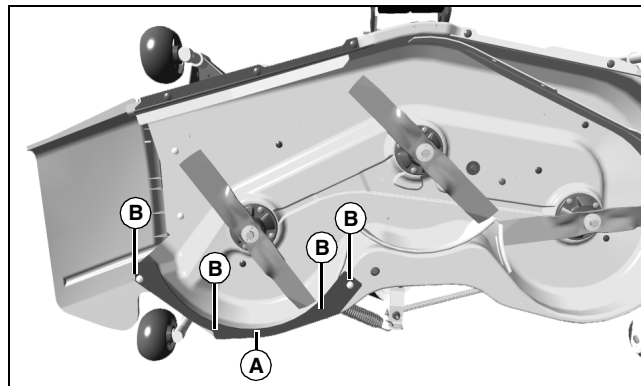
Prepare Mower Deck



CAUTION: Avoid injury! Blades are sharp. Always wear gloves when handling blades or working near blades.

1. Turn mower deck over and clean underside.

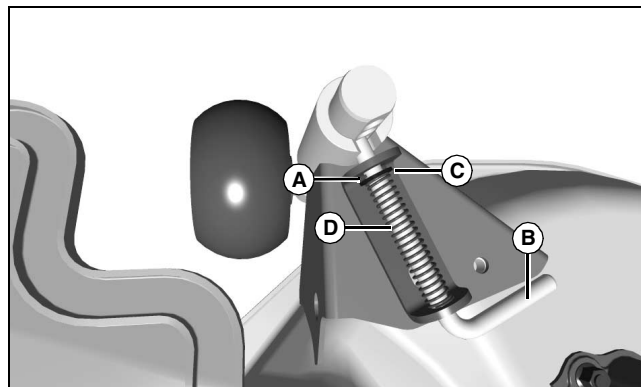
Install Plate



MX10039

1. Install rear baffle plate (A) with four M8x16 bolts (B) and M8 locknuts. Tighten to 10-30 N•m (8-22 lb-ft).

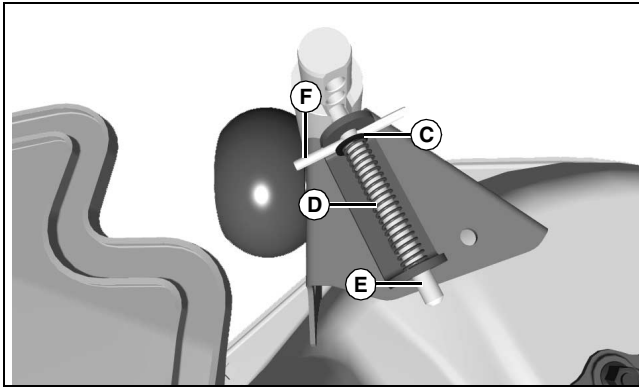
Install Gage Wheel Adjuster Pin



MX10043

1. Remove spring pin (A) from right rear gage wheel adjuster pin (B).
2. Remove adjuster pin (B), washer (C) and compression spring (D). Keep washer and spring.

PREPARING VEHICLE

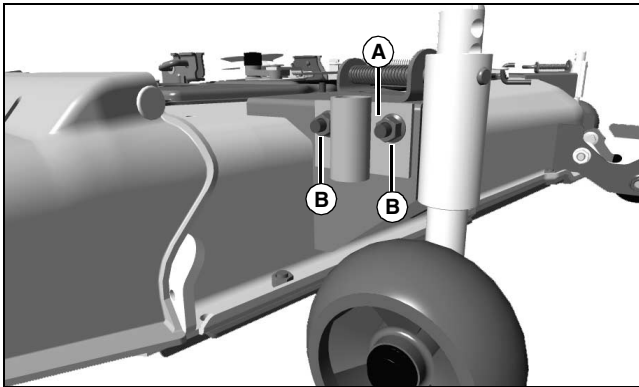


MX10044

3. Install new gage wheel adjuster pin (E), compression spring (D), washer (C) and new spring pin (F).

Install Front Mounting Bracket

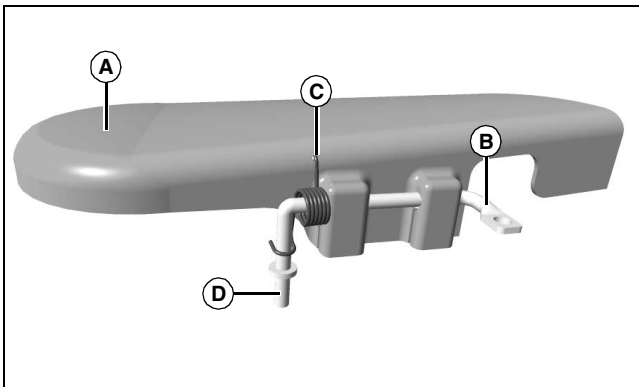
NOTE: Remove wheel for easy installation.



MX10050

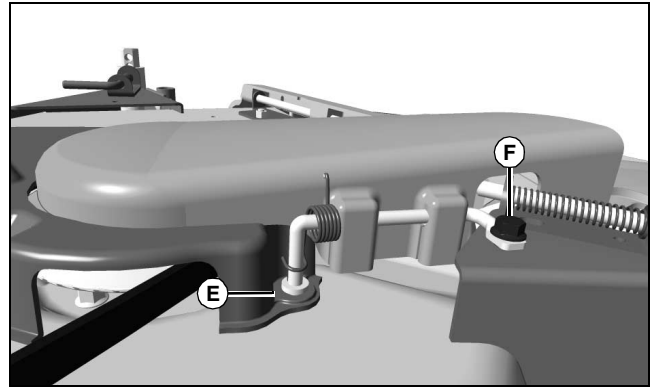
1. Install front mounting bracket (A) on mower deck right front gage wheel bracket with two M8x25 bolts and M8 flanged locknuts (B). Tighten to 20-40 N•m (15-29 lb-ft).

Assemble And Install Deck Belt Shield



MX10053

1. Install deck belt shield (A) on short bent pin (B), aligning hole in shield (C) with end of spring. Install end of spring in shield hole.
2. Install M6 washer on threaded end (D) of short bent pin.



MX10052

3. Install threaded end of short bent pin with washer in mower deck belt shield (E). Install M6 washer and M6 flanged locknut on threaded end from beneath deck.
4. Install M6x25 flanged bolt (F) through slotted end of bent pin into right rear gage wheel bracket. Install M6 washer and M6 flanged locknut on bolt from beneath deck.
5. Tighten locknuts to 20-40 N•m (15-29 lb-ft).
6. Check for proper operation and alignment of deck belt shield and spring.
7. Loosen locknuts and reposition deck belt shield and spring for alignment if needed.

Preparing Vehicle

Remove Mulch Kit



CAUTION: Avoid injury! Blades are sharp. Always wear gloves when handling blades or working near blades.

Mulch kit is not compatible with installation of blower assembly. If mulch kit is installed on mower, removal of mulch plug, attaching hardware and mulching blades is required. See installation instructions shipped with mulch kit.

Install Proper Mower Blades

IMPORTANT: Avoid damage! When replacing mower blades, always use genuine John Deere Service Parts.

- For best performance, always use correct mower blade for job being performed.
- Always follow safety and service instructions in the machine operator's manual when changing mower blades.

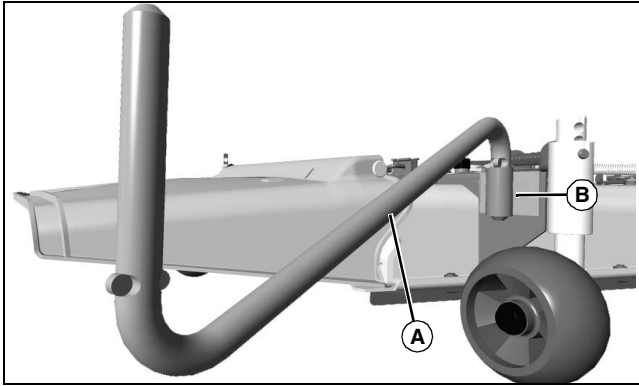
For maximum performance from blower assembly, install correct mower blades for application:

- **Mulching Blades** - Not for use with blower assembly.
- **Standard Blades** - Standard blades are designed for bagging, side discharging, and all mowing conditions.

INSTALLING

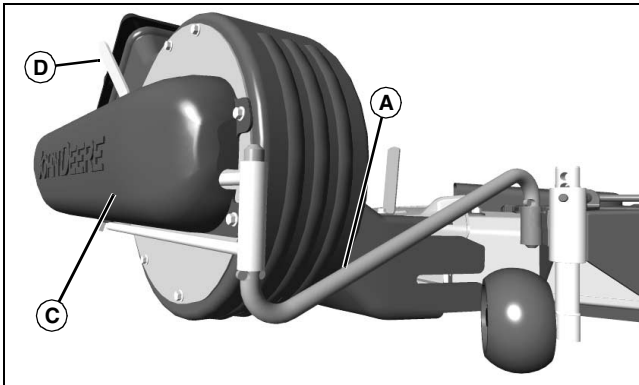
Installing

Installing Power Flow (54C and 62C Mowers)



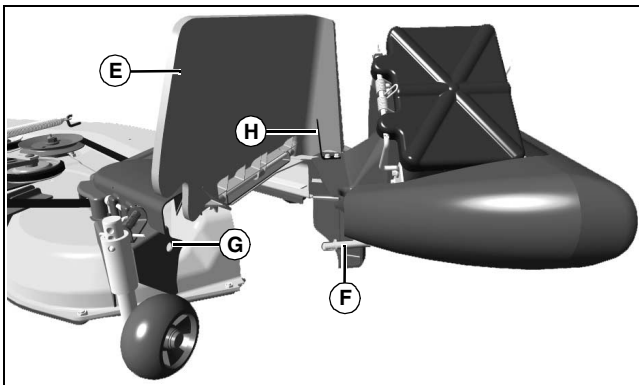
MX10019

1. Install short end of long bent pin (A) in front mounting bracket (B).



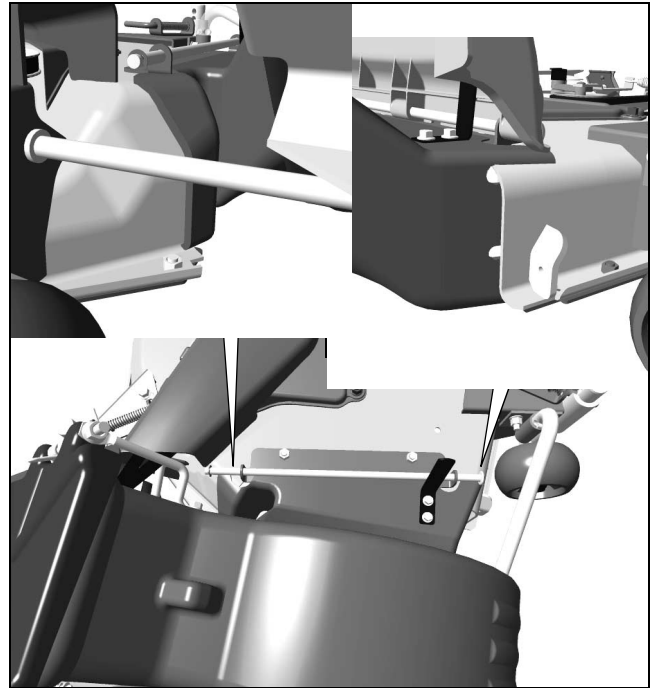
MX10024

2. Install power flow (C) on long end of bent pin (A).
3. Move tension lever (D) to forward to release position.



MX10020

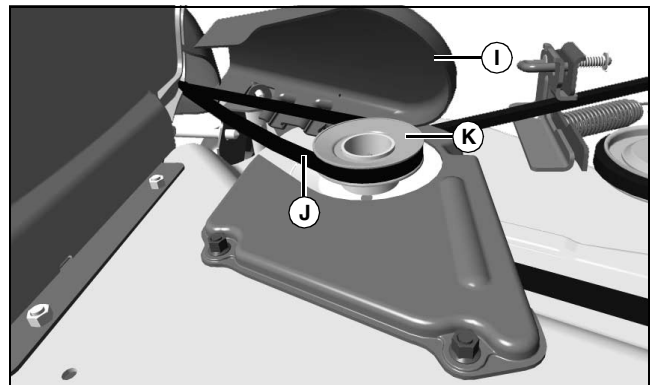
4. Fully raise mower deck discharge chute (E), and pivot power flow toward deck. Insert bent pin (F) into hole (G) in right rear gage bracket.
5. Rest mower deck discharge chute (E) on assembly bracket (H).



MX10021, MX10025, MX10027

Picture Note: Parts removed for clarity.

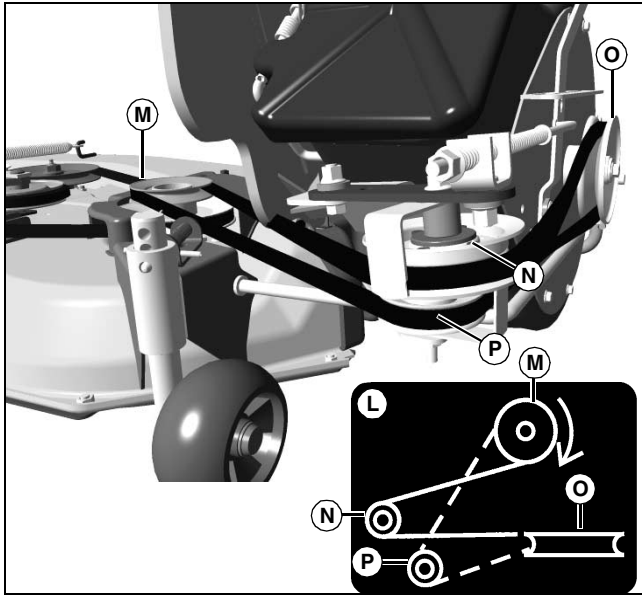
6. Power flow must install on mower deck discharge area as shown, as you insert pin (F) into hole (G).
7. Hold power flow securely against mower deck discharge area.



MX10026

8. Raise deck belt shield (I). Install drive belt (J) to top sheave (K) with belt "V" in groove.

INSTALLING



M146337, MX10022

9. Locate belt installation label (L) on belt shield and verify correct drive belt installation. The drive belt must run:

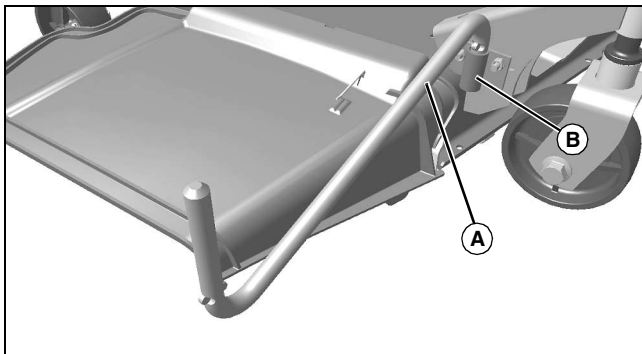
- from mower deck top sheave (M),
- to idler (N),
- to top of sheave (O),
- to V-idler sheave (P),
- back to mower deck top sheave (M).

10. Move tension lever rearward to the locked position.

11. Adjust mower deck and complete bagger installation.

Installing Power Flow (54D and 62D Mowers)

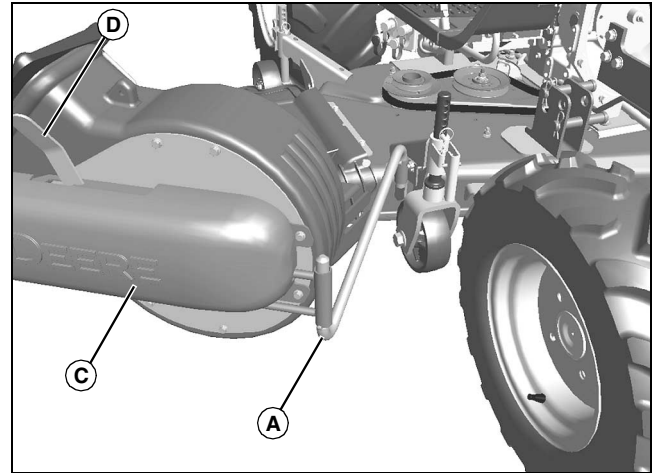
NOTE: Use the bent pin that comes with your Power Flow kit for the 54D mower deck. Use the bent pin from the mounting kit for the 62D mower deck.



MX37756

Picture Note: 62D Model shown.

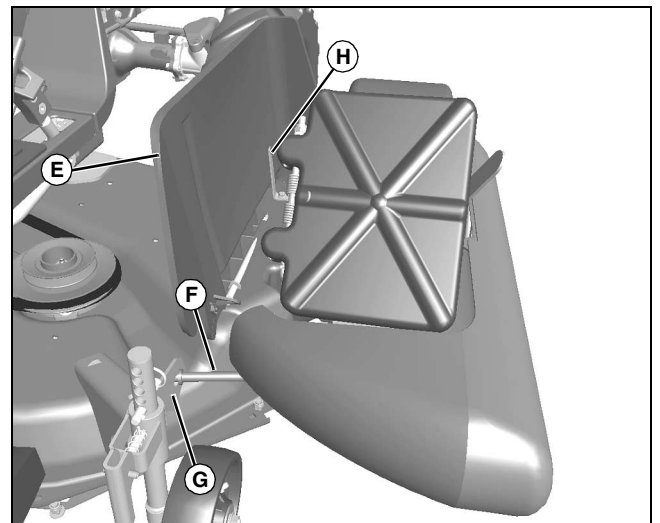
1. Install short end of long bent pin (A) in front mounting bracket (B).



MX37757

Picture Note: 62D Model shown.

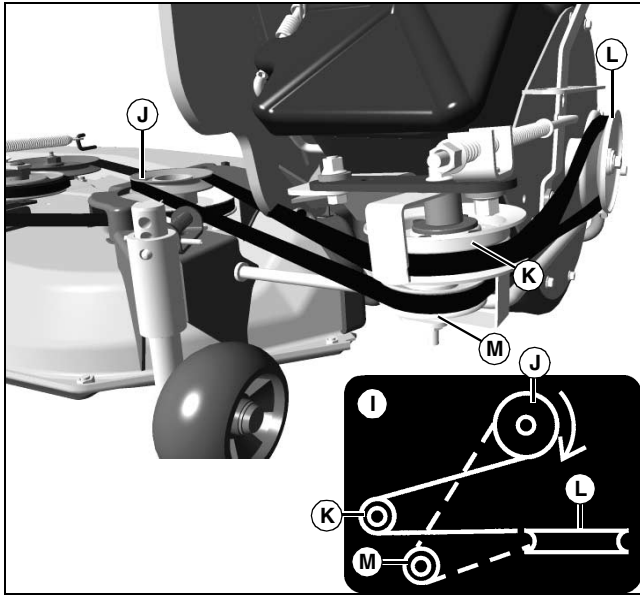
2. Install power flow (C) on long end of bent pin (A).
3. Move tension lever (D) forward to release position.



MX37758

4. Fully raise mower deck discharge chute (E), and pivot power flow toward deck. Insert straight pin (F) into hole in right rear gage bracket (G).
5. Lower discharge chute, so it rests on bracket (H).
6. Remove hardware for power flow belt shield.

REMOVING AND STORING



M146337, MX10022

7. Locate belt installation label (I) on inside of power flow belt shield, and verify correct drive belt installation. The drive belt must run:

- a. from mower deck top sheave (J),
- b. to idler (K),
- c. to top of sheave (L),
- d. to V-idler sheave (M),
- e. back to mower deck top sheave (J).

8. Move tension lever on power flow rearward to the locked position.

9. Adjust mower deck and complete bagger installation.

Adjusting Mower Deck

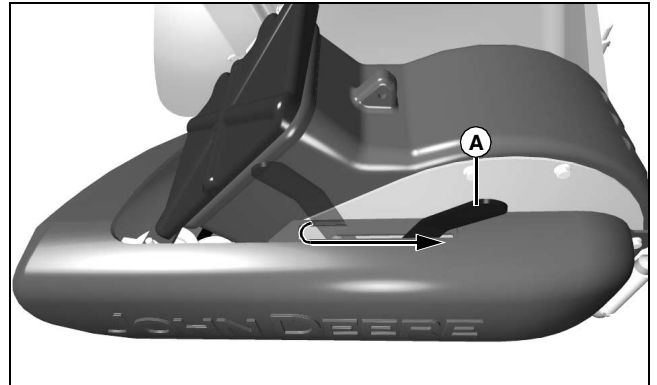
IMPORTANT: Avoid damage! Adjust mower deck right-hand wheels after each installation to provide adequate support for the POWER FLOW while traveling over the mowing area.

1. Adjust cutting height and level mower deck side-to-side and front-to-rear as described in tractor operator's manual.
2. Lower mower deck to pre-set cutting height.
3. Adjust both right-hand mower deck wheels to one position lower than they were positioned when leveling mower deck.

Removing and Storing

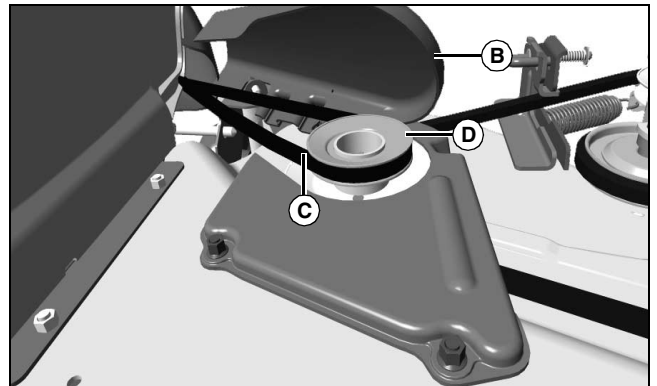
Removing Power Flow (54C and 62C Mowers)

NOTE: It is not necessary to remove the rear baffle plate from the mower deck when removing the power flow.



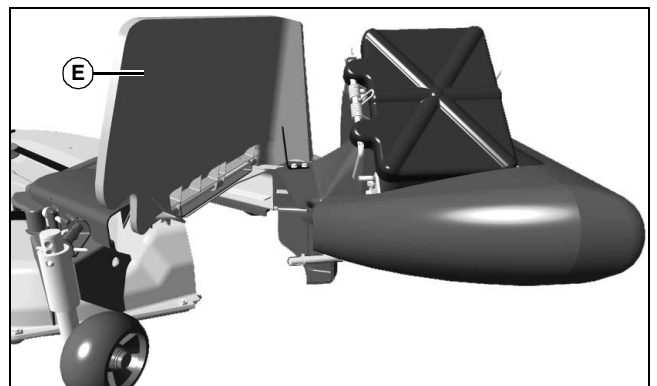
MX10036

1. Move tension lever (A) to release position.



MX10026

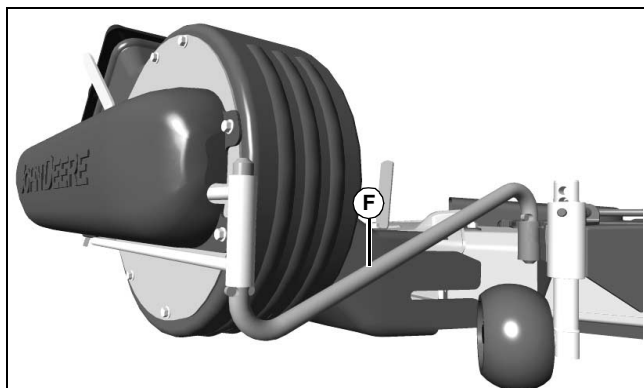
2. Raise deck belt shield (B) and remove drive belt (C) from top sheave (D).



MX10020

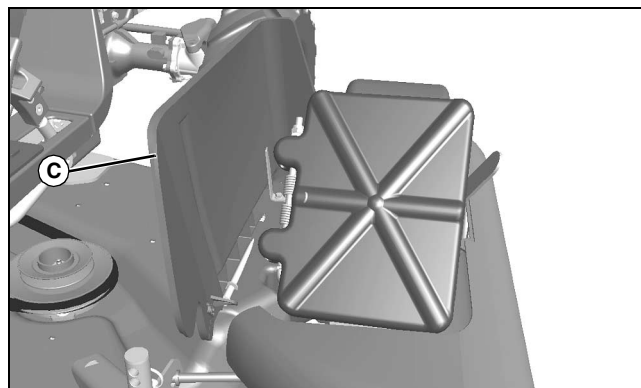
3. Raise mower deck discharge chute (E) and pivot power flow away from deck.

REMOVING AND STORING



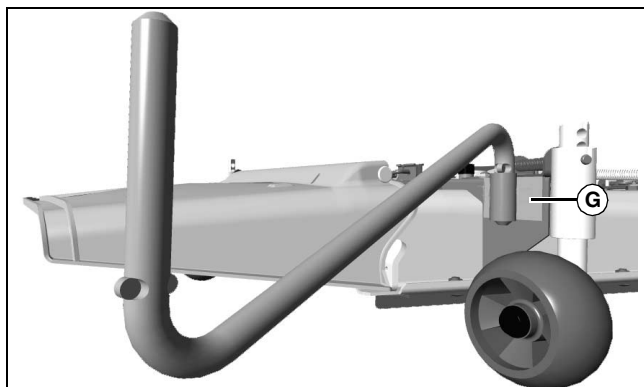
MX10024

4. Remove power flow from long end of bent pin (F).



MX37758

3. Raise mower deck discharge chute (C), and pivot power flow away from deck.



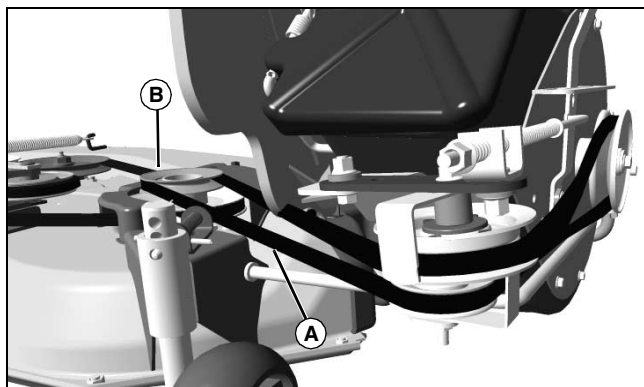
MX10019

5. Remove short end of bent pin from front mounting bracket (G).

Removing Power Flow (54D and 62D Mowers)

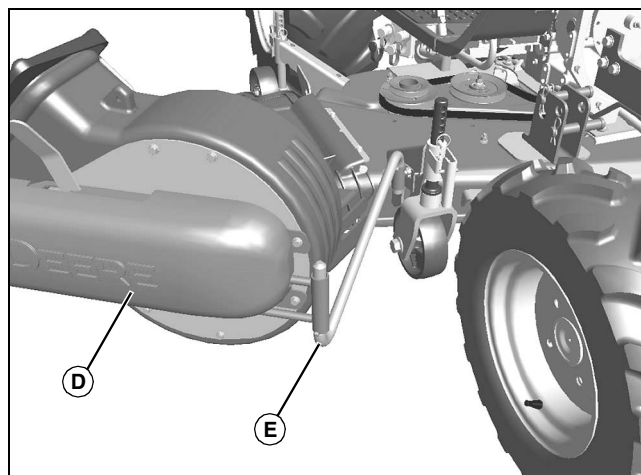
NOTE: It is not necessary to remove the rear baffle plate from the mower deck when removing the POWER FLOW.

1. Move tension lever to release position.



MX10022

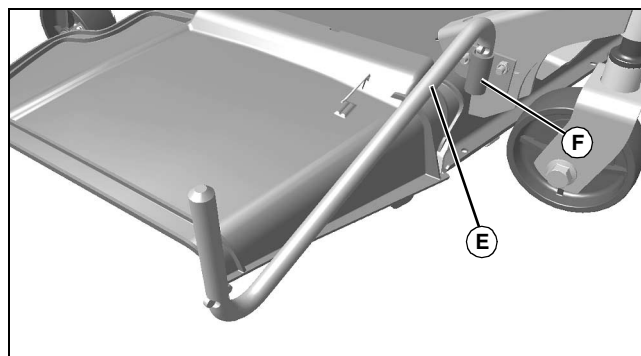
2. Raise deck belt shield and remove drive belt (A) from top sheave (B).



MX37757

Picture Note: 62D Model shown.

4. Remove power flow (D) from long end of bent pin (E).



MX37756

Picture Note: 62D Model shown.

5. Remove short end of bent pin (E) from front mounting bracket (F).

OPERATING

Storing Safety



CAUTION: Avoid injury! Fuel vapors are explosive and flammable. Engine exhaust fumes contain carbon monoxide and can cause serious illness or death:

- Run the engine only long enough to move the machine to or from storage.
- Machine fires and structure fires can occur if a machine is stored before allowing it to cool, or if debris is not removed from around the engine and muffler, or if stored near combustible materials.
- Do not store vehicle with fuel in the tank inside a building where fumes may reach an open flame or spark.
- Allow the engine to cool before storing the machine in any enclosure.

Storing Attachment

NOTE: Some of the following steps may not apply to your attachment.

1. Remove any grass clippings from MCS or bagger attachment.
2. Remove attachment from machine.
3. Clean attachment and driveline, if equipped, with water pressure from a hose.
4. Remove any shields if needed to clean out all debris.
5. Repair or replace worn, bent, or damaged parts. Tighten loose hardware.
6. Apply paint to painted surfaces where needed to prevent rust.
7. Apply thin coat of grease to blades or tines to prevent rust.
8. Lubricate any pivot points with engine oil to prevent rust.
9. Lubricate any grease points.

IMPORTANT: Avoid damage! Abrasive surfaces can damage attachment. Store attachment on non-abrasive surface or on wooden blocks.

10. If storing attachment outdoors, block up attachment if possible and place a waterproof cover over it.

Operating

Using the Blower Assembly

Starting Blower Assembly

Whenever tractor PTO is engaged to start mower deck, blower assembly will automatically start. (See tractor operator's manual for PTO operating instructions.)

Stopping Blower Assembly

Whenever tractor PTO is disengaged to stop mower deck, blower assembly will automatically stop.

Unplugging Mower, Bagger, or Material Collection System



CAUTION: Avoid injury! Do not attempt to unplug attachment with machine running.

- Rotating blades are dangerous. Shut off the engine and remove the key before getting off the seat to inspect the machine and attachment.
- Thrown objects can cause serious injury. Make sure all machine parts are stopped before raising hopper top or removing chutes.

Checking For Plugging While Driving

If grass builds up in front of mower discharge chute, check for plugged chute or problems with blower assembly (if equipped).

If there is a trail of clippings behind mower or clippings blow to the side, check for plugged chute, full collector bags, or problems with blower assembly.

Removing Debris From Inspection Points:



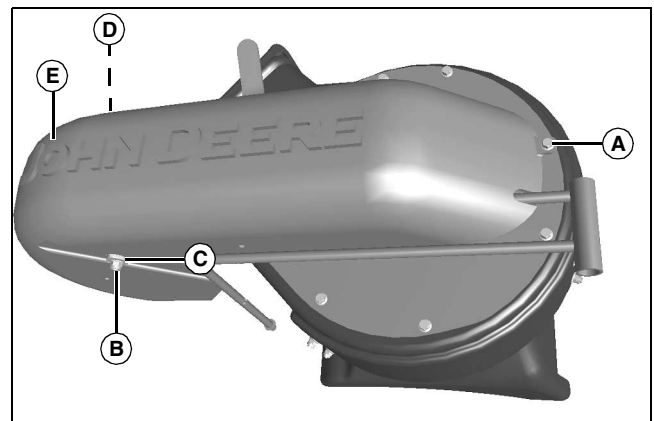
CAUTION: Avoid injury! Do not use hands or feet to clear plugged mower deck or blower assembly. Stored energy can cause blades to rotate.

1. Park machine safely. Wait for all moving parts to stop before getting off to inspect machine.
2. Open hopper cover. Check chute outlet.
3. Remove chute from mower deck or blower assembly. Check chute inlet.
4. Check under mower deck for debris.

Service

Removing Drive Belt

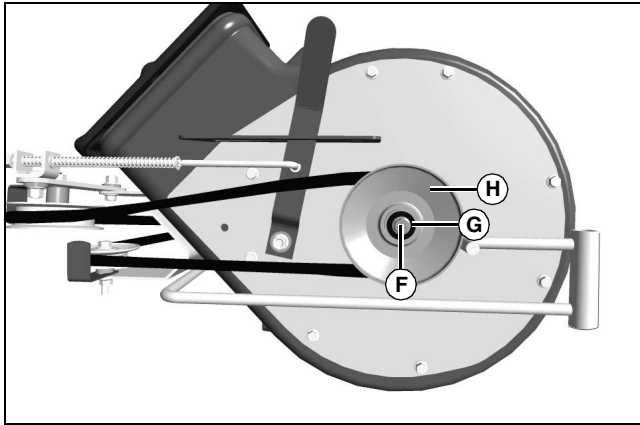
1. Remove POWER FLOW from mower deck.



MX38746

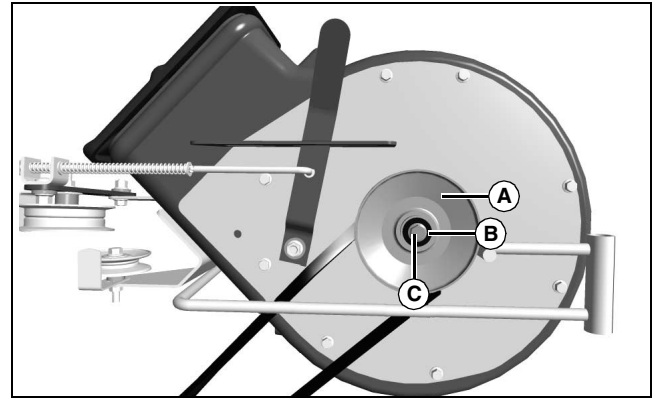
2. Remove one bolt (A), bottom nut (B) and washer (C), and top nut (D) attaching belt shield (E) to POWER FLOW.
3. Remove belt shield.
4. Remove all grass accumulation around belt, idler and sheaves.

SERVICE



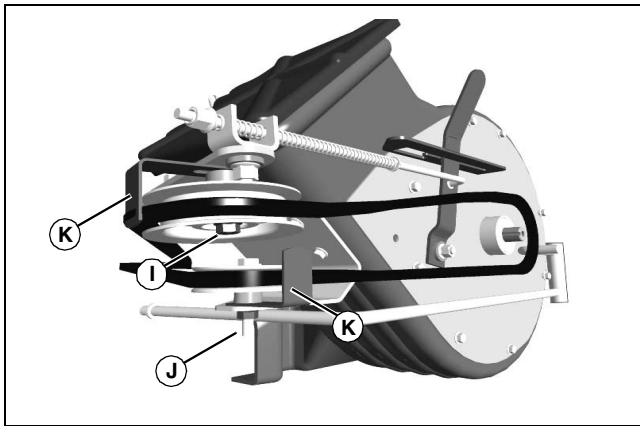
MX10030

5. Remove and keep bolt (F), washer (G) and sheave (H).
6. If key is loose on shaft, remove and keep key to avoid losing.



MX10033

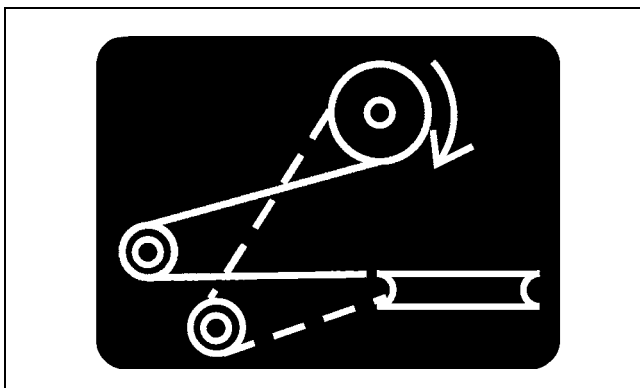
1. If key was removed, install key on shaft.
2. Install sheave (A), washer (B) and bolt (C). Tighten bolt to 30-44 N•m (22-32 lb-ft).



MX10031

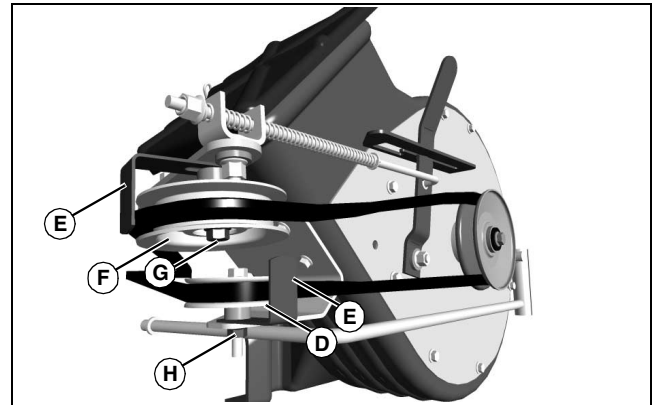
7. Loosen nut (I) on idler and nut (J) on sheave.
8. Move belt brackets (K) away from idler and sheave, and remove belt.

Installing Drive Belt



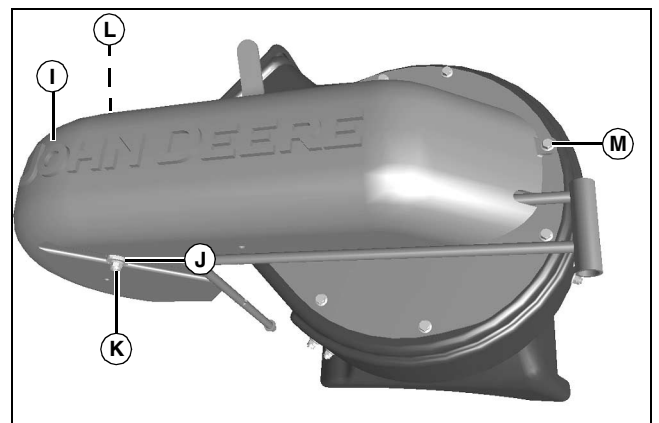
M146337

NOTE: Locate belt installation label on belt shield. This label illustrates correct belt installation. If belt is not installed correctly, it is possible that POWER FLOW fan will rotate backwards.



MX10034

3. Route belt:
 - a. between v-idler sheave (D) and belt bracket (E) with belt "V" in groove,
 - b. between idler (F) and belt bracket (E) with belt "face" in groove.
4. Move belt brackets (E) perpendicular to outer edges of sheave and idler. Leave 3 mm (1/8 in.) clearance between brackets and outer edges.
5. Tighten nut (G) and nut (H) to 20-40 N•m (15-29 lb-ft).



MX38746

6. Install belt shield (I) to POWER FLOW with washer (J) and bottom nut (K), top nut (L), and one bolt (M).

TROUBLESHOOTING

Troubleshooting

Using Troubleshooting Chart

If you are experiencing a problem that is not listed in this chart, see your John Deere dealer for service.

When you have checked all the possible causes listed and you are still experiencing the problem, see your John Deere dealer.

If	Check
Blower Assembly Will Not Turn On	Belt worn or broken.
Blower Assembly Plugs	Ground speed too fast for grass conditions. Locking handle not fully engaged. Belt worn. Belt installed incorrectly. Mower blades not correct type for application.
Blower Assembly Performance is Poor	Ground speed too fast for grass conditions. Locking handle not fully engaged. Belt worn. Mower blades not correct type for application.

(Part numbers are subject to change without notice. Part Numbers may be different outside the U.S.A.)

John Deere Quality Continues with Quality Service

John Deere provides a process to handle your questions or problems, should they arise, to ensure that product quality continues with your John Deere dealer's parts and service support.

Follow the steps below to get answers to any questions you may have about your product.

1. Refer to the appropriate attachment, machine or equipment operator manuals.
2. Contact your John Deere dealer with unanswered questions.
3. Call the John Deere Customer Contact Center.
 - Call 1-800-537-8233 and provide product serial number and model number.

Getting Quality Service

Service Literature

If you would like a copy of the Parts Catalog or Technical Manual for this machine call:

- **U.S. & Canada:** 1-800-522-7448.
- **All Other Regions:** Your John Deere dealer.

Parts

We recommend John Deere quality parts and lubricants, available at your John Deere dealer.

When you order parts, your John Deere dealer needs the serial number or product identification number (PIN) for your machine or attachment. These are the numbers that you recorded in the Product Identification section of this manual.

Order Service Parts Online

Visit <http://JDParts.deere.com> for your Internet connection to parts ordering and information.

Part Numbers

Item	Part Number
Drive Belt - 54HP Power Flow	M146479
Drive Belt - 62HP Power Flow	M147279
Standard Blades - 54C & 54D Deck	M143520
Standard Blades - 62C & 54D Deck	M143504

GETTING QUALITY SERVICE

GETTING QUALITY SERVICE
