

JOHN DEERE
AG & TURF DIVISION

**54 and 60 Inch High Capacity
X700 Mower Deck**

OMM167537 G2

OPERATOR'S MANUAL



JOHN DEERE

Original Instruction

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Consumer Equipment Division**

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INTRODUCTION

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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

These mower decks are compatible with X700 Series tractors.

Record Identification Numbers

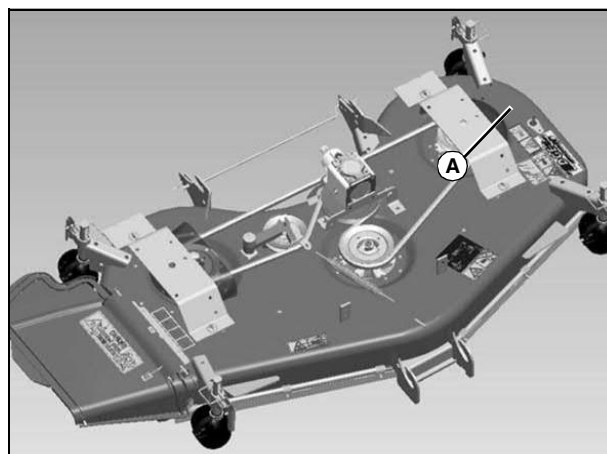
Mower

54HC Serial No. (010001 -)

60HC Serial No. (010001 -)

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

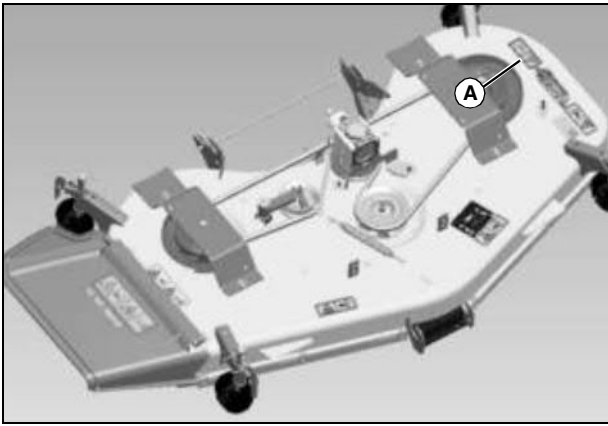
You will need to locate the model and serial number for the mower and record the information in the spaces provided below.



MX51926

Picture Note: 54HC

PRODUCT IDENTIFICATION



MX51925

Picture Note: 60HC

DATE OF PURCHASE:

DEALER NAME:

DEALER PHONE:

PRODUCT SERIAL NUMBER (A):

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Hello dear friend!

Thank you very much for reading.

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SAFETY LABELS

Safety Labels



Pictorial Safety Signs

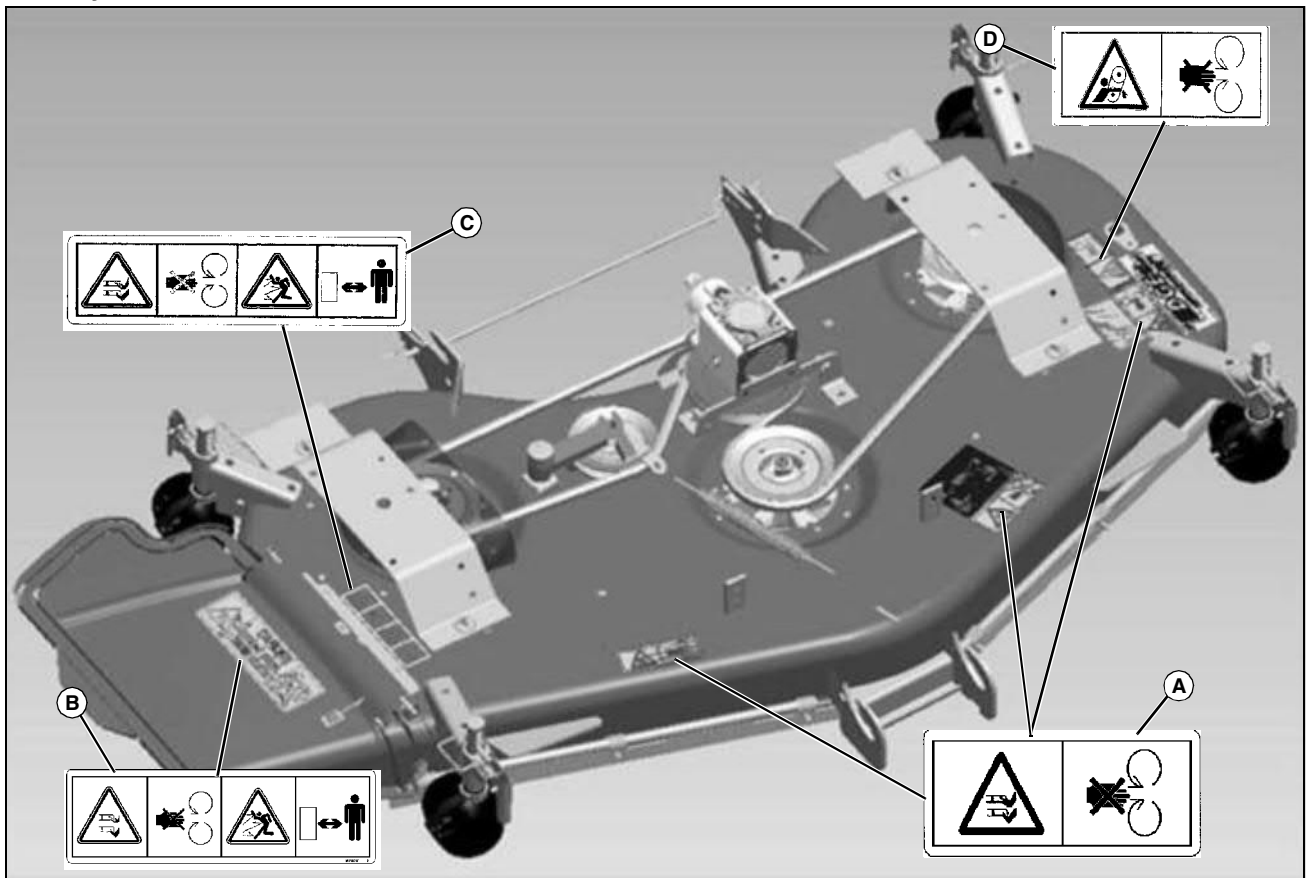
At several important places on this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury.

These safety signs, their placement on the machine and a brief explanatory text are shown in this Safety section.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

SAFETY LABELS

54HC Safety Label Location



M138631, M118040, M118041, M136436, MX51926

Picture Note: Use label number listed in table below to locate complete text of safety label message following this illustration.

A- Avoid Injury From Rotating Blades - M118041

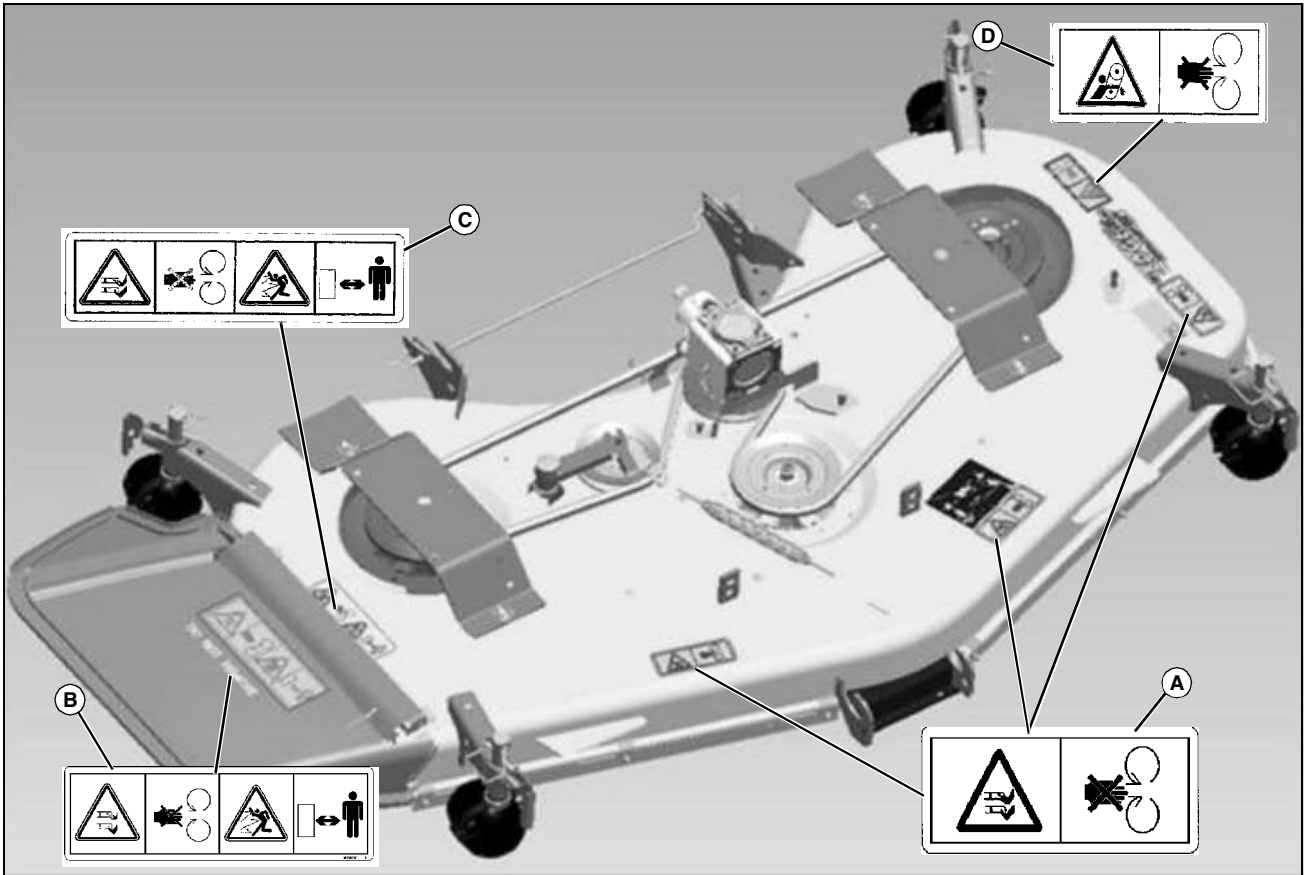
B- Safety Label - M118040

C- Avoid Injury From Rotating Blades and Thrown Objects - M138631

D- Avoid Injury From Getting Caught in Belt - M136436

SAFETY LABELS

60HC Safety Label Location

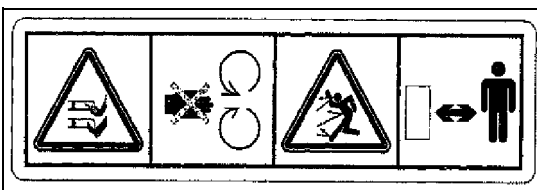


M138631, M118040, M118041, M136436, MX51925

Picture Note: Use label number listed in table below to locate complete text of safety label message following this illustration.

- A- Danger - M118041
- B- Danger - M118040
- C- Danger - M138631
- D- Danger - M136436

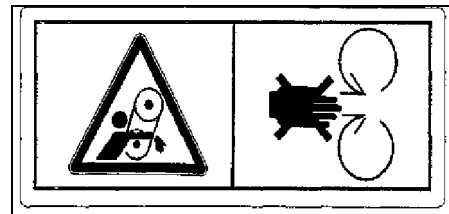
Avoid Injury From Rotating Blades and Thrown Objects - M138631



M138631

- Do not put hands or feet under or into mower when engine is running.
- Do not operate mower without discharge chute or entire grass catcher in place.
- Before mowing, clear area of objects that may be thrown by blade.
- Stay clear while engine is running.

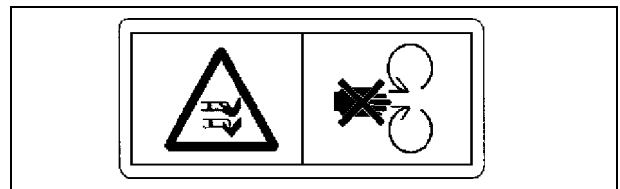
Avoid Injury From Getting Caught in Belt - M136436



M136436

- Stay clear of belts.
- Do not operate mower without shields in place.

Avoid Injury From Rotating Blades - M118041

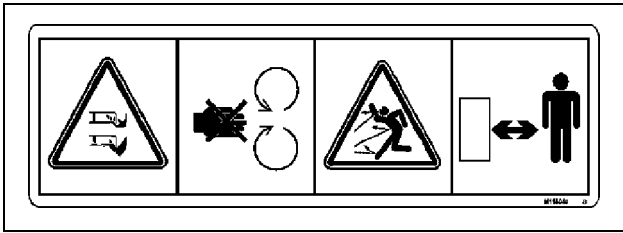


M118041

- Do not put hands or feet under or into mower when engine is running.
- Do not operate mower without discharge chute or entire grass catcher in place.

SAFETY

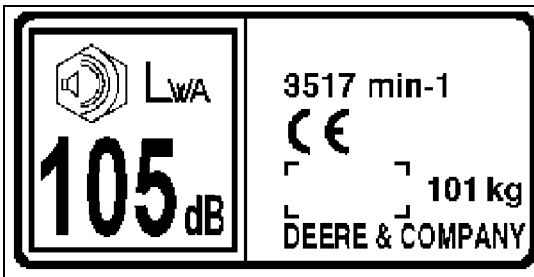
Safety Label



M118040

- Do not put hands or feet under or into mower when engine is running.
- Do not operate mower without discharge chute or entire grass catcher in place.
- Keep away from machine while engine is running.

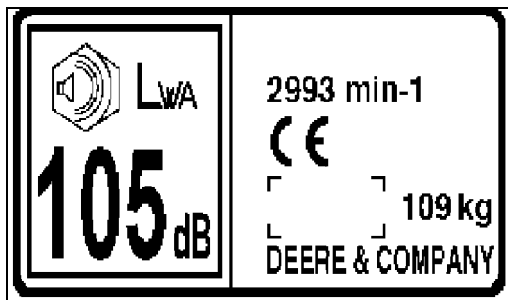
CE Certification and Specification Label - 54HC - M166991



M166991

- This label on your machine indicates that this model has been certified and is in compliance with European Directive 2006/42/EC and 2000/14/EC.

CE Certification and Specification Label - 60HC - M166990



M166990

- This label on your machine indicates that this model has been certified and is in compliance with European Directive 2006/42/EC and 2000/14/EC.

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

This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

- Read, understand and follow all instructions on the machine and in manuals provided, and view safety video, before starting. Be thoroughly familiar with the controls and the proper use of the machine before starting.
- Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate this machine. Local regulations may restrict the age of the operator.
- Clear the area of objects such as rocks, wire and toys which could be thrown by the blades.
- Be sure the area is clear of bystanders before operating. Stop machine if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blades when crossing gravel surfaces.
- Do not operate the machine without the entire grasscatcher, discharge guard, or other safety devices in place and working. Never operate with the discharge deflector raised, removed, or altered, unless using a grasscatcher.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, lock park brake, stop engine and remove key before dismounting.
- Disengage blades when not mowing. Shut off engine and wait for all parts to come to a complete stop before cleaning the machine, removing the grasscatcher, or unclogging the discharge chute.
- Operate machine only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways. Stop blades before crossing roads or sidewalks.
- Use extra care when loading or unloading the machine into a trailer or truck.
- Always wear safety goggles or safety glasses with side shields when operating machine.
- Data indicates operators 60 years and above are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.
- Follow the manufacturer's recommendation for wheel weights or counterweights.
- Inspect machine before you operate. Be sure hardware is tight. Repair or

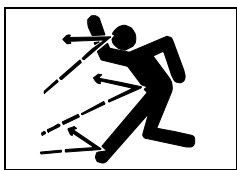
SAFETY

replace damaged, badly worn, or missing parts. Be sure guards and shields are in good condition and fastened in place. Make any necessary adjustments before you operate.

- Before using, always visually inspect to see that the blades, blade bolts and the mower assembly are not worn and damaged. Replace worn and damaged blades and bolts in sets to preserve balance.
- Make sure spark plug, muffler, fuel cap and air cleaner are in place before starting the engine.
- Be sure all drives are in neutral and parking brake is locked before starting engine. Only start engine from the operator's position.
- Do not change the engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.
- If you hit an object or if abnormal vibration occurs, stop the machine and inspect it. Make repairs before you operate.
- Use only accessories and attachments approved by the manufacturer of the machine. Keep safety labels visible when installing accessories and attachments.
- Do not wear radio or music headphones. Safe service and operation requires your full attention.
- When machine is left unattended, stored, or parked, lower the mower deck unless a positive mechanical lock is used.

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.

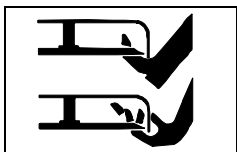


Checking Mowing Area

- Clear mowing area of objects that might be thrown. Keep people and pets out of mowing area.
- Low-hanging branches and similar obstacles can injure the operator or interfere with

mowing operation. Before mowing, identify potential obstacles such as low-hanging branches, and trim or remove those obstacles.

- Study mowing area. Set up a safe mowing pattern. Do not mow where traction or stability is doubtful.
- Test drive area with mower lowered but not running. Slow down when you travel over rough ground.



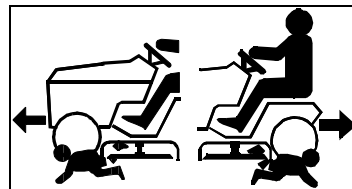
Rotating Blades are Dangerous

HELP PREVENT SERIOUS OR FATAL ACCIDENTS:

- Rotating blades can cut off arms and legs, and throw objects. Failure to observe safety instructions could result in serious injury or

death.

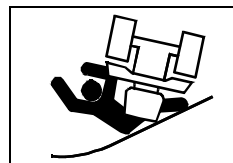
- Keep hands, feet and clothing away from mower deck when engine is running.
- Be alert at all times, drive forward and in reverse carefully. People, especially children can move quickly into the mowing area before you know it.
- Before backing up, stop mower blades or attachments and look down and behind the machine carefully, especially for children.
- Do not mow in reverse.
- Shut off blades when you are not mowing.
- Park machine safely before leaving the operator's station for any reason including emptying the grasscatchers or unplugging the chute.
- The mower blades should stop in approximately five seconds when the mower is disengaged. If you believe that your blades may not be stopping in that period of time, take your machine to your authorized dealer where they can safely check and service your machine.



Protect Children

- Death or serious injury can occur when young children associate having fun with a lawn mowing machine simply because someone has given them a ride on a machine.

- Children are attracted to lawn mowing machines and mowing activities. They don't understand the dangers of rotating blades or the fact that the operator is unaware of their presence.
- Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- Tragic accidents with children can occur if the operator is not alert to the presence of children, especially when a child approaches a machine from behind. Before and while backing up, stop mower blades and look down and behind the machine carefully, especially for children.
- Never carry children on a machine or attachment, even with the blades off. Do not tow children in a cart or trailer. They can fall off and be seriously injured or interfere with safe machine operation.
- Never use the machine as a recreational vehicle or to entertain children.
- Never allow children or an untrained person operate the machine. Instruct all operators not to give children a ride on the machine or in an attachment.
- Keep children indoors, out of the mowing area, and in the watchful eye of a responsible adult, other than the operator, when a mower is being operated.
- Stay alert to the presence of children. Never assume that children will remain where you last saw them. Turn the machine off if a child enters the work area.
- Use extreme care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.

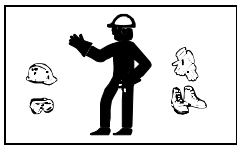


Avoid Tipping

- Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

ASSEMBLY

- Mow up and down slopes, not across.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Choose a low ground speed so you will not have to stop or shift while on a slope.
- Do not mow or operate machine on wet grass. Tires may lose traction. Tires may lose traction on slopes even though the brakes are functioning properly.
- Always keep the machine in gear when going down slopes. Do not shift to neutral and coast downhill.
- Avoid starting, stopping or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly, straight down the slope.
- Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to roll over.
- Use extra care while operating machine with grasscatchers or other attachments, they can affect stability of the machine. Do not use on steep slopes.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not mow near drop-offs, ditches, embankments, or bodies of water. The machine could suddenly roll over if a wheel goes over the edge or the edge caves in. Leave a safety area between the machine and any hazard.
- Follow the manufacturer's recommendations for wheel weights or counterweights for added stability when operating on slopes or using front or rear mounted attachments. Remove weights when not required.



Wear Appropriate Clothing

- Always wear eye protection when operating the machine.
- Wear close fitting clothing and safety equipment appropriate for the job.

- While operating this machine, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Wear a suitable protective device such as earplugs. Loud noise can cause impairment or loss of hearing.



Practice Safe Maintenance

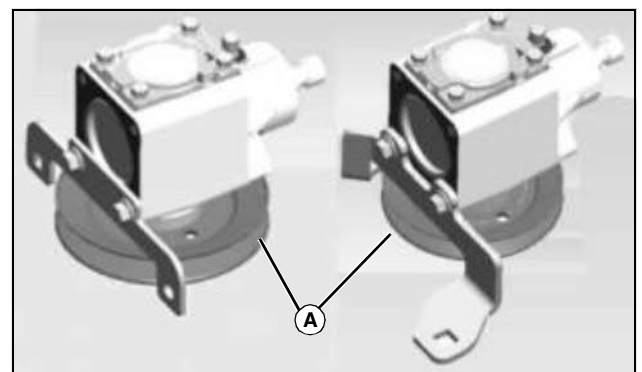
- Only qualified, trained adults should service this machine. Understand service procedure before doing work.

- Never operate machine in a closed area where dangerous carbon monoxide fumes can collect.
- Keep all nuts and bolts tight, especially blade attachment bolts, to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves or other debris build-up. Clean up oil or fuel spillage and remove any fuel-soaked debris. Allow the machine to cool before storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before restarting.
- Never make any adjustments or repairs with the engine running. Wait for all movement to stop on machine before adjusting, cleaning or repairing.
- Check grasscatcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary. Grasscatcher components are subject to wear, damage, and deterioration which could expose moving parts or allow objects to be thrown.

- Mower blades are sharp. Wrap the blade or wear gloves, and use extra care when servicing them. Only replace blades. Never straighten or weld them.
- Check brake operation frequently. Adjust and service as required.
- Maintain or replace safety and instruction labels, as necessary.
- On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.
- Lower any attachments to the ground before cleaning or servicing machine. Disengage all power and stop the engine. Lock park brake and remove the key. Let machine cool.
- Securely support any machine elements that must be raised for service work. Use jack stands or lock service latches to support components when needed.
- Disconnect battery or remove spark plug wire (for gasoline engines) before making any repairs. Disconnect negative terminal first and positive last. Install positive terminal first and negative last.
- Before servicing machine or attachment, carefully release pressure from any components with stored energy, such as hydraulic components or springs.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts.
- Charge batteries in an open, well-ventilated area, away from sparks. Unplug battery charger before connecting or disconnecting from the battery. Wear protective clothing and use insulated tools.
- Do not strike the flywheel with a hammer or hard object because the flywheel may later shatter during operation.
- If equipped with hydraulic lift - release hydraulic pressure by lowering attachment or cutting units to the ground or to a mechanical stop and move hydraulic control levers back and forth.

Assembly

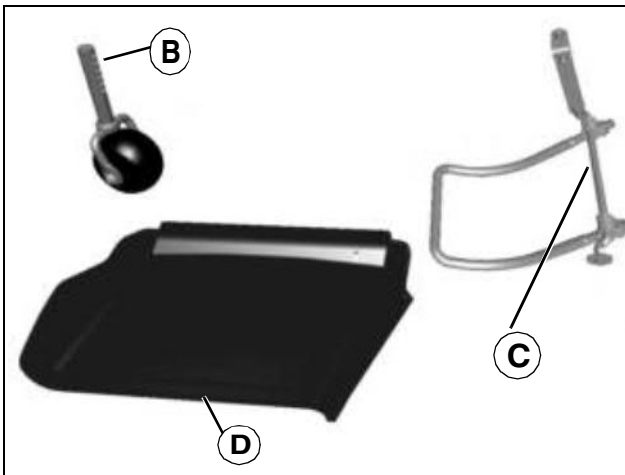
Identify Parts



MX51707

Picture Note: 54HC (Left), 60HC (Right)

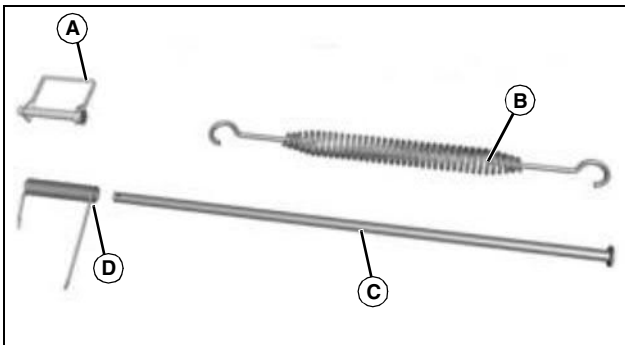
ASSEMBLY



MX46235

Qty.	Description
1	Gearbox Assembly (A)
4	Gage Wheel (B)
1	Deck Hanger, Front (C)
1	Chute (D)

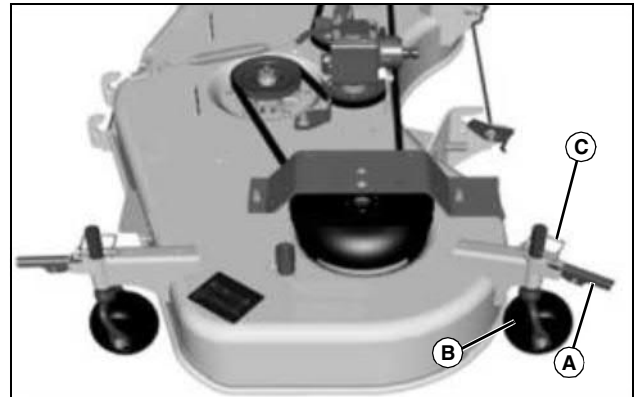
Bag of Parts



MX38431

Qty.	Description
4	Locking Pin (A)
1	Spring, Idler Tension (B)
1	Rod, Chute (C)
1	Spring, Chute (D)
1	Roll Pin, Chute Rod
2	Cotter Pin
4	Bolt, M10x30
4	Locknut, M10

Install Mower Wheels

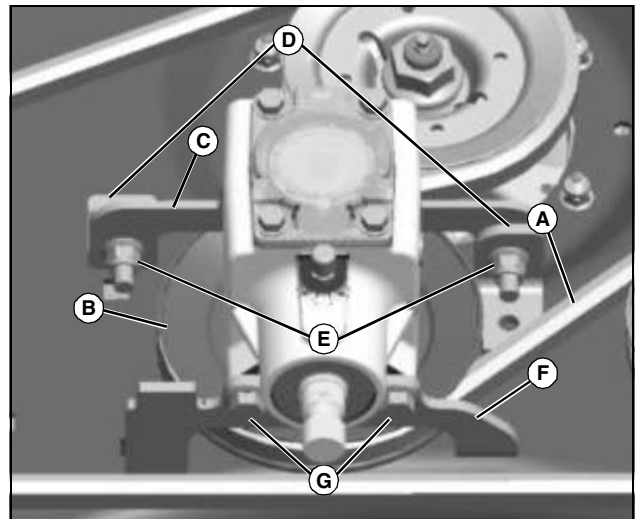


MX51706

1. Move quick release pin lever (A) to the horizontal position, and install wheel (B) onto deck wheel bracket. Move wheel to desired height and lower quick release pin lever (A). Install locking pin (C) in lowest shaft hole above wheel bracket to keep same height setting for later mower installations. Repeat for all four wheels.

Install Gearbox Assembly

54HC

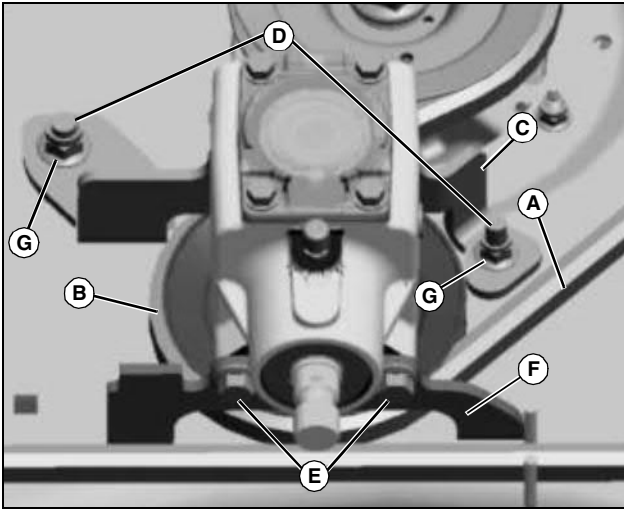


MX51704

- Route drive belt (A) around the input sheave (B) and through the front mounting plate (C).
- Insert two M10 carriage bolts through deck L-brackets (D) and front mounting plate (C).
- Install two nuts (E) on the two bolts in the front bracket. Leave hardware loose at this time.
- Install two M10 bolts (G) through the rear bracket (F) into the gearbox.
- Tighten M10 bolts on rear bracket to 73 N-m (54 ft-lb).
- Tighten M10 bolts on front bracket to 73 N-m (54 ft-lb).

INSTALLING

60HC



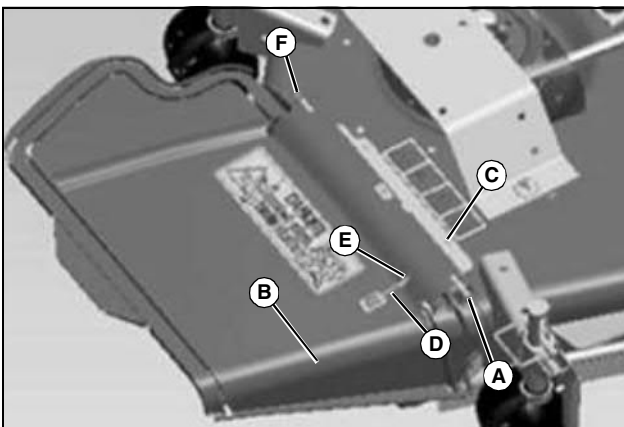
MX51705

1. Route drive belt (A) around the input sheave (B) and through the front mounting bracket (C) while positioning the two holes in the front bracket over the hardware (D) in the deck shell.
2. Install two M10 bolts (E) through the rear bracket (F) into the gearbox.
3. Install nuts (G) on the two bolts in the front bracket. Leave hardware loose at this time.
4. Tighten M10 bolts on rear bracket to 73 N-m (54 ft-lb).
5. Tighten M12 bolt on front bracket to 119 N-m (88 ft-lb).
6. Tighten M10 bolt on front bracket to 73 N-m (54 ft-lb).

Install Discharge Chute

CAUTION: Avoid injury! Components are installed under spring tension. Wear eye protection and use proper tools when installing and removing components with spring tension.

54HC

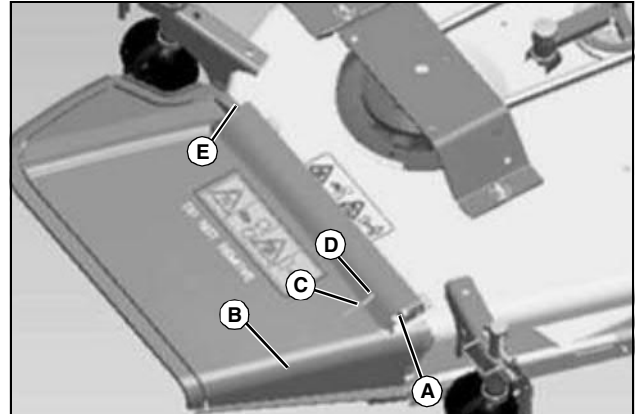


MX51927

1. Install rod (A) through front of discharge chute (B), front opening of deck bracket (C), and spring (D), with long end of spring installed through hole (E) in chute. Install rod through opposite end opening in deck bracket and chute.

2. Secure rod with push nut retainer (F).

60HC

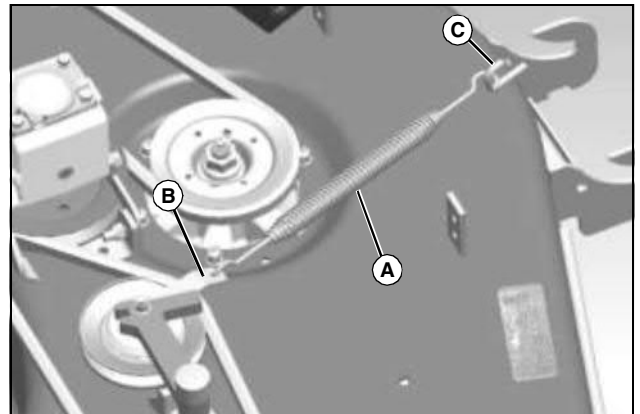


MX51928

1. Install rod (A) through front of discharge chute (B), deck bracket, and spring (C), with long end of spring installed through hole (D) in chute. Install rod through opposite end deck bracket and rear of chute.
2. Secure rod with roll pin (E).

Install Idler Tension Spring

CAUTION: Avoid injury! Components are installed under spring tension. Wear eye protection and use proper tools when installing and removing components with spring tension.



MX28443

1. Confirm belt is properly routed around all sheaves, and install idler tension spring (A) onto idler tension bracket (B) and hook (C) on deck.

Installing

Installing Mower

Installing Mower - Two Wheel Drive Tractor

1. Park machine safely in front of mower deck with rear wheels facing the mower deck. (See Parking Safely in the SAFETY section.)

INSTALLING



CAUTION: Avoid injury! Servicing a machine while the engine is running is dangerous.

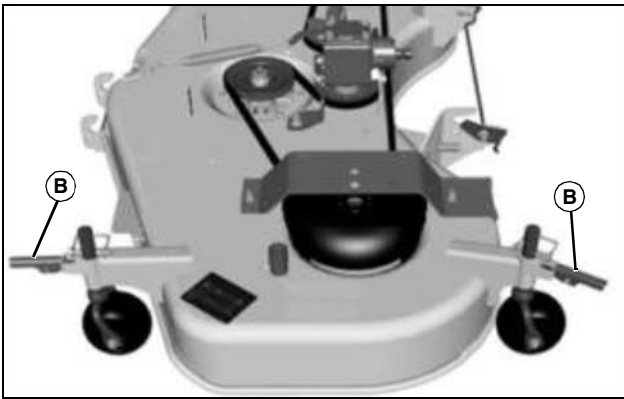
- Engine exhaust fumes contain carbon monoxide and can cause serious illness or death. Do not run an engine in an enclosed area without adequate ventilation.
- Be cautious and wear protective clothing when servicing or working near a hot engine and components.
- Keep hands, clothing, jewelry and long hair away from moving parts.



MX51270

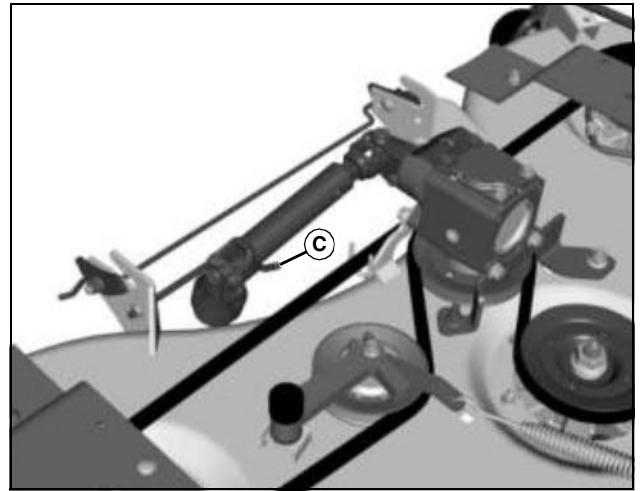
2. Start engine, and pull back top hydraulic lever (A) to raise lift arms to highest position.

3. Adjust mower height control knob to lowest cutting position.



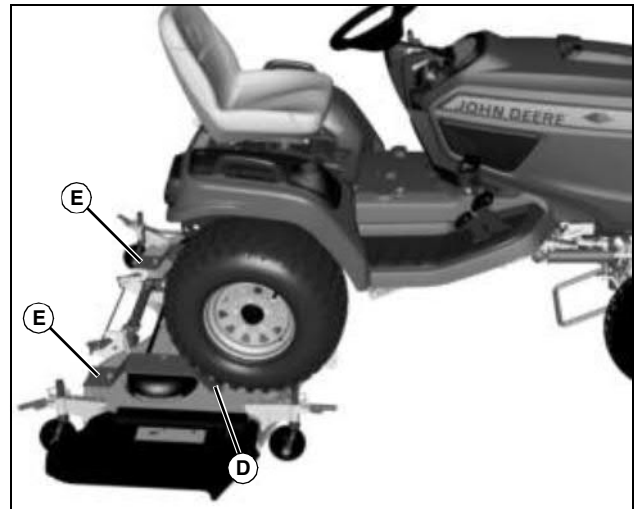
MX51706

4. Position mower on a hard and level surface. Move all four mower wheel quick release pin levers (B) to the horizontal position to ensure mower deck shell is sitting flat on surface.



MX51840

5. If using a standard PTO shaft connection, ensure PTO shaft on deck is positioned on hanger (C), clear of where the rear draft arms fit into rear brackets on deck.



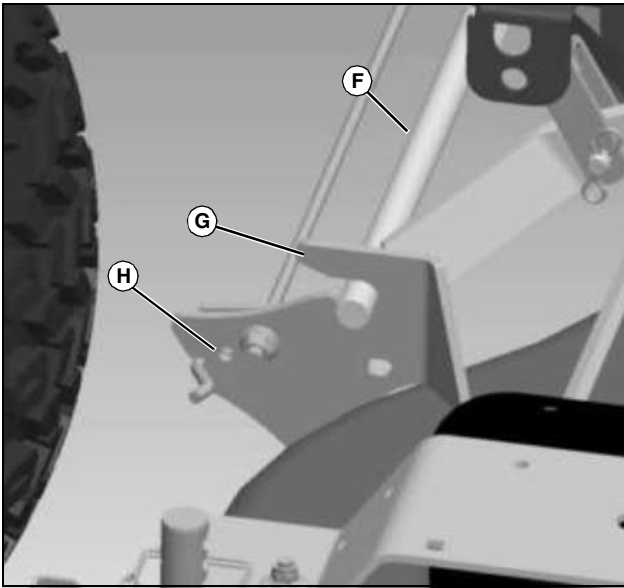
MX51841

6. Line up rear tires with plates (D) on front of deck, and increase engine speed to full throttle.

7. Back machine over the middle of deck ramps (E). Continue backing up until the rear tires are over the mower deck and the front tires contact the front plates on deck.

8. Push top hydraulic lever (A) forward to lower rear draft arms.

INSTALLING



MX51816

9. Drive forward to engage rear draft arms (F) into deck brackets (G), stop once deck begins to be pushed forward.

10. Turn off engine and set the park brake.

11. Check to make sure rear draft lock (H) is in the up position, securing the rear draft arms (F) of the tractor within the rear deck brackets (G). Manually rotate draft lock on deck if necessary to complete the connection.



MX11052a

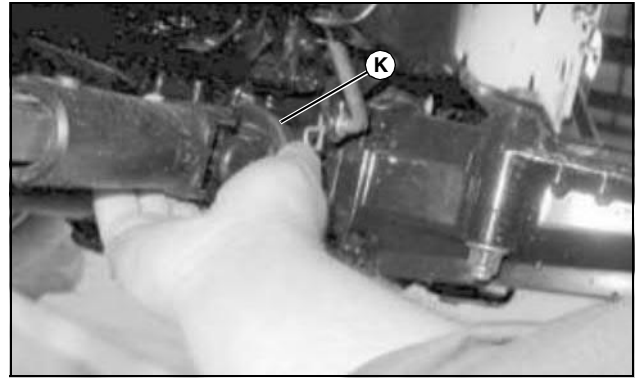
12. Install front deck hanger (I) through front hooks on deck, then onto the hooks on the vehicle frame. If necessary, manually rotate draft lock from right side of tractor to complete the connection.



MX11052

13. Move release latch (J) up and lock pin into hole on frame.

NOTE: If auto connect coupler does not line up with gearbox input shaft, see *Adjusting Auto Connect Coupler*.



MX11077

14. If using a standard PTO shaft connection, hook up coupler on deck PTO driveshaft (K) to the stub shaft on the transmission. When coupler locks onto stub shaft, push coupler fully forward and then pull backward to make sure coupler is latched.

15. Start engine and pull back on top hydraulic lever to raise deck to highest position.

16. Adjust mower height control knob to desired setting.

17. Lower deck by pushing forward on the top hydraulic lever.

18. Turn off engine and set park brake.

NOTE: Bottom of anti-scalping wheels should be approximately 6 -13 mm (1/4 - 1/2 in.) from ground.



MX51706

19. Turn quick release pin levers (L) to horizontal (open) position. Move anti-scalping wheels to desired operating position, and lower quick release pin levers to lock in place.

20. Install locking pins (M) in lowest shaft hole above wheel bracket to keep same height setting for later mower installations.

Installing Mower - Four Wheel Drive Tractor

1. Park machine safely behind mower deck with front wheels facing the mower deck. (See *Parking Safely* in the SAFETY section.)



Suggest:

If the above button click is invalid.

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INSTALLING



CAUTION: Avoid injury! Servicing a machine while the engine is running is dangerous.

- Engine exhaust fumes contain carbon monoxide and can cause serious illness or death. Do not run an engine in an enclosed area without adequate ventilation.
- Be cautious and wear protective clothing when servicing or working near a hot engine and components.
- Keep hands, clothing, jewelry and long hair away from moving parts.



MX51270

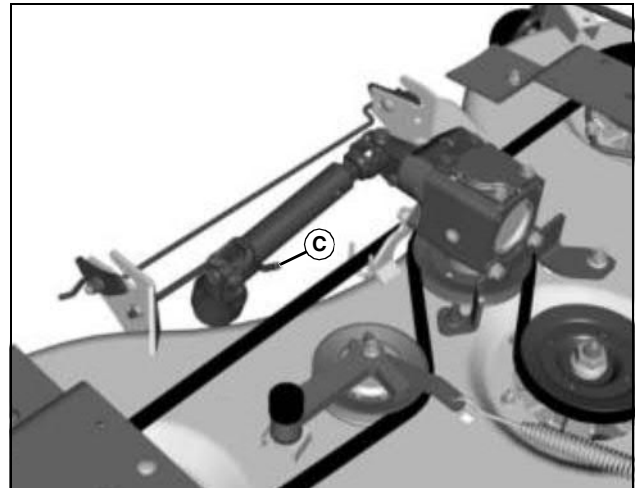
2. Start engine, and pull back top hydraulic lever (A) to raise lift arms to highest position.



MX51706

3. Adjust mower height control knob to lowest cutting position.

4. Position mower on a hard level surface. Move all four mower wheel quick release pin levers (B) to the horizontal position to ensure mower deck shelf is sitting flat on surface.



MX51840

5. If using a standard PTO shaft connection, ensure PTO shaft on deck is positioned on hanger (C), clear of where the rear draft arms fit into rear brackets on deck.

6. Adjust mower height control knob to lowest cutting position.



MX51842

7. Line up left front tires with deck ramps (D), increase engine speed to full throttle and drive forward over the ramps. Continue driving forward until front tires are just over the mower deck. Back up if necessary after driving over deck until front tires are contacting front plates on the mower deck.

NOTE: If rear tires slip, push down on pedal on left side of machine to engage traction assist.

8. Push top hydraulic lever (A) forward to lower rear draft arms.

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