

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Mechanical Tiller
30-Inch

OMM138587 B4

OPERATOR'S MANUAL



JOHN DEERE

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John Deere Worldwide Commercial and Consumer Equipment Division

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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

This manual is an important part of your machine and should remain with the machine when you sell it.

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.

Product Identification

Product Compatibility

This Tiller is designed for use with Garden Tractors.

Record Identification Numbers

Mechanical Tiller

30-Inch 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 deck and record the information in the spaces provided below.

DATE OF PURCHASE:

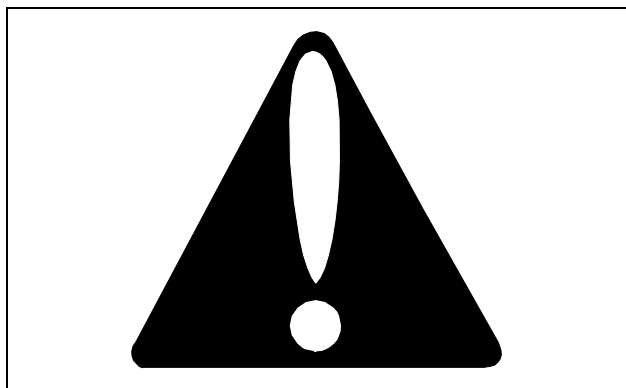
DEALER NAME:

DEALER PHONE:

PRODUCT SERIAL NUMBER:

Safety Labels

Understanding The Machine Safety Labels



Safety-Alert Symbol

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 Labels

WARNING



M74570 M74608

To avoid injury from rotating knives, keep hands, feet and clothing away.

CAUTION - AVOID INJURY FROM LOSS OF BRAKING OR STEERING

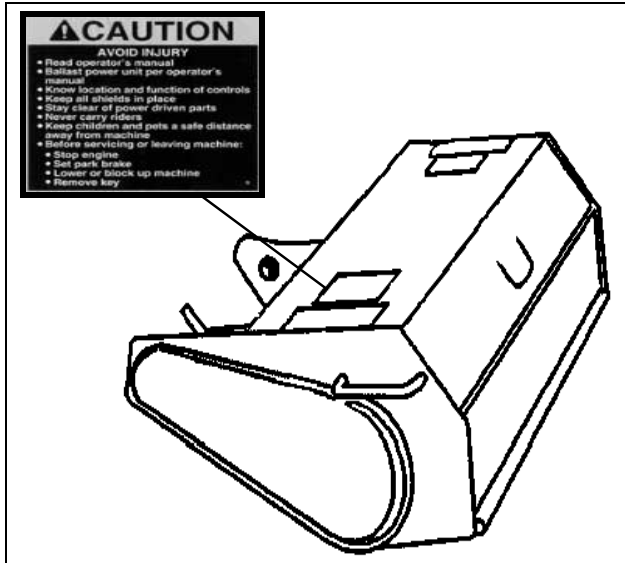


M74626 M74608

- Install ballast per Operator's Manual.

SAFETY

CAUTION - AVOID INJURY



M74568 M74608

- Read operator's manual.
- Ballast power unit per operator's manual.
- Know location and function of controls.
- Keep all shields in place.
- Stay clear of power driven parts.
- Never carry riders.
- Keep children and pets a safe distance away from machine.
- Before servicing or leaving machine:
 - Stop engine.
 - Set park brake.
 - Lower or block up machine.
 - Remove key.

recommended in adjustment procedure.

- Take all possible precautions when leaving the machine unattended. Shut off the engine before unplugging the attachment, or when making any repairs, adjustments, or inspections. Disengage the PTO, lower the attachment, lock the parking brake, stop the engine, and remove the key.
- Only operate during daylight or with good artificial light.
- Look behind machine before you back up. Back up carefully. Do not back up when the tiller door is down all the way.
- Do not let anyone, especially children, ride on machine or attachment. Riders are subject to injury such as being struck by foreign objects and being thrown off. Riders may also obstruct the operator's view, resulting in the machine being operated in an unsafe manner.
- Do not operate machine when you are tired or ill or under the influence of drugs or alcohol.
- Travel slowly when operating the tiller. Do not overload the machine capacity by attempting to operate attachment at too fast a rate.
- Never operate the machine at high transport speeds on slippery surfaces.
- Use only attachments and accessories approved by the manufacturer of this product.
- After striking a foreign object, stop the engine, remove the spark plug wire, thoroughly inspect the machine for any damage, and repair the damage before starting and operating the machine.
- Avoid operating tiller near a ditch, rock pile, fence, concrete slab, or any object that could be a hazard.
- Use extreme caution when operating on or near gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- If the machine vibrates abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.
- Disengage the power to the attachment when the machine is transported or not in use.
- Do not wear radio or music headphones while operating the machine. Safe operation requires your full attention.
- Always refer to the Storage section of the operator's manual for important details if storing this product for a long period of time.

Safety

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

Operating Safely

- Read the machine and attachment operator's manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the machine and disengage the controls quickly.
- Do not let children or an untrained person operate machine.
- Never operate the machine without proper guards or other safety devices in place.
- Disengage all clutches and shift into neutral before starting the engine.
- Inspect machine before you operate and at frequent intervals while operating. Be sure hardware is tight. Repair or replace damaged badly worn, or missing parts.
- Make any necessary adjustments before you operate. Never attempt to make any adjustments while the engine is running, unless if

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 (for gasoline engines) before servicing the machine.

Checking Area to be Tilled

- Clear the area to be tilled of objects that you do not want tilled into the ground or that might damage the tiller.
- Keep people and pets out of the work area. Keep children indoors when operating the machine and attachment. Turn the machine off if anyone

SAFETY

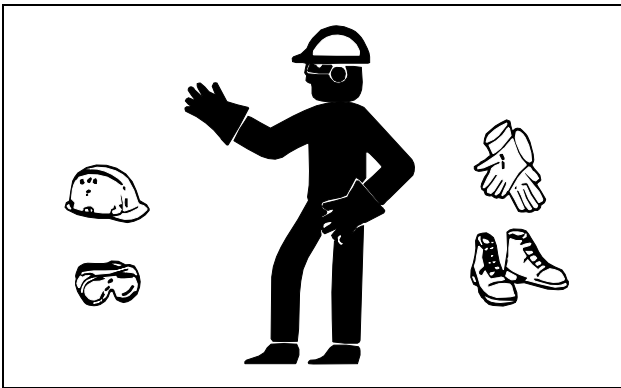
enters the area.

- Set up a safe tilling pattern. Do not till under conditions in which traction or stability is doubtful.

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.

Wear Appropriate Clothing



- Always wear safety goggles or safety glasses with side shields when operating the machine.
- Wear close fitting clothing and safety equipment appropriate for the job.
- While mowing, 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.

Avoid Injury from Moving Parts

Before cleaning, repairing, or inspecting, make certain all moving parts have stopped. Disconnect the spark plug wire to prevent accidental starting. Disconnect the cord to electrical motors (if applicable).

Do not put hands or feet near or under rotating parts. Keep clear of any discharge area at all times.

Protect your hands when you inspect or unplug the attachment. Wear gloves and use proper tools.

Before you dismount to unplug or adjust attachment:

- Disengage PTO.
- Stop the engine.
- Lock the park brake.
- Remove the key.
- Wait for all moving parts to stop.
- Keep hands, feet and clothing away from attachment when engine is running.

Avoid Injury from Hitting Obstructions

- Raise the attachment when driving between jobs.
- Drive at slow speeds when using the attachment. Be cautious of hidden obstacles.

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.
- 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.

Avoid High Pressure Fluids

- Hydraulic hoses and lines can fail due to physical damage, kinks, age, and exposure. Check hoses and lines regularly. Replace damaged hoses

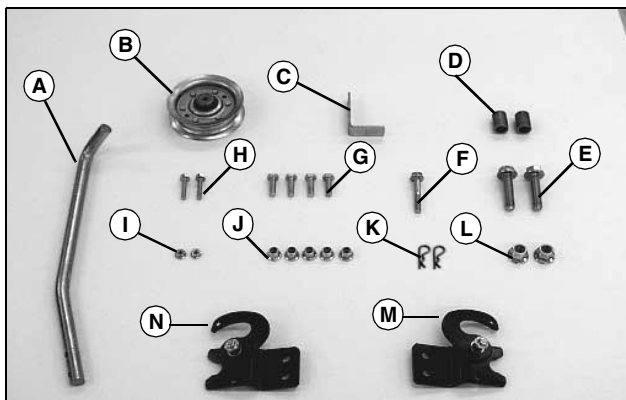
ASSEMBLY

and lines.

- Hydraulic fluid connections can loosen due to physical damage and vibration. Check connections regularly. Tighten loose connections.
- Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.
- Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A. Information may be obtained in the United States and Canada only by calling 1-800-822-8262.

Assembly

Identify Parts - Bag of Parts



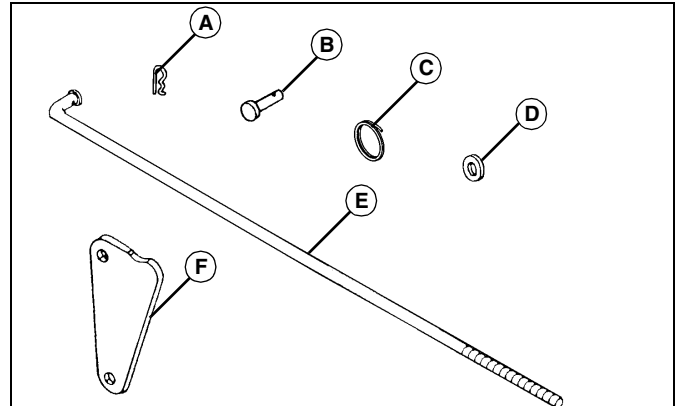
M97621

Qty.	Description	Size
1	Lever, Attaching Assist (A)	
1	Sheave, Idler (B)	
1	Guide, Belt (C)	
2	Spacer (D)	
2	Bolt, Flange (E)	M12x50
1	Bolt, Flange (F)	M8x50
4	Bolt, Hex (G)	M8x25
2	Bolt, Hex (H)	M6x30
2	Nut, Flange (I)	M6
5	Locknut, Hex Flange (J)	M8
2	Pin, Spring Locking (K)	
1	Locknut, Hex Flange (L)	M12
1	Tiller Clip, Right-Hand (M)	

Qty.	Description	Size
1	Tiller Clip, Left Hand (N)	

Identify Parts – Lift Assist Parts (Models 240, 245, 260, 265, 285 and 320)

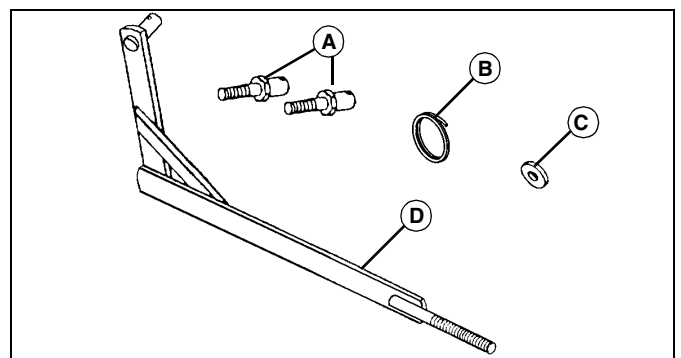
NOTE: Parts ordered separately.



M97623

Qty.	Description	Size
1	Pin, Quick-Pull (A)	
1	Pin, Drilled (B)	
1	Ring, Locking (C)	
1	Washer (D)	M13
1	Rod, Lift (E)	
1	Plate, Front Lift Link (F)	

Identify Parts – Lift Assist Kit (Models GT242, GT262, and GT275)



M97625

Qty.	Description	Size
2	Pin, Special Threaded (A)	
1	Ring, Locking (B)	
1	Washer (C)	M13

ASSEMBLY

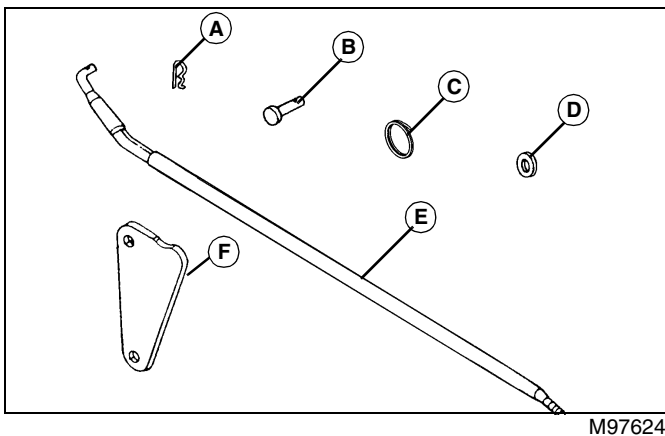
Qty.	Description	Size
1	Rod, Lift (D)	

Identify Parts – Lift Assist Kit (Models GT225 and GT235)

M97626

Qty.	Description	Size
1	Rod, Lift (A)	
1	Strap, Lift Arm (B)	
2	Pin, Quick-Pull (C)	
2	Pin, Special Threaded (D)	
1	Washer (E)	M13 x 24 x 2.5 mm
1	Ring, Locking (F)	

Identify Parts – Lift Assist Kit (Models 325, 335, 345 and 355)



Qty.	Description	Size
1	Pin, Quick-Pull (A)	
1	Pin, Drilled (B)	

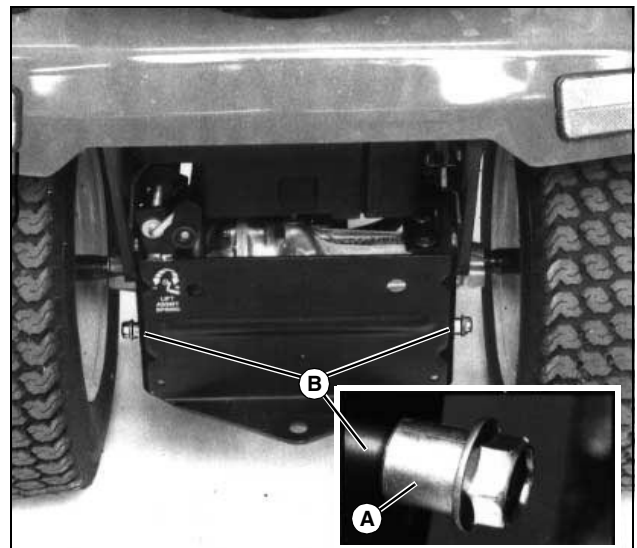
Qty.	Description	Size
1	Ring, Locking (C)	
1	Washer (D)	M13
1	Rod, Lift (E)	
1	Plate, Front Lift Link (F)	

Preparing the Vehicle

Remove Mower Deck

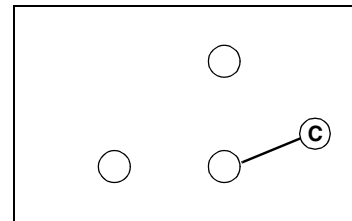
The mower deck must be removed from your tractor before installing the tiller. See your tractor operator's manual or mower deck manual for removal instructions.

Install Rear Frame Mounting Hardware



1. Install one spacer (A) over threaded end of each M12x50 flange bolt (B).

NOTE: If tractor frame has three holes on each side, use the lower front hole (C). If frame has two holes per side, use the bottom hole.



Picture Note: Right-hand side shown.

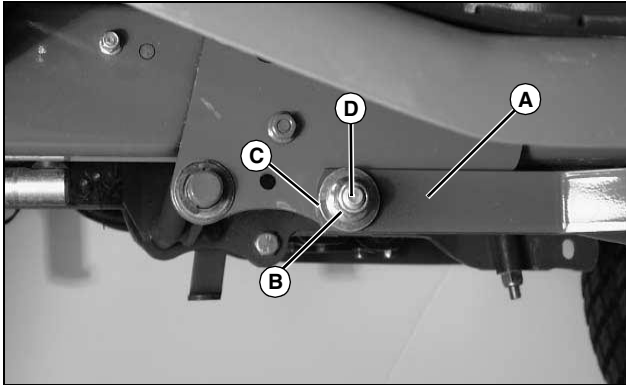
2. Install bolt (B) in proper hole on each side of tractor frame and secure with M12 locknut. Tighten locknut to 105 N•m (78 ft-lb).

Install Mounting Pins (Models GT225, GT235, GT242, GT262, and GT275)

IMPORTANT: Avoid damage! If spacer falls out of draft arm (A) when pivot bolt is removed, return spacer to its original position in the draft arm hole. Damage may occur if spacer is missing or not properly installed.

ASSEMBLY

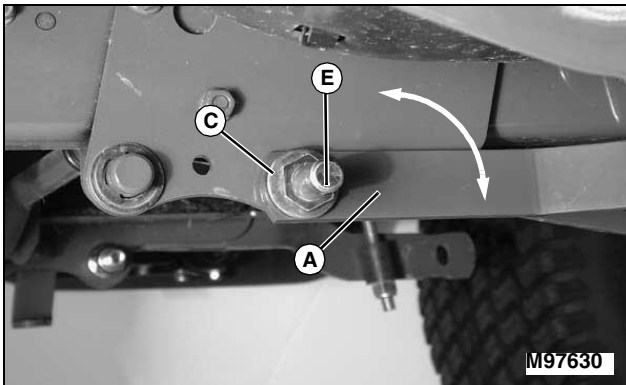
NOTE: Complete the following steps on both sides of tractor.



M97629

Picture Note: GT225 Shown

1. Locate draft arm (A) under tractor foot rest. Remove locknut (B), washer (C), and pivot bolt (D). Discard the pivot bolt.



M97630

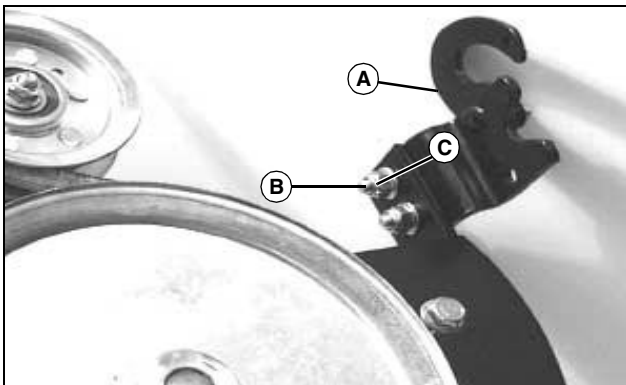
Picture Note: GT225 Shown

2. Place draft arm (A) in its original position. Make sure spacer is in place.

NOTE: Some tractors may have two washers (C). If so, install both.

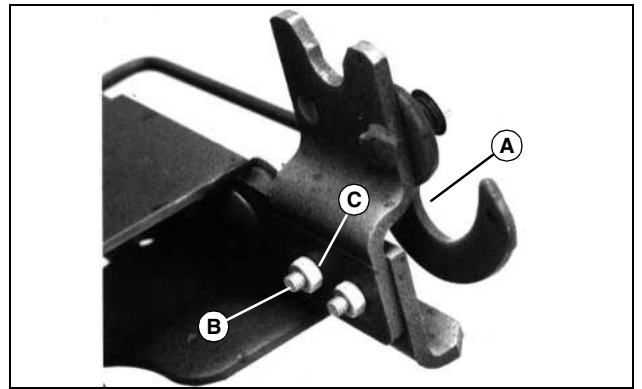
3. Install original washer (C) and special threaded pin (E) from kit. Secure with original locknut (B) at back side of draft arm. Tighten locknut completely.

Install Clips On Tiller Frame



M97632

Picture Note: Right-hand clip shown



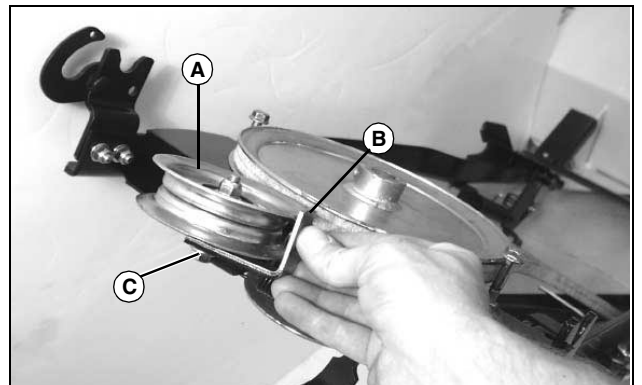
M73536

Picture Note: Left-hand clip shown

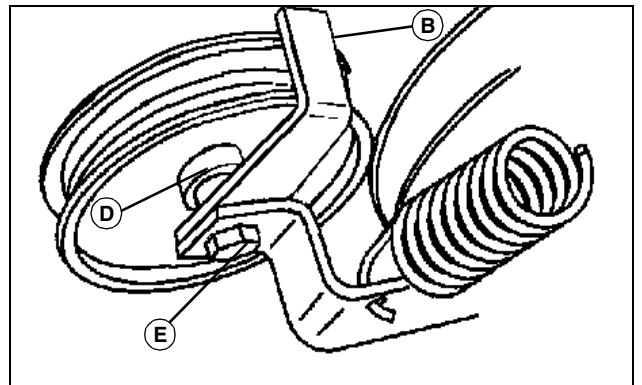
Attach tiller clip (A) to correct side of tiller frame with two M8x25 hex bolts (B) and M8 locknuts (C). Tighten locknuts to 20 N•m (15 ft-lb).

- **For GT Series tractors** – Install the clips to the outside of tiller frame.
- **For 325, 335, 345 or 355D tractors** – Install right-hand clip to outside of tiller frame. Install left-hand clip to inside of tiller frame.
- **For other tractor models** – Install the clips to the inside of tiller frame.

Install Idler Sheave



M97631

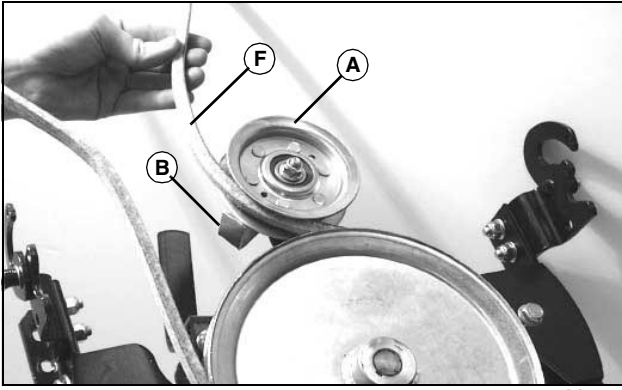


M97634

1. Position idler sheave (A) and belt guide (B) onto tensioning arm (C). Make sure shoulder (D) on sheave is seated against the belt guide.

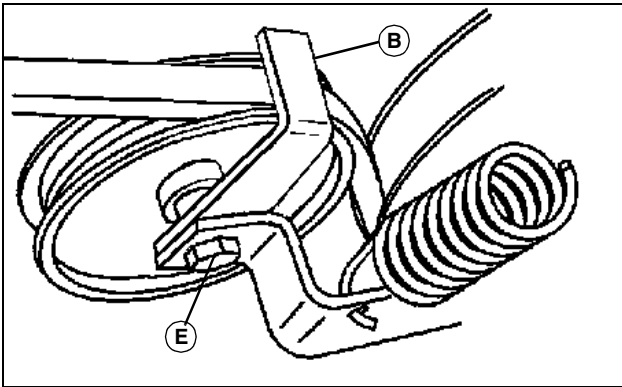
2. Install M8x50 flange bolt (E) from bottom side of idler sheave. Install M8 locknut at top side of sheave. Do not tighten completely.

ASSEMBLY



M97635

3. Route belt (F) between belt guide (B) and idler sheave (A).



M97633

4. Adjust the position of belt guide (B) as shown. Make sure belt guide does not contact idler sheave.

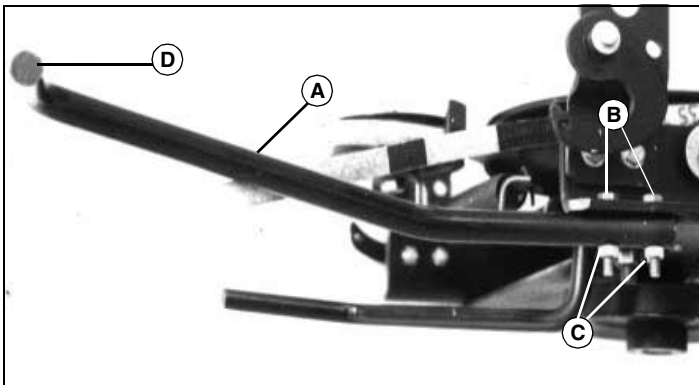
NOTE: Make sure belt guide does not move out of position when tightening locknut.

5. Hold bolt head (E) with wrench and tighten M8 locknut completely at top side of idler sheave.

6. After tightening, make sure the idler sheave rotates freely on the tensioning arm.

7. Pull the belt tight and make sure belt guide does not contact idler sheave or belt.

Install Attaching Assist Lever

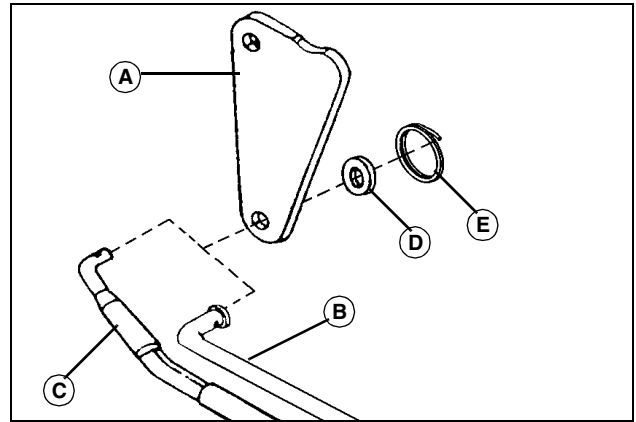


M73548

1. Position attaching assist lever (A) on bottom surface of left side tiller frame. Install two M6x30 hex bolts (B). Make sure bent end (D) of lever faces outside.

2. Secure the assist lever with two M6 flange nuts (C). Tighten the nuts to 12 N•m (9 ft-lb).

Fasten Plate to Lift Rod (Models 240, 245, 260, 265, 285, 320, 325 and 345)



M97627

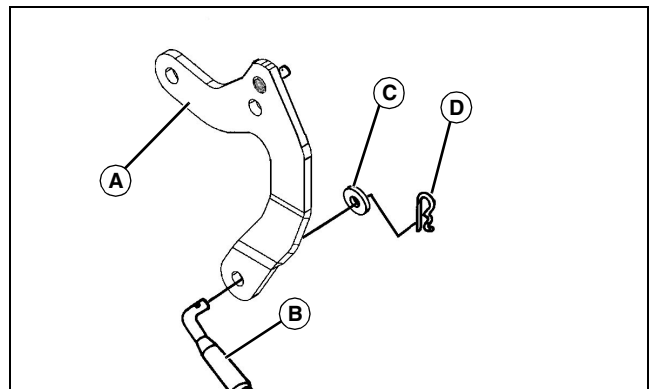
1. Position front lift link plate (A) as shown.

2. Place lift rod through lower hole in plate:

- Lift rod (B) – models 240, 245, 260, 265, 285, and 320.
- Lift rod (C) – models 325 and 345.

3. Install M13 washer (D) and secure with locking ring (E).

Fasten Arm to Lift Rod (Models with Foot Lift)



MX31800A

1. Position arm (A) as shown.

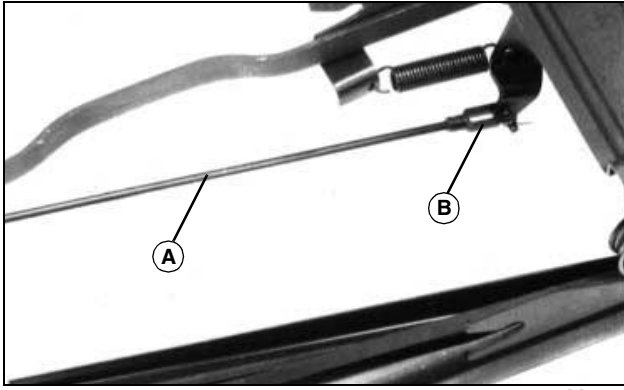
2. Place lift rod (B) through lower hole in arm.

3. Install M13 Washer (C) and secure with locking ring (D).

Install Lift Rod

NOTE: Straight lift rod shown. Lift rod may look different for your tractor model.

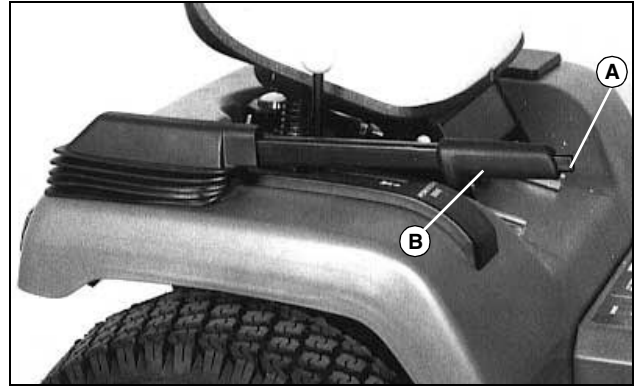
INSTALLING THE TILLER



M73544

Tighten the threaded end of lift rod (A) into clevis (B) on tiller. Tighten the rod far enough so the threaded end is flush with the inside clevis hole but not passing through it.

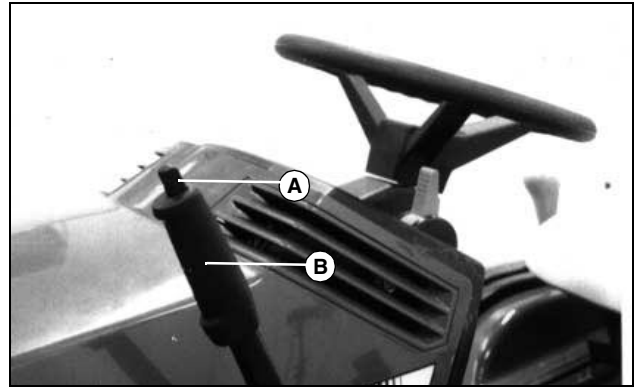
Move Manual Lift Lever (Models 240, 245, 260, 265, 285, GT225, GT235, GT242, GT262, and GT275)



M41184

Picture Note: 200 Series Shown

1. Push and hold down button (A).



M73540

Picture Note: GT Series Shown

2. Push lever (B) all the way forward to the lock-out position.

3. Release button.

Installing the Tiller

Ballasting Requirements

All tractors require one of the following be installed when using the tiller:

- A minimum of two front weights when tilling level ground.
- Four front weights when tilling on slopes.

Use the following recommendations to help improve traction:

IMPORTANT: Avoid damage! Do not use tire chains on newer GT, GX models that are in combination with tire sizes 24x12-12 and the tiller, as damage to tiller frame can occur.

- Install tire chains on turf tires or install bar tires on the tractor.
- Install three rear weights.

Ballast weights can be purchased from your John Deere Dealer. See your machine operator's manual for further information.

Set the Depth Control Knob



M73539

Picture Note: GT242, GT262, and GT275 Shown

Turn the depth control knob (A) to the "0" setting.

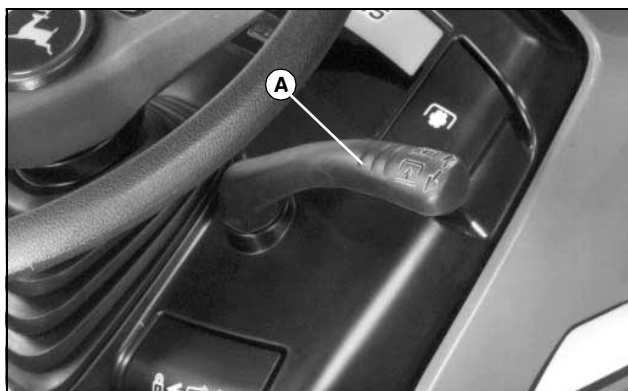
Move Hydraulic Lift Lever (Models 320, 325, 335, 345 and 355)



M73546

Picture Note: Model 320

INSTALLING THE TILLER



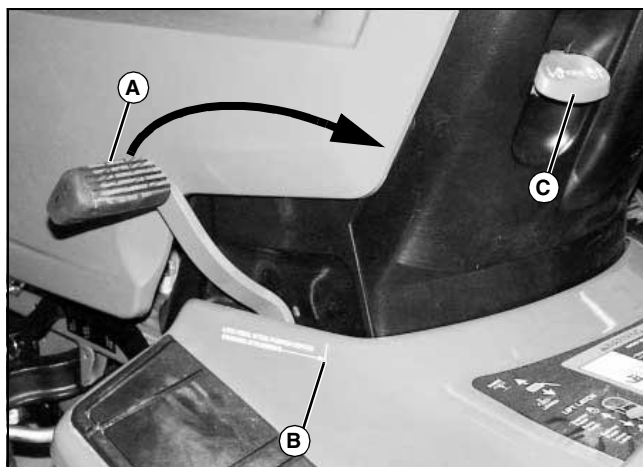
M71987

Picture Note: Models 325, 335, 345 and 355

Push lift lever (A) forward to rotate lift shaft downward for ease of tiller installation.

Move Lift Pedal (Foot Lift Models)

CAUTION: Avoid injury! Lift pedal is spring-assisted and may have unexpected movement.
Lock lift pedal when installing or removing attachment.

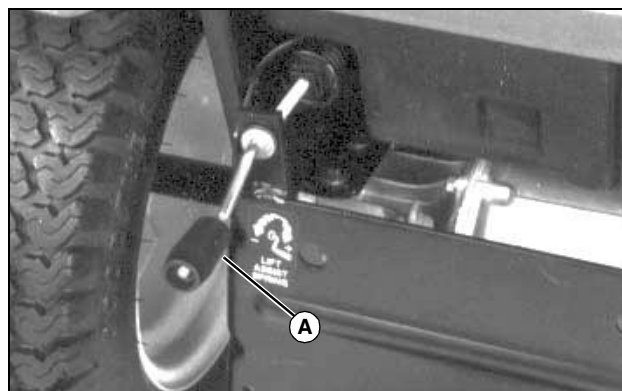


MX30484

1. Pull back lift pedal (A) by hand to put tiller in the lower/down position (B). Pull up lock lever (C) to lock attachment in the lowered position.

Release Spring Tension (Models 240, 245, 260, 265, and 285)

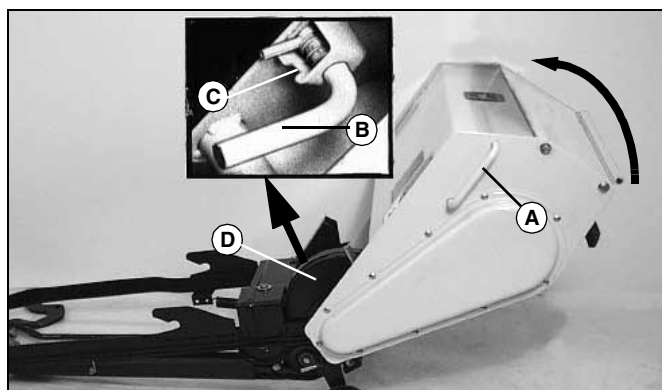
CAUTION: Avoid injury! Release the lift spring tension before installing the tiller.



M41146

Turn crank (A) counter-clockwise to release spring tension.

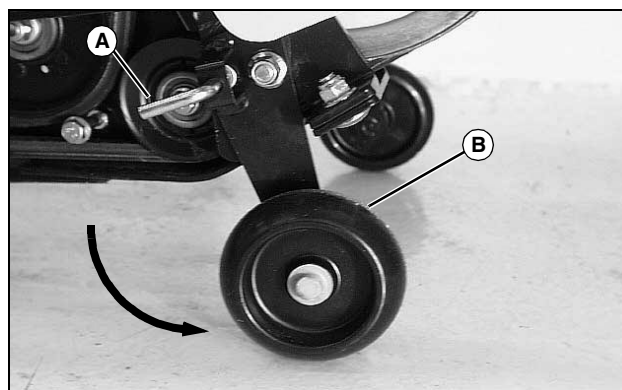
Put Tiller in Transport Position



M97636

1. Grasp handle (A) and pull slightly upward on tiller to relieve tension on transport lever (B). Pull out and rotate the transport lever to engage locking pin in slot (C).
2. Pivot tiller up and forward as far as it will go.
3. Rotate transport lever (B) until locking pin disengages from slot (C). Allow transport lever to lock into hole in shield (D).

Put Wheels in Down Position

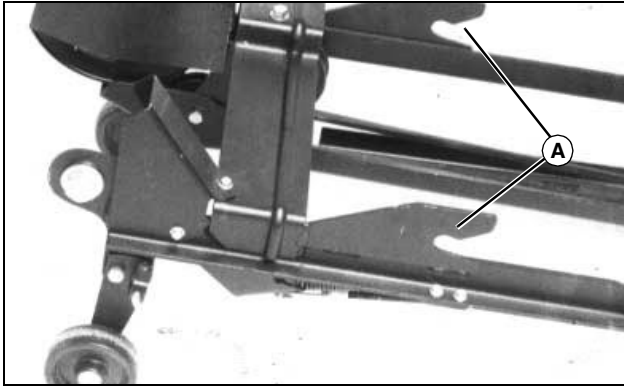


M97637

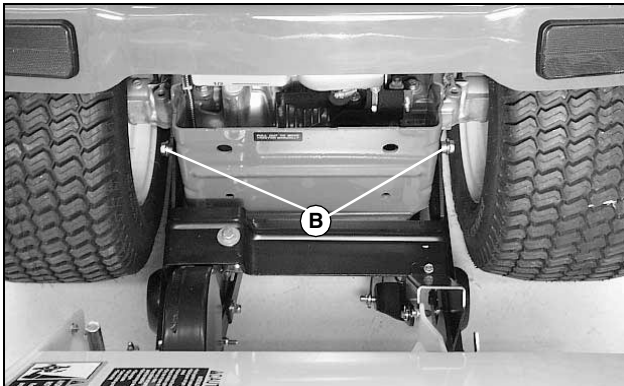
1. Pull and hold out wheel locking pin (A).
2. Swing wheel assembly (B) into down position. Make sure locking pin engages to lock wheel in down position. Repeat for other wheel assembly.

INSTALLING THE TILLER

Install Tiller on Rear Tractor Frame



M41781

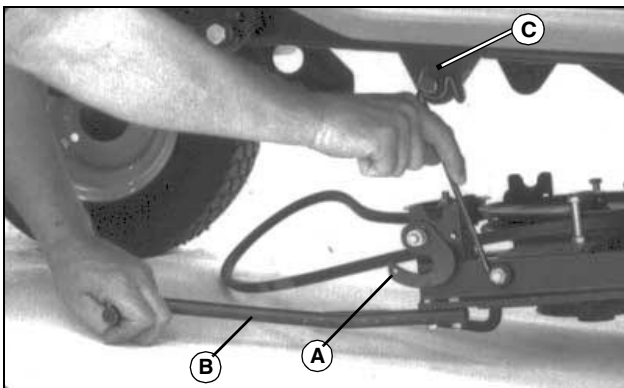


M97638

1. Place tiller frame hooks (A) over spacers (B) in rear tractor frame.

Engage the Support Rod

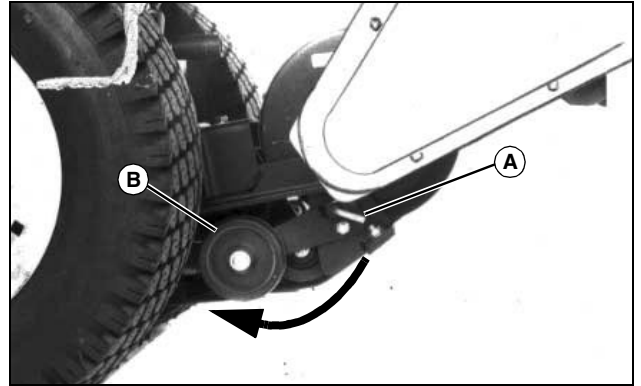
CAUTION: Avoid injury! Hold attaching assist lever securely until support rod is in place. Keep hands clear of pinch areas between tiller and tractor frame.



M41744

1. Open tiller clip (A) at both sides of tiller.
2. Push and hold down attaching assist lever (B).
3. Pivot support rod (C) upward so loop in rod is under stud in tractor frame.
4. Slowly release downward pressure on attaching assist lever (B).

Lock Wheels in Up Position

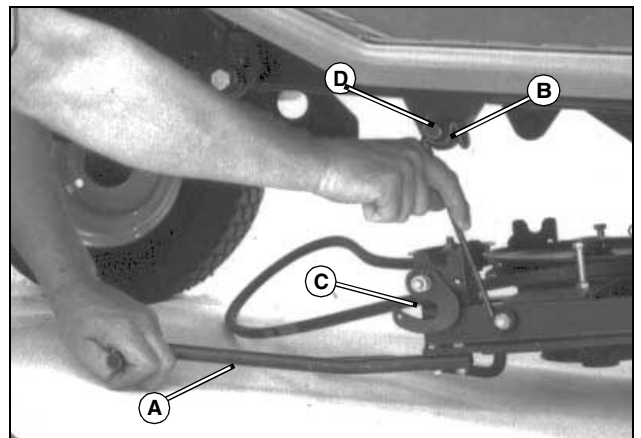


M41746

1. Pull and hold out wheel locking pin (A).
2. Swing wheel assembly (B) into up position. Make sure locking pin engages to lock wheel in up position. Repeat for other wheel assembly.

Pivot the Support Rod Down

CAUTION: Avoid injury! Hold attaching assist lever securely until tiller frame clips are seated against mounting pins. Keep hands clear of pinch areas between tiller and tractor frame.

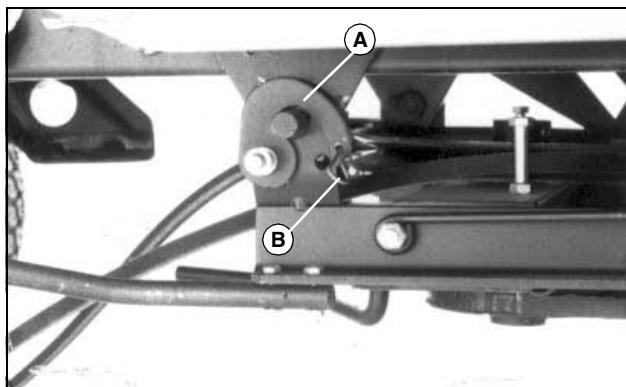


M41744

1. Maintain downward pressure on attaching assist lever (A).
2. Pivot support rod (B) down.
3. Slowly release downward pressure on attaching assist lever until tiller frame clips (C) are resting against mounting pins (D).

INSTALLING THE TILLER

Fasten Frame and Install Belt

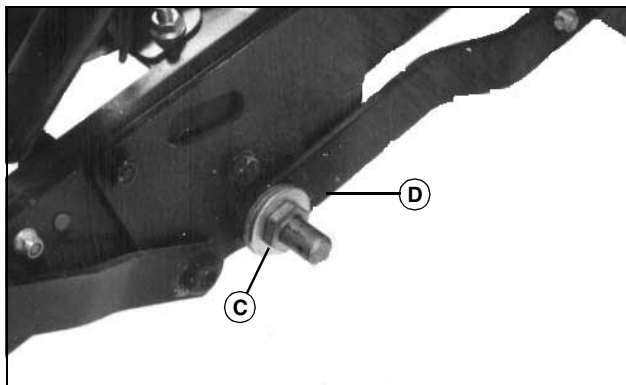


M41750

1. Close clip latch (A) around mounting pin at each side of tractor.
2. Install spring locking pin (B) through small hole in each clip latch to prevent latches from opening.

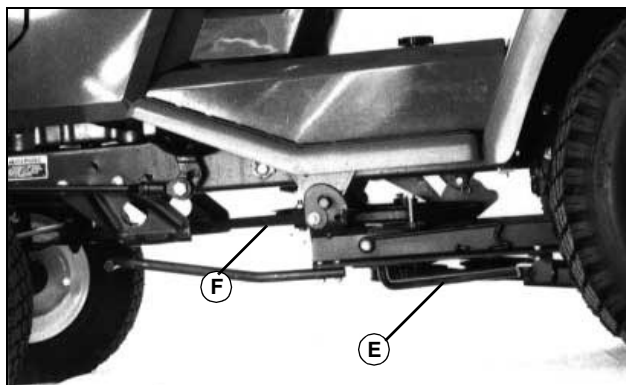
IMPORTANT: Avoid damage! Do not install more washers than needed or locknut will not be fully threaded onto pin (D). Locknut could loosen and fall off.

NOTE: Additional spacer washers are not included. If needed, obtain washers locally.



M74556

3. Move tiller frame from side to side and check for looseness. If side play is excessive, install additional 1.2 mm (3/16 in.) washers as needed between pin shoulder (C) and draft arm (D) to remove side play.



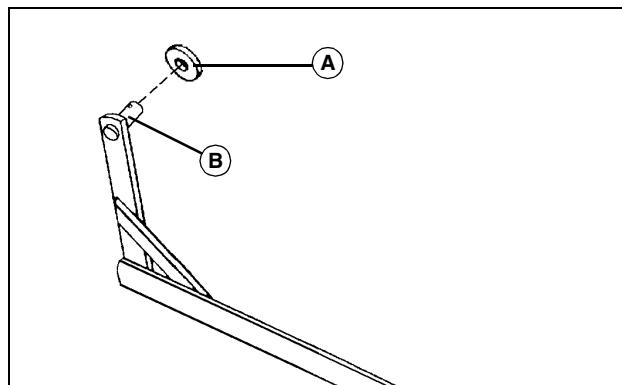
M74613

4. Swing belt tensioning lever (E) toward front of tractor to loosen the belt tension.
5. Install belt (F) on tractor drive sheave.

6. Swing belt tensioning lever (E) toward rear of tractor to tighten belt.

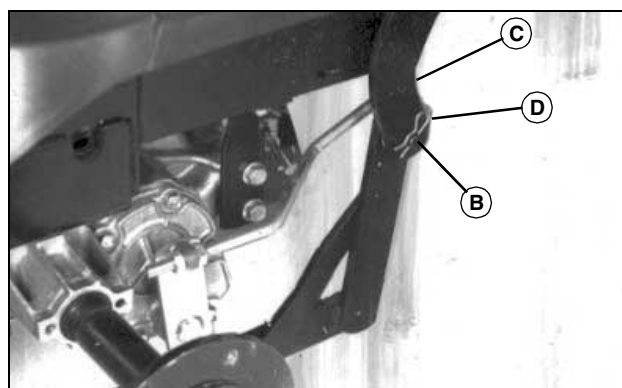
Fasten Lift Rod to Lift Link (Models GT242, GT262, and GT275)

1. Lower tiller from the transport position to the operating position.
2. Place manual lift lever in the lock-out position.



M99282

3. Install M13 washer (A) on lift rod pin (B).



M73537

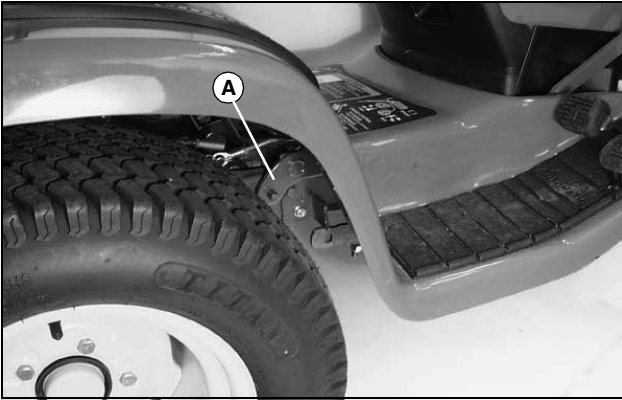
Picture Note: Right rear tire has been removed for clarity.

4. Place lift rod pin (B) through hole in lift link (C). The M13 washer should be against the inside of the lift link.
5. Secure lift rod to lift link with spring locking pin (D).

Install Lift Arm Strap and Lift Rod (Models GT225 and GT235)

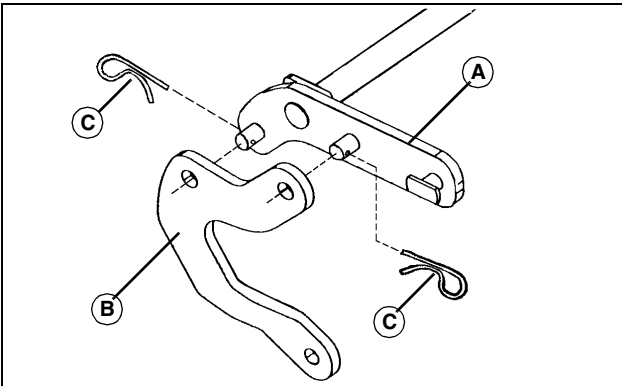
1. Lower tiller from the transport position to the operating position.
2. Place manual lift lever in the lock-out position.

INSTALLING THE TILLER



M99280

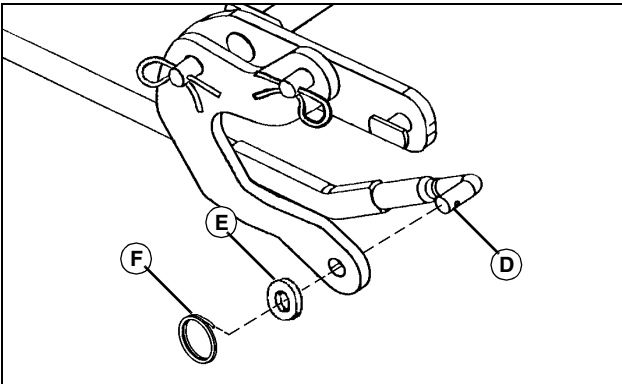
3. Locate rear lift shaft assembly (A) under right rear fender.



M99281

4. Position lift arm strap (B) as shown and install it onto lift shaft (A) studs.

5. Install spring locking pins (C) to secure lift strap to lift shaft assembly.



M99283

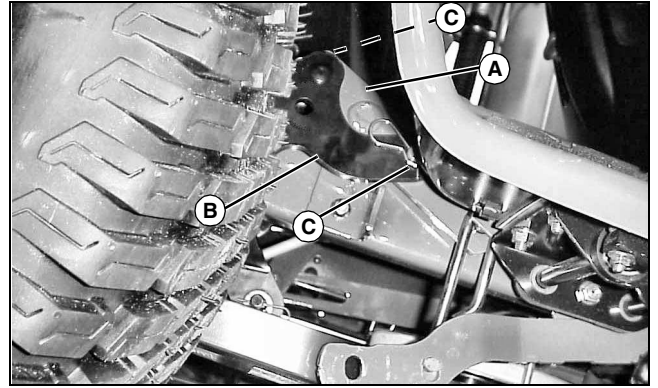
6. Place lift rod (D) from tiller through lower hole in lift arm strap.

7. Install M13 washer (E) and secure with locking ring (F).

Install Lift Arm and Lift Rod (Models with Foot Lift)

1. Lower tiller from transport position to operating position.

2. Place lift pedal in the lockout position.

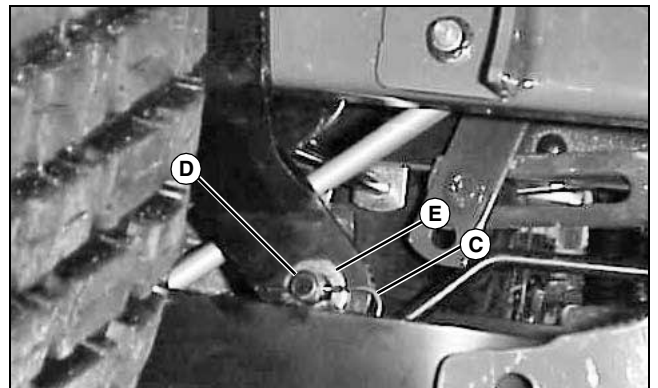


MX31801

3. Locate the lift shaft assembly (A) under right rear fender.

4. Install lift arm (B) onto lift shaft assembly.

5. Install spring locking pins (C) to secure lift arm to lift shaft assembly.



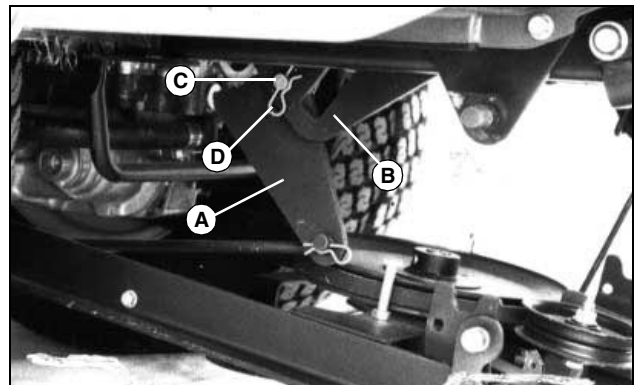
MX31802

6. Place lift rod (D) from tiller through lower hole in lift arm.

7. Install M13 washer (E) and secure with spring locking pin (C).

Fasten Plate to Lift Link (Models 240, 245, 260, 265, 285, 320, 325, 335, 345 and 355)

NOTE: Arrow on plate should point toward front of tractor.



M41745

Fasten front lift link plate (A) to lift link (B) with drilled pin (C) and spring locking pin (D).

Adjust Tiller Lift Height

1. Raise tiller as high as it will go.

2. Measure distance between lowest tine and ground. Distance should be

REMOVING AND STORING THE TILLER

75 mm (3 in.) to allow a maximum 150 mm (6 in.) tilling depth and enough ground clearance for turns on the ends of the tilling area. If distance is not correct, see Adjusting Tilling Depth in the Operating section.

3. Models 240, 245, 260, 265, and 285 - Adjust the lift spring tension. (See Adjusting Lift Spring in the OPERATING section.)

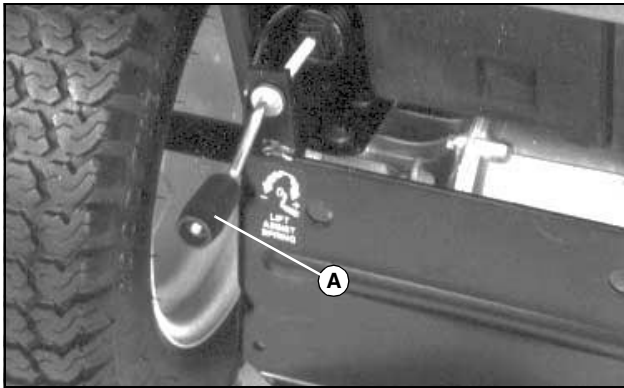
Removing and Storing the Tiller

Release Spring Tension (Models 240, 245, 260, 265, and 285)



CAUTION: Avoid injury! Release spring tension before removing tiller.

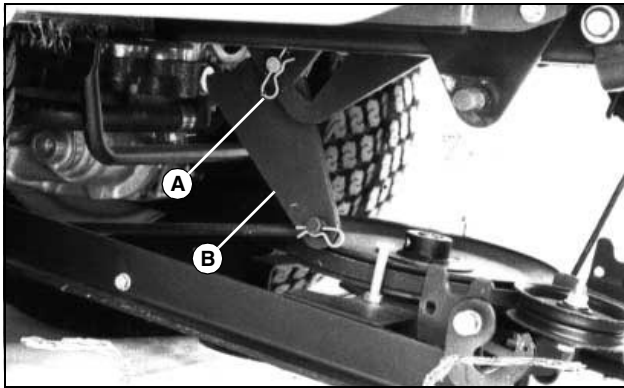
1. Pull rearward on lift lever to raise tiller as high as it will go.



M41146

2. Turn crank (A) counter-clockwise to release spring tension.

Disconnect Tiller From Tractor Lift Link (Models 240, 245, 260, 265, 285, 320, 325, 335, 345 and 355)



M41745

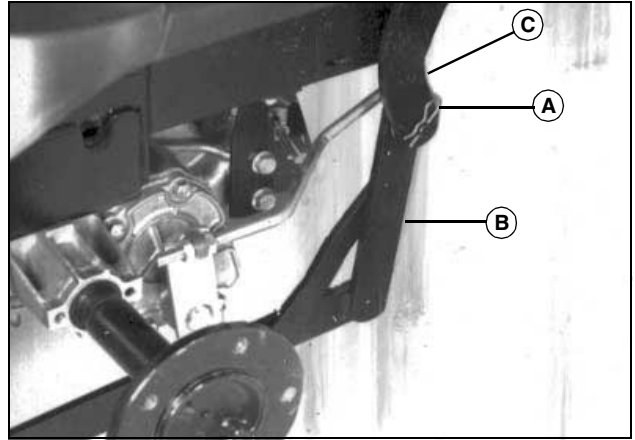
1. Lower tiller to the ground.
2. Remove spring locking pin (A) and drilled pin to disconnect plate (B) from lift link.

Disconnect Tiller From Tractor Lift Link (Models GT242, GT262, and GT275)



CAUTION: Avoid injury! You must push lift lever forward to the lock-out position to take tiller weight off of lift rod.

1. Push lift lever forward to the lock-out position.



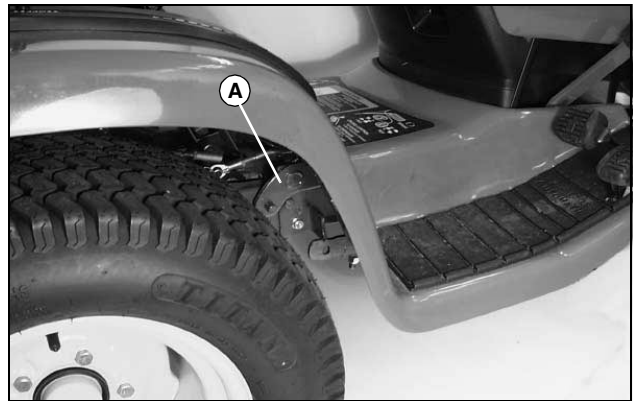
M73537

Picture Note: Right rear tire has been removed for clarity.

2. Remove spring locking pin (A) from lift rod (B).
3. Remove lift rod and washer from lift link (C). Install washer and spring locking pin to lift rod for storage.
4. Pull lift lever rearward to disengage lock-out.

Remove Lift Arm Strap and Lift Rod (Models GT225 and GT235)

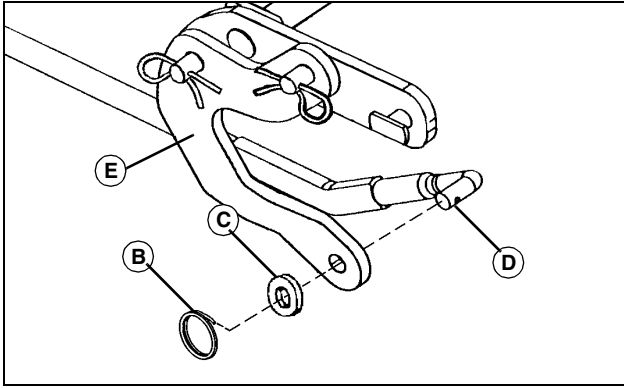
1. Lower the tiller to the operating position.
2. Place manual lift lever in the lock-out position.



M99280

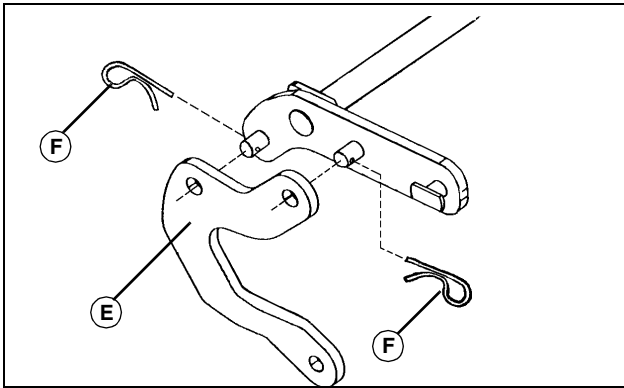
3. Locate rear lift shaft assembly (A) under right rear fender.

REMOVING AND STORING THE TILLER



M99283

4. Remove locking ring (B) and washer (C) from lift rod (D).
5. Remove lift rod from lift arm strap (E).



M99281

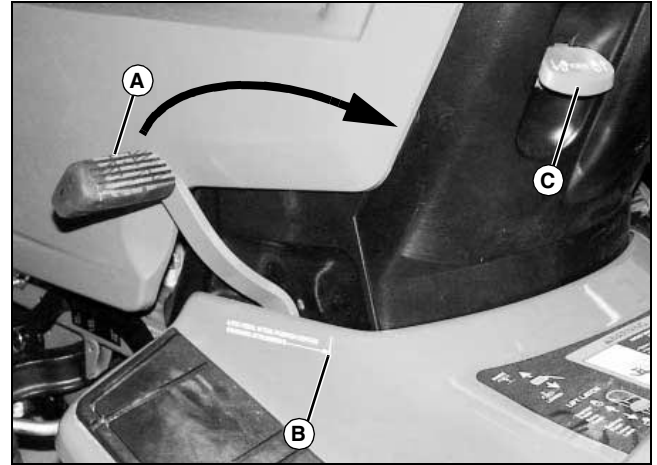
6. Remove spring locking pins (F) and lift arm strap (E). Install the spring locking in the rear lift shaft studs for storage.
7. For storage, attach the lift arm strap to the lift rod using the washer and locking pin.

Remove Lift Arm and Lift Rod (Models with Foot Lift)



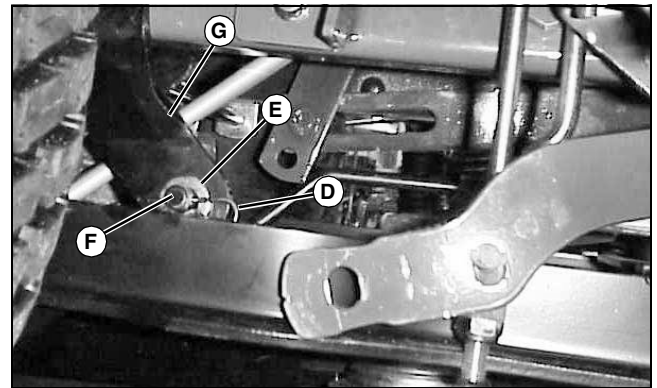
CAUTION: Avoid injury! Lift pedal is spring-assisted and may have unexpected movement.

Lock lift pedal when installing or removing attachment.



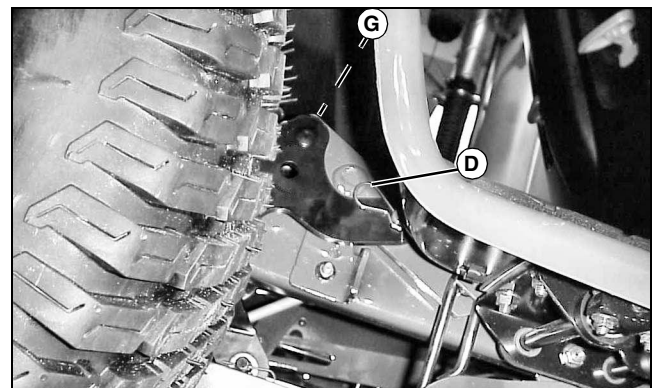
MX30484

1. Pull lift pedal (A) back by hand to lower tiller to the lower/down position (B). Pull up lock lever (C) to lock attachment in the lowered position.



MX31802

2. Remove spring locking pin (D) and washer (E) from lift rod (F).
3. Remove lift rod from lift arm (G).



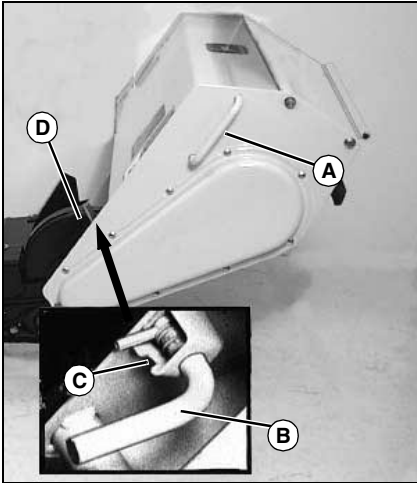
MX31801

4. Remove spring locking pins (D) and lift arm (G). Install the spring locking pins in the rear lift shaft studs for storage.

REMOVING AND STORING THE TILLER

5. For storage, attach the lift arm strap to the lift rod using the washer and locking pin.

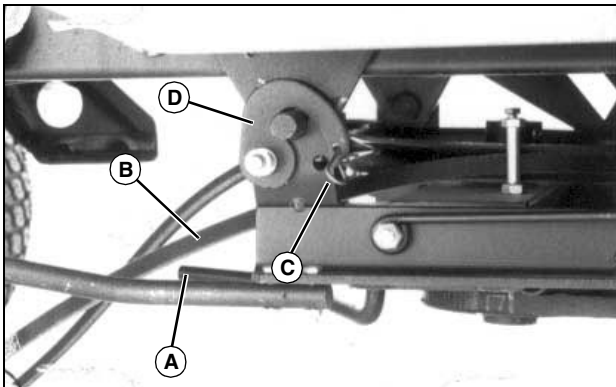
Put Tiller in Transport Position



M99284

1. Grasp handle (A) and pull slightly upward on tiller to relieve tension on transport lever (B). Pull out and rotate the transport lever (B) to engage locking pin in slot (C).
2. Pivot tiller up and forward as far as it will go.
3. Rotate transport lever (B) until locking pin disengages from slot (C). Allow transport lever to lock into hole in shield (D).

Remove Belt and Open Cams



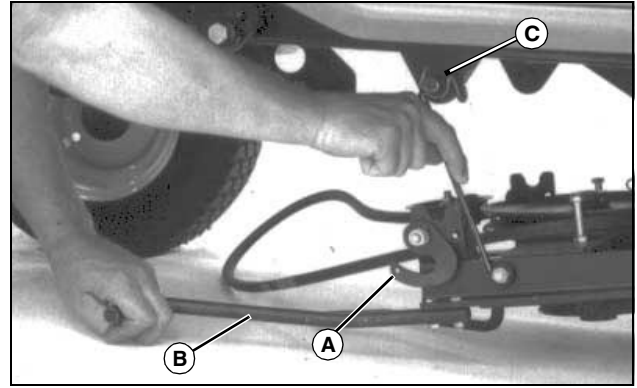
M41750

1. Swing belt tensioning lever (A) toward front of tractor.
2. Remove belt (B) from tractor drive sheave.
3. Remove spring locking pin (C) from both frame clip latches.
4. Swing open both clip latches (D).
5. Install spring locking pins in clip latches for storage.

Engage the Support Rod



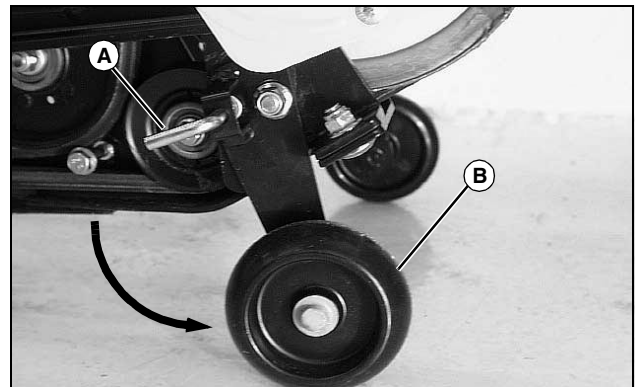
CAUTION: Avoid injury! Maintain a secure grasp of attaching assist lever until support rod is in place. Keep hands clear of pinch areas between tiller and tractor frame.



M41744

1. Make sure clip (A) is open at both sides of tiller.
2. Push and hold down attaching assist lever (B).
3. Pivot support rod (C) upward so loop in rod is under stud in tractor frame.
4. Slowly release downward pressure on attaching assist lever.

Put Wheels in Down Position



M97637

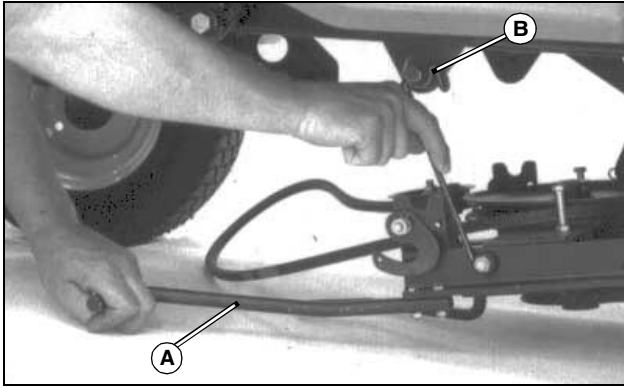
1. Pull and hold out wheel locking pin (A).
2. Swing wheel assembly (B) into down position. Make sure locking pin engages to lock wheel in down position. Repeat for other wheel assembly.

Pivot the Support Rod Down



CAUTION: Avoid injury! Maintain a secure grasp of attaching assist lever until tiller is resting on wheel assemblies. Keep hands clear of pinch areas between tiller and tractor frame.

OPERATING



M41744

1. Maintain downward pressure on attaching assist lever (A).
2. Pivot support rod (B) down.
3. Slowly release downward pressure on attaching assist lever until tiller is resting on wheel assemblies.
4. Roll tiller out from under tractor.

Store Tiller

1. Remove tiller from tractor.
2. Clean tiller with water pressure.
3. Check belts. If necessary, get new belts from your John Deere dealer. Do not install the new belts until you take the tiller out of storage.
4. Replace or repair badly worn or damaged parts.
5. Paint scratched areas to prevent rust.
6. Lubricate two grease points.
7. Store the tiller on a hard, level surface in a clean, dry place. If you must store the tiller outside, cover it with a waterproof cover.

Operating

Tilling Tips

Install the correct front and rear tractor weights.

IMPORTANT: Avoid damage! Do not back up or make sharp turns with the tiller in the ground.

Check the tines before you till. Replace missing, bent, or broken tines.

When you till hard ground or sod, till at a shallow depth for the first pass. Till deeper on each pass after that.

When you till a small area, make a pass through the middle, then circle the original pass, working to the outside. After you finish, make a few passes around the edge to cover ridges left by turning.

Till straight ahead when possible. This will leave fewer ridges from turning.

For seed bed preparation, till the soil once in the fall. Decaying vegetation will add valuable nutrients to the soil by spring. If the terrain is hilly or uneven, wait until spring, or leave some untilled strips, to help reduce soil erosion. The climate and terrain will help you decide the best time to till.

Before Tilling

Test the soil by squeezing it in your hand. If the soil forms a ball, it is too wet to till. If soil does not compress easily or falls apart, it is ready to till. Do not till when soil is wet. Wet soil will stick to the tines and tine shaft. Wet soil will also dry out and become hard, making it hard to work with

during the growing season.

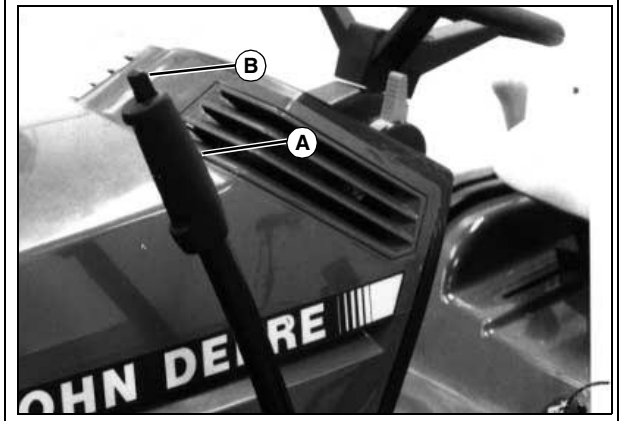
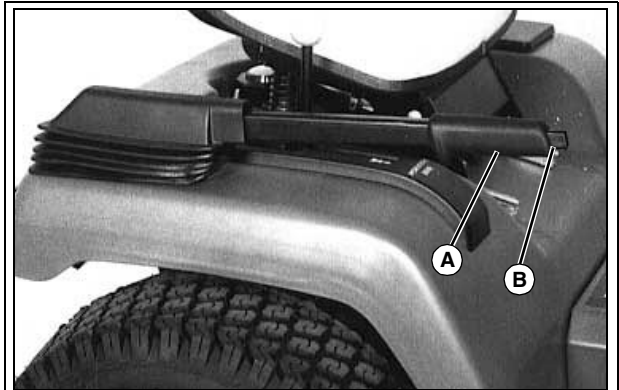
Mow tall weeds and grass to keep them from wrapping on tines or the tine shaft.

Pick up rocks, branches, and other objects that might damage the tiller.

Check the tines before tilling. Repair or replace loose, bent, or broken tines.

Raising and Lowering Tiller (Models 240, 245, 260, 265, 285, GT225, GT235, GT242, GT262, and GT275)

To Raise Tiller for Transport



M41184 M73540

Picture Note: Upper Photo - 200 Series; Lower Photo - GT series

1. Push lift lever (A) down or forward (GT series) slightly.
2. Push in button (B).
3. Pull lever up or back (GT series) until it latches and tiller stays up.

To Lower Tiller to Lockout Position:

1. Pull lift lever (A) up or back (GT series) slightly.
2. Push in button (B).
3. Push lever down or forward (GT series) until it latches.

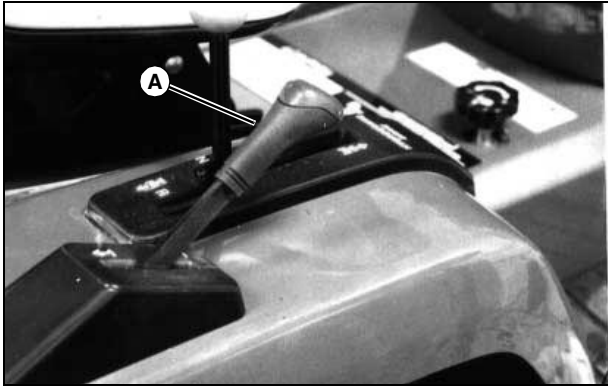
Lock-Out Position: Locks tiller in the lowest position. For difficult conditions, such as, heavy soils, clay, or sod. The lift spring is Locked Out. It has no effect on tiller weight.

Float or Mid-Position: Tiller is in float or mid-position when lift lever is not latched in raised or lockout position. The tiller should drop by itself and perform well in light to medium soils: Sandy soils, loam, or soils already tilled. Some of the tiller weight is carried by the lift spring.

Transport or Lock-Up Position: The lever is in the highest position and locks tiller in the highest position for transport.

OPERATING

Raising and Lowering Tiller (Models 320, 325, 335, 345 and 355)



M73546

Picture Note: 320 Tractor

Push hydraulic lift lever (A) forward to lower tiller.



M71987

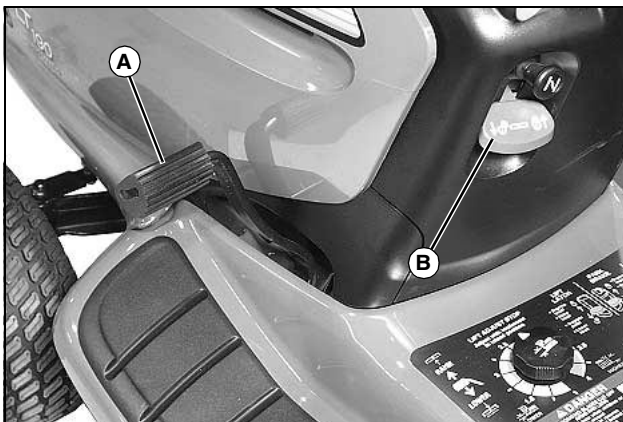
Picture Note: 325, 335, 345 and 355 Tractor

Pull hydraulic lift lever (A) rearward to raise tiller.

Raising and Lowering Tiller (Models with Foot Lift)

NOTE: Make sure the tension on the lift assist spring is properly adjusted to support the weight of the attachment installed.

Raising Tiller:

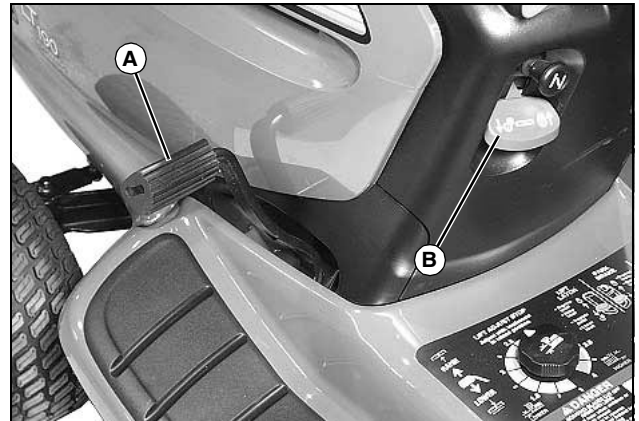


MX31335

1. Push down and hold lift pedal (A).
2. Pull up lever (B) to lock tiller in the transport position.

3. Release lift pedal. Pedal should stay down and lever should stay locked.

Lowering Tiller:



MX31335

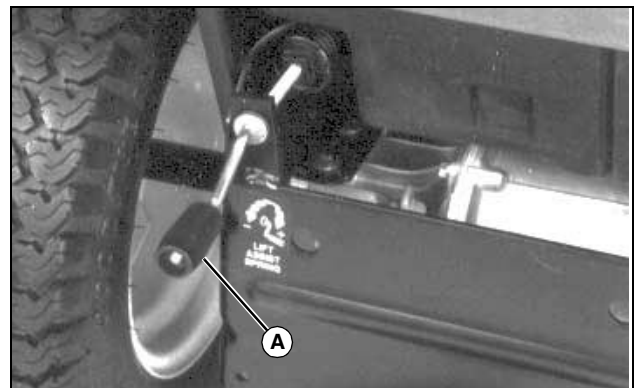
1. Push down and hold lift pedal (A).
2. Push down lever (B) to unlock.
3. Release lift pedal to lower tiller.

Transport Position

Holds tiller above ground while traveling to and from worksite.

1. Push forward on lift pedal (A).
2. Raise pedal latch handle (B) to latch tiller in transport (raised) position.
3. Remove foot from lift pedal and the tiller stays up.

Tips for Adjusting Lift Spring (Models 240, 245, 260, 265, and 285)



M41146

Before you adjust lift spring with crank (A), consider two points:

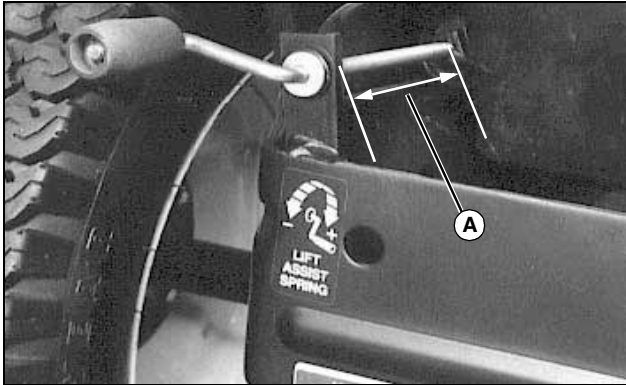
1. The effort required to lift the tiller in relation to the effort required to lock-out the lift spring:
 - Too little spring tension may require too much effort to lift the tiller.
 - Too much spring tension may require too much effort to push down and lock the lift lever down.
2. Field conditions and tiller performance:
 - For difficult conditions you may need little or no spring tension, so the weight of the tiller holds it down in heavy soils or sod.
 - For normal conditions you may need moderate spring tension, so the tiller performs well in light to medium soils and soil already tilled.

OPERATING

Adjusting Lift Spring (Models 240, 245, 260, 265, and 285)

NOTE: Adjust spring tension as necessary when operating the tiller:

- Heavy soils, clay, or sod require less spring tension.
- Light to medium soils, or soils already tilled, require more spring tension.



M41391

1. Turn crank until distance (A) is approximately 120 mm (4-3/4 in.).
2. Raise tiller all the way with lift lever, but do not release lever button.
3. Release lever:
 - The tiller should drop to the ground by itself and
 - The tiller should be raised with little effort. If not, adjust spring tension as desired. To increase spring tension, turn the crank clockwise. To decrease spring tension, turn the crank counter-clockwise.

Adjusting Lift Assist Spring (Models with Foot Lift)

NOTE: Weight of attachment affects ease of lifting. Adjust lift assist spring for your particular attachment model.



MX30708

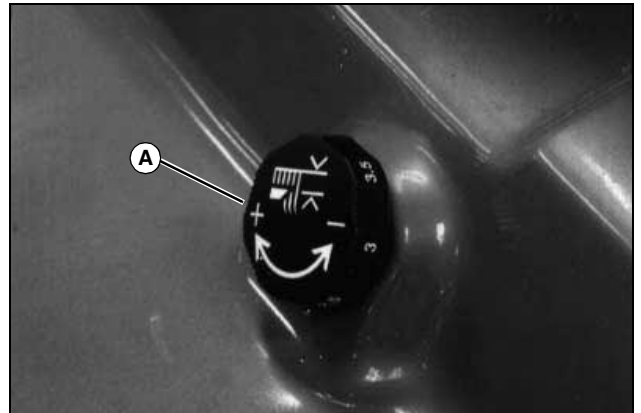
1. Make sure yellow indicator (A) is aligned with proper mark for attachment installed. If not, adjust lift assist spring so indicator is aligned with correct mark.
2. Turn adjusting bolt (B) at front of machine frame to adjust lift assist spring:
 - Clockwise - Increases spring tension and moves indicator toward front of machine for heavier attachments.
 - Counterclockwise - Decreases spring tension and moves indicator toward rear of machine for lighter attachments.
3. Field conditions and tiller performance:

- For difficult conditions you may need little or no spring tension, so the weight of the tiller holds it down in heavy soils or sod.
- For normal conditions you may need moderate spring tension, so the tiller performs well in light to medium soils and soil already tilled.

Using Depth Control Knob

Adjust this knob to set tilling depth. The tiller will return to the same depth each time you lower it.

1. Raise tiller as high as it will go.



M73539

Picture Note: GT242, GT262 and GT275 Tractors Shown

2. Turn knob (A) clockwise to raise the tiller depth or counter-clockwise to lower the depth.

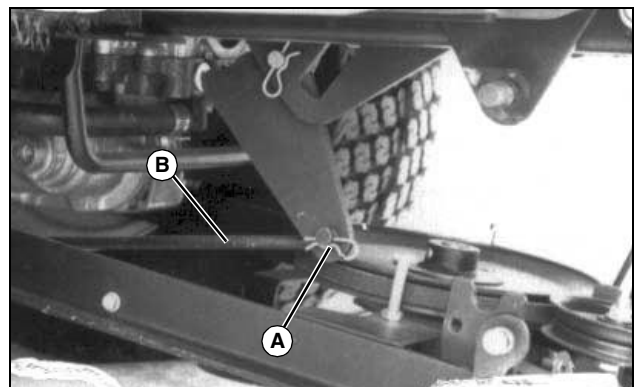
NOTE: If you cannot adjust for the desired tilling depth, see *Adjusting Tilling Depth in Service section.*

Adjusting Tilling Depth (Models 240, 245, 260, 265, 285, 320, 325, 335, 345 and 355)

CAUTION: Avoid injury! Release spring tension before removing parts.

1. Release the lift spring tension:
 - Models 320, 325, 335, 345 and 355 – Push lift lever forward. Lower tiller to the ground.
 - 200 Series Tractors – Turn crank at rear of tractor counter-clockwise.

NOTE: Tiller frame has been removed from tractor for clarity.



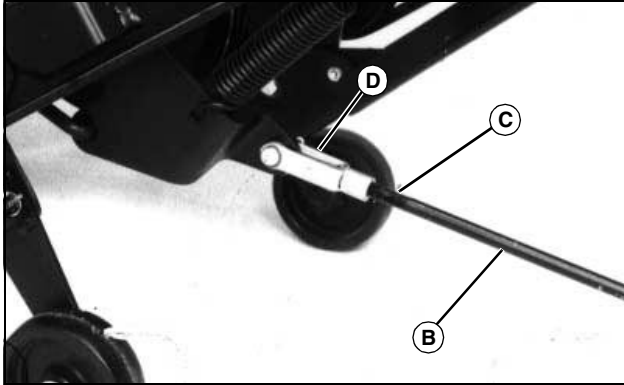
M41783

2. Remove spring locking pin (A).
3. Remove rod (B) from the plate.

OPERATING

IMPORTANT: Avoid damage! Do not expose more than 30 mm (1-1/4 in.) of thread (C) or lift rod could separate from clevis.

NOTE: Maximum tilling depth is 150 mm (6 in.).



M41754

4. Adjust the depth:

- To increase tilling depth, turn rod (B) out of clevis (D).
- To decrease tilling depth, turn rod (B) into clevis (D).

5. Install rod in plate and secure with spring locking pin.

6. Check tiller ground clearance:

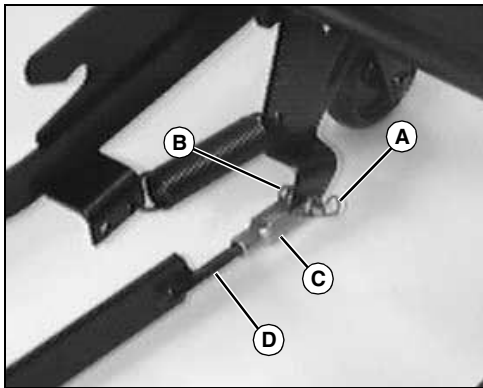
- Use lift lever to raise tiller as high as it will go.
- Measure distance between ground and the lowest tine. The distance should be 75 mm (3 in.).

Adjusting Tilling Depth (Models GT225, GT235, GT242, GT262, and GT275)

CAUTION: Avoid injury! Push lift lever forward to the lock-out position to prevent being hit by parts under spring tension.

1. Push manual lift lever forward to the lock-out position.

IMPORTANT: Avoid damage! Do not expose more than 30 mm (1-1/4 in.) of thread or lift rod could separate from clevis.



M78428

Picture Note: Tiller frame removed from tractor for clarity.

2. Remove cotter pin (A) and drilled pin (B) to disconnect clevis (C) from tiller frame.

NOTE: Maximum tilling depth is 150 mm (6 in.).

3. Adjust the depth:

- To increase tilling depth, turn lift rod (D) out of clevis (C).
- To decrease tilling depth, turn lift rod (D) into clevis (C).

4. Install clevis (C) to tiller frame and fasten with drilled pin (B) and cotter pin (A).

5. Check tiller ground clearance:

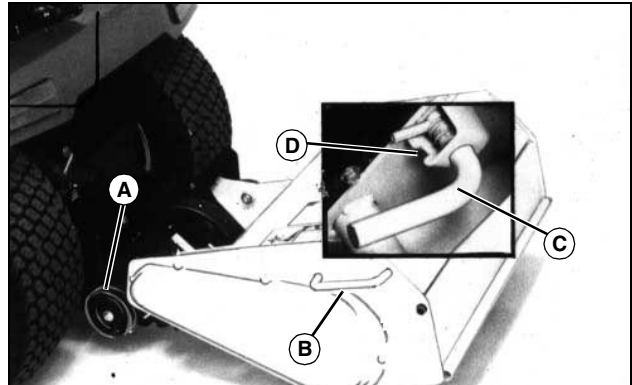
- Use lift lever to raise tiller as high as it will go.
- Measure distance between ground and the lowest tine.
- The distance should be 75 mm (3 in.).

Operating Tiller



CAUTION: Avoid injury!

- Pick up objects from tilling area.
- Guards and shields must be in place.
- Clear the work area of people.
- Do not let children operate the tractor/tiller.
- Do not let children ride on the tractor or tiller.



M41755

1. Lock wheels (A) in the raised position.

2. Put tiller in the operating position:

- Raise tiller slightly with handle (B).
- Pull lever (C) out of the frame.
- Put lever in slot (D).
- Slowly lower tiller. Release lever (C). Make sure lever locks in place.

IMPORTANT: Avoid damage! To help prevent clutch damage, do not engage tiller with throttle lever in the fast position.

3. Start engine. Put throttle lever at 1/4 position.

NOTE: For those tractors with RIO (Reverse Implement Option), the tiller will stop when the tractor is put in reverse.

4. To engage tiller, put PTO control in the on position.

5. Push throttle lever to the fast position.

6. Unlock the park brake.

7. Till ground at a safe travel speed.

SERVICE INTERVALS

Inspecting, Unplugging, or Parking Tiller



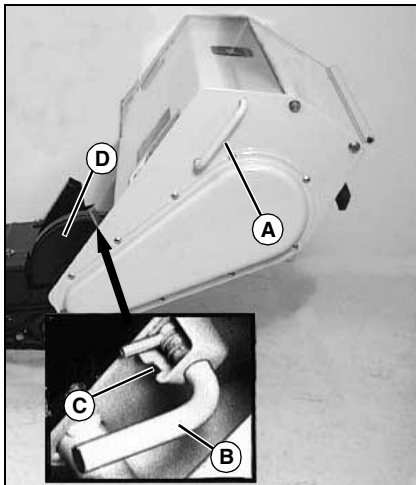
CAUTION: Avoid injury! Stop the engine and wait for all moving parts to stop before leaving tractor seat.

1. Stop the tractor.
2. Put PTO control in the off position.
3. Lower tiller to the ground.
4. Lock the park brake.
5. Stop the engine.
6. Remove the key.

Transporting Tiller

Drive the tractor with the tiller in the transport position when traveling from one tilling area to the other. Drive the tractor at a safe travel speed. Slow down on slopes or rough ground.

Place tiller in transport position as follows:



M99284

1. Grasp handle (A) and pull slightly upward on tiller to relieve tension on transport lever (B). Pull out and rotate the transport lever to engage locking pin in slot (C).
2. Pivot tiller up and forward as far as it will go.
3. Rotate transport lever (B) until locking pin disengages from slot (C). Allow transport lever to lock into hole in shield (D).

Service Intervals

Service Intervals

5 Hours

- Check belt tension.
- Clean under belt shield.

10 Hours

- Lubricate drive sheave bearing.
- Lubricate rear jackshaft.

Service Lubrication

Grease

IMPORTANT: Avoid damage! Use recommended John Deere greases to avoid component failure and premature wear.

The recommended John Deere greases are effective within an average air temperature range of -29 to 135 degrees C (-20 to 275 degrees F).

If operating outside that temperature range, contact your Servicing dealer for a special-use grease.

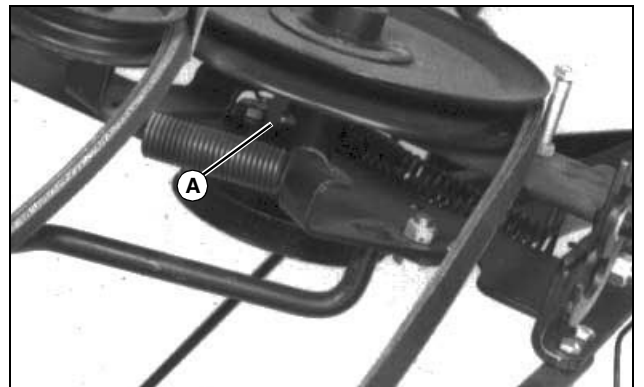
The following greases are preferred:

- John Deere Multi-Purpose SD Polyurea Grease
- John Deere Multi-Purpose HD Lithium Complex Grease

If not using any of the preferred greases, be sure to use a general all-purpose grease with an NLGI grade No.2 rating.

Wet or high speed conditions may require use of a special-use grease. Contact your Servicing dealer for information.

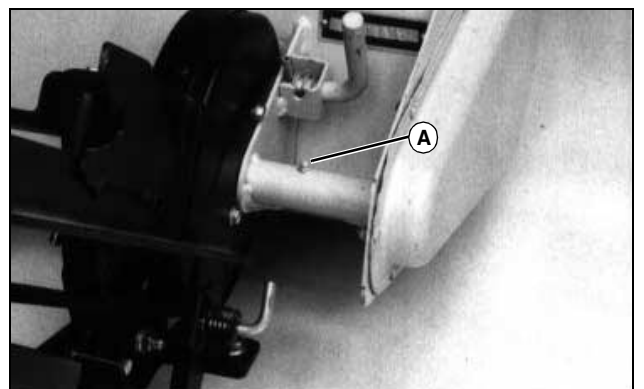
Lubricating Drive Sheave Bearing



M41757

Lubricate bearing (A) with one or two shots of John Deere Multipurpose Grease or an equivalent until grease comes out of seals.

Lubricating Rear Jackshaft



M41758

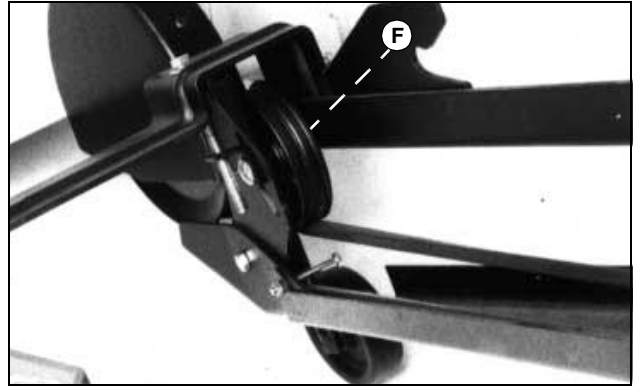
Lubricate shaft (A) with two or three shots of John Deere Multipurpose Grease or an equivalent.

SERVICE

Lubricating the Chain

NOTE: Do not perform this procedure unless you are replacing parts or adjusting chain on tillers with Serial No. below 140000.

1. Clean old grease from chain and shield.
2. Remove bolts from shield.
3. Remove glue that holds shield to tiller.
4. Coat chain with John Deere Moly High Temperature Grease or an equivalent. Work grease into chain with your hand.
5. Put 0.5 kg (1 lb) of grease inside chain shield.
6. Remove old glue from shield. Apply fresh glue to shield. (See your John Deere dealer for the correct glue.)
7. Install shield and bolts.

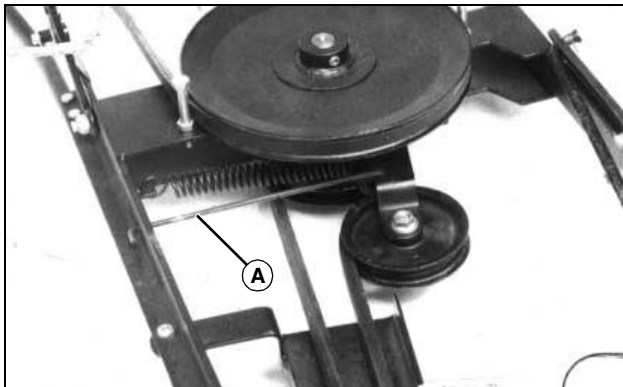


M41785

- Loosen nut (F) on the idler pulley.

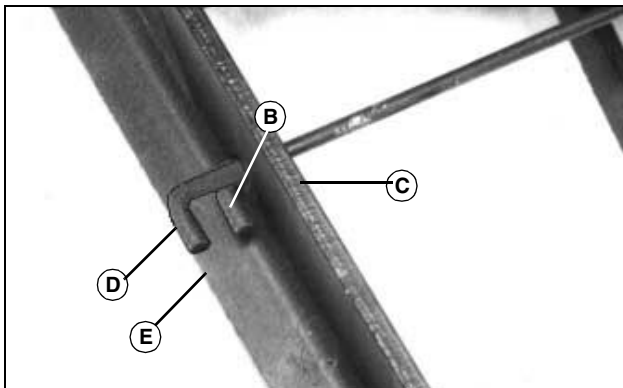
Service

Checking Belt Tension



M41860

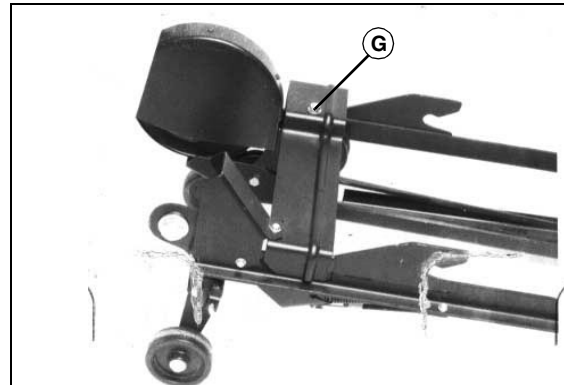
1. Check position of belt tension rod (A):



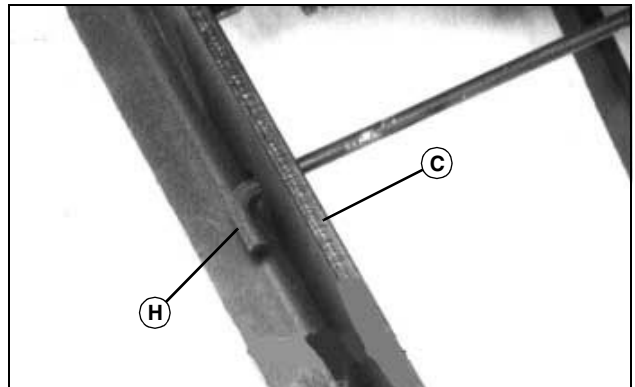
M79280

- If rod end is in position (B), against the vertical frame rail (C), the belt is too tight and must be loosened.
- If rod end is in position (D), extends beyond horizontal frame rail (E), the belt is too loose and must be tightened.

2. Adjust belt tension:



M41786



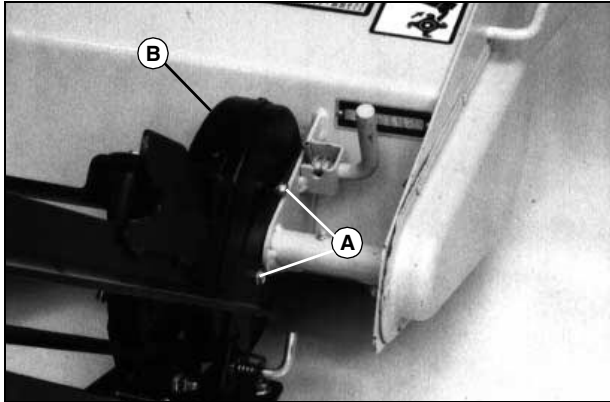
M41784

- To tighten belt, turn bolt (G) counter-clockwise until 3 mm (1/8 in.) clearance exists between rod end (H) and vertical frame rail (C).
- To loosen belt, turn bolt (G) clockwise until 3 mm (1/8 in.) clearance exists between rod end (H) and vertical frame rail (C).

3. Tighten nut on the idler pulley after adjustment.

SERVICE

Cleaning Under Belt Shield

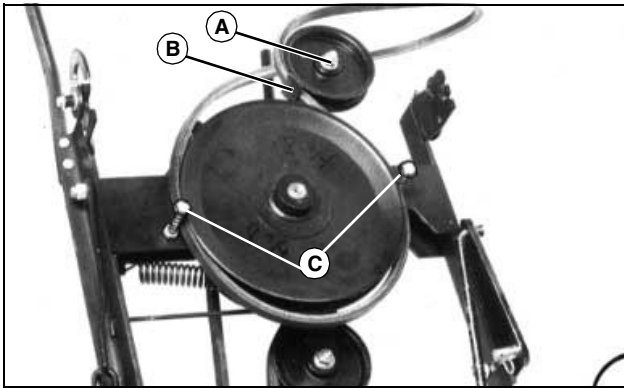


M41758

1. Remove screws (A) and belt shield (B).
2. Clean dirt from sheave with water pressure.
3. Install shield and screws.

Removing Primary Drive Belt

1. Remove tiller from tractor.

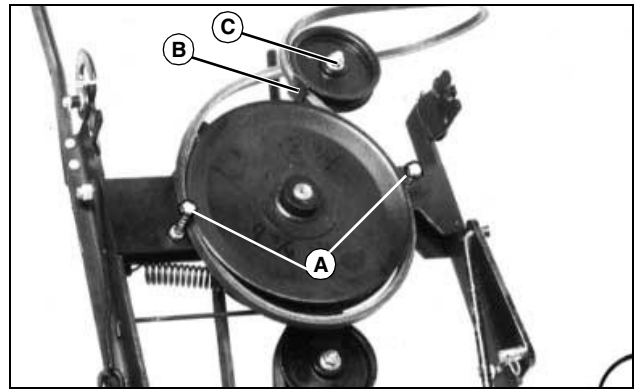


M41760

2. Loosen nut (A). Move belt guide (B) away from belt.
3. Loosen bolts (C).
4. Remove belt.
5. Remove secondary belt.

Installing Primary Drive Belt

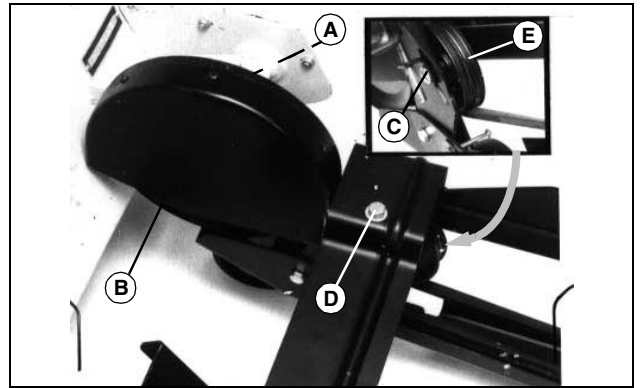
1. Install belt on drive sheave.



M41760

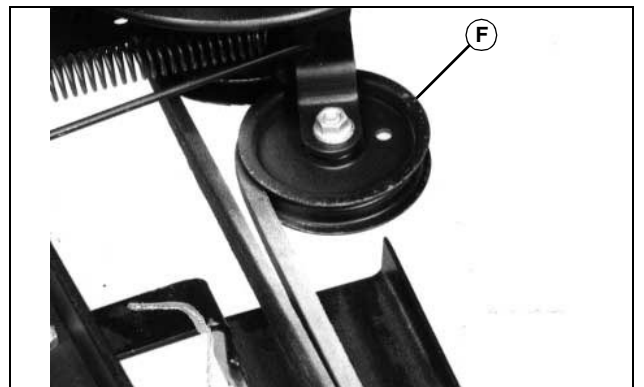
2. Tighten bolts (A).
3. Install belt between belt idler and belt guide (B).
4. Push the arm to the right. Point belt guide toward drive sheave, as shown. Tighten cap screw (C).

Removing Secondary Belt



M41761

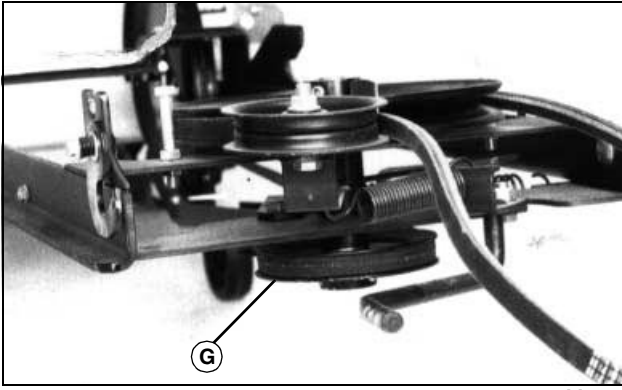
1. Remove two self tapping screws (A) and belt shield (B).
2. Loosen bolt (C).
3. Turn bolt (D) so idler (E) moves up in the slot.



M41763

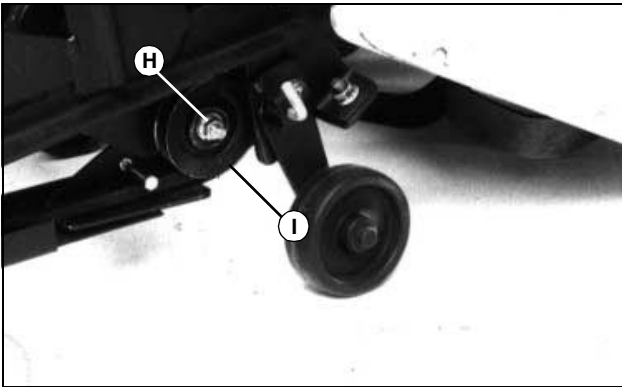
4. Remove secondary belt from front idler (F).

SERVICE



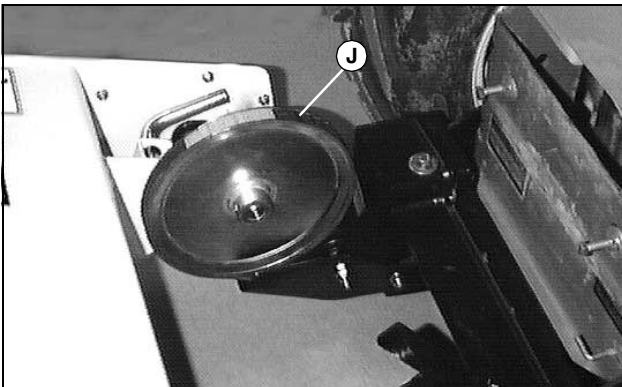
M41762

5. Remove secondary belt from front drive sheave (G).



M41764

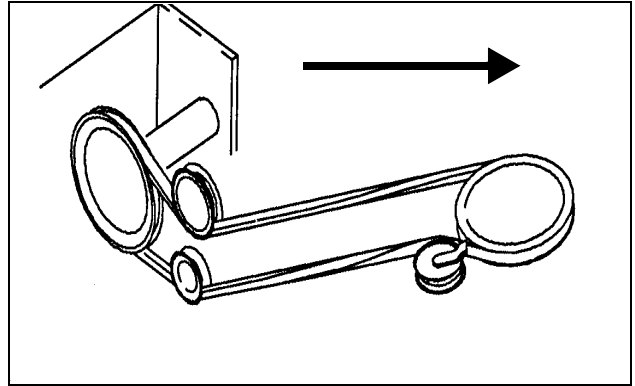
6. Remove nut (H) and V-idler (I).



M88457

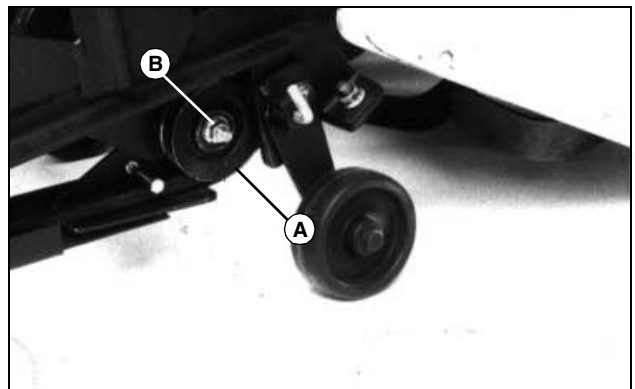
7. Remove secondary belt (J).

Installing Secondary Drive Belt



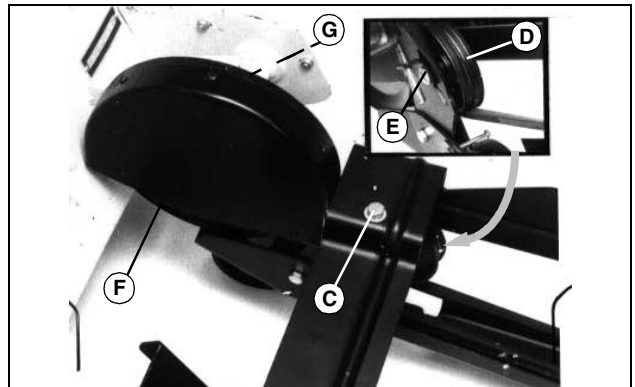
M41766

1. Install new secondary drive belt as shown.



M41764

2. Install V-idler (A) and nut (B).



M41761

3. Turn bolt (C) so idler (D) is seated as far down as possible in slot.

4. Tighten bolt (E).

5. Install shield (F) and fasten with two self tapping screws (G).

Replacing Tines



CAUTION: Avoid injury! Support raised tiller with blocks. Wear heavy gloves when working around sharp tines.

1. Park machine safely.

2. Raise tiller as high as it will go.

SERVICE

NOTE: For ease in replacing tines, you can remove tiller from the tractor and turn it completely upside down.

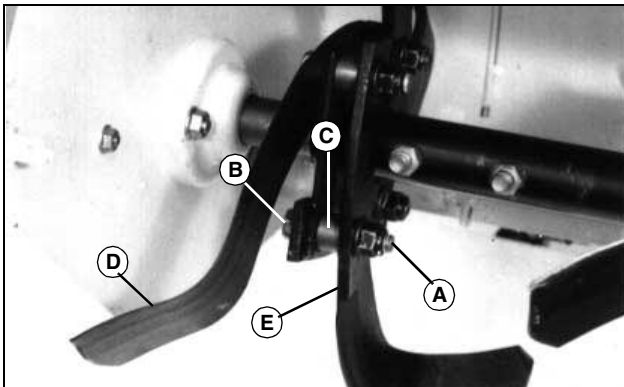
3. Put tiller in the transport position.

4. Put blocks under the tiller.

NOTE: Each cluster of tines must have two left tines (D) and two right tines (E):

- Alternate left and right tines in each cluster.
- A bolt with no spacer is an M10x35 bolt.
- A bolt with one spacer is an M10x45 bolt.
- A bolt with two spacers is an M10x60 bolt.

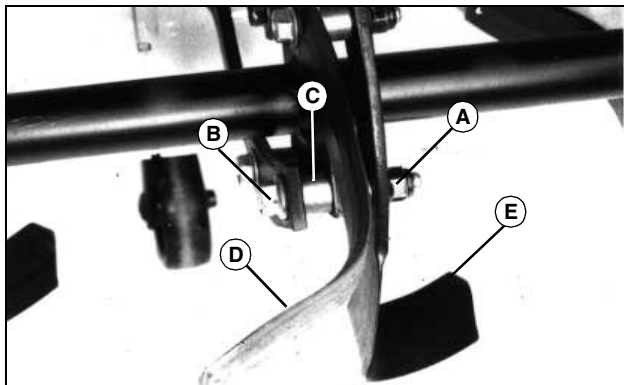
5. Replace tines.



M73541

Picture Note: Left Cluster

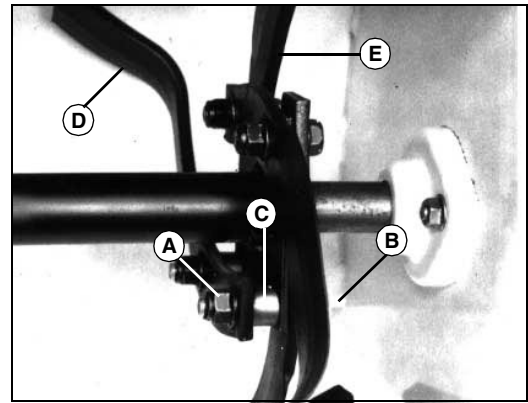
• **Left Cluster:** Remove nuts (A), bolts (B), spacer (C), two left tines (D), and two right tines (E). Install the new tines and hardware exactly as the old tines and hardware were positioned. Use the pictures to help you install tines correctly.



M73542

Picture Note: Mid Cluster

• **Mid Cluster:** Remove nuts (A), bolts (B), spacer (C), two left tines (D), and two right tines (E). Install the new tines and hardware exactly as the old tines and hardware were positioned. Use the pictures to help you install tines correctly.



M73543

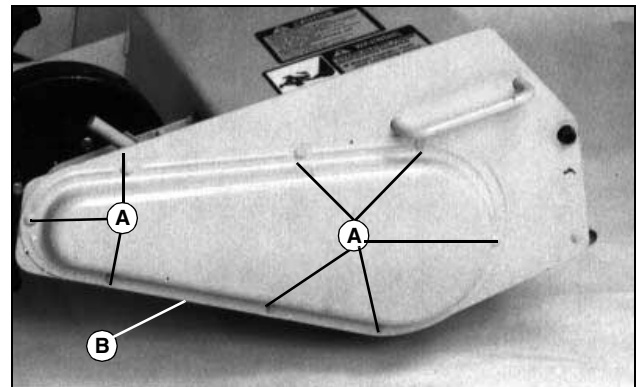
Picture Note: Right Cluster

• **Right Cluster:** Remove nuts (A), bolts (B), spacer (C), two left tines (D), and two right tines (E). Install the new tines and hardware exactly as the old tines and hardware were positioned. Use the pictures to help you install tines correctly.

6. Tighten bolts.

Adjusting Chain

NOTE: This procedure is for tillers with Serial No. below 140000.

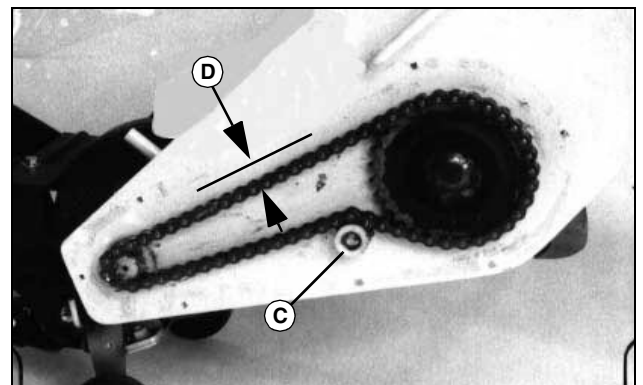


M41770

1. Remove bolts (A) from chain shield (B).

2. Remove shield. The shield is fastened to tiller with glue.

NOTE: Rotate and make sure chain does not become tight due to the sprockets being off center.



M41771

3. Adjust idler (C) until chain deflects or can be pushed up 6-10 mm (1/4-3/8 in.) (D) near center of top links.

TROUBLESHOOTING

4.Remove old glue from shield. Apply fresh glue to shield. (See your John Deere dealer for the correct glue.)

NOTE: Adjust chain before lubricating.

5.Lubricate the chain.

6.Install shield and bolts.

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.

Tiller (All Tractor Models)

If	Check
Tiller Is Noisy	Tines are bent or damaged. Rocks in tilling area.
Tiller Will Not Work	Belts broken.
Tiller Operates Erratically	Trash caught in tines. Speed too fast or erratic. Belts loose. Tines damaged.
Belt Slipping	Debris in sheave. Worn belt.
Tiller Loads Down The Machine	Engine RPM too low.

Tiller (Tractor Models 240, 245, 260, 265, 285 and 320)

If	Check
Tiller Is Too Hard Too Lift	Lift spring tension too low.
Tiller Does Not Stay Down	Lift spring tension too high.
The Lift Lever Is Too Hard To Lower And Lockout	Lift spring tension too high.

Specifications

Tiller Specifications

Cutting Width..... 762 mm (30 in.)

Maximum Cutting Depth..... 152 mm (6 in.)

Maximum Lift Height..... 76 mm (3 in.)

Transport Height 203 mm (8 in.)

Rotor Diameter 356 mm (14 in.)

Rotor Speed..... 250 rpm

Drive Chain No. 50 Roller Chain

Tine Shaft Bearings..... Sealed Ball Bearings

(Specifications and design are subject to change without notice.)

Getting Quality Service

Service Literature

If you would like a copy of 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.

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

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

