

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Cultivator
One Row

OMM147682 B2

OPERATOR'S MANUAL



JOHN DEERE

North American Version
Litho in U.S.A.

INTRODUCTION

Thank You for Purchasing a John Deere Product

We appreciate your business and wish you many years of safe and satisfied use of your machine.

Using Your Operator's Manual

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

Reading your operator's manual will help you and others avoid personal injury or damage to the machine. Information given in this manual will provide the operator with the safest and most effective use of the machine. Knowing how to operate this machine safely and correctly will allow you to train others who may operate this machine.

If you have an attachment, use the safety and operating information in the attachment operator's manual along with the machine operator's manual to operate the attachment safely and correctly.

This manual and safety signs on your machine may also be available in other languages (see your John Deere Dealer to order).

Sections in your operator's manual are placed in a specific order to help you understand all the safety messages and learn the controls so you can operate this machine safely. You can also use this manual to answer any specific operating or servicing questions. A convenient index located at the end of this book will help you to find needed information quickly.

The machine shown in this manual may differ slightly from your machine, but will be similar enough to help you understand our instructions.

RIGHT-HAND and LEFT-HAND sides are determined by facing in the direction the machine will travel when going forward. When you see a broken line (-----), the item referred to is hidden from view.

Before delivering this machine, your John Deere Dealer performed a predelivery inspection to ensure best performance.

Special Messages

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.



CAUTION: Avoid injury! This symbol and text highlight potential hazards or death to the operator or bystanders that may occur if the hazards or procedures are ignored.

IMPORTANT: Avoid damage! This text is used to tell the operator of actions or conditions that might result in damage to the machine.

NOTE: General information is given throughout the manual that may help the operator in the operation or service of the machine.

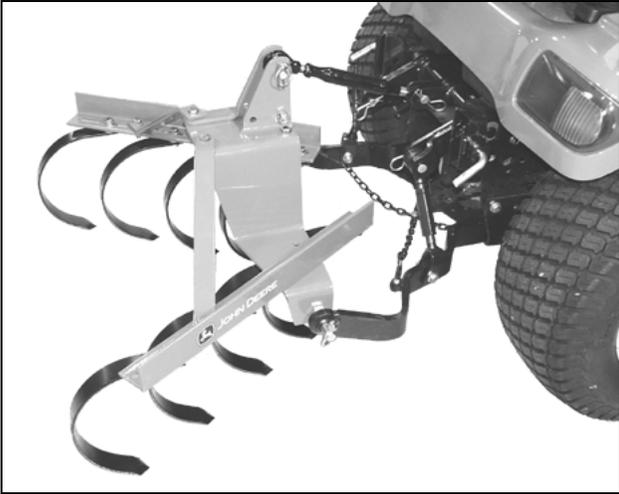
PRODUCT IDENTIFICATION

Product Compatibility

This cultivator is compatible with tractors, 18.6 kW (25 hp) and under, equipped with a limited Category 1, rear 3-point hitch.

Record Purchase Information

Record your purchase information in the spaces provided below.



MX13247

DATE OF PURCHASE:

DEALER NAME:

DEALER PHONE:

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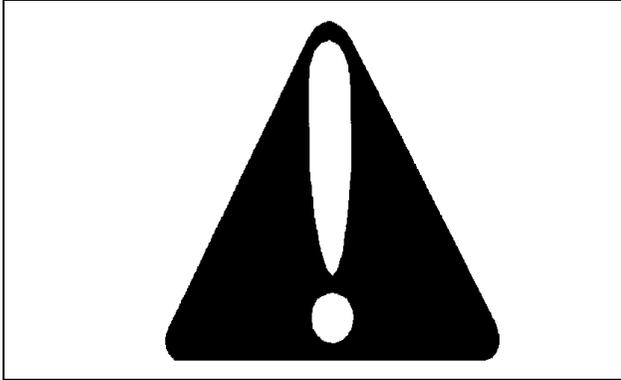
Previous Editions

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OMM147682 B2 - English

SAFETY

Understanding the Machine Safety Labels



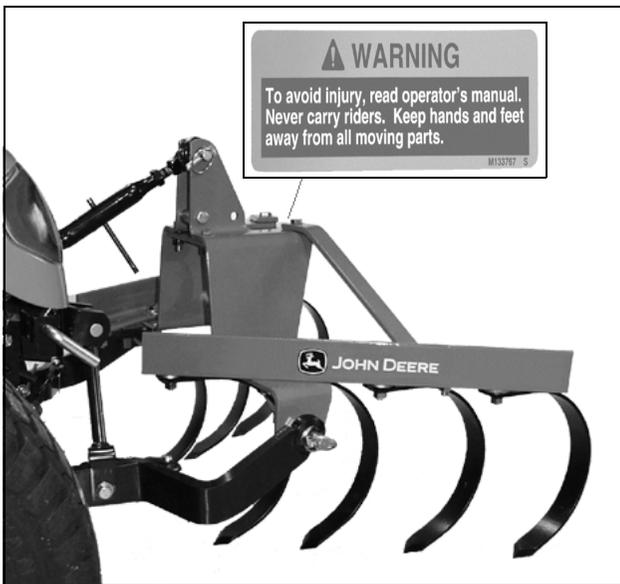
Safety-Alert Symbol

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.

WARNING



MX13350, M133767

To avoid injury, read the operator's manual. Never carry riders. Keep hands and feet away from all moving parts.

Practice Safe Maintenance



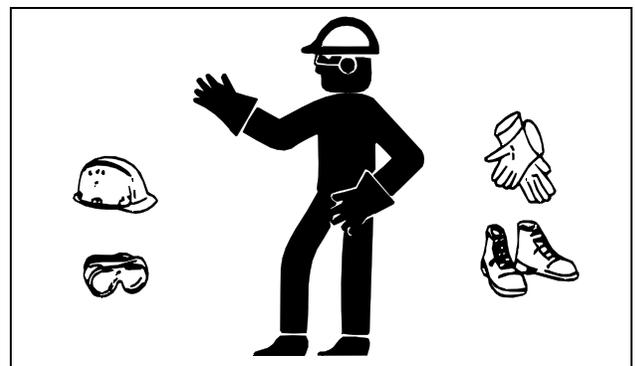
MIF

- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service or adjust machine 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.

Before you service, adjust, clean or inspect the attachment:

- Stop the machine engine.
- Securely support any machine elements that must be raised for service work.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil or debris.
- Unauthorized modifications to the machine may impair its function and safety.

Wear Appropriate Clothing



MIF

- Wear close fitting clothing and safety equipment appropriate for the job.
- Always wear safety goggles or safety glasses with side

SAFETY

shields when operating the machine.

- Loud noise can cause impairment or loss of hearing; wear a suitable protective device such as earplugs.
- Do not wear radio or music headphones while servicing the machine. Safe servicing requires your full attention.

Parking Safely

1. Stop machine on a level surface, not on a slope.
2. Disengage Power Take-Off (PTO).
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.

Operating Machine Safely

- Check machine brake action before you operate. Adjust or service brakes as necessary.
- Inspect machine before you operate. Be sure hardware is tight. Repair or 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.
- Make repairs before you operate. Keep machine properly maintained and in good working order.
- Keep children away from working area.
- Do not leave machine unattended when it is running.
- Only operate during daylight or with good artificial light.
- Do not let anyone, especially children, ride on attachment or machine.
- Only allow responsible adults who are familiar with the instructions to operate the machine.
- Do not wear radio or music headphones while operating the machine. Safe operation requires your full attention.

Operating Cultivator Safely

Read, understand and follow all instructions in this manual,

in the Operator's Manual for the machine and on the safety signs on the equipment before starting.

Before you remove or install the cultivator:

1. Stop the machine.
2. Disengage the PTO.
3. Stop the engine.

Before you back up:

1. Stop the machine.
2. Look behind the machine for children.

INSTALLING

Preparing the Machine

IMPORTANT: Avoid damage! Do not install on tractors with engines larger than 18.6 kW (25 hp).

Remove all attachments before installing the cultivator.

NOTE: Read and complete the Assembly section at the back of this operator's manual if installing the attachment for the first time.

Required Equipment

- Three-point hitch

Recommend Equipment

- Bar (lug) tires or tire chains

Machine Setup

- Check tire pressure before operating machine.

Installing Ballast



CAUTION: Avoid injury! When the attachment is removed, also remove any ballast that was added to the machine.

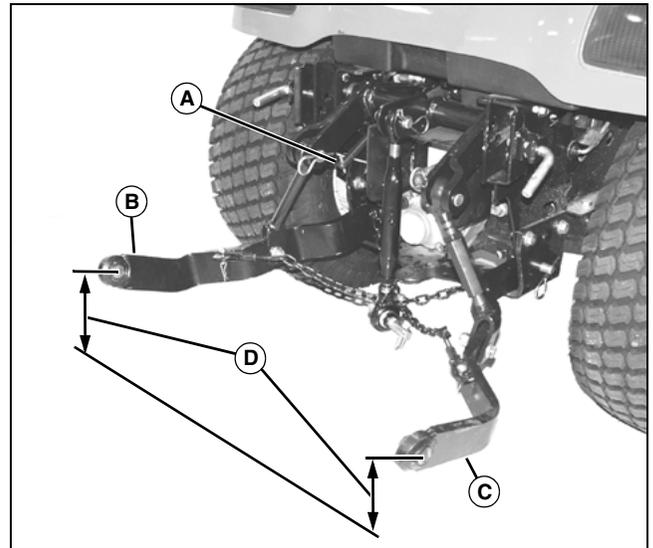
Use only attachments and accessories recommended by the manufacturer.

The following may be used as appropriate ballast, to improve maneuverability and traction:

- Four front weights.
- Two Wheel Steer Models: One 33 kg (72 lb) rear starter wheel weight and one additional 23 kg (50 lb) rear wheel weight.
- All Wheel Steer Models: Two 23 kg (50 lb) rear wheel weights.

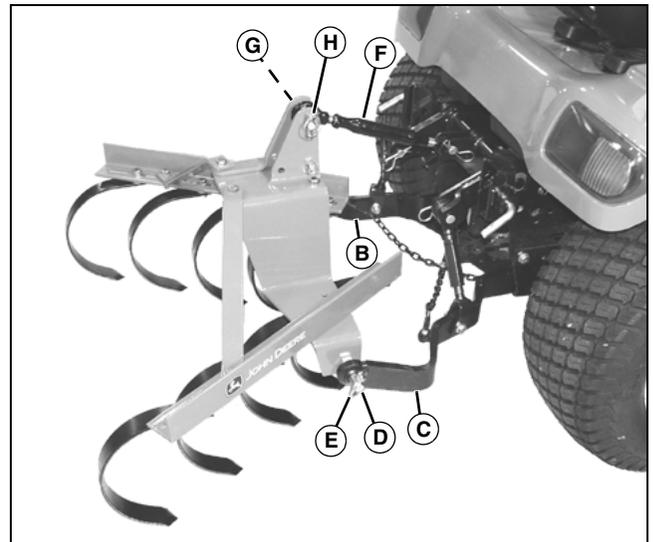
Attaching the Cultivator

1. Park the machine safely. (See Parking Safely in Safety section.)



MX13264

2. With the 3-point hitch in the lowered position, adjust the lift rod adjuster (A) until the ends of the lower link balls (B and C) are approximately 20 cm (8 in.) (D) from the ground.



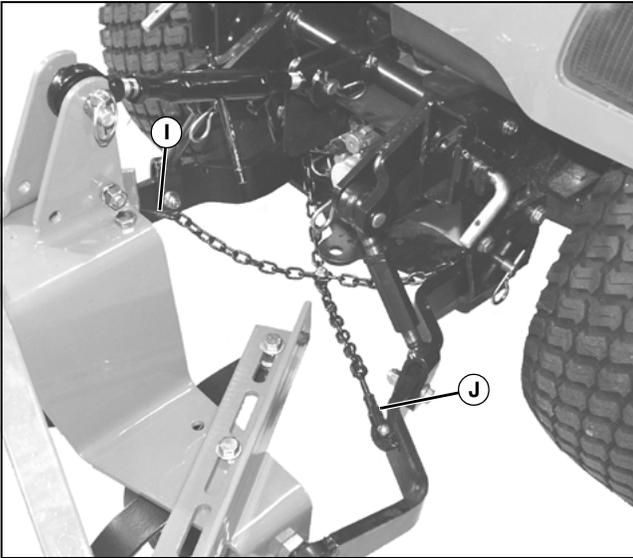
MX13247

3. Slide the lower links (B and C) over the link pins (D). Secure with quick-lock pins (E) supplied with the cultivator.

NOTE: The center link pin and the quick-lock pin are not supplied with the cultivator.

4. Attach the center link (F) to the cultivator upper mounting point with a link pin (G) and quick-lock pin (H).

INSTALLING



MX13268

5. Tighten the stabilizer chains (I and J) to prevent side sway of the cultivator during operation.



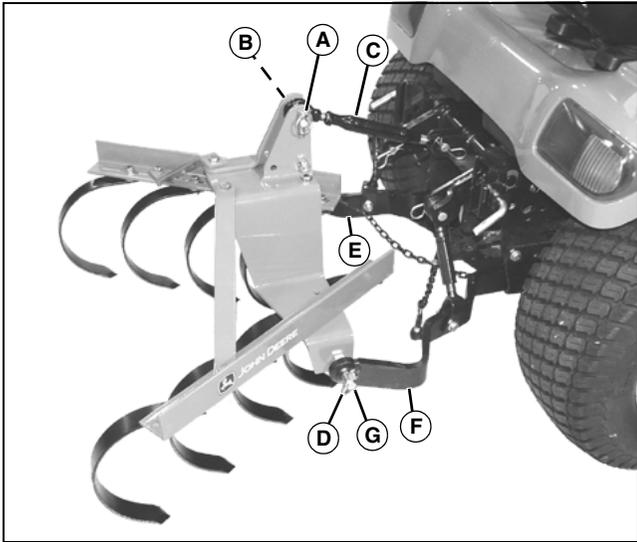
CAUTION: Avoid injury! Exhaust fumes can cause sickness or death. If it is necessary to run the engine in an enclosed area, use an exhaust pipe extension to remove the fumes.

6. Start the machine, and raise the 3-point hitch.

REMOVING

Removing the Cultivator

1. Park the machine safely. (See Parking Safely in Safety section.)
2. Lower the cultivator to the ground.



MX13247

3. Remove the quick-lock pin (A), link pin (B), and disconnect the center link (C).
4. Install the link pin (B) and quick-lock pin (A) in the center link for storage.
5. Remove the quick-lock pins (D) from the lower links (E and F).
6. Pull the lower links (E and F) off the lower link pins (G).
7. Install the quick-lock pins (D) into the lower link pins (G) for storage.



CAUTION: Avoid injury!

When the attachment is removed, you must also remove any ballast that was added to the machine.

Use only attachments and accessories recommended by the manufacturer.

8. Remove any added ballast from machine.

OPERATING

Using Cultivator

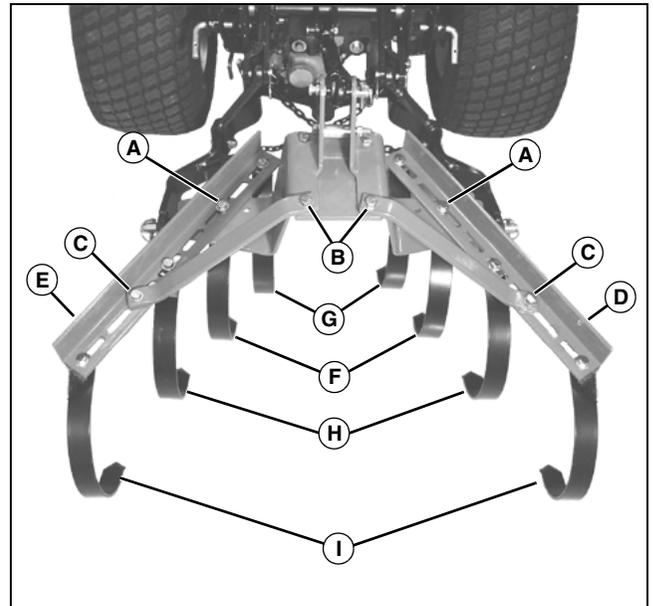
The most common uses for a cultivator:

1. Weed control in emerging gardens:
 - Straddle row cultivation: By straddling the cultivator over the plant row, weeds on each side of the row of plants can be dislodged.
 - Between row cultivation: Using the full width of the cultivator, the space between rows of plants can be tilled to loosen the soil and dislodge weeds (a minimum space between rows of 1.27-1.40 m (50-55 in.) is required).
2. Prepare seed beds:
 - Scratching the surface: The cultivator can be used to break the surface of the soil to allow for planting.
 - Prepare for field sowing: Large planting beds such as lawns can be prepared for planting.
3. Garden clean-up in fall:
 - Rake: The cultivator can be used to remove vines and other plant residue after the growing season.
 - Level old growth: After plant residue has been removed, the area can be leveled to prepare the area for the next season.

Adjusting Frame Width

NOTE: Tine spacing is changed when the frame width is adjusted.

1. Park the machine safely. (See Parking Safely in Safety section.)
2. Lower the cultivator until the bottom of the spring tines are approximately 25 mm (1 in.) off the ground.



MX13266

3. Loosen the capscrews and nuts (A) at the front A-frame and at the front of the frame struts (B).

NOTE: To obtain the desired width, it may be necessary to remove the capscrew, nut and washers, and move the rear of the frame struts to another mounting hole.

4. Loosen the capscrews and nuts (C) at the rear of the frame struts.
5. Move the right (D) and left (E) frame angles in or out until the desired width is obtained.
6. Tighten the capscrews and nuts (C) at the rear of the frame struts.
7. Move the spring tines (F) until they are parallel with the direction of travel.
8. Tighten the capscrews and nuts (A) at the front A-frame and at the front of the frame struts (B).
9. Loosen the capscrews and nuts for each remaining pair of spring tines (G - I), adjust until parallel with the direction of travel, and tighten the capscrews and nuts.

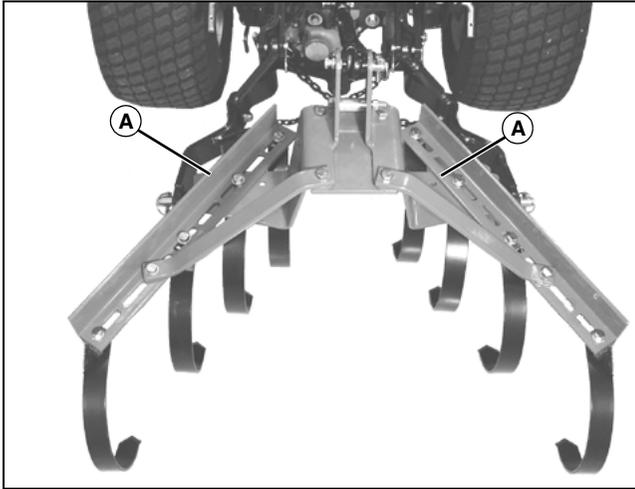
Changing Spring Tine Spacing

The spring tine spacing can be changed by moving the spring tines to any one of the slotted mounting holes in the frame. Spacing can also be changed by adjusting the frame width.

1. Park the machine safely. (See Parking Safely in Safety section.)
2. Lower the cultivator until the bottom of the spring tines are approximately 25 mm (1 in.) off the ground.

OPERATING

NOTE: Two extra sets of spring tine mounting hardware are included with the cultivator. This hardware is needed when the spring tines at position (A) are moved to another set of open mounting holes in the frame.



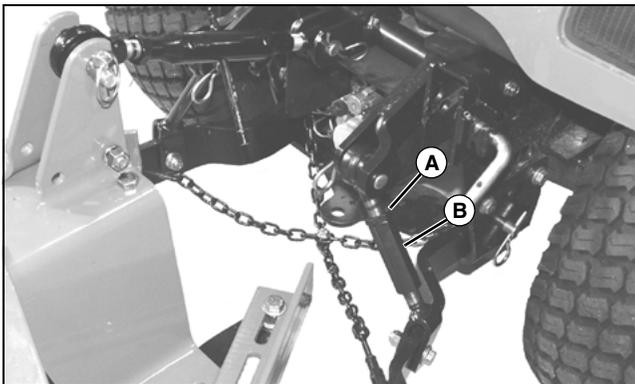
MX13266

3. Remove and/or locate the spring tine(s) to any open mounting hole to obtain the desired spacing.

Leveling the Cultivator

Leveling Side-to-Side

1. Park the machine safely. (See Parking Safely in Safety section.)
2. Lower the cultivator to the ground.

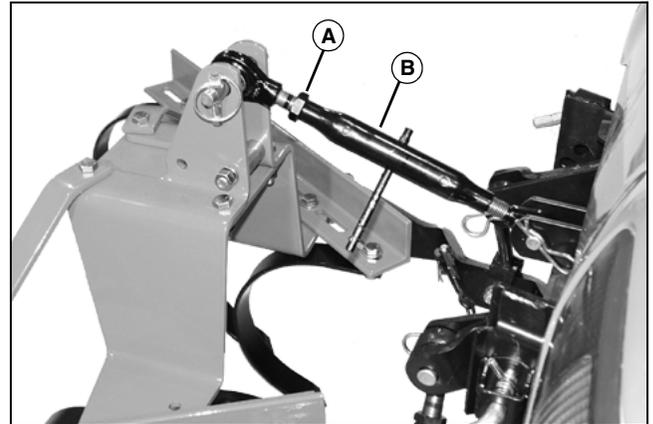


MX13268

3. Loosen the adjuster jam nut (A) on the right rockshaft arm.
4. Level the cultivator side-to-side:
 - Turn the adjuster (B) clockwise to lower the right side of the cultivator.
 - Turn the adjuster (B) counterclockwise to raise the right side of the cultivator.
5. Tighten the adjuster jam nut (A).

Leveling Front-to-Back

NOTE: The normal operating position will be level (all tines making even contact with the ground).



MX13267

1. Loosen the center link jam nut (A).
2. Level the cultivator front-to-back:
 - Turn the center link adjuster (B) clockwise (as viewed from the rear) to lower the rear of the cultivator.
 - Turn the center link adjuster (B) counterclockwise (as viewed from the rear) to raise the rear of the cultivator.
3. Tighten the center link jam nut (A).

Operating Tips

- Never use the cultivator when the soil is wet. Pick up a handful of soil and roll it into a ball. If the soil does not crumble, it is too wet.

If the soil is too dry, it may be difficult for the cultivator to penetrate properly.

- Avoid low areas, old roadways, paths and other areas where the soil is overly packed.
- Adjust the frame to the desired width before use.
- Straddle Row Cultivating: Before use, check the spacing required to clear the plants being cultivated. Adjust the spring tine spacing to the required width.
- Level the cultivator before use.
- The recommended cultivating depth is 50 mm (2 in.). A deeper setting will remove excessive moisture from the soil.
- Push and hold the 3-point hitch control lever in the lower position until the cultivator is digging into the soil at the desired depth.
- When cultivating an area, keep the machine speed low 3-5 km/h (2-3 mph).
- Always lift the cultivator before turning.

REPLACEMENT PARTS

Service Literature

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

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

Replacement Parts

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

Part numbers may change, use part numbers listed below when you order. If a number changes, your John Deere dealer will have the latest number.

Part Numbers

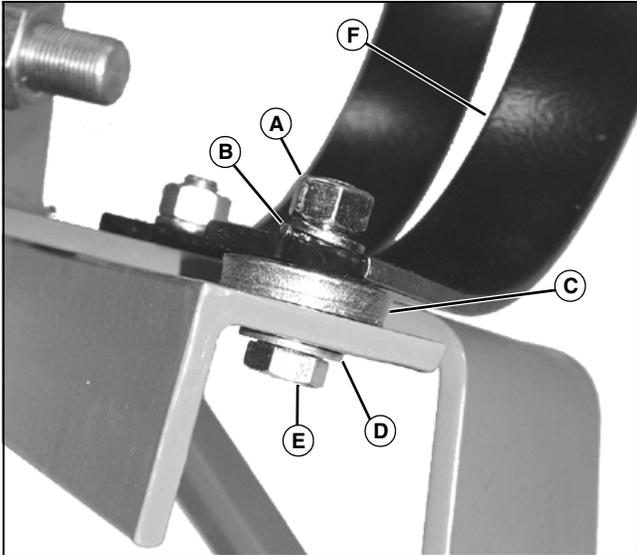
Item	Part Number
Spring Tine	M147680

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

SERVICE

Replacing Spring Tines

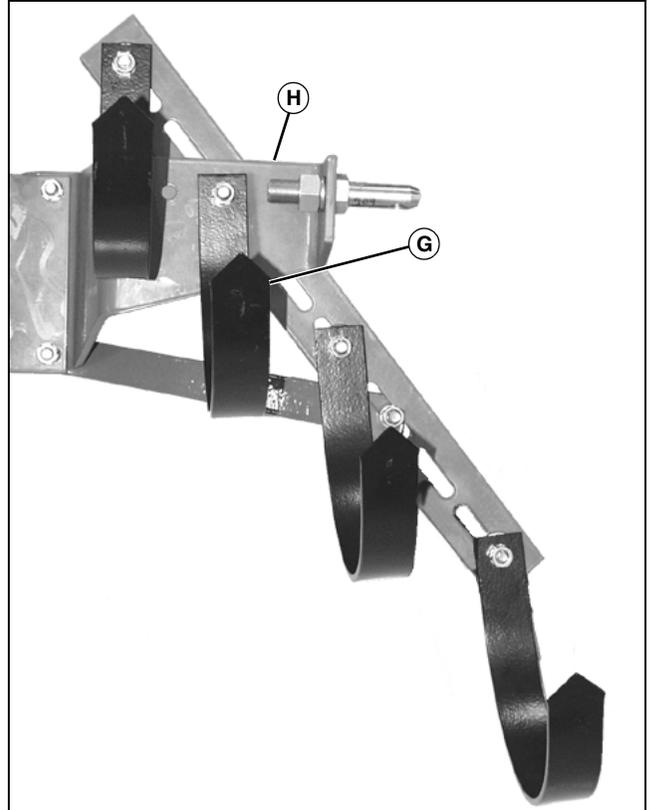
1. Park the machine safely. (See Parking Safely in Safety section.)
2. Remove the cultivator from the machine.
3. Turn the cultivator upside-down.



MX13258

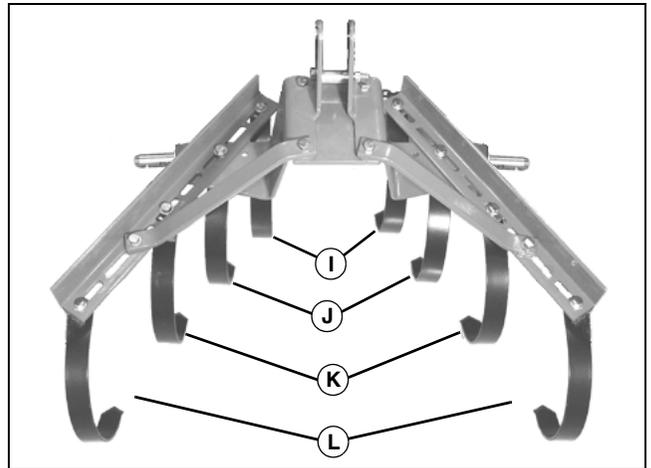
4. Remove the nut (A), lockwasher (B), 1/2 x 1-3/4 x 3/8 in. washer (C), flat washer (D) and capscrew (E).
5. Remove the damaged spring tine (F).

NOTE: The 1/2 x 1-3/4 x 3/8 in. washer is not used when a spring tine (G) is installed on the A-frame (H).



MX13257

6. Install the new spring tine (F) using a capscrew (E), flat washer (D), 1/2 x 1-3/4 x 3/8 in. washer (C), lockwasher (B) and nut (A). Do not tighten hardware at this time.
7. Turn the cultivator over.



MX13290

8. Adjust the spring tines (I - L) until they are parallel with the direction of travel. Tighten all spring tine mounting hardware.

STORAGE

Storing Cultivator Safely



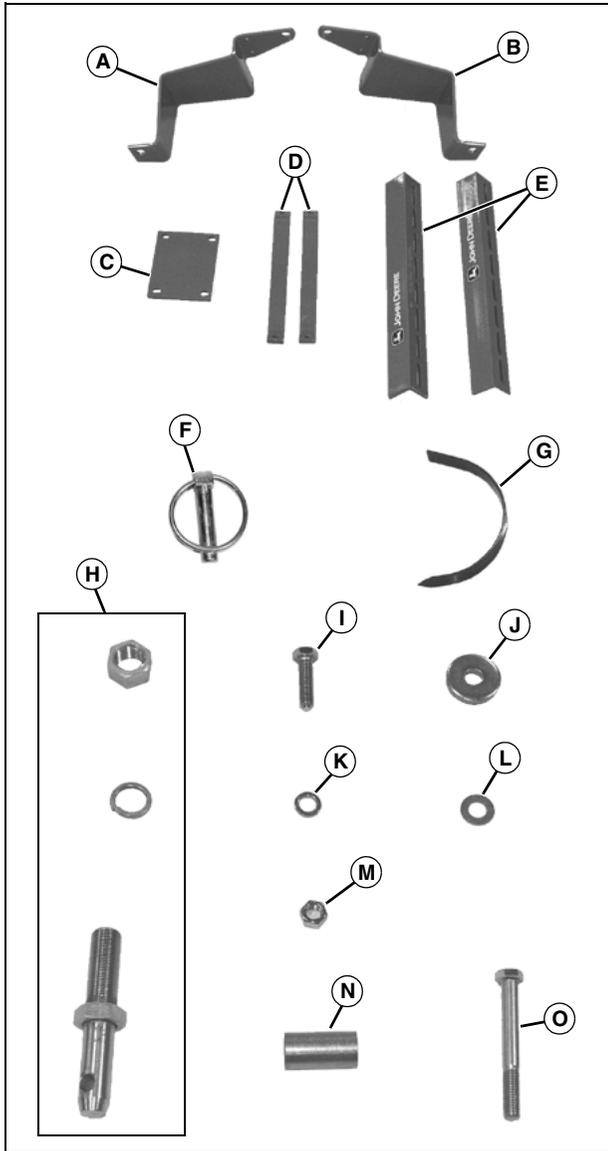
CAUTION: Avoid injury! Fuel vapors are explosive and flammable. Engine exhaust fumes contain carbon monoxide and can cause serious illness or death:

- **Run the engine only long enough to move the machine to or from storage.**
- **Do not store vehicle with fuel in the tank inside a building where fumes may reach an open flame or spark.**
- **Allow the engine to cool before storing the machine in any enclosure.**

1. Remove cultivator from the machine.
2. Thoroughly clean the cultivator with soapy water and brush, or use high-pressure washer.
3. Check the cultivator for worn or damaged parts. Replace parts as needed.
4. Tighten loose hardware.
5. Apply paint to exposed areas to prevent rust.
6. Apply a thin film of oil the link pins.
7. Apply a thin film of oil to any bare metal on the spring tines.
8. Store cultivator indoors on a hard, level surface in a clean, dry place.
9. If cultivator is stored outdoors, put a sheet of plywood or wood blocks under the cultivator.
10. Put a waterproof cover over the cultivator, if you store the cultivator outdoors.

ASSEMBLY

Identify Parts

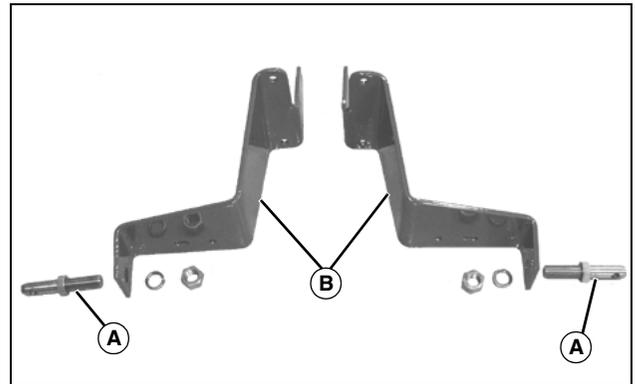


MX13245a

Qty.	Description
1	A-Frame, Right (A)
1	A-Frame, Left (B)
1	Plate, Spacing (C)
2	Frame Strut (D)
2	Frame Angle (E)
2	Pin, Quick-Lock (F)
8	Spring Tine (G)
2	Link Pin with Hardware (H)
16	Cap screw, 1/2 x 1-3/4 in. (I)

Qty.	Description
8	Washer, 1/2 x 1-3/4 x 3/8 in. (J)
17	Lockwasher, 1/2 in. (K)
16	Washer, Flat, 1/2 in. (L)
17	Nut, 1/2 in. (M)
1	Spacer Tube, 1 x 2 in. (N)
1	Capscrew, 1/2 x 3-1/2 in. (O)

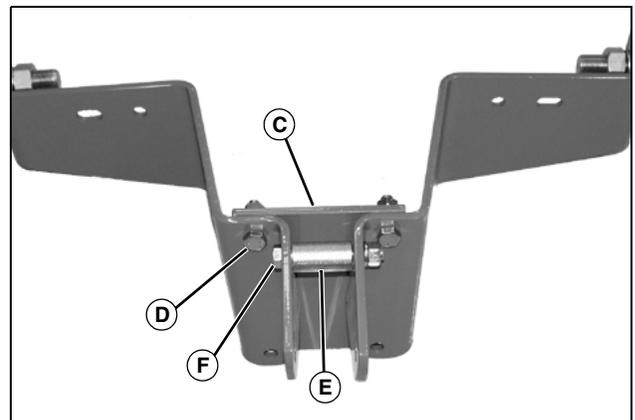
Assemble Frame



MX13270

1. Assemble lower link pins (A) to A-frame halves (B) using supplied hardware.

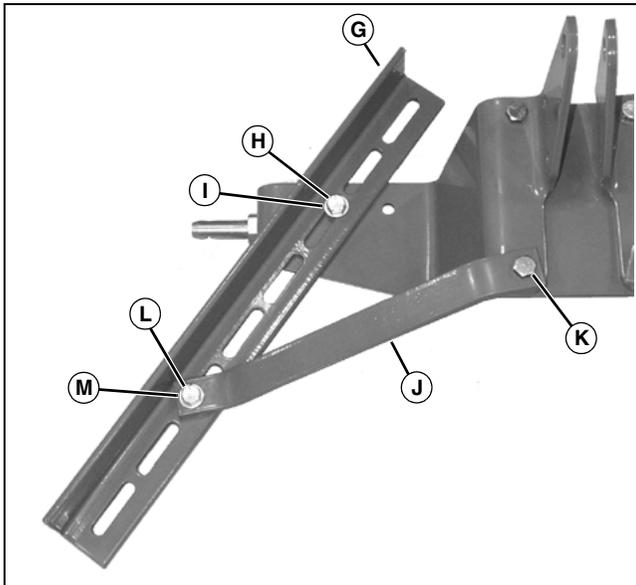
NOTE: To allow for alignment and installation of components, do not tighten hardware completely until instructed to do so.



MX13271

2. Attach A-frame halves together as shown with spacing plate (C). Secure with two 1/2 x 1-3/4 in. cap screws (D), 1/2 in. flat washers and 1/2 in. nuts in front holes only.
3. Insert mast spacer (E) inside opening of frame halves, and attach using 1/2 x 3-1/2 in. cap screw (F), 1/2 in. lockwasher, and 1/2 in. nut.

ASSEMBLY



Picture Note: Left side shown.

4. Install the frame angle (G) on the A-frame, placing the third slotted hole in the frame angle over the elongated hole in the A-frame. Secure using one 1/2 x 1-3/4 in. capscrew (H), 1/2 in. flat washer (I), 1/2 in. lockwasher and 1/2 in. nut.

NOTE: Install the frame strut with the warning label on the right side of the cultivator.

5. Install the frame strut (J) on the A-frame at the rear mounting hole using a 1/2 x 1-3/4 in. capscrew (K), 1/2 in. lockwasher and 1/2 in. nut.

NOTE: The frame is shown assembled at a cultivating width of approximately 89 cm (35 in.). The width can be changed by installing the rear of the frame struts in a different set of holes.

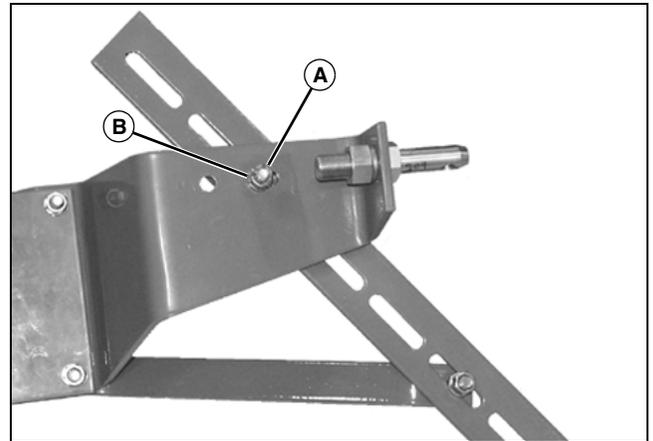
6. Align the hole in the frame strut with the third slotted hole in the frame angle. Secure using a 1/2 x 1-3/4 in. capscrew (L), 1/2 in. flat washer (M), 1/2 in. lockwasher and 1/2 in. nut.

7. Repeat steps 4-6 to install the frame angle and frame strut on the other side.

8. Adjust the frame angles to the desired width, and tighten all hardware.

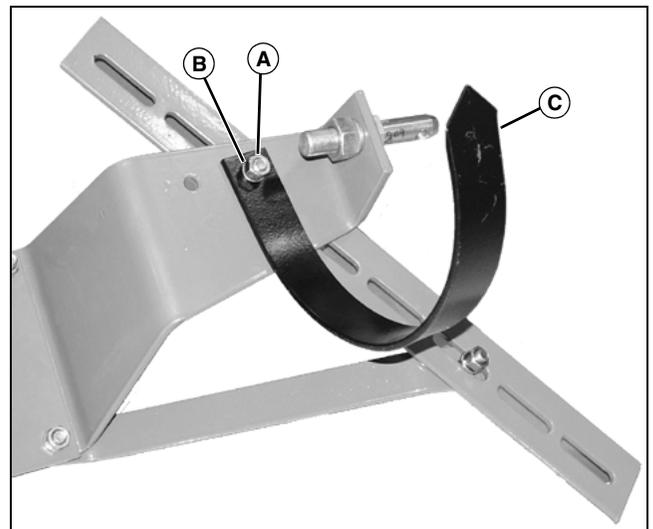
9. Turn the frame assembly upside-down.

Install Spring Tines



1. Remove and retain the nut (A) and lockwasher (B) attaching the frame angle to the A-frame.

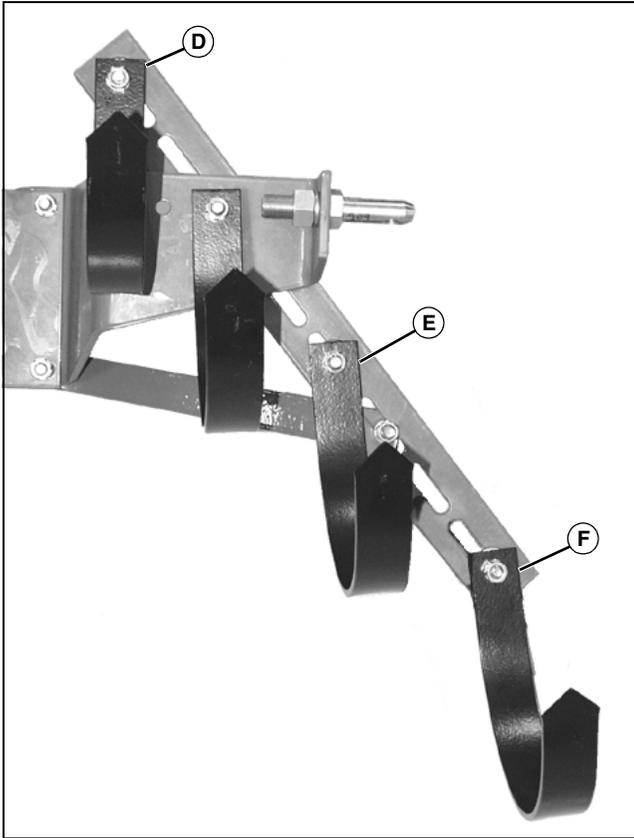
NOTE: Two extra sets of spring tine mounting hardware are included with the cultivator. This hardware is needed when the spring tines are moved from the position shown to another set of open mounting holes in the frame. Save the extra hardware for future use.



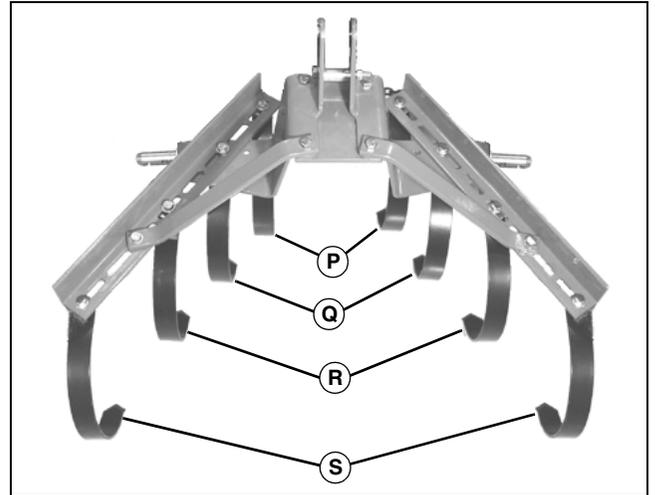
2. Install a spring tine (C) on the capscrew, and secure using the retained lockwasher (B) and nut (A) removed in step 1.

3. Repeat steps 1 and 2 to install the spring tine on the other side.

ASSEMBLY



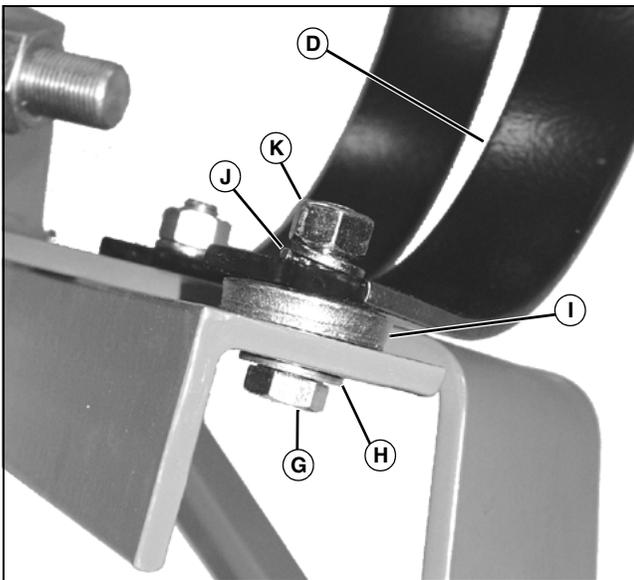
MX13257



MX13290

6. Tighten all hardware except for the spring tine mounting hardware.

7. Adjust the spring tines (P - S) until they are parallel with the direction of travel. Tighten all spring tine mounting hardware.



MX13258

4. Install all remaining spring tines (D, E and F) equally in the positions shown, using a 1/2 x 1-3/4 in. cap screw (G), 1/2 in. flat washer (H), 1/2 x 1-3/4 x 3/8 in. washer (I), 1/2 in. lockwasher (J) and 1/2 in. nut (K).

5. Turn the cultivator over.

SPECIFICATIONS

Cultivator

Overall Dimensions	1.17 m W x 76 cm L x 65 cm H (46 in. W x 30 in. L x 25.5 in. H)
Mounting	Limited Category 1, 3-Point Hitch
Weight	36 kg (80 lb)
Frame Width (Adjustable)	0.72-1.17 m (30-46 in.)
Normal Working Cultivating Depth	50 mm (2 in.)
Mast (Emerging Growth) Clearance	51 cm (20 in.)
Number of Tines	8

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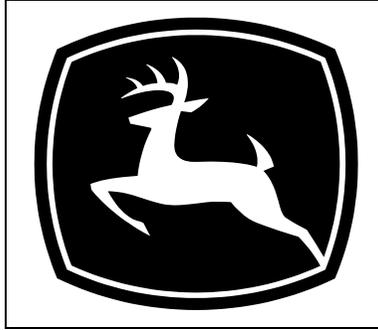
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JOHN DEERE QUALITY STATEMENT

John Deere Quality



MIF

John Deere equipment is more than just a purchase it's an investment in quality. That quality goes beyond our equipment to your John Deere Dealer's parts and service support. This support is needed to keep you as a satisfied customer.

That's why John Deere has initiated a process to handle your questions or problems, should they arise. The following three steps will help guide you through the process.

Step 1

Refer to your operator's manual

- A. It has many illustrations and detailed information on the safe and proper operation of your equipment.
- B. It gives troubleshooting procedures and specification information.
- C. It gives ordering information for parts catalogs, service and technical manuals.
- D. If your questions are not answered in the operator's manual, then go to Step 2.

Step 2

Contact your dealer

- A. Your John Deere Dealer has the responsibility, authority and ability to answer questions, resolve problems and fulfill your parts and service needs.
- B. First, discuss your questions or problems with your dealer's trained parts and service staff.
- C. If the parts and service people are unable to resolve your problem, see the dealership manager or owner.
- D. If your questions or problems are not resolved by the dealer, then go to Step 3.

Step 3

Call the John Deere Customer Communications Center

- A. Your John Deere Dealer is the most efficient source in addressing any concern, but if you are not able to resolve your problem after checking your operator's manual and contacting your dealer, call the Customer Communications Center.
- B. For prompt, effective service, please have the following ready before you call:
 - The name of the dealer with whom you've been working.
 - Your equipment model number.
 - Number of hours on machine (if applicable).
 - Your 13-digit serial number, which you recorded on the inside front cover of this manual.
 - If the problem is with an attachment, your attachment identification number.
- C. Then call 1-800-537-8233 and our advisor will work with your dealer to investigate your concern.