

1038 2001

48 and 54-Inch Mid-Mount Rotary Mowers for 425, 445, and 455 Tractors

(Serial No. 010001—)



OPERATOR'S MANUAL



John Deere Horicon Works
OMM117686 Issue H2

LITHO IN U.S.A.
ENGLISH

Introduction

THANK YOU for purchasing a John Deere product.

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalent. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction the machine or implement will travel when going forward.

WRITE PRODUCT IDENTIFICATIONS NUMBERS (P.I.N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied.



UN-04MAY92

M47474

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All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

OMM117686 H2-19-05JUN92

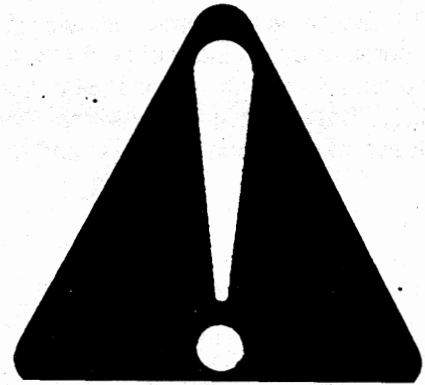
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A John Deere ILLUSTRATION™ Manual

Safety

RECOGNIZE SAFETY INFORMATION

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



DX,ALERT -19-04JUN90

T81389 -UN-07DEC88

UNDERSTAND SIGNAL WORDS

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

⚠ DANGER

⚠ WARNING

⚠ CAUTION

DX,SIGNAL -19-09JAN92

TS187 -19-30SEP88

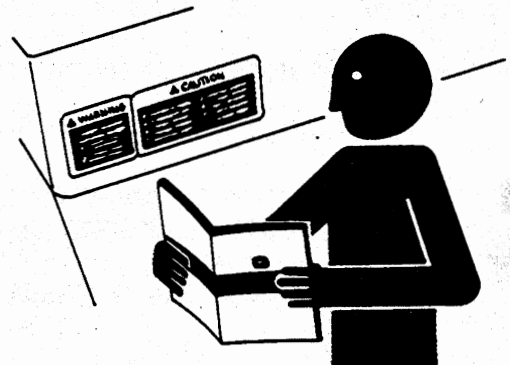
FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.



DX,READ -19-04JUN90

TS201 -UN-23AUG88



This OPEI Label on your mower indicates that this model has been certified by an independent laboratory for compliance with American National Standard B-71.1-1990, "Safety Specifications" for Power Lawn Mowers, Lawn and Garden Tractors, and Lawn Tractors.

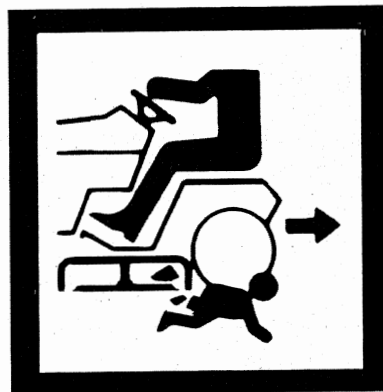


M47634 -19-13MAY92

MX,CERT1 -19-15JUN92



OPERATE MOWER SAFELY



M71458 -JUN-13MAY92

PROTECT CHILDREN:

- Tragic accidents can occur if you are not alert to the presence of children. Children are often attracted to machines and mowing activity. Never assume that children will remain where you last saw them.
- Keep children in the house under watchful care of a responsible adult when you are operating the mower.
- Turn machine off if children enter the mowing area. Take children out of the area before you operate.
- Use extra care—**BE ALERT FOR CHILDREN**—when you come to blind corners, shrubs, trees, or other objects that may block your vision.
- **DO NOT** let children or untrained person operate tractor.
- **NEVER** carry children. **DO NOT** let children ride on tractor, or any attachment. Don't tow children in cart or trailer.

ROTATING BLADES CAN CUT OFF ARMS OR LEGS.

DO NOT MOW IN REVERSE UNLESS IT IS ABSOLUTELY NECESSARY.

TO HELP PREVENT SERIOUS OR FATAL ACCIDENTS:

BACK VERY CAREFULLY:

- **FIRST: DISENGAGE** the mower.
- **THEN LOOK CAREFULLY** over the entire area behind the tractor.
- **LOOK DOWN AND BEHIND** before and while backing.
- **LOOK ESPECIALLY FOR CHILDREN.**

DRIVE FORWARD VERY CAREFULLY:

- People, **ESPECIALLY CHILDREN**, can move quickly into the mowing area before you know it.
- **BE ALERT AT ALL TIMES WHEN YOU DRIVE FORWARD.**

MX,SAJA,C -19-15JUN92



STAY CLEAR OF ROTATING DRIVELINES

Entanglement in rotating driveline can cause serious injury or death.

Wear close fitting clothing.

Stop the engine and be sure PTO driveline is STOPPED before making adjustments, connections, or cleaning out PTO driven equipment.



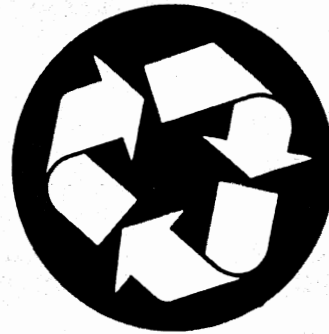
MX,PTO -19-15JUN92

TS198 -UN-23AUG88

WASTE PRODUCT SAFETY

Waste products, such as, used oil, fuel, coolant, brake fluid, and batteries, can harm the environment and people. See your local Recycling Center or John Deere dealer to learn how to recycle or get rid of waste products.

Don't use beverage containers for waste fluids—someone may drink from them.



MX,SAIR,I -19-15JUN92

M73469 -UN-24JAN91

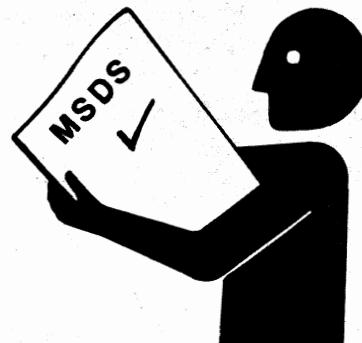
HANDLE CHEMICAL PRODUCTS SAFELY

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



DX,MSDS,NA -19-15MAR91

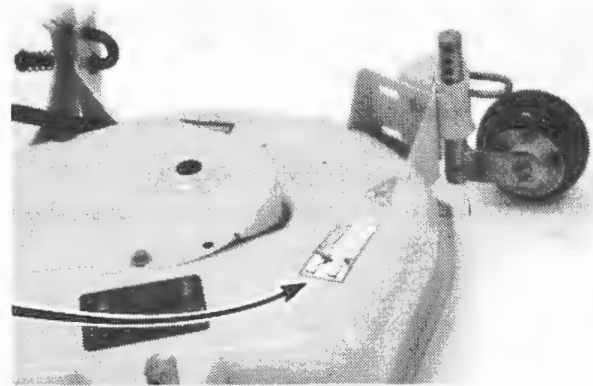
TS1132 -UN-26NOV80



READ SAFETY SIGNS



M38614 -19-19SEP90

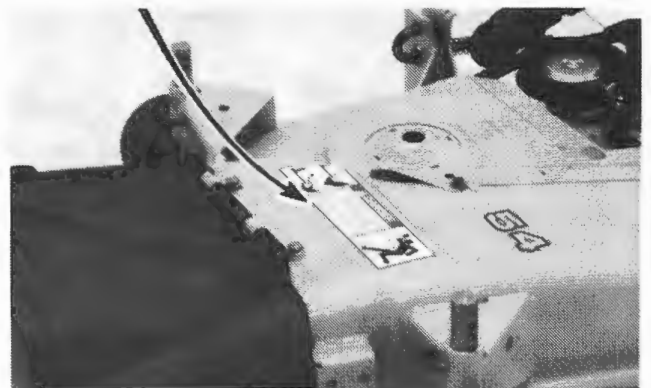


M47475 -UN-04MAY92

MX,SAJA,A -19-15JUN92



M47637 -19-19MAY92



M47476 -UN-04MAY92

MX,SAJA,B -19-15JUN92

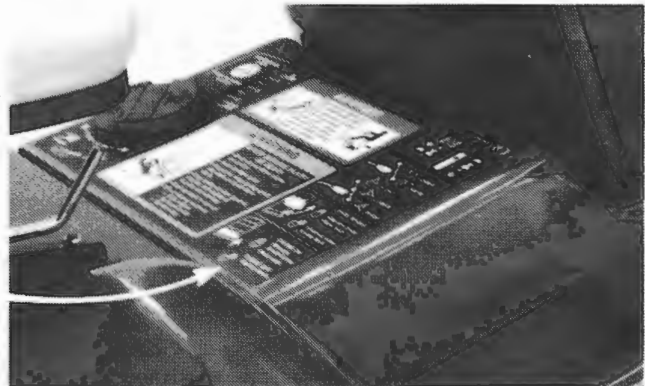
Installing Mower

INSTALLING MOWER

1. Park tractor on a hard, level surface. Such as a cement floor.
2. Put ALL gauge wheels in the SIDEWAYS position.
3. Lower tractor lift arms by moving lever (A) FORWARD. (You can also refer to the decal located on tractor platform.)



M47478 -UN-04MAY92



M47479 -UN-04MAY92

MX,INJA,A -19-15JUN92

4. Turn front wheels to the left.



CAUTION: Before installing mower on tractor:

- STOP engine.
- Put park brake in the LOCKED position.

5. STOP the engine.

6. Put the park brake (A) in the LOCKED position.

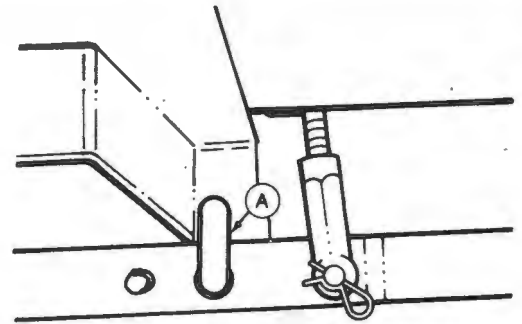


M47477 -UN-04MAY92

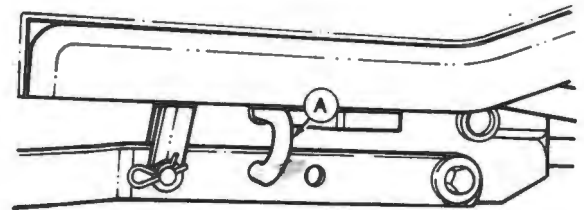
MX,INJA,B -19-15JUN92

Installing Mower

7. Lift right side rear tractor draft arm and LOCK into the UP position with J-pin (A).
8. Lift left side rear tractor draft arm and LOCK into the UP position with J-pin (A).
9. Roll mower deck under tractor from the right side.



Two Wheel Steer



All Wheel Steer

MX,INJA,C -19-15JUN92

M47513 -UN-13MAY92

M47513 -UN-13MAY92

M47480 -UN-04MAY92

NOTE: You should hear a *CLICK* sound when driveline is properly installed.

- For ease in installing driveline, install from left-hand side of tractor.

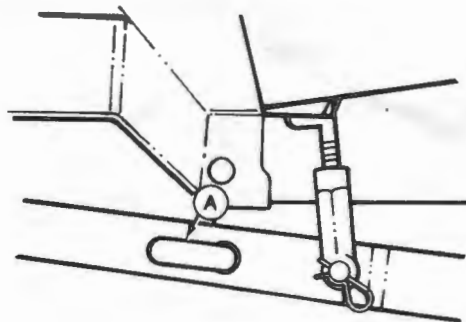
10. Install driveline (A) on tractor by pulling coupler (B) back and pushing driveline onto tractor shaft until it LOCKS in place.



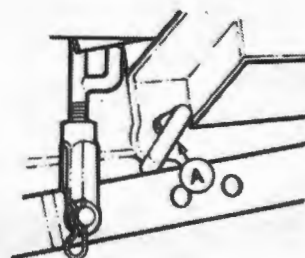
MX,INJA,D -19-15JUN92

11. Pull right side rear tractor draft arm J-pin to UNLOCK draft arm from tractor and put J-pin (A) in the STOP position.

12. Pull left side rear tractor draft arm J-pin to UNLOCK draft arm from tractor and put J-pin (A) in the STOP position.



Two Wheel Steer



All Wheel Steer

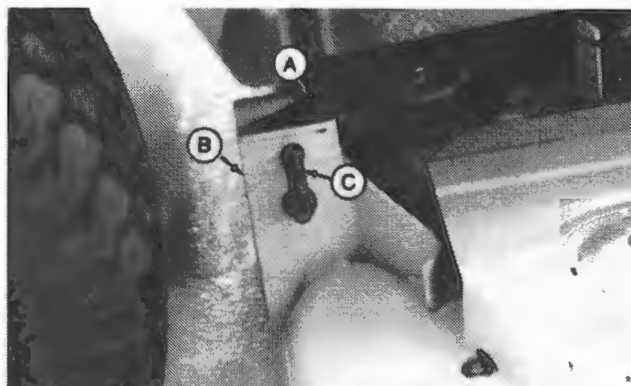
MX,INJA,E -19-15JUN92

M47510 -UN-13MAY92

M47512 -UN-13MAY92

13. Put each tractor rear draft arm (A) between brackets (B) on mower deck.

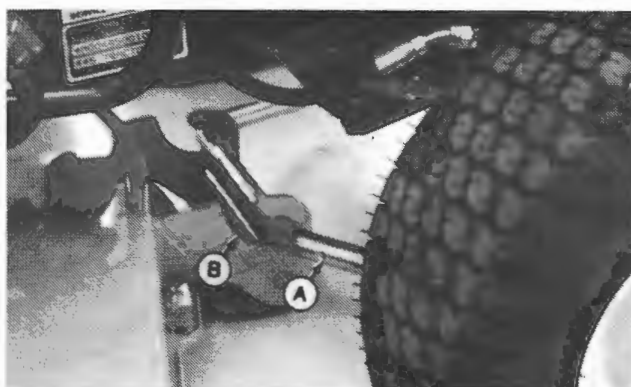
14. LOCK tractor rear draft arm in place with spring loaded J-pin (C).



MX,INJA,F -19-15JUN92

M47481 -UN-04MAY92

15. Put front draft rod (A) of mower draft assembly in slotted bracket (B) on mower deck.

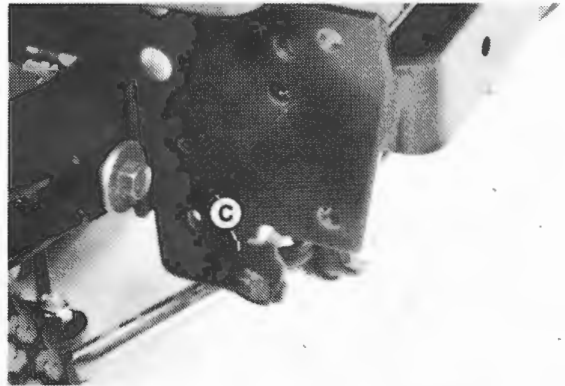
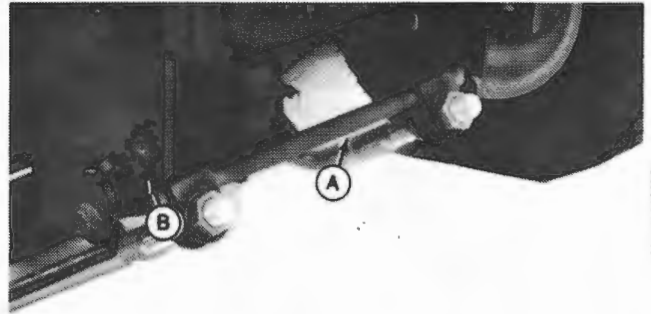


MX,INJA,G -19-15JUN92

M47482 -UN-04MAY92

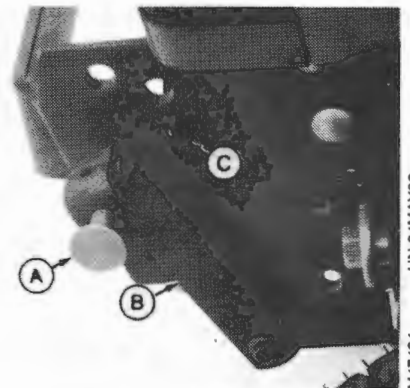
16. Install front draft pivot end (A) of mower draft assembly in slot (B) on each side of tractor frame.

17. Make sure tab (C) is in position shown.



MX,INJA,H -19-15JUN92

18. Pull spring loaded pin (A) OUTWARD of handle (B) and put in hole (C) on tractor frame.



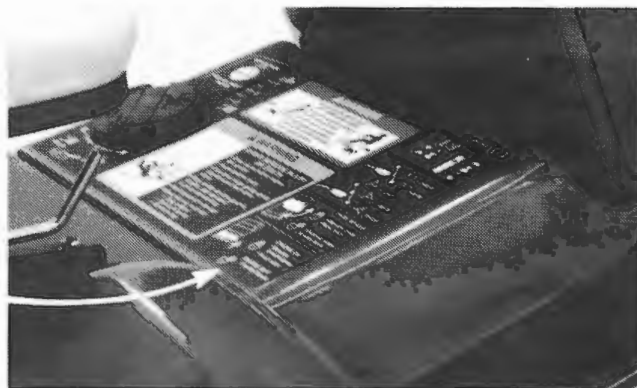
MX,INJA,I -19-15JUN92

19. Start engine.

20. Raise mower by pulling lever (A) REARWARD. (You can also refer to the decal on tractor platform.)



M47478 -UN-04MAY92



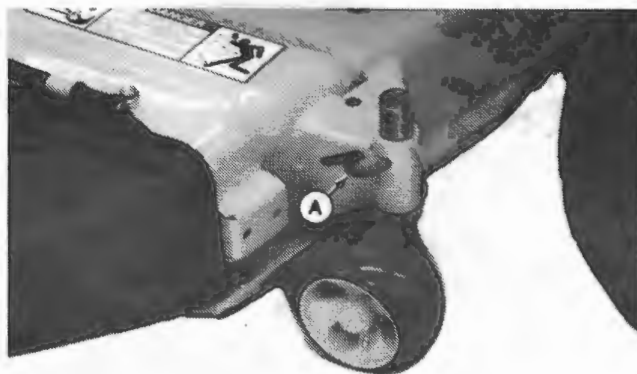
M47478 -UN-04MAY92

MX,INJA,J -19-15JUN92

21. Put all four gauge wheels in the MOWING position:
Pull spring loaded J-pin (A).

- Turn each wheel 90 degrees.
- Choose desired cutting height and insert spring loaded J-pin back into proper hole.

22. To adjust cutting height: See ADJUSTING CUTTING HEIGHT in the Operating Mower section.



M47485 -UN-04MAY92

MX,INJA,K -19-15JUN92

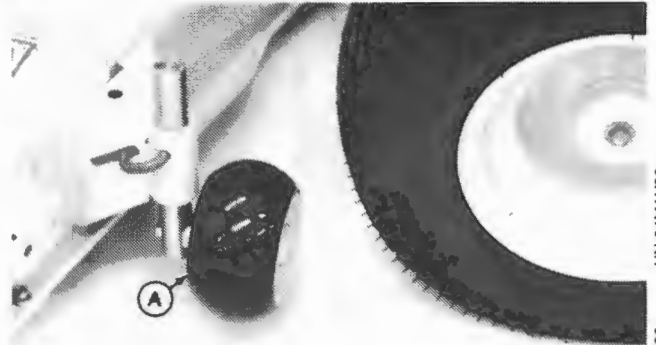
Removing Mower

REMOVING MOWER

⚠ CAUTION: Before removing mower deck from tractor:

- STOP the engine.
- Put park brake in the LOCKED position.
- Wait for ALL moving parts to STOP.

1. Park tractor on a hard, level surface. Such as a cement floor.
2. Turn front wheels to the left.
3. Put each gauge wheel (A) in the SIDEWAYS position shown.



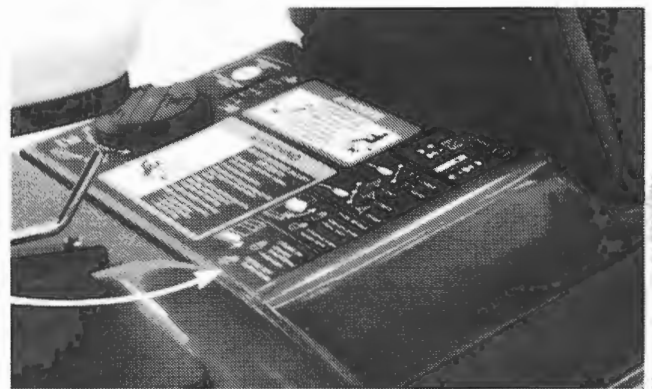
M47486 -UN-04MAY82

MX,REJA,A -19-15JUN92

4. Lower mower to the ground by pushing lever (A) FORWARD. (You can also refer to the decal on tractor platform.)



M47478 -UN-04MAY82



M47479 -UN-04MAY82

MX,REJA,C -19-15JUN92

Removing Mower

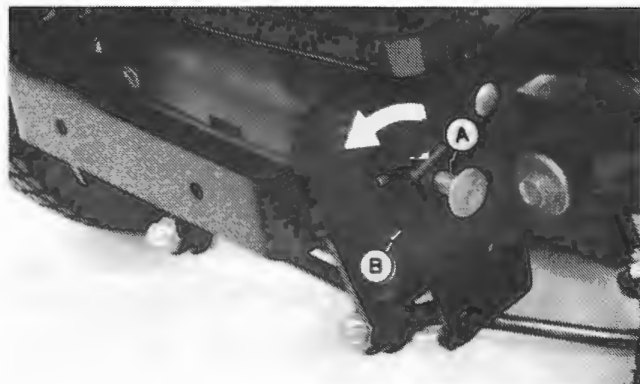
5. STOP the engine.
6. Put the park brake (A) in the LOCKED position.
7. Wait for ALL moving parts to STOP.



MX,REJA,B -19-15JUN92

M47477 -UN-04MAY92

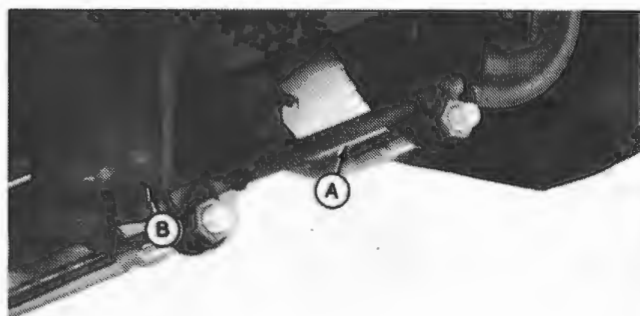
8. Pull spring loaded pin (A) OUTWARD and pull handle (B) FORWARD.



MX,REJA,D -19-15JUN92

M47487 -UN-04MAY92

9. Slide front draft pivot rod (A) out of slots (B).



MX,REJA,E -19-15JUN92

M47483 -UN-04MAY92

10. Remove front draft rod (A) of mower draft assembly from slotted bracket (B) on mower deck.
11. Remove front draft assembly from underneath tractor.

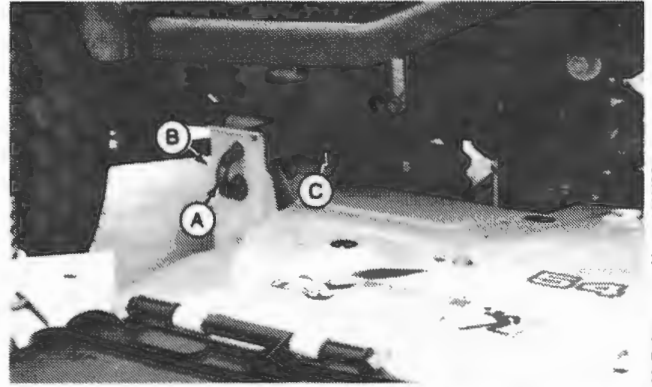


MX,REJA,F -19-15JUN92

M47482 -UN-04MAY92

Removing Mower

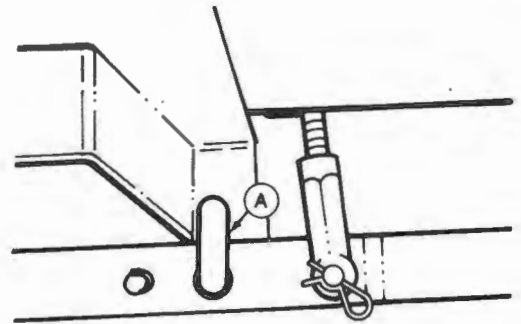
12. Pull each spring loaded J-pin (A) OUT of each mower bracket (B) and each tractor lift arm (C).



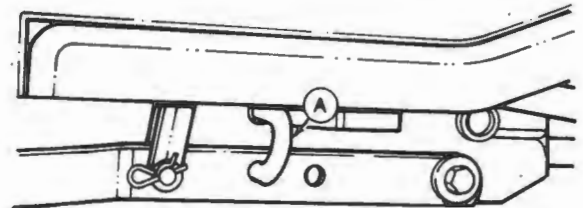
MX,REJA,G -19-15JUN92

M47489 -UN-04MAY92

13. Lift right side rear tractor draft arm and LOCK into the UP position with J-pin (A).
14. Lift left side rear tractor draft arm and LOCK into the UP position with J-pin (A).



Two Wheel Steer



All Wheel Steer

MX,REJA,H -19-15JUN92

M47511 -UN-13MAY92

M47513 -UN-13MAY92

IMPORTANT: To prevent damage to driveline:

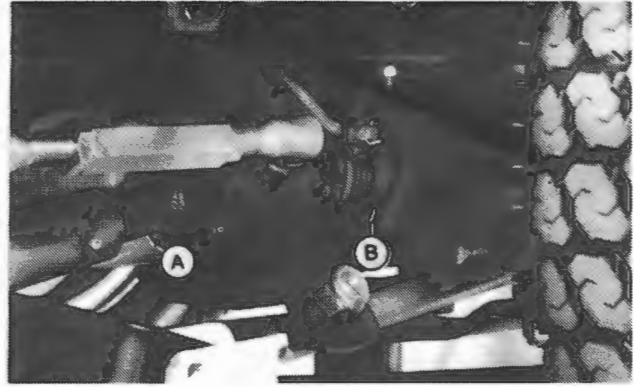
- Rest driveline on mower deck when sliding mower deck from under tractor.

15. Remove driveline (A) from tractor by pulling coupler (B) back.

16. Roll mower deck out right side of tractor.

IMPORTANT: To prevent damage to tractor lift arms:

- Keep lift arms in the **LOCKED** position when you are not using an attachment.



MX,REJA,I -19-15JUN82

Transporting Mower

TRANSPORTING THE MOWER

DO NOT tow tractor and mower. (See your tractor operator's manual for information on pushing the tractor a short distance.)

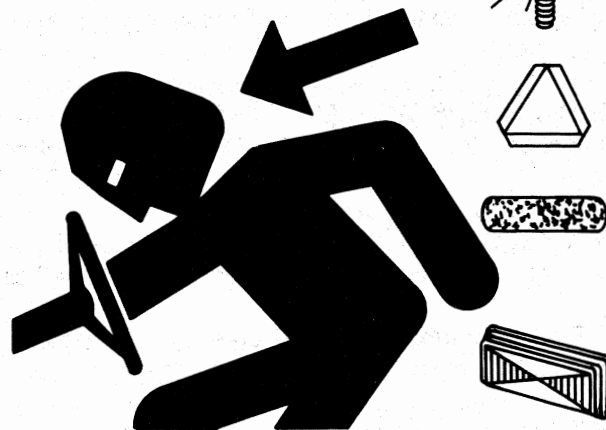
Use a heavy-duty trailer to transport your tractor and mower.

Lower mower to trailer deck.

ENGAGE park brake.

MAKE SURE trailer has all the necessary lights and signs required by local, state, provincial, or federal laws.

Fasten the tractor and mower to the trailer with straps, chains and cables.



MX,TRJA,A -19-15JUN92

TS951 -UN-12APR90

Operating Mower

OPERATE MOWER SAFELY (GENERAL OPERATION)

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

- READ, UNDERSTAND, AND FOLLOW all instructions in this manual and on the machine before starting.
- ONLY ALLOW RESPONSIBLE ADULTS, who are familiar with the instructions, to operate this machine.
- BE SURE the area is clear of other people before mowing. STOP machine if anyone enters the area.
- NEVER carry passengers.
- DO NOT mow in reverse unless absolutely necessary. ALWAYS LOOK DOWN AND BEHIND before and while backing.

- BE AWARE of the mower discharge direction and DO NOT point it at anyone. DO NOT operate the mower without either the entire grass catcher or the guard in place.

- SLOW DOWN before turning.
- NEVER LEAVE a running machine unattended. ALWAYS turn OFF blades, set parking brake, STOP engine, and remove keys before dismounting.
- TURN OFF blades when not mowing.
- STOP engine before removing grass catcher or unclogging chute.
- MOW ONLY in daylight or good artificial light.
- DO NOT operate this machine while under the influence of alcohol or drugs.
- WATCH for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading this machine onto a trailer or a truck.

MX,OPJA,A -19-15JUN92

OPERATE MOWER SAFELY (ON SLOPES)

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. ALL slopes require extra caution. If you CANNOT back up the slope or if you feel UNEASY on it, DO NOT mow it.

- Mow UP and DOWN slopes—not ACROSS.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn this machine. Tall grass can hide obstacles.
- Use a slow speed.
- Follow the recommendations for wheel weights or counterweights to improve stability.
- Use extra care with grass catchers or other attachments. These can CHANGE the stability of this machine.

- Keep ALL movement on the slopes SLOW and GRADUAL. DO NOT make sudden changes in speed or direction.
- Avoid STARTING or STOPPING on a slope. If tires lose traction, DISENGAGE the blades and proceed slowly straight down the slope.
- DO NOT turn on slopes unless necessary, and then, turn SLOWLY and GRADUALLY downhill, if possible.
- DO NOT mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- DO NOT mow on wet grass. Reduced traction could cause sliding.
- DO NOT try to stabilize this machine by putting your FOOT on the GROUND.
- DO NOT use grass catcher on steep slopes.

MX,OPJA,B -19-15JUN92

OPERATE MOWER SAFELY (WHEN CHILDREN ARE PRESENT)

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. NEVER ASSUME that children will remain where you last saw them.

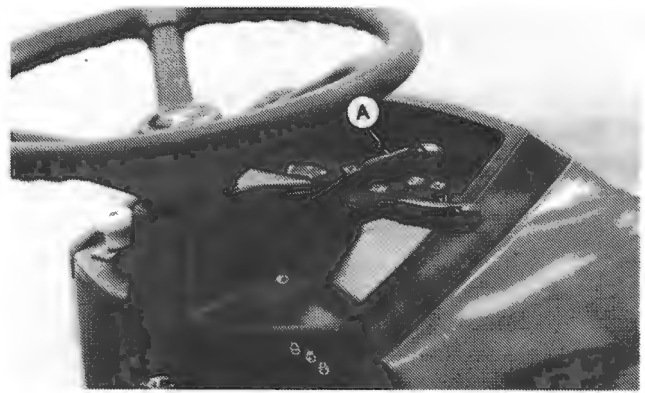
- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be ALERT and turn the machine OFF if children enter the area.
- BEFORE AND WHEN BACKING, look BEHIND and DOWN for small children.
- NEVER carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- NEVER allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

MX,OPJA,C -19-15JUN92

LOWERING AND RAISING MOWER

To RAISE mower: Pull lever (A) REARWARD.

To LOWER mower: Push lever (A) FORWARD.



MX,OPJA,D -19-15JUN92

M47478 -UN-04MAY92

ENGAGING MOWER

IMPORTANT: To help prevent damage to PTO clutch:

- ENGAGE mower at 1/2 to FULL throttle.
- Operate engine at MAXIMUM speed:
 - When mowing.
 - Whenever PTO clutch is ENGAGED.

1. Start the engine.
2. Move throttle lever (A) to 1/2 to FULL engine speed position.
3. Lower mower to the ground.
4. ENGAGE the PTO by pulling knob (B) up.



MX,OPJA,E -19-15JUN92

M47455 -UN-27APR92

DISENGAGING MOWER

DISENGAGE PTO by pushing button (A) IN at any time while you are mowing.

If you hit an object with mower while mowing, STOP mower by pushing button (A) IN or depressing brake pedal. STOP the engine immediately.

Inspect mower for damage. Fix any damage before operating again.



MX,OPJA,F -19-11MAY92

M47635 -UN-13MAY92

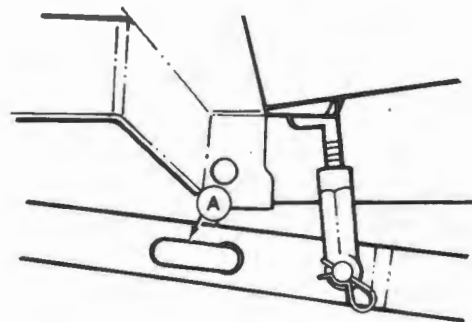
ADJUSTING FOR MAXIMUM CUTTING HEIGHT

1. Park tractor on a hard level surface. Such as a cement floor.
2. Raise mower to maximum cutting height.

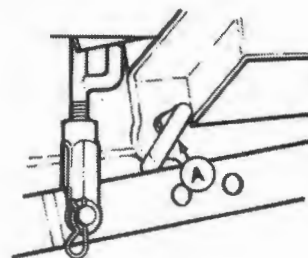
NOTE: Upward travel of tractor rear draft arm is limited by the J-pin STOPS (A).

- Maximum cut height is achieved when one or both J-pin STOPS are forced to contact the tractor frame by movement of the rear draft arm.

3. Check to see if rear tractor draft arm forces STOPS to contact tractor frame:
 - If STOPS DO hit the tractor frame, you need not go any further.
 - If STOPS DO NOT hit the tractor frame, continue to follow the steps listed below.



Two Wheel Steer



All Wheel Steer

MX,OPJA,G -19-15JUN92

4. Start the engine.
5. Lower mower to the ground by pushing lever (A) FORWARD. (You can also refer to the decal on tractor platform.)



MX,OPJA,H -19-15JUN92

6. Remove spring locking pin (A) and drilled pin (B) from each tractor lift arm.

7. Turn each yoke (C) clockwise to RAISE both sides of mower equally.

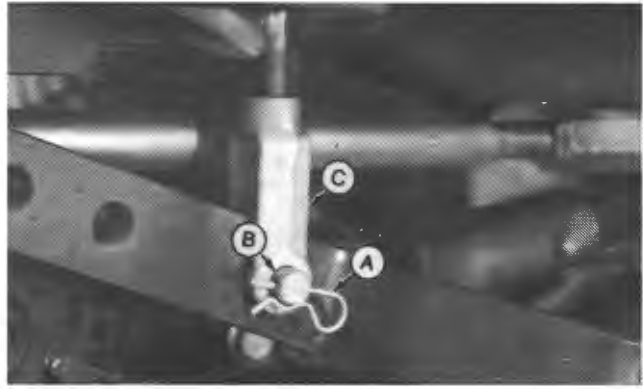
8. Attach yokes to tractor lift arms with drilled pins and spring locking pins (removed in Step 6.)

9. Start engine.

10. Raise mower to maximum cutting height.

11. Check to see if rear tractor draft arm forces STOPS to contact tractor frame:

- If STOPS DO hit the tractor frame, you need not go any further.
- If STOPS DO NOT hit the tractor frame, Repeat Steps 4—8.



M47480 -JUN-04/MAY92

MX,OPJA,I -19-15JUN92

ADJUSTING MOWER LEVEL (SIDE-TO-SIDE)

CAUTION: To avoid injury, before adjusting mower:

- STOP the engine.
- Put park brake in the LOCKED position.
- Wait for ALL moving parts to STOP.

1. Park tractor on a hard, level surface. Such as a cement floor.

2. Inflate tractor tires:

- Front tires 14 psi (100 kPa).
- Rear tires 10 psi (70 kPa).

3. Lower mower to the desired cutting height.

MX,OPJA,J -19-15JUN92

NOTE: Mower wheels **SHOULD NOT** contact the ground while leveling.

CAUTION: Blades are sharp and can cut you. To avoid injury:

- Wear heavy gloves or wrap blade several times with a rag.

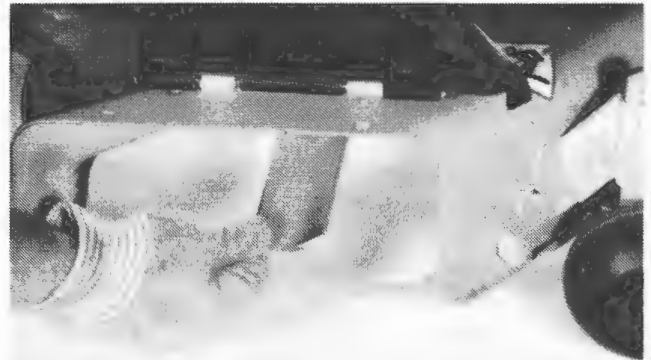
4. Turn left and right blade by hand parallel to tractor axle.

NOTE: A convenient leveling gauge (B) is available from your John Deere dealer.

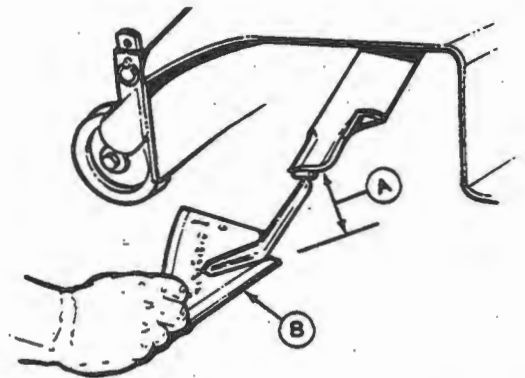
- Gauge wheels **SHOULD NOT** contact ground while leveling.

5. Measure from each outside blade tip (A) to level surface. Difference between left and right-hand blade measurements **MUST NOT** be more than 1/8-in. (3 mm).

6. If difference is 1/8-in (3 mm) or less, no more steps are necessary. If difference is greater than 1/8-in (3 mm) continue by following the next steps.



M40434 -UN-30AUG88



M40161 -UN-30AUG88

MX,OPJA,JK -19-15JUN92

7. Start engine.

8. Lower mower to the ground by pushing lever (A) FORWARD. (You can also refer to the decal on tractor platform.)



M47478 -UN-04MAY92



M47479 -UN-04MAY92

MX,OPJA,KA -19-15JUN92

9. Remove spring locking pin (A) and drilled pin (B) from tractor lift arm.

10. Turn yoke (C) clockwise to RAISE left-hand side of mower.

- Turn yoke (C) counterclockwise to LOWER left-hand side of mower.

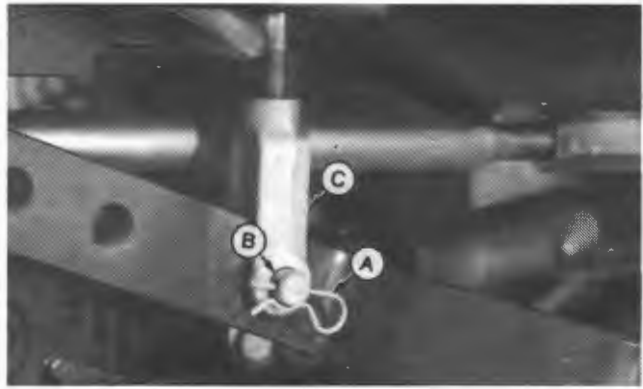
11. Attach yoke to tractor lift arm with drilled pin and spring locking pin.

12. Adjust right side of mower deck, if necessary. (You need only to do Steps 9—11.)

13. Start engine.

14. Lift mower to desired cutting height.

15. Recheck mower side-to-side level, Step 5. Do Steps 7—12 again, if necessary.



MA7490 -JUN-04MAY92

MX,OPJA,K -19-15JUN92

ADJUSTING MOWER LEVEL (FRONT-TO-REAR)

CAUTION: To avoid injury, before you adjust mower:

- STOP the engine.
- Put park brake in the LOCKED position.
- Wait for ALL moving parts to STOP.

1. Park tractor on a hard, level surface. Such as a cement floor.

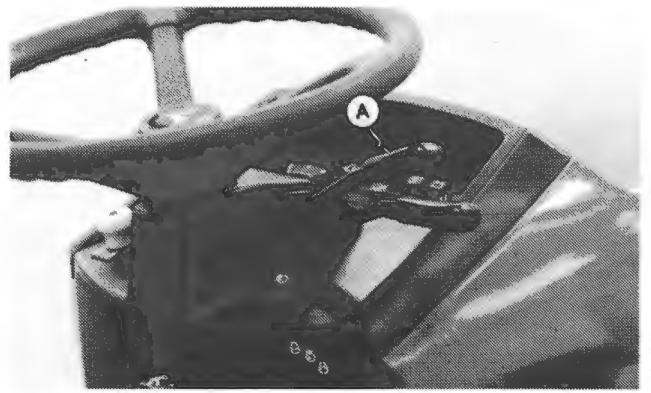
2. Check tire pressure. Tire pressure MUST BE correct, before adjusting mower level:

- Front Tire—14 psi (100 kPa).
- Rear Tire—10 psi (70 kPa).

MX,OPJA,L -19-15JUN92

3. Raise mower to desired cutting height with lever (A) by pulling lever REARWARD.

NOTE: Mower wheels **SHOULD NOT** contact the ground during leveling.



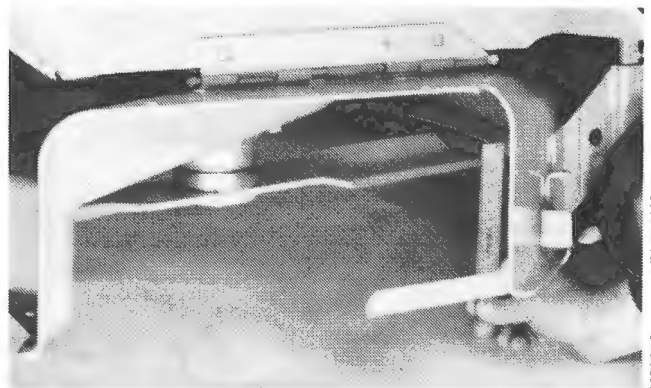
MX,OPJA,M -19-15JUN92

M47478 -UN-04MAY92

4. Turn right blade by hand so blade tip points STRAIGHT FORWARD.

5. Measure from the front and rear tips of the blade to the level surface. The front blade tip **MUST BE** 1/8—1/4 in (3—6 mm) lower than the rear blade tip or blades will cut grass twice and grass will turn brown.

6. If measurement of front blade tip is **NOT** 1/8—1/4 in (3—6 mm) less than measurement of rear blade tip, then continue with Step 7.

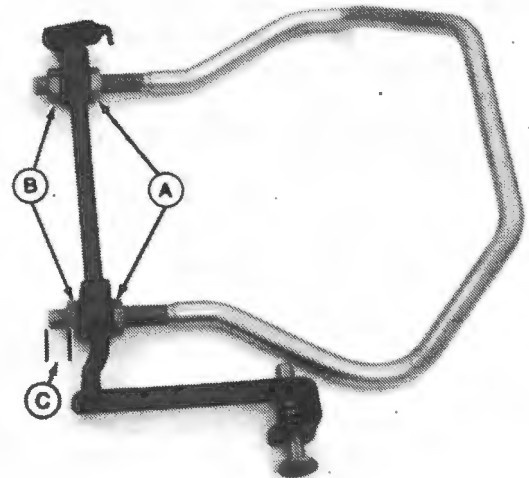


MX,OPJA,N -19-15JUN92

M38812 -UN-28AUG88

NOTE: Mower attaching bracket removed from tractor for clarity.

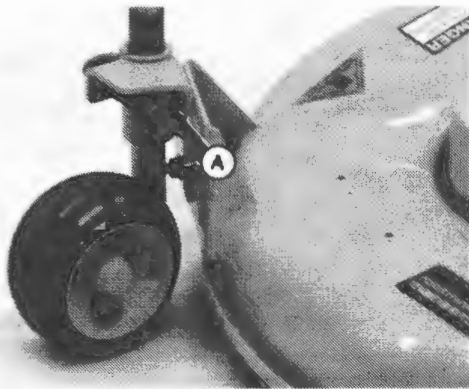
7. Lower mower to the ground.
8. Loosen two rear nuts (A).
9. Turn two front nuts (B) clockwise to RAISE front of mower deck.
 - Turn two front nuts (B) counterclockwise to LOWER front of mower deck.
10. Measure distance (C). This measurement **SHOULD BE** the SAME on each side of the front draft rod.
11. Tighten rear nuts after adjustment is made.
12. Return mower to the desired cutting height.
13. Return to Step 5.



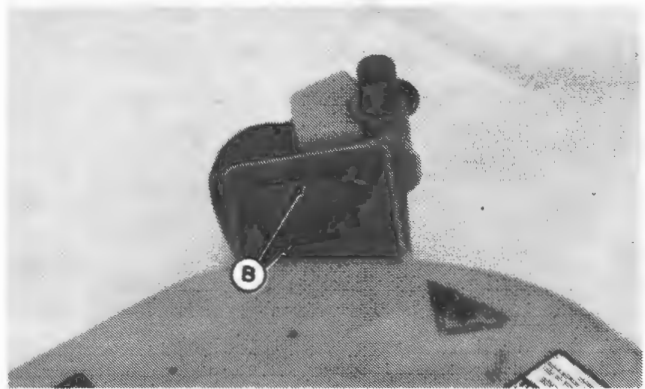
MX,OPJA,O -19-15JUN92

M47486 -UN-04MAY92

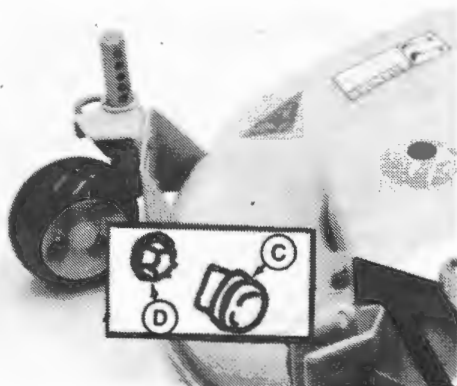
ADJUSTING LEFT REAR GAUGE WHEEL FOR TRIMMING



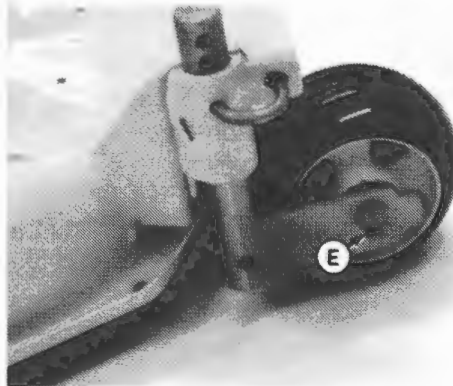
M47491 -UN-04MAY92



M47492 -UN-04MAY92



M47493 -UN-04MAY92



M47494 -UN-04MAY92

To adjust left rear gauge wheel to correspond to NARROW and WIDE positions of rear wheels on tractor and optimize trimming:

- Loosen nuts (A).
- Move gauge wheel to desired spot in slots (B).
- Tighten nuts.

To match height of right and left-hand rear gauge wheels:

- Remove plastic cap (C) and loosen nut (D).
- Move wheel up and down in slot (E) to obtain desired height.
- Tighten nut and install plastic cap.

MX,OPJA,Q -19-15JUN92

ADJUSTING HEIGHT OF ALL GAUGE WHEELS

NOTE: The flattest cut can be achieved by having the rear gauge wheels off the ground.

To more closely follow ground contour in special conditions such as rolling terrain, and when using a POWERFLOW™ and bagger; rear gauge wheels can be used to support deck by setting wheels to roll on the ground.

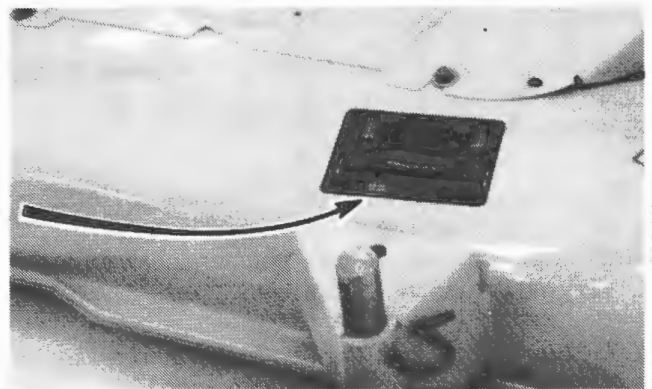
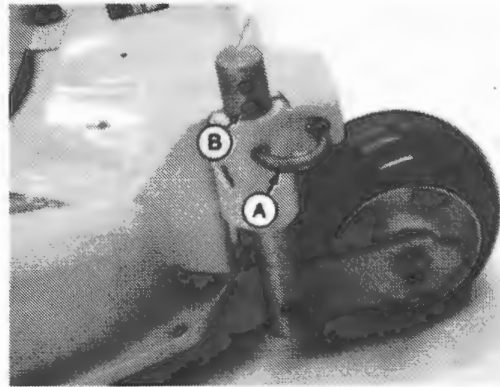
The front wheels should always be kept off the ground to minimize scuffing.



CAUTION: To avoid injury, before you adjust mower wheels:

- STOP the engine.
- Put the park brake in the LOCKED position.
- Wait for all moving parts to STOP.

1. Pull spring loaded J-pin (A) and move all mower wheels up or down until wheels are approximately 1/4—1/2 in. (6—13 mm) above mowing surface.
2. Insert spring loaded J-pin in appropriate hole (B). (Use decal on mower deck for reference.)
3. If desired, you can adjust rear gauge wheels to roll on the ground:
 - To adjust wheel by 1/2 in. (13 mm) increments:
 - Set wheel one hole lower.



MX,OPJA,W -19-15JUN92

JUN-04MAY92
M47497

JUN-04MAY92
M47498

ADJUSTING CUTTING HEIGHT BY DEPTH CONTROL STOP

Cutting height can be adjusted from approximately 1—4 in. (25—100 mm).

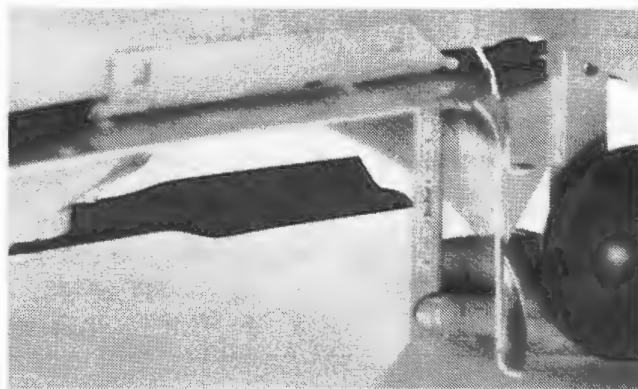
1. Inflate tractor tires:
 - Front tires 14 psi (100 kPa).
 - Rear tires 10 psi (70 kPa).
2. Lower mower by pushing lever (A) FORWARD.



MX,OPJA,R -19-15JUN92

JUN-04MAY92
M47478

3. STOP engine.
4. Turn right-hand blade to point straight forward.
5. Measure distance from front blade tip to surface.



MX,OPJA,U -19-15JUN92

M38156 -UN-29AUG88

6. To change mower height setting: Put mower in the maximum RAISED position by pulling lever (A) REARWARD.

7. Turn depth control knob (B) clockwise to RAISE mower cutting height level.
 - Turn depth control knob (B) counterclockwise to LOWER mower cutting height level.

NOTE: Lower mower to the depth stop and make final check of cutting height adjustment.

8. Adjust gauge wheels. (See Adjusting Gauge Wheels in this section.)



M47478 -UN-04MAY92



M71481 -UN-13MAY92

MX,OPJA,V -19-15JUN92

Lubrication

GREASE

Use grease based on the expected air temperature range during the service interval.

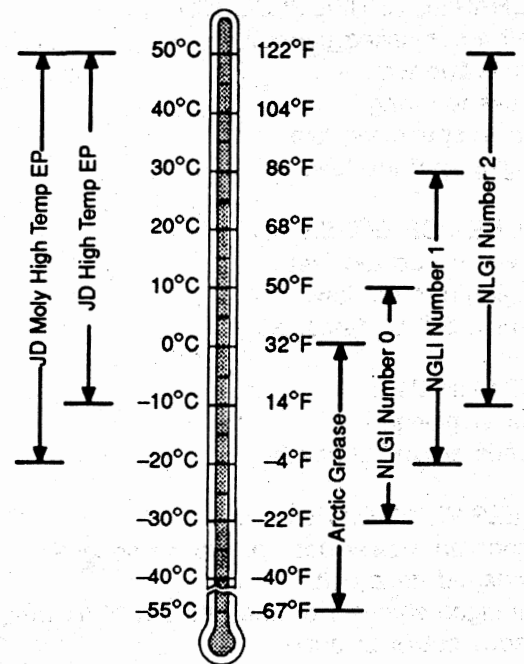
The following greases are preferred:

- John Deere MOLY HIGH TEMPERATURE EP GREASE
- John Deere HIGH TEMPERATURE EP GREASE
- John Deere GREASE-GARD™

Other greases may be used if they meet one of the following:

- SAE Multipurpose EP Grease with a maximum of 5% molybdenum disulfide
- SAE Multipurpose EP Grease

Greases meeting Military Specification MIL-G-10924F may be used as arctic grease.



DX,GREA1 -19-11JUN92

TS1417 -JUN-29MAY92

Use oil viscosity based on the expected air temperature range during the period between oil changes.

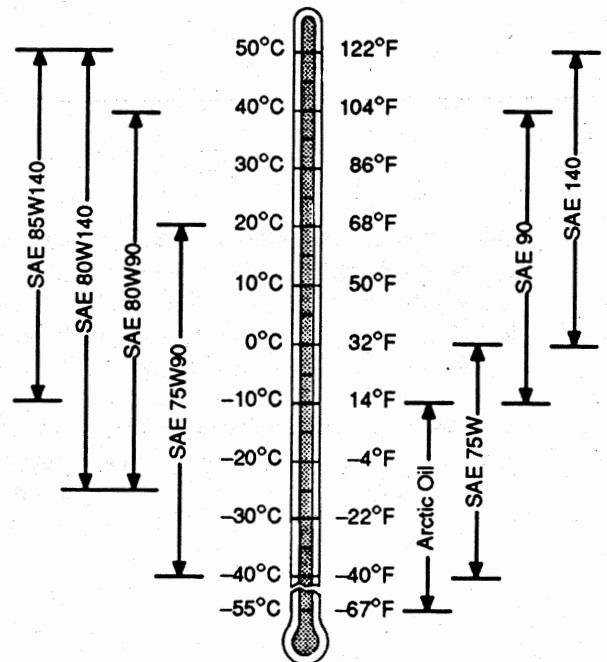
The following oils are preferred:

- John Deere EXTREME-GARD™
- John Deere GL-5 GEAR LUBRICANT

Other oils may be used if they meet the following:

- API Service Classification GL-5

Oils meeting Military Specification MIL-L-10324A may be used as arctic oils.



DX,GEOIL -19-11JUN92

TS1416 -JUN-29MAY92

Troubleshooting

TROUBLESHOOTING

DISCHARGE CHUTE PLUGGED

- Belt not installed correctly.
- Grass too wet.
- Grass too long.
- Travel speed too fast.
- Engine rpm too low.

PATCHES OF GRASS UNCUT:

- Travel speed too fast.
- Engine rpm too low.
- Blades dull or damaged.

BELT SLIPPING:

- Mower plugged.
- Debris around sheaves.

EXCESSIVE VIBRATION:

- Debris on mower deck or around sheaves.
- Damaged drive belt.
- Damaged sheaves or sheaves out of alignment.
- Blades out of balance.

BLADES SCALPING GRASS:

- Cutting too low.
- Turning speed too fast.
- Rough or uneven terrain.
- Low tire pressure.
- Mower wheels are not adjusted correctly.

UNEVEN CUT:

- Mower not level.
- Travel speed too fast.
- Blades dull.
- Mower wheels not adjusted correctly.

MOWER LOADS DOWN TRACTOR:

- Engine rpm too low.
- Travel speed too fast.
- Debris wrapped around mower spindles.

NOISY GEARBOX:

- Lubricant level low.

MX,TSJA,A -19-15JUN92

Servicing Mower

JOHN DEERE PARTS—YOUR BEST CHOICE

WE RECOMMEND JOHN DEERE quality parts and lubricants, available at your John Deere dealer.

A PARTS CATALOG is available for your machine. To order a catalog, use the Service Literature page, located near the end of this manual.

WHEN YOU ORDER PARTS your John Deere dealer needs machine identification numbers. These are the numbers you have recorded in the Specifications section.

MX,PARTS,3 -19-15JUN92

SERVICE INTERVALS

25 HOURS:

- Lubricate driveline.
- Lubricate all mower gauge wheels.
- Lubricate mower blade spindles.
- Check mower blades.

100 HOURS:

- Power wash deck without shields.
- Check mower drive belt.
- Check gearbox oil level.

500 HOURS:

- Change gearbox oil.

AS NECESSARY:

- Clean and/or replace mower deck belt.
- Sharpen mower blades.
- Balance mower blades.
- Remove and/or install mower blades.

MX,SEJA,A -19-15JUN92

SAFETY TIPS—SERVICING MOWER

Keep top of mower deck free of grass, leaves, or other debris build-up.

STOP and inspect the equipment if you strike an object. Repair, if necessary, before restarting.

NEVER make adjustments or repairs with the engine running.

Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with John Deere recommended parts, when necessary.

Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.

MX,SEJA,B -19-15JUN92

CHECKING TIRE PRESSURE

Check tires for damage.

Check tire pressure with an accurate gauge.

Level mower after you check tire pressure. (See ADJUSTING MOWER LEVEL in Operating Mower section.)

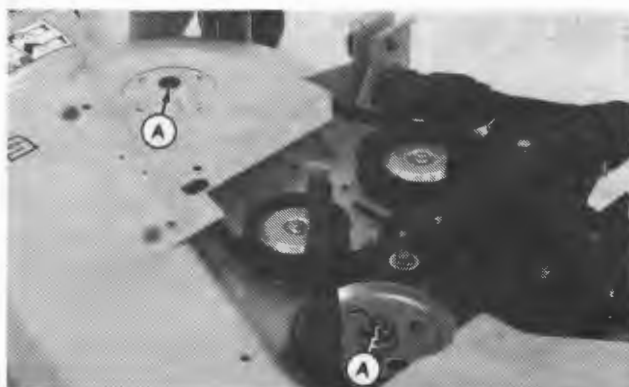
Tire pressure should be:

- Front tire 14 psi (100 kPa).
- Rear tire 10 psi (70 kPa).

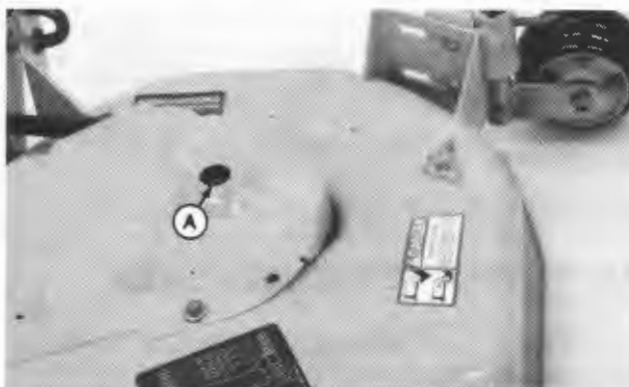
MX,SEJA,C -19-15JUN92

LUBRICATING MOWER BLADE SPINDLES

Lubricate mower blade spindles (A) with one or two shots of John Deere extreme pressure grease or an equivalent.



Right-Hand and Middle Spindle

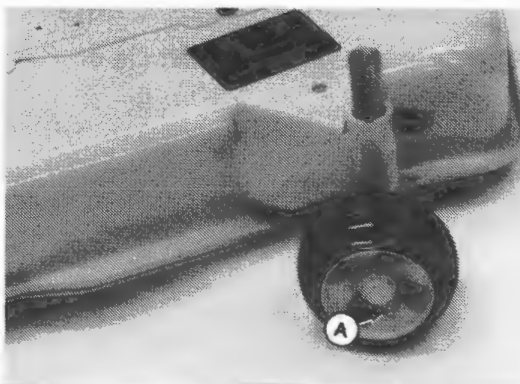


Left-Hand Spindle

MX,SEJA,D -19-15JUN92

LUBRICATING GAUGE WHEELS (FRONT AND REAR)

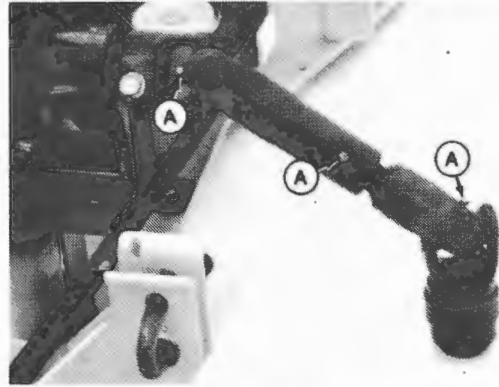
Lubricate grease fitting (A) on each gauge wheel with one or two shots of John Deere extreme pressure grease or an equivalent.



MX,SEJA,E -19-15JUN92

LUBRICATING DRIVE LINE

Lubricate three points (A) on driveline with John Deere extreme pressure grease or an equivalent.



MX,SEJA,F -19-15JUN92

M47509 -UN-04MAY92

CHECKING AND ADDING GEARBOX OIL

Remove check plug (A). Check oil level by sticking a small screwdriver or a piece of wire in check plug hole.

Remove screwdriver or piece of wire:

- If there is oil on it, you do not need to add oil. Install check plug (A) and tighten. Oil level should be at the bottom edge of check plug hole (A).
- If there is no oil shown on it, add oil. (See Lubrication section for correct oil.) Then install check plug (A).

NOTE: *The check plug on your unit may not look exactly like the photo, but the procedure for checking and changing the gearbox oil is the same.*

You can add oil through the hole of check plug (A).

Install and tighten check plug (A).

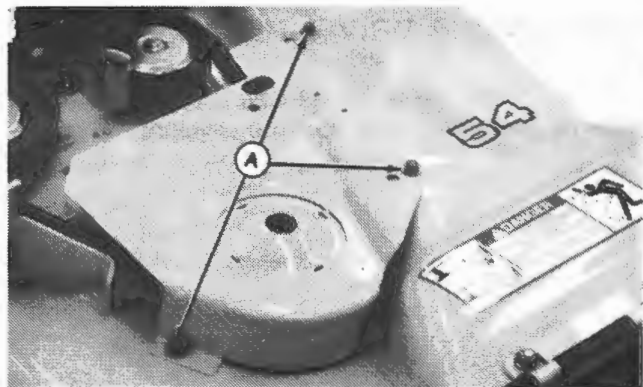


MX,SEJA,G -19-15JUN92

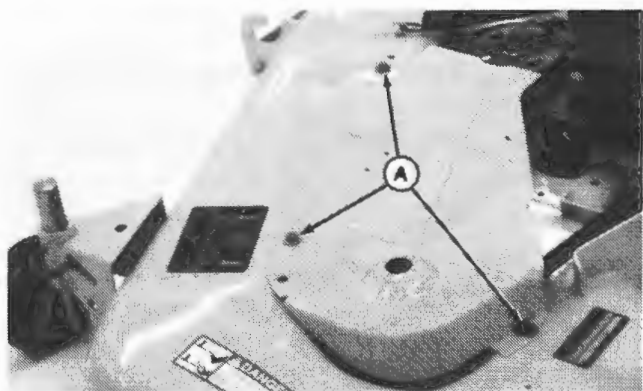
M47515 -UN-04MAY92

CLEANING AND/OR REPLACING MOWER DECK BELT

1. Remove mower deck from tractor. (See REMOVING MOWER DECK in Removing Mower section.)
2. Remove each belt guard cover by loosening cap screws (A).

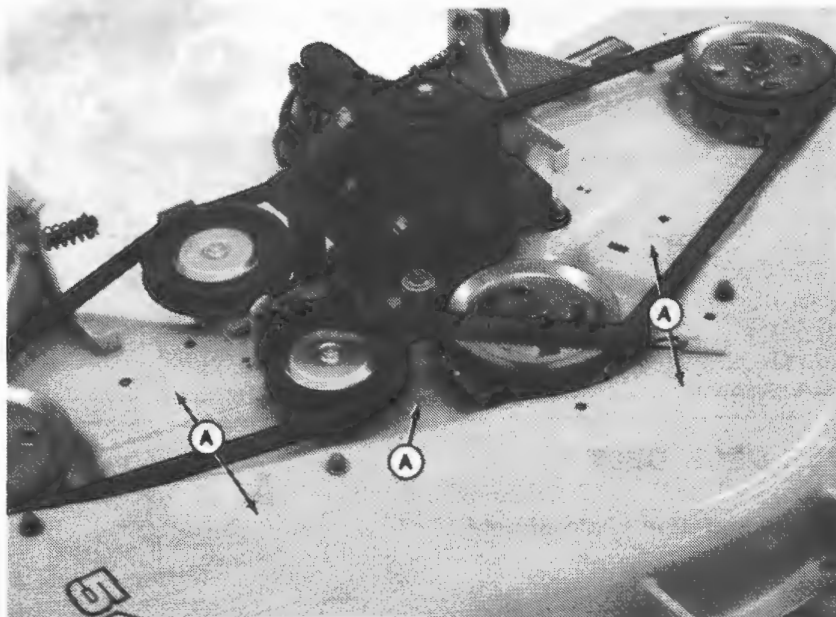


M47517 -UN-04MAY92



M47516 -UN-04MAY92

MX,SEJA,H -19-15JUN92



M47520 -UN-04MAY92

3. Clean top of the mower deck and the area around all of the sheaves (A) of debris.

IMPORTANT: To prevent damage to mower belt:

- DO NOT clean belt using parts cleaning solvent or belt dressing. They soften belt and shorten belt life.

4. Clean and inspect belt for damage:

- If belt DOES NOT need to be replaced, STOP here. Install belt shields.
- If belt DOES need to be replaced, continue with Step 5.

MX,SEJA,I -19-15JUN92

To remove belt from mower deck:



CAUTION: To avoid injury when disconnecting idler spring:

- Use a locking pliers.
- Wear eye protection.

5. Disconnect idler spring (A).

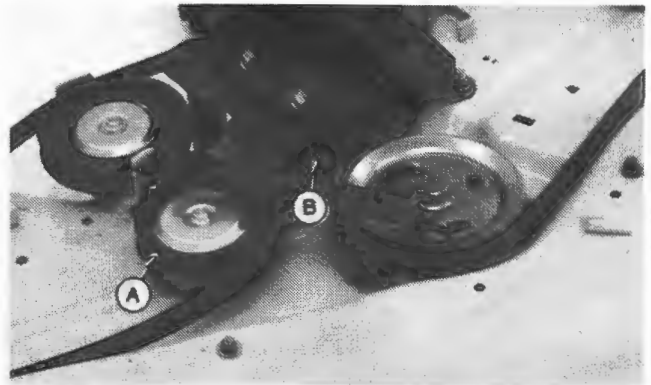


M47518 -UN-04MAY92

MX,SEJA,J -19-15JUN92

6. Remove pulley (A) by removing bolt (B), washer, and nut (located on bottom of deck).

7. Remove belt.

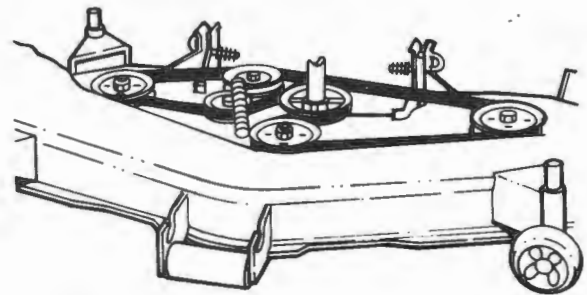


MX,SEJA,K -19-15JUN92

M47519 -UN-04MAY92

INSTALLING MOWER DECK BELT

1. Install mower deck belt as shown in photo at right.

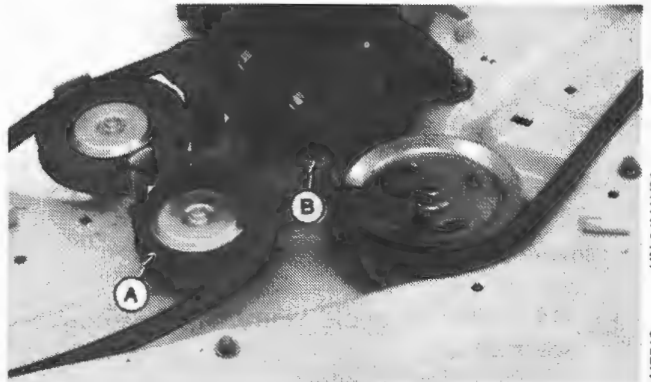


MX,SEJA,L -19-15JUN92

M47514 -UN-13MAY92

2. Install pulley (A) and fasten with bolt (B), washer, and lock nut.

3. Tighten nut to 60 N·m (44 ft-lb).



MX,SEJA,M -19-15JUN92

M47519 -UN-04MAY92



CAUTION: To avoid injury, when installing idler spring:

- Use a locking pliers.
- Wear eye protection.

4. Connect idler spring (A).

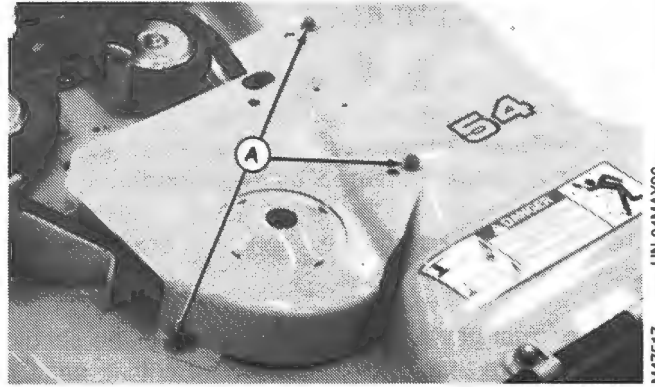


MX,SEJA,N -19-15JUN92

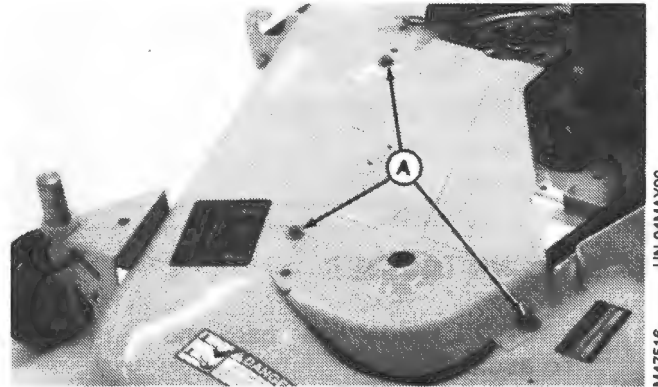
M47518 -UN-04MAY92

NOTE: Make sure that belt guards go underneath washers.

5. Install each belt guard and tighten six cap screws (A).
6. Install mower on tractor. (See INSTALLING MOWER in Installing Mower section.)



Right-Hand Belt Guard

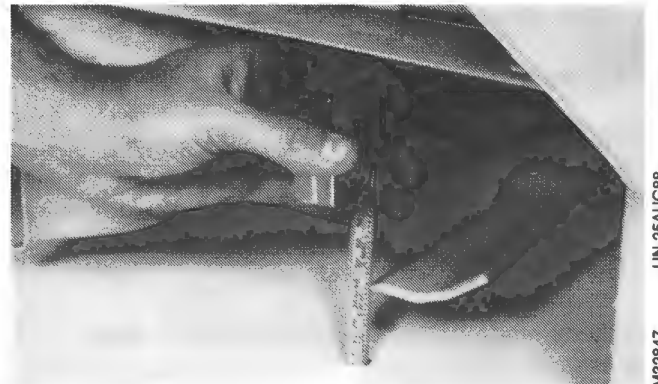


Left-Hand Belt Guard

MX,SEJA,O -19-15JUN92

CHECKING MOWER FOR BENT BLADES

1. Lower mower. Measure distance between blade tip and flat ground surface.
2. Turn blade 180 degrees. Measure distance between other blade tip and flat ground surface.
3. If the distance between the two measurements is more than 1/8 in (3 mm), loosen blade bolt, rotate blade 90 degrees (1/4 turn) and tighten blade bolt.
4. Repeat Steps 1 and 2. If distance between the two measurements is still more than 1/8 in (3 mm), install new blade.



MX,SEJA,P -19-15JUN92

SHARPENING BLADES

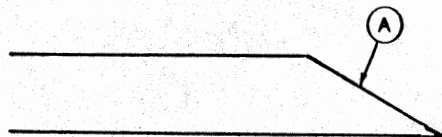


CAUTION: When you sharpen blades:

- Wear goggles and gloves.
- Balance blade after you sharpen it.
- Replace damaged blade immediately.

Sharpen blades with grinder, hand file, or electric blade sharpener.

Keep original bevel (A) when you grind. Blade should have no more than 1/64 in (0.40 mm) cutting edge.



MX,SEJA,Q -19-15JUN92

UN-29JUL91
M61830

BALANCING BLADES

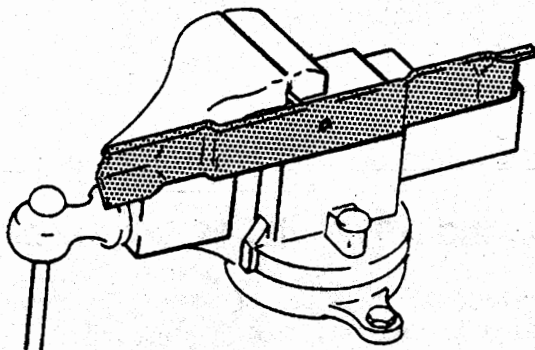


CAUTION: Blades are sharp and can cut you.

To avoid injury:

- Wear heavy gloves or wrap blade with a rag when handling blades.

1. Clean blade.
2. Put blade on nail in vise or on vertical wall stud.
3. Turn blade to HORIZONTAL position.
4. If blade is not balanced, heavy end of blade will drop.
5. Grind bevel of heavy end.
6. Check blade balance again and repeat Steps 3—5, if necessary.
7. Do not change blade bevel.



MX,SEJA,R -19-15JUN92

UN-01SEP88
M61524

REMOVING AND INSTALLING MOWER BLADES

1. Remove mower from tractor. (See Removing Mower section.)

CAUTION: Mower blades are sharp and can cut you. To avoid injury, before installing blades:

- Wear heavy gloves or wrap blade with a rag when handling blades.
- Block blade with a board.
- Turn mower over with a safe lifting device.

2. Turn mower over and place a block of wood between blade and mower deck to prevent blade from turning when removing bolt.

3. Remove bolt, washer, and blade (A).

4. Clean trash guard (B).

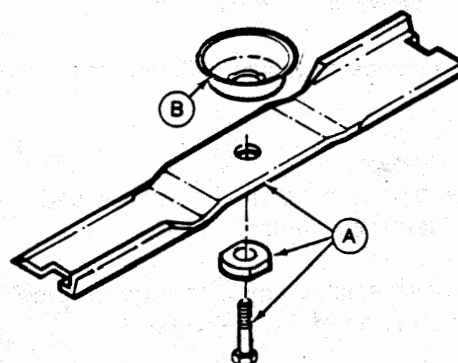
5. If blade is dull, have it sharpened and balanced.

6. If blade is damaged, install new blade, and fasten with washer, and bolt.

IMPORTANT: MAKE SURE hexagon shaped hole in washer is in alignment with hexagon portion of spindle.

- MAKE SURE cupped side of washer is next to blade.

7. Tighten bolt to 55 lb-ft (75 N·m).



M74256 -UN-26JUN90

MX,SEJA,S -19-15JUN92

Storing Mower

1. Remove mower from tractor.
2. Clean underside of mower with water pressure and scraper.
3. Inspect blades:
 - Have dull blades sharpened and balanced.
 - Replace damaged blades.
4. Remove belt shields and clean top of deck and the area around all of the sheaves.
5. Check condition of belt. If necessary, get a new belt. DO NOT install new belt until you remove mower from storage.
6. Install belt shields.



CAUTION: To avoid injury when disconnecting idler spring:

- Use a locking pliers.
- Wear eye protection.

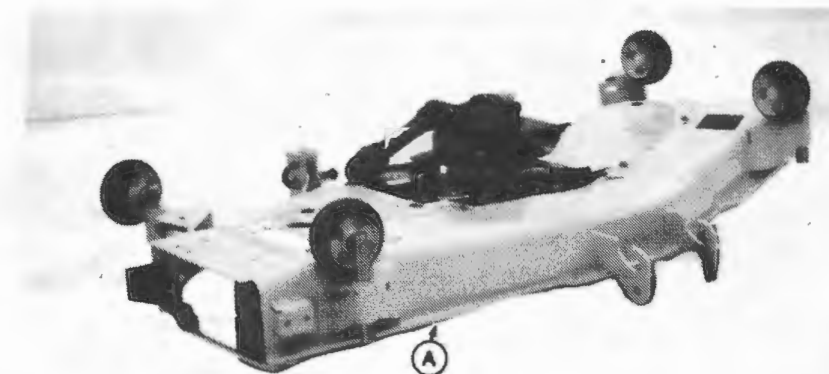
7. If mower is to be stored for a long period of time, disconnect idler spring from mower.
8. Repair or replace any worn or damaged parts.
9. Apply touch-up paint where needed to prevent rust.
10. Store mower in a clean, dry place.
11. Put a waterproof cover over mower, if you store the mower outside.
12. If tractor is to be stored, keep mower on tractor.

MX,STJA,A -19-15JUN92

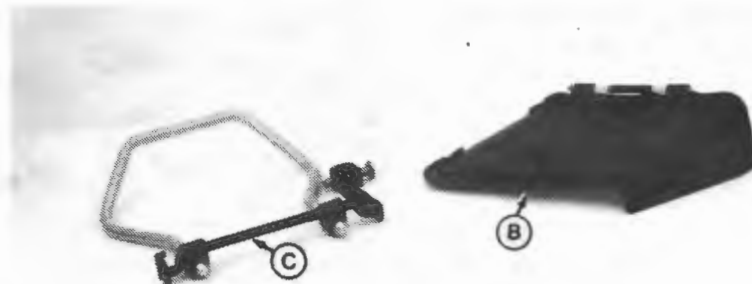
Assembly

IDENTIFY PARTS

All photos in this assembly section and all of the other sections in this book were taken of the 54-inch mower deck.



M47500
-JUN-04MAY92



M47501
-JUN-04MAY92

A—Mower Deck and Driveline

B—Mower Discharge Chute and Hardware

C—Mower Front Draft Assembly

Remove mower from cardboard box with a safe lifting device.

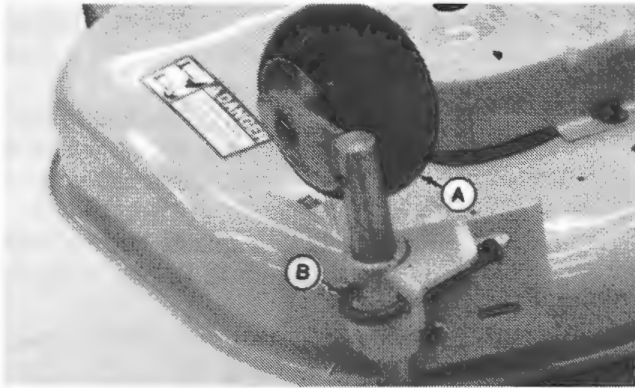
Remove wood base from mower.

Place blocks of wood under mower.

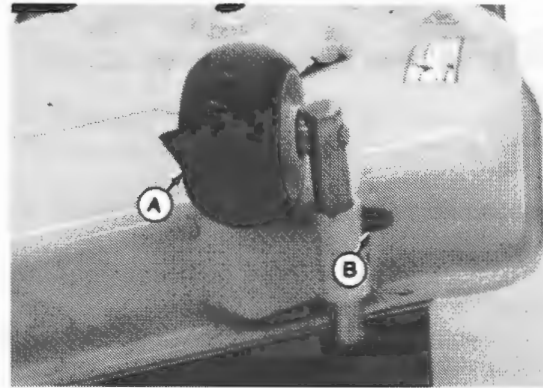
Check parts and report any shortages.

MX,ASJA,A -19-15JUN92

INSTALL GAUGE WHEELS (FRONT AND REAR)



Rear Gauge Wheels



Front Gauge Wheels

Remove each gauge wheel (A) by pulling spring locking pin (B) out.

NOTE: For ease of installing mower on tractor, put all gauge wheels in the *SIDEWAYS* position.

Turn each wheel 180 degrees and install each gauge wheel back on mower deck.



MX,ASJA,B -19-15JUN92

INSTALL MOWER DISCHARGE CHUTE

Remove two carriage bolts and lock nuts from mower discharge chute. (Do not discard.)

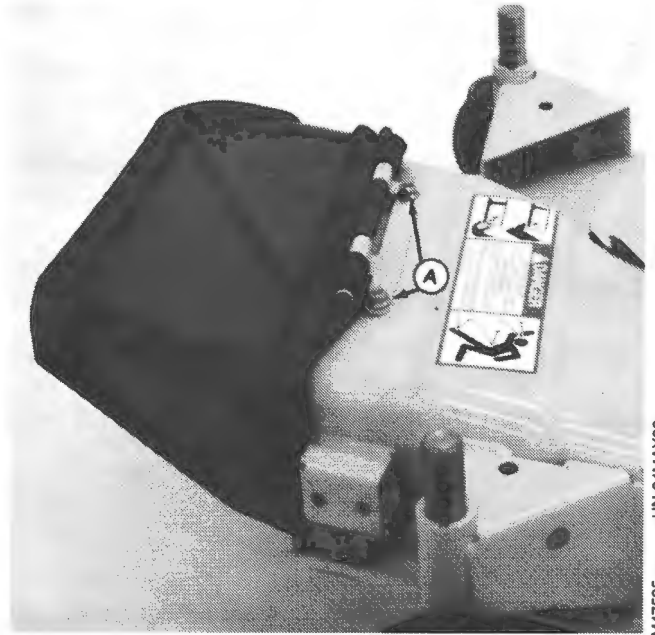
Put chute on mower deck and fasten with two carriage bolts (A) and lock nuts (removed above).



CAUTION: Mower discharge chute is spring loaded. To avoid injury:

- Hold chute firmly on mower deck when installing.
- After installing chute on deck check to **MAKE SURE** hinge on chute is working properly by opening chute and releasing it. Chute **MUST** spring back to the **LOWERED** position.

Tighten nuts to 15 ft-lb (20 N·m).



MX,ASJA,C -19-15JUN92

M47505 -UN-04MAY92

Specifications

MOWER SPECIFICATIONS

Item	48-Inch	54-Inch
Type	Rotary	Rotary
Cutting Blades	3	3
Cutting Width	48 in (1219 mm)	54 in (1372 mm)
Blade Length	16.6 in (423 mm)	18.7 in (474 mm)
Cutting Height (Approx.)	1.0—4.0 in (25—102 mm)	1.0—4.0 in (25—102 mm)

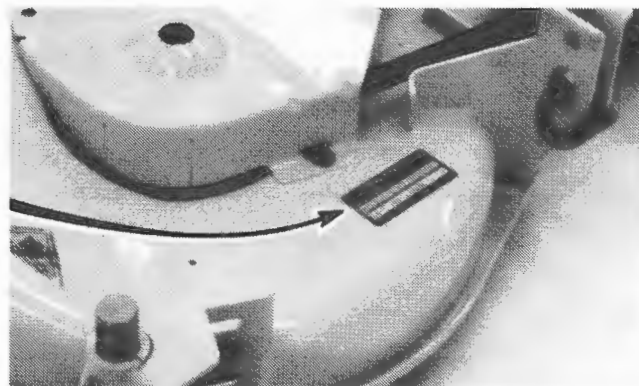
(Specifications and design subject to change without notice.)

MX,SPJA,A -19-15JUN92

MOWER SERIAL NUMBER

Write your mower serial number below. Your John Deere dealer needs this information when you order parts.

Serial Number _____



M47499 -UN-04MAY92

MX,SPJA,B -19-15JUN92

ORDERING LITERATURE

To order catalogs, manuals, or booklets described below, use the form that follows.

MX,ORDER -19-15JUN92

KNOW-HOW BOOKLETS

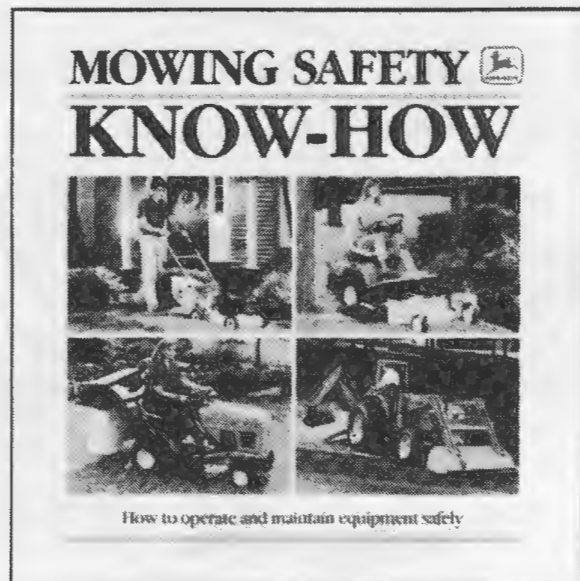
The four KNOW-HOW BOOKLETS are free and provide many helpful tips for landscaping, lawn care, gardening, and safety. To order booklets, use the form that follows, or see your John Deere dealer for free copies.

The LANDSCAPING AND RECYCLING KNOW-HOW BOOKLET tells you how to develop an attractive and balanced landscape and how to recycle lawn clippings and leaves.

The LAWN CARE KNOW-HOW BOOKLET tells you how to mow, water, feed, and dethatch a lawn to keep it beautiful.

The VEGETABLE GARDENING KNOW-HOW BOOKLET has tips for planting, preparing a seedbed, caring for your garden, and composting.

The MOWING SAFETY KNOW-HOW BOOKLET tells you how to operate and maintain your mowing equipment safely.



M73475 -UN-27MAR91

MX,KNOW -19-15JUN92

PARTS CATALOG

The parts catalog lists service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.



TS189 -UN-17JAN89

DX,PARTS -19-04JUN90

OPERATOR'S MANUAL

The operator's manual provides safety, operating, maintenance, and service information about John Deere machines.

An extra copy of the operator's manual is important if the copy furnished with your machine is misplaced.



DX,OM

-19-04JUN90

TS180 -JUN-17JAN89

Name _____

Address _____

City _____

State _____ Zip _____

Phone () _____

Title	Order Number	Price Each	x Quantity	= Total
48 and 54-Inch Mid-Mount Mower for 425, 445, and 455 Series				
Tractors		\$		
Parts Catalog	PC2358	3.25	X	=
Operator's Manual	OMM117686	1.25	X	=
			X	=
			X	=
			X	=
			X	=
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FOS Manual—Engines	FCP80101B	16.20	X	=
FOS Manual—Power Trains	FCP81102B	14.65	X	=
FOS Manual—Electrical Systems	FCP83101B	14.65	X	=
FOS Manual—Hydraulics	FCP82101B	12.95	X	=
1-in. 3-Ring Binder (400 pages max.)	SX2062	2.10	X	=
1-1/2-in. Ring Binder (600 pages max.)	SX2063	5.00	X	=
1—1-1/2-in. 3-Post Binder (600 pages max.)	SX2066	7.50	X	=
2—3-1/2-in. 3-Post Binder (1400 pages max.)	SX2064	15.75	X	=
2-4-in. 4-Post Expandable (2000 pages max.)	SX2056	20.00	X	=
Catalog of Available Service Publications	DB1112	No Charge		
Subtotal				

☐ Check or Money Order enclosed
☐ John Deere Credit Card
☐ MasterCard ☐ Discover
☐ Visa ☐ American Express

Credit Card Acct. No. (13 or 16 digits)

Expiration date: _____

Your Signature

Subtotal

\$.50 to \$ 14.99	\$ 3.00
15.00 to 24.99	4.25
25.00 to 49.99	5.50
50.00 to 99.99	7.50
100.00 and over	4% of subtotal

Shipping & Handling

\$.50 to \$ 14.99 . . .	\$ 3.00
15.00 to 24.99	4.25
25.00 to 49.99	5.50
50.00 to 99.99	7.50
100.00 and over	4% of subtotal

Optional shipping available.
Please check and add cost to
normal shipping above.

<input type="checkbox"/>	1 day air	\$15.00
<input type="checkbox"/>	2 day air	\$10.00

Illinois state residents add 6.25% and Iowa state residents add 4% for Retail Occupation Tax or show tax exemption number. Other states excluded.

Total Shipping & Handling

Amount Due in U.S. Dollars
(Prices subject to change
without notice - DEC 91)

MX.SLIT.117686 -19-15JUN92

John Deere Service Keeps You On The Job



John Deere is at your service when you need it

John Deere takes pride in providing superior service. We'll be around when you need us. To help minimize downtime, we maintain a large and varied parts inventory. Precision tools and testing equipment enable dealerships to locate and correct troubles quickly. We hold regular training schools for service technicians so they know your equipment and how to maintain it. Our goal is to provide prompt, efficient service through competent dealerships.

Your dealer is interested in your satisfaction and stands ready to help you with your service needs. When you need service:

- First, discuss the problem with your dealership service manager.
- If unable to resolve, see the dealership manager, explain the problem, and request assistance. Make sure your dealer is aware of your problem and has the opportunity to help you. Your dealer can request company assistance if needed.
- If you have a persistent problem that your dealership is unable to satisfy, contact the John Deere branch office within your geographic area on the map.

Be prepared with the following information:

- Machine model and product serial number (PIN)
- Date of purchase
- Selling/servicing dealer
- Nature of problem

Sales Branch

1. JOHN DEERE COMPANY
701 Georgeville Road
Columbus, OH 43228
614-275-1500

2. JOHN DEERE COMPANY
2001 Deere Dr.
Conyers, GA 30208
404-922-7040

3. JOHN DEERE COMPANY
10650 Hines Boulevard
Dallas, TX 75220-2635
214-352-1701

4. JOHN DEERE COMPANY
3210 East 85th Street
Southeast Station
Kansas City, MO 64132-2586
816-361-4000

5. JOHN DEERE COMPANY
2001 West 94th Street
Bloomington, MN 55431-2311
612-887-6200

6. JOHN DEERE COMPANY
South Service Road at Hunter
Grimsby, Ontario, Canada L3M 4H5
416-945-9281

7. JOHN DEERE COMPANY
4401 Bland Road, Suite 200
Raleigh, NC 27609-6203
919-850-0123

