

# 3-Bag Material Collection System (MCS): 50 & 55 Series Tractors



JOHN DEERE

## OPERATORS MANUAL

3-Bag Material Collection System  
(MCS): 50 & 55 Series Tractors

OMM77710 Issue E8 English

John Deere Horicon Works

**OMM77710 Issue E8**

(This manual replaces OMM77710 Issue B8)

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ENGLISH



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# 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 U.S. customary units and their metric equivalents.

**Right-hand and left-hand** sides are determined by facing in the direction of forward travel.

**Write identification numbers** in the specifications 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. If this manual is kept on the machine, also 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. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

**Part numbers** may differ outside of U.S. See your John Deere dealer.



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

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# Safety

## SAFETY TIPS

1. Allow only operator on tractor. Keep riders off.

2. Use MCS safely:

- Stop tractor engine and Power-Pak engine before you empty MCS.
- Keep all chutes and hoses in place.
- Lower MCS to ground when not in use.
- Empty MCS before transporting
- Empty bags at end of each day.
- Do not use MCS unless it is attached to tractor.

3. Do not modify machine. Unauthorized modifications may impair function and/or safety and affect machine life.

## PROTECT CHILDREN

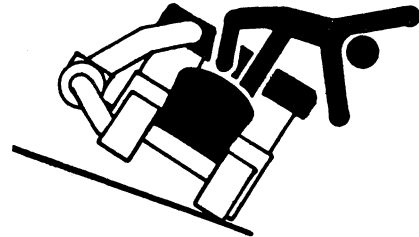
- Before you back: Look behind for children.
- Do not let children ride on tractor or MCS.



M61002

## AVOID TIPPING

- Slow down before you make turns.
- Do not use MCS near ditch or bank.
- Avoid holes, rocks or roots.
- Drive up and down—not across—slopes.
- Avoid parking on slopes.
- On slopes: empty bags when half full.



M61051

## AVOID INJURY FROM THROWN OBJECTS

- Clear work area of objects that may be thrown.
- Keep bystanders out of work area.
- Stop tractor and Power-Pak engines before you empty MCS.
- Keep all shields, chutes and hoses in place.



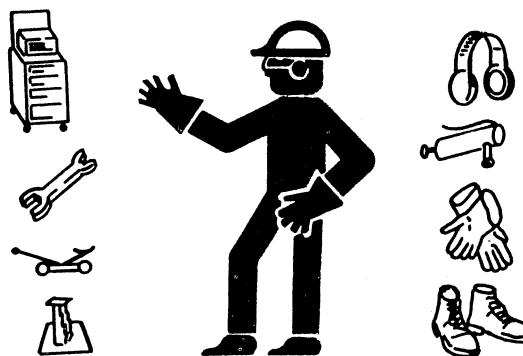
M41423

## WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as ear-muffs or earplugs to protect against objectionable or uncomfortable loud noises.

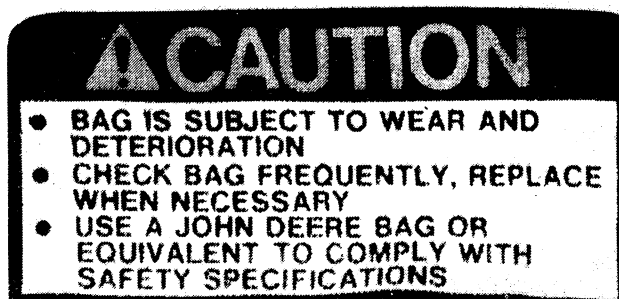


TS206

## FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.



On Bags



On Top of Mower Boot



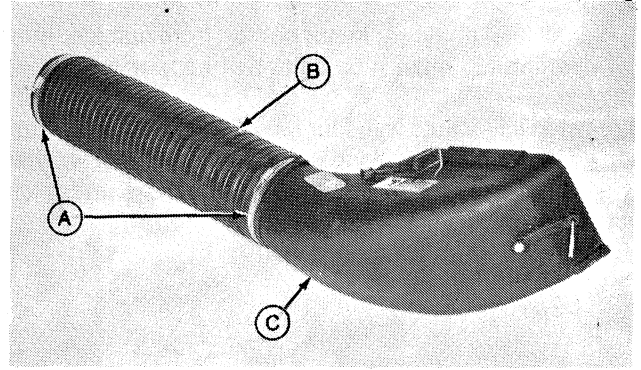
On Top of Hopper

M61004

# Installation/Removal

## ASSEMBLING MCS

1. For 50-in. mower, cut hose to 46 in. (1170 mm). For 60-in. mower, use hose as is.
2. Put clamps (A) on hose (B).
3. Put hose on boot (C) and fasten it with clamp.



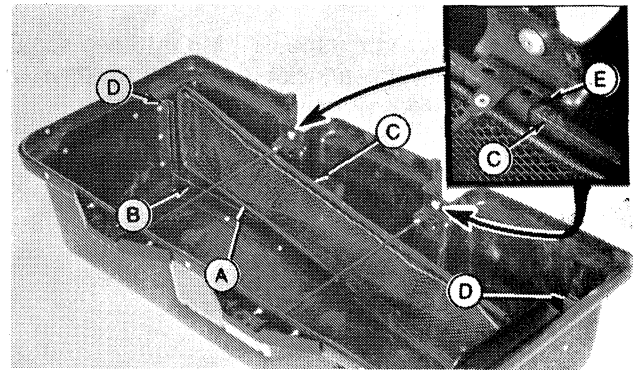
M43147

4. Install screen (A) in hopper top:

—Put screen (A) behind flange (B). Put flat side of plastic edge (C) toward front of hopper top.

—Slide screen frame into channels (D).

—Twist plastic edge (C) into retainers (E).



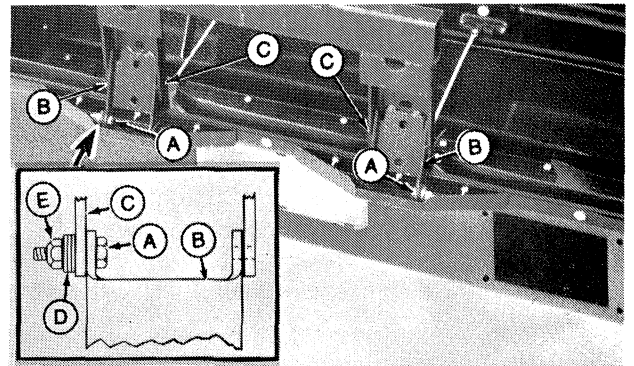
M61005

5. Fasten hopper top to support:

—Put 5/16 x 1 in. cap screws (A) through hopper supports (B) and hinges (C). Put cap screws through from inside.

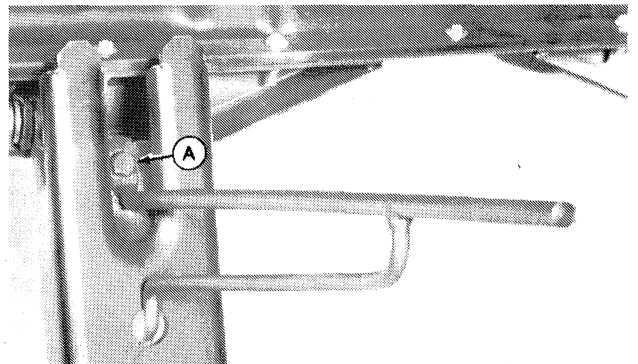
—Put four spring washers (D) on cap screws. Cup sides of washers must face hinge.

—Fasten cap screws with lock nuts (E).



M61006

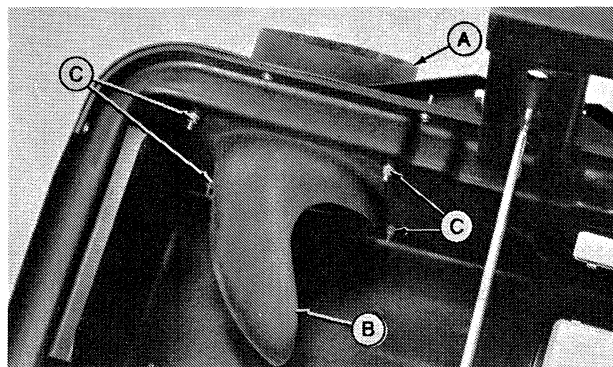
6. Install two latch retainers on support. Fasten retainers with 5/16 x 1-in. screw (A), 0.344 x 1 x 0.134-in. washer, and lock nut. Washer must be between lock nut and support. Tighten lock nuts.



M43152

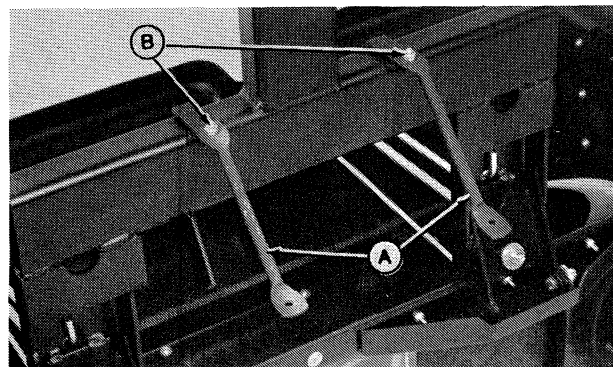
7. Install inlet chute (A) in hopper top from outside. Internal opening (B) must face center of hopper top.

8. Fasten inlet chute with four M6 x 35 flanged cap screws (C), eight washers and flanged lock nuts. Put four washers under heads of cap screws and four washers under lock nuts.



M40643

9. Fasten tie rods (A) to frame with M6 x 16 cap screws and lock nuts (B). Tighten lock nuts until 2 or 3 threads are exposed. Tie rods must pivot freely.



M40644

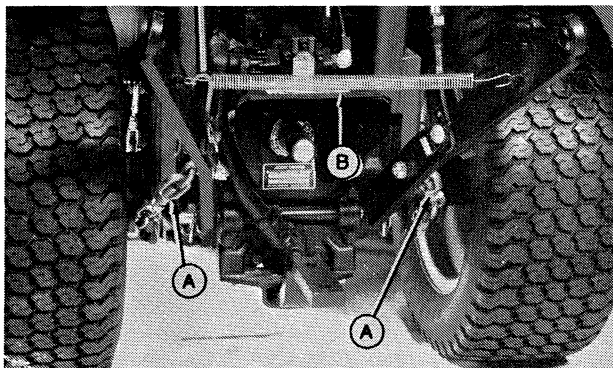
## TRACTOR REQUIREMENTS

1. Tractor must have Category 1, 3-point hitch.
2. 655, 755 and 855 Tractors must have mid-rockshaft hydraulic cylinder. This prevents MCS from raising and lowering every time you raise or lower mower.
3. 650 and 750 Tractors require 3-point hitch with chain leveling kit.
4. Install minimum of three front weights to maintain steering control and stability.
5. Tractor must have 50 or 60 in. mower.

## INSTALLING MCS

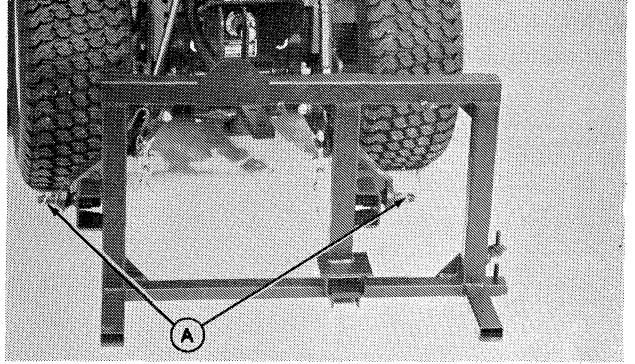
**NOTE:** Put 3-point hitch in no-float before you install 3-bag frame.

1. Remove sway chains (A) and spring (B) from draft links.



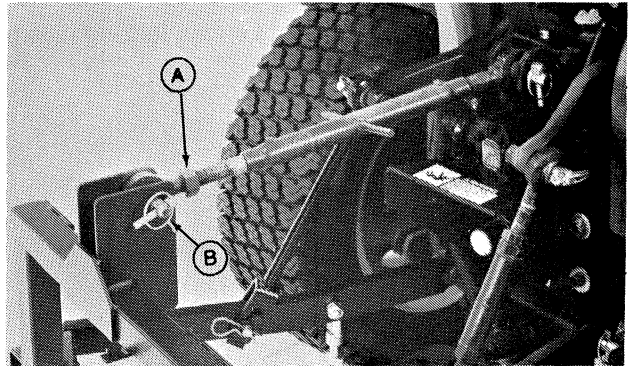
M40631

2. Lower 3-point hitch fully with tractor rockshaft lever.
3. Fasten frame pins to draft links with quick-lock pins (A).



M40632

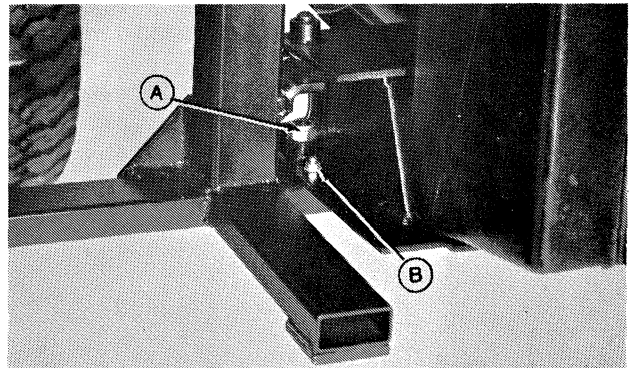
4. Loosen locking nut (A) on tractor center link.
5. Adjust center link until you can fasten it to frame with pin and quick-lock pin (B).
6. Connect sway chains to draft links. Adjust turnbuckles on sway chains until 3-point hitch has no side sway. See Step 1.



M40633

7. Install Power-Pak:

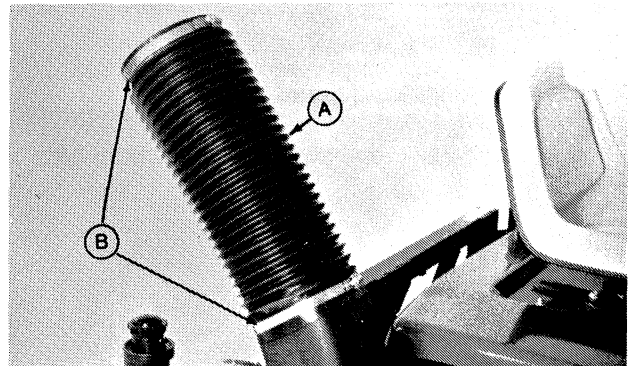
- Put Power-Pak on frame stud and fasten it loosely with nut (A).
- Raise frame slightly with tractor rockshaft lever.
- Install shear-bolt (B) and fasten it with lock nut. Tighten nut (A).



M40635

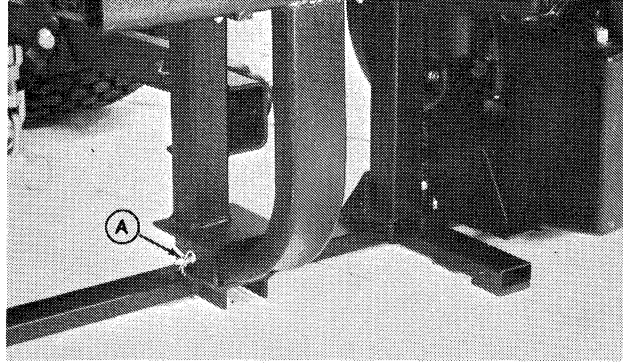
8. Install boot (A):

- Put hose clamps (B) on boot.
- Install boot on blower chute and fasten it with clamp.



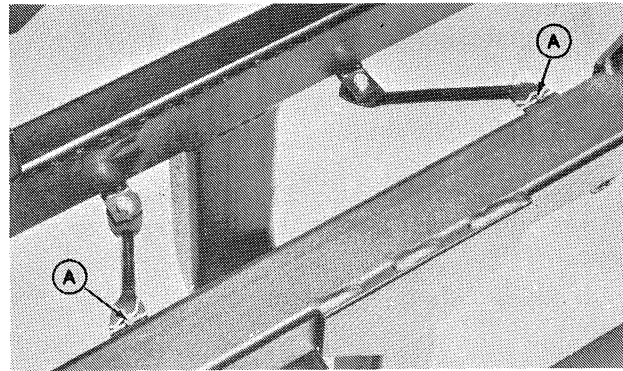
M61012

9. Install bagger support into frame and fasten it with pin and spring locking pin (A).



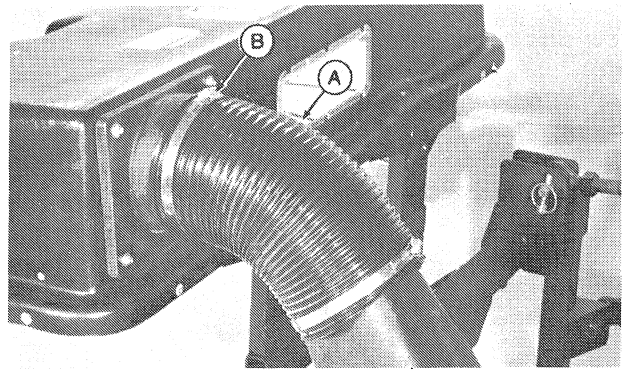
M40637

10. Fasten tie rods to frame with spring locking pins (A).



M40638

11. Install boot (A) on hopper top and fasten it with clamp (B).

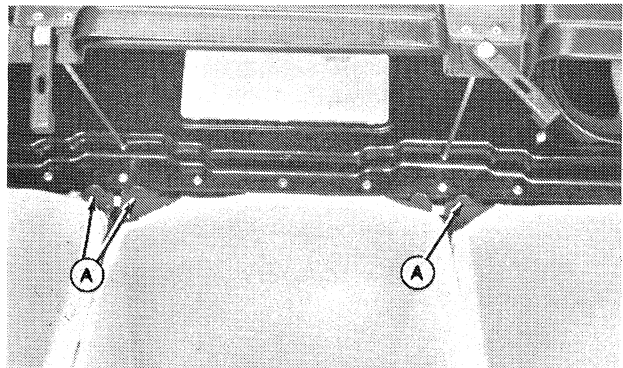


M61014

12. Install bags:

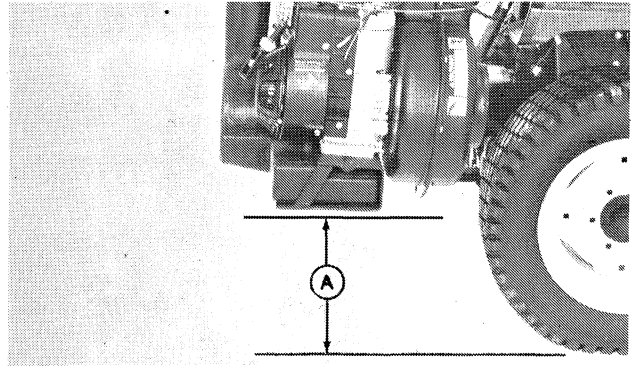
—Install three bags on support tabs (A).

—Bag frames must be level. Bend support tabs as needed.



M40718

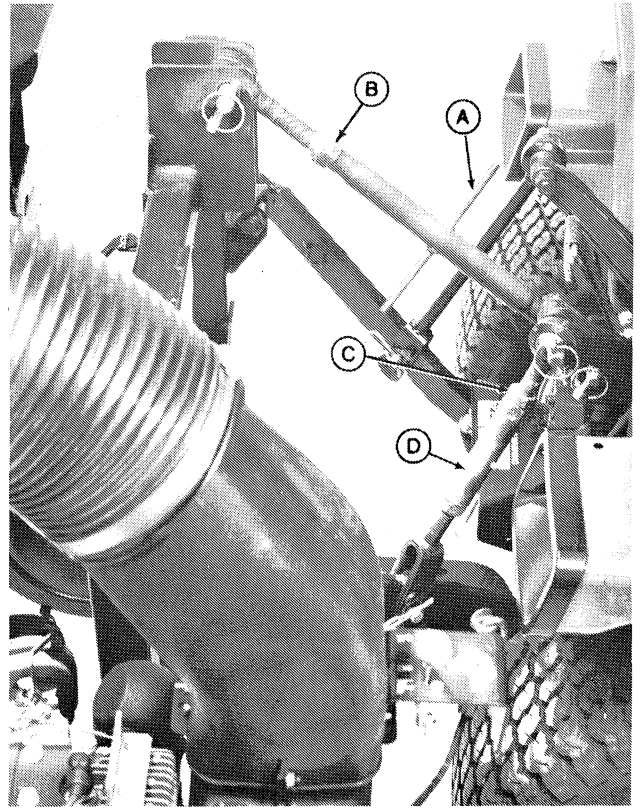
13. Raise frame approximately 14 in. (350 mm) off floor with tractor rockshaft lever. See Dimension A.



M40641

14. Level frame:

- Turn center link (A) until bagger frame is perpendicular to floor. Tighten locking nut (B).
- Loosen lock nut (C) on right-hand lift link.
- Turn right-hand lift link (D) until bagger frame is level side-to-side. Tighten lock nut (C).



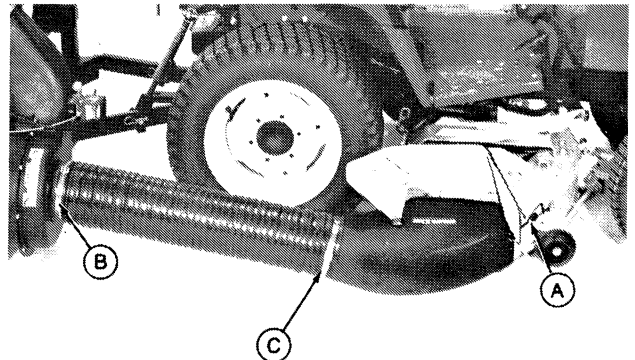
M40642

15. Fasten boot to mower deck with strap (A).

*NOTE: 60 in. mower requires two straps.  
50 in. mower requires one strap.*

16. Fasten hose to blower housing with clamp (B).

17. Tighten clamp (C).



*Boot With 50 In. Mower Illustrated*

M41051

## **INSTALLING ASSEMBLED MCS ON TRACTOR**

1. Slowly back tractor up to MCS.
2. Lower tractor 3-point hitch.
3. Remove sway chains and spring from draft links.
4. Fasten lower frame to tractor draft links with quick-lock pins.
5. Fasten tractor center link to upper frame with drilled pin and quick-lock pin.
6. Fasten boot to mower deck.
7. Connect sway chains to draft links. Adjust turn-buckles on sway chains until 3-point hitch has no side sway.

## **REMOVING MCS FROM TRACTOR**



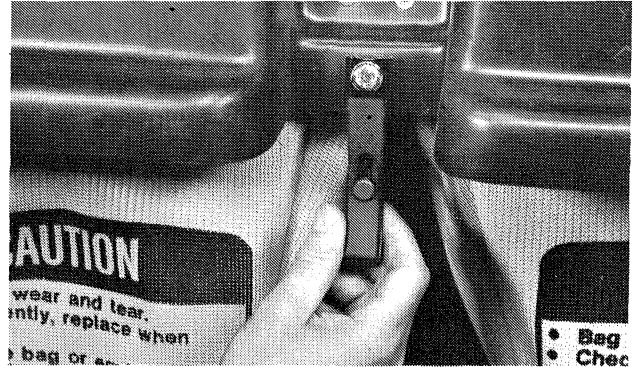
**CAUTION: Stop tractor and Power-Pak engines before you remove MCS.**

1. Remove mower boot from mower.
2. Lower tractor 3-point hitch.
3. Remove MCS from tractor 3-point hitch.
4. Drive tractor slowly forward.

# Operating MCS

## OPENING HOPPER TOP

1. Pull down hold-down and remove it from latch retainer.



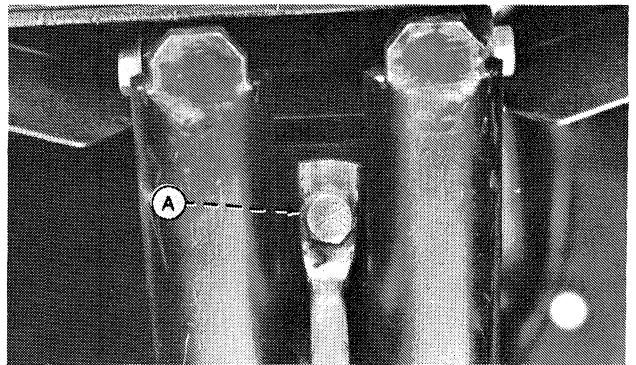
M43126

## ADJUSTING LATCH RETAINER

There should be 3/4 to 1 in. (19 to 25 mm) stretch in rubber hold-down.

To adjust latch retainer:

1. Loosen cap screw (A) and move latch retainer up or down as needed. Tighten cap screw.
2. You may need to put extra flat washers between latch retainer and bag holder for desired stretch.



M43127

## BAGGING TIPS

DO NOT cut wet grass. Wet grass will plug mower, blower and bagger.



**CAUTION:** If discharge chute gets plugged, do not try to unplug it while tractor or MCS are operating.

**NOTE:** Line cloth bags with plastic garbage bags to help prevent bags from wear.

**IMPORTANT:** Do not leave clippings in bag:  
—Moisture may damage bags.  
—Damp clippings are fire hazard.

Bag grass only when grass is dry and not tall (or dense).

## MOWING TRAVEL SPEEDS

Use slow travel speed for:

1. Trimming.
2. Working in close quarters.
3. Mowing tall grass.

Use faster travel speeds for:

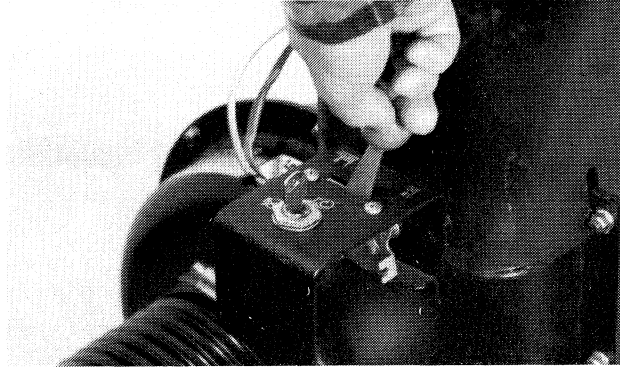
1. Normal mowing on level ground.
2. Driving between mowing jobs.

## OPERATING TIPS



**CAUTION:** Do not use MCS unless it is attached to tractor.

1. Put Power-Pak engine throttle lever at slow position for short grass.
2. Put throttle lever at first stop for medium grass.
3. Push lever to right and forward for tall grass.
4. Slow engine speed if grass blows through bags or hopper top. Increase engine speed if grass clippings plug collector chute or hose.



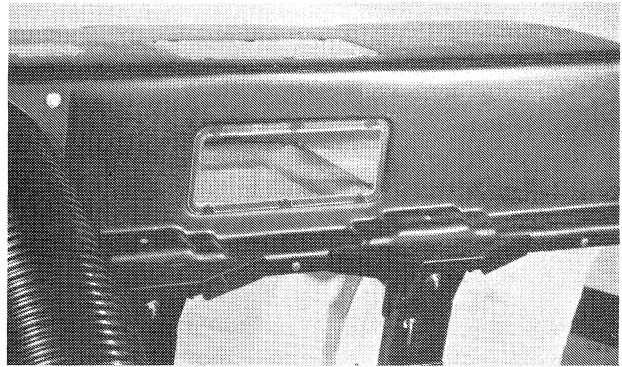
M43124

## FILLING BAGS

Check window often.

Empty bags when clippings are up to window of hopper top or you may plug bagger chute.

Left bag normally fills first. Center and right bag may not fill completely when you cut thin strands of grass. Bags will fill if you slow Power-Pak engine speed.



M43130

## DRIVING TRACTOR WITH MCS

**IMPORTANT:** Do not pull tractor and MCS with another vehicle.

Tractor and MCS are not intended for use on streets or highways.

Fasten SMV sign to back of MCS.

Grass bags must be empty.

Drive carefully at safe speed.

Be careful when you drive on slopes.

Slow down when you make turns.

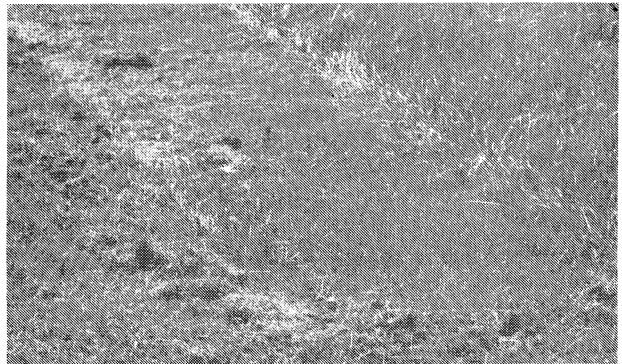
## CHECKING FOR PLUGGING



**CAUTION:** If MCS plugs, stop tractor and Power-Pak engines before you unplug it.

If there is trail of clippings behind mower, check for plugged chute, hoses, or full bags.

Do not remove grass from blower or hoses while you sit on operator's seat.



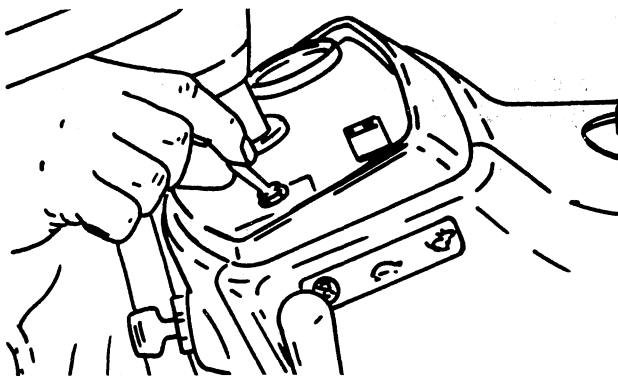
M32856

## DISMOUNTING TO EMPTY OR CHECK BAGS



**CAUTION:** Before you service MCS:  
—Stop tractor and Power-Pak engines.  
—Lower MCS to ground.

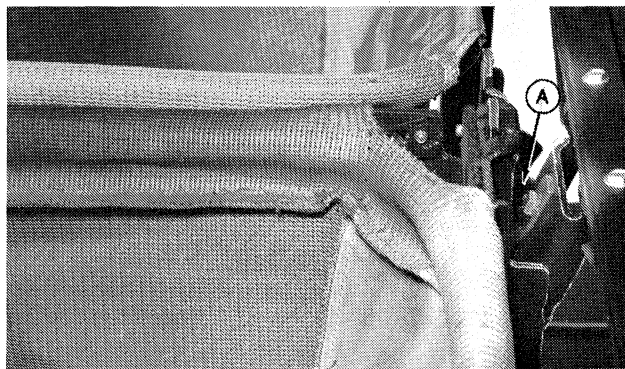
1. Stop PTO.
2. Stop tractor engine.
3. Stop Power-Pak engines.



M35785

## CLEANING SUPPORT POSTS

Clean grass and leaves from top of support posts (A).



M43060

# Troubleshooting

| Problem                                         | Solution                                             | Section   |
|-------------------------------------------------|------------------------------------------------------|-----------|
| <b>Grass not being picked up completely.</b>    | 1. Mow grass only when dry.                          | —         |
|                                                 | 2. Reduce tractor ground speed.                      | —         |
|                                                 | 3. Empty MCS.                                        | Operating |
|                                                 | 4. Clean screen in hopper top.                       | —         |
|                                                 | 5. Unplug chute.                                     | —         |
|                                                 | 6. Adjust Power-Pak engine speed.                    | Operating |
|                                                 | 7. Increase tractor engine speed to full throttle.   | —         |
| <b>Collection boot and blower housing plug.</b> | 1. Mow grass only when dry.                          | —         |
|                                                 | 2. Empty MCS.                                        | —         |
|                                                 | 3. Increase Power-Pak engine speed to full throttle. | Operating |
|                                                 | 4. Clean screen in hopper top.                       | —         |
|                                                 | 5. Reduce tractor ground speed.                      | —         |
|                                                 | 6. Stop mower when MCS is full.                      | —         |
| <b>Power-Pak engine will not run.</b>           | 1. Clean blower housing.                             | —         |

# Specifications

## SPECIFICATIONS

Used On.....650, 750, 655, 755, 855 Tractors  
Approximate Volume of Bags.....10 bu. (0.35 cubic meters)  
Overall Height.....approx. 36 in. (915 mm)  
Overall Width.....approx. 56 in. (1420 mm)

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



# John Deere Service Literature Available

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| Title                                                                 | Order Number | Price Each | x Quantity | = Total |
|-----------------------------------------------------------------------|--------------|------------|------------|---------|
| 3-Bag Material Collection System (MCS)<br>for 50 & 55 Series Tractors |              |            |            |         |
| Parts Catalog                                                         | PC2131       | \$         | x          | =       |
| Operator's Manual                                                     | OM-M77710    |            | x          | =       |
|                                                                       |              |            | x          | =       |
|                                                                       |              |            | x          | =       |
|                                                                       |              |            | x          | =       |
| FOS Manual-Engines                                                    | FCP-80101B   |            | x          | =       |
| FOS Manual-Electrical Systems                                         | FCP-83101B   |            | x          | =       |
| FOS Manual-Hydraulics                                                 | FCP-82101B   |            | x          | =       |
| FOS Manual-Power Trains                                               | FCP-81101B   |            | x          | =       |
| Catalogs of Available Service Publications:                           |              |            |            |         |
| Consumer Product Publications                                         | CPC-1704     |            |            |         |
| Agricultural Product Publications                                     | CPC-1703     |            |            |         |
| Industrial Product Publications                                       | CPC-1852     |            |            |         |
|                                                                       |              |            |            |         |
|                                                                       |              |            |            |         |

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Subtotal

Illinois State Residents add 6%  
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Check or money order in U.S.  
Dollars enclosed..... Total  
(Do not send cash or stamps)

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SP-317-Jan-88





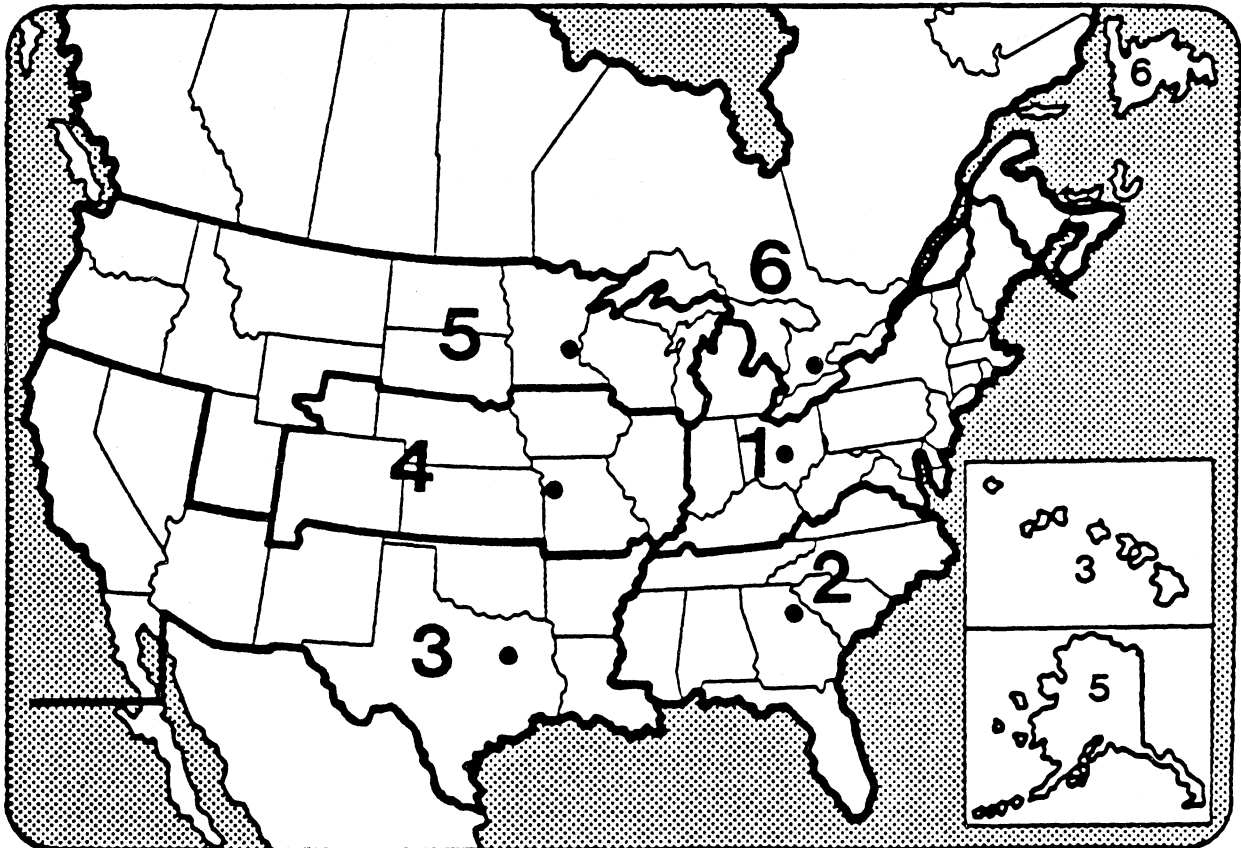
## John Deere is at your service when you need it

It is John Deere's objective to train all of their authorized dealer service personnel effectively so they can handle your service needs. Your dealer therefore has service technicians who are trained to give your machine the best of care. We would encourage you to use the service provided by your dealer whenever possible.

If for some reason you are unable to locate a dealer in your area, our sales branches are available to provide you with such information. The location and listing of such sales branches are shown below. Check the listing for the location of the area in which you reside.

### Sales Branch

- |                                                                                       |                                                                                                                         |                                                                                                           |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1. JOHN DEERE COMPANY<br>701 Georgeville Road<br>Columbus, Ohio 43228<br>614-275-1500 | 3. JOHN DEERE COMPANY<br>10650 Hines Boulevard<br>Dallas, Texas 75220-2635<br>214-352-1701                              | 5. JOHN DEERE COMPANY<br>2001 West 94th Street<br>Bloomington, Minnesota 55431-2311<br>612-887-6200       |
| 2. JOHN DEERE COMPANY<br>2001 Deere Drive<br>Conyers, Georgia 30208<br>404-922-7040   | 4. JOHN DEERE COMPANY<br>3210 East 85th Street<br>Southeast Station<br>Kansas City, Missouri 64132-2586<br>816-361-4000 | 6. JOHN DEERE COMPANY<br>South Service Road at Hunter<br>Grimsby, Ontario, Canada L3M 4H5<br>416-945-9281 |



SP-633 (Jun-87)

