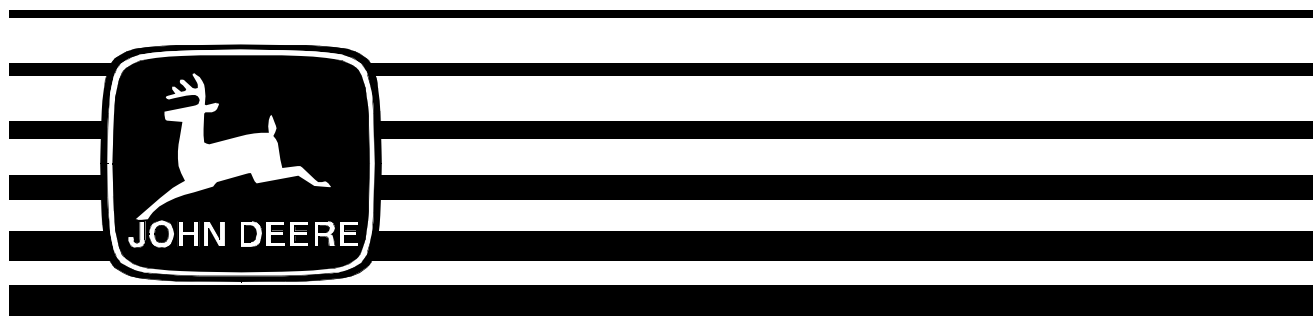


Hydraulic Dump Material Collection System (MCS) For 4100 Tractors

Serial No. (010001 -)



OPERATOR'S MANUAL

**John Deere
Worldwide Commercial And
Consumer Equipment Division
OMM140121 E9**

**North American
Litho in U.S.A.
English**

INTRODUCTION

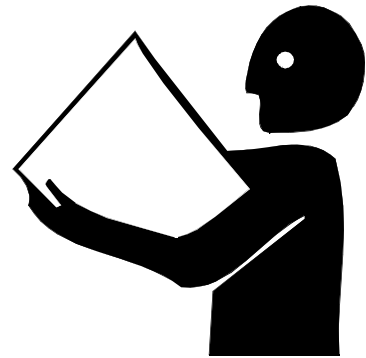
THANK YOU for purchasing a John Deere product.

Read this manual thoroughly. 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 metric units and their U.S. customary equivalents. 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 arrow (---->), it indicates the part it is pointing to is hidden.

Record identification numbers below. Be sure to record all the numbers to help in tracing the machine if it is stolen. You also need to give these numbers to your dealer when you order parts.



DATE OF PURCHASE:

DEALER NAME:

DEALER PHONE:

PRODUCT IDENTIFICATION NUMBER (A):

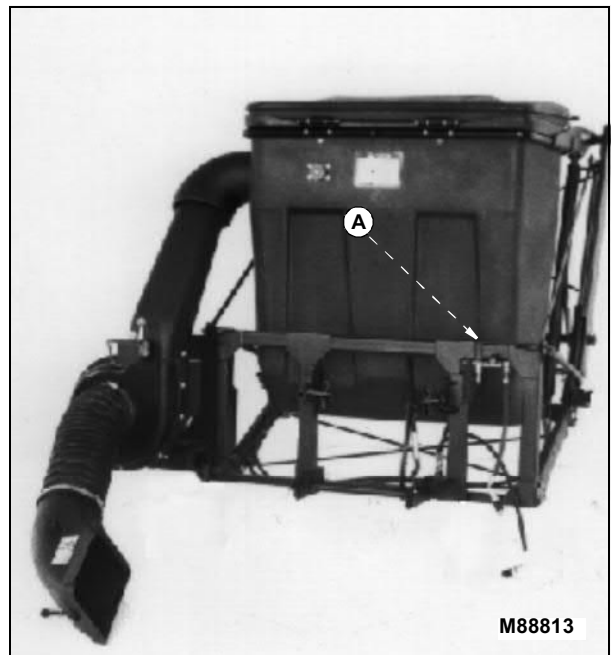


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John Deere Worldwide Commercial and
Consumer Equipment Division
Horicon, WI
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OMM140121 E9

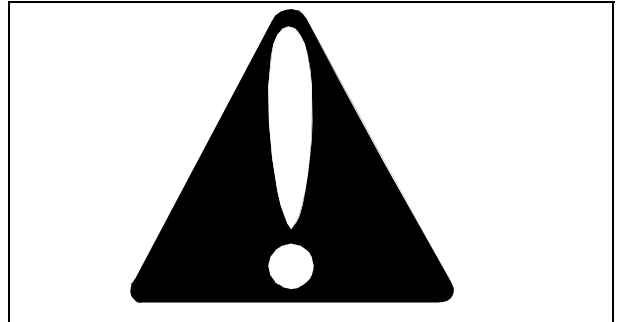
NOTES

SAFETY SIGNS

Safety-Alert Symbol

Read and recognize safety information. Be alert to the potential for personal injury when you see this safety-alert symbol.

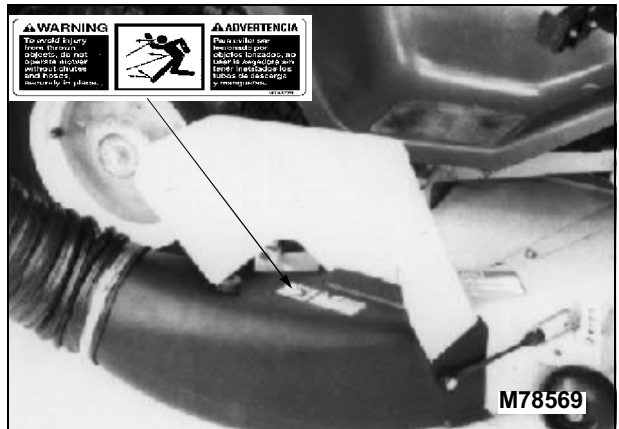
On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards. In this manual, the word CAUTION and this symbol call attention to safety messages.



Machine Safety Labels

WARNING

To avoid injury from thrown objects: DO NOT operate mower without chutes and hoses securely in place.



CAUTION

- Shut off blower and mower before dumping box.
- Catcher assembly is subject to wear and deterioration. Check condition frequently. Replace if necessary.
- Use a John Deere box or equivalent to comply with safety specifications.



SAFETY SIGNS

CAUTION

To avoid injury when raising, dumping or lowering box.

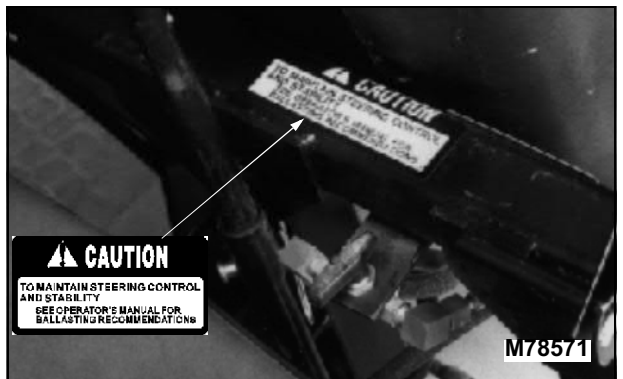
- Keep bystanders away and keep body parts out of path of box.
- Raise and dump box only on level surface.



CAUTION

To maintain steering control and stability.

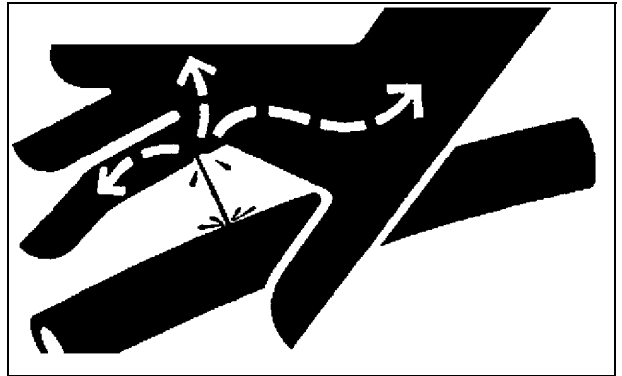
See operator's manual for ballasting recommendations.



INSTALLING

Avoid High Pressure Fluids

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



Tractor Requirements

- Tractor must have a category 1, 3-point hitch.
- Tractor must have a mid-rockshaft hydraulic cylinder. This prevents the MCS from raising and lowering every time the mower deck is raised or lowered.
- Tractor must have optional Dual SCV kit installed.
- Install five 20 kg (42 lb) front weights.
- Install Lift Stop Kit.

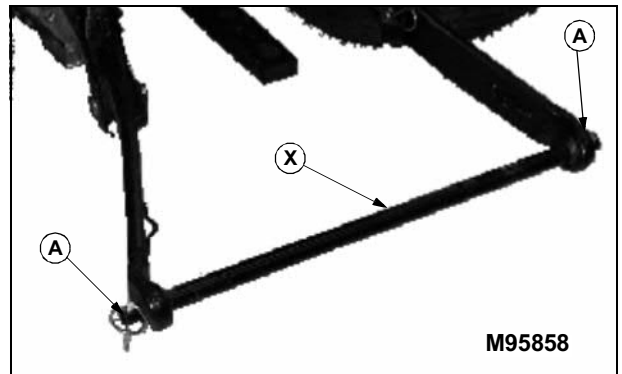
INSTALLING

Installing MCS

1. Park tractor safely and on level ground.

NOTE: Crossbar and quick-lock pins are stored with MCS.

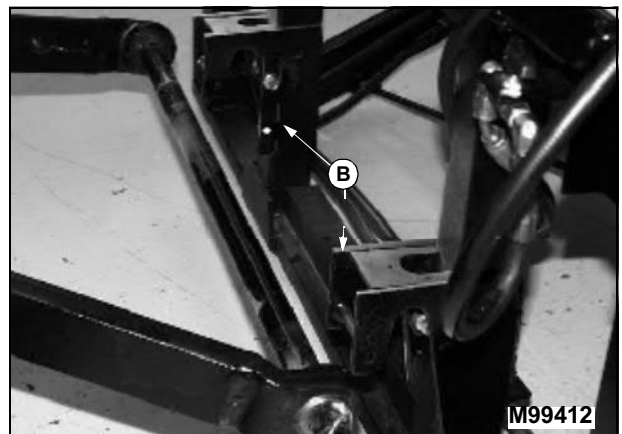
2. Install crossbar (X) through draft-links. Fasten with two quick-lock pins (A).



3. Open left and right MCS frame safety latches (B).

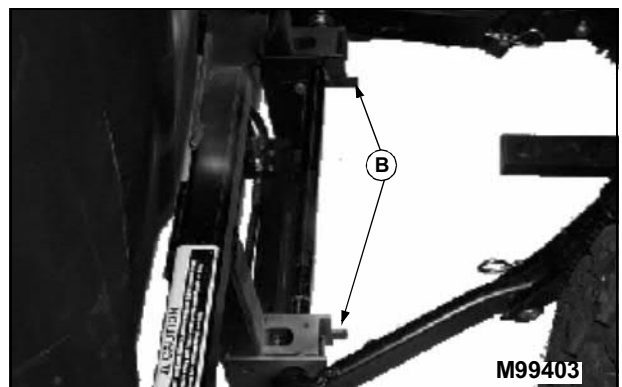
4. Back tractor into position. Raise hitch until crossbar contacts top of hydraulic dump brackets.

5. Engage park brake, stop engine and remove key.



IMPORTANT: To help prevent damage to the hydraulic dump, close safety latches before raising or lowering MCS.

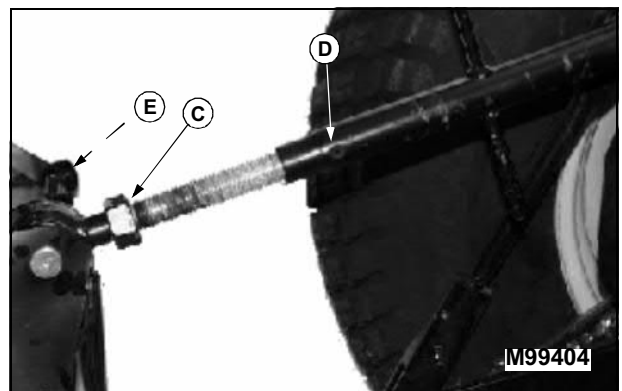
6. Close each safety latch (B).



7. Loosen locking nut (C) on center link (D).

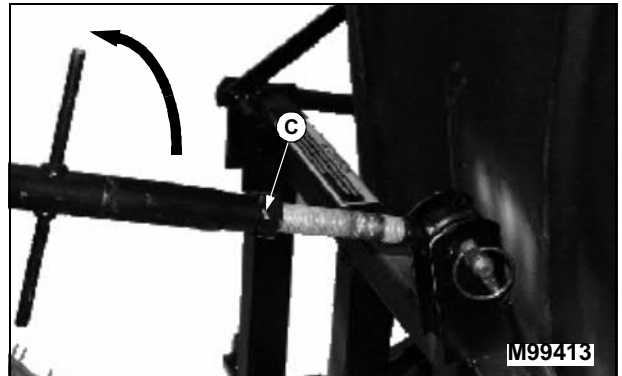
NOTE: The same amount of threaded rod should show on each end of the center link.

8. Adjust center link and install pin. Fasten with quick-lock pin (E).

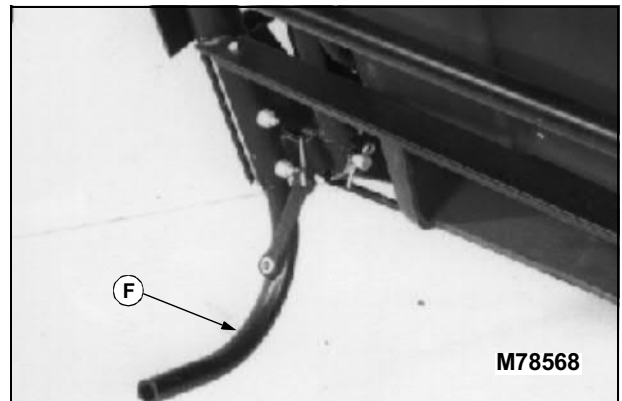


INSTALLING

9. Start tractor engine and raise MCS 350 mm (14 in.) off ground.
10. Stop engine and remove key.
11. Adjust center link until frame is perpendicular to the ground.
12. Tighten locking nut (C) against center link.



13. Remove both stabilizer feet (F).



14. Route and connect hydraulic lines (G) from MCS to the right side of tractor. Under center link, between ROPS mounting bracket and transaxle along tractor frame and to hydraulic couplers.

15. Use tie straps provided to safely attach hoses to tractor frame and out of the way of moving parts.

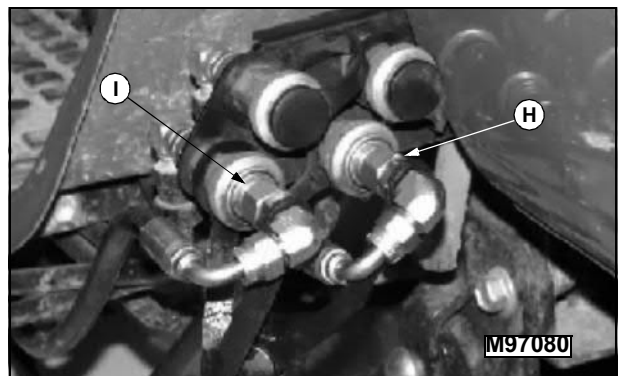


16. Connect green hydraulic coupler (H) to No. 4 SCV. This line is connected to shut-off valve on MCS frame.

17. Connect black hydraulic coupler (I) to No. 3 SCV. This line is connected to "raise" side of lift cylinders.

18. Attach hoses to tractor frame with tie straps.

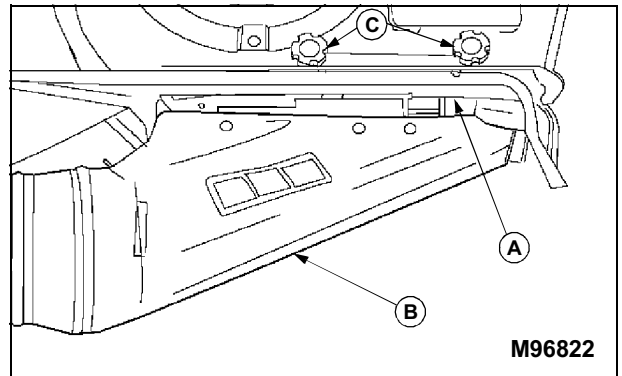
19. Connect plug for optional light kit into tractor if equipped.



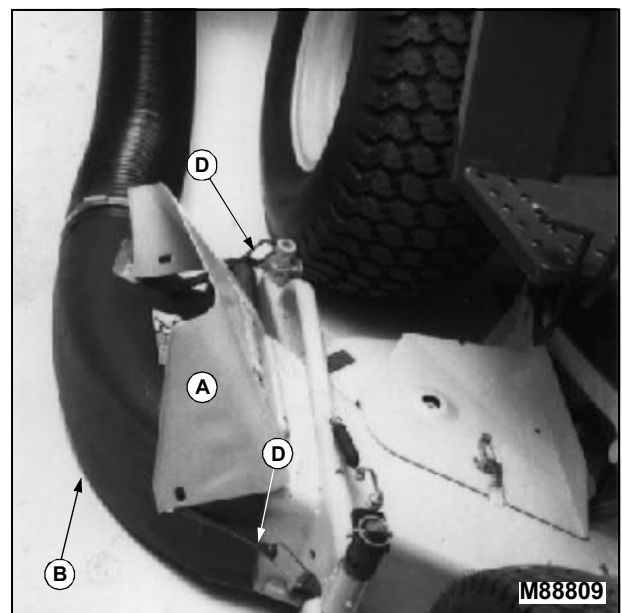
INSTALLING

Installing Boot

1. Clean grass and dirt from underside of discharge chute.
2. Lower mower deck to its lowest position.
3. Raise hydraulic dump to its highest operating position.
4. Raise the discharge chute (A).
5. For 54-inch decks: Fasten boot (B) to mower deck with knobs (C).



6. For 60 inch decks: Fasten the boot (B) to the mower deck with two straps (D).



INSTALLING

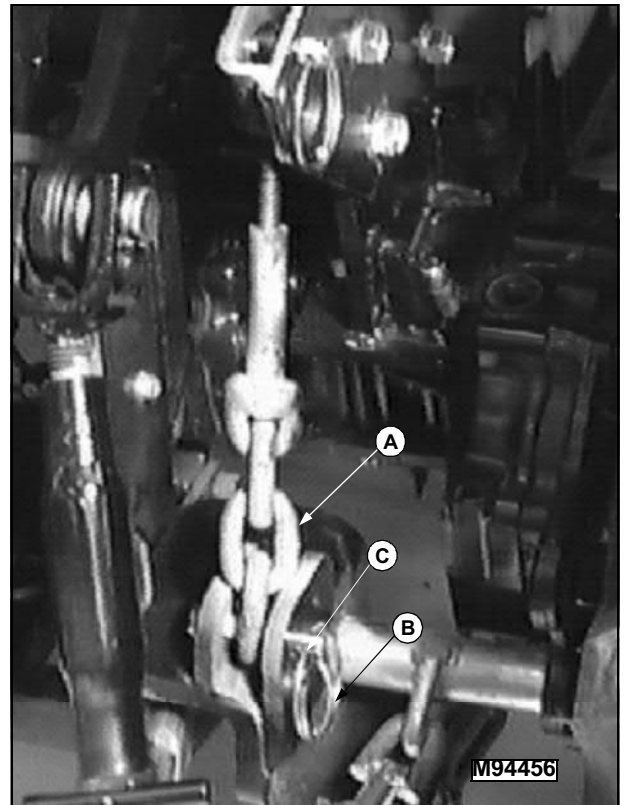
Adjusting Lift Stop Bracket

NOTE: The purpose of this adjustment is to set the mower at the desired cutting height. While allowing the MCS full range of motion.

1. Raise mower deck to provide slack in lift stop chains (A).
2. Remove ring (B) and bottom clevis pin (C) from right lift bracket. Repeat for left lift stop bracket.

NOTE: Make sure mower deck is slightly higher (approximately 1/8 inch) than desired height. Mower deck will settle slightly when weight is shifted to lift stop brackets.

3. Set mower deck height. (See tractor operator manual for deck height adjustments).
4. Adjust stop length for both sides, so that chain tension is tight. Install bottom clevis pins and rings.



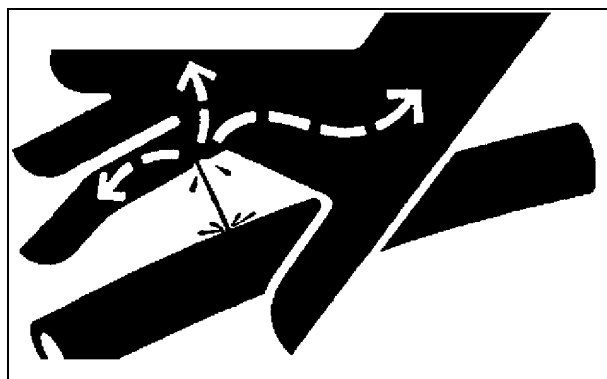
REMOVING

Park Vehicle Safely

- Stop vehicle on a level surface, not on a slope.
- Disengage PTO.
- Engage the park brake.
- STOP the engine.
- Remove the key.
- Before you leave the operator's seat, wait for engine and all moving parts to STOP.

Avoid High Pressure Fluids

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



REMOVING

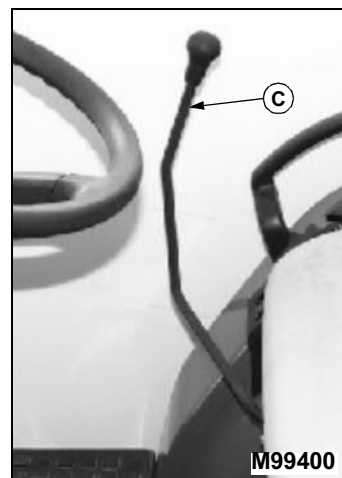
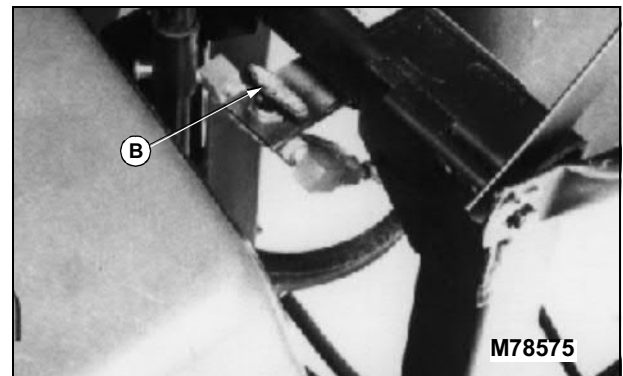
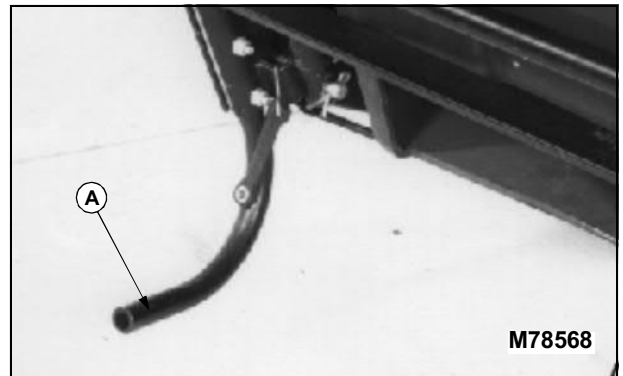
Removing MCS

1. Park vehicle safely.



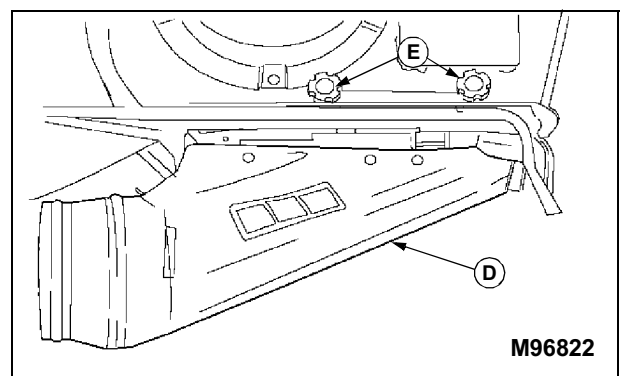
CAUTION: Stop tractor and Power-Pak engines before removing MCS.

2. Remove mower boot from mower.
3. Raise MCS off ground.
4. Shut off engine and engage park brake.
5. Install both MCS stabilizer feet (A).
6. Start engine.
7. Lower MCS to the ground using 3-point hitch.
8. Put hydraulic dump shut-off valve (B) in the horizontal and open position shown.
9. Shut off engine and engage park brake.
10. Relieve hydraulic pressure by moving SCV lever (C) in all four directions.



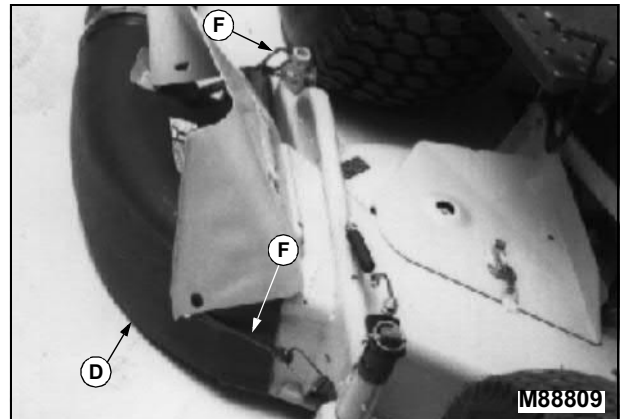
11. Remove boot (D) and tube together from mower deck:

- For 54-inch decks, turn plastic knobs (E) to the right, counterclockwise, to loosen.



REMOVING

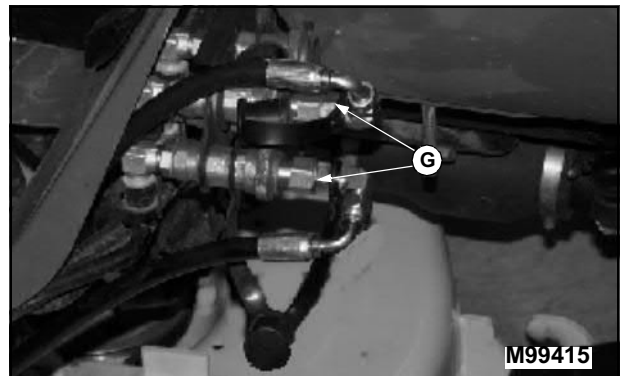
- For 60-inch decks, remove straps (F) securing boot to deck.



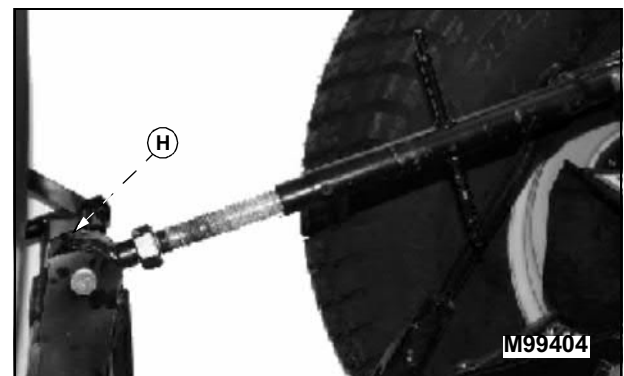
12. Secure boot to MCS.

13. Remove hoses (G) from tractor hydraulic couplers. Install hose protectors on hose ends. Remove tie straps securing hoses to tractor.

14. Remove plug for optional light kit from tractor, if equipped.

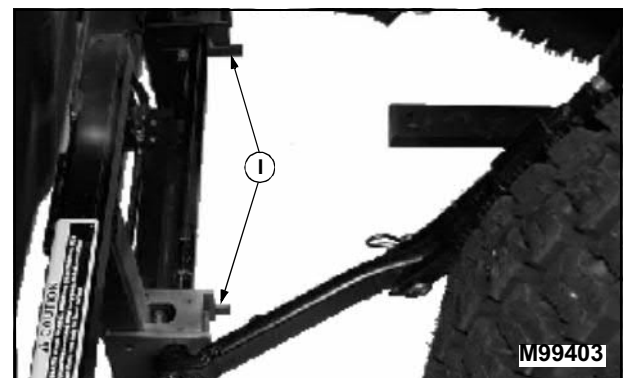


15. Remove center link from MCS by removing quick lock pin (H) and drilled pin.



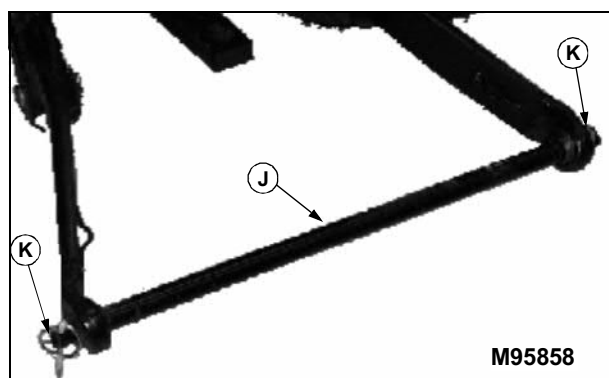
16. Open both MCS frame safety latches (I).

17. Start tractor and drive slowly away from MCS.



REMOVING

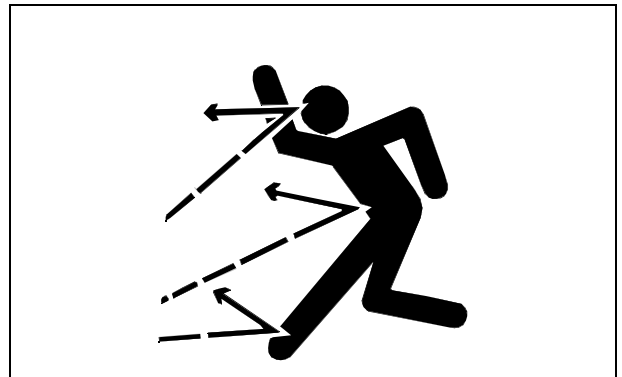
18.Remove and store quick lock pins (K) and cross bar (J) with MCS.



OPERATING

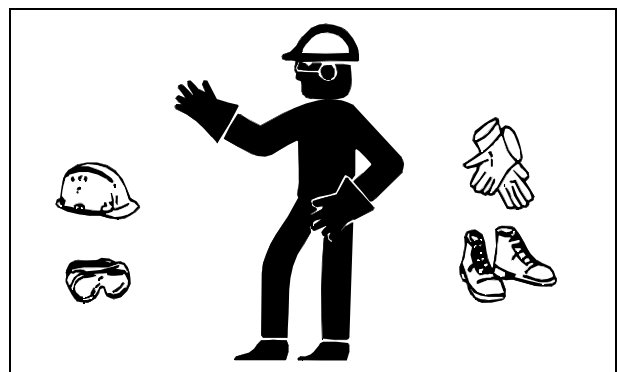
Operate Safely

- Check vehicle 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.
- Clear work area of objects that might be thrown. Keep people and pets out of the work area. Stop machine if anyone enters the area.
- If you hit an object, stop the machine and inspect it. Make repairs before you operate. Keep machine properly maintained and in good working order. Keep all shields and guards in place.
- DO NOT leave machine unattended when it is running.
- Operate only during daylight or with good artificial light.
- DO NOT let anyone, especially children, ride on machine or vehicle.
- DO NOT let children or an untrained person operate machine.
- Do not wear radio or music headphones while operating the machine. Safe operation requires your full attention.
- DO NOT operate machine while under the influence of drugs or alcohol.



Wear Appropriate Clothing

- Wear close fitting clothing and safety equipment appropriate for the job.
- Loud noise can cause impairment or loss of hearing; wear a suitable protective device such as earplugs.

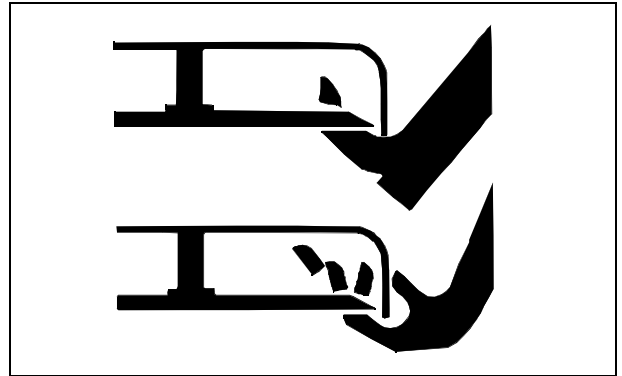


OPERATING

Avoid Injury From Contacting Blades

Before you dismount to unplug or adjust mower:

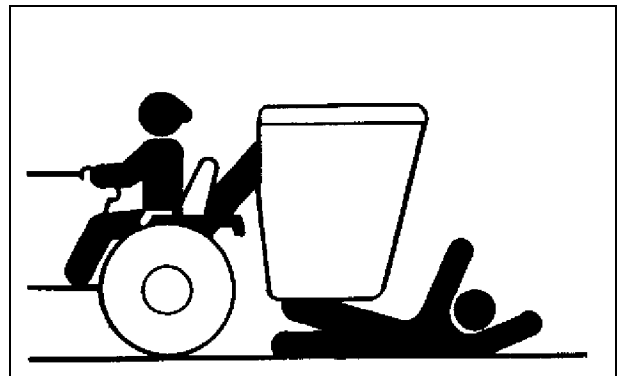
- DISENGAGE PTO to stop mower blades.
- STOP the engine.
- LOCK the park brake.
- Remove key.
- Wait for mower blades to STOP.
- Keep hands, feet and clothing away from mower deck when engine is running.
- DISENGAGE PTO to stop mower blades when you are not using mower.



Protect Children

Before backing up: Look behind for children.

- DO NOT allow children to get inside MCS.
- DO NOT allow children to ride on tractor or MCS.



Safety Tips

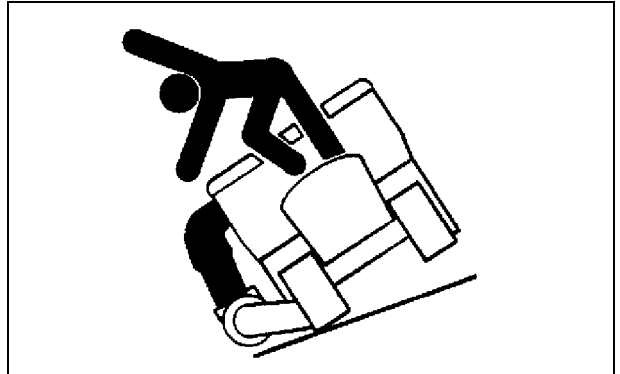
- Allow only operator on tractor. Keep riders off.
- Stop tractor and Power-Pak engines before emptying MCS.
- Empty MCS before transporting.
- DO NOT drive with MCS in the dump position.
- Empty MCS at the end of each day.

OPERATING

Avoid Tipping

Install six 20 kg (42 lb.) front weights on tractor.

- Slow down before making turns.
- DO NOT use MCS near a ditch or bank.
- Avoid holes, rocks, or roots.
- Drive up and down slopes. DO NOT drive across slopes.
- Avoid parking on slopes.
- On slopes empty MCS when half full.



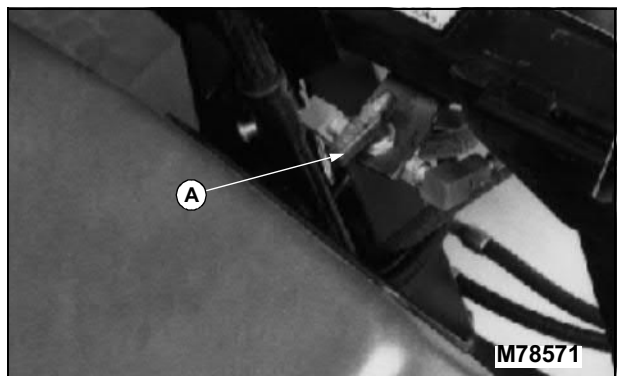
Learning Controls

1. Use SCV control lever to raise and dump MCS.

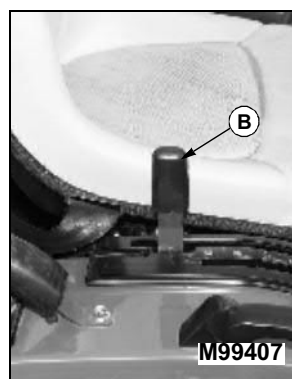


2. Turn hydraulic dump shut-off valve (A) to control MCS:

- Turn shut-off valve to a vertical and closed position when mowing or when not dumping grass (shown).
- Turn shut-off valve to a horizontal and open position (in line with hydraulic hoses) when dumping grass.



3. Raise and lower MCS to transport and operating positions with tractor rockshaft lever (B).



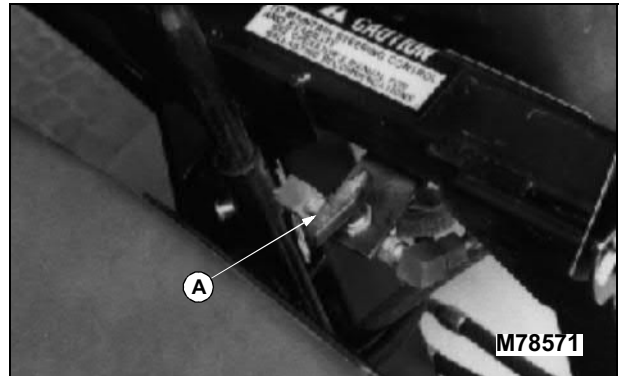
OPERATING

Operating Tips: MCS



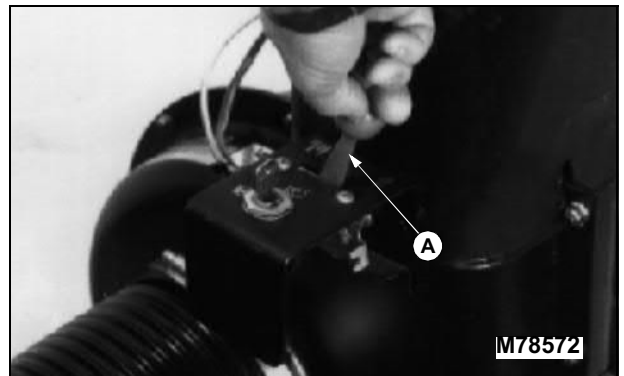
CAUTION: AVOID INJURY! DO NOT operate without discharge chute or entire grass catcher in place.

1. Do not cut wet grass. Use MCS only when grass is dry, not too tall, or dense.
2. Lower MCS to operating position before picking up grass.
3. Put hydraulic dump shut-off valve (A) in closed position shown before picking up grass.
4. Start mower with tractor PTO switch.
5. Move tractor throttle to FAST.
6. Empty MCS at end of each day.



Operating Tips: Power-Pak Engine

1. Put Power-Pak engine throttle lever (A) 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. Reduce engine speed if grass blows through collection box air vent. Increase engine speed if grass clippings plug collector chute or hoses.



OPERATING

Mowing Travel Speeds

NOTE: *If MCS is not picking up grass clippings, reduce ground speed. In general, ground speed should be slower when using MCS.*

Use slow travel speed for:

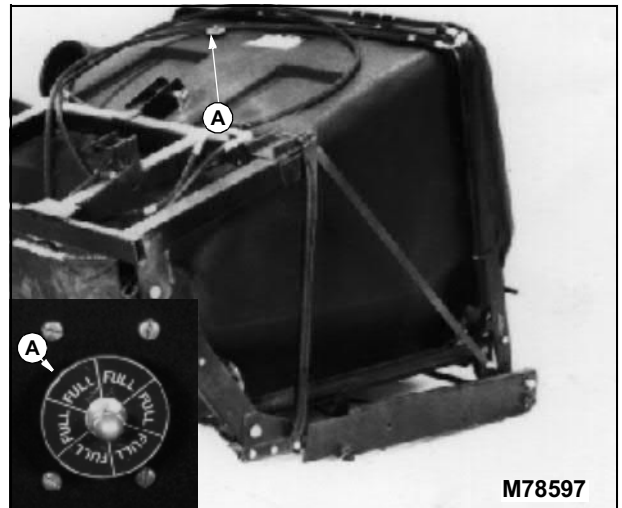
- Trimming.
- Mowing tall grass.

Use faster travel speeds for:

- Normal mowing on level ground.
- Driving between mowing jobs.

Filling Collection Box

1. FULL washer (A) spins when MCS is operating and box is not full.
2. FULL washer stops spinning when box is full.
3. When FULL washer stops spinning:
 - Stop mower with tractor PTO switch.
 - Stop Power-Pak engine. Remove key.



OPERATING

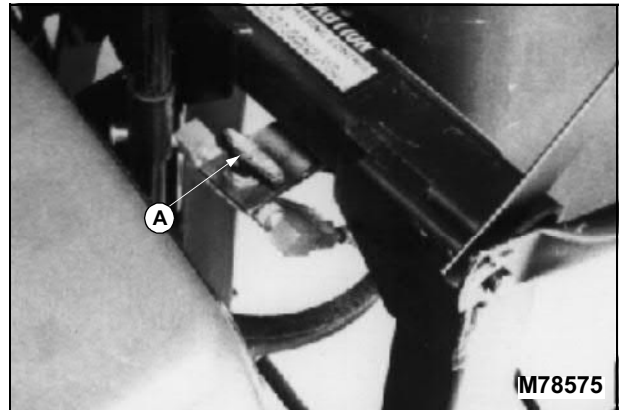
Emptying Material Collection System (MCS)



CAUTION: To prevent bodily injury or damage to tractor or MCS, follow safety tips:

- DO NOT allow anyone to stand near or under raises MCS.
- LOOK behind MCS before backing up tractor.
- Park tractor on level ground before emptying MCS.
- Do not move tractor while MCS is raising.

1. Back tractor until MCS is approximately 50 mm (2 in.) from dump container.
2. Lock park brake.
3. Stop mower with tractor PTO switch.
4. Stop Power-Pak engine. Remove key.
5. Move throttle to FAST.
6. Place hydraulic dump shut-off valve (A) in the open position shown.
7. Pull tractor SCV control lever rearward. Hold lever until load is dumped.
8. Push tractor SCV control lever forward to lower MCS.
9. Put hydraulic dump shut-off valve in the closed position.



OPERATING

Checking for Plugging



CAUTION: Prevent bodily injury. Stop tractor, shut off Power-Pak engine and remove key before unplugging discharge chute.

LOOK: If there is trail of clippings behind mower, check for plugged chute or full box.

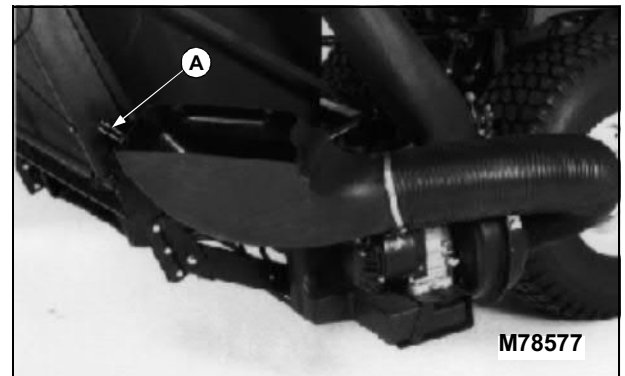


Mowing Without Using Hydraulic Dump



CAUTION: AVOID INJURY: DO NOT operate mower without discharge chute or entire grass catcher in place.

1. Shut off Power-Pak engine.
2. Disconnect blower boot from mower deck.
3. Fasten boot to frame with retainer (A).
4. Lower discharge chute into place.



OPERATING

Driving Tractor With Material Collection System (MCS)

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

- Tractor and MCS are not intended for use on streets or highways.
- Fasten Slow Moving Vehicle (SMV) sign to back of MCS.
- Before you drive tractor, stop mower and Power-Pak engine.
- Empty MCS and lower to operating position.
- Raise mower fully.
- Drive carefully at safe speed.
- Be careful when you drive on slopes.
- Slow down when you make turns.

SERVICE MACHINE SAFELY

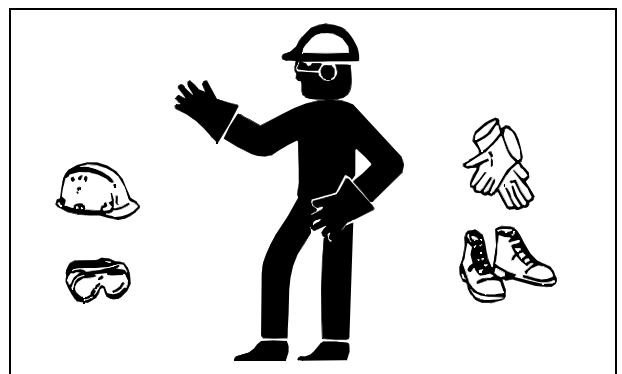
Practice Safe Maintenance

- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate or service machine while it is moving. Keep safety devices in place and in working condition. Keep hardware tight.
- To prevent them from getting caught, keep hands, feet, clothing, jewelry, and long hair away from any moving parts.
- Before servicing machine, lower it to the ground. Disengage all power and stop the vehicle engine. Move hydraulic lift levers back and forth to relieve pressure. Lock vehicle park brake and remove the key. Let engine cool.
- Securely support any machine elements that must be raised for service work.
- Never run vehicle engine unless park brake is locked.
- 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

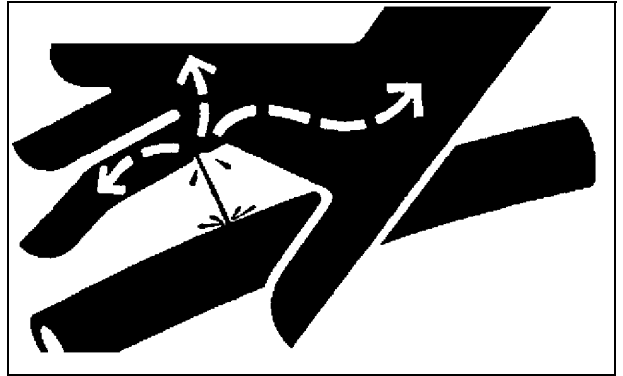
- Wear close fitting clothing and safety equipment appropriate for the job.
- Loud noise can cause impairment or loss of hearing, wear a suitable protective device such as earplugs.
- Do not wear radio or music headphones while servicing the machine. Safe servicing requires your full attention.



SERVICE MACHINE SAFELY

Avoid High Pressure Fluids

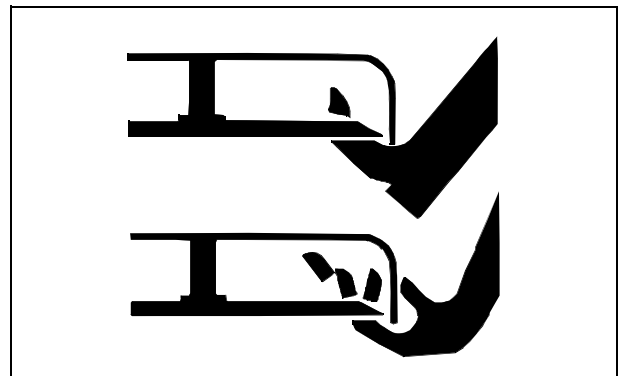
- Hydraulic hoses and lines can fail due to physical damage, kinks, age, and exposure. Check hoses and lines regularly. Replace damaged hoses and lines.
- Hydraulic fluid connections can loosen due to physical damage and vibration. Check connections regularly. Tighten loose connections.
- Escaping fluid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



Avoid Injury From Contacting Blades

Before you dismount to unplug or adjust mower:

- STOP the engine.
- LOCK the park brake.
- DISENGAGE PTO to stop mower blades.
- Remove key.
- Wait for mower blades to STOP.
- Keep hands, feet and clothing away from mower deck when engine is running.
- DISENGAGE PTO to stop mower blades when you are not using mower.



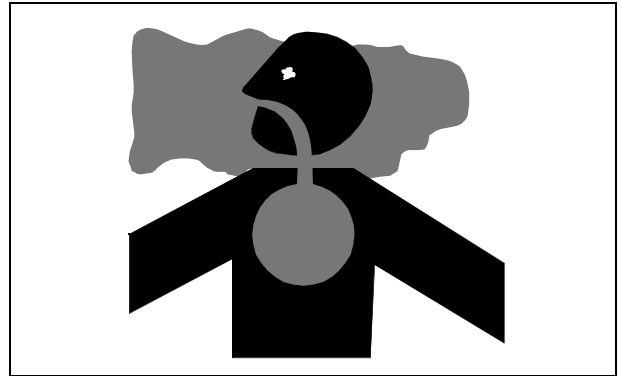
SERVICE

Avoid Fumes



CAUTION: Engine exhaust fumes can cause sickness or death:

- If it is necessary to run an engine in an enclosed area, use an exhaust pipe extension to remove the fumes.
- Always try to work in a well ventilated area.



Checking Hydraulic Dump and Tractor Hydraulic System



CAUTION: Avoid Serious Injury!

DO NOT allow anyone to stand near or under raised MCS.

IMPORTANT: Hydraulic oil and engine must be at normal operating temperature. Cold hydraulic oil will give incorrect reading.

1. Start engine. Operate transmission, mower deck, and hydraulic dump functions for minimum of 5 to 10 minutes.
2. Record amount of time it requires to raise box to dump position at full throttle. Do this several times and take average.
3. Record amount of time required to lower box to transport position at full throttle. Do this several times and take average.
4. Compare your results:
Time required to lift.
(Cycle time) ---- 20 seconds maximum
Time required to lower.
(Cycle time) ---- 20 seconds maximum
5. Cycle times given are to be used only as guidelines. When unit does not perform according to cycle times given, you must decide if difference is great enough to indicate malfunction of system.

SERVICE

Checking Hydraulic System Fluid Level

1. Move PTO switches to OFF position.
2. Empty MCS.
3. Raise and lower MCS several times to remove air from hydraulic cylinder.
4. Put MCS in lowered position.
5. Stop tractor and Power-Pak engines. Remove keys. Lock park brake.
6. Wait for all rotating parts to stop.
7. Check fluid level. (See tractor operator's manual.)

Cleaning Stainless Steel Supports - Every 25 Hours

1. Move PTO lever to OFF position.
2. Empty MCS.
3. Put MCS in lowered position.
4. Stop tractor and Power-Pak engine. Remove keys. Lock park brake.
5. Wait for all rotating parts to stop.
6. Remove burrs and scratches (with steel wool or equivalent) from upper part of stainless steel supports.



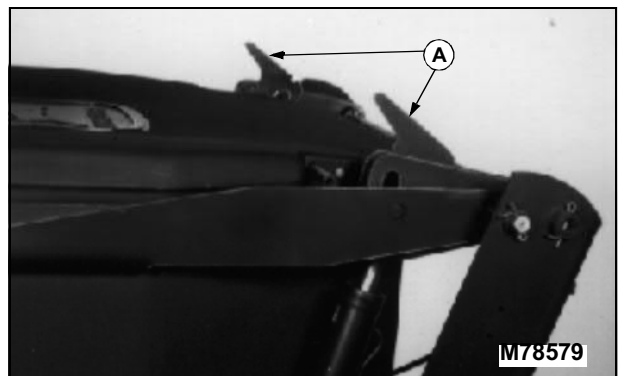
CAUTION: Avoid Serious Injury!

DO NOT allow anyone to stand near or under raised MCS.

7. If necessary, raise collection box to dump position. Remove burrs and scratches from lower parts of stainless steel supports.

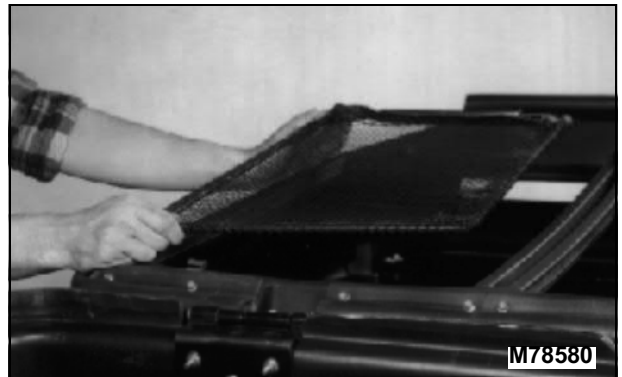
Cleaning Collection Box Lid Screens

1. Stop mower by moving PTO switch to OFF. Stop Power-Pak engine and remove key.
2. Empty MCS.
3. Raise box lid locks (A) slightly with remote cylinder lever.



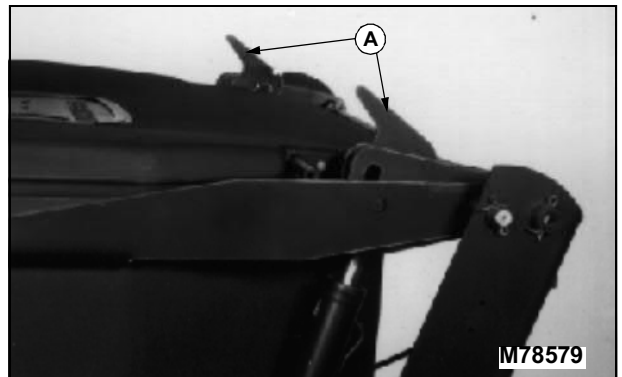
SERVICE

4. Stop tractor engine. Remove key. Lock park brake.
5. Open lid.
6. Remove and clean screens.
7. Install screens. Close lid.



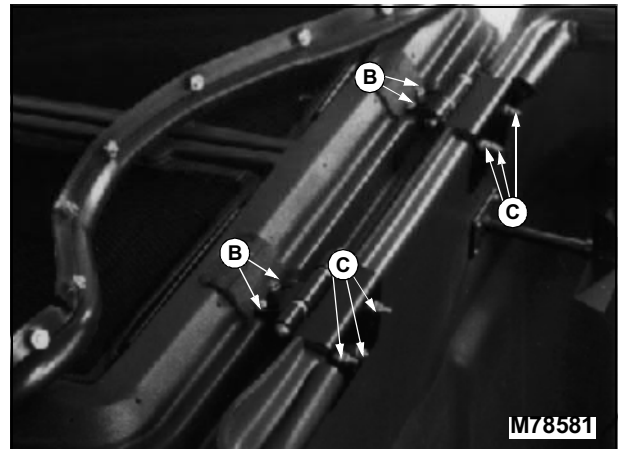
Adjusting Collection Box Lid

1. Stop mower by moving PTO switch to OFF. Stop Power-Pak engine and remove key.
2. Empty MCS.
3. Raise lid lock (A) with tractor hydraulic lever.
4. Stop tractor engine. Remove key. Lock park brake.
5. Open lid.



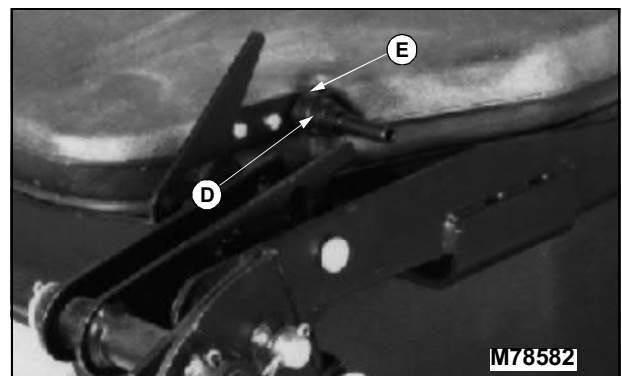
Picture Note: Lid seal shown partially removed for clarity.

6. Loosen bolts (B).
7. Loosen lock nuts (C).
8. Close lid. Move lid until seal on lid aligns with seal on box.
9. Tighten bolts and lock nuts.



10. Adjust lid for tight seal:

- Loosen set screw (D) on sidewall of stepped bushing located on each side of lid.
- Move stepped bushing (E) inward or outward as needed.
- Tighten set screw.
- CHECK: That the lid closes tightly. Adjust stepped bushing (E) as needed.



TROUBLESHOOTING

Using Troubleshooting Chart

If you are experiencing a problem that is not listed in this chart, see your John Deere dealer for service.

When you have checked all the possible causes listed and you are still experiencing the problem, see your John Deere dealer.

IF	CHECK
Grass not being picked up completely.	Mow grass only when dry.
	Reduce tractor ground speed.
	Empty MCS.
	Clean collection box screen.
	Unplug chute.
	Adjust Power-Pak engine speed.
	Increase tractor engine speed to full throttle.
Collection boot and blower hose plug.	Mow grass only when dry.
	Empty MCS.
	Clean collection box screen.
	Increase Power-Pak engine speed to full throttle.
	Reduce tractor ground speed.
	Stop mower when MCS is full.
MCS moves too slowly.	Mow grass only when dry.
	Open shut-off valve fully.
	Check for pinched hydraulic valve.
	Check oil level. Add oil only if needed.
	Using wrong oil in tractor. Check tractor operator manual.
	Replace oil filter. See tractor operator manual.
	Check for bent or broken control valve linkage. See John Deere dealer.
	Check relief valve. See a John Deere dealer.
	Clean stainless steel supports.

TROUBLESHOOTING

IF	CHECK
MCS will not raise.	Open shut-off valve fully.
	Check hydraulic connections.
	Check for pinched hydraulic hoses.
	Mow grass only when dry.
	Clean stainless steel supports.
MCS raises, but will not dump.	Mow grass only when dry.
MCS goes up crooked.	Unload MCS on level ground.
	Clean stainless steel supports.
	Spread out grass from side to side in MCS.
MCS lid will not open when in DUMP position.	Adjust lid.
Tractor bounces during use.	Add additional front weights to tractor.
Grass leaks out lid.	Adjust lid latches and/or lid hinges.
Front wheels raise off ground when emptying MCS.	Add additional front wheel weights.

STORING MACHINE

Storing Safety



CAUTION: Engine exhaust fumes can cause sickness or death.

- If it is necessary to run an engine in an enclosed area, use an exhaust pipe extension to remove the fumes. Always try to work in a well ventilated area.
- **DO NOT** store vehicle with fuel in the tank inside a building where fumes may reach an open flame or spark.
- Allow engine to cool before storing in any enclosure.

Storing Hydraulic Dump Material Collection System (MCS)

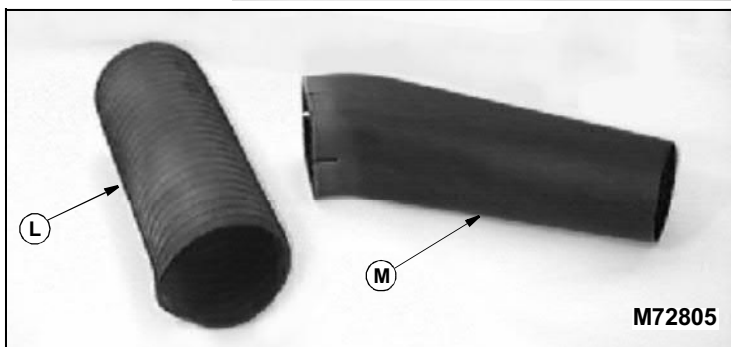
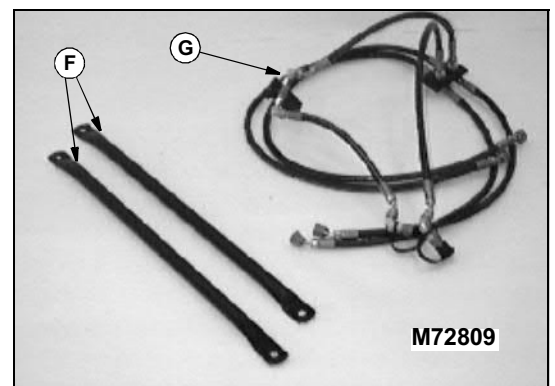
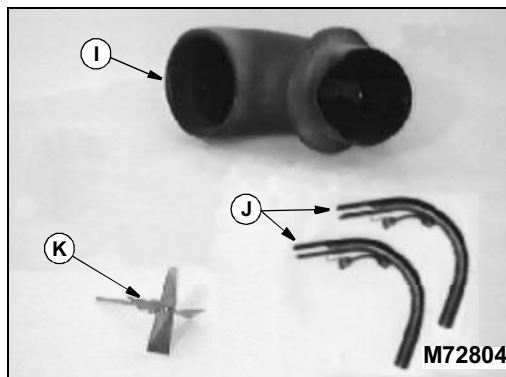
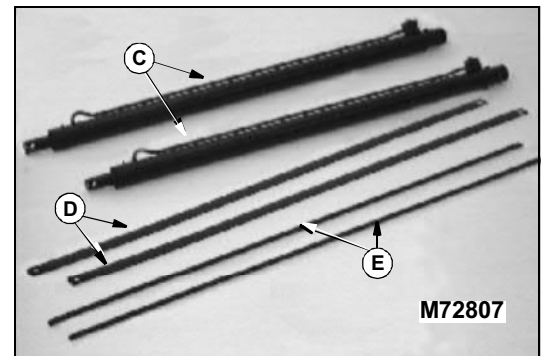
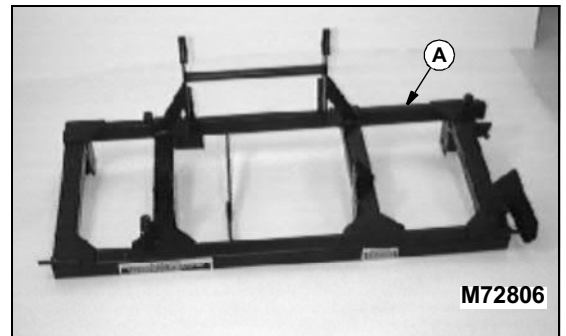
IMPORTANT: Empty MCS before storing.

1. Empty MCS.
2. Clean box and box screen.
3. Remove MCS from tractor.
4. Check for missing hardware. Replace if necessary.
5. Paint unpainted areas to prevent rust.
6. If possible, store MCS in cool, dark place. If MCS must be stored outside, put weather-proof cover over it.

ASSEMBLY

Identify Parts

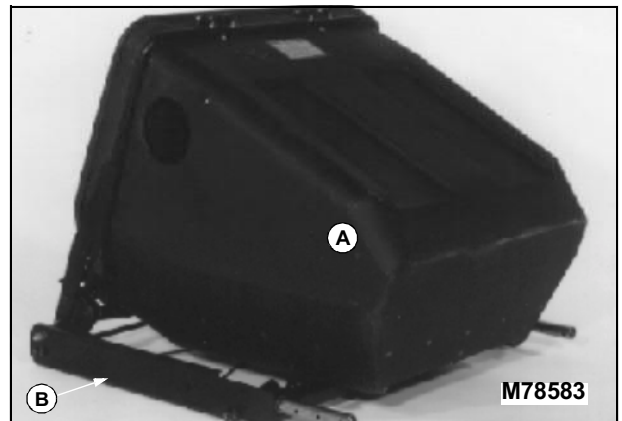
Qty	Description
1	Collection Box Assembly (Not Shown)
1	Frame, Hydraulic Dump (A)
2	Cylinder Support (B)
2	Cylinder (C)
2	Rod, Cylinder (D)
2	Strap, Support (E)
2	Tube, Stop (F)
1	Hose Assembly, Hydraulic (G)
1	Boot, Mower Deck (H) (60-inch shown)
1	Chute, Inlet (I)
2	Stabilizer Foot (J)
1	Fan (K)
1	Hose, (Mower Deck Boot to Power-Pak) (L)
1	Chute, Blower (M)
1	Bag of Parts (not shown)



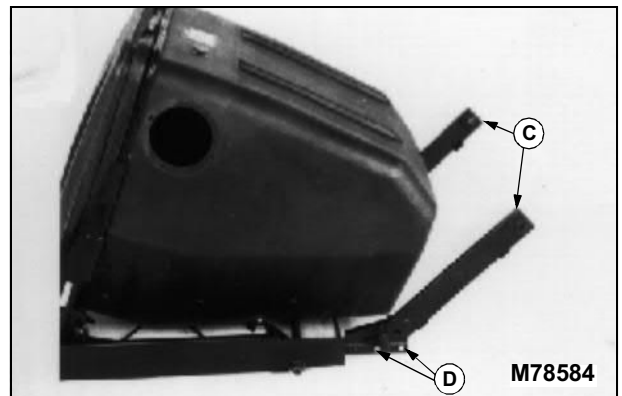
ASSEMBLY

Assemble MCS Box to Frame

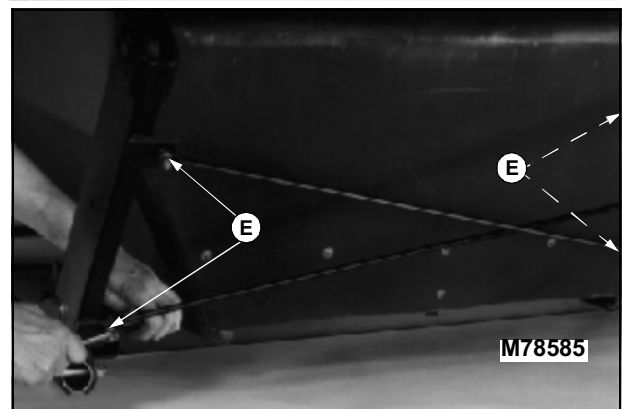
1. Put collection box (A) on back frame (B).



2. Install cylinder supports (C) on stainless steel tubes. Loosely fasten supports with M10 x 65 bolts and lock nuts (D).



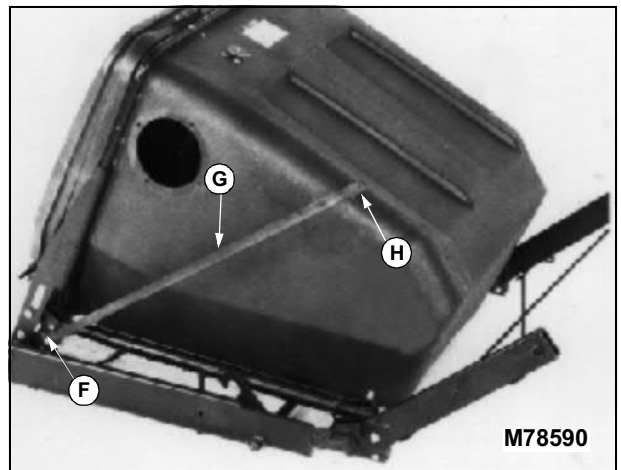
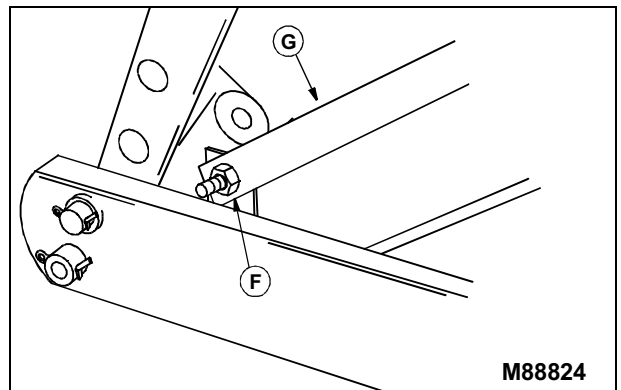
3. Install reinforcement rods between the cylinder supports. Loosely fasten rods to both supports with four M6 x 20 bolts and lock nuts (E).



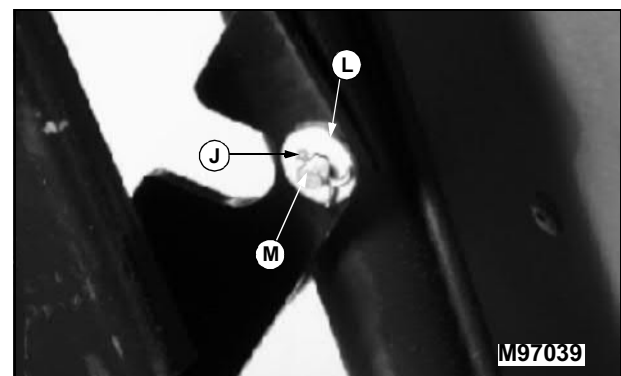
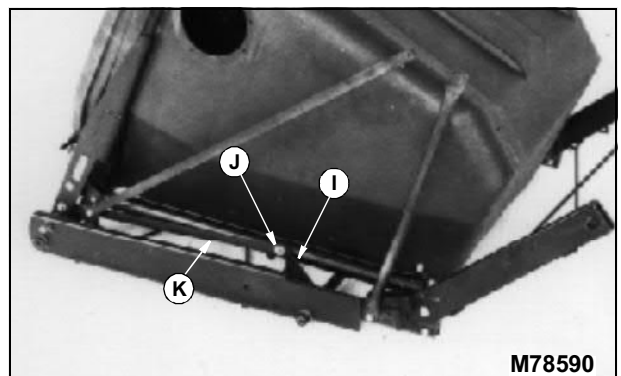
ASSEMBLY

NOTE: Support strap on right side of MCS unit must be fastened to support bracket with cap screw inserted from the inside out. If this procedure is not followed, the linkage strap will strike the cap screw causing the linkage strap to bind and bend. Larger hole (H) on one end of each support strap must extend away from the support bracket.

4. Fasten support strap (G) loosely to support bracket with M10 x 25 cap screw (F) and lock nut.



5. Connect linkage (K) to locking mechanism (I) on right side of frame. Fasten linkage with drilled pin (M), washer (L) and 1/8 x 3/4 in. cotter pin (J). Install pin from inside so washer and cotter pin face to the outside of linkage.

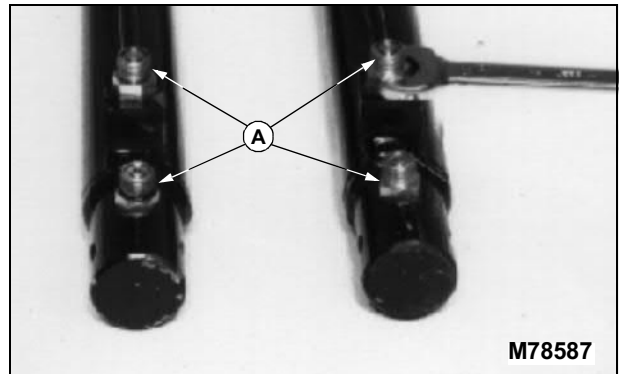


ASSEMBLY

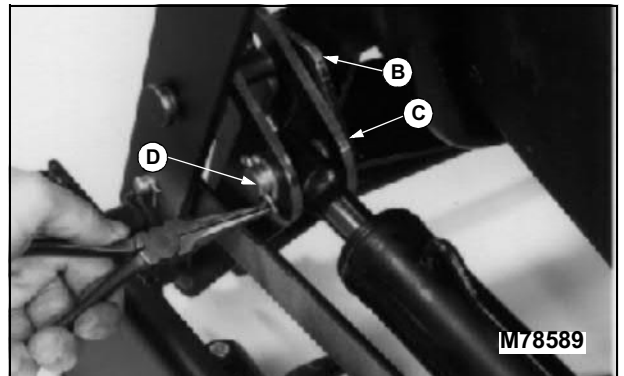
Install Hydraulic Cylinders and Stop Tubes

1. Place large diameter O-rings (A) on cylinder fitting shoulders.

2. Install and tighten cylinder fittings.

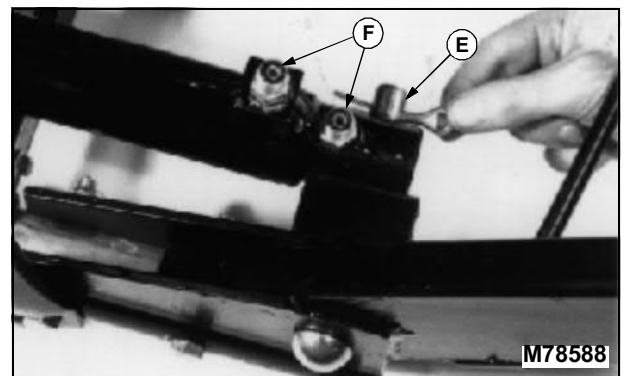


3. Fasten rod end of cylinder to latch (B) and linkage assembly (C) with drilled pin (D), washer, and cotter pin. Repeat for other cylinder.

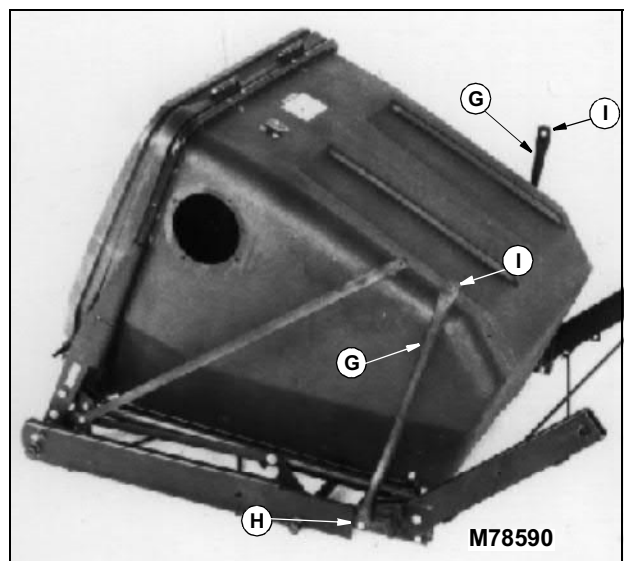


4. Fasten cylinders to cylinder supports with cylinder pins (E) and cotter pins.

5. Place small diameter O-rings (F) in cylinder fittings.



6. Loosely fasten stop tubes (G) to cylinder supports on both sides of collection box with M10 x 70 bolts and lock nuts (H) finger tight. Larger hole (I) on one end of each stop tube must extend away from the cylinder support.

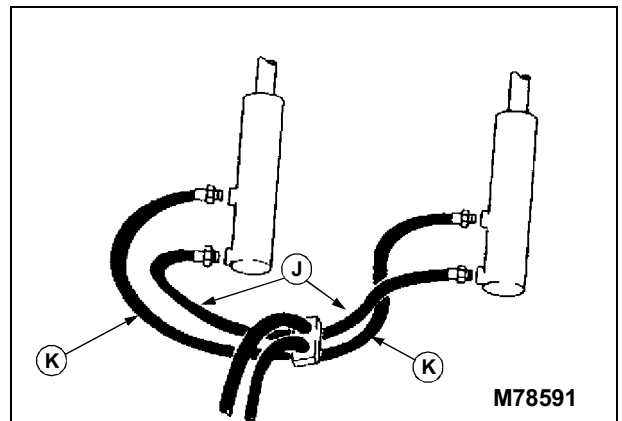


ASSEMBLY

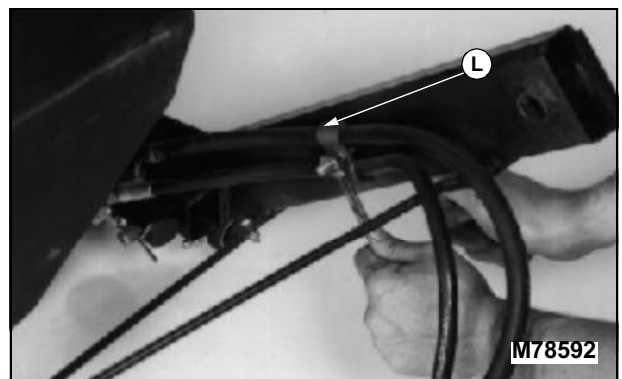
IMPORTANT: Be sure hydraulic line fittings are tight.

NOTE: *Shortest hydraulic line should be connected to left-hand cylinder.*

7. Connect hydraulic lines (J) tightly to lower fittings on both cylinders.
8. Connect hydraulic lines (K) tightly to upper fittings on both cylinders.

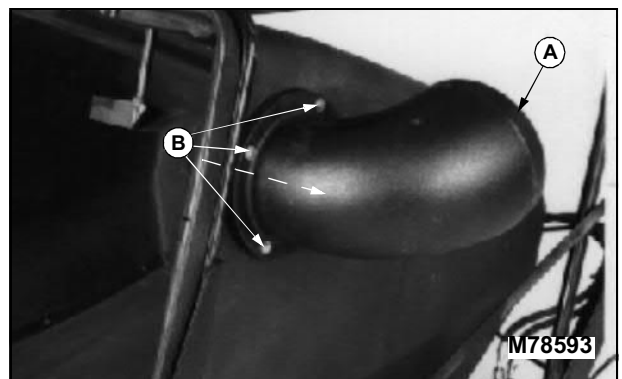


9. Fasten hydraulic hoses to both cylinder supports with clamps (L), M8 x 55 bolts, and lock nuts. Do not tighten clamps at this time.



Install Inlet Chute

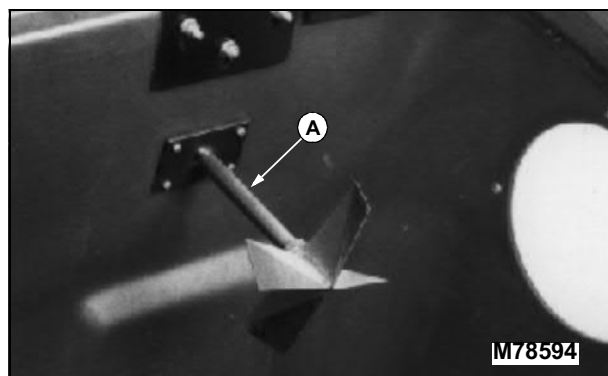
1. Install inlet chute (A) to collection box as shown.
2. Fasten chute to box with four M6 x 35 bolts (B), eight washers and four lock nuts. Washers should be placed under bolt heads and under nuts.



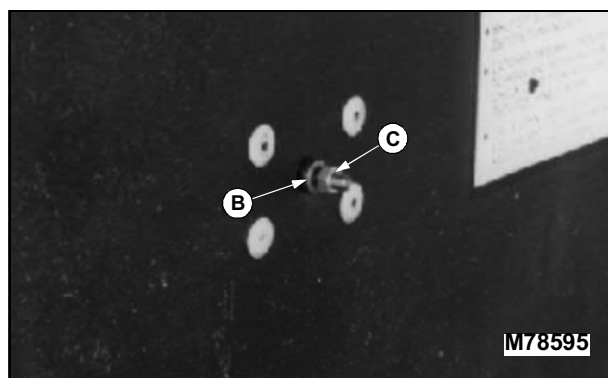
ASSEMBLY

Install Collection Box Fan

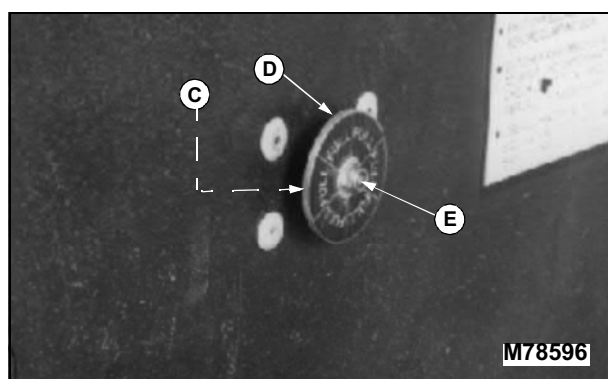
1. Install fan (A) through bracket from inside collection box.



2. Fasten fan from outside the collection box with washer (B) and nut (C).



3. Apply "FULL" decal on FULL washer. Put FULL washer (D) on shaft. Fasten it with crown nut (E). Turn nut (C) installed in Step 2 out against FULL washer until washer cannot turn on shaft.

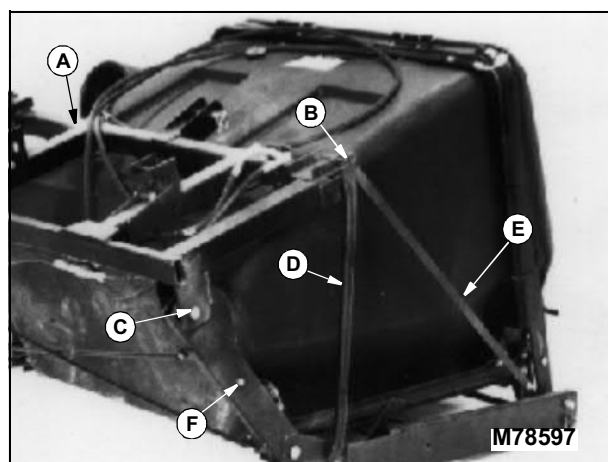


Install Collection Box to Frame

1. Fasten cylinder supports (F) to both sides of hydraulic dump frame (A) with drilled pin and cotter pin (C).

2. Fasten stop tube (D) and support strap (E) on studs on both sides of frame with cotter pin (B).

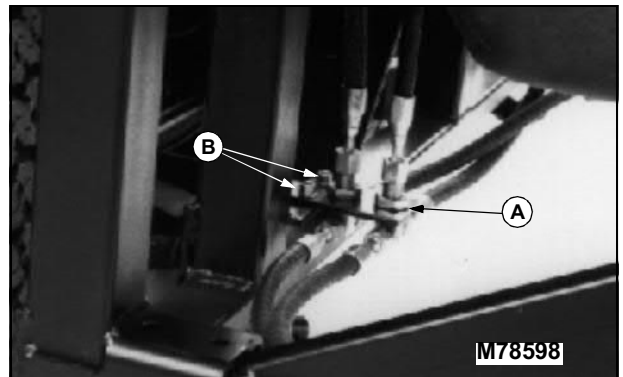
3. Tighten hardware on cylinder supports, reinforcement rods, stop tubes, and support straps.



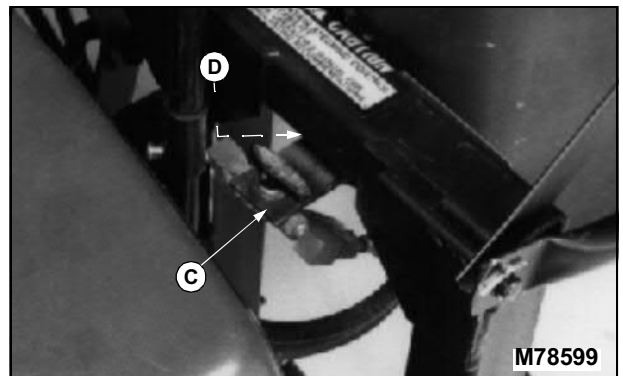
ASSEMBLY

Connect Hydraulic Hoses

1. Fasten hose support bracket (A) to frame with two M6 x 20 cap screws and lock nuts (B). Position hoses and tighten clamp lock nuts installed when hydraulic cylinders were installed.

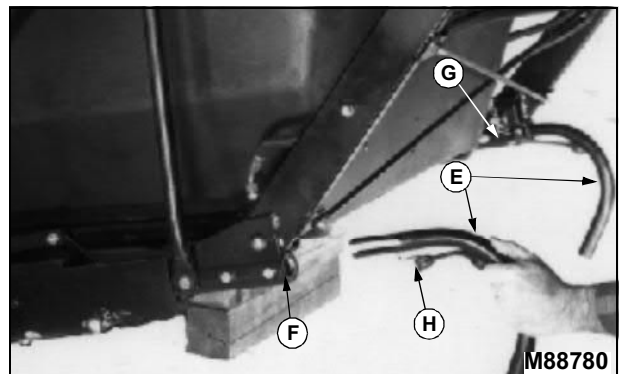


2. Fasten shut-off valve and bracket (C) to bottom side of frame with two No. 10 screws (D).



NOTE: Performing the following steps may require two people or the use of a hoist.

3. Lift frame end of collection box.
4. Support collection box with wood blocks or stabilizer feet.
5. Slide stabilizer feet (E) inside stainless steel tubes (F).
6. Fasten rubber straps to top of bracket (G) with hook (H).



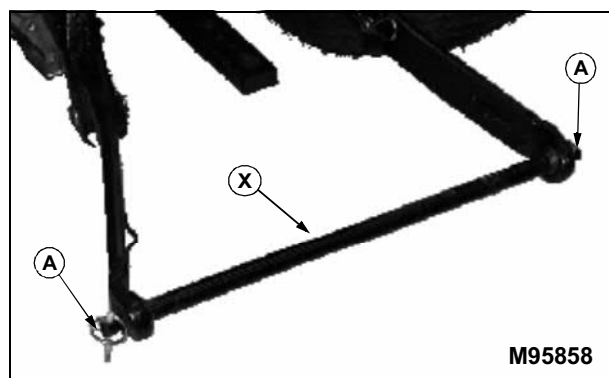
ASSEMBLY

Attaching MCS on Tractor

1. CHECK: Tractor must have requirements listed below:

- A Category 1, 3-point hitch.
- Install five 42 lb. front weights.
- A 54 or 60 in. mower deck.
- Lift stop kit.

2. Install crossbar (X) through draft links. Fasten with two quick-lock pins (A).

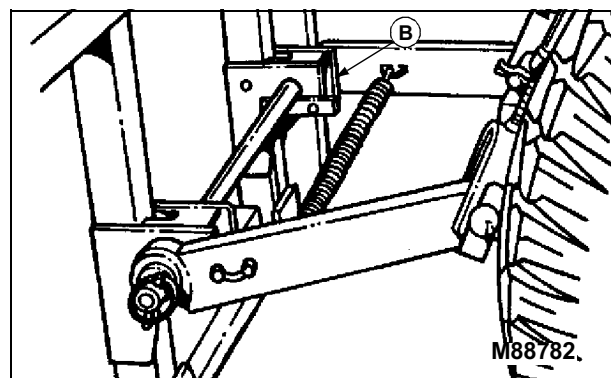
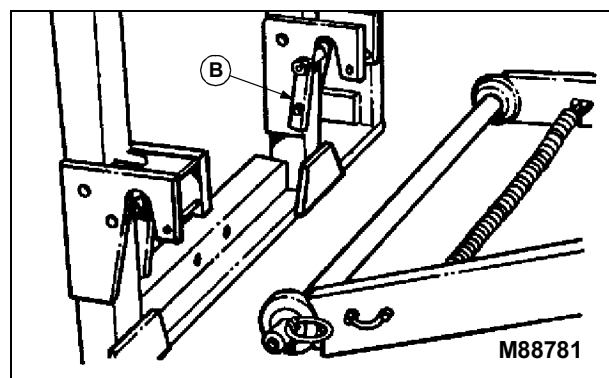


3. Open left and right safety latches (B) on MCS frame.

IMPORTANT: To help prevent damage to hydraulic dump, close safety latches before raising or lowering the MCS.

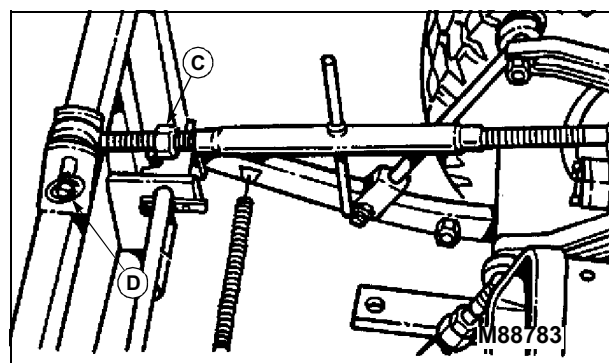
4. Back tractor into position. Raise hitch until crossbar contacts top of hydraulic dump brackets.

5. Close each safety latch (B).



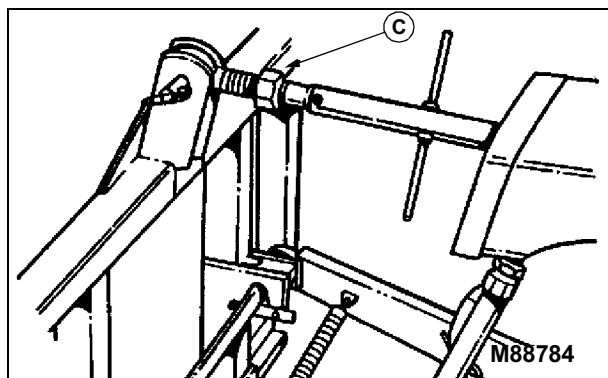
6. Loosen locking nut (C) on center link.

7. Adjust center link and install pin. Fasten it with quick-lock pin (D). The same amount of threaded rod should show on each end of center link.



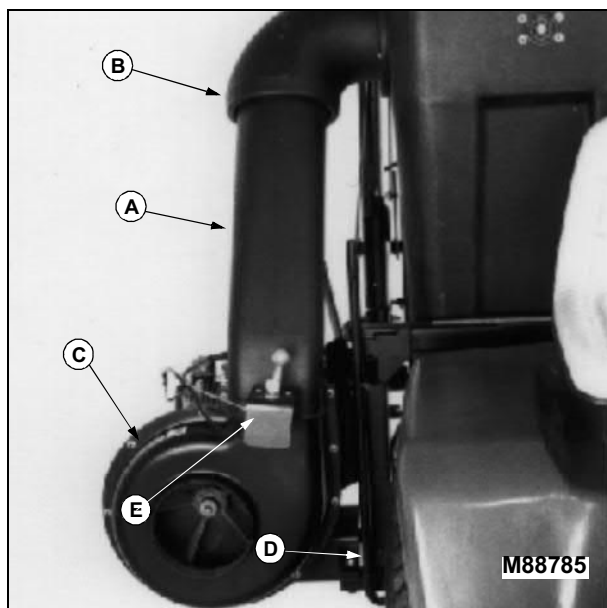
ASSEMBLY

8. Start tractor engine. Raise MCS approximately 350 mm (14 in.) off the ground.
9. Turn center link until MCS frame is perpendicular to the ground.
10. Tighten locking nut (C) against center link adjusting tube.

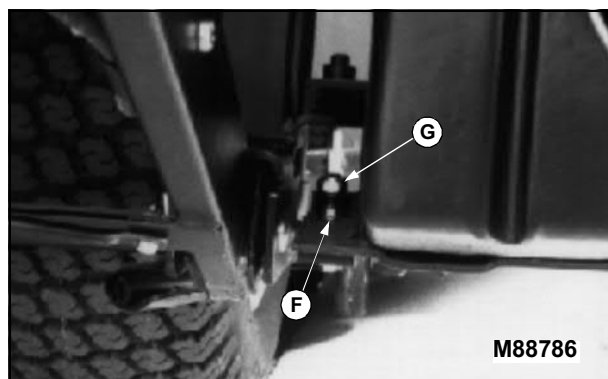


Install Power-Pak and Blower Chute

1. Put blower chute (A) into inlet chute (B).
2. Put Power-Pak (C) on frame stud. Fasten it loosely with nut (D). Secure blower chute to Power-Pak.
3. Mount Power-Pak engine throttle controls (E) to blower chute.



4. Install shear-bolt (F) and fasten it with lock nut (G). Tighten nut.



ASSEMBLY

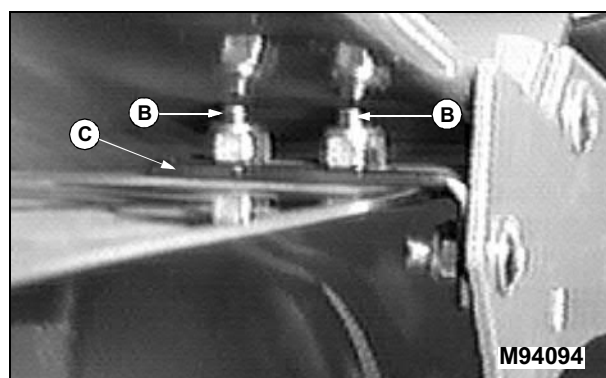
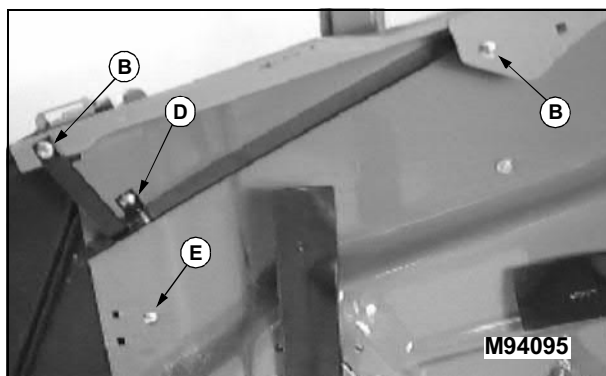
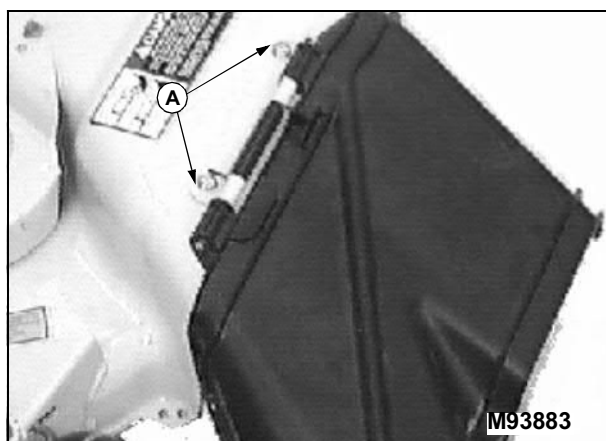
Install Baffle (54-Inch Deck)

1. Park tractor on a level surface. Lock park brake.
2. Stop engine. Remove key.



CAUTION: Mower blades have sharp edges. Wear heavy gloves or wrap blade with a rag to protect hands when working near the blades.

3. Remove mower deck from tractor.
4. Use a safe lifting device and lift mower deck to a position to safely install baffle.
5. Clean grass and dirt from underside of discharge chute.
6. Remove existing hardware (A) attaching the side discharge chute to the mower deck.
7. Fasten baffle to underside of mower deck near the chute opening with four 5/16 x 3/4 in. hex bolts (B), L-bracket (C), six 5/16 in. locknuts, one 5/16 x 1-1/4 in. hex bolt (D) and one 5/16 x 1 in. carriage bolt (E).



ASSEMBLY

Install Boot Hardware (54-Inch Deck)



CAUTION: Avoid injury from thrown objects!
Always operate the mower with the discharge chute in place.

1. Attach strap (F) and hinge (G) of discharge chute to mower deck with four flat washers (H) and two 5/16 in. locknuts (I).

- Before installing the discharge chute, the strap (F) and tightening locknuts (I), install two flat washers (H) onto one 5/16 x 1-1/4 in. hex bolt (D) and one 5/16 in. x 1 in. carriage bolt (E).

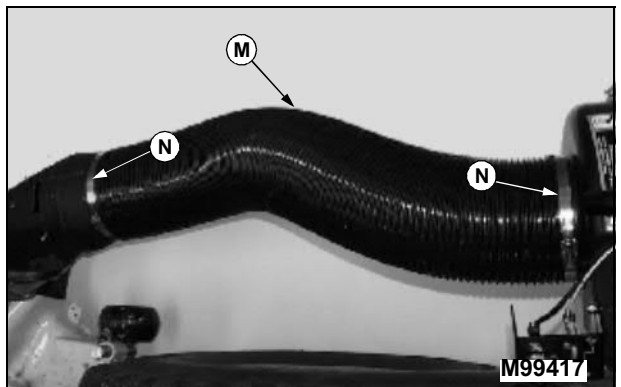
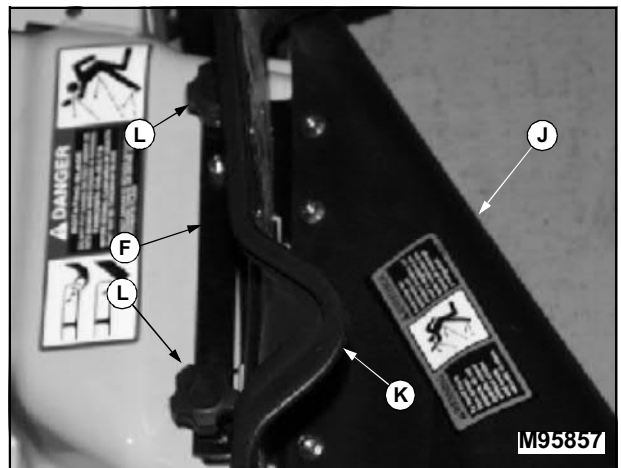
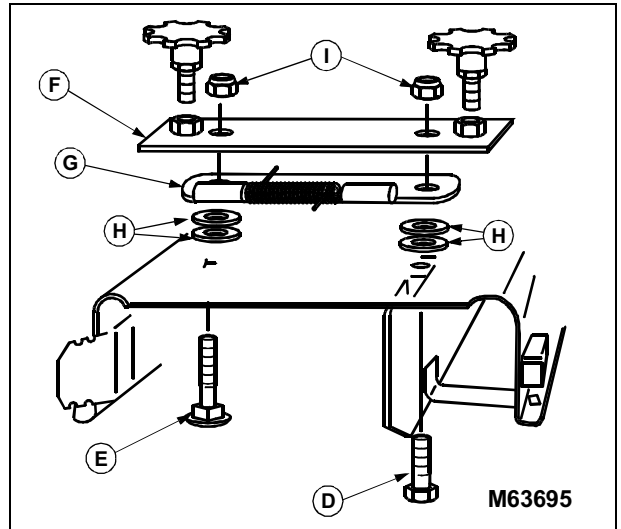
2. Safely lower deck to mowing position.

3. Install mower deck to tractor. (See mower deck operator manual for assistance.)

4. Install boot (J).

- Raise discharge chute (K).
- Slide boot into position under strap (F). Align boot mounting holes with strap mounting holes.
- Install plastic knobs (L).
- Turn plastic knobs clockwise to secure boot in position.

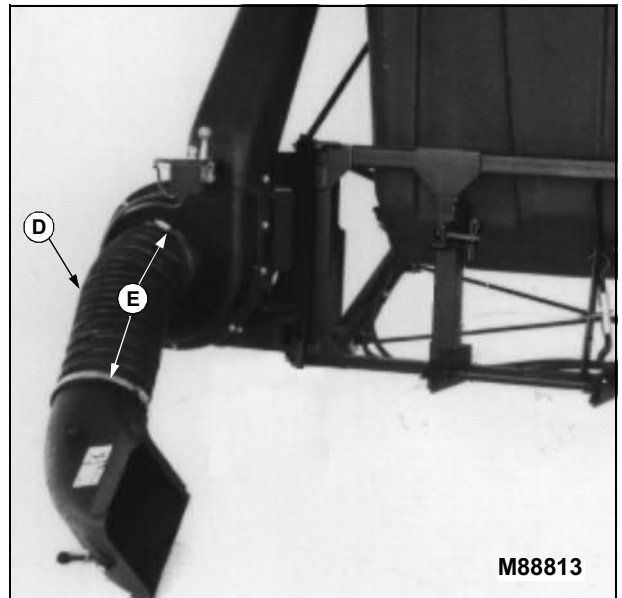
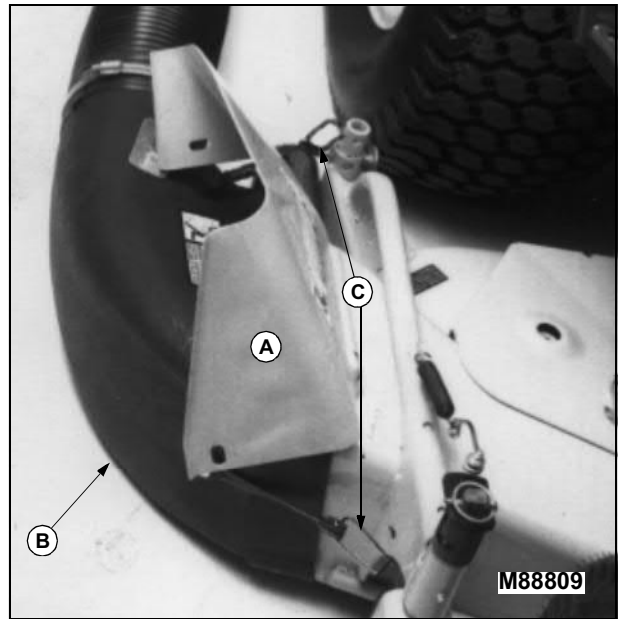
5. Fasten hose (M) to boot and Power-Pak with clamps (N).



ASSEMBLY

Install Mower Deck Boot Assembly (60-Inch Deck)

1. Clean grass and dirt from underside of discharge chute.
2. Remove two cap screws holding discharge chute in a fixed position.
3. Lower mower deck to its lowest position.
4. Raise hydraulic dump to its highest operating position.
5. Raise discharge chute (A) and fasten boot (B) to mower deck with straps (C).
6. Fasten hose (D) to boot and Power-Pak with clamps (E).



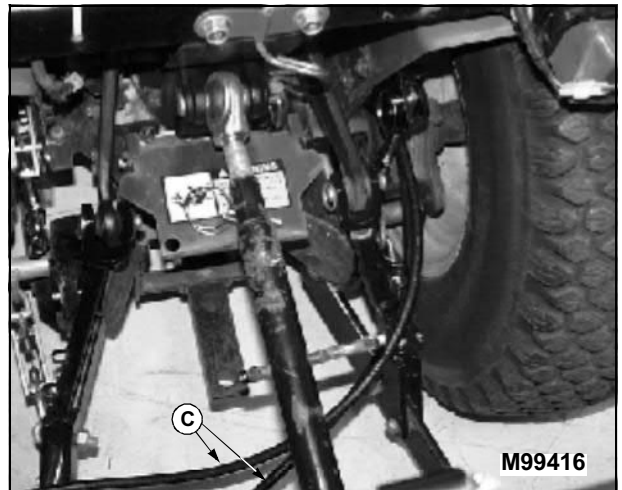
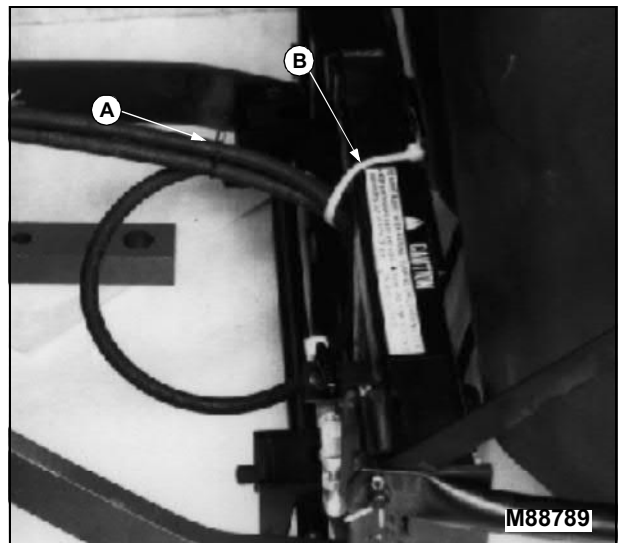
ASSEMBLY

Install Hydraulic Lines

IMPORTANT: Clean ends of hydraulic couplers and hoses before connecting them. Keep system clean to help prevent costly damage to hydrostatic system.

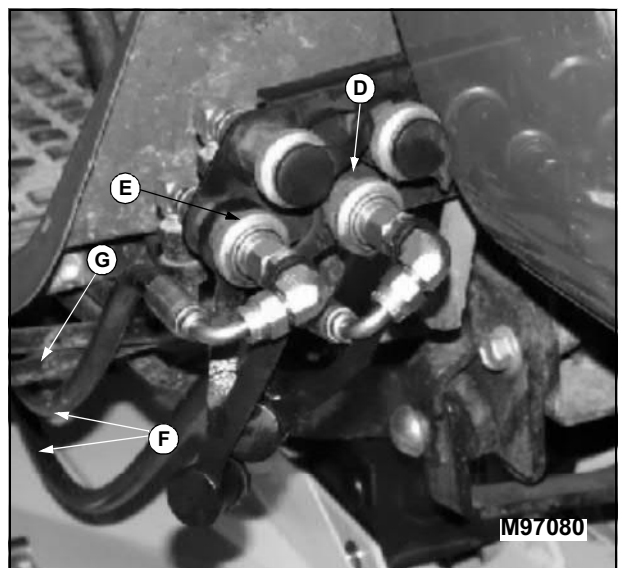
NOTE: *DO NOT tighten tie straps until final assembly.*

1. One hose is longer than the other. The hoses should be approximately the same length when connected to the tractor. Loop the longest hose as shown and secure loosely to other hose with tie strap (A).
2. Secure hoses loosely to frame with tie straps (B).
3. Route and connect hydraulic lines (C) from MCS to the right side of tractor. Under center link, between ROPS mounting bracket and transaxle along tractor frame and to hydraulic couplers.



4. Connect green hydraulic coupler (D) to No. 4 SCV. This line is connected to shut-off valve on MCS frame, to lower the MCS.
5. Connect black hydraulic coupler (E) to No. 3 SCV. This line is connected to “raise” side of lift cylinders.
6. Install hose retaining ring around both hoses (F) and outside hydraulic line (G).
7. Install tie straps in convenient and safe positions. Tighten tie straps.

NOTE: *Collection box lid may require adjustment (See Service section in this manual).*



ASSEMBLY

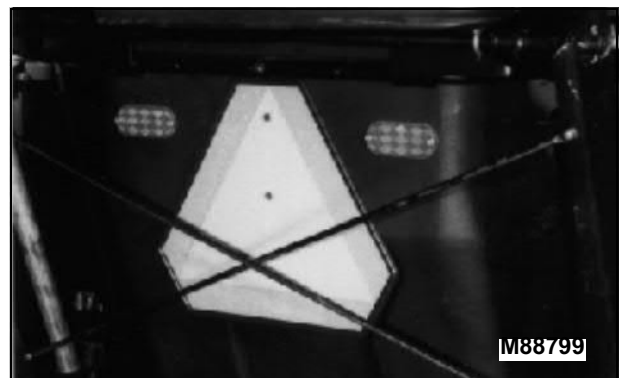
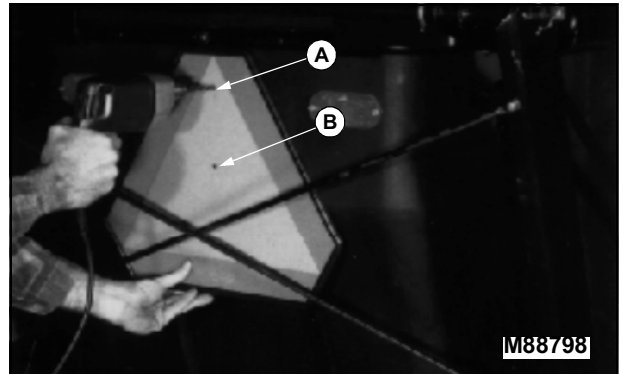
Install Optional Slow-Moving Vehicle Sign (SMV)

NOTE: *Sign is available as an option. See your John Deere dealer to order.*

1. Center SMV on rear of collection box.
2. Mark box through top hole (A) in SMV and fourth hole down (B) in SMV.
3. Drill two 6 mm (1/4 in.) holes in box.

NOTE: *Hardware is not provided for installation of this sign.*

4. Fasten SMV to box with two 6 mm x 25 mm (1/4 in. x 1 in.) cap screws, washers and lock nuts.



ASSEMBLY

Install Optional Warning Light Kit

1. Install light on bracket as explained in instructions provided with kit.

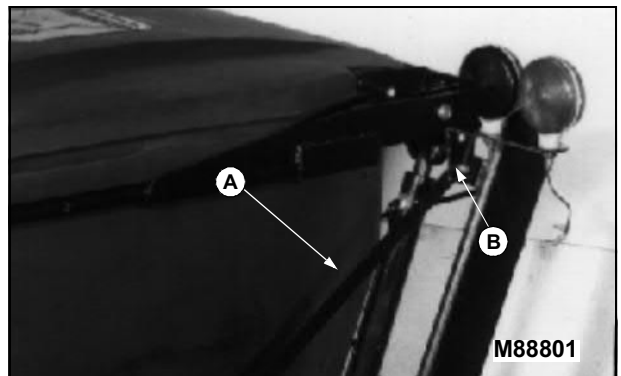


2. Remove and discard M10 x 20 cap screw and lock nut from support straps (A).

3. Fasten light assemblies to support straps with 3/8 x 1 in. cap screw and lock nut (B).

4. Cut two-wire and three-wire cable to 3 m (10 ft.) lengths. Measure from end with molded connectors.

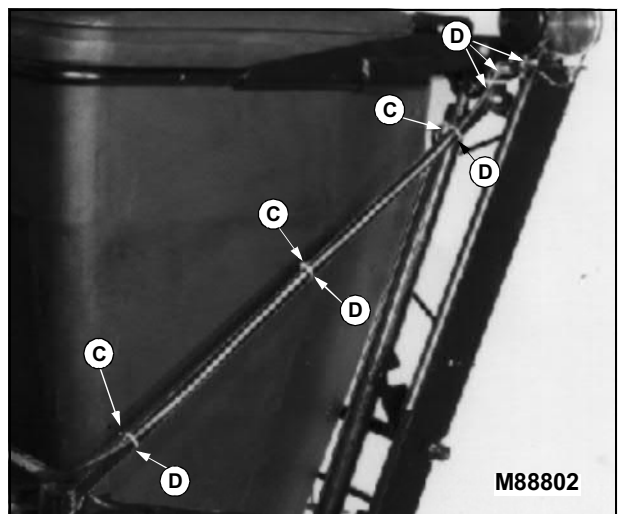
5. Remove 10 mm (3/8 in.) of insulation from end of each wire. Solder each end.



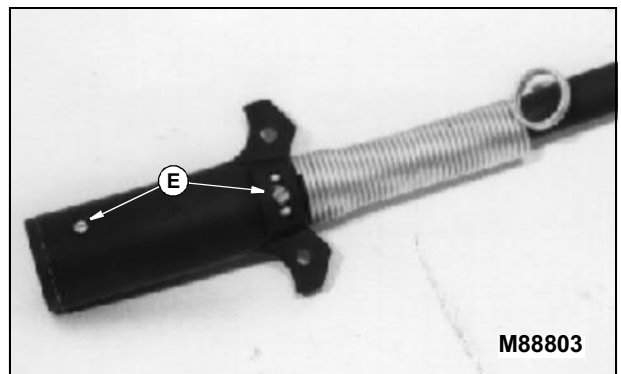
6. Clean mounting surface with solvent. Install three adhesive mounts (C) on inside of each support strap.

7. Connect wires to light assemblies.

8. Route wire down outside of each support strap. Fasten wires with tie straps (D); six on left side and five on right side.

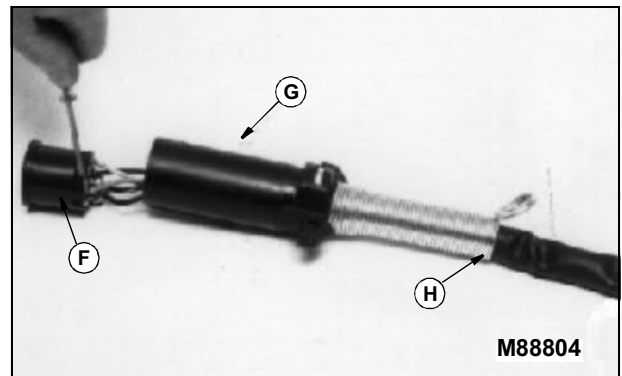


9. Remove set screws (E) from light kit plug.

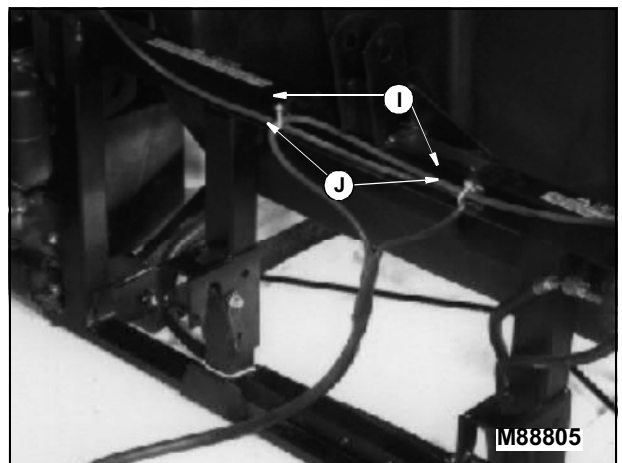


ASSEMBLY

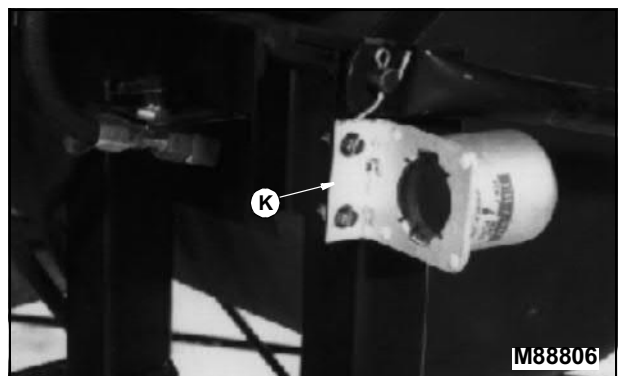
10. Pull pin socket (F) out of plug cover (G).
11. Write down on paper the location of wires connected to pin socket.
12. Loosen screws to remove pin socket from wires.
13. Pull plug cover off wiring.
14. Cut and remove 1067 mm (3 ft. 6 in.) of sheathing (H) from wire.



15. Install two adhesive mounts (I) on frame.
16. Route wires to center of frame as shown. Fasten wires with two tie straps (J).
17. Install sheathing over wire cables.
18. Push plug cover over wire cables.
19. Connect wires to pin socket:
 - 2-wire – black to WHT1
 - 2-wire – white to GRN5
 - 3-wire – black to WHT1
 - 3-wire – white to YEL3
 - 3-wire – green to BRN6



20. Push pin socket into plug cover.
21. Install set screws in plug.
22. Use the 7-pin plug storage container (K) as the template to locate and drill two 7/32 in. diameter holes in MCS frame.
23. Fasten storage container to frame with two 1/4 x 3/4 in. self-tapping screws and 1/4 in. nuts.
24. Install plug into storage container.



SPECIFICATIONS

Material Collection System Specifications

Approximate Lifting Time	20 seconds
Approximate Lowering Time	20 seconds
Approximate Weight of MCS	102 kg (225 lb)
Approximate Capacity of MCS	0.425 M ³ (15 cu ft)
Approximate Box Lift Height From Bottom of Box to Ground	1676 mm (5.5 ft)
Overall Width	Approximately 1420 mm (56 in)
Overall Length	Approximately 915 mm (36 in.)

Recommended Lubricants

Grease	John Deere MOLY HIGH TEMPERATURE EP GREASE
.	John Deere HIGH TEMPERATURE EP GREASE
.	John Deere GREASE GARD™
Gear Oil	John Deere GL-5 Gear Lubricant

(Specifications and design subject to change without notice.)

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JOHN DEERE SERVICE LITERATURE

Order Form

John Deere Distribution Center - Department S/P P.O. Box 186, Moline, IL 61266-0186

To order these publications, call 1-800-522-7448. If you want manuals or catalogs for equipment not shown on this list, provide the model number, serial number, and name of the product when you call. Make checks payable to John Deere.

Name _____

Address _____

City _____

State _____

Zip _____ Phone: () _____

Title	Number	Price	Qty	Total
Parts Catalog	PC2130	(Call 1-800-522-7448 for current prices.)		
Operator's Manual	OMM140121			
Fundamentals of Service (FOS) Manuals:				
Engines	FCP80103B	(Call 1-800-522-7448 for current prices.)		
Power Trains	FCP81102B			
Electrical Systems	FCP83102B			
Hydraulics	FCP82102B			
Sub-total				
State Sales Tax (Illinois & Iowa only)				
Shipping & Handling				
Total				
Method of Payment				
<input type="checkbox"/> Check/Money Order Enclosed				
<input type="checkbox"/> John Deere Credit Card				
<input type="checkbox"/> MasterCard				
<input type="checkbox"/> Visa				
<input type="checkbox"/> American Express				
<input type="checkbox"/> Discover				
<input type="checkbox"/> Farm Plan				
Credit Card Acct. No. (13 or 16 digits)		Expiration Date:		Signature:
_____ - _____ - _____ - _____		_____		_____

NOTES

QUALITY DOESN'T END WHEN YOU INVEST IN A DEERE

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 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.