

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Quick-Hitch Snowthrower
46-Inch

OMM146455 H1

OPERATOR'S MANUAL



JOHN DEERE

North American Version
Litho in U.S.A.

INTRODUCTION

Thank You for Purchasing a John Deere Product

We appreciate having you as a customer and wish you many years of safe and satisfied use of your machine.

Using Your Operator's Manual

This 46-Inch snowthrower can be used on the 400 Series (425, 445, 455 tractors) and on the F900 Series (F911, F925, and F935 front mowers).

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

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

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

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

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

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

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

Before delivering this machine, your dealer performed a predelivery inspection to ensure best performance.

Special Messages

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



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

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

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

PRODUCT IDENTIFICATION

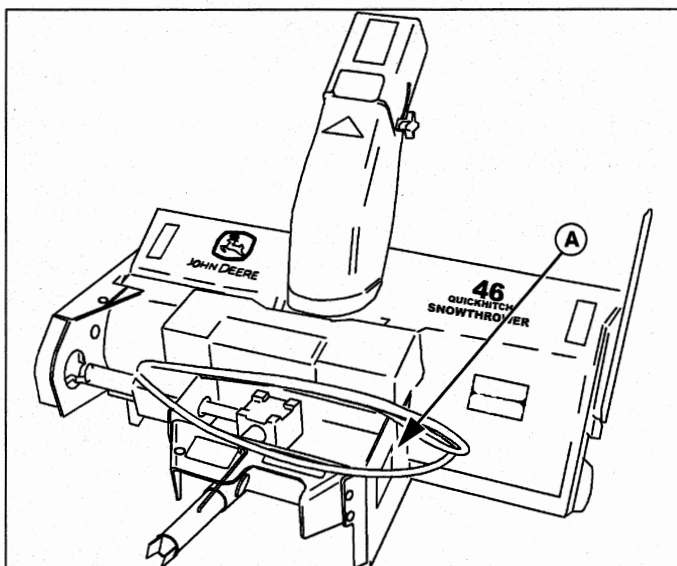
Record Identification Numbers

Snowthrower

46-Inch Serial No. (010001-)

If you need to contact an Authorized Service Center for information on servicing, always provide the product model and serial number.

You will need to locate the model and serial number for the machine and record the information in the spaces provided below.



MX15000a

DATE OF PURCHASE:

DEALER NAME:

DEALER PHONE:

PRODUCT SERIAL NUMBER (A):

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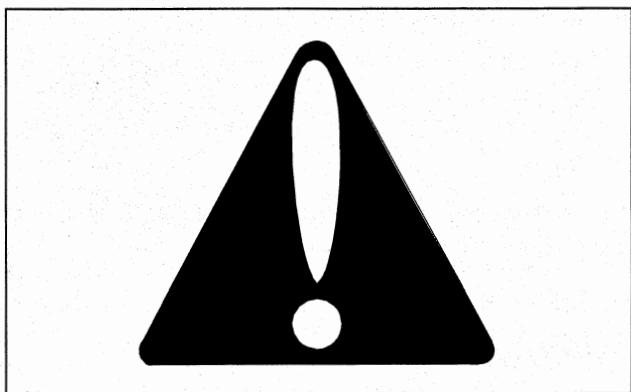
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Consumer Equipment Division

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and 1992

OMM146455 H1 - English

SAFETY

Understanding The Machine Safety



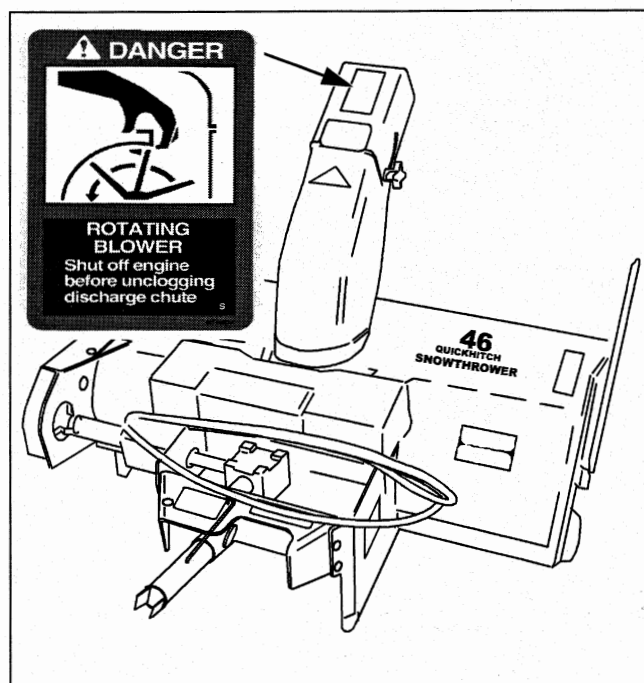
MIF

The machine safety labels shown in this section are placed in important areas on your machine to draw attention to potential safety hazards.

On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety-alert symbol. DANGER identifies the most serious hazards.

The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol.

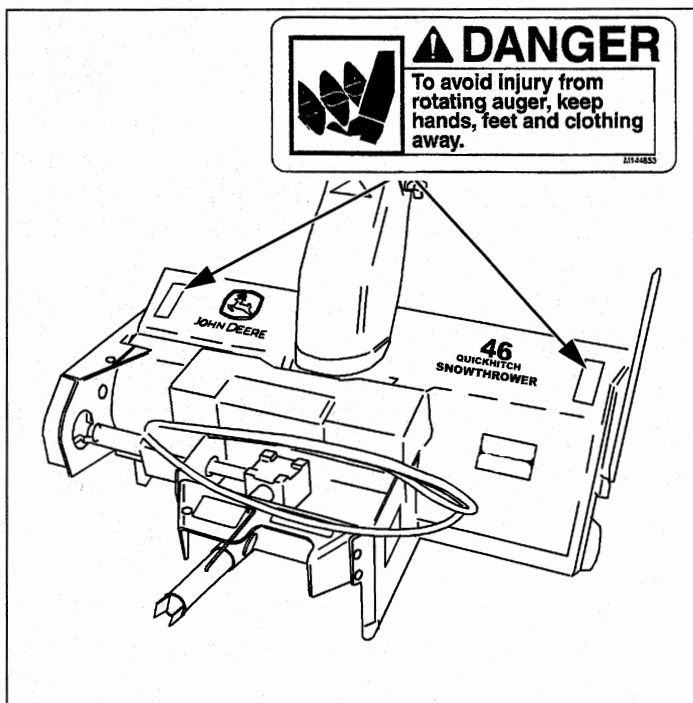
DANGER



M74599a MX15000a

- Rotating blower. Shut off engine before unclogging discharge chute.

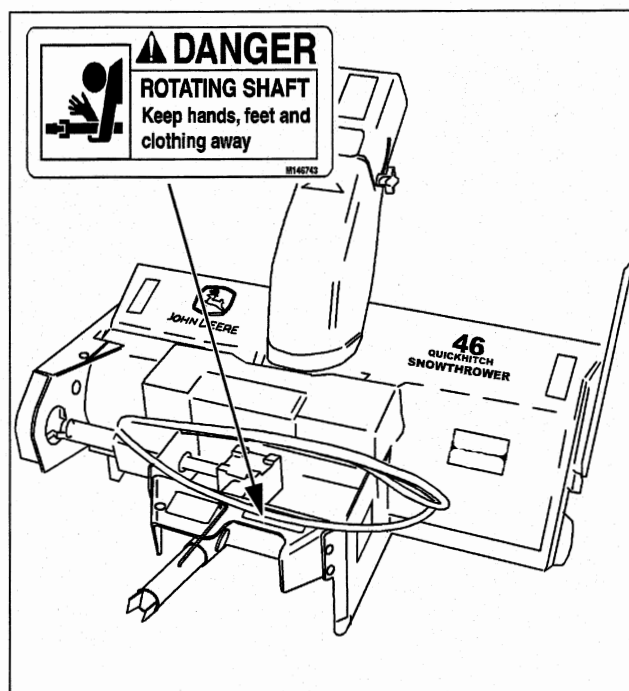
DANGER



M144853 MX15000a

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

DANGER



M146743 MX15000a

- Rotating shaft. Keep hands, feet and clothing away.

SAFETY

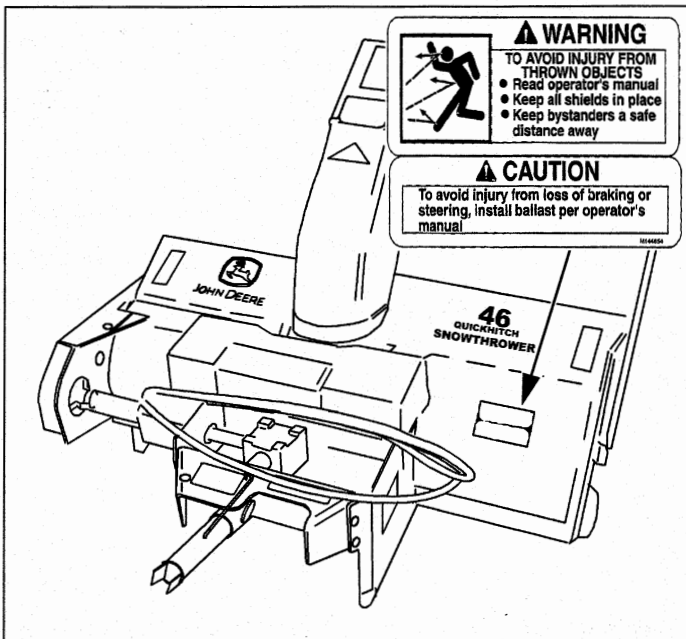
DANGER



M74970 M60485

- Rotating driveline. Contact can cause death. Keep away.
- Do not operate without
 - All driveline, tractor and equipment shields in place.
 - Driveline securely attached at both ends.
 - Driveline shields that turn freely on driveline.

WARNING



M144854 MX15000a

- To avoid injury from thrown objects
 - Read operator's manual.
 - Keep all shields in place.
 - Keep bystanders a safe distance away.

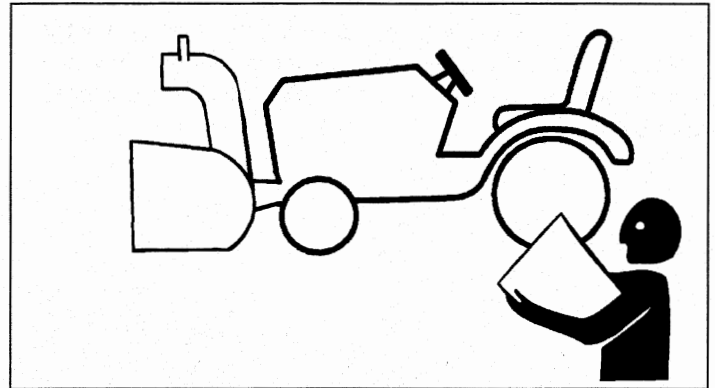
CAUTION

- To avoid injury from loss of braking or steering, install ballast per operator's manual

Certification

Your snowthrower has been certified by an independent laboratory for compliance with American National Standard B-71.3, "Safety Specifications" for Snow Throwers.

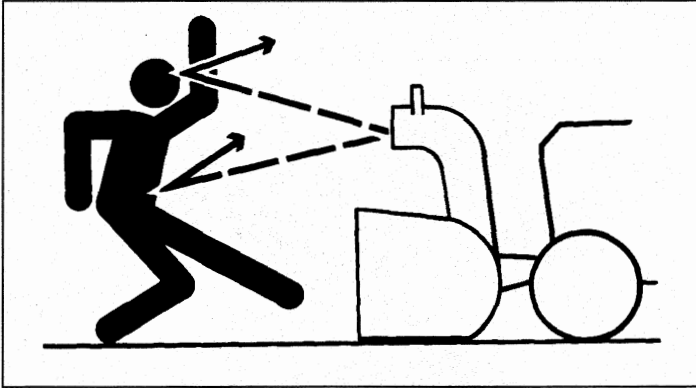
Operate Safely



MX10213

- Read the tractor and snowthrower operator's manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the tractor and disengage the controls quickly.
- 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.

SAFETY



M41313

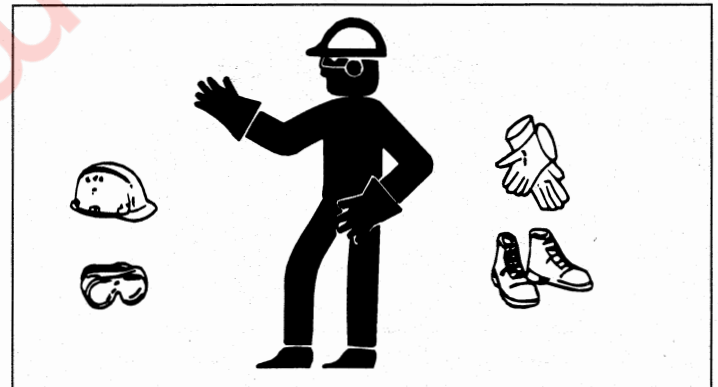
- Clear work area of objects that might be thrown. Keep people and pets out of the work area. Keep children indoors when blowing snow. Turn the machine off if anyone enters the area.
- If you hit an object, stop the machine and inspect it. Make repairs before you operate. Keep machine properly maintained and in good working order.
- Do not leave machine unattended when it is running.
- Only operate during daylight or with good artificial light.
- Look carefully behind tractor before you back up.
- Do not let anyone, especially children, ride on machine or attachment. Riders are subject to injury such as being struck by foreign objects and being thrown off. Riders may also obstruct the operator's view, resulting in the machine being operated in an unsafe manner.
- Do not wear radio or music headphones while operating the machine. Safe operation requires your full attention.
- Do not let children or an untrained person operate machine.
- Be alert for traffic when crossing or working near roadways.
- Be alert. Do not operate snowthrower when you are tired or ill or under the influence of drugs or alcohol.
- Keep clear of the discharge opening at all times.
- Do not operate tractor at high speeds. Operate snowthrower at full throttle and a safe, slow travel speed.
- Do not throw snow toward bystanders, buildings, or automobiles.
- Throw snow downwind, if possible.
- Clean snowthrower after you use it.
- Be extremely careful if you must clear snow from a gravel surface.
- Operate slowly and carefully on slopes and in sharp turns.
- Drive up and down--not across--slopes.

- Do not operate near edge of ditch or bank. Avoid holes, rocks, and roots. Be alert for hidden hazards.
- Older adults are involved in a large percentage of riding mower accidents involving injury. These operators should evaluate their ability to operate a mower and a snowthrower safely enough to protect the operator and others from serious injury.

Park Safely

1. Stop machine on a level surface, not on a slope.
2. Disengage mower blades or snowthrower augers.
3. Lower attachments to the ground.
4. Lock the park brake.
5. Stop the engine.
6. Remove the key.
7. Wait for engine and all moving parts to stop before you leave the operator's seat.

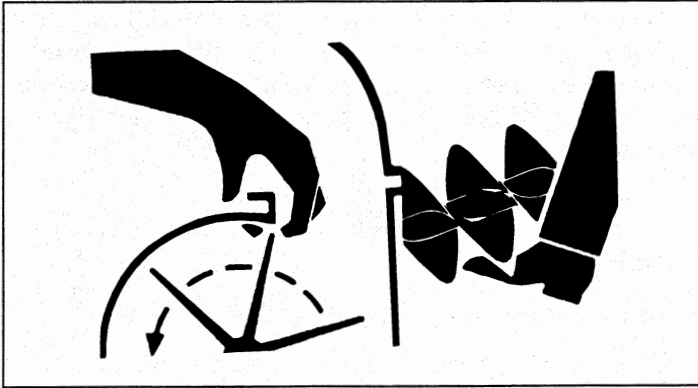
Wear Appropriate Clothing



- Always wear safety glasses or eye shields during operation to protect eyes from foreign objects that may be thrown from the machine.
- Wear adequate winter outer garments and footwear that will improve footing on slippery surfaces.
- 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.

SAFETY

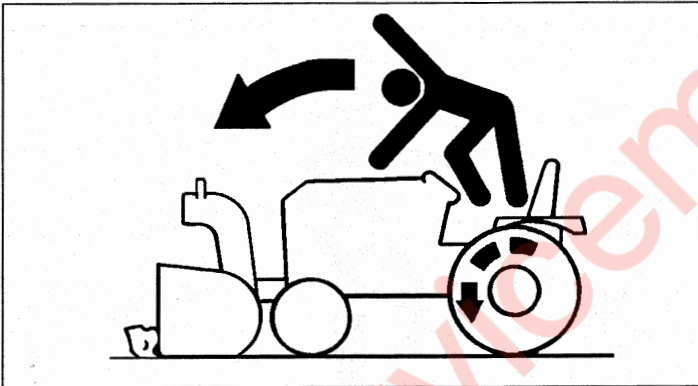
Avoid Injury from Moving Parts



MX10215

- Keep hands, feet and clothing away from snowthrower and discharge chute when auger is turning.
- Stop auger when you are not throwing snow.
- Stop vehicle engine before you unplug, repair, or adjust snowthrower.

Avoid Injury from Hitting Obstructions



MX10214

- Raise snowthrower when you drive between jobs.
- Slow down when you remove snow. Be cautious on slopes, when you make turns or when close to buildings or trees.

Practice Safe Maintenance



- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service, or adjust machine while it is moving. Keep safety devices in place and in working condition. Keep hardware tight.
- Keep hands, feet, clothing, jewelry, and long hair away from any moving parts, to prevent them from getting caught.
- Lower attachments to the ground before servicing machine. Disengage all power and stop the engine. Lock park brake and remove the key. Let machine cool.
- Securely support any machine elements that must be raised for service work.
- Never run engine unless park brake is locked.
- Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.
- Disconnect battery negative (-) cable before making adjustments on electrical systems or welding on machine.
- Do not modify machine. Unauthorized modifications may impair its function and safety.
- Do not wear radio or music headphones while servicing the machine. Safe service requires your full attention.

Avoid High Pressure Fluids



MIF

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

PREPARING VEHICLE

Preparing the Machine



CAUTION: Avoid injury!

The machine may become unstable when operating with snowthrower.

Ballasting is required for safe operation of your snowthrower.

When the snowthrower is removed, you must also remove any weights that were added to the machine.

Ballast for 400 Series

- Two rear suitcase weights with rear weight bracket used with 3-point hitch kit

OR

- Ballast box with 45 kg (100 lbs.), frame mounted or mounted to 3-point hitch kit

OR

- Rear wheel weights, one on each side

Ballast for F900 Series

- Six rear bumper weights and cast iron rear bumper (Rear weight kit required.)

Your Machine Must Have

400 Series

- Front hitch kit
- Front PTO kit
- Hydraulic outlet kit (425 only)
- Attachment drive and upstop

F900 Series

- Front hitch kit
- Front PTO kit
- Auxiliary hydraulic kit
- Attachment drive and upstop

To Improve Traction

- Install chains on drive tires
- Install wheel weights on drive wheels
- Install liquid ballast in drive tires

Recommended Options on F900 Series

- Weight transfer valve

Tire Inflation

400 Series

- Front
 - 2 ply: 97 kPa (14 psi)
 - 4 ply: 150 kPa (22 psi)
- Rear
 - 35-70 kPa (5-10 psi)

F900 Series

- Front (Drive)
 - 165 kPa (24 psi)
- Rear (Steering)
 - 193 kPa (28 psi)

INSTALLING

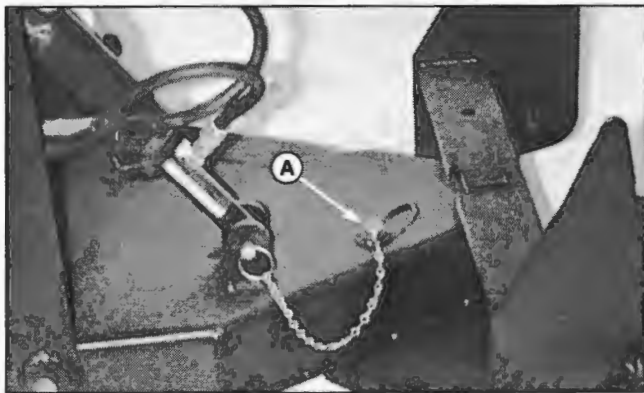
Aligning Snowthrower with Front Hitch

IMPORTANT: Avoid damage! To prevent damage to driveshaft:

- Do not angle snowthrower.
- Put snowthrower driveshaft on support rod before driving machine forward.

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

IMPORTANT: Avoid damage! Use locking pin to prevent front hitch from angling when using snowthrower.



M58974

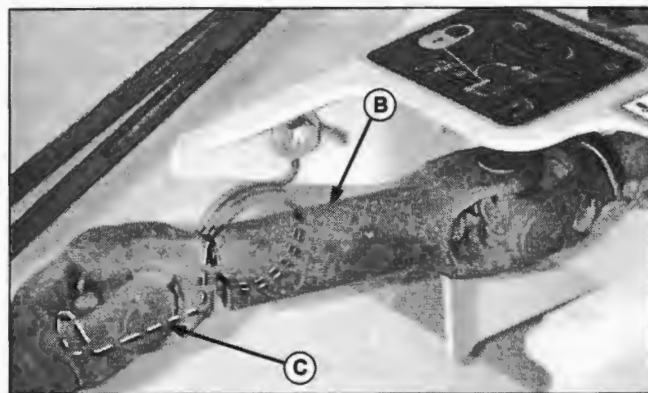
Picture Note: 400 Series

2. Insert locking pin assembly (A) in front hole on front hitch and fasten with spring locking pin.

NOTE: Different styles of components shown. Match your components to picture and follow appropriate directions.

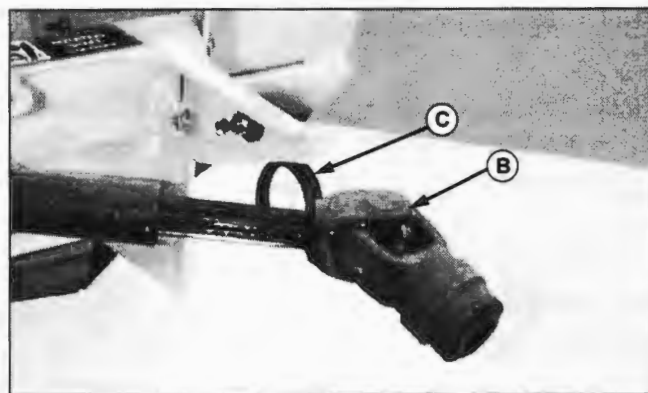


M60480



M58992b

Picture Note: 400 Series



M58999

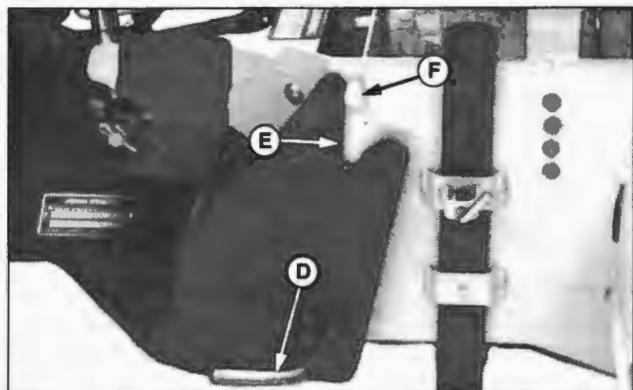
Picture Note: F900 Series

3. Install driveshaft (B) on support rod (C).

4. Lower front hitch.

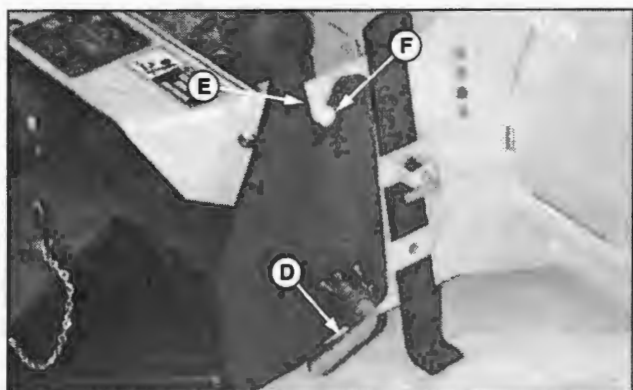
INSTALLING

NOTE: Locking pin lever (D) on each side of front hitch bracket must be in the unlocked position shown.



M47447a

5. Move machine forward slowly until slot (E) on front hitch bracket lines up with pin (F) on snowthrower.

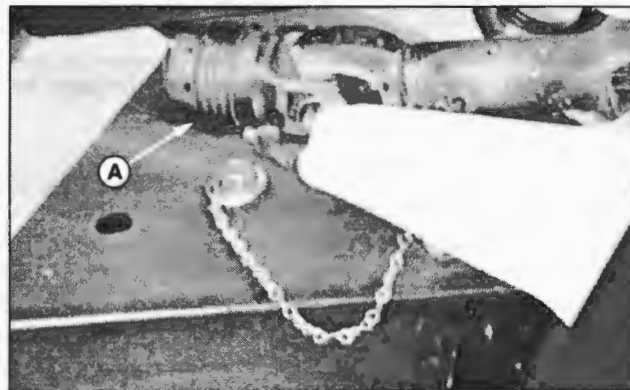


M58975

6. Raise front hitch until slot (E) locks in place under pin (F).
7. Insert locking pins (D) on both sides of hitch bracket into bracket and snowthrower.
8. Lower snowthrower to the ground.

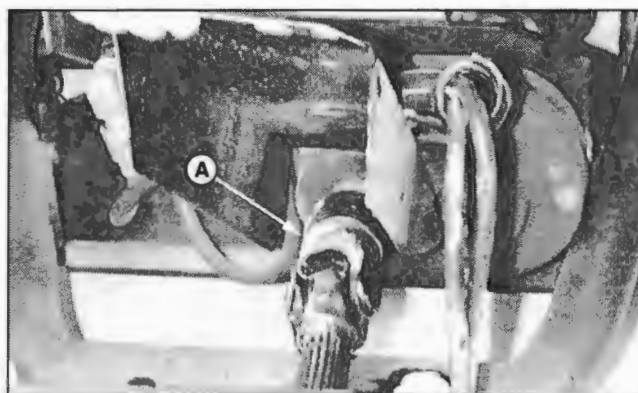
Connecting Driveshaft

1. Remove snowthrower driveshaft from support rod.



M58993

2. Pull back coupler (A) on driveshaft to lock collar open.



M58995

Picture Note: F900 Series shown

3. Push driveshaft onto machine PTO shaft until coupler (A) locks.

Connecting Hydraulic Hoses (400 Series)

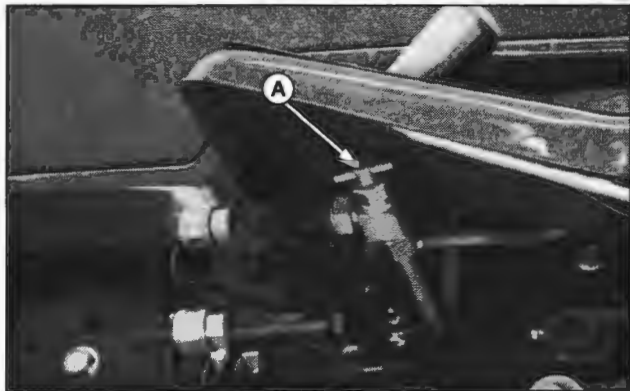
1. Move hydraulic control levers back and forth to relieve hydraulic pressure.

INSTALLING



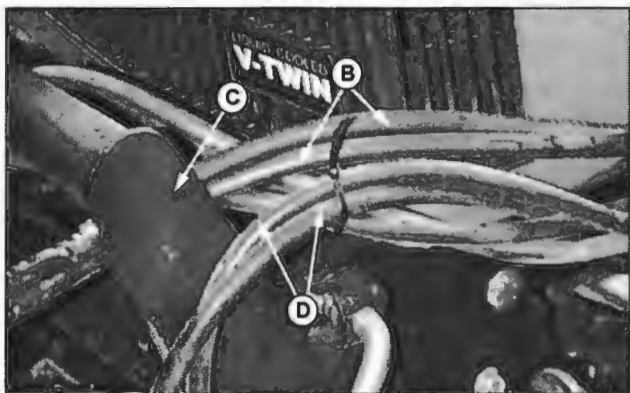
CAUTION: Avoid injury! Hydraulic fluid is under pressure. Escaping fluid can penetrate the skin and cause serious injury. Protect hands and body.

- Relieve all pressure before checking hydraulic hoses.
- Search for leaks with piece of cardboard. Do not use hands to check hoses.
- Tighten all connections before applying pressure.



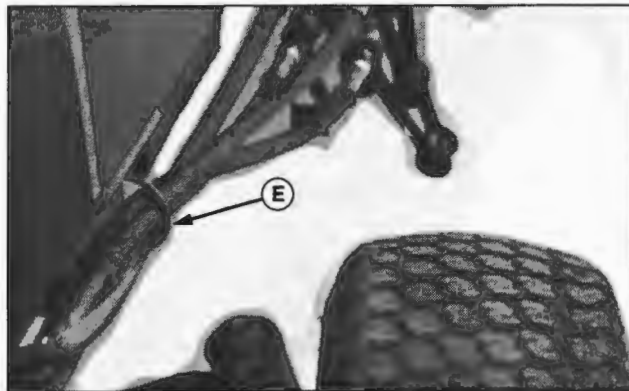
M55415

2. Turn hydraulic lockout valve (A) (located under left foot rest) clockwise until closed to lock out mower and rear implement lift.



M60488

3. Route snowthrower hydraulic chute hoses (B) inside bracket (C) on front hitch. If hydraulic angling kit is installed on your machine, route angling kit hoses (D) outside bracket (C) and strap to lift cylinder hoses.

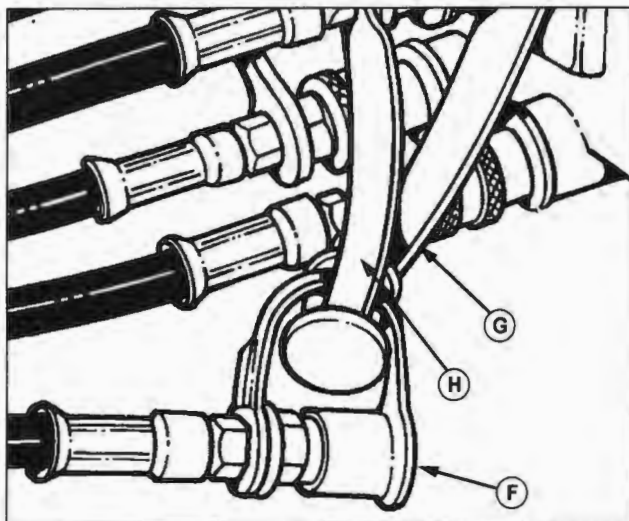


M47638

4. Route snowthrower hoses through holder (E) on side of tractor.

5. If hydraulic angling kit is not installed on your machine, match color on hose with color on machine port and install snowthrower hoses in ports. (See decal on machine platform.)

6. If hydraulic angling kit is installed on your machine, you need to fasten the angling kit hoses so they do not drag:



M47451

- Remove angling kit hoses from top two ports on machine. (See decal on machine platform for reference.)
- Match color on hose with color on machine port and install snowthrower hoses in ports.
- Install dust cap (F) on each angling kit hose you just removed.
- Route dust cap on port (G) through loop on dust cap on angling kit hose and connect to cap on snowthrower hose (H).

INSTALLING

Connecting Hydraulic Hoses (F900 Series)

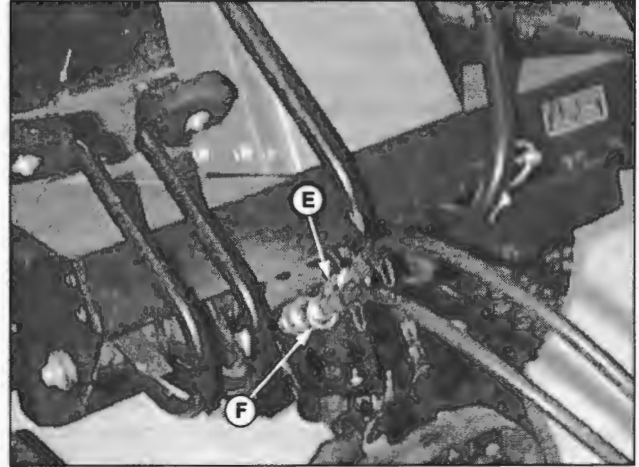
NOTE: If angling kit is not installed, complete step 1 and then proceed to step 5.

1. Move hydraulic control levers back and forth to relieve hydraulic pressure.



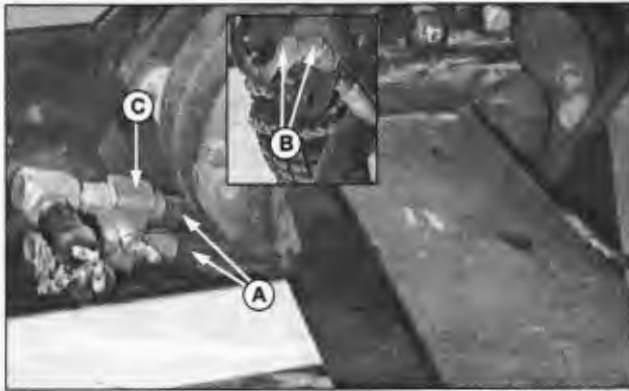
CAUTION: Avoid injury! Hydraulic fluid is under pressure. Escaping fluid can penetrate the skin and cause serious injury. Protect hands and body.

- Relieve all pressure before checking hydraulic hoses.
- Search for leaks with piece of cardboard. Do not use hands to check hoses.
- Tighten all connections before applying pressure.



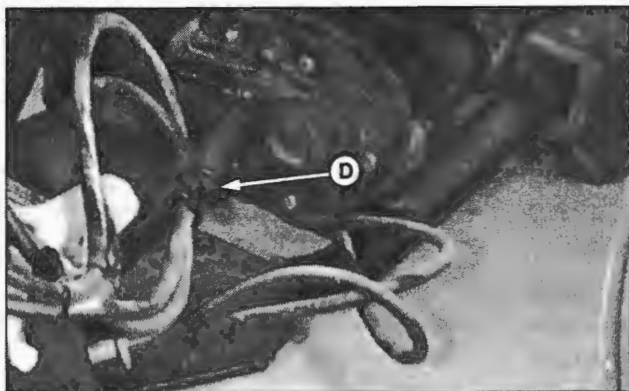
M58997

7. Connect hoses with yellow ring (E) and with silver ring (F) to matching ports.



M58986 M60463

2. Remove angling kit hoses (A) from ports (B) and holder.
3. Slide hoses under gearbox and clamp to hitch bracket (C).
4. Install dust plugs on ports.



M60464a

5. Put snowthrower hoses through holder (D).
6. Remove dust caps from snowthrower hoses.

Checking Hydraulic Hoses and Fluid Level

1. Remove transaxle hydraulic fluid dip stick.
2. Check fluid level. Add fluid if necessary. (See your tractor operator's manual for correct procedure.)
3. Replace dip stick.
4. Start engine.
5. Move hydraulic control levers back and forth to check for leaks.

Checking Discharge Chute Rotation

1. Start engine.

NOTE: If chute turns in the opposite direction indicated by the lever, reverse hose location in ports.

2. Turn chute in both directions:

On 400 Series

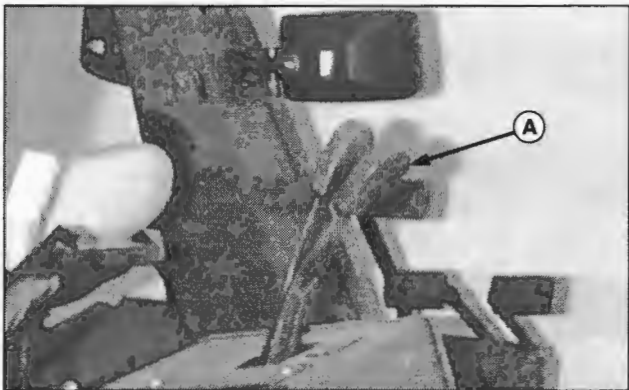
INSTALLING



M47453

- Pull lever (A) back to rotate chute to the right.
- Push lever forward to rotate chute to the left.

On F900 Series



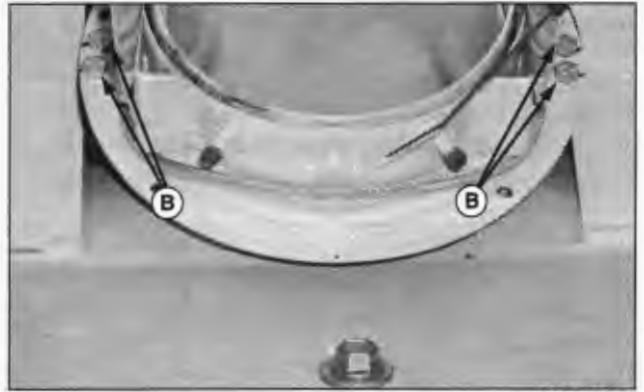
M58989

- Pull lever (A) back to rotate chute to the right.
- Push lever forward to rotate chute to the left.

IMPORTANT: Avoid damage! Ensure proper rotation of chute. Position chute to face right (as viewed from machine seat) before adjusting cables.

3. Chute should turn 90 degrees to each side. If it does not:

- a. Stop the engine.



MX11502

- b. Loosen bolts (B).
- c. Pull cable ends tighter.
- d. Tighten bolts.

REMOVING

Removing Snowthrower

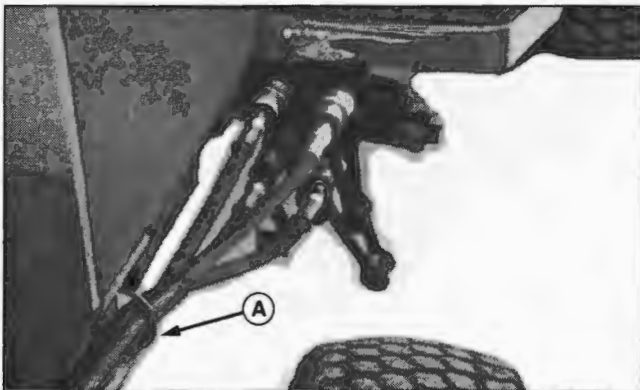
1. Park machine safely. (See Parking Safely in the Safety section.)
2. Move hydraulic control levers back and forth to relieve hydraulic pressure.



CAUTION: Avoid injury! Hydraulic fluid is under pressure. Escaping fluid can penetrate the skin and cause serious injury. Protect hands and body.

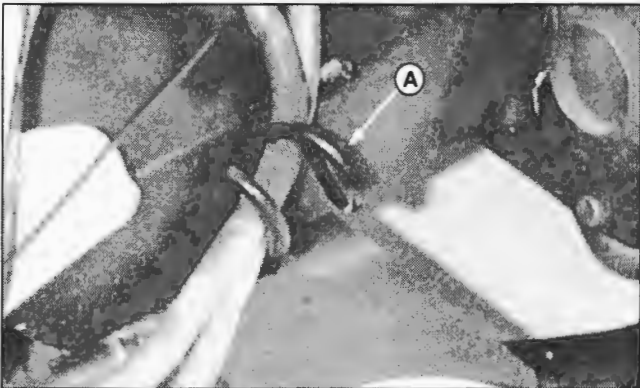
- Relieve pressure before disconnecting hydraulic hoses.
- Search for leaks with piece of cardboard. Do not use hands.
- Tighten all connections before applying pressure.

3. Disconnect snowthrower hydraulic hoses and install dust caps.



M47638

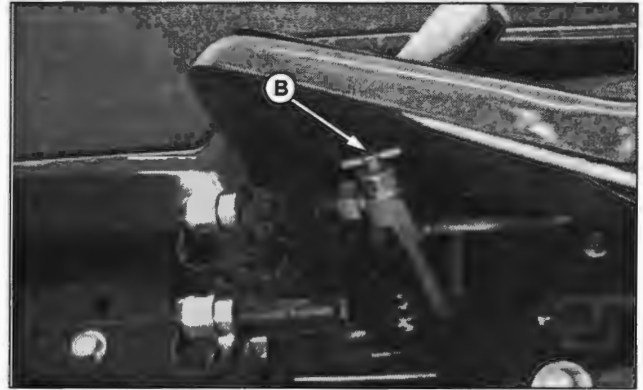
Picture Note: 400 Series



M60464

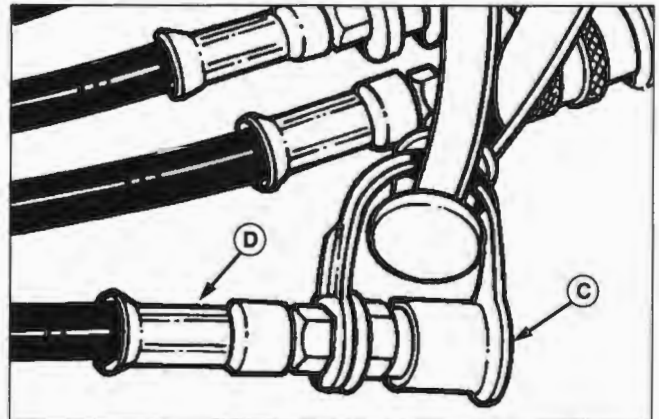
Picture Note: F900 Series

4. Remove snowthrower hoses from holder (A).



M55415

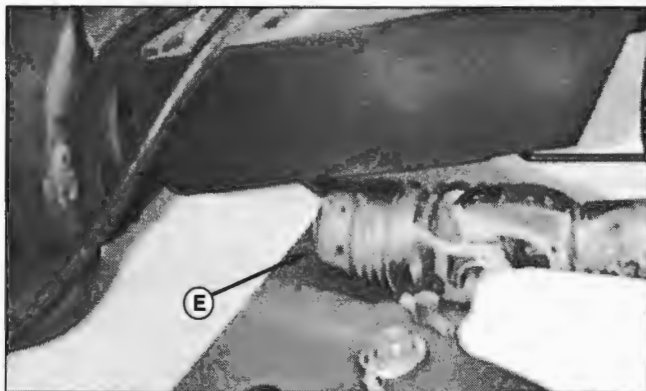
5. For 400 Series: Turn hydraulic lockout valve (B) (located under left foot rest) counterclockwise to open and allow mower and rear implement to lift.



M47451

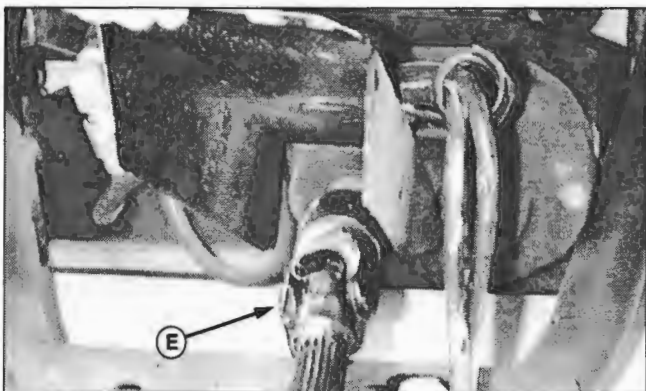
6. For 400 Series: Disconnect dust caps (C) from angling kit hoses (D) and connect hoses to machine. (See decal on machine platform.)

REMOVING



M58993

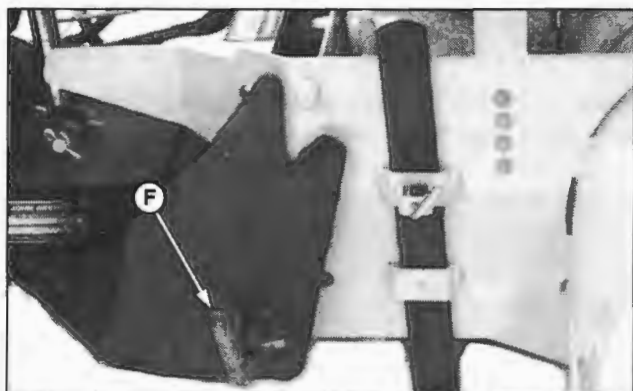
Picture Note: 400 Series



M58995

Picture Note: F900 Series

7. Pull coupler to disconnect driveshaft (E) from machine.
8. Put driveshaft on support rod.



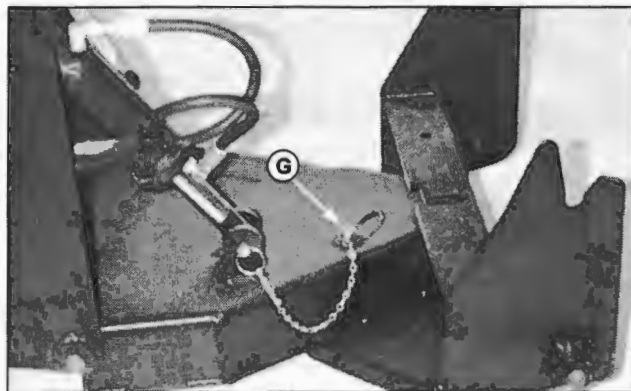
M47472

9. Move lever (F) to the unlatched position shown.
10. Lower hitch.
11. Slowly back machine away from snowthrower.



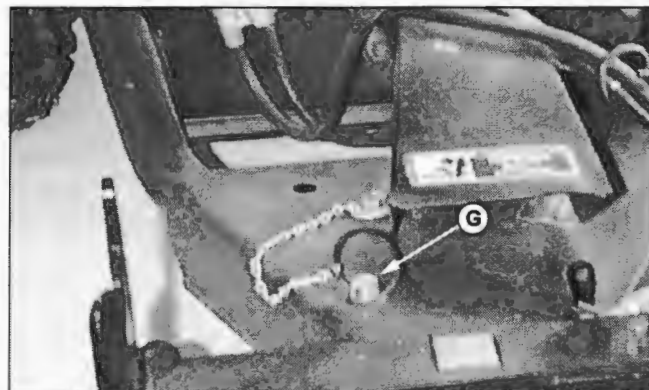
CAUTION: Avoid injury! Driving machine with extra weights when attachment is removed can cause steering problems. Remove weights from machine when you remove the attachment.

12. Remove any weights that were installed when preparing the machine.



M58974

Picture Note: 400 Series



M58984

Picture Note: F900 Series

13. Remove locking pin from front hole (G) on front hitch, insert in storage hole and fasten with spring locking pin.

OPERATING

Raising and Lowering Snowthrower



CAUTION: Avoid injury! Attachment can lower rapidly. Keep bystanders, especially children, away from attachment when raising and lowering.



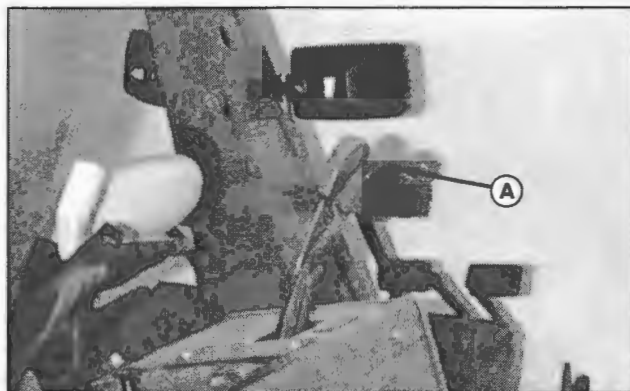
M47453

Picture Note: 400 Series



M47453

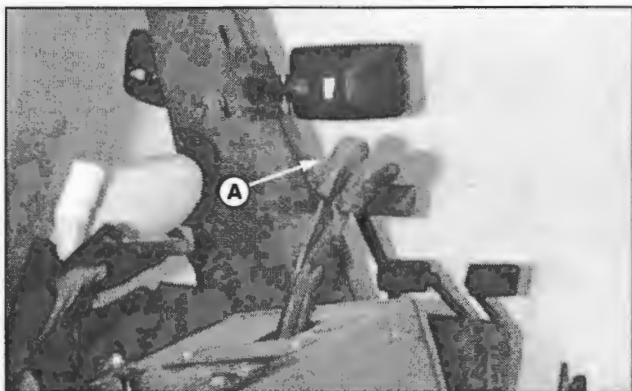
Picture Note: 400 Series



M58989

Picture Note: F900 Series

- To turn discharge chute to the right: Pull lever (A) back.
- To turn discharge chute to the left: Push lever (A) forward.



M58989

Picture Note: F900 Series

- To lower snowthrower: Push lever (A) forward.
- To raise snowthrower: Pull lever (A) back.

Turning Discharge Chute

NOTE: If chute turns in the opposite direction indicated by the lever, reverse hydraulic hoses.

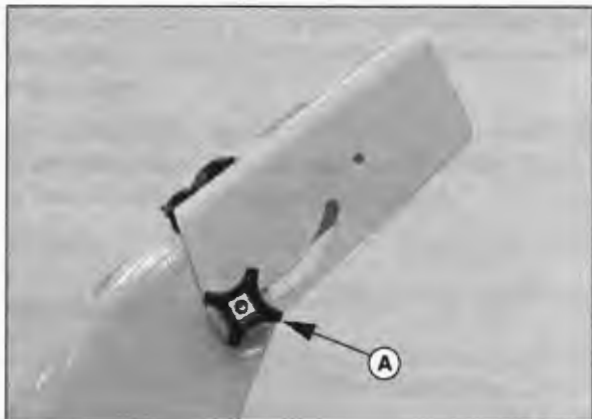
OPERATING

Adjusting Spout



CAUTION: Avoid injury! Before you adjust spout:

- Stop the snowthrower.
- Stop the engine.
- Lower snowthrower to the ground.
- Lock the park brake.
- Wait for all moving parts to stop.

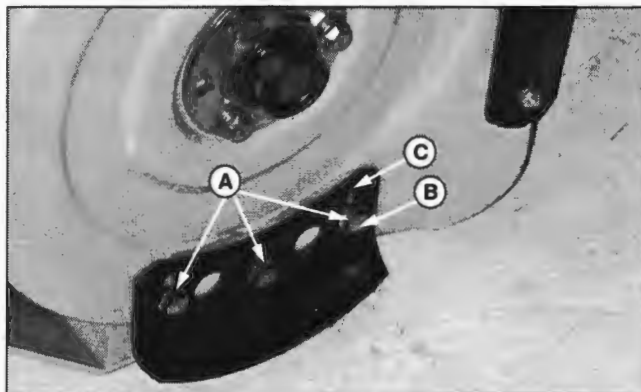


MX11501

1. Loosen knob (A).
2. Move spout to desired position.
3. Tighten knob.

Adjusting Skid Shoes

NOTE: Before using snowthrower on gravel or uneven surfaces, lower skid shoes fully. Both skid shoes must be in the same position.



MX11509

1. Loosen bolts (A) on each skid shoe.
2. To clear snow from a flat surface, lower skid shoes to position (B).

3. To clear snow from a rough or a gravel surface, raise skid shoes to position (C).

4. Tighten bolts.

Operating Snowthrower



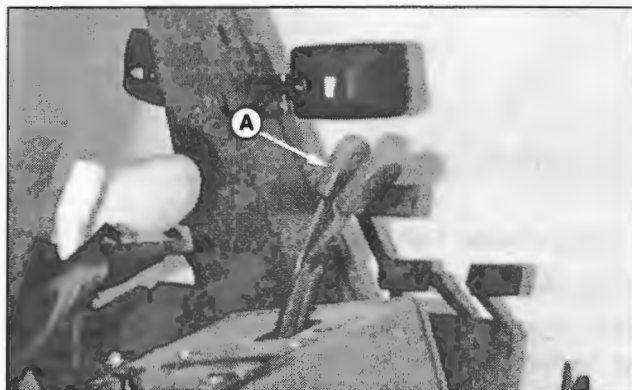
CAUTION: Avoid injury! Keep people and pets out of snowblowing area.

NOTE: See your machine operator's manual for detailed information on controls.



M47453

Picture Note: 400 series



M58989

Picture Note: F900 Series

1. Start engine.
2. Push lever (A) forward to lower snowthrower to ground and lock in float position.

NOTE: Lever must be in float position to allow snowthrower to follow contours of ground.

3. Unlock park brake.

OPERATING

IMPORTANT: Avoid damage! Do not engage PTO if engine is at full throttle. Engaging PTO with engine at full throttle can damage clutch.

1. Engage PTO.
2. Move lever to full throttle position.

- *Install liquid ballast on steering tires.*
- *Use individual wheel brakes to make sharp turns at slow speeds and reduce slippage.*



M47455

Picture Note: 400 series



M39485

Picture Note: F900 Series

4. Engage PTO (B).

NOTE: Operate snowthrower at full throttle position for best performance.

5. Move throttle lever (C) to full throttle position.

NOTE: To improve traction and steering:

For 400 Series:

- *Push down differential lock button if one wheel is slipping. During normal operation, differential lock button should not be engaged.*

For F900 Series:

- *Push down differential lock button if one wheel is slipping. During normal operation, differential lock button should not be engaged.*
- *Install wheel weights on steering tires.*

REPLACEMENT PARTS

Service Literature

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

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

Parts

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

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

When you order parts, your John Deere dealer needs your product serial number. You recorded this number in the Product Identification section of this manual.

Part Numbers

Item	Part Number
Skid Shoes	
• Right	M46530
• Left	M46530
Scraper Blade	M42481
Drift Blade	M88984

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

Service Intervals

IMPORTANT: Avoid damage! Operating in extreme conditions may require more frequent service intervals.

- Engine components may become plugged.
- Engine oil and spark plugs may lose efficiency if machine is operated constantly at slow or low engine speeds or with frequent short trips.

Beginning of Season

- Adjust and lubricate drive chain.
- Check gear case oil level.

Every 25 Hours and End of Season

- Lubricate two grease points on driveshaft.

Grease

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

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

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

The following greases are preferred:

- John Deere Multi-Purpose SD Polyurea Grease
- John Deere Multi-Purpose HD Lithium Complex Grease
- John Deere Moly High Temperature EP Grease

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

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

Gear Oil

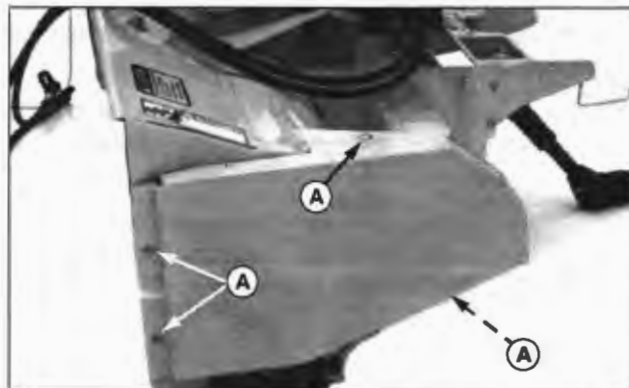
We recommend 80W-90 GL-5 Gear Oil.

Adjusting and Lubricating Drive Chain



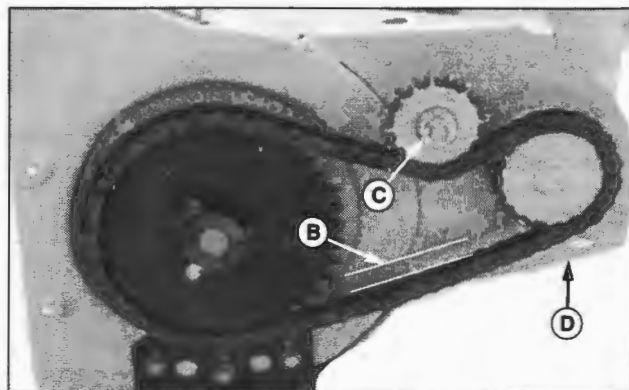
CAUTION: Avoid injury! Do not operate snowthrower without chain shield.

1. Stop engine.
2. Lock park brake.
3. Remove key.



M47459

4. Remove chain shield by removing four carriage bolts (A) and lock nuts.



M47460

5. Push chain upward at a point half way between sprockets. Deflection (B) should be 4.7-12.7 mm (3/16-1/2 in.)
6. Adjust chain, if necessary:
 - a. Loosen bolt (C) by loosening nut on back side of bracket (D).
 - b. Slide idler gear up or down until deflection measurement is right.
 - c. Hold idler gear in place and tighten nut.
7. Lubricate chain with John Deere TY6240 Chain Lube Spray or equivalent.
8. Start engine. Run snowthrower briefly to distribute oil.
9. STOP engine. Wipe off excess oil.

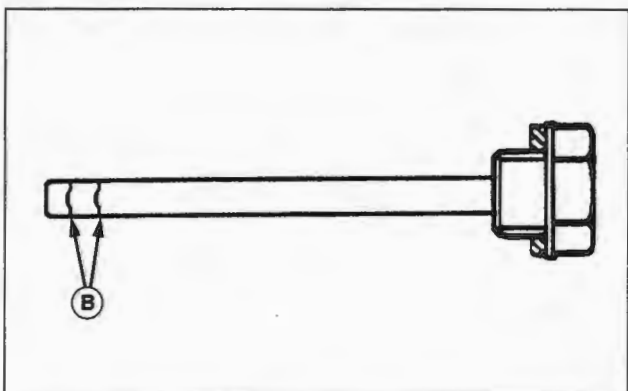
10. Check condition of chain and sprockets.
11. Install chain shield.

Checking Gear Box Oil



M47461

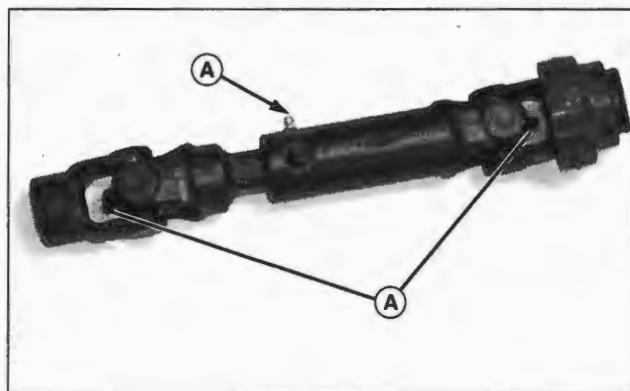
1. Remove dipstick (A).
2. Wipe oil off dipstick with a rag.



M47636

3. Screw dipstick back in gearbox and then remove. Oil level should be between indents (B) on dipstick.
4. If oil level is correct, install dipstick.
5. If oil level is low, add correct oil and install dipstick.

Lubricating Driveshaft



MX11505

- Lubricate driveshaft grease fittings (A) with John Deere Moly High Temperature EP Grease or an equivalent.

Replacing Shear Bolt

IMPORTANT: Avoid damage! Replacement shear bolts must be same as original shear bolts on your snowthrower:

- Softer bolts may shear too easily.
- Harder bolts may not shear: Snowthrower may be damaged.

NOTE: When the auger hits an object, a shear bolt may break. This breakage helps prevent damage to rotor and snowthrower. Replace broken shear bolts.

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



M47462

2. Remove broken shear bolt (A) from auger.

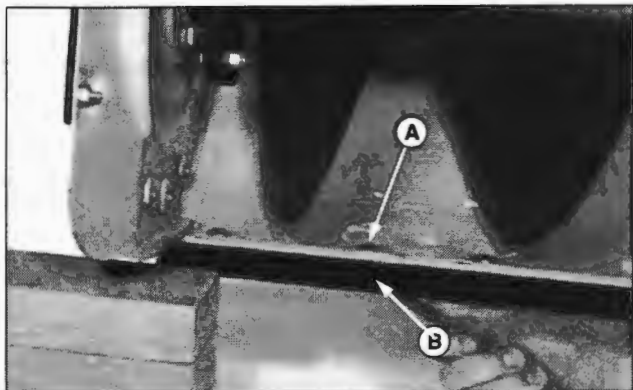


M47463

3. Turn auger to line up holes in shaft. Remove spare shear bolt (B) from snowthrower.
4. Install bolt and nut. Tighten so that the two paddles that the shear bolts connect are touching. Do not overtighten nut.
5. Find and correct the cause for shearing.

Servicing Scraper Blade

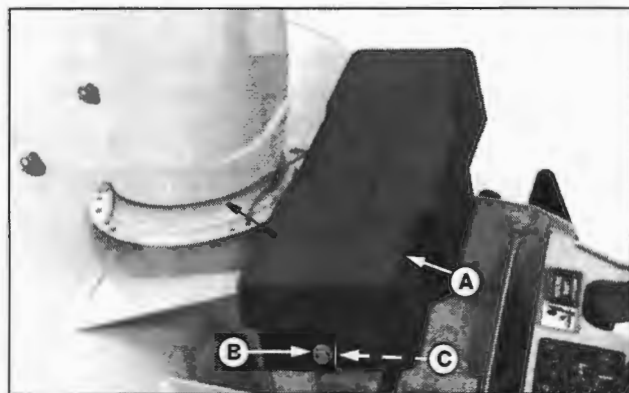
1. Check scraper blade for wear or damage.
2. Raise snowthrower.
3. Place wood blocks under collector assembly.
4. Lower snowthrower onto blocks.



M35254

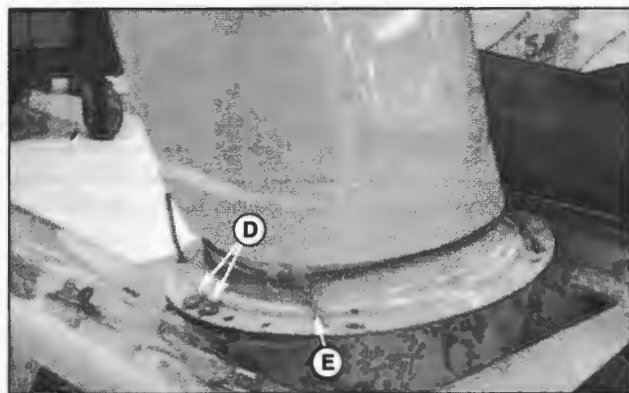
5. Remove nuts from carriage bolts (A).
6. Turn scraper blade (B) end-for-end or replace blade if both sides are worn.
7. Install scraper blade.
8. Tighten bolts.

Removing Discharge Chute Cables



M47793

1. Remove black cable shield (A) by removing two hex head bolts (B) and lock nuts (C). (One on each side.)

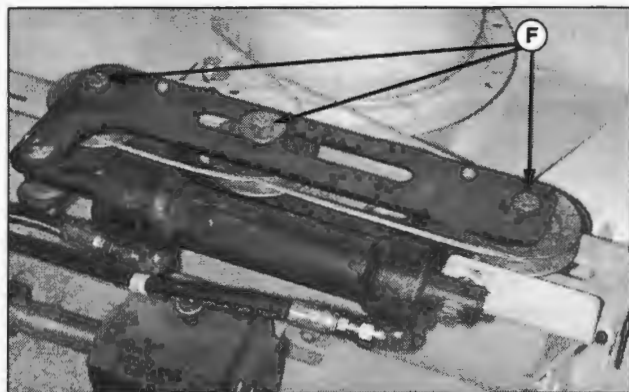


M47794

2. Loosen four cap screws (D). (Two on each side of discharge chute.)

NOTE: For ease of assembly and proper cable routing, remove one cable at a time.

3. Remove each cable (E) from snowthrower.



MX11512

4. Remove cables from pulleys (F).
5. Install new cables on pulleys.

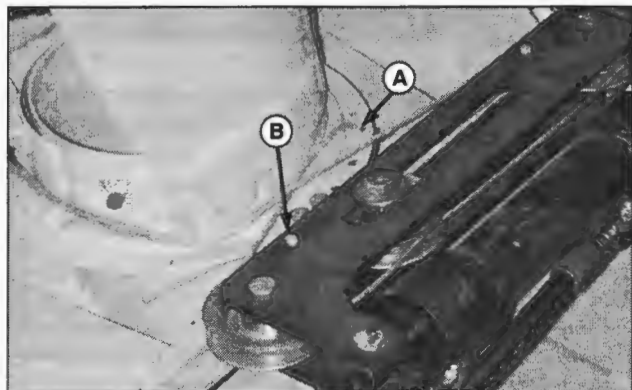
Replacing Left Discharge Chute Cable

IMPORTANT: Avoid damage! Hydraulic cylinder plunger must be in the retracted position (all the way in the cylinder) when beginning this procedure.

NOTE: For ease of assembly and proper cable routing, replace one cable at a time.

When replacing discharge chute cables, route left-hand cable around snowthrower first.

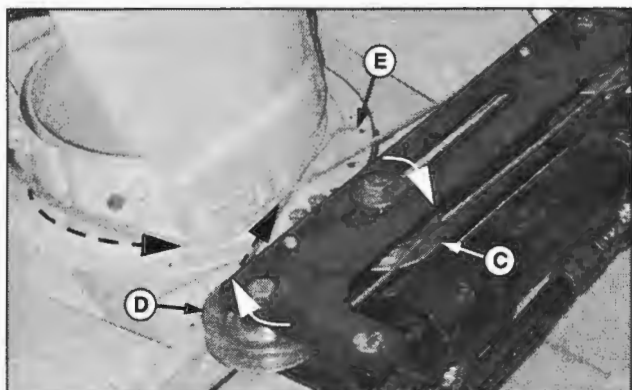
1. Turn snowthrower discharge chute to the left (as viewed from tractor/front mower seat).



MX11513

2. Standing at rear of snowthrower, put cable (A) through hole (B).

NOTE: Make sure right-hand cable is under left-hand cable before putting in hole (E).

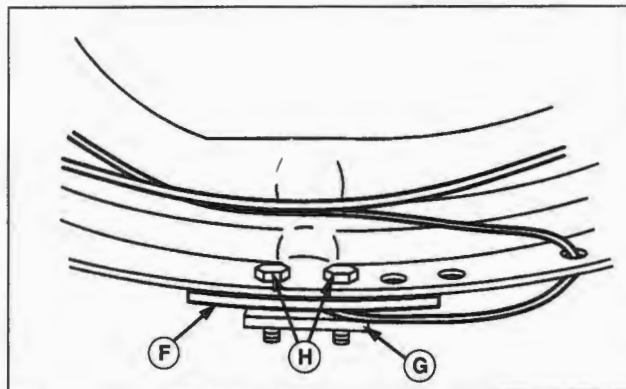


MX11513

3. Wrap cable around middle pulley (C), and around left-hand pulley (D).

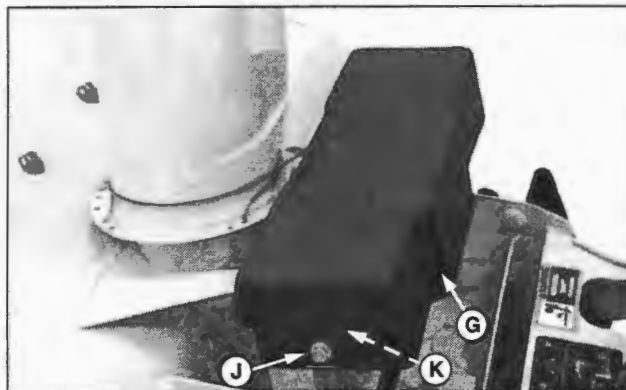
Wrap cable counterclockwise around discharge chute and put in hole (E).

IMPORTANT: Avoid damage! Make sure you install the long bolts through the black cable shield and bracket and that the cable routing is correct. Verify with line drawing below.



M47797a

4. Route cable between large clip (F), double nut (G) and two hex head bolts (H).
5. Pull cable end tight and tighten hex head bolts.



M47797a

6. Install cable shield (I) and fasten with two hex head bolts (J) and lock nuts (K).
7. Tighten nuts.

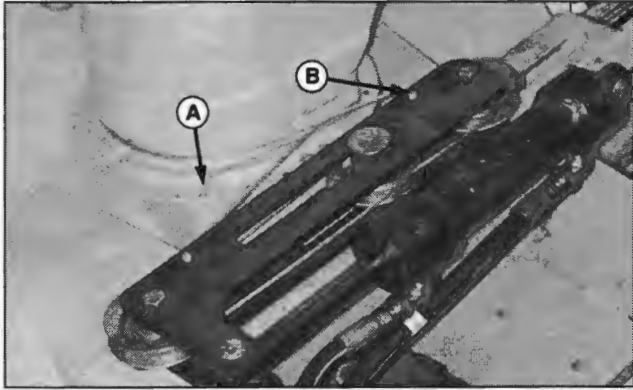
Replacing Right Discharge Chute Cable

IMPORTANT: Avoid damage! Hydraulic cylinder plunger must be fully extended when beginning this procedure.

NOTE: For ease of assembly and proper cable routing, replace one cable at a time.

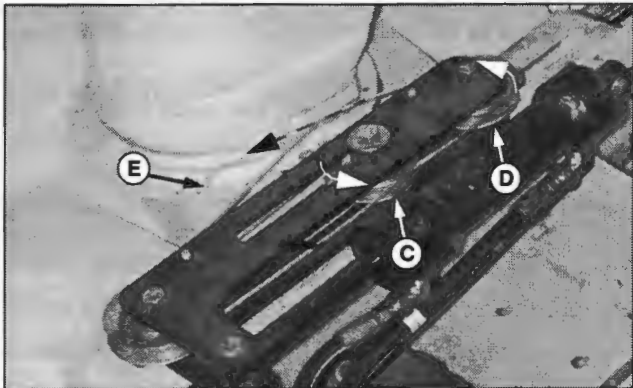
1. Turn snowthrower discharge chute to the right (as viewed from tractor/front mower seat).

SERVICE



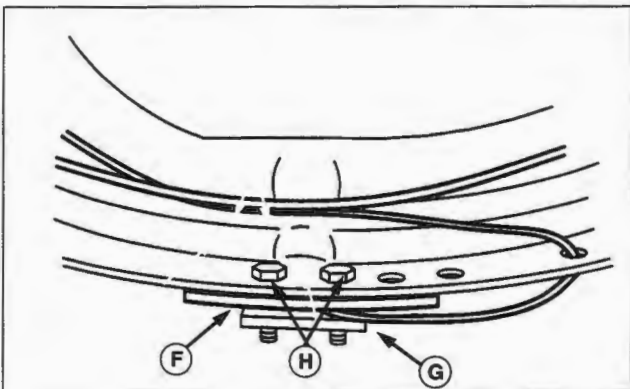
2. Standing at rear of snowthrower, put cable (A) through hole (B).

NOTE: Make sure right-hand cable is under left-hand cable before putting in hole (E).



3. Wrap cable around middle pulley (C), and around left-hand pulley (D).
4. Wrap cable clockwise around discharge chute and put in hole (E).

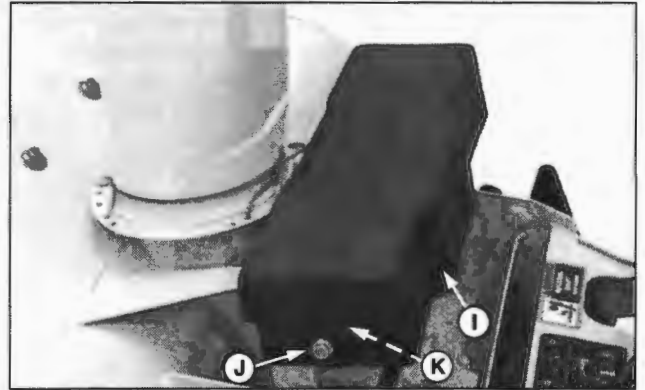
IMPORTANT: Avoid damage! Make sure you install the long bolts through the black cable shield and bracket and that the cable routing is correct. Verify with line drawing below.



5. Route cable between large clip (F), double nut (G) and

two hex head bolts (H).

6. Pull cable end tight and tighten hex head bolts.



7. Install cable shield (I) and fasten with two hex head bolts (J) and lock nuts (K).

8. Tighten nuts.

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
Rotor or Impeller Will Not Turn	Replace broken shear bolt.
Machine Rear Wheels Slip	Install two rear wheel weights. Install chains on each drive tire. (See machine operator's manual for instructions.) Add calcium chloride solution to drive tires.
Snowthrower Operation is Erratic	Tighten drive chain. Lubricate snowthrower. Replace or repair bent scraper blade(s). Reverse or replace badly worn scraper blade(s). Adjust skid shoes for conditions.
Chute Moves in Wrong Direction	Reverse hydraulic hoses.

STORAGE

Storing Snowthrower

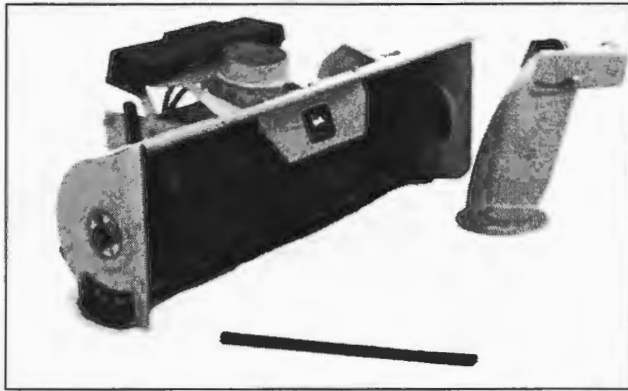


CAUTION: Avoid injury! Do not work under a raised snowthrower unless it is supported correctly.

1. Remove snowthrower.
2. Clean snowthrower with water pressure from a hose.
3. Repair or replace worn, bent, or damaged parts. Tighten loose hardware.
4. Apply paint to areas that need it to prevent rust.
5. Lubricate pivot points with engine oil to prevent rust.
6. Lubricate grease points.
7. Cover snowthrower if stored outdoors.

ASSEMBLY

Remove Snowthrower from Crate



M47302a

Parts in Bag

Qty.	Description
2	Double Nuts
2	Bolts (1 in.)
2	Large Clips
4	Hex Head Bolts (5/8 in.)
2	Lock Nuts (No Plastic Insert)
1	Lock Nut (Plastic Insert)
1	Carriage Bolts (3/4 in.)

1. Remove snowthrower and hydraulic hose assembly, discharge chute, drift blade and bag of parts.

2. Remove bag of parts.

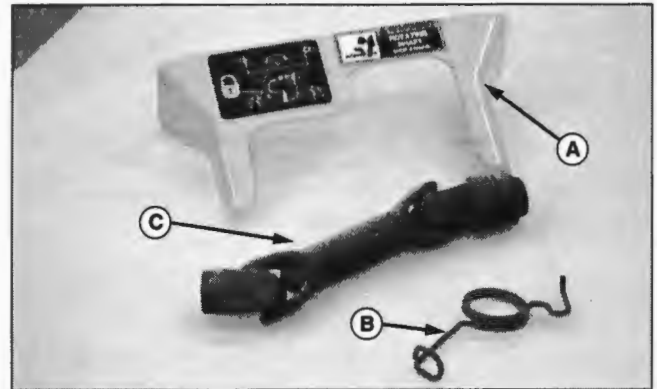
3. See your Front Hitch Kit Installation Instructions for assembling the following hardware:

- Large Spring Locking Pin (Used with Front Hitch Kit)
- Tether Assembly (Used with Front Hitch Kit)

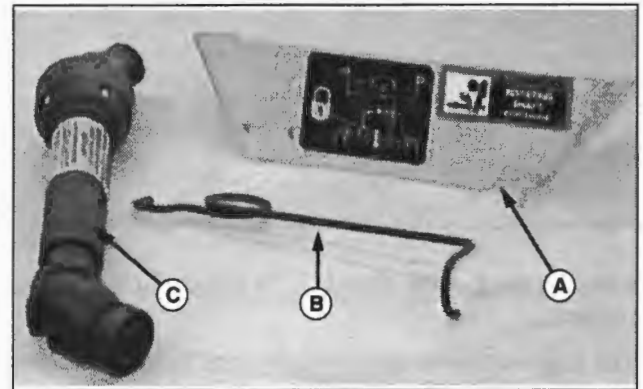
The above parts are used to restrict the hitch from angling with the snowthrower.

Identify Drive Assembly Parts

NOTE: You will receive one of two different styles of drive assembly components. Both styles are pictured here.



M58988



M60470

Parts in Box

Qty.	Description
1	Upstop (A)
1	Driveshaft Support Rod (B)
1	Driveshaft (C)
1	Bag of Parts

Parts in Bag

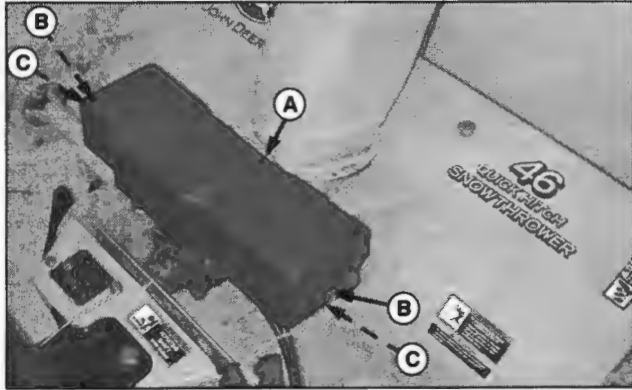
Qty.	Description
4	Carriage Bolt, M8x20
4	Nut
2	Hydraulic Fittings (Straight)
1	Rolled Pin
1	Woodruff Key
1	Wire

ASSEMBLY

Install Hydraulic Fittings

1. Replace 90° fittings on hoses with straight fittings. Retain 90° fittings for future use.

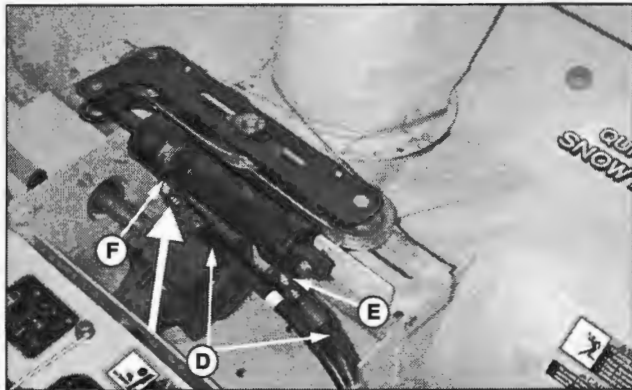
Reverse Hydraulic Hoses



MX11506

1. Remove black cable shield (A) by removing two bolts (B) and nuts (C).

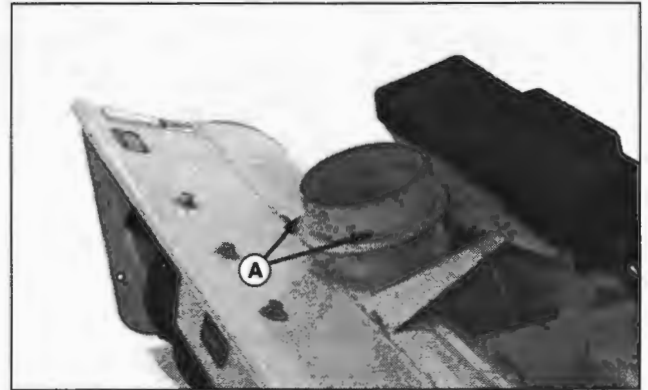
NOTE: Remember original location of hoses. You will connect them to the opposite ports from which you removed them.



MX11507

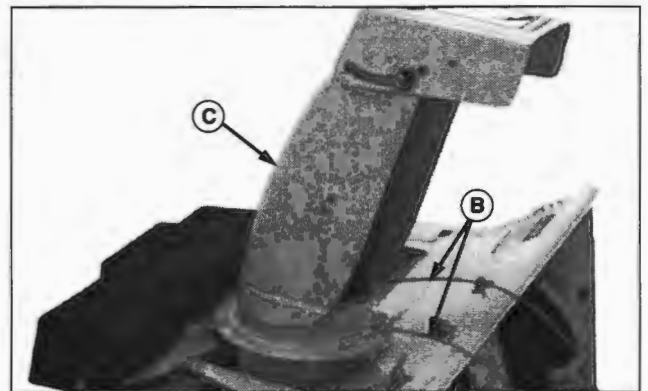
2. Mark one hose and cylinder port for identification purposes and remove hoses (D) from cylinder, one hose at a time.
3. Connect hoses (E) and (F) to the opposite ports.
4. Angle hoses to left of snowthrower and tighten.

Install Discharge Chute



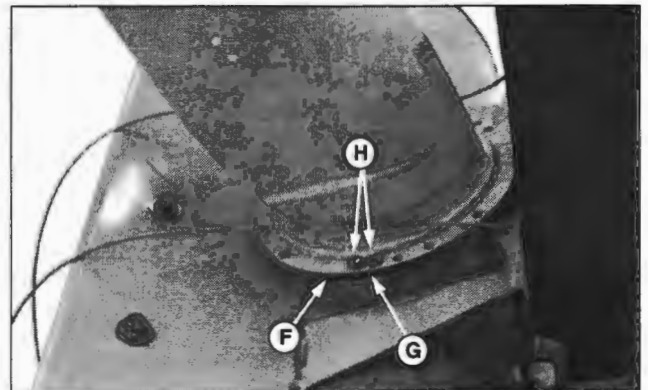
M47305

1. Apply John Deere Moly High Temperature EP Grease or an equivalent onto discharge chute base (A).



M47313

2. Lay cables (B) over snowthrower shell.
3. Put discharge chute (C) on base.



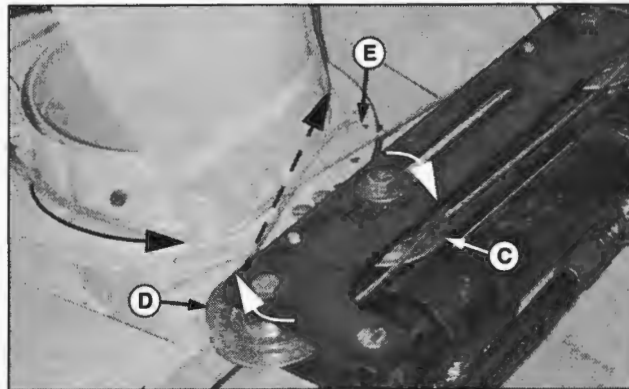
M47314

4. Install one large clip (F), one double nut (G) on each side of chute and fasten with two hex head bolts (H). (Do not tighten bolts at this time.)

ASSEMBLY



M58978



MX11513

5. Remove black cable shield (I) by removing four bolts (J) and nuts.

6. Check cables to make sure they are still installed on pulleys.

3. Wrap cable around middle pulley (C), and around left-hand pulley (D).

4. Wrap cable counterclockwise around discharge chute and put in hole (E).

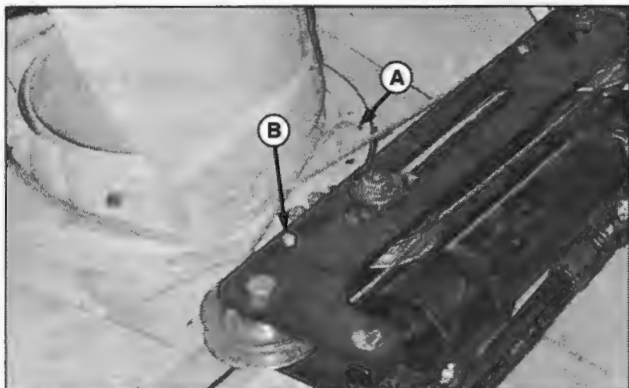
Install Discharge Chute Cables

IMPORTANT: Avoid damage! Hydraulic cylinder plunger must be in the retracted position (all the way in the cylinder) when beginning this procedure.

NOTE: For ease of reassembly and proper cable routing, replace one cable at a time.

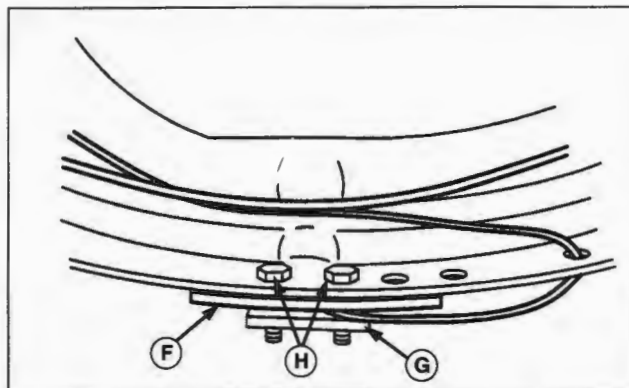
When installing discharge chute cables, route left-hand cable around snowthrower first.

1. Turn snowthrower discharge chute to the left (as viewed from tractor/front mower seat).



MX11513

2. Standing at rear of snowthrower, put cable (A) through hole (B).



M47797a

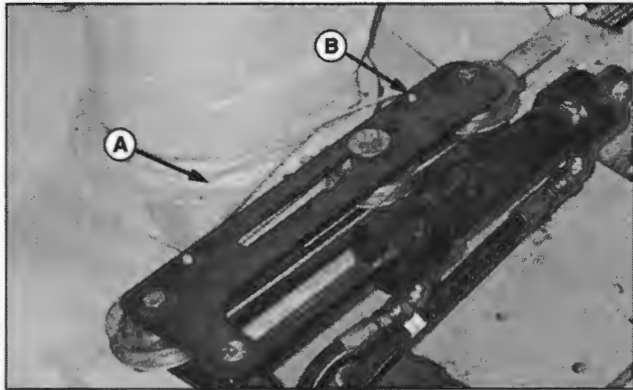
5. Route cable between large clip (F), double nut (G) and two hex head bolts (H).

6. Pull cable end tight and tighten hex head bolts.

IMPORTANT: Avoid damage! Hydraulic cylinder plunger must be fully extended when beginning this procedure.

7. Turn snowthrower discharge chute to the right (as viewed from tractor/front mower seat).

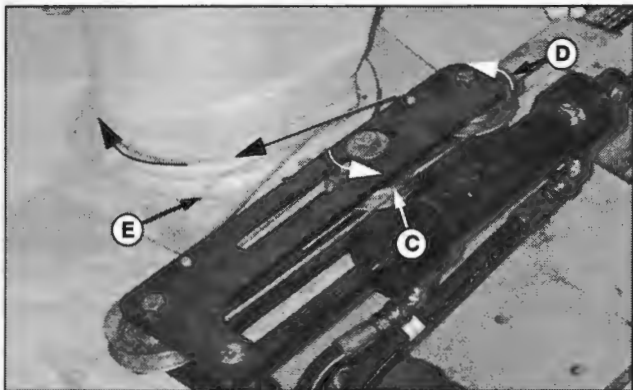
ASSEMBLY



MX11514

8. Standing at rear of snowthrower, put cable (A) through hole (B).

NOTE: Make sure right-hand cable is under left-hand cable before putting in hole (E).

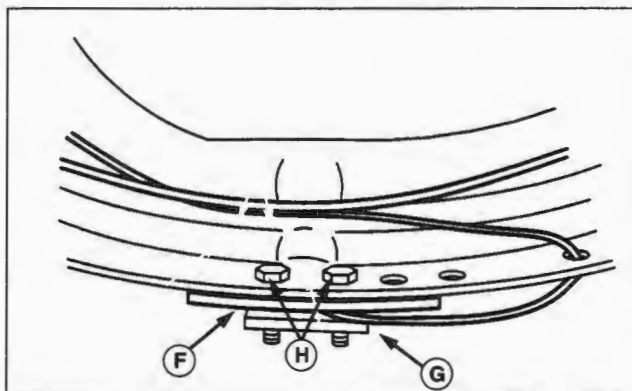


MX11514

9. Wrap cable around middle pulley (C), and around left-hand pulley (D).

10. Wrap cable clockwise around discharge chute and put in hole (E).

IMPORTANT: Avoid damage! Make sure you install the long bolts through the black cable shield and bracket and that the cable routing is correct. Verify with line drawing below.

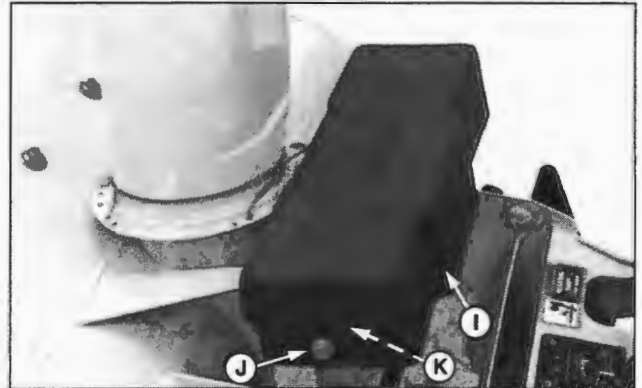


M47797a

11. Route cable between large clip (F), double nut (G) and

two hex head bolts (H).

12. Pull cable end tight and tighten hex head bolts.



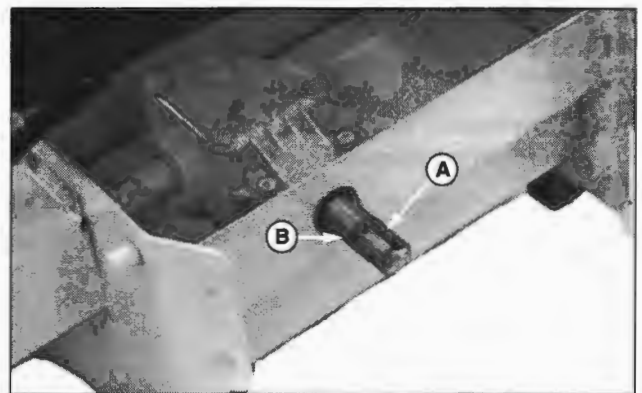
M47797a

13. Install cable shield (I) and fasten with two hex head bolts (J) and lock nuts (K).

14. Tighten nuts.

IMPORTANT: Avoid damage! Hydraulic cylinder plunger must be fully extended when beginning this procedure.

Install Driveshaft

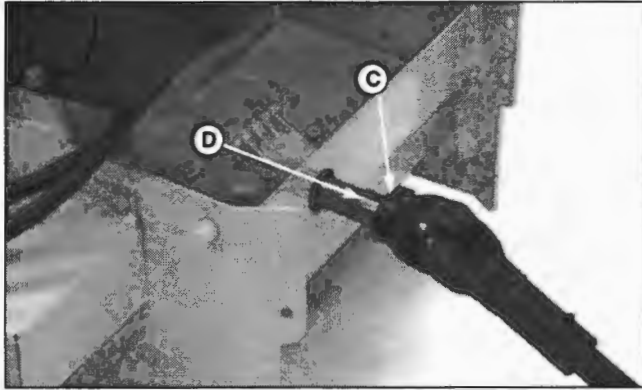


M47428

1. Install key (A) in gearbox shaft groove.

2. Apply John Deere NEVER SEEZ® lubricant or an equivalent on sprocket driveshaft (B).

ASSEMBLY



M47429

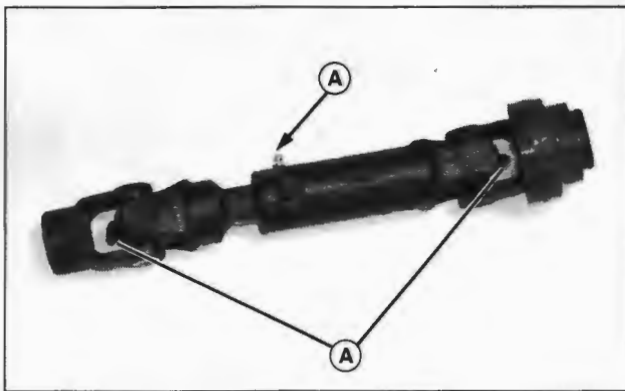
3. Align keyway in driveshaft (C) with key on gearbox shaft (D) and push driveshaft on gearbox shaft.



M47430

4. Align holes on gearbox shaft with holes in driveshaft and install rolled pin (E) through both shafts.
5. Install wire through rolled pin, bend around joint, and twist both ends of wire together a minimum of three turns.

Lubricate Driveshaft



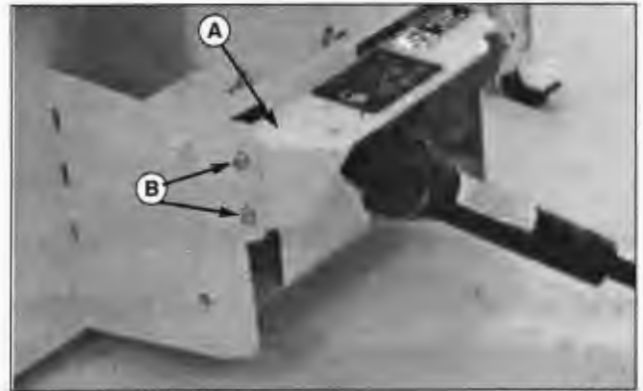
MX11505

1. Lubricate driveshaft grease fittings (A) (with John Deere Moly High Temperature EP Grease or an equivalent).

Install Upstop



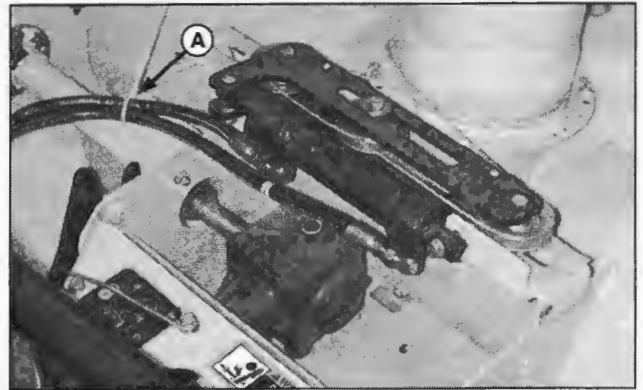
CAUTION: Avoid injury! Do not operate snowthrower without upstop in place.



M60475

1. Install upstop (A) on snowthrower and fasten with four carriage bolts (B) and lock nuts. (Two on each side.)
2. Tighten nuts.

Install Tie Strap



MX11510

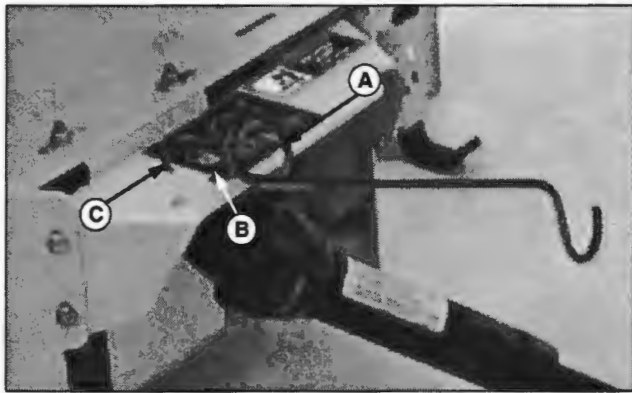
1. Fasten snowthrower hydraulic hoses with tie strap (A).
2. Cut off excess.

Install Driveshaft Support Rod

NOTE: Instructions differ depending on the style of drive assembly components. Match your style to the corresponding pictures and follow the appropriate directions.

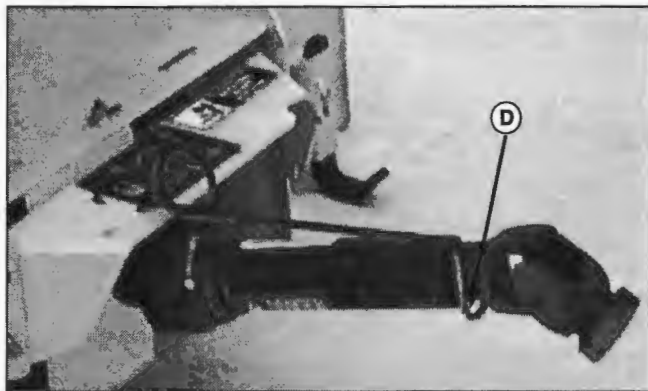
ASSEMBLY

Style 1 Components



M60477

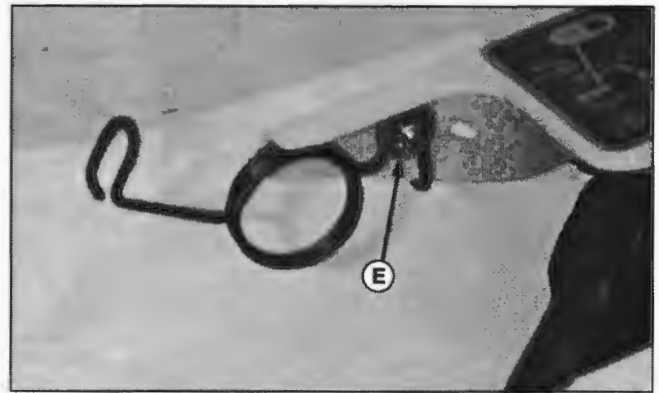
1. Install end (A) of support rod in holes (B, C) on upstop.



M60480

2. Install driveshaft on end (D) of support rod.

Style 2 Components



M77296

Picture Note: 400 Series

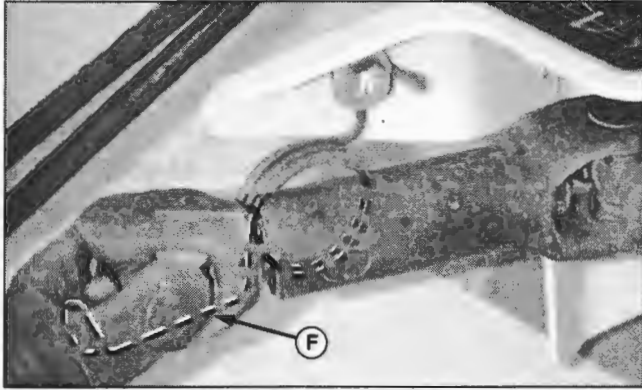


M60479

Picture Note: F900 Series

1. Install support rod on upstop with carriage bolt, washer, and lock nut (E).

- For 400 Series: Install rod inside the left-hand side of upstop.
- For F900 Series: Install rod outside the right-hand side of upstop.



M58992b

Picture Note: 400 Series



M60462

Picture Note: F900 Series

2. Install driveshaft on end of support rod (F).

Install Drift Blade



MX11511

1. Install drift blade (A) with two hex head bolts and lock nuts.

SPECIFICATIONS

Snowthrower Specifications

Dimensions

Clearing Width	1.2 m (46 in.)
Height to Top of Spout	78 cm (30-5/8 in.)
Length	69 cm (27 in.)
Lift Height	279 mm (11 in.)
Net Weight	113 kg (250 lb)
Scraper Blade (Replaceable and Reversible)	1.1 m (43-13/16 in.)

Discharge Chute

Control	Hydraulic
Rotation	100° to each side
Snowthrower Drive	Splined coupler shaft to gear case
Snowthrower Lift	Hydraulic

Rotor

Length	1 m (40-3/4 in.)
Speed (Auger)	945 rpm
Diameter (Auger)	305 mm (12 in.)
Drive	Gear case to roller chain
Bearings	Sealed ball bearings

Recommended Lubricants

Gear Oil	John Deere GL-5 Gear Lubricant
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Grease:

.....	John Deere MOLY HIGH TEMPERATURE EP GREASE
.....	John Deere Multi-Purpose SD Polyurea Grease
.....	John Deere Multi-Purpose HD Lithium Complex Grease

(Specifications and design subject to change without notice.)

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NOTES

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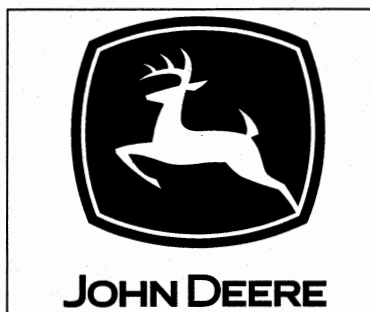
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JOHN DEERE QUALITY STATEMENT

John Deere Quality



MIF

John Deere equipment is more than just a purchase, it's an investment in quality. That quality goes beyond our equipment to your John Deere dealer's parts and service support. This support is needed to keep you 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 (Call 1-800-537-8233 to locate your nearest John Deere 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.