



ATTACHMENT OPERATOR'S MANUAL



42" Snow Blade

42" Snow Blade

Mfg. No.	Description
1694919	42" Remote Angling Snow Blade

1732529
Revision 01
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NOTE: In these instructions, "left" and "right" are referred to as seen from the operating position.

Recommended Accessories

For best performance, it is recommended to use tire chains and two rear wheel weights. A rear-mounted weight carrier can also be added for additional traction. The maximum weight added to the tractor should not exceed 35 lbs. per wheel, plus 66 additional pounds in the rear weight box.

For operation on slopes greater than 15% (8.5°), Quick Tach Weights, tire chains, and wheel weights are recommended. Never operate on slopes greater than 17.6% (10°).

Safety Rules & Information



Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of unit, severe personal injury or death to you, or bystanders, or damage to property or equipment.

The triangle  in text signifies important cautions or warnings which must be followed.

GENERAL WARNINGS

- Know the tractor controls and how to stop quickly. **READ THE TRACTOR OPERATOR'S MANUAL.**
- Read this manual and the tractor Operator's Manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
- Never allow children to operate the machine. Do not allow adults to operate it without proper instruction.
- Do not carry passengers.
- Use only attachments or accessories designed for your machine. See your dealer for a complete list of recommended attachments or accessories.
- Keep the area of operation clear of all persons, particularly small children, and pets.
- Never direct discharge towards bystanders.
- Make sure all hardware is secure and that dozer blade is in good operating condition.
- Check to be sure all safety devices and shields are in place.
- Check that all adjustments are correct before using this unit.
- Gasoline is highly flammable. Follow all precautions listed in your tractor's operator's manual.
- Always wear eye protection while operating and performing adjustments to protect eyes from debris thrown by the dozer.
- When cleaning, repairing, or inspecting the unit make sure all moving parts have stopped. Disconnect and secure the spark plug wires and remove the key to prevent accidental starting.

DANGER

OPERATING ON SLOPES CAN BE DANGEROUS

For operation on slopes greater than 15% (8.5°), weight box, tire chains, and wheel weights are recommended. NEVER OPERATE ON SLOPES GREATER THAN 17.6% (10°).

PREPARATION

- Disengage the PTO before making any adjustments.
- Never attempt to make any adjustments while engine is running.
- Thoroughly inspect the area where the dozer is to be operated and remove all foreign objects.
- Adjust the skid shoe height to clear gravel or crushed stone surface. See the Adjustments section for procedure.

OPERATING SAFETY

- Always clear snow up and down the face of slopes, never across the face. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
- Exercise extreme caution when operating on, or crossing, gravel drives, walks or roads. Stay alert for hidden hazards or traffic.
- After striking an object or if unit starts to vibrate abnormally, stop the engine and remove the key. Check for the cause and any damage before restarting. Before any inspection, make sure all moving parts have stopped.
- Take all possible precautions before leaving operator's position. Lower the attachment, set the parking brake, stop the engine and remove the key.
- Never operate near glass enclosures, automobiles, window wells, dropoffs, etc.
- Do not put hands or feet near or under the dozer blade. Keep clear of the dozer blade at all times.
- Do not overload machine capacity by attempting to clear too much material at too fast a rate.
- Never operate unit at high transport speeds on slippery surfaces. Use care when travelling in reverse.
- Never operate the dozer blade without good visibility or light. Always be sure your feet are properly placed on the footrests and keep a firm hold on the steering wheel.
- Do not run the engine indoors.
- Never allow anyone in front of the unit.

CONTROL FUNCTIONS

The information below briefly describes the function of individual controls. Operating the tractor and dozer require the combined use of these controls and additional controls whose operation is described in the tractor Operator's Manual.

Please Take a moment and familiarize yourself with the name, location, and function of these controls so that you will better understand the safety and operating instructions provided in this manual.

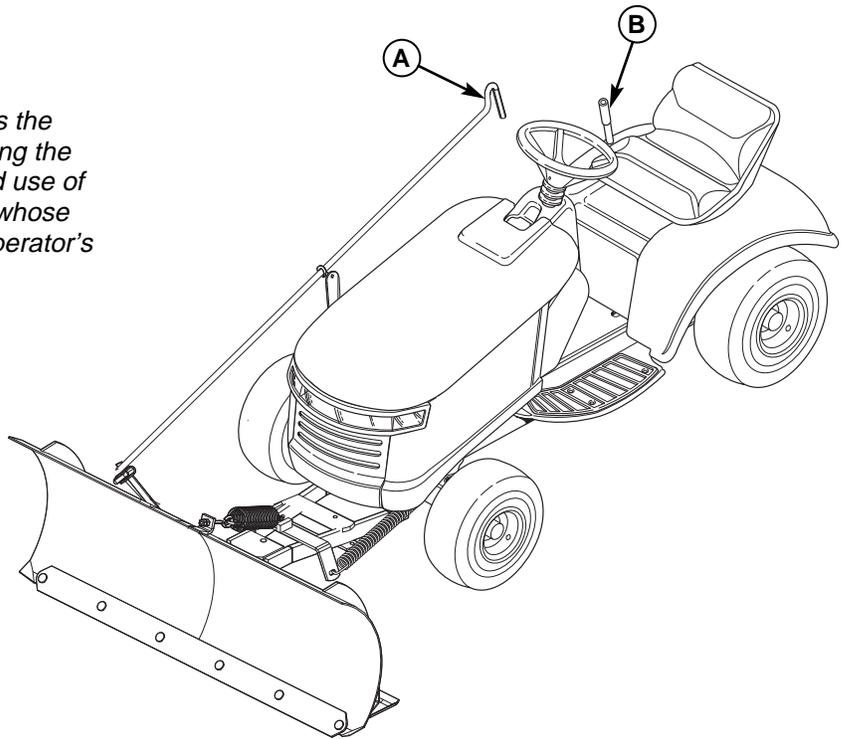


Figure 1. Control Locations
A. Blade Angle Control Lever
B. Attachment Lift

A. Blade Angle Control Lever

The blade angle release lever controls a spring-loaded plate which locks the blade in one of three positions.

Turn the lever counterclockwise to release the angling mechanism and move the blade left or right. Push the angling lever forward fully to lock the blade in the left position. Pull the lever fully back to lock the blade in the right position. Move the lever slowly past center to lock in the centered position.

NOTE: It is easier to change the angle of the blade with the attachment raised.

B. Attachment Lift

The attachment lift lever raises and lowers the dozer blade. To RAISE attachment pull back on lever. To LOWER an attachment, move the lever forward.



TRACTOR CONTROLS

Before you begin operating the tractor with the dozer blade attachment, make certain you have:

- Read and understood the instructions in the tractor Operator's Manual.
- Become thoroughly familiar with all of the tractor controls and their operation, including how to safely and properly start and stop the unit.
- Practice driving in an open area—without dozing—to become accustomed to the unit.

General Operating Instructions



Checks Before Starting

1. Refer to the Maintenance & Adjustments sections of this manual and perform any needed service. Also, refer to the tractor Operator's Manual and perform any required service.
2. Remove any objects from the work area which might interfere with plowing activity.
3. Adjust the skid shoes to desired height. See Skid Shoe Adjustment.
4. Make sure all hardware is present and secure.

Engine & Ground Speed Selection

Always run the engine at full throttle.

Set tractor speed to obtain the needed power to move the material. Operate at a safe speed, depending on conditions, so that you have complete control of the tractor. Rear wheel weights and chains are recommended for slippery surfaces.

A rear weight carrier is recommended for additional traction.

Transporting

For maximum ground clearance, transport the blade to and from work areas fully raised and angled straight ahead.

Starting & Stopping

1. Start the tractor engine. Set engine throttle to full.
2. Raise the attachment lift and travel to the work site.
3. Set the angling control to the desired angle.
4. Lower the attachment lift and begin plowing.
5. Raise the plow before backing up.
6. To stop the tractor, set ground speed to neutral and set the parking brake. Before leaving the seat, stop the engine, set the parking brake, remove the key, and wait for all moving parts to stop.

WARNING

Perform the Safety System Interlock test found in your tractor Operator's Manual. If tractor does not pass the test, do not operate the tractor. See your authorized dealer. Under no circumstances should you attempt to defeat the safety system.

Use caution when plowing a snow covered area. Snow can cover objects such as curbs, drop-offs, and other obstacles. Be familiar with the area you are plowing.

To prevent an explosion or fire, never store the tractor with fuel in the tank inside a building where an ignition source is present.



IMPORTANT NOTE

To prevent damage to the unit, always raise the dozer blade BEFORE turning or backing up.

DANGER

OPERATING ON SLOPES CAN BE DANGEROUS

Never operate on slopes greater than 17.6% (10°) which is a rise of 3-1/2 feet (106cm) vertically in 10 feet (607cm) horizontally.

Operate the unit at a slow ground speed when driving onto slope. Avoid using brakes to control ground speed.

When operating on slopes that are greater than 15 % (8.5°) but less than 17.6%, use additional wheel weights or counterweights.

In addition to counterweights, use extra caution when operating on slopes. Drive UP and DOWN the slope, never across the face, use caution when changing directions and DO NOT START OR STOP ON SLOPE.

For additional traction, tire chains and a weight box can be added. Maximum weight added to tractor should not exceed 35 lbs. per wheel and 100 additional lbs. in weight box.

Changing Angle of the Blade:

See Figure 1 for location of Controls.

NOTE: It is easier to change the angle of the blade with the attachment raised.

1. Raise the attachment lift.
2. Turn the lever counterclockwise to release the angling mechanism and move the blade left or right. Push the angling lever forward fully to lock the blade in the left position. Pull the lever fully back to lock the blade in the right position. Move the lever slowly over center to lock in the centered position.

Snow Plowing Tips

- Determine the best snow removal pattern before beginning.
- Plan the pattern so that you avoid pushing snow onto cleared areas.
- When land contour permits, it is best to travel in the longest direction to minimize turning.
- In very deep or heavy snow, it may be necessary to make the first pass with dozer blade partially raised, then repeat each pass with the blade lowered to clear the material left on the surface. Also, it may be necessary to clear less than the full width of the dozer blade or reduce ground speed.
- Snow tends to freeze into solid banks when plowed off a driveway or other large area. Because of this you may want to plow snow several feet past the edge of the drive to allow space for future plowing to build up.
- If pushing snow past the edges of driveways or side-

walks, be careful not to tear up the grass buried under snow next to the drive or sidewalk. Lift the blade several inches off the ground to avoid damaging the grass.

- Spinning tires with tire chains can leave unsightly marks or permanent damage to asphalt or concrete driveways or sidewalks. Avoid sudden stops or starts.

Storage



IMPORTANT NOTE
Refer to Tractor Operator's Manual for important information concerning safely storing your tractor.

Daily Storage

1. Allow tractor engine to cool before storing in any enclosure.
2. After dozing or plowing jobs are completed, hose or brush down the blade to remove excess dirt.
3. Lightly oil all pivot points. Coat bare metal surfaces to prevent corrosion.

Off-Season Storage

1. Remove dozer blade and hitch from the tractor.
2. Use water pressure or a brush to thoroughly clean the dozer blade.
3. Paint, or lightly coat with oil, any area where paint has been worn or chipped away.
4. Lubricate the dozer blade.
5. Store the dozer blade and hitch in a dry place.



Schedule For Normal Care

General Lubrication

Lubricate the snow blade as shown in Figure 2. Where an oil can is shown use 30 weight oil. Where a grease gun is shown, use lithium grease. Lubricate the following areas:

- Grease the blade pivot.
- Oil the blade lock pawl
- Apply grease to the plastic wear surface above the bell crank and to the bell crank.

⚠ WARNING

To avoid serious injury, perform maintenance on the unit only when the engine is stopped and all moving parts have stopped. Always remove the ignition key before beginning maintenance or adjustments to prevent accidental starting of the engine.

General Lubrication

Care Required	Schedule
Clean snow and ice from the snow blade.	After each use
Lubricate snow blade.	Every 10 hours or at least once a year.

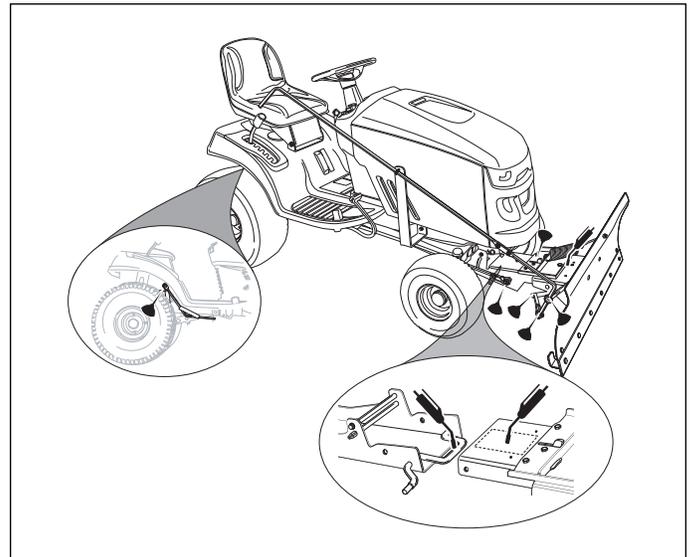


Figure 2. Lubrication Points

Troubleshooting, Adjustments, & Service



TROUBLESHOOTING

While normal care and regular maintenance will extend the life of your equipment, prolonged or constant use may eventually require that service be performed to allow it to continue operating properly. The troubleshooting guide below lists the most common problems, their causes and remedies. See the information on the following pages for instructions on how to perform most of these minor adjustments and service repairs yourself. If you prefer, all of these procedures can be performed for you by your local authorized dealer.

WARNING

- To avoid serious injury, perform maintenance on the tractor or snow blade only when the engine is stopped and the parking brake engaged.
- Always remove the ignition key, disconnect the spark plug wire and fasten it away from the plug before beginning the maintenance, to prevent accidental starting of the engine.

PROBLEM	CAUSE/SOLUTION
1 Snow blade does not lock into position.	A. Clean ice or snow from lock and pivot mechanism. B. Lubricate lock and pivot mechanism. C. Check return spring.
2 Scraper bar does not clean down to hard surface.	A. Skid shoes not properly adjusted. Adjust skid shoes. B. Lift height out of adjustment. See ADJUSTMENTS section.
3. Snow blade picks up stones on gravel drive.	A. Skid shoes not properly adjusted for ground surface. Adjust skid shoes.
4 Tractor does not have sufficient traction.	A. Tractor too light at rear wheels. Use Quick Tach weights, wheel weights, and tire chains.
5. Tractor not stable on sloping surfaces.	A. Ground speed too fast. Reduce speed. B. Tractor not properly weighted. See Recommended Accessories, page 1. C. Slope grade too steep. See Safety Section. Use Quick Tach weights, wheel weights, and tire chains.
6 Snow blade lifts hard.	A. Apply grease to plastic wear pad above bell crank and to the bell crank. B. Check lift assist spring.

Skid Shoe Adjustment

On smooth surfaces such as concrete or asphalt, the scraper bar should scrape the surface. On surfaces such as gravel, the scraper bar should be set high enough so that it will not pick up debris.

1. Lower the snow blade and adjust the skid shoes to achieve the correct plowing height.
2. Loosen the nuts (A, Figure 3) securing the skid shoes (B).
3. Raise or lower the scraper bar to the desired height. Use wood blocks to hold the snow blade in position.
4. Set the skid shoes so that they are in contact with the ground and tighten the skid shoe nuts.

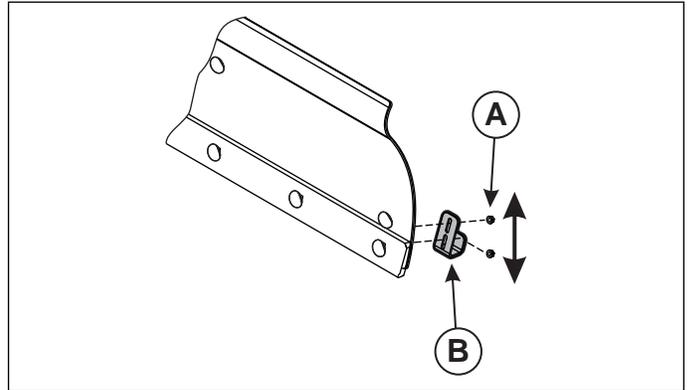


Figure 3. Skid Shoe Adjustment
A – Lock Nut
B – Skid Shoe

Lift Adjustment

In the fully raised position the attachment should be 4"-5" off the ground.

LIFT HEIGHT ADJUSTMENT

1. Fully raise the snow blade. The snow blade should be approximately 4"-5" off the ground. If not, go to step 2.
2. Lower the snow blade to the ground.
3. Remove hairpin cotter pin (B, Figure 4) from the ball joint (A) on the lift arm. Remove the lift arm from the bell crank (C).
4. Loosen the ball joint lock nut (D) and rotate the ball joint either counter clockwise to lower the travel height or clockwise to increase the travel height. Tighten the lock nut (D).
5. Reinstall the lift arm (A) onto the bell crank (C) and secure with the hairpin cotter pin (B).
6. Raise the snow blade off the ground and check the travel height.
7. Repeat as needed until the correct travel height is set.

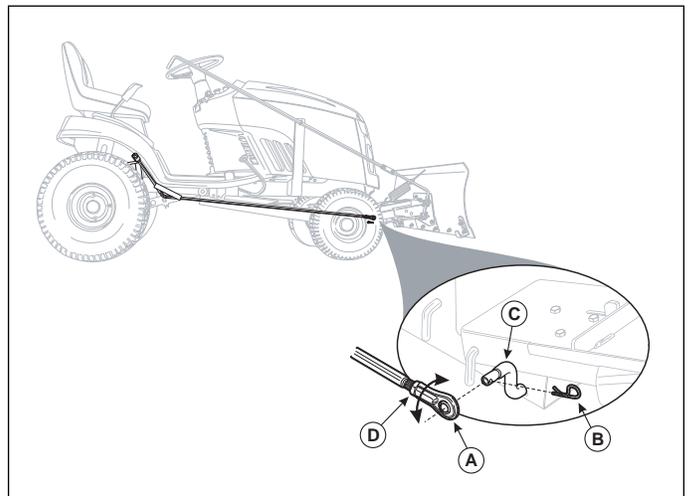
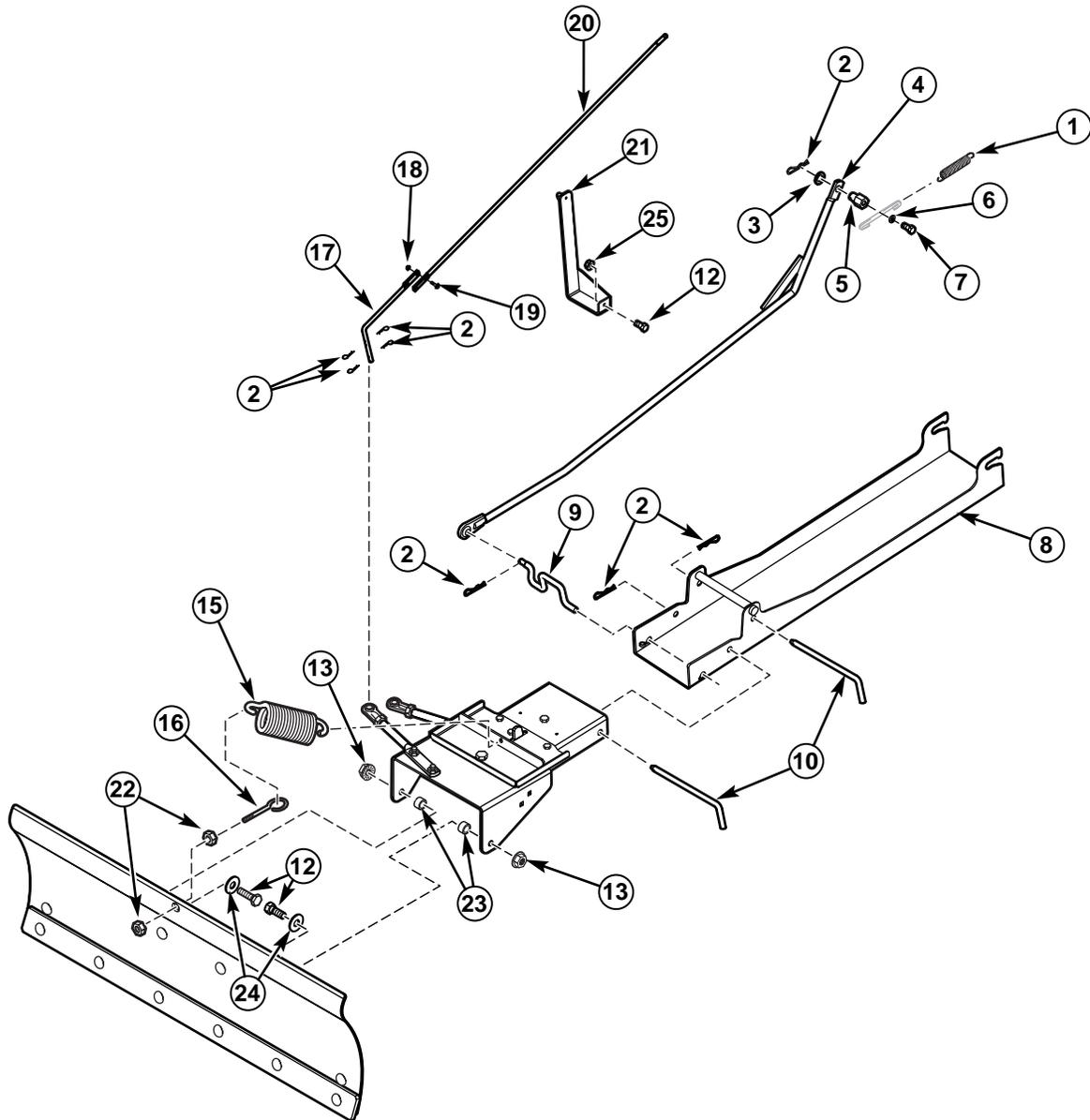


Figure 4. Travel Height Adjustment
A – Lift Arm Ball Joint
B – Hair pin
C – Bell Crank
D – Ball Joint Lock Nut

Initial Setup & Assembly

Setup



Ref	Qty	Description
1	1	Lift Assist Spring
2	7	Hair pin
3	1	Flat Washer
4	1	Lift Arm
5	1	Stand Off
6	1	Lock Washer
7	1	Bolt
8	1	Hitch Assembly
9	1	Bell Crank
10	2	Mounting Pin
11	1	Hitch Pivot Assembly
12	3	Bolt
13	2	Whiz Lock Nut

Ref	Qty	Description
14	1	Snow Blade Assembly
15	1	Spring
16	1	Eye Bolt
17	1	Lower Control Arm
18	2	Bolt
19	2	Flange Nut
20	1	Upper Control Arm
21	1	Control Arm Support Bracket
22	2	Eye bolt lock nut
23	2	Spacer
24	2	Washer
25	1	Flange Nut

Figure 5. Initial Setup

Install Hitch on to Tractor

1. Remove mower deck.
2. Install the bell crank (A, Figure 6) through the front holes (B) of the hitch assembly.

NOTE: Make sure that the Lift Arm connection is to the right side of the hitch assembly.

3. Place hitch on floor in front of tractor, with the hitch mounting arms towards the rear of the tractor.
4. On underside of tractor frame, insert hitch support shaft (A, Figure 7) as shown and secure, with the cotter pin (B) on inside of frame. **IMPORTANT** – the cotter pin must be located along the inside edge of the tractor frame.

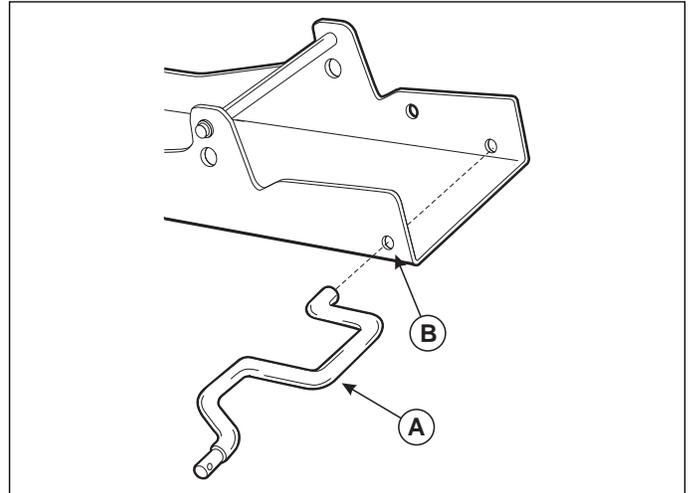


Figure 6. Bell Crank Installation
A. Chute Rotator Drive Cover Bolt
B. Chute Rotator Drive Cover

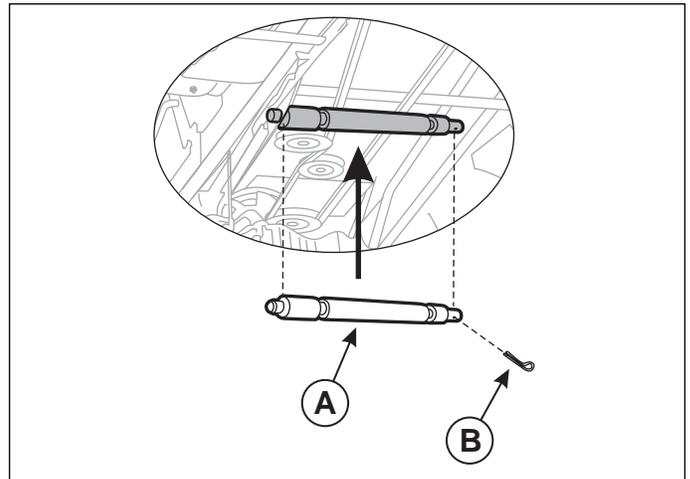


Figure 7. Hitch Support Shaft
A. Hitch Support Shaft
B. Cotter pin

Initial Setup & Assembly

- Slide hitch (A, Figure 8) under tractor and lift to slide hitch mounting arms (C) over hitch support shaft (B).
- At front of the machine, locate and remove the lower hitch latch pin (D, Figure 9) from the hitch assembly (C).
- Turn the front wheels fully to the left.
- Lift the hitch (C) and place the upper hitch latch pin (A) onto the tractor frame support fingers. From the left side of the tractor, slide lower hitch latch pin (D) through the mounting hole in hitch frame, underneath the tractor frame support fingers (B) and through the final mounting hole in hitch frame locking the hitch onto the tractor frame. Secure the lower hitch latch pin (D) with the quick clip (E).

NOTE: Keep the handle portion of the hitch latch pin towards the front of the tractor.

- Hitch installation is now complete.

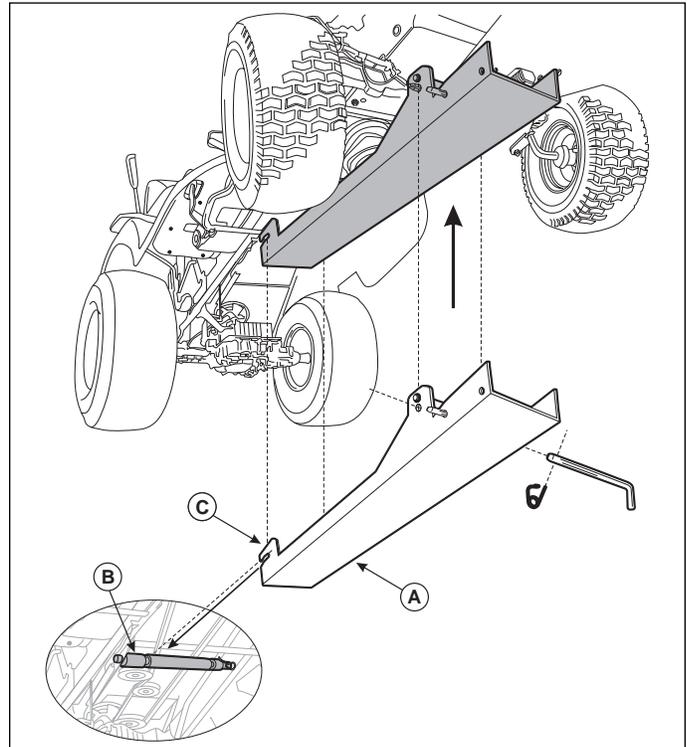


Figure 8. Hitch Installation

- A. Hitch Assembly**
- B. Hitch Support Shaft**
- C. Hitch Mounting Arms**

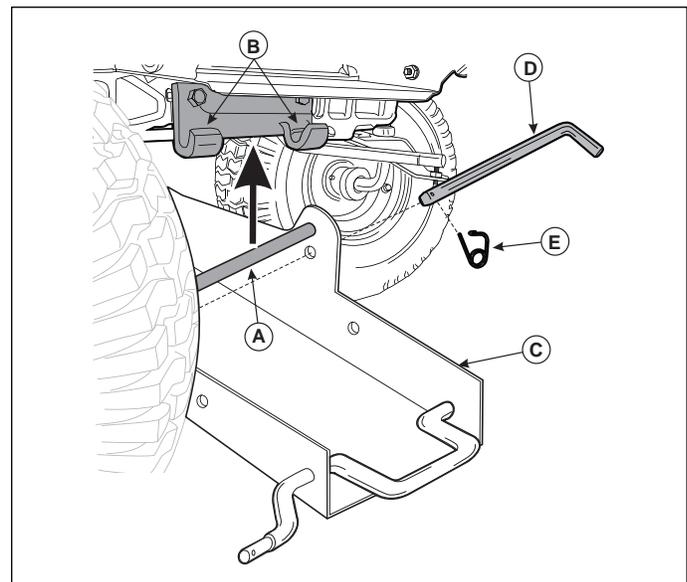


Figure 9. Hitch Latch Pin Installation

- A. Upper Hitch Latch Pin**
- B. Frame Support Fingers**
- C. Hitch Assembly**
- D. Lower Hitch Latch Pin**
- E. Hair pin**

Install Snow Blade Lift Arm

1. Move the mower deck lift arm to the "LOWERED" position.
2. Install the brass stand-off (A, Figure 10) at the top of the mower deck lift arm (B), using bolt (C) and washer (D).
3. Install the lift assist spring (E) from the rear edge of the tractor frame to the brass "C" clip (F) on the mower deck lift arm (B), if not already installed.
4. Slide the snow blade lift arm (G) underneath the tractor and attach the lift arm to the stand-off (A). Secure the lift arm with the hair pin (H). NOTE: Make sure to position the washer (D) between the hair pin (H) and the lift arm (G).
5. Attach the lower ball joint (I) to the bell crank (J). Secure the lift arm with the hair pin (H).

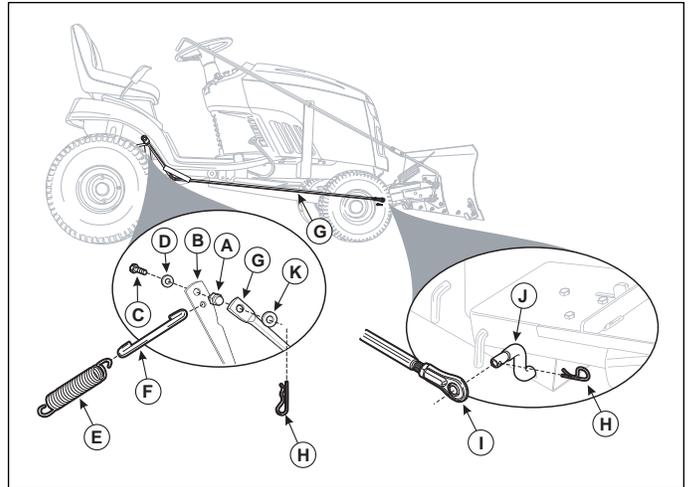


Figure 10. Belt Tension Lever

- A. Stand Off**
- B. Mower Deck Lift Arm**
- C. Bolt**
- D. Lock Washer**
- E. Lift Assist Spring**
- F. C-Clip**
- G. Snow Blade Lift Arm**
- H. Hair pin**
- I. Lift Arm Ball Joint**
- J. Bell Crank**
- K. Flat Washer**

Initial Setup & Assembly

Attaching Pivot Assembly to Snow Blade

1. Attach the pivot assembly (A, Figure 11) to the snow blade (C) using bolt and nut (B).
2. Attach the tension spring (D) to the pivot assembly (A) and then to the eyebolt (E).
3. Tighten the eyebolt nut (F) to apply tension to the spring. Tighten lock nut (G) when the proper spring tension is set.

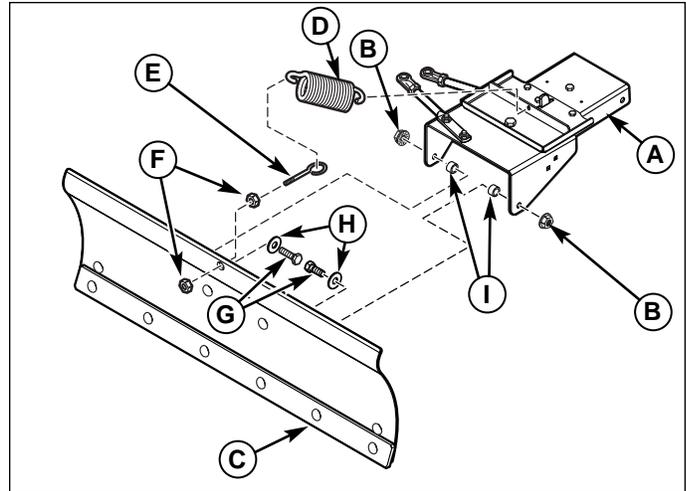


Figure 11. Snow Blade Assembly

- A. Pivot Assembly
- B. Whiz Lock Nut
- C. Snow Blade Assembly
- D. Tension Spring
- E. Eyebolt
- F. Nut
- G. Capscrew
- H. Flat Washer
- I. Spacer

Attaching Snow Blade to Tractor

1. Position snow blade assembly in front of tractor.
2. Remove the mounting pin (A, Figure 12) and quick clip (B) from the snow blade.

NOTE: Make sure that the bell crank (C) is rotated forward before installing the snow blade assembly.

3. Align mounting holes on snow blade frame with the mounting holes in the hitch.
4. Insert mounting pin (A) and secure with hair pin (B).

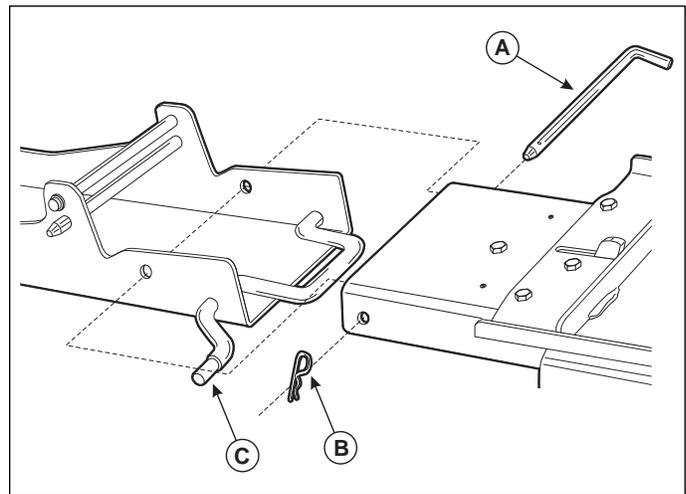


Figure 12. Attaching Snow Blade to Hitch

- A. Mounting Pin
- B. Hair Pin
- C. Bell Crank

Attaching Snow Blade Control Arm to Tractor

1. On right side of tractor, install the control arm support bracket (A, Figure 13) using the flange nut (B) and bolt (C) to the tractor frame.
2. Install the eyebolt (D) through the hole at the top of the lift arm support bracket, with the eyebolt to the outside.
3. Attach the lower portion of the control arm (F) to the upper control arm using the lock nuts (G) and bolts (H).
4. Install the lock bolt (A, Figure 14) through the upper snow blade adjustment arm (B), securing the adjustment arm to the snow blade frame.
5. Slide the control arm through the two adjustment arm ball joints (D). Secure the control arm with the four (4) hair pins (E).
6. Lower the blade to the ground and adjust the skid shoes.

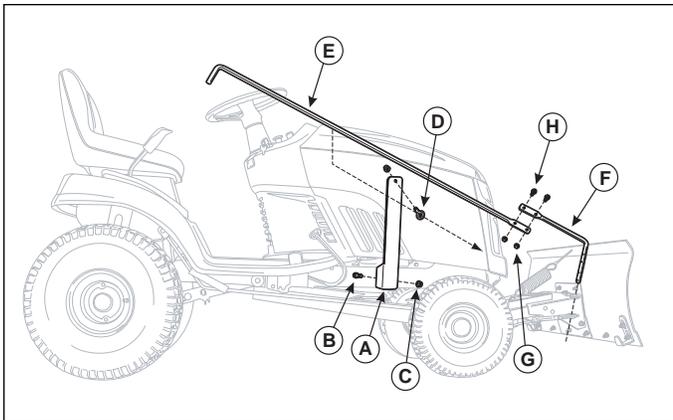


Figure 13. Blade Control Arm Installation

- A. Control Arm Support Bracket
- B. Flange Nut
- C. Bolt
- D. Eyebolt
- E. Upper Control Arm
- F. Lower Control Arm
- G. Nut
- H. Bolt

Travel Height Adjustment

1. Fully raise the snow blade off the ground. If the transport height is not correct, lower the snow blade to the ground and remove the lift arm (A, Figure 15) from the bell crank (C).
2. Loosen the lift arm ball joint lock nut (D) and rotate the ball joint (A) either right or left to adjust the proper lift height.
3. Reinstall and secure the lift arm and test adjustment. Repeat as needed.

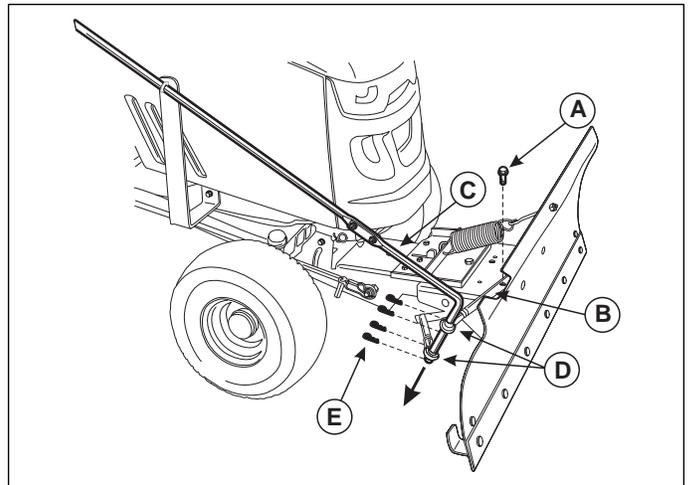


Figure 14. Lower Control Arm Installation

- A. Bolt
- B. Adjustment Arm
- C. Lower Control Arm
- D. Ball Joints
- E. Hair pins

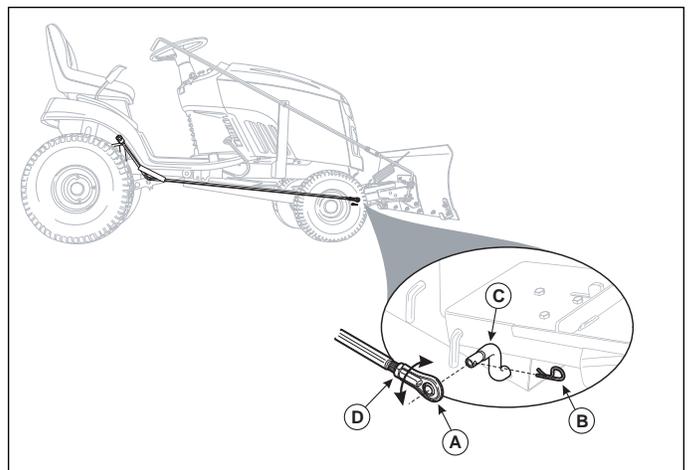


Figure 15. Lower Control Arm Installation

- A. Ball Joint
- B. Hair pin
- C. Bell Crank
- D. Ball Joint Lock Nut

Snow Blade Removal

CAUTION

Make sure to shut off the engine and lock the tractor brakes or block the rear wheels before beginning the snow blade removal process.

1. Lower the snow blade to the ground.
2. Remove the four (4) hair pins (C, Figure 16) from the control arm (A) and remove the control arm from the snow blade assembly.
3. Remove the control arm from the tractor.

NOTE: The control arm support bracket can be left on the tractor.

4. Remove the bell crank hair pin (A, Figure 17) and remove the snow blade lift arm (B) from the bell crank (C).
5. Remove lift arm (B) from the mower deck lift arm by removing the hairpin cotter pin (D) from the stand off (F). Fully remove the snow blade lift arm (B) from the tractor.

NOTE: Leave the stand off attached to the mower deck lift arm.

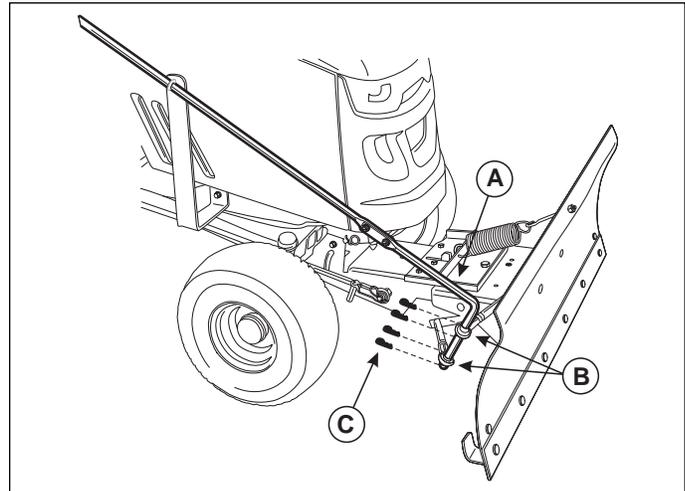


Figure 16. Control Arm Removal

- A. Control Arm**
- B. Ball Joints**
- C. Hair pins**

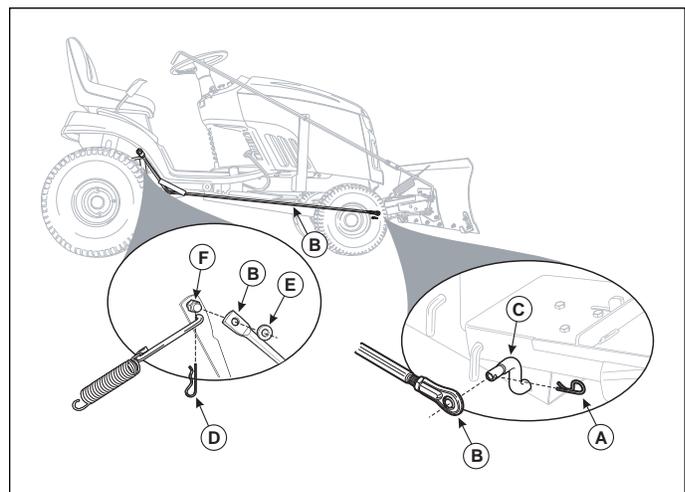


Figure 17. Control Arm Removal

- A. Hair pin**
- B. Snow Blade Lift Rod**
- C. Bell Crank**
- D. Hair pin**
- E. Flat Washer**
- F. Standoff**

6. Remove the snow blade hair pin (B, Figure 18) and mounting pin (A).
7. Slide the snow blade assembly away from the tractor.
8. Remove the lower latch pin (A, Figure 19) from the front of the hitch assembly.
9. Lift the hitch assembly off of the support fingers (C).

CAUTION

Make sure to support the front of the hitch assembly as it will be loose when the latch pin has been removed.

10. Slide the hitch assembly (A, Figure 20) forwards until the hitch mounting arms (C) are free of the hitch support shaft (B).
11. Slide the hitch from under the tractor.

NOTE: The hitch support shaft (B) may be left in position and will not interfere with the operation of the lawn mower deck.



IMPORTANT NOTE

Inspect the snow blade assembly, hitch assembly, and all component parts for signs of wear or damage. Have these items repaired or serviced before reinstalling the snow blade onto the tractor.

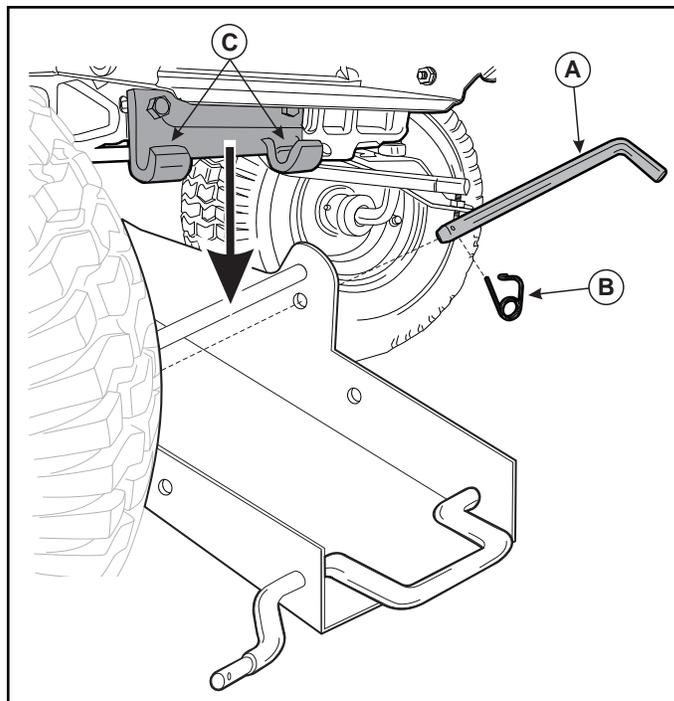


Figure 19. Remove Hitch Latch Pin
A. Lower Latch Pin
B. Quick Clip
C. Frame Support Fingers

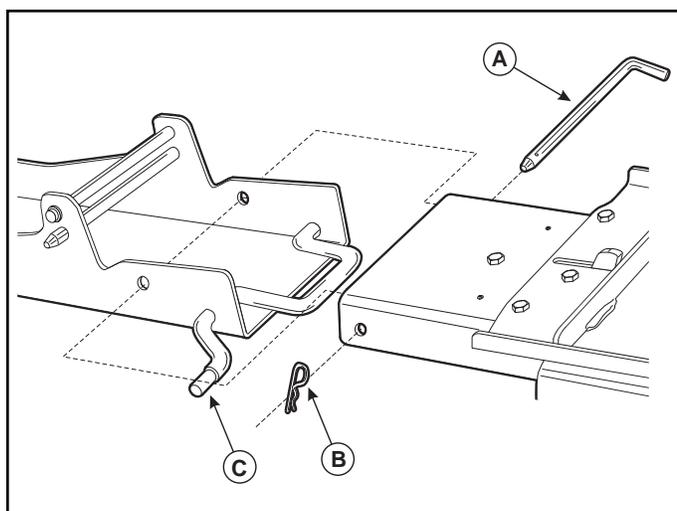


Figure 18. Removing Snow Blade from Hitch
A. Mounting Pin
B. Hair pin
C. Bell Crank

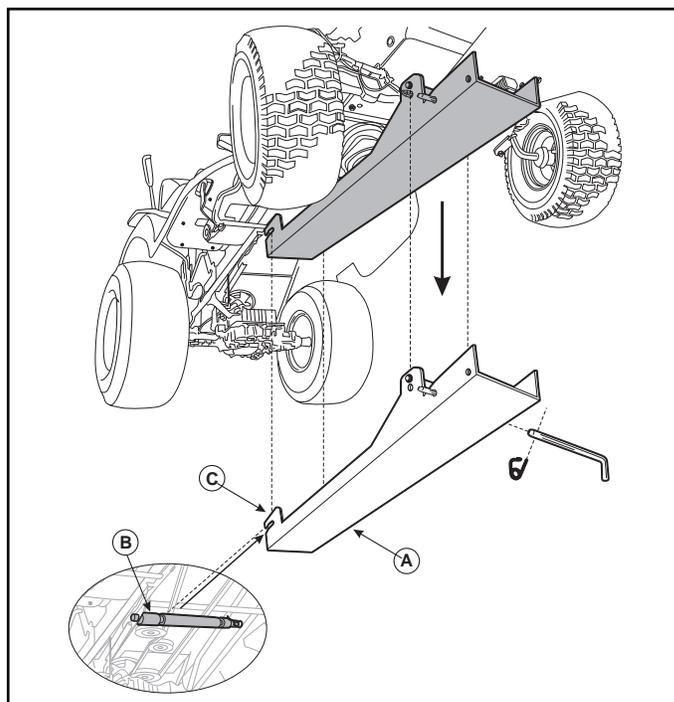


Figure 20. Hitch Removal
A. Hitch Assembly
B. Hitch Support Shaft
C. Hitch Mounting Arms



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