



# Bobcat®

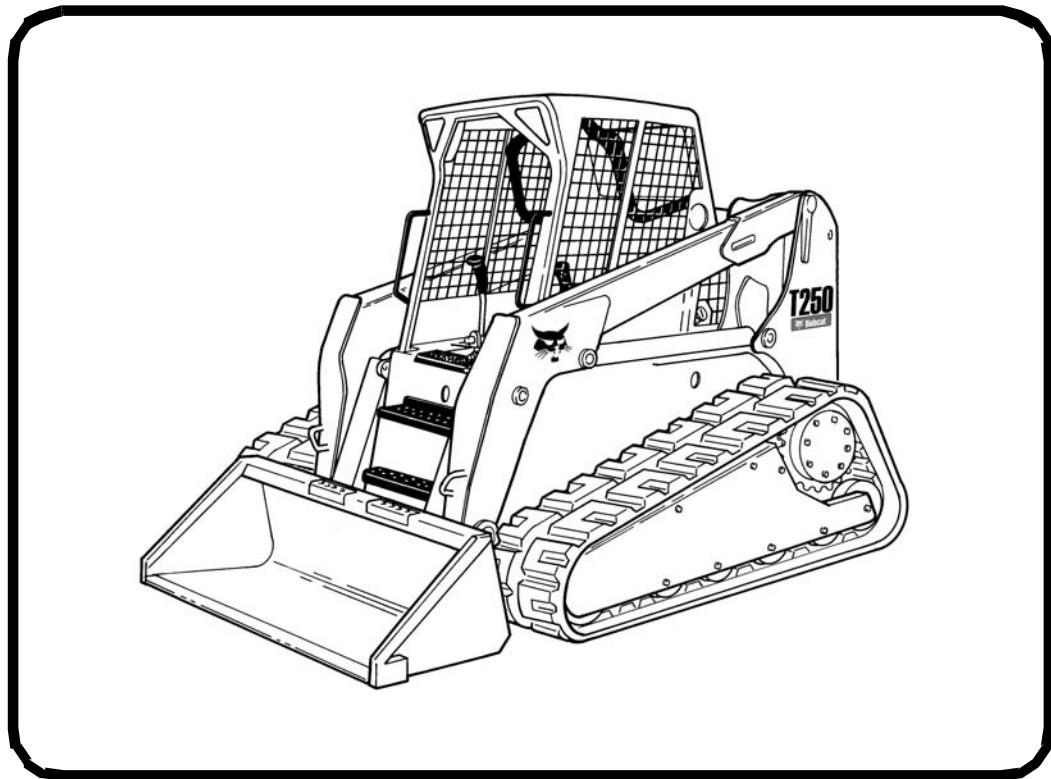
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## Service Manual

# T250 Compact Track Loader

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**S/N 531811001 & Above**  
**S/N 531911001 & Above**



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**SAFETY &  
MAINTENANCE**

**HYDRAULIC  
SYSTEM**

**HYDROSTATIC  
SYSTEM**

**DRIVE  
SYSTEM**

**MAIN FRAME**

**ELECTRICAL  
SYSTEM &  
ANALYSIS**

**ENGINE  
SERVICE**

**HVAC**

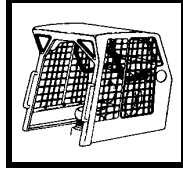
**SPECIFICATIONS**

# FOREWORD

This manual is for the Bobcat loader mechanic. It provides necessary servicing and adjustment procedures for the Bobcat loader and its component parts and systems. Refer to the Operation & Maintenance Manual for operating instructions, Starting procedure, daily checks, etc.

A general inspection of the following items must be made after the loader has had service or repair:

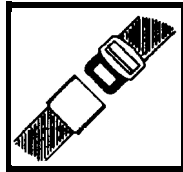
1. Check that the ROPS/FOPS (Including side screens) is in good condition and is not modified.



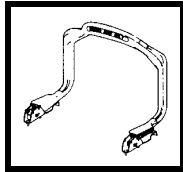
2. Check that ROPS mounting hardware is tightened and is Bobcat approved.



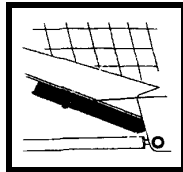
3. The seat belt must be correctly installed, functional and in good condition.



4. The seat bar must be correctly adjusted, clean and lubricated.



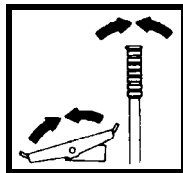
5. Check lift arm support device, replace if damaged.



6. Machine signs must be legible and in the correct location.



7. Steering levers and foot pedals must return to neutral.



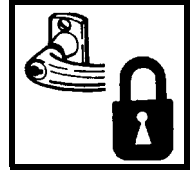
8. Check for correct function of the work lights



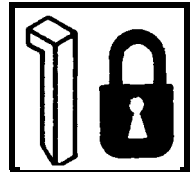
9. The parking brake must function correctly.



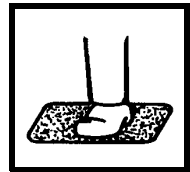
10. Enclosure door latches must open and close freely.



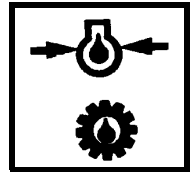
11. Bob-Tach wedges and linkages must function correctly and be in good condition.



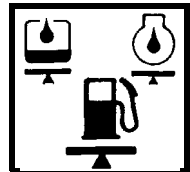
12. Safety treads must be in good condition.



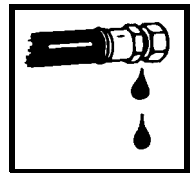
13. Check for correct function of indicator lamps (Optional on some models).



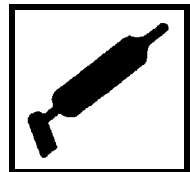
14. Check hydraulic fluid level, engine oil level and fuel supply.



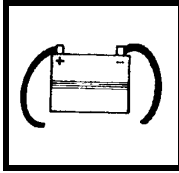
15. Inspect for fuel, oil or hydraulic fluid leaks.



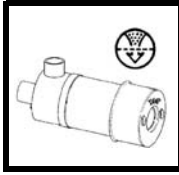
16. Lubricate the loader.



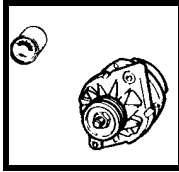
17. Check the condition of the battery and cables.



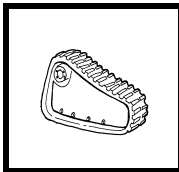
18. Inspect the air cleaner for damage or leaks. Check the condition of the element.



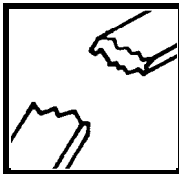
19. Check the electrical charging system.



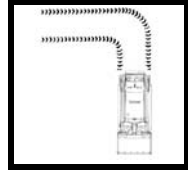
20. Check tracks for wear and tension.



21. Inspect for loose or broken parts or connections.



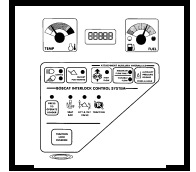
22. Operate the loader and check all functions.



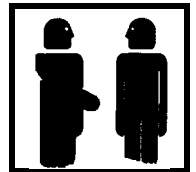
23. Check for any field modification not completed.



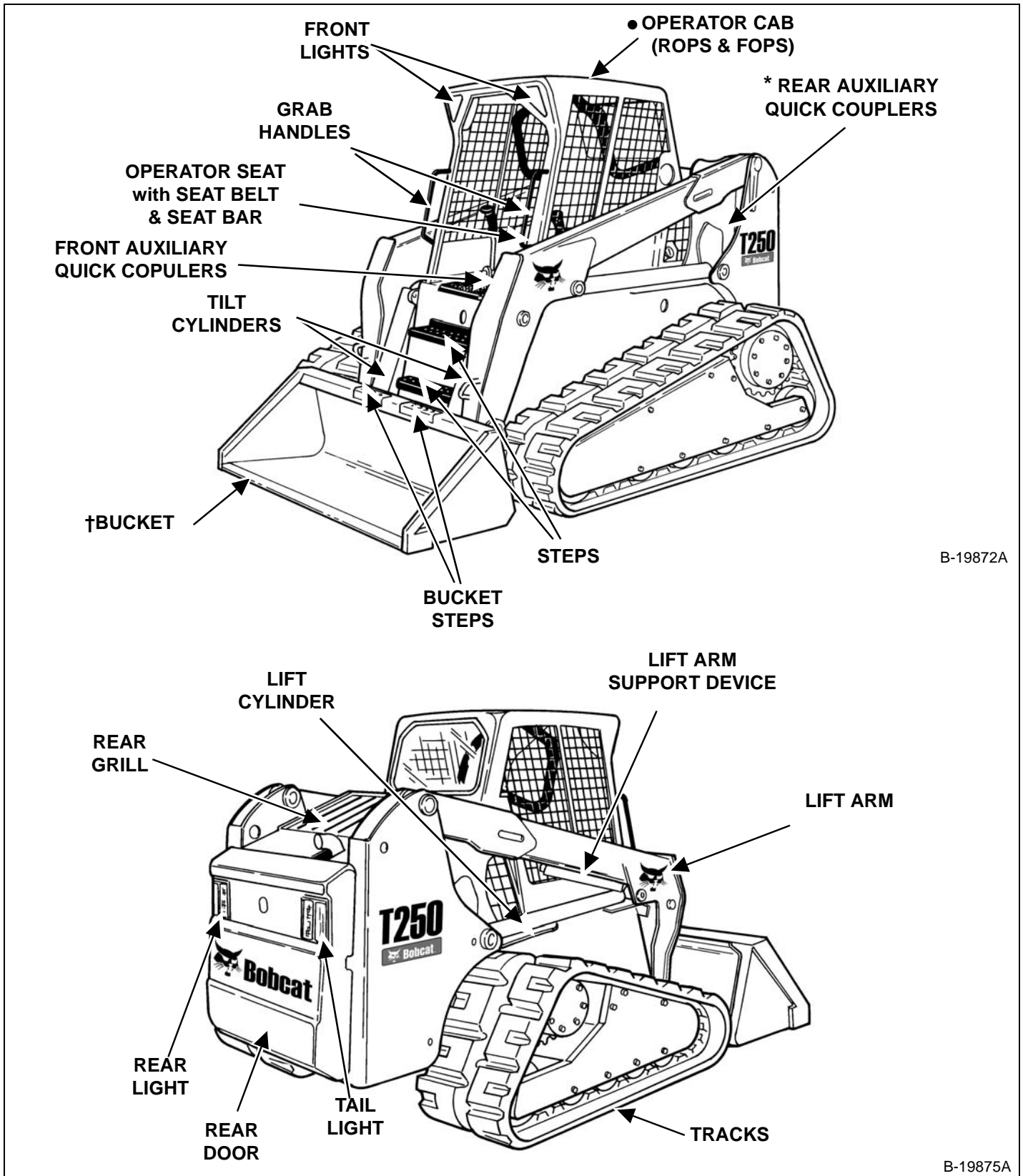
24. Check for correct function of the Bobcat Interlock Control System (BICST™) before the machine is returned to the customer.



25. Recommend to the owner that all necessary corrections be made before the machine is returned to service.



# LOADER IDENTIFICATION



B-19872A

B-19875A

\* Option or Field Accessory

† Many buckets and other attachments are available.

● ROPS, FOPS - Roll Over Protective Structure per SAE / ISO 3471, and Falling Object Protective Structure ISO 3449, Level I. Level II is available.

## SAFETY AND MAINTENANCE

### SAFETY & MAINTENANCE

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## SAFETY AND MAINTENANCE (CONT'D)

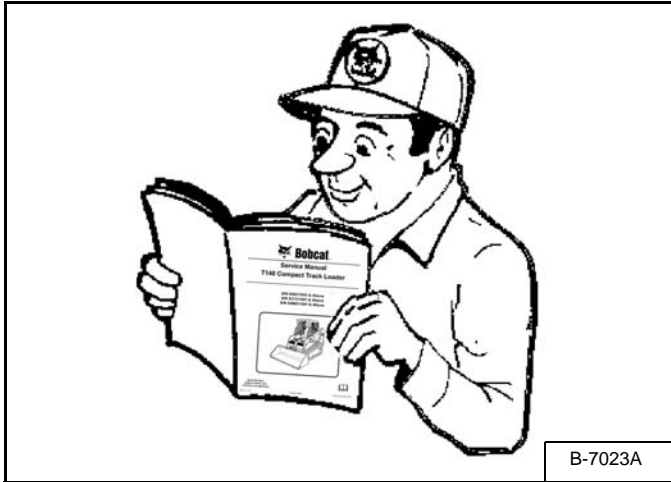
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**TIGHTEN ALL HARDWARE PER SIZE TO GRADE 5 TORQUE (SEE STANDARD TORQUE SPECIFICATIONS FOR BOLTS, SECTION SPEC-01) UNLESS OTHERWISE SPECIFIED.**

## LIFTING AND BLOCKING THE LOADER

### Procedure

Figure 10-10-4



## WARNING

### AVOID INJURY OR DEATH

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0807

Read the Removal & Installation, Disassembly & Assembly, etc. completely to become familiar with the procedure before beginning [Figure 10-10-4].

Always park the loader on a level surface.

## WARNING

Put jackstands under the front axles and rear corners of the frame before running the engine for service. Failure to use jackstands can allow the machine to fall or move and cause injury or death.

W-2017-0286

Figure 10-10-5



Lift the rear of the loader and install jackstands [Figure 10-10-5].

Figure 10-10-6



Lift the front of the loader and put jackstands under the axle tubes [Figure 10-10-6].

**NOTE: Make sure the jackstands do not touch the tracks.**



## LIFT ARM SUPPORT DEVICE

### Installing

# ! WARNING

Never work on a machine with the lift arms up unless the lift arms are secured by an approved lift arm support device. Failure to use an approved lift arm support device can allow the lift arms or attachment to fall and cause injury or death.

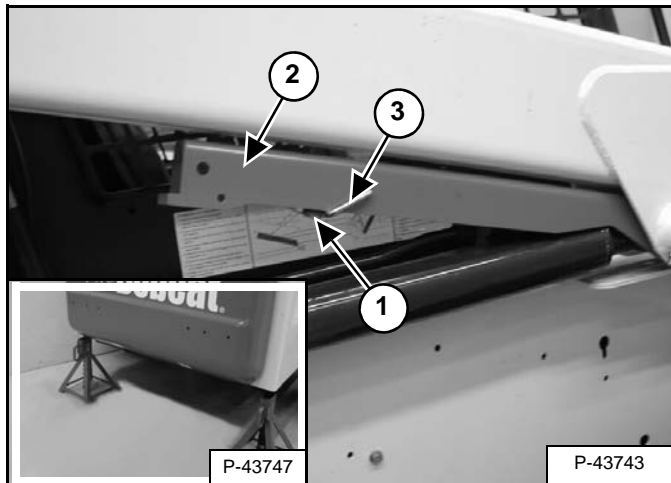
Service lift arm support device if damaged or if parts are missing. Using a damaged lift arm support or with missing parts can cause lift arms to drop causing injury or death.

W-2572-0407

|   |  |
|---|--|
| <h2>! DANGER</h2> <p><b>AVOID DEATH</b></p> <ul style="list-style-type: none"><li>• Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop.</li><li>• Keep out of this area when lift arms are raised unless supported by an approved lift arm support. Replace if damaged.</li></ul> <p><small>67116 SW 6717343A enUS<br/>© 2017 Hyster</small></p> |  |
|---|--|

Remove attachment from the loader.

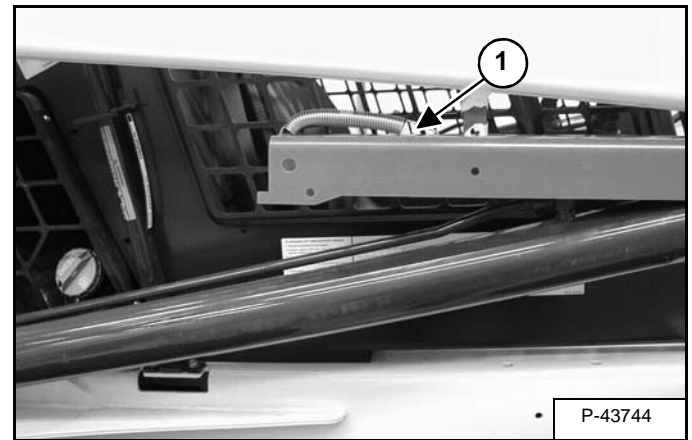
Figure 10-20-1



Put jackstands under the rear corners of the loader frame (Inset) [Figure 10-20-1].

Disconnect the spring from the lift arm support device retaining pin (Item 1). Support the lift arm support device (Item 2) with your hand and remove the retaining pin (Item 3) [Figure 10-20-1].

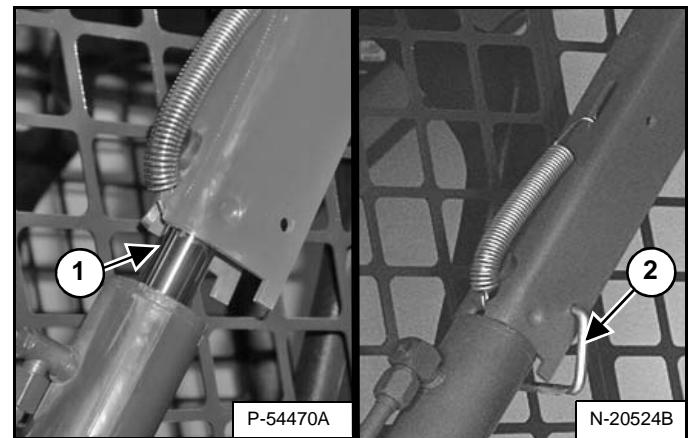
Figure 10-20-2



Lower the lift arm support device to the top of the lift cylinder. Hook the free end of the spring (Item 1) [Figure 10-20-2] to the lift arm support device so there will be no interference with the support device engagement.

Sit in the operator's seat, fasten the seat belt and lower the seat bar. Start the engine.

Figure 10-20-3



Raise the lift arms until the lift arm support device drops onto the lift cylinder rod (Item 1) [Figure 10-20-3].

Lower the lift arms slowly until the support device is held between the lift arm and the lift cylinder. Stop the engine. Raise the seat bar and move both pedals until both pedals lock.

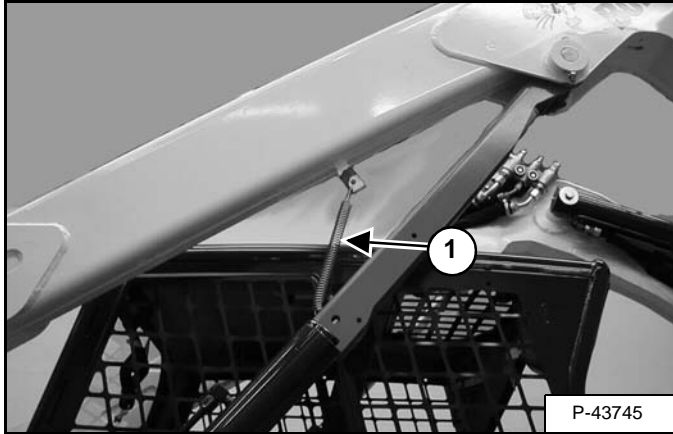
Install pin (Item 2) [Figure 10-20-3] into the rear of the lift arm support device below the cylinder rod.

## LIFT ARM SUPPORT DEVICE (CONT'D)

### Removing

Remove the pin from the lift arm support device.

Figure 10-20-4



Connect the spring (Item 1) [Figure 10-20-4] from the lift arm support device to the bracket below the lift arms.

Sit in the operator's seat fasten the seat belt and lower the seat bar. Start the engine.

Figure 10-20-5



Raise the lift arms a small amount. The spring will lift the support device off the lift cylinder rod [Figure 10-20-5]. Lower the lift arms. Stop the engine.

Raise the seat bar, disconnect the seat belt, move pedals until both pedals lock and exit the cab.

Disconnect the spring from the bracket.

Raise the support device into storage position and insert pin through lift arm support device and bracket.

Remove the jackstands.

## **OPERATOR CAB**

### **Description**

The Bobcat Loader has an operator cab (ROPS and FOPS) as standard equipment to protect the operator from rollover and falling objects. Check with your dealer if the operator cab has been damaged. The seat belt must be worn for rollover protection.

ROPS / FOPS - Roll Over protective Structure per ISO 3471, and Falling Object Protective Structure per SAE J1043 and ISO 3449, Level I. Level II is available.

#### *Level I*

Protection from falling bricks, small concrete blocks, and hand tools encountered in operations such as highway maintenance, landscaping, and other construction sites.

#### *Level*

Protection from falling trees, rocks: for machines involved in site clearing, overhead demolition or forestry.

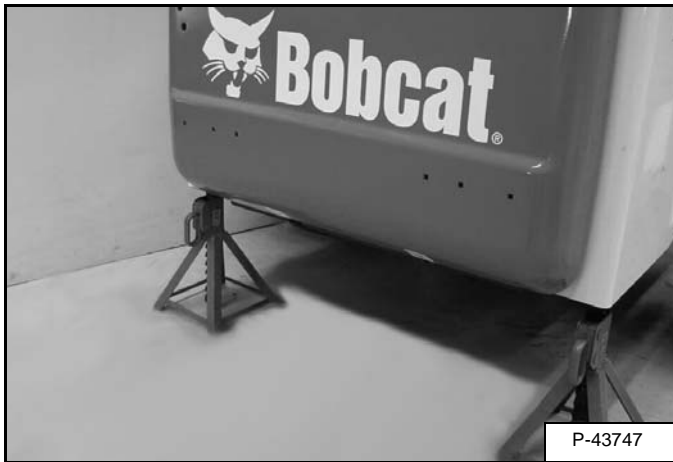
## OPERATOR CAB (CONT'D)

### Raising

Always stop the engine before raising or lowering the cab.

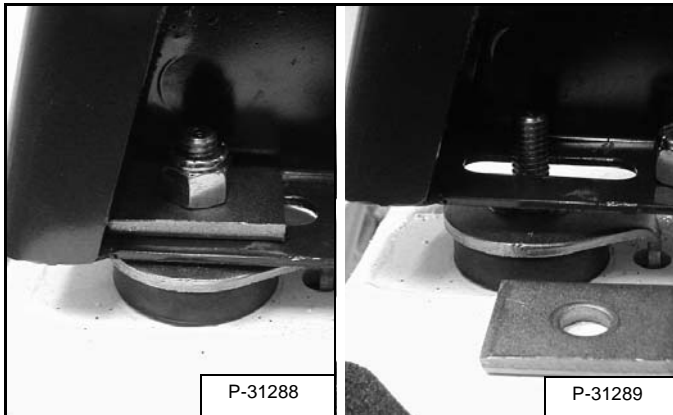
Stop the loader on a level surface. Lower the lift arms. If the lift arms must be up while raising the operator cab, install the lift arm support device. (See LIFT ARM SUPPORT DEVICE on Page 10-20-1.)

Figure 10-30-1



Install jackstands under the rear of the loader frame [Figure 10-30-1].

Figure 10-30-2



Remove the nuts and plates [Figure 10-30-2] (both sides) at the front corners of the cab.



**NOTE:** On Advanced Control System (ACS) equipped machines, the steering levers could contact the cab frame while raising or lowering the operator cab. The engine **MUST** be stopped before raising or lowering the cab.

Figure 10-30-3



Lift on the grab handles and bottom of the operator cab [Figure 10-30-3] slowly until the cab is all the way up and the latching mechanism engages.

## ! WARNING

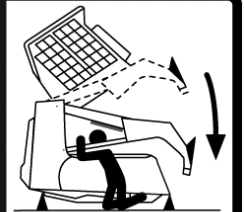
Never modify operator cab by welding, grinding, drilling holes or adding attachments unless instructed to do so by Bobcat Company. Changes to the cab can cause loss of operator protection from rollover and falling objects, and result in injury or death.

W-2069-0200

## ! DANGER

### AVOID DEATH

- Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop.
- Keep out of this area when lift arms are raised unless supported by an approved lift arm support. Replace if damaged.



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## OPERATOR CAB (CONT'D)

### Lowering

Always stop the engine before raising or lowering the cab.

**NOTE:** Always use the grab handles to lower the cab.

Figure 10-30-4



Pull down on the bottom of the operator cab until it stops at the latching mechanism [Figure 10-30-4].

**NOTE:** The weight of the cab increases when equipped with options and accessories such as cab door, heater, air conditioning, etc. In these cases, the cab may need to be raised slightly from the latch to be able to release the latch.



**NOTE:** On Advanced Control System (ACS) equipped machines, the steering levers could contact the cab frame while raising or lowering the operator cab. The engine **MUST** be stopped before raising or lowering the cab.

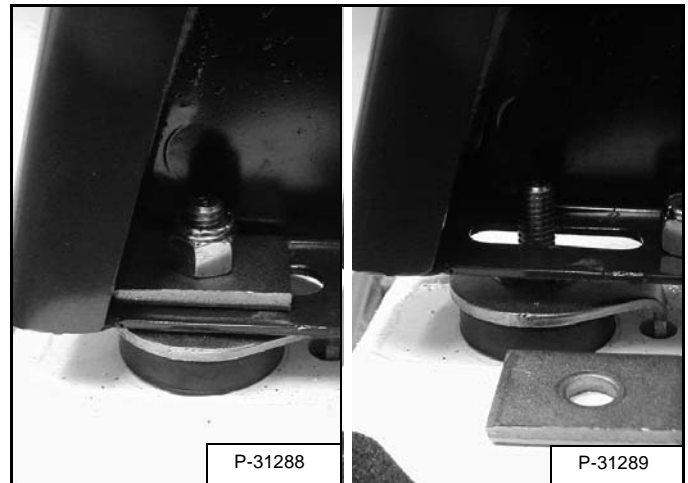
Support the cab and release the latching mechanism (Inset) [Figure 10-30-4]. Remove your hand from latching mechanism when the cab is past the latch stop. Use both hands to lower the cab all the way.



**PINCH POINT CAN CAUSE INJURY**  
Remove your hand from the latching mechanism when the cab is past the latch stop.

W-2469-0803

Figure 10-30-5



Install the plates and nuts (both sides) [Figure 10-30-5].

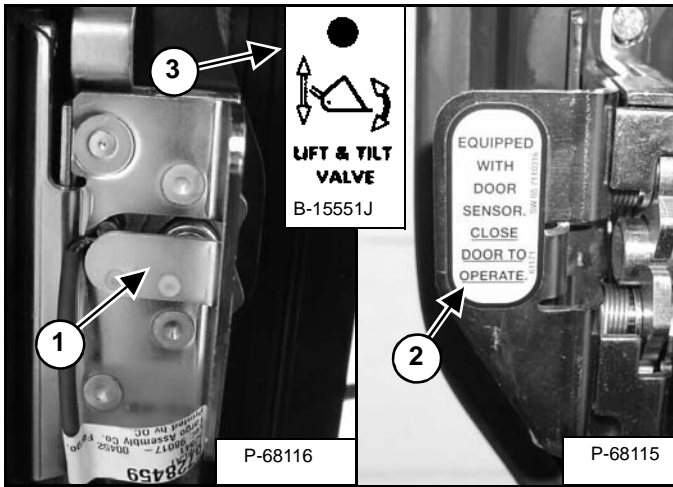
Tighten the nuts to 40-45 ft.-lb. (54-61 N•m) torque.

## OPERATOR CAB (CONT'D)

### Cab Door Sensor (If Equipped)

This machine may be equipped with a Cab Door Sensor.

Figure 10-30-6



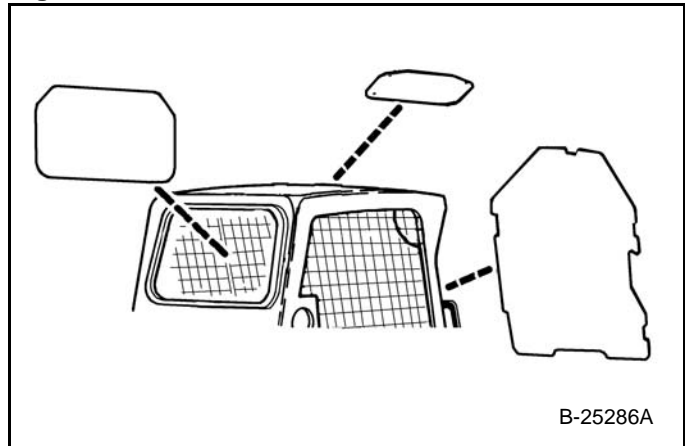
The cab door (option) has a sensor (Item 1) [Figure 10-30-6] installed which deactivates the lift and tilt valves when the door is open.

A decal is located on the latch mechanism (Item 2) [Figure 10-30-6].

The LIFT & TILT VALVE light (Item 3) [Figure 10-30-6] will be ON when the door is closed and the PRESS TO OPERATE LOADER button is pressed.

## Special Applications Kit

Figure 10-30-7



Available for special applications to restrict material from entering cab openings. Kit includes 1/2 inch Lexan® front door, top and rear windows.

See your Bobcat dealer for availability.

### Special Applications Kit Inspection And Maintenance

- Inspect for cracks or damage. Replace if required.
- Pre-rinse with water to remove gritty materials.
- Wash with a mild household detergent and warm water.
- Use a sponge or soft cloth. Rinse well with water and dry with a clean soft cloth or rubber squeegee.
- Do not use abrasive or highly alkaline cleaners.
- Do not operate windshield wipers on a dry surface.
- Do not clean with metal blades or scrapers.

## TRANSPORTING THE LOADER ON A TRAILER

### Loading And Unloading



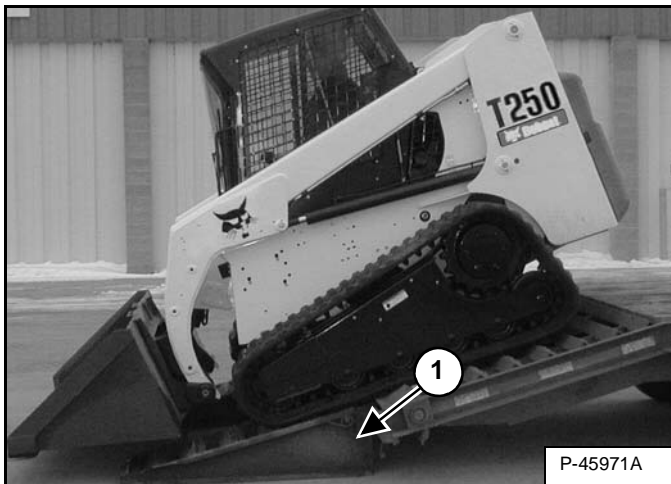
#### AVOID SERIOUS INJURY OR DEATH

Adequately designed ramps of sufficient strength are needed to support the weight of the machine when loading onto a transport vehicle. Wood ramps can break and cause personal injury.

W-2058-0807

Be sure the transport and towing vehicles are of adequate size and capacity. For weight of loader (See Capacities on Page SPEC-10-4)

Figure 10-40-1

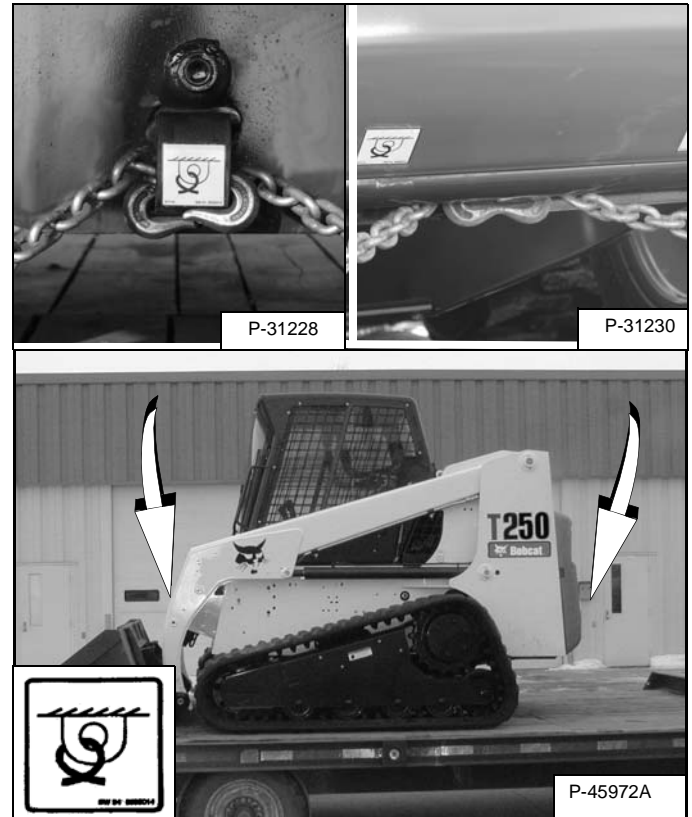


A loader with an empty bucket or no attachment must be loaded backward onto the transport vehicle [Figure 10-40-1].

The rear of the trailer must be blocked or supported (Item 1) [Figure 10-40-1] when loading or unloading the loader to prevent the front end of the trailer from raising up.

### Fastening

Figure 10-40-2



Use the following procedure to fasten the Bobcat Loader to the transport vehicle to prevent the loader from moving during sudden stops or when going up or down slopes [Figure 10-40-2].

- Lower the bucket or attachment to the floor.
- Stop the engine.
- Engage the parking brake.
- Install chains at the front and rear loader tie down positions [Figure 10-40-2]
- Fasten each end of the chain to the transport vehicle.



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