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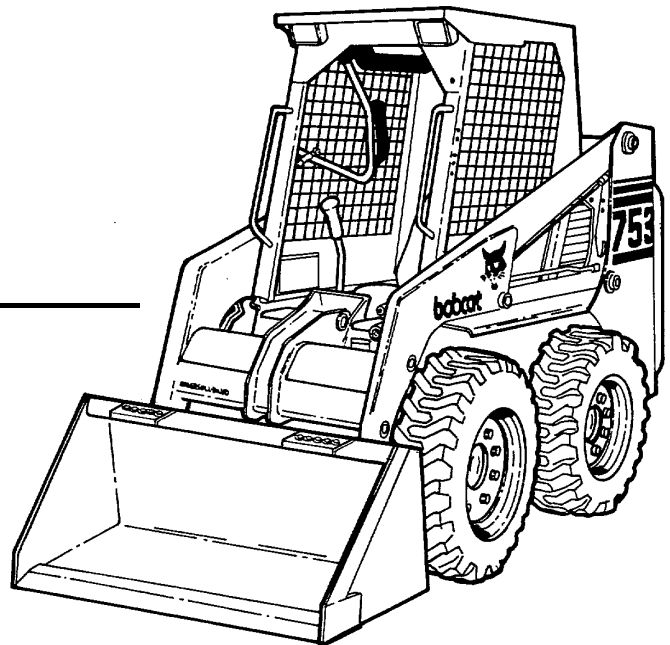
Bobcat®

Service Manual

G Series

(S/N 515830001 & Above)

(S/N 516220001 & Above)



CONTENTS

FOREWORD.....	II
SAFETY INSTRUCTIONS	V
SERIAL NUMBER LOCATIONS	IX
DELIVERY REPORT.....	IX
LOADER IDENTIFICATION	X
SAFETY AND MAINTENANCE.....	10-01
HYDRAULIC SYSTEM	20-01
HYDROSTATIC SYSTEM.....	30-01
DRIVE SYSTEM	40-01
MAIN FRAME	50-01
ELECTRICAL SYSTEM & ANALYSIS.....	60-01
ENGINE SERVICE	70-01
HEATER	80-01
SPECIFICATIONS.....	SPEC-01

**SAFETY &
MAINTENANCE**

**HYDRAULIC
SYSTEM**

**HYDROSTATIC
SYSTEM**

**DRIVE
SYSTEM**

MAIN FRAME

**ELECTRICAL
SYSTEM &
ANALYSIS**

**ENGINE
SERVICE**

HEATER

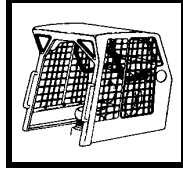
SPECIFICATIONS

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:

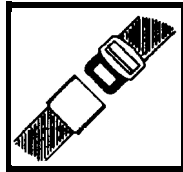
1. Check that the ROPS/FOPS (Including side screens) is in good condition and is not modified.



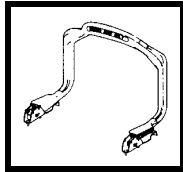
2. Check that ROPS mounting hardware is tightened and is Bobcat approved.



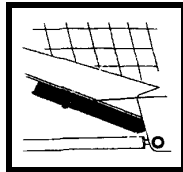
3. The seat belt must be correctly installed, functional and in good condition.



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



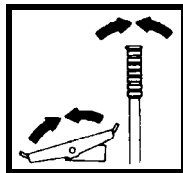
5. Check lift arm support device, replace if damaged.



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



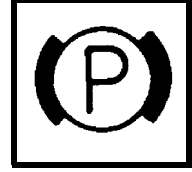
7. Steering levers and foot pedals must return to neutral.



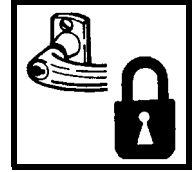
8. Check for correct function of the work lights



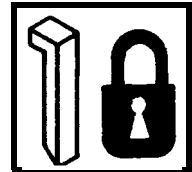
9. The parking brake must function correctly.



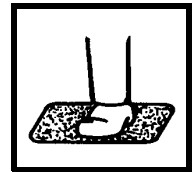
10. Enclosure door latches must open and close freely.



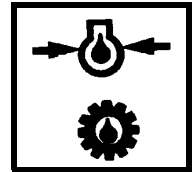
11. Bob-Tach wedges and linkages must function correctly and be in good condition.



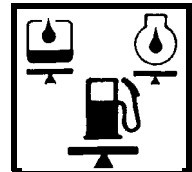
12. Safety treads must be in good condition.



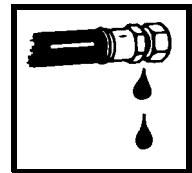
13. Check for correct function of indicator lamps (Optional on some models).



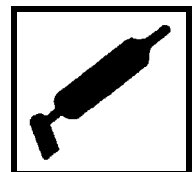
14. Check hydraulic fluid level, engine oil level and fuel supply.



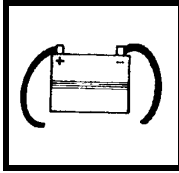
15. Inspect for fuel, oil or hydraulic fluid leaks.



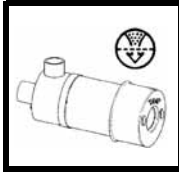
16. Lubricate the loader.



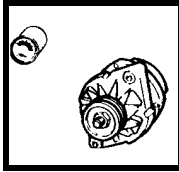
17. Check the condition of the battery and cables.



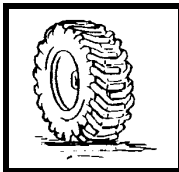
18. Inspect the air cleaner for damage or leaks. Check the condition of the element.



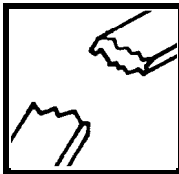
19. Check the electrical charging system.



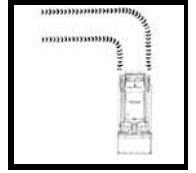
20. Check tires for wear and pressure.



21. Inspect for loose or broken parts or connections.



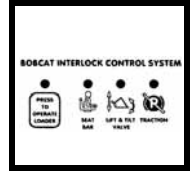
22. Operate the loader and check all functions.



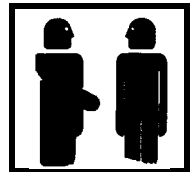
23. Check for any field modification not completed.



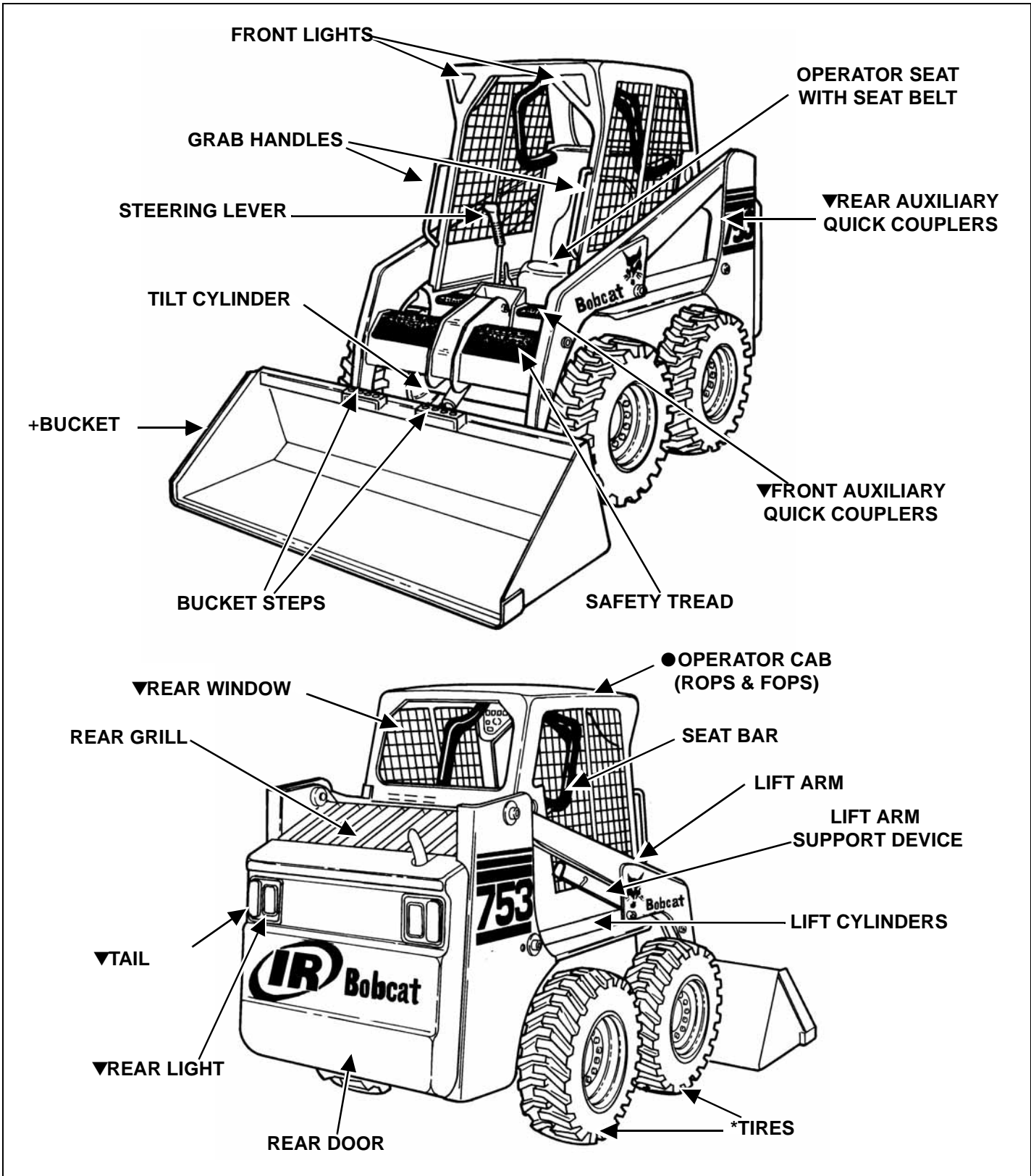
24. Check for correct function of the Bobcat Interlock Control System (BICST™) before the machine is returned to the customer.



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



LOADER IDENTIFICATION



▼ OPTIONAL OR FIELD ACCESSORY (Not Standard Equipment)

* TIRES - Flotation tires (Optional) are shown. The Bobcat loader is factory equipped with standard tires.

+ BUCKET - Several different buckets and other attachments are available for the Bobcat loader.

● ROPS, FOPS - Roll Over Protective Structure, per SAE J1040 and ISO 3471, and Falling Object Protective Structure per SAE J1043 and ISO 3449, Level I. Level II is available. The Bobcat loader is base-equipped with a standard operator cab as shown. Extra insulated cab is available as an option (Reduced noise level).

SAFETY AND MAINTENANCE

SAFETY AND MAINTENANCE

AIR CLEANER SERVICE	10-80-1
Checking	10-80-1
Replacing Filter Element(s)	10-80-2
BOB-TACH	10-150-1
Inspection And Maintenance	10-150-1
ENGINE COOLING SYSTEM	10-90-1
Checking The Coolant Level	10-90-1
Cleaning The Cooling System	10-90-1
Replacing The Coolant	10-90-2
ENGINE LUBRICATION SYSTEM	10-110-1
Checking Engine Oil	10-110-1
Oil Chart	10-110-1
Replacing Oil And Filter	10-110-1
FAN GEARBOX	10-140-1
Checking And Maintaining	10-140-1
FINAL DRIVE TRANSMISSION (CHAINCASE)	10-130-1
Checking And Adding Oil	10-130-1
Removing The Oil	10-130-1
FUEL SYSTEM	10-100-1
Filling the Fuel Tank	10-100-1
Fuel Filter	10-100-2
Fuel Specifications	10-100-1
Removing Air From The Fuel System	10-100-3
HYDRAULIC/HYDROSTATIC SYSTEM	10-120-1
Breather Cap	10-120-4
Checking And Adding Fluid	10-120-1
Replacing Hydraulic Fluid	10-120-3
Replacing Hydraulic/Hydrostatic Filter	10-120-1
Replacing Hydrostatic Motor Case Drain Filter(s)	10-120-2
LIFT ARM SUPPORT DEVICE	10-20-1
Installing Lift Arm Support Device	10-20-1
Removing The Lift Arm Support Device	10-20-2
LIFTING AND BLOCKING THE LOADER	10-10-1
Procedure	10-10-1

Continued On Next Page

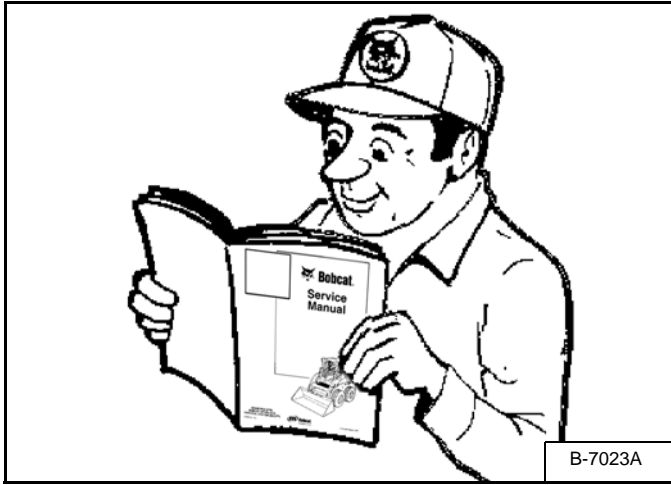
SAFETY AND MAINTENANCE (CONT'D)

LUBRICATION OF THE BOBCAT LOADER.....	10-160-1
Procedure	10-160-1
OPERATOR CAB	10-30-1
Description	10-30-1
Emergency Exit	10-30-3
Lowering The Operator Cab	10-30-2
Raising The Operator Cab.....	10-30-1
REMOTE START.....	10-60-1
Procedure	10-60-1
SERVICE SCHEDULE	10-70-1
Chart	10-70-1
SPARK ARRESTOR MUFFLER	10-180-1
Servicing	10-180-1
TIRE MAINTENANCE.....	10-170-1
Mounting	10-170-1
Rotating	10-170-1
Wheel Nuts	10-170-1
TOWING THE LOADER	10-50-1
Procedure	10-50-1
TRANSPORTING THE BOBCAT LOADER	10-40-1
Procedure	10-40-1

LIFTING AND BLOCKING THE LOADER

Procedure

Figure 10-10-1



WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, 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-2003-0199

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 10-10-2



Put floor jack under the rear of the loader [Figure 10-10-2].

Lift the rear of the loader and install jackstands [Figure 10-10-2].

Figure 10-10-3



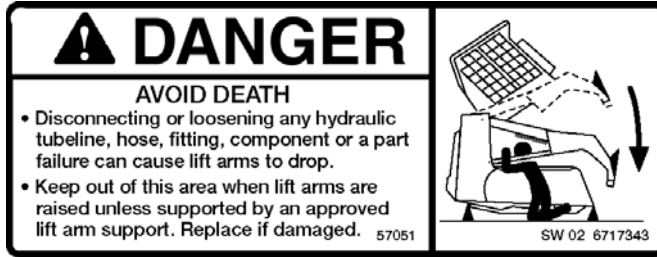
Put the floor jack under the front of the loader [Figure 10-10-3].

Lift the front of the loader and put jackstands under the axle tubes [Figure 10-10-3].

NOTE: Make sure the jackstands do not touch the tires. Make sure tires clear floor or any obstacles.

LIFT ARM SUPPORT DEVICE

Installing Lift Arm Support Device



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.

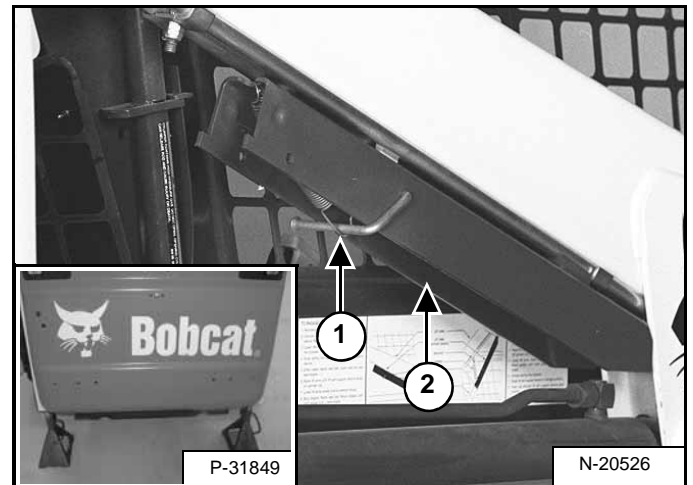
W-2059-0598



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-2271-1197

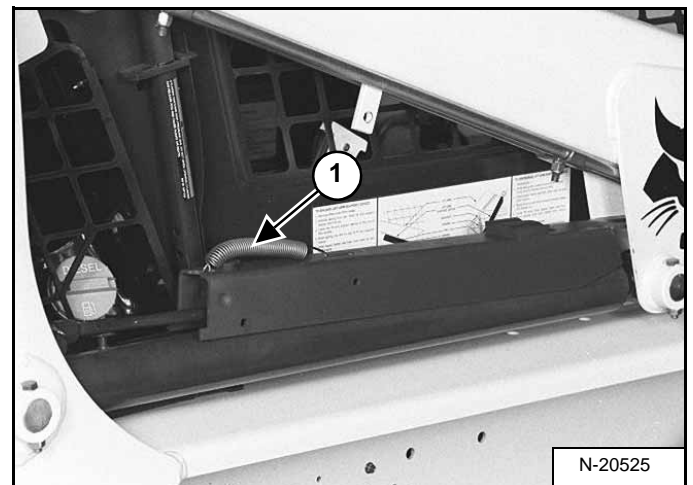
Figure 10-20-1



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) [Figure 10-20-1] with your hand and remove the retaining pin.

Figure 10-20-2



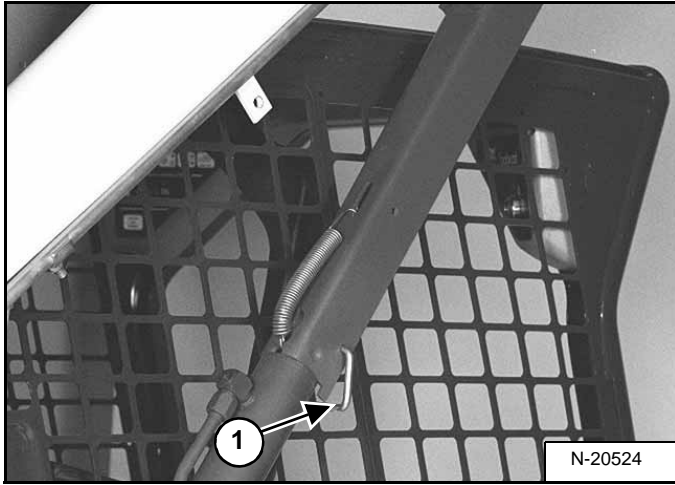
Lower the lift arm support device on top of the lift cylinder. Hook the free end of the spring (Item 1) [Figure 10-20-2] to the lift arm support device so there will be no interference with the support device engagement.

With the operator in the seat, seat belt fastened and seat bar lowered, start the engine.

LIFT ARM SUPPORT DEVICE (CONT'D)

Installing Lift Arm Support Device (Cont'd)

Figure 10-20-3



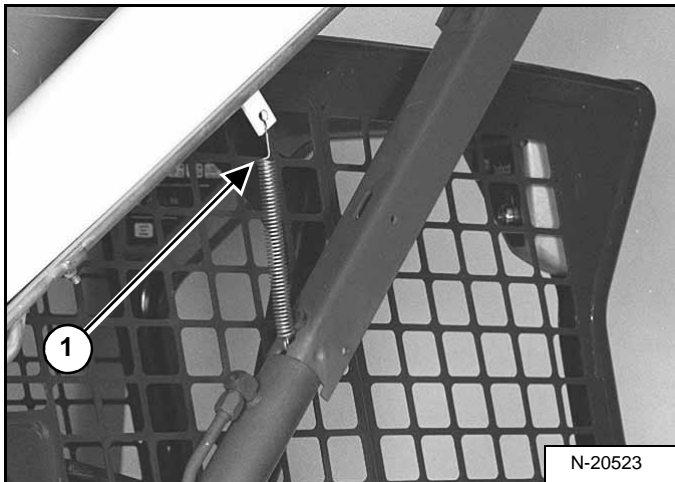
Raise the lift arms, until the lift arm support device drops onto the lift cylinder rod [Figure 10-20-3].

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 pedals until both pedals lock.

Install pin (Item 1) [Figure 10-20-3] into the rear of the lift arm support device below the cylinder rod.

Removing The Lift Arm Support Device

Figure 10-20-4



Remove the pin from the lift arm support device.

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

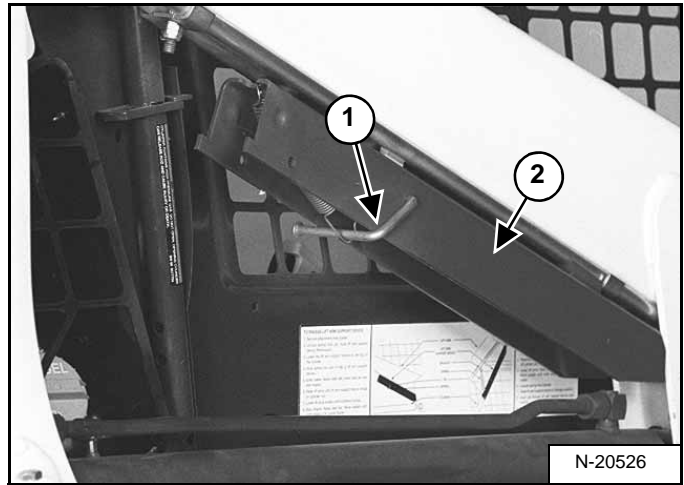
With the operator in the seat, seat belt fastened and seat bar lowered, start the engine.

Raise the lift arms a small amount and the spring will lift the support device off the lift cylinder rod. Lower the lift arms. Stop the engine.

Raise the seat bar and move pedals until both pedals lock.

Disconnect the spring from the bracket.

Figure 10-20-5



Raise the support device into storage position and insert pin (Item 1) through lift arm support device (Item 2) [Figure 10-20-5] and bracket. Connect spring to pin.

Remove 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 roll over protection.

ROPS/FOPS - Roll Over Protective Structure per SAE J1040 and 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 site services.

Level II - Protection from falling trees, rocks; for machines involved in site clearing, overhead demolition or forestry.

Raising The Operator Cab

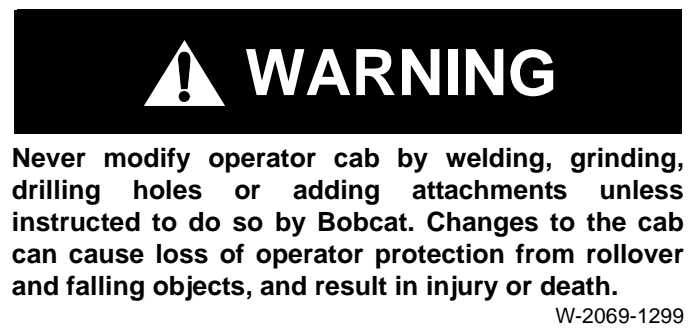
Always stop the engine before raising or lowering the cab.

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 Installing Lift Arm Support Device on Page 10-20-1.)

Figure 10-30-1



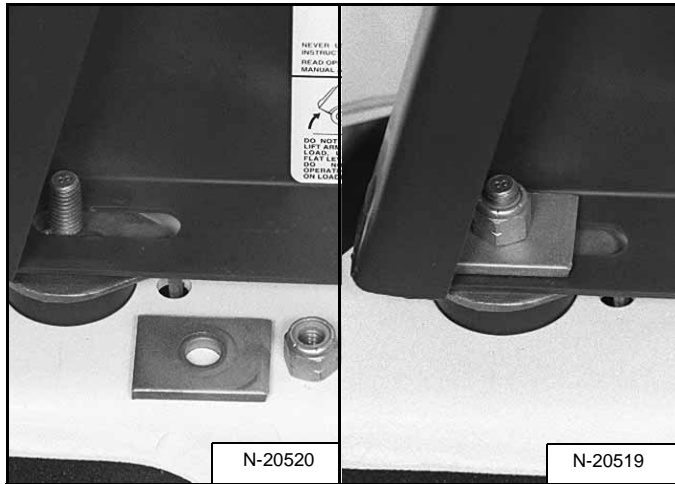
Install jackstands under the rear of the loader frame [Figure 10-30-1].



OPERATOR CAB (CONT'D)

Raising The Operator Cab (Cont'd)

Figure 10-30-2



Loosen the nut (both sides) at the front corners of the operator cab [Figure 10-30-2].

Remove the nuts and plates [Figure 10-30-2] (both sides).

Figure 10-30-3

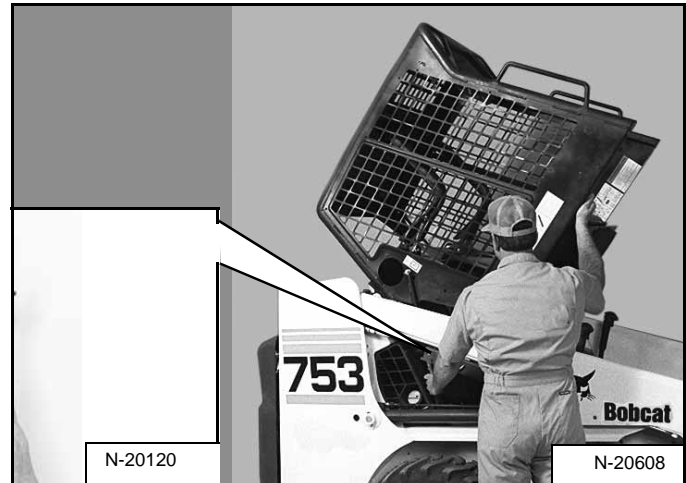


Lift on the grab handle and bottom of the operator cab slowly until the cab is all the way up and the latching mechanism engages [Figure 10-30-3].

Advanced Control System (ACS) and Advanced Hand Controls (AHC) Only

Lowering The Operator Cab

Figure 10-30-4



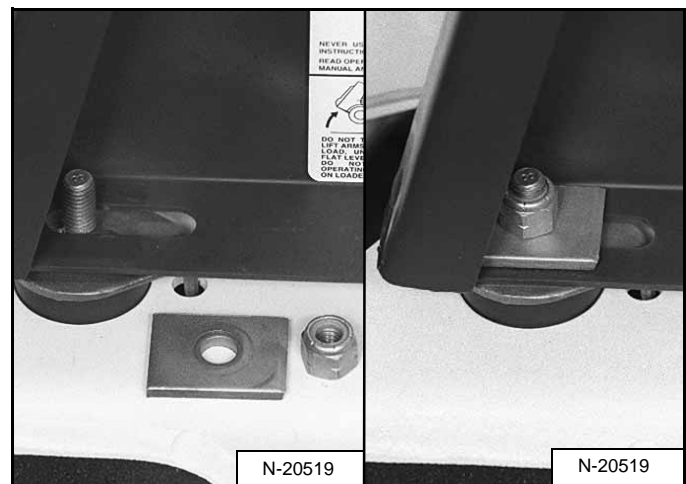
Always stop the engine before raising or lowering the cab.

NOTE: Make sure the seat bar is fully raised or lowered when lowering the cab. Always use the grab handles to lower the cab.

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

Release the latching mechanism (Inset) [Figure 10-30-4] and pull the cab all the way down.

Figure 10-30-5



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

Tighten the nuts to 40-50 ft.-lbs. (54-68 Nm) torque.

OPERATOR CAB (CONT'D)

Emergency Exit

Figure 10-30-6

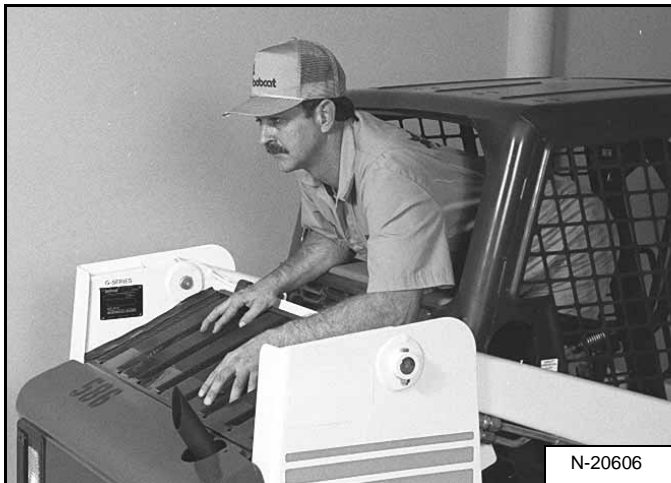


The front opening on the operator cab and rear window provide exits.

Rear Window (If Equipped)

Pull on the tag on the top of the rear window to remove the rubber cord [Figure 10-30-6].

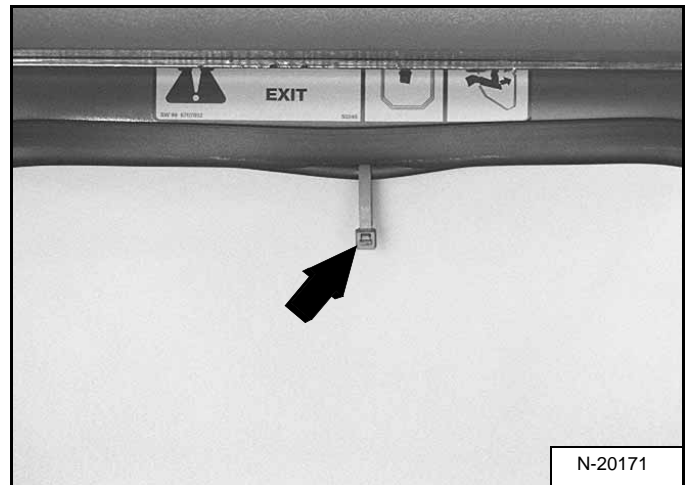
Figure 10-30-7



Push the rear window out of the rear of the operator cab.

Exit through the rear of the operator cab [Figure 10-30-7].

Figure 10-30-8

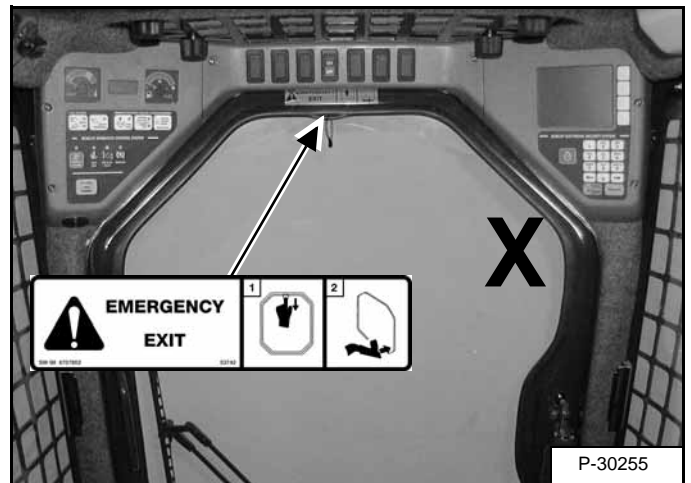


Front Door (If Equipped)

NOTE: When an Operator Cab Enclosure Kit is installed, the window of the front door can be used as an emergency exit. [Figure 10-30-8]

Pull the plastic loop at the top of the window in the front door to remove the rubber cord [Figure 10-30-8].

Figure 10-30-9



Push the window out with your foot [Figure 10-30-9] at any corner of the window.

Exit through the front door.

TRANSPORTING THE BOBCAT LOADER

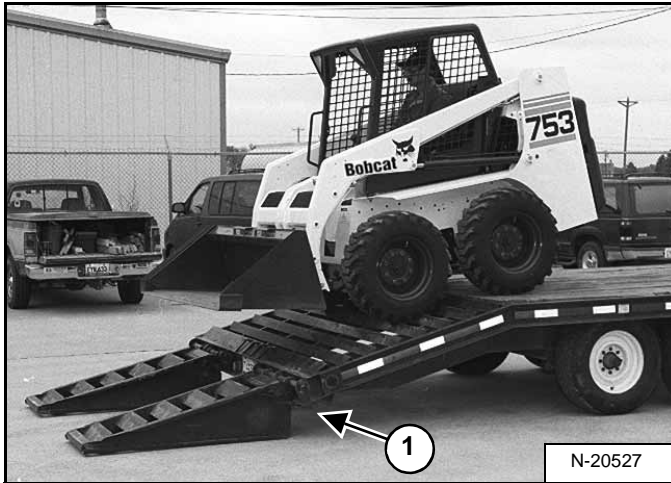
Procedure



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.

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Figure 10-40-1

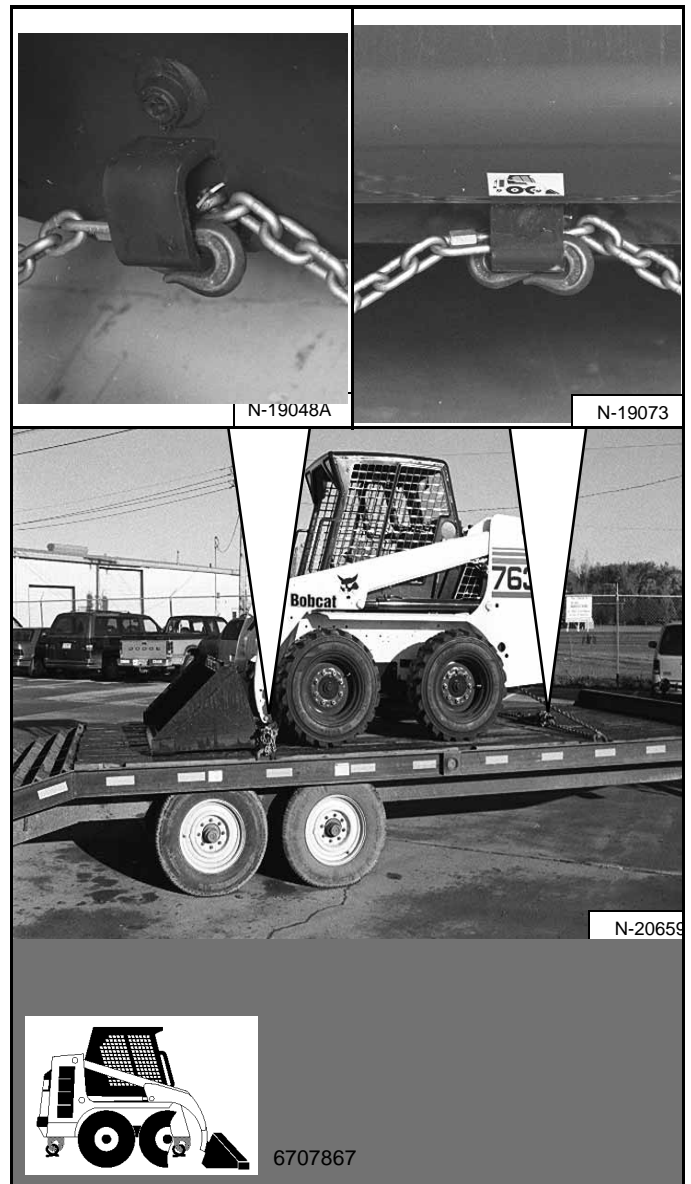


Be sure the transport and towing vehicles are of adequate size and capacity (See Machine Dimensions on Page SPEC-10-1.)

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.

Figure 10-40-2



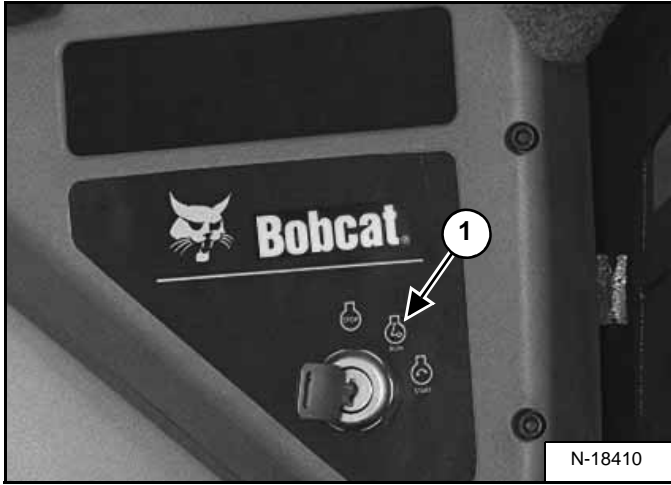
Use the following procedure to fasten the Bobcat loader to the transport vehicle to prevent the loader from moving during sudden stops or when going up or down slopes [Figure 10-40-2].

- 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 (Inset) [Figure 10-40-2].
- Fasten each end of the chain to the transport vehicle.

TOWING THE LOADER

Procedure

Figure 10-50-1

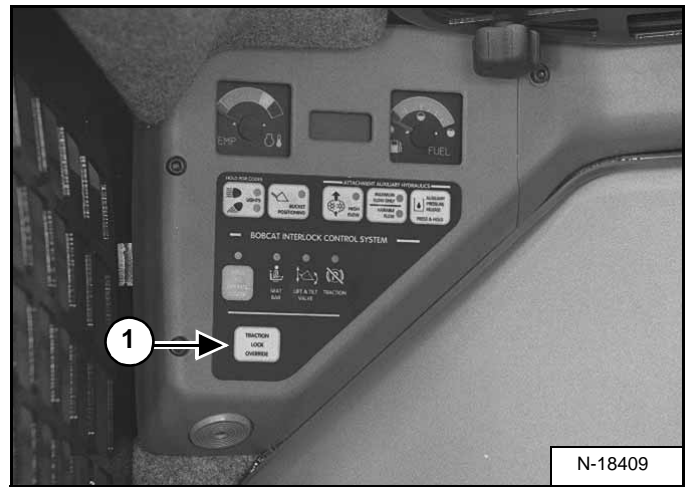


To prevent damage to the loader's hydrostatic system, the loader must be towed only a short distance at slow speed. (Example: Moving the loader onto a transport vehicle).

The towing chain (or cable) must be rated at 1 & 1/2 times the weight of the loader. (See Machine Dimensions on Page SPEC-10-1.)

- Turn the key switch to RUN (Item 1) **[Figure 10-50-1]** (*Standard Panel*) OR press the RUN/ENTER Button (*Deluxe Panel*).

Figure 10-50-2



- Press the TRACTION LOCK OVERRIDE Button (Item 1) **[Figure 10-50-2]**.
- Tow the Bobcat at 2 MPH (3,2 km/hr) or less for not more than 25 feet (7,6 meters).

If the electrical system is not functioning or the engine does not run part of the brake system must be disassembled to move the loader. (See TRACTION LOCK on Page 60-110-1.)



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