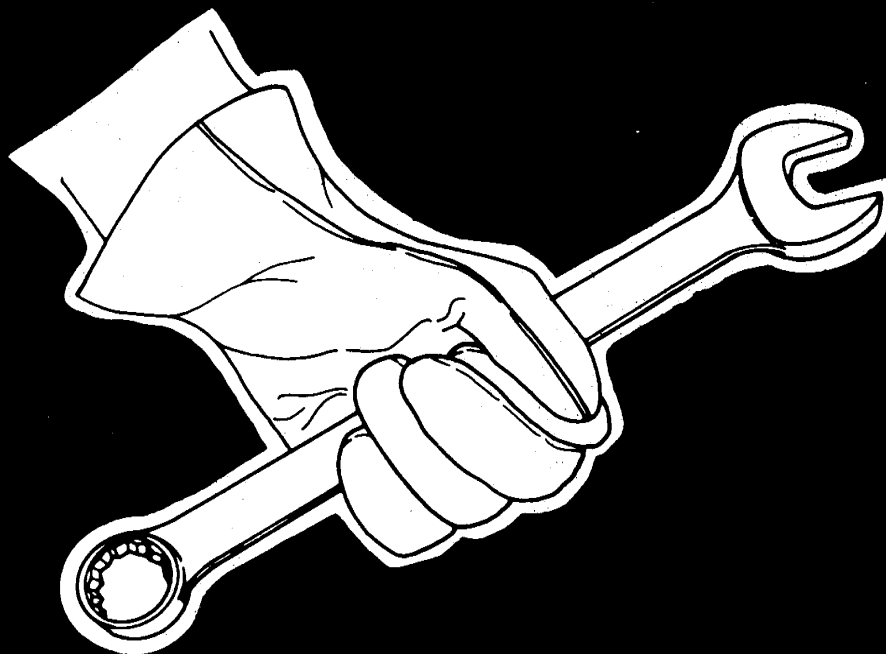




**645**

# SERVICE MANUAL



# MAINTENANCE SAFETY



## WARNING

Instructions are necessary before operating or servicing machine. Read 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. Failure to follow instructions can cause injury or death.

W-2003-1089



**Safety Alert Symbol:** This symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury or death.

**CORRECT**



B 10731



Never service the Bobcat loader without instructions.

**CORRECT**



B 7469



Cleaning and maintenance are required daily.

**CORRECT**



B 7494



Keep rear door closed except for service. Close and latch door before operating the loader.

**CORRECT**

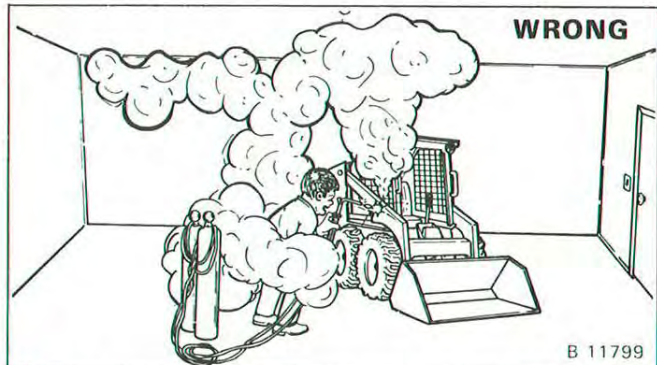


B 12365



Use the correct procedure to lift or lower operator cab.

**WRONG**



B 11799



Have good ventilation when welding or grinding painted parts. Wear dust mask when grinding painted parts. Toxic dust and gas can be produced.

**WRONG**



B 6593



Never work on loader with lift arms up unless lift arms are held by a lift arm support device.



Never modify equipment or add attachments not approved by Melroe Company.



# MAINTENANCE SAFETY (Cont'd)



## WARNING

Instructions are necessary before operating or servicing machine. Read 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. Failure to follow instructions can cause injury or death.

W-2003-1089



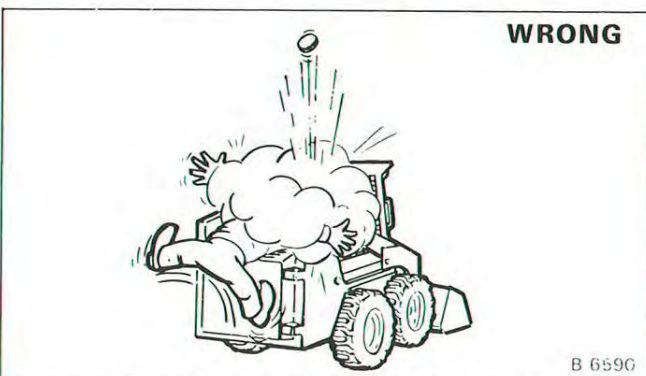
**Safety Alert Symbol:** This symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury or death.



- ⚠ Vent exhaust to outside when engine must be run for service.
- ⚠ Avoid exhaust fume leaks which can kill without warning. Exhaust system must be tightly sealed.



- ⚠ Keep body, jewelry and clothing away from moving parts, electrical contacts, hot parts and exhaust.
- ⚠ Wear eye protection to guard from battery acid, compressed springs, fluids under pressure and flying debris when engines are running or tools are used.



- ⚠ Stop, cool and clean engine of flammable materials before checking fluids.
- ⚠ Never service or adjust loader with the engine running unless instructed to do so in the manual.
- ⚠ Avoid contact with leaking hydraulic fluids or diesel fuel which is under pressure. It can penetrate the skin or eyes.
- ⚠ Never fill fuel tank with engine running, while smoking or when near open flame.



- ⚠ Lead-acid batteries produce flammable and explosive gases.
- ⚠ Keep arcs, sparks, flames and lighted tobacco away from batteries.
- ⚠ Batteries contain acid which burn eyes or skin on contact, wear protective clothing. If acid contacts body, flush well with water. For eye contact flush well and get immediate medical attention.

**Thanks very much for your reading,  
Want to get more information,  
Please click here, Then get the complete  
manual**

**JustClickHere** 

**NOTE:**

**If there is no response to click on the link above,  
please download the PDF document first, and then  
click on it.**

**Have any questions please write to me:  
[admin@servicemanualperfect.com](mailto:admin@servicemanualperfect.com)**

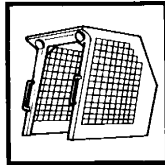


## FOREWORD

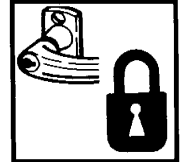
This manual is for the Bobcat loader mechanic. It provides necessary servicing and adjustment procedures for the Bobcat loader and its component parts and systems. Refer to the Operation & Maintenance Manual for operating instructions, starting procedure, daily checks, etc.

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

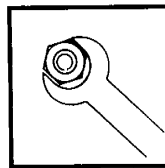
1. Check that the ROPS/FOPS (Including sidescreens) is in good condition and is not modified.



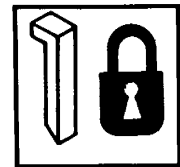
9. Enclosure door latches must open and close freely.



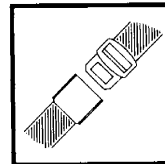
2. Check that ROPS mounting hardware is tightened and is Melroe approved.



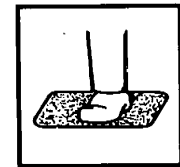
10. Bob-Tach wedges and linkages must function correctly and be in good condition.



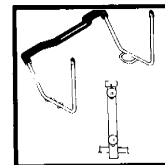
3. The seat belt must be correctly installed, functional and in good condition.



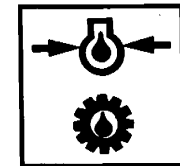
11. Safety treads must be in good condition.



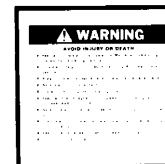
4. The seat bar and pedal interlocks must be correctly adjusted, clean and lubricated.



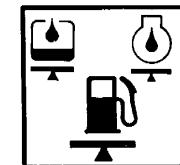
12. Check for correct function of indicator lamps (Optional on some models).



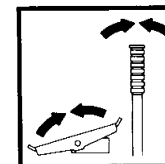
5. Machine signs must be legible and in the correct location.



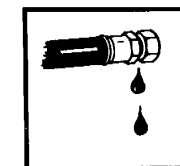
13. Check hydraulic fluid level, engine oil level and fuel supply.



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



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



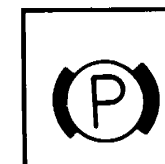
7. Check for correct function of the work lights.



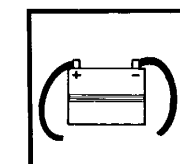
15. Lubricate the loader.



8. The parking brake must function correctly.

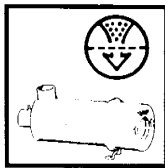


16. Check the condition of the battery and cables.

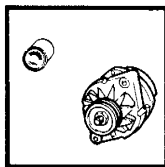


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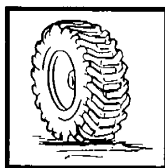
17. Inspect the air cleaner for damage or leaks. Check the condition of the element.



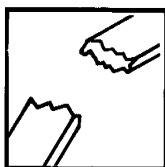
18. Check the electrical charging system.



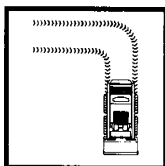
19. Check tires for wear and pressure.



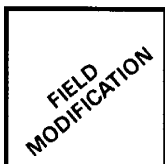
20. Inspect for loose or broken parts or connections.



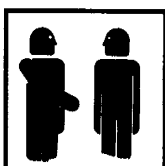
21. Operate the loader and check all functions.



22. Check for any field modifications not completed.



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



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SAFETY INSTRUCTIONS.....	i
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PREVENTIVE  
MAINTENANCE

HYDRAULIC  
SYSTEM

HYDROSTATIC  
SYSTEM

DRIVE  
SYSTEM

MAIN  
FRAME

ELECTRICAL  
SYSTEM

ENGINE  
SERVICE

SPECIFICATIONS

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## SAFETY INSTRUCTIONS

### **WARNING**

Instructions are necessary before operating or servicing machine. Read 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. Failure to follow instructions can cause injury or death.

W-2003-1289

The following publications provide information on the safe use of the loader and attachments:

1. The Delivery Report is used to assure that complete instructions have been given to the new owner and that the machine is in safe operating condition.
2. The Operation & Maintenance Manual delivered with the loader gives operating information as well as routine maintenance and service procedures. It is a part of the loader and must stay with the machine when it is sold.
3. The loader has machine signs (decals) which instruct on the safe care and operation. The signs and their locations are shown in the Operation & Maintenance Manual. Replacement signs are available from Bobcat loader dealers.
4. The FIEI Manual delivered with the loader gives general safety information.
5. The Service Manual and Parts Manual are available from Bobcat loader dealers for use by mechanics to do shop type service and repair work.



This symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury.

- Wear tight fitting clothing and any other required safety apparel when operating or servicing the loader.
- Wear safety glasses when maintaining or servicing the loader.
- Exhaust gases can kill, vent engine exhaust outdoors.
- Know where fire extinguishers and first aid kits are located and how to use them.
- Do not run the Bobcat loader where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.
- Check fuel and hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Tighten or replace any parts that show leakage. Always clean fluid spills. DO NOT use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.
- Clean the loader before doing any welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the loader when welding.
- Have good ventilation when welding or grinding painted parts. Wear a dust mask when grinding painted parts. Toxic dust and gas can be produced.
- Stop the engine and let it cool before adding fuel. No smoking.
- Use the procedure in this manual for connecting battery.
- Use the procedure in this manual for cleaning the spark arrestor muffler after each 100 hours of operation.

Always use the serial number of the loader when requesting service information or when ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation.

The loader serial number plate is located on the inside of the left upright, above the rear grill **A**.

XXXXX      XXXX

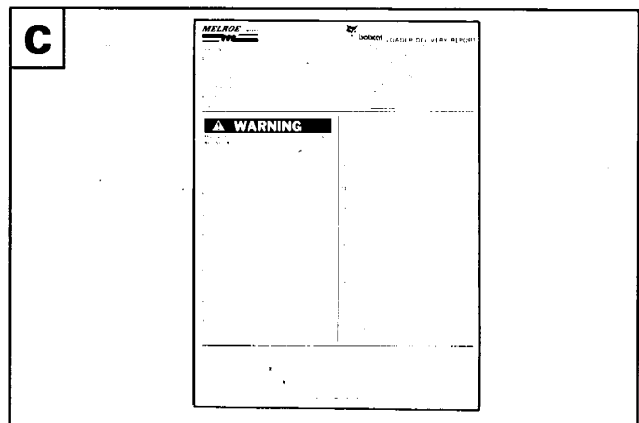
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Production Sequence (Series)

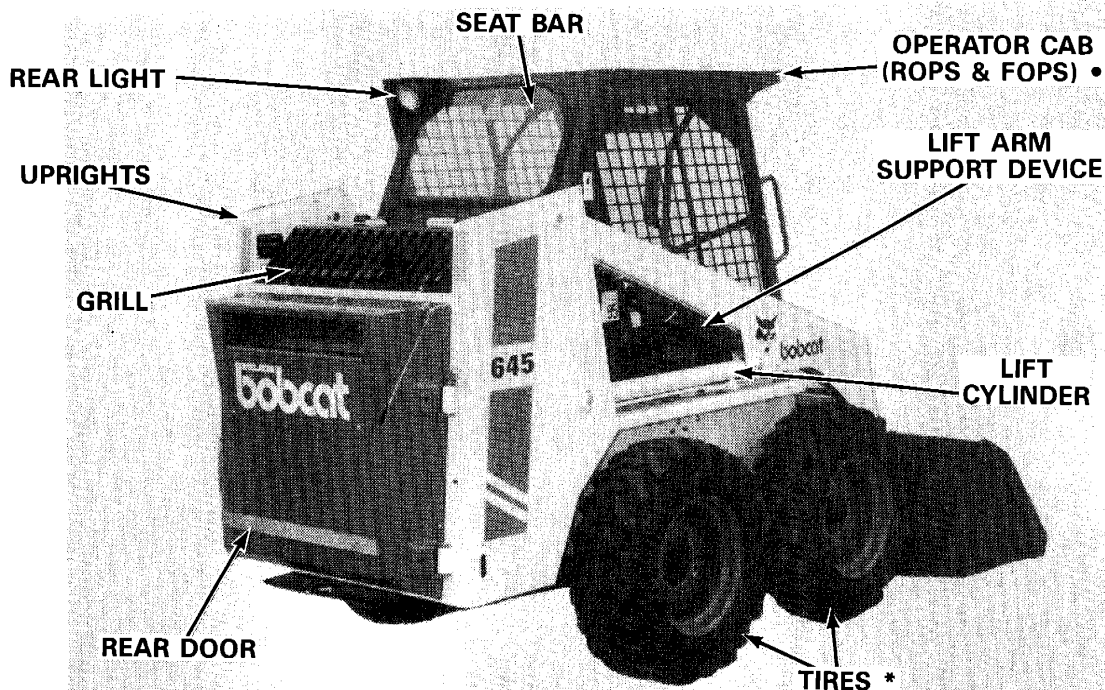
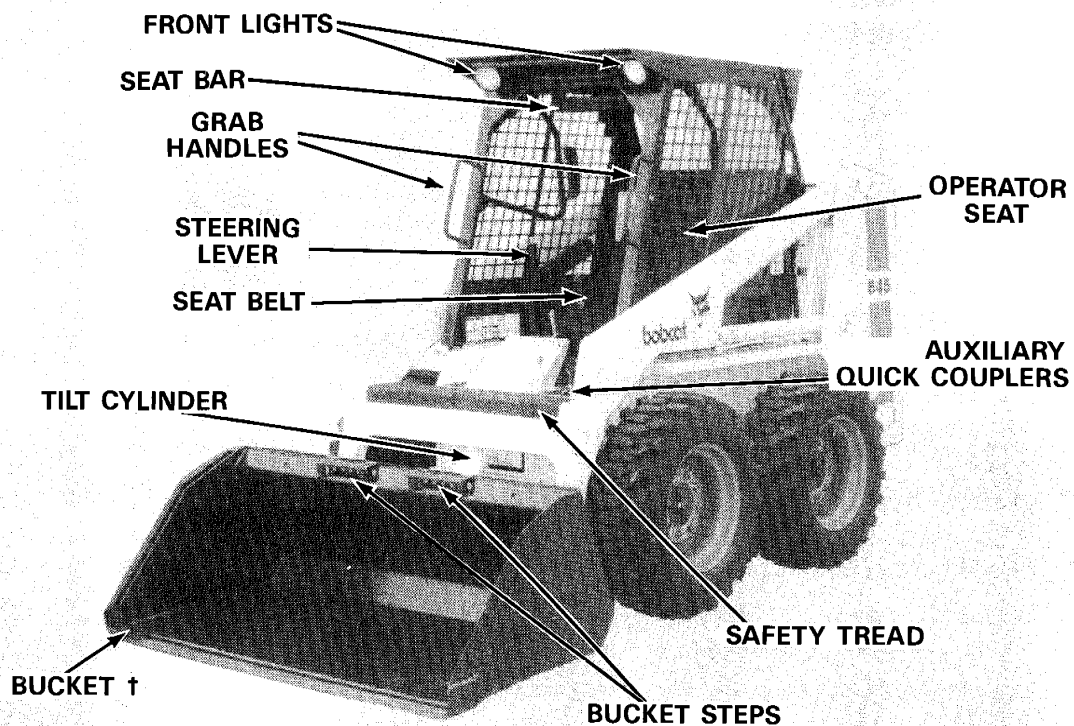
Model, Engine Version

The serial number is located at the fuel injection pump side on the engine block **B**.

The Delivery Report must be filled out by the dealer and signed by the owner or operator when the Bobcat loader is delivered. An explanation of the form must be given to the owner. Make sure it is filled out completely **C**.



## BOBCAT SKID STEER LOADER IDENTIFICATION



PI-13058  
PI-13059

\* TIRES — Flotation tires are shown. The Bobcat loader is base-equipped with standard tires.

† BUCKET — Several different buckets and other attachments are available for the Bobcat loader.

• ROPS, FOPS — Roll-Over Protective Structure, Falling Object Protective Structure, per SAE J1040 and SAE J1043. The Bobcat loader is base-equipped with standard operator cab as shown.





## PREVENTIVE MAINTENANCE

## PREVENTIVE MAINTENANCE

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## SERVICE SCHEDULE

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and early failures. The service schedule is a guide for correct maintenance of the Bobcat loader.



## WARNING

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W-2003-1089

SERVICE SCHEDULE		HOURS					
ITEM	SERVICE REQUIRED	8-10	50	100	250	500	1000
Engine Oil	Check the oil level & add oil as needed.						
Engine Air Cleaner	Replace the outer filter element only when the red ring shows in the indicator window. Check for leaks & damaged components.						
Engine Cooling System	Clean debris from shrouds & grill. Check coolant level in the recovery tank & add as needed.						
Tires	Check for damaged tires & correct air pressure.						
Seat Belt, Seat Bar & Pedal Interlocks	Check the condition of seat belt. Check the seat bar & pedal interlocks for correct operation.						
Safety Signs & Safety Tread	Check for damaged signs (decals) & safety treads. Replace any signs or safety treads that are damaged or worn.						
Lift Arm, Cyl., Bob-Tach, Pivot Pin	Add grease to the fittings until extra grease shows.						
Fuel Filter	Remove water from filter.						
Operator Cab	Check the fastening bolts, washers & nuts. Check the condition of the cab.						
Wheel Nuts	★ Check for loose wheel nuts. Tighten to correct torque if loose.						
Engine Oil & Filter	Replace the oil & the engine oil filter.						
Battery	Check the electrolyte level. Check battery cables for corrosion. Check that the battery cables are tight. Check covers.						
Hydraulic Fluid, Tubelines & Hoses	Check the fluid level & add as needed. Check for damage & leaks & replace as needed.						
Alternator Drive Belt	Check the tension & adjust as needed.						
Chaincase	Check the fluid level & add as needed.						
Controls & Brake	Check operation & adjust as needed.						
Spark Arrestor Muffler	Remove the plug & clean the spark chamber.						
Seat Bar	Grease pivot as needed.						
Steering Shaft Pivots	Grease two fittings. Add oil to steering shaft.						
Hyd./Hydro. Filters	● Replace filter elements.						
U-Joint	Grease three fittings with correct grease.						
Fuel Filter	Replace the filter element.						
Hyd. Reservoir Breather Cap	Replace breather cap.						
Chaincase	Replace the fluid.						
Hydraulic Reservoir	Replace the hydraulic fluid.						
Case Drain Filter	+ Replace the filter						

★ Check wheel nut torque every 8 hours for the first 24 hours of operation.

- Also replace hydrostatic filter element when the transmission warning light stays on for five (5) minutes after the hydrostatic fluid is at operating temperature.

■ Or Every 12 months.

+ Replace case drain filter in the event of any Hydraulic/Hydrostatic System failure.

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## PREVENTIVE MAINTENANCE



### WARNING

Instructions are necessary before operating or servicing machine. Read 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. Failure to follow instructions can cause injury or death.

W-2003-1089

## LIFTING AND BLOCKING THE BOBCAT LOADER

### Procedure

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

Put a floor jack under the rear of the loader **[B]**.

Lift the rear of the loader and install jackstands **[B]**.

Put the floor jack under the front of the loader **[C]**.

Lift the front of the loader and install jackstands **[C]**.

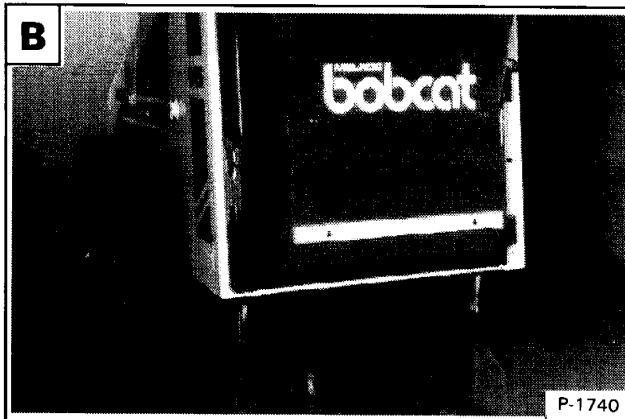
**NOTE:** Make sure the jackstands do not touch the tires.

**A**



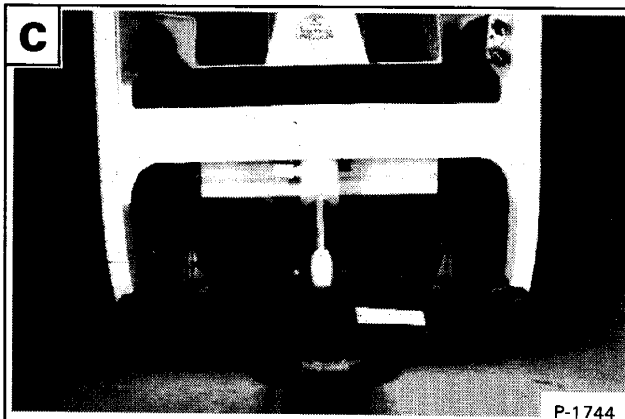
B-7023

**B**



P-1740

**C**



P-1744

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## PARKING THE BOBCAT LOADER

### Procedure

1. Stop the Bobcat loader on level ground.
2. Lower the lift arms fully and put the edge of the bucket on the ground.
3. Pull the throttle all the way backward. Turn the key switch to the "OFF" position.



## WARNING

### AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms, put attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise seat bar, move pedals until both lock

W-2045-1086

4. Engage the parking brake.
5. Lift the seat bar and make sure the foot pedals are in the locked position.
6. Un-buckle the seat belt. Remove the key from the switch to prevent operation of the loader by unauthorized personnel.

## TRANSPORTING THE BOBCAT LOADER



## WARNING

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

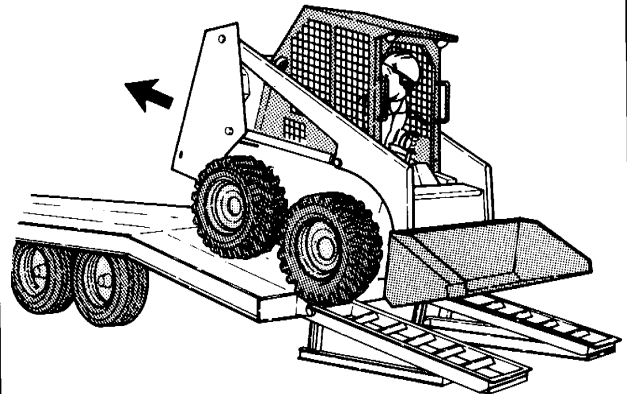
W-2058-0887

A loader with an empty bucket or no attachment must be loaded backward onto the transport vehicle **A**.

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 and down slopes **B**.

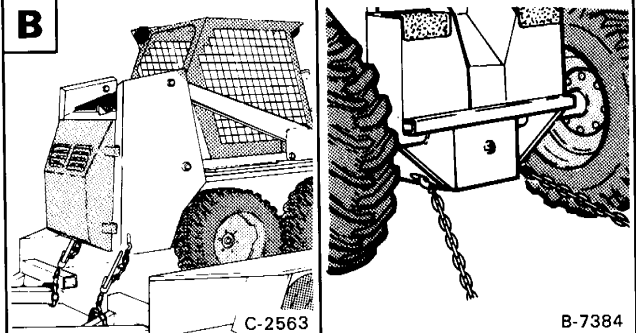
Lower the bucket or attachment to the floor. Stop the engine. Engage the parking brake. Install chains at the front and rear of the loader as shown in figure **B**.

**A**

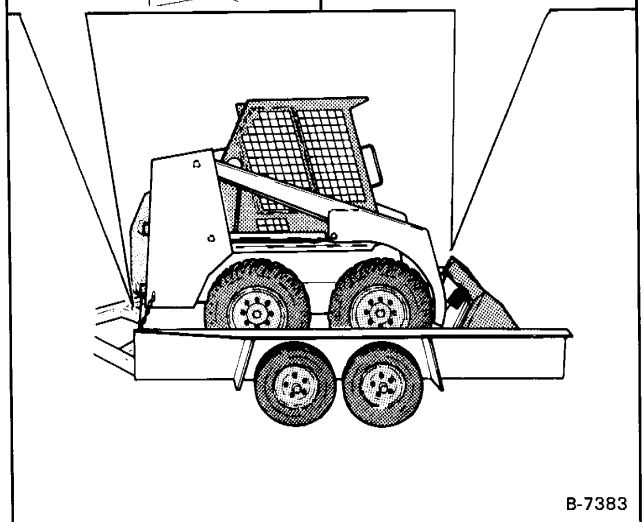


B-2668

**B**



B-7384



B-7383



## LIFT ARM SUPPORT DEVICE



### WARNING

Never work on a machine with the lift arms up unless the lift arms are secured by a 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-2059-0487

#### To Engage Lift Arm Support Device

Maintenance and service work can be done with lift arms lowered. If the lift arms are raised, use the following procedure:

Put jackstands under the rear corners of the loader.

Disconnect the spring from the lift arm support device retaining pin, hold onto the support device and remove the retaining pin **A**.

Lower the lift arm support device on top of the lift cylinder. Hook the free end of the spring to the lift arm support device so there will be no interference with the support device engagement **B**.

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

Raise the lift arms, until the lift arm support device is on the lift cylinder rod **C**.

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 into the rear of the lift arm support device below the cylinder rod.

#### To Disengage Lift Arm Support Device

Remove the pin from the lift arm support device.

Connect the spring from the lift arm support device to the bracket below the lift arms **D**.

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

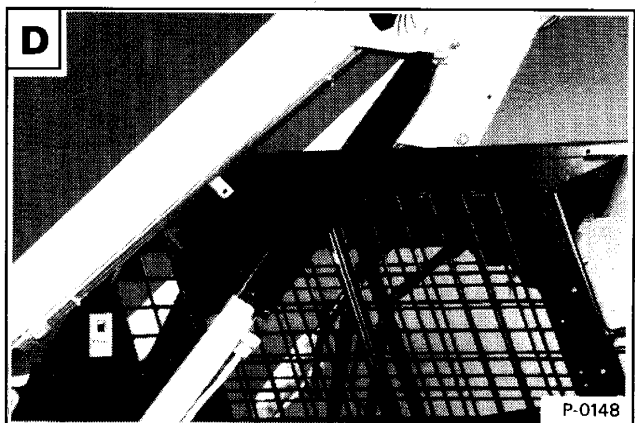
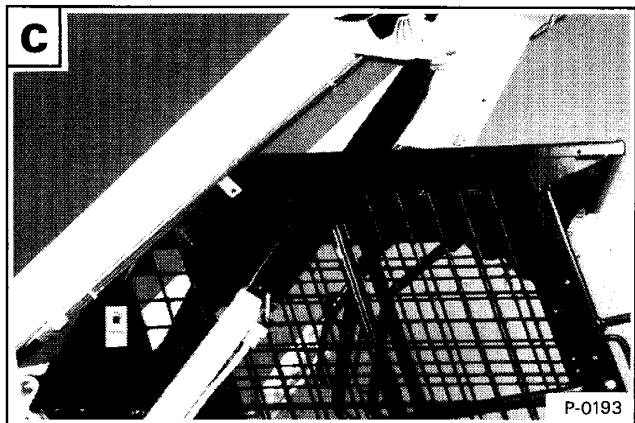
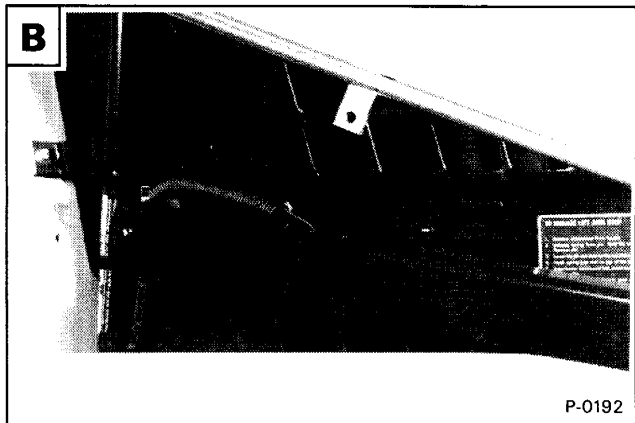
Raise the lift arms a small amount and the spring will lift the support device off the lift cylinder rod. Lower the lift arms. Stop the engine.

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

Disconnect the spring from the bracket.

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

Connect spring to pin.



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