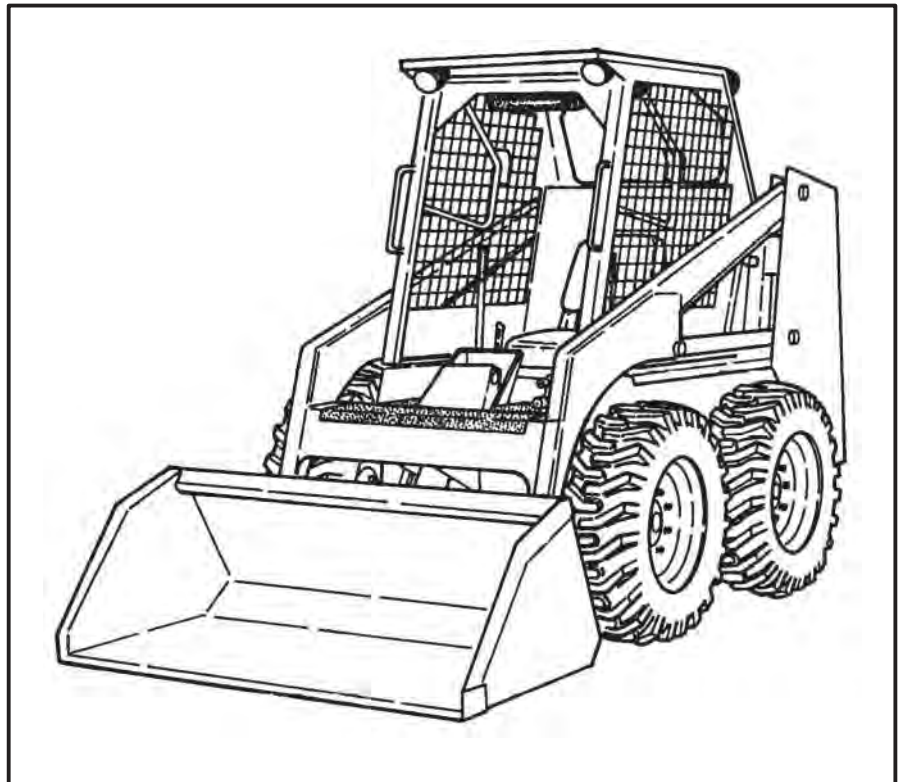


7
4
2
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Service Manual

7
4
3
B



MELROE
INGERSOLL-RAND

6720772(7-92)

Printed in U.S.A.



© Melroe Company 1992

MAINTENANCE SAFETY



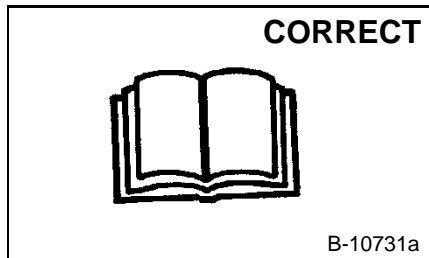
WARNING

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.

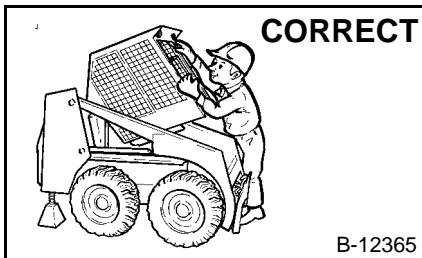
W-2003-0903



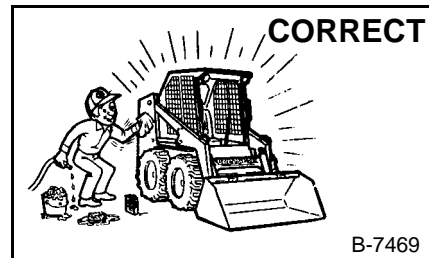
Safety Alert Symbol: This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



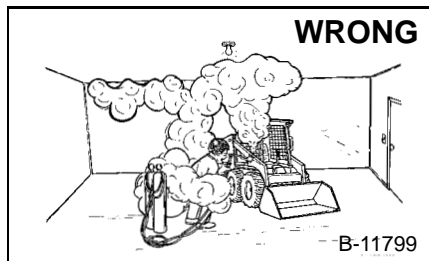
Never service the Bobcat Skid-Steer Loader without instructions.



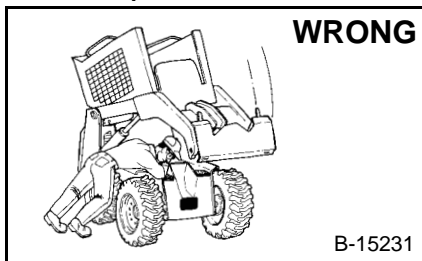
Use the correct procedure to lift or lower operator cab.



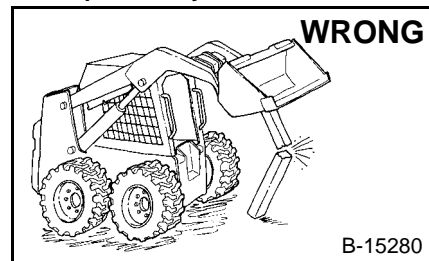
Cleaning and maintenance are required daily.



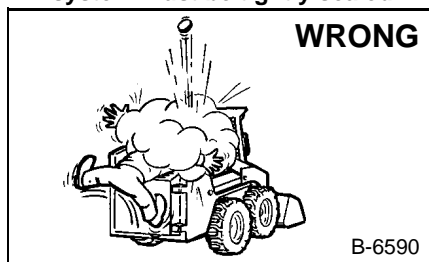
- Have good ventilation when welding or grinding painted parts.
- Wear dust mask when grinding painted parts. Toxic dust and gas can be produced.
- Avoid exhaust fume leaks which can kill without warning. Exhaust system must be tightly sealed.



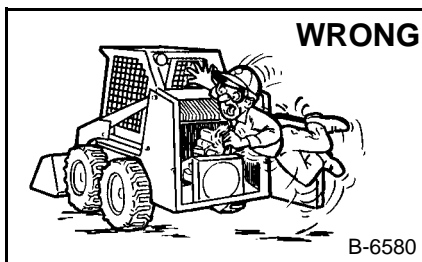
Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop. Do not go under lift arms when raised unless supported by an approved lift arm support device. Replace it if damaged.



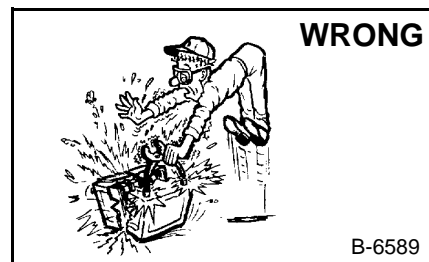
- Never work on loader with lift arms up unless lift arms are held by an approved lift arm support device. Replace if damaged.
- Never modify equipment or add attachments not approved by Bobcat Company.



- 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 fluid or diesel fuel under pressure. It can penetrate the skin or eyes.
- Never fill fuel tank with engine running, while smoking or when near open flame.



- Keep body, jewelry and clothing away from moving parts, electrical contact, 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. Use eye protection approved for type of welding.
- Keep rear door closed except for service. Close and latch door before operating the loader.



- Lead-acid batteries produce flammable and explosive gases.
- Keep arcs, sparks, flames and lighted tobacco away from batteries.
- Batteries contain acid which burns 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.

Maintenance procedures which are given in the Operation & Maintenance Manual can be performed by the owner/operator without any specific technical training. Maintenance procedures which are **not** in the Operation & Maintenance Manual must be performed **ONLY BY QUALIFIED BOBCAT SERVICE PERSONNEL**. Always use genuine Bobcat replacement parts. The Service Safety Training Course is available from your Bobcat dealer.



Bobcat®

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**CALIFORNIA
PROPOSITION 65 WARNING**
Diesel engine exhaust and some of its
constituents are known to the State of California
to cause cancer, birth defects and other
reproductive harm.

**PREVENTIVE
MAINTENANCE**

**HYDRAULIC
SYSTEM**

**HYDROSTATIC
SYSTEM**

**DRIVE
SYSTEM**

**MAIN
FRAME**

**ELECTRICAL
SYSTEM**

**ENGINE
SERVICE**

SPECIFICATIONS

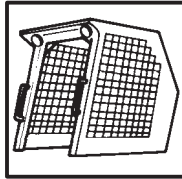


FOREWORD

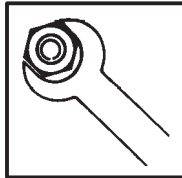
This manual is for the Bobcat loader mechanic. It provides necessary servicing and adjustment procedures for the Bobcat loader and its component parts and systems. Refer to the Operation & Maintenance Manual for operating instructions, starting procedure, daily checks, etc.

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

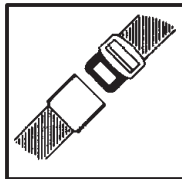
1. Check that the ROPS/FOPS (Including sidescreens) is in good condition and is not modified.



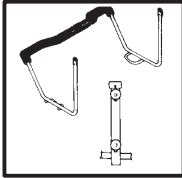
2. Check that ROPS mounting hardware is tightened and is Melroe approved.



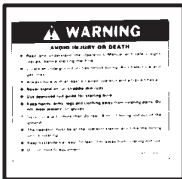
3. The seat belt must be correctly installed, functional and in good condition.



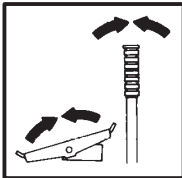
4. The seat bar and pedal interlocks must be correctly adjusted, clean and lubricated.



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



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



7. Check for correct function of the work lights.



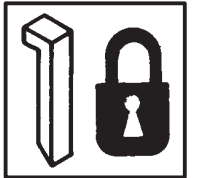
8. The parking brake must function correctly.



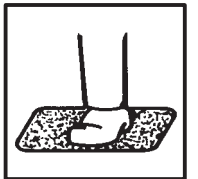
9. Enclosure door latches must open and close freely.



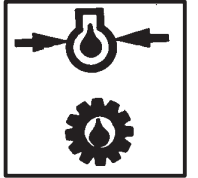
10. Bob-Tach wedges and linkages must function correctly and be in good condition.



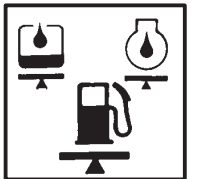
11. Safety treads must in good condition.



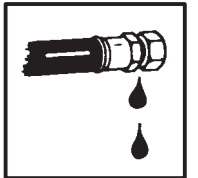
12. Check for correct function of indicator lamps (Optional on some models).



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



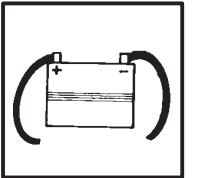
14. Inspect for fuel, oil or hydraulic fluid leaks.



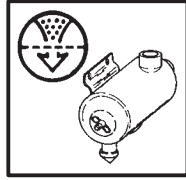
15. Lubricate the loader.



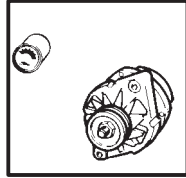
16. Check the condition of the battery and cables.



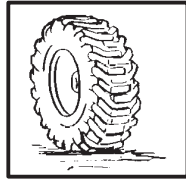
17. Inspect the air cleaner for damage or leaks. Check the condition of the element.



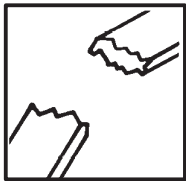
18. Check the electrical charging system.



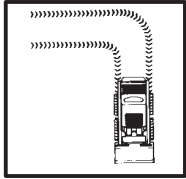
19. Check tires for wear and pressure.



20. Inspect for loose or broken parts or connections.



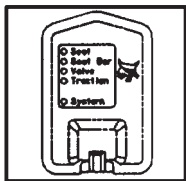
21. Operate the loader and check all functions.



22. Check for any field modification not completed.



23. Check for correct function of the Bobcat Interlock Control System (BICS™) 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.



SAFETY INSTRUCTIONS

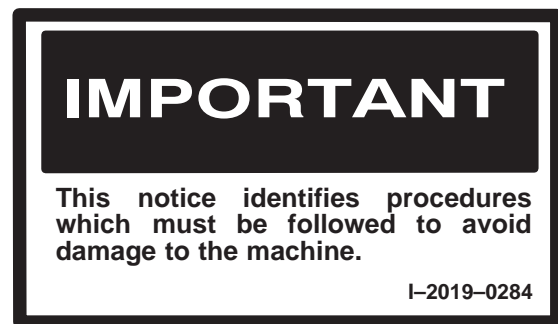
WARNING

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-2003-0797

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

- 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.
- 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. Replacement Operation & Maintenance Manuals can be ordered from your Bobcat loader dealer.
- The loader has machine signs (decals) which instruct on the safe operation and care. The signs and their locations are shown in the Operation & Maintenance Manual. Replacement signs are available from your Bobcat loader dealer.
- The loader has a plastic Operator's Handbook fastened to the operator cab. Its brief instructions are convenient to the operator. The handbook is available from your dealer in an English edition or one of the following languages: French, German, Italian, Dutch & Spanish editions.
- The EMI Safety Manual (available in Spanish) delivered with the loader gives general safety information.
- The Service Manual and Parts Manual are available from your dealer for use by mechanics to do shop-type service and repair work.
- The Skid-Steer Loader Operator Training Course is available through your local dealer. This course is intended to provide rules and practices for correct operation of the Bobcat loader. The course is available in English and Spanish versions.
- The Bobcat Skid-Steer Loader Safety Video is available from your Bobcat Dealer.



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

SAFETY INSTRUCTIONS (Cont'd)

- Wear tight fitting clothing. Always wear safety glasses when maintaining or servicing loader. Safety glasses, hearing protection or loader special applications kit are required for some work. See your dealer for Melroe Safety equipment.
- Know where fire extinguisher and first aid kit are located and how to use them.
- Do not use the Bobcat loader where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.
- The engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazard and overheating.
- Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part.
- 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.
- Follow any environmental safety regulations when disposing of used fluids such as engine oil, grease or anti-freeze.
- Do not use ether or starting fluids on this engine. It has a glow plug. These starting aids can cause explosion and injure you or bystanders.
- Always clean the loader and disconnect the battery 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 grinding or welding painted parts. Wear dust mask when grinding painted parts. Toxic dust or gas can be produced.
- Stop the engine and let it cool before adding fuel. No smoking!
- Use the procedure in the Operation & Maintenance or Service Manuals for connecting the battery.

A fire extinguisher is available from your local dealer. The fire extinguisher can be installed in the location shown [A].



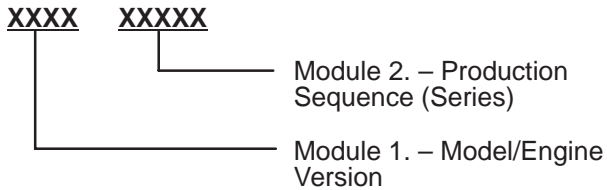
SERIAL NUMBER LOCATIONS

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.

LOADER SERIAL NUMBER

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

Explanation of loader Serial Number:



The four digit Model/Engine Combination module number identifies the model number and engine combination. This number (in parenthesis beside the model number) is used in the Service Manual to more easily identify the standard, optional and field accessory equipment included or available for each specific model.

The five digit Production Sequence Number identifies the order which the loader is produced.

ENGINE SERIAL NUMBER (743B)

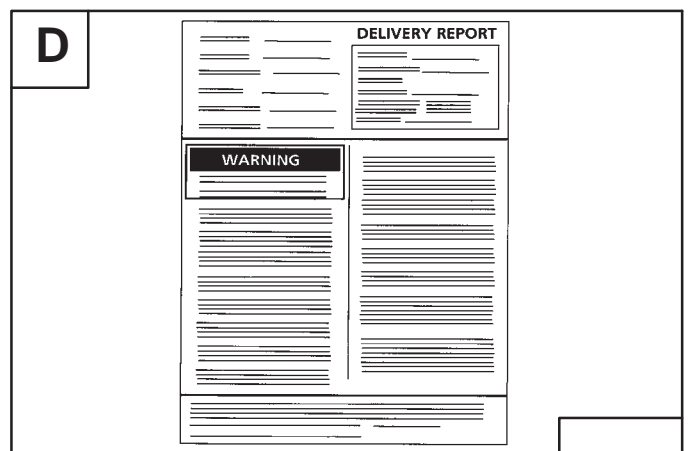
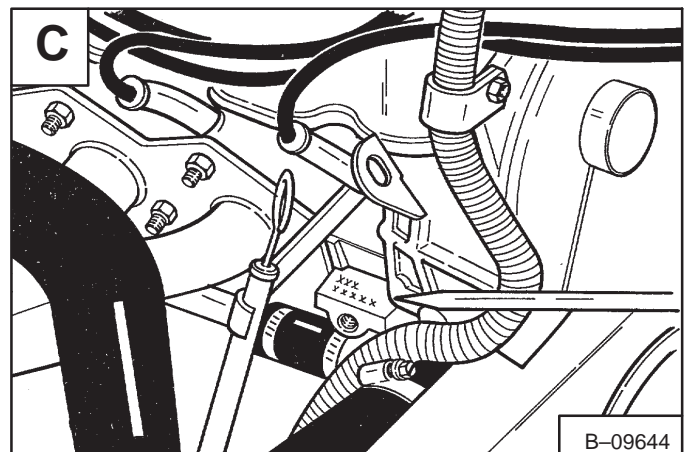
The serial number is located at the fuel injection pump side on the engine block [B].

ENGINE SERIAL NUMBER (742B)

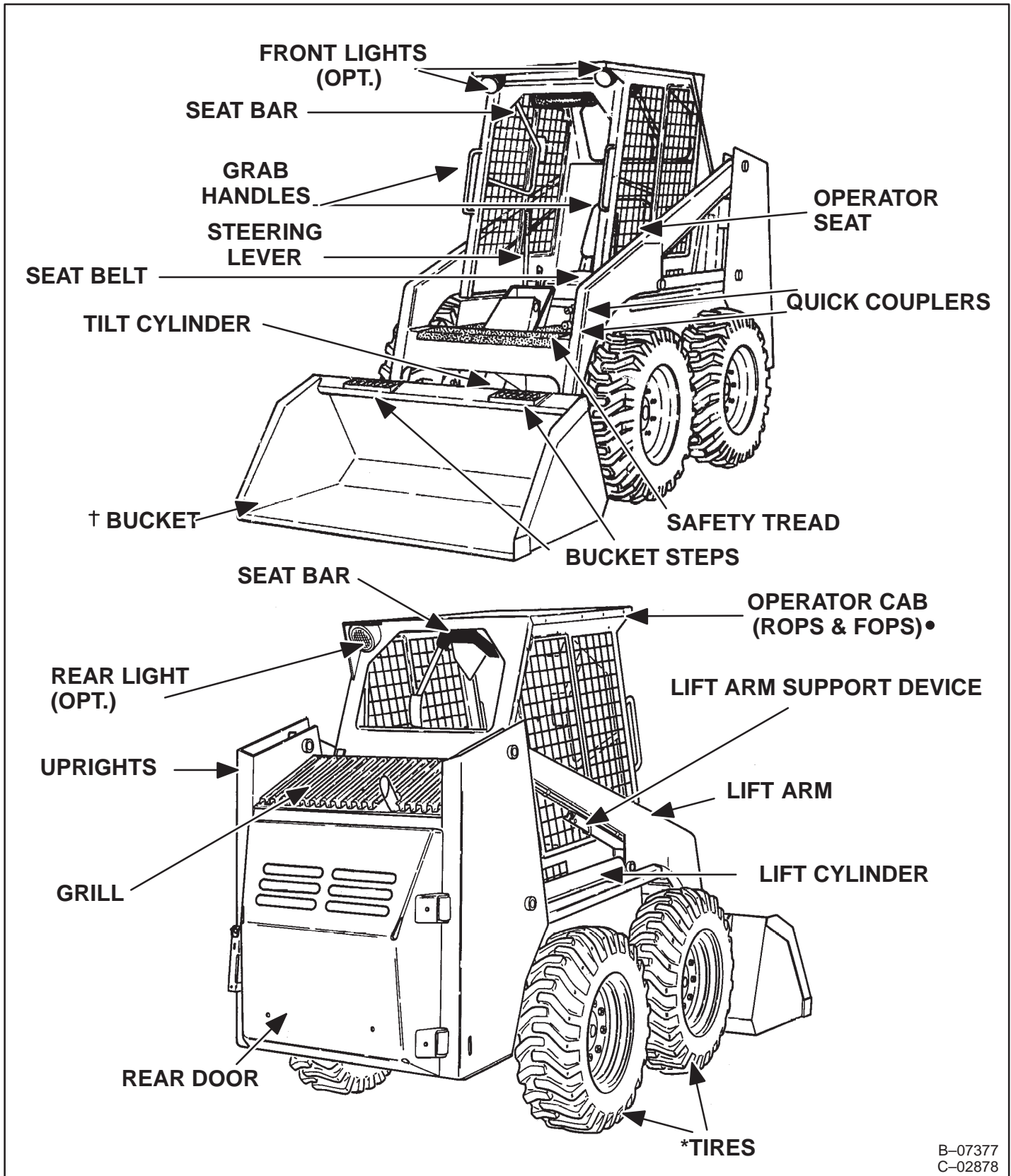
The serial number is located at top left surface of the engine block [C].

DELIVERY REPORT

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 [D].



BOBCAT SKID STEER LOADER IDENTIFICATION



B-07377
C-02878

* 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 SE J1040 and SAE J1043. The Bobcat loader is base-equipped with a 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

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-2003-0797

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 read 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 (743B)	Remove water from filter.	■					
Operator Cab	Check the fastening bolts, washers & nuts. Check the condition of the cab.	■					
Wheel Nuts	<input type="checkbox"/> Check for loose wheel nuts. Tighten to correct torque if loose.		■				
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.		■				
Engine Oil & Filter	Replace the oil & the engine oil filter.			■			
Spark Arrestor Muffler	Remove the plug & clean the spark chamber.			■			
Governor Oil Level (742B)	Check level, if low, add oil.			■			
Governor Shaft (742B)	Grease or oil the shaft.				■		
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.

● Also replace hydrostatic filter element when the transmission warning light stays on for five 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.



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 [A].

W-2003-0797

LIFTING AND BLOCKING THE 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 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 the loader [C].

Lift the front of the loader and put jackstands [C].

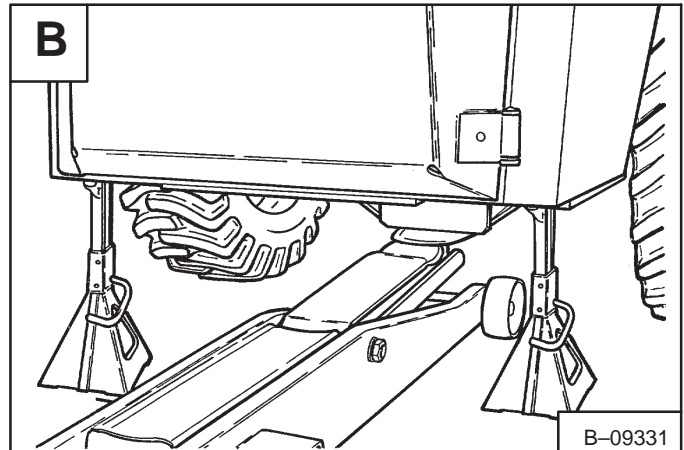
NOTE: Make sure the jackstands do not touch the tires.

A



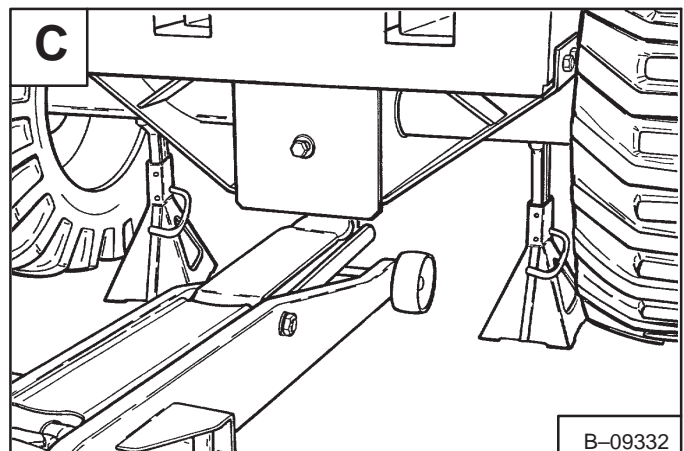
B-07023

B



B-09331

C



B-09332

PARKING THE BOBCAT LOADER

Procedure

Stop the Bobcat loader on level ground.

Lower the lift arms fully and put the edge of the bucket on the ground.

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

W-2045-1086

Engage the parking brake.

Lift the seat bar and make sure the foot pedals are in the locked position.

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

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.

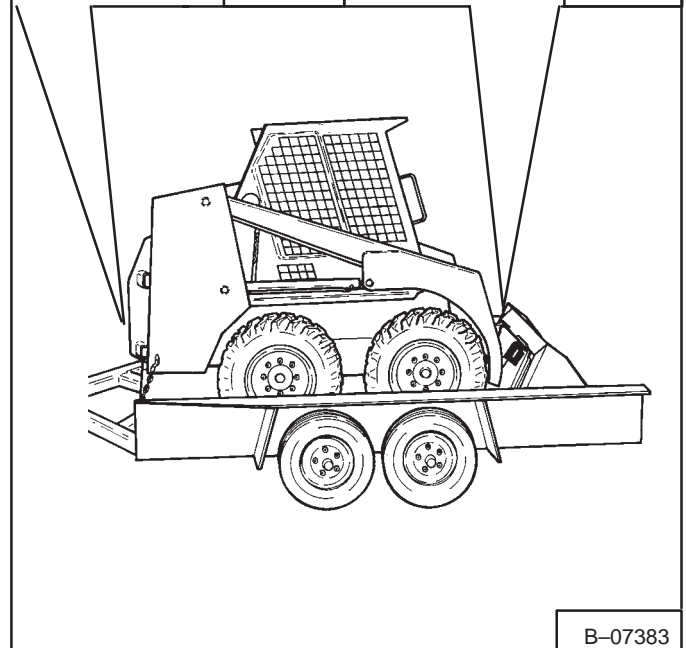
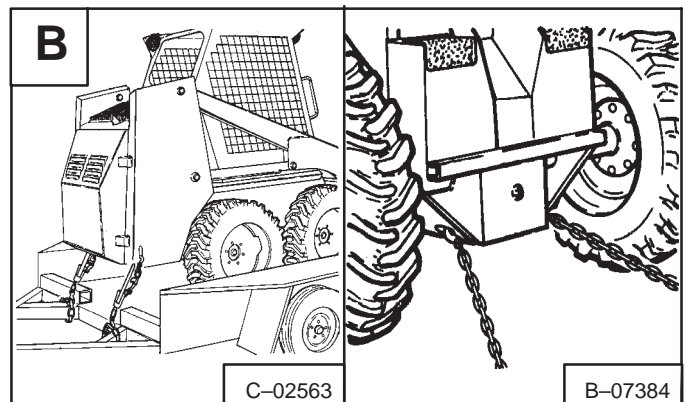
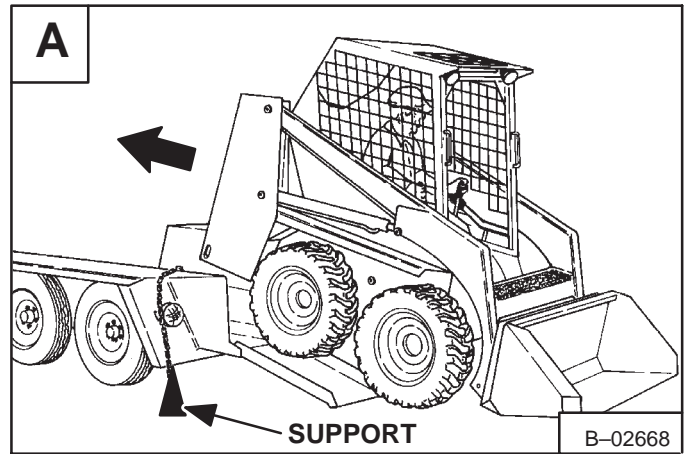
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A loader with an empty bucket or no attachment must be loaded backward onto the transport vehicle [A].

The rear of the trailer must be blocked or supported [A] when loading or unloading the loader to prevent the front end of the trailer from raising up.

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].



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