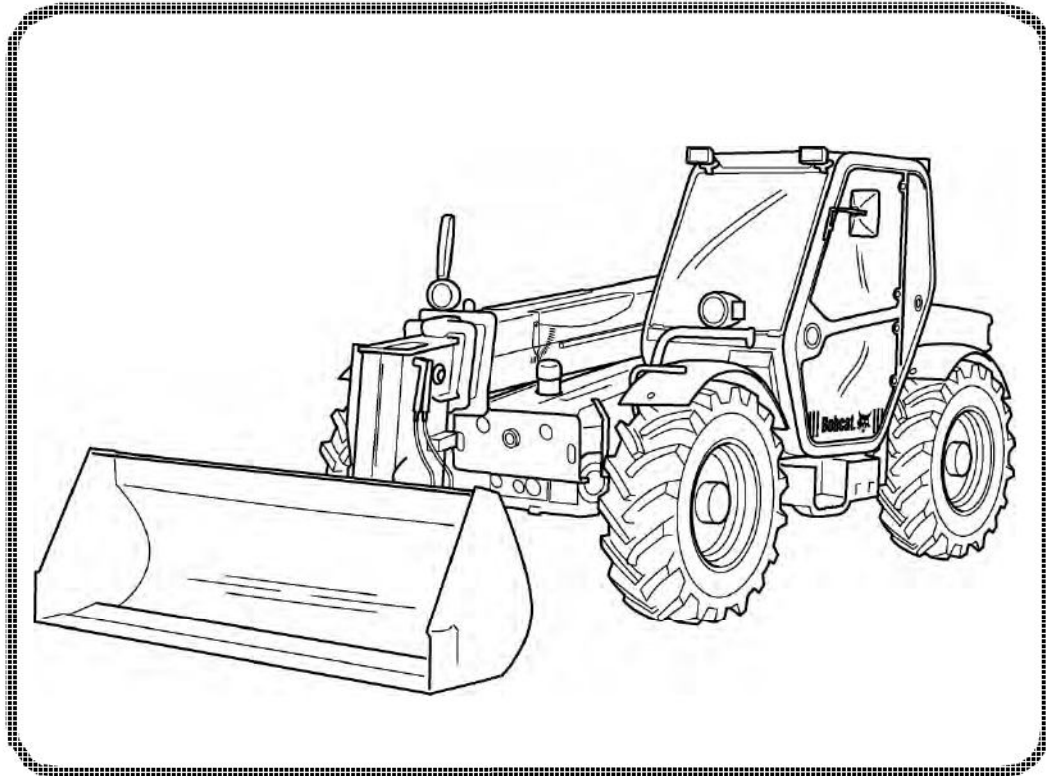




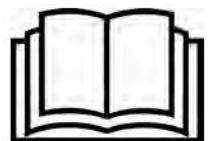
Bobcat®

Service Manual V638 VersaHANDLER®

S/N A8HM11001 & Above (with Cab)
S/N A8HN11001 & Above (with Canopy)



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MAINTENANCE SAFETY

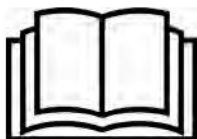


WARNING

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-2003-0807

CORRECT



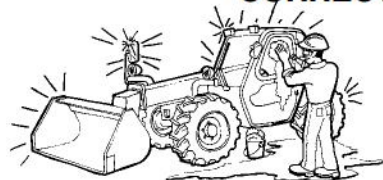
P-90216

⚠ Never service the Bobcat VersaHANDLER without instructions.



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

CORRECT



B-16082

⚠ Cleaning and maintenance are required daily.

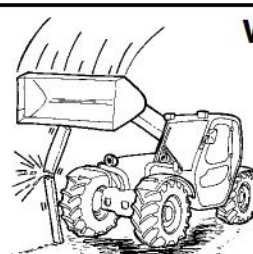
WRONG



B-16080

⚠ Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause boom to drop. Do not go under boom when raised unless supported by an approved boom stop. Replace if damaged.

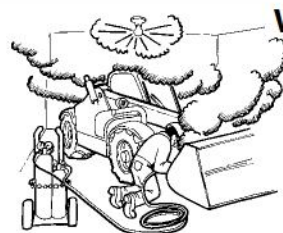
WRONG



B-16079

⚠ Never work on VersaHANDLER with boom up unless boom is held by an approved boom stop. Replace if damaged.
⚠ Never modify equipment or add attachments not approved by Bobcat Company.

WRONG



B-16081

⚠ 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.

WRONG



B-16078

⚠ 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.

WRONG



B-6589

⚠ 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.

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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**.

MSW12-0409

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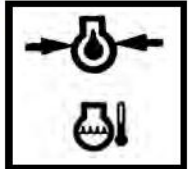




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FOREWORD

This manual is for the Bobcat VersaHANDLER mechanic. It provides necessary servicing and adjustment procedures for the Bobcat VersaHANDLER 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 VersaHANDLER has had service or repair:

- | | | | |
|---|---|--|---|
| 1. Check that ROPS/FOPS (including right side window) is in good condition and is not modified. |  | 8. The parking brake must function correctly. |  |
| 2. Check that ROPS mounting hardware is tightened and is Bobcat approved. |  | 9. Enclosure door latches must open and close freely. |  |
| 3. The seat belt must be correctly installed, functional and in good condition. |  | 10. Attachment locking pins must function correctly and be in good condition. Bob-Tach wedges and linkages (if equipped) must function correctly and be in good condition. |  |
| 4. Check boom stop, replace if damaged. |  | 11. Safety treads must be in good condition. |  |
| 5. Machine signs (decals) must be legible and in the correct location. |  | 12. Check for correct function of indicator lamps and gauges. |  |
| 6. Joystick control lever and foot pedals must return to neutral. |  | 13. Check hydraulic fluid level, engine oil level and fuel supply. |  |
| 7. Check for correct function of the work lights. |  | 14. Inspect for fuel, oil or hydraulic fluid leaks. |  |

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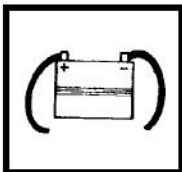
15. Lubricate the VersaHANDLER.



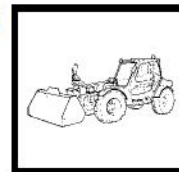
20. Check for any field modification not completed.



16. Check the condition of the battery and cables.



20. Operate the machine and check all functions.



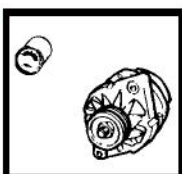
17. Inspect the air cleaner for damage or leaks. Check the condition of the element.



21. Check for correct function of the Lateral Operator Restraint System (LORS) if equipped.



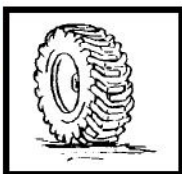
18. Check the electrical charging system.



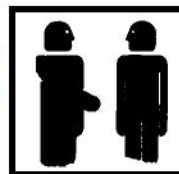
22. Check function or condition of all equipped options and accessories (examples: back-up alarm, fire extinguisher, rotating beacon, front stabilizers, etc.).



19. Check tires for wear and pressure. Use only approved tires.



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



20. Inspect for loose or broken parts or connections.



**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.

SAFETY INSTRUCTIONS (CONT'D)



Cutting or drilling concrete containing sand or rock containing quartz can result in exposure to silica dust. Use a respirator, water spray or other means to control dust.

FIRE PREVENTION



Maintenance

The machine and some attachments have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.

The operator's area, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.

All fuels, most lubricants and some coolants mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

Operation

Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.

Electrical



Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.

Battery gas can explode and cause serious injury. Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

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FIRE PREVENTION (CONT'D)

Hydraulic System

Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. 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.

Fueling



Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.

Starting

Do not use ether or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or bystanders.

Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.

Spark Arrester Exhaust System

The spark arrester exhaust system is designed to control the emission of hot particles from the engine and exhaust system, but the muffler and the exhaust gases are still hot.

Check the spark arrester exhaust system regularly to make sure it is maintained and working properly. Use the procedure in the Operation & Maintenance Manual for cleaning the spark arrester muffler (if equipped).

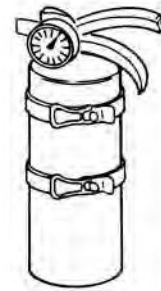
Welding And Grinding

Always clean the machine and attachment, disconnect the battery, and disconnect the wiring from the Bobcat controllers before welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the machine 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.

Dust generated from repairing nonmetallic parts such as hoods, fenders or covers can be flammable or explosive. Repair such components in a well ventilated area away from open flames or sparks.

Fire Extinguishers



Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

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SERIAL NUMBER LOCATION

Always use the serial number of the VersaHANDLER when requesting service information or when ordering parts.

VersaHANDLER Serial Number

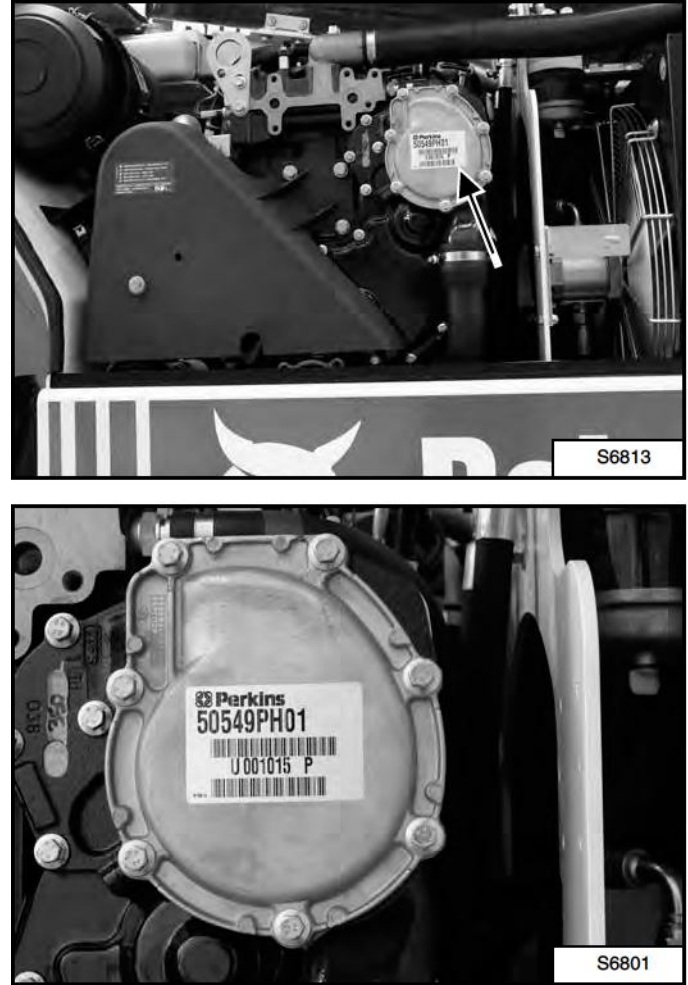
Figure 1



The front, on the right side of the chassis [Figure 1].

Engine Serial Number

Figure 2



The engine serial number can be found on the water pump [Figure 2] in front of you when opening the engine cover. Always use the full number when ordering replacement parts.

Other Serial Numbers

Some components can also have serial numbers. Always use these serial numbers when requesting parts.

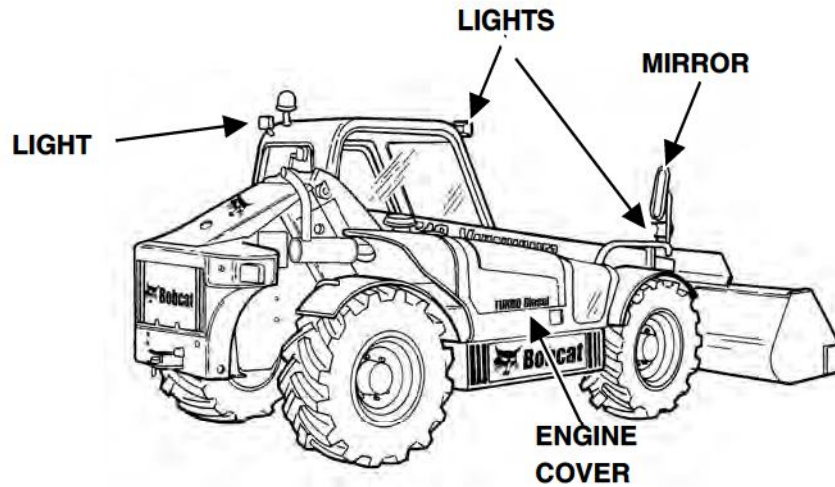
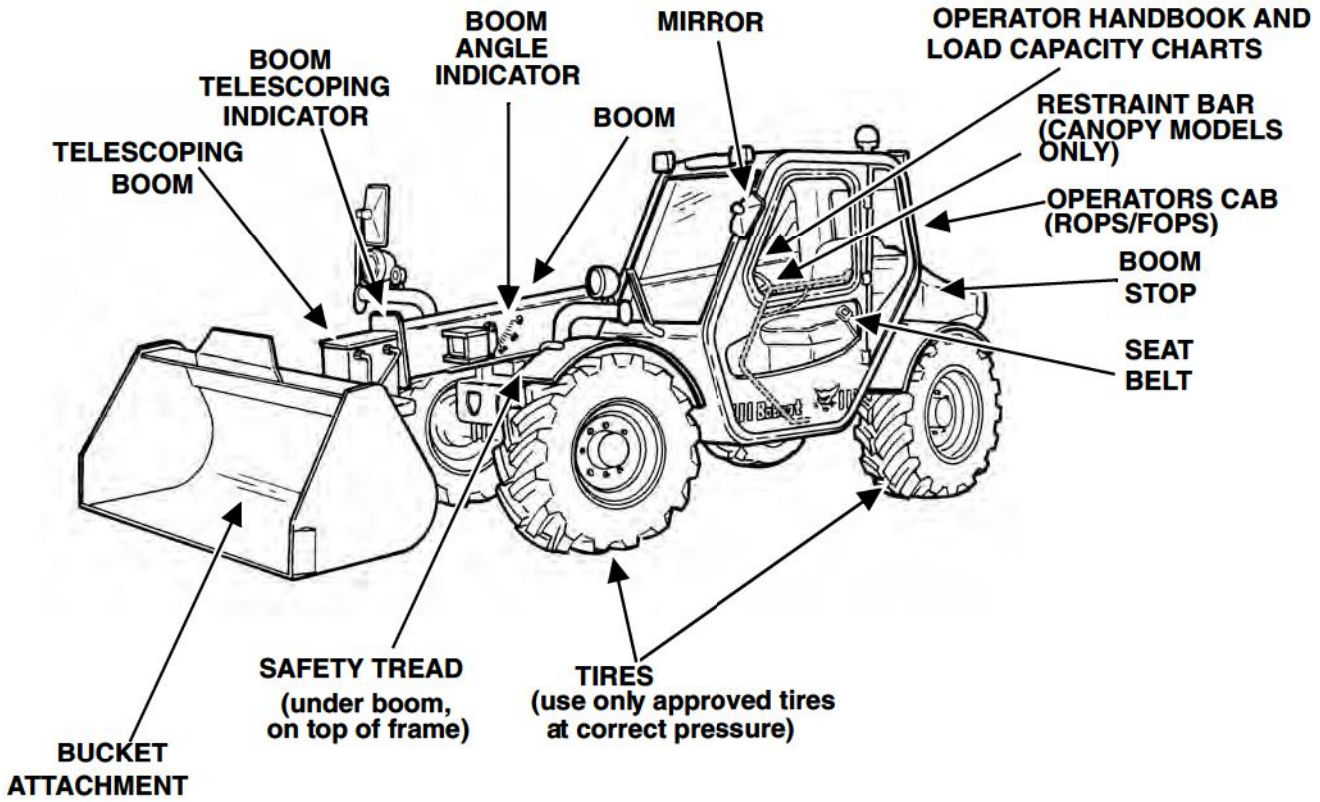
DELIVERY REPORT

Figure 3

The diagram shows a form titled "DELIVERY REPORT". The form is divided into several sections. At the top right, the title "DELIVERY REPORT" is printed. Below the title, there are several horizontal lines representing text input fields. To the left of these fields, there is a section with a dark header containing the word "WARNING" in white capital letters. Below the "WARNING" section, there are more horizontal lines. At the bottom right of the form, there is a small rectangular box containing the alphanumeric code "B-16315".

The Delivery Report must be filled out by the dealer and signed by the owner or operator when the VersaHANDLER is delivered. An explanation of the form must be given to the owner. Make sure it is filled out completely [Figure 3].

BOBCAT VERSAHANDLER IDENTIFICATION



S6922
S6923

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LIFTING AND BLOCKING THE VERSAHANDLER

Procedure

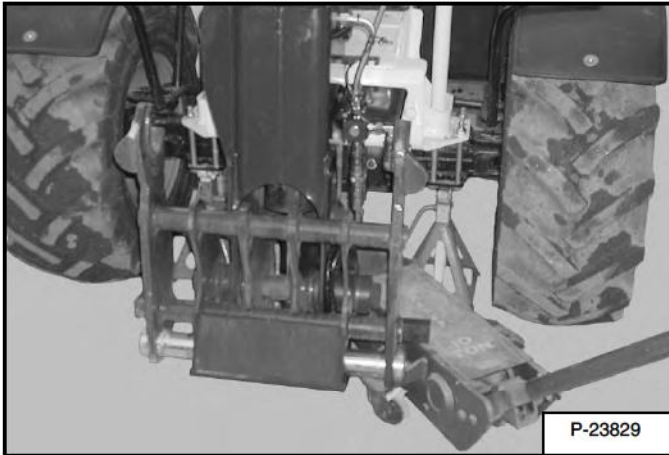
Always park the machine on a level surface.

WARNING

The seat bar system must deactivate the lift, and tilt control functions when the seat bar is up. Service the system if joysticks do not deactivate.

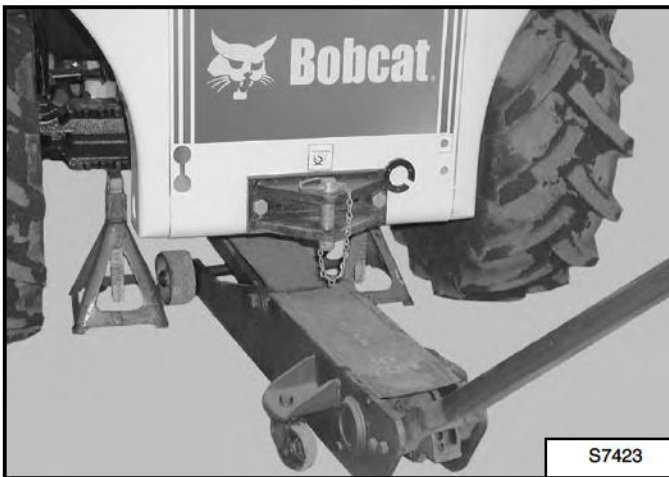
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Figure 10-10-1



STOP the engine. Put the floor jack under the center of the front axle. Lift the VersaHANDLER and install jackstands [Figure 10-10-1].

Figure 10-10-2



Put the floor jack under the center of the rear axle. Lift the VersaHANDLER and install jackstands [Figure 10-10-2].

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