EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)
MAINTENANCE SAFETY

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.

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

CORRECT

Never service the Bobcat Skid-Steer Loader without instructions.

B-10731a

CORRECT

Use the correct procedure to lift or lower operator cab.

B-15590

CORRECT

Cleaning and maintenance are required daily.

B-15591

WRONG

Have good ventilation when welding or grinding painted parts.

B-15592

WRONG

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.

B-15593

WRONG

Never work on loader with lift arms up unless lift arms are held by an approved lift arm support device. Replace if damaged.

B-15599

WRONG

Avoid exhaust fume leaks which can kill without warning. Exhaust system must be tightly sealed.

B-15600

WRONG

Never fill fuel tank with engine running, while smoking or when near open flame.

B-15601

WRONG

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

B-6589

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.

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.
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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 (decals) must be legible and in the correct location.

7. Steering levers, hand controls and foot pedals must return to neutral (as applicable).

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.

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

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

16. Lubricate the loader.

FW S100 Service Manual
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. Check tracks for wear and tension. Use only approved tires or tracks.

21. Inspect for loose or broken parts or connections.

22. Check for any field modification not completed.

23. Operate the machine and check all functions.

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

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

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

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

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

**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.

**IMPORTANT**

This notice identifies procedures which must be followed to avoid damage to the machine.

**DANGER**

The signal word DANGER on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING**

The signal word WARNING on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

The following publications provide information on the safe use and maintenance of the Bobcat machine 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 machine or attachment contains operating information as well as routine maintenance and service procedures. It is a part of the machine and can be stored in a container provided on the machine. Replacement Operation & Maintenance Manuals can be ordered from your Bobcat dealer.

- Machine signs (decals) instruct on the safe operation and care of your Bobcat machine or attachment. The signs and their locations are shown in the Operation & Maintenance Manual. Replacement signs are available from your Bobcat dealer.

- An Operator's Handbook fastened to the operator cab. It's brief instructions are convenient to the operator. The handbook is available from your dealer in an English edition or one of many other languages. See your Bobcat dealer for more information on translated versions.

- The AEM Safety Manual delivered with the machine 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 or at [www.training.bobcat.com](http://www.training.bobcat.com) or [www.bobcat.com](http://www.bobcat.com). This course is intended to provide rules and practices of correct operation of the Skid-Steer Loader. The course is available in English and Spanish versions.

- Service Safety Training Courses are available from your Bobcat dealer or at [www.training.bobcat.com](http://www.training.bobcat.com) or [www.bobcat.com](http://www.bobcat.com). They provide information for safe and correct service procedures.

- The Skid-Steer Loader Safety Video is available from your Bobcat dealer or at [www.training.bobcat.com](http://www.training.bobcat.com) or [www.bobcat.com](http://www.bobcat.com).
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.

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 Arrestor Exhaust System

The spark arrestor 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 arrestor exhaust system regularly to make sure it is maintained and working properly. Use the procedure in the Operation & Maintenance Manual for cleaning the spark arrestor muffler (if equipped).
FIRE PREVENTION (CONT'D)

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.
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.

Figure 1

The loader serial number plate (Item 1) [Figure 1] is located inside the cab on the right-hand side.

Explanation of loader Serial Number:

<table>
<thead>
<tr>
<th>Module 2. - Production Sequence (Series)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1. - Model / Engine Combination</td>
</tr>
</tbody>
</table>

1. The four digit Model / Engine Combination Module number identifies the model number and engine combination.

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

Figure 2

The engine serial number is located on top of the engine (Item 1) [Figure 2].

Loader Serial Number

Engine Serial Number
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 [Figure 3].
**LOADER IDENTIFICATION**

- **OPERATOR SEAT** with SEAT BELT & SEAT BAR
- **GRAB HANDLES**
- **TILT CYLINDER**
- **FRONT LIGHTS**
- **FRONT AUXILIARY QUICK COUPLERS**
- **REAR LIGHT**
- **TAIL LIGHT**
- **STEPS**
- **BUCKET STEP**
- **M OPERATOR CAB (ROPS / FOPS)**
- **LIFT ARM SUPPORT DEVICE**
- **LIFT ARM**
- **LIFT CYLINDER**

* **TIRES** - Tires shown may not be standard. The machine is factory equipped with standard tires. Other tires are available.

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

† Bucket - Several different Buckets and other Attachments are available.
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LIFTING AND BLOCKING THE LOADER

Procedure

Figure 10-10-1

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.

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.

Figure 10-10-2

Put the floor jack under the rear of the loader.

Lift the rear of the loader and install jack stands [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 jack stands under the axle tubes [Figure 10-10-3].

NOTE: Make sure the jack stands do not touch the tires. Make sure tires clear floor or any obstacles.
LIFT ARM SUPPORT DEVICE

Installing

Maintenance and service work can be done with the lift arms lowered. If the lift arms are raised, use the following procedures to engage and disengage an approved lift arm support device.

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

Figure 10-20-1

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

Figure 10-20-2

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

Remove attachment from the loader.
Thank you very much for your reading.

Please click here and go back to the website.

Then, you can download the complete manual instantly.

No waiting.