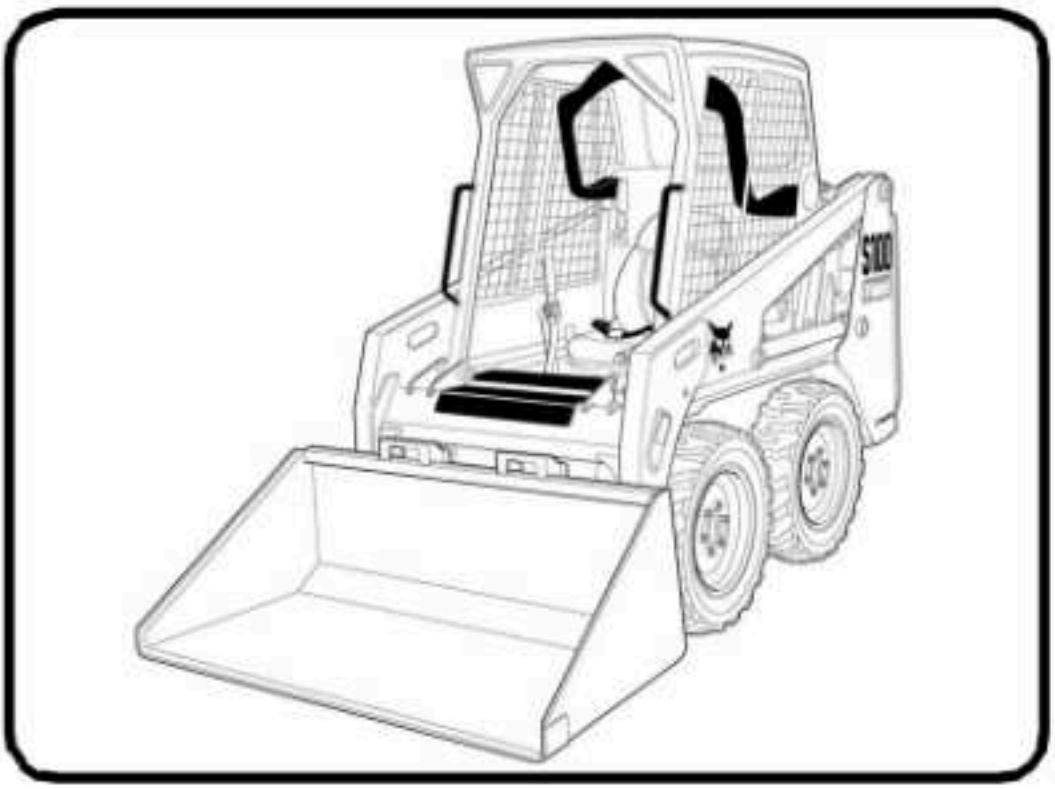
Bobcat®

Operation & Maintenance Manual
S100 Skid-Steer Loader

S/N A2G711001 & Above



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

6904925 (5-07) Revised (8-07) (2)

Printed in U.S.A.

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REFERENCE INFORMATION

Write the correct information for YOUR Bobcat Loader in the spaces below. Always use these numbers when referring to your Bobcat Loader.

Loader Serial Number _____

Engine Serial Number _____

_____

NOTES:

_____

_____

_____

YOUR BOBCAT DEALER:

_____

ADDRESS:

_____

PHONE:

_____

Bobcat Company
P.O. Box 128
Gwinner, ND 58040-0128

Bobcat Company Europe
Drève Richelle 167
B-1410 WATERLOO
Belgium

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FOREWORD

This Operation & Maintenance Manual was written to give the owner/operator instructions on the safe operation and maintenance of the Bobcat Loader. READ AND UNDERSTAND THIS OPERATION & MAINTENANCE MANUAL BEFORE OPERATING YOUR BOBCAT LOADER. If you have any questions, see your Bobcat dealer. This manual may illustrate options and accessories not installed on your loader.

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BOBCAT COMPANY IS ISO 9001:2000 CERTIFIED

ISO 9001:2000 is an international standard that controls the processes and procedures which we use to design, develop, manufacture and distribute Bobcat products.

British Standards Institute (**BSI**) is the Certified Registrar Bobcat Company chose to assess the Company's compliance with the ISO 9001:2000 standard. The BSI registration certifies that Bobcat's manufacturing facilities in Gwinner and Bismarck, North Dakota (North America), Pontchateau (France), Dobris (Czech Republic) and the Bobcat corporate offices (Gwinner, Bismarck & West Fargo) in North Dakota are in compliance with ISO 9001:2000. Only certified assessors, like BSI, can grant registrations.

ISO 9001:2000 means that as a company we say what we do and do what we say. In other words, we have established procedures and policies, and we provide evidence that the procedures and policies are followed.

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.

REGULAR MAINTENANCE ITEMS

 ENGINE OIL FILTER (6 Pack) 6657635	 HYDRAULIC FILTER 6661248
 FUEL FILTER 6667352	 CASE DRAIN FILTER, In-Line 6661022
 AIR FILTER, Outer 6690907	 BATTERY 6673865
 AIR FILTER, Inner 6690908	 COOLANT PRESSURE CAP 6733429
MOTOR OIL 6903105 . . . . . SAE 15W/40 CE/SG (12 qt.) 6903106 . . . . . SAE 15W/40 CE/SG (1 Gal.) 6903113 . . . . . SAE 15W/40 CE/SG (2.5 Gal.) 6903107 . . . . . SAE 10W/30 CE/SG (12 qt.) 6903108 . . . . . SAE 10W/30 CE/SG (1 Gal.) 6903112 . . . . . SAE 10W/30 CE/SG (2.5 Gal.) 6903109 . . . . . SAE 30W CE/SG (12 qt.) 6903110 . . . . . SAE 30W CE/SG (1 Gal.) 6903111 . . . . . SAE 30W CE/SG (2.5 Gal.)	 FLUID, Hydraulic / Hydrostatic 6903117 - (Two -2.5 Gal. containers) 6903118 - (5 Gal.) 6903119 - (55 Gal.)
	 Propylene Glycol Premixed - 6724094 Concentrate - 6724354

NOTE: Always verify Part Numbers with your Bobcat dealer.

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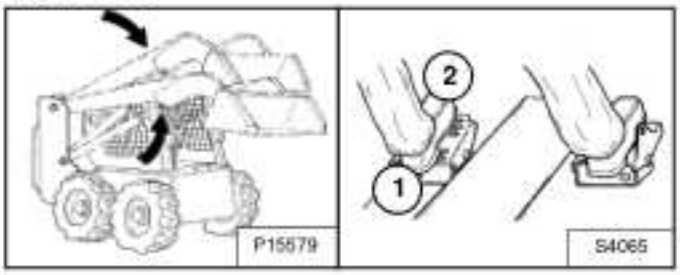
HYDRAULIC CONTROLS

Description

Two foot pedals control the hydraulic cylinders for the lift and tilt functions.

Put your feet on the pedals and KEEP THEM THERE any time you operate the loader.

Figure OI-19



Lift Arm Operation (Left Pedal)

Push the heel (Item 1) **[Figure OI-19]** of the pedal to raise the lift arms.

Push the toe (Item 2) **[Figure OI-19]** of the pedal to lower the lift arms.

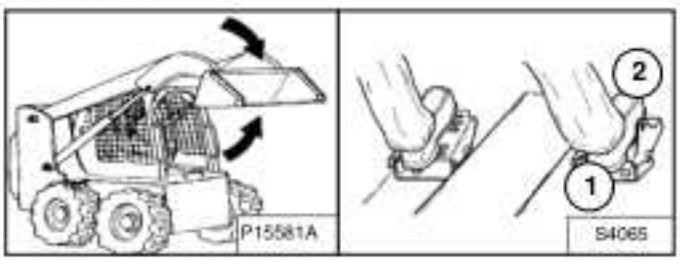
Lift Arm Float Position Operation (Left Pedal)

Push the toe (Item 2) **[Figure OI-19]** of the pedal all the way forward until it locks into the float position.

Use the float position of the lift arms to level loose material while driving backward.

Raise the lift arms to disengage the float position.

Figure OI-20



Tilt Operation - (Right Pedal)

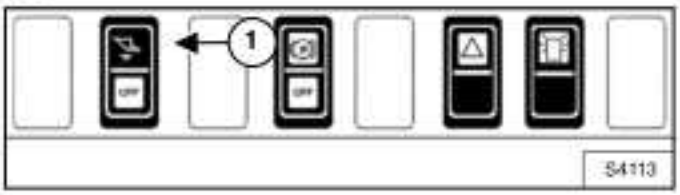
Push the heel (Item 1) **[Figure OI-20]** of the pedal to tilt the bucket backward.

Push the toe (Item 2) **[Figure OI-20]** of the pedal to tilt the bucket forward.

Bucket Position Valve Operation (If Equipped)

The function of the bucket position valve is to keep the bucket in the same relative position to the ground while raising the lift arms.

Figure OI-21

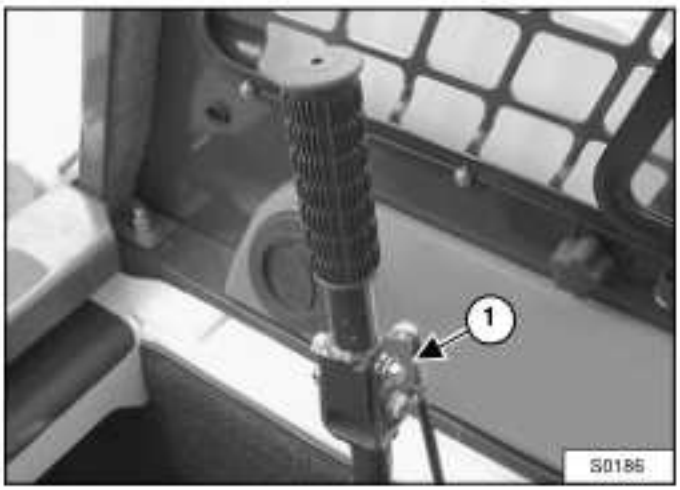


Press the top of the BUCKET POSITION switch (Item 1) **[Figure OI-21]** to engage the bucket position function. Press the bottom of the switch to disengage this function.

Bucket positioning functions only during upward lift cycle.

Auxiliary Control Lockout

Figure OI-22



Remove the auxiliary control lockout bolt and nut (Item 1) **[Figure OI-22]** before using the auxiliary control for the first time.

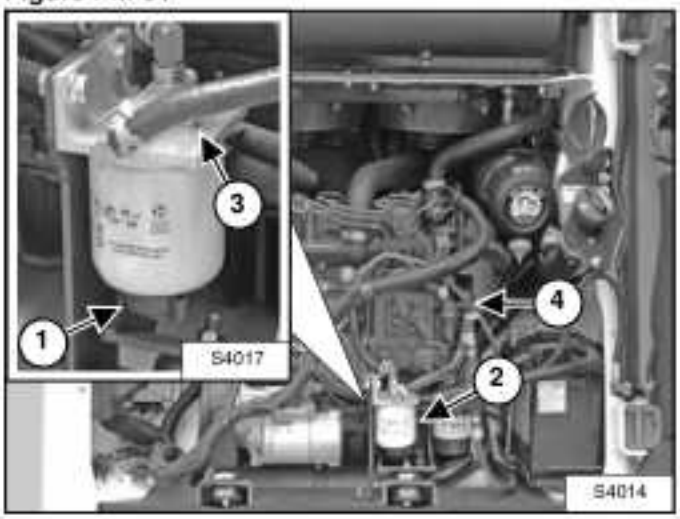
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Fuel Filter

For the service interval for removing water from, or replacing the fuel filter (See SERVICE SCHEDULE on Page PM-7.)

Removing Water

Figure PM-31



Loosen the drain (Item 1) **[Figure PM-31]** at the bottom of the filter element to remove water from the filter.

Replacing Element

Remove the filter element (Item 2) **[Figure PM-31]**.

Clean the area around the filter housing. Put clean oil on the seal of the new filter element. Install the fuel filter, and hand tighten.

Remove air from the fuel system. (See Removing Air From The Fuel System below.)

Removing Air From The Fuel System

⚠ WARNING

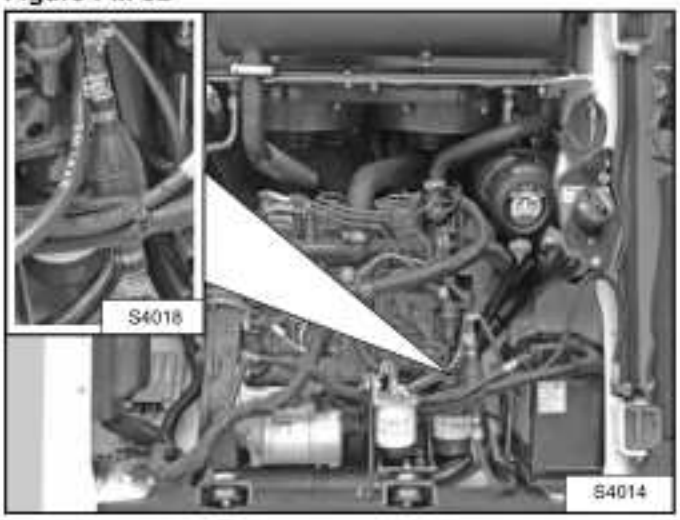
AVOID INJURY OR DEATH

Diesel fuel or hydraulic fluid under pressure can penetrate skin or eyes, causing serious injury or death. Fluid leaks under pressure may not be visible. Use a piece of cardboard or wood to find leaks. Do not use your bare hand. Wear safety goggles. If fluid enters skin or eyes, get immediate medical attention from a physician familiar with this injury.

W-2072-0807

After replacing the filter element or when the fuel tank has run out of fuel, the air must be removed from the fuel system before starting the engine.

Figure PM-32



Open the vent (Item 3) **[Figure PM-31]** on the fuel filter housing.

Squeeze the hand pump (priming bulb) (Inset) **[Figure PM-32]** until air bubbles do not come up any more.

Close the vent (Item 3) **[Figure PM-31]** on the fuel filter housing.

Open the vent (Item 4) **[Figure PM-31]** on the fuel injection pump.

Squeeze the hand pump (priming bulb) (Inset) **[Figure PM-32]** until air bubbles do not come up any more.

Close the vent (Item 4) **[Figure PM-31]** on the fuel injection pump.

Start the engine.

It may be necessary to open the vent plug briefly while the engine is running. Close the vent when the engine runs smoothly.

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(S100) LOADER SPECIFICATIONS (CONT'D)

Electrical

Alternator	Belt driven, 90 amps ventilated
Battery	12 volts, 600 cold cranking amps @ 0°F. (-18°C); 115 minute reserve capacity at 25 amps
Starter	12 volts; Gear Reduction Type; 2.68 HP (2.0 kW)
Instrumentation	Standard Instrumentation: Gauges: Hourmeter, Fuel, Engine Temperature Warning Lights: Engine Coolant Temperature, Engine Oil Pressure, Hydraulic Oil Temperature & Charge Pressure, Hydraulic Filter, Engine Air Filter, Seat Belt, Fuel Level, General Warning, System Voltage Indicators: BICS Functions, glow plugs, Headlights, Bucket Positioning

Drive System

Main Drive	Hydrostatic 4 wheel drive
Transmission	Infinitely variable tandem hydrostatic piston pumps, driving 2 fully reversing hydrostatic motors.
Final Drive	#80 HS endless roller chain & sprockets in sealed chaincase with oil lubrication.
Total Engine to Wheel Reduction	40:1
Axle Size	1.76 (44.70)
Wheel Bolts	0.5625-18 in.

Capacities

Cooling System Without Heater With Heater	 3.0 Gal. (11.6 L) 3.3 Gal. (12.3 L)
Fuel	11.9 Gal. (45 L)
Engine Oil W/Filter	1.2 Gal. (4.5 L)
Hydraulic Reservoir	3.4 Gal. (13 L)
Hydraulic / Hydrostatic System (Including Reservoir)	5.8 Gal. (22 L)
Chaincase Reservoir	5.8 Gal. (22 L)
Coolant Recovery Bottle	1.1 Gal. (4 L)

Tires

Standard Duty Heavy Duty	27 x 8.50 - 15, 6 ply rating 27 x 8.50 - 15, 6 ply rating
Recommended Pressure	Inflate tires to MAXIMUM pressure shown on the side wall of the tire. DO NOT mix brands of tires used on the same loader.

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Safe Operation Is The Operator's Responsibility

Safety Alert Symbol

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

WARNING

Operator must have instructions before running the machine. Untrained operators can cause injury or death.

W-2001-1285

IMPORTANT

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

I-2019-0284

WARNING

Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.

W-2044-1285

The Bobcat Loader and attachment must be in good operating condition before use.

Check all of the items on the Bobcat Service Schedule Decal under the 8-10 hour column or as shown in the Operation & Maintenance Manual.

Safe Operation Needs A Qualified Operator

For an operator to be qualified, he or she must not use drugs or alcoholic drinks which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine.

A Qualified Operator Must Do The Following:

Understand the Written Instructions, Rules and Regulations

- The written instructions from Bobcat Company include the Delivery Report, Operation & Maintenance Manual, Operator's Handbook, Safety Manual and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem. Regulations may identify a hazard such as a utility line.

Have Training with Actual Operation

- Operator training must consist of a demonstration and verbal instruction. This training is given by your Bobcat dealer before the product is delivered.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine and attachment safely under all conditions of the work area. Always fasten seat belt before operating.
- Operator Training Courses are available from your Bobcat dealer in English and Spanish. They provide information for safe and efficient equipment operation. Safety videos are also available.
- Service Safety Training Courses are available from your Bobcat dealer. They provide information for safe and correct service procedures.

Know the Work Conditions

- Know the weight of the materials being handled. Avoid exceeding the Rated Operating Capacity (R.O.C.) of the machine. Material which is very dense will be heavier than the same volume of less dense material. Reduce the size of the load if handling dense material.
- The operator must know any prohibited uses or work areas, for example, he or she needs to know about excessive slopes.
- Know the location of any underground lines. Call local utilities or the TOLL FREE phone number found in the **Before Operation** Section of this manual.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service. Safety glasses, hearing protection or Special Applications Kits are required for some work. See your Bobcat dealer about Bobcat Safety Equipment for your model.

SI SSL-0307

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