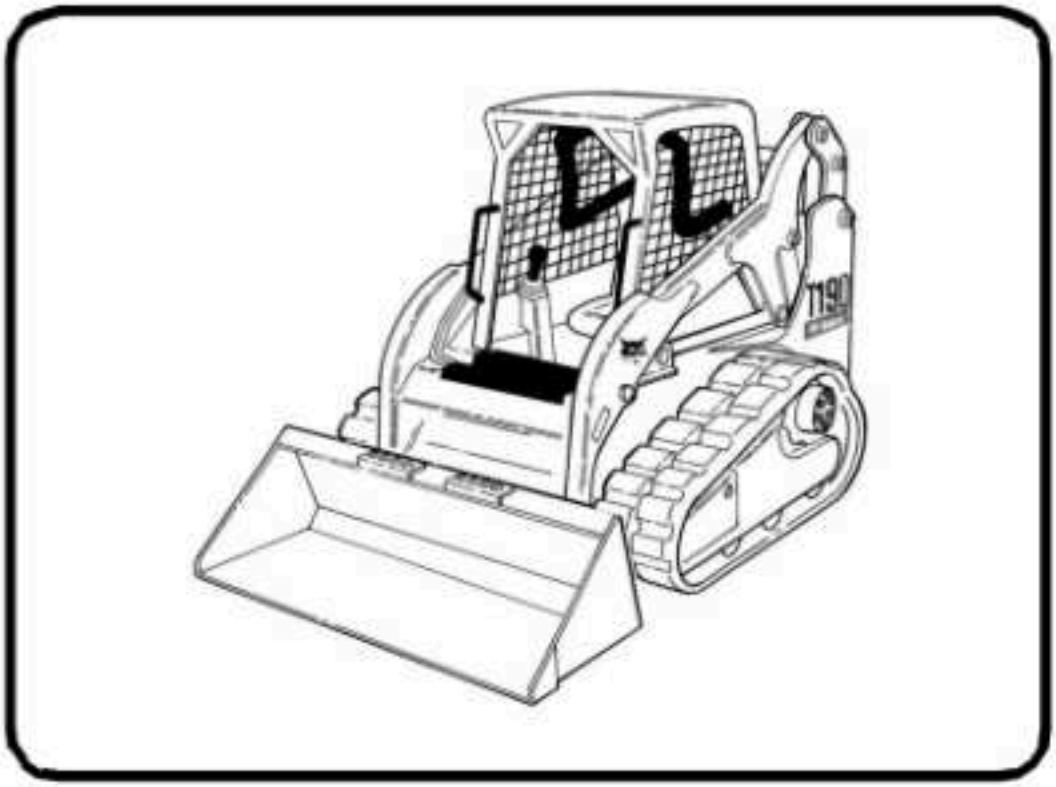
Bobcat

Operation & Maintenance Manual
T190 Compact Track Loader

S/N 531611001 - 531659999
S/N 531711001 - 531759999



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

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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
Dréve Richelle 167
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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 LOADER. If you have any questions, see your Bobcat dealer.

BOBCAT COMPANY IS ISO 9001:2000 CERTIFIED V

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HYDRAULIC CONTROLS

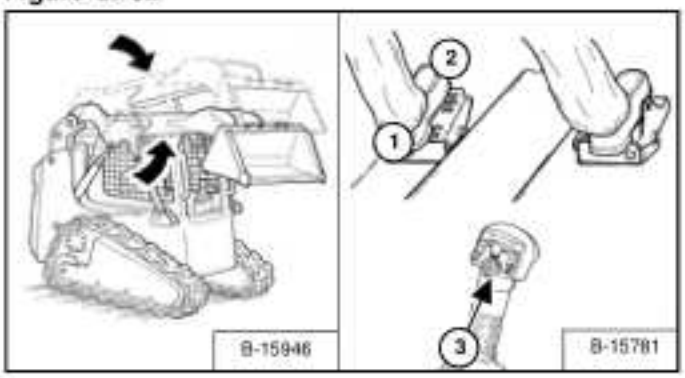
Description

Two foot pedals (or optional hand controls) control the hydraulic cylinders for the lift and tilt functions.

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

Standard Controls (Also ACS In FOOT Pedal Mode)

Figure OI-32



Lift Arm Operation - (Left Pedal)

Push the heel (Item 1) **[Figure OI-32]** of the pedal to raise the lift arms.

Push the toe (Item 2) **[Figure OI-32]** of the pedal to lower the lift arms.

Lift Arm Float Position Operation - (Left Pedal)

Push the toe (Item 2) **[Figure OI-32]** 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.

Lift Arm Float Position (With ACS) - (Left Pedal)

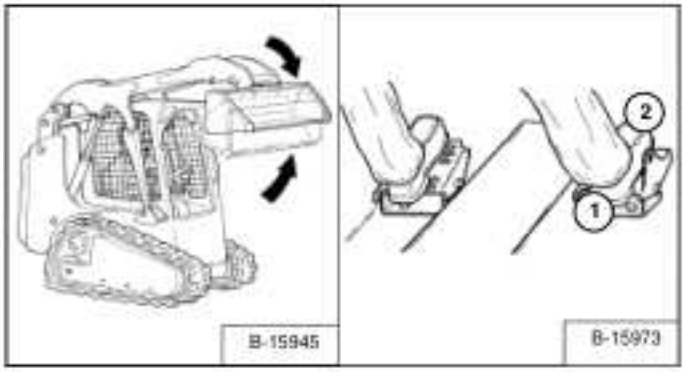
Press and hold the Float button (Item 3) **[Figure OI-32]**.

Push the toe (Item 2) **[Figure OI-32]** of the pedal forward to lower the lift arms. Then release the float button.

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-33



Tilt Operation - (Right Pedal)

Push the heel (Item 1) **[Figure OI-33]** of the pedal to tilt the bucket backward.

Push the toe (Item 2) **[Figure OI-33]** of the pedal to tilt the bucket forward.

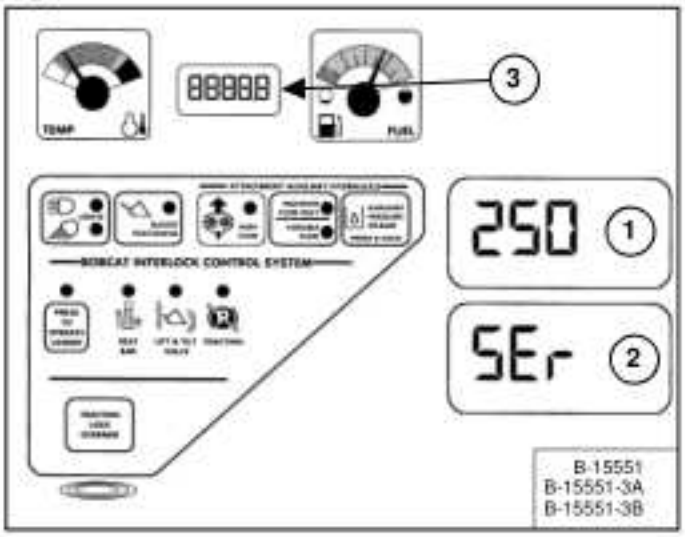
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MAINTENANCE CLOCK

Description

The Maintenance Clock alerts the operator when the next service interval is due. *EXAMPLE:* The Maintenance Clock can be set to a 250 hour interval as a reminder for the next 250 hour planned maintenance.

Figure SA-9



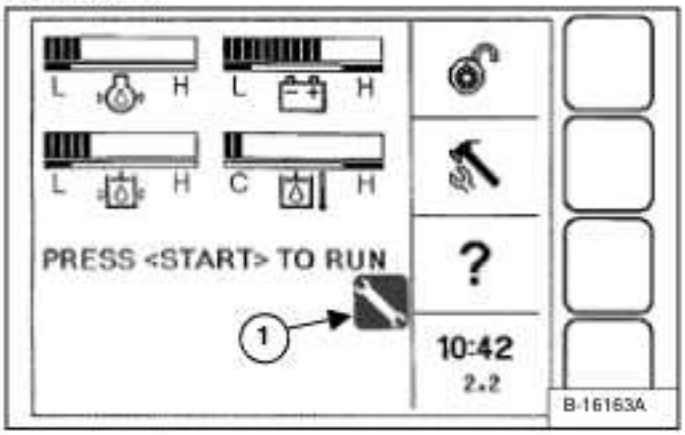
During machine operation, a two beep alarm will sound when there are less than 10 hours until the next planned maintenance. The hour interval (Item 1) and **[SEr]** (Item 2) will alternate in the display screen (Item 3) **[Figure SA-9]** for 10 seconds. The display will then revert back to the previous display and will appear for 10 seconds every time the machine is started until the maintenance clock is reset.

Figure SA-10



The Keyless Right Panel, if equipped, will display a message (Item 1) **[Figure SA-10]** alerting the operator to service the machine. This message will remain for 10 seconds before reverting back to the previous screen and will appear for 10 seconds every time the machine is started until the maintenance clock is reset.

Figure SA-11



The Keyless Right Panel, if equipped, will display a wrench icon (Item 1) **[Figure SA-11]** alerting the operator to service the machine. This icon will remain on the display until the maintenance clock is reset.

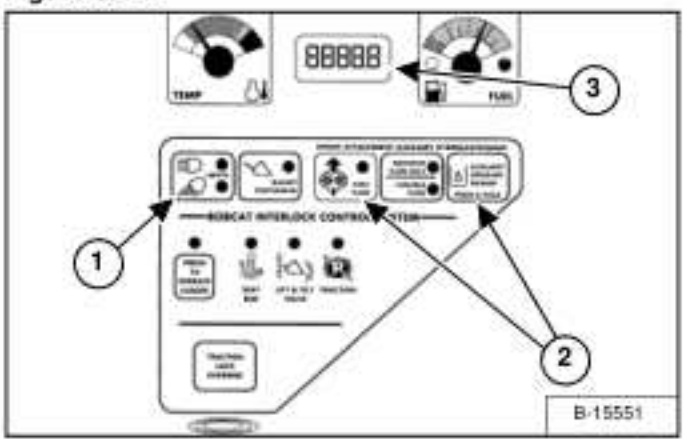
NOTE: Key Switch machines will not display the BobCARE^{SM} PM message or wrench icon on the right panel.

Setup

See your Bobcat dealer about installation of this feature.

Reset

Figure SA-12



Place the key switch in the OFF position (Key Switch) or press the STOP button (Keyless).

Press the LIGHTS button (Item 1) **[Figure SA-12]** to turn the panel ON.

Press and hold the HIGH FLOW and AUXILIARY PRESSURE RELEASE buttons (Item 2) simultaneously, until **[rEsET]** appears in the display screen (Item 3) **[Figure SA-12]**.

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(T190) LOADER SPECIFICATIONS (CONT'D)

Performance

Rated Operating Capacity (ISO)	1900 lb. (862 kg)
Tipping Load (ISO Rating)	6851 lb. (3108 kg)
Operating Weight	7612 lb. (3453kg)
SAE Breakout Force - Lift	4700 lb. (2132 kg)
SAE Breakout Force - Tilt	4450 lb. (2018 kg)
Travel Speed	0 - 7.1 mph (0 - 11.4 km/hr.)
Push Force	4700 lb. (2132 kg)

Controls

Vehicle Steering	Direction and speed controlled by two hand levers *or* optional joystick(s)
Loader Hydraulics - Lift and Tilt - Front Auxiliary (Standard) - Rear Auxiliary (Option)	 Controlled by separate foot pedals *or* optional Advanced Control System (ACS) *or* optional Selectable Joystick Control (SJC) Controlled by electrical switch on Right Hand steering lever or joystick Controlled by electrical switch on Left Hand steering lever or joystick
Auxiliary Pressure Release	Front quick couplers. Push couplers in, hold for 5 seconds. Rear quick couplers. Press and hold (5 seconds) the AUXILIARY PRESSURE RELEASE Button on right hand instrument panel.
Engine	Hand lever speed control; key-type starter switch and shutdown (or optional keyless start).
Starting Aid	Glow Plugs automatically activated as needed by Instrument Panel
Service Brake	Two independent hydrostatic systems controlled by two hand operated steering levers
Secondary Brake	One of the hydrostatic transmissions
Parking Brake (Standard)	Mechanical disc, hand operated rocker switch on instrument panel

Engine

Make / Model	Kubota V2403M-DI-T
Fuel / Cooling	Diesel / Liquid
Horsepower (SAE Net)	61 HP (45.5 kW) @ 2700 RPM
Low Idle	1075 - 1225 RPM
High Idle	2760 - 2900 RPM
Torque (SAE Net)	155.6 lbf.-ft. (211 N•m) @ 1475 RPM
Number of Cylinders	4
Displacement	148.5 cu. in. (2.4 L)
Bore / Stroke	3.43 in. / 4.03 in. (87 mm / 102 mm)
Lubrication	Gear Pump Pressure System with Filter
Crankcase Ventilation	Open Breathing
Air Cleaner	Dry replaceable paper cartridge with separate safety element
Ignition	Diesel - Compression
Engine Coolant	Propylene Glycol / Water Mixture
Starting Aid	Glow Plugs

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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 (ROC) 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, respiratory equipment, hearing protection or Special Applications Kits are required for some work. See your Bobcat dealer about Bobcat Safety Equipment for your model.

SI SSL-1007

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