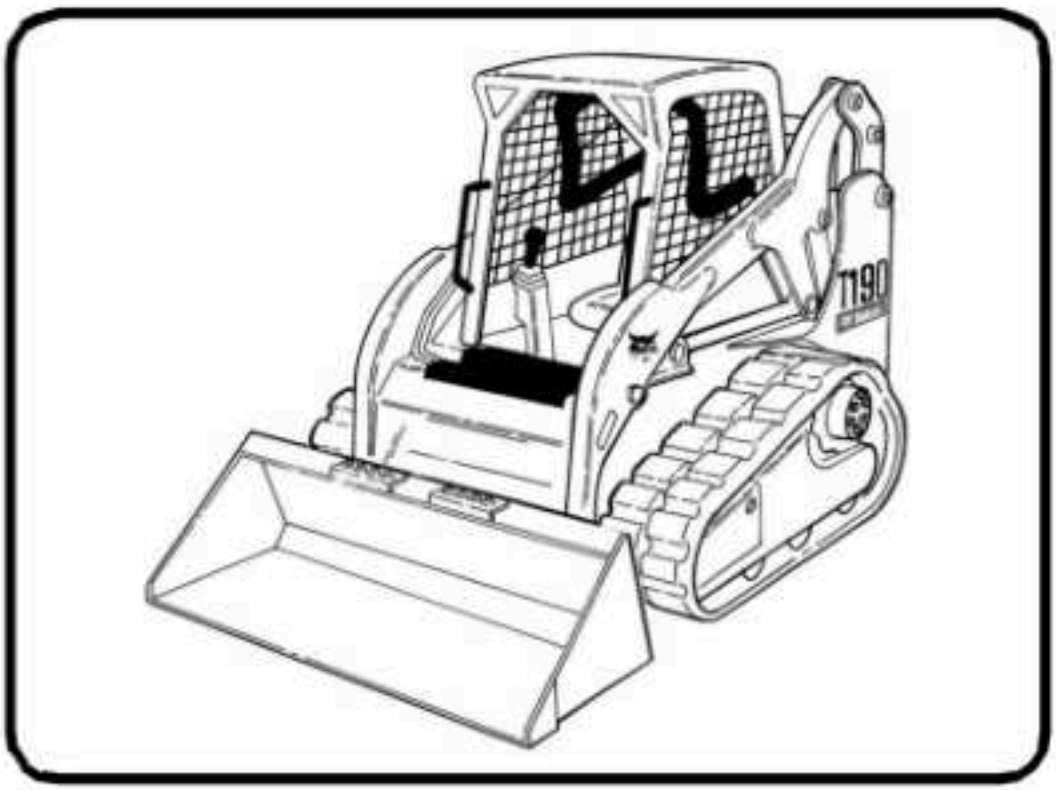
Bobcat®

Operation & Maintenance Manual
T190 Compact Track Loader

S/N A3LN36500 & Above



EQUIPPED WITH BOBCAT INTERLOCK CONTROL SYSTEM (BICS™)

6989619 (3-10) Revised (11-10) (2)

Printed in U.S.A.

© Bobcat Company 2010

MidWestTech | Bobcat T190 Compact Track Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD 5

SAFETY & TRAINING RESOURCES 13

OPERATING INSTRUCTIONS 23

PREVENTIVE MAINTENANCE 97

SYSTEM SETUP & ANALYSIS 151

MACHINE SIGN TRANSLATIONS 165

SPECIFICATIONS 181

WARRANTY 187

ALPHABETICAL INDEX 191

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
UNITED STATES OF AMERICA

Doosan Benelux SA
Drève Richelle 167
B-1410 Waterloo
BELGIUM

MidWestTech | Bobcat T190 Compact Track Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

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.

BOBCAT COMPANY IS IS0 9001 CERTIFIED 7

REGULAR MAINTENANCE ITEMS 7

SERIAL NUMBER LOCATIONS 8
- Loader Serial Number 8
- Engine Serial Number 8

DELIVERY REPORT 8

LOADER IDENTIFICATION 9

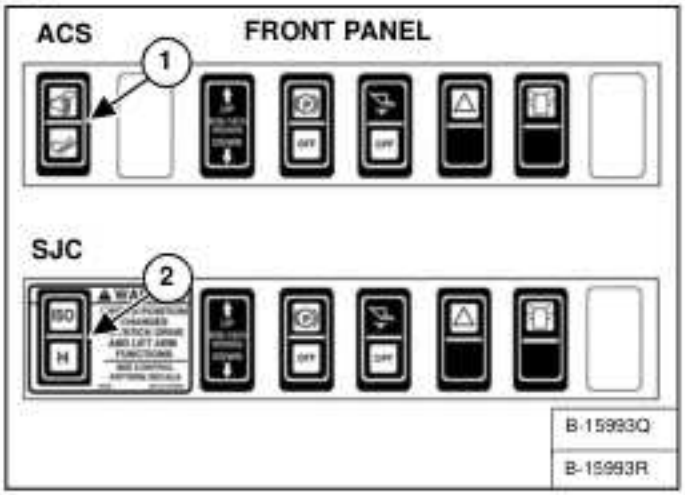
FEATURES, ACCESSORIES AND ATTACHMENTS 10
- Standard Items 10
- Options And Accessories 10
- Buckets Available 11
- Attachments 11
- High-Flow Attachments 11
- Special Applications Kit 12
- Special Applications Kit Inspection And Maintenance 12

MidWestTech | Bobcat T190 Compact Track Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

Deluxe Instrumentation Panel (Cont'd)

NOTE: Make sure both hand controls (ACS) or joysticks (SJC) are in the neutral position before starting the engine. Do not move the levers or joysticks from the neutral position when pressing the RUN / ENTER or START buttons with the BICS activated.

Figure 104



(ACS) Select hand control or foot pedal operation (Item 1) **[Figure 104]**.

OR

(SJC) Select 'ISO' or 'H' Control Pattern (Item 2) **[Figure 104]**.

Figure 105



Press the PRESS TO OPERATE LOADER button (Item 1) **[Figure 105]** to activate the BICS and to perform hydraulic and loader functions.

(SJC) The current drive response setting will be displayed briefly in the data display (Item 2) each time the PRESS TO OPERATE LOADER button (Item 1) **[Figure 105]** is pressed.

NOTE: (SJC) The light of the current switch position (ISO or H) will flash, which will indicate PRESS TO OPERATE LOADER is required. The light will flash when the RUN button has been pressed and continue to flash until the PRESS TO OPERATE LOADER button is pressed, thereafter the light will become solid. If the mode (ISO / H) is changed while driving, the active mode light will remain solid and the pending mode light will flash. When operation of the machine is returned to neutral, the active mode light will then turn off and the pending mode light will continue to flash until the PRESS TO OPERATE LOADER button is pressed.

⚠ WARNING

AVOID INJURY OR DEATH

When an engine is running in an enclosed area, fresh air must be added to avoid concentration of exhaust fumes. If the engine is stationary, vent the exhaust outside. Exhaust fumes contain odorless, invisible gases which can kill without warning.

W-2050-0807

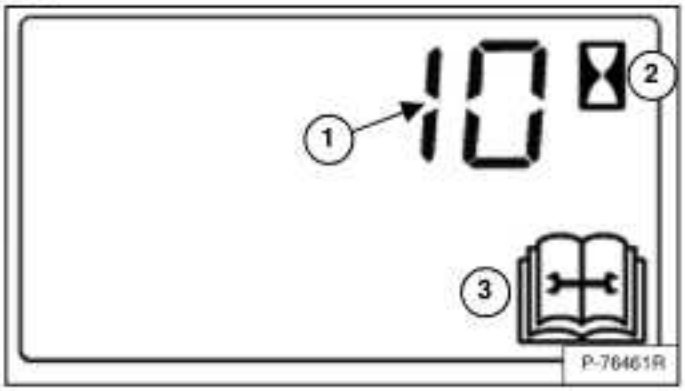
MidWestTech | Bobcat T190 Compact Track Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

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 271



During machine operation, a two beep alarm will sound when there are less than 10 hours until the next planned maintenance.

The remaining hours before maintenance is required will appear in the data display (Item 1) for five seconds while the service icon (Item 3) and hourmeter icon (Item 2) **[Figure 271]** flash.

NOTE: The display will show negative numbers after counting down to zero.

The display will then revert back to the previous display and will appear for five seconds every time the machine is started until the maintenance clock is reset.

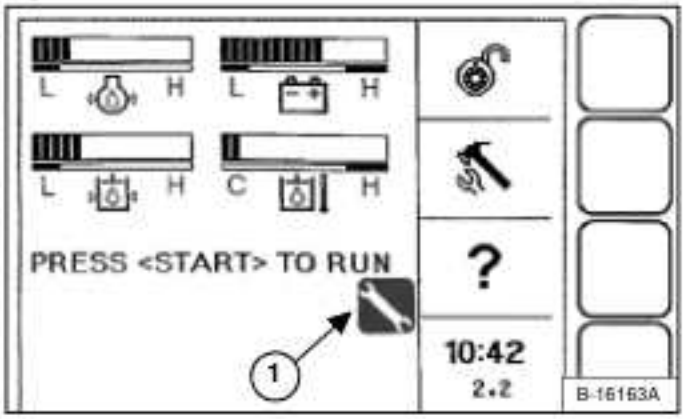
Figure 272



The Deluxe Instrumentation Panel, if equipped, will display a message (Item 1) **[Figure 272]** 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 273



The Deluxe Instrumentation Panel, if equipped, will display a wrench icon (Item 1) **[Figure 273]** alerting the operator to service the machine. This icon will remain on the display until the maintenance clock is reset.

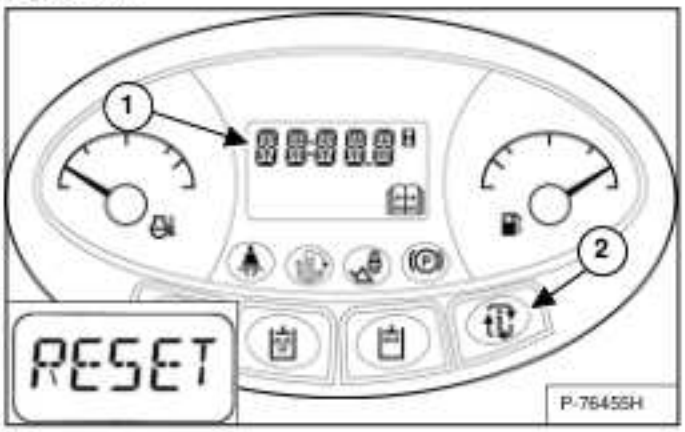
NOTE: Loaders equipped with a Standard Key Panel or Keyless Start Panel will not display the BobCARE^{SM} PM message or wrench icon on the right panel.

Setup

See your Bobcat dealer about installation of this feature.

Reset

Figure 274



Press the information button (Item 2) until the display screen (Item 1) **[Figure 274]** shows the maintenance clock.

Press and hold the information button (Item 2) for seven seconds until **[RESET]** (Inset) appears in the display screen (Item 1) **[Figure 274]**.

MidWestTech | Bobcat T190 Compact Track Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

(T190) LOADER SPECIFICATIONS (CONT'D)

Electrical

Alternator	Belt driven, 90 amperes, open
Battery	12 volts, 600 cold cranking amperes @ -18°C (0°F) 115 Minute reserve capacity @ 25 amperes
Starter	12 volts, gear type, 2,7 kW (3.62 hp)
Instrumentation	**Gauges:** Engine Coolant Temperature, Fuel Level. **Warning lights:** Fuel Level, Seat Belt, Engine Coolant Temperature, Engine Malfunction, Hydraulic Malfunction, General Warning. **Indicators:** BICS Functions, Two-Speed, 3-Point Shoulder Belt, Turn Signals, Engine Preheat. **Data Display:** Operating Hours, Engine rpm, Speed Management Setting, Maintenance Clock Countdown, Battery Voltage, Service Codes, Engine Preheat Countdown, Steering Drift Compensation Setting. **Other:** Audible Alarm, Lights, Option / Accessory Switches. **Optional Deluxe Instrumentation Panel:** *Additional bar-type gauges for: Engine Oil Pressure, System Voltage, Hydrostatic Charge Pressure and Hydraulic Oil Temperature. *Additional Features Included: Keyless Start, Digital Clock, Job Clock, Attachment Control Information, High-Flow / Two-Speed / Password Lockouts, Multi-language Display, Help Screens, Diagnostic Capability and Engine / Hydraulic Systems Shutdown Function.

Capacities

Fuel	106 L (28 U.S. gal)
Engine Lubrication & Filter	9,7 L (10.25 qt)
Engine Cooling System w/o Heater	12,6 L (13.3 qt)
Engine Cooling System w/ Heater	13,7 L (14.5 qt)
Hydraulic/Hydrostatic Reservoir	18,2 L (19.2 qt)
Hydraulic/Hydrostatic System	34,1 L (9 U.S. gal)
Hydrostatic Drive Motor (Each)	60 mL (2.0 U.S. fl oz)

Tracks

Standard	320 mm (12.6 in) Rubber, C-Pattern
Optional	400 mm (15.75 in) Rubber, C-Pattern
Optional	320 mm (12.6 in) Rubber, Winter Pattern

Ground Pressure

Standard track - 320 mm (12.6 in)	0,0347 MPa (0.347 bar) (5.0 psi)
Optional track - 400 mm (15.75 in)	0,0289 MPa (0.289 bar) (4.2 psi)

MidWestTech | Bobcat T190 Compact Track Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >

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

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.

D-1002-1107

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.

W-2044-1107

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-1008

MidWestTech | Bobcat T190 Compact Track Loader Operation & Maintenance Manual | Pu... Order the manual at mid-west-tech.com >