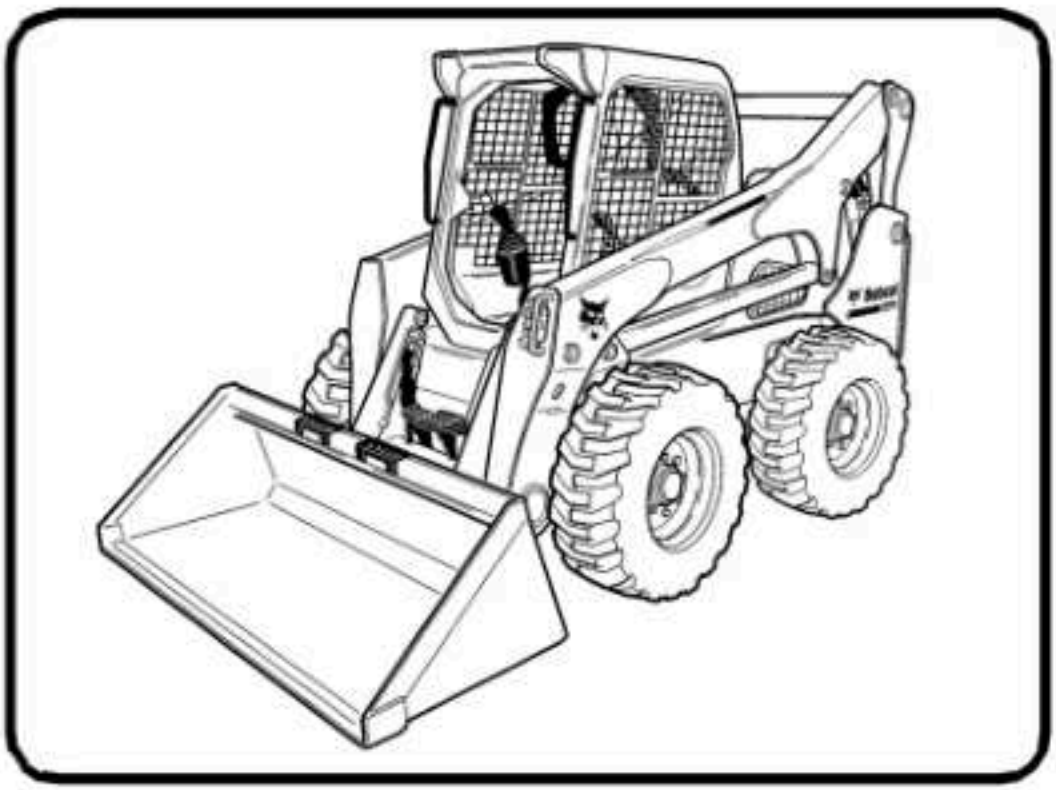
Bobcat®

Operation & Maintenance Manual
S850 Skid-Steer Loader

S/N ACS711001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6987478 (10-10) Revised (11-10) (4)

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
UNITED STATES OF AMERICA

Doosan Benelux SA
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B-1410 Waterloo
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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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LOADER IDENTIFICATION 9

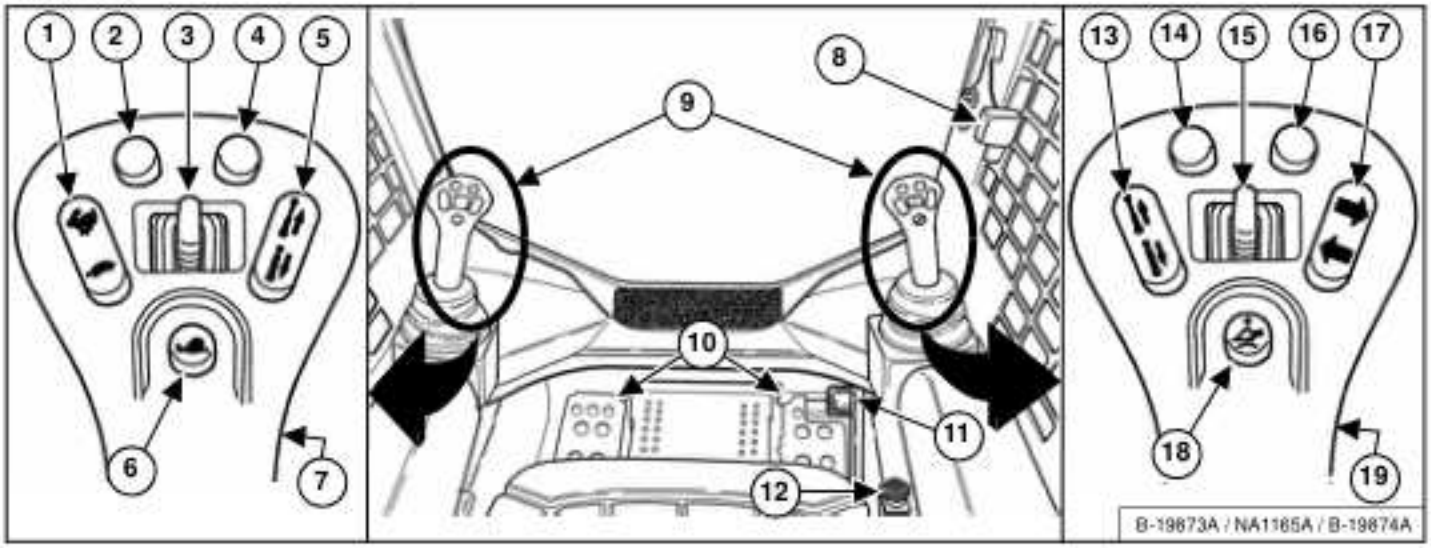
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- Options And Accessories 10
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- Forestry Door And Window Kit Inspection And Maintenance 13

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CONTROL IDENTIFICATION (CONT'D)

Selectable Joystick Controls (SJC)

Figure 24



REF. NO.	DESCRIPTION	FUNCTION / OPERATION
1	TWO-SPEED CONTROL Also: SPEED MANAGEMENT	See TWO-SPEED CONTROL in this manual. See SPEED MANAGEMENT in this manual.
* 2	STEERING DRIFT COMPENSATION Also: DRIVE RESPONSE	See STEERING DRIFT COMPENSATION in this manual. See DRIVE RESPONSE in this manual.
3	REAR AUXILIARY HYDRAULICS (Option) Also: ATTACHMENT FUNCTION CONTROL	See REAR Auxiliary Hydraulics Operation in this manual. See ATTACHMENT CONTROL DEVICE in this manual.
* 4	STEERING DRIFT COMPENSATION Also: DRIVE RESPONSE	See STEERING DRIFT COMPENSATION in this manual. See DRIVE RESPONSE in this manual.
5	ATTACHMENT FUNCTION CONTROL	See ATTACHMENT CONTROL DEVICE in this manual.
6	SPEED MANAGEMENT	See SPEED MANAGEMENT in this manual.
7	FRONT HORN	Press the front switch to sound the front horn.
8	ENGINE SPEED CONTROL (HAND)	See ENGINE SPEED CONTROL in this manual.
9	JOYSTICKS	See DRIVING AND STEERING THE LOADER and HYDRAULIC CONTROLS in this manual.
10	FOOTRESTS	Keep your feet on the footrests at all times.
11	ENGINE SPEED CONTROL (FOOT)	See ENGINE SPEED CONTROL in this manual.
12	LIFT ARM BYPASS CONTROL	See LIFT ARM BYPASS CONTROL in this manual.
13	ATTACHMENT FUNCTION CONTROL	See ATTACHMENT CONTROL DEVICE in this manual.
* 14	NOT USED	- - -
15	FRONT AUXILIARY HYDRAULICS	See FRONT Auxiliary Hydraulics Operation in this manual.
* 16	NOT USED	- - -
17	NOT USED	- - -
18	FLOAT CONTROL	See HYDRAULIC CONTROLS in this manual.
19	CONTINUOUS FLOW CONTROL FOR AUXILIARY HYDRAULICS	See FRONT Auxiliary Hydraulics Operation (CONTINUOUS FLOW) in this manual.

* Also used as Attachment Function Control: See your attachment Operation & Maintenance Manual.

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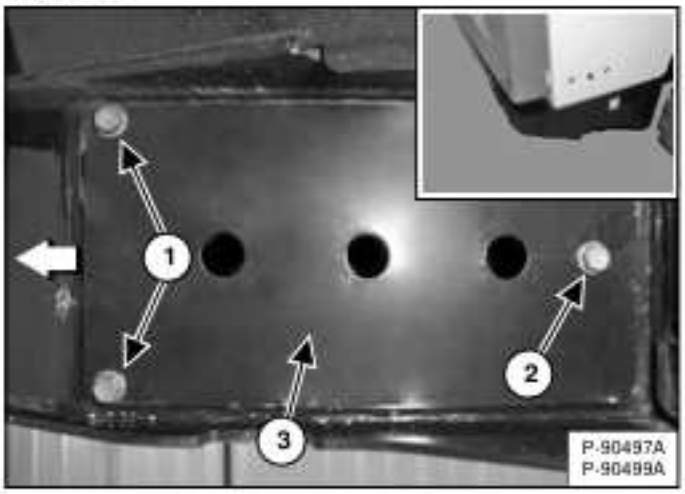
ENGINE LUBRICATION SYSTEM (CONT'D)

Removing And Replacing Oil And Filter

For the service interval for replacing the engine oil and filter (See SERVICE SCHEDULE on Page 115.)

Run the engine until it is at operating temperature. Stop the engine.

Figure 205

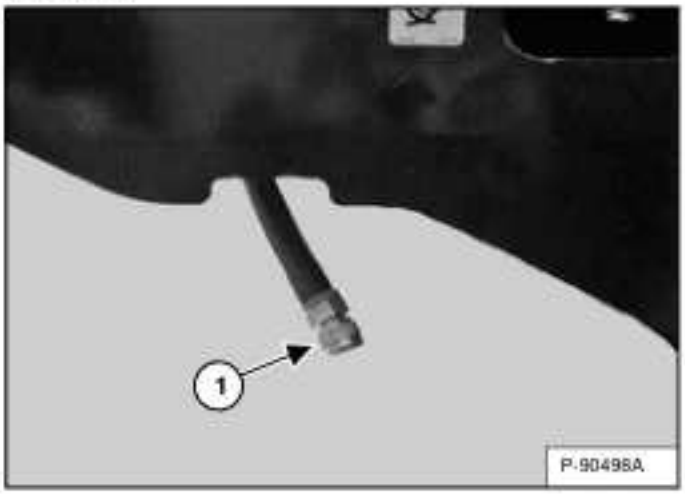


The oil drain hose is located behind a cover under the right rear corner of the loader (Inset) **[Figure 205]**.

Remove two cover mounting bolts (Item 1) **[Figure 205]**.

Loosen one cover mounting bolt (Item 2), slide the cover (Item 3) **[Figure 205]** to the rear of the loader and remove.

Figure 206

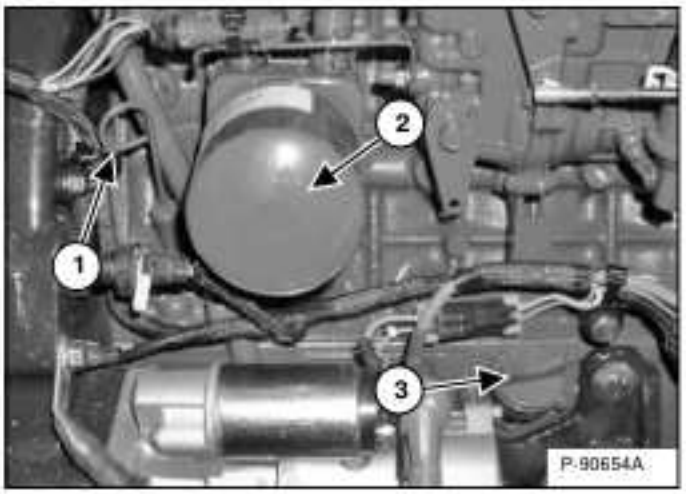


Remove the oil drain cap (Item 1) **[Figure 206]** from the oil drain hose and drain the oil into a container. Recycle or dispose of used oil in an environmentally safe manner.

Install and tighten the oil drain cap **[Figure 206]**.

Install the cover and the cover mounting bolts **[Figure 205]**. Tighten all bolts.

Figure 207



Open the rear door, remove the oil filter (Item 2) **[Figure 207]** and clean the filter housing surface.

Use genuine Bobcat filter only.

Put clean oil on the new filter gasket, install the filter and hand tighten.

Remove the oil fill cap (Item 3) **[Figure 207]**.

Put oil in the engine and replace the fill cap. For the correct quantity (See Capacities on Page 201.) Do not overfill.

Start the engine and let it run for several minutes. Stop the engine and check for leaks at the filter.

Remove the dipstick (Item 1) **[Figure 207]** and check the oil level.

Add oil as needed if it is not at the top mark on the dipstick. Install the dipstick and close the rear door.

⚠ WARNING

AVOID INJURY OR DEATH

Always clean up spilled fuel or oil. Keep heat, flames, sparks or lighted tobacco away from fuel and oil. Failure to use care around combustibles can cause explosion or fire.

W-2103-0508

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(S850) LOADER SPECIFICATIONS (CONT'D)

Performance

Rated Operating Capacity	1792 kg (3950 lb)
with 200 Pound Frame Mounted Counterweight Kit	1860 kg (4100 lb)
with 300 Pound Frame Mounted Counterweight Kit	1882 kg (4150 lb)
with 400 Pound Frame Mounted Counterweight Kit	1928 kg (4250 lb)
Tipping Load	3583 kg (7900 lb)
Operating Weight	4540 kg (10008 lb)
Breakout Force - Lift	2826 kg (6231 lb)
Breakout Force - Tilt	3019 kg (6655 lb)
Push Force	2874 kg (6336 lb)
Travel Speed - Low Range / High Range	0 - 11,4 km/h (0 - 7.1 mph) / 0 - 19,8 km/h (0 - 12.3 mph)

Engine

Make / Model	Kubota / V3800-DI-TE3 Tier III
Fuel / Cooling	Diesel / Liquid
Horsepower - ISO 9249 EEC / SAE J1349 Net - ISO 14396 Gross - SAE J1995 Gross	 65,6 kW (88.0 hp) @ 2400 rpm 67,6 kW (90.6 hp) @ 2400 rpm 68,6 kW (92.0 hp) @ 2400 rpm
Torque - ISO 9249 EEC / SAE J1349 Net - SAE J1995 Gross	 310,3 N•m (228.8 ft-lb) @ 1600 rpm 315,0 N•m (232.3 ft-lb) @ 1600 rpm
Low Idle rpm	1250 - 1400
High Idle rpm	2525 - 2650
Number of Cylinders	4
Displacement	3,8 L (230 in^3)
Bore / Stroke	100 mm / 120 mm (3.94 in / 4.72 in)
Lubrication	Gear Pump Pressure System with Filter
Crankcase Ventilation	Open Breathing
Air Cleaner	Dry replaceable paper cartridge with separate safety element
Ignition	Diesel - Compression
Air Induction	Turbo-Charged
Engine Coolant	Propylene Glycol / Water Mixture
Starting Aid	Air Intake Heater - Automatically activated as needed in RUN position

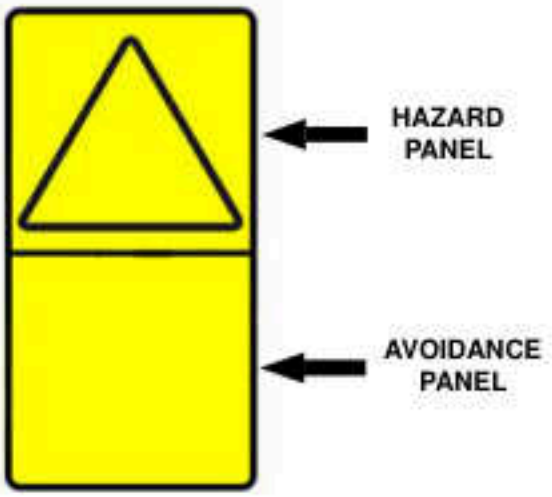
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MACHINE SIGNS (DECALS) (CONT'D)

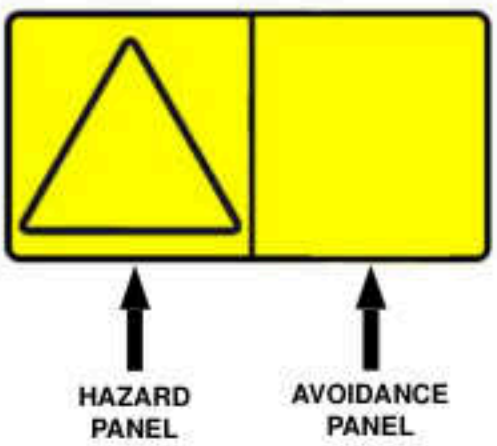
No-Text Safety Signs

Safety signs are used to alert the equipment operator or maintenance person to hazards that may be encountered in the use and maintenance of the equipment. The location and description of the safety signs are detailed in this section. Please become familiarized with all safety signs installed on the machine / attachment.

Vertical Configuration



Horizontal Configuration



The format consists of the hazard panel(s) and the avoidance panel(s):

Hazard panels depict a potential hazard enclosed in a safety alert triangle.

Avoidance panels depict actions required to avoid the hazards.

A safety sign may contain more than one hazard panel and more than one avoidance panel.

NOTE: See the numbered MACHINE SIGNS (DECALS) on Page 22 and MACHINE SIGNS (DECALS) (CONT'D) on Page 23 for the machine location of each correspondingly numbered no-text decal.

1. High Range Speeds (7184346)

This safety sign is located in the operator cab on loaders equipped with a seat belt with 3-point restraint.



⚠ WARNING

HITTING OBSTRUCTIONS AT HIGH RANGE SPEEDS CAN CAUSE SERIOUS INJURY OR DEATH

Fasten shoulder belt for additional restraint when operating at high range speeds.

W-2754-0908

2. Hot Pressurized Fluid (7169699)

This safety sign is located on the engine coolant tank cap.



⚠ WARNING

HOT PRESSURIZED FLUID CAN CAUSE SERIOUS BURNS

- **Never open hot.**
- **OPEN SLOWLY.**

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