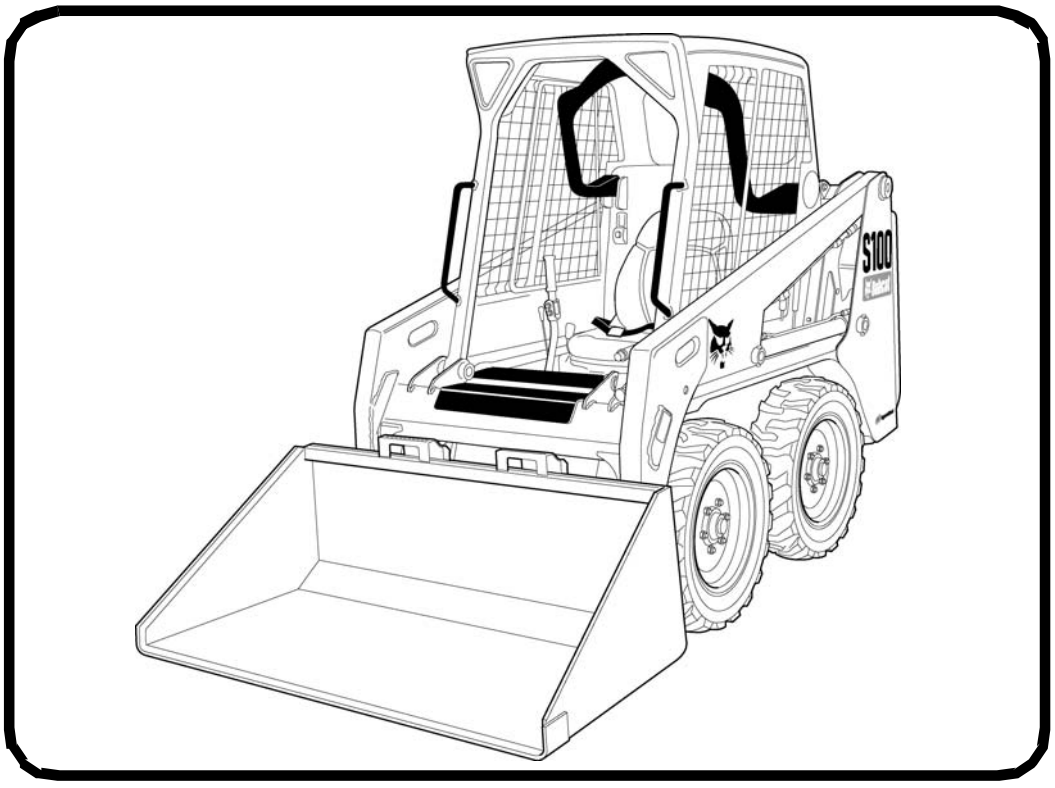
Bobcat®

Operation & Maintenance Manual
S100 Skid-Steer Loader

S/N A2G711001 & Above

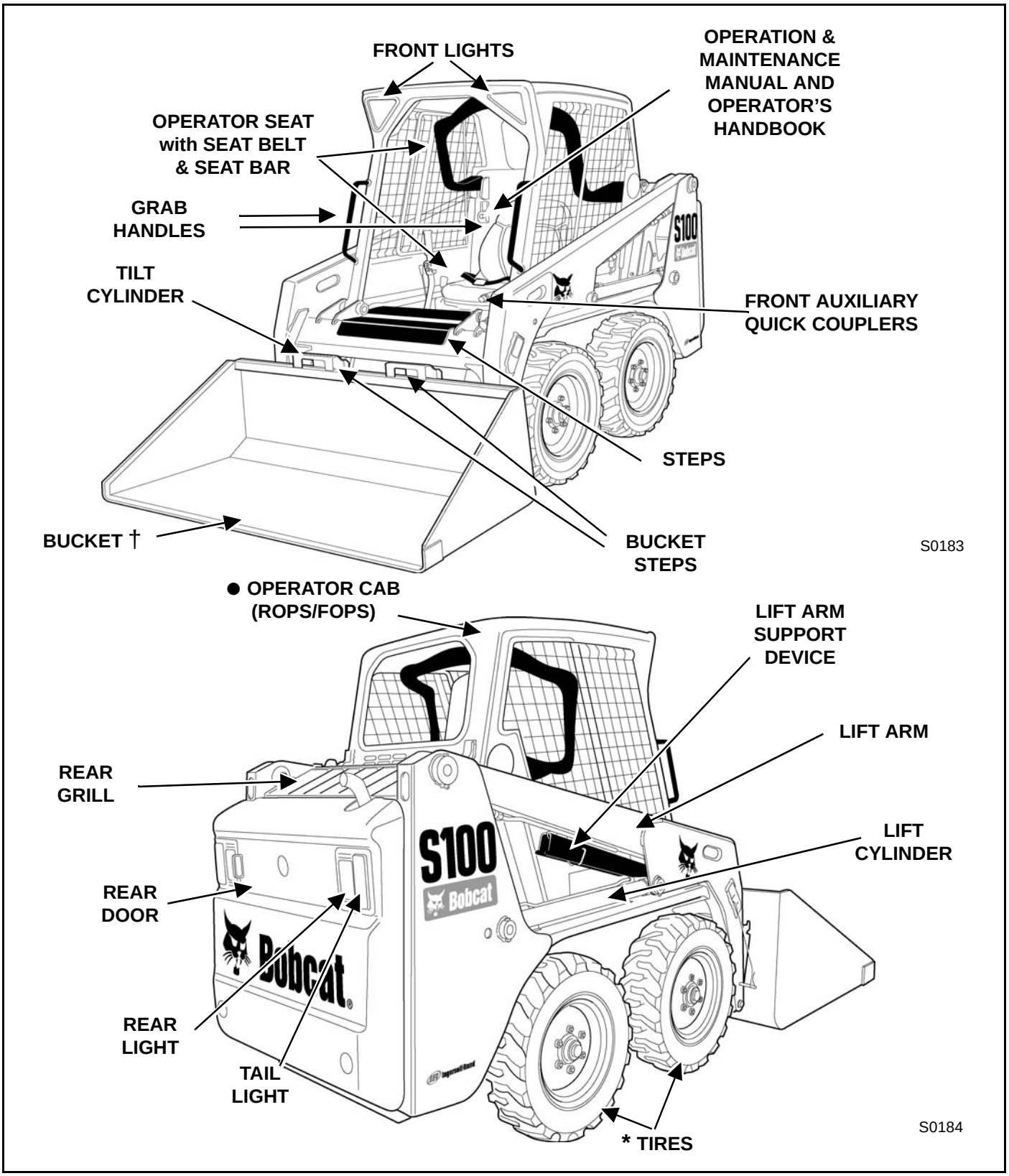


EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS)

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

Printed in U.S.A.

LOADER IDENTIFICATION



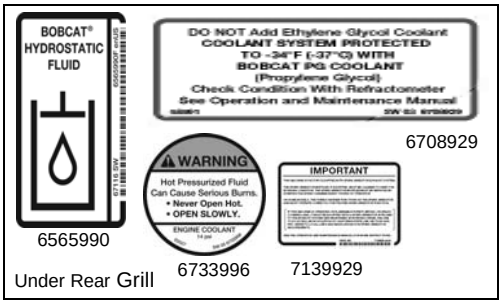
***** TIRES - Tires shown may not be standard. The machine is factory equipped with standard tires. Other tires are available.

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

† Bucket - Many Buckets and other Attachments are available.

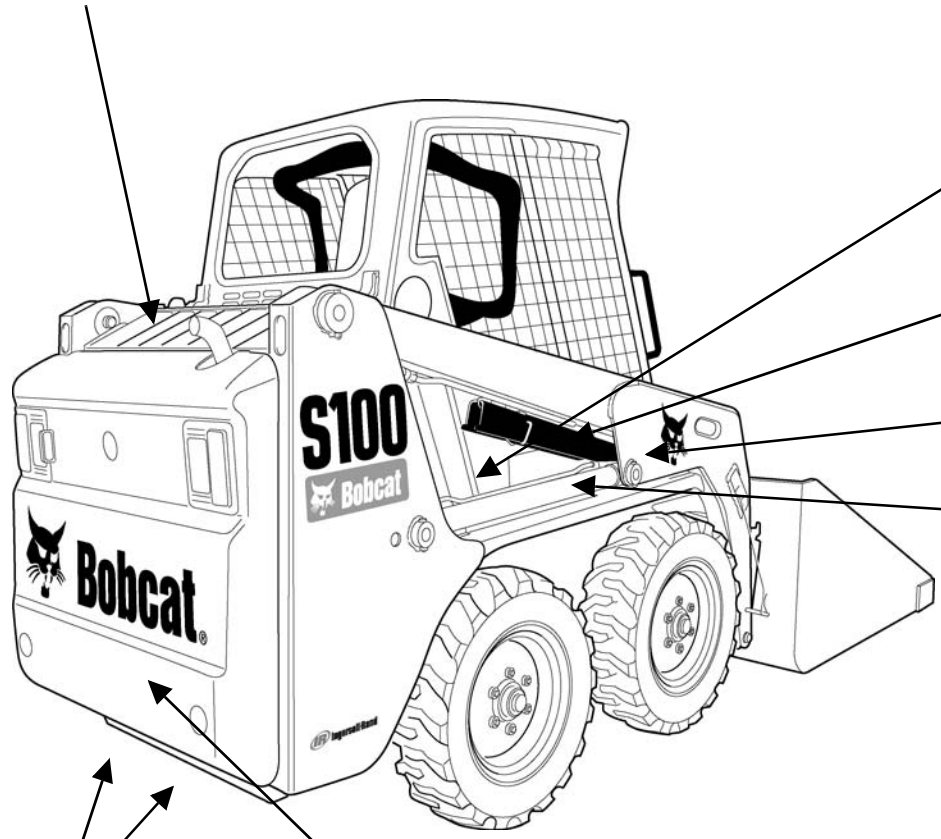
MACHINE SIGNS (DECALS) (CONT'D)

Follow the instructions on all the Machine Signs (Decals) that are on the loader. Replace any damaged machine signs and be sure they are in the correct locations. Machine signs are available from your Bobcat Loader dealer.



6565990 6708929 6733996 7139929

Under Rear Grill



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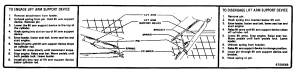


6706558

6809511 (4)

6717343 (2)
(Under Cab)

6727595 (Ref.)

6734534

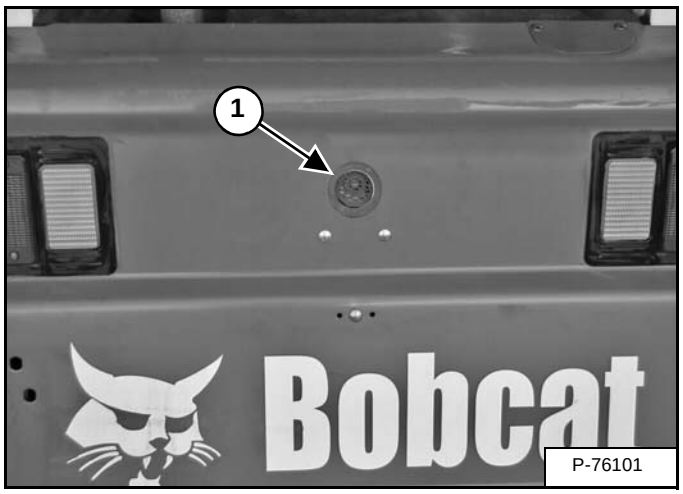
Inside Rear Door

S0184

BACK-UP ALARM SYSTEM

Operation

Figure OI-13



This machine may be equipped with a back-up alarm system. The back-up alarm (Item 1) **[Figure OI-13]** is located on the inside of the rear door.

Figure OI-14

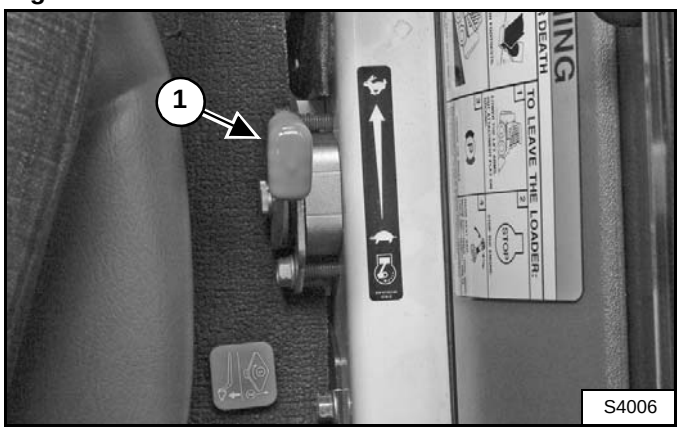
The back-up alarm will sound when the operator moves both steering levers in the reverse position **[Figure OI-14]**. Slight movement of the steering levers in the reverse position is required with hydrostatic transmissions, before the back-up alarm will sound.

If alarm does not sound or for adjustment instructions, see inspection and maintenance instructions for the back-up alarm system in the preventive maintenance section of this manual. (See BACK-UP ALARM SYSTEM on Page PM-13.)

ENGINE SPEED CONTROL

Operation

Figure OI-15



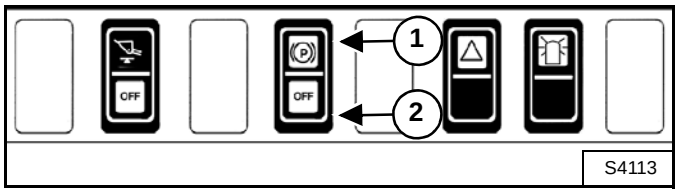
The speed control lever is to the right of the operator seat (Item 1) **[Figure OI-15]**.

Move the lever forward to increase engine speed. Move backward to decrease engine speed.

PARKING BRAKE

Operation

Figure OI-16



Press the top of the switch (Item 1) **[Figure OI-16]** to engage the parking brake. The traction drive system will be locked.

Press the bottom of the switch (Item 2) **[Figure OI-16]** to disengage the parking brake. The traction drive system will be unlocked.

NOTE: The PARKING BRAKE light on the left instrument panel will remain ON until the engine is started, the PRESS TO OPERATE LOADER button is pressed and the parking brake is disengaged.

Warming The Hydraulic / Hydrostatic System

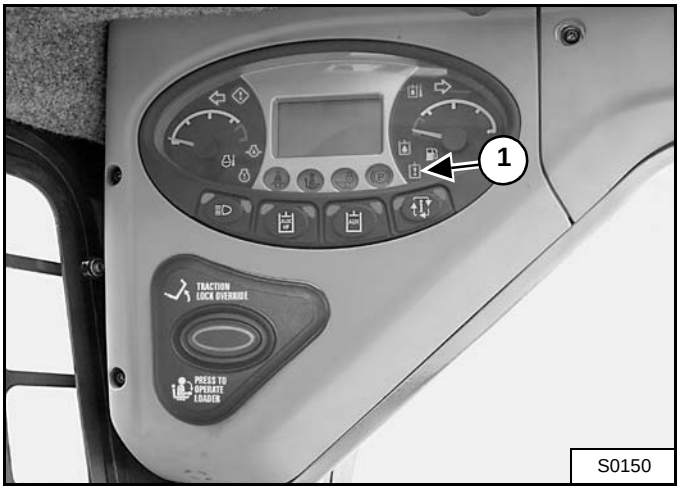
IMPORTANT

When the temperature is below -20°F (-30°C), hydrostatic oil must be warmed before starting. The hydrostatic system will not get enough oil at low temperatures and will be damaged. Park the machine in an area where the temperature will be above 0°F (-18°C) if possible.

I-2007-1285

Let the engine run for a minimum of 5 minutes to warm the engine and hydrostatic transmission fluid before operating the loader.

Figure OI-37



If the Hydraulic Error icon (Item 1) **[Figure OI-37]** comes ON when operating the loader (cold), more warm up time is needed.

Cold Temperature Starting

WARNING

Do not use ether with glow plug (preheat) systems. Explosion can result which can cause injury, death, or severe engine damage.

W-2071-0903

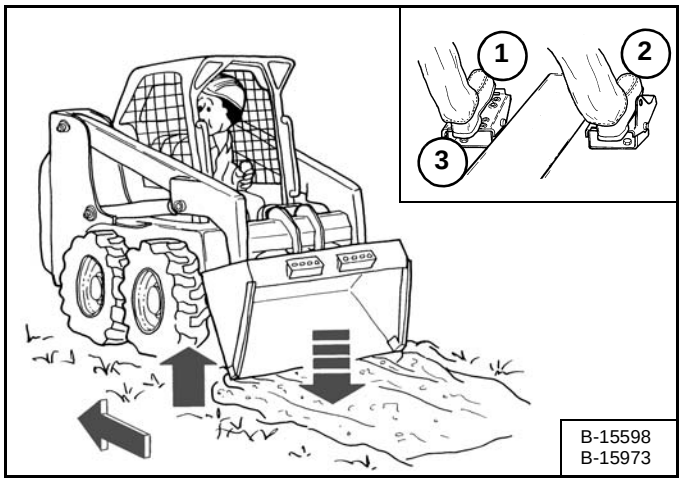
If the temperature is below freezing perform the following to make starting the engine easier:

- Replace the engine oil with the correct type and viscosity for the anticipated starting temperature (See ENGINE LUBRICATION SYSTEM on Page PM-22.)
- Make sure the battery is fully charged.
- Install an engine heater, available from your local Bobcat dealer.

NOTE: The display screen of the left instrument panel may not be immediately visible when the temperature is below -15°F (-26°C). It may take 30 seconds to several minutes for the panel to warm up. All systems remain monitored even when the display is off.

Leveling The Ground Using Float

Figure OI-63



Put the lift arms in *float* position by pushing the toe of the left pedal (Item 1) **[Figure OI-63]** until it is locked in the forward position.

Tilt the bucket forward by pushing the toe of the right pedal (Item 2) **[Figure OI-63]** to change the position of the cutting edge of the bucket.

With the bucket tilted farther forward, there is more force on the cutting edge and more loose material can be moved.

Drive backward to level loose material **[Figure OI-63]**.

Push the heel of the left pedal (Item 3) **[Figure OI-63]** to unlock the float position.

IMPORTANT

Never drive forward when the hydraulic control for lift arms is in float position.

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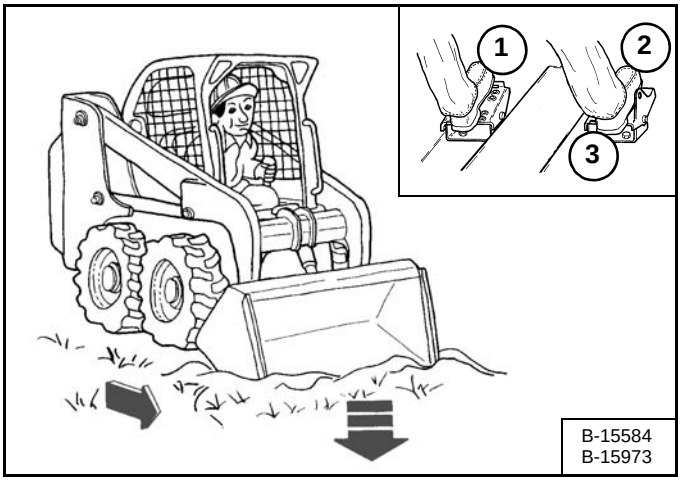
Digging And Filling A Hole

Digging

Figure OI-64

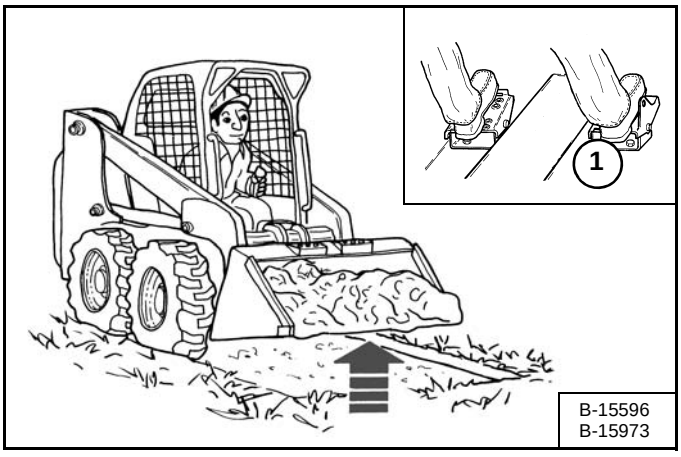


Lower the lift arms all the way by pushing the toe of the left pedal (Item 1) **[Figure OI-64]**. Put the cutting edge of the bucket on the ground by pushing the toe of the right pedal (Item 2) **[Figure OI-64]**.

Drive forward slowly and continue to tilt the bucket down (Item 2) **[Figure OI-64]** until it enters the ground.

Raise the cutting edge a small amount by pushing the heel of the right pedal (Item 3) **[Figure OI-64]** to increase traction and keep an even digging depth. Continue to drive forward until the bucket is full. When the ground is hard, raise and lower the cutting edge of the bucket (Items 2 & 3) **[Figure OI-64]** while driving forward slowly.

Figure OI-65



Tilt the bucket backward by pushing the heel of the right pedal (Item 1) **[Figure OI-65]** as far as it will go when the bucket is full.

SERVICE SCHEDULE

Chart

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and early failures. The service schedule is a guide for correct maintenance of the Bobcat Loader.

⚠ 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.

W-2003-0903

SERVICE SCHEDULE		HOURS					
ITEM	**SERVICE REQUIRED**	**8-10**	**50**	**100**	**■ 250**	**■ 500**	**■ 1000**
Engine Oil	Check the oil level and add as needed. Do not overfill.						
Engine Air Filter and Air System	Check condition indicator, replace element when required (See AIR CLEANER SERVICE on Page PM-19.) Check for leaks and damaged components. Empty dust cup as needed.						
Engine Cooling System	Clean debris from oil cooler, radiator & grill. Check coolant level COLD and add premixed coolant as needed.						
Fuel Filter	Remove the trapped water.						
Lift Arms, Cylinders, Bob-Tach Pivot Pins and Wedges	Lubricate with multi-purpose lithium based grease.						
Seat Belt, Seat Belt Retractors, Seat Bar, Control Interlocks	Check the condition of seat belt. Clean or replace seat belt retractors as needed. Clean dirt and debris from moving parts. Check the seat bar and control interlocks for correct operation.						
Bobcat Interlock Control Systems (BICS)	Check that three BICS indicator lights and functions are activated. See details in this Manual.						
Safety Signs and Safety Treads	Check for damaged signs (decals) and safety treads. Replace any signs or safety treads that are damaged or worn.						
Operator Cab	Check the fastening bolts, washers and nuts. Check the condition of the cab.						
Tires	Check for damaged tires and correct air pressure. Inflate to MAXIMUM pressure shown on sidewall of tire.						
Indicators and Lights	Check for correct operation of all indicators and lights.						
Heater Filter (If equipped)	Clean or replace filter as needed.						
Hydraulic Fluid, Hoses and Tubelines	Check fluid level and add as needed. Check for damage and leaks. Repair or replace as needed.						
Final Drive Trans. (Chaincase), Foot Pedals, Steering Levers	Check oil level and add oil as needed. Check for correct operation. Repair or adjust as needed.						
Parking Brake	Check operation.						
Wheel Nuts	Check for loose wheel nuts and tighten to correct torque. (See TIRE MAINTENANCE on Page PM-33.)	❑					
Spark Arrestor Muffler	Clean the spark chamber.						
Battery	Check cables, connections and electrolyte level. Add distilled water as needed.						
Steering Lever Pivots	Grease fittings.						
Fuel Filter	Replace filter element.						
Engine / Hydro. Drive Belt	Check for wear or damage.		❍				
Alternator Belt	Check condition and tension. Adjust or replace as needed.						
Bobcat Interlock Control System (BICS)	Check the function of the lift arm bypass control.						
Engine Oil and Filter	Replace oil and filter. Use CF/CG4 or better grade oil and Bobcat filter.		❁				
Hydrostatic Filter, Charge Filter	Replace the hydrostatic filter and the charge filter.		▼				
Engine Valves	Adjust the engine valves.						
Final Drive Trans. (Chaincase)	Replace the fluid.						
Hydraulic Reservoir	Replace the fluid.						
Case Drain Filters	Replace the filters.						
Coolant	Replace the coolant.	Every 2 years.					

■ **Or every 12 months.**
❑ **Check every 8-10 hours for the first 50 hours, then 50 hour intervals thereafter.**
❍ **Inspect new belt after first 50 hours.**
▼ **Replace the hydraulic / hydrostatic filter element after the first 50 hours; and thereafter when the transmission warning light comes ON while operating or at the 500 hour interval.**
❁ **First oil and filter change must occur at 50 hours; every 250 hours thereafter.**

REAR DOOR

Opening And Closing

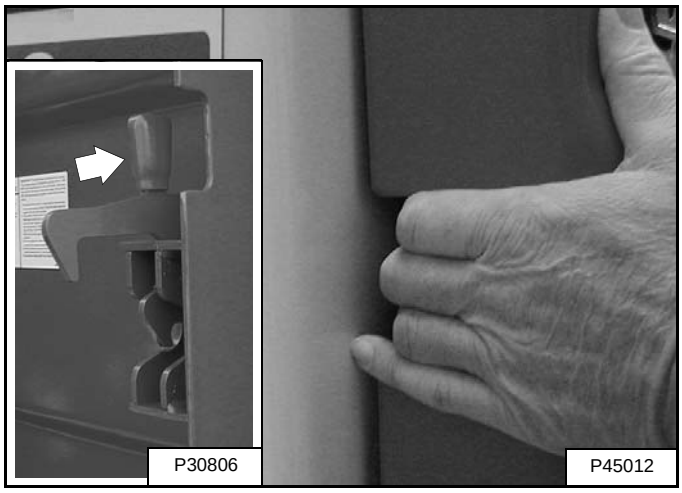
WARNING

AVOID INJURY OR DEATH

Never service or adjust the machine when the engine is running unless instructed to do so in the manual.

W-2012-0497

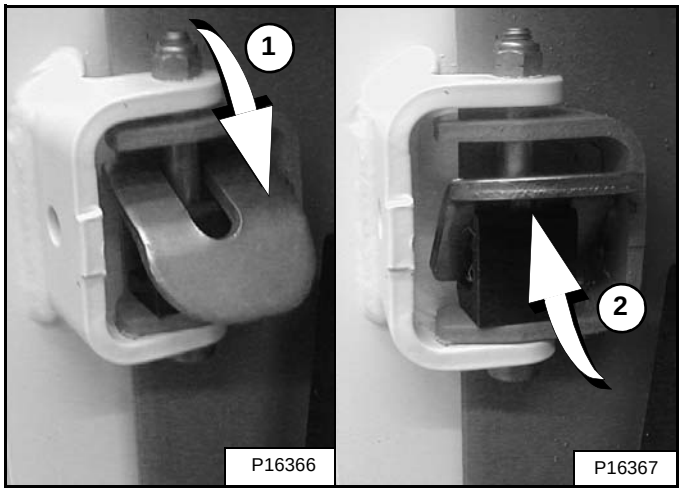
Figure PM-20



Reach into the slot in the rear door and pull the latch handle **[Figure PM-20]**.

Pull the rear door open.

Figure PM-21



Move the door stop into the engaged position (Item 1) to hold the door open. Move the door stop up (Item 2) **[Figure PM-21]** and close the rear door.

WARNING

Keep the rear door closed when operating the machine. Failure to do so could seriously injure a bystander.

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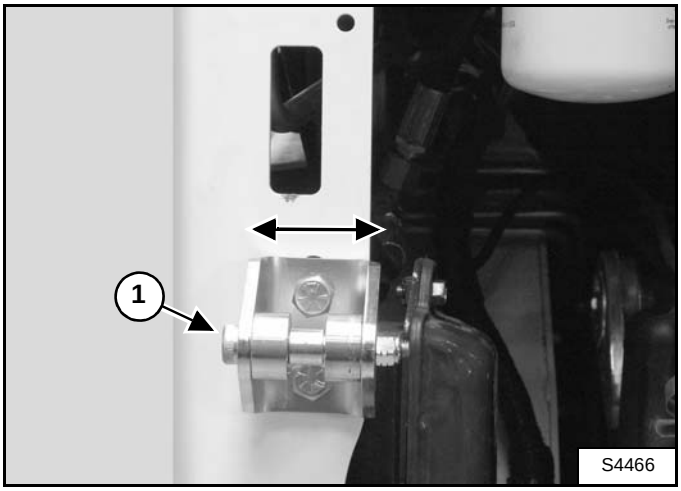
Adjusting

Figure PM-22



The door latch catch (Item 1) **[Figure PM-22]** can be adjusted left and right for alignment with the door latch mechanism.

Close the rear door before operating the loader.

Using A Booster Battery (Jump Starting) (Cont'd)

⚠ WARNING

AVOID INJURY OR DEATH

Batteries contain acid which burns eyes and skin on contact. Wear goggles, protective clothing and rubber gloves to keep acid off body.

In case of acid contact, wash immediately with water. In case of eye contact get prompt medical attention and wash eye with clean, cool water for at least 15 minutes.

If electrolyte is taken internally drink large quantities of water or milk! DO NOT induce vomiting. Get prompt medical attention.

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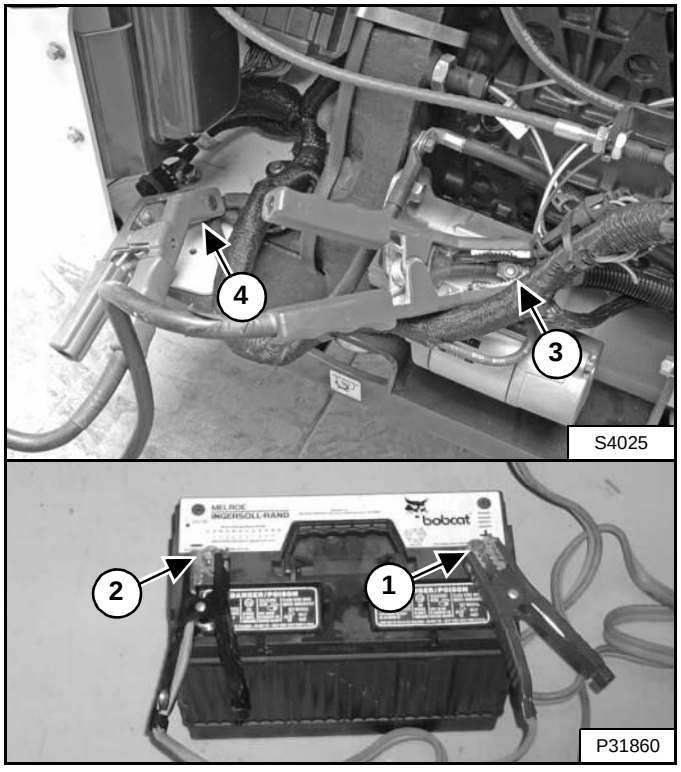
Figure PM-44



Connect the end of the first cable to the positive (+) terminal (Item 1) of the booster battery. Connect the other end of the same cable to the positive terminal (Item 3) **[Figure PM-44]** on the loader starter.

Connect the end of the second cable to the negative (-) terminal (Item 2) of the booster battery. Connect the other end of the same cable (Item 4) **[Figure PM-44]** to the engine.

NOTE: Keep cables away from moving parts.

Start the engine. (See STARTING THE ENGINE on Page OI-17.)

After the engine has started, remove the ground (-) cable (Item 4) **[Figure PM-44]** first.

Remove the cable from the positive terminal (Item 2) **[Figure PM-44]**.

IMPORTANT

Damage to the alternator can occur if:

- **Engine is operated with battery cables disconnected.**
- **Battery cables are connected when using a fast charger or when welding on the loader. (Remove both cables from the battery.)**
- **Extra battery cables (booster cables) are connected wrong.**

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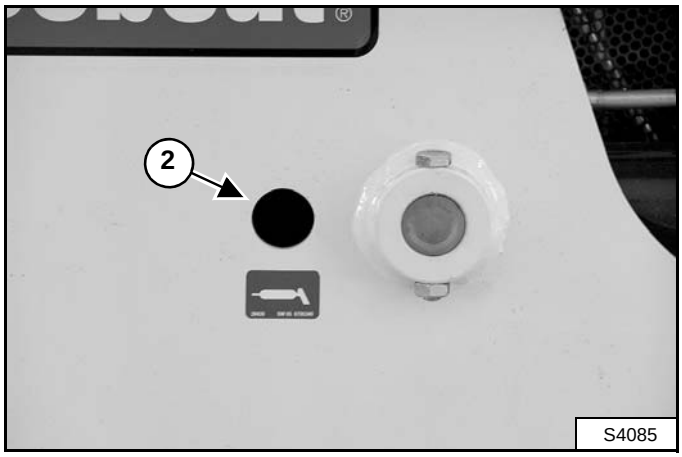
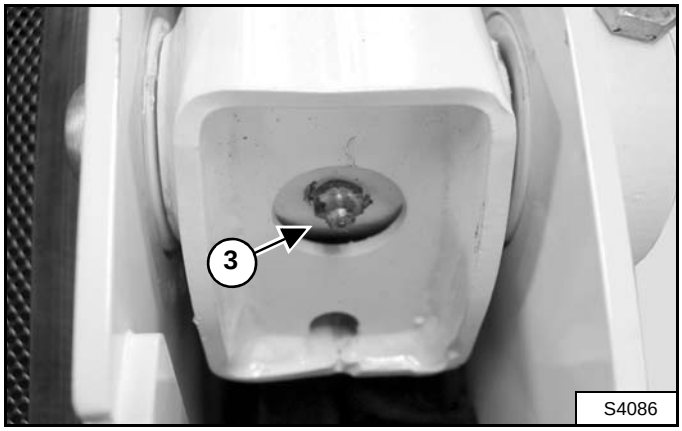
Lubrication Locations (Cont'd)

Figure PM-63



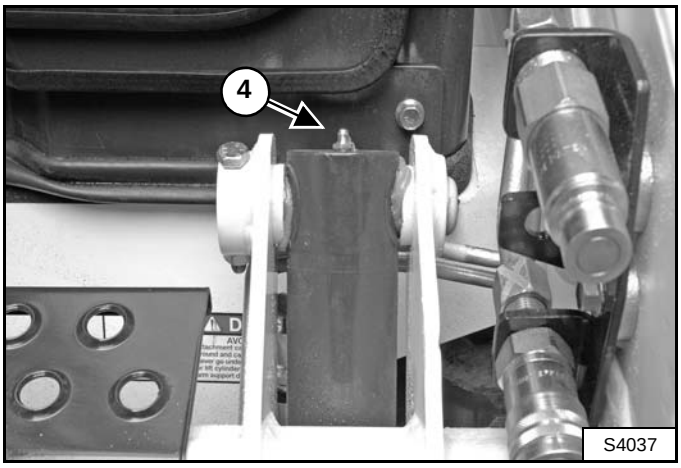
2. Base End Lift Cylinder (Both Sides) (Item 2) **[Figure PM-61]** & **[Figure PM-63]**.

Figure PM-64



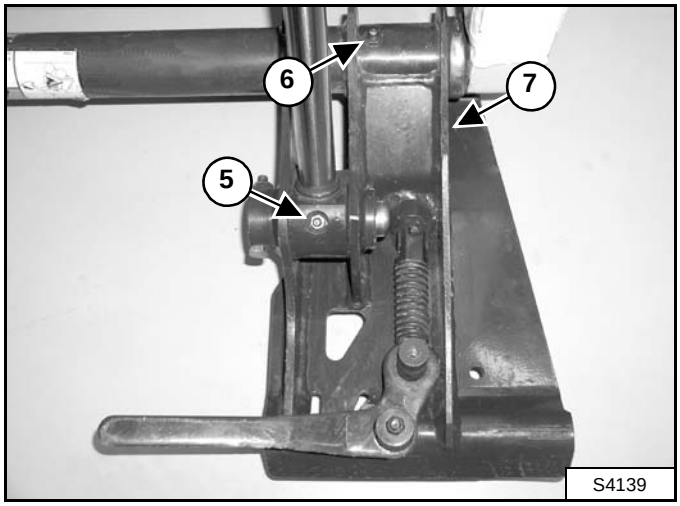
3. Lift Arm Pivot Pin (Both Sides) (Item 3) **[Figure PM-61]** & **[Figure PM-64]**.

Figure PM-65



4. Base End Tilt Cylinder (Both Sides) (Item 4) **[Figure PM-61]** & **[Figure PM-65]**.

Figure PM-66



5. Rod End Tilt Cylinder (Both Sides) (Item 5) **[Figure PM-66]**.

6. Bob-Tach Pivot Pin (Both Sides) (Item 6) **[Figure PM-66]**.

7. Bob-Tach Wedge (Both Sides) (Item 7) **[Figure PM-66]**.

Service Codes List

CODE	FUNCTION	FAILURES	ICON	BUZZER
M-02-17	Hydraulic Implement Filter	Plugged	Service manual icon	none
M-03-09	Battery Voltage	Low	solid battery icon	3 beeps
M-03-10	Battery Voltage	High	solid battery icon	3 beeps
M-03-11	Battery Voltage	Extremely High	solid battery icon	none
M-03-14	Battery Voltage	Extremely Low	solid battery icon	none
M-03-22	Battery Voltage	Out of Range Low	solid battery icon	none
M-04-14	Engine Oil Pressure	Extremely Low	flashing eop icon	continuous
M-04-15	Engine Oil Pressure	Shutdown	flashing eop icon	none
M-05-09	Hydraulic Charge Pressure	Low	solid hyd icon	3 beeps
M-05-10	Hydraulic Charge Pressure	High	solid hyd icon	3 beeps
M-05-11	Hydraulic Charge Pressure	Extremely High	flashing hyd icon	continuous
M-05-14	Hydraulic Charge Pressure	Extremely Low	flashing hyd icon	continuous
M-05-15	Hydraulic Charge Pressure	Shutdown	flashing hyd icon	none
M-05-21	Hydraulic Charge Pressure	Out of Range High	solid hyd icon	none
M-05-22	Hydraulic Charge Pressure	Out of Range Low	solid hyd icon	none
M-06-10	Engine Speed	High	solid rpm icon	3 beeps
M-06-11	Engine Speed	Extremely High	flashing rpm icon	continuous
M-06-13	Engine Speed	No Signal	solid rpm icon	none
M-06-15	Engine Speed	Shutdown	flashing rpm icon	none
M-06-18	Engine Speed	Out of Range	solid rpm icon	none
M-07-10	Hydraulic Oil Temperature	High	solid hyd icon	3 beeps
M-07-11	Hydraulic Oil Temperature	Extremely High	flashing hyd icon	continuous
M-07-15	Hydraulic Oil Temperature	Shutdown	flashing hyd icon	none
M-07-21	Hydraulic Oil Temperature	Out of Range High	solid hyd icon	none
M-07-22	Hydraulic Oil Temperature	Out of Range Low	solid hyd icon	none
M-08-10	Engine Coolant Temperature	High	solid ect icon	3 beeps
M-08-11	Engine Coolant Temperature	Extremely High	flashing ect icon	continuous
M-08-15	Engine Coolant Temperature	In Shutdown	flashing ect icon	none
M-09-09	Fuel Level	Low	solid fuel icon	1 beep
M-09-21	Fuel Level	Out of Range High	solid fuel icon	none
M-09-22	Fuel Level	Out of Range Low	solid fuel icon	none
M-11-21	Seatbar Sensor	Out of Range High	flashing seatbar icon	3 beeps
M-11-22	Seatbar Sensor	Out of Range Low	flashing seatbar icon	3 beeps
M-13-05	Fuel Hold Solenoid	Short to Battery	flashing engine icon	3 beeps
M-13-06	Fuel Hold Solenoid	Short to Ground	flashing engine icon	3 beeps
M-13-07	Fuel Hold Solenoid	Open Circuit	flashing engine icon	3 beeps
M-14-02	Fuel Pull Output	Error On	flashing engine icon	3 beeps
M-14-03	Fuel Pull Output	Error Off	flashing engine icon	3 beeps

WARNING (6577754)

⚠ WARNING

CYLINDER CONTAINS HIGH PRESSURE GAS. DO NOT OPEN. OPENING CYLINDER CAN RELEASE ROD AND CAUSE INJURY OR DEATH. SW 99 6577754

⚠ ADVERTENCIA

EL CILINDRO CONTIENE GAS DE ALTA PRESIÓN. NO LO ABRA. SI SE ABRE EL CILINDRO, SE PUEDE LIBERAR EL VÁSTAGO Y SE PUEDEN OCASIONAR LESIONES O LA MUERTE.
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⚠ AVERTISSEMENT

LES VERINS RENFERMENT UN GAZ SOUS PRESSION. N'OUVREZ JAMAIS UN VERIN, SOUS PEINE DE VOIR S'ECHAPPER BRUTALEMENET LA TIGE, CAUSANT AINSI DES BLESSURES GRAVES, VOIRE MORTELLES. DV-99-6577754-FR

WARNING (6733996)

IMPORTANT (7139929)

IMPORTANT

THIS MACHINE IS FACTORY EQUIPPED WITH SPARK ARRESTOR EXHAUST SYSTEM.

THE SPARK ARRESTOR MUFFLER, IF EQUIPPED, MUST BE CLEANED TO KEEP IT IN WORKING CONDITION. THE SPARK ARRESTOR MUFFLER MUST BE SERVICED BY DUMPING THE SPARK CHAMBER EVERY 100 HRS OF OPERATION.

ON SOME MODELS, THE TURBOCHARGER FUNCTIONS AS THE SPARK ARRESTOR AND MUST OPERATE CORRECTLY FOR PROPER SPARK ARRESTOR FUNCTION.

IF THIS MACHINE IS OPERATED ON FLAMMABLE FOREST, BRUSH, OR GRASS COVERED LAND, IT MUST BE EQUIPPED WITH A SPARK ARRESTOR ATTACHED TO THE EXHAUST SYSTEM AND MAINTAINED IN WORKING ORDER. FAILURE TO DO SO WILL BE IN VIOLATION OF CALIFORNIA STATE LAW, SECTION 4442. PRC. REFER TO LOCAL LAWS AND REGULATIONS FOR SPARK ARRESTOR REQUIREMENTS.

SEE THE OPERATION AND MAINTENANCE MANUAL FOR MORE INSTRUCTIONS.

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IMPORTANTE

ESTA MÁQUINA ESTÁ EQUIPADA DE FÁBRICA CON UN SISTEMA PARACHISPAS.

EL SILENCIADOR DEL SISTEMA PARACHISPAS, SI ESTÁ EQUIPADO, DEBE LIMPIARSE PARA MANTENERSE EN CONDICIONES DE TRABAJO. ASÍ MISMO, SE LE DEBE DAR SERVICIO VACIANDO LA CÁMARA DE CHISPAS CADA 100 HORAS DE OPERACIÓN.

EN ALGUNOS MODELOS, EL TURBOCARGADOR FUNCIONA COMO EL PARACHISPAS Y DEBE OPERAR CORRECTAMENTE COMO TAL.

SI VA A UTILIZAR ESTA MÁQUINA EN BOSQUES INFLAMABLES O EN SUELOS CUBIERTOS DE MATORRALES O CÉSPED, DEBE EQUIPARSE CON UN SISTEMA PARACHISPAS COLOCADO EN EL SISTEMA DE ESCAPE Y MANTENERLA EN BUENAS CONDICIONES DE TRABAJO. NO CUMPLIR LO ANTERIOR INFRINGE LA SECCIÓN 4442 DE LA LEY DEL ESTADO DE CALIFORNIA. CONSULTE LAS LEYES Y REGLAMENTOS LOCALES PARA CONOCER LOS REQUISITOS DEL PARACHISPAS.

CONSULTE EL MANUAL DE OPERACIÓN Y MANTENIMIENTO PARA OBTENER MÁS INSTRUCCIONES.

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IMPORTANT

CETTE MACHINE EST ÉQUIPÉE EN USINE D'UN SYSTÈME D'ÉCHAPPEMENT PARE-ÉTINCELLES.

LE CAS ÉCHÉANT, LE SILENCIEUX PARE-ÉTINCELLES DOIT ÊTRE ENTRETENU POUR ASSURER SON BON FONCTIONNEMENT. CET ENTRETIEN CONSISTE À REMPLACER LA CHAMBRE À ÉTINCELLES TOUTES LES 100 HEURES D'EXPLOITATION.

SUR CERTAINS MODÈLES, LA FONCTION DE PARE-ÉTINCELLES EST ASSURÉE PAR LE TURBOCOMPRESSEUR QUI DOIT FONCTIONNER CORRECTEMENT POUR REMPLIR SA FONCTION.

SI VOUS UTILISEZ LA MACHINE EN FORÊT, SUR TERRAIN HERBEUX OU DANS DES TAILLIS, VOUS DEVEZ ÉQUIPER LE SYSTÈME D'ÉCHAPPEMENT D'UN PARE-ÉTINCELLES ET LE GARDER EN BON ÉTAT DE FONCTIONNEMENT. LE NON RESPECT DE CETTE OBLIGATION CONTREVIENT À LA LOI DE L'ÉTAT DE CALIFORNIE, SECTION 4442 PRC. VEUILLEZ VOUS RÉFÉRER AUX LOIS ET RÈGLEMENTS LOCAUX POUR CONNAÎTRE LES EXIGENCES EN MATIÈRE DE PARE-ÉTINCELLES.

VEUILLEZ CONSULTER LE MANUEL DE L'OPÉRATEUR ET D'ENTRETIEN POUR DES INSTRUCTIONS COMPLÉMENTAIRES.

60065 SW 7139929 fr

(S100) LOADER SPECIFICATIONS (CONT'D)

Engine

Make/Model	KUBOTA V1505-E2B-BCZ-1
Fuel/Cooling	Diesel/Liquid
Horsepower @ 3000 RPM (SAE)	Net: 33.5 HP (25 kW) Gross: 35.5 HP (26.5 kW)
Torque @ 1700 RPM (SAE)	Net: 67 ft.-lb. (91 N•m) Gross: 68 ft.-lb. (92 N•m)
Number of Cylinders	Four
Displacement	91.41 cu. in. (1498 cu. cm.)
Bore/Stroke	3.07 / 3.09 (78.0 / 78.4)
Lubrication	Gear Pump Pressure System W/Filter
Crankcase Ventilation	Closed-Breathing
Air Cleaner	Dry replaceable paper cartridge w/separate safety element
Ignition	Diesel-Compression
Low Idle	1100 RPM
High Idle	3200 RPM

Hydraulic System

Pumps	Engine driven, Gear type
Pump Capacity	13.1 GPM (49.6 L/min.) @ 3270 Pump RPM @ 91% efficiency
Filters	Full flow replaceable, 3 micron synthetic media element
System Relief Valve Setting	3000 PSI (20.7 MPa)
Hydraulic Cylinders Bore Diameter: Lift Cylinder (2) Tilt Cylinder (1) Rod Diameter: Lift Cylinder (2) Tilt Cylinder (1) Stroke: Lift Cylinder (2) Tilt Cylinder (1)	Double acting; Tilt cylinder has cushioning feature on dump & rollback 2.00 (50.8) 2.25 (57.2) 1.25 (31.8) 1.25 (31.8) 25.73 (653.54) 12.09 (307.1)
Control Valve	3-spool, open center type w/float detent on lift and electrically controlled auxiliary spool.
Fluid Lines	SAE standard tubelines, hoses and fittings.
Fluid Type	BOBCAT FLUID, Hydraulic / Hydrostatic 6903117 - (2.5 Gal.) 6903118 - (5 Gal.) 6903119 - (55 Gal.)
Hydraulic Function Time: Raise Lift Arms Lower Lift Arms Bucket Dump Bucket Rollback	 2.8 Seconds 1.8 Seconds 1.6 Seconds 1.2 Seconds

OPERATOR SAFETY WARNINGS

WARNING

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

W-2001-0502

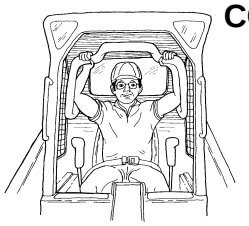
Safety Alert Symbol: **This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.**

CORRECT

P-90216

Never use the loader without instructions. See machine signs (decals), Operation & Maintenance Manual, and Operator's Handbook.

CORRECT



B-15570

Always use the seat bar and fasten seat belt snugly.

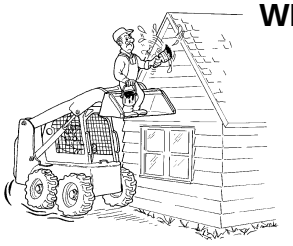
Always keep feet on the foot pedals or footrests when operating loader.

CORRECT

B-15572

Never use loader without operator cab with ROPS and FOPS approval. Fasten your seat belt.

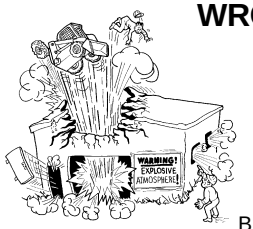
WRONG



B-15571

Never use loader as man lift or elevating device for personnel.

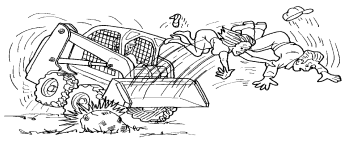
WRONG



B-15573

Do not use loader in atmosphere with explosive dust, explosive gas, or where exhaust can contact flammable material.

WRONG

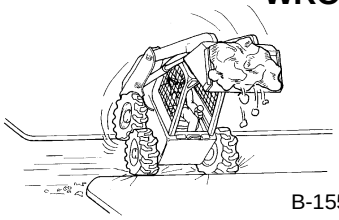


B-15574

Never carry riders.

Keep bystanders away from work area.

WRONG



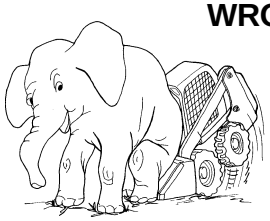
B-15575A

Always carry bucket or attachments as low as possible.

Do not travel or turn with lift arms up.

Load, unload, and turn on flat level ground.

WRONG



B-15576

Never exceed Rated Operating Capacity.

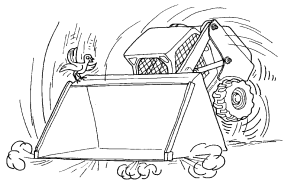
WRONG

B-15577

Never leave loader with engine running or with lift arms up.

To park, engage parking brake and put attachment flat on the ground.

WRONG



B-15578

Never modify equipment.

Use only attachments approved by Bobcat Company for this model loader.

SAFETY EQUIPMENT

The Bobcat Loader must be equipped with safety items necessary for each job. Ask your dealer for information on the safe use of attachments and accessories.

1. **SEAT BELT: Check belt fasteners and check for damaged webbing or buckle.**
2. **SEAT BAR: When up, it must lock the loader controls.**
3. **OPERATOR CAB (ROPS and FOPS): It must be on the loader with all fasteners tight.**
4. **OPERATOR'S HANDBOOK: Must be in the cab.**
5. **SAFETY SIGNS (DECALS): Replace if damaged.**
6. **SAFETY TREADS: Replace if damaged.**
7. **GRAB HANDLES: Replace if damaged.**
8. **LIFT ARM SUPPORT DEVICE: Replace if damaged.**
9. **PARKING BRAKE**
10. **BOBCAT INTERLOCK CONTROL SYSTEM (BICS)**

OSW09-0409

FEATURES, ACCESSORIES AND ATTACHMENTS (CONT'D)

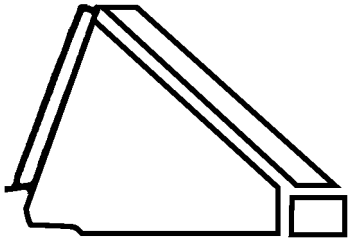
These and other attachments are approved for use on this model loader. Do not use unapproved attachments. Attachments not manufactured by Bobcat may not be approved.

The versatile Bobcat loader quickly turns into a multi-job machine with a tight-fit attachment hook-up . . . from bucket to grapple to pallet fork to backhoe and a variety of other attachments.

See your Bobcat dealer for information about approved attachments and attachment Operation & Maintenance Manuals.

Increase the versatility of your Bobcat loader with a variety of bucket styles and sizes.

Buckets Available



BUCKET

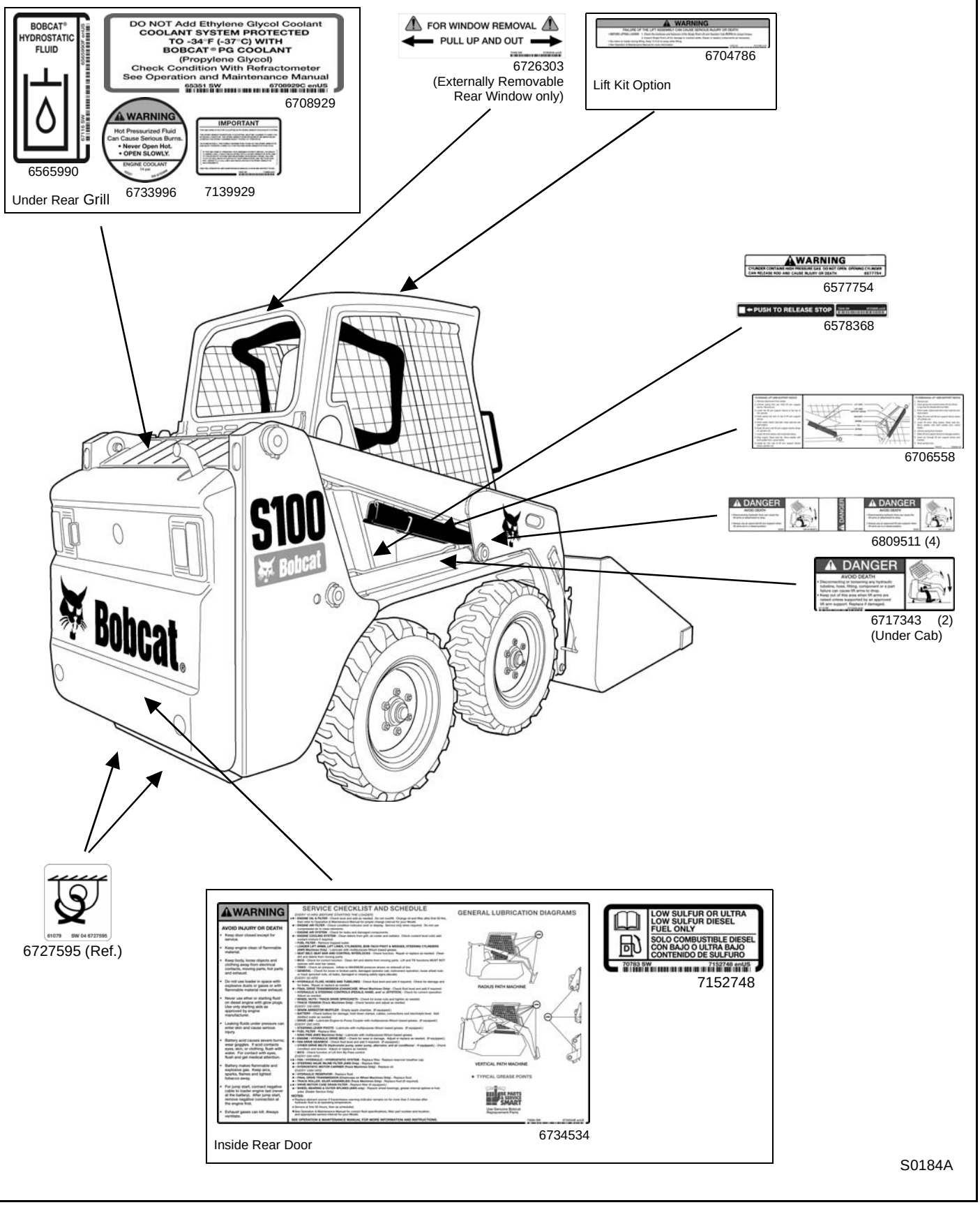
Many bucket styles, widths and different capacities are available for a variety of different applications. They include Construction & Industrial, Low Profile, Fertilizer and Snow, to name a few. See your Bobcat dealer for the correct bucket for your Bobcat loader and application.

Attachments

- Angle Broom
- Auger
- Backhoe
- Blades
  - Snow Blade
  - V-Blade
- Breaker, Hydraulic
- Brush Saw
- Buckets
- Digger
- Dumping Hopper
- Grapple, Industrial
- Grapple, Root
- Landplane
- Mower
- Pallet Forks
- Scarifier
- Scraper
- Snowblower
- Soil Conditioner
- Sweeper
- Three-Point Hitch Adapter
- Tiller
- Tree Fork
- Trencher
- Utility Forks
- Utility Frame
- X-Change™ Frame

MACHINE SIGNS (DECALS) (CONT'D)

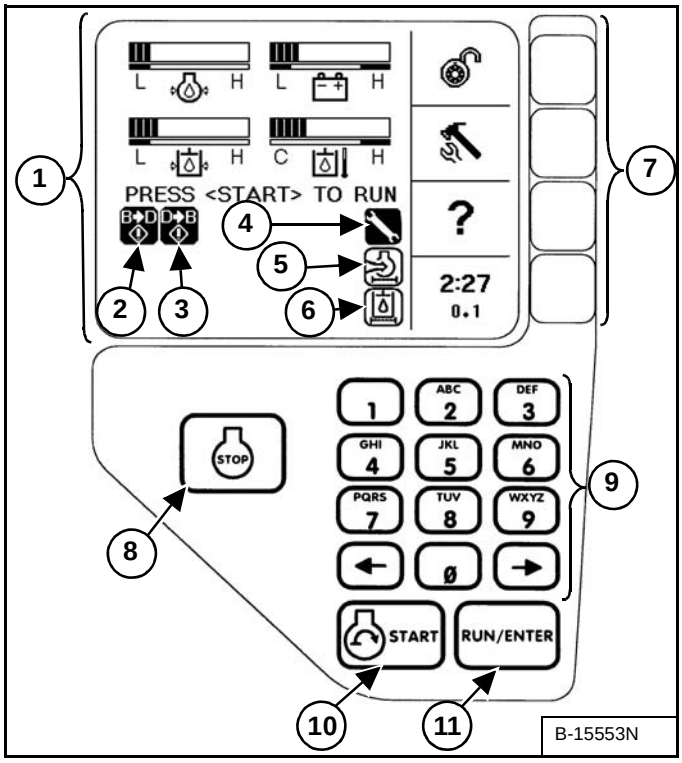
Follow the instructions on all the Machine Signs (Decals) that are on the loader. Replace any damaged machine signs and be sure they are in the correct locations. Machine signs are available from your Bobcat Loader dealer.



S0184A

Deluxe Instrumentation Panel

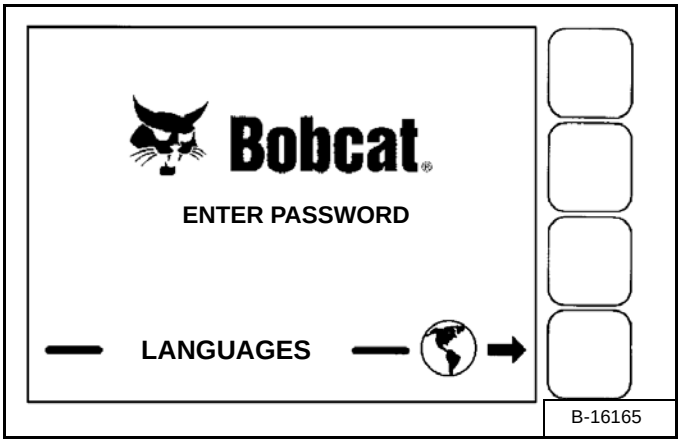
Figure OI-8



This machine may be equipped with a Deluxe Instrumentation Panel **[Figure OI-8]**.

1. **Display Screen:** The Display Screen is where all system setup, monitoring, troubleshooting and error conditions are displayed.
2. **Bobcat Main Controller Error:** Indicates communication error between Bobcat Main Controller and Deluxe Instrumentation Panel. (See DIAGNOSTIC SERVICE CODES on Page SA-3.)
3. **Display Error:** Indicates communication error between instrument panel and Bobcat controller. (See DIAGNOSTIC SERVICE CODES on Page SA-3.)
4. **BobCARE PM^{SM} Icon:** Indicates planned maintenance is due.
5. **Engine Air Filter Icon:** Indicates engine air filter requires service.
6. **Hydraulic Filter Icon:** Indicates hydraulic filter requires service.
7. **Selection Buttons:** The four Selection Buttons allow you to select items from the Display Screen and scroll through screens.
8. **Stop Button:** Used to stop the engine and shut down the loader's electrical system.
9. **Keypad:** The numeric keypad has two functions:
   - To enter a number code (password) to allow starting the engine.
   - To enter a number as directed for further use of the Display Screen.
10. **Start Button:** Used to start the engine.
11. **Run / Enter Button:** Used to turn on the loader's electrical system.

Figure OI-9



The first screen you will see on your new loader will be as shown in **[Figure OI-9]**.

When this screen is on the display you can enter the password and start the engine or change the Display Screen setup features.

NOTE: Your new loader (with Deluxe Instrumentation Panel) will have an Owner Password. Your dealer will provide you with this password. Change the password to one that you will easily remember to prevent unauthorized use of your loader. (See Changing The Owner Password on Page SA-10.) Keep your password in a safe place for future needs.

Change Language: Press the Selection Button at the end of the arrow **[Figure OI-9]** to go to the next screen. Use the Keypad to select the number of the language.

Press EXIT. The screen will return to **[Figure OI-9]**. You can then enter the password and start the engine.

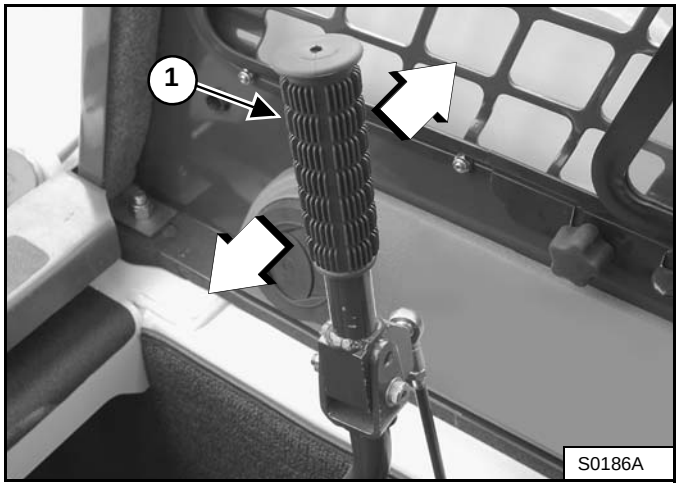
See CONTROL PANEL SETUP for further description of screens to setup the system for your use. (See CONTROL PANEL SETUP on Page SA-8.)

NOTE: Pressing the EXIT key will go to the previous screen and you can continue pressing until you get to the initial (home) screen. SHORTCUT: Press the "0" (zero) key to get to the home screen immediately.

FRONT Auxiliary Hydraulics Operation (Variable Flow)

Variable Flow allows for slow-to-fast movement of auxiliary hydraulic functions.

Figure OI-32



The handle of the right steering lever (Item 1) **[Figure OI-32]** is also the control lever for the front auxiliary hydraulics.

Move the handle (Item 1) **[Figure OI-32]** to the left for auxiliary hydraulic oil flow to the front male coupler. Hydraulic oil flow increases to the coupler as the handle is moved to the left.

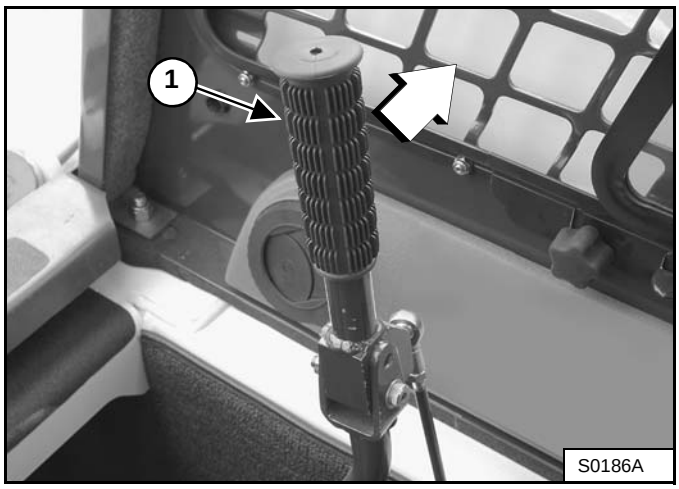
Move the handle (Item 1) **[Figure OI-32]** to the right for auxiliary hydraulic oil flow to the front female coupler. Hydraulic oil flow increases to the coupler as the handle is moved to the right.

Move the handle to the neutral position to stop auxiliary hydraulic oil flow.

FRONT Auxiliary Hydraulics Operation (Continuous Flow)

Continuous Flow allows for a constant flow of auxiliary hydraulic oil to an attachment.

Figure OI-33



Move the handle of the right steering lever (Item 1) **[Figure OI-33]** fully to the right to put it into continuous flow (detent) position. This will allow constant auxiliary hydraulic oil flow to the female coupler.

Move the handle to the neutral position to stop auxiliary hydraulic oil flow.

Move the handle out of the continuous flow (detent) position before leaving the operator's seat.

Deluxe Instrumentation Panel

⚠ WARNING

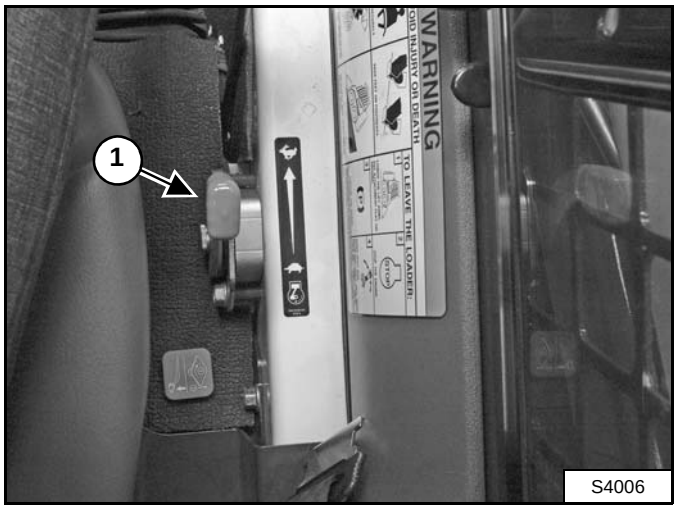
AVOID INJURY OR DEATH

- **Engines can have hot parts and hot exhaust gas. Keep flammable material away.**
- **Do not use machines in atmosphere containing explosive gas.**

W-2051-1086

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page OI-24.)

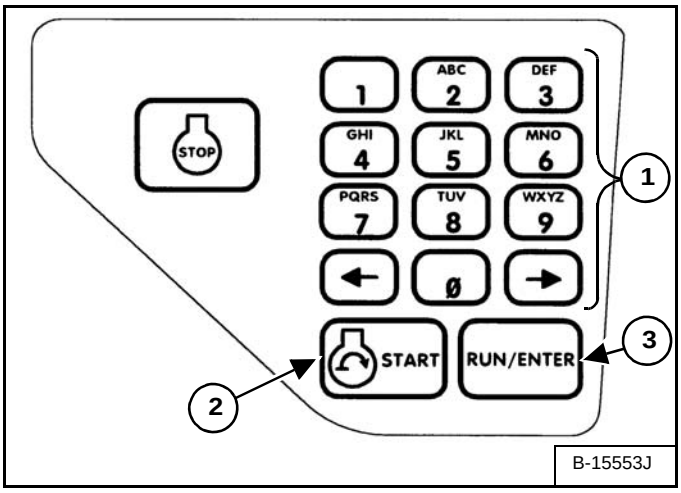
Figure OI-50



Move the speed control lever (Item 1) **[Figure OI-50]** to the idle position.

NOTE: Loaders with a Deluxe Instrumentation Panel have a permanent, randomly generated Master Password set at the factory. Your loader will be assigned an Owner Password. Your dealer will provide you with this password. Change the password to one that you will easily remember to prevent unauthorized use of your loader. (See Changing The Owner Password on Page SA-10.) Keep your password in a safe place for future needs.

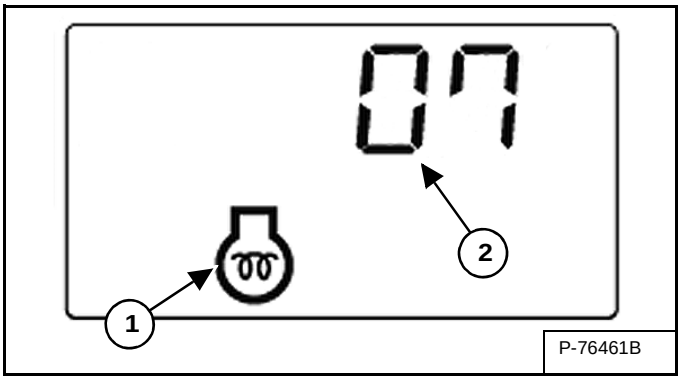
Figure OI-51



Press the RUN / ENTER button (Item 3) **[Figure OI-51]**.

Use the numeric keypad (Item 1) to enter the password, then press the RUN / ENTER button (Item 3) **[Figure OI-51]**.

Figure OI-52



If the temperature is cold, the air intake heater will automatically cycle. The engine preheat icon (Item 1) will be ON and the cycle time remaining (Item 2) **[Figure OI-52]** will show in the data display.

When the engine preheat icon goes OFF, press the START button (Item 2) **[Figure OI-51]**. Release the button when the engine starts.

OPERATING PROCEDURE

Inspect The Work Area

Before beginning operation, inspect the work area for unsafe conditions.

Look for sharp drop-offs or rough terrain. Have underground utility lines (gas, water, sewer, irrigation, etc.) located and marked.

Remove objects or other construction material that could cause personal injury or damage the loader.

Operating With A Full Bucket

⚠ WARNING

AVOID INJURY OR DEATH

- **Keep the lift arms as low as possible.**
- **Do not travel or turn with the lift arms up.**
- **Turn on level ground.**
- **Go up and down slopes, not across them.**
- **Keep the heavy end of the machine uphill.**
- **Do not overload the machine.**
- **Check for adequate traction.**

Failure to obey warnings can cause the machine to tip or roll over and cause injury or death.

W-2018-1009

IMPORTANT

Machines warmed up with moderate engine speed and light load have longer life.

I-2015-0284

When operating on a public road or highway, always follow local regulations. For example: Slow Moving Vehicle Sign or direction signals may be required.

Always warm the engine and hydrostatic system before operating the loader.

Keep the lift arms as low as possible and do not travel or turn with the lift arms up. Turn only on level ground and go up and down slopes, not across them.

Do not overload the machine and keep the heavy end of the machine uphill.

Operate the loader with the engine at full speed for maximum horsepower. Move the steering levers only a small amount to operate the loader slowly.

New operators must operate the loader in an open area without bystanders. Operate the controls until the loader can be handled at an efficient and safe rate for all conditions of the work area.

Figure OI-66

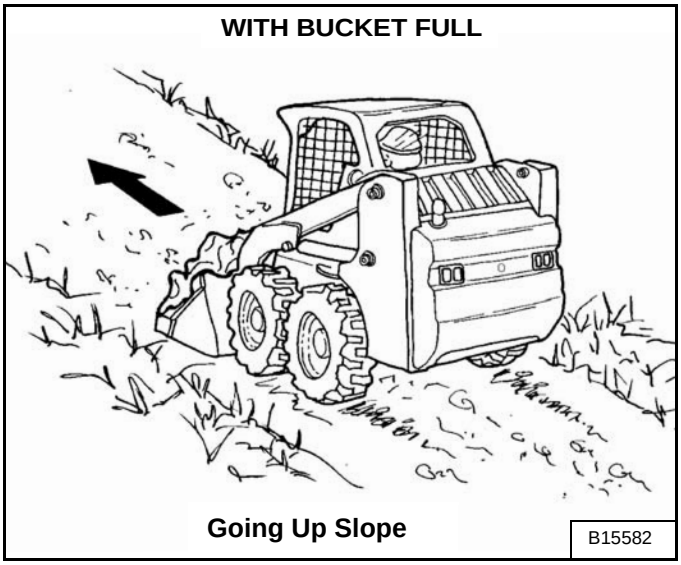
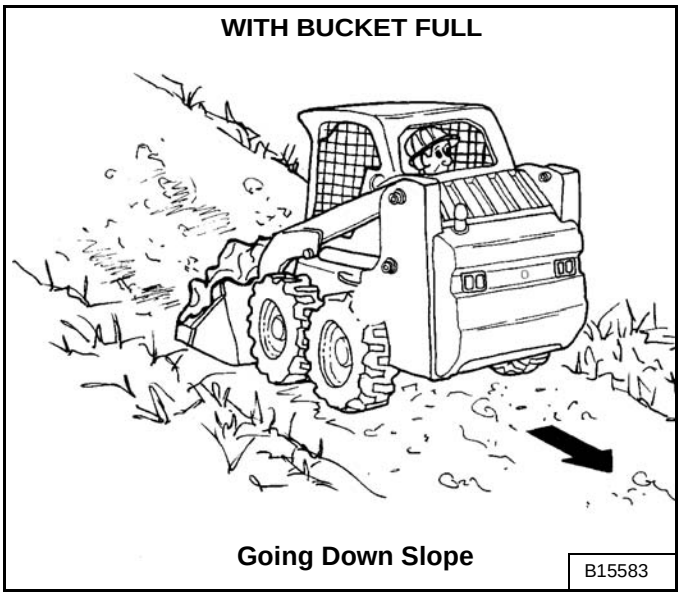


Figure OI-67



With a full bucket, go up or down the slope with the bucket (heavy end) toward the top of the slope **[Figure OI-66]** and **[Figure OI-67]**.

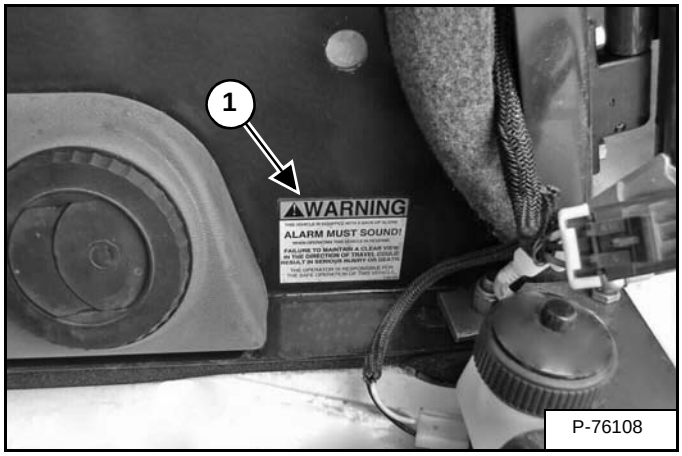
BACK-UP ALARM SYSTEM

Description

The back-up alarm will sound when the operator moves both steering levers into the reverse position. Slight movement of the steering levers into the reverse position is required with hydrostatic transmissions, before the back-up alarm will sound.

Inspecting

Figure PM-10



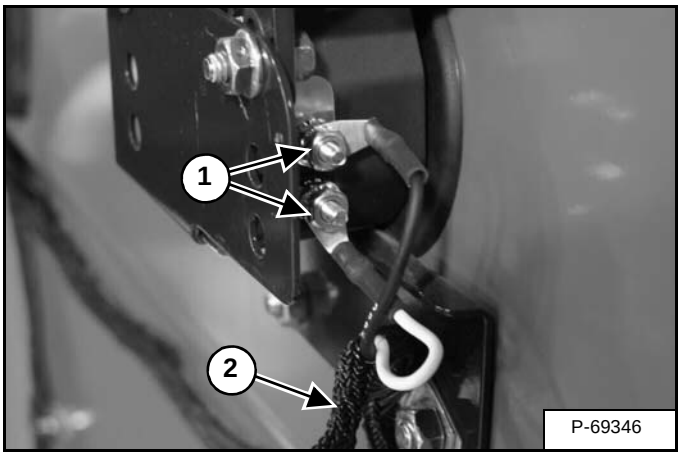
Inspect for damaged or missing back-up alarm decal (Item 1) **[Figure PM-10]**. Replace if required.

Sit in the seat and fasten the seat belt. Engage the parking brake. Pull the seat bar all the way down. Start the engine. Press the PRESS TO OPERATE LOADER button. Disengage the parking brake.

Move both steering levers into the reverse position. The back-up alarm must sound when all wheels or both tracks are moving in reverse.

The back-up alarm is located on the inside of the rear door.

Figure PM-11



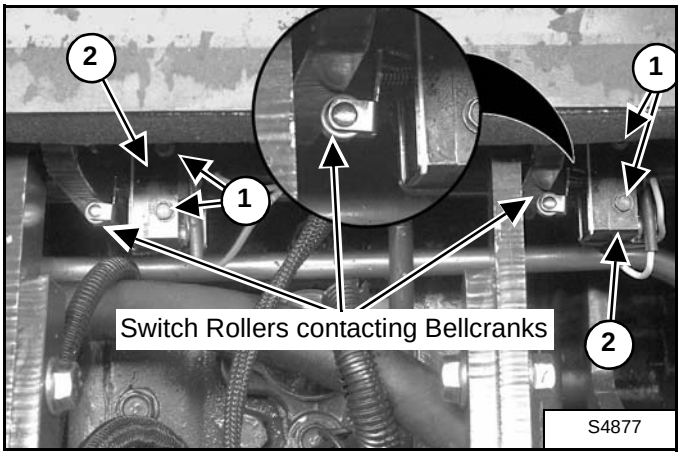
Inspect the back-up alarm electrical connections (Item 1) **[Figure PM-11]**, wire harness (Item 2) **[Figure PM-11]** and back-up alarm switches (if equipped) (Item 2) **[Figure PM-12]** for tightness and damage. Repair or replace any damaged components.

If the back-up alarm switches require adjustment, (See Adjusting Switch Position on Page PM-13.)

Adjusting Switch Position

Stop the engine and raise the operator cab. (See Raising on Page PM-14.)

Figure PM-12



Place the steering levers in the neutral position.

Loosen the screws (Item 1) **[Figure PM-12]** securing the back-up alarm switches.

Position the back-up alarm switch rollers so that they just make contact with bellcranks without compressing the switch springs **[Figure PM-12]**. Torque the screws (Item 1) **[Figure PM-12]** securing the switches to the bracket to 14 - 19 in.-lb. (1,6 - 2,1 N•m).

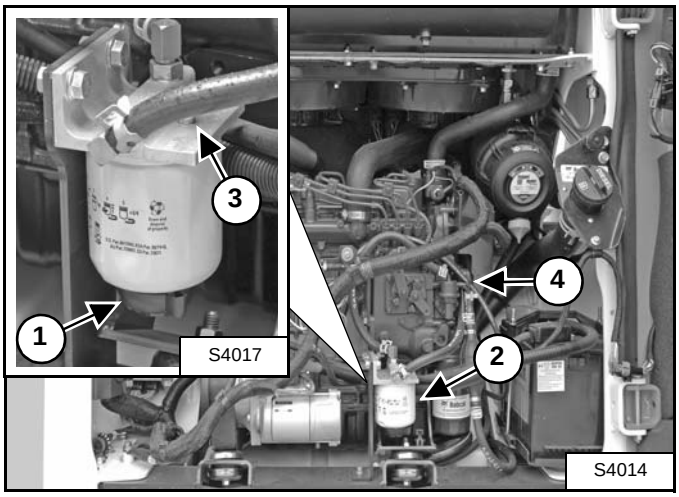
Lower the operator cab (See Lowering on Page PM-15.) and inspect back-up alarm system for proper function. (See Inspecting on Page PM-13.)

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-34



Loosen the drain (Item 1) **[Figure PM-34]** at the bottom of the filter element to remove water from the filter.

Replacing Element

Remove the filter element (Item 2) **[Figure PM-34]**.

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 on Page PM-23.)

⚠ 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

Removing Air From The Fuel System

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.

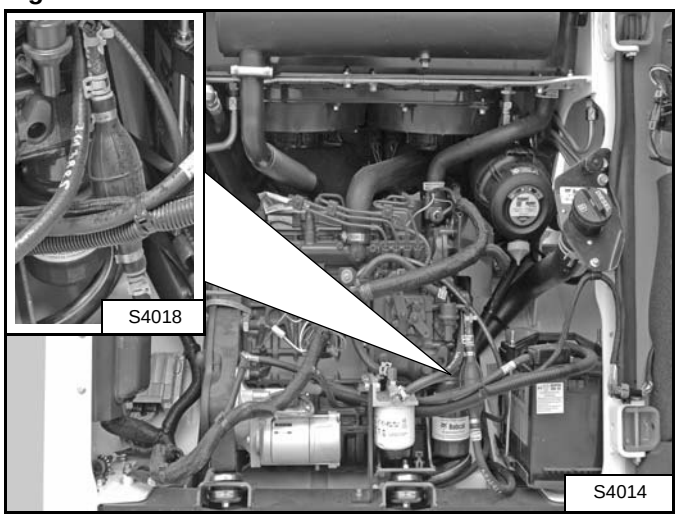
⚠ WARNING

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

Figure PM-35



Open the vent (Item 3) **[Figure PM-34]** on the fuel filter housing.

Squeeze the hand pump (priming bulb) (Inset) **[Figure PM-35]** until air bubbles do not come up any more.

Close the vent (Item 3) **[Figure PM-34]** on the fuel filter housing.

Open the vent (Item 4) **[Figure PM-34]** on the fuel injection pump.

Squeeze the hand pump (priming bulb) (Inset) **[Figure PM-35]** until air bubbles do not come up any more.

Close the vent (Item 4) **[Figure PM-34]** on the fuel injection pump.

Start the engine.

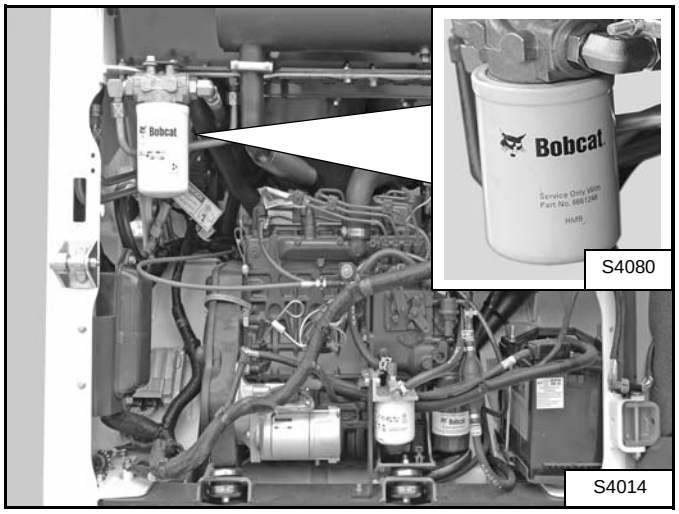
It may be necessary to open the vent plug briefly while the engine is running. Close the vent when the engine runs smoothly.

Removing And Replacing Hydraulic / Hydrostatic Filter

For the correct service interval (See SERVICE SCHEDULE on Page PM-7.)

Stop the engine and open the rear door.

Figure PM-53



Remove the filter (Inset) **[Figure PM-53]**.

Clean the surface of the filter housing where the filter seal contacts the housing.

Put clean oil on the seal of the new filter. Install and hand tighten the new filter.

⚠ 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

Close the rear door before operating the loader.

Start the engine and operate the loader hydraulic controls.

⚠ 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

Stop the engine and check for leaks at the filter.

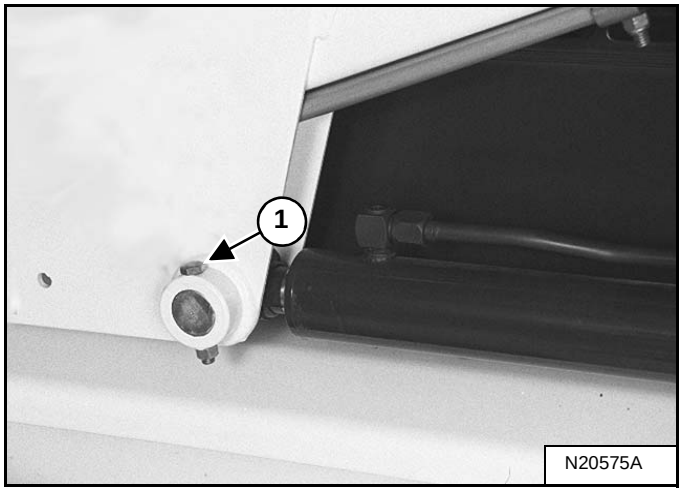
Check the fluid level in the reservoir and add as needed. (See Checking And Adding Fluid on Page PM-31.)

Close the rear door.

PIVOT PINS

Inspection And Maintenance

Figure PM-72



All lift arm and cylinder pivots have a large pin held in position with a retainer bolt and lock nut (Item 1) **[Figure PM-72]**.

Figure PM-73

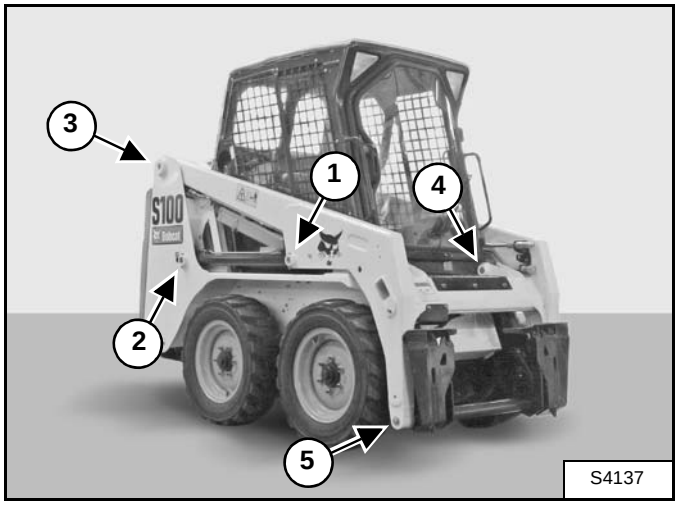
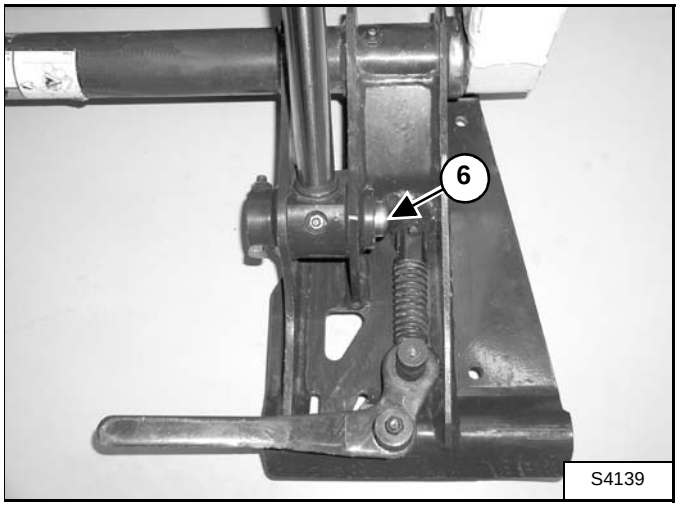


Figure PM-74



Check that the lock nuts are tightened to 35 - 40 ft.-lb. (48 - 54 N•m) torque (Both Sides) (Items 1 - 6) **[Figure PM-73]** and **[Figure PM-74]**.

Service Codes List (Cont'd)

CODE	DESCRIPTION	CODE	DESCRIPTION
M4807	Front light relay open circuit	W3223	ACS calibration required
M4902	Rear light relay error ON	W3224	ACS calibration performed
M4903	Rear light relay error OFF	W3231	Tilt actuator fault
M4907	Rear light relay open circuit	W3234	Tilt actuator not in neutral
M5002	Front light output error ON	W3235	Tilt handle / pedal not in neutral
M5003	Front light output error OFF	W3236	Lift actuator fault
M5007	Front light output open circuit	W3239	Lift actuator not in neutral
M5028	Front light output failure	W3240	Lift handle / pedal not in neutral
M5102	Rear light output error ON	W3249	Lift actuator short to ground
M5103	Rear light output error OFF	W3250	Tilt actuator short to ground
M5107	Rear light output open circuit	W3251	Lift actuator short to battery
M5128	Rear light output failure	W3252	Tilt actuator short to battery
M5202	PTOL switch error ON	W3253	Lift handle / pedal short to ground
M5221	PTOL switch out of range high	W3254	Tilt handle / pedal short to ground
M5222	PTOL switch out of range low	W3255	Lift handle / pedal short to battery
M5305	PTOL LED short to battery	W3256	Tilt handle / pedal short to battery
M5306	PTOL LED short to ground	W3257	Lift actuator reduced performance
M5405	Tilt spool lock short to battery	W3258	Tilt actuator reduced performance
M5406	Tilt spool lock short to ground	W3259	Lift actuator wrong direction
M5407	Tilt spool lock open circuit	W3260	Tilt actuator wrong direction
M5432	Tilt spool lock overcurrent	W3261	Handle lock short to ground
M6402	Switched power relay error ON	W3262	Handle lock short to battery
M6403	Switched power relay error OFF	W3263	Pedal lock short to ground
M7002	Switched power output error ON	W3264	Pedal lock short to battery
M7003	Switched power output error OFF	W3265	Sensor supply out of range
M7007	Switched power output open circuit	W3266	Battery voltage out of range
M7028	Switched power output failure	W3267	Handle/pedal switch flipped while operating
M7304	Remote control no communication	W3275	Recovery mode error
M7423	Main controller unprogrammed	W3276	CAN joystick information error
M7504	Drive no communication	W3277	Remote control information error
M7604	Left display panel no communication	W3905	Left joystick X-axis not in neutral
M7748	Key switch multiple	W4005	Right joystick X-axis not in neutral
M7974	Door open	W4007	Right joystick Y-axis not in neutral

AVERTISSEMENT

RISQUE DE BLESSURE OU DE MORT

- Gardez la porte fermée sauf pour des opérations d'entretien.
- Débarrassez le moteur de tout matériau inflammable.
- Maintenez le corps, les objets mobiles et les vêtements à l'écart des contacts électriques, des pièces mobiles, des pièces brûlantes et de l'échappement.
- N'utilisez pas la chargeuse dans des lieux contenant des poussières ou des gaz explosifs ou avec des matériaux inflammables à proximité de l'échappement.
- N'utilisez jamais d'éther ou de liquide d'aide au démarrage sur les moteurs diesel équipés de bougies de préchauffage. Utilisez uniquement des aides au démarrage approuvées par le fabricant du moteur.
- En cas de fuite, le liquide sous pression peut pénétrer dans la peau et provoquer des blessures graves.
- Portez des lunettes de protection car l'acide contenu dans une batterie provoque des brûlures graves. En cas de contact d'acide sur les yeux, la peau ou les vêtements, rincez abondamment à l'eau. En cas de contact sur les yeux, rincez abondamment et consultez immédiatement un médecin.
- La batterie génère des gaz inflammables et explosifs. Maintenez-la à l'écart des arcs, des étincelles, des flammes et des cigarettes allumées.
- En cas de démarrage forcé, connectez le câble négatif au moteur de la chargeuse en dernier (jamais à la batterie). Après un démarrage forcé, retirez en premier la connexion négative au moteur.
- Les gaz d'échappement peuvent être mortels. Veillez à toujours aérer la zone.

LISTE DE CONTRÔLE ET PÉRIODICITÉ DES ENTRETIENS

TOUTES LES 10 H (AVANT DE DÉMARRER LA CHARGEUSE)

▲■ • **HUILE ET FILTRE MOTEUR** - Vérifiez le niveau et faites l'appoint si nécessaire. Ne dépassez pas le niveau indiqué. Changez l'huile et le filtre après les 50 premières heures, puis consultez le manuel d'utilisation et d'entretien pour connaître la périodicité de changement d'huile pour votre modèle.

■ • **FILTRES À AIR DU MOTEUR** - Vérifiez l'indicateur d'état et/ou l'affichage. N'effectuez que l'entretien nécessaire. N'utilisez pas d'air comprimé pour nettoyer les éléments.

• **CIRCUIT DE VENTILATION DU MOTEUR** - Vérifiez l'étanchéité et l'état des éléments.

■ • **CIRCUIT DE REFROIDISSEMENT DU MOTEUR** - Ôtez les débris de la grille, du refroidisseur d'huile et du radiateur. Vérifiez le niveau du liquide de refroidissement à froid; faites l'appoint au besoin.

• **FILTRE D'ALIMENTATION** - Retirez l'eau piégée.

• **BRAS DE LEVAGE DE LA CHARGEUSE, ARTICULATIONS DE LEVAGE, VÉRINS, PIVOT ET CALES DU BOB-TACH, VÉRINS DE DIRECTION** (machines à roues directrices uniquement) - Graissez avec une graisse à base de lithium.

• **CEINTURE DE SÉCURITÉ, ARCEAU DE SIÈGE ET VERROUILLAGE DES COMMANDES** - Vérifiez le bon fonctionnement. Réparez ou remplacez-les au besoin. Éliminez toute trace de saleté ou tout débris des pièces mobiles.

• **BICS** - Vérifiez son bon fonctionnement. Éliminez les saletés et les débris des pièces mobiles. Les fonctions de levage et de cavage NE DOIVENT PAS fonctionner lorsque l'arceau de siège est relevé.

• **PNEUS** - Vérifiez la pression. Gonflez à la pression MAXIMALE indiquée sur la paroi du pneu.

• **GÉNÉRAL** - Contrôlez toute pièce desserrée ou endommagée, le bon état de la cabine de l'opérateur, le fonctionnement des instruments, le serrage des écrous de roues ou des écrous de galets de chenilles, les tuites d'huile, les autocollants abîmés ou manquants.

TOUTES LES 50 H

■ • **HUILE HYDRAULIQUE, FLEXIBLES ET CONDUITES** - Vérifiez le niveau d'huile et faites l'appoint le cas échéant. Vérifiez la présence de dégât ou de fuite. Effectuez les réparations ou les remplacements requis.

■ • **TRANSMISSION FINALE (CARTER DE CHAÎNE,** machines sur roues uniquement) - Vérifiez le niveau du fluide et faites l'appoint si nécessaire.

• **COMMANDES HYDRAULIQUES ET DE DIRECTION (PÉDALES, POIGNÉE et/ou MANIPULATEUR)** - Vérifiez leur bon fonctionnement. Effectuez les réglages nécessaires.

• **ÉCROUS DE ROUES / BARBOTINS D'ENTRAÎNEMENT FINAL** - Vérifiez le serrage des écrous, resserrez-les si nécessaire.

• **TENSION DES CHENILLES** (machines à chenilles uniquement) - Vérifiez la tension et effectuez les réglages nécessaires.

TOUTES LES 100 H

• **SILENCIEUX PARE-ÉTINCELLES** - Videz la chambre à étincelles (le cas échéant).

• **BATTERIE** - Vérifiez l'état de la batterie, des brides de fixations, des câbles, des connexions et le niveau d'électrolyte. Ajoutez de l'eau distillée si nécessaire.

• **CHAÎNE CINÉMATIQUE** - Graissez le raccord moteur/pompe avec de la graisse multi-usages à base de lithium. (le cas échéant)

TOUTES LES 250 H

■ • **PIVOTS DES LEVIER DE DIRECTION** - Graissez avec de la graisse multi-usages à base de lithium (le cas échéant).

■ • **FILTRE D'ALIMENTATION** - Remplacez le filtre.

• **AXES DE FUSÉES** (machines à roues directrices uniquement) - Graissez avec de la graisse multi-usages à base de lithium.

▲ • **COURROIE D'ENTRAÎNEMENT MOTEUR / HYDRAULIQUE** - Vérifiez que la courroie n'est ni usée ni détériorée. Effectuez les réglages ou les remplacements requis (le cas échéant).

■ • **BOÎTE À ENGRENAGES DU VENTILATEUR** - Vérifiez le niveau d'huile et faites l'appoint si nécessaire (le cas échéant).

• **AUTRES COURROIES D'ENTRAÎNEMENT** (pompe hydrostatique, pompe à eau, alternateur et climatiseur - le cas échéant) - Vérifiez l'état et la tension. Effectuez les réglages ou les remplacements requis.

• **BICS** - Vérifiez le bon fonctionnement de la commande de dérivation des bras de levage.

TOUTES LES 500 H

*■ • **VENTILATEUR / CIRCUIT HYDROSTATIQUE / HYDRAULIQUE** - Remplacez le filtre. Remplacez le bouchon reniflard du réservoir.

■ • **FILTRE INTÉGRÉ DU CLAPET DE DIRECTION** (modèles à roues directrices uniquement) - Remplacez le filtre.

■ • **PORTE-MOTEUR HYDROSTATIQUE** (machines sur chenilles uniquement) - Remplacez l'huile.

TOUTES LES 1000 H

■ • **RÉSERVOIR HYDRAULIQUE** - Remplacez le fluide.

■ • **TRANSMISSION FINALE** (carter de chaînes, machines sur roues uniquement) - Remplacez l'huile.

■ • **ENSEMBLES GALETS DE CHENILLE/ROUE DE TENSION** (machines sur chenilles uniquement) - Remplacez le fluide (si nécessaire).

▲■ • **FILTRE DE RETOUR DE CARTER DU MOTEUR D'ENTRAÎNEMENT** - Remplacez le filtre (le cas échéant).

■ • **ROULEMENT DE ROUES ET CANNELURES MÂLES** (modèles à roues directrices uniquement) - Graissez à plein les roulements de roues, graissez les cannelures femelles de la fourche (entretien par le concessionnaire uniquement).

REMARQUES :

★ remplacez l'élément plus tôt si le témoin d'avertissement de la transmission reste allumé pendant plus de 5 minutes une fois que l'huile hydraulique a atteint la température de fonctionnement.

▲ Effectuez l'entretien après 50 heures, puis selon le tableau.

■ Consultez le manuel d'utilisation et d'entretien pour les spécifications sur les fluides, le numéro de pièce et l'emplacement du filtre, et la périodicité d'entretien appropriée pour votre modèle.

CONSULTEZ LE MANUEL D'UTILISATION ET D'ENTRETIEN POUR DES INSTRUCTIONS ET DES INFORMATIONS SUPPLÉMENTAIRES.

SCHÉMAS GÉNÉRAUX DE GRAISSAGE

LEVAGE EN ARC DE CERCLE

LEVAGE VERTICAL

● POINTS DE GRAISSAGE TYPIQUES

BE PARTS & SERVICE SMART

Utilisez des pièces de rechange Bobcat d'origine

73094 SW

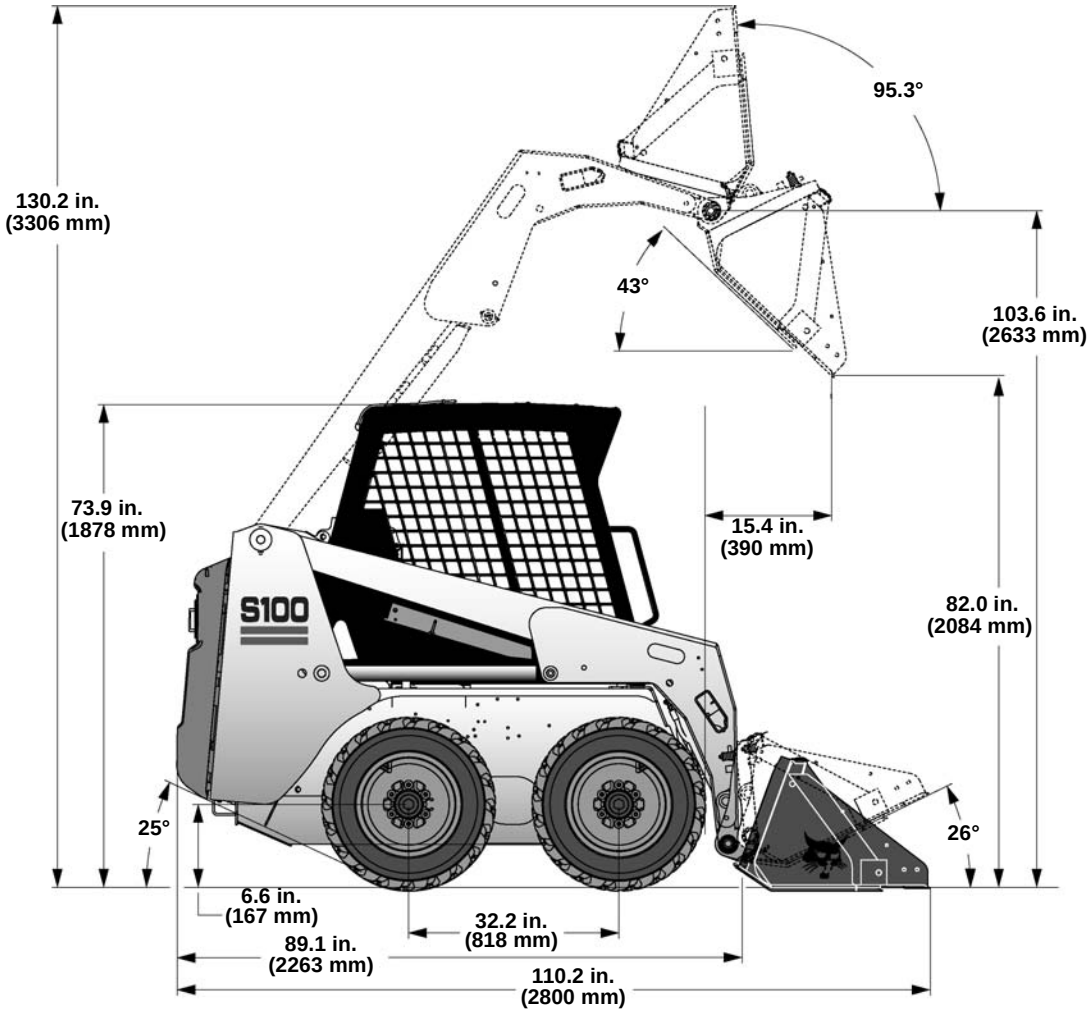
6734534E frCA

(S100) LOADER SPECIFICATIONS

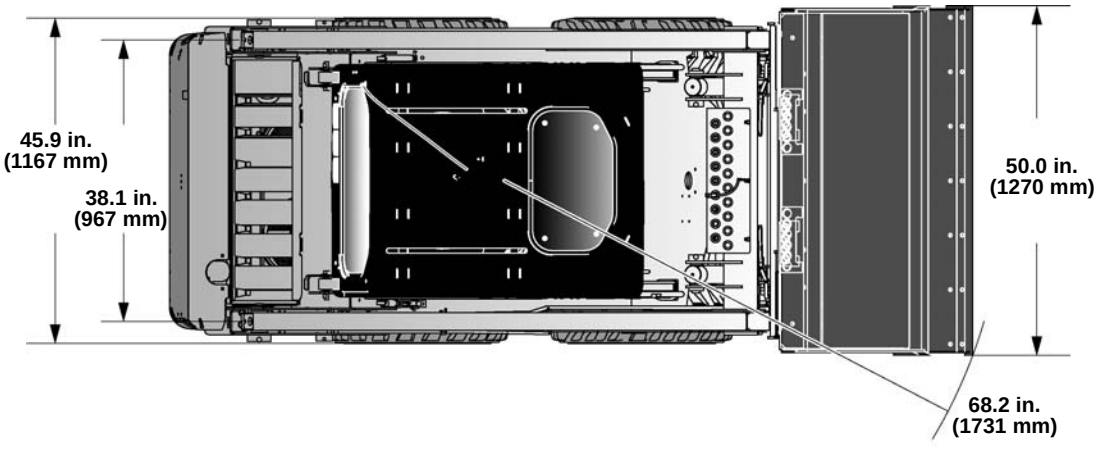
Machine Dimensions

- Dimensions are given for loader equipped with standard tires and 50 inch Dirt bucket and may vary with other bucket types. All dimensions are shown in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.

- Where applicable, specifications conform to SAE or ISO standards and are subject to change without notice.



S0114A

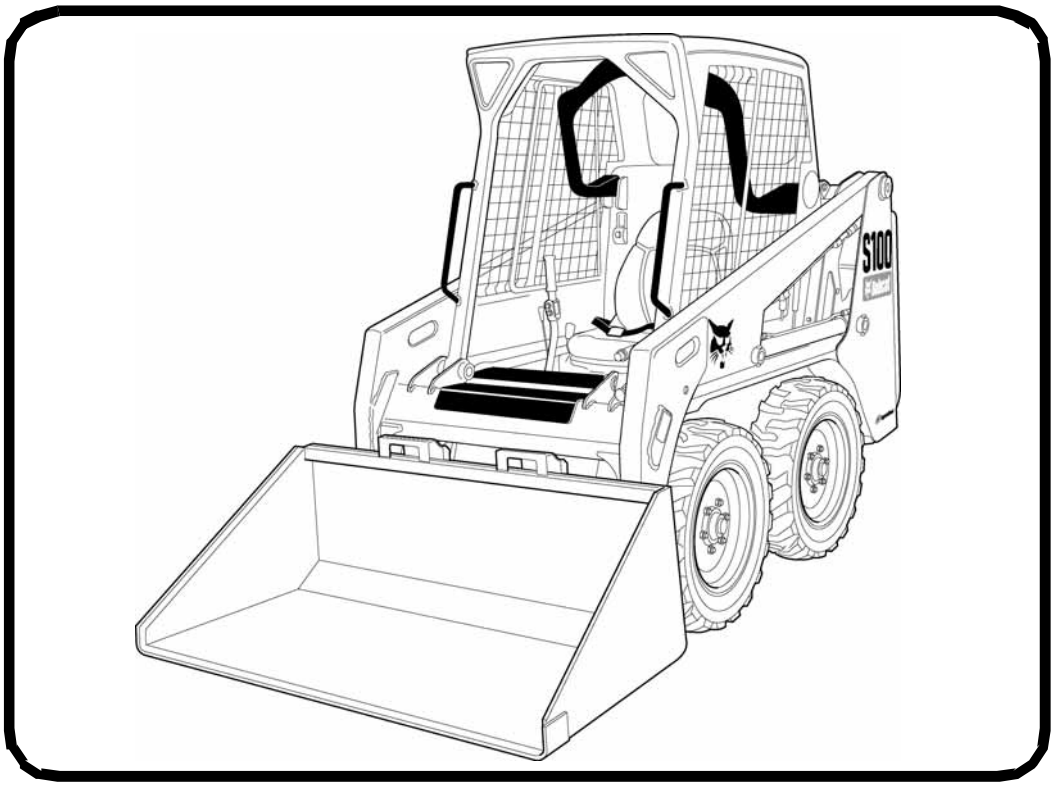


S0129A

Changes of structure or weight distribution of the loader can cause changes in control and steering response and can cause failure of the loader parts.

Operation & Maintenance Manual
S100 Skid-Steer Loader

S/N AB6420001 & Above

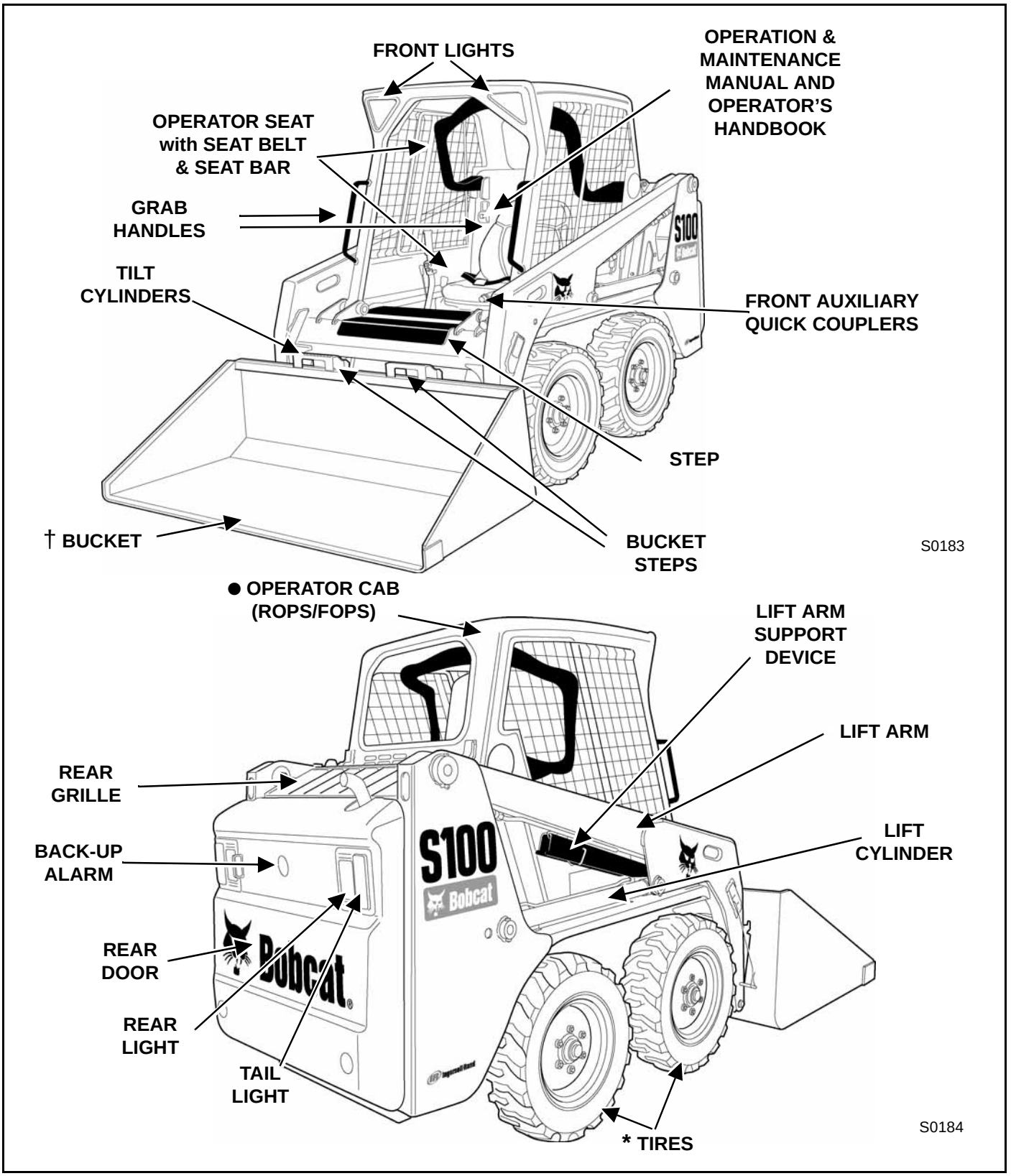


EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)

6987370 (3-10) Revised (11-10) (6)

Printed in U.S.A.

LOADER IDENTIFICATION



***** 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 - Many Buckets and other Attachments are available.


Bobcat®

INSTRUMENT PANEL IDENTIFICATION (CONT'D)

Left Panel (Cont'd)

REF. NO.	DESCRIPTION	FUNCTION / OPERATION
1	ENGINE TEMPERATURE GAUGE	Shows the engine coolant temperature.
2	LEFT DIRECTION INDICATOR (Option)	Indicates left turn signals are ON.
3	GENERAL WARNING	Malfunction with one or more machine functions. (See Service Codes*)
4	TWO-SPEED (Option)	High range selected. (Available with SJC controls only)
5	ENGINE MALFUNCTION	Engine malfunction or failure. (See Service Codes*)
6	ENGINE COOLANT TEMPERATURE	Engine coolant temperature high or sensor error.
7	DISPLAY SCREEN	Displays information. (See Display Screen in this manual.)
8	SEAT BELT	Instructs operator to fasten seat belt. Remains lit for 45 seconds.
9	SEAT BAR	The light comes on when the seat bar is UP.
10	LIFT & TILT VALVE	The light comes on when the lift and tilt functions cannot be operated.
11	PARKING BRAKE	The light comes on when the loader cannot be driven.
12	RIGHT DIRECTION INDICATOR (Option)	Indicates right turn signals are ON.
13	SHOULDER BELT	Not used.
14	HYDRAULIC SYSTEM MALFUNCTION	Hydraulic system malfunction or failure. (See Service Codes*)
15	FUEL	Fuel level low or sensor error.
16	FUEL GAUGE	Shows the amount of fuel in the tank.
17	LIGHTS	Press once for FRONT work lights and REAR taillights. (Left green LED will light.) Press a second time to add REAR work lights. (Left and right green LEDs will light.) Press a third time to turn all lights off. (Left and right green LEDs will be off.) Press and hold five seconds to display software version in display screen.
18	HIGH-FLOW	Not used.
19	AUXILIARY HYDRAULICS	Press once to engage the auxiliary hydraulics. (left green LED will light.) Press a second time to disengage.
20	INFORMATION	Cycles through (after each button press): • Hourmeter (On start up) • Engine rpm • Battery voltage • Maintenance clock (Press and hold for seven seconds when displayed to reset the maintenance clock.) • Service codes*
21	TRACTION LOCK OVERRIDE	Functions only when the seat bar is raised and the engine is running. Press once to unlock the brakes. Allows you to use the steering levers or joystick(s) to move the loader forward or backward when using the backhoe attachment. (See TRACTION LOCK OVERRIDE in this manual.) Press a second time to lock the brakes.
22	PRESS TO OPERATE LOADER	Press to activate the BICS™ when the seat bar is down and operator is seated in operating position. Button will light. Press and hold **three seconds** to engage Drive Response and Steering Drift Compensation. (See DRIVE RESPONSE and STEERING DRIFT COMPENSATION in this manual.)
23	ALARM	The alarm beeps when Error, Warning or Shutdown conditions exist.

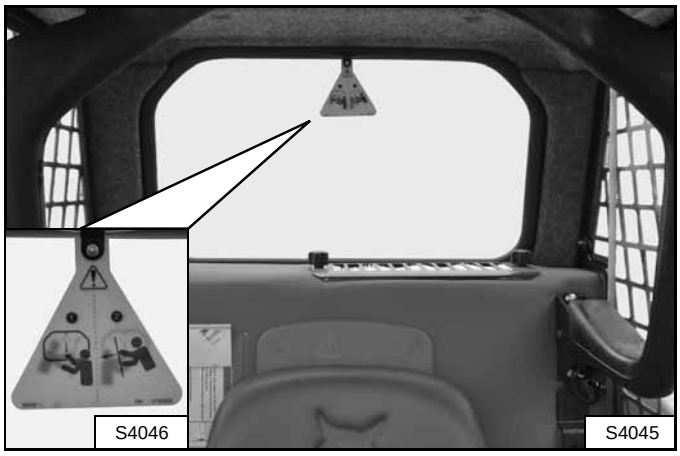
* See SYSTEM SETUP & ANALYSIS for Service Code description. (See DIAGNOSTIC SERVICE CODES on Page SA-3.)

EMERGENCY EXIT

The front opening on the operator cab and rear window provide exits.

Rear Window

Figure OI-21



Pull the tag on the top of the rear window to remove the rubber cord **[Figure OI-21]**.

Push the rear window out of the rear of the operator cab.

Figure OI-22

Exit through the rear of the operator cab **[Figure OI-22]**.

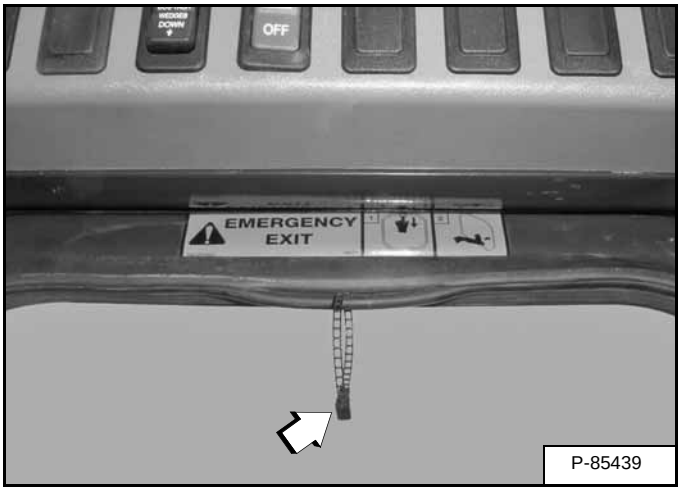
Front Door

This machine may be equipped with a front door.

NOTE: When an Operator Cab Enclosure Kit is installed, the window of the front door can be used as an emergency exit [Figure OI-23].

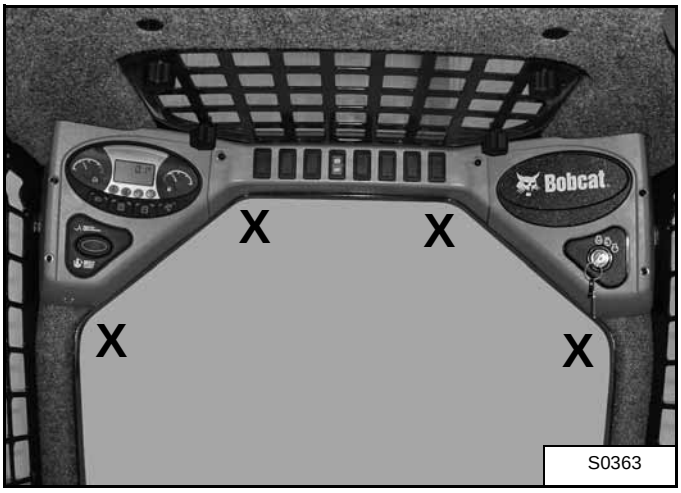
NOTE: If the loader has a Special Application Door Kit installed, the window of the front door is NOT an emergency exit.

Figure OI-23



Pull the plastic loop at the top of the window in the front door to remove the rubber cord **[Figure OI-23]**.

Figure OI-24



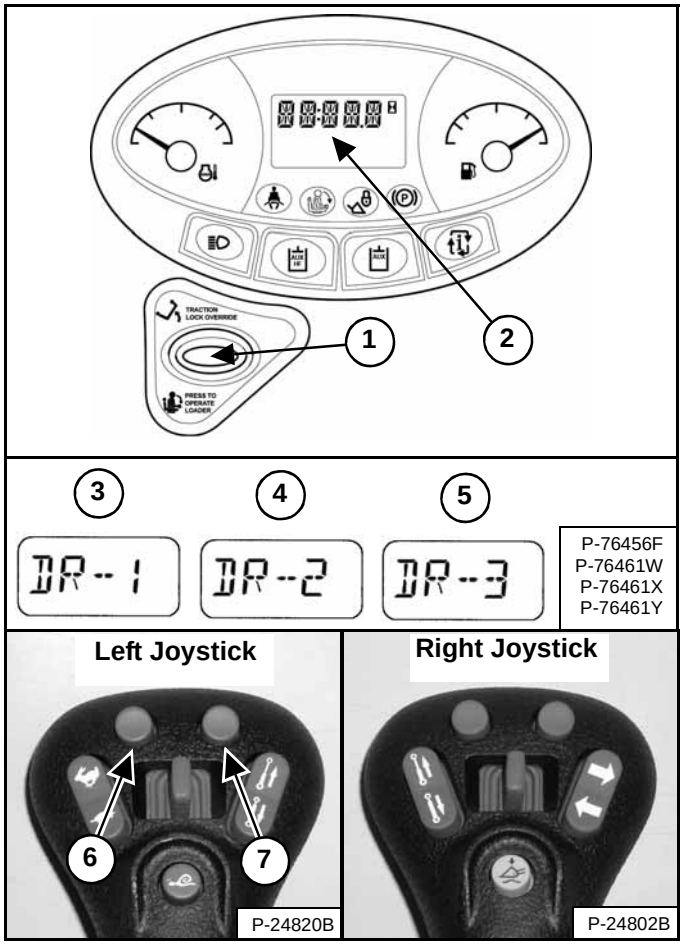
Push the window out with your foot at any corner of the window **[Figure OI-24]**.

Exit through the front door.

DRIVE RESPONSE (CONT'D)

Operation (Cont'd)

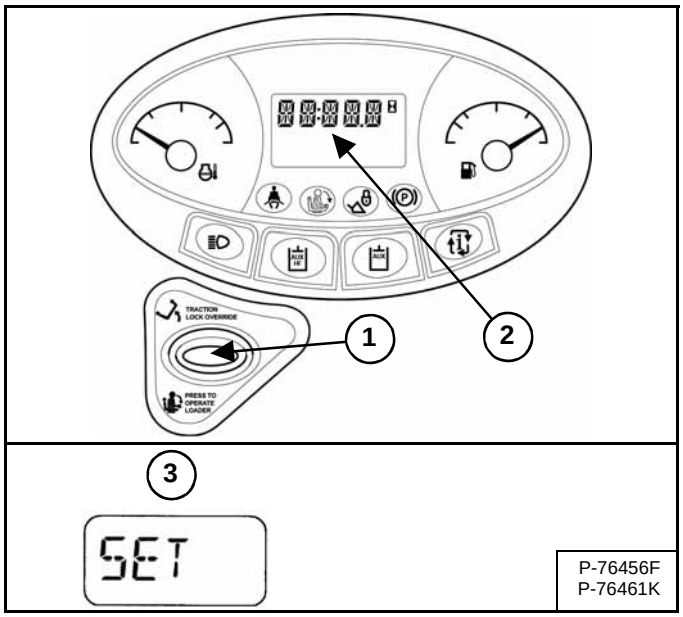
Figure OI-42



Press and hold the PRESS TO OPERATE LOADER button (Item 1) for **three seconds** to adjust the loader drive response setting. The current drive response setting will appear in the data display (Item 2) **[Figure OI-42]**.

Press the upper left button (Item 6) on the left joystick to scroll down through the three settings. Press the upper right button (Item 7) on the left joystick to scroll up through the three drive response settings. The new drive response setting (Item 3, 4 or 5) will appear in the data display (Item 2) **[Figure OI-42]**. Adjustments to drive response will be effective immediately.

Figure OI-43



Saving The Drive Response Setting:

The current drive response setting can be saved by pressing and holding the PRESS TO OPERATE LOADER button (Item 1) for **three seconds**. **[SET]** (Item 3) will appear in the data display (Item 2) **[Figure OI-43]** and the machine will exit from the drive response adjustment menu.

OR

Press the PRESS TO OPERATE LOADER button to exit from the drive response adjustment menu without saving the current setting.

The current steering drift compensation setting (See STEERING DRIFT COMPENSATION on Page OI-28.) will appear in the data display (Item 2) **[Figure OI-43]** and the upper left and upper right buttons on the left joystick will no longer make changes to drive response.

NOTE: The last displayed drive response setting will remain in effect until the STOP button is pressed or the key is turned OFF. The machine will revert back to the last saved drive response setting the next time it is started.

Adjustments to steering drift compensation can now be made (See STEERING DRIFT COMPENSATION on Page OI-28.)

OR

Press the PRESS TO OPERATE LOADER button again to exit from the steering drift compensation menu.

Figure OI-68

⚠ WARNING

AVOID INJURY OR DEATH

- Keep door closed except for service.
- Keep engine clean of flammable material.
- Keep body, loose objects and clothing away from electrical contacts, moving parts, hot parts and exhaust.
- Do not use loader in space with explosive dusts or gases or with flammable material near exhaust.
- Never use ether or starting fluid on diesel engine with glow plugs. Use only starting aids as approved by engine manufacturer.
- Leaking fluids under pressure can enter skin and cause serious injury.
- Battery acid causes severe burns; wear goggles. If acid contacts eyes, skin, or clothing, flush with water. For contact with eyes, flush and get medical attention.
- Battery makes flammable and explosive gas. Keep arcs, sparks, flames and lighted tobacco away.
- For jump start, connect negative cable to loader engine last (never at the battery). After jump start, remove negative connection at the engine first.
- Exhaust gases can kill. Always ventilate.

SERVICE CHECKLIST AND SCHEDULE

EVERY 10 HRS (BEFORE STARTING THE LOADER)

▲■ • **ENGINE OIL & FILTER** - Check level and add as needed. Do not overfill. Change oil and filter after first 50 Hrs, then refer to Operation & Maintenance Manual for proper change interval for your Model.

■ • **ENGINE AIR FILTER** - Check condition indicator and/ or display. Service only when required. Do not use compressed air to clean elements.

• **ENGINE AIR SYSTEM** - Check for leaks and damaged components.

■ • **ENGINE COOLING SYSTEM** - Clean debris from grill, oil cooler and radiator. Check coolant level cold; add coolant mixture if required.

• **FUEL FILTER** - Remove trapped water.

• **LOADER LIFT ARMS, LIFT LINKS, CYLINDERS, BOB-TACH PIVOT & WEDGES, STEERING CYLINDERS (AWS Machines Only)** - Lubricate with multipurpose lithium based grease.

• **SEAT BELT, SEAT BAR AND CONTROL INTERLOCKS** - Check function. Repair or replace as needed. Clean dirt and debris from moving parts.

• **BICS** - Check for correct function. Clean dirt and debris from moving parts. Lift and Tilt functions MUST NOT operate with seat bar raised.

• **TIRES** - Check air pressure. Inflate to MAXIMUM pressure shown on sidewall of tire.

• **GENERAL** - Check for loose or broken parts, damaged operator cab, instrument operation, loose wheel nuts or track sprocket nuts, oil leaks, damaged or missing safety signs (decals).

EVERY 50 HRS

■ • **HYDRAULIC FLUID, HOSES AND TUBELINES** - Check fluid level and add if required. Check for damage and for leaks. Repair or replace as needed.

■ • **FINAL DRIVE TRANSMISSION (CHAINCASE, Wheel Machines Only)** - Check fluid level and add if required.

• **HYDRAULIC & STEERING CONTROLS (PEDALS, HAND, and/ or JOYSTICK)** - Check for correct operation. Adjust as needed.

• **WHEEL NUTS / TRACK DRIVE SPROCKETS** - Check for loose nuts and tighten as needed.

• **TRACK TENSION (Track Machines Only)** - Check tension and adjust as needed.

EVERY 100 HRS

• **SPARK ARRESTOR MUFFLER** - Empty spark chamber. (If equipped.)

• **BATTERY** - Check battery for damage, hold down clamps, cables, connections and electrolyte level. Add distilled water as needed.

• **DRIVE LINE** - Lubricate Engine-to-Pump Coupler with multipurpose lithium based grease. (If equipped.)

EVERY 250 HRS

• **STEERING LEVER PIVOTS** - Lubricate with multipurpose lithium based grease. (If equipped.)

■ • **FUEL FILTER** - Replace filter.

• **KING PINS (AWS Machines Only)** - Lubricate with multipurpose lithium based grease.

▲ • **ENGINE / HYDRAULIC DRIVE BELT** - Check for wear or damage. Adjust or replace as needed. (If equipped.)

■ • **FAN DRIVE GEARBOX** - Check fluid level and add if required. (If equipped.)

• **OTHER DRIVE BELTS (Hydrostatic pump, water pump, alternator, and air conditioner - if equipped.)** - Check condition and tension. Adjust or replace as needed.

• **BICS** - Check function of Lift Arm By-Pass control.

EVERY 500 HRS

★■ • **FAN / HYDRAULIC / HYDROSTATIC SYSTEM** - Replace filter. Replace reservoir breather cap.

■ • **STEERING VALVE INLINE FILTER (AWS Only)** - Replace filter.

■ • **HYDROSTATIC MOTOR CARRIER (Track Machines Only)** - Replace oil.

EVERY 1000 HRS

■ • **HYDRAULIC RESERVOIR** - Replace fluid.

■ • **FINAL DRIVE TRANSMISSION (Chaincase on Wheel Machines Only)** - Replace fluid.

■ • **TRACK ROLLER, IDLER ASSEMBLIES (Track Machines Only)** - Replace fluid (If required).

▲■ • **DRIVE MOTOR CASE DRAIN FILTER** - Replace filter (If equipped.)

■ • **WHEEL BEARING & OUTER SPLINES (AWS only)** - Repack wheel bearings, grease internal splines in hub yoke. (Dealer Service Only)

NOTES:

★ Replace element sooner if transmission warning indicator remains on for more than 5 minutes after hydraulic fluid is at operating temperature.

▲ Service at first 50 Hours, then as scheduled.

■ See Operation & Maintenance Manual for correct fluid specifications, filter part number and location, and appropriate service interval for your Model.

SEE OPERATION & MAINTENANCE MANUAL FOR MORE INFORMATION AND INSTRUCTIONS.

GENERAL LUBRICATION DIAGRAMS

RADIUS PATH MACHINE

VERTICAL PATH MACHINE

● TYPICAL GREASE POINTS

USE PARTS & SERVICE SMART

Use Genuine Bobcat Replacement Parts

73094 SW

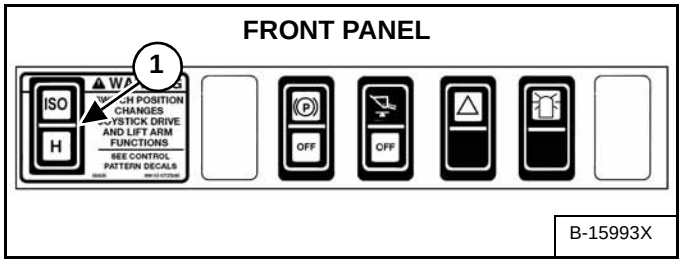
6734534E enUS

6734534-V

Deluxe Instrumentation Panel (Cont'd)

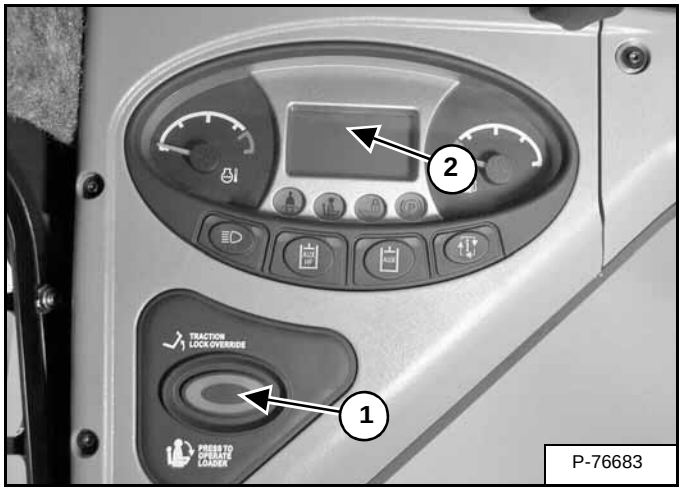
NOTE: Make sure both joysticks (SJC) are in the neutral position before starting the engine. Do not move the joysticks from the neutral position when pressing the RUN / ENTER or START buttons with the BICS activated.

Figure OI-90



(SJC) Select 'ISO' or 'H' Control Pattern (Item 1) **[Figure OI-90]**.

Figure OI-91



Press the PRESS TO OPERATE LOADER button (Item 1) **[Figure OI-91]** 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 OI-91]** 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

Operating With A Full Bucket

Figure OI-104

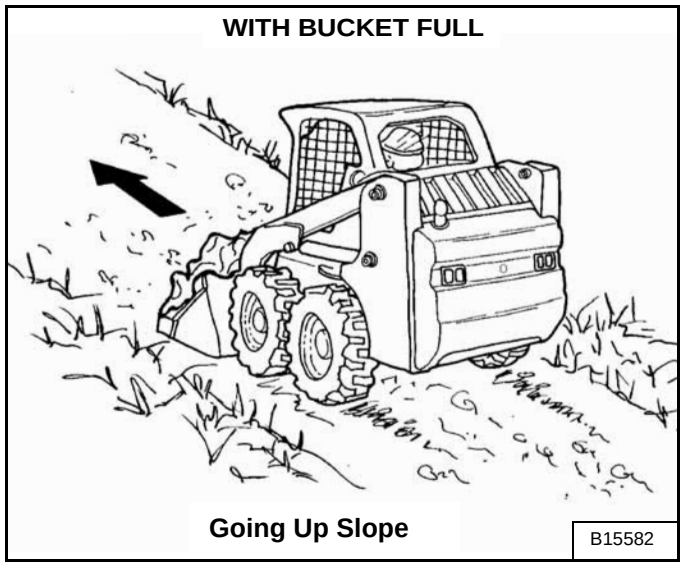
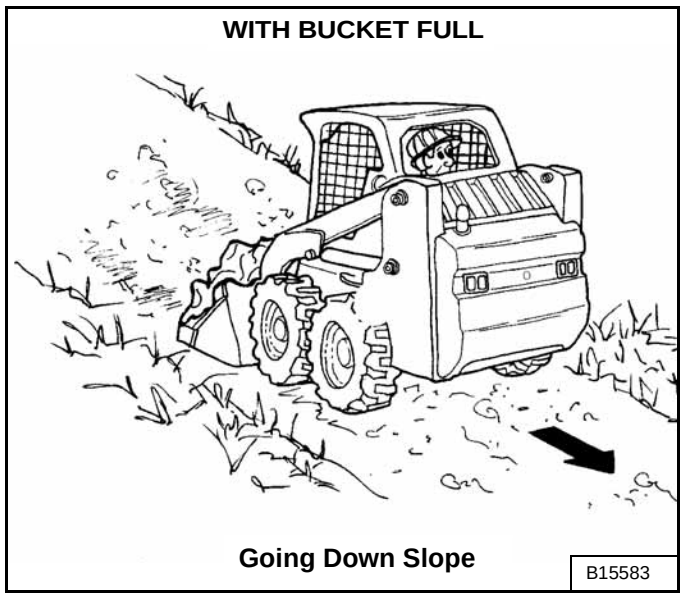


Figure OI-105



With a full bucket, go up or down the slope with the bucket (heavy end) toward the top of the slope **[Figure OI-104]** and **[Figure OI-105]**.

Operating With An Empty Bucket

Figure OI-106

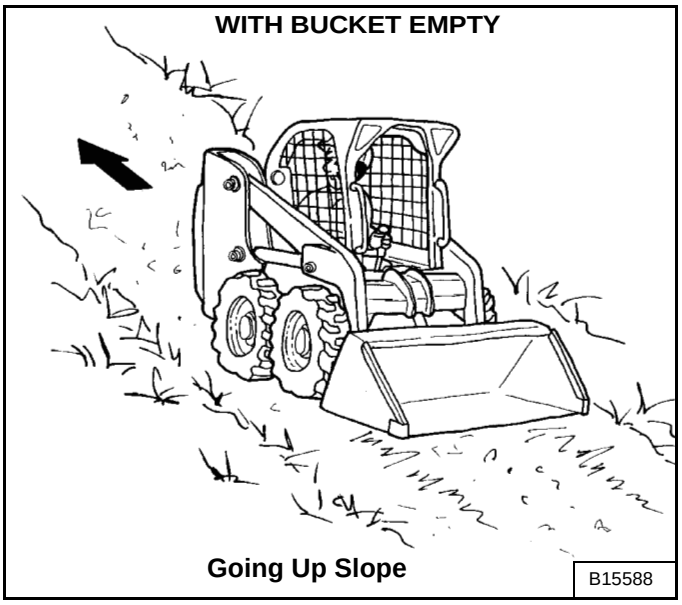
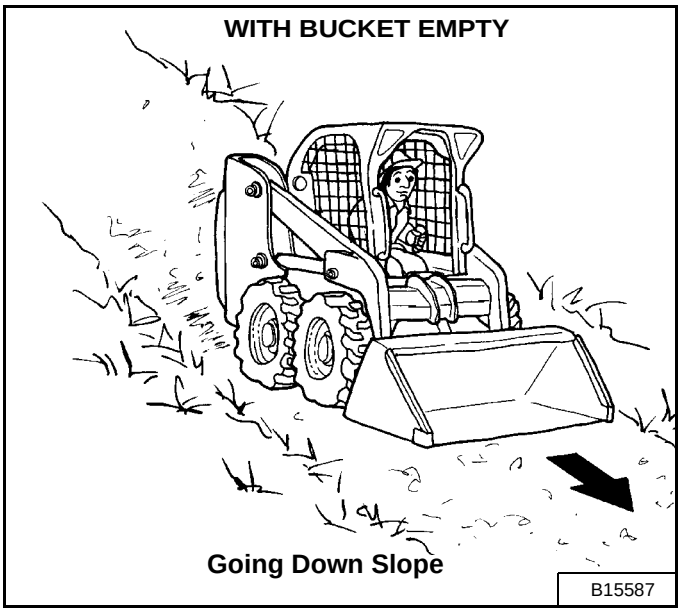


Figure OI-107



With an empty bucket, go up or down the slope with the back of the loader (heavy end) toward the top of the slope **[Figure OI-106]** and **[Figure OI-107]**.

Raise the bucket only high enough to avoid obstructions on rough ground.

PREVENTIVE MAINTENANCE

Continued On Next Page

SEAT BELT

Inspection And Maintenance

WARNING

Failure to properly inspect and maintain the seat belt can cause lack of operator restraint resulting in serious injury or death.

W-2466-0703

Check the seat belt daily for correct function.

Inspect the seat belt system thoroughly at least once each year or more often if the machine is exposed to severe environmental conditions or applications.

Any seat belt system that shows cuts, fraying, extreme or unusual wear, significant discolorations due to ultraviolet UV exposure, dusty / dirty conditions, abrasion to the seat belt webbing, or damage to the buckle, latch plate, retractor (if equipped), hardware or any other obvious problem should be replaced immediately.

The items below are referenced in **[Figure PM-4]**.

1. Check the webbing. If the system is equipped with a retractor, pull the webbing completely out and inspect the full length of the webbing. Look for cuts, wear, fraying, dirt and stiffness.

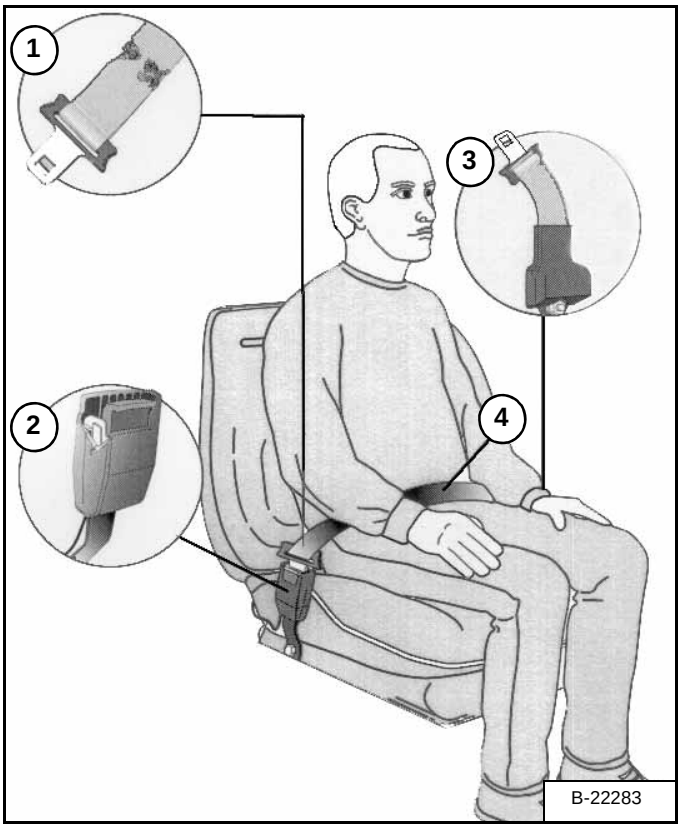
2. Check the buckle and latch for correct operation. Make sure latch plate is not excessively worn, deformed or buckle is not damaged or casing broken.

3. Check the retractor web storage device (if equipped) by extending webbing to determine if it looks correct and that it spools out and retracts webbing correctly.

4. Check webbing in areas exposed to ultraviolet (UV) rays from the sun or extreme dust or dirt. If the original color of the webbing in these areas is extremely faded and / or the webbing is packed with dirt, the webbing strength may have deteriorated.

See your Bobcat dealer for seat belt system replacement parts for your machine.

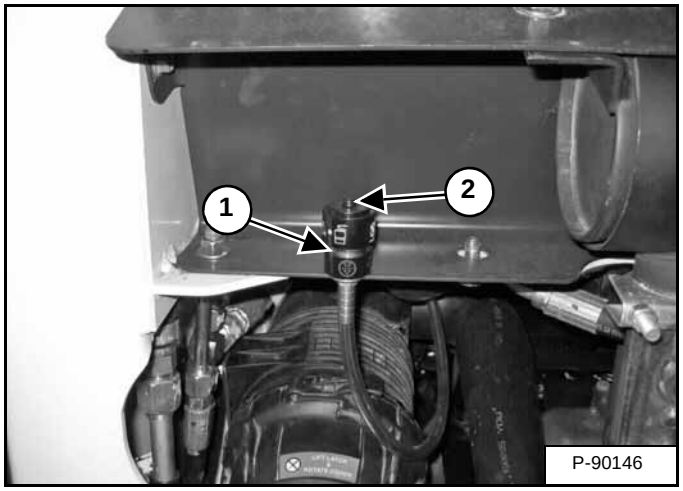
Figure PM-4



AIR CLEANER SERVICE

Replacing Filter Elements

Figure PM-29

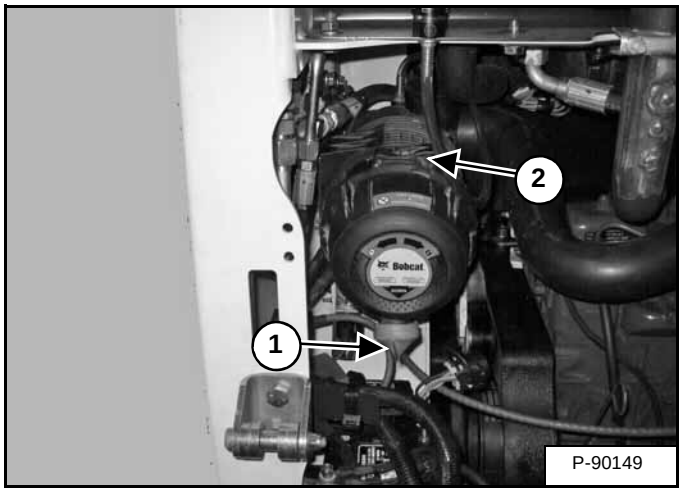


Replace the large (outer) filter element only when the red ring shows in the window of the condition indicator (Item 1) **[Figure PM-29]**.

NOTE: Before replacing the filter element, push the button on the condition indicator (Item 2) [Figure PM-29]. Start the engine. If the red ring does not show, do not replace the filter element.

Outer Filter

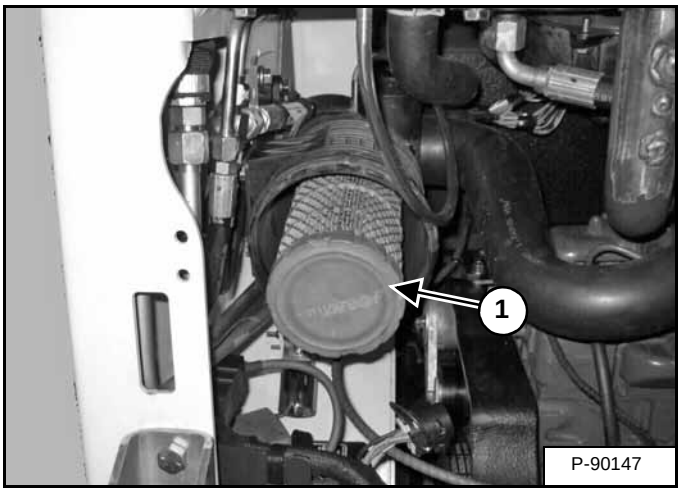
Figure PM-30



Open the evacuator valve (Item 1) **[Figure PM-30]** to get rid of large particles of dust and dirt.

Remove the dust cover by lifting the lever (Item 2) **[Figure PM-30]** and rotating the dust cover.

Figure PM-31



Pull the outer element (Item 1) **[Figure PM-31]** straight out.

Install a new outer element.

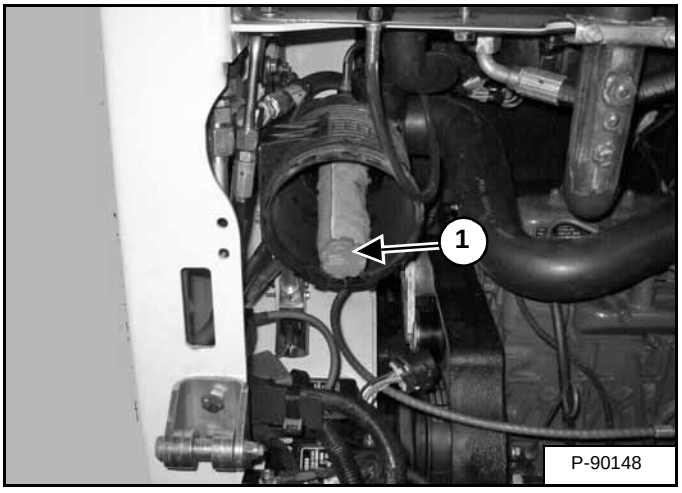
Install the dust cover.

Check the air intake hose and the air cleaner housing for damage. Make sure all connections are tight.

Inner Filter

Replace the inner filter every third time the outer filter is replaced or when the red ring still shows in the indicator window after the outer filter has been replaced.

Figure PM-32



Remove the inner filter (Item 1) **[Figure PM-32]**.

NOTE: Make sure all sealing surfaces are free of dirt and debris.

Install a new inner element.

Install the outer element and the dust cover.

Removing And Installing Battery

⚠ WARNING

AVOID INJURY OR DEATH

Batteries contain acid which burns eyes and skin on contact. Wear goggles, protective clothing and rubber gloves to keep acid off body.

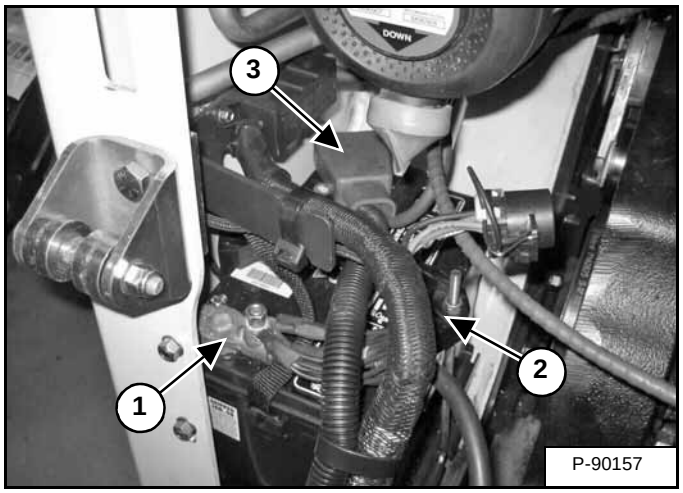
In case of acid contact, wash immediately with water. In case of eye contact get prompt medical attention and wash eye with clean, cool water for at least 15 minutes.

If electrolyte is taken internally drink large quantities of water or milk! DO NOT induce vomiting. Get prompt medical attention.

W-2065-0807

Open the rear door.

Figure PM-48



Disconnect the negative (-) battery cable (Item 1) **[Figure PM-48]**.

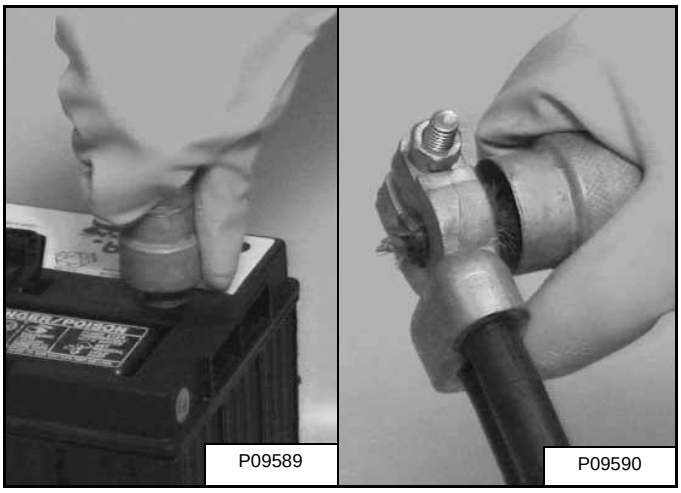
Remove the battery hold down clamp (Item 2) **[Figure PM-48]**.

Disconnect the positive (+) cable (Item 3) **[Figure PM-48]** from the battery.

Remove the battery from the loader.

NOTE: When removing or installing the battery in the loader, do not touch any metal parts with the battery terminals.

Figure PM-49



Always clean the battery terminals and cable ends when installing a new or used battery **[Figure PM-49]**.

NOTE: Always connect the negative (-) cable last and remove it first to prevent sparks.

Install and tighten the battery hold down clamp.

Connect and tighten the battery cables.

Close the rear door before operating the loader.

DRIVE BELT

Belt Adjustment

Drive belt tension is automatically maintained, no adjustment is necessary.

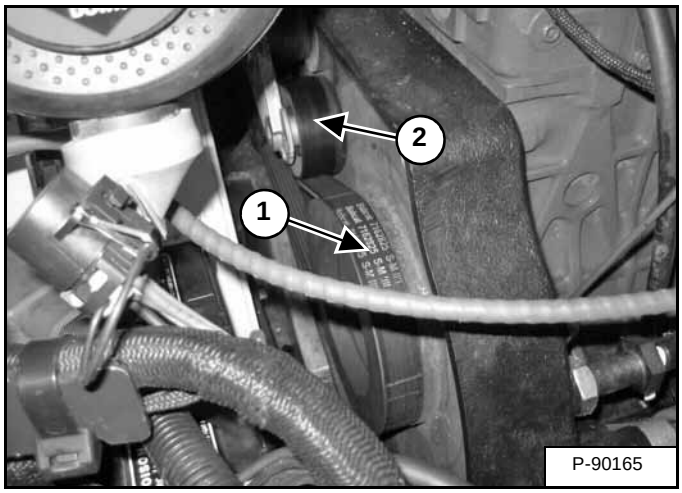
Belt Replacement

Stop the engine and open the rear door.

Disconnect the negative (-) cable from the battery.

Remove the two drive belt shield fasteners and remove the drive belt shield.

Figure PM-64



Loosen the drive belt (Item 1) by pulling the tension wheel (Item 2) **[Figure PM-64]** upwards with a socket wrench.

Remove the drive belt.

Install new drive belt.

Lower the tension wheel onto the drive belt.

Install the drive belt shield and the drive belt shield fasteners.

Connect the negative (-) cable to the battery.

Close the rear door before operating the loader.

DIAGNOSTIC SERVICE CODES (CONT'D)

Service Codes List (Cont'd)

CODE	DESCRIPTION	CODE	DESCRIPTION
D7521	Left joystick Y-axis out of range high	D7572	Drive pump not calibrated
D7522	Right joystick Y-axis out of range high	D7573	Operating mode switch flipped while operating
D7523	Right front wheel angle sensor out of range high	D7574	Right wheel speed uncommanded motion
D7524	Left front wheel angle sensor out of range high	D7575	Left wheel speed uncommanded motion
D7525	Right rear wheel angle sensor out of range high	D7576	No communication from ACS controller
D7526	Left rear wheel angle sensor out of range high	D7577	Left speed sensor out of range high
D7527	Left swash plate out of position	D7578	Right speed sensor out of range high
D7528	Right swash plate out of position	D7579	Left speed sensor out of range low
D7529	Left joystick X-axis out of range low	D7580	Right speed sensor out of range low
D7531	Left joystick Y-axis out of range low	D7581	Right front steer retract short to battery
D7532	Right joystick Y-axis out of range low	D7582	Left front steer retract short to battery
D7533	Right front wheel angle sensor out of range low	D7583	Right rear steer retract short to battery
D7534	Left front wheel angle sensor out of range low	D7584	Left rear steer retract short to battery
D7535	Right rear wheel angle sensor out of range low	D7585	Sensor supply 1 out of range high
D7536	Left rear wheel angle sensor out of range low	D7586	Sensor supply 2 out of range high
D7537	Sensor supply 1 out of range low	D7587	Software update required
D7538	Sensor supply 2 out of range low	D7588	Switched power stuck ON
D7539	Left swash plate sensor out of range high	D7589	Switched power error OFF
D7540	Left swash plate sensor out of range low	D7591	Left swash plate sensor reversed
D7541	Right swash plate sensor out of range high	D7592	Right swash plate sensor reversed
D7542	Right swash plate sensor out of range low	D7593	Right speed sensor unresponsive
D7543	Left forward drive solenoid error ON	D7594	Left speed sensor unresponsive
D7544	Left reverse drive solenoid error ON	D7595	Left speed sensor reversed
D7545	Right forward drive solenoid error ON	D7596	Right speed sensor reversed
D7546	Right reverse drive solenoid error ON	D7597	Controller programmed
D7547	Right front steer extend short to battery	D7598	In drive calibration mode
D7548	Left front steer extend short to battery	D7599	In angle calibration mode
D7549	Right rear steer extend short to battery		
D7550	Left rear steer extend short to battery	H1221	Right Primary out of range high
D7551	Steer pressure short to battery	H1222	Right Primary out of range low
D7552	Back-up alarm error ON	H1224	Right Primary not in neutral
D7553	Left forward drive solenoid error OFF	H1321	Left Primary out of range high
D7554	Left reverse drive solenoid error OFF	H1322	Left Primary out of range low
D7555	Right forward drive solenoid error OFF	H1324	Left Primary not in neutral
D7556	Right reverse drive solenoid error OFF	H2005	Boost solenoid short to battery
D7557	Right front steer extend short to ground	H2006	Boost solenoid short to ground
D7558	Right front steer retract short to ground	H2007	Boost solenoid open circuit
D7559	Left front steer extend short to ground	H2032	Boost solenoid overcurrent
D7560	Left front steer retract short to ground	H2205	Pressure control solenoid short to battery
D7561	Right rear steer extend short to ground	H2206	Pressure control solenoid short to ground
D7562	Right rear steer retract short to ground	H2207	Pressure control solenoid open circuit
D7563	Left rear steer extend short to ground	H2232	Pressure control solenoid overcurrent
D7564	Left rear steer retract short to ground	H2305	Rear base solenoid short to battery
D7565	Steer pressure short to ground	H2306	Rear base solenoid short to ground
D7566	Back-up alarm error OFF	H2307	Rear base solenoid open circuit
D7567	No communication from Gateway controller	H2332	Rear base solenoid overcurrent
D7568	Angle sensors not calibrated	H2405	Rear rod solenoid short to battery
D7569	Battery voltage out of range high	H2406	Rear rod solenoid short to ground
D7570	Interrupted power	H2407	Rear rod solenoid open circuit
D7571	Battery voltage out of range low	H2432	Rear rod solenoid overcurrent

MACHINE SIGN TRANSLATIONS

TO ENGAGE LIFT ARM SUPPORT DEVICE
1. Remove attachment from loader.
2. Unhook spring from pin. Hold lift arm support device. Remove pin.
3. Lower the lift arm support device to the top of the cylinder.
4. Hook spring into slot on top of lift arm support device.
5. Enter loader, fasten seat belt, lower seat bar and start engine.
6. Raise lift arms until lift arm support device drops on cylinder rod.
7. Lower lift arms slowly until movement stops.
8. Stop engine. Raise seat bar. Move pedals until both pedals lock. Leave loader.
9. Install pin into rear of lift arm support device below cylinder rod.
LIFT ARM
LIFT ARM SUPPORT DEVICE
BRACKET
SPRING
PIN
SPRING
CYLINDER
TO DISENGAGE LIFT ARM SUPPORT DEVICE
1. Remove pin.
2. Hook spring into bracket below lift arm (Hook in top hole for Models 953 and 963).
3. Enter loader, fasten seat belt, lower seat bar and start engine.
4. Raise lift arms until lift arm support device raises off cylinder rod.
5. Lower lift arms. Stop engine. Raise seat bar. Move pedals until both pedals lock. Leave loader.
6. Unhook spring from bracket.
7. Raise lift arm support device to storage position.
8. Insert pin through lift arm support device and bracket.
9. Hook spring to pin.
62554 SW
6706558B enUS

CMO ENGANCHAR EL DISPOSITIVO DE SOSTÉN DEL BRAZO DE ELEVACIÓN
1. Retire el accesorio de la cargadora.
2. Desenganche el resorte de la clavija. Sostenga el dispositivo de sostén del brazo de elevación. Retire la clavija.
3. Baje el dispositivo de sostén del brazo de elevación hasta la parte superior del cilindro.
4. Enganche el resorte en la ranura sobre la parte superior del dispositivo de sostén del brazo de elevación.
5. Ingrese la cargadora, ajústese el cinturón de seguridad, baje la barra del asiento y encienda el motor.
6. Eleve los brazos de elevación hasta que el dispositivo de sostén del brazo de elevación caiga sobre la varilla del cilindro.
7. Baje los brazos de elevación lentamente hasta que el movimiento se detenga.
8. Detenga el motor. Eleve la barra del asiento. Mueva los pedales hasta que ambos se bloqueen. Retírese de la cargadora.
9. Instale la clavija en la parte trasera del dispositivo de sostén del brazo de elevación debajo de la varilla del cilindro.
BRAZO DE ELEVACIÓN
DISPOSITIVO DE SOSTÉN DEL BRAZO DE ELEVACIÓN
SOPORTE
RESORTE
CLAVIJA
RESORTE
CILINDRO
CMO DESENGANCHAR EL DISPOSITIVO DE SOSTÉN DEL BRAZO DE ELEVACIÓN
1. Retire la clavija.
2. Enganche el resorte en el soporte debajo del brazo de elevación (enganche el orificio superior en los modelos 953 y 963).
3. Ingrese la cargadora, ajústese el cinturón de seguridad, baje la barra del asiento y encienda el motor.
4. Eleve los brazos de elevación hasta que el dispositivo de sostén del brazo de elevación se eleve fuera de la varilla del cilindro.
5. Baje los brazos de elevación. Detenga el motor. Eleve la barra del asiento. Mueva los pedales hasta que ambos se bloqueen. Retírese de la cargadora.
6. Desenganche el resorte del soporte.
7. Eleve el dispositivo de sostén del brazo de elevación a la posición de almacenamiento.
8. Introduzca la clavija a través del dispositivo de sostén del brazo de elevación y el soporte.
9. Enganche el resorte a la clavija.
62554 SW
6706558B enAR

ENCLENCHEMENT DE L'ARRÊTOIR DE BRAS DE LEVAGE
1. Retirez l'accessoire de la chargeuse.
2. Décrochez le ressort de la goupille. Tenez l'arrêtoir de bras de levage. Retirez la goupille.
3. Abaissez l'arrêtoir de bras de levage jusqu'à la partie supérieure du vérin.
4. Accrochez le ressort en le passant dans la fente sur l'arrêtoir de bras de levage.
5. Prenez place dans la chargeuse, bouclez la ceinture, abaissez l'arceau de siège et mettez le moteur en marche.
6. Relevez les bras de levage jusqu'à ce que l'arrêtoir de bras de levage tombe sur la tige du vérin.
7. Abaissez lentement les bras de levage jusqu'à ce qu'ils s'arrêtent.
8. Arrêtez le moteur. Relevez l'arceau de siège. Bougez les pédales jusqu'à ce qu'elles se verrouillent. Quittez la chargeuse.
9. Installez la goupille à l'arrière de l'arrêtoir de bras de levage sous la tige du vérin.
BRAS DE LEVAGE
ARRÊTOIR DE BRAS DE LEVAGE
BRIDE
RESSORT
GOUPILLE
RESSORT
VÉRIN
DÉSENCLENCHEMENT DE L'ARRÊTOIR DE BRAS DE LEVAGE
1. Retirez la goupille.
2. Accrochez le ressort sur la bride sous le bras de levage (accrochez-le au trou supérieur dans le cas des modèles 953 et 963).
3. Prenez place dans la chargeuse, bouclez la ceinture, abaissez l'arceau de siège et mettez le moteur en marche.
4. Relevez les bras de levage jusqu'à ce que l'arrêtoir de bras de levage se lève hors de la tige du vérin.
5. Abaissez les bras de levage. Arrêtez le moteur. Relevez l'arceau de siège. Bougez les pédales jusqu'à ce qu'elles se verrouillent. Quittez la chargeuse.
6. Décrochez le ressort de la bride.
7. Relevez l'arrêtoir de bras de levage en position de rangement.
8. Insérez la goupille dans l'arrêtoir de bras de levage et la bride.
9. Accrochez le ressort à la goupille.
62554 SW
6706558B frCA

Controls

Vehicle Steering	Direction and speed controlled by two hand operated steering levers *or* optional joystick(s).
Loader Hydraulics - Lift and Tilt	Controlled by separate foot pedals *or* optional Selectable Joystick Control (SJC).
- Front Auxiliary (Std.)	Controlled by lateral movement of the right hand steering lever *or* optional Right Hand Selectable Joystick Control (SJC).
Engine	Hand lever speed control, key type start switch or optional Deluxe Instrumentation Panel and function error shutdown.
Starting Aid	Glow Plugs automatically activated as needed by Instrument Panel.
Service Brake	Two independent hydrostatic systems controlled by two hand operated steering levers *or* optional joystick(s).
Secondary Brake	One of the hydrostatic transmissions.
Parking Brake	Mechanical disc, manually operated switch on front instrument panel

Hydraulic System

Pump	Engine driven, gear type
Pump Capacity	49,6 L/min (13.1 U.S. gpm) @ 3000 Engine rpm @ 91% efficiency
Filter (Hydraulic)	Full flow replaceable, 3 micron synthetic media element
System Relief Valve Setting	20,7 MPa (207 bar) (3000 psi)
Hydraulic Cylinders Bore Diameter: Lift Cylinder (2) Tilt Cylinder (1) Rod Diameter: Lift Cylinder (2) Tilt Cylinder (1) Stroke: Lift Cylinder (2) Tilt Cylinder (1)	Double acting; Tilt cylinder has cushioning feature on dump & rollback 50,8 mm (2.00 in) 57,2 mm (2.25 in) 31,8 mm (1.25 in) 31,8 mm (1.25 in) 653,5 mm (25.73 in) 307,1 mm (12.09 in)
Control Valve	3-Spool, open center type with spring detent on lift float and electrically controlled auxiliary spool.
Fluid Lines	SAE standard tubelines, hoses and fittings.
Fluid Type	BOBCAT FLUID, Hydraulic / Hydrostatic 6903117 - (Two - 2.5 U.S. gal) 6903118 - (5 U.S. gal) 6903119 - (55 U.S. gal)
Hydraulic Function Time: Raise Lift Arms Lower Lift Arms Bucket Dump Bucket Rollback	 2.8 Seconds 1.8 Seconds 1.6 Seconds 1.2 Seconds