

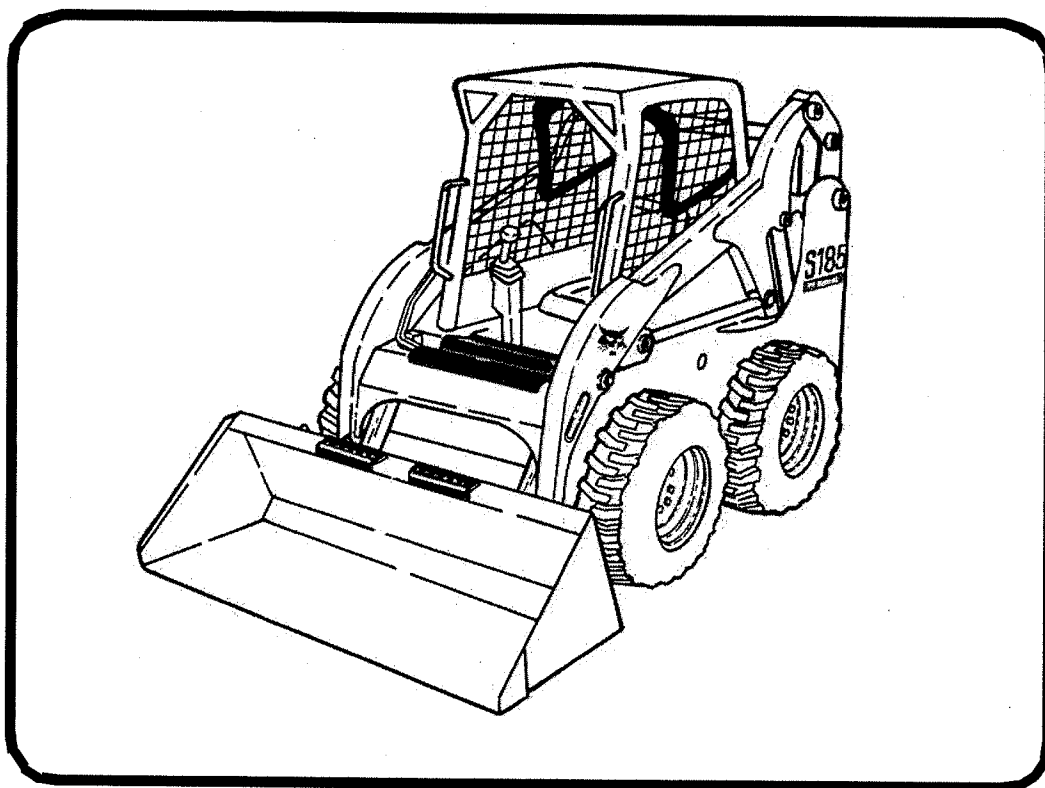


Bobcat®

Operation & Maintenance Manual

S185 Skid-Steer Loader

S/N A3L911001 & Above
S/N A3LH11001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)



OPERATOR SAFETY WARNINGS

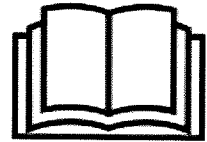


WARNING

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

W-2001-0502

CORRECT

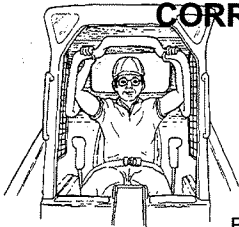


P-90216



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

CORRECT



B-15570

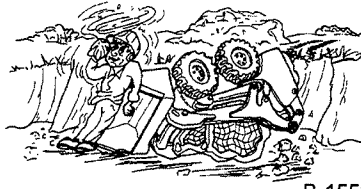


Always use the seat bar and fasten seat belt snugly.



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

CORRECT



B-15528



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

WRONG



B-15531



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

WRONG



B-15735



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

WRONG



B-15529

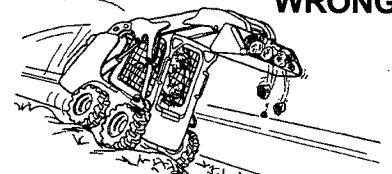


Never carry riders.



Keep bystanders away from work area.

WRONG



B-15532



Always carry bucket or attachments as low as possible.

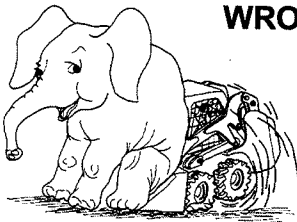


Do not travel or turn with lift arms up.



Load, unload, and turn on flat level ground.

WRONG



B-15527



Never exceed Rated Operating Capacity.

WRONG



B-15530

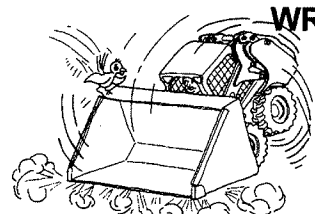


Never leave loader with engine running or with lift arms up.



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

WRONG



B-15533



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 about 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)

OSW08-0409



Bobcat®

CONTENTS

FOREWORD.....	III
SAFETY & TRAINING RESOURCES.....	XI
OPERATING INSTRUCTIONS	OI-1
PREVENTIVE MAINTENANCE	PM-1
SYSTEM SETUP & ANALYSIS.....	SA-1
MACHINE SIGN TRANSLATIONS	MST-1
SPECIFICATIONS.....	SPEC-1
WARRANTY	WARRANTY-1
ALPHABETICAL INDEX	INDEX-1

REFERENCE INFORMATION

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

Loader Serial Number _____
Engine Serial Number _____

NOTES:

YOUR BOBCAT DEALER:

ADDRESS: _____

PHONE: _____

Bobcat Company
P.O. Box 128
Gwinner, ND 58040-0128
UNITED STATES OF AMERICA

Doosan Benelux SA
Drève Richelle 167
B-1410 Waterloo
BELGIUM

FOREWORD

**SAFETY &
TRAINING
RESOURCES**

**OPERATING
INSTRUCTIONS
(OI)**

**PREVENTIVE
MAINTENANCE
(PM)**

**SYSTEM SETUP
& ANALYSIS
(SA)**

**MACHINE SIGN
TRANSLATIONS
(MST)**

**SPECIFICATIONS
(SPEC)**

WARRANTY

**ALPHABETICAL
INDEX**



Bobcat®

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

BOBCAT COMPANY IS ISO 9001 CERTIFIED	V
DELIVERY REPORT	VI
FEATURES, ACCESSORIES AND ATTACHMENTS	VIII
Attachments	IX
Buckets Available	IX
High-Flow Attachments	IX
Options And Accessories	VIII
Special Applications Kit	X
Special Applications Kit Inspection And Maintenance	X
Standard Items	VIII
LOADER IDENTIFICATION	VII
REGULAR MAINTENANCE ITEMS	V
SERIAL NUMBER LOCATIONS	VI
Engine Serial Number	VI
Loader Serial Number	VI



Bobcat®

BOBCAT COMPANY IS ISO 9001 CERTIFIED



ISO 9001 is an international standard that specifies requirements for a quality management system that controls the processes and procedures which we use to design, develop, manufacture and distribute Bobcat products.

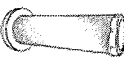
British Standards Institute (**BSI**) is the Certified Registrar Bobcat Company chose to assess the Company's compliance with the ISO 9001 at Bobcat's manufacturing facilities in Gwinner and Bismarck, North Dakota (U.S.A.), Pontchateau (France), Dobris (Czech Republic) and the Bobcat corporate offices (Gwinner, Bismarck & West Fargo) in North Dakota. Only certified assessors, like BSI, can grant registrations.

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

CALIFORNIA PROPOSITION 65 WARNING

Diesel engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects and other reproductive harm.

REGULAR MAINTENANCE ITEMS

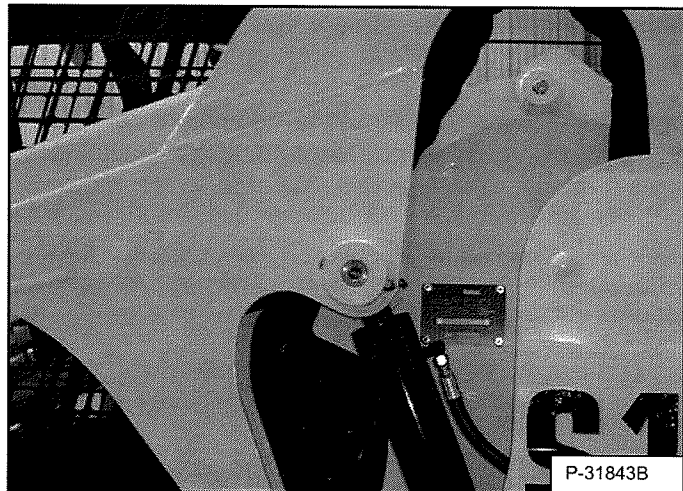
	ENGINE OIL FILTER (6 Pack) 6675517		HYDROSTATIC CASE DRAIN FILTERS 6661022
	FUEL FILTER 6667352		BATTERY 6674687
	AIR FILTER, Outer 6698057		FLUID, Hydraulic / Hydrostatic 6903117 - (2.5 U.S. gal) 6903118 - (5 U.S. gal) 6903119 - (55 U.S. gal)
	AIR FILTER, Inner 6698058		
	HYDRAULIC CHARGE FILTER 6686926 (Earlier Models) 6692337 (Later Models)		BREATHER CAP 6684923
	HYDROSTATIC FILTER 6661248		ANTI-FREEZE, Propylene Glycol 6983128 - Premixed 6983129 - Concentrate
ENGINE OIL 6903105 SAE 15W40 CE/SG (12 qt) 6903107 SAE 10W30 CE/SG (12 qt) 6903109 SAE 30W CE/SG (12 qt) 6903113 SAE 15W40 CE/SG (2.5 U.S. gal) 6903112 SAE 10W30 CE/SG (2.5 U.S. gal) 6903111 SAE 30W CE/SG (2.5 U.S. gal)		ENGINE OIL 6903106 SAE 15W40 CE/SG (1 U.S. gal) 6903108 SAE 10W30 CE/SG (1 U.S. gal) 6903110 SAE 30W CE/SG (1 U.S. gal)	

NOTE: Always verify Part Numbers with your Bobcat dealer.

SERIAL NUMBER LOCATIONS

Always use the serial number of the loader when requesting service information or when ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation.

Figure 1



Loader Serial Number

The loader serial number plate [Figure 1] is located on the outside of the loader frame.

Explanation of loader Serial Number:

XXXX XXXXX

Module 2. - Production
Sequence (Series)

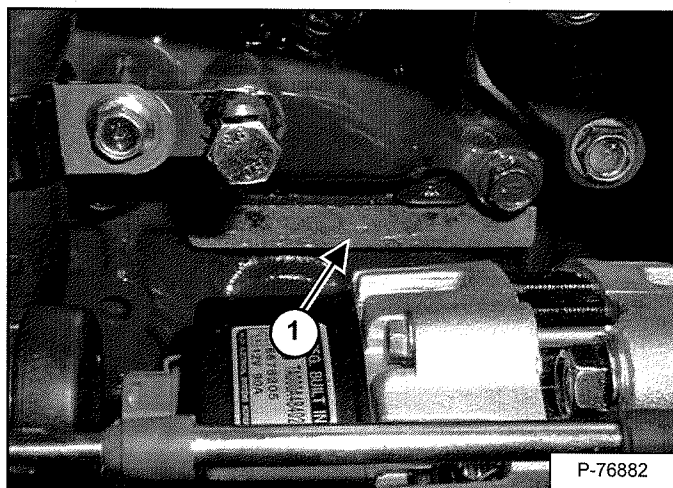
Module 1. - Model / Engine
Combination

1. The four digit Model / Engine Combination Module number identifies the model number and engine combination.

2. The five digit Production Sequence Number identifies the order which the loader is produced.

Engine Serial Number

Figure 2



The engine serial number is located on the side of the engine (Item 1) [Figure 2] above the alternator.

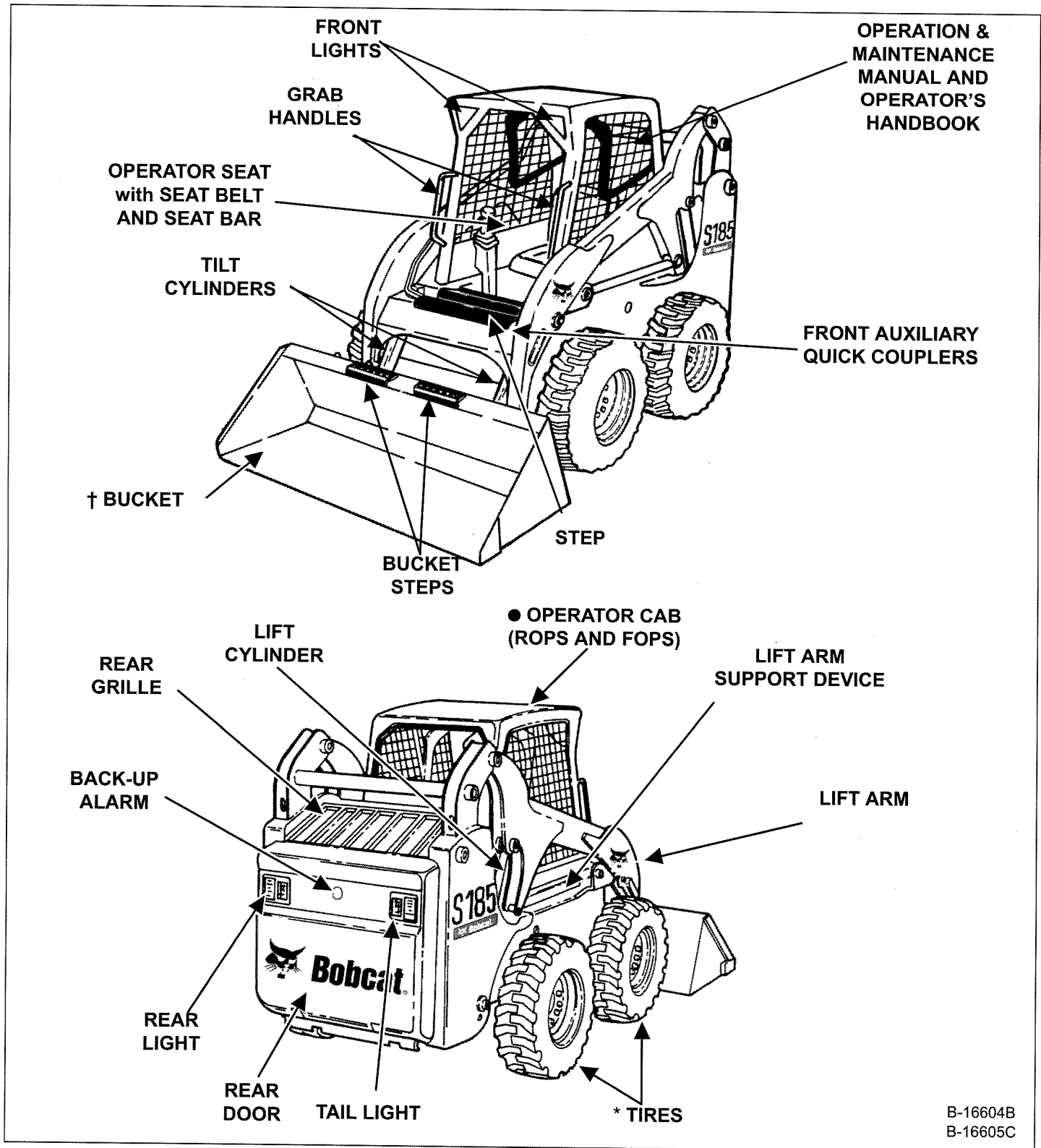
DELIVERY REPORT

Figure 3

A black and white photograph of a delivery report form. The form is titled 'DELIVERY REPORT' and has a 'WARNING' section. It contains several lines for text entry. A label 'B-16315' is in the bottom right corner.

The delivery report [Figure 3] must be completed by the dealer and signed by the owner or operator when the Bobcat loader is delivered. An explanation of the form must be given to the owner.

LOADER IDENTIFICATION



* TIRES - The Bobcat loader is factory equipped with standard tires.

† BUCKETS - Several different buckets and other attachments are available for the Bobcat loader.

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

FEATURES, ACCESSORIES AND ATTACHMENTS

Standard Items

Model S185 Bobcat loaders are equipped with the following standard items:

- Adjustable Vinyl Seat
- Automatically Activated Glow Plugs
- Auxiliary Hydraulics
- Bobcat Interlock Control System (BICS™)
- Bob-Tach™
- Deluxe Cab (includes: interior insulation, top and rear windows, accessory harness, dome light and 12 volt power port) ROPS and FOPS Approved
- Engine / Hydraulic Systems Shutdown
- Front Horn / Back-up Alarm
- Instrumentation: Hourmeter, Engine Temperature and Fuel Gauges and Warning Lights
- Lift Arm Support Device
- Lights, Front and Rear
- Parking Brake
- Seat Bar
- Seat Belt
- Seat Belt with 3-Point Restraint (with Two-Speed Option)
- Spark Arrester Muffler
- Tires (10-16.5, Bobcat Standard Duty, 8 ply Rating)

Options And Accessories

Below is a list of some equipment available from your Bobcat loader dealer as Dealer and / or Factory Installed Accessories and Factory Installed Options. See your Bobcat dealer for other available options and accessories.

- Access Cover Kit (Foot Pedal Area)
- Accessories Electrical Harness
- Adjustable Air Ride Suspension Seat
- Adjustable Suspension Seat
- Advanced Control System (ACS) (Selectable Foot Pedal or Hand Control)
- Selectable Joystick Controls (SJC) (Selectable 'ISO' or 'H' Pattern Control)
- Auxiliary Hydraulics, Rear
- Auxiliary Hydraulics, Front - Right Hand Side
- Air Conditioning
- Attachment Control Device (ACD)
- Cab Door
- Cab Enclosure
- Cab Heater
- Catalytic Exhaust Purifier
- Counterweight Kit
- Deluxe Instrumentation Panel
- Dual Attachment Control Kit
- Engine Heater
- Extended Pedals

Options And Accessories (Cont'd)

- Fire Extinguisher
- FOPS Kit (Level II)
- GPS System
- High-Flow Auxiliary Hydraulics
- Hose Guide
- Hydraulic Bucket Positioning (Includes On / Off Selection)
- Keyless Start
- Lift Kit (Four-Point, Single-Point)
- Locking Fuel Cap
- Power Bob-Tach
- Radiator Screen Kit
- Radio Remote Control
- Rear Window Wiper
- Ride Control
- Rotating Beacon
- Seat Belt with 3-Point Restraint (Std. on Two-Speed Models)
- Seat Belt - 3 in. Wide
- Seat Belt - Retractable
- Sound Reduction Kit (Reduces noise at operator ear)
- Special Applications Kit
- Steel Tracks
- Strobe Light
- Tailgate Lock
- Tires:
 - Bobcat Heavy Duty 10-16.5 10 Ply Rating
 - Bobcat Severe Duty 10-16.5 10 Ply Rating
 - Bobcat Severe Duty Solidflex 10-16.5
 - Bobcat Severe Duty Poly-Fill 10-16.5 10 Ply Rating
 - Bobcat Heavy Duty Flotation 31X12-16.5 10 Ply
- Tool Container
- Two-Speed Travel
- Warning Lights: Four-Way Flasher (Includes Direction Signals)
- Vinyl Cab Enclosure
- Weighlog Kit
- Windows
 - Top and Rear Windows
 - Side Windows
 - Polycarbonate Rear Window
 - Polycarbonate Top Window
 - Externally Removable Rear Window

Specifications subject to change without notice and standard items may vary.

FEATURES, ACCESSORIES AND ATTACHMENTS (CONT'D)

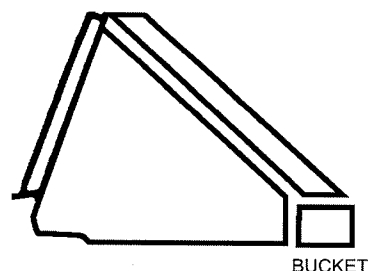
These and other attachments are approved for use on this model loader. Do not use unapproved attachments. Attachments not manufactured by Bobcat may not be approved.

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



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
 - Box Blade
 - Dozer Blade
 - Snow Blade
 - V-Blade
- Bob-Tach Backhoe
- Brush Saw
- Breaker, Hydraulic
- Buckets
- Bucket Adapter
- Chipper
- Combination Bucket
- Concrete Mixer
- Concrete Pump
- Digger
- Drop Hammer
- Dumping Hopper
- Flail Cutter
- Forks, Utility
- Grader
- Grapple, Farm / Utility
- Grapple, Industrial
- Grapple, Root
- Landplane
- Landscape Rake
- Mower
- Packer Wheel
- Pallet Forks
- Planer
- Rear Stabilizers
- Rotary Cutter (Brushcat™)
- Scarifier
- Scraper
- Seeder
- Snow Pusher
- Snowblower
- Sod Layer
- Soil Conditioner
- Spreader
- Steel Tracks
- Stump Grinder
- Sweeper
- Three-Point Hitch Adapter
- Tiller
- Tilt-Tatch
- Tree Spade
- Trench Compactor
- Trencher
- Utility Frame
- Vibratory Roller
- Water Kit
- Whisker Broom

High-Flow Attachments

The following attachments are approved for use on High-Flow machines. See your Bobcat dealer for an updated list of approved attachments.

- Chipper
- Flail Cutter
- Planer
- Rotary Cutter (Brushcat™)
- Snowblower
- Soil Conditioner
- Tiller
- Trencher
- Wheel Saw

FEATURES, ACCESSORIES AND ATTACHMENTS (CONT'D)

Special Applications Kit

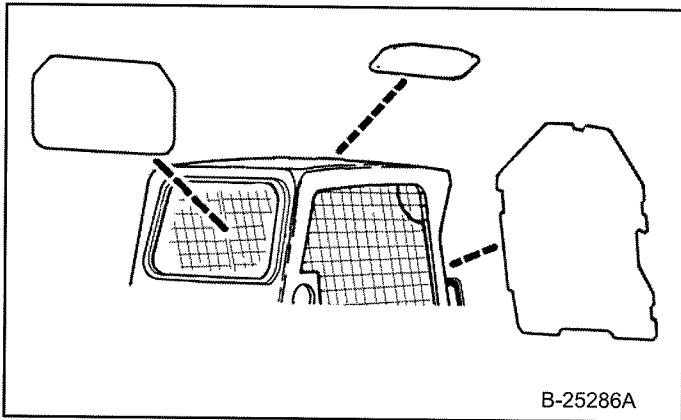
! WARNING

AVOID INJURY OR DEATH

Some attachment applications can cause flying debris or objects to enter front, top or rear cab openings. Install the Special Applications Kit to provide added operator protection in these applications.

W-2737-0508

Figure 4



Available for special applications to restrict material from entering cab openings. Kit includes 12,7 mm (0.5 in) thick polycarbonate front door, top and rear windows [Figure 4].

See your Bobcat dealer for availability.

Special Applications Kit Inspection And Maintenance

- Inspect for cracks or damage. Replace if required.
- Pre-rinse with water to remove gritty materials.
- Wash with a mild household detergent and warm water.
- Use a sponge or soft cloth. Rinse well with water and dry with a clean soft cloth or rubber squeegee.
- Do not use abrasive or highly alkaline cleaners.
- Do not clean with metal blades or scrapers.

SAFETY & TRAINING RESOURCES

SAFETY & TRAINING RESOURCES

FIRE PREVENTION	XV
Electrical	XV
Fire Extinguishers	XVI
Fueling	XVI
Hydraulic System	XVI
Maintenance	XV
Operation	XV
Spark Arrestor Exhaust System	XVI
Starting	XVI
Welding And Grinding	XVI
 MACHINE SIGNS (DECALS)	 XVIII
 PUBLICATIONS AND TRAINING RESOURCES	 XX
 SAFETY INSTRUCTIONS	 XIII
Avoid Silica Dust	XV
Before Operation	XIII
Safe Operation Is The Operator's Responsibility	XIV
Safe Operation Needs A Qualified Operator	XIV



Bobcat®

SAFETY INSTRUCTIONS

Before Operation

Carefully follow the operating and maintenance instructions in this manual.

The Bobcat loader is highly maneuverable and compact. It is rugged and useful under a wide variety of conditions. This presents an operator with hazards associated with off highway, rough terrain applications, common with Bobcat loader usage.

The Bobcat loader has an internal combustion engine with resultant heat and exhaust. All exhaust gases can kill or cause illness so use the Loader with adequate ventilation.

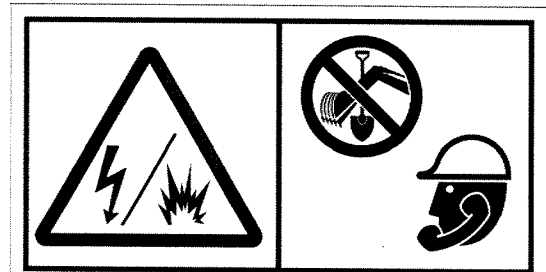
The dealer explains the capabilities and restrictions of the Bobcat loader and attachment for each application. The dealer demonstrates the safe operation according to Bobcat instructional materials, which are also available to operators. The dealer can also identify unsafe modifications or use of unapproved attachments. The attachments and buckets are designed for a Rated Operating Capacity (some have restricted lift heights). They are designed for secure fastening to the Bobcat loader. The user must check with the dealer, or Bobcat literature, to determine safe loads of materials of specified densities for the machine - attachment combination.

The following publications and training materials provide information on the safe use and maintenance of the Bobcat machine and attachments:

- The Delivery Report is used to assure that complete instructions have been given to the new owner and that the machine and attachment is in safe operating condition.
- The Operation & Maintenance Manual delivered with the machine or attachment gives operating information as well as routine maintenance and service procedures. It is a part of the machine and can be stored in a container provided on the machine. Replacement Operation & Maintenance Manuals can be ordered from your Bobcat dealer.
- Machine signs (decals) instruct on the safe operation and care of your Bobcat machine or attachment. The signs and their locations are shown in the Operation & Maintenance Manual. Replacement signs are available from your Bobcat dealer.

- An Operator's Handbook is fastened to the operator cab of the loader. It's brief instructions are convenient to the operator. The Handbook is available from your dealer in an English edition or one of many other languages. See your Bobcat dealer for more information on translated versions.
- The AEM Safety Manual delivered with the machine gives general safety information.
- The Skid-Steer Loader Operating Training Course is available through your Bobcat dealer. This course is intended to provide rules and practices of correct operation of the Bobcat loader. The course is available in English and Spanish versions.
- Service Safety Training Courses are available from your Bobcat dealer. They provide information for safe and correct service procedures.
- See the PUBLICATIONS AND TRAINING RESOURCES Page in this manual or your Bobcat dealer for Service and Parts Manuals, printed materials, videos, or training courses available. Also check the Bobcat web sites www.training.bobcat.com or www.bobcat.com

The dealer and owner / operator review the recommended uses of the product when delivered. If the owner / operator will be using the machine for a different application(s) he or she must ask the dealer for recommendations on the new use.



Call Before You Dig
Dial 811 (USA Only)
1-888-258-0808 (USA & Canada)

When you call, you will be directed to a location in your state / province, or city for information about buried lines (telephone, cable TV, water, sewer, gas, etc.).

SAFETY INSTRUCTIONS (CONT'D)

Safe Operation Is The Operator's Responsibility



Safety Alert Symbol

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



WARNING

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

W-2001-1285

IMPORTANT

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

I-2019-0284



DANGER

The signal word DANGER on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.

D-1002-1107



WARNING

The signal word WARNING on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

W-2044-1107

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

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

Safe Operation Needs A Qualified Operator

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

A Qualified Operator Must Do The Following:

Understand the Written Instructions, Rules and Regulations

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

Have Training with Actual Operation

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

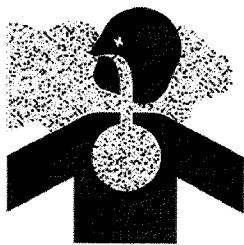
Know the Work Conditions

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

SI SSL-1008

SAFETY INSTRUCTIONS (CONT'D)

Avoid Silica Dust



Cutting or drilling concrete containing sand or rock containing quartz may result in exposure to silica dust. Do not exceed Permissible Exposure Limits (PEL) to silica dust as determined by OSHA or other job site Rules and Regulations. Use a respirator, water spray or other means to control dust. Silica dust can cause lung disease and is known to the state of California to cause cancer.

FIRE PREVENTION



Maintenance

The machine and some attachments have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.

The operator's area, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.

All fuels, most lubricants and some coolants mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

Operation

Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.

Electrical



Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.

Battery gas can explode and cause serious injury. Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

SI SSL-1008

FIRE PREVENTION (CONT'D)

Hydraulic System

Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.

Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.

Fueling



Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.

Starting

Do not use ether or starting fluids on any engine that has glow plugs or air intake heater. These starting aids can cause explosion and injure you or bystanders.

Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.

Spark Arrestor Exhaust System

The spark arrestor exhaust system is designed to control the emission of hot particles from the engine and exhaust system, but the muffler and the exhaust gases are still hot.

Check the spark arrestor exhaust system regularly to make sure it is maintained and working properly. Use the procedure in the Operation & Maintenance Manual for cleaning the spark arrestor muffler (if equipped).

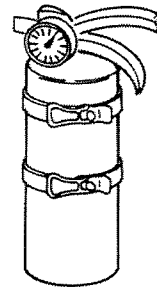
Welding And Grinding

Always clean the machine and attachment, disconnect the battery, and disconnect the wiring from the Bobcat controllers before welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the machine when welding.

Have good ventilation when grinding or welding painted parts. Wear dust mask when grinding painted parts. Toxic dust or gas can be produced.

Dust generated from repairing nonmetallic parts such as hoods, fenders or covers can be flammable or explosive. Repair such components in a well ventilated area away from open flames or sparks.

Fire Extinguishers



Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.



Bobcat®

MACHINE SIGNS (DECALS)

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.

Standard and ACS - 6727926

SJC - 7131519

6718579

6735140

Standard and ACS - 6728539

SJC - 7131518

Door Opt. - 6707852

7184779

SJC - 6737248

ACS - 6718706

Two-Speed Opt. 6725370

6986651

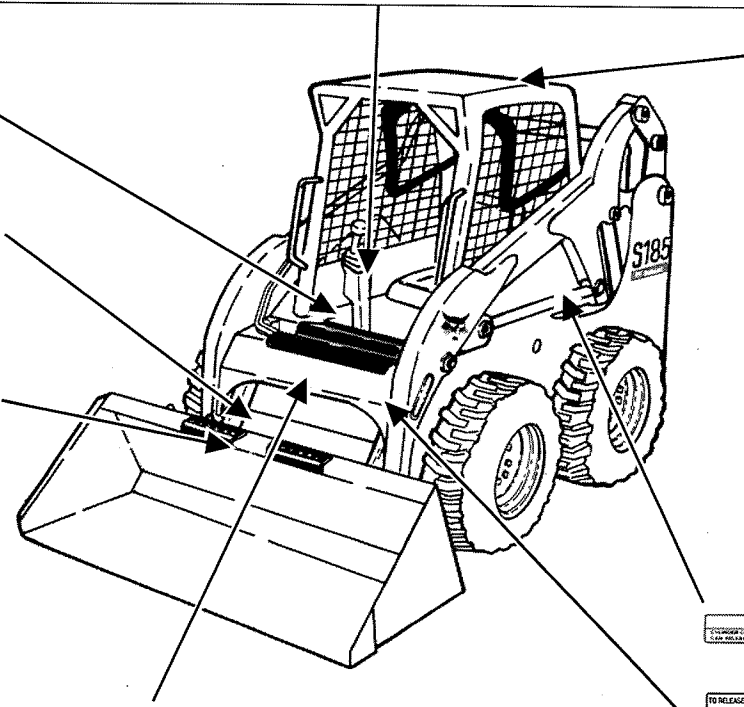
6737189

Inside Cab

7159779
(Inside Fuse Cover)

6579528
(Behind Lift Arm Crossmember)

6561383
(Behind Bob-Tach)



Single-Point Lift
Opt. - 6533898

Four-Point Lift
Opt. - 6726423

Single-Point Lift
Opt. - 6704786

Lift Kit Options

6702301

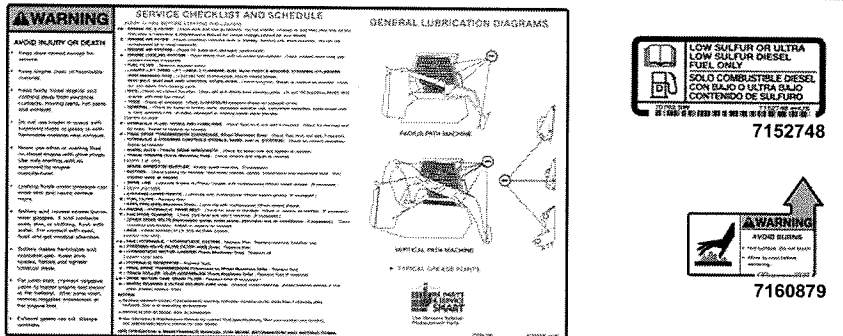
6702302

6710358

6757754 (2)

6731757

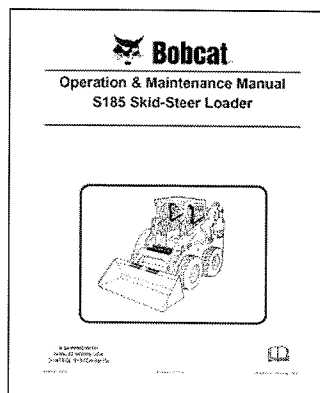
Follow the instructions on all the Machine Signs (Decals) that are on the loader. Replace any damaged machine signs and be sure they are in the correct locations. Machine signs are available from your Bobcat loader dealer.



PUBLICATIONS AND TRAINING RESOURCES

The following publications are also available for your Bobcat loader. You can order them from your Bobcat dealer.

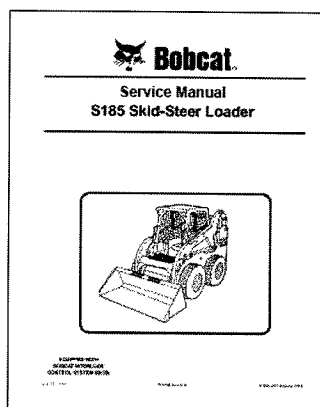
For the latest information on Bobcat products and the Bobcat Company, visit our web site at training.bobcat.com or www.bobcat.com.



OPERATION & MAINTENANCE MANUAL

6987011

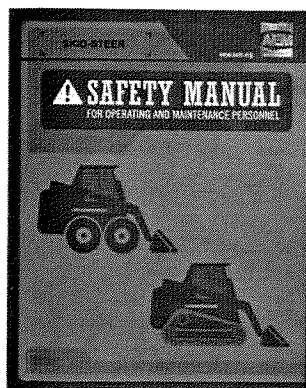
Complete instructions on the correct operation and the routine maintenance of the Bobcat loader.



S185 SERVICE MANUAL

6987049

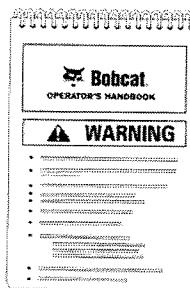
Complete maintenance instructions for your Bobcat loader.



SAFETY MANUAL (English & Spanish)

6556500

Provides basic safety procedures and warnings for your Bobcat loader in both English and Spanish.



OPERATOR'S HANDBOOK

6986651

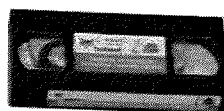
Gives basic operation instructions and safety warnings.



SKID-STEER LOADER OPERATOR TRAINING COURSE

6901726

Introduces operator to step-by-step basics of skid-steer loader operation. Also available in Spanish P/N 6902289.



OPERATOR SAFETY VIDEO

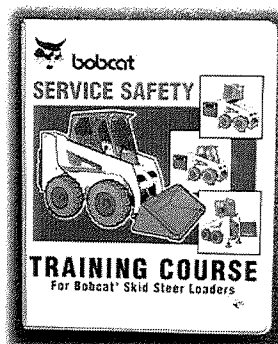
6902176



OPERATOR SAFETY DVD (English & Spanish)

6904762

Provides basic safety instructions contained in all Bobcat safety videos in both English and Spanish.



SKID-STEER LOADER SERVICE SAFETY TRAINING COURSE

6900641

Introduces service technicians to step-by-step basics of proper and safe skid-steer loader maintenance and servicing procedures.

OPERATING INSTRUCTIONS

ATTACHMENT CONTROL DEVICE (ACD)	OI-39
Description	OI-39
ATTACHMENTS	OI-56
Choosing The Correct Bucket	OI-56
Installing And Removing The Attachment (Hand Lever Bob-Tach)	OI-57
Installing And Removing The Attachment (Power Bob-Tach)	OI-59
Pallet Forks	OI-56
BACK-UP ALARM SYSTEM	OI-19
Description	OI-19
Operation	OI-19
BOBCAT INTERLOCK CONTROL SYSTEM (BICS)	OI-16
Operation	OI-16
CONTROL IDENTIFICATION	OI-12
Advanced Control System (ACS)	OI-13
Selectable Joystick Controls (SJC)	OI-14
Standard Controls	OI-12
COUNTERWEIGHTS	OI-55
Accessories That Affect Machine Weight	OI-55
Description	OI-55
Effect On The Loader And Loader Operation	OI-55
When To Consider Removing Counterweights	OI-55
When To Consider Using Counterweights	OI-55
DAILY INSPECTION	OI-40
Daily Inspection And Maintenance	OI-41
DRIVE RESPONSE	OI-27
Description	OI-27
Operation	OI-27
DRIVING AND STEERING THE LOADER	OI-21
Available Control Configurations	OI-21
Operation (SJC) In 'H' Control Pattern	OI-23
Operation (SJC) In 'ISO' Control Pattern	OI-22
Operation (Standard And ACS)	OI-21
EMERGENCY EXIT	OI-18
Front Door	OI-18
Rear Window	OI-18
ENGINE SPEED CONTROL	OI-20
Operation	OI-20

OPERATING INSTRUCTIONS (OI)

Continued On Next Page

OPERATING INSTRUCTIONS (CONT'D)

HYDRAULIC CONTROLS	OI-31
Advanced Control System (ACS) In HAND Control Mode	OI-32
Description	OI-31
FRONT Auxiliary Hydraulics Operation	OI-34
FRONT Auxiliary Hydraulics Operation (CONTINUOUS FLOW)	OI-35
High-Flow Hydraulics Operation	OI-37
Hydraulic Bucket Positioning	OI-33
Quick Couplers	OI-37
REAR Auxiliary Hydraulics Operation	OI-35
Relieve Auxiliary Hydraulic Pressure (Loader And Attachment)	OI-38
Secondary Front Auxiliary Hydraulics Operation	OI-36
Selectable Joystick Controls (SJC) In 'H' Control Pattern	OI-33
Selectable Joystick Controls (SJC) In 'ISO' Control Pattern	OI-32
Standard Controls (Also ACS In FOOT Pedal Mode)	OI-31
INSTRUMENT PANEL IDENTIFICATION	OI-5
Cab Light	OI-5
Deluxe Instrumentation Panel	OI-10
Display Screen	OI-8
Front Panel	OI-11
Keyless Start Panel	OI-9
Left Panel	OI-6
Side Panel	OI-11
Standard Key Panel	OI-9
LIFT ARM BYPASS CONTROL	OI-17
Operation	OI-17
LIFTING THE LOADER	OI-72
Four-Point Lift	OI-72
Single-Point Lift	OI-72
MONITORING THE DISPLAY PANELS	OI-53
Left Panel	OI-53
Warning And Shutdown	OI-53

Continued On Next Page

OPERATING INSTRUCTIONS (CONT'D)

OPERATING PROCEDURE	OI-62
Basic Operating Instructions	OI-62
Digging And Filling A Hole (ACS - Handles, SJC - 'H' Pattern)	OI-68
Digging And Filling A Hole (Foot Pedals)	OI-65
Digging And Filling A Hole (SJC - 'ISO' Pattern)	OI-70
Driving On Public Roads	OI-62
Filling And Emptying The Bucket (ACS - Handles, SJC - 'H' Pattern) ..	OI-66
Filling And Emptying The Bucket (Foot Pedals)	OI-64
Filling And Emptying The Bucket (SJC - 'ISO' Pattern)	OI-69
Inspect The Work Area	OI-62
Leveling The Ground Using Float (ACS - Handles, SJC - 'H' Pattern) ..	OI-67
Leveling The Ground Using Float (Foot Pedals)	OI-65
Leveling The Ground Using Float (SJC - 'ISO' Pattern)	OI-70
Operating With A Full Bucket	OI-63
Operating With An Empty Bucket	OI-63
 PARKING BRAKE	 OI-17
Operation	OI-17
 PRE-STARTING PROCEDURE	 OI-42
Entering The Loader	OI-42
Operation & Maintenance Manual And Operator's Handbook Locations	OI-42
Seat Adjustment	OI-43
Seat Bar	OI-44
Seat Belt Adjustment	OI-44
 SEAT BAR RESTRAINT SYSTEM	 OI-15
Operation	OI-15
 SPEED MANAGEMENT	 OI-25
Changing The Factory Default Setting	OI-26
Operation	OI-25
 STARTING THE ENGINE	 OI-45
Cold Temperature Starting	OI-51
Deluxe Instrumentation Panel	OI-49
Keyless Start Panel	OI-47
Standard Key Panel	OI-45
Warming The Hydraulic / Hydrostatic System	OI-52
 STEERING DRIFT COMPENSATION	 OI-29
Description	OI-29
Operation	OI-29
 STOPPING THE ENGINE AND LEAVING THE LOADER	 OI-54
Procedure	OI-54

Continued On Next Page

OPERATING INSTRUCTIONS (CONT'D)

STOPPING THE LOADER	OI-23
Using The Control Levers Or Joysticks	OI-23
TOWING THE LOADER	OI-71
Procedure	OI-71
TRACTION LOCK OVERRIDE	OI-17
Operation	OI-17
TRANSPORTING THE LOADER ON A TRAILER	OI-73
Fastening	OI-73
Loading And Unloading	OI-73
TWO-SPEED CONTROL	OI-24
Description	OI-24
Operation (SJC) (If Equipped)	OI-24
Operation (Standard And ACS) (If Equipped)	OI-24

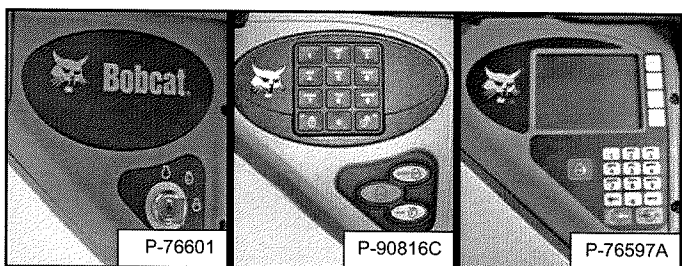
INSTRUMENT PANEL IDENTIFICATION

Figure OI-1



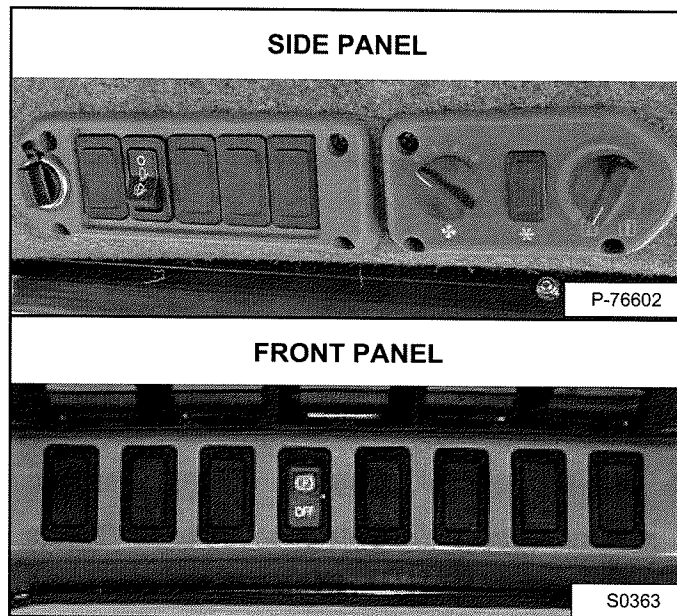
The left panel [Figure OI-1] is described on pages OI-6, OI-7 and OI-8. (See Left Panel on Page OI-6.)

Figure OI-2



The right panel [Figure OI-2] is described on pages OI-9 and OI-10. (See Standard Key Panel on Page OI-9.), (See Keyless Start Panel on Page OI-9.) or (See Deluxe Instrumentation Panel on Page OI-10.)

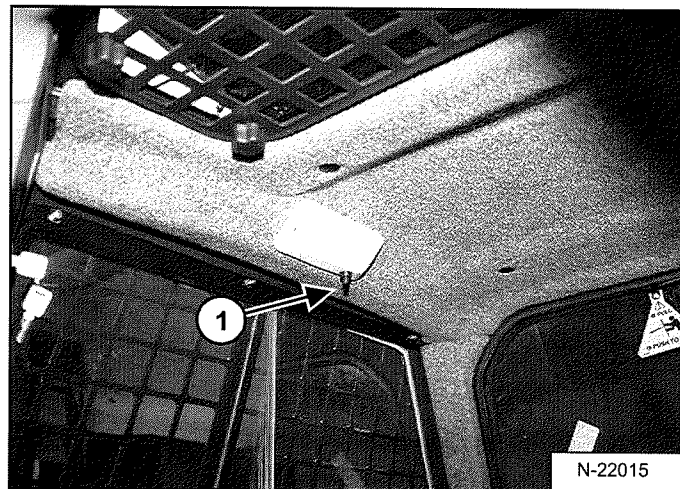
Figure OI-3



The side and front panels [Figure OI-3] are described on page OI-10. (See Side Panel on Page OI-11.) and (See Front Panel on Page OI-11.)

Cab Light

Figure OI-4



Push the button (Item 1) [Figure OI-4] to turn the light ON. Push the button again to turn OFF.

Left Panel

Figure OI-5



P-76459C

The left instrument panel [Figure OI-5] is the same for Standard Key Panel, Keyless Start Panel and Deluxe Instrumentation Panel equipped machines.

The table on the facing page shows the DESCRIPTION and FUNCTION / OPERATION for each of the components of the left panel.

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.
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 (Option)	Instructs operator to fasten shoulder belt when operating in high range. Remains lit while in high range.
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 (Option)	Press once to engage the HIGH-FLOW auxiliary hydraulics. (Left green LED will light.) Press a second time to disengage.
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.)

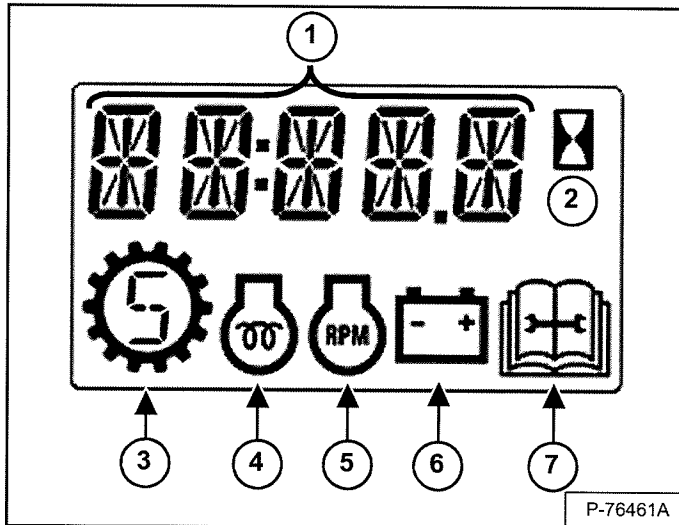
INSTRUMENT PANEL IDENTIFICATION (CONT'D)

Display Screen

The display screen can display the following information:

- Operating hours.
- Engine revolutions per minute (rpm).
- Speed management setting.
- Maintenance clock countdown.
- Battery voltage.
- Service codes.
- Engine preheat countdown.
- Steering drift compensation setting.
- Drive response setting.

Figure OI-6



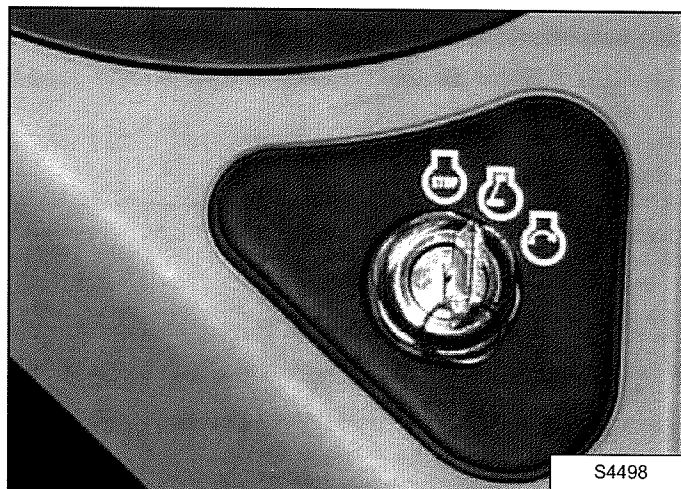
The display screen is shown in [Figure OI-6]. The data display will show operating hours upon startup.

1. **Data Display.**
2. **Hourmeter.**
3. **Speed Management.**
4. **Engine Preheat.**
5. **Engine Revolutions Per Minute.**
6. **Battery / Charging Voltage.**
7. **Service.**

INSTRUMENT PANEL IDENTIFICATION (CONT'D)

Standard Key Panel

Figure OI-7

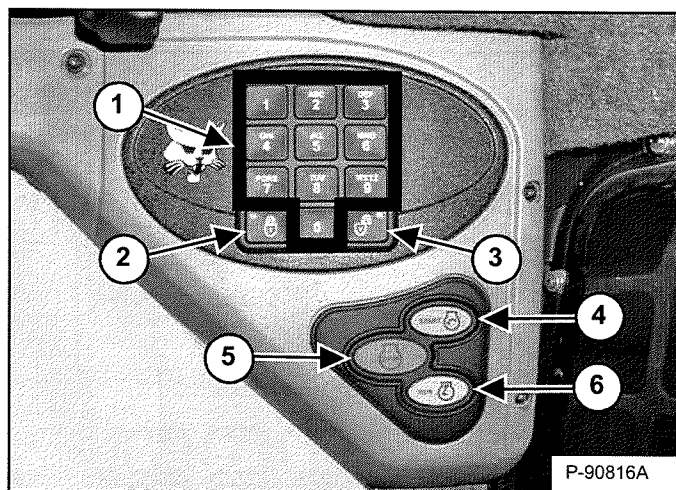


This machine may be equipped with a Standard Key Panel [Figure OI-7].

The Standard Key Panel is used to turn the loader electrical system on and off, and to start and stop the engine.

Keyless Start Panel

Figure OI-8



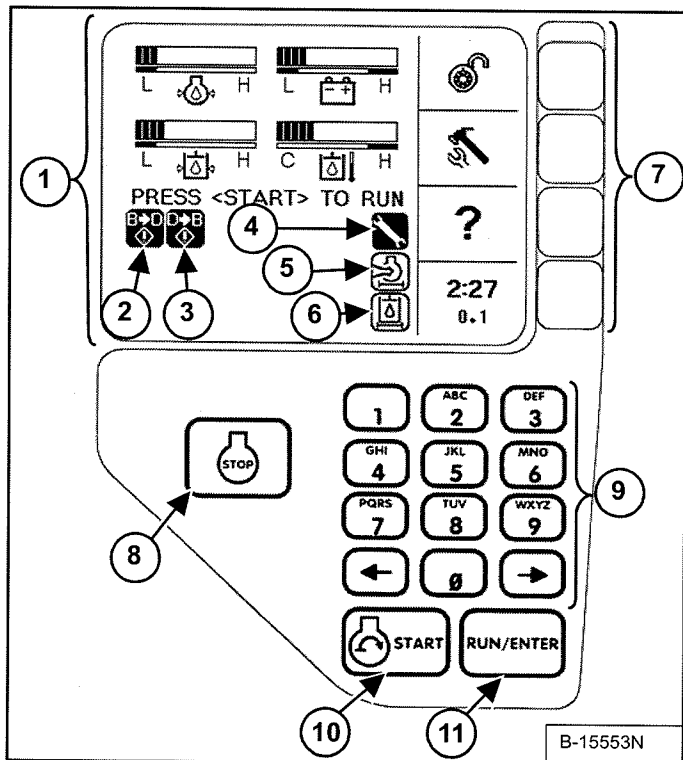
This machine may be equipped with a Keyless Start Panel [Figure OI-8].

1. **Keypad (keys 1 through 0):** Used to enter a number code (password) to allow starting the engine. An asterisk will show in the left panel display screen for each key press.
2. **LOCK Key:** Used to lock keypad. The lock key will display a red light to indicate a password is required to start the loader. (See Password Lockout Feature on Page SA-11.)
3. **UNLOCK Key:** Used to unlock keypad. The unlock key will display a green light to indicate the loader can be started without a password. (See Password Lockout Feature on Page SA-11.)
4. **START Button:** Used to start the engine.
5. **STOP Button:** Used to stop the engine and shut down the loader electrical system.
6. **RUN Button:** Used to turn on the loader electrical system.

INSTRUMENT PANEL IDENTIFICATION (CONT'D)

Deluxe Instrumentation Panel

Figure OI-9

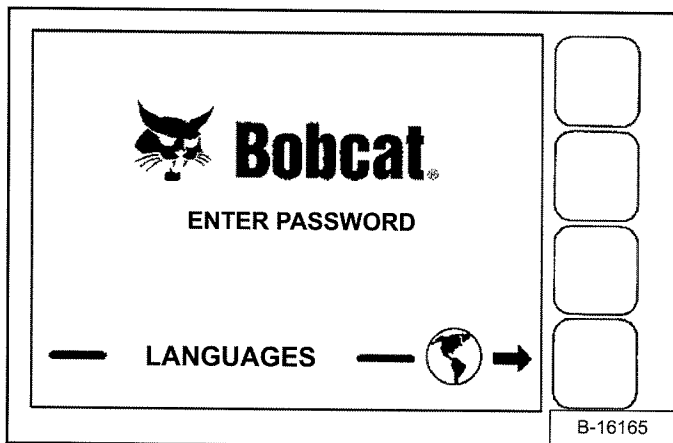


This machine may be equipped with a Deluxe Instrumentation Panel [Figure OI-9].

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 PMSM Icon:** Indicates planned maintenance is due. (See MAINTENANCE CLOCK on Page SA-14.)
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 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 electrical system.

Figure OI-10



The first screen you will see on your new loader will be as shown in [Figure OI-10].

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-12.) Keep your password in a safe place for future needs.

Change Language: Press the Selection Button at the end of the arrow [Figure OI-10] 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-10]. You can then enter the password and start the engine.

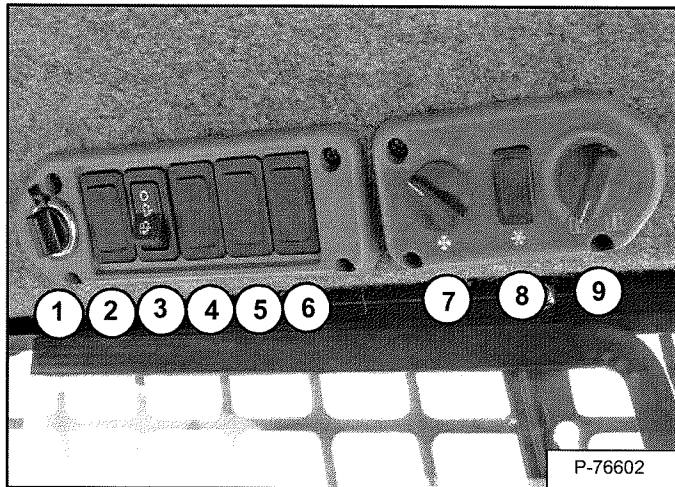
See CONTROL PANEL SETUP for further description of screens to setup the system for your use. (See CONTROL PANEL SETUP on Page SA-9.)

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.

INSTRUMENT PANEL IDENTIFICATION (CONT'D)

Side Panel

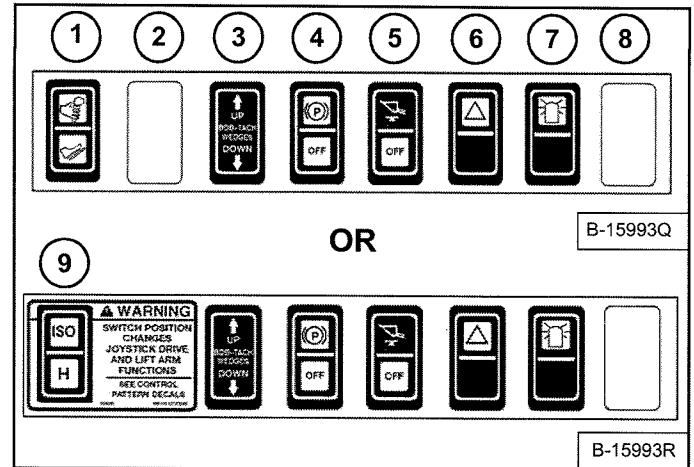
Figure OI-11



REF. NO.	DESCRIPTION	FUNCTION / OPERATION
1	POWER PORT	Provides a 12 volt receptacle for accessories.
2	NOT USED	---
3	FRONT WIPER (Option)	Press the bottom of the switch to start the front wiper (press and hold for washer fluid). Press the top of the switch to stop the wiper.
4	REAR WIPER (Option)	Press the bottom of the switch to start the rear wiper (press and hold for washer fluid). Press the top of the switch to stop the wiper.
5	NOT USED	---
6	NOT USED	---
7	FAN MOTOR (Option)	Turn clockwise to increase fan speed; counterclockwise to decrease. There are four positions; OFF-1-2-3.
8	AIR CONDITIONING SWITCH (Option)	Press bottom of switch to start; top to stop. Fan Motor (Item 7) must be ON for A/C to operate.
9	TEMPERATURE CONTROL (Option)	Turn clockwise to increase the temperature; counterclockwise to decrease.

Front Panel

Figure OI-12



NOTE: Parking Brake (Item 4) [Figure OI-12] is standard on all loaders.

REF. NO.	DESCRIPTION	FUNCTION / OPERATION
1	ADVANCED CONTROL SYSTEM (ACS) (Option)	Press the top to select Hand Controls; bottom to select Foot Controls.
2	NOT USED	---
3	POWER BOB-TACH (Option)	Press and hold the up arrow to disengage the Bob-Tach wedges. Press and hold the down arrow to engage the wedges into the mounting frame holes.
4	PARKING BRAKE (Standard on all loaders)	Press the top to engage the PARKING BRAKE; bottom to disengage.
5	HYDRAULIC BUCKET POSITIONING (Option)	Press the top to engage Hydraulic Bucket Positioning; bottom to disengage.
6	HAZARD LIGHTS (Option)	Press the top to turn the HAZARD LIGHTS ON; bottom to turn OFF.
7	ROTATING BEACON (Option)	Press the top to turn the ROTATING BEACON ON; bottom to turn OFF.
8	NOT USED	---
9	SELECTABLE JOYSTICK CONTROLS (SJC) (Option)	Press the top to select 'ISO' Control Pattern; bottom to select 'H' Control Pattern.

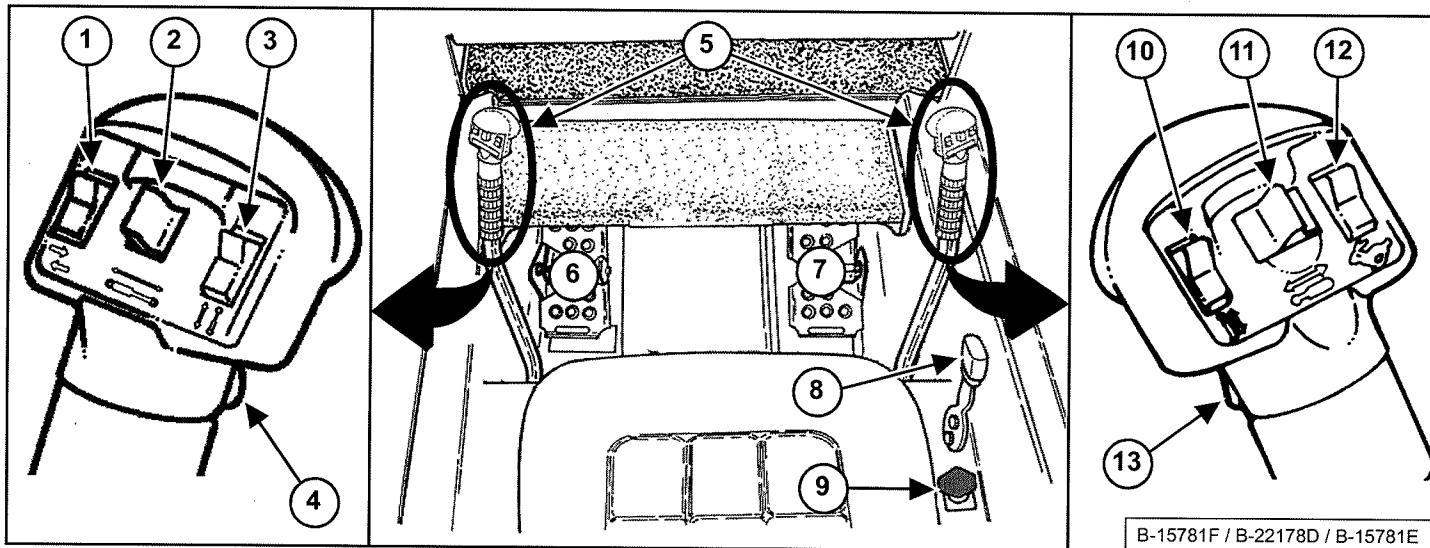
CONTROL IDENTIFICATION

This loader has three control configurations available to operate lift / tilt functions and driving / steering the loader:

- **Standard Controls** - Uses foot pedals for lift and tilt functions.
Uses steering levers for driving and steering the loader.
- **Advanced Control System (ACS) (Option)** - Uses a choice of foot pedals or handles for lift and tilt functions.
Uses steering levers for driving and steering the loader.
- **Selectable Joystick Controls (SJC) (Option)** - Uses joysticks for lift / tilt functions and driving / steering the loader.

Standard Controls

Figure OI-13

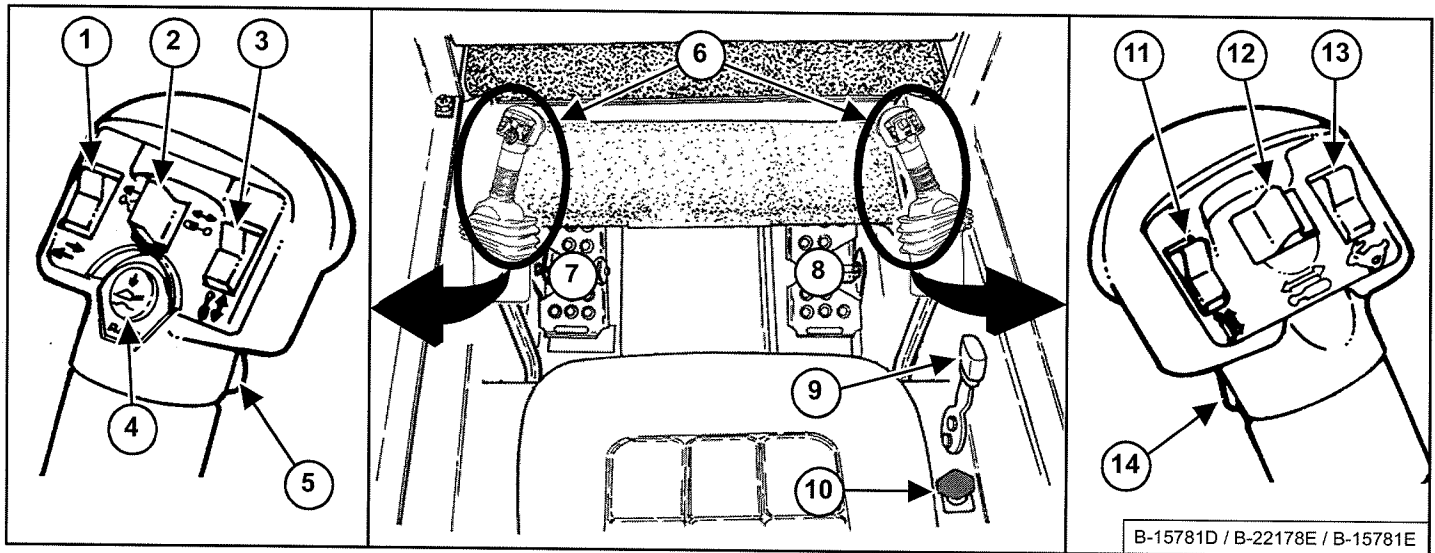


REF. NO.	DESCRIPTION	FUNCTION / OPERATION
1	TURN SIGNALS (Option)	Press the top to activate right signal; bottom to activate left signal; center position to turn off.
2	REAR AUXILIARY HYDRAULICS (Option) Also: ATTACHMENT FUNCTION CONTROL	See REAR Auxiliary Hydraulics Operation in this manual. See ATTACHMENT CONTROL DEVICE in this manual.
3	ATTACHMENT FUNCTION CONTROL	See ATTACHMENT CONTROL DEVICE in this manual.
4	FRONT HORN	Press the front switch to sound the front horn.
5	STEERING LEVERS	See DRIVING AND STEERING THE LOADER in this manual.
6	LIFT ARM PEDAL	See HYDRAULIC CONTROLS in this manual.
7	TILT PEDAL	See HYDRAULIC CONTROLS in this manual.
8	ENGINE SPEED CONTROL	See ENGINE SPEED CONTROL in this manual.
9	LIFT ARM BYPASS CONTROL	See LIFT ARM BYPASS CONTROL in this manual.
10	ATTACHMENT FUNCTION CONTROL	See ATTACHMENT CONTROL DEVICE in this manual.
11	FRONT AUXILIARY HYDRAULICS	See FRONT Auxiliary Hydraulics Operation in this manual.
12	TWO-SPEED CONTROL (Option)	See TWO-SPEED CONTROL in this manual.
13	CONTINUOUS FLOW CONTROL FOR AUXILIARY HYDRAULICS	See FRONT Auxiliary Hydraulics Operation (CONTINUOUS FLOW) in this manual.

CONTROL IDENTIFICATION (CONT'D)

Advanced Control System (ACS)

Figure OI-14

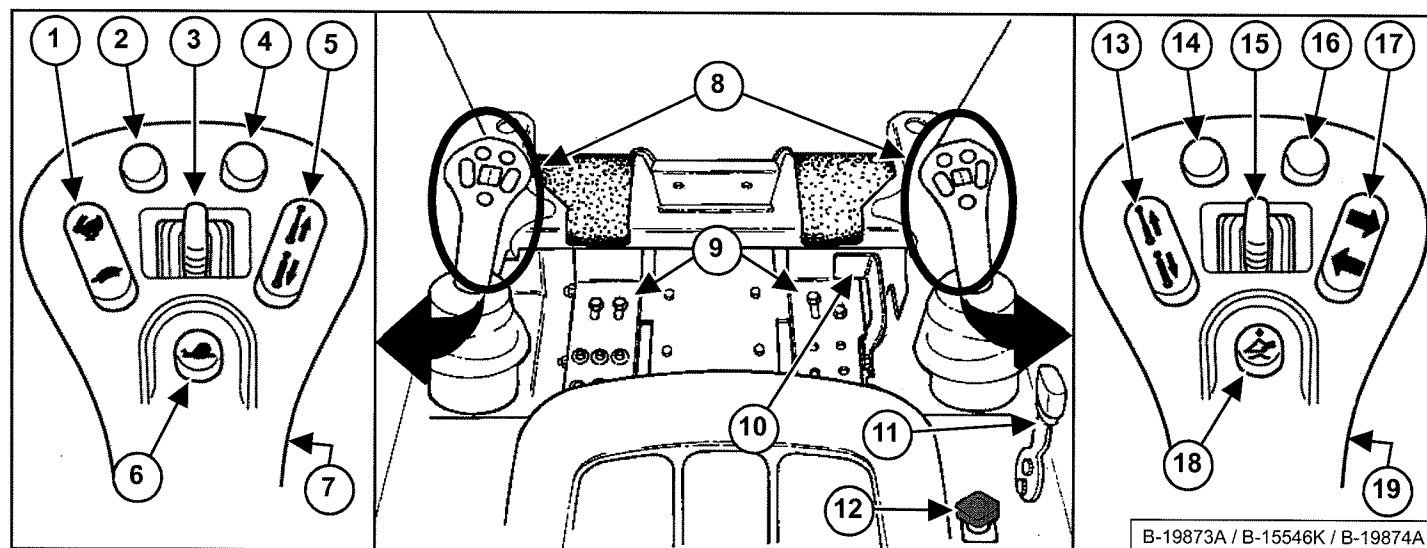


REF. NO.	DESCRIPTION	FUNCTION / OPERATION
1	TURN SIGNALS (Option)	Press the top to activate right signal; bottom to activate left signal; center position to turn off.
2	REAR AUXILIARY HYDRAULICS (Option) Also: ATTACHMENT FUNCTION CONTROL	See REAR Auxiliary Hydraulics Operation in this manual. See ATTACHMENT CONTROL DEVICE in this manual.
3	ATTACHMENT FUNCTION CONTROL	See ATTACHMENT CONTROL DEVICE in this manual.
4	FLOAT CONTROL	See HYDRAULIC CONTROLS in this manual.
5	FRONT HORN	Press the front switch to sound the front horn.
6	STEERING LEVERS AND LIFT / TILT HANDLES	See DRIVING AND STEERING THE LOADER and HYDRAULIC CONTROLS in this manual.
7	LIFT ARM PEDAL	See HYDRAULIC CONTROLS in this manual.
8	TILT PEDAL	See HYDRAULIC CONTROLS in this manual.
9	ENGINE SPEED CONTROL	See ENGINE SPEED CONTROL in this manual.
10	LIFT ARM BYPASS CONTROL	See LIFT ARM BYPASS CONTROL in this manual.
11	ATTACHMENT FUNCTION CONTROL	See ATTACHMENT CONTROL DEVICE in this manual.
12	FRONT AUXILIARY HYDRAULICS	See FRONT Auxiliary Hydraulics Operation in this manual.
13	TWO-SPEED CONTROL (Option)	See TWO-SPEED CONTROL in this manual.
14	CONTINUOUS FLOW CONTROL FOR AUXILIARY HYDRAULICS	See FRONT Auxiliary Hydraulics Operation (CONTINUOUS FLOW) in this manual.

CONTROL IDENTIFICATION (CONT'D)

Selectable Joystick Controls (SJC)

Figure OI-15



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

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

SEAT BAR RESTRAINT SYSTEM

Operation

Figure OI-16



The seat bar restraint system has a pivoting seat bar with armrests (Item 1) [Figure OI-16].

The operator controls the use of the seat bar. The seat bar in the down position helps to keep the operator in the seat.

WARNING

AVOID INJURY OR DEATH

When operating the machine:

- Keep the seat belt fastened snugly.
- The seat bar must be lowered.
- Keep your feet on the pedal controls or footrests and hands on the controls.

W-2261-0909

When the seat bar is down, the engine is running, the PRESS TO OPERATE LOADER button is activated, and the brake is released, the lift, tilt, and traction drive functions can be operated.

When the seat bar is up, the lift, tilt and traction drive functions are deactivated and both foot pedals (if equipped) will be locked when returned to neutral position.

WARNING

AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise the seat bar.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. Service the system if controls do not deactivate.

W-2463-0610

BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

Operation

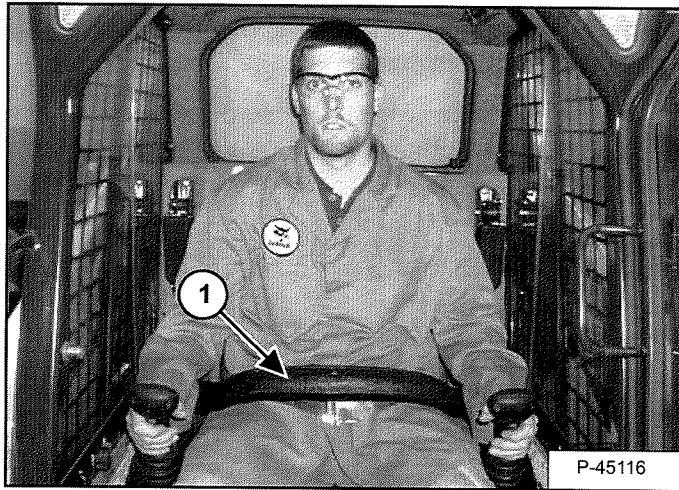
! WARNING

AVOID INJURY OR DEATH

The Bobcat Interlock Control System (BICS) must deactivate the lift, tilt and traction drive functions. If it does not, contact your dealer for service. **DO NOT** modify the system.

W-2151-0394

Figure OI-17



The Bobcat Interlock Control System (BICS) has a pivoting seat bar with armrests (Item 1) [Figure OI-17]. The operator controls the use of the seat bar.

The BICS requires the operator to be seated in the operating position with the seat bar fully lowered before the lift, tilt, auxiliary hydraulics, and traction functions can be operated. The seat belt must be fastened anytime you operate the machine.

! WARNING

AVOID INJURY OR DEATH

When operating the machine:

- Keep the seat belt fastened snugly.
- The seat bar must be lowered.
- Keep your feet on the pedal controls or footrests and hands on the controls.

W-2261-0909

Figure OI-18



There are three display lights (Items 1, 2 and 3) [Figure OI-18] located on the left instrument panel that must be OFF to fully operate the machine.

When the seat bar is lowered, the engine is running, the PRESS TO OPERATE LOADER button is activated, and the parking brake is released, the lift, tilt, auxiliary hydraulics, and traction drive functions can be operated.

When, the seat bar is raised, the lift, tilt, auxiliary hydraulics, and traction drive functions are deactivated.

! WARNING

AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise the seat bar.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

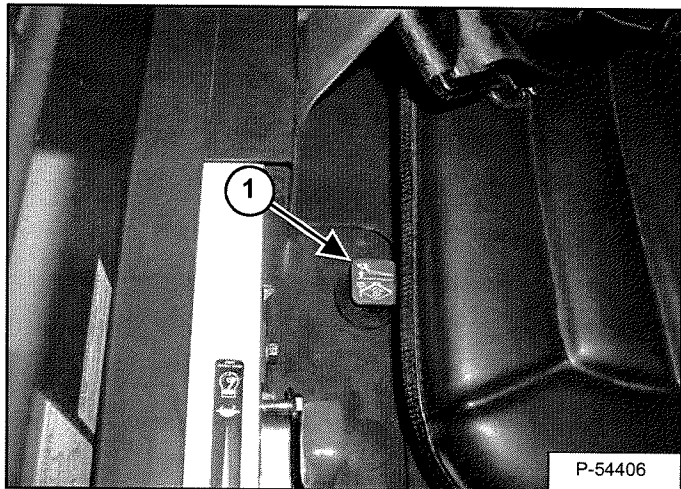
The seat bar system must deactivate these functions when the seat bar is up. Service the system if controls do not deactivate.

W-2463-0610

LIFT ARM BYPASS CONTROL

Operation

Figure OI-19



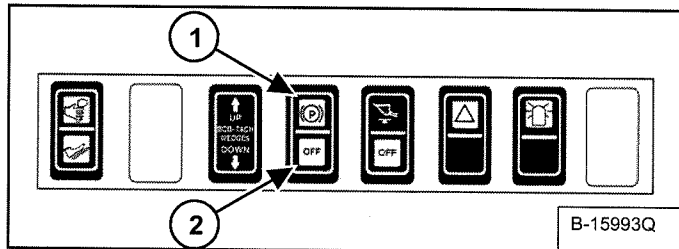
The lift arm bypass control (Item 1) [Figure OI-19] is used to lower the lift arms if the lift arms cannot be lowered during normal operations.

1. Sit in the operator's seat.
2. Fasten the seat belt and lower the seat bar.
3. Turn the knob (Item 1) [Figure OI-19] clockwise 1/4 turn.
4. Pull up and hold the knob until the lift arms lower.

PARKING BRAKE

Operation

Figure OI-20



Press the top of the switch (Item 1) [Figure OI-20] to engage the parking brake. The red light in the switch will turn on. The traction drive system will be locked.

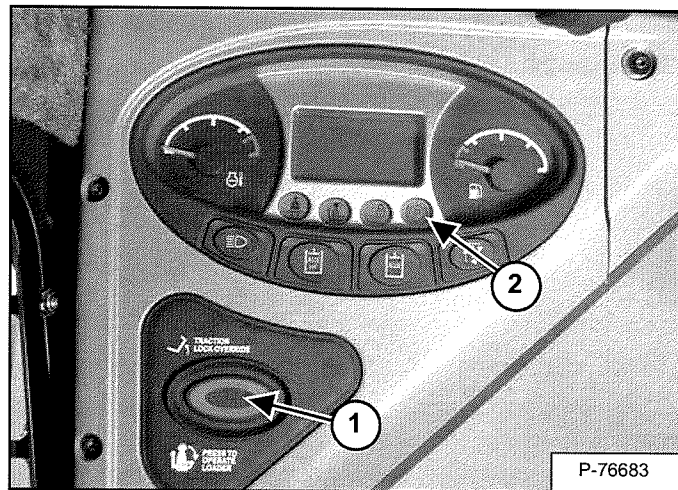
Press the bottom of the switch (Item 2) [Figure OI-20] to disengage the parking brake. The red light in the switch will turn off. The traction drive system will be unlocked.

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.

TRACTION LOCK OVERRIDE

Operation

Figure OI-21



(Functions Only When The Seat Bar Is Raised And The Engine Is Running) There is a **TRACTION LOCK OVERRIDE** button (Item 1) [Figure OI-21] on the left instrument panel which will allow you to use the steering levers to move the loader forward and backward when using the backhoe attachment.

- Press the **TRACTION LOCK OVERRIDE** button once to unlock traction drive. The **PARKING BRAKE** light (Item 2) [Figure OI-21] will be **OFF**.
- Press the button a second time to lock the traction drive. The **PARKING BRAKE** light (Item 2) [Figure OI-21] will be **ON**.

NOTE: The **TRACTION LOCK OVERRIDE** button will unlock the traction drive when the seat bar is raised and the engine is running.

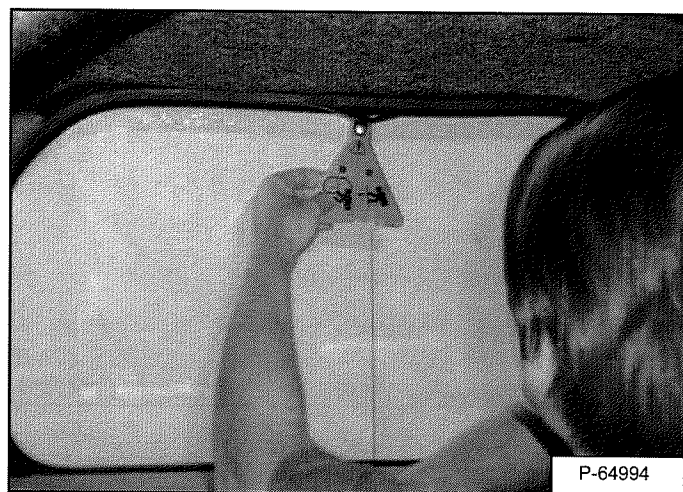
NOTE: The **TRACTION LOCK OVERRIDE** button will function if the parking brake is in the engaged or disengaged position and the engine is running. If the parking brake switch is turned **ON**, the red light in the parking brake switch will turn **OFF** when **TRACTION LOCK OVERRIDE** is engaged.

EMERGENCY EXIT

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

Rear Window

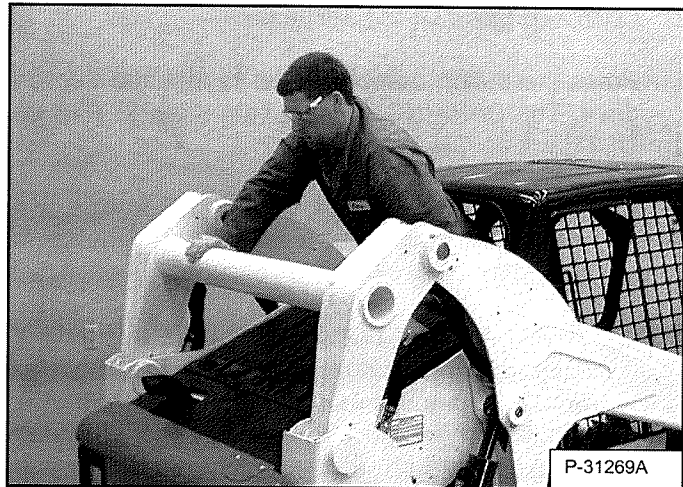
Figure OI-22



Pull on the tag on the top of the rear window to remove the rubber cord [Figure OI-22].

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

Figure OI-23



Exit through the rear of the operator cab [Figure OI-23].

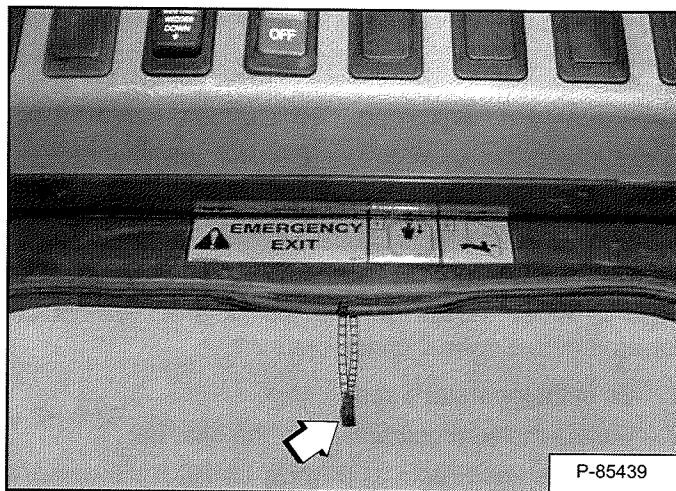
Front Door

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-24].

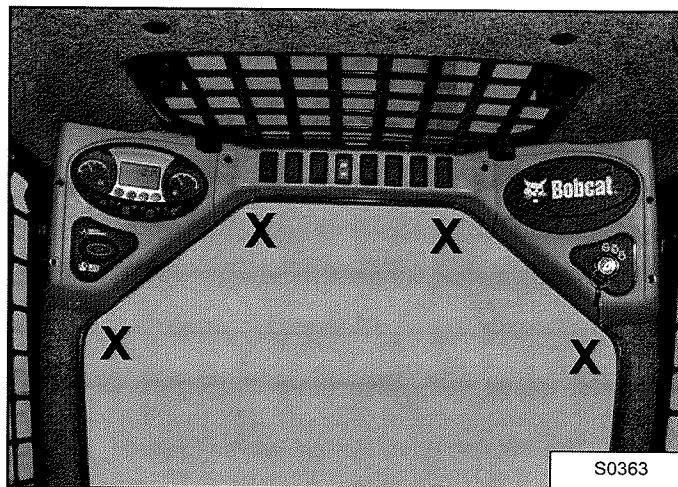
NOTE: If the loader has a Special Application Door Kit installed, the window of the front door is NOT an emergency exit.

Figure OI-24



Pull the plastic loop at the top of the window in the front door to remove the rubber cord [Figure OI-24].

Figure OI-25



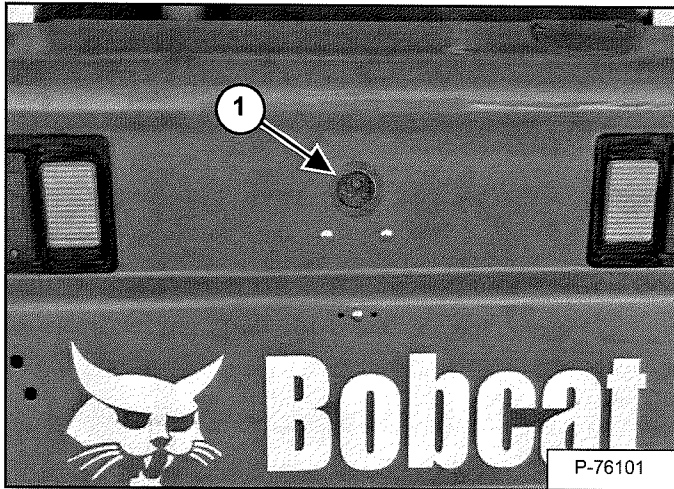
Push the window out with your foot at any corner of the window [Figure OI-25].

Exit through the front door.

BACK-UP ALARM SYSTEM

Description

Figure OI-26



The back-up alarm (Item 1) [Figure OI-26] is located on the inside of the rear door.

A back-up alarm is not a substitute for looking to the rear when operating the loader in reverse, or for keeping bystanders away from the work area. Operators **must always** look in the direction of travel, including **reverse**, and must also keep bystanders away from the work area, even though the loader is equipped with a back-up alarm.

Operators must be trained to **always** look in the direction of travel, **including when operating the loader in reverse** and to keep bystanders away from the work area. Other workers should be trained to **always** keep away from the operator's work area and travel path.

Operation

WARNING

AVOID INJURY OR DEATH

- **Always keep bystanders away from the work area and travel path.**
- **The operator must always look in the direction of travel.**
- **The back-up alarm must sound when operating the machine in the reverse direction.**

W-2783-0409

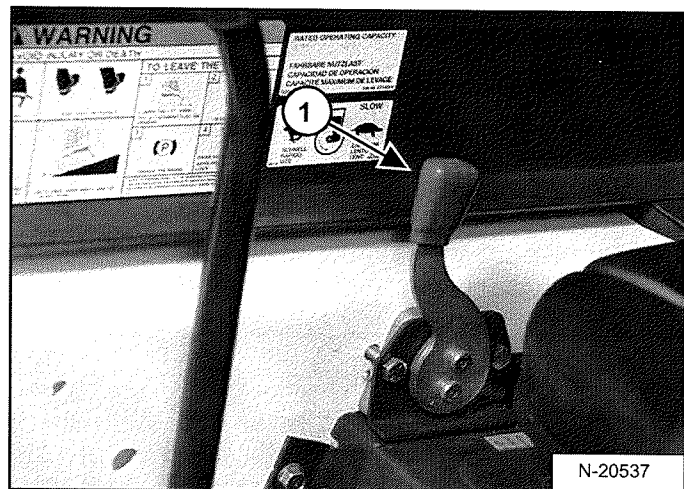
The back-up alarm will sound when the operator moves both steering levers or joystick(s) into the reverse position. Slight movement of the steering levers into the reverse position is required with hydrostatic transmissions, before the back-up alarm will sound.

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

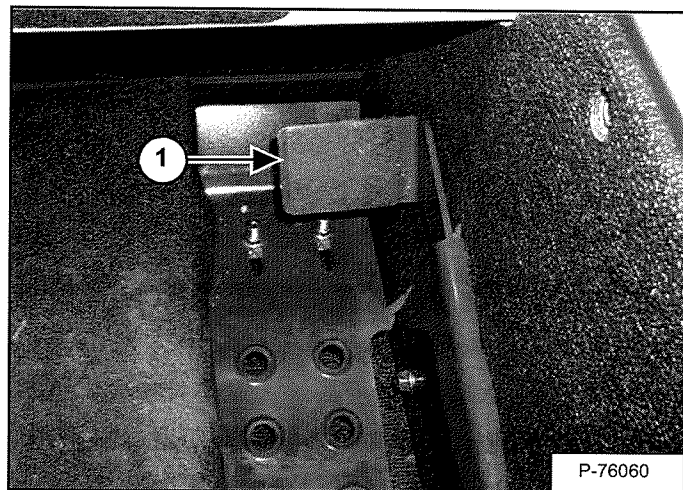
Figure OI-27



The engine speed control lever is at the right side of the operator's seat (Item 1) [Figure OI-27].

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

Figure OI-28



There is a foot operated engine speed control pedal (Item 1) [Figure OI-28] in addition to the engine speed control lever on SJC equipped machines. It is located on the right side floor above the footrest.

DRIVING AND STEERING THE LOADER

Available Control Configurations

The loader has three configurations available:

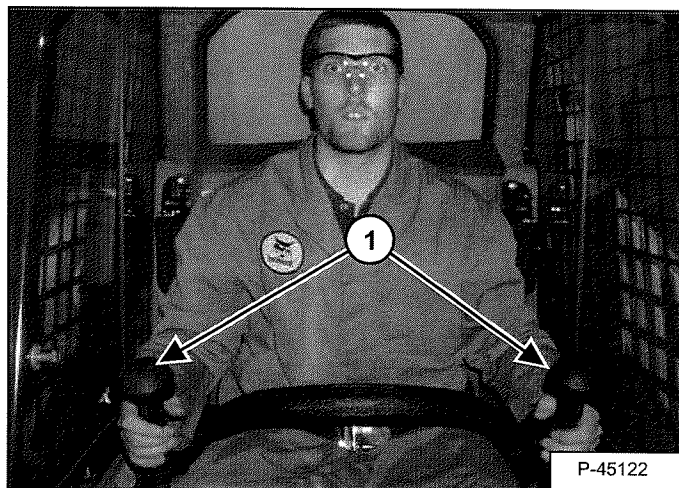
- *Standard Controls* - Two Steering Levers control drive and steering functions.
- *Advanced Control System (ACS) (Option)* - Two Steering Levers control drive and steering functions.
- *Selectable Joystick Controls (SJC) (Option)* -

(*'ISO' Pattern*) Left joystick controls the drive and steering functions.

(*'H' Pattern*) Left and right joysticks control left and right side drive and steering functions.

Operation (Standard And ACS)

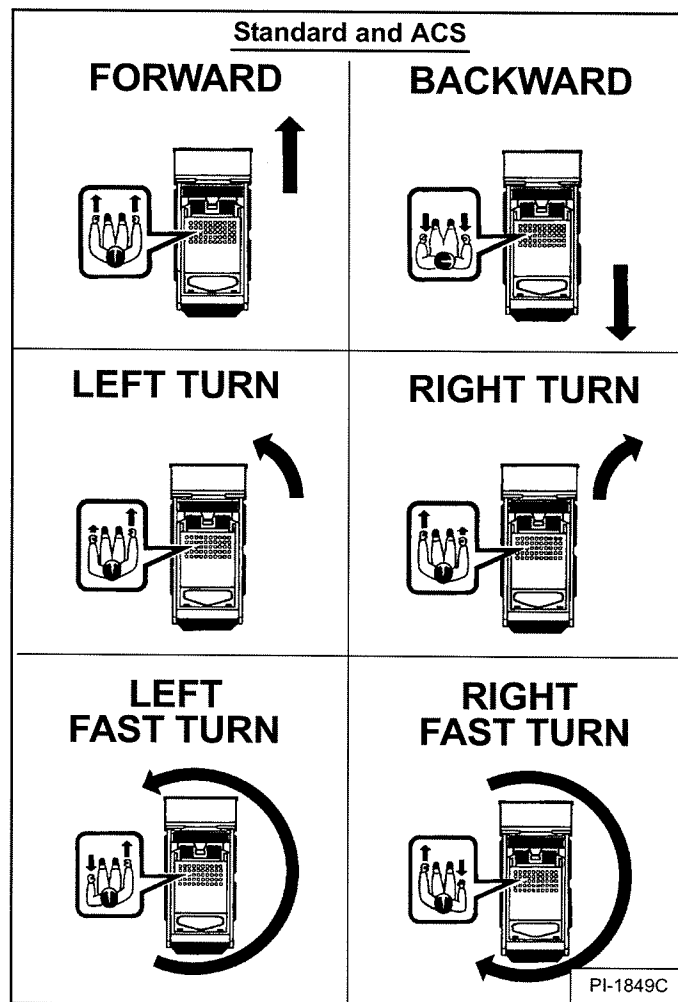
Figure OI-29



The steering levers (Item 1) [Figure OI-29] are on the left and right side in front of the seat.

Move the levers smoothly. Avoid sudden starting and stopping.

Figure OI-30



The steering levers control forward and backward travel and turning the loader [Figure OI-30].

Forward Travel - Push both levers forward.

Reverse Travel - Pull both levers backward.

Normal Turning - Move one lever farther forward than the other.

Fast Turning - Push one lever forward and pull the other lever backward.



WARNING

AVOID INJURY OR DEATH

When operating the machine:

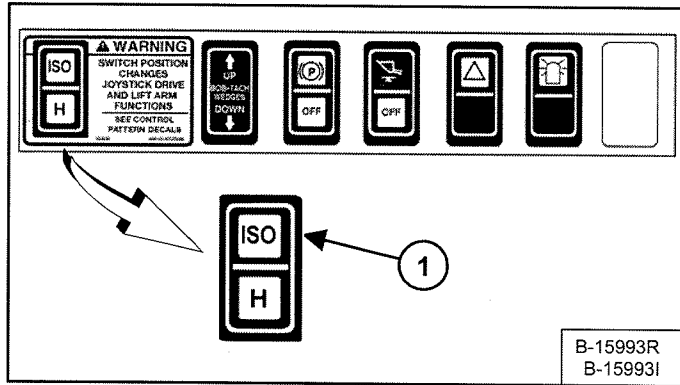
- Keep the seat belt fastened snugly.
- The seat bar must be lowered.
- Keep your feet on the pedal controls or footrests and hands on the controls.

W-2261-0909

DRIVING AND STEERING THE LOADER (CONT'D)

Operation (SJC) In 'ISO' Control Pattern

Figure OI-31



Select the 'ISO' control pattern by pressing the top of the switch (Item 1) [Figure OI-31].

! WARNING

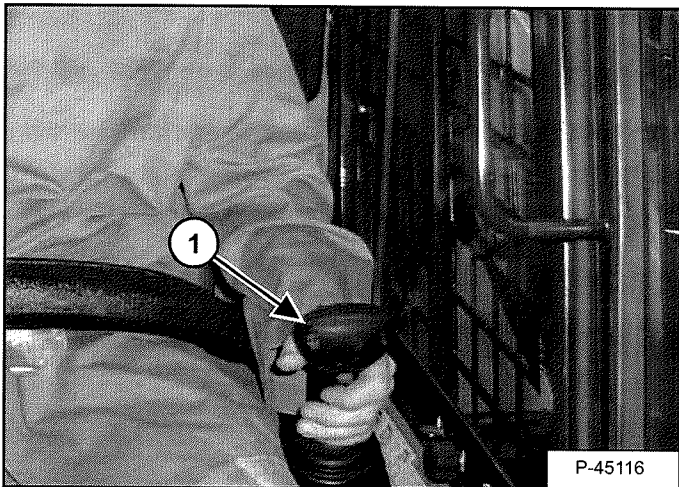
AVOID INJURY OR DEATH

When operating the machine:

- Keep the seat belt fastened snugly.
- The seat bar must be lowered.
- Keep your feet on the foot rests and hands on control levers.

W-2399-0501

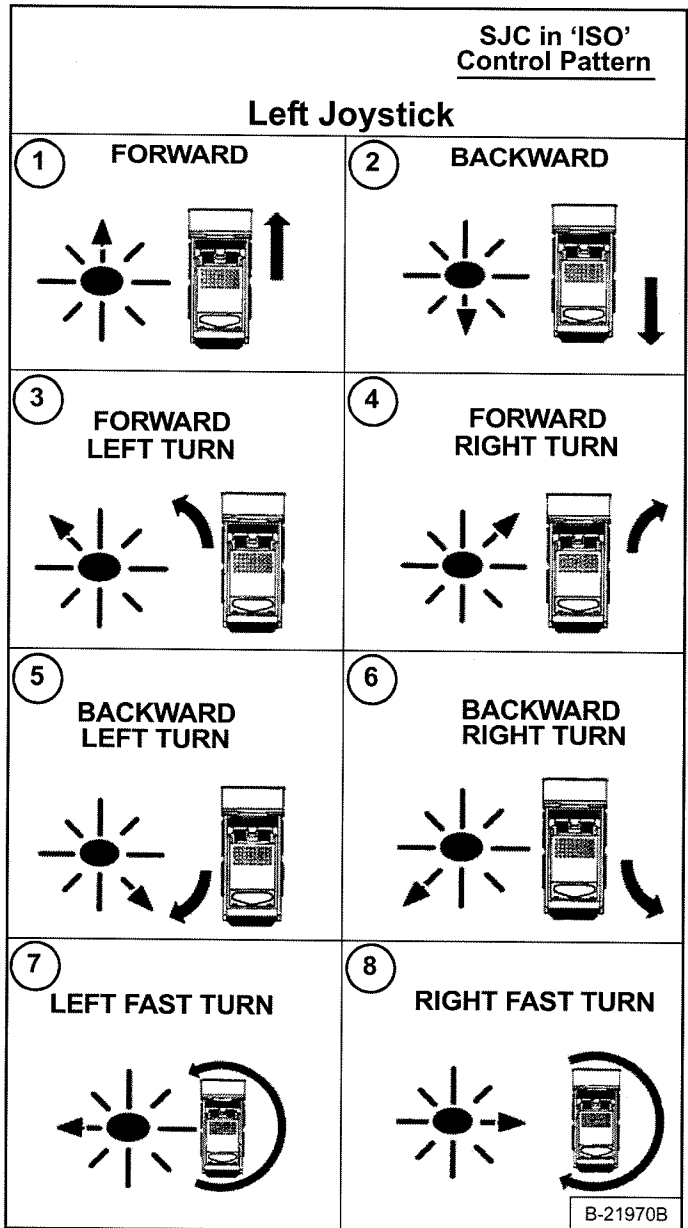
Figure OI-32



The joystick that controls drive and steering is on the left side in front of the seat (Item 1) [Figure OI-32].

Move the joystick smoothly. Avoid sudden starting and stopping.

Figure OI-33



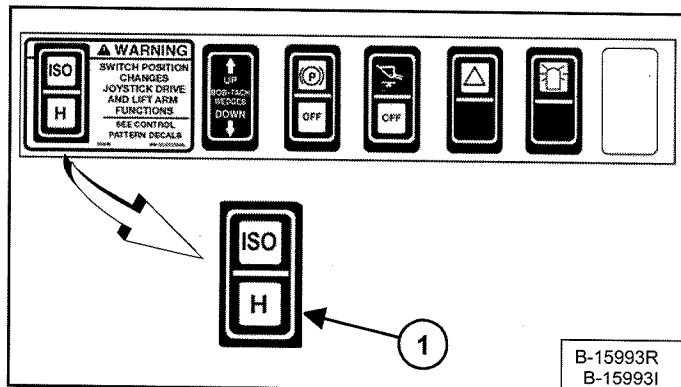
Left Joystick Functions (Drive and Steering) [Figure OI-33].

1. **Forward Travel** - Move joystick forward.
2. **Backward Travel** - Move joystick backward.
3. **Forward Left Turn** - Move joystick forward and to the left.
4. **Forward Right Turn** - Move joystick forward and to the right.
5. **Backward Left Turn** - Move joystick backward and to the right.
6. **Backward Right Turn** - Move joystick backward and to the left.
7. **Left Fast Turn** - Move joystick to the left.
8. **Right Fast Turn** - Move joystick to the right.

DRIVING AND STEERING THE LOADER (CONT'D)

Operation (SJC) In 'H' Control Pattern

Figure OI-34



Select the 'H' control pattern by pressing the bottom of the switch (Item 1) [Figure OI-34].



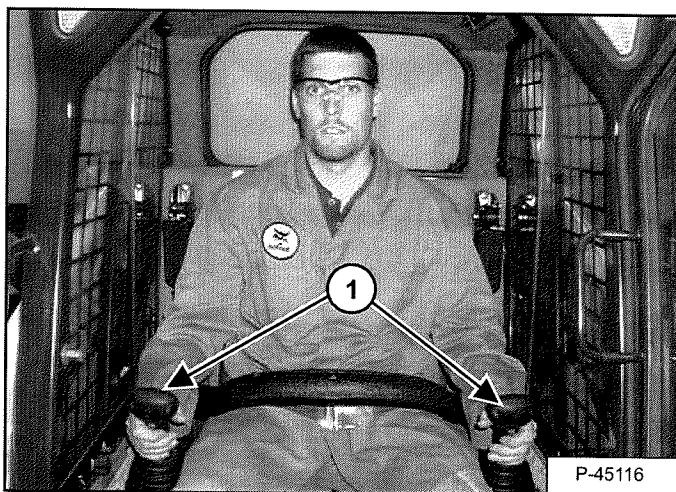
AVOID INJURY OR DEATH

When operating the machine:

- Keep the seat belt fastened snugly.
- The seat bar must be lowered.
- Keep your feet on the foot rests and hands on control levers.

W-2399-0501

Figure OI-35



Both joysticks control drive and steering and are located on the left and right side in front of the seat (Item 1) [Figure OI-35].

Move the joysticks smoothly. Avoid sudden starting and stopping.

Figure OI-36

Left Joystick	Right Joystick	SJC in 'H' Control Pattern
1		 FORWARD
2		 BACKWARD
3		 LEFT TURN
4		 RIGHT TURN
5		 LEFT FAST TURN
6		 RIGHT FAST TURN

B-22029A

Joystick Functions (Drive and Steering) [Figure OI-36]

1. **Forward Travel** - Move both joysticks forward.
2. **Backward Travel** - Move both joysticks backward.
3. **Forward Left Turn** - Move the right joystick farther forward than the left joystick.
4. **Forward Right Turn** - Move the left joystick farther forward than the right joystick.
5. **Left Fast Turn** - Move the left joystick backward and the right joystick forward.
6. **Right Fast Turn** - Move the left joystick forward and the right joystick backward.

STOPPING THE LOADER

Using The Control Levers Or Joysticks

When the steering levers or joysticks are moved to the neutral position, the hydrostatic transmission will act as a *service brake* to stop the loader.

TWO-SPEED CONTROL

Description

This machine may be equipped with Two-Speed. Two-speed allows you to reduce cycle times when there is a long travel distance between the dig site and the dump site. You can also use the two-speed when traveling from one job site to another at faster speeds.

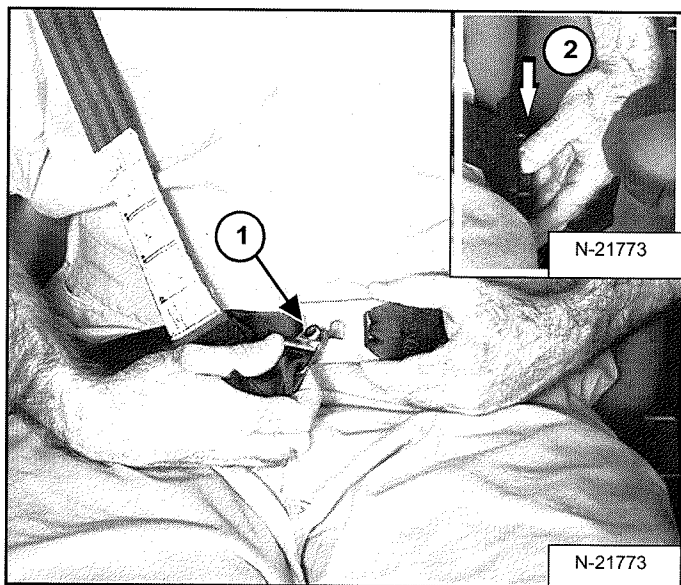
WARNING

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

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

W-2754-0908

Figure OI-37



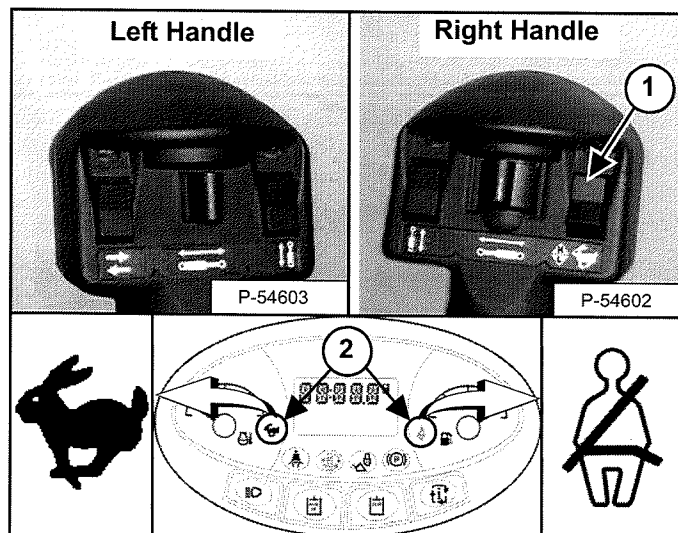
NOTE: The 3-point restraint must be used when selecting two-speed operation [Figure OI-37].

Connect the shoulder belt to the lap belt (Item 1). Pull the lap belt across to the left side of the seat (Item 2) [Figure OI-37] and fasten.

The shoulder belt must be positioned over your right shoulder and lap belt over your lower hips [Figure OI-37].

Operation (Standard And ACS) (If Equipped)

Figure OI-38



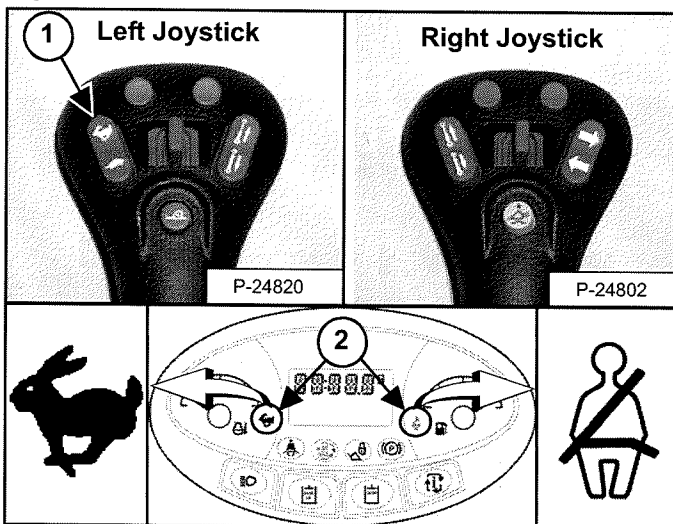
Press the top of the switch (Item 1) on the right handle for high range. The two-speed and shoulder belt icons located on the left instrument panel (Item 2) [Figure OI-38] will come on.

NOTE: This toggle switch retains the selected range. The loader will be in high range speed at start-up if the switch is in the high range position.

Press the bottom of the switch for low range.

Operation (SJC) (If Equipped)

Figure OI-39



NOTE: You must disengage Speed Management before you can select high range.

Press the top of the switch (Item 1) on the left joystick for high range. The two-speed and shoulder belt icons located on the left instrument panel (Item 2) [Figure OI-39] will come on.

Press the bottom of the switch for low range.

SPEED MANAGEMENT

Speed Management is available on SJC equipped machines.

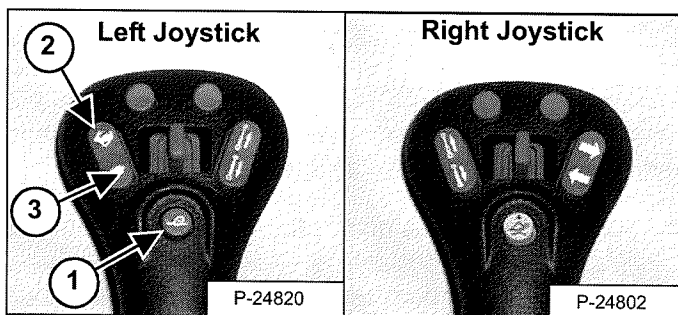
Operation

Speed Management allows the loader to be maneuvered at a slower travel speed, even during maximum movement of the joystick(s).

This feature can be useful when installing attachments, loading or unloading, and certain applications. (EXAMPLES: Landscaping, tilling, trenching)

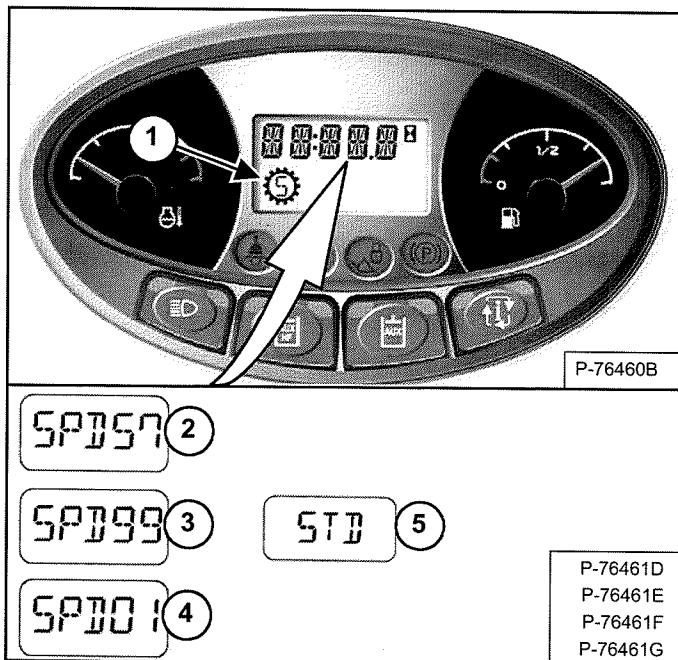
NOTE: Two-Speed Loaders Only - You must be in low range speed to engage Speed Management.

Figure OI-40



Press the button (Item 1) [Figure OI-40] on the left joystick once to engage Speed Management.

Figure OI-41



The Speed Management icon (Item 1) [Figure OI-41] will appear in the display and remain on until the Speed Management button is pressed again or the machine is turned off.

When Speed Management is engaged, the machine will travel at the factory default setting of 57% of Standard Travel Speed and the percentage [SPD 57] will appear in the display (Item 2) [Figure OI-41].

NOTE: The factory default setting can be changed by the operator. (See Changing The Factory Default Setting on Page OI-26.)

While Speed Management is engaged, press the top of the Speed Control switch (Item 2) [Figure OI-40] to increase the speed up to 99% [SPD 99] or the bottom of the switch (Item 3) [Figure OI-40] to decrease the speed down to 1% [SPD 01]. The percentages will appear in the display (Items 2, 3 and 4) [Figure OI-41].

Press button (Item 1) [Figure OI-40] again to disengage Speed Management and return to Standard Travel Speed. [STD] (Item 5) [Figure OI-41] will appear in the display.

The system will retain the speed percentage as long as the key remains ON or the STOP button has not been pressed.

EXAMPLE: You can be using the machine at 40% and then disengage Speed Management to reposition the loader, then re-engage Speed Management. The speed percentage will still be at 40%.

EXAMPLE: Turning the key OFF or pressing the STOP button will return the Speed Management setting to default. The next time you start the engine and engage Speed Management, the speed will be at 57% (factory default setting) or the last default setting saved by the operator. (See Changing The Factory Default Setting on Page OI-26.)

NOTE: Two-Speed Loaders Only - You must disengage Speed Management before you can select high range.

SPEED MANAGEMENT (CONT'D)

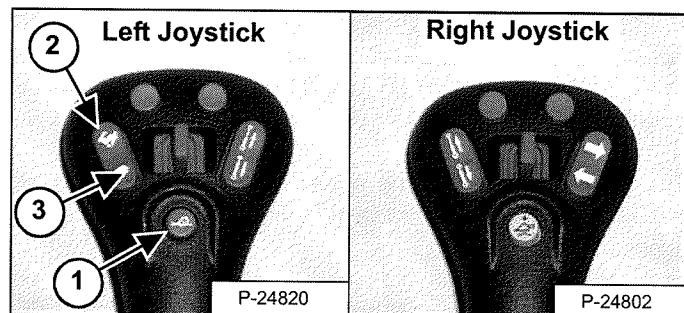
Changing The Factory Default Setting

The Speed Management factory default setting can be changed by the operator to save adjustment time.

EXAMPLE: Your machine is often used for trenching and you prefer a Speed Management setting of 28% of Standard Travel Speed for that application. The Speed Management default setting can be changed to 28% of Standard Travel Speed instead of the factory default setting of 57%. Each time you start the machine and first select Speed Management, the machine will default to 28% of Standard Travel Speed.

Engage Speed management. (See Operation on Page OI-25.)

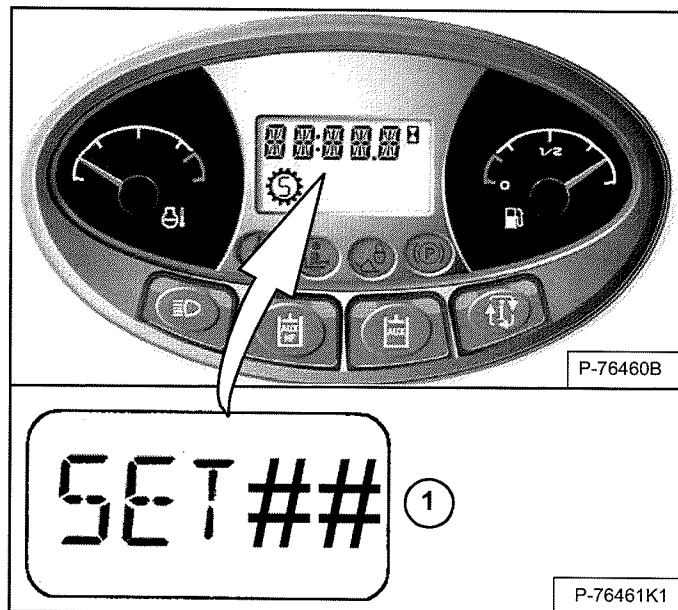
Figure OI-42



Adjust the speed percentage higher (Item 2) or lower (Item 3) [Figure OI-42] by pressing the Speed Control switch until the desired default setting is displayed.

Press and hold the button (Item 1) [Figure OI-42] on the left joystick to save the default setting.

Figure OI-43



The alarm will beep once, display **[SET ##]** (## will be the percentage you selected) (Item 1) [Figure OI-43] and remain in Speed Management mode.

Pressing the button (Item 1) [Figure OI-42] on the left joystick or turning the machine off will disengage Speed Management and return the loader to Standard Travel Speed.

When Speed Management is first selected each time the machine is started, the percentage you selected will be the default setting. Speed Management can still be adjusted from 1% to 99% of Standard Travel Speed.

The default setting can be changed any time the operator chooses.

DRIVE RESPONSE

Drive Response is available on SJC equipped machines.

NOTE: An upgrade to the loader software may be required if this feature does not function as described in this manual. See your Bobcat dealer to update your machine software version if necessary.

Description

Drive Response changes how responsive (more or less) the loader drive and steering systems are when the operator moves the joystick(s).

Drive Response can be changed by the operator for different drive response preferences and various job conditions and attachment use.

NOTE: Changes to drive response do not affect braking or stopping the loader.

There are three drive response settings:

- **[DR-1]** provides a smooth responsive reaction to joystick movement. (Drive only)
- **[DR-2]** is the default setting and provides a normal responsive reaction to joystick movement. (Drive only)
- **[DR-3]** provides a quick responsive reaction to joystick movement. (Drive only)

Operation

NOTE: Changes **CANNOT** be performed until the seat bar is lowered, the engine is started and the **PRESS TO OPERATE LOADER** button is pressed to activate the BICS.

Perform pre-starting and starting procedures:

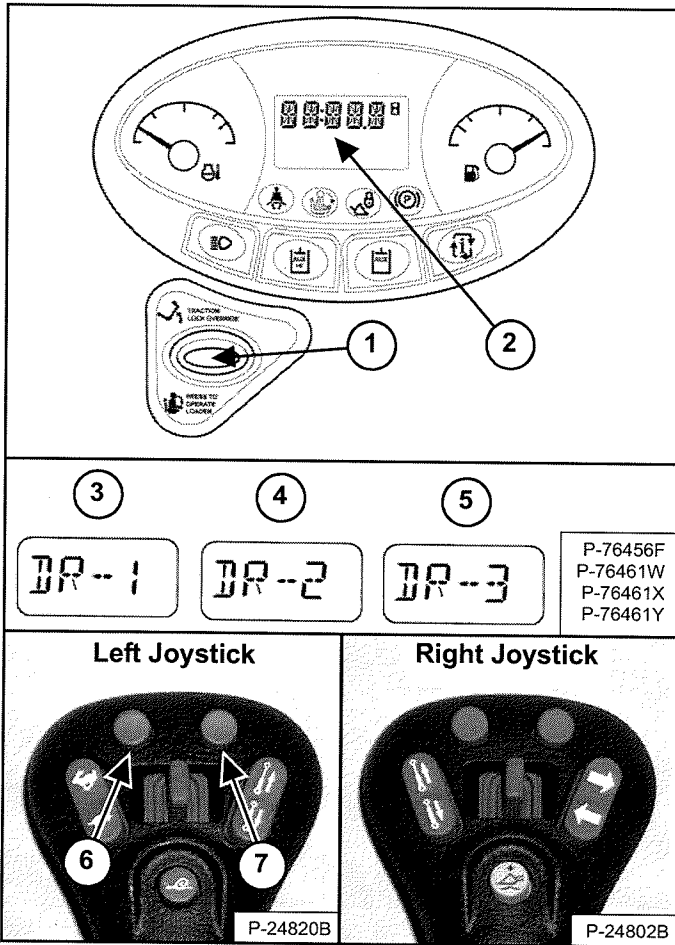
1. Fasten seat belt.
2. Lower seat bar.
3. Place joysticks in neutral position.
4. Start the engine.
5. Press the **PRESS TO OPERATE LOADER** button.
6. Current drive response setting will be displayed briefly in the data display.

NOTE: Raising the seat bar or changing control mode (ISO / H) will cause the machine to disengage from drive response. The last displayed setting will remain in effect until the **STOP** button is pressed or the key is turned OFF.

DRIVE RESPONSE (CONT'D)

Operation (Cont'd)

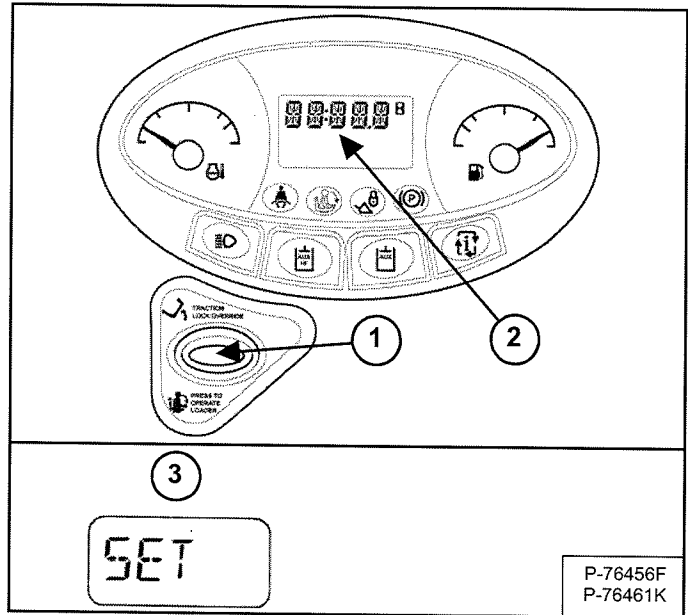
Figure OI-44



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-44].

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-44]. Adjustments to drive response will be effective immediately.

Figure OI-45



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-45] 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-29.) will appear in the data display (Item 2) [Figure OI-45] 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-29.)

OR

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

STEERING DRIFT COMPENSATION

Steering Drift Compensation is available on SJC equipped machines.

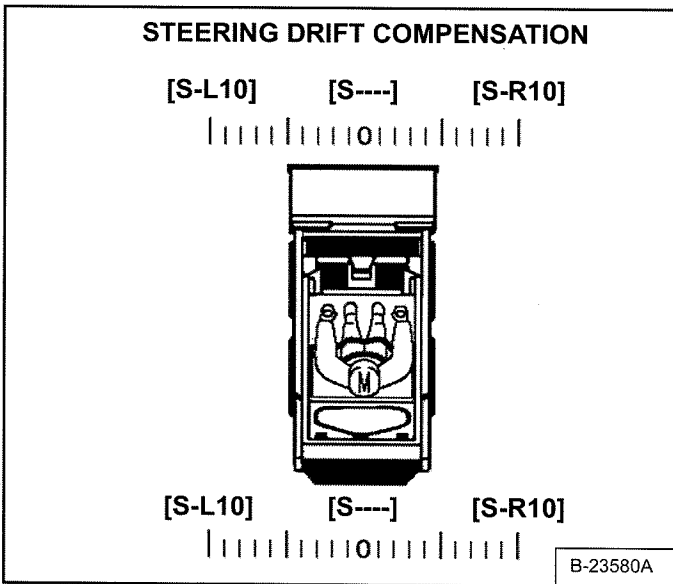
Description

Steering Drift Compensation can be used to reduce steering drift to maintain a desired travel path in both forward and reverse directions.

Examples of applications where this feature can be used:

- To compensate for normal variations such as tire inflation pressure, track tension, tire wear and track wear.
- Using side shift attachments such as trenchers, planers and silt fence installers.
- Driving on uneven terrain such as crowned road surfaces.

Figure OI-46



Steering drift compensation contains a total of 21 settings. Steering drift compensation can be set to any point from neutral to **[S-L10]** left and from neutral to **[S-R10]** right. **[S----]** is displayed when set for neutral **[Figure OI-46]**.

Operation

NOTE: Changes **CANNOT** be performed until the seat bar is lowered, the engine is started and the **PRESS TO OPERATE LOADER** button is pressed to activate the BICS.

Perform pre-starting and starting procedures:

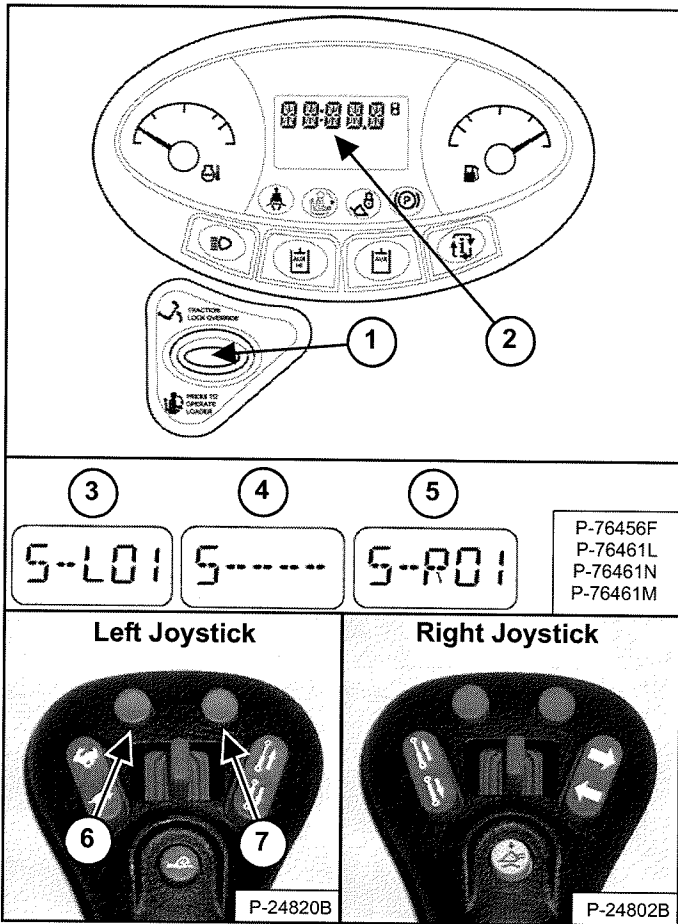
1. Fasten seat belt.
2. Lower seat bar.
3. Place joysticks in neutral position.
4. Start the engine.
5. Press the **PRESS TO OPERATE LOADER** button.
6. Current drive response setting will be displayed briefly in the data display.

NOTE: Raising the seat bar or changing control mode (ISO / H) will cause the machine to disengage from steering drift compensation. The last displayed setting will remain in effect until the **STOP** button is pressed or the key is turned OFF.

STEERING DRIFT COMPENSATION (CONT'D)

Operation (Cont'd)

Figure OI-47

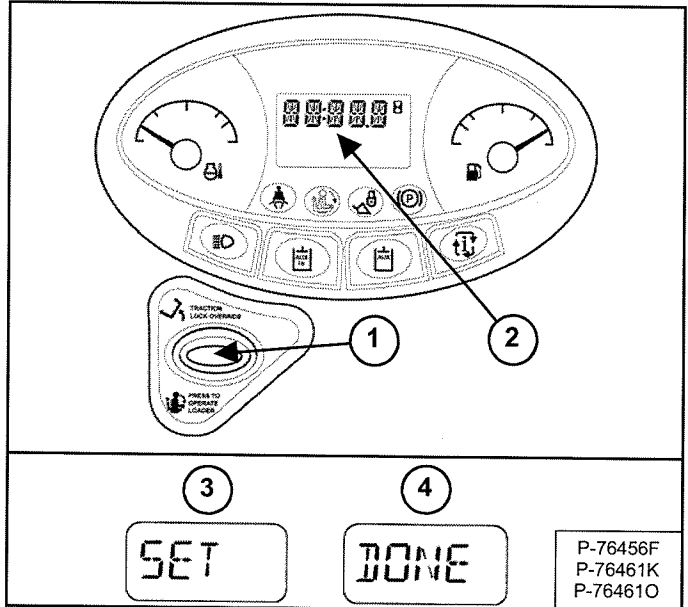


Press and hold the PRESS TO OPERATE LOADER button (Item 1) for **three seconds** to enter the drive response adjustment menu. Press the PRESS TO OPERATE LOADER button (Item 1) again to adjust the loader steering drift compensation setting. The current steering drift compensation setting will appear in the data display (Item 2) [Figure OI-47].

Press the upper left button (Item 6) on the left joystick to adjust the machine left. [S-L01] (Item 3) through a maximum of [S-L10] will appear in the data display (Item 2) [Figure OI-47]. The number will increase by one each time you press the button. The higher the number, the greater the amount of steering drift compensation to the left. Adjustments to steering drift compensation will be effective immediately.

Press the upper right button (Item 7) on the left joystick to adjust back toward center. The display will decrease down to neutral displayed as [S----] (Item 4). Another press of the upper right button will cause [S-R01] (Item 5) to appear in the data display (Item 2) [Figure OI-47]. The number will increase by one each time you press the button up to a maximum of [S-R10]. The higher the number, the greater the amount of steering drift compensation to the right. Adjustments to steering drift compensation will be effective immediately.

Figure OI-48



Saving The Steering Drift Compensation Setting:

The current steering drift compensation 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-48] and the machine will exit from the steering drift compensation adjustment menu.

OR

Press the PRESS TO OPERATE LOADER button to exit from the steering drift compensation adjustment menu without saving the current setting. [DONE] (Item 4) will appear in the data display (Item 2) [Figure OI-48] and the upper left and upper right buttons on the left joystick will no longer make changes to steering drift compensation.

NOTE: The last displayed steering drift compensation 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 setting the next time it is started.

HYDRAULIC CONTROLS

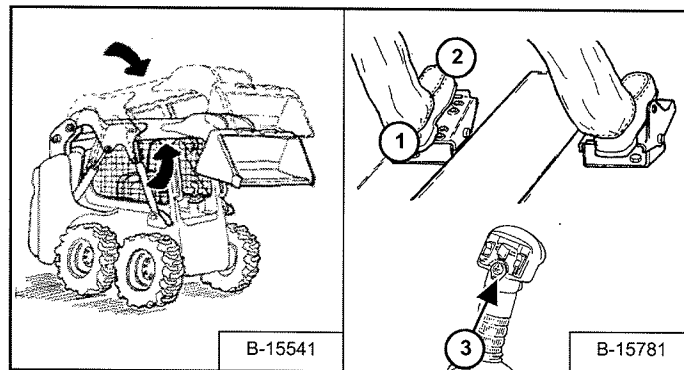
Description

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

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

Standard Controls (Also ACS In FOOT Pedal Mode)

Figure OI-49



Lift Arm Operation - (Left Pedal)

Push the heel (Item 1) **[Figure OI-49]** of the pedal to raise the lift arms.

Push the toe (Item 2) **[Figure OI-49]** of the pedal to lower the lift arms.

Lift Arm Float Position - (Left Pedal)

Push the toe (Item 2) **[Figure OI-49]** of the pedal all the way forward until it locks into the float position.

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

Raise the lift arms to disengage the float position.

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

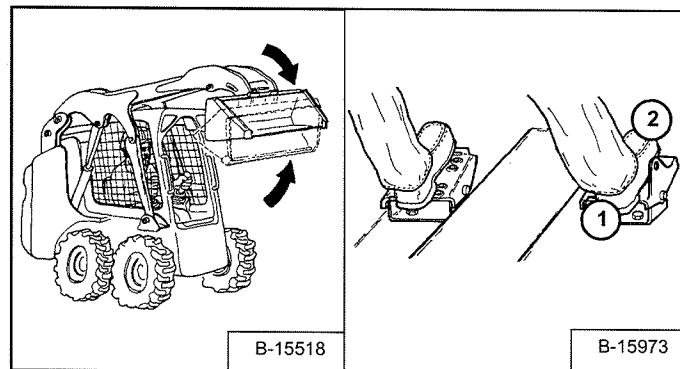
Press and hold the Float button (Item 3) **[Figure OI-49]**.

Push the toe (Item 2) **[Figure OI-49]** of the pedal forward to lower the lift arms. Then release the float button.

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

Raise the lift arms to disengage the float position.

Figure OI-50



Tilt Operation - (Right Pedal)

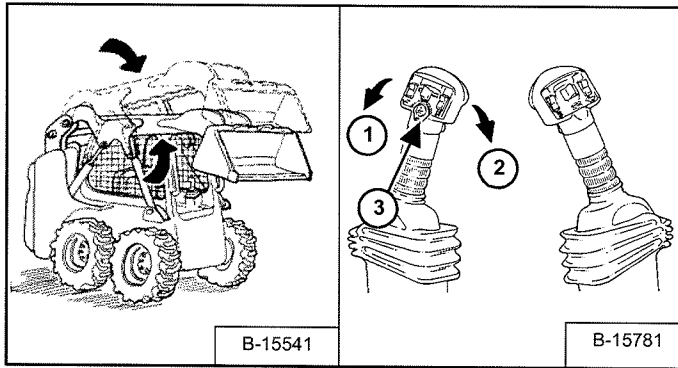
Push the heel (Item 1) **[Figure OI-50]** of the pedal to tilt the bucket backward.

Push the toe (Item 2) **[Figure OI-50]** of the pedal to tilt the bucket forward.

HYDRAULIC CONTROLS (CONT'D)

Advanced Control System (ACS) In HAND Control Mode

Figure OI-51



Lift Arm Operation - (Left Hand Lever)

Move the lever outward (Item 1) [Figure OI-51] to raise the lift arms.

Move the lever inward (Item 2) [Figure OI-51] to lower the lift arms.

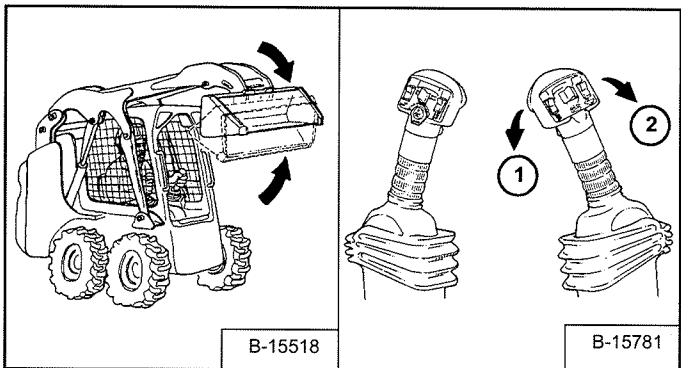
Lift Arm Float Position - (Left Hand Lever)

Press and hold the Float button (Item 3) [Figure OI-51] while the lever is in neutral. Move the lever to lift arm down position (Item 2) [Figure OI-51], then release the button.

Press Float button (Item 3) [Figure OI-51] again or move the lever to lift arm up position to disengage.

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

Figure OI-52



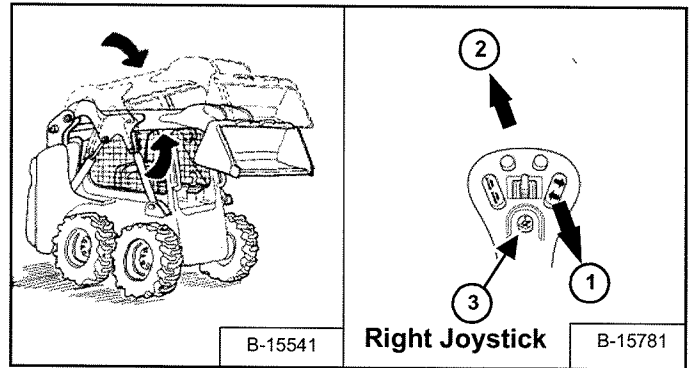
Tilt Operation - (Right Hand Lever)

Move the lever inward (Item 1) [Figure OI-52] to tilt the bucket backward.

Move the lever outward (Item 2) [Figure OI-52] to tilt the bucket forward.

Selectable Joystick Controls (SJC) In 'ISO' Control Pattern

Figure OI-53



Lift Arm Operation - (Right Hand Joystick)

Move the joystick backward (Item 1) [Figure OI-53] to raise the lift arms.

Move the joystick forward (Item 2) [Figure OI-53] to lower the lift arms.

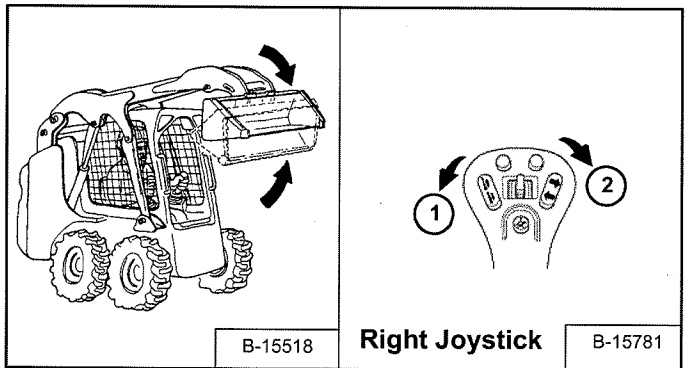
Lift Arm Float Position - (Right Hand Joystick)

Press and hold the Float button (Item 3) [Figure OI-53] while the joystick is in neutral. Move the joystick to lift arm down position (Item 2) [Figure OI-53], then release the button.

Press Float button (Item 3) again or move the joystick to lift arm up position (Item 1) [Figure OI-53] to disengage.

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

Figure OI-54



Tilt Operation - (Right Hand Joystick)

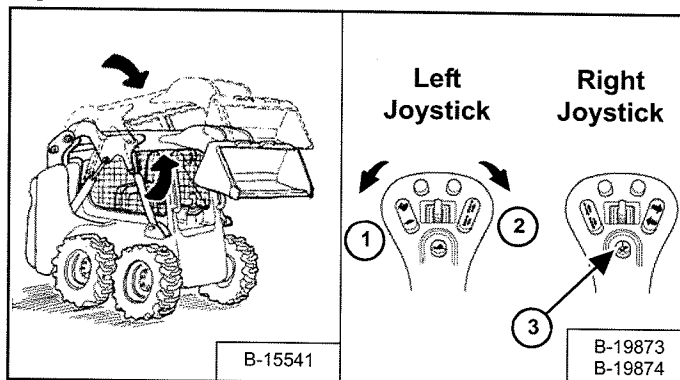
Move the joystick inward (Item 1) [Figure OI-54] to tilt the bucket backward.

Move the joystick outward (Item 2) [Figure OI-54] to tilt the bucket forward.

HYDRAULIC CONTROLS (CONT'D)

Selectable Joystick Controls (SJC) In 'H' Control Pattern

Figure OI-55



Lift Arm Operation - (Left Hand Joystick)

Move the joystick outward (Item 1) [Figure OI-55] to raise the lift arms.

Move the joystick inward (Item 2) [Figure OI-55] to lower the lift arms.

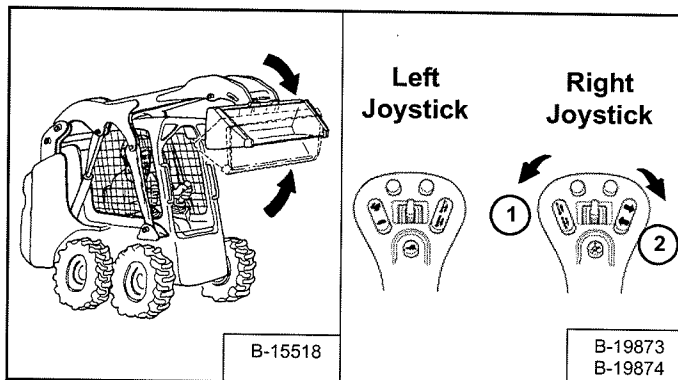
Lift Arm Float Position - (Left and Right Hand Joysticks)

Press and hold the Float button (Item 3) [Figure OI-55] while the joysticks are in neutral. Move the left joystick to lift arm down position (Item 2) [Figure OI-55], then release the button.

Press Float button (Item 3) [Figure OI-55] again or move the left joystick to lift arm up position to disengage.

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

Figure OI-56



Tilt Operation - (Right Hand Joystick)

Move the joystick inward (Item 1) [Figure OI-56] to tilt the bucket backward.

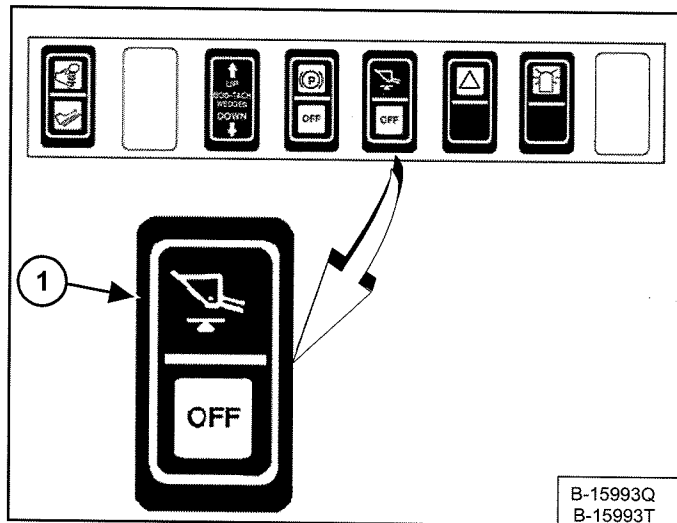
Move the joystick outward (Item 2) [Figure OI-56] to tilt the bucket forward.

Hydraulic Bucket Positioning

This machine may be equipped with Hydraulic Bucket Positioning.

The function of hydraulic bucket positioning is to keep the bucket in the same approximate position it is in before you begin raising the lift arms.

Figure OI-57



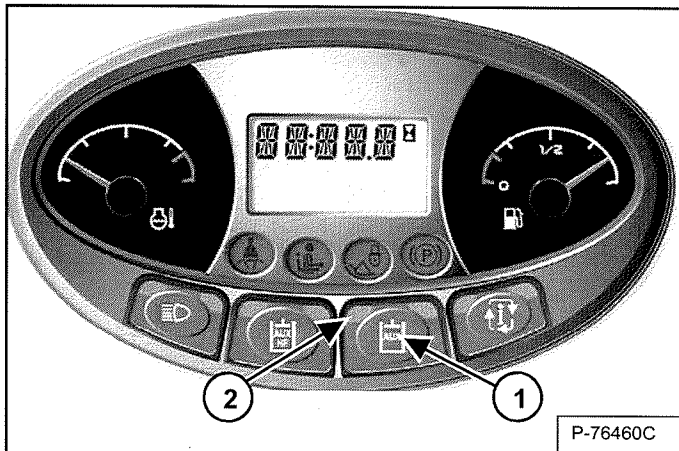
Press the top of the BUCKET POSITIONING switch (Item 1) [Figure OI-57] to engage the bucket positioning function. The amber light in the switch will turn on. Press the bottom of the switch to disengage. The amber light will turn off.

Bucket positioning functions only during upward lift cycle.

HYDRAULIC CONTROLS (CONT'D)

FRONT Auxiliary Hydraulics Operation

Figure OI-58

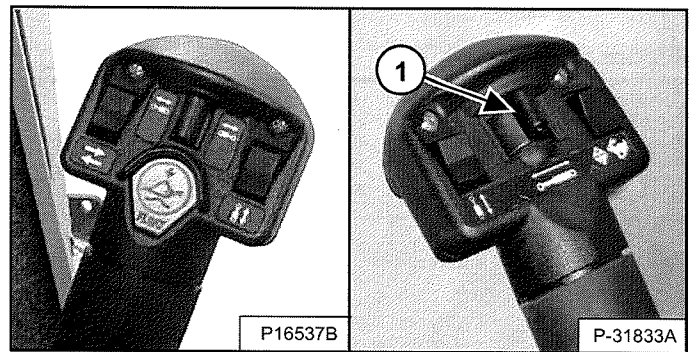


Press the auxiliary hydraulics button (Item 1) **[Figure OI-58]** once to engage auxiliary hydraulics.

The light (Item 2) **[Figure OI-58]** will be ON.

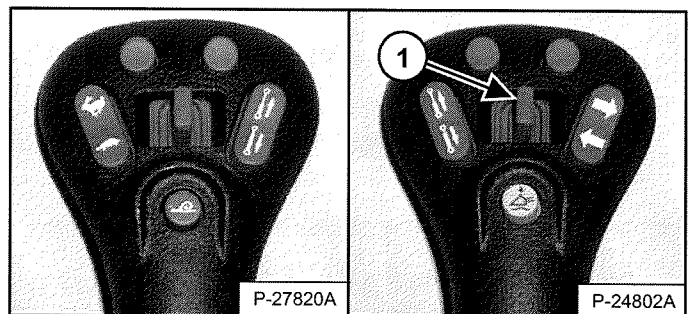
Standard And ACS (If Equipped)

Figure OI-59



SJC (If Equipped)

Figure OI-60



Move the front auxiliary hydraulic switch (Item 1) **[Figure OI-59]** or **[Figure OI-60]** to the right or left to change the fluid flow direction of the front quick couplers. If you move the switch half-way, the auxiliary functions move at approximately one-half speed; release the switch to stop auxiliary functions. (EXAMPLE: Open and close grapple teeth.)

To disengage, press the auxiliary hydraulics button (Item 1) **[Figure OI-58]** again.

The light (Item 2) **[Figure OI-58]** will be OFF.

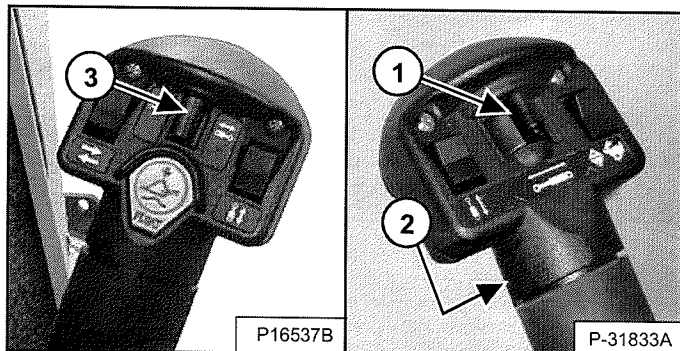
NOTE: When the operator is seated and raises the seat bar, the Auxiliary Hydraulic System (Front and Rear) will deactivate.

HYDRAULIC CONTROLS (CONT'D)

FRONT Auxiliary Hydraulics Operation (CONTINUOUS FLOW)

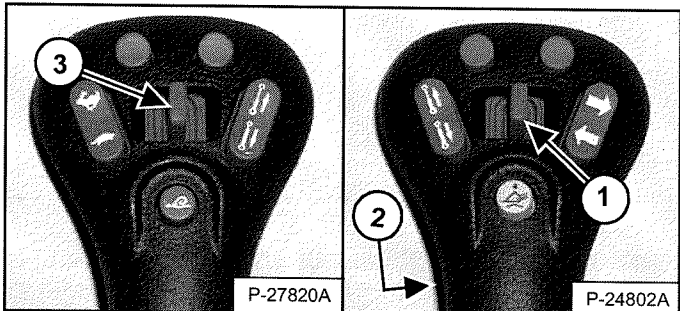
Standard And ACS (If Equipped)

Figure OI-61



SJC (If Equipped)

Figure OI-62



After engaging auxiliary hydraulics, press the front switch (Item 2) [Figure OI-61] or [Figure OI-62] to give the front quick couplers a constant flow of fluid with the female coupler being pressurized. (EXAMPLE: Operate a backhoe.)

REVERSE CONTINUOUS FLOW - To set reverse flow (male coupler pressurized), engage auxiliary hydraulics, then, while holding the auxiliary switch (Item 1) [Figure OI-61] or [Figure OI-62] to the left, press the front switch (Item 2) [Figure OI-61] or [Figure OI-62].

NOTE: Reverse flow can cause damage to some attachments. Use reverse flow with your attachment only if approved. See your attachment Operation & Maintenance Manual for detailed information.

To release from continuous operation, press the front switch (Item 2) [Figure OI-61] or [Figure OI-62] a second time.

NOTE: When the operator is seated and raises the seat bar, the Auxiliary Hydraulic System (Front and Rear) will deactivate.

REAR Auxiliary Hydraulics Operation

This machine may be equipped with Rear Auxiliary Hydraulics.

Figure OI-63

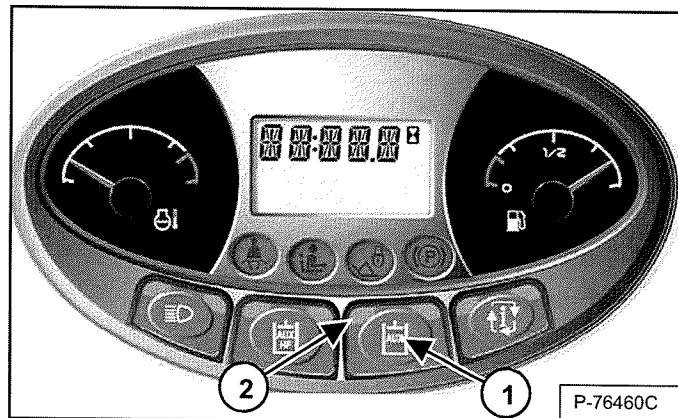
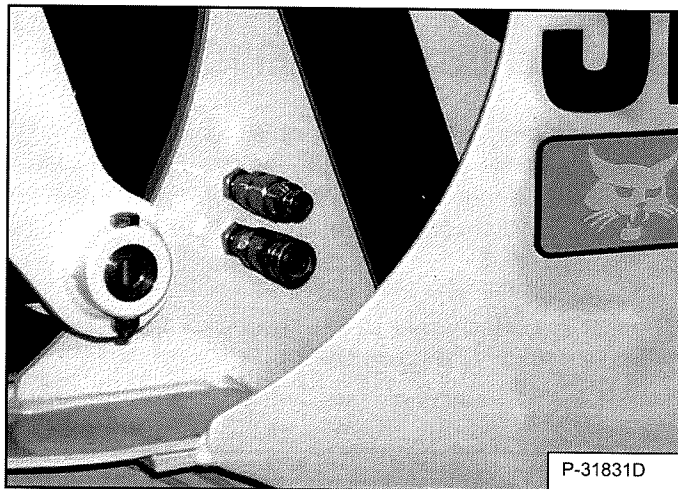


Figure OI-64



The switches on the left hand lever or joystick control the rear auxiliary hydraulics.

Press the auxiliary hydraulics button (Item 1) [Figure OI-63] once to engage auxiliary hydraulics.

The light (Item 2) [Figure OI-63] will be ON.

Push the switch (Item 3) [Figure OI-61] or [Figure OI-62] to the right or left to change the fluid flow direction to rear quick couplers [Figure OI-64]. (EXAMPLE: Raise and lower rear stabilizers.)

To disengage, press the auxiliary hydraulics button (Item 1) [Figure OI-63] again.

The light (Item 2) [Figure OI-63] will be OFF.

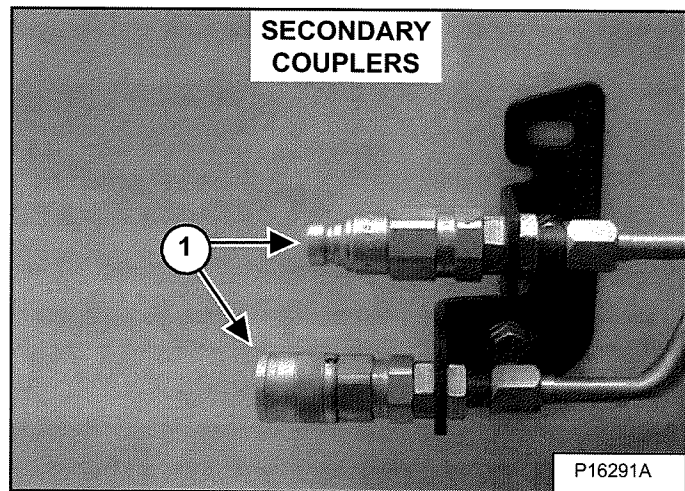
NOTE: When the operator is seated and raises the seat bar, the Auxiliary Hydraulic System (Front and Rear) will deactivate.

HYDRAULIC CONTROLS (CONT'D)

Secondary Front Auxiliary Hydraulics Operation

This machine may be equipped with Secondary Front Auxiliary Hydraulics.

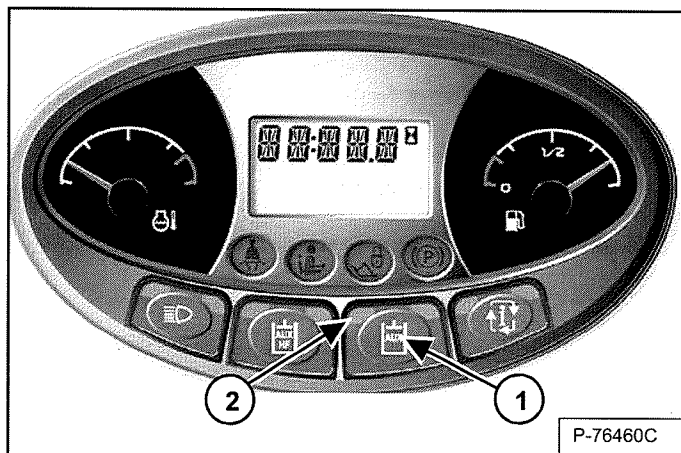
Figure OI-65



The secondary front auxiliary quick couplers (Item 1) [Figure OI-65] are available as a Field Installed Accessory. These are used when there is a need for additional auxiliary hydraulics. (EXAMPLE: Side shift on the Planer.)

Connect the attachment to the secondary front auxiliary hydraulics (Item 1) [Figure OI-65].

Figure OI-66

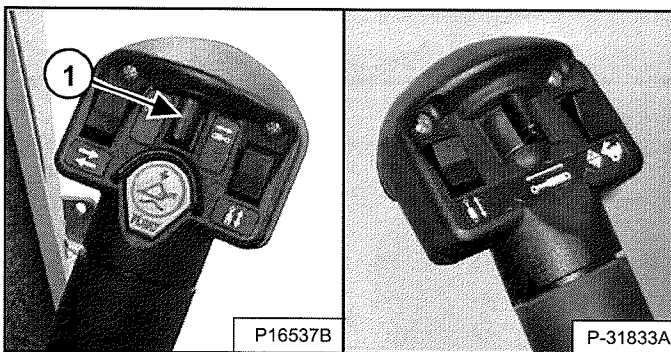


Press the auxiliary hydraulics button (Item 1) [Figure OI-66] once to engage auxiliary hydraulics.

The light (Item 2) [Figure OI-66] will be ON.

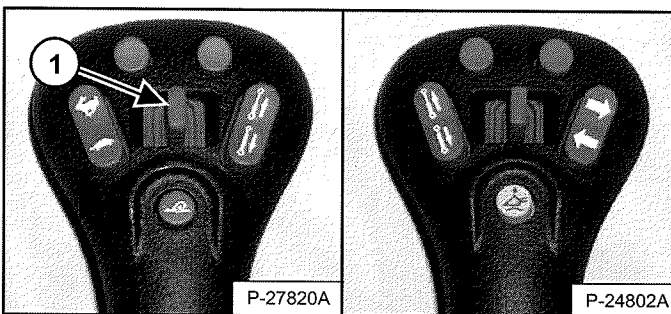
Standard And ACS (If Equipped)

Figure OI-67



SJC (If Equipped)

Figure OI-68



Push switch (Item 1) [Figure OI-67] or [Figure OI-68] to the right or left to change fluid flow direction. (EXAMPLE: Side shift on the Planer.)

NOTE: The secondary front auxiliary hydraulics and the rear auxiliary hydraulics operate from the same auxiliary section of the control valve. To operate an attachment with secondary front auxiliary hydraulics, you must disconnect any attachment connected to the rear auxiliary hydraulic quick couplers.

To disengage, press the auxiliary hydraulics button (Item 1) [Figure OI-66] again.

The light (Item 2) [Figure OI-66] will be OFF.

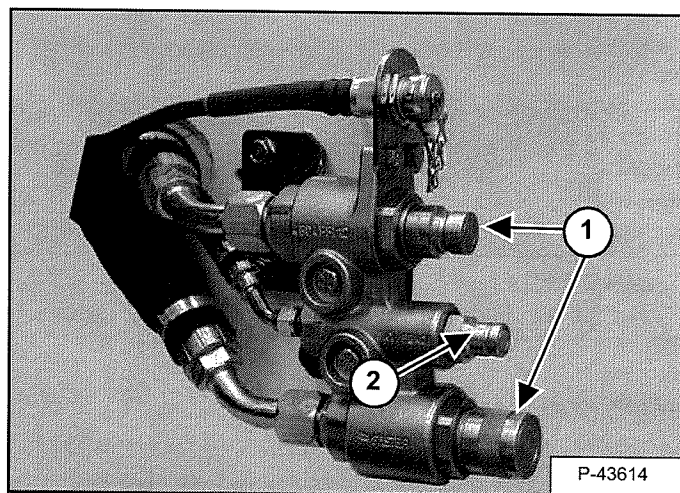
NOTE: When the operator is seated and raises the seat bar, the Auxiliary Hydraulic System (Front and Rear) will deactivate.

HYDRAULIC CONTROLS (CONT'D)

High-Flow Hydraulics Operation

This machine may be equipped with High-Flow Hydraulics.

Figure OI-69

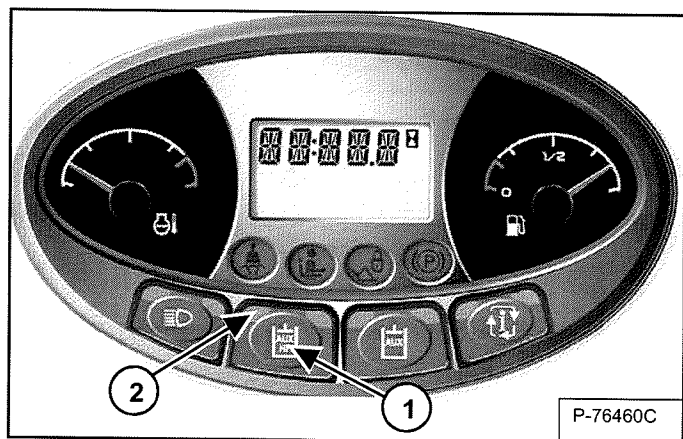


The High-Flow function provides additional flow to the system to operate an attachment which requires more hydraulic flow. (EXAMPLE: Planer)

Connect the attachment to the quick couplers (Item 1) [Figure OI-69].

Some attachments may have a case drain which needs to be connected to the small quick coupler (Item 2) [Figure OI-69].

Figure OI-70



Press the HIGH FLOW button (Item 1) [Figure OI-70].

The light (Item 2) [Figure OI-70] will be ON.

To disengage, press the HIGH FLOW button (Item 1) [Figure OI-70] again.

The light (Item 2) [Figure OI-70] will be OFF.

Quick Couplers

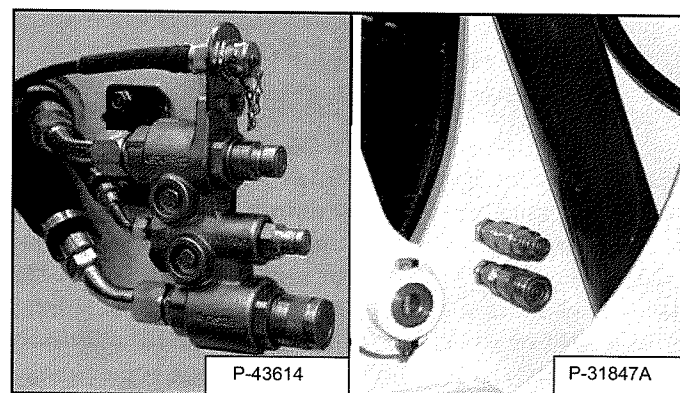
WARNING

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 OI-71



To Connect: Remove dirt or debris from the surface of both the male and female couplers, and from the outside diameter of the male coupler. Visually check the couplers for corroding, cracking, damage or excessive wear. If any of these conditions exist, the coupler(s) [Figure OI-71] must be replaced.

Install the male coupler into the female coupler. Full connection is made when the ball release sleeve slides forward on the female coupler.

To Disconnect: Hold the male coupler. Retract the sleeve on the female coupler until the couplers disconnect.

WARNING

AVOID BURNS

Hydraulic fluid, tubes, fittings and quick couplers can get hot when running machine and attachments. Be careful when connecting and disconnecting quick couplers.

W-2220-0396

HYDRAULIC CONTROLS (CONT'D)

Relieve Auxiliary Hydraulic Pressure (Loader And Attachment)

! WARNING

AVOID BURNS

Hydraulic fluid, tubes, fittings and quick couplers can get hot when running machine and attachments. Be careful when connecting and disconnecting quick couplers.

W-2220-0396

! 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

Front Auxiliary Quick Couplers

When Connecting: Push the quick couplers tightly together and hold for five seconds; the pressure is automatically relieved as the couplers are installed.

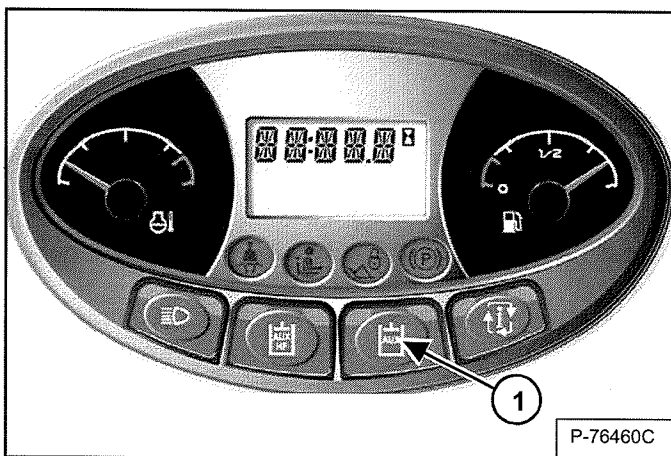
When Disconnecting: Push the quick couplers tightly together and hold for five seconds; then retract the sleeve until the couplers disconnect.

Rear Auxiliary and Secondary Front Auxiliary Quick Couplers

Put the attachment flat on the ground.

Stop the engine and turn the key to RUN or press the RUN button.

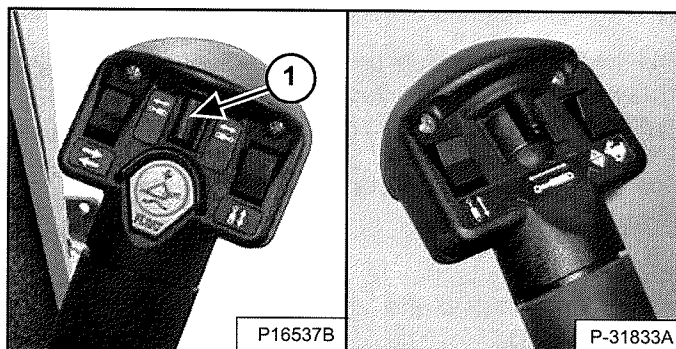
Figure OI-72



Press the auxiliary hydraulics button (Item 1) [Figure OI-72].

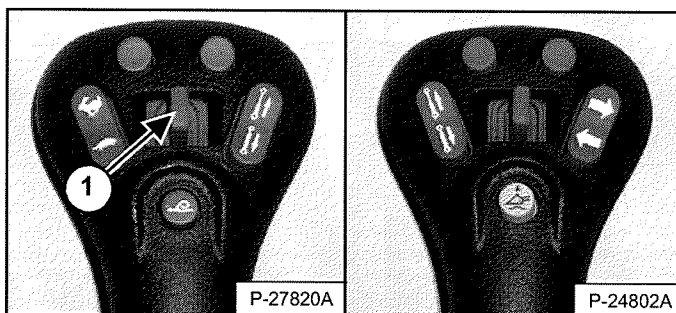
Standard And ACS (If Equipped)

Figure OI-73



SJC (If Equipped)

Figure OI-74



Move the rear auxiliary hydraulic switch (Item 1) [Figure OI-73] or [Figure OI-74] to the right and left several times.

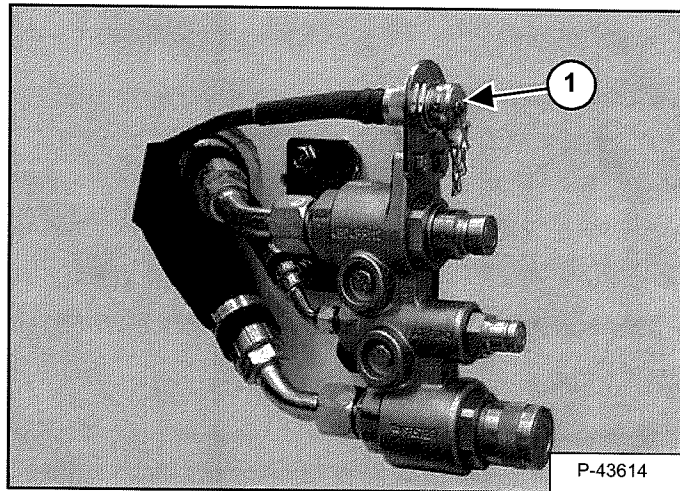
Turn the key to OFF or press the STOP button.

ATTACHMENT CONTROL DEVICE (ACD)

This machine may be equipped with an Attachment Control Device.

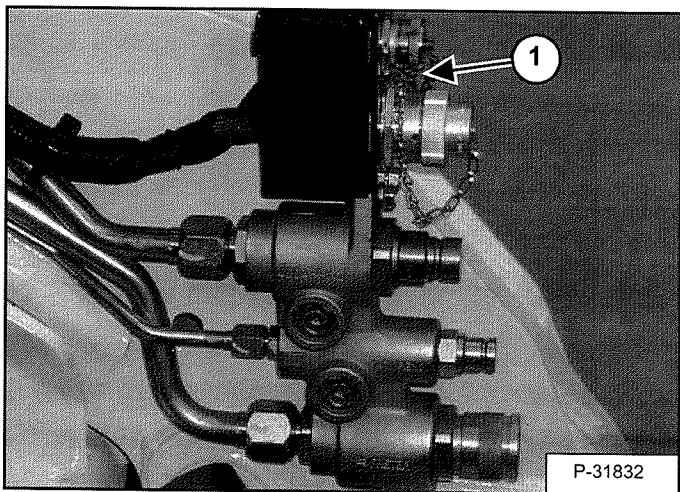
Description

Figure OI-75



Connect the attachment electrical harness to the attachment control device (Item 1) [Figure OI-75].

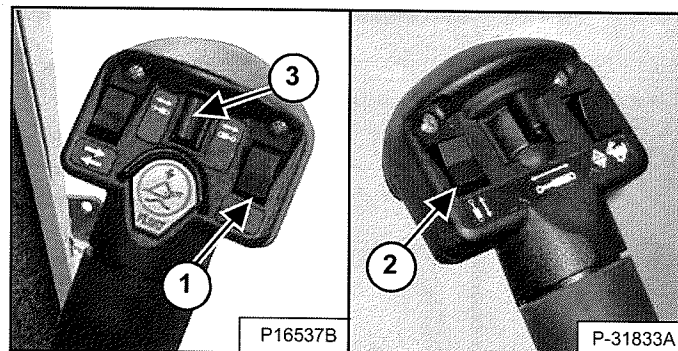
Figure OI-76



You will need the Dual-Connector (7-pin / 14-pin) kit (Item 1) [Figure OI-76] to operate early model attachments. See your Bobcat loader dealer.

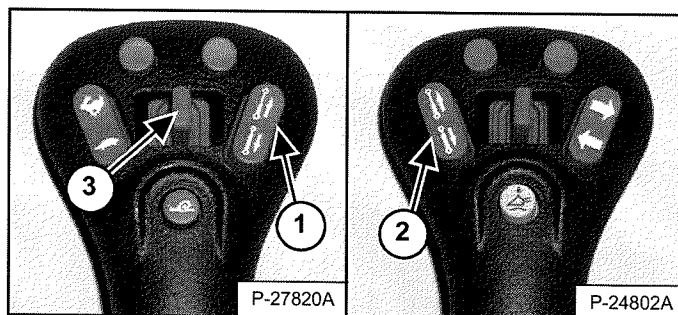
Standard And ACS (If Equipped)

Figure OI-77



SJC (If Equipped)

Figure OI-78



Additional switches (Items 1, 2 and 3) [Figure OI-77] or [Figure OI-78] on the right and left control handles or joysticks are used to control some attachment functions through the attachment control device.

NOTE: ACD takes over the function of auxiliary hydraulic switch (Item 3) [Figure OI-77] or [Figure OI-78] from Rear Auxiliary Hydraulics and Secondary Front Auxiliary Hydraulics when an attachment electrical harness is attached to the ACD.

See the appropriate attachment Operation & Maintenance Manual for control details.

Figure OI-79

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.

- **WHEEL 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 DEARBOX** - 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:

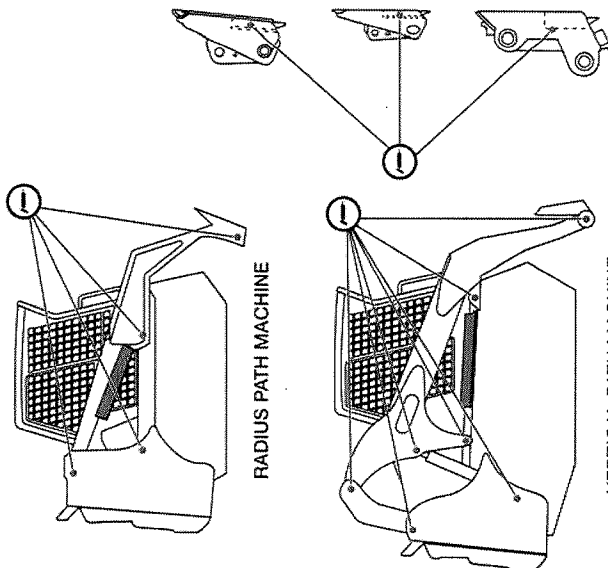
- Replace element sooner if transmission warning indicator remains on for more than 5 minutes after hydraulic fluid is at operating temperature.

- 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



• TYPICAL GREASE POINTS



Use Genuine Bobcat Replacement Parts

73094 SW 6734534-E enUS
SEE OPERATION & MAINTENANCE MANUAL FOR MORE INFORMATION AND INSTRUCTIONS.

6734534-V

DAILY INSPECTION (CONT'D)

Daily Inspection And Maintenance

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and early failures. The Service Schedule [Figure OI-79] is a guide for correct maintenance of the Bobcat loader. It is located inside the rear door of the loader and also in the MACHINE SIGN TRANSLATION section of this manual. (See SERVICE SCHEDULE (6734534) on Page MST-3.)

- Engine Oil Level
- Hydraulic / Hydrostatic Fluid Level
- Engine Air Filter - Check System for Damage or Leaks
- Engine Coolant Level - Check System for Damage or Leaks
- Operator Cab and Cab Mounting Hardware
- Seat Belt
- Seat Bar and Control Interlocks
- Bobcat Interlock Control System (BICS)
- Front Horn and Back-up Alarm - Check for proper function
- Grease Pivot Pins (Lift Arms, Bob-Tach, Cylinders, Bob-Tach Wedges)
- Tires - Check for Wear, Damage, Correct Air Pressure
- Fuel Filter - Remove Trapped Water
- Loose or Broken Parts - Repair or Replace as Necessary
- Safety Treads and Safety Signs (Decals) - Replace as necessary
- Lift Arm Support Device - Replace if damaged

WARNING

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

W-2001-0502

NOTE: Fluids such as engine oil, hydraulic fluid, coolant, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for correct disposal.

IMPORTANT

PRESSURE WASHING DECALS

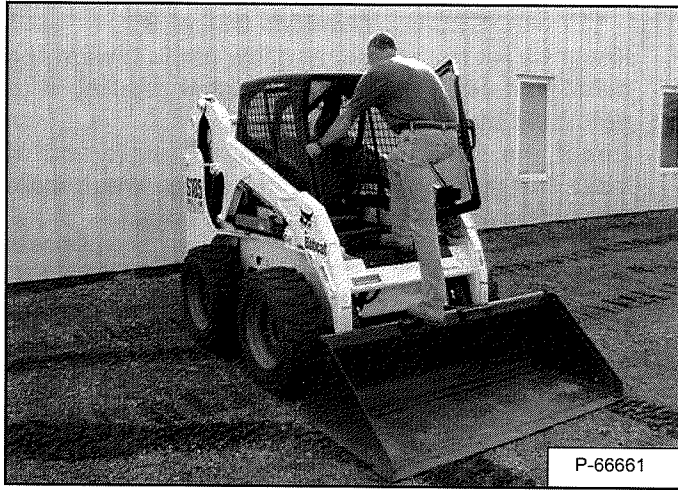
- **Never direct the stream at a low angle toward the decal that could damage the decal causing it to peel from the surface.**
- **Direct the stream at a 90 degree angle and at least 300 mm (12 in) from the decal. Wash from the center of the decal toward the edges.**

I-2226-0910

PRE-STARTING PROCEDURE

Entering The Loader

Figure OI-80



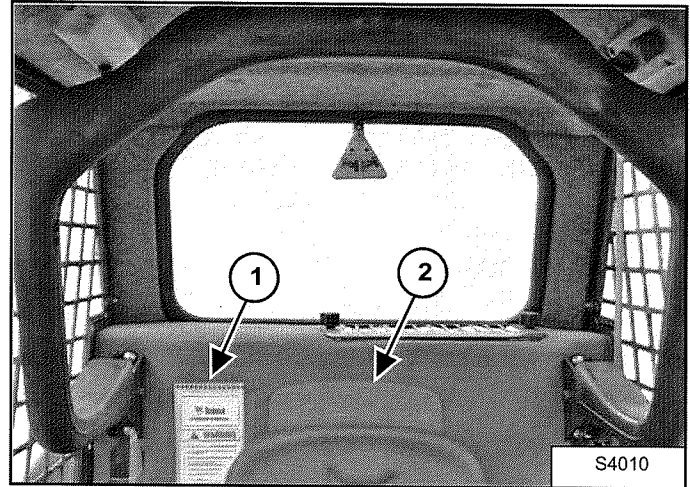
Use the bucket or attachment steps, grab handles and safety treads (on the loader lift arms and frame) to get on and off the loader **[Figure OI-80]**. Do not jump.

Safety treads are installed on the Bobcat loader to provide a slip resistant surface for getting on and off the loader.

Keep safety treads clean and replace when damaged. Replacement treads are available from your Bobcat dealer.

Operation & Maintenance Manual And Operator's Handbook Locations

Figure OI-81



Read and understand the Operation & Maintenance Manual and the Operator's Handbook (Item 1) **[Figure OI-81]** before operating the loader.

The Operation & Maintenance Manual and other manuals can be kept in a container (Item 2) **[Figure OI-81]** provided behind the operator seat.

WARNING

AVOID INJURY OR DEATH

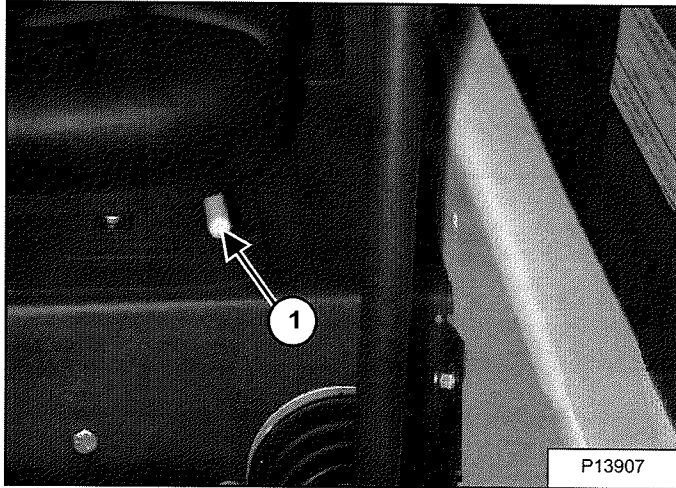
Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0807

PRE-STARTING PROCEDURE (CONT'D)

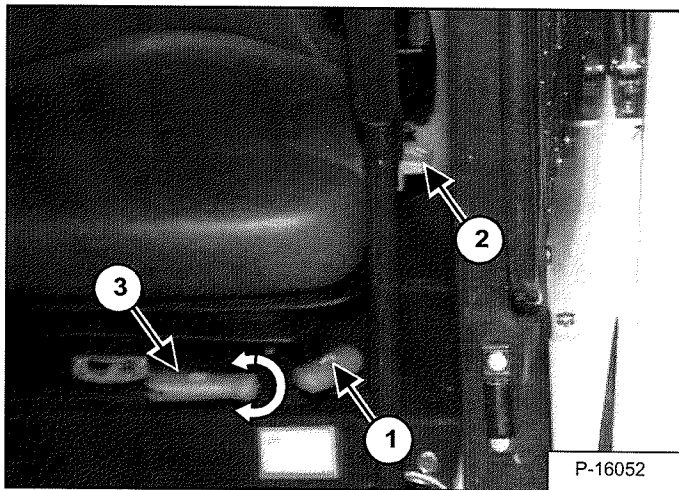
Seat Adjustment

Figure OI-82



Pull the seat lever (Item 1) [Figure OI-82] out to adjust the seat position for comfortable operation of the loader controls.

Figure OI-83

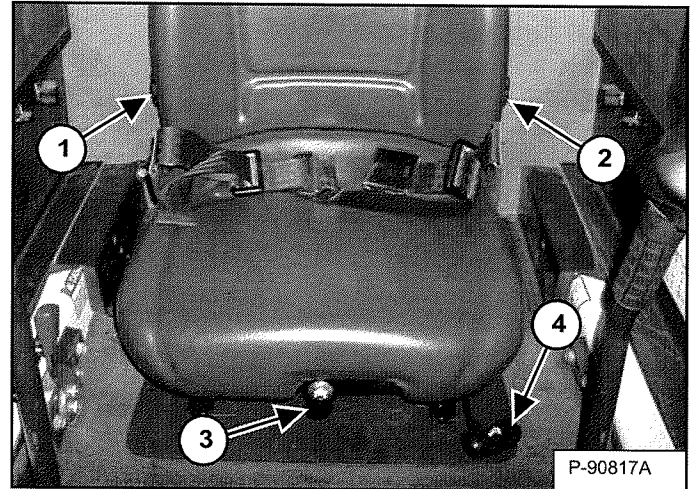


Suspension Seat - (Option and Loaders with Two-Speed)
Pull the lever (Item 1) [Figure OI-83] up to adjust the seat position for comfortable operation of the loader controls.

Pull the lever (Item 2) [Figure OI-83] up to adjust the angle of the seat back.

Turn the lever (Item 3) [Figure OI-83] to adjust the seat cushion for weight of the operator.

Figure OI-84



Air Ride Suspension Seat - (Option) Turn the knob (Item 1) [Figure OI-84] to adjust the angle of the seat back.

Turn the knob (Item 2) [Figure OI-84] to adjust the lumbar support.

Push the knob (Item 3) [Figure OI-84] in and hold to increase the amount of air in the seat suspension. Pull the knob out and hold to decrease the amount of air in the seat suspension.

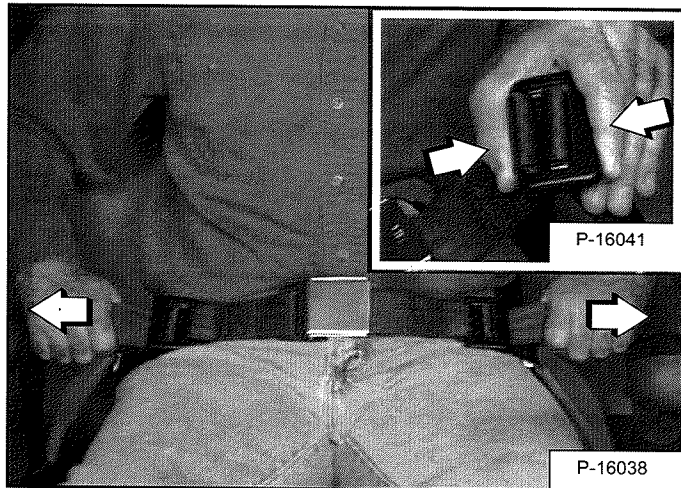
NOTE: The loader electrical system must be turned ON to increase the amount of air in the seat suspension.

Pull the lever (Item 4) [Figure OI-84] up to adjust the seat position for comfortable operation of the loader controls.

PRE-STARTING PROCEDURE (CONT'D)

Seat Belt Adjustment

Figure OI-85

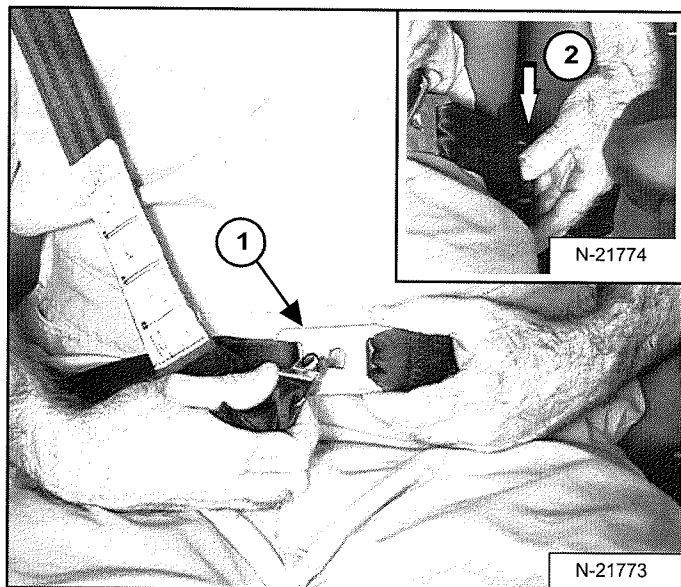


Squeeze both seat belt adjusters to release and lengthen each half of the seat belt [Figure OI-85].

Fasten the seat belt.

Pull the ends of the belt through the belt adjusters so that the seat belt is snug and the buckle is centered between your hips [Figure OI-85].

Figure OI-86



3-Point Restraint - (Option and Loaders with Two-Speed) Connect the shoulder belt to the lap belt (Item 1) [Figure OI-86]. Pull the lap belt across to the left side of the seat (Item 2) [Figure OI-86] and fasten.

The shoulder belt must be positioned over your right shoulder and lap belt over your lower hips [Figure OI-86].

IMPORTANT

Check the seat belt and shoulder belt retractors for correct operation.

Keep retractors clean and replace as necessary.

I-2199-0200

Seat Bar

Figure OI-87



Lower the seat bar and engage the parking brake [Figure OI-87].

Put the foot pedals or hand controls in neutral position.

NOTE: Keep your hands on the steering levers and your feet on the foot pedals (or footrests) while operating the loader.

! WARNING

AVOID INJURY OR DEATH

When operating the machine:

- Keep the seat belt fastened snugly.
- The seat bar must be lowered.
- Keep your feet on the pedal controls or footrests and hands on the controls.

W-2261-0909

STARTING THE ENGINE

Standard Key Panel

! WARNING

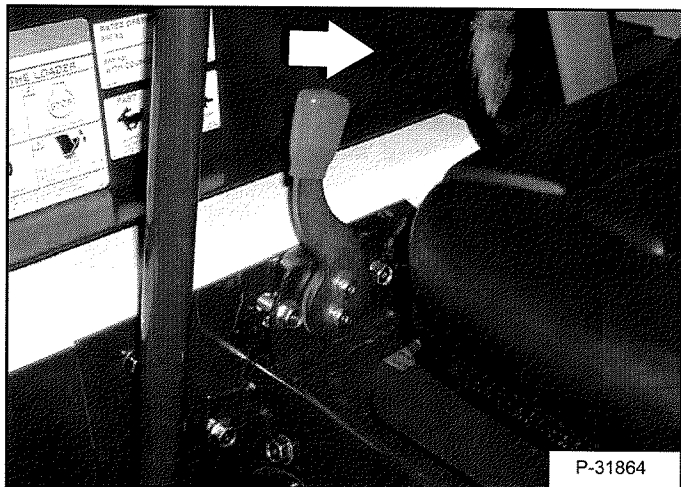
AVOID INJURY OR DEATH

- 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

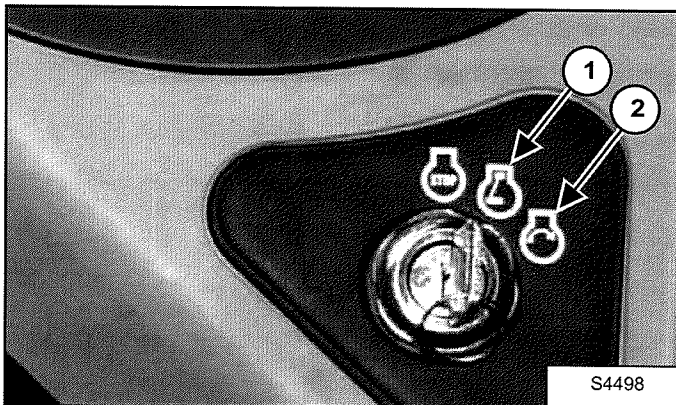
Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page OI-42.)

Figure OI-88



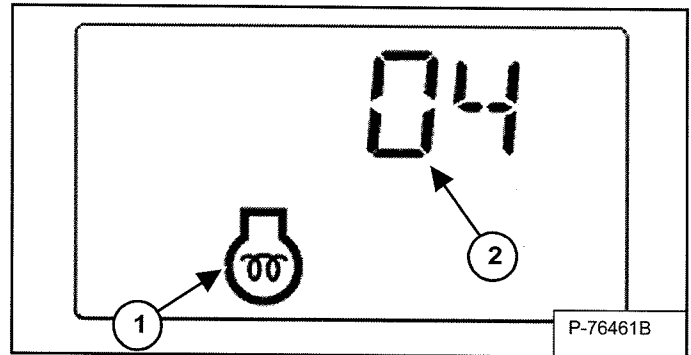
Set the engine speed control to the idle position [Figure OI-88].

Figure OI-89



Turn the key switch to RUN (Item 1) [Figure OI-89]. The indicator lights on the left instrument panel will come ON briefly and the Instrument Panel / monitoring system will do a self test.

Figure OI-90



The machine will cycle the air intake heater (glow plugs) automatically based on temperature. The engine preheat icon (Item 1) will be ON and the cycle time remaining will show in the data display (Item 2) [Figure OI-90].

When the engine preheat icon goes OFF, turn the key switch to START (Item 2). Release the key when the engine starts and allow it to return to the RUN position (Item 1) [Figure OI-89].

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

! WARNING

AVOID INJURY OR DEATH

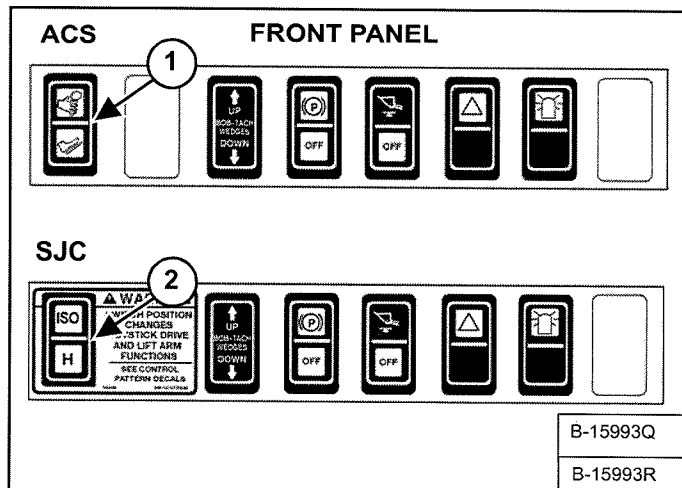
- Fasten seat belt, start and operate only from the operator's seat.
- Never wear loose clothing when working near machine.

W-2135-1108

STARTING THE ENGINE (CONT'D)

Standard Key Panel (Cont'd)

Figure OI-91

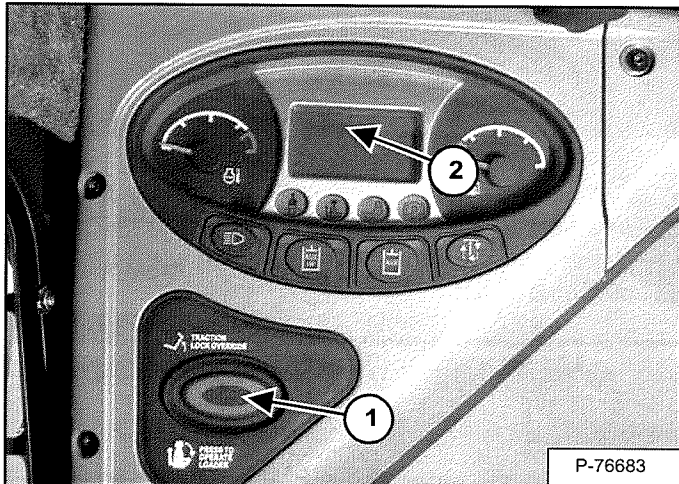


(ACS) Select hand control or foot pedal operation (Item 1) [Figure OI-91].

OR

(SJC) Select 'ISO' or 'H' Control Pattern (Item 2) [Figure OI-91].

Figure OI-92



Press the PRESS TO OPERATE LOADER button (Item 1) [Figure OI-92] 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-92] 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 key switch is ON 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

STARTING THE ENGINE (CONT'D)

Keyless Start Panel



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-42.)

Figure OI-93

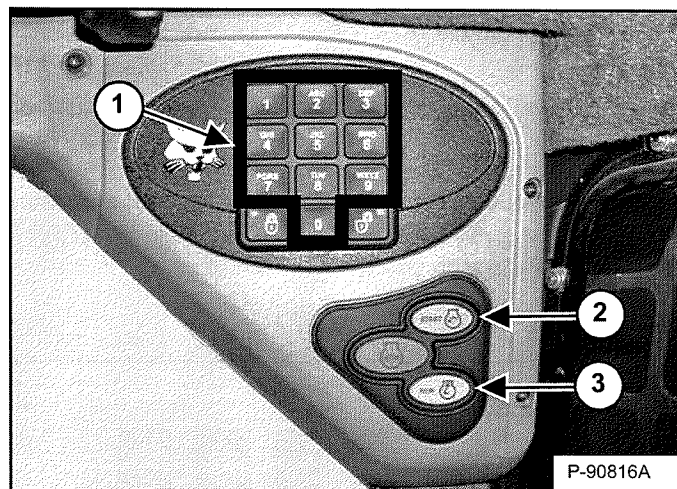


Set the engine speed control to the idle position [Figure OI-93]

NOTE: Loaders with a Keyless Start Panel have a permanent, randomly generated Master Password set at the factory. Your loader will have an Owner Password. The password can be changed to prevent unauthorized use of your loader. (See Changing The Owner Password on Page SA-11.) Keep your password in a safe place for future needs.

NOTE: The Password Lockout feature can be used to allow starting of the loader without a password. (See Password Lockout Feature on Page SA-11.)

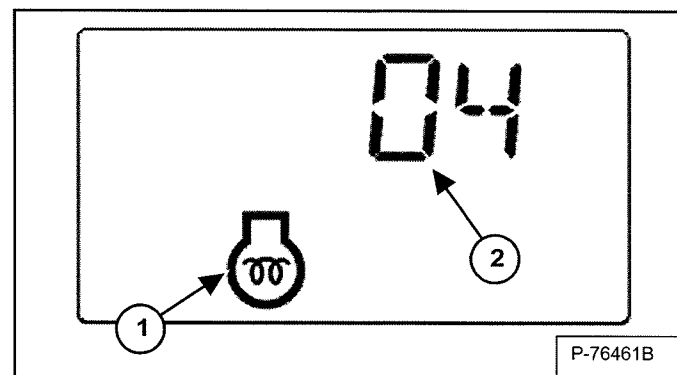
Figure OI-94



Press the RUN button (Item 3) [Figure OI-94].

Use the numeric keypad (Item 1) to enter the password, then press the RUN button (Item 3) [Figure OI-94].

Figure OI-95



The machine will cycle the air intake heater (glow plugs) automatically based on temperature. The engine preheat icon (Item 1) will be ON and the cycle time remaining will show in the data display (Item 2) [Figure OI-95].

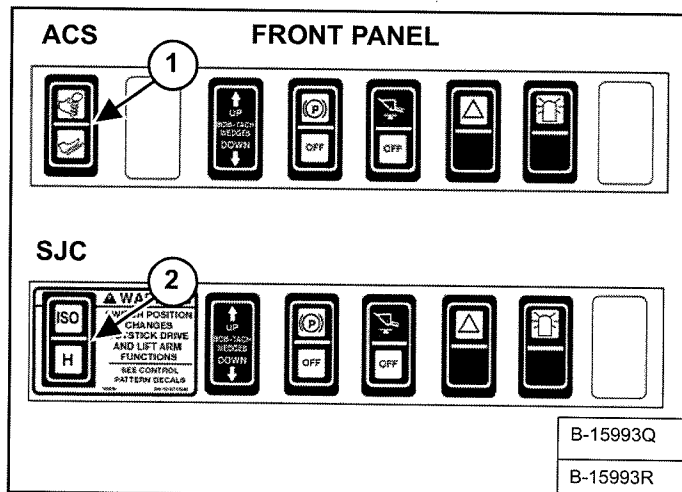
When the engine preheat icon goes OFF, press the START button (Item 2) [Figure OI-94]. Release the button when the engine starts.

STARTING THE ENGINE (CONT'D)

Keyless Start Panel (Cont'd)

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

Figure OI-96

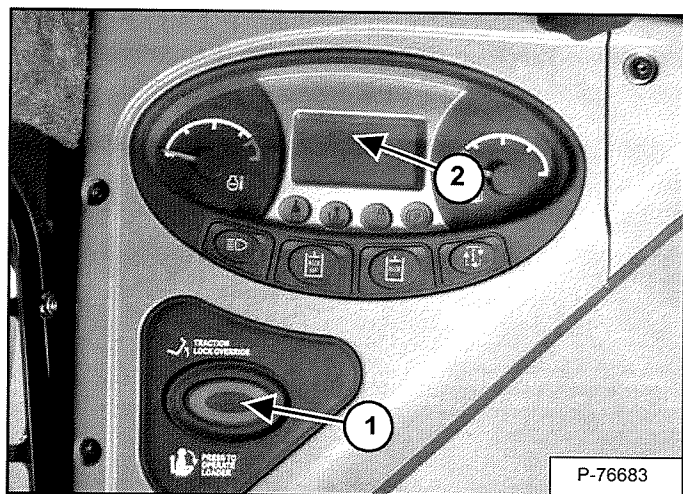


(ACS) Select hand control or foot pedal operation (Item 1) [Figure OI-96].

OR

(SJC) Select 'ISO' or 'H' Control Pattern (Item 2) [Figure OI-96].

Figure OI-97



Press the PRESS TO OPERATE LOADER button (Item 1) [Figure OI-97] 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-97] 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

STARTING THE ENGINE (CONT'D)

Deluxe Instrumentation Panel



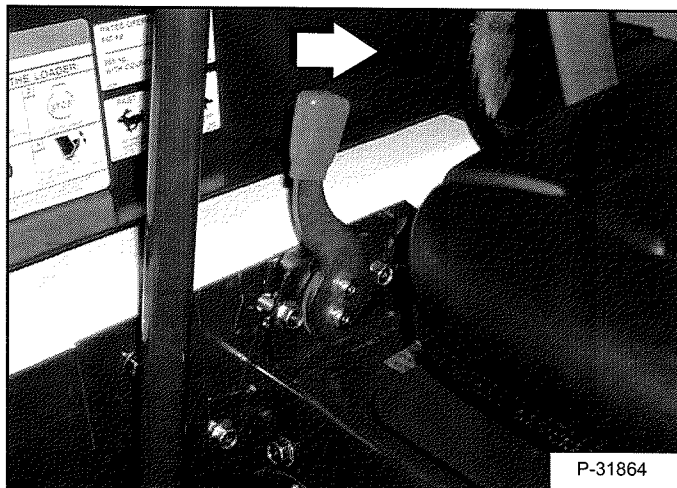
AVOID INJURY OR DEATH

- 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-42.)

Figure OI-98

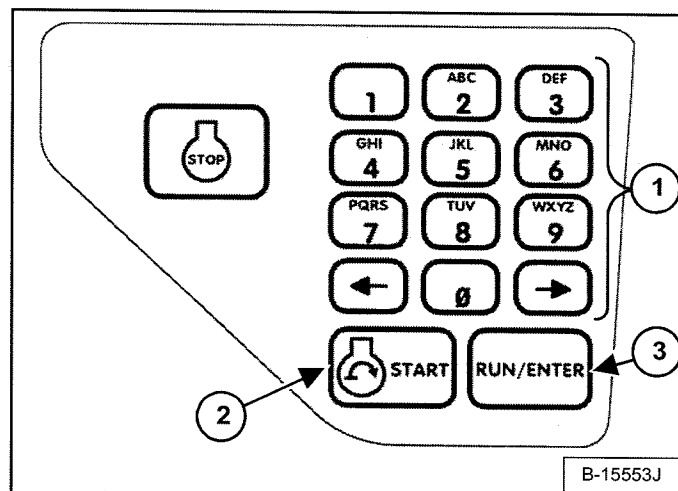


Set the engine speed control to the idle position [Figure OI-98]

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-12.) Keep your password in a safe place for future needs.

NOTE: The Password Lockout feature can be used to allow starting of the loader without a password. (See Password Lockout Feature on Page SA-13.)

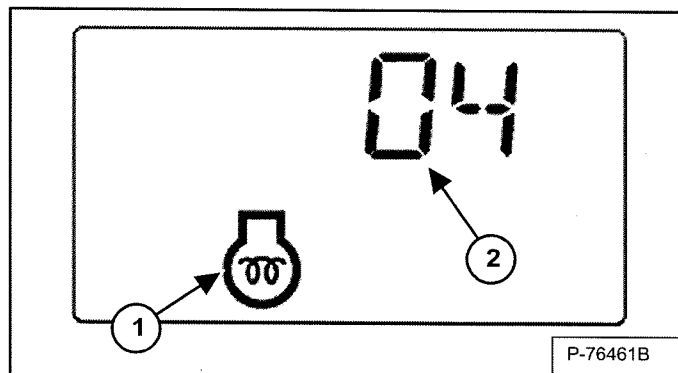
Figure OI-99



Press the RUN / ENTER button (Item 3) [Figure OI-99].

Use the numeric keypad (Item 1) to enter the password, then press the RUN / ENTER button (Item 3) [Figure OI-99].

Figure OI-100



The machine will cycle the air intake heater (glow plugs) automatically based on temperature. The engine preheat icon (Item 1) will be ON and the cycle time remaining will show in the data display (Item 2) [Figure OI-100].

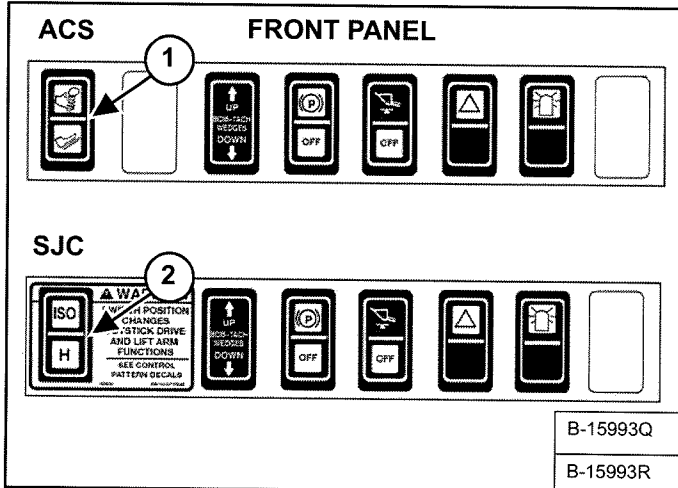
When the engine preheat icon goes OFF, press the START button (Item 2) [Figure OI-99]. Release the button when the engine starts.

STARTING THE ENGINE (CONT'D)

Deluxe Instrumentation Panel (Cont'd)

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

Figure OI-101

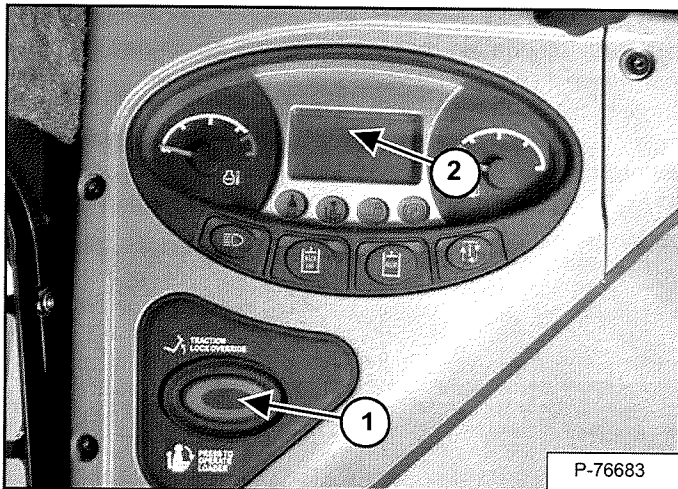


(ACS) Select hand control or foot pedal operation (Item 1) [Figure OI-101].

OR

(SJC) Select 'ISO' or 'H' Control Pattern (Item 2) [Figure OI-101].

Figure OI-102



Press the PRESS TO OPERATE LOADER button (Item 1) [Figure OI-102] 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-102] 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

STARTING THE ENGINE (CONT'D)

Cold Temperature Starting



WARNING

AVOID INJURY OR DEATH

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

W-2071-0907

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 Oil Chart on Page PM-24.)
- Make sure the battery is fully charged.
- Install an engine heater, available from your Bobcat loader dealer.
- Move engine speed control lever halfway before starting. Return to idle position after the engine starts.

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

STARTING THE ENGINE (CONT'D)

Warming The Hydraulic / Hydrostatic System

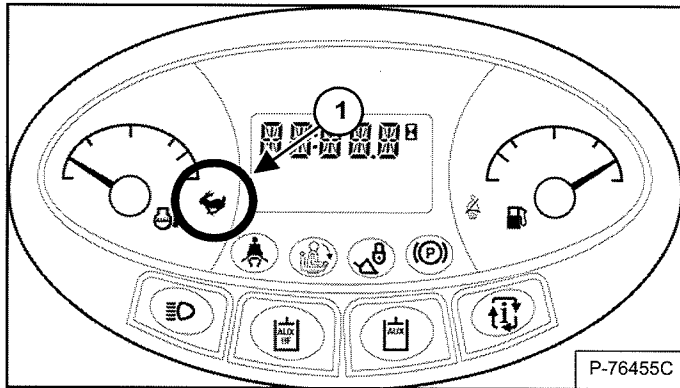
IMPORTANT

When the temperature is below -30°C (-20°F), 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 -18°C (0°F) if possible.

I-2007-0910

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

Figure OI-103

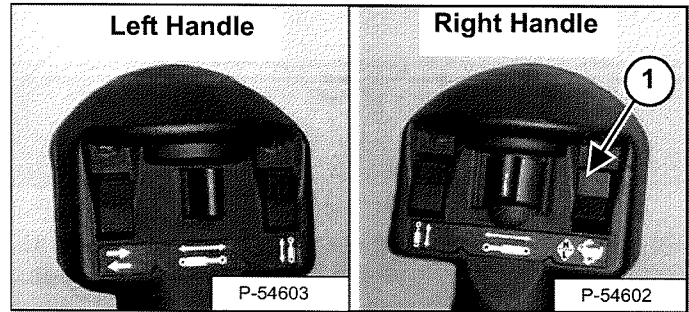


The two-speed icon (Item 1) [Figure OI-103] will flash slowly if the operator attempts to engage two-speed operation before the hydraulic / hydrostatic system has been adequately warmed up.

NOTE: There is a minimum three minute delay if the two-speed icon is flashing slowly. The machine will automatically warm up the hydraulic / hydrostatic fluid and notify the operator when fluid is warm enough for two-speed operation by turning off the two-speed icon.

Standard And ACS (If Equipped)

Figure OI-104

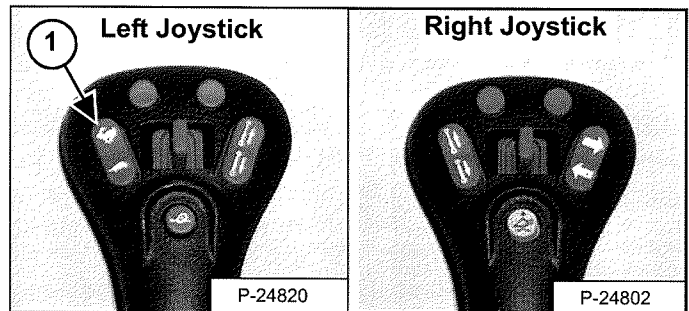


Press the bottom of the two-speed switch (Item 1) [Figure OI-104] to cycle system back to single speed when the two-speed icon (Item 1) [Figure OI-103] stops flashing. Then press the top of the switch (Item 1) [Figure OI-104] to enter two-speed operation.

NOTE: Returning the two-speed switch to single speed operation will turn the flashing icon off immediately.

SJC (If Equipped)

Figure OI-105



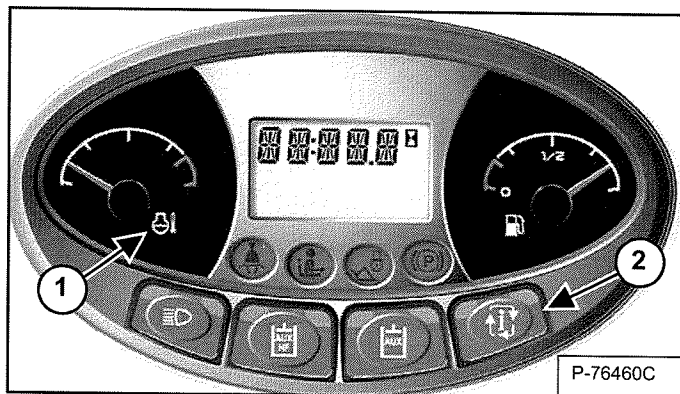
Press the top of the two-speed switch (Item 1) [Figure OI-105] to enter two-speed operation when the two-speed icon (Item 1) [Figure OI-103] stops flashing.

NOTE: Returning the two-speed switch to single speed operation will turn the flashing icon off immediately.

MONITORING THE DISPLAY PANELS

Left Panel

Figure OI-106



Frequently monitor the temperature and fuel gauges and BICS lights (all BICS lights must be OFF to operate loader) [Figure OI-106].

After the engine is running, frequently monitor the left instrument panel [Figure OI-106] for error conditions.

The associated icon will be ON if there is an error condition.

EXAMPLE: Engine Coolant Temperature is High

The Engine Over-Temperature icon (Item 1) [Figure OI-106] will be ON.

Press the Information button (Item 2) [Figure OI-106] to cycle the data display until the service code screen is displayed. One of the following SERVICE CODES will be displayed.

- **M0810** Engine Coolant Temperature High
- **M0811** Engine Coolant Temperature Extremely High

Find the cause of the error code and correct before operating the loader again. (See Service Codes List on Page SA-4.)

Warning And Shutdown

When a WARNING condition exists, the associated icon light will come ON and there will be 3 beeps from the alarm. If this condition is allowed to continue, there may be damage to the engine or loader hydraulic systems.

When a SHUTDOWN condition exists, the associated icon light will come ON and there will be a continuous beep from the alarm. The monitoring system will automatically stop the engine in 15 seconds. The engine can be restarted to move or relocate the loader.

The SHUTDOWN feature is associated with the following icons:

General Warning
Engine Malfunction
Engine Coolant Temperature
Hydraulic System Malfunction

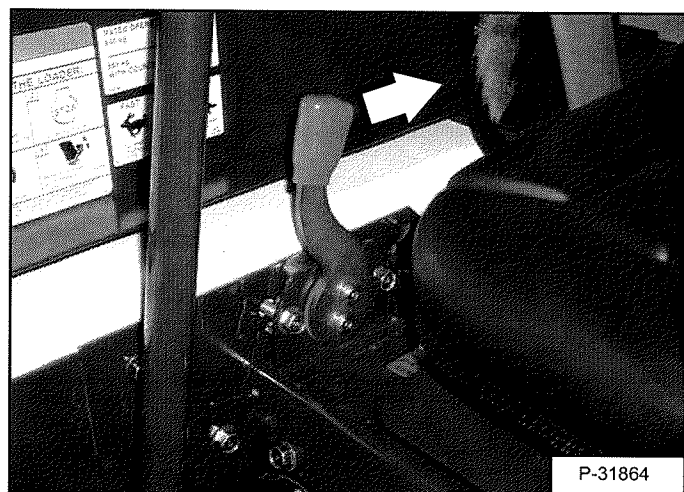
STOPPING THE ENGINE AND LEAVING THE LOADER

Procedure

Stop the loader on level ground.

Fully lower the lift arms and put the attachment flat on the ground.

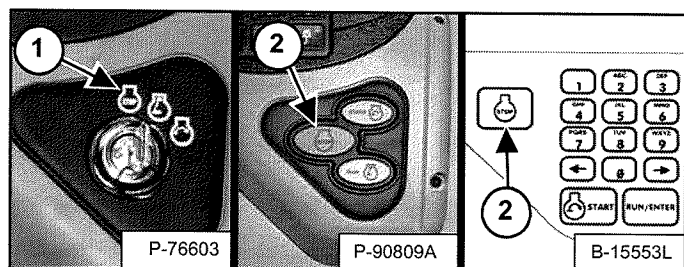
Figure OI-107



Pull the engine speed control fully backward [Figure OI-107] to decrease the engine speed.

Engage the parking brake.

Figure OI-108



Turn the key switch to the STOP position (Item 1) or press the STOP button (Item 2) [Figure OI-108].

NOTE: If the loader lights are ON, they will remain ON for approximately 90 seconds after turning the loader OFF.

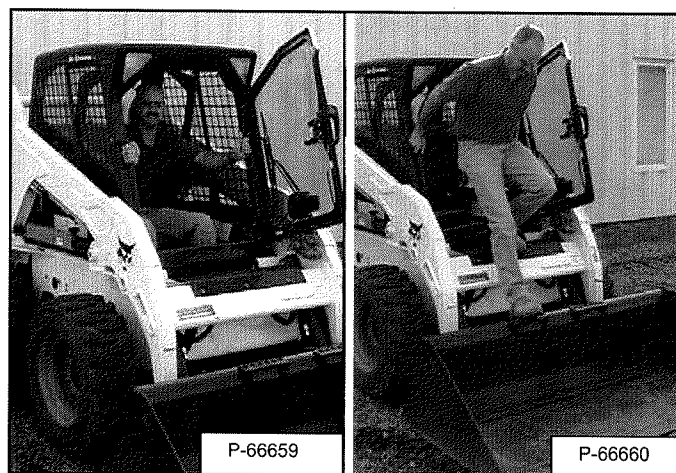
Raise the seat bar and make sure the lift and tilt functions are deactivated.

Unbuckle the seat belt.

Remove the key from the switch (Standard Key Panel) to prevent operation of the loader by unauthorized personnel.

NOTE: Activating the Password Lockout Feature on machines with the Keyless Start Panel or the Deluxe Instrumentation Panel allows operation of the loader without using a password. (See Password Lockout Feature on Page SA-11.) or (See Password Lockout Feature on Page SA-13.)

Figure OI-109



Exit the loader using grab handles, safety tread and steps (maintaining a 3-point contact) [Figure OI-109].

WARNING

AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise the seat bar.
- Move all controls to the NEUTRAL / LOCKED position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. Service the system if controls do not deactivate.

W-2463-0610

COUNTERWEIGHTS

Description

Counterweights can be installed on the loader. See your Bobcat dealer for information about approved loader counterweights and configurations for your job application and attachment.

Effect On The Loader And Loader Operation

Proper operation of the loader and attachment does not change if counterweights are installed on this loader. Always follow the instructions provided in this manual when operating your loader with counterweights installed.

Counterweights installed on your loader can affect the loader and its operation in some applications. Some examples are:

- Increased machine weight.
- Increased Rated Operating Capacity (ROC).
- Harder steering.
- Accelerated or uneven tire wear.
- Increased power consumption.

When To Consider Using Counterweights

Install counterweights to increase the loader Rated Operating Capacity (ROC) which could improve attachment performance in some applications. Some examples are:

- Using pallet forks with palletized loads.
- Using grapples or bale forks.
- Using buckets to handle loose material without digging.

When To Consider Removing Counterweights

Remove counterweights to increase the downward force of the attachment for better attachment performance in some applications. Some examples are:

- Digging with buckets.
- Using Hydraulic Breakers, Scrapers or Landplanes.

Accessories That Affect Machine Weight

If your loader is already equipped with accessories like Over Tire Steel Tracks, Water Tanks or Rear Stabilizers, installing counterweights may not be necessary.

See your Bobcat dealer for more information about the proper use of counterweights with your attachments and accessories.

ATTACHMENTS

Choosing The Correct Bucket



WARNING

AVOID INJURY OR DEATH

Never use attachments or buckets which are not approved by Bobcat Company. Buckets and attachments for safe loads of specified densities are approved for each model. Unapproved attachments can cause injury or death.

W-2052-0907

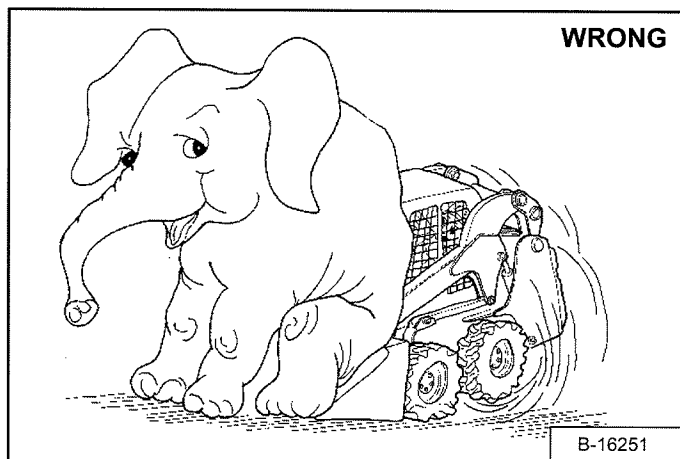
NOTE: Warranty is void if non-approved attachments are used on the Bobcat loader.

The dealer can identify, for each model loader, the attachments and buckets approved by Bobcat. The buckets and attachments are approved for Rated Operating Capacity (ROC) and for secure fastening to the Bob-Tach.

The ROC for this loader is shown on a decal in the operator cab. (See Performance on Page SPEC-4.)

The ROC is determined by using a bucket and material of normal density, such as dirt or dry gravel. If longer buckets are used, the load center moves forward and reduces the ROC. If very dense material is loaded, the volume must be reduced to prevent overloading.

Figure OI-110



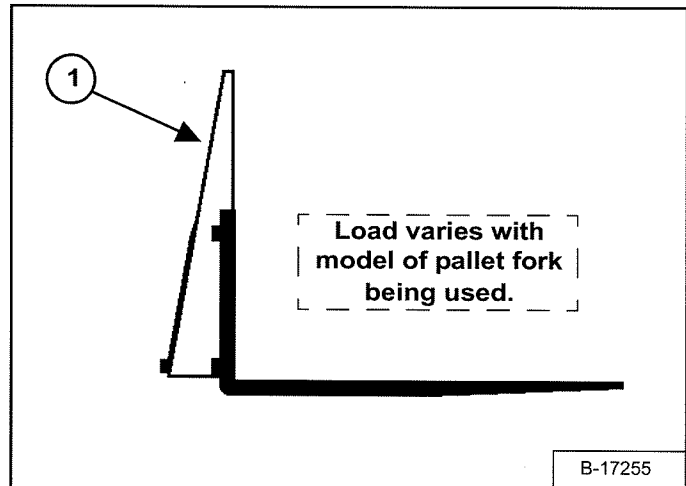
Exceeding the ROC [Figure OI-110] can cause the following problems:

- Steering the loader may be difficult.
- Tires will wear faster.
- There will be a loss of stability.
- The life of the Bobcat loader will be reduced.

Use the correct bucket size for the type and density of material being handled. For safe handling of materials and avoiding machine damage, the attachment (or bucket) should handle a full load without going over the ROC for the loader. Partial loads make steering more difficult.

Pallet Forks

Figure OI-111



The maximum load to be carried when using a pallet fork is shown on a decal located on the pallet fork frame (Item 1) [Figure OI-111].

See your Bobcat dealer for more information about pallet fork inspection, maintenance and replacement. See your Bobcat dealer for ROC when using a pallet fork and for other available attachments.



WARNING

AVOID INJURY OR DEATH

Do not exceed Rated Operating Capacity (ROC). Excessive load can cause tipping or loss of control.

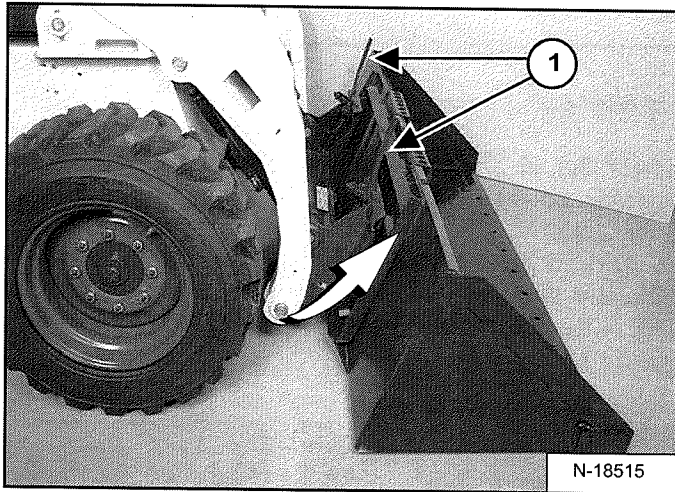
W-2053-0903

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Hand Lever Bob-Tach)

The Bob-Tach is used for fast changing of buckets and attachments. See the appropriate Attachment Operation & Maintenance Manual to install other attachments.

Figure OI-112



Installing

Pull the Bob-Tach levers all the way up (Item 1) [Figure OI-112].

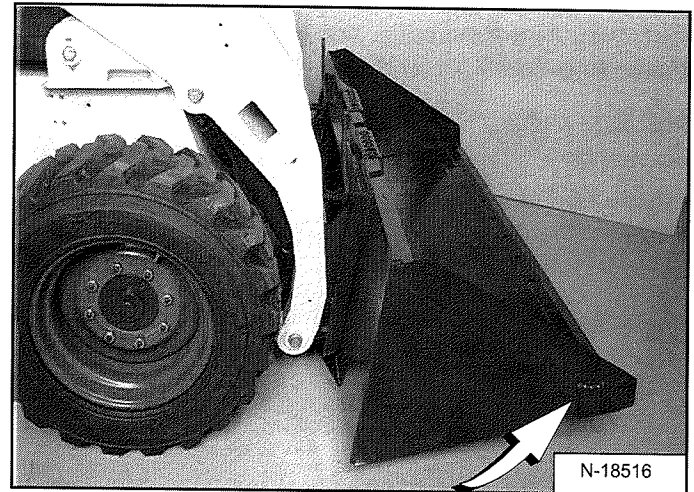
Enter the loader and perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page OI-42.)

Start the engine, press the PRESS TO OPERATE LOADER button and release the parking brake.

Lower the lift arms and tilt the Bob-Tach forward.

Drive the loader forward until the top edge of the Bob-Tach is completely under the top flange of the bucket [Figure OI-112] (or other attachment). Be sure the Bob-Tach levers do not hit the bucket.

Figure OI-113



Tilt the Bob-Tach backward until the cutting edge of the bucket (or other attachment) is slightly off the ground to ensure the mounting frame is tight to the Bob-Tach [Figure OI-113].

Stop the engine and exit the loader. (See STOPPING THE ENGINE AND LEAVING THE LOADER on Page PM-54.)

WARNING

AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise the seat bar.
- Move all controls to the **NEUTRAL / LOCKED** position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. Service the system if controls do not deactivate.

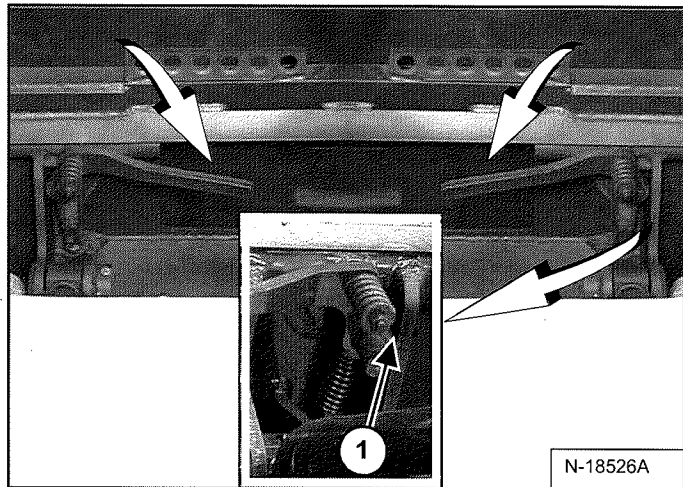
W-2463-0610

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Hand Lever Bob-Tach) (Cont'd)

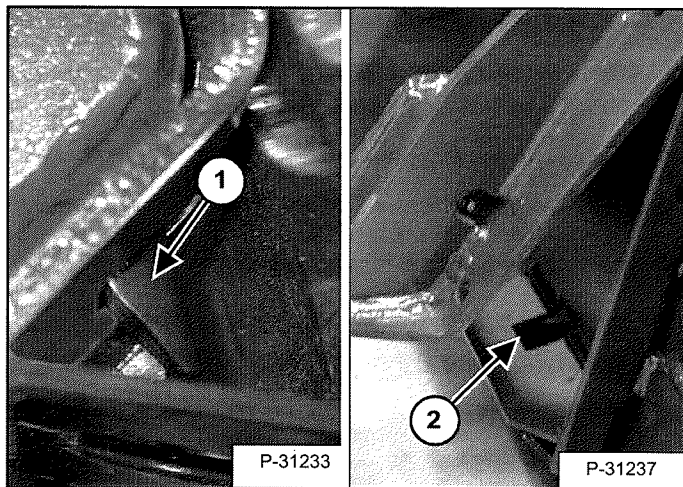
Installing (Cont'd)

Figure OI-114



Push down on the Bob-Tach levers until they are fully engaged in the locked position (Item 1) [Figure OI-114] (wedges fully extended).

Figure OI-115



The wedges (Item 1) must extend through the holes (Item 2) [Figure OI-115] in the mounting frame of the bucket (or other attachment), securely fastening the bucket to the Bob-Tach.

WARNING

AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Removing

Lower the lift arms and put the attachment flat on the ground. Lower or close any hydraulic equipment, if applicable.

Stop the engine and exit the loader. (See STOPPING THE ENGINE AND LEAVING THE LOADER on Page PM-54.)

WARNING

AVOID INJURY OR DEATH

Before you leave the operator's seat:

- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise the seat bar.
- Move all controls to the **NEUTRAL / LOCKED** position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. Service the system if controls do not deactivate.

W-2463-0610

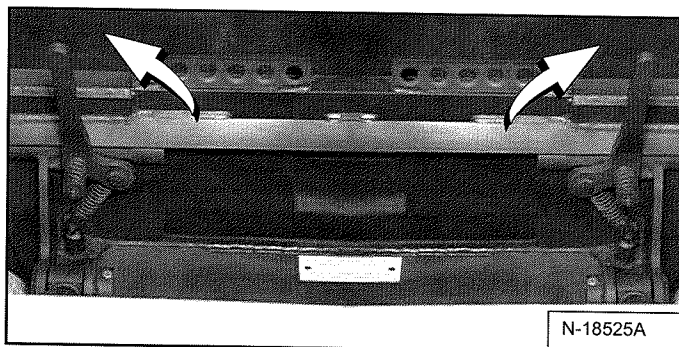
Disconnect attachment electrical harness, water line and hydraulic lines, if applicable, from the loader. (See Relieve Auxiliary Hydraulic Pressure (Loader And Attachment) on Page OI-38.)

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Hand Lever Bob-Tach) (Cont'd)

Removing (Cont'd)

Figure OI-116



Pull the Bob-Tach levers [Figure OI-116] all the way up.



Bob-Tach levers have spring tension. Hold lever tightly and release slowly. Failure to obey warning can cause injury.

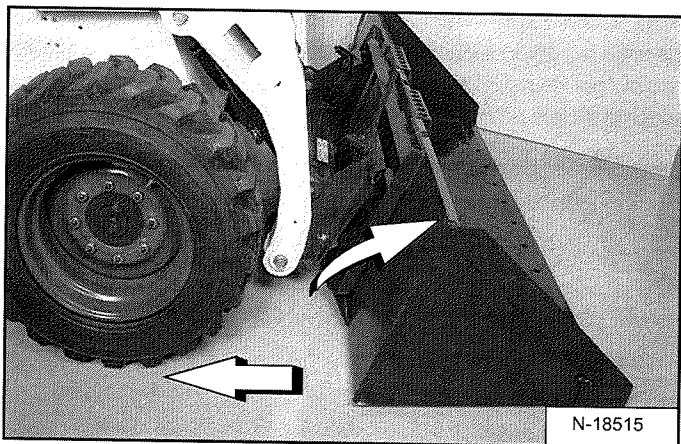
W-2054-1285

Enter the loader.

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page OI-42.)

Start the engine, press the PRESS TO OPERATE LOADER button and release the parking brake.

Figure OI-117



Tilt the Bob-Tach forward and move the loader backward, away from the bucket or attachment [Figure OI-117].

Installing And Removing The Attachment (Power Bob-Tach)

This machine may be equipped with a Power Bob-Tach.

Installing

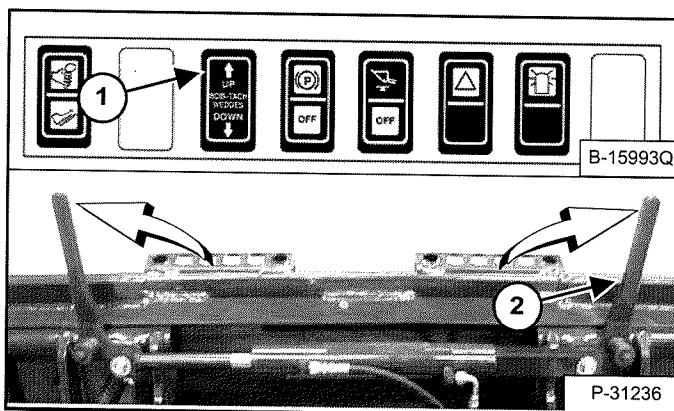
The Bob-Tach is used for fast changing of buckets and attachments. See the appropriate Attachment Operation & Maintenance Manual to install other attachments.

Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page OI-42.)

Start the engine, press the PRESS TO OPERATE LOADER button and release the parking brake.

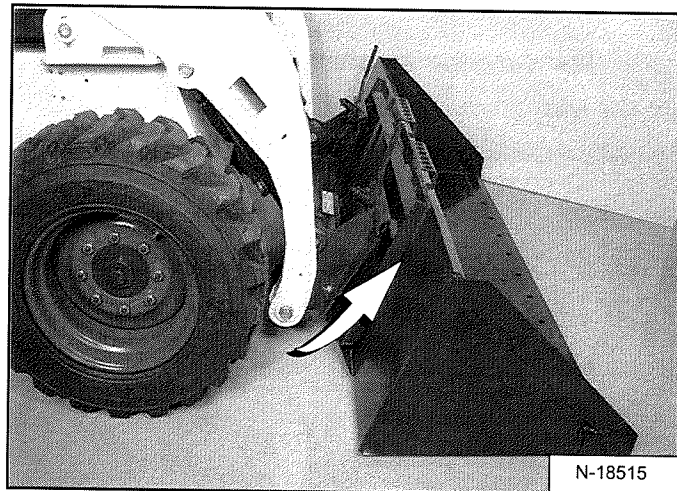
Lower the lift arms and tilt the Bob-Tach forward.

Figure OI-118



Push and hold BOB-TACH "WEDGES UP" switch (Item 1) (Front Panel) until levers (Item 2) [Figure OI-118] are in unlocked position (wedges fully raised).

Figure OI-119



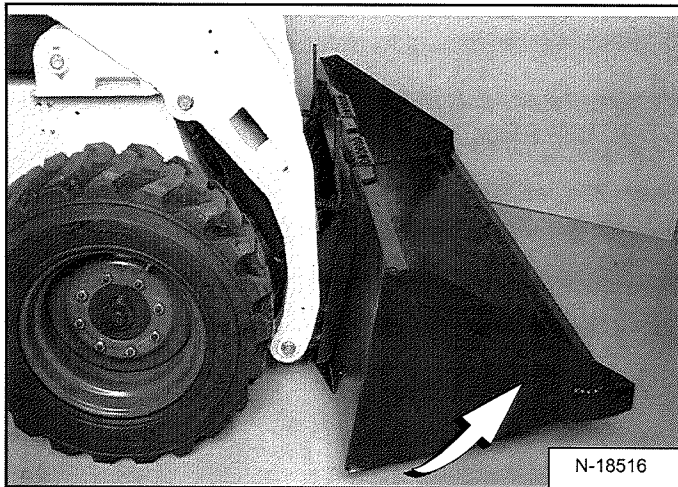
Drive the loader forward until the top edge of the Bob-Tach is completely under the top flange of the bucket [Figure OI-119] (or other attachment). Be sure the Bob-Tach levers do not hit the bucket.

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Power Bob-Tach) (Cont'd)

Installing (Cont'd)

Figure OI-120

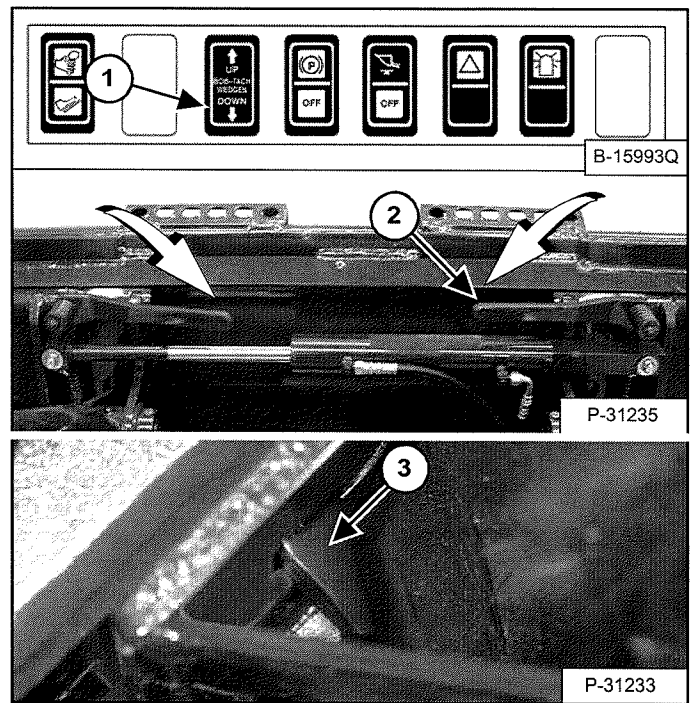


Tilt the Bob-Tach backward until the cutting edge of the bucket (or other attachment) is slightly off the ground [Figure OI-120].

Push and hold BOB-TACH "WEDGES UP" switch (Item 1) [Figure OI-118] (Front Panel) to make sure the levers are all the way up.

NOTE: The Power Bob-Tach system has continuous pressurized hydraulic oil to keep the wedges in the engaged position and prevent attachment disengagement. Because the wedges can slowly lower, the operator may need to reactivate the switch (WEDGES UP) to be sure both wedges are fully raised before installing the attachment.

Figure OI-121



Push and hold BOB-TACH "WEDGES DOWN" switch (Front Panel) (Item 1) until levers are fully engaged in the locked position (Item 2) [Figure OI-121] (wedges fully engaged).

The wedges (Item 3) [Figure OI-121] must extend through the holes in the mounting frame of the bucket (or other attachment), securely fastening the bucket to the Bob-Tach.

WARNING

AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

ATTACHMENTS (CONT'D)

Installing And Removing The Attachment (Power Bob-Tach) (Cont'd)

Removing

Lower the lift arms and put the attachment flat on the ground. Lower or close any hydraulic equipment, if applicable.

If the attachment has electrical, water or hydraulic connections to the loader:

1. Stop the engine and exit the loader. (See STOPPING THE ENGINE AND LEAVING THE LOADER on Page PM-54.)

WARNING

AVOID INJURY OR DEATH

Before you leave the operator's seat:

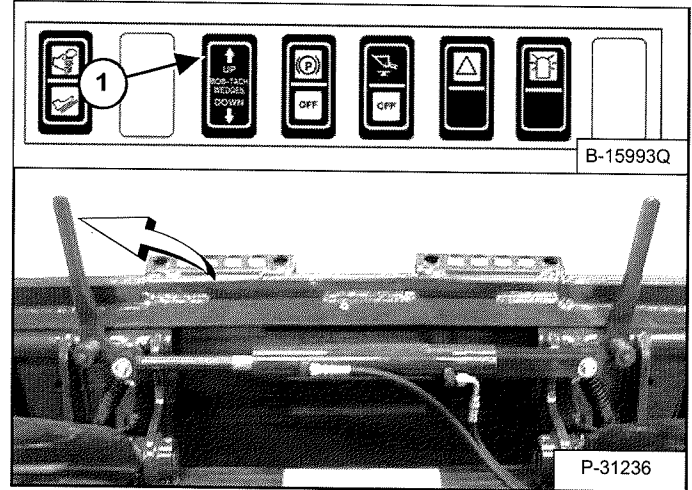
- Lower the lift arms and put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise the seat bar.
- Move all controls to the **NEUTRAL / LOCKED** position to make sure the lift, tilt and traction drive functions are deactivated.

The seat bar system must deactivate these functions when the seat bar is up. Service the system if controls do not deactivate.

W-2463-0610

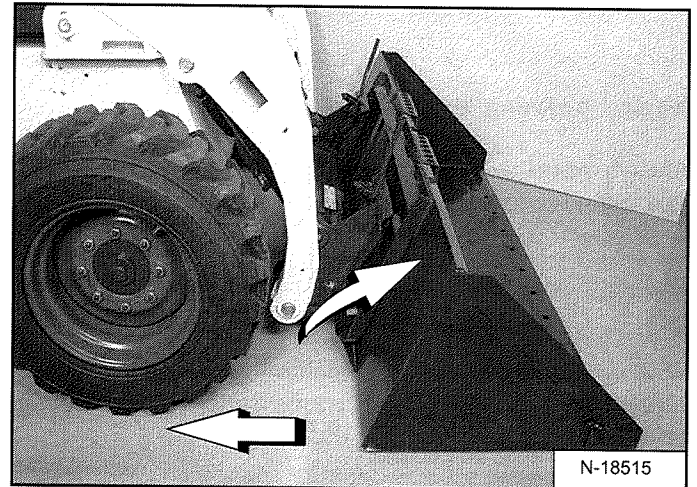
2. Disconnect attachment electrical harness and water or hydraulic lines, if applicable, from the loader. (See Relieve Auxiliary Hydraulic Pressure (Loader And Attachment) on Page OI-38.)
3. Perform the PRE-STARTING PROCEDURE. (See PRE-STARTING PROCEDURE on Page OI-42.)
4. Start the engine, press the PRESS TO OPERATE LOADER button and release the parking brake.

Figure OI-122



Push and hold the BOB-TACH "WEDGES UP" switch (Front Panel) (Item 1) [Figure OI-122] until the wedges are fully raised.

Figure OI-123



Tilt the Bob-Tach forward and move the loader backward, away from the bucket or attachment [Figure OI-123].

NOTE: The Power Bob-Tach system has continuous pressurized hydraulic oil to keep the wedges in the engaged position and prevent attachment disengagement. Because the wedges can slowly lower, the operator may need to reactivate the switch (WEDGES UP) when removing an attachment to be sure both wedges are fully raised.

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 damage the loader or cause personal injury.

Always check ground conditions before starting your work:

- Inspect for signs of instability such as cracks or settlement.
- Be aware of weather conditions that can affect ground stability.
- Check for adequate traction if working on a slope.

Basic Operating Instructions

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

IMPORTANT

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

I-2015-0284

Operate the loader with 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.

Operating Near An Edge Or Water

Keep the loader as far back from the edge as possible and the loader wheels perpendicular to the edge so that if part of the edge collapses, the loader can be moved back.

Always move the loader back at any indication the edge may be unstable.

WARNING

MACHINE TIPPING OR ROLL OVER CAN CAUSE SERIOUS 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. Slow down when turning.**
- **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.**

W-2018-1109

Driving On Public Roads

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

OPERATING PROCEDURE (CONT'D)

Operating With A Full Bucket

Figure OI-124

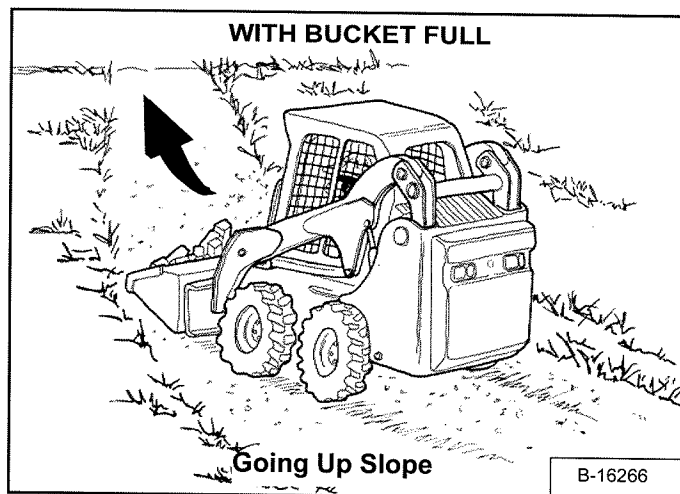
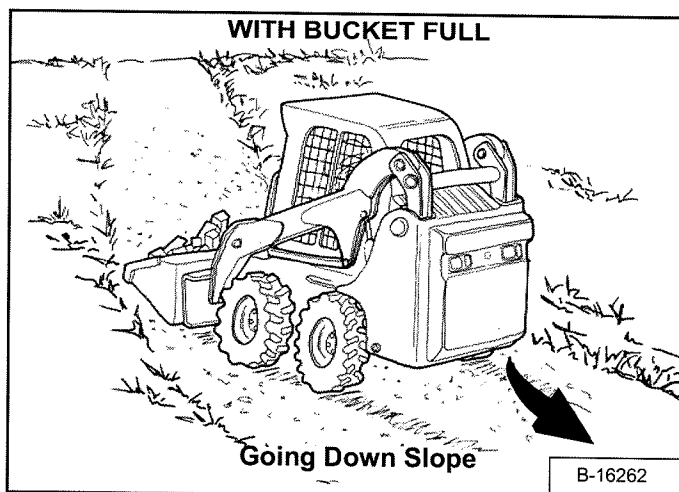


Figure OI-125



With a full bucket, go up or down the slope with the heavy end toward the top of the slope [Figure OI-124] and [Figure OI-125].

Operating With An Empty Bucket

Figure OI-126

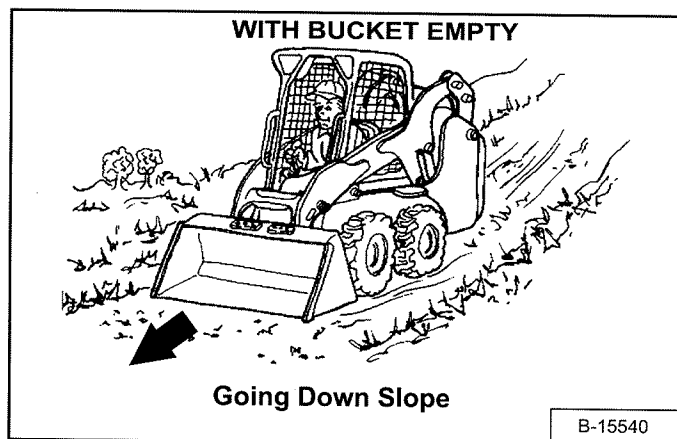
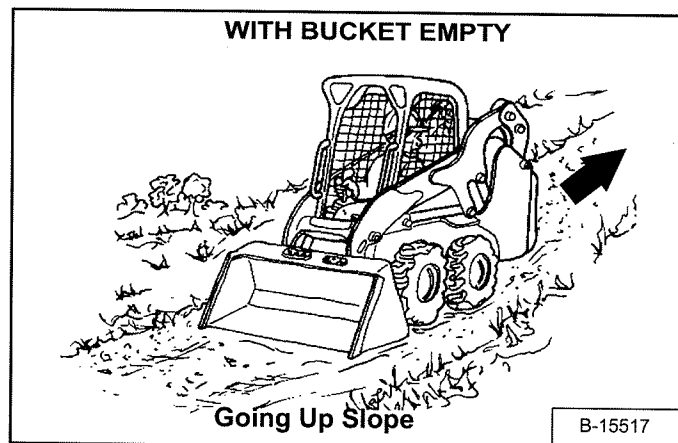


Figure OI-127



With an empty bucket, go down or up the slope with the heavy end toward the top of the slope [Figure OI-126] and [Figure OI-127].

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

OPERATING PROCEDURE (CONT'D)

Filling And Emptying The Bucket (Foot Pedals)

Filling

Figure OI-128

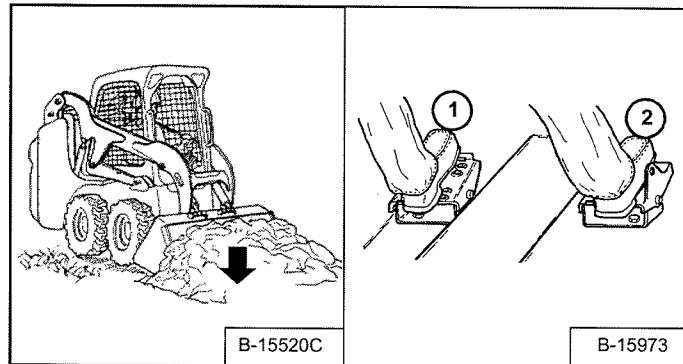
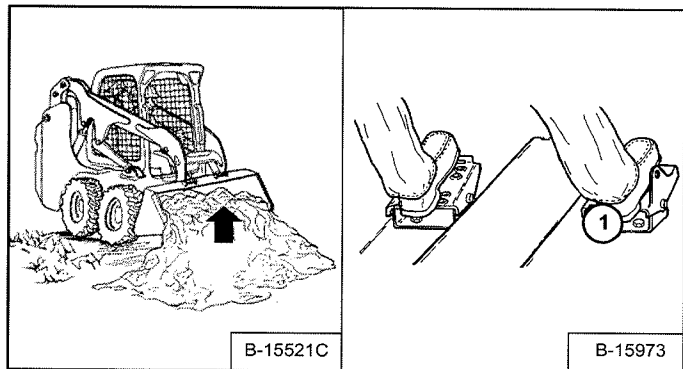


Figure OI-129



Lower the lift arms all the way (Item 1) [Figure OI-128].

Tilt the bucket forward (Item 2) [Figure OI-128] until the cutting edge of the bucket is on the ground.

Drive slowly forward into the material. Tilt the bucket backward (Item 1) [Figure OI-129] all the way when the bucket is full.

Drive backward away from the material.

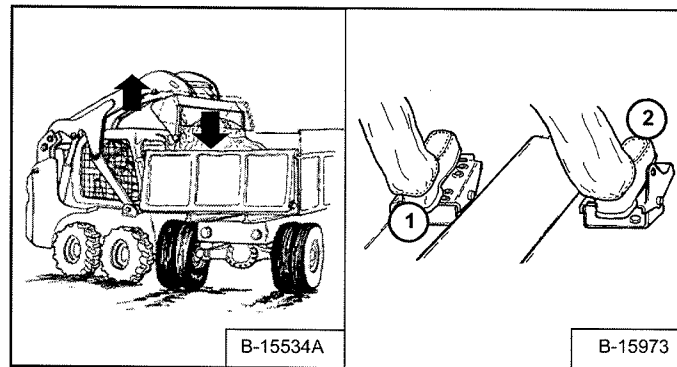
! WARNING

Load, unload and turn on flat level ground. Do not exceed Rated Operating Capacity (ROC) shown on sign (decal) in cab. Failure to obey warnings can cause the machine to tip or roll over and cause injury or death.

W-2056-0903

Emptying

Figure OI-130



Keep the bucket low when moving to the area where you want to empty the bucket.

Raise the lift arms (Item 1) [Figure OI-130]. Level the bucket (Item 2) [Figure OI-130] while raising the lift arms to help prevent material from falling off the back of the bucket.

Drive forward slowly until the bucket is over the top of the truck box or bin.

Empty the bucket (Item 2) [Figure OI-130]. If all the material is near the side of the truck or bin, use the bucket tilt to move it to the other side.

! WARNING

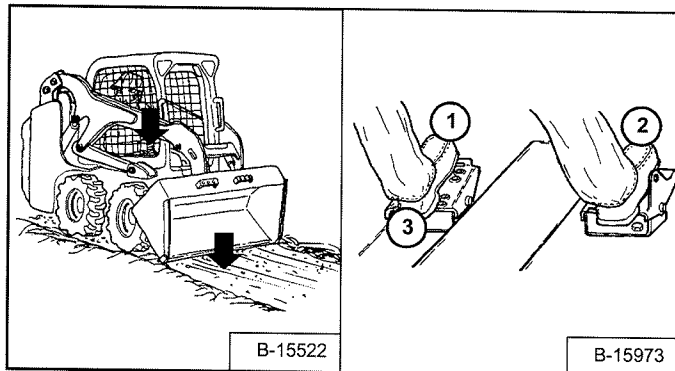
Never dump over an obstruction, such as a post, that can enter the operator cab. The machine could tip forward and cause injury or death.

W-2057-0694

OPERATING PROCEDURE (CONT'D)

Leveling The Ground Using Float (Foot Pedals)

Figure OI-131



Put the lift arms in *float* position by pushing the pedal all the way forward (Item 1) [Figure OI-131] until the pedal is locked in the forward position.

Tilt the bucket forward (Item 2) [Figure OI-131] 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.

Push the bottom of the lift pedal (Item 3) [Figure OI-131] to unlock the float position.

IMPORTANT

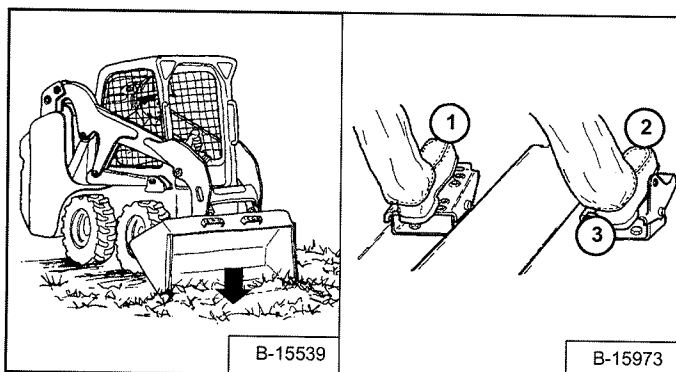
Never drive forward when the hydraulic control for lift arms is in float position.

I-2005-1285

Digging And Filling A Hole (Foot Pedals)

Digging

Figure OI-132

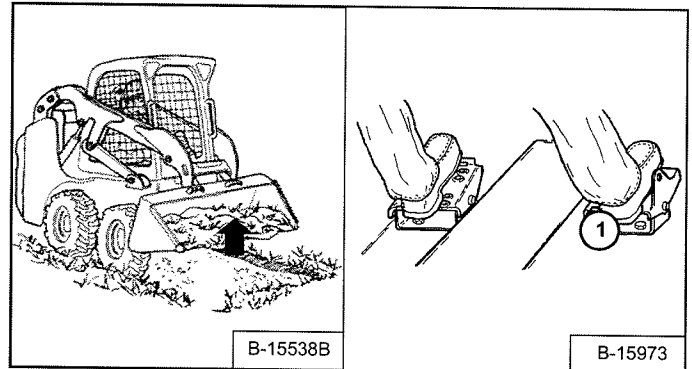


Lower the lift arms all the way (Item 1) [Figure OI-132]. Put the cutting edge of the bucket on the ground (Item 2) [Figure OI-132].

Drive forward slowly and continue to tilt the bucket down (Item 2) [Figure OI-132] until it enters the ground.

Raise the cutting edge a small amount (Item 3) [Figure OI-132] 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 and 3) [Figure OI-132] while driving forward slowly.

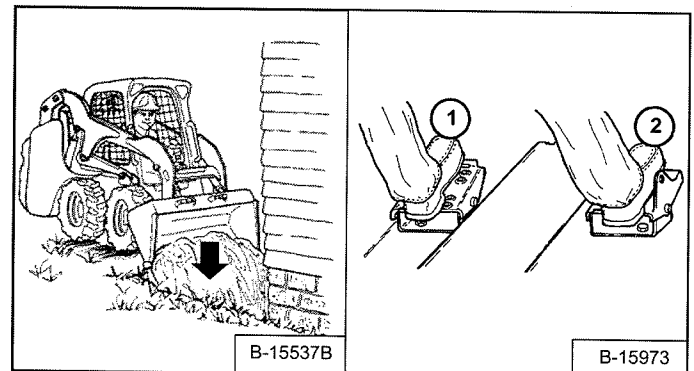
Figure OI-133



Tilt the bucket backward (Item 1) [Figure OI-133] as far as it will go when the bucket is full.

Filling

Figure OI-134



Lower the lift arms (Item 1) [Figure OI-134] and put the cutting edge of the bucket on the ground (Item 2) [Figure OI-134]. Drive forward to the edge of the hole to push the material into the hole.

Tilt the bucket forward (Item 2) [Figure OI-134] as soon as it is past the edge of the hole.

If necessary, raise the lift arms to empty the bucket.

OPERATING PROCEDURE (CONT'D)

Filling And Emptying The Bucket (ACS - Handles, SJC - 'H' Pattern)

Filling

Figure OI-135

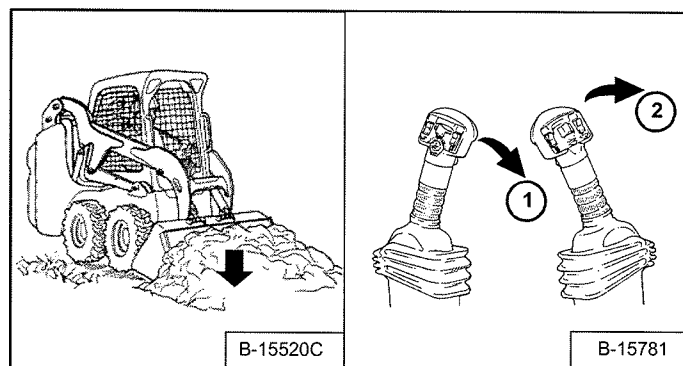
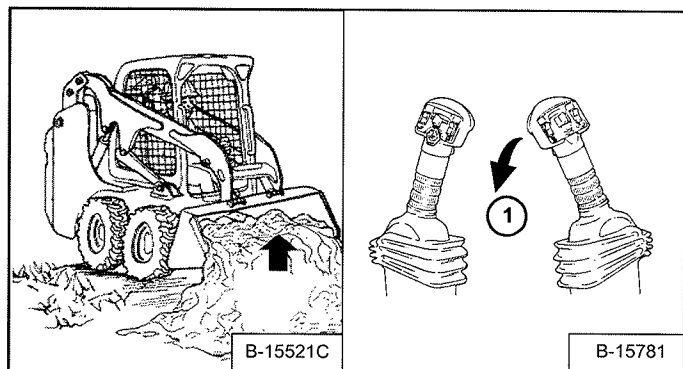


Figure OI-136



Lower the lift arms all the way (Item 1) [Figure OI-135].

Tilt the bucket forward (Item 2) [Figure OI-135] until the cutting edge of the bucket is on the ground.

Drive slowly forward into the material. Tilt the bucket backward (Item 1) [Figure OI-136] all the way when the bucket is full.

Drive backward away from the material.

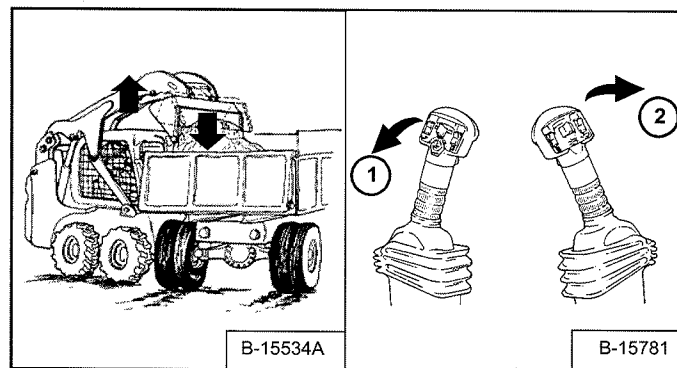
! WARNING

Load, unload and turn on flat level ground. Do not exceed Rated Operating Capacity (ROC) shown on sign (decals) in cab. Failure to obey warnings can cause the machine to tip or roll over and cause injury or death.

W-2056-0903

Emptying

Figure OI-137



Keep the bucket low when moving to the area where you want to empty the bucket.

Raise the lift arms (Item 1) [Figure OI-137]. Level the bucket (Item 2) [Figure OI-137] while raising the lift arms to help prevent material from falling off the back of the bucket.

Drive forward slowly until the bucket is over the top of the truck box or bin.

Empty the bucket (Item 2) [Figure OI-137]. If all material is near the side of the truck or bin, use the bucket tilt to move it to the other side.

! WARNING

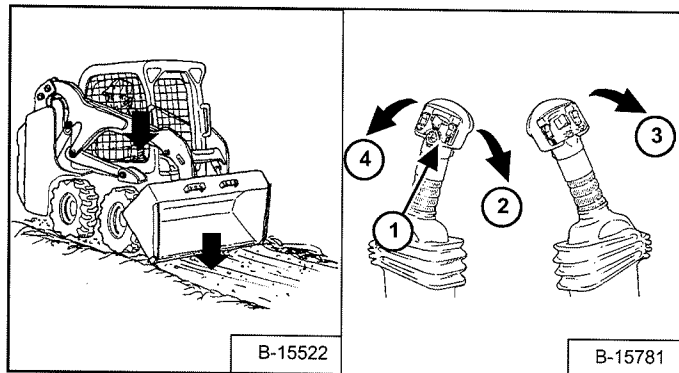
Never dump over an obstruction, such as a post, that can enter the operator cab. The machine could tip forward and cause injury or death.

W-2057-0694

OPERATING PROCEDURE (CONT'D)

Leveling The Ground Using Float (ACS - Handles, SJC - 'H' Pattern)

Figure OI-138



Press and hold the float button (Item 1) [Figure OI-138] while the lever is in neutral. While lowering the lift arms (Item 2) [Figure OI-138], release the float button.

Tilt the bucket forward (Item 3) [Figure OI-138] 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.

To disengage float, press the float button again or raise the lift arms (Item 4) [Figure OI-138].

IMPORTANT

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

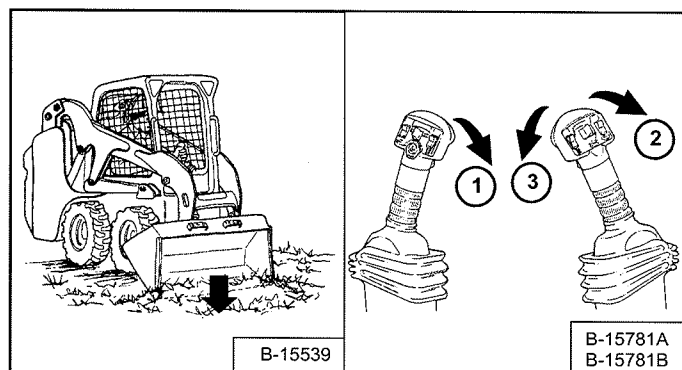
I-2005-1285

OPERATING PROCEDURE (CONT'D)

Digging And Filling A Hole (ACS - Handles, SJC - 'H' Pattern)

Digging

Figure OI-139

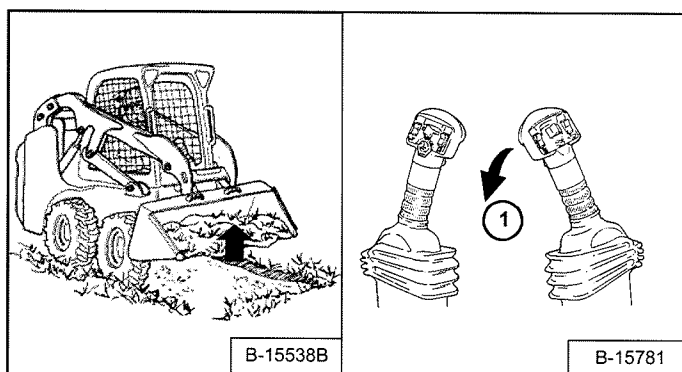


Lower the lift arms all the way (Item 1) [Figure OI-139]. Tilt the bucket forward (Item 2) [Figure OI-139] until the cutting edge of the bucket is on the ground.

Drive forward slowly and continue to tilt the bucket down (Item 2) [Figure OI-139] until it enters the ground.

Tilt the bucket backward a small amount (Item 3) [Figure OI-139] 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 (Items 2 and 3) [Figure OI-139] while driving forward.

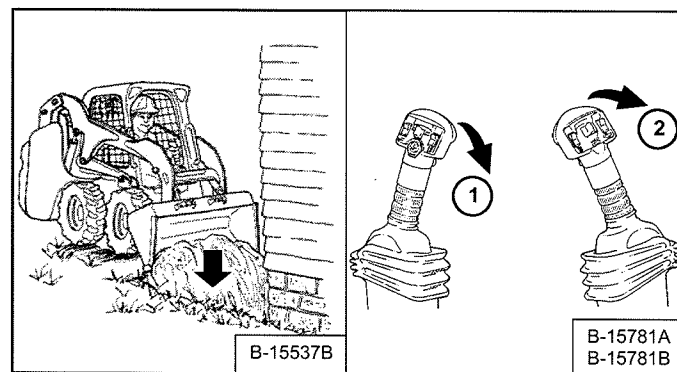
Figure OI-140



Tilt the bucket backward (Item 1) [Figure OI-140] as far as it will go when the bucket is full.

Filling

Figure OI-141



Lower the lift arms (Item 1) [Figure OI-141] and put the cutting edge of the bucket on the ground (Item 2) [Figure OI-141]. Drive forward to the edge of the hole to push the material into the hole.

Tilt the bucket forward (Item 2) [Figure OI-141] as soon as it is past the edge of the hole.

If necessary, raise the lift arms to empty the bucket.

OPERATING PROCEDURE (CONT'D)

Filling And Emptying The Bucket (SJC - 'ISO' Pattern)

Filling

Figure OI-142

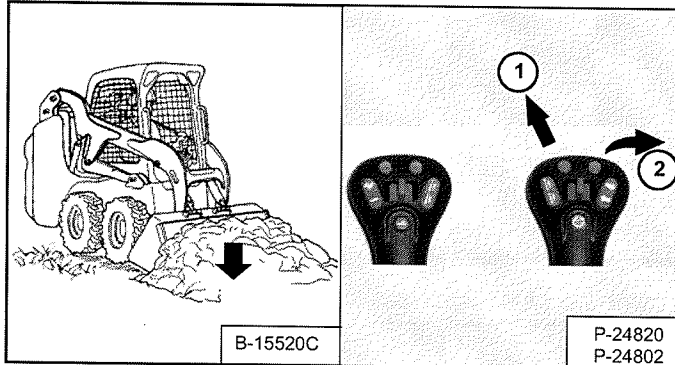
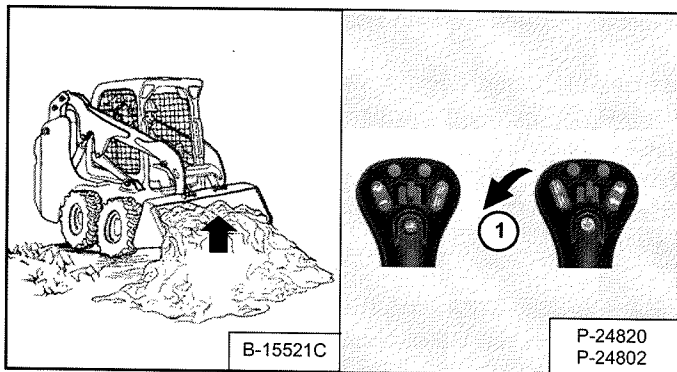


Figure OI-143



Lower the lift arms all the way (Item 1) [Figure OI-142].

Tilt the bucket forward (Item 2) [Figure OI-142] until the cutting edge of the bucket is on the ground.

Drive slowly forward into the material. Tilt the bucket backward (Item 1) [Figure OI-143] all the way when the bucket is full.

Drive backward away from the material.

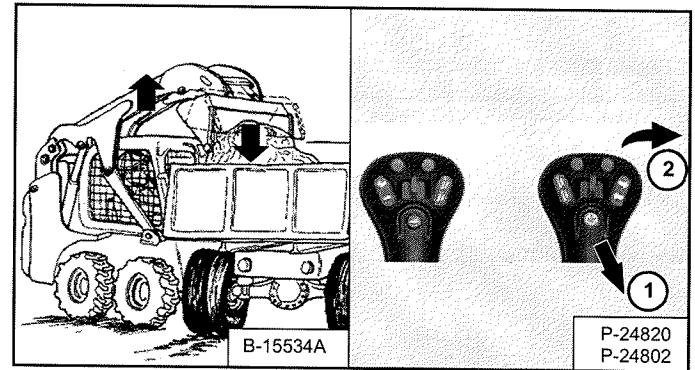
WARNING

Load, unload and turn on flat level ground. Do not exceed Rated Operating Capacity (ROC) shown on sign (decals) in cab. Failure to obey warnings can cause the machine to tip or roll over and cause injury or death.

W-2056-0903

Emptying

Figure OI-144



Keep the bucket low when moving to the area where you want to empty the bucket.

Raise the lift arms (Item 1) [Figure OI-144]. Level the bucket (Item 2) [Figure OI-144] while raising the lift arms to help prevent material from falling off the back of the bucket.

Drive forward slowly until the bucket is over the top of the truck box or bin.

Empty the bucket (Item 2) [Figure OI-144]. If all material is near the side of the truck or bin, use the bucket tilt to move it to the other side.

WARNING

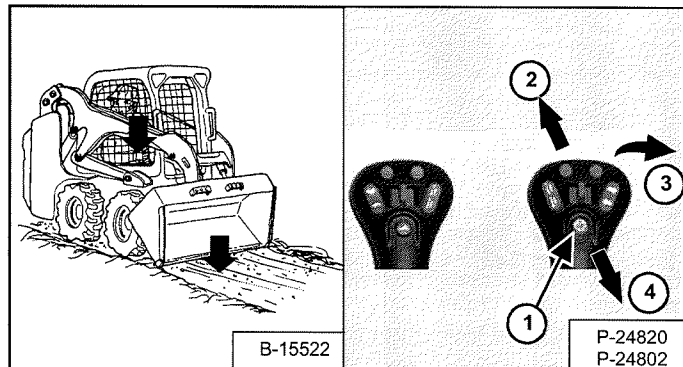
Never dump over an obstruction, such as a post, that can enter the operator cab. The machine could tip forward and cause injury or death.

W-2057-0694

OPERATING PROCEDURE (CONT'D)

Leveling The Ground Using Float (SJC - 'ISO' Pattern)

Figure OI-145



Press and hold the float button (Item 1) [Figure OI-145] while the joystick is in neutral. While lowering the lift arms (Item 2) [Figure OI-145], release the float button.

Tilt the bucket forward (Item 3) [Figure OI-145] 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.

To disengage, press the float button again or raise the lift arms (Item 4) [Figure OI-145].

IMPORTANT

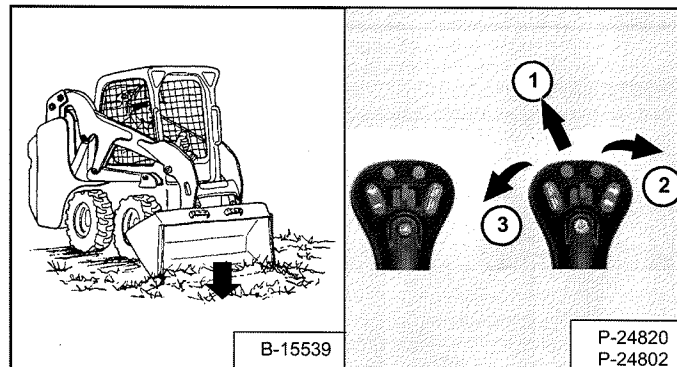
Never drive forward when the hydraulic control for lift arms is in float position.

I-2005-1285

Digging And Filling A Hole (SJC - 'ISO' Pattern)

Digging

Figure OI-146



Lower the lift arms all the way (Item 1) [Figure OI-146]. Put the cutting edge of the bucket on the ground (Item 2) [Figure OI-146].

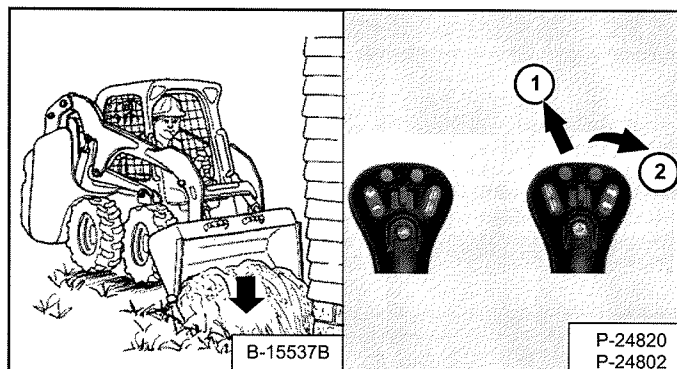
Drive forward slowly and continue to tilt the bucket down (Item 2) [Figure OI-146] until it enters the ground.

Raise the cutting edge a small amount (Item 3) [Figure OI-146] 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 (Items 2 and 3) [Figure OI-146] while driving forward.

Tilt the bucket backward (Item 3) [Figure OI-146] as far as it will go when the bucket is full.

Filling

Figure OI-147



Lower the lift arms (Item 1) [Figure OI-147] and put the cutting edge of the bucket on the ground (Item 2) [Figure OI-147]. Drive forward to the edge of the hole to push the material into the hole.

Tilt the bucket forward (Item 2) [Figure OI-147] as soon as it is past the edge of the hole.

If necessary, raise the lift arms to empty the bucket.

TOWING THE LOADER

Procedure

Because of the design of the loader, there is not a recommended towing procedure.

- The loader can be lifted onto a transport vehicle.
- The loader can be skidded a short distance to move for service (EXAMPLE: Move onto a transport vehicle.) without damage to the hydrostatic system. (The tires will not turn.) There might be slight wear to the tires when the loader is skidded.

The towing chain (or cable) must be rated at 1.5 times the weight of the loader. (See Performance on Page SPEC-4.)

LIFTING THE LOADER

Single-Point Lift

! WARNING

AVOID INJURY OR DEATH

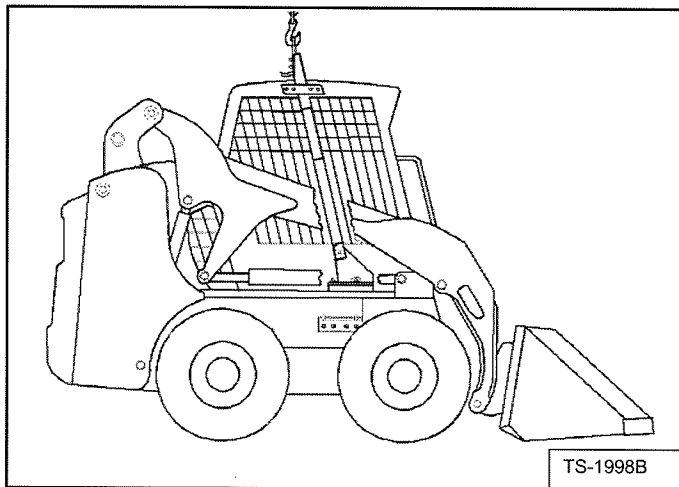
- Before lifting, check fasteners on single point lift and operator cab.
- Assemble front cab fasteners as shown in this manual.
- Never allow riders in the cab or bystanders within 5 m (15 ft) while lifting the machine.

W-2007-0910

The loader can be lifted with the Single-Point Lift which is available as a kit from your Bobcat loader dealer.

The Single-Point Lift, supplied by Bobcat, is designed to lift and support the Bobcat loader without affecting roll over and falling object protection features of the operator cab.

Figure OI-148



Attach lift to lift eye [Figure OI-148].

NOTE: Be sure the lifting equipment is of adequate size and capacity for the weight of the loader. (See Performance on Page SPEC-4.)

Four-Point Lift

! WARNING

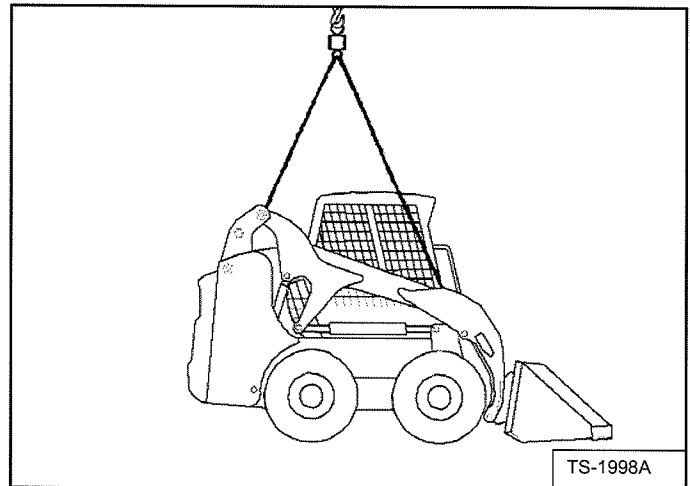
AVOID INJURY OR DEATH

- Before lifting, check fasteners on four point lift.
- Never allow riders in the cab or bystanders within 5 m (15 ft) while lifting the machine.

W-2160-0910

The loader can be lifted with the Four-Point Lift which is available as a kit from your Bobcat loader dealer.

Figure OI-149



Attach cables or chains to lift eyes [Figure OI-149].

NOTE: Be sure the lifting equipment is of adequate size and capacity for the weight of the loader. (See Performance on Page SPEC-4.)

TRANSPORTING THE LOADER ON A TRAILER

Loading And Unloading

! WARNING

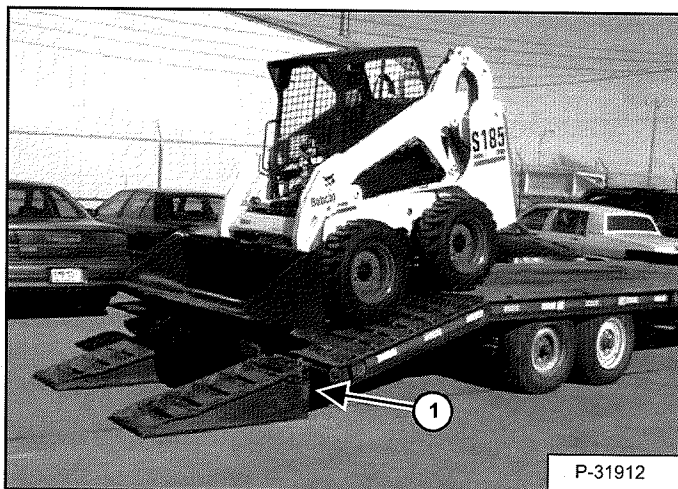
AVOID SERIOUS INJURY OR DEATH

Adequately designed ramps of sufficient strength are needed to support the weight of the machine when loading onto a transport vehicle. Wood ramps can break and cause personal injury.

W-2058-0807

Be sure the transport and towing vehicles are of adequate size and capacity for weight of loader. (See Performance on Page SPEC-4.)

Figure OI-150

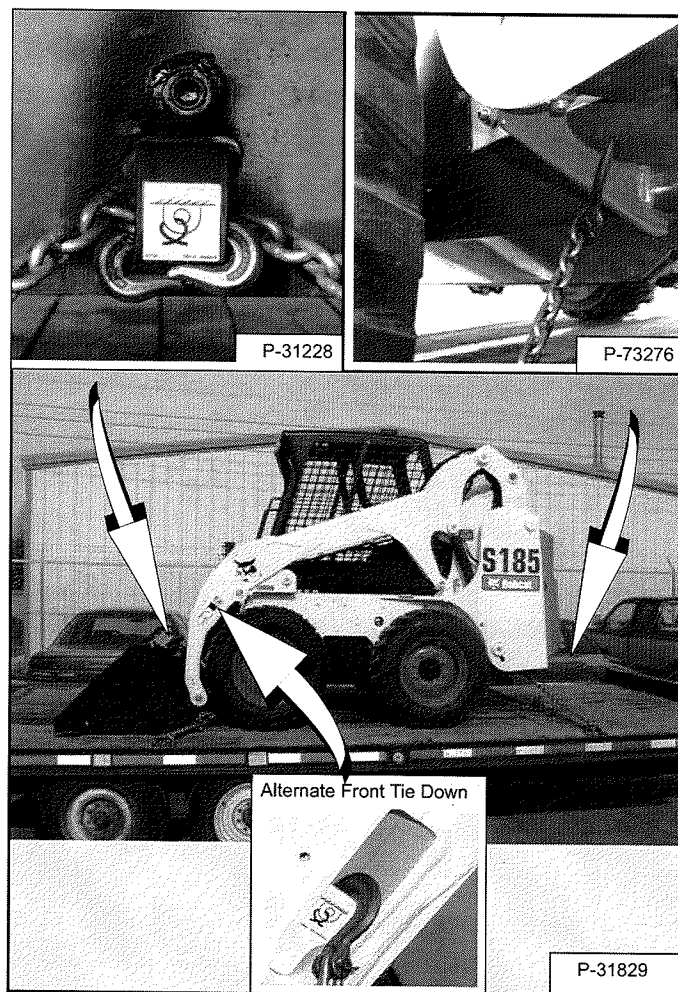


A loader with an empty bucket or no attachment must be loaded backward onto the transport vehicle [Figure OI-150].

The rear of the trailer must be blocked or supported (Item 1) [Figure OI-150] when loading or unloading the loader to prevent the front end of the trailer from raising up.

Fastening

Figure OI-151



Use the following procedure to fasten the Bobcat loader to the transport vehicle to prevent the loader from moving during sudden stops or when going up or down slopes [Figure OI-151].

- Lower the bucket or attachment to the floor.
- Stop the engine.
- Engage the parking brake.
- Install chains at the front and rear loader tie down positions [Figure OI-151].
- Fasten each end of the chain to the transport vehicle.



Bobcat®

PREVENTIVE MAINTENANCE

AIR CLEANER SERVICE	PM-19
Replacing Filter Elements	PM-19
AIR CONDITIONING BELT	PM-42
Belt Adjustment	PM-42
Belt Replacement	PM-42
ALTERNATOR BELT	PM-41
Belt Adjustment	PM-41
Belt Replacement	PM-41
BACK-UP ALARM SYSTEM	PM-13
Adjusting Switch Position	PM-13
Description	PM-13
Inspecting	PM-13
BOBCAT INTERLOCK CONTROL SYSTEM (BICS)	PM-8
Inspecting Deactivation Of Lift And Tilt Functions (ACS And SJC) ...	PM-8
Inspecting Deactivation Of The Auxiliary Hydraulics System (Engine STOPPED - Key ON)	PM-8
Inspecting The BICS (Engine STOPPED - Key ON)	PM-8
Inspecting The Lift Arm Bypass Control	PM-8
Inspecting The Seat Bar Sensor (Engine RUNNING)	PM-8
Inspecting The Traction Lock (Engine RUNNING)	PM-8
BOB-TACH (HAND LEVER)	PM-49
Inspection And Maintenance	PM-49
BOB-TACH (POWER)	PM-50
Inspection And Maintenance	PM-50
DRIVE BELT	PM-43
Belt Adjustment	PM-43
Belt Replacement	PM-45
ELECTRICAL SYSTEM	PM-27
Battery Maintenance	PM-28
Description	PM-27
Fuse And Relay Location / Identification	PM-27
Removing And Installing Battery	PM-30
Using A Booster Battery (Jump Starting)	PM-29
ENGINE COOLING SYSTEM	PM-25
Checking Level	PM-26
Cleaning	PM-25
Removing And Replacing Coolant	PM-26

**PREVENTIVE
MAINTENANCE
(PM)**

Continued On Next Page

PREVENTIVE MAINTENANCE (CONT'D)

ENGINE LUBRICATION SYSTEM	PM-24
Checking And Adding Engine Oil	PM-24
Engine Oil Chart	PM-24
Removing And Replacing Oil And Filter	PM-24
FINAL DRIVE TRANSMISSION (CHAINCASE)	PM-40
Checking And Adding Oil	PM-40
Removing And Replacing Oil	PM-40
FUEL SYSTEM	PM-21
Biodiesel Blend Fuel	PM-21
Filling The Fuel Tank	PM-22
Fuel Filter	PM-23
Fuel Specifications	PM-21
Removing Air From The Fuel System	PM-23
HEATING, VENTILATION AND AIR CONDITIONING (HVAC)	PM-18
Air Conditioning Lubrication	PM-18
Cleaning And Maintenance	PM-18
Condenser	PM-18
Evaporator / Heater Coil	PM-18
Filters	PM-18
Troubleshooting	PM-18
HYDRAULIC / HYDROSTATIC SYSTEM	PM-31
Breather Cap	PM-37
Checking And Adding Fluid	PM-31
Hydraulic / Hydrostatic Fluid Chart	PM-31
Removing And Replacing Hydraulic Case Drain Filters (Single Speed Loaders)	PM-33
Removing And Replacing Hydraulic Case Drain Filters (Two-Speed Loaders)	PM-34
Removing And Replacing Hydraulic Charge Filter	PM-36
Removing And Replacing Hydraulic Fluid	PM-32
Removing And Replacing Hydraulic / Hydrostatic Filter	PM-32
LIFT ARM SUPPORT DEVICE	PM-11
Installing	PM-11
Removing	PM-12
LOADER STORAGE AND RETURN TO SERVICE	PM-51
Return To Service	PM-51
Storage	PM-51
LUBRICATING THE LOADER	PM-46
Lubrication Locations	PM-46

Continued On Next Page

PREVENTIVE MAINTENANCE (CONT'D)

MAINTENANCE SAFETY	PM-5
OPERATOR CAB	PM-14
Cab Door Sensor	PM-16
Description	PM-14
Lowering	PM-15
Raising	PM-14
PIVOT PINS	PM-48
Inspection And Maintenance	PM-48
REAR DOOR (TAILGATE)	PM-17
Adjusting	PM-17
Opening And Closing	PM-17
REAR GRILLE	PM-17
Installing	PM-17
Removing	PM-17
SEAT BAR RESTRAINT SYSTEM	PM-9
Description	PM-9
Inspecting	PM-9
Maintaining	PM-9
SEAT BELT	PM-10
Inspection And Maintenance	PM-10
SERVICE SCHEDULE	PM-7
Chart	PM-7
SPARK ARRESTER MUFFLER	PM-38
Cleaning Procedure	PM-38
TIRE MAINTENANCE	PM-39
Mounting	PM-39
Rotating	PM-39
Wheel Nuts	PM-39



Bobcat®

MAINTENANCE SAFETY



WARNING

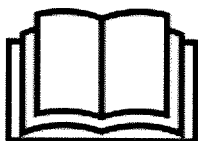
Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0807



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

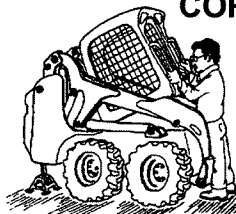
CORRECT



P-90216

- ⚠ Never service the Bobcat Skid-Steer Loader without instructions.

CORRECT



B-15535

- ⚠ Use the correct procedure to lift or lower operator cab.

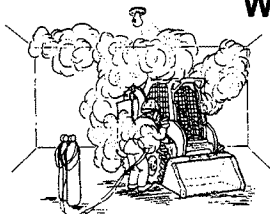
CORRECT



B-15524

- ⚠ Cleaning and maintenance are required daily.

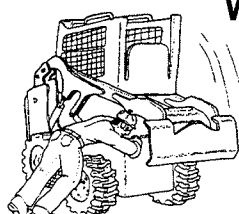
WRONG



B-15734

- ⚠ Have good ventilation when welding or grinding painted parts.
- ⚠ Wear dust mask when grinding painted parts. Toxic dust and gas can be produced.
- ⚠ Avoid exhaust fume leaks which can kill without warning. Exhaust system must be tightly sealed.

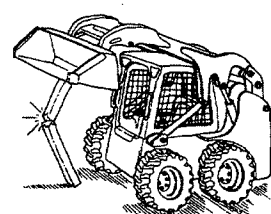
WRONG



B-15732

- ⚠ Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop. Do not go under lift arms when raised unless supported by an approved lift arm support device. Replace it if damaged.

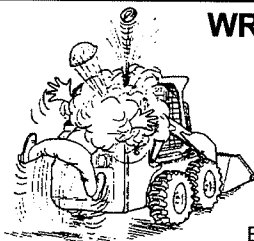
WRONG



B-15525

- ⚠ Never work on loader with lift arms up unless lift arms are held by an approved lift arm support device. Replace if damaged.
- ⚠ Never modify equipment or add attachments not approved by Bobcat Company.

WRONG



B-15733

- ⚠ Stop, cool and clean engine of flammable materials before checking fluids.
- ⚠ Never service or adjust loader with the engine running unless instructed to do so in the manual.
- ⚠ Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate the skin or eyes.
- ⚠ Never fill fuel tank with engine running, while smoking or when near open flame.

WRONG



B-15523

- ⚠ Keep body, jewelry and clothing away from moving parts, electrical contact, hot parts and exhaust.
- ⚠ Wear eye protection to guard from battery acid, compressed springs, fluids under pressure and flying debris when engines are running or tools are used. Use eye protection approved for type of welding.
- ⚠ Keep rear door closed except for service. Close and latch door before operating the loader.

WRONG



B-6589

- ⚠ Lead-acid batteries produce flammable and explosive gases.
- ⚠ Keep arcs, sparks, flames and lighted tobacco away from batteries.
- ⚠ Batteries contain acid which burns eyes or skin on contact. Wear protective clothing. If acid contacts body, flush well with water. For eye contact flush well and get immediate medical attention.

Maintenance procedures which are given in the Operation & Maintenance Manual can be performed by the owner/operator without any specific technical training. Maintenance procedures which are **not** in the Operation & Maintenance Manual must be performed **ONLY BY QUALIFIED BOBCAT SERVICE PERSONNEL**. Always use **genuine Bobcat replacement parts**. The Service Safety Training Course is available from your Bobcat dealer.

MSW07-0409



Bobcat®

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

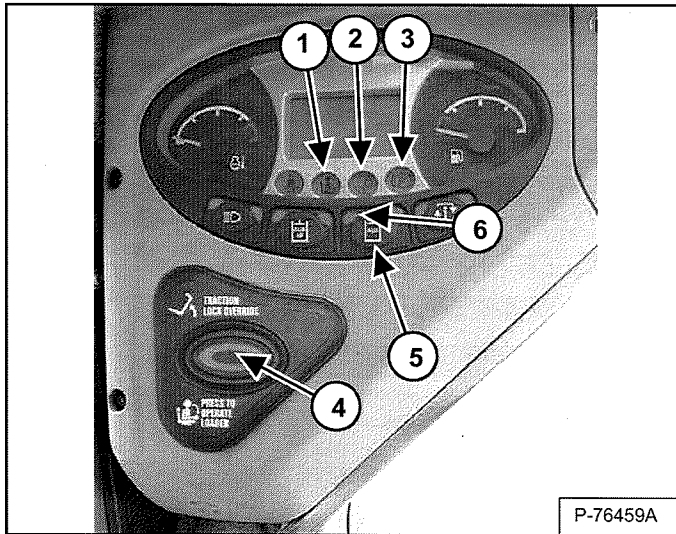
SERVICE SCHEDULE		HOURS					
ITEM	SERVICE REQUIRED	8-10	50	100	250	500	1000
Engine Oil	Check the oil level and add as needed. Do not overfill.						
Engine Air Filter and Air System	Check display panel. Service only when required. Check for leaks and damaged components.						
Engine Cooling System	Clean debris from oil cooler, radiator and grille. 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 multipurpose lithium based grease.						
Tires	Check for damaged tires and correct air pressure. Inflate to MAXIMUM pressure shown on the sidewall of the tire.						
Seat Bar, Control Interlocks, Seat Belt, Seat Belt Retractors	Check the condition of seat belt. Clean or replace seat belt retractors as needed. Check the seat bar and control interlocks for correct operation. Clean dirt and debris from moving parts.						
Bobcat Interlock Control Systems (BICS)	Check for correct function. Lift and Tilt functions MUST NOT operate with seat bar raised. See details in this Manual.						
Front Horn / Back-up Alarm	Check for proper function.						
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.						
Indicators and Lights	Check for correct operation of all indicators and lights.						
Heater and A/C Filters (If Equipped)	Clean or replace filters 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),	Check fluid level and add as needed.						
Parking Brake, Foot Pedals, Hand Controls and Steering Levers or Joysticks	Check for correct operation. Repair or adjust as needed.						
Wheel Nuts	Check for loose wheel nuts and tighten to correct torque. (See TIRE MAINTENANCE in this manual.)	□					
Spark Arrester 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. Check idler arm stop.		▲				
Drive Belts (Alternator, air conditioning, water pump)	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.		▲	*			
Hydraulic / Hydrostatic Filter, Charge Filter, Reservoir Breather	Replace the hydraulic / hydrostatic filter, charge filter, and the reservoir breather.		●				
Final Drive Trans. (Chaincase)	Replace the fluid.						
Hydraulic Reservoir	Replace the fluid.						
Case Drain Filters	Replace the filters.		▲				
Engine Valves	Adjust the engine valves.					○	
Coolant	Replace the coolant						
		Every 2 years					

- Or every 12 months.
- ▲ Perform at first 50 hours, then as scheduled.
- Check every 8 - 10 hours for the first 24 hours, then at 50 hour intervals.
- Replace the hydraulic / hydrostatic filter element after the first 50 hours, then when service code [M0217] is displayed or as scheduled.
- * Change oil and filter every 100 hours when operating under severe conditions.
- Perform at first 500 hours, then as scheduled.

BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

Inspecting The BICS (Engine STOPPED - Key ON)

Figure PM-1



1. Sit in operator's seat. Turn key to RUN or press RUN button. Lower seat bar and disengage parking brake. Press the PRESS TO OPERATE LOADER button (Item 4). Two BICS lights (Items 1 and 2) [Figure PM-1] [SEAT BAR AND LIFT & TILT VALVE] on left instrument panel must be OFF. The PRESS TO OPERATE LOADER button will light.
2. Raise seat bar fully. All three BICS lights (Items 1, 2 and 3) [Figure PM-1] [SEAT BAR, LIFT & TILT VALVE AND PARKING BRAKE] on left instrument panel must be ON. The PRESS TO OPERATE LOADER button light will turn OFF.

Inspecting Deactivation Of The Auxiliary Hydraulics System (Engine STOPPED - Key ON)

3. Sit in operator's seat, lower seat bar and press the PRESS TO OPERATE LOADER button (Item 4). Press the auxiliary hydraulics button (Item 5). The auxiliary hydraulics light will be ON (Item 6) [Figure PM-1]. Raise the seat bar. The light must be OFF.

Inspecting The Seat Bar Sensor (Engine RUNNING)

4. Sit in operator's seat, lower seat bar, engage parking brake and fasten seat belt.
5. Start engine and operate at low idle. Press the PRESS TO OPERATE LOADER button. While raising the lift arms, raise the seat bar fully. The lift arms must stop. Repeat using the tilt function.

Inspecting The Traction Lock (Engine RUNNING)

6. Fasten seat belt, disengage parking brake, press the PRESS TO OPERATE LOADER button and raise seat bar fully. Move steering levers or joystick(s) slowly forward and backward. The TRACTION lock must be engaged. Lower the seat bar. Press the PRESS TO OPERATE LOADER button.
7. Engage parking brake and move steering levers or joystick(s) slowly forward and backward. The TRACTION lock must be engaged.

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.

Inspecting The Lift Arm Bypass Control

8. Raise the lift arms 2 m (6 ft) off the ground. Stop engine. Turn lift arm bypass control knob clockwise 1/4 turn. Pull up and hold lift arm bypass control knob until lift arms slowly lower.

Inspecting Deactivation Of Lift And Tilt Functions (ACS And SJC)

9. Sit in operator's seat and fasten seat belt. Lower seat bar, start engine and press the PRESS TO OPERATE LOADER button.
10. Raise lift arms about 2 m (6 ft) off the ground.
11. Turn key OFF or press STOP button, and wait for the engine to come to a complete stop.
12. Turn key ON or press RUN button. Press the PRESS TO OPERATE LOADER button, move the control (foot pedal, hand control or joystick) to lower the lift arms. Lift arms must not lower.
13. Move the control (foot pedal, hand control or joystick) to tilt the bucket (or attachment) forward. The bucket (or attachment) must not tilt forward.

WARNING

AVOID INJURY OR DEATH
The Bobcat Interlock Control System (BICS) must deactivate the lift, tilt and traction drive functions. If it does not, contact your dealer for service. **DO NOT** modify the system.

W-2151-0394

SEAT BAR RESTRAINT SYSTEM

Description

The seat bar restraint system has a pivoting seat bar with armrests.

The operator controls the use of the seat bar. The seat bar in the down position helps to keep the operator in the seat.

Models with Standard Controls have hydraulic valve spool interlocks for the lift and tilt functions. The spool interlocks require the operator to lower the seat bar in order to operate the foot pedal controls.

When the seat bar is down, the PRESS TO OPERATE LOADER button is activated and the engine is running, the lift, tilt and traction drive functions can be operated.

When the seat bar is up, the lift and tilt control pedals are locked when returned to the NEUTRAL position.

Models with Advanced Control System (ACS) have mechanical interlocks for the handles and pedals. The interlocks for the handles and pedals require the operator to lower the seat bar in order to operate the selected controls.

When the seat bar is down, the PRESS TO OPERATE LOADER button is activated and the engine is running, the lift, tilt and traction drive functions can be operated using the selected controls (handles or foot pedals).

When the seat bar is up, the handles and pedals are locked when returned to the NEUTRAL position.

Models with Selectable Joystick Controls (SJC) have electrical deactivation of joystick functions. Activation of functions require the operator to lower the seat bar.

When the seat bar is down, the PRESS TO OPERATE LOADER button is activated and the engine is running, the lift, tilt and traction drive functions can be operated.

When the seat bar is up, the joystick functions are deactivated even though the joystick does not mechanically lock.

Inspecting

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.

Operate the hydraulic controls to check that both the lift and tilt functions operate correctly. Raise the lift arms until the attachment is about 600 mm (2 ft) off the ground.

Raise the seat bar. Move the hydraulic controls. Pedals and handles (if equipped) must be firmly locked in the NEUTRAL position (except joysticks). There must be no motion of the lift arms or tilt (attachment) when the controls are moved.

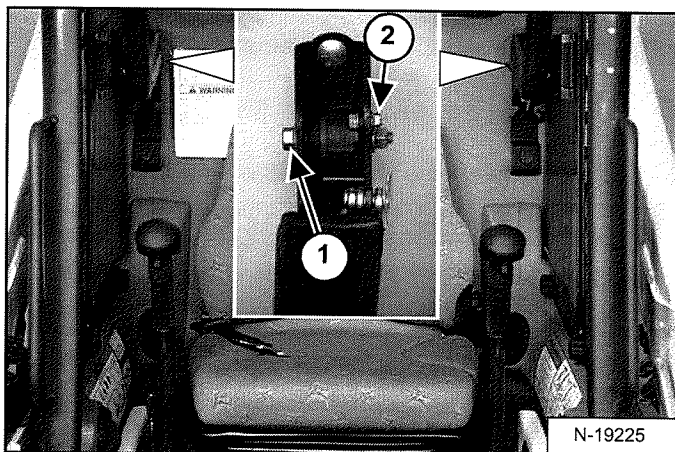
Lower the seat bar, press the PRESS TO OPERATE LOADER button and lower the lift arms. Operate the lift control. While the lift arms are going up, raise the seat bar. The lift arms must stop.

Lower the seat bar, press the PRESS TO OPERATE LOADER button, lower the lift arms and put the attachment flat on the ground. Stop the engine. Raise the seat bar. Operate the foot pedals and handles (if equipped) to be sure they are firmly locked in the NEUTRAL position (except joysticks).

Maintaining

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

Figure PM-2



Use compressed air to clean any debris or dirt from the pivot parts. Do not lubricate. Inspect all mounting hardware. The correct hinge bolt (Item 1) torque is 34 - 38 N•m (25 - 28 ft-lb). The seat bar sensor nut (left side only) (Item 2) [Figure PM-2] torque is 6 - 8 N•m (50 - 70 in-lb).

If the seat bar system does not function correctly, replace parts that are worn or damaged. Use only genuine Bobcat replacement parts.



The seat bar system must deactivate the lift and tilt control functions when the seat bar is up. Service the system if hydraulic controls do not deactivate.

W-2465-0703

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.

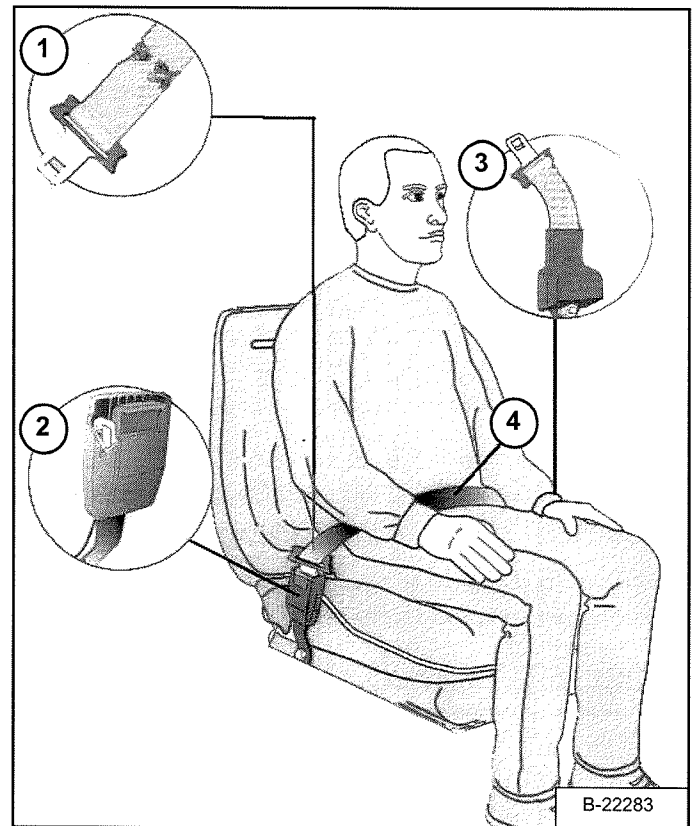
Any seat belt system that shows cuts, fraying, extreme or unusual wear, significant discolorations due to ultraviolet UV exposure, dusty / dirty conditions, abrasion to the seat belt webbing, or damage to the buckle, latch plate, retractor (if equipped), hardware or any other obvious problem should be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

The items below are referenced in **[Figure PM-3]**.

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-3



LIFT ARM SUPPORT DEVICE

Installing

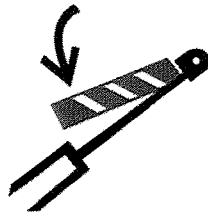
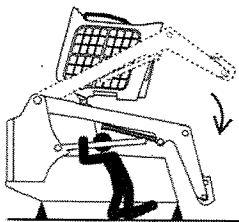
! WARNING

Never work on a machine with the lift arms up unless the lift arms are secured by an approved lift arm support device. Failure to use an approved lift arm support device can allow the lift arms or attachment to fall and cause injury or death.

Service lift arm support device if damaged or if parts are missing. Using a damaged lift arm support or with missing parts can cause lift arms to drop causing injury or death.

W-2572-0407

! DANGER



P-90328

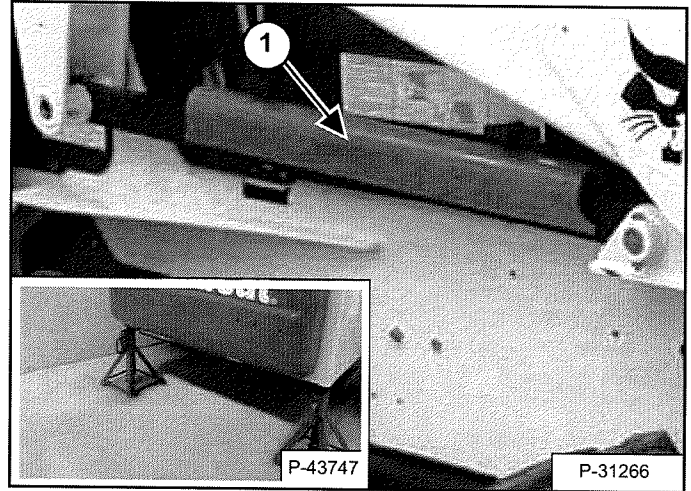
AVOID DEATH

- Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop.
- Keep out of this area when lift arms are raised unless supported by an approved lift arm support. Replace if damaged.

D-1009-0409

Remove attachment from the loader. (See Installing And Removing The Attachment (Hand Lever Bob-Tach) on Page OI-57.) **OR** (See Installing And Removing The Attachment (Power Bob-Tach) on Page OI-59.)

Figure PM-4



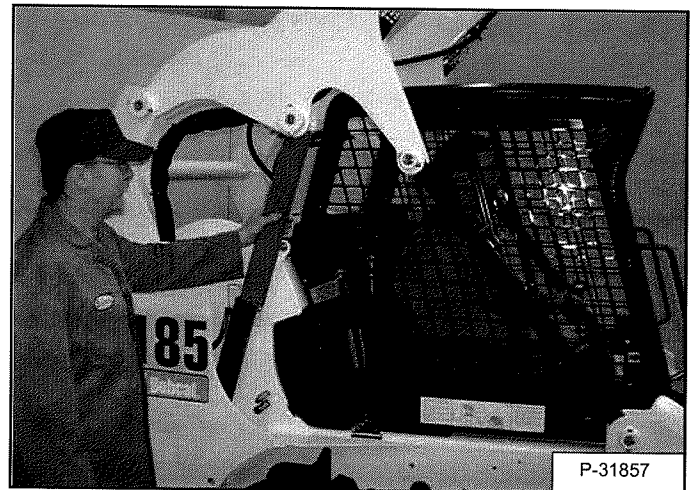
Put jackstands under the rear corners of the loader frame (Inset) [Figure PM-4].

Remove the lift arm support device (Item 1) [Figure PM-4] from the storage position.

The operator must stay in the operator seat with the seat belt fastened and the seat bar lowered until the lift arm support device is installed.

Start the engine and raise the lift arms all the way up.

Figure PM-5



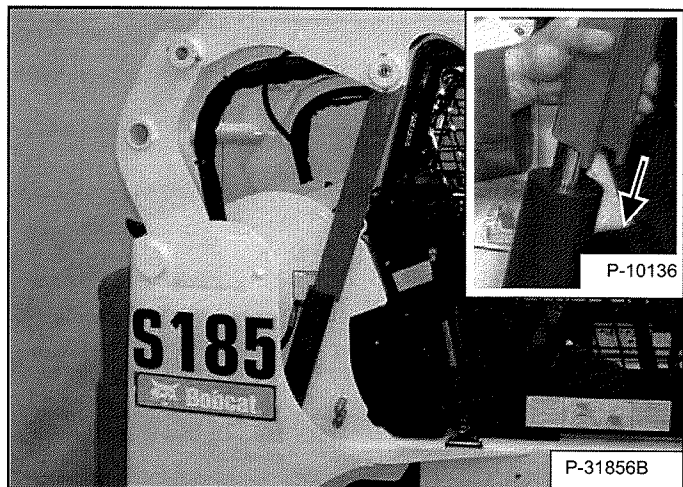
Have a second person install the lift arm support device over the rod of one of the lift cylinders [Figure PM-5].

The lift arm support device must be tight against the cylinder rod.

LIFT ARM SUPPORT DEVICE (CONT'D)

Installing (Cont'd)

Figure PM-6



Lower the lift arms slowly until the lift arm support device is held between the lift arms and the lift cylinder **[Figure PM-6]**. The tabs of the lift arm support device must go past the end of the cylinder (Inset) **[Figure PM-6]**.

Removing

The operator must be in the operator's seat, with the seat belt fastened and seat bar lowered, until the lift arm support device is removed and the lift arms are lowered all the way.

Start the engine and raise the lift arms all the way up.

Have a second person remove the lift arm support device.

Lower the lift arms all the way and stop the engine.

Return the lift arm support device to the storage position and secure with clamping knobs.

Remove the jackstands.

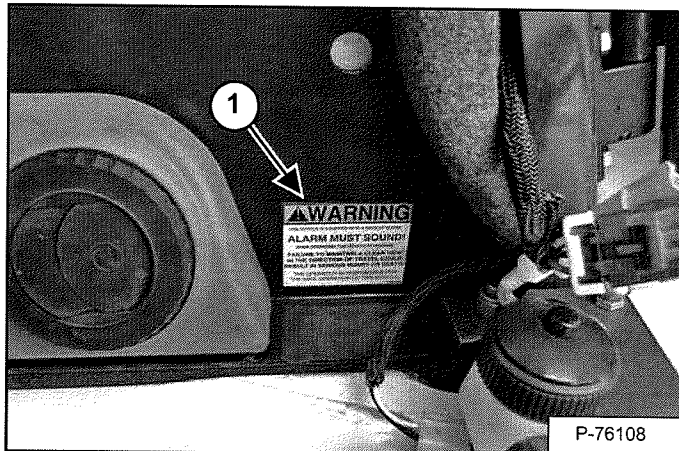
BACK-UP ALARM SYSTEM

Description

The back-up alarm will sound when the operator moves both steering levers or joystick(s) 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-7



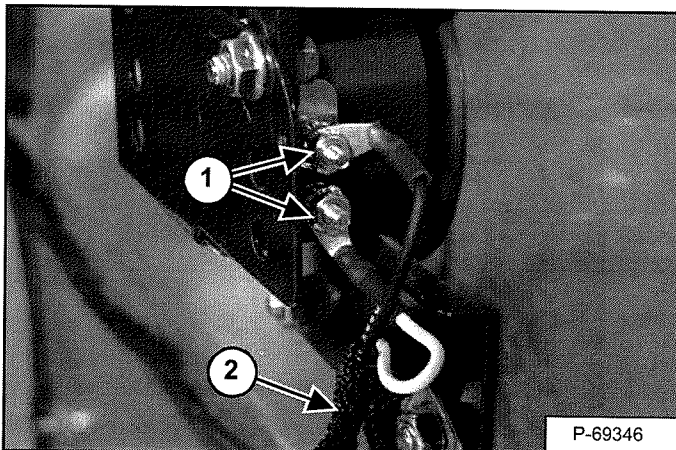
Inspect for damaged or missing back-up alarm decal (Item 1) [Figure PM-7]. Replace if required.

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 or joystick(s) 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-8



Inspect the back-up alarm electrical connections (Item 1) [Figure PM-8], wire harness (Item 2) [Figure PM-8] and back-up alarm switches (if equipped) (Item 2) [Figure PM-9] 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.)

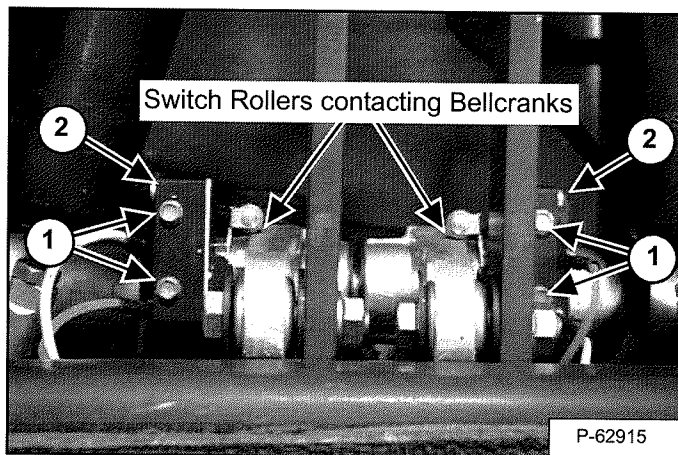
Adjusting Switch Position

NOTE: Joystick equipped machines do not have back-up alarm switches and cannot be adjusted. See your Bobcat dealer for service if your back-up alarm does not sound.

Standard Controls And ACS (If Equipped)

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

Figure PM-9



Place the steering levers in the neutral position.

Loosen the screws (Item 1) [Figure PM-9] 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-9]. Torque the screws (Item 1) [Figure PM-9] securing the switches to the bracket to 1,6 - 2,1 N•m (14 - 19 in-lb).

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

OPERATOR CAB

Description

The Bobcat loader has an operator cab (ROPS and FOPS) as standard equipment to protect the operator from rollover and falling objects. The seat belt must be worn for rollover protection.

Check the ROPS / FOPS cab, mounting and hardware for damage. Never modify the ROPS / FOPS cab. Replace the cab and hardware if damaged. See your Bobcat dealer for parts.

ROPS / FOPS - Roll Over protective Structure per ISO 3471, and Falling Object Protective Structure per SAE J1043 and ISO 3449, Level I. Level II is available.

Level I

Protection from falling bricks, small concrete blocks, and hand tools encountered in operations such as highway maintenance, landscaping, and other construction sites.

Level II

Protection from falling trees, rocks: for machines involved in site clearing, overhead demolition or forestry.

WARNING

Never modify operator cab by welding, grinding, drilling holes or adding attachments unless instructed to do so by Bobcat Company. Changes to the cab can cause loss of operator protection from rollover and falling objects, and result in injury or death.

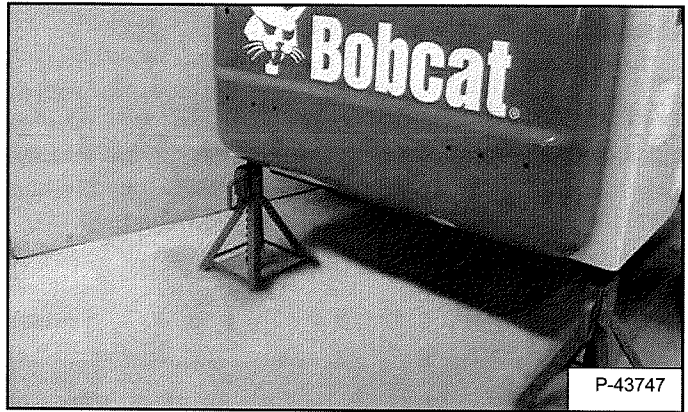
W-2069-0200

Raising

Always stop the engine before raising or lowering the cab.

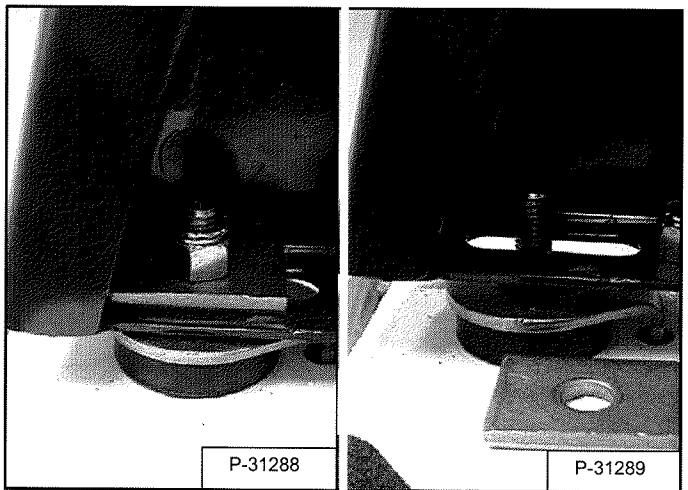
Stop the loader on a level surface. Lower the lift arms. If the lift arms must be up while raising the operator cab, install the lift arm support device. (See LIFT ARM SUPPORT DEVICE on Page PM-11.)

Figure PM-10



Install jackstands under the rear of the loader frame [Figure PM-10].

Figure PM-11



Remove the nuts and plates [Figure PM-11] (both sides) at the front corners of the cab.

WARNING

UNEXPECTED LOADER, LIFT ARM OR ATTACHMENT MOVEMENT CAUSED BY CAB CONTACT WITH CONTROLS CAN CAUSE SERIOUS INJURY OR DEATH

- **STOP ENGINE** before raising or lowering cab.

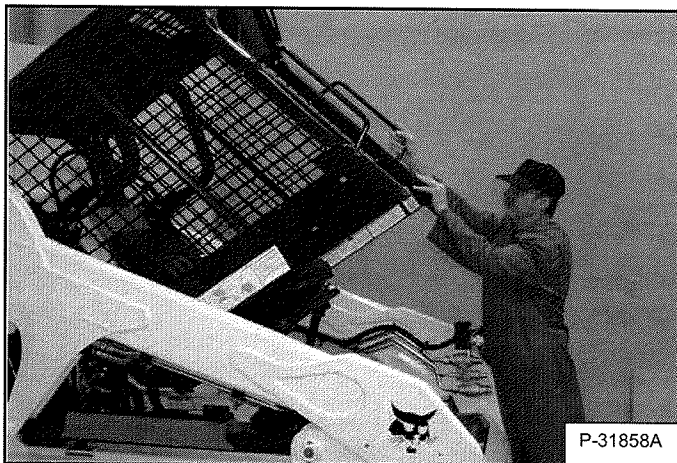
W-2758-0908

NOTE: On some machines, the operator cab frame could contact the steering levers while raising or lowering the operator cab. The engine **MUST** be stopped before raising or lowering the operator cab.

OPERATOR CAB (CONT'D)

Raising (Cont'd)

Figure PM-12



Lift on the grab handles and bottom of the operator cab [Figure PM-12] slowly until the cab is all the way up and the latching mechanism engages.

Lowering

Always stop the engine before raising or lowering the cab.

NOTE: Always use the grab handles to lower the cab.

Figure PM-13



Pull down on the bottom of the operator cab until it stops at the latching mechanism [Figure PM-13].

NOTE: The weight of the cab increases when equipped with options and accessories such as cab door, heater, air conditioning, etc. In these cases, the cab may need to be raised slightly from the latch to be able to release the latch.

WARNING

UNEXPECTED LOADER, LIFT ARM OR ATTACHMENT MOVEMENT CAUSED BY CAB CONTACT WITH CONTROLS CAN CAUSE SERIOUS INJURY OR DEATH

- **STOP ENGINE** before raising or lowering cab.

W-2758-0908

NOTE: On some machines, the operator cab frame could contact the steering levers while raising or lowering the operator cab. The engine **MUST** be stopped before raising or lowering the operator cab.

Support the cab and release the latching mechanism (Inset) [Figure PM-13]. Remove your hand from the latch mechanism when the cab is past the latch stop. Use both hands to lower the cab all the way down.

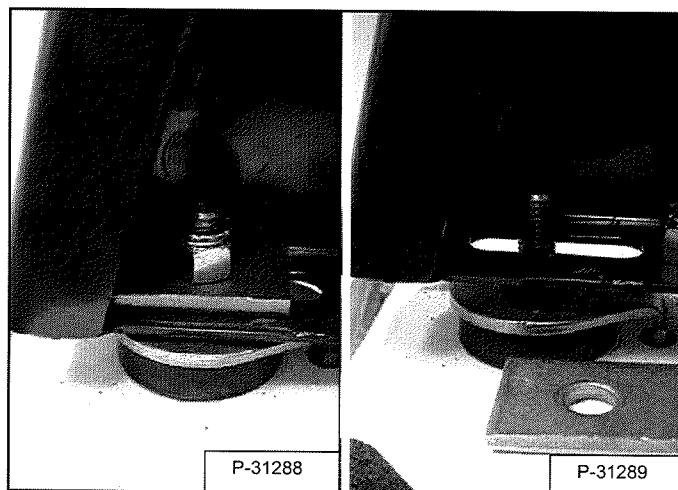
WARNING

PINCH POINT CAN CAUSE INJURY

Remove your hand from the latching mechanism when the cab is past the latch stop.

W-2469-0803

Figure PM-14



Install the plates and nuts (both sides) [Figure PM-14].

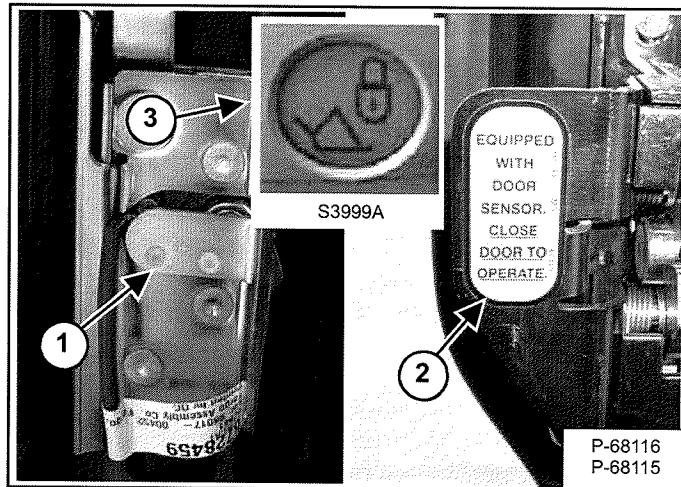
Tighten the nuts to 54 - 61 N•m (40 - 45 ft-lb) torque.

OPERATOR CAB (CONT'D)

Cab Door Sensor

This machine may be equipped with a Cab Door Sensor.

Figure PM-15

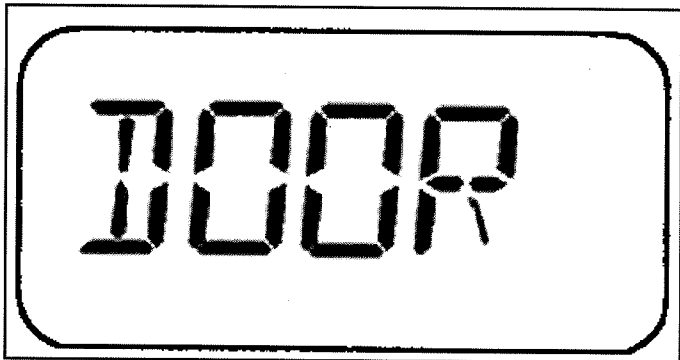


The cab door has a sensor (Item 1) [Figure PM-15] installed which deactivates the lift and tilt valves when the door is open.

A decal is located on the latch mechanism (Item 2) [Figure PM-15].

The LIFT & TILT VALVE light (Item 3) [Figure PM-15] will be OFF when the door is closed, the key switch is turned to RUN or the RUN / ENTER button is pressed, the seat bar is lowered and the PRESS TO OPERATE LOADER button is pressed.

Figure PM-16



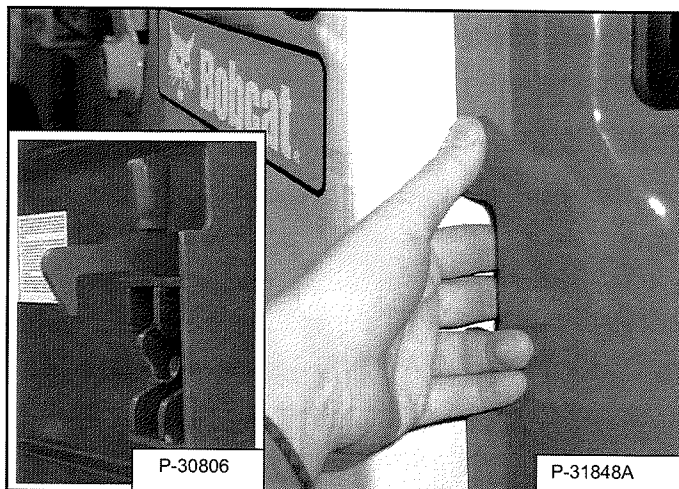
The LIFT & TILT VALVE light (Item 3) [Figure PM-15] will be ON when the door is open, the key switch is turned to RUN or the RUN / ENTER button is pressed, the seat bar is lowered and the PRESS TO OPERATE LOADER button is pressed.

[DOOR] will appear in the data display [Figure PM-16].

REAR DOOR (TAILGATE)

Opening And Closing

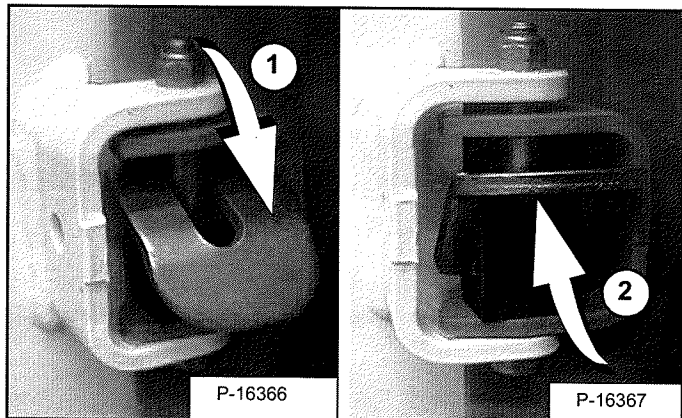
Figure PM-17



Reach into the slot in the rear door and pull the latch handle [Figure PM-17].

Pull the rear door open.

Figure PM-18



Move the door stop into the engaged position (Item 1) [Figure PM-18] to hold the door open.

Move the door stop up (Item 2) [Figure PM-18] to disengage the door stop and allow the door to close.

Close the rear door.



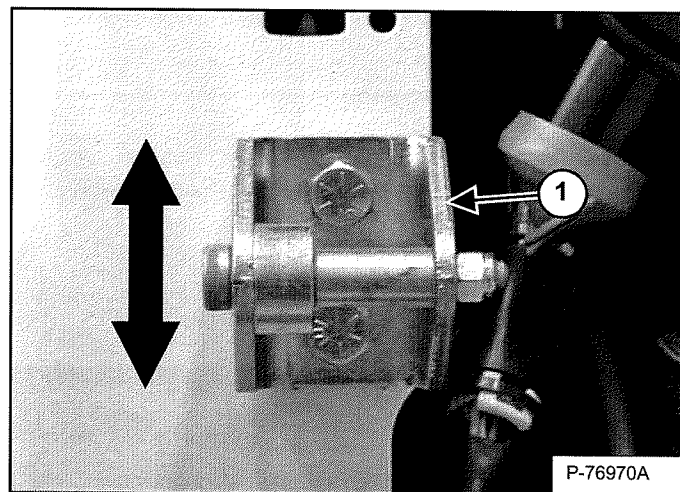
WARNING

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

W-2020-1285

Adjusting

Figure PM-19



The door latch (Item 1) [Figure PM-19] can be adjusted up or down for alignment with the door latch mechanism.

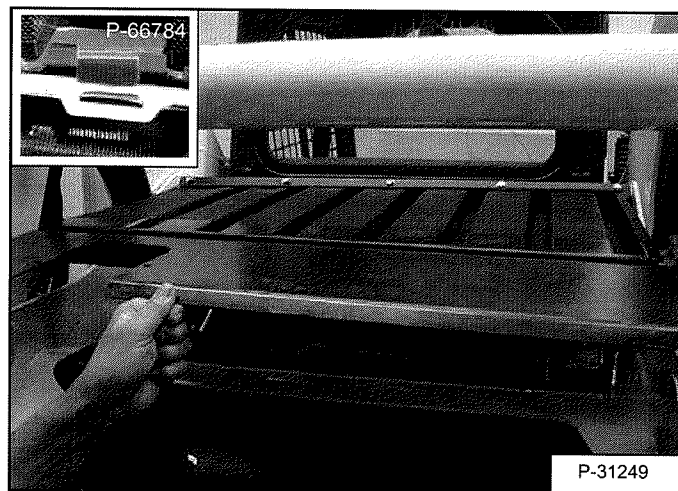
Close the rear door before operating the loader.

REAR GRILLE

Removing

Open the rear door.

Figure PM-20



Lift and pull the rear grille to remove it from the loader [Figure PM-20].

Installing

Align the tabs of the rear grille into the slots in the loader frame (Inset) [Figure PM-20].

Lower the rear grille and close the rear door.

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

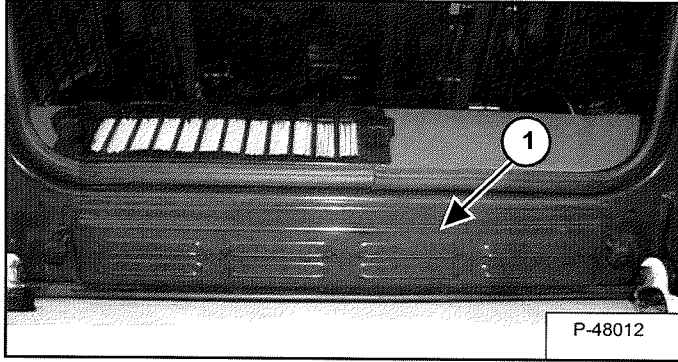
This machine may be equipped with a Heating System or HVAC.

Cleaning And Maintenance

The heating and HVAC systems require regular inspection and maintenance. (See SERVICE SCHEDULE on Page PM-7.)

Filters

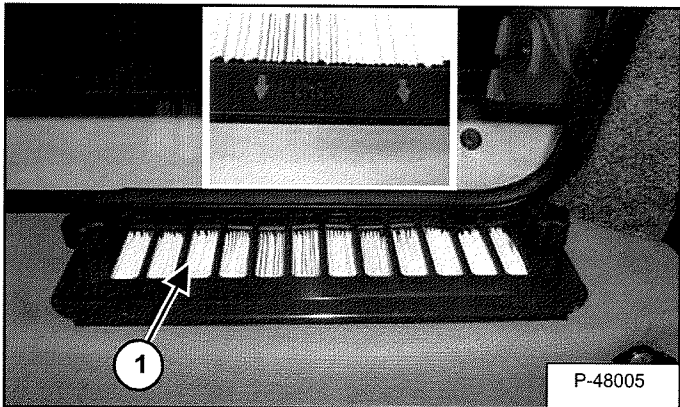
Figure PM-21



The *Fresh Air Filter* (Item 1) [Figure PM-21] is located below the rear window outside the cab. Remove the clamping knobs, filter cover and filter.

Shake the filter or use low pressure air to remove dirt. This can be done several times before replacement is required. Install the filter, filter cover and clamping knobs.

Figure PM-22



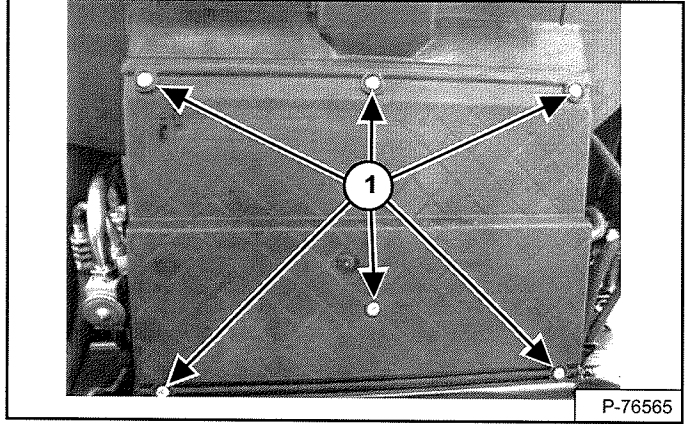
The *Recirculation Filter* (Item 2) [Figure PM-22] is located in front of the rear window inside the cab. Remove the clamping knobs, filter cover, and filter.

Shake the filter or use a vacuum to clean. This can be done several times before replacement is required. Install the filter with the arrows pointing forward (Inset) [Figure PM-22], install the filter cover and clamping knobs.

Evaporator / Heater Coil

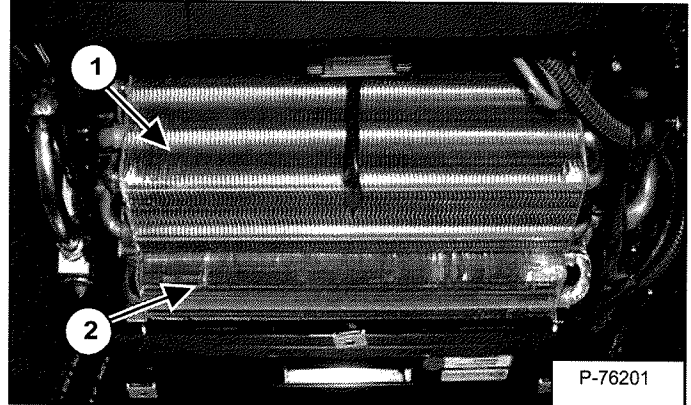
Raise the operator cab. (See Raising on Page PM-14.)

Figure PM-23



Remove the cover screws (Item 1) [Figure PM-23] and remove the cover.

Figure PM-24



Use low pressure air or water to remove debris from the evaporator (Item 1) and heater coil (Item 2) [Figure PM-24].

Install the cover and lower the operator cab. (See Lowering on Page PM-15.)

Condenser

The condenser should be cleaned with the oil cooler and the radiator. (See Cleaning on Page PM-25.)

Air Conditioning Lubrication

Run the air conditioning for about five minutes every week to lubricate the internal components.

Troubleshooting

If the fan does not run, or the air conditioning does not turn on, check the fuse. (See ELECTRICAL SYSTEM on Page PM-27.)

If the air conditioning system circulates warm air, the refrigerant may need to be recharged.

AIR CLEANER SERVICE

Replacing Filter Elements

Figure PM-25

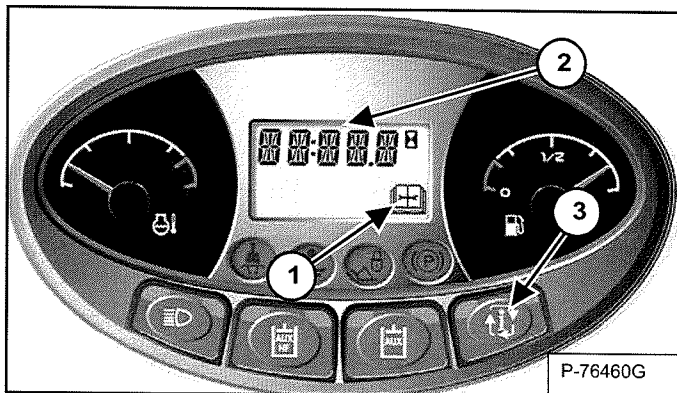
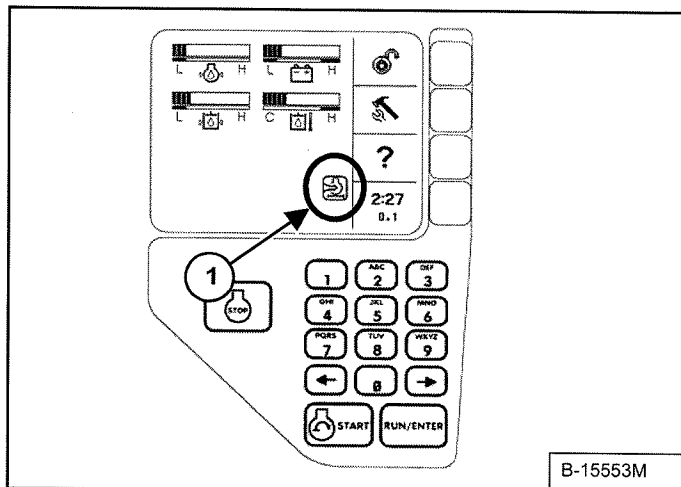


Figure PM-26



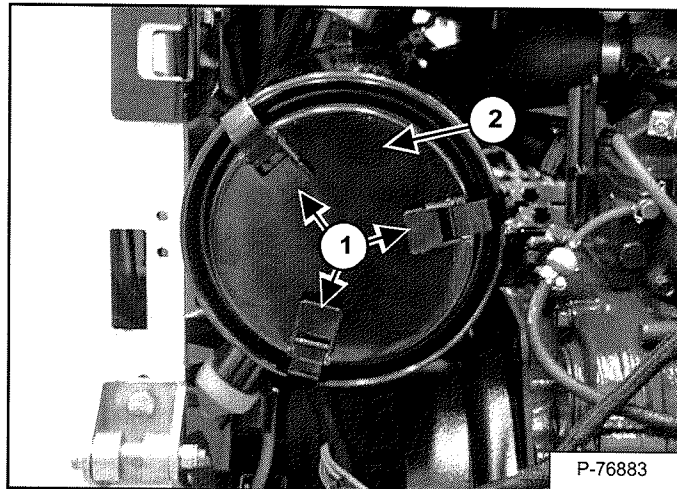
It is important to change the air filter element only when necessary. The Service indicator (Item 1) will FLASH and service code **[M0117]** (Air Filter Plugged) will show in the Data Display (Item 2) when the Information button (Item 3) **[Figure PM-25]** is held for two seconds.

The Air Cleaner icon on the Deluxe Instrumentation Panel, if equipped, will be ON (Item 1) **[Figure PM-26]**.

Replace the inner filter every third time the outer filter is replaced or as indicated.

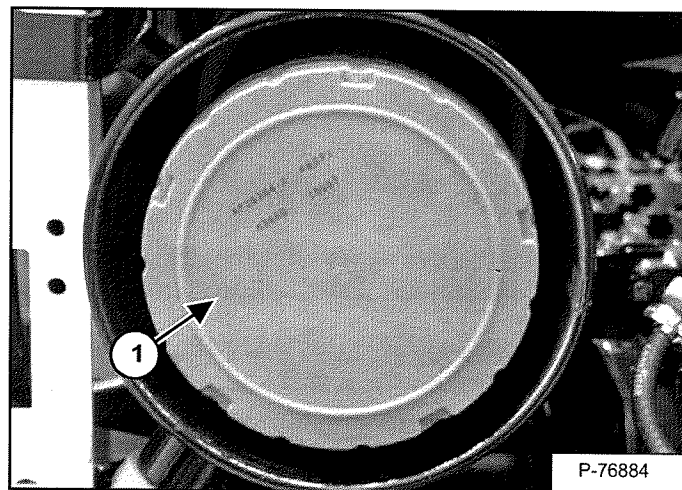
Outer Filter

Figure PM-27



Open the latches (Item 1) and remove the dust cover (Item 2) **[Figure PM-27]**.

Figure PM-28



Pull the outer filter element (Item 1) **[Figure PM-28]** out and discard.

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

Install new filter element. Push all the way in until it contacts the base of the housing.

Install the dust cover and secure the latches **[Figure PM-27]**.

AIR CLEANER SERVICE (CONT'D)

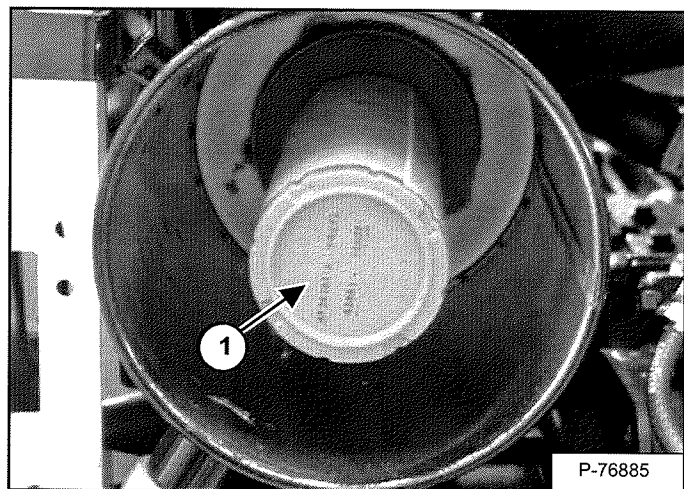
Replacing Filter Elements (Cont'd)

Inner Filter

Only replace the inner filter element under the following conditions:

- Replace the inner filter element every *third* time the outer filter is replaced.
- After the outer element has been replaced, start the engine and run at full rpm. If the HOURMETER / CODE DISPLAY shows **[M0117]** (Air Filter Plugged), replace the inner filter element.

Figure PM-29



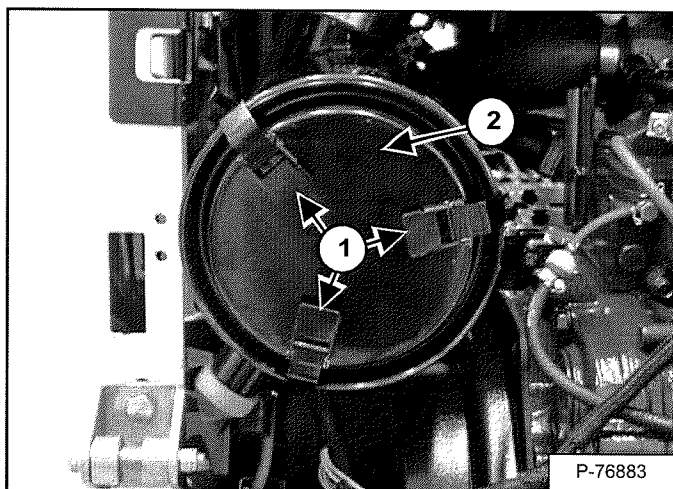
Remove the inner filter element (Item 1) [Figure PM-29].

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

Install new filter element. Push all the way in until it contacts the base of the housing.

Install the outer element [Figure PM-28].

Figure PM-30



Install the dust cover (Item 2) and secure the latches (Item 1) [Figure PM-30].

FUEL SYSTEM

Fuel Specifications

Use only clean, high quality diesel fuel, Grade No. 2 or Grade No. 1.

The following is one suggested blending guideline which should prevent fuel gelling during cold temperatures:

TEMPERATURE C° (F°)	NO. 2	NO. 1
-9° (+15°)	100%	0%
Down to -29° (-20°)	50%	50%
Below -29° (-20°)	0%	100%

At a minimum, Low Sulfur (500 ppm sulfur) Diesel Fuel must be used in this machine:

The following fuels may also be used in this machine:

- Ultra Low Sulfur (15 ppm sulfur) Diesel Fuel.
- Biodiesel Blend Fuel - Must contain no more than five percent biodiesel mixed with low sulfur or ultra low sulfur petroleum based diesel. This is commonly marketed as B5 blended diesel fuel. B5 blended diesel fuel must meet ASTM D975 (US Standard) or EN590 (EU Standard) specifications.

Biodiesel Blend Fuel

Biodiesel blend fuel has unique qualities that should be considered before using in this machine:

- Cold weather conditions can lead to plugged fuel system components and hard starting.
- Biodiesel blend fuel is an excellent medium for microbial growth and contamination which can cause corrosion and plugging of fuel system components.
- Use of biodiesel blend fuel may result in premature failure of fuel system components, such as plugged fuel filters and deteriorated fuel lines.
- Shorter maintenance intervals may be required, such as cleaning the fuel system and replacing fuel filters and fuel lines.
- Using biodiesel blended fuels containing more than five percent biodiesel can affect engine life and cause deterioration of hoses, tubelines, injectors, injector pump and seals.

Apply the following guidelines if biodiesel blend fuel is used:

- Ensure the fuel tank is as full as possible at all times to prevent moisture from collecting in the fuel tank.
- Ensure that the fuel tank cap is securely tightened.
- Biodiesel blend fuel can damage painted surfaces, remove all spilled fuel from painted surfaces immediately.
- Drain all water from the fuel filter daily before operating the machine.
- Do not exceed engine oil change interval. Extended oil change intervals can cause engine damage.
- Before vehicle storage; drain the fuel tank, refill with 100% petroleum diesel fuel, add fuel stabilizer and run the engine for at least 30 minutes.

NOTE: Biodiesel blend fuel does not have long term stability and should not be stored for more than three months.

FUEL SYSTEM (CONT'D)

Filling The Fuel Tank

! WARNING

AVOID INJURY OR DEATH

Stop and cool the engine before adding fuel. **NO SMOKING!** Failure to obey warnings can cause an explosion or fire.

W-2063-0807

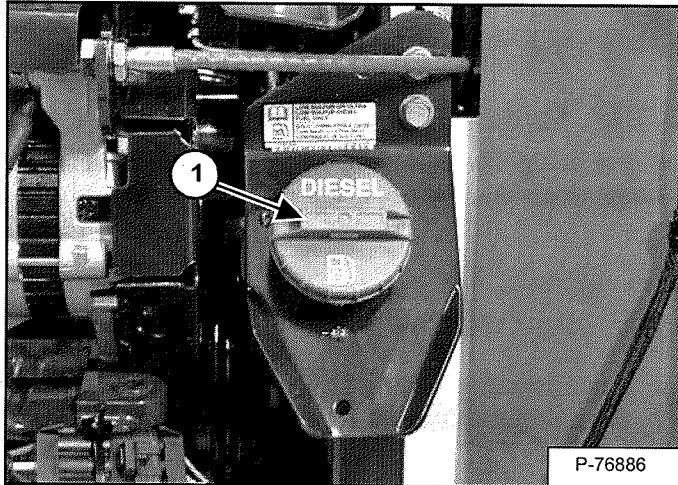
! WARNING

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.

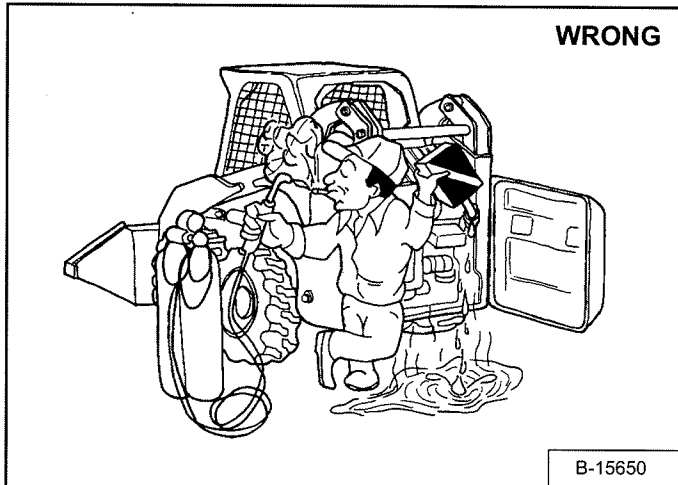
W-2103-0508

Figure PM-31



Remove the fill cap (Item 1) [Figure PM-31].

Figure PM-32



Use a clean, approved safety container to add fuel of the correct specification. Add fuel only in an area that has free movement of air and no open flames or sparks **NO SMOKING!** [Figure PM-32].

Install and tighten the fuel cap (Item 1) [Figure PM-31].

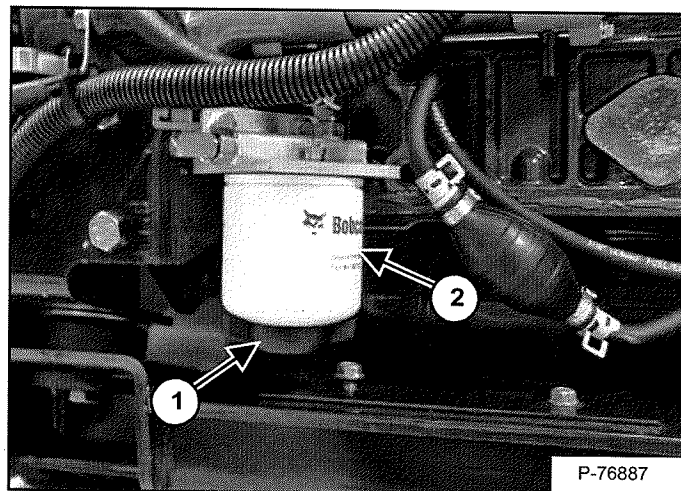
FUEL SYSTEM (CONT'D)

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-33



Loosen the drain (Item 1) [Figure PM-33] at the bottom of the filter element to remove water from the filter.

Replacing Element

Remove the filter element (Item 2) [Figure PM-33].

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.

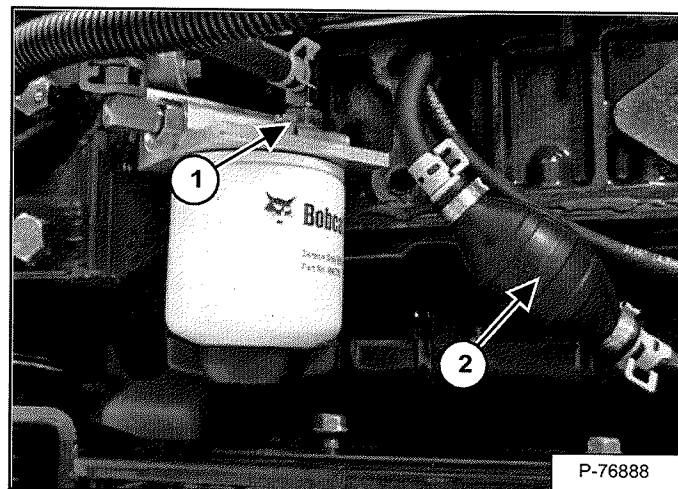
WARNING

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-34



Open the vent (Item 1) [Figure PM-34] on the fuel filter housing.

Squeeze the hand pump (priming bulb) (Item 2) [Figure PM-34] until fuel flows from the vent with no air bubbles.

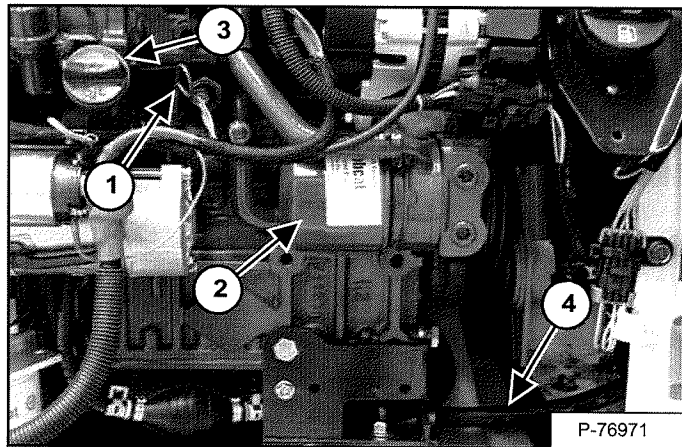
Close the vent (Item 1) [Figure PM-34].

ENGINE LUBRICATION SYSTEM

Checking And Adding Engine Oil

Check the engine oil level every day before starting the engine for the work shift.

Figure PM-35

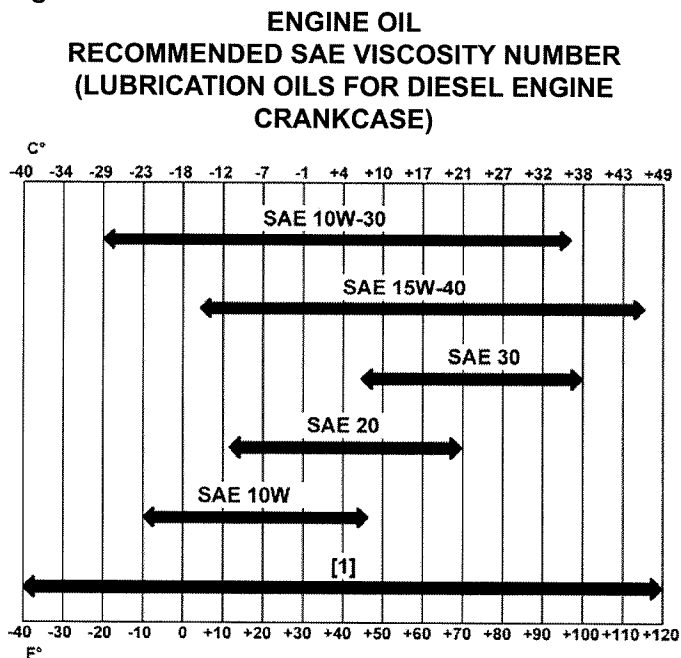


Park the machine on level ground. Open the rear door and remove the dipstick (Item 1) [Figure PM-35].

Keep the oil level between the marks on the dipstick. Do not overfill.

Engine Oil Chart

Figure PM-36



**TEMPERATURE RANGE ANTICIPATED BEFORE
NEXT OIL CHANGE (DIESEL ENGINES MUST USE API
CLASSIFICATION CI-4 OR BETTER)**

[1] Synthetic Oil - Use recommendation from Synthetic Oil Manufacturer.

Use good quality engine oil that meets API Service Classification of CI-4 or better [Figure PM-36].

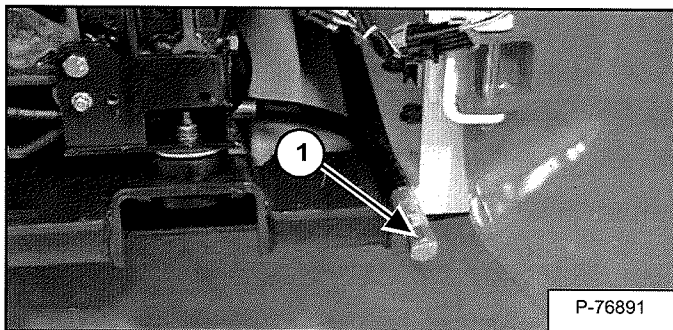
Removing And Replacing Oil And Filter

For the service interval for replacing the engine oil and filter (See SERVICE SCHEDULE on Page PM-7.)

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

Open the rear door and remove the drain hose from its storage position (Item 4) [Figure PM-35].

Figure PM-37



Remove the oil drain cap (Item 1) [Figure PM-37] and drain the oil into a container. Recycle or dispose of used oil in an environmentally safe manner.

Install the oil drain cap.

Remove the oil filter (Item 2) [Figure PM-35] and clean the filter housing surface.

Use genuine Bobcat filter only. Put oil on the new filter gasket, install the filter and hand tighten.

Remove the fill cap (Item 3) [Figure PM-35]. Put oil in the engine. For the correct quantity (See Capacities on Page SPEC-6.) Do not overfill.

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

Remove the dipstick (Item 1) [Figure PM-35] and check the oil level.

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

WARNING

AVOID INJURY OR DEATH

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

W-2103-0508

ENGINE COOLING SYSTEM

Check the cooling system every day to prevent overheating, loss of performance or engine damage.

WARNING

AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

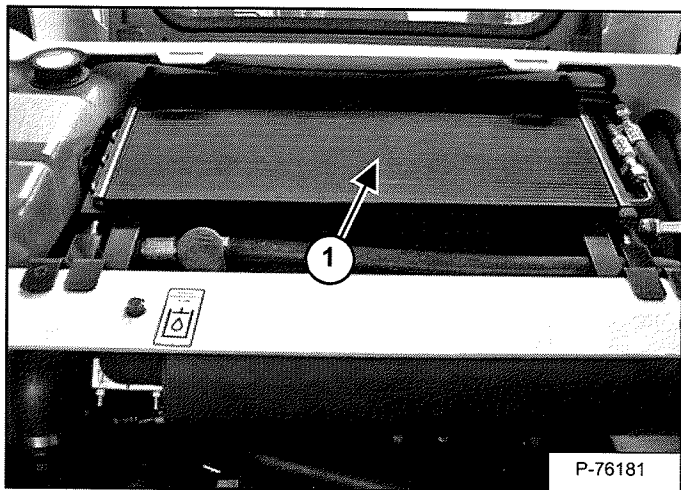
W-2019-0907

Cleaning

Open the rear door. (See REAR DOOR (TAILGATE) on Page PM-17.)

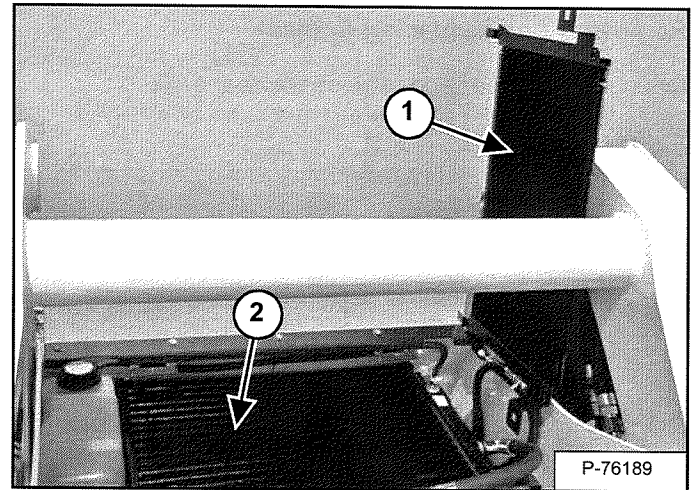
Remove the rear grille. (See REAR GRILLE on Page PM-17.)

Figure PM-38



Use low air pressure or water pressure to clean the top of the air conditioning condenser (Item 1) [Figure PM-38], if equipped.

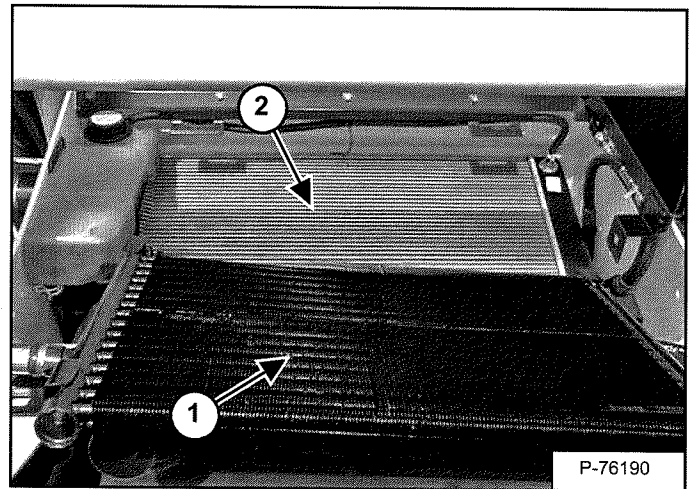
Figure PM-39



NOTE: Be careful when raising and lowering the air conditioning condenser so that the air conditioning condenser does not fall on the oil cooler and damage the fins.

Raise the air conditioning condenser (Item 1) and use low air pressure or water pressure to clean the top of the oil cooler (Item 2) [Figure PM-39].

Figure PM-40



NOTE: Be careful when raising and lowering the oil cooler so that the oil cooler does not fall on the radiator and damage the fins.

Raise the oil cooler (Item 1) and use low air pressure or water pressure to clean the top of the radiator (Item 2) [Figure PM-40].

Lower the oil cooler.

Lower the air conditioning condenser, if equipped.

Check the cooling system for leaks.

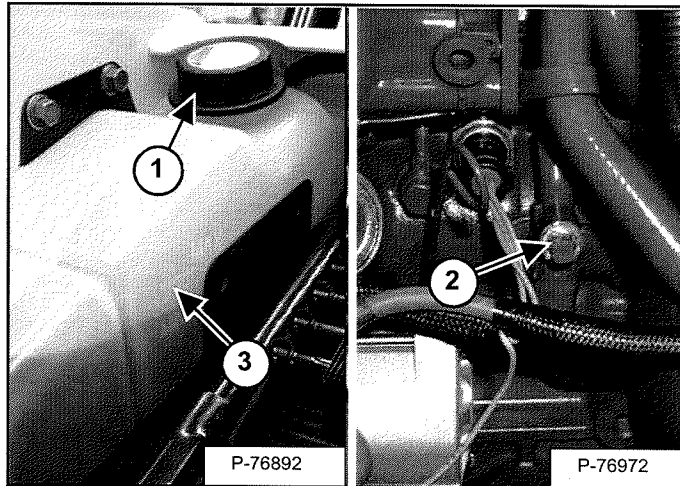
Install the rear grille and close the rear door.

ENGINE COOLING SYSTEM (CONT'D)

Removing And Replacing Coolant

Open the rear door and remove the rear grille.

Figure PM-41



Remove the coolant fill cap (Item 1) [Figure PM-41].

Remove the plug (Item 2) [Figure PM-41] located between the oil filter and the starter. Drain the coolant into a container.

After all the coolant is removed, install the plug. Recycle or dispose of coolant in an environmentally safe manner.

Mix new coolant in a separate container. (See Capacities on Page SPEC-6.)

NOTE: The loader is factory filled with propylene glycol coolant (purple color). **DO NOT** mix propylene glycol with ethylene glycol.

Add premixed coolant, 47% water and 53% propylene glycol to the recovery tank. (See Checking Level on Page PM-26.)

The correct mixture of coolant to provide a -37°C (-34°F) freeze protection is 5 L propylene glycol mixed with 4,4 L of water **OR** 1 U.S. gal propylene glycol mixed with 3.5 qt of water.

Fill the tank until it is at the lower marker on the tank and replace the coolant fill cap.

NOTE: When installing the coolant fill cap, the cap must be tightened until it clicks.

Run the engine until it is at operating temperature. Stop the engine. Check the coolant level when cool. Use a refractometer to check the condition of propylene glycol in your cooling system. Add coolant as needed.

Install the rear grille and close the rear door.

Checking Level

Open the rear door and raise the rear grille.

Check coolant level using the level markers (Item 3) [Figure PM-41] on the tank. Coolant must be at the bottom marker when the engine is cold; top marker when hot.

Close the rear door before operating the loader.

IMPORTANT

AVOID ENGINE DAMAGE

Always use the correct ratio of water to antifreeze.

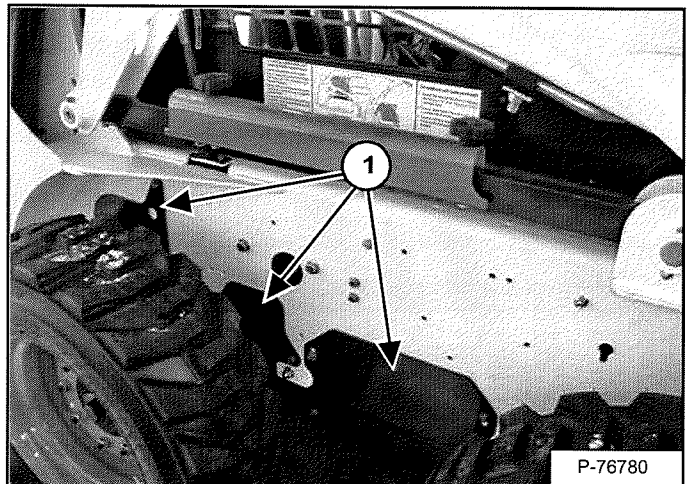
Too much antifreeze reduces cooling system efficiency and may cause serious premature engine damage.

Too little antifreeze reduces the additives which protect the internal engine components; reduces the boiling point and freeze protection of the system.

Always add a premixed solution. Adding full strength concentrated coolant can cause serious premature engine damage.

I-2124-0497

Figure PM-42

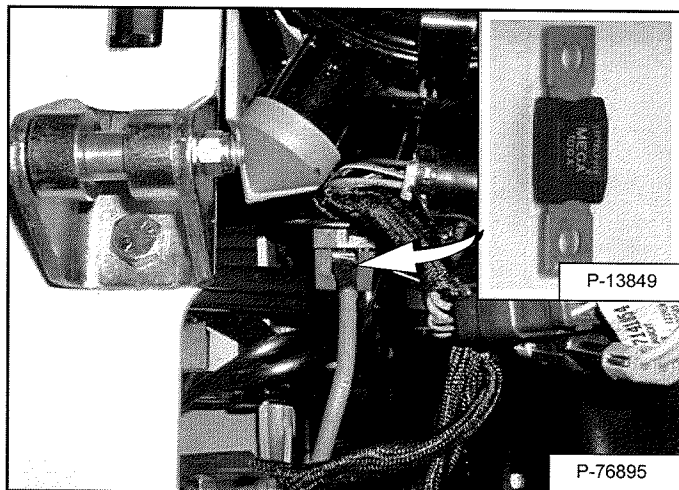


NOTE: All access covers (Item 1) [Figure PM-42] (both sides) must be in place to ensure correct air flow through the oil cooler which will ensure cooling for engine and hydraulic system.

ELECTRICAL SYSTEM

Description

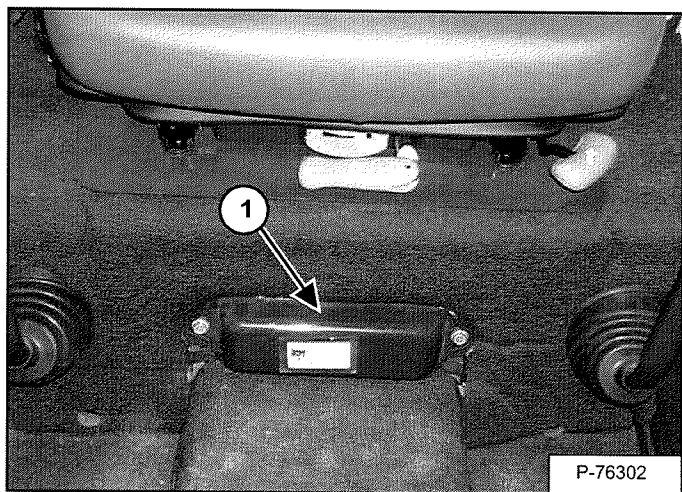
Figure PM-43



The loader has a 12 volt, negative ground alternator charging system. The electrical system is protected by fuses located in the cab on the steering control panel, and a 100 ampere master fuse [Figure PM-43] in the engine compartment on the left side of the engine, under the air cleaner. The fuses will protect the electrical system when there is an electrical overload. The reason for the overload must be found before starting the engine again.

Fuse And Relay Location / Identification

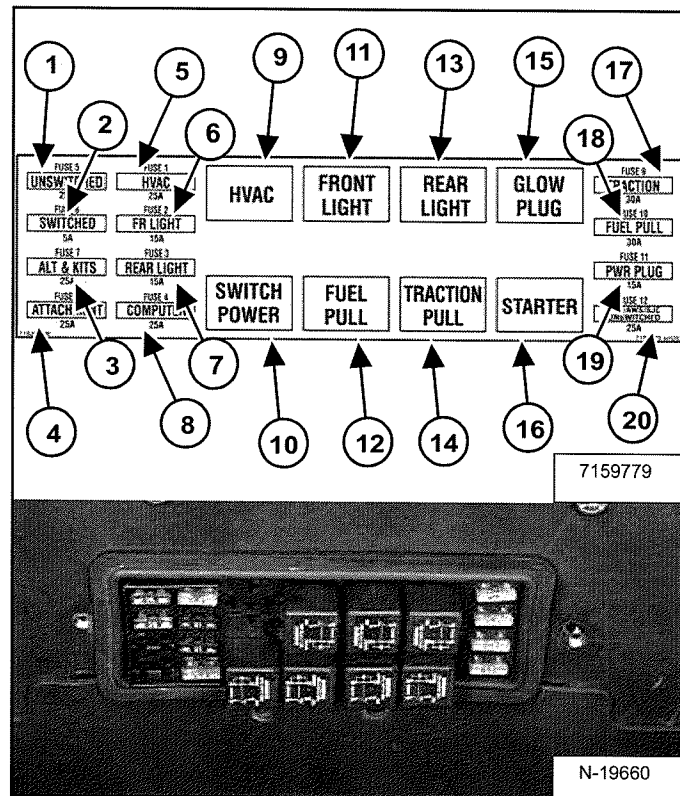
Figure PM-44



The electrical system is protected from overload by fuses and relays under the fuse panel cover (Item 1) [Figure PM-44]. A decal is inside the cover to show location and amperage ratings.

Remove the cover to check or replace the fuses.

Figure PM-45



The location and sizes are shown below and [Figure PM-45].

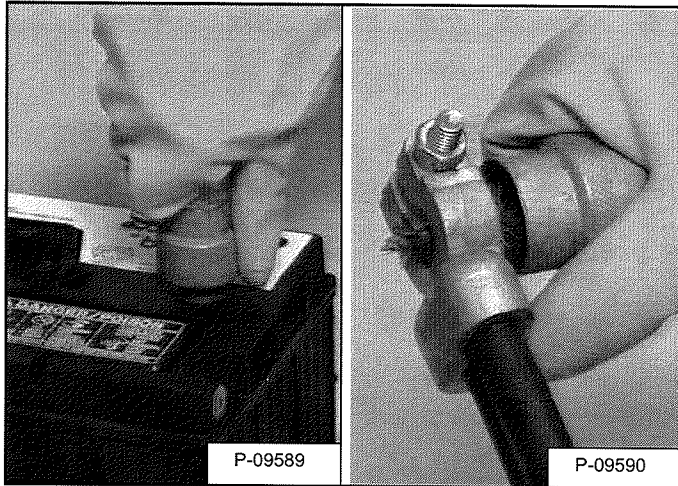
REF	DESCRIPTION	AMP	REF	DESCRIPTION	AMP
1	Unswitched Horn	25	11	Front & Marker Lights	R
2	ACS/AWS/SJC Switched	5	12	Fuel Shutoff	R
3	Alternator & Accessories Back-up Alarm	25	13	Rear Lights	R
4	Attachments	25	14	Traction	R
5	Heater & Air Conditioning	25	15	Glow Plugs	R
6	Front & Marker Lights	15	16	Starter	R
7	Rear Lights	15	17	Traction	30
8	Bobcat Controller	25	18	Fuel Shutoff	30
9	Heater & Air Conditioning	R	19	Power Plug	15
10	Switch Power	R	20	ACS/AWS/SJC Unswitched	25

R - Relay

ELECTRICAL SYSTEM (CONT'D)

Battery Maintenance

Figure PM-46



The battery cables must be clean and tight **[Figure PM-46]**. Check electrolyte level in the battery. Add distilled water as needed. Remove acid or corrosion from battery and cables with sodium bicarbonate (baking soda) and water solution.

Put Battery Saver (6988074) or grease on the battery terminals and cable ends to prevent corrosion.

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

ELECTRICAL SYSTEM (CONT'D)

Using A Booster Battery (Jump Starting)

If it is necessary to use a booster battery to start the engine, BE CAREFUL! There must be one person in the operator's seat and one person to connect and disconnect the battery cables.

The key switch must be OFF or the STOP button must be pressed. The booster battery must be 12 volt.

WARNING

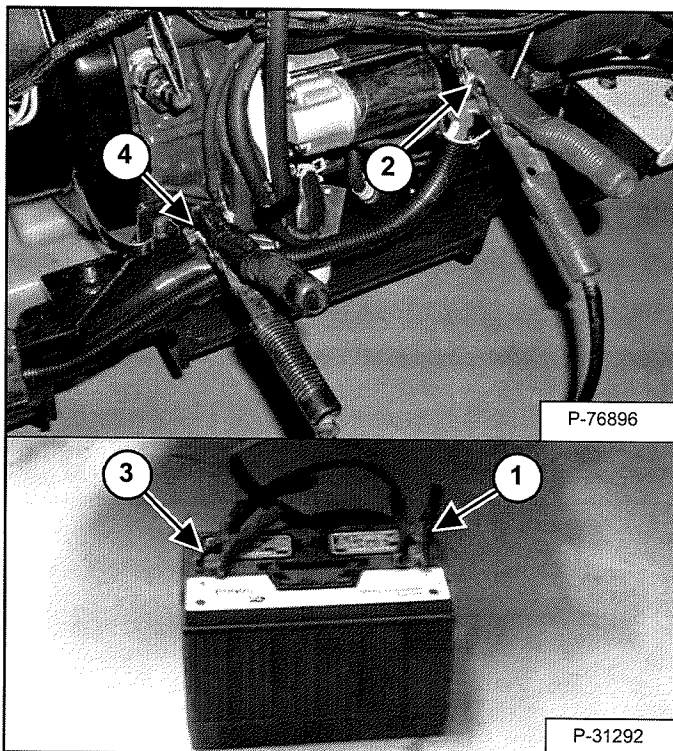
BATTERY GAS CAN EXPLODE AND CAUSE SERIOUS INJURY OR DEATH

Keep arcs, sparks, flames and lighted tobacco away from batteries. When *jumping* from booster battery make final connection (negative) at machine frame.

Do not jump start or charge a frozen or damaged battery. Warm battery to 16°C (60°F) before connecting to a charger. Unplug charger before connecting or disconnecting cables to battery. Never lean over battery while boosting, testing or charging.

W-2066-0910

Figure PM-47



Connect the end of the first cable (Item 1) [Figure PM-47] to the positive (+) terminal of the booster battery.

Connect the other end of the same cable (Item 2) [Figure PM-47] to the positive terminal on the loader starter.

Connect the end of the second cable (Item 3) [Figure PM-47] to the negative terminal of the booster battery. Connect the other end of the same cable (Item 4) [Figure PM-47] to the engine.

Keep cables away from moving parts. Start the engine. (See STARTING THE ENGINE on Page OI-45.)

After the engine has started, remove the ground (-) cable (Item 4) [Figure PM-47] first. Remove the cable from the positive terminal (Item 2) [Figure PM-47].

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.

I-2023-1285

ELECTRICAL SYSTEM (CONT'D)

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.

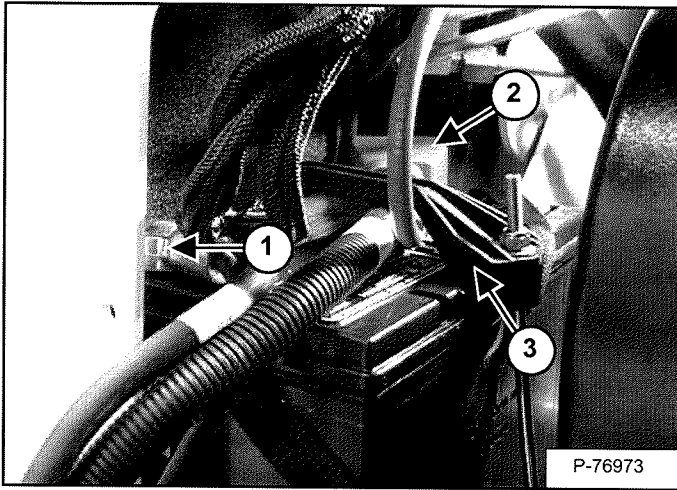
In case of acid contact, wash immediately with water. In case of eye contact get prompt medical attention and wash eye with clean, cool water for at least 15 minutes.

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



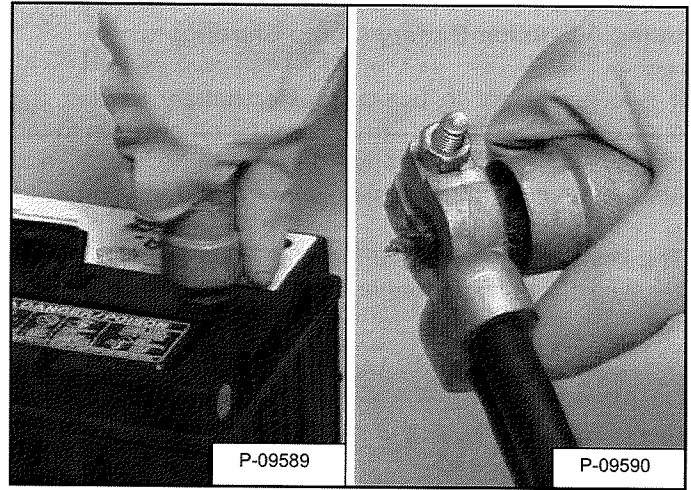
Disconnect the negative (-) cable (Item 1) [Figure PM-48].

Remove the battery hold down clamp (Item 3) [Figure PM-48].

Disconnect the positive (+) cable (Item 2) [Figure PM-48] from the battery.

Remove the battery from the loader.

Figure PM-49



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

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

Connect the negative (-) cable last to prevent sparks.

Connect and tighten the battery cables.

Install and tighten the battery hold down.

! WARNING

BATTERY GAS CAN EXPLODE AND CAUSE SERIOUS INJURY OR DEATH

Keep arcs, sparks, flames and lighted tobacco away from batteries. When *jumping* from booster battery make final connection (negative) at machine frame.

Do not jump start or charge a frozen or damaged battery. Warm battery to 16°C (60°F) before connecting to a charger. Unplug charger before connecting or disconnecting cables to battery. Never lean over battery while boosting, testing or charging.

W-2066-0910

HYDRAULIC / HYDROSTATIC SYSTEM

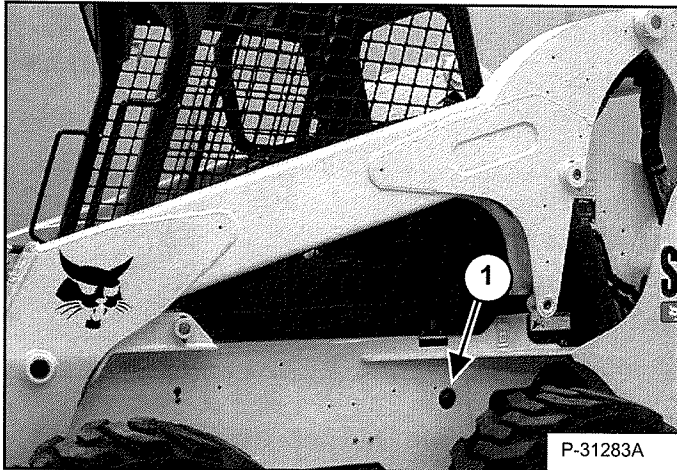
Checking And Adding Fluid

Check the hydraulic / hydrostatic fluid level every day before starting the work shift.

Put the loader on a level surface, lower the lift arms and tilt the Bob-Tach fully back.

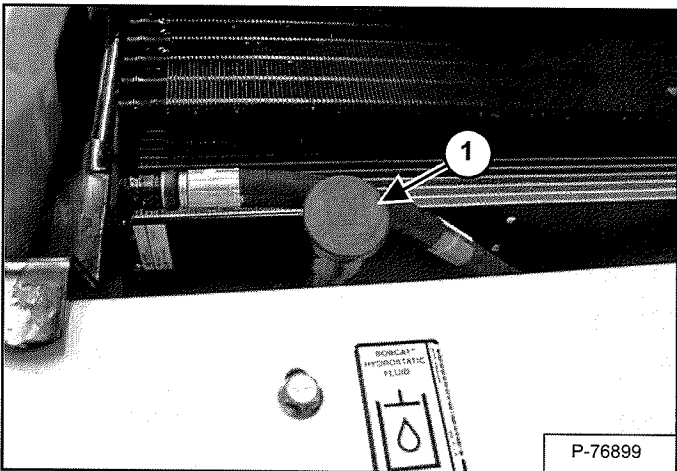
Stop the engine.

Figure PM-50



Check the fluid level in the sight gauge (Item 1) [Figure PM-50].

Figure PM-51



Open the rear door and remove the rear grille. Remove the fill cap (Item 1) [Figure PM-51].

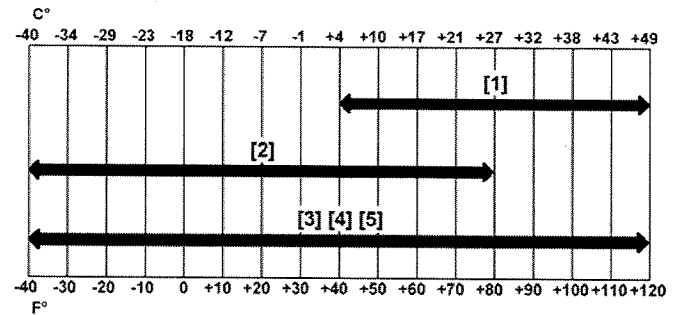
Add fluid as needed to bring the level to the center of the sight gauge. Install the fill cap (Item 1) [Figure PM-51].

Install the rear grille and close the rear door.

Hydraulic / Hydrostatic Fluid Chart

Figure PM-52

HYDRAULIC / HYDROSTATIC FLUID RECOMMENDED ISO VISCOSITY GRADE (VG) AND VISCOSITY INDEX (VI)



TEMPERATURE RANGE ANTICIPATED DURING MACHINE USE

- [1] VG 100; Minimum VI 130
- [2] VG 46; Minimum VI 150
- [3] BOBCAT All-Season Fluid
- [4] BOBCAT Synthetic Fluid
- [5] BOBCAT Biodegradable Hydraulic / Hydrostatic Fluid (Unlike biodegradable fluids that are vegetable based, Bobcat biodegradable fluid is formulated to prevent oxidation and thermal breakdown at operating temperatures.)

Use only recommended fluid in the hydraulic system [Figure PM-52]. (See Hydraulic System on Page SPEC-5.)

HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

Removing And Replacing Hydraulic Fluid

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

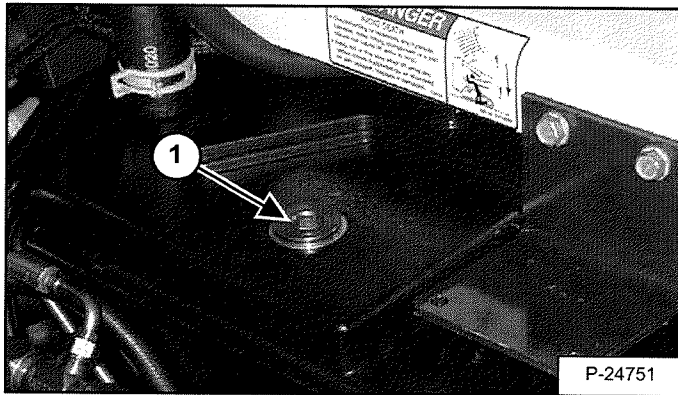
Replace the fluid if it becomes contaminated or after major repair.

Always replace the hydraulic / hydrostatic filter, the case drain filters and the hydraulic charge filter whenever the hydraulic fluid is replaced. (See **Removing And Replacing Hydraulic / Hydrostatic Filter** on Page PM-32.)

Open the rear door and remove the rear grille. Remove the fill cap.

Raise the operator cab. (See **Raising** on Page PM-14.)

Figure PM-53



Remove the plug from the top of the reservoir (Item 1) **[Figure PM-53]**. Pump the fluid out of the reservoir and into a container.

Recycle or dispose of used fluid in an environmentally safe manner.

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

Install the plug (Item 1) **[Figure PM-53]** and lower the operator cab. (See **Lowering** on Page PM-15.)

Add the correct fluid to the reservoir until the fluid level is at the center of the sight gauge. (See **Checking And Adding Fluid** on Page PM-31.)

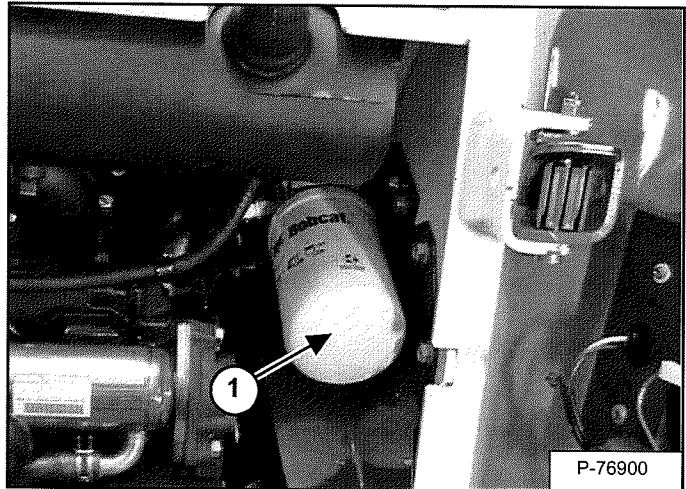
Replace the fill cap, install the rear grille and close the rear door.

Removing And Replacing Hydraulic / Hydrostatic Filter

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

Open the rear door.

Figure PM-54



Remove the filter (Item 1) **[Figure PM-54]**.

Clean the surface of the filter housing where the filter seal contacts the housing. Put clean oil on the seal of the new filter element. Install and hand tighten the filter element.

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.

Stop the engine and check for leaks at the filter.

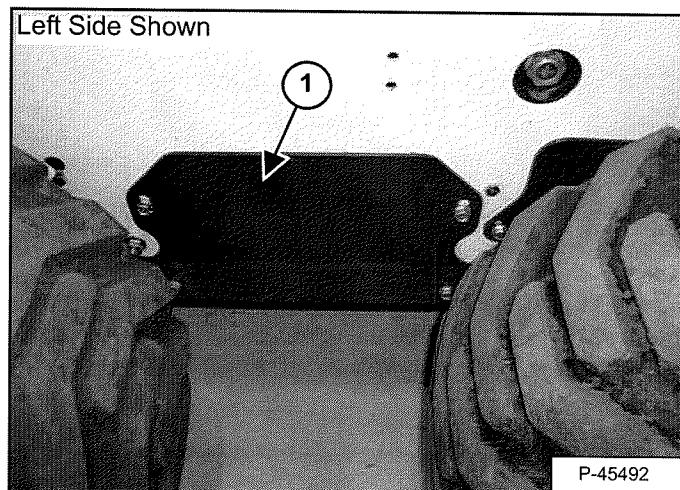
Check the fluid level in the reservoir and add as needed. (See **Checking And Adding Fluid** on Page PM-31.)

HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

Removing And Replacing Hydraulic Case Drain Filters (Single Speed Loaders)

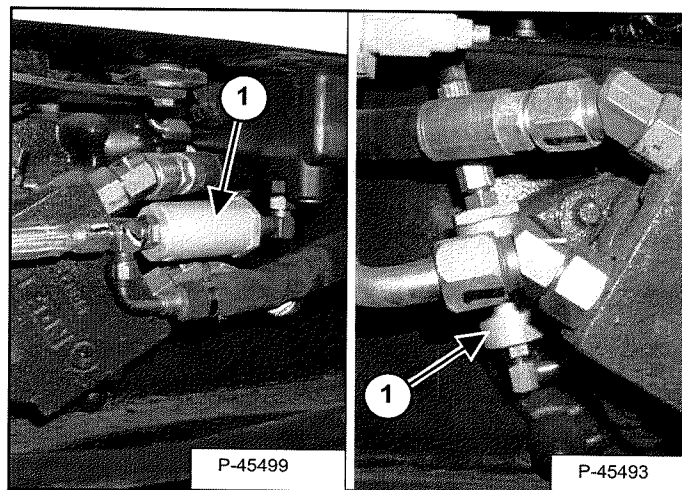
For the correct service interval (See SERVICE SCHEDULE on Page PM-7.)

Figure PM-55



Remove both hydrostatic motor covers (Item 1) [Figure PM-55].

Figure PM-56



Remove the case drain filter assemblies (Item 1) [Figure PM-56] near the hydrostatic motors. Install the fittings from the old filter assembly onto the new filter assembly. Install new filter assemblies. Install motor covers.

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

Recycle or dispose of used fluid in an environmentally safe manner.

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 assemblies.

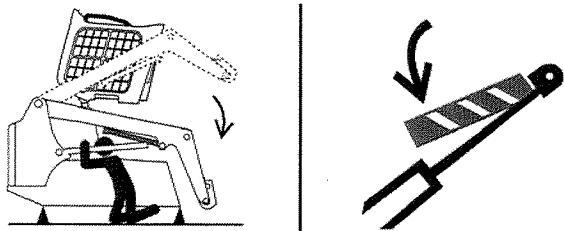
Check the fluid level in the reservoir and add as needed. (See Checking And Adding Fluid on Page PM-31.)

HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

Removing And Replacing Hydraulic Case Drain Filters (Two-Speed Loaders)

Raise the lift arms and install the lift arm support device. (See LIFT ARM SUPPORT DEVICE on Page PM-11.)

! DANGER



P-90328

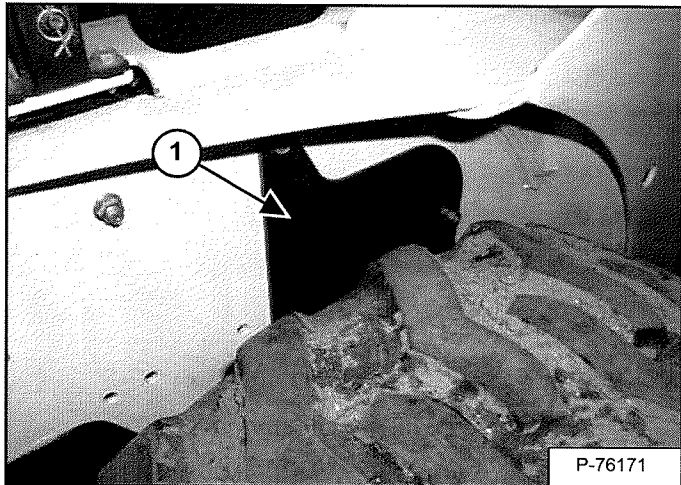
AVOID DEATH

- Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop.
- Keep out of this area when lift arms are raised unless supported by an approved lift arm support. Replace if damaged.

D-1009-0409

Raise the operator cab. (See Raising on Page PM-14.)

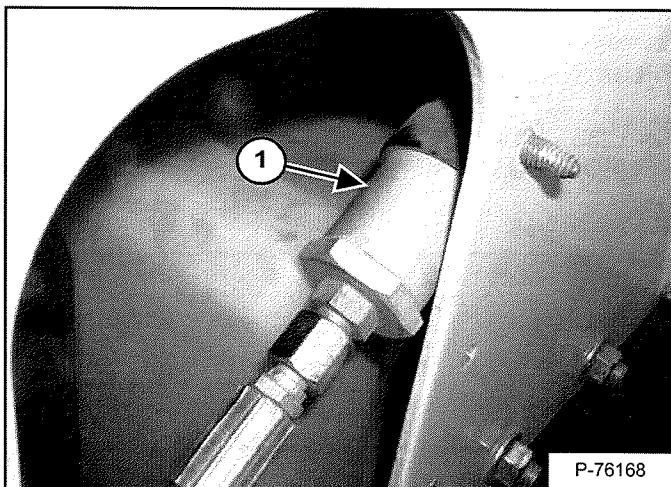
Figure PM-57



P-76171

Remove the left side access cover (Item 1) [Figure PM-57] near the rear tire.

Figure PM-58



P-76168

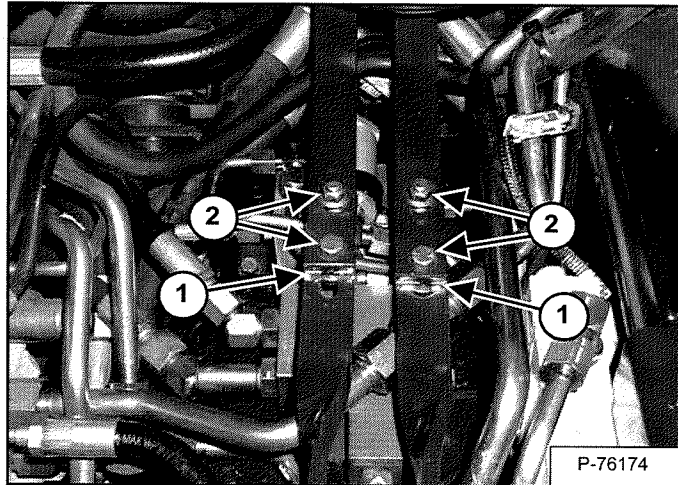
Remove the case drain filter assembly (Item 1) [Figure PM-58]. Install the fittings from the old filter assembly onto the new filter assembly.

Install new case drain filter assembly and replace the side access cover.

Recycle or dispose of used fluid in an environmentally safe manner.

SJC equipped machines skip ahead to [Figure PM-60].

Figure PM-59



P-76174

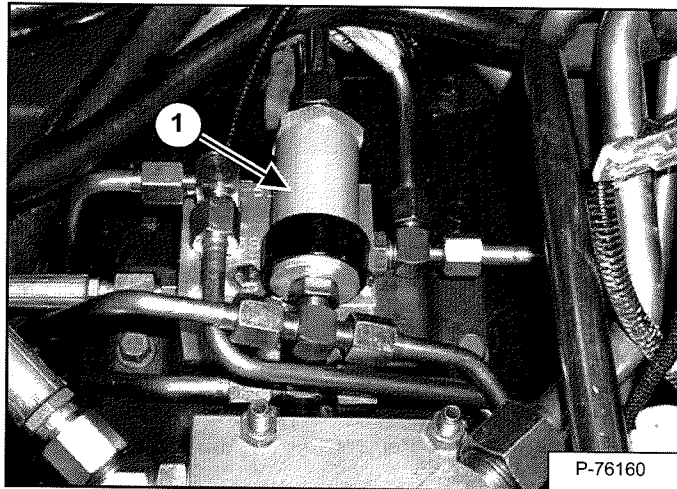
Scribe a mark across the top of the steering linkage bars (Item 1) [Figure PM-59] which are connected to the steering shaft on the control panel.

Remove the four steering linkage mounting bolts (Item 2) [Figure PM-59].

HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

Removing And Replacing Hydraulic Case Drain Filters (Two-Speed Loaders) (Cont'd)

Figure PM-60



Remove the case drain filter assembly (Item 1) [Figure PM-60]. Install the fittings from the old filter assembly onto the new filter assembly.

Install new case drain filter assembly.

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

Standard Controls and ACS only: Align the marks on the steering linkage bars. Install the steering linkage mounting bolts (Item 2) [Figure PM-59] in the proper orientation (two bolts facing up and two bolts facing down). Tighten the steering linkage mounting bolts to 47,5 - 54,2 N•m (35 - 40 ft-lb).

Recycle or dispose of the used fluid in an environmentally safe manner.

Lower the operator cab. (See Lowering on Page PM-15.)

Remove the lift arm support device and lower the lift arms. (See LIFT ARM SUPPORT DEVICE on Page PM-11.)

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 assemblies.

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

HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

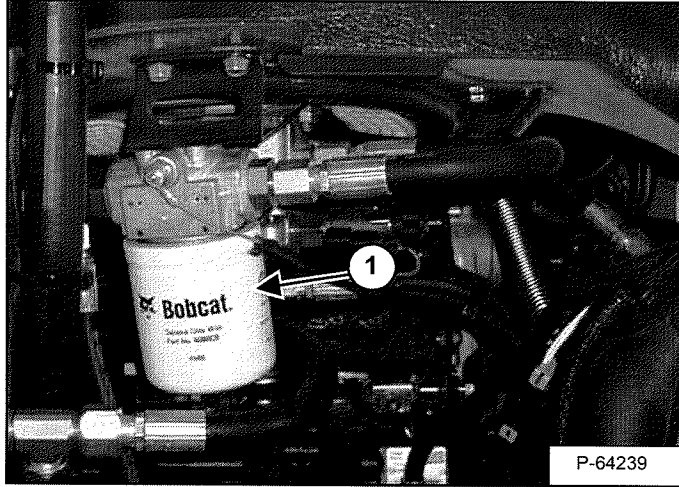
Removing And Replacing Hydraulic Charge Filter

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

Raise the operator cab. (See Raising on Page PM-14.)

Earlier Models

Figure PM-61



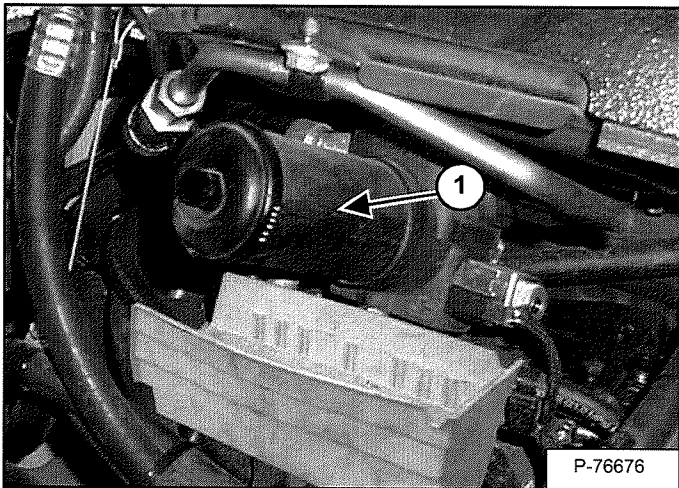
Remove the filter (Item 1) [Figure PM-61].

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.

Later Models

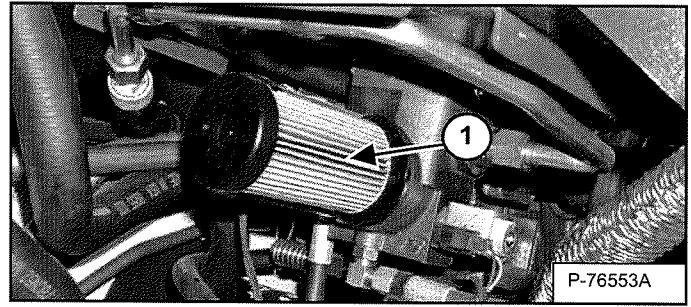
Figure PM-62



Place a suitable container below the filter housing and remove the filter housing (Item 1) [Figure PM-62].

Recycle or dispose of used fluid in an environmentally safe manner.

Figure PM-63



Remove and discard the filter element (Item 1) [Figure PM-63].

Clean the surface of the filter housing and the filter base where they contact the filter element seal.

Put clean oil on the seal of the new filter element. Install the element on the filter base. Install and hand tighten the filter housing to 47 - 54 N•m (35 - 40 ft-lb) torque.

All Models

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

Lower the operator cab. (See Lowering on Page PM-15.)

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.)

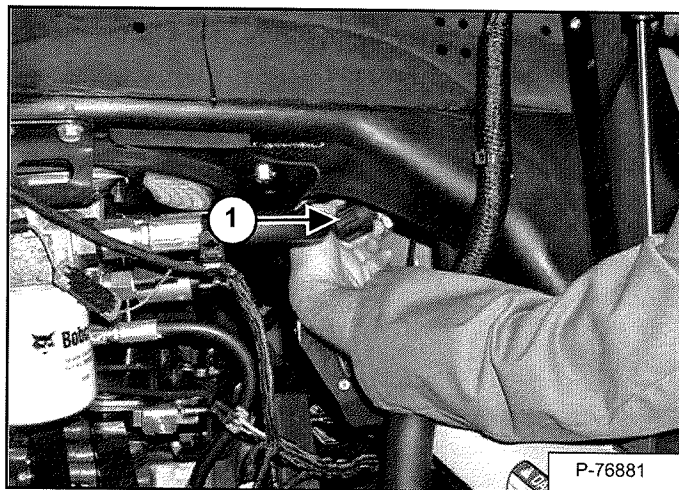
HYDRAULIC / HYDROSTATIC SYSTEM (CONT'D)

Breather Cap

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

Raise the operator cab. (See Raising on Page PM-14.)

Figure PM-64



Remove the breather cap (Item 1) [Figure PM-64] and discard.

Install new breather cap.

Lower the operator cab. (See Lowering on Page PM-15.)

SPARK ARRESTER MUFFLER

Cleaning Procedure

See the SERVICE SCHEDULE for service interval for cleaning the spark arrester muffler. (See SERVICE SCHEDULE on Page PM-7.)

Do not operate the loader with a defective exhaust system.

IMPORTANT

This machine is factory equipped with a U.S.D.A. Forestry Service approved spark arrester exhaust system.

The spark arrester muffler, if equipped, must be cleaned to keep it in working condition. The spark arrester muffler must be serviced by dumping the spark chamber every 100 hours of operation.

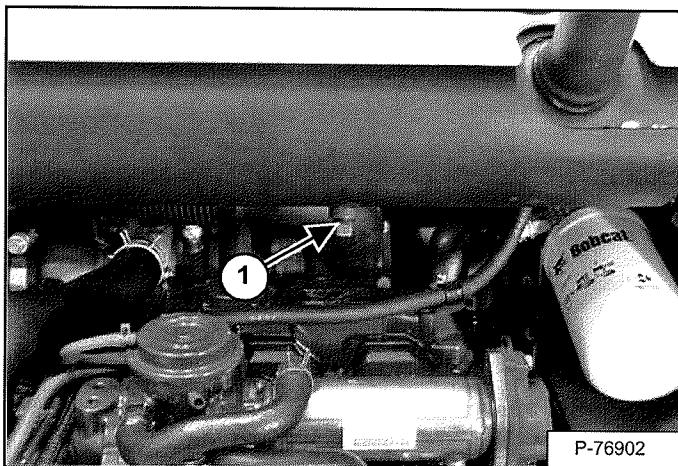
On some models, the turbocharger functions as the spark arrester and must operate correctly for proper spark arrester function.

If this machine is operated on flammable forest, brush, or grass covered land, it must be equipped with a spark arrester 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 arrester requirements.

I-2284-0409

Stop the engine. Open the rear door.

Figure PM-65



Remove the plug (Item 1) [Figure PM-65] from the bottom of the muffler.

! WARNING

When the engine is running during service, the driving and steering controls must be in neutral and the parking brake engaged. Failure to do so can cause injury or death.

W-2006-1209

Start the engine and run for about 10 seconds while a second person, wearing safety glasses, holds a piece of wood over the outlet of the muffler.

This will force contaminants out through the cleanout hole.

Stop the engine.

Install and tighten the plug.

Close the rear door.

! 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

! WARNING

Stop engine and allow the muffler to cool before cleaning the spark chamber. Wear safety goggles. Failure to obey can cause serious injury.

W-2011-1285

! WARNING

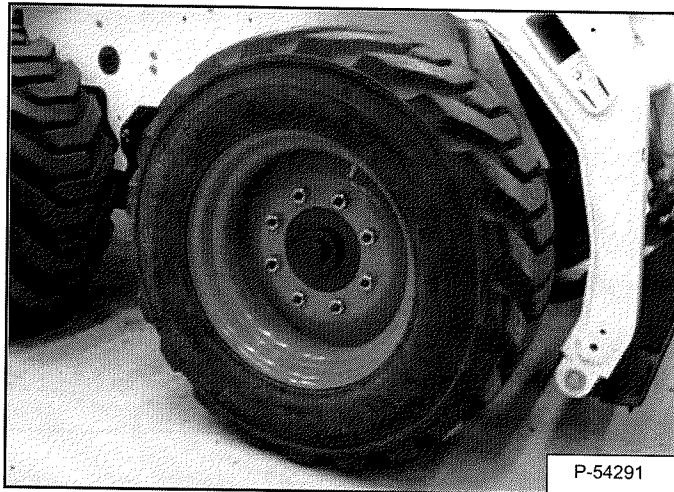
Never use machine in atmosphere with explosive dust or gases or where exhaust can contact flammable material. Failure to obey warnings can cause injury or death.

W-2068-1285

TIRE MAINTENANCE

Wheel Nuts

Figure PM-66



See your SERVICE SCHEDULE for the service interval to check the wheel nuts [Figure PM-66]. (See SERVICE SCHEDULE on Page PM-7.)

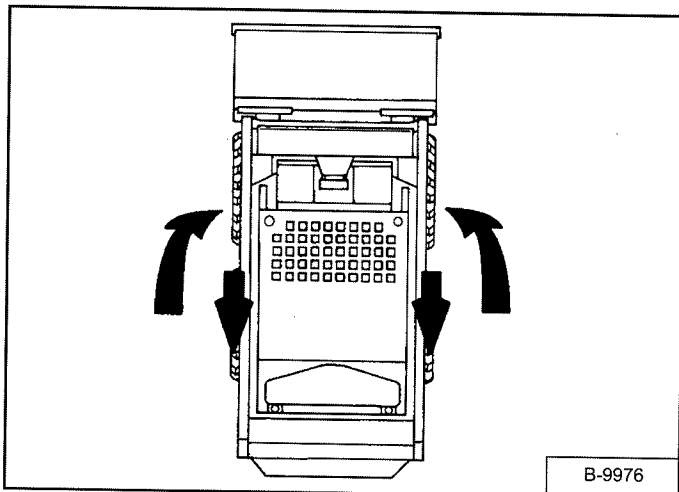
When installing wheel nuts, tighten to 217 N•m (160 ft-lb) torque.

When checking wheel nut torque, set the torque wrench to 190 N•m (140 ft-lb) to prevent over-tightening.

Rotating

Check the tires regularly for wear, damage and pressure.

Figure PM-67



Rear tires usually wear faster than front tires. To keep tire wear even, move the front tires to the rear and rear tires to the front [Figure PM-67].

It is important to keep the same size tires on each side of the loader. If different sizes are used, each tire will be turning at a different rate and cause excessive wear. The tread bars of all the tires must face the same direction.

Recommended tire pressure must be maintained to avoid excessive tire wear and loss of stability and handling capability. Check for correct pressure before operating the loader.

Mounting

Tires are to be repaired only by an authorized person using the proper procedures and safe equipment.

Tires and rims must always be checked for correct size before mounting. Check rim and tire bead for damage.

The rim flange must be cleaned and free of rust.

The tire bead and rim flange must be lubricated with a rubber lubricant before mounting the tire.

Avoid excessive pressure which can rupture the tire and cause serious injury or death.

During inflation of the tire, check the tire pressure frequently to avoid over inflation.

! WARNING

AVOID INJURY OR DEATH

Do not inflate tires above specified pressure. Failure to use correct tire mounting procedure can cause an explosion which can result in injury or death.

W-2078-1007

IMPORTANT

Inflate tires to the MAXIMUM pressure shown on the sidewall of the tire. DO NOT mix brands of tires used on the same machine.

I-2057-1010

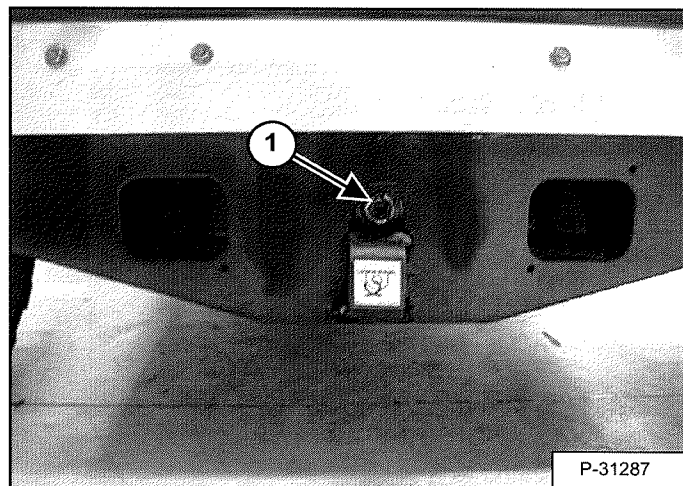
FINAL DRIVE TRANSMISSION (CHAINCASE)

Checking And Adding Oil

The chaincase contains the final drive sprockets and chains and uses the same type of oil as the hydraulic / hydrostatic system. (See Hydraulic System on Page SPEC-5.)

Park the loader on a level surface and stop the engine.

Figure PM-68



Remove the drain plug (Item 1) [Figure PM-68] from the front of the chaincase housing.

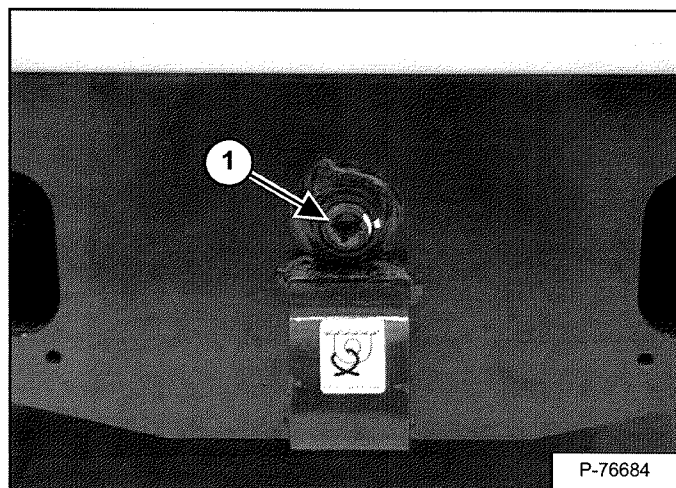
If oil can be reached with the tip of your finger through the hole, the oil level is correct.

If the level is low, add oil through the check plug hole until the oil flows from the hole.

Install and tighten the plug.

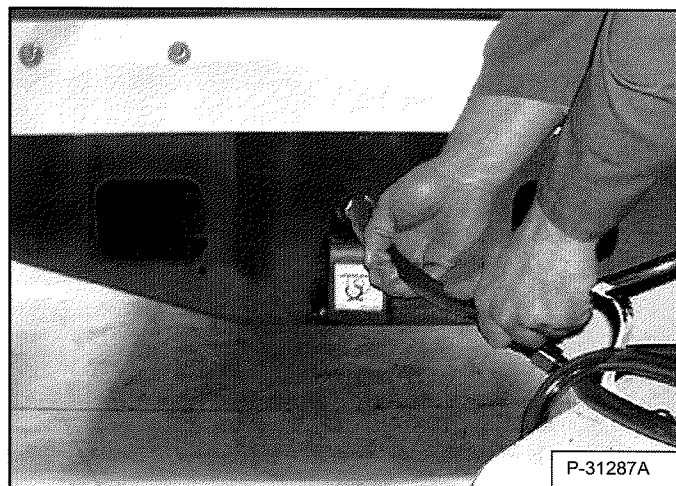
Removing And Replacing Oil

Figure PM-69



Remove the check plug (Item 1) [Figure PM-69] from the front of the chaincase housing.

Figure PM-70



Remove the oil from the chaincase [Figure PM-70].

Recycle or dispose of the used oil in an environmentally safe manner.

Add oil through the check plug hole until the oil flows from the hole.

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.

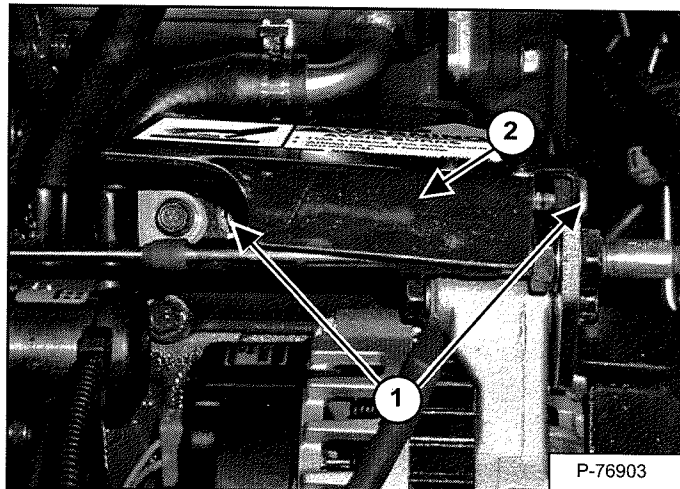
W-2103-0508

ALTERNATOR BELT

Belt Adjustment

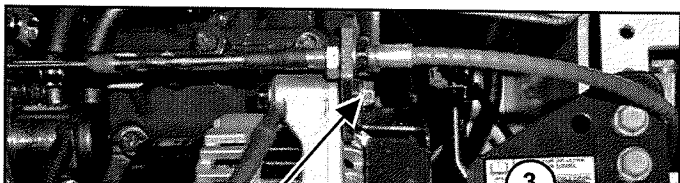
Stop the engine and open the rear door.

Figure PM-71



Loosen the alternator shield mounting bolts (Item 1) and remove the alternator shield (Item 2) **[Figure PM-71]**.

Figure PM-72



Belt Replacement

Remove the air conditioning belt, if equipped. (See AIR CONDITIONING BELT on Page PM-42.)

Loosen the alternator shield mounting bolts (Item 1) and remove the alternator shield (Item 2) **[Figure PM-71]**.

Loosen the alternator mounting and adjustment bolts (Item 1) and remove the alternator belt shield (Item 3) **[Figure PM-72]**.

Move the alternator forward as far as it will go.

Remove the belt from the pulleys and inspect the pulleys for wear. Replace as needed.

Install new alternator belt.

Install alternator belt shield (Item 3) **[Figure PM-72]**.

Adjust the belt. (See Belt Adjustment on Page PM-41.)

Install the alternator shield and tighten mounting bolts.

Install the air conditioning belt, if equipped. (See AIR CONDITIONING BELT on Page PM-42.)

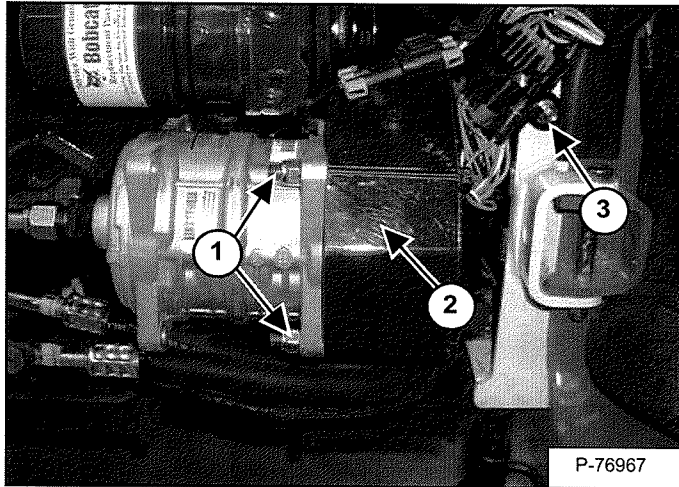
Close the rear door before operating the loader.

AIR CONDITIONING BELT

Belt Adjustment

Stop the engine and open the rear door.

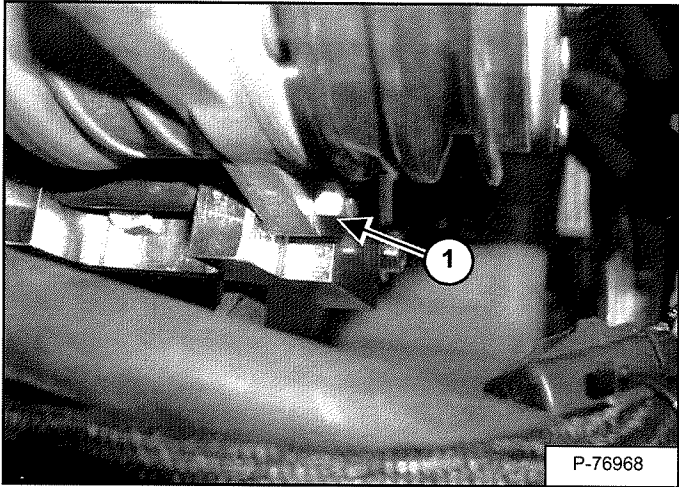
Figure PM-73



Remove bolt (Item 3) [Figure PM-73] holding harness clamp.

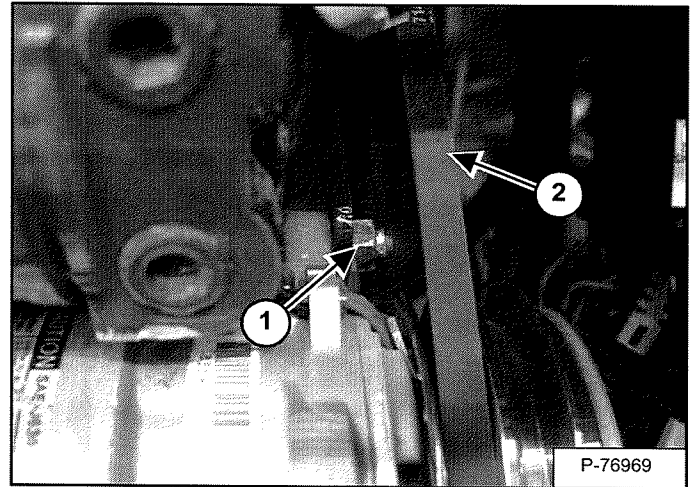
Remove nuts (Item 1) and remove belt shield (Item 2) [Figure PM-73].

Figure PM-74



Loosen the mounting nut (Item 1) [Figure PM-74] at bottom of compressor.

Figure PM-75



Loosen the adjustment nut (Item 1) [Figure PM-75] at top of compressor.

Move the air conditioning compressor toward the rear of machine to tighten the belt. The tension is correct when there is 4,0 mm (0.16 in) movement at the middle of the belt span (Item 2) [Figure PM-75] with 16,5 - 17,7 N (3.72 - 3.98 lb) of force.

Tighten the mounting and adjustment nuts, install belt shield and install harness clamp and bolt.

Close the rear door before operating the loader.

Belt Replacement

Stop the engine and open the rear door.

Remove bolt (Item 3) [Figure PM-73] holding harness clamp.

Remove nuts (Item 1) and remove belt shield (Item 2) [Figure PM-73].

Loosen the mounting nut (Item 1) [Figure PM-74] at bottom of compressor.

Loosen the adjustment nut (Item 1) [Figure PM-75] at top of compressor.

Move the air conditioning compressor toward the front of the machine to loosen the belt.

Remove the belt from the pulleys and inspect the pulleys for wear. Replace as needed.

Install new air conditioning belt.

Adjust the belt. (See Belt Adjustment on Page PM-42.)

Close the rear door before operating the loader.

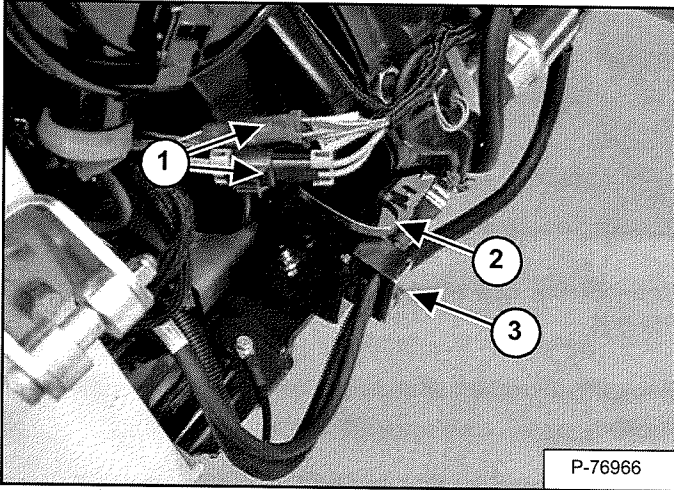
DRIVE BELT

Belt Adjustment

Stop the engine and open the rear door.

Disconnect the negative battery cable.

Figure PM-76



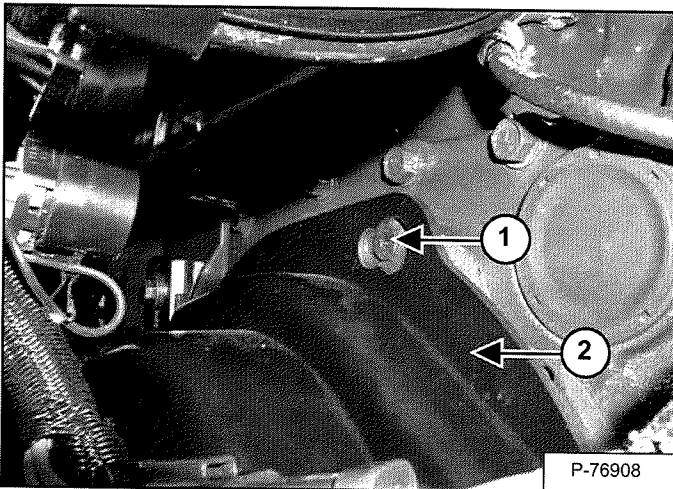
Disconnect the two electrical connectors (Item 1) [Figure PM-76].

Unhook the drive belt shield clip (Item 2) [Figure PM-76].

Remove the bolt and nut (Item 3) [Figure PM-76] from the cable bracket.

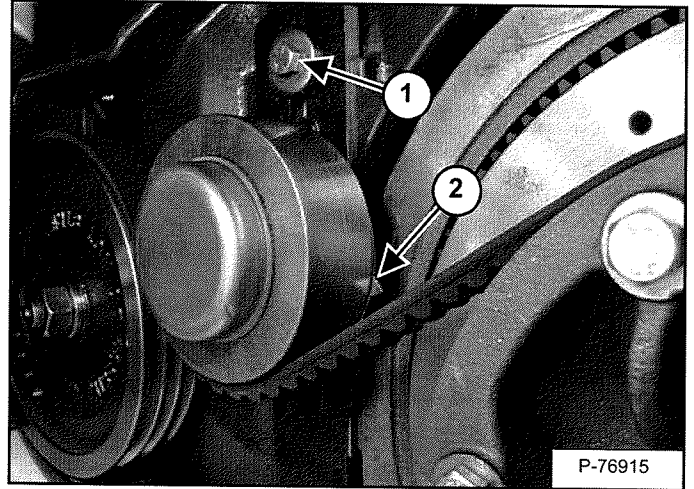
Move the cables to allow removal of the drive belt shield.

Figure PM-77



Do **NOT** loosen the drive belt shield mounting bolts (Top bolt shown) (Item 1). Slide the drive belt shield (Item 2) toward the front of the loader to unseat the shield from the top and bottom drive belt housing bolts. Remove the drive belt shield (Item 2) [Figure PM-77].

Figure PM-78



Loosen the spring loaded drive idler mounting bolt (Item 1) [Figure PM-78].

NOTE: The pointer will be at the 1 o'clock position when the spring loaded drive idler is not under tension.

Push the idler pulley against the belt using a pry bar. The pointer will be at the 3 o'clock position (Item 2) [Figure PM-78] when the idler pulley is properly adjusted.

Tighten the spring loaded drive idler mounting bolt (Item 1) [Figure PM-78] to 34 - 38 N·m (25 - 28 ft-lb) torque.

DRIVE BELT (CONT'D)

Belt Adjustment (Cont'd)

Figure PM-79

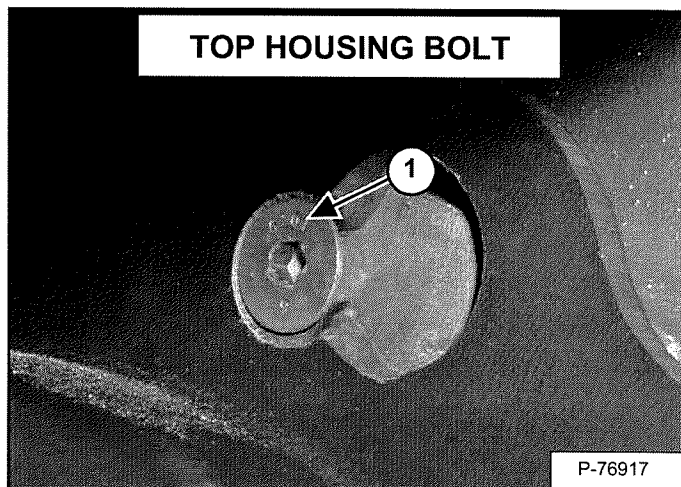
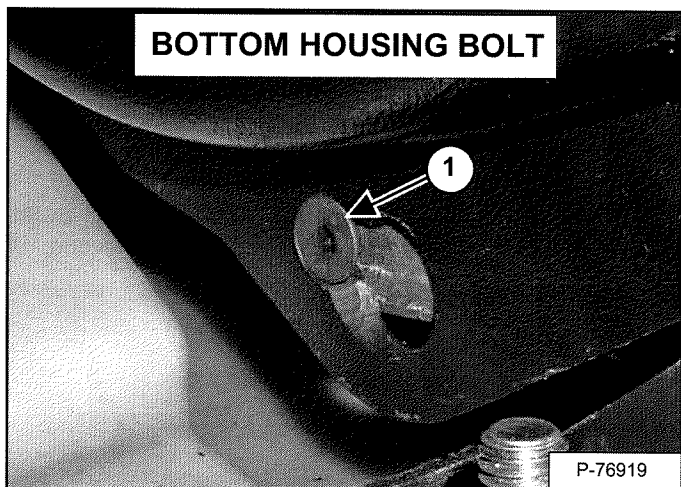
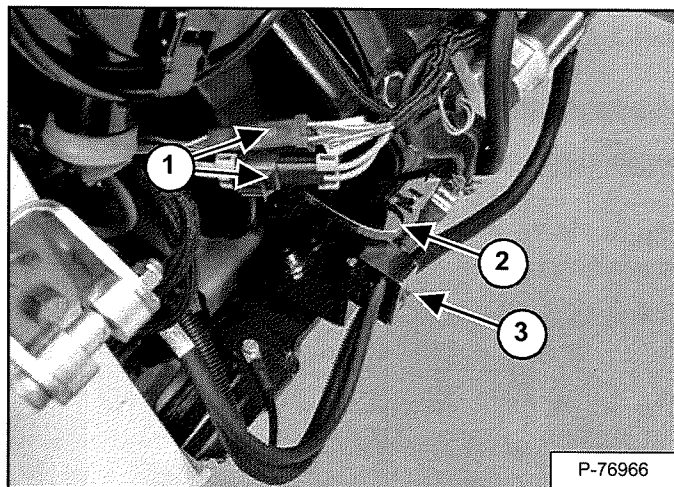


Figure PM-80



Position the drive belt shield over the drive belt housing bolts and slide the drive belt shield toward the back of the loader to fully seat the shield onto the top and bottom drive belt housing bolts (Item 1) [Figure PM-79] and [Figure PM-80].

Figure PM-81



Connect the two electrical connectors (Item 1) [Figure PM-81].

Hook the drive belt shield clip (Item 2) [Figure PM-81] in place.

Install the cable bracket and tighten the bolt and nut (Item 3) [Figure PM-81].

Connect the negative battery cable.

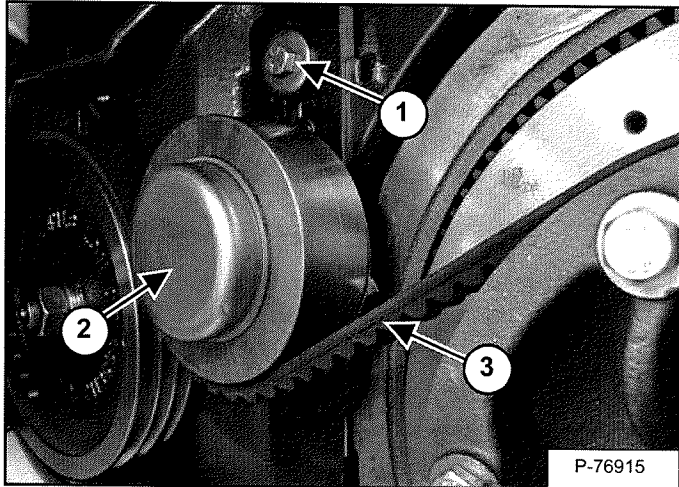
Close the rear door before operating the loader.

DRIVE BELT (CONT'D)

Belt Replacement

Follow the procedure under drive belt adjustment to loosen the spring loaded drive idler. (See Belt Adjustment on Page PM-43.)

Figure PM-82



Remove the spring loaded drive idler mounting bolt (Item 1) and spring loaded drive idler (Item 2) **[Figure PM-82]**.

Remove the drive belt (Item 3) **[Figure PM-82]** from the pump pulley and flywheel and remove the belt from the loader.

Install new drive belt. Install the spring loaded drive idler. Apply Loctite® 242 to the mounting bolt (Item 1) **[Figure PM-82]** and install the mounting bolt and washer.

Continue the procedure under drive belt adjustment to adjust the drive belt and complete installation of removed and disconnected components. (See Belt Adjustment on Page PM-43.)

Close the rear door before operating the loader.

LUBRICATING THE LOADER

Lubrication Locations

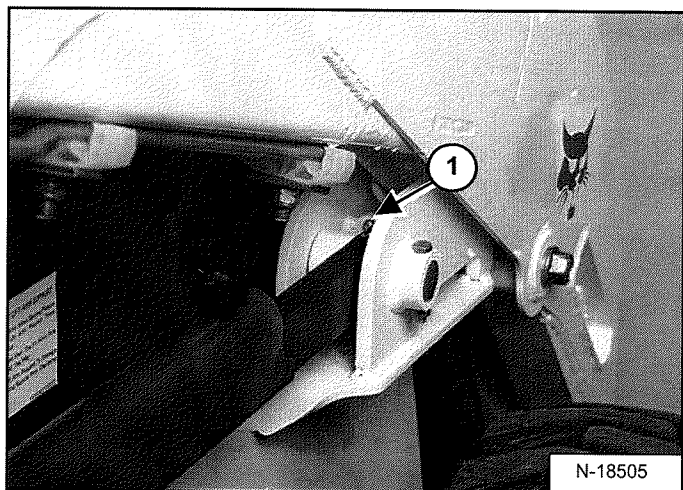
Lubricate the loader as specified for the best performance of the loader. (See SERVICE SCHEDULE on Page PM-7)

Record the operating hours each time you lubricate the Bobcat Loader.

Always use a good quality lithium based multipurpose grease when you lubricate the loader. Apply lubricant until extra grease shows.

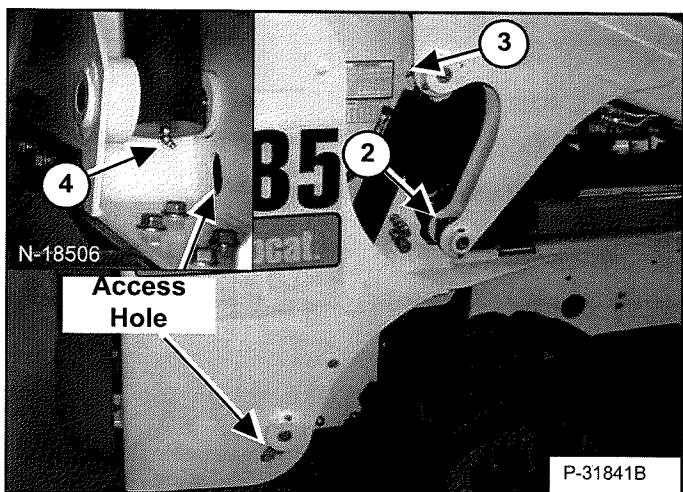
Lubricate the following:

Figure PM-83



1. Stabilizer Rod - Front (Both Sides) (2) [Figure PM-83]

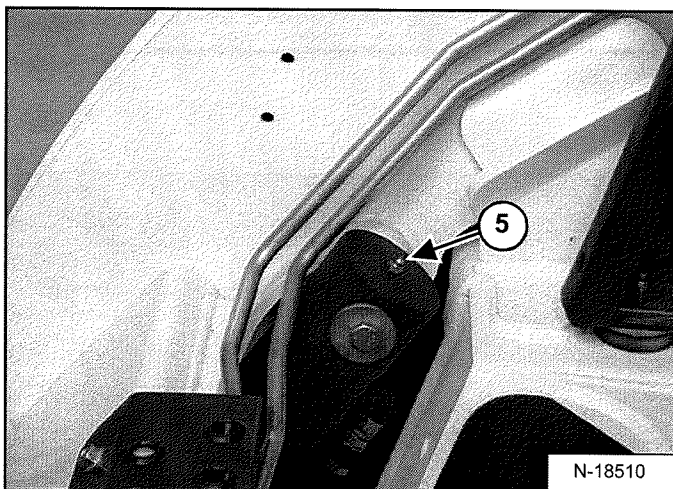
Figure PM-84



2. Stabilizer Rod - Rear (Both Sides) (2) [Figure PM-84].
3. Lift Cylinder Rod End (Both Sides) (2) [Figure PM-84].

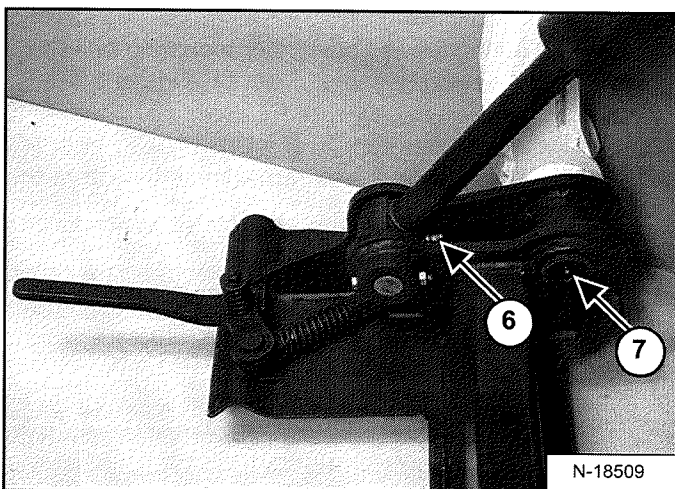
4. Lift Cylinder Base End (Both Sides) (2) [Figure PM-84].

Figure PM-85



5. Tilt Cylinder Base End (Both Sides) (2) [Figure PM-85].

Figure PM-86

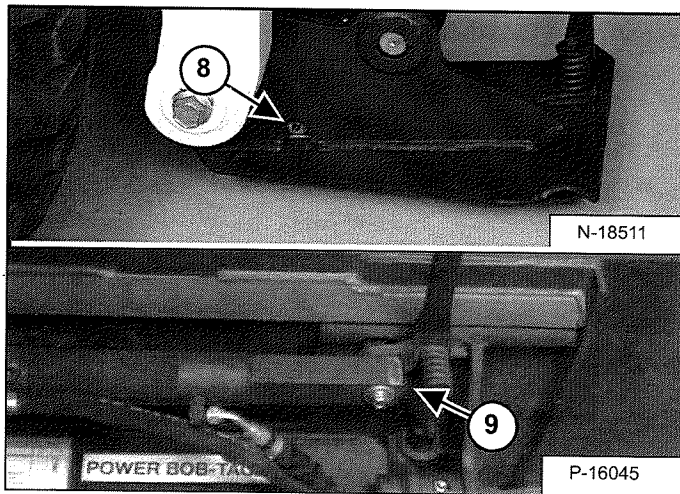


6. Tilt Cylinder Rod End (Both Sides) (2) [Figure PM-86].
7. Bob-Tach Pivot Pin (Both Sides) (2) [Figure PM-86].

LUBRICATING THE LOADER (CONT'D)

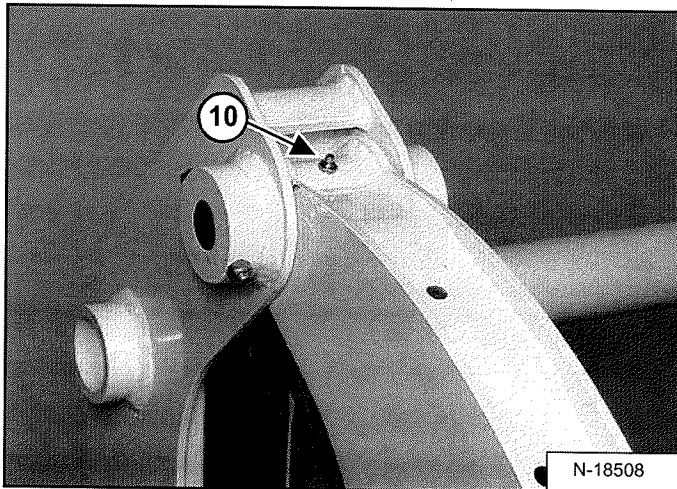
Lubrication Locations (Cont'd)

Figure PM-87



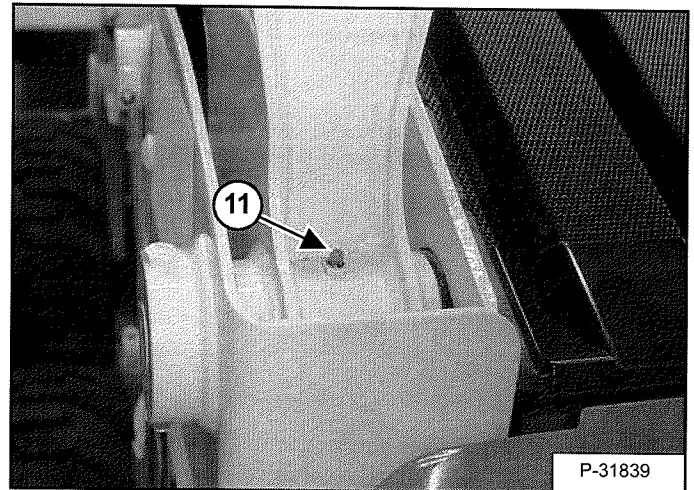
- 8. Bob-Tach Wedge (Both Sides) (2) [Figure PM-87].
- 9. Power Bob-Tach Cylinder (Both Sides) (2) [Figure PM-87].

Figure PM-88



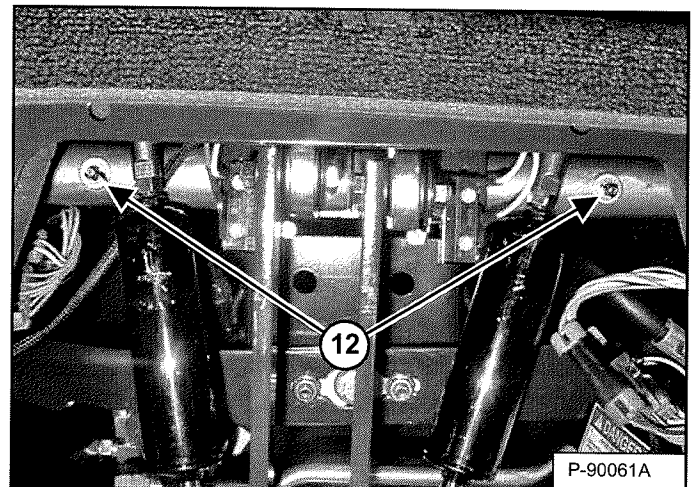
- 10. Lift Arm Pivot Pin (Both Sides) (2) [Figure PM-88].

Figure PM-89



- 11. Lift Arm Link Pivot Pin (Both Sides) (2) [Figure PM-89].

Figure PM-90



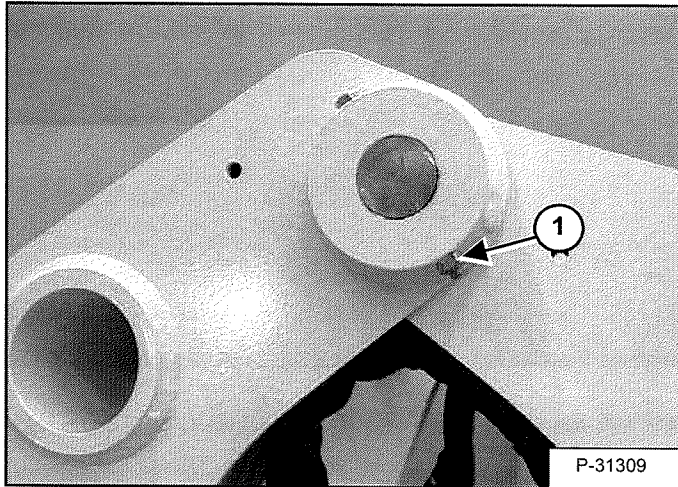
NOTE: SJC equipped machines do not have a steering lever shaft.

- 12. 250 Hours: Steering Lever Shaft (2) [Figure PM-90].

PIVOT PINS

Inspection And Maintenance

Figure PM-91



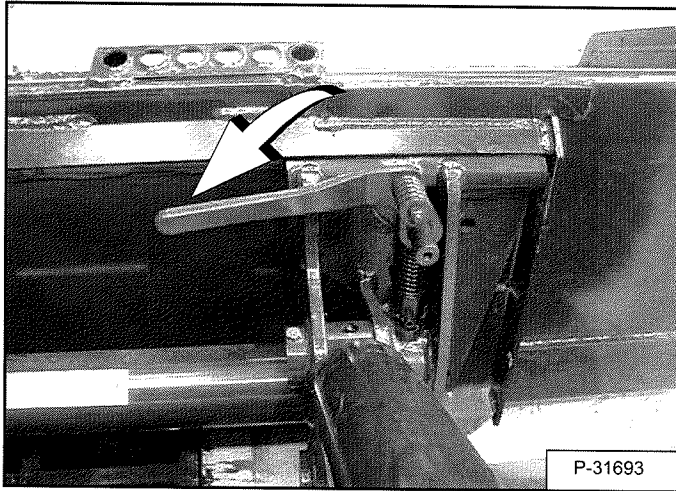
All lift arm and cylinder pivots have a large pin held in position with a retainer bolt and lock nut (Item 1) **[Figure PM-91]**.

Check that the lock nuts are tightened to 48 - 54 N•m (35 - 40 ft-lb) torque.

BOB-TACH (HAND LEVER)

Inspection And Maintenance

Figure PM-92



Move the Bob-Tach levers down to engage the wedges [Figure PM-92].

The levers and wedges must move freely.

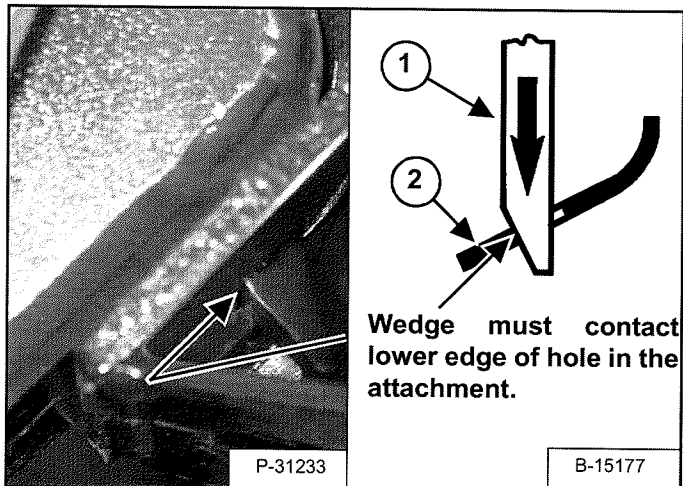
WARNING

AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure PM-93

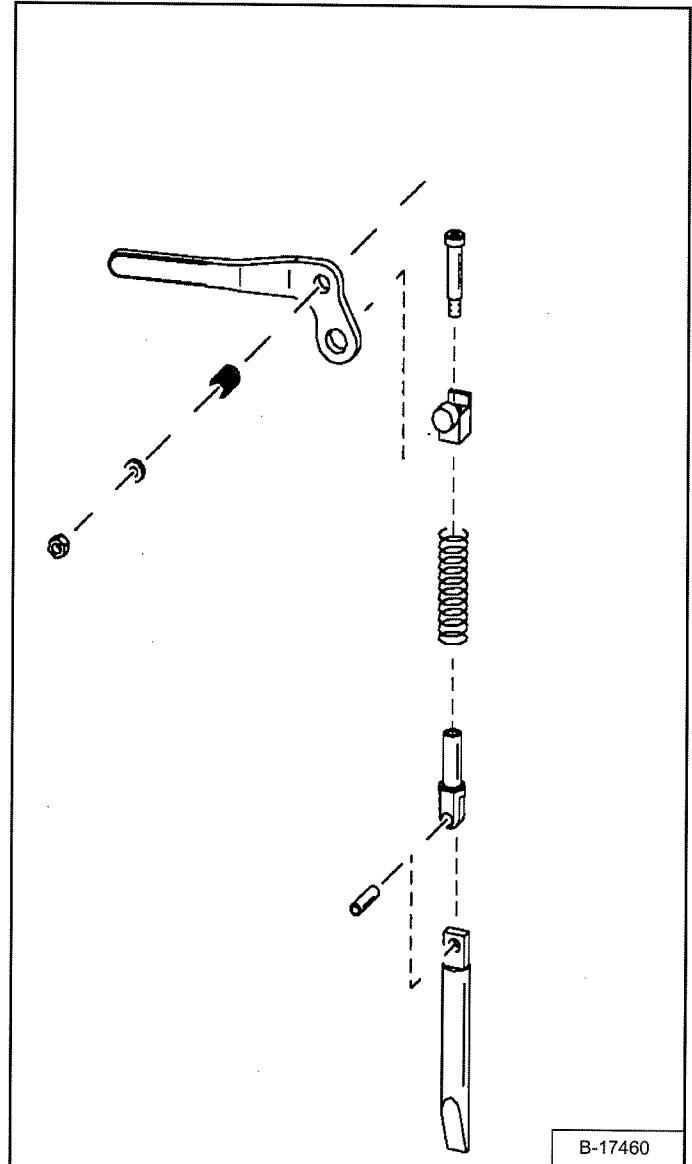


The wedges (Item 1) [Figure PM-93] must extend through the holes in the attachment mounting frame.

The spring loaded wedge (Item 1) must contact the lower edge of the hole in the attachment (Item 2) [Figure PM-93].

If the wedge does not contact the lower edge of the hole [Figure PM-93], the attachment will be loose and can come off the Bob-Tach.

Figure PM-94



Inspect the mounting frame on the attachment and Bob-Tach, linkages and wedges for excessive wear or damage [Figure PM-94]. Replace any parts that are damaged, bent or missing. Keep all fasteners tight.

Look for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

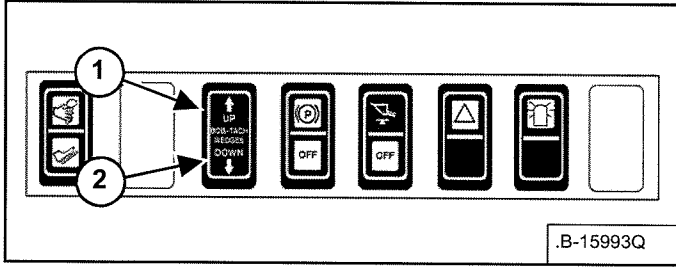
Lubricate the wedges. (See SERVICE SCHEDULE on Page PM-7.) (See LUBRICATING THE LOADER on Page PM-46.)

BOB-TACH (POWER)

This machine may be equipped with a Power Bob-Tach.

Inspection And Maintenance

Figure PM-95



Push and hold the BOB-TACH "WEDGES UP" switch (Item 1) until wedges are fully raised. Push and hold the BOB-TACH "WEDGES DOWN" switch (Item 2) [Figure PM-95] until the wedges are fully down.

The levers and wedges must move freely.

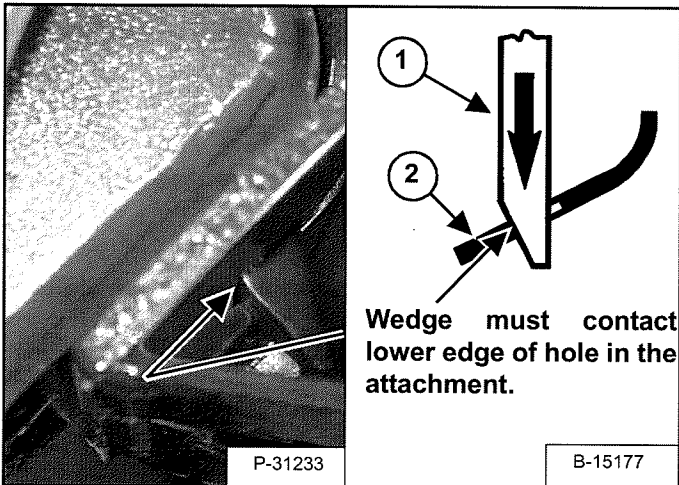
! WARNING

AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure PM-96

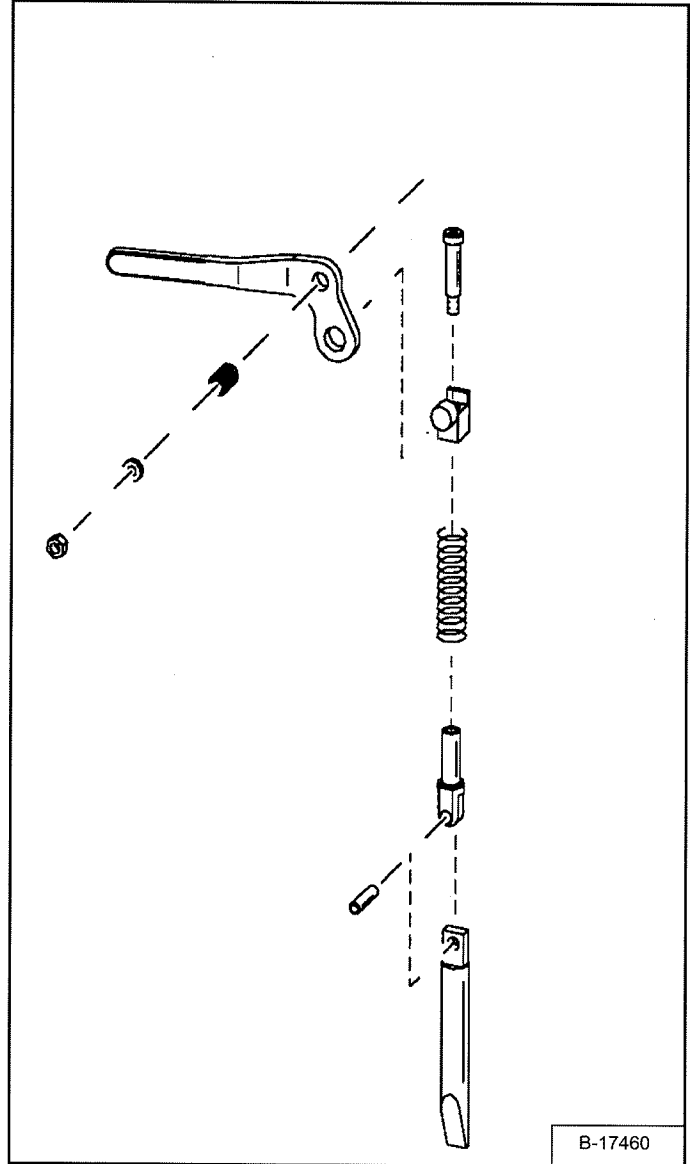


The wedges (Item 1) [Figure PM-96] must extend through the holes in the attachment mounting frame.

The spring loaded wedge (Item 1) must contact the lower edge of the hole in the attachment (Item 2) [Figure PM-96].

If the wedge does not contact the lower edge of the hole [Figure PM-96], the attachment will be loose and can come off the Bob-Tach.

Figure PM-97



Inspect the mounting frame on the attachment and Bob-Tach, linkages and wedges for excessive wear or damage [Figure PM-97]. Replace any parts that are damaged, bent or missing. Keep all fasteners tight.

Look for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

Lubricate the wedges. (See SERVICE SCHEDULE on Page PM-7.) (See LUBRICATING THE LOADER on Page PM-46.)

LOADER STORAGE AND RETURN TO SERVICE

Storage

Sometimes it may be necessary to store your Bobcat loader for an extend period of time. Below is a list of items to perform before storage.

- Thoroughly clean the loader including the engine compartment.
- Lubricate the loader.
- Replace worn or damaged parts.
- Park the loader in a dry protected shelter.
- Lower the lift arms all the way and put the bucket flat on the ground.
- Put blocks under the frame to remove weight from the tires.
- Put grease on any exposed cylinder rods.
- Put fuel stabilizer in the fuel tank and run the engine a few minutes to circulate the stabilizer to the pump and fuel injectors.

If biodiesel blend fuel has been used, perform the following:

Drain the fuel tank, refill with 100% petroleum diesel fuel, add fuel stabilizer and run the engine for at least 30 minutes.

- Drain and flush the cooling system. Refill with premixed coolant.
- Replace all fluids and filters (engine, hydraulic / hydrostatic).
- Replace air cleaner, heater and air conditioning filters.
- Put all controls in neutral position.
- Remove the battery. Be sure the electrolyte level is correct then charge the battery. Store it in a cool dry place above freezing temperatures and charge it periodically during storage.
- Cover the exhaust pipe opening.
- Tag the machine to indicate that it is in storage condition.

Return To Service

After the Bobcat loader has been in storage, it is necessary to follow a list of items to return the loader to service.

- Check the engine and hydraulic oil levels; check coolant level.
- Install a fully charged battery.
- Remove grease from exposed cylinder rods.
- Check all belt tensions.
- Be sure all shields and guards are in place.
- Lubricate the loader.
- Check tire inflation and remove blocks from under frame.
- Remove cover from exhaust pipe opening.
- Start the engine and let run for a few minutes while observing the instrument panels and systems for correct operation.
- Operate machine, check for correct function.
- Stop the engine and check for leaks. Repair as needed.



Bobcat®

SYSTEM SETUP & ANALYSIS

CONTROL PANEL SETUP	SA-9
Attachment Control Information (Deluxe Instrumentation Panel)	SA-10
Right Panel Setup (Deluxe Instrumentation Panel)	SA-9
DIAGNOSTIC SERVICE CODES	SA-3
Service Codes List	SA-4
Viewing Service Codes	SA-3
MAINTENANCE CLOCK	SA-14
Description	SA-14
Reset	SA-14
Setup	SA-14
PASSWORD SETUP (DELUXE INSTRUMENTATION PANEL)	SA-12
Changing The Owner Password	SA-12
Changing The User Passwords	SA-13
Password Description	SA-12
Password Lockout Feature	SA-13
PASSWORD SETUP (KEYLESS START PANEL)	SA-11
Changing The Owner Password	SA-11
Password Description	SA-11
Password Lockout Feature	SA-11

**SYSTEM SETUP
& ANALYSIS
(SA)**



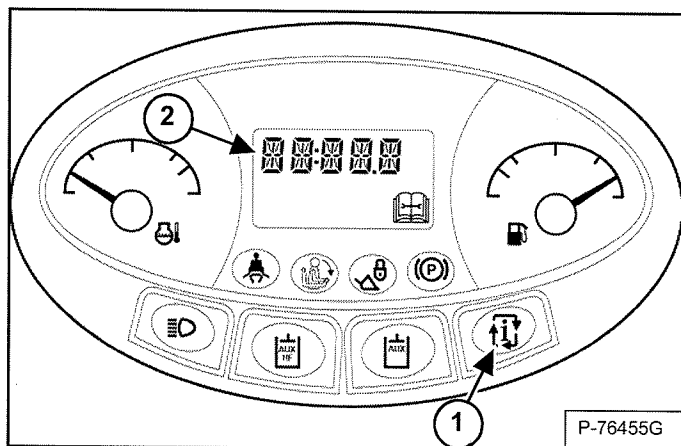
Bobcat®

DIAGNOSTIC SERVICE CODES

Viewing Service Codes

The Service Codes will aid your dealer in diagnosing conditions which can damage your machine.

Figure SA-1



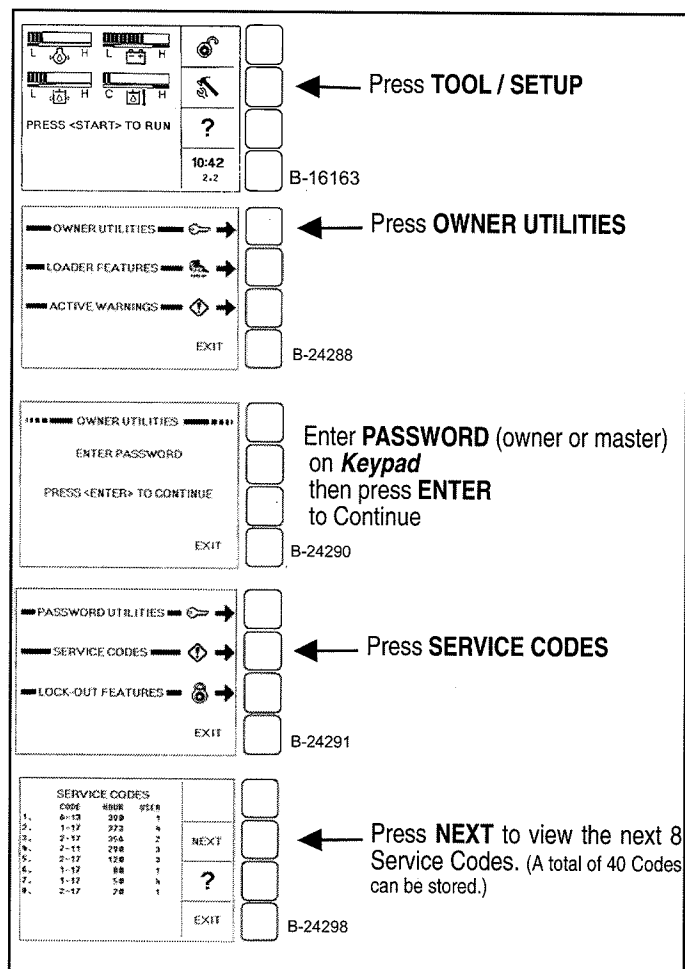
Press the INFORMATION button (Item 1) to cycle the DATA DISPLAY (Item 2) [Figure SA-1] until the service code screen is displayed. If more than one SERVICE CODE is present, the codes will scroll on the DATA DISPLAY.

NOTE: Corroded or loose grounds can cause multiple service codes and / or abnormal symptoms. All instrument panel lights flashing, alarm sounding, headlights and taillights flashing, could indicate a bad ground. The same symptoms could apply if the voltage is low, such as loose or corroded battery cables. If you observe these symptoms, check grounds and positive leads first.

Deluxe Instrumentation Panel

The optional Deluxe Instrumentation Panel offers an additional view of service codes.

Figure SA-2



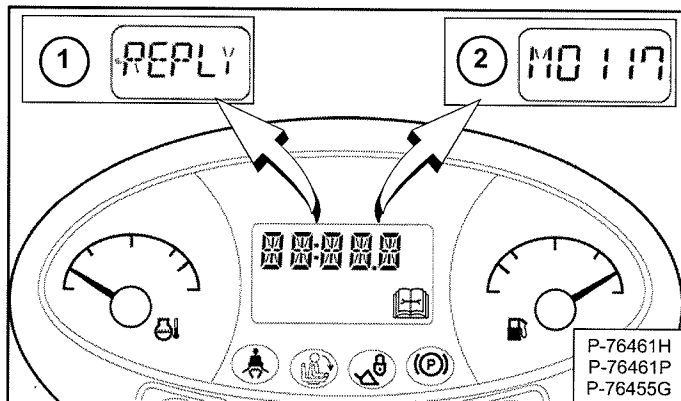
The Display Panel will list the Code Number, (CODE) hourmeter reading when the error occurred (HOUR), and the User (USER) who was logged in to operate the machine when the error occurred [Figure SA-2].

A total of 40 Codes can be stored. When more than 40 codes occur, the oldest code will disappear and the newest code will be in the number 1 position.

DIAGNOSTIC SERVICE CODES (CONT'D)

Service Codes List

Figure SA-3



Service Codes may be either a word (Item 1) or a number (Item 2) [Figure SA-3].

The following word errors may be displayed:

[REPLY] One or both instrument panel(s) not communicating with the controller.

[CODE] The controller is asking for a password. (Keyless Start and Deluxe Instrumentation Panels only.)

[ERROR] The wrong password was entered. (Keyless Start and Deluxe Instrumentation Panels only.)

[SHTDN] A shutdown condition exists.

[DOOR] Operator cab door is open. (Lift and Tilt functions will not operate.)

CODE	DESCRIPTION	CODE	DESCRIPTION
A3623	ACD not programmed	A8503	ACD output 'F' error OFF
A8002	ACD output 'A' error ON	A8505	ACD output 'F' short to battery
A8003	ACD output 'A' error OFF	A8506	ACD output 'F' short to ground
A8005	ACD output 'A' short to battery	A8507	ACD output 'F' open circuit
A8006	ACD output 'A' short to ground	A8532	ACD output 'F' overcurrent
A8007	ACD output 'A' open circuit	A8602	ACD output 'G' error ON
A8032	ACD output 'A' overcurrent	A8603	ACD output 'G' error OFF
A8102	ACD output 'B' error ON	A8605	ACD output 'G' short to battery
A8103	ACD output 'B' error OFF	A8606	ACD output 'G' short to ground
A8105	ACD output 'B' short to battery	A8607	ACD output 'G' open circuit
A8106	ACD output 'B' short to ground	A8702	ACD output 'H' error ON
A8107	ACD output 'B' open circuit	A8703	ACD output 'H' error OFF
A8132	ACD output 'B' overcurrent	A8705	ACD output 'H' short to battery
A8202	ACD output 'C' error ON	A8706	ACD output 'H' short to ground
A8203	ACD output 'C' error OFF	A8707	ACD output 'H' open circuit
A8205	ACD output 'C' short to battery		
A8206	ACD output 'C' short to ground	D3905	Left joystick X-axis not in neutral
A8207	ACD output 'C' open circuit	D3907	Left joystick Y-axis not in neutral
A8232	ACD output 'C' overcurrent	D4007	Right joystick Y-axis not in neutral
A8302	ACD output 'D' error ON	D7501	CAN joystick communication error
A8303	ACD output 'D' error OFF	D7504	No communication from drive controller
A8305	ACD output 'D' short to battery	D7505	Left joystick X-axis not in neutral
A8306	ACD output 'D' short to ground	D7507	Left joystick Y-axis not in neutral
A8307	ACD output 'D' open circuit	D7508	Right joystick Y-axis not in neutral
A8332	ACD output 'D' overcurrent	D7509	Operating mode switch short to ground or battery
A8402	ACD output 'E' error ON	D7513	Right front wheel angle sensor unresponsive
A8403	ACD output 'E' error OFF	D7514	Left front wheel angle sensor unresponsive
A8405	ACD output 'E' short to battery	D7515	Right rear wheel angle sensor unresponsive
A8406	ACD output 'E' short to ground	D7516	Left rear wheel angle sensor unresponsive
A8407	ACD output 'E' open circuit	D7517	Left swash plate not in neutral
A8432	ACD output 'E' overcurrent	D7518	Right swash plate not in neutral
A8502	ACD output 'F' error ON	D7519	Left joystick X-axis out of range high

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

DIAGNOSTIC SERVICE CODES (CONT'D)

Service Codes List (Cont'd)

CODE	DESCRIPTION	CODE	DESCRIPTION
H2505	Rear aux relief short to battery	M0116	Air filter not connected
H2506	Rear aux relief short to ground	M0117	Air filter plugged
H2507	Rear aux relief open circuit	M0216	Hydraulic/Hydrostatic filter not connected
H2605	Front base solenoid short to battery	M0217	Hydraulic/Hydrostatic filter plugged
H2606	Front base solenoid short to ground	M0309	Battery voltage low
H2607	Front base solenoid open circuit	M0310	Battery voltage high
H2632	Front base solenoid overcurrent	M0311	Battery voltage extremely high
H2705	Front rod solenoid short to battery	M0314	Battery voltage extremely low
H2706	Front rod solenoid short to ground	M0322	Battery voltage out of range low
H2707	Front rod solenoid open circuit	M0409	Engine oil pressure low
H2732	Front rod solenoid overcurrent	M0414	Engine oil pressure extremely low
H2805	Diverter rod solenoid short to battery	M0415	Engine oil pressure shutdown
H2806	Diverter rod solenoid short to ground	M0421	Engine oil pressure out of range high
H2807	Diverter rod solenoid open circuit	M0422	Engine oil pressure out of range low
H2905	High-flow solenoid short to battery	M0509	Hydraulic charge pressure low
H2906	High-flow solenoid short to ground	M0510	Hydraulic charge pressure high
H2907	High-flow solenoid open circuit	M0511	Hydraulic charge pressure extremely high
H2932	High-flow solenoid overcurrent	M0514	Hydraulic charge pressure extremely low
H3028	Controller memory failure	M0515	Hydraulic charge pressure shutdown
H3128	Interrupted power failure	M0521	Hydraulic charge pressure out of range high
H3648	ACD multiple	M0522	Hydraulic charge pressure out of range low
H3913	Left joystick grip no communication	M0610	Engine speed high
H3916	Left joystick not connected	M0611	Engine speed extremely high
H3928	Left joystick failure	M0613	Engine speed no signal
H3948	Left joystick multiple	M0615	Engine speed shutdown
H4013	Right joystick grip no communication	M0618	Engine speed out of range
H4016	Right joystick not connected	M0710	Hydraulic oil temperature high
H4028	Right joystick failure	M0711	Hydraulic oil temperature extremely high
H4048	Right joystick multiple	M0715	Hydraulic oil temperature shutdown
H4302	Horn error ON	M0721	Hydraulic oil temperature out of range high
H4303	Horn error OFF	M0722	Hydraulic oil temperature out of range low
H4423	Auxiliary not programmed	M0810	Engine coolant temperature high
H4502	Right signal error ON	M0811	Engine coolant temperature extremely high
H4503	Right signal error OFF	M0815	Engine coolant temperature shutdown
H4602	Left signal error ON	M0821	Engine coolant temperature out of range high
H4603	Left signal error OFF	M0822	Engine coolant temperature out of range low
H4721	Sensor supply 1 out of range high	M0909	Fuel level low
H4722	Sensor supply 1 out of range low	M0921	Fuel level out of range high
H7314	Remote control failure	M0922	Fuel level out of range low
H7328	Remote control no signal	M1016	Hydraulic charge filter not connected
H7404	Main controller no communication	M1017	Hydraulic charge filter plugged
H7604	Left hand panel no communication	M1121	Seat bar sensor out of range high
		M1122	Seat bar sensor out of range low
L0102	Left panel button 1 error ON	M1305	Fuel hold solenoid short to battery
L0202	Left panel button 2 error ON	M1306	Fuel hold solenoid short to ground
L0302	Left panel button 3 error ON	M1307	Fuel hold solenoid open circuit
L0402	Left panel button 4 error ON	M1402	Fuel pull output error ON
L7404	Left panel main controller no communication	M1403	Fuel pull output error OFF
L7672	Left panel programming error	M1407	Fuel pull output open circuit
		M1428	Fuel pull output failure

DIAGNOSTIC SERVICE CODES (CONT'D)

Service Codes List (Cont'd)

CODE	DESCRIPTION	CODE	DESCRIPTION
M1502	Traction lock pull output error ON	M3805	Auxiliary hydraulic lock short to battery
M1503	Traction lock pull output error OFF	M3806	Auxiliary hydraulic lock short to ground
M1507	Traction lock pull output open circuit	M3807	Auxiliary hydraulic lock open circuit
M1528	Traction lock pull output failure	M3832	Auxiliary hydraulic lock overcurrent
M1605	Traction lock hold solenoid short to battery	M4109	Alternator low
M1606	Traction lock hold solenoid short to ground	M4110	Alternator high
M1607	Traction lock hold solenoid open circuit	M4304	Keyless panel no communication
M1705	Hydraulic lock valve solenoid short to battery	M4404	Auxiliary no communication
M1706	Hydraulic lock valve solenoid short to ground	M4621	5 volt sensor supply out of range high
M1707	Hydraulic lock valve solenoid open circuit	M4622	5 volt sensor supply out of range low
M1732	Hydraulic lock valve solenoid overcurrent	M4721	8 volt sensor supply out of range high
M1805	Lift spool lock short to battery	M4722	8 volt sensor supply out of range low
M1806	Lift spool lock short to ground	M4802	Front light relay error ON
M1807	Lift spool lock open circuit	M4803	Front light relay error OFF
M1832	Lift spool lock overcurrent	M4807	Front light relay open circuit
M2005	Two-speed primary short to battery	M4902	Rear light relay error ON
M2006	Two-speed primary short to ground	M4903	Rear light relay error OFF
M2007	Two-speed primary open circuit	M4907	Rear light relay open circuit
M2032	Two-speed primary overcurrent	M5002	Front light output error ON
M2102	Glow plug output error ON	M5003	Front light output error OFF
M2103	Glow plug output error OFF	M5007	Front light output open circuit
M2107	Glow plug output open circuit	M5028	Front light output failure
M2128	Glow plug output failure	M5102	Rear light output error ON
M2202	Starter output error ON	M5103	Rear light output error OFF
M2203	Starter output error OFF	M5107	Rear light output open circuit
M2207	Starter output open circuit	M5128	Rear light output failure
M2228	Starter output failure	M5202	PTOL switch error ON
M2302	Starter relay error ON	M5221	PTOL switch out of range high
M2303	Starter relay error OFF	M5222	PTOL switch out of range low
M2402	Fuel pull relay error ON	M5305	PTOL LED short to battery
M2403	Fuel pull relay error OFF	M5306	PTOL LED short to ground
M2502	Traction pull relay error ON	M5405	Tilt spool lock short to battery
M2503	Traction pull relay error OFF	M5406	Tilt spool lock short to ground
M2602	Glow plug relay error ON	M5407	Tilt spool lock open circuit
M2603	Glow plug relay error OFF	M5432	Tilt spool lock overcurrent
M2721	Throttle primary out of range high	M6402	Switched power relay error ON
M2722	Throttle primary out of range low	M6403	Switched power relay error OFF
M2821	Throttle secondary out of range high	M6505	EEC power short to battery
M2822	Throttle secondary out of range low	M6506	EEC power short to ground
M3128	Interrupted power failure	M6507	EEC power open circuit
M3204	Workgroup no communication	M6604	EEC power no communications
M3304	Deluxe panel no communication	M7002	Switched power output error ON
M3505	Hydraulic fan short to battery	M7003	Switched power output error OFF
M3506	Hydraulic fan short to ground	M7007	Switched power output open circuit
M3507	Hydraulic fan open circuit	M7028	Switched power output failure
M3532	Hydraulic fan overcurrent	M7102	Electric fan 1 output error ON
M3705	Two-speed secondary short to battery	M7103	Electric fan 1 output error OFF
M3706	Two-speed secondary short to ground	M7128	Electric fan 1 output failure
M3707	Two-speed secondary open circuit	M7202	Electric fan 1 relay error ON
M3732	Two-speed secondary overcurrent	M7203	Electric fan 1 relay error OFF

DIAGNOSTIC SERVICE CODES (CONT'D)

Service Codes List (Cont'd)

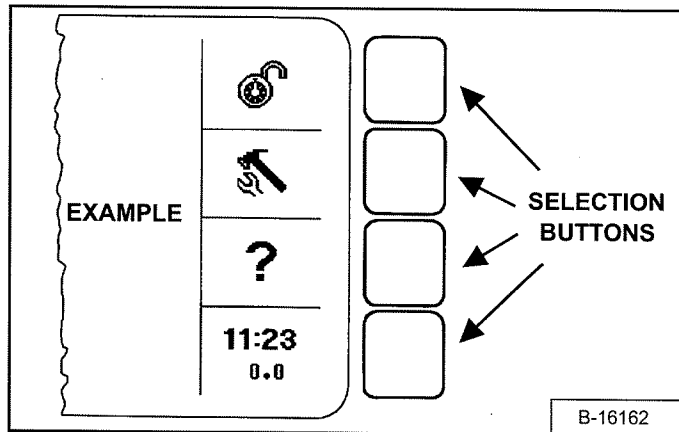
CODE	DESCRIPTION	CODE	DESCRIPTION
M7207	Electric fan 1 relay open circuit	W3251	Lift actuator short to battery
M7304	Remote control no communication	W3252	Tilt actuator short to battery
M7316	Remote control no signal from transmitter	W3253	Lift handle / pedal short to ground
M7423	Main controller not programmed	W3254	Tilt handle / pedal short to ground
M7472	Main controller in boot code	W3255	Lift handle / pedal short to battery
M7497	Main controller software updated	W3256	Tilt handle / pedal short to battery
M7504	Drive no communication	W3257	Lift actuator reduced performance
M7604	Left display panel no communication	W3258	Tilt actuator reduced performance
M7748	Key switch multiple	W3259	Lift actuator wrong direction
M7839	Hourmeter changed	W3260	Tilt actuator wrong direction
M7974	Door open	W3261	Handle lock short to ground
		W3262	Handle lock short to battery
W3223	ACS calibration required	W3263	Pedal lock short to ground
W3224	ACS calibration failed	W3264	Pedal lock short to battery
W3231	Tilt actuator fault	W3265	Sensor supply voltage out of range
W3232	Tilt actuator wiring fault	W3266	Battery voltage out of range
W3233	Tilt handle wiring fault	W3267	Handle/pedal switch flipped while operating
W3234	Tilt actuator not in neutral	W3268	Lift handle information error
W3235	Tilt handle / pedal not in neutral	W3270	Right hand drive short to ground
W3236	Lift actuator fault	W3271	Right hand drive short to battery
W3237	Lift actuator wiring fault	W3274	Left joystick X-axis out of range
W3238	Lift handle wiring fault	W3275	Interrupted unswitched power
W3239	Lift actuator not in neutral	W3276	CAN joystick information error
W3240	Lift handle / pedal not in neutral	W3277	Remote control information error
W3241	No communication	W3905	Left joystick X-axis not in neutral
W3249	Lift actuator short to ground	W4005	Right joystick X-axis not in neutral
W3250	Tilt actuator short to ground	W4007	Right joystick Y-axis not in neutral

CONTROL PANEL SETUP

Right Panel Setup (Deluxe Instrumentation Panel)

Icon Identification

Figure SA-4

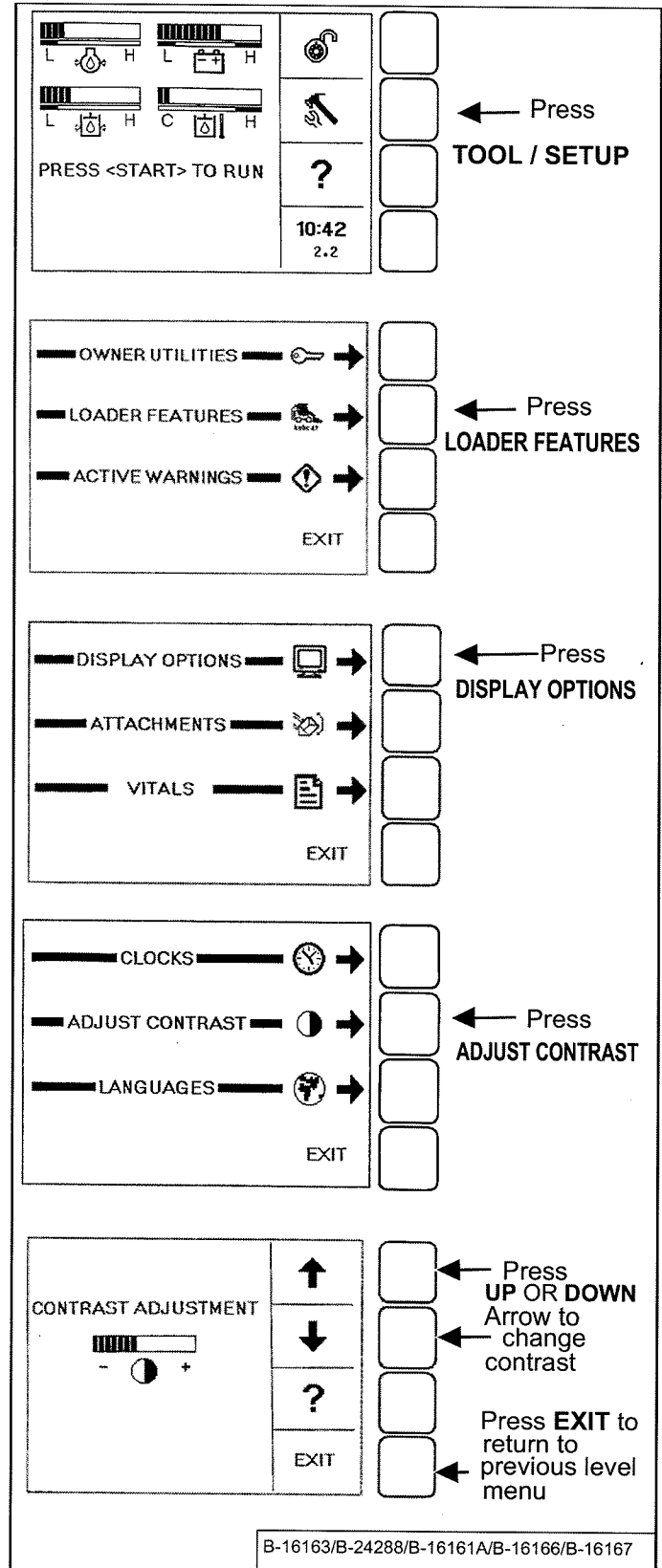


Make selection by pressing the **SELECTION BUTTON** adjacent to the icon [Figure SA-4].

ICON	DESCRIPTION
	LOCK / UNLOCK: Allows machine to be locked / unlocked. You must lock machine to activate security system.
	When system is unlocked, the user can press RUN / ENTER then press START to begin operation.
	TOOL / SETUP: Access system options. Use to set clock, check system warnings, select language, set passwords, etc.
	HELP: Access help on current menu item.
EXIT	EXIT returns you to previous level menu.
11:23 0.0	CLOCK / JOB CLOCK: Press to clear or lock job clock; TOOL / SETUP to set time.
	UP ARROW: Goes backward one screen.
	DOWN ARROW: Goes forward one screen.
	OUTLINE ARROWS: No screen available (backward / forward).
	SELECTION ARROW: Use to select menu item.
NEXT	Goes to the NEXT screen in series. EXAMPLE: the next Active Warning screen.
INFO	Goes to more information about attachments.
YES / NO	Answer yes / no to current setup question.
CLEAR	Removes previously installed password.
SET	Set accepts current installed password.

Examples

Figure SA-5



CONTROL PANEL SETUP (CONT'D)

Right Panel Setup (Deluxe Instrumentation Panel) (Cont'd)

More Examples

Clocks

Press . . .

TOOL / SETUP
LOADER FEATURES
DISPLAY OPTIONS
CLOCKS

SET CLOCK

Use the keypad to set time.

Press **RUN / ENTER** to set clock.

Press **EXIT** to return to previous level menu.

RESET JOB CLOCK (Password required)

(Job Clock keeps a running total for job hours)

Press **CLEAR** to reset Job Clock to zero.

Press **LOCK / UNLOCK** to unlock.

Enter Password and press **RUN / ENTER**.

Languages

Press . . .

TOOL / SETUP
LOADER FEATURES
DISPLAY OPTIONS

LANGUAGES

Select the language, press **RUN / ENTER**.

Press **EXIT** to return to previous level menu.

Vitals (Monitor the engine, hydraulic / hydrostatic, electrical functions when engine is running.)

Press . . .

TOOL / SETUP
LOADER FEATURES.

VITALS

Press **SELECTION ARROW** to select METRIC or ENGLISH (M / E) readouts

You can monitor real-time readouts of:

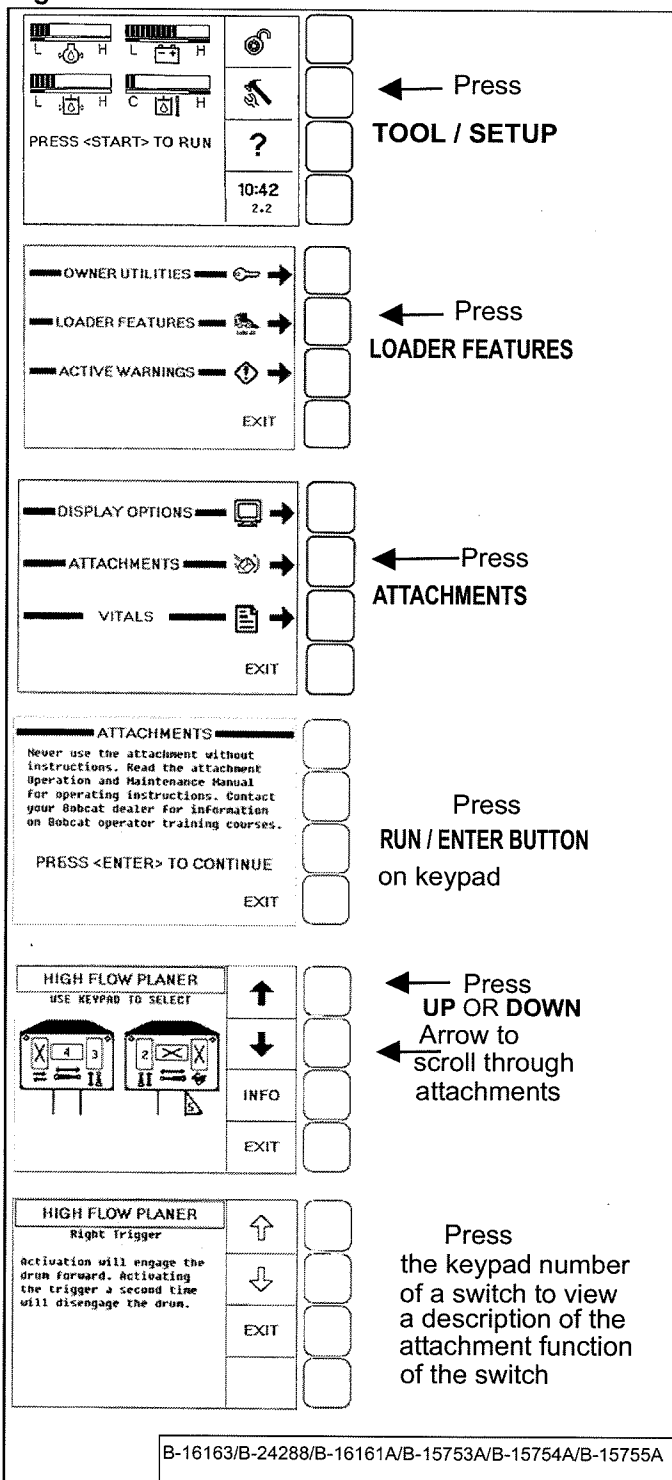
Engine Oil Pressure
Engine Coolant Temperature
Hydraulic Charge Pressure
Hydraulic Oil Temperature
System Voltage
Engine Speed

The Deluxe Instrumentation Panel is easy to use. Continue to set your own preferences for running / monitoring your Bobcat loader.

Attachment Control Information (Deluxe Instrumentation Panel)

The Deluxe Instrumentation Panel allows the user to view information concerning the operation of Bobcat attachments.

Figure SA-6



Attachments are listed alphabetically [Figure SA-6]. Press the exit button to return one screen or press the "0" (zero) key to return to the home screen immediately.

PASSWORD SETUP (KEYLESS START PANEL)

Password Description

Master Password:

A permanent, randomly selected password set at the factory which cannot be changed. This password is used for service by the Bobcat dealer if the owner password is not known; or to change the owner password.

Owner Password:

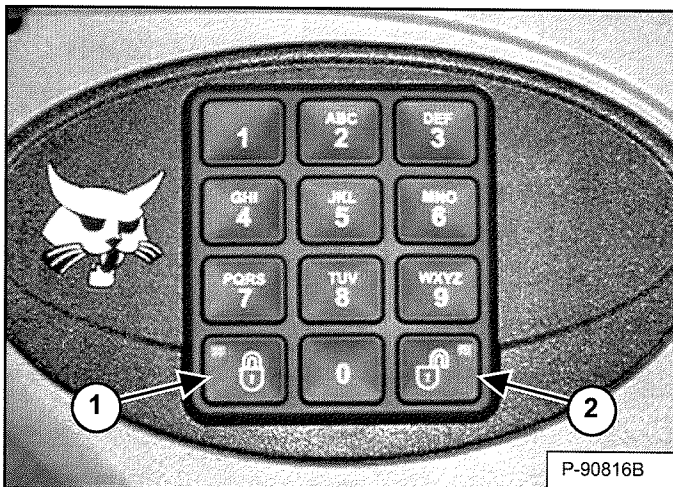
Allows for full use of the loader. It must be used to change the owner password.

Changing The Owner Password

Press the RUN button to turn on the loader electrical system.

Enter the five digit owner password using the number keys (1 through 0) if locked.

Figure SA-7



Press and hold the lock (Item 1) and unlock (Item 2) [Figure SA-7] keys for two seconds.

The lock key red light will flash and the left panel display screen will show **[ENTER]**.

Enter a new five digit password using the number keys (1 through 0). An asterisk will show in the left panel display screen for each key press.

The left panel display screen will show **[AGAIN]**.

Enter the new five digit password again.

The lock key red light will become solid.

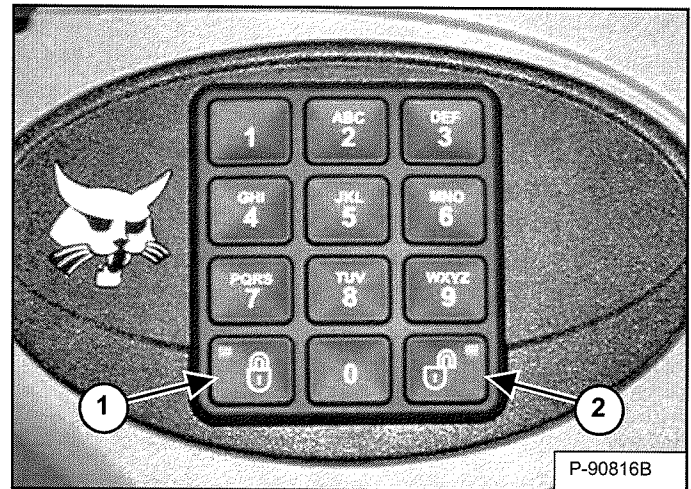
Password Lockout Feature

This feature allows the owner to unlock the password feature so that a password does not need to be used every time the engine is started.

Press the RUN button to turn on the loader electrical system.

Enter the five digit owner password using the number keys (1 through 0).

Figure SA-8



Press the unlock key (Item 2) [Figure SA-8].

The left panel display screen will show **[CODE]**.

Enter the five digit owner password using the number keys (1 through 0). The unlock key green light will flash, then become solid.

The loader can now be started without using a password.

NOTE: Use the following procedure to reset the machine lock so that the loader requires a password to start the engine.

Press the RUN button to turn on the loader electrical system.

Press the lock key (Item 1) [Figure SA-8].

The lock key red light will flash and the left panel display screen will show **[CODE]**.

Enter the five digit owner password using the number keys (1 through 0). The unlock key green light will flash, then the lock key red light will become solid.

You must now enter the password every time to start the loader.

PASSWORD SETUP (DELUXE INSTRUMENTATION PANEL)

Password Setup is available on machines with a Deluxe Instrumentation Panel.

Password Description

All new machines with a Deluxe Instrumentation Panel arrive at Bobcat dealerships with the keypad in locked mode. This means that a password must be used to start the engine.

For security purposes, your dealer may change the password and also set it in the locked mode. Your dealer will provide you with the password.

Master Password:

A permanent, randomly selected password set at the factory which cannot be changed. This password is used for service by the Bobcat dealer if the owner password is not known; or to change the owner password.

Owner Password:

Allows for full use of the loader and to setup the Deluxe Instrumentation Panel. There is only one owner password. It must be used to change the owner or user passwords. Owner should change the password as soon as possible for security of the loader.

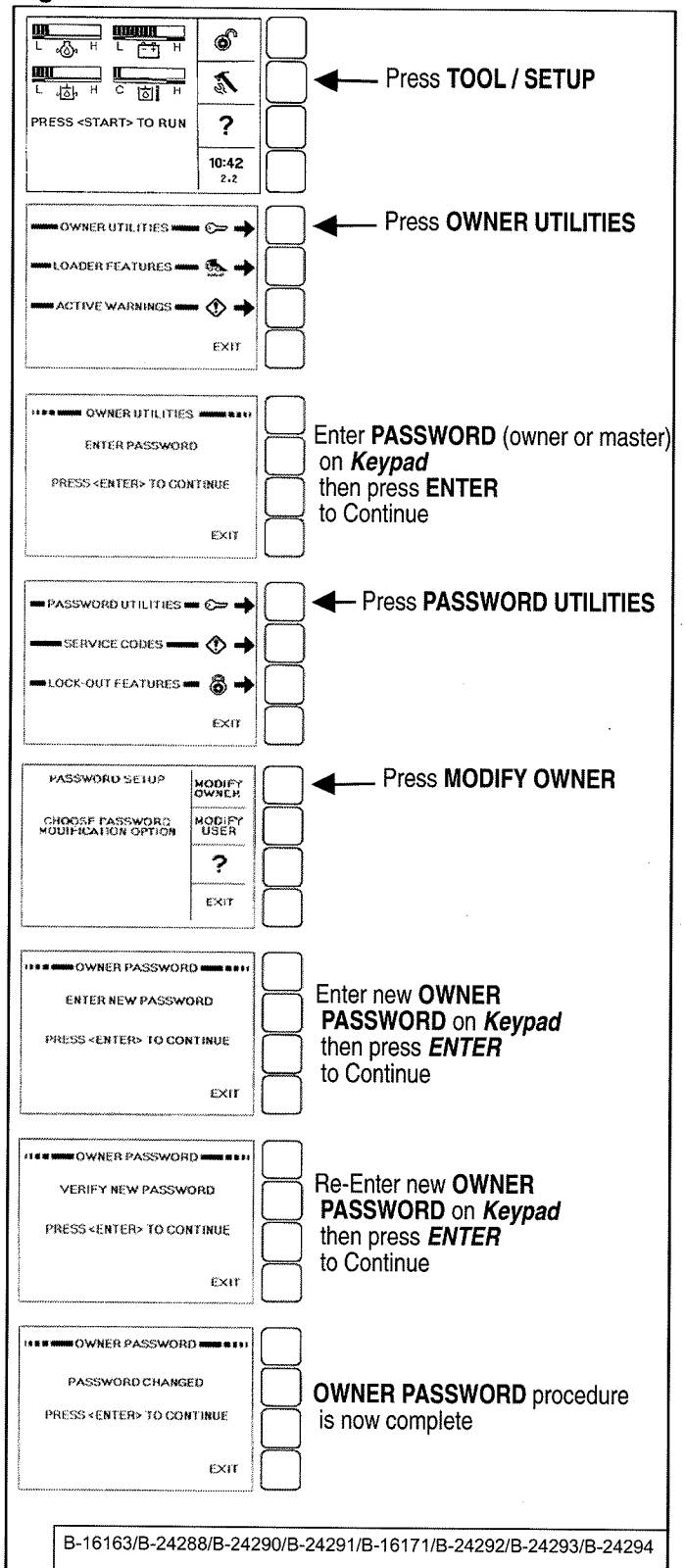
User Password:

Allows starting and operating the loader; cannot change password or any of the other setup features.

For the procedures to change passwords (See Changing The Owner Password on Page SA-12.) (See Changing The User Passwords on Page SA-13.)

Changing The Owner Password

Figure SA-9



PASSWORD SETUP (DELUXE INSTRUMENTATION PANEL) (CONT'D)

Changing The User Passwords

Figure SA-10

Press **TOOL / SETUP**

Press **OWNER UTILITIES**

Press **PASSWORD UTILITIES**

Press **MODIFY USER**

Enter **USER** number on **Keypad** (There can be up to 8 different Users, each with their own password) then press **ENTER** to Continue

Enter **USER PASSWORD** on **Keypad** then press **ENTER** to Continue

USER PASSWORD procedure is now complete. Enter another **USER** number

OR

Press **EXIT**

B-16163/B-24288/B-24290/B-24291/B-16171/B-24295/B-24296/B-24297A

Password Lockout Feature

This feature allows the owner to unlock the password feature so that a password does not need to be used every time the engine is started.

Figure SA-11

Press **LOCK / UNLOCK**

Enter **OWNER PASSWORD** on **Keypad** then press **ENTER** to Continue

Press **UNLOCK MACHINE**

Press **EXIT**

Machine is now **UNLOCKED** and can be started without using a password

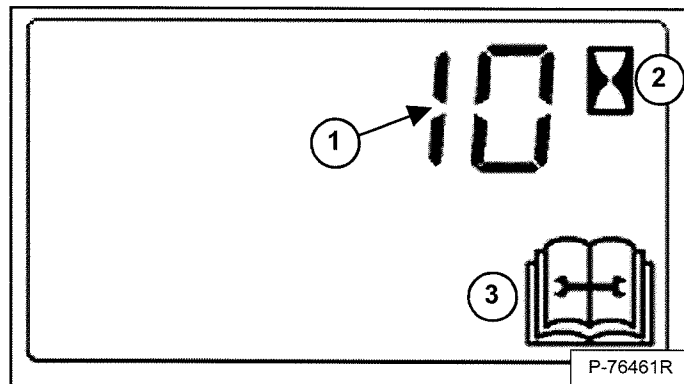
B-16163/P-76075/P-76076/P-76076A/P-76077

MAINTENANCE CLOCK

Description

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

Figure SA-12



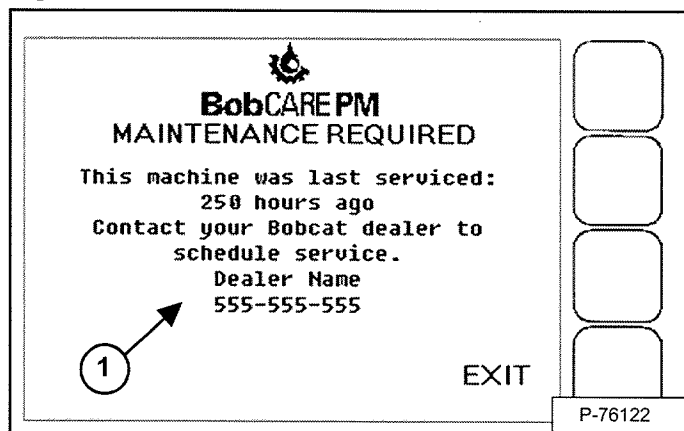
During machine operation, a two beep alarm will sound when there are less than 10 hours until the next planned maintenance.

The remaining hours before maintenance is required will appear in the data display (Item 1) for five seconds while the service icon (Item 3) and hourmeter icon (Item 2) [Figure SA-12] flash.

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

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

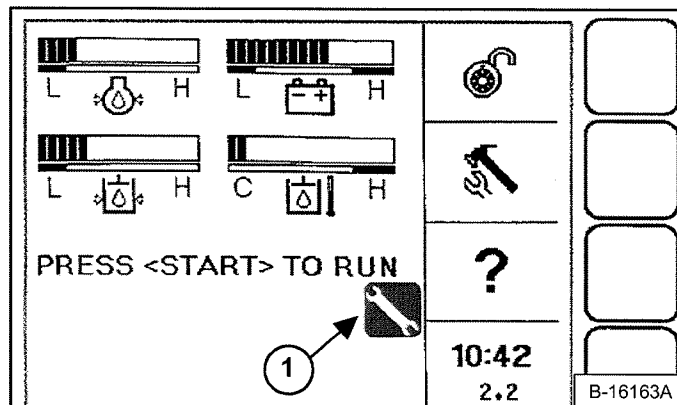
Figure SA-13



The Deluxe Instrumentation Panel, if equipped, will display a message (Item 1) [Figure SA-13] alerting the operator to service the machine.

This message will remain for 10 seconds before reverting back to the previous screen and will appear for 10 seconds every time the machine is started until the maintenance clock is reset.

Figure SA-14



The Deluxe Instrumentation Panel, if equipped, will display a wrench icon (Item 1) [Figure SA-14] alerting the operator to service the machine. This icon will remain on the display until the maintenance clock is reset.

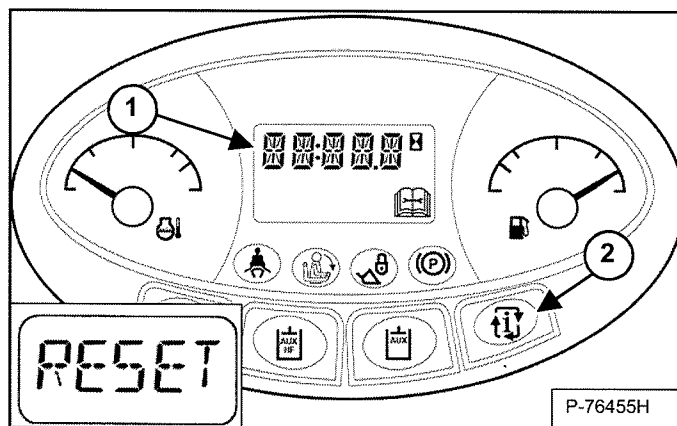
NOTE: Loaders equipped with a Standard Key Panel or Keyless Start Panel will not display the BobCARESM PM message or wrench icon on the right panel.

Setup

See your Bobcat dealer about installation of this feature.

Reset

Figure SA-15



Press the information button (Item 2) until the display screen (Item 1) [Figure SA-15] shows the maintenance clock.

Press and hold the information button (Item 2) for seven seconds until [RESET] (Inset) appears in the display screen (Item 1) [Figure SA-15].

MACHINE SIGN TRANSLATIONS

DANGER (6702301)	MST-6
DANGER (6702302)	MST-6
DANGER (6717343)	MST-6
DANGER (6809511)	MST-9
IMPORTANT (6560573)	MST-7
LIFT ARM SUPPORT DEVICE (6719018)	MST-11
SERVICE SCHEDULE (6734534)	MST-3
WARNING (6577754)	MST-6
WARNING (6579528)	MST-16
WARNING (6704786)	MST-16
WARNING (6710358)	MST-9
WARNING (6718706)	MST-9
WARNING (6725370)	MST-10
WARNING (6726423)	MST-15
WARNING (6728539)	MST-8
WARNING (6737189)	MST-10
WARNING (6737248)	MST-10
WARNING (7131518)	MST-12
WARNING (7131519)	MST-14
WARNING (7160879)	MST-7

**MACHINE SIGN
TRANSLATIONS
(MST)**



Bobcat®

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

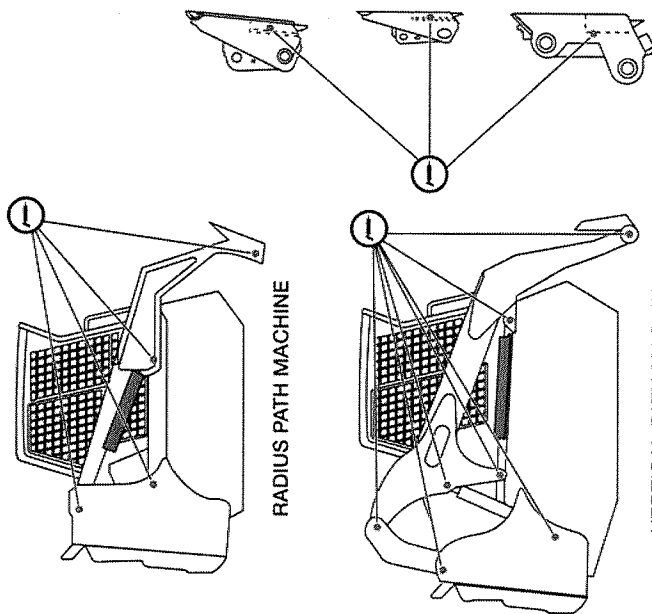
- EVERY 10 HRS (BEFORE STARTING THE LOADER)**
- **ENGINE OIL & FILTER** - Check level and add as needed. Do not overfill. Change oil and filter after first 50 Hrs, then refer to Operation & Maintenance Manual for proper change interval for your Model.
 - **ENGINE AIR FILTER** - Check condition indicator and/or display. Service only when required. Do not use compressed air to clean elements.
 - **ENGINE COOLING SYSTEM** - Check for leaks and damaged components.
 - **ENGINE COOLANT** - 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 BELT'S (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 Genuine Bobcat Replacement Parts

ADVERTENCIA

EVITE LESIONES O LA MUERTE

- Mantenga la puerta cerrada, excepto para efectuar el servicio.
- Mantenga el motor libre de materiales inflamables.
- Mantenga el cuerpo, los objetos sueltos y la ropa alejados de los contactos eléctricos, las piezas en movimiento, las piezas calientes y los escapes.
- No utilice la cargadora en espacios que contengan polvo, gases explosivos o material inflamable cerca del escape.
- Nunca utilice éter o líquido de arranque en un motor con bujías incandescentes. Utilice sólo los aditivos para el arranque aprobados por el fabricante del motor.
- Las fugas de líquido bajo presión pueden penetrar la piel y provocar lesiones graves.
- El ácido de la batería produce quemaduras graves; use anteojos protectores. Si el ácido entra en contacto con los ojos, o la ropa, enjuague con agua. En caso de entrar en contacto con los ojos, enjuáguelos y solicite atención médica de inmediato.
- La batería genera gas inflamable y explosivo. Mantenga alejados los arcos, las chispas, las llamas y el tabaco encendido.
- Para realizar un puente de arranque, conecte en último lugar el cable negativo al motor de la cargadora (nunca a la batería). Después del puente de arranque, retire en primer lugar la conexión negativa del motor.
- Los gases del escape pueden ser letales. Ventíle siempre.

LISTA DE CONTROL Y PROGRAMA DEL SERVICIO DE MANTENIMIENTO

CADA 10 HORAS (ANTES DE ENCENDER EL CARGADOR)

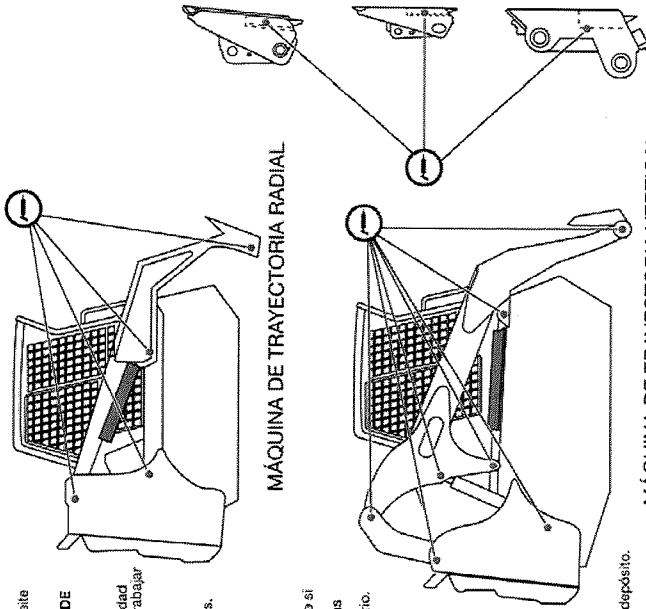
- **ACEITE Y FILTRO DEL MOTOR:** controle el nivel de aceite y agregue más cantidad si es necesario. No sobre cargue. Cambie el aceite y el filtro luego de las primeras 50 horas. Luego, consulte el Manual de funcionamiento y mantenimiento para ver la frecuencia de mantenimiento apropiada para el modelo de su máquina.
 - **FILTRO DE AIRE DEL MOTOR:** controle el indicador de estado y/o la pantalla. Repare sólo cuando sea necesario. No limpie los filtros de aire.
 - **SISTEMA DE AIRE DEL MOTOR:** revise los sistemas de succión y los componentes dañados.
 - **SISTEMA DE ENFRÍAMIENTO DEL MOTOR:** limpie y elimine la suciedad que haya en la pantalla, en el refrigerante de aceite y en el radiador. Verifique el nivel de frío del refrigerante y agregue la cantidad necesaria.
 - **FILTRO DEL COMBUSTIBLE:** retire el agua que quede acumulada.
 - **BRAZOS DE ELEVACIÓN, CONECTORES DE ELEVACIÓN, CILINDROS, PIVOTE Y CUÑAS BOB-TACH, Y CILINDROS DE DIRECCIÓN DEL CARGADOR (sólo en máquinas con sistema AWS):** lubrique con engrasador multiuso a base de litio.
 - **CINTURÓN DE SEGURIDAD, APOYABRAZOS Y SEGUROS DE CONTROL:** verifique si funcionan correctamente.
 - **SISTEMA DE ENFREQUE:** revise según sea necesario. Limpie la suciedad y los desechos de las piezas en movimiento.
 - **SISTEMA DE ENFREQUE Y/O DE CONTROLES BOBCAT (BICS):** verifique si funciona correctamente. Limpie la suciedad con la barra del asiento elevada. Cuando se utilicen las funciones de elevación e inclinación, NO SE DEBE TRABAJAR con la barra del asiento elevada.
 - **NEUMÁTICOS:** verifique la presión del aire. Inicie los neumáticos a la presión MÁXIMA, como se muestra en el lateral del neumático.
 - **GENERAL:** verifique que no haya partes sueltas o rotas, que la cabina del operador no se encuentre dañada, el funcionamiento de los instrumentos y que las tuercas de las ruedas o las tuercas del engranaje de tracción no estén flojas.
- ### CADA 50 HORAS:
- **FLUIDO HIDRÁULICO, MANGUERAS Y TUBOS:** controle el nivel de fluido y agregue según sea necesario.
 - **TRANSMISIÓN FINAL (sólo en las GUARDA-CADENAS de máquinas con ruedas):** controle el nivel de fluido y agregue según sea necesario.
 - **CONTRIOLES DE DIRECCIÓN HIDRÁULICA (PEDALES, CONTROLES MANUALES Y/O PALANCA DE MANDO):** verifique si funcionan correctamente. Ajuste según sea necesario.
 - **TUERCA DE RUEDAS / ENGRANAJES DE TRANSMISIÓN DE LA TRACCIÓN:** verifique que las tuercas no estén sueltas y ajustelas según sea necesario.
 - **TENSION DE LA BANDA DE TRACCIÓN (sólo en máquinas de tracción):** verifique la tensión y ajuste según sea necesario.
- ### CADA 100 HORAS:
- **SEÑALADOR PARACHISPAS:** vacíe la cámara de chispas (si corresponde).
 - **BATERÍA:** verifique la batería por daños, grietas de sujeciones, cables, conexiones y nivel de electrolitos. Agregue agua destilada según sea necesario.
 - **LÍNEA DE TRANSMISIÓN:** lubrique con engrasador multiuso a base de litio (si corresponde).
- ### CADA 250 HORAS:
- **PIVOTES DE LA PALANCA DE DIRECCIÓN:** lubrique con engrasador multiuso a base de litio (si corresponde).
 - **FILTRO DEL COMBUSTIBLE:** reemplace el filtro.
 - **PIVOTES DE DIRECCIÓN (sólo en máquinas con sistema AWS):** lubrique con engrasador multiuso a base de litio.
 - **MOTOR / CORREA IMPULSORA HIDRÁULICA:** controle que no estén gastados o dañados.
 - **CAJA DE ENGRANAJES DEL VENTILADOR:** controle el nivel de fluido y agregue según sea necesario (si corresponde).
 - **OTROS CINTURONES DE SEGURIDAD (bomba hidráulica, bomba de agua, alternador y aire acondicionado, etc.):** revise el funcionamiento y reemplace según sea necesario.
 - **SISTEMA DE ENCLAVAMIENTO DE CONTROLES BOBCAT (BICS):** verifique el funcionamiento del control de derivación del brazo de elevación.
- ### CADA 500 HORAS:
- **VENTILADOR / SISTEMA HIDRÁULICO / HIDROSTÁTICO:** reemplace el filtro. Reemplace la cubierta del respiradero del depósito.
 - **FILTRO DE ENTRADA DE LA VALVULA DE DIRECCIÓN (sólo en máquinas con sistema AWS):** reemplace el filtro.
 - **PORTADOR DEL MOTOR HIDROSTÁTICO (sólo en máquinas de tracción):** reemplace el aceite.
- ### CADA 1000 HORAS:
- **DEPÓSITO HIDRÁULICO:** reemplace el fluido.
 - **TRANSMISIÓN FINAL (sólo en las GUARDA-CADENAS de máquinas con ruedas):** reemplace el fluido.
 - **RODILLO DE TRACCIÓN, CONJUNTO DE RODILLOS AUXILIARES (sólo en máquinas de tracción):** reemplace el fluido.
 - **FILTRO DE DRENAJE DE LA CAJA DEL MOTOR DE TRANSMISIÓN:** reemplace el filtro (si corresponde).
 - **COJINETES DE LAS RUEDAS Y RANURAS EXTERIORES (sólo en máquinas con sistema AWS):** vuelva a untar grasa en los cojinetes de las ruedas y lubrique las ranuras externas en la horquilla del cubo. (Sólo servicio de mantenimiento del distribuidor)

NOTAS:

- Reemplace el elemento cuanto antes si el indicador de advertencia de la transmisión permanece encendido durante más de 5 minutos luego de que el fluido hidráulico haya alcanzado la temperatura de funcionamiento.
- Realice un servicio de mantenimiento después de las primeras 50 horas y, luego, según el programa.
- Consulte el Manual de funcionamiento y mantenimiento acerca de las especificaciones de fluidos, los números de piezas de filtros y las ubicaciones, así como la frecuencia apropiada para realizar el mantenimiento a su modelo de máquina.

CONSULTE EL MANUAL DE FUNCIONAMIENTO Y MANTENIMIENTO PARA OBTENER MÁS INFORMACIÓN E INSTRUCCIONES.

DIAGRAMAS GENERALES DE LUBRICACIÓN



MÁQUINA DE TRAYECTORIA RADIAL

MÁQUINA DE TRAYECTORIA VERTICAL

● PUNTOS DE ENGRASE HABITUALES



Utilice piezas originales
Bobcat de repuesto

73094 SW

6734534E CSAR
REEMPLAZAR

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'ether 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)

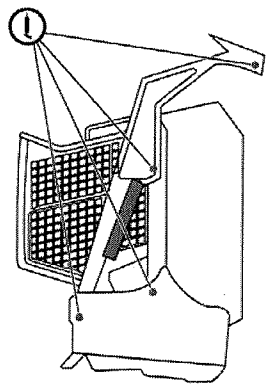
- ▲ **HUILE ET FILTRE MOTEUR** - Vérifiez le niveau et faites l'appoint si nécessaire. Ne dépassez pas le niveau indiqué. Changez l'huile et le filtre après les 50 premières heures, puis consultez le manuel d'utilisation et d'entretien pour connaître la périodicité de changement d'huile pour votre modèle.
- ▲ **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 REFRIGÉRATION 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 la graisse multi-usages 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'arcade de siège est relevée.
- ▲ **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 lûtes 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 débris ou de fuite. Effectuez les réparations ou les remplacements requis.
 - ▲ **TRANSMISSION FINALE (CARTER DE CHÂÎNE, 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 LEVIERS 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 déformée. 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 remplissage 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 bousche (entretien par le concessionnaire uniquement).

REMARQUES :

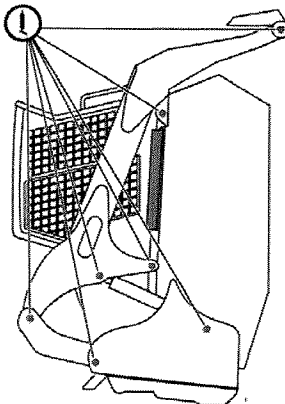
- ★ remplacez l'élément plus tôt si le témoin d'avertissement de la transmission reste allumé pendant plus de 5 minutes une fois que l'huile hydraulique a atteint la température de fonctionnement.
- ▲ Effectuez l'entretien après 50 heures, puis selon le tableau.
- Consultez le manuel d'utilisation et 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.

SCHEMAS GÉNÉRAUX DE GRAISSAGE



LEVAGE EN ARC DE CERCLE



LEVAGE VERTICAL

POINTS DE GRAISSAGE TYPIQUES



Utilisez des pièces de rechange
Bobcat d'origine

73094 SW

6734534E fca
請參閱說明書 1 圖表圖樣及零件 註

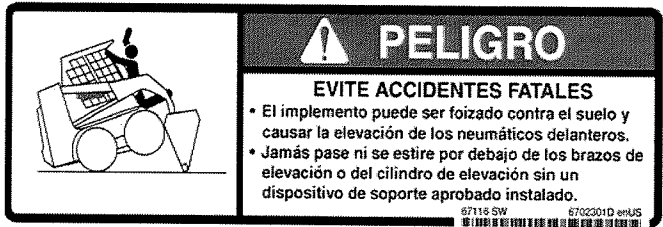
DANGER

AVOID DEATH

- Attachment can be forced against the ground and cause front wheels to raise.
- Never go under or reach under lift arms or lift cylinder without an approved lift arm support device installed.

87110 SW
1 800 828 2828

670201D eBUS
© 2001 JCB



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

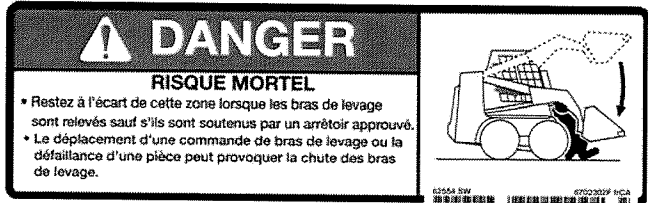
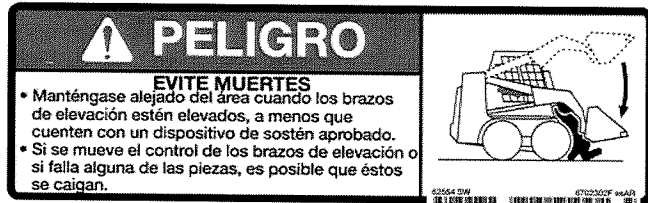


DANGER

AVOID DEATH

- Keep out of this area when lift arms are raised unless supported by an approved lift arm support device.
- Moving lift arm control or failure of a part can cause lift arms to drop.

©2014 BY
HILLIARD, INC. THIS MANUAL IS THE PROPERTY OF HILLIARD, INC. IT IS TO BE USED ONLY BY THE OPERATOR.
©2009/07 HILLIARD

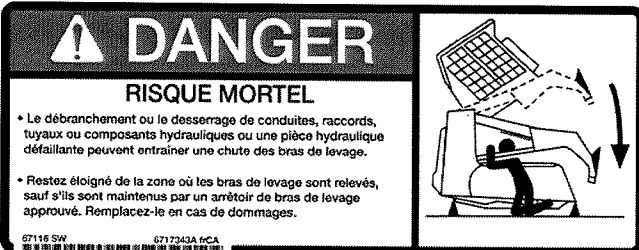


DANGER

AVOID DEATH

- Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop.
- Keep out of this area when lift arms are raised unless supported by an approved lift arm support. Replace if damaged.

67116 SW
6717343A enUS



IMPORTANT

THIS MACHINE IS FACTORY EQUIPPED WITH A U.S.D.A. FORESTRY SERVICE APPROVED 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.

62554 SW

6560573G enUS

IMPORTANT

CETTE MACHINE EST ÉQUIPÉE EN USINE D'UN SYSTÈME D'ÉCHAPPEMENT PARE-ÉTINCELLES APPROUVÉ PAR LE SERVICE AMÉRICAIN DES EAUX ET FORÊTS (U.S.D.A. FORESTRY SERVICE).

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. VEUILLER 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.

62554 SW

6560573G enUS

IMPORTANTE

ESTA MÁQUINA ESTÁ EQUIPADA DE FÁBRICA CON UN SILENCIADOR DEL SISTEMA PARACHISPAS APROBADO POR EL SERVICIO DE SILVICULTURA DE LA U.S.D.A.

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.

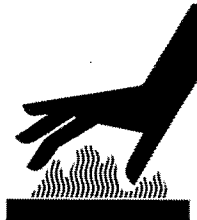
EN ALGUNOS MODELOS, EL TURBOCARGADOR FUNCIONA COMO EL PARACHISPAS Y DEBE OPERAR CORRECTAMENTE COMO TAL.

[SI VA A OPERAR ESTA MÁQUINA EN BOSQUES INFLAMABLES O EN TERRENOS CUBIERTOS DE RAMAS O CÉSPED, DEBE DISPONER DE UN SISTEMA PARACHISPAS EN EL SISTEMA DE ESCAPE Y MANTENERLO EN BUENAS CONDICIONES DE TRABAJO. NO CUMPLIR ESTA ADVERTENCIA INFRINGIRÁ LA SECCIÓN 442 DE LA LEY DEL ESTADO DE CALIFORNIA. CONSULTE LAS LEYES Y REGLAMENTOS LOCALES ACERCA DE LOS REQUERIMIENTOS PARA UTILIZAR SISTEMAS PARACHISPAS.

PARA MAYORES INSTRUCCIONES, CONSULTE EL MANUAL DE OPERACIÓN Y MANTENIMIENTO.

62554 SW

6560573G enUS



WARNING

AVOID BURNS

- Hot surface. Do not touch.
- Allow to cool before servicing.

71846 SW

7160879 enUS



ADVERTENCIA

EVITE QUEMADURAS

- Superficie caliente. No tocar.
- Deje que se enfríe antes de realizar el servicio de mantenimiento.

71846 SW

7160879 esAR



AVERTISSEMENT

DANGER DE BRÛLURE

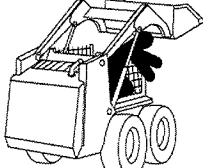
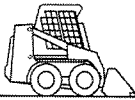
- Surface chaude. Ne la touchez pas.
- Laissez-la refroidir avant tout entretien.

71846 SW

7160879 frCA

WARNING

AVOID INJURY OR DEATH

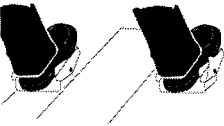
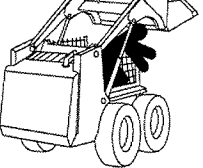
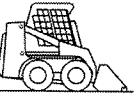
 NEVER USE THE LOADER WITHOUT INSTRUCTIONS. READ OPERATION AND MAINTENANCE MANUAL AND HANDBOOK.	 USE SEAT BAR. FASTEN SEAT BELT SECURELY.	 KEEP FEET ON PEDALS OR FOOT REST.	TO LEAVE THE LOADER:	
 DO NOT TRAVEL OR TURN WITH LIFT ARMS UP. LOAD, UNLOAD AND TURN ON FLAT LEVEL GROUND. DO NOT EXCEED RATED OPERATING CAPACITY (SEE SIGN ON LOADER).	 NEVER MODIFY EQUIPMENT OR USE ATTACHMENTS NOT APPROVED BY BOBCAT COMPANY.	 ON SLOPES, KEEP HEAVY END OF LOADER UPHILL.	1  LOWER THE LIFT ARMS. PUT ATTACHMENT FLAT ON GROUND.	2  STOP THE ENGINE.
			3  ENGAGE THE BRAKE.	4  RAISE SEAT BAR. MOVE PEDALS AND HAND CONTROLS UNTIL BOTH LOCK.

Weitere Anweisungen finden sie in der Bedienungs- und Instandhaltungsanleitung. Para más instrucciones, vea el Manual de Operación y Mantenimiento. Voir le Manuel de l'opérateur et d'entretien pour d'autres renseignements.

67116 SW 6728539C enUS

ADVERTENCIA

EVITE LESIONES O ACCIDENTES FATALES

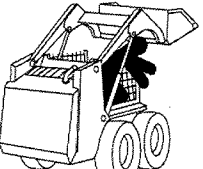
 JAMÁS USE EL CARGADOR SIN LEER LAS INSTRUCCIONES. LEA EL MANUAL DE OPERACIÓN Y MANTENIMIENTO Y LA GUÍA.	 USE LA BARRA DEL ASIENTO. ABRÓCHESE EL CINTURÓN DE SEGURIDAD CON FIRMEZA.	 MANTENGA LOS PIES EN LOS PEDALS O APOYAPIES.	PARA SALIR DEL CARGADOR:	
 NO SE DESPLACE O GIRE CON LOS BRAZOS DE ELEVACIÓN ARRIBA. CARGUE, DESCARGUE Y GIRE SOBRE SUELOS PLANOS NIVELADOS. NO EXCEDA LA CAPACIDAD DE OPERACIÓN NOMINAL (VEA EL AVISO EN EL CARGADOR).	 JAMÁS MODIFIQUE EL EQUIPO O USE IMPLEMENTOS NO APROBADOS POR BOBCAT COMPANY.	 EN PENDIENTES, MANTENGA EL EXTREMO PESADO DEL CARGADOR CUESTA ARRIBA.	1  BAJE LOS BRAZOS DE ELEVACIÓN. COLOQUE EL IMPLEMENTO EN EL SUELO.	2  PARE PARA DETENGA EL MOTOR
			3  COLOQUE EL FRENO	4  LEVANTE LA BARRA DEL ASIENTO. MUEVA LOS PEDALES Y CONTROLES MANUALES HASTA QUE AMBOS SE BLOQUEEN.

Weitere Anweisungen finden sie in der Bedienungs- und Instandhaltungsanleitung. Para más instrucciones, vea el Manual de Operación y Mantenimiento. Voir le Manuel de l'opérateur et d'entretien pour d'autres renseignements.

67116 SW 6728539C enUS

ATTENTION

EVITER LES BLESSURES OU LA MORT

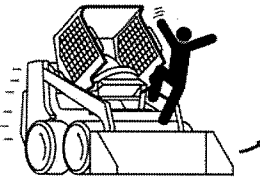
 NE VOUS SERVEZ JAMAIS DE LA CHARGEUSE SANS INSTRUCTIONS. USEZ LE MANUEL DE L'OPÉRATEUR ET D'ENTRETIEN AINSI QUE LE GUIDE D'UTILISATION.	 UTILISEZ L'ARCEAU DE SÉCURITÉ. ATTACHEZ SOIGNEUSEMENT LA CEINTURE DE SÉCURITÉ	 MAINTENEZ LES PIEDS SUR LES PÉDALES	POUR QUITTER LA CHARGEUSE:	
 NE PAS SE DÉPLACER NI VIRER AVEC LES BRAS RELEVÉS. CHARGEZ DÉCHARGEZ ET VIREZ SUR UN SOL PLAT ET HORIZONTAL. NE DÉPASSEZ PAS LA CAPACITÉ OPÉRATIONNELLE (CONSULTEZ L'AUTOCOLLANT APPOSÉ SUR LA CHARGEUSE)	 NE JAMAIS MODIFIER L'EQUIPEMENT NI SE SERVIR D'ACCESSOIRES QUE NE SONT PAS APPROUVÉS PAR BOBCAT COMPANY.	 DANS LES PENTES, MAINTENEZ TOUJOURS LA PARTIE LA PLUS LOURDE DE LA CHARGEUSE VERS LE HAUT.	1  ABAISSÉZ VOS BRAS DE LEVAGE POSEZ L'EQUIPEMENT À PLAT SUR LE SOL.	2  ARRÊTEZ LE MOTEUR
			3  ACTIVÉZ LE FREIN DE STATIONNEMENT	4  RELEVEZ L'ARCEAU DE SIÈGE. DÉPLACEZ LES PÉDALES ET LES COMMANDES MANUELLES JUSQU'À CE QU'ELLES SOIENT TOUTES DEUX VERROUILLÉES.

Weitere Anweisungen finden sie in der Bedienungs- und Instandhaltungsanleitung. Para más instrucciones, vea el Manual de Operación y Mantenimiento. Voir le Manuel de l'opérateur et d'entretien pour d'autres renseignements.

67116 SW 6728539C enUS

WARNING (6718706)

WARNING



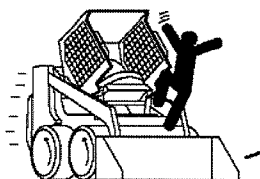
Unexpected loader, lift arm or attachment movement caused by cab contact with steering levers can cause serious injury or death.

BEFORE RAISING OR LOWERING CAB:

- Stop engine

70485 SW 6718706B enUS

ADVERTÊNCIA



El movimiento inesperado del cargador, brazo de elevación o implemento causado por el contacto de la cabina con las palancas de direccionamiento puede causar lesiones serias o accidentes fatales.

ANTES DE LEVANTAR O BAJAR LA CABINA:

- Apague el motor

70485 SW 6718706B es

AVERTISSEMENT



Un mouvement intempestif de la chargeuse, du bras de levage ou de l'accessoire dû au contact de la cabine avec les leviers de direction peut entraîner des blessures graves, voire mortelles.

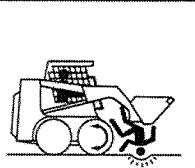
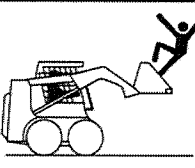
AVANT DE RELEVER OU D'ABAISSER LA CABINE :

- Arrêtez le moteur

70485 SW 6718706B fr

WARNING (6710358)

WARNING

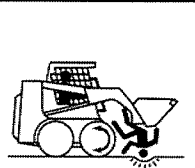
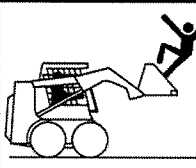



AVOID INJURY OR DEATH

- Never carry riders.
- Never use loader as a man lift or work platform.

62702 SW 6710358B enUS

ADVERTENCIA

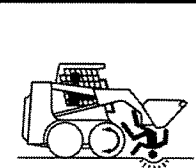
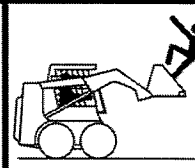



EVITE LESIONES O LA MUERTE

- Nunca lleve ocupantes.
- Nunca utilice la cargadora para levantar personas o como plataforma de trabajo.

62702 SW 6710358B esAR

AVERTISSEMENT

RISQUE DE BLESSURE OU DE MORT

- Ne transportez jamais de passagers.
- N'utilisez jamais la chargeuse comme élévateur pour le personnel ou comme plateforme de travail.

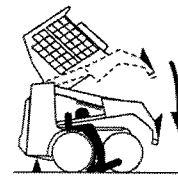
62702 SW 6710358B frCA

DANGER (6809511)

DANGER

AVOID DEATH

- Disconnecting hydraulic lines can cause the lift arms or attachment to drop.
- Always use an approved lift arm support when lift arms are in a raised position.

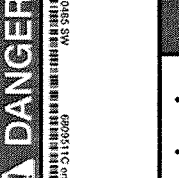


62245 SW 05 6809511 AR

DANGER

AVOID DEATH

- Disconnecting hydraulic lines can cause the lift arms or attachment to drop.
- Always use an approved lift arm support when lift arms are in a raised position.

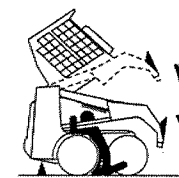


62245 SW 05 6809511 AR

DANGER

AVOID DEATH

- Disconnecting hydraulic lines can cause the lift arms or attachment to drop.
- Always use an approved lift arm support when lift arms are in a raised position.

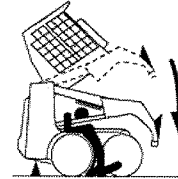


62245 SW 05 6809511 AR

PELIGRO

EVITE LESIONES FATALES

- Desconectar las líneas hidráulicas puede provocar que los brazos de elevación o el implemento se caigan.
- Utilice siempre un soporte aprobado cuando los brazos de elevación están levantados.

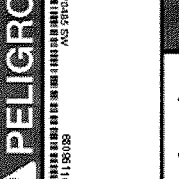


62245 SW 05 6809511 AR

PELIGRO

EVITE LESIONES FATALES

- Desconectar las líneas hidráulicas puede provocar que los brazos de elevación o el implemento se caigan.
- Utilice siempre un soporte aprobado cuando los brazos de elevación están levantados.

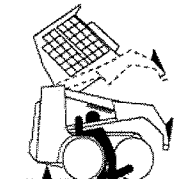


62245 SW 05 6809511 AR

PELIGRO

EVITE LESIONES FATALES

- Desconectar las líneas hidráulicas puede provocar que los brazos de elevación o el implemento se caigan.
- Utilice siempre un soporte aprobado cuando los brazos de elevación están levantados.

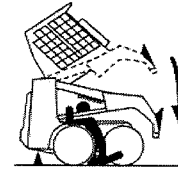


62245 SW 05 6809511 AR

DANGER

DANGER DE MORT

- Le débranchement des conduites hydrauliques peut provoquer la chute des bras de levage ou de l'accessoire.
- Utilisez toujours un arrêt de bras de levage approuvé quand les bras de levage sont relevés.

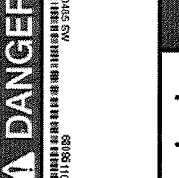


62245 SW 05 6809511 AR

DANGER

DANGER DE MORT

- Le débranchement des conduites hydrauliques peut provoquer la chute des bras de levage ou de l'accessoire.
- Utilisez toujours un arrêt de bras de levage approuvé quand les bras de levage sont relevés.

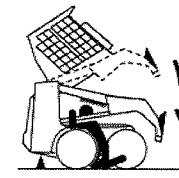


62245 SW 05 6809511 AR

DANGER

DANGER DE MORT

- Le débranchement des conduites hydrauliques peut provoquer la chute des bras de levage ou de l'accessoire.
- Utilisez toujours un arrêt de bras de levage approuvé quand les bras de levage sont relevés.

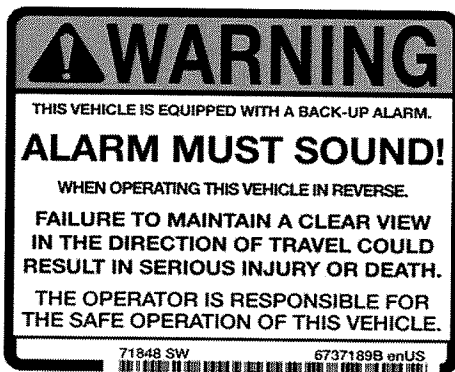


62245 SW 05 6809511 AR

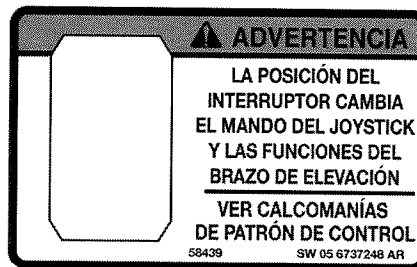
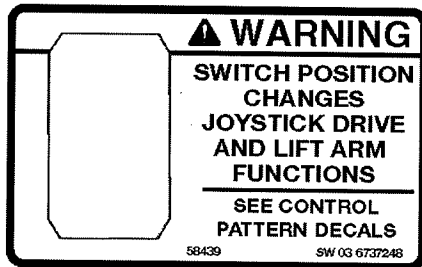
WARNING (6725370)



WARNING (6737189)



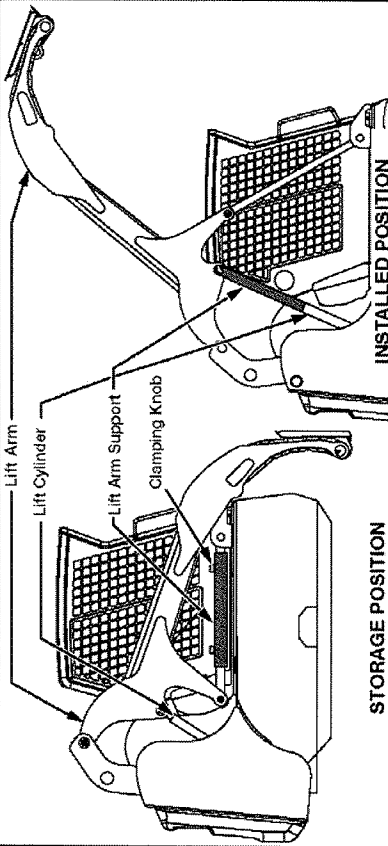
WARNING (6737248)



TO INSTALL APPROVED LIFT ARM SUPPORT P/N 6718312:

1. Remove Attachment From Loader.
2. Stay in Seat While Second Person Removes Lift Arm Support From Storage Position.
3. Raise Lift Arms While Second Person Positions Lift Arm Support Against Cylinder Rod.
4. Lower Lift Arms Slowly Until Lift Arm Support Is Held Securely Between Lift Arm And Cylinder.

57045



TO REMOVE LIFT ARM SUPPORT:

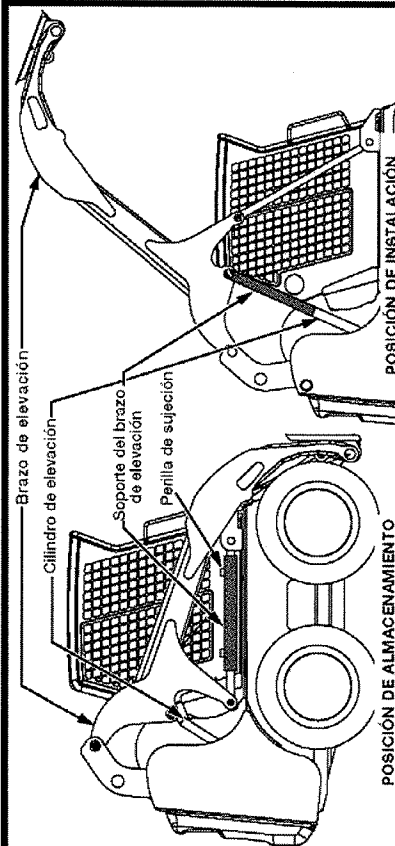
1. Raise Lift Arms While Second Person Removes Lift Arm Support From Cylinder Rod.
2. Stay in Seat Until The Lift Arms Are Lowered All The Way.
3. Return Lift Arm Support To Storage Position And Secure With Clamping Knobs.

SW 02 6719018

CÓMO INSTALAR EL SOPORTE APROBADO DEL BRAZO DE ELEVACIÓN P/N 6718312:

1. Retire el implemento del cargador.
2. Permanezca en el asiento mientras otra persona retira el soporte del brazo de elevación de la posición de almacenamiento.
3. Levante los brazos de elevación mientras otra persona coloque el soporte del brazo de elevación contra el vástago del cilindro.
4. Baje los brazos de elevación lentamente hasta que el soporte se encuentre bien asegurado entre el brazo de elevación y el cilindro.

53761



PARA RETIRAR EL SOPORTE DEL BRAZO DE ELEVACIÓN:

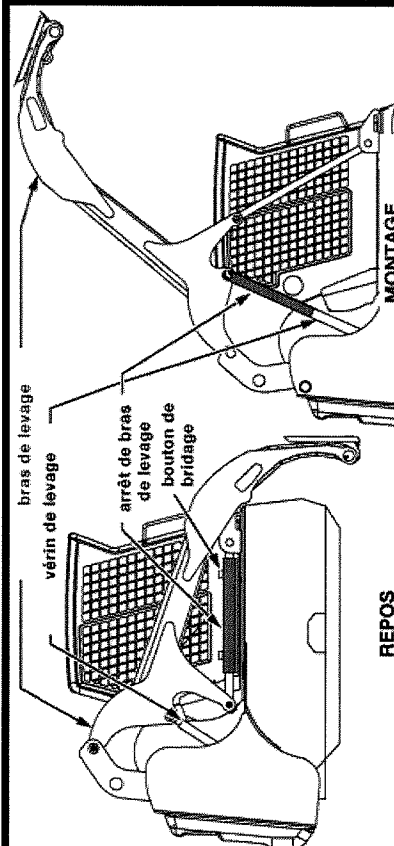
1. Levante los brazos de elevación mientras otra persona retira el soporte de el vástago del cilindro.
2. Permanezca en el asiento hasta que los brazos de elevación estén completamente abajo.
3. Regrese el soporte del brazo de elevación a la posición de almacenamiento y asegúrelo con las perillas de sujeción.

SW 01 6719018 AR

MONTAGE DE L'ARRÊT DE BRAS DE LEVAGE N/P6718312 :

1. Retirer l'arrêt de bras de levage de sa position de repos.
2. Il faut que l'opérateur soit sur le siège.
3. Relevez les bras à bout de course. Demander à un aide de monter l'arrêt de bras de levage sur la tige d'un des vérins de levage.
4. L'arrêt de bras de levage doit être bien appuyé sur la tige du vérin. Abaissez lentement les bras de levage jusqu'à ce que l'arrêt soit coincé entre les bras et le vérin de levage.

57045



DEPOSE DE L'ARRÊT DE BRAS DE LEVAGE :

1. Relevez les bras à bout de course. Demander à un aide de retirer l'arrêt de bras de levage.
2. Il faut que l'opérateur soit sur le siège jusqu'à ce que l'arrêt de bras de levage soit déposé et que les bras de levage soient abaissés à bout de course
3. Remettre l'arrêt de bras de levage dans sa position de repos et le fixer à l'aide de boutons de bridage.

Q7-03-6719018-FR

FLOAT "DETENT"

- Press yellow float button on right joystick while lowering lift arms.

RIGHT JOYSTICK - ISO

LOWER LIFT ARMS
BUCKET TILT
BUCKET TILT
RAISE LIFT ARMS

RIGHT JOYSTICK - H

RIGHT SIDE FORWARD
BUCKET TILT
BUCKET TILT
RIGHT SIDE BACKWARD

WARNING

AVOID INJURY OR DEATH

NEVER USE THE LOADER WITHOUT INSTRUCTIONS. READ OPERATION AND MAINTENANCE MANUAL AND HANDBOOK.	USE SEAT BELT. FASTEN SEAT BELT SECURELY.	KEEP FEET ON FOOTRESTS.	TO LEAVE THE LOADER: 1 LOWER THE LIFT ARMS. PUT ATTACHMENT FLAT ON GROUND. 2 STOP THE ENGINE
DO NOT TRAVEL OR TURN WITH LIFT ARMS UP. AND TURN ON FLAT LEVEL GROUND. DO NOT EXCEED RATED OPERATING CAPACITY (SEE SIGN ON LOADER).	NEVER MODIFY EQUIPMENT OR USE ATTACHMENTS NOT APPROVED BY BOBCAT COMPANY.	ON SLOPES, KEEP HEAVY END OF LOADER UPHILL.	3 ENGAGE THE BRAKE 4 RAISE SEAT BAR

Wichtige Anweisungen finden Sie in der Bedienungs- und Instandhaltungsanleitung. Für mehr Instruktionen, siehe el Manual de Operación y Mantenimiento. Voir le Manuel de l'opérateur et d'entretien pour d'autres renseignements.

"FRENADO" FLUTANTE

- Oprima el botón amarillo de flotación en el joystick derecho mientras baja los brazos.

JOYSTICK DERECHO - ISO

BAJAR LOS BRAZOS
INCLINAR EL CUCHARÓN
INCLINAR EL CUCHARÓN
ELEVARE LOS BRAZOS

JOYSTICK DERECHO - H

AVANZAR, LADO DERECHO
INCLINAR EL CUCHARÓN
INCLINAR EL CUCHARÓN
RETROCEDER, LADO DERECHO

ADVERTENCIA

EVITE LESIONES O ACCIDENTES FATALES

JAMÁS USE EL CARGADOR SIN LEER LAS INSTRUCCIONES. LEA EL MANUAL DE OPERACIÓN Y MANTENIMIENTO Y LA GUÍA.	USE LA BARRA DEL ASIENTO. ABROCHE EL CINTURÓN DE SEGURIDAD CON FIRMEZA.	MANTENGA LOS PIES EN LOS APÓYANES.	ANTES DE ABANDONAR EL CARGADOR: 1 BAJE LOS BRAZOS. COLOQUE EL IMPLEMENTO DE CAIR AL SUELO. 2 DETENGA EL MOTOR.
NO VIAJE O GIRE CON LOS BRAZOS CARGUE. DESCARGUE Y GIRE EL SUELO PLANOS LLANOS. NO EXCEDA LA CAPACIDAD DE OPERACIÓN NOMINAL (RDC) (VER ANTES EN CARGADOR).	JAMÁS MODIFIQUE EL EQUIPO O USE IMPLEMENTOS NO APROBADOS POR BOBCAT COMPANY.	EN PENDIENTES, MANTENGA EL EXTREMO PESADO DEL CARGADOR CUESTA ARRIBA.	3 COLOQUE EL FRENO. 4 SUBA LA BARRA DEL ASIENTO

Wichtige Anweisungen finden Sie in der Bedienungs- und Instandhaltungsanleitung. Für mehr Instruktionen, siehe el Manual de Operación y Mantenimiento. Voir le Manuel de l'opérateur et d'entretien pour d'autres renseignements.

⚠ AVERTISSEMENT

RISQUE DE BLESSURE GRAVES, VOIRE MORTELLES

POUR QUITTER LA CHARGEUSE :	
1 ADJUSTEZ LES BRAS DE LEVAGE. PLACEZ L'ACCESSOIRE À PLAT SUR LE SOL.	2 ARRÊTEZ LE MOTEUR
3 ENGAGEZ LE FREIN	4 RELEVÉZ L'ACCÈS AU SIÈGE

Weitere Anweisungen finden Sie in der Bedienungs- und Instandhaltungsanleitung.
 Para más instrucciones, vea el Manual de Operación y el Manual de Mantenimiento.
 Voir le Manuel de l'Opérateur et d'Entretien pour d'autres renseignements.

VERROUILLAGE DU FLOTTEMENT

• Appuyez sur le bouton jaune ou l'indicateur du manipulateur droit pendant l'abaissement des bras de levage.

 N'UTILISEZ JAMAIS LA CHARGEUSE SANS DISPOSER DES INSTRUCTIONS. LISEZ LE MANUEL ET LE GUIDE DE L'OPÉRATEUR ET D'ENTRETIEN.	 UTILISEZ L'ARCEAU DE SIÈGE. ATTACHEZ SOIGNEUSEMENT VOTRE CEINTURE DE SÉCURITÉ.	 GARDEZ LES PIEDS SUR LES REPOSE-PIEDS.	 SUR LES PENTES, VEULEZ À MAINTENIR LE CÔTÉ LOUPO DE LA CHARGEUSE VERS LE HAUT.
 NE VIREZ PAS ET NE DÉPLACEZ PAS LA CHARGEUSE QUAND LES BRAS CHARGÉS DECHARGEZ ET VIREZ UNIQUEMENT SUR UN SOL PLAT ET HORIZONTAL. NE DÉPASSEZ JAMAIS LA CAPACITÉ MAXIMALE PERMISE POUR AUTOCOLLANT SUR LA CHARGEUSE.	 NE MONTREZ JAMAIS L'ÉQUIPEMENT ET N'UTILISEZ JAMAIS D'ACCESSOIRES QUI NE SONT PAS APPROUVÉS PAR DOBOCAT COMPANY.		

67472 SW

7131518 fr

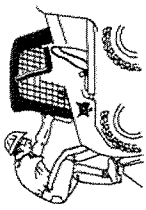
MANIPULATEUR DROIT - ISO

ABAISSEMENT DES BRAS

MANIPULATEUR DROIT - H

MARCHE AVANT CÔTÉ DROIT

ENTERING THE LOADER



OPERATING THE LOADER



LEAVING THE LOADER



OPERATION INSTRUCTIONS FOR SELECTABLE JOYSTICK CONTROLS (SJC)

TO OPERATE LOADER:

1. Fasten seat belt and lower seat bar.
2. Put joystick controls in neutral.
3. Start engine.
4. Select control mode (ISO or H pattern) on center instrument panel.
5. Activate green "PRESS TO OPERATE LOADER" button on left instrument panel.

- If hydraulic or drive functions do not operate, stop engine. Check that both joysticks are in the neutral position. Re-start engine.

Note: Activate "PRESS TO OPERATE LOADER" button again if seat bar is raised and lowered or key is turned off.

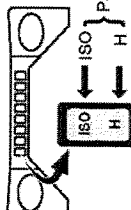
See Operation & Maintenance Manual and Handbook for more instructions.

WARNING

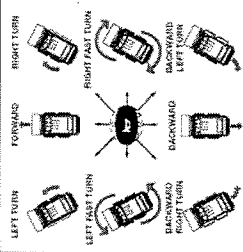
ACCIDENTAL LOADER MOVEMENT CAN CAUSE INJURY OR DEATH

- Drive and lift arm functions operate on different joysticks in each mode.
- Know and understand the selected control mode before operating.

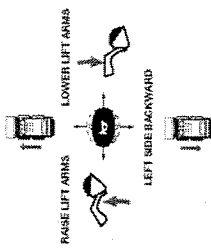
SELECT CONTROL MODE



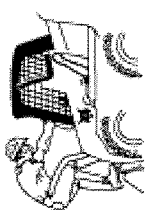
LEFT JOYSTICK - ISO



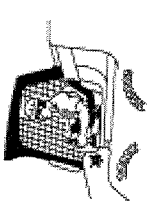
LEFT JOYSTICK - H



PARA ENTRAR AL CARGADOR



PARA OPERAR EL CARGADOR



PARA SALIR DEL CARGADOR



INSTRUCCIONES DE OPERACIÓN DEL JOYSTICK CON SELECCIÓN DE CONTROL (SJC)

PARA OPERAR EL CARGADOR:

1. Abroche el cinturón de seguridad y baje la barra del asiento.
2. Coloque los controles del joystick en posición neutral.
3. Encienda el motor.
4. Elija la modalidad de control (patrón ISO o H) en el panel de instrumentos central.
5. Active el botón verde "PRESS TO OPERATE LOADER" en el panel de instrumentos izquierdo.

- Detenga el motor si los sistemas hidráulicos o de transmisión no funcionan. Revise que ambos joystick estén en posición neutral. Encienda el motor de nuevo.

Nota: Active de nuevo el botón "PRESS TO OPERATE LOADER" si se sube o baja la barra del asiento o la llave se coloca en posición Off.

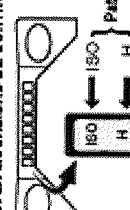
Consulte el manual de operación y mantenimiento como también el manual del operador para mayores instrucciones

ADVERTENCIA

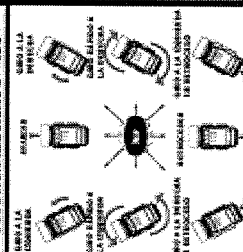
EL MOVIMIENTO ACCIDENTAL DEL CARGADOR PUEDE PROVOCAR LESIONES O ACCIDENTES FATALES

- La transmisión y el brazo elevador operan en joystick diferentes en cada modalidad.
- Conozca y entienda la modalidad de control que elija antes de operar la máquina.

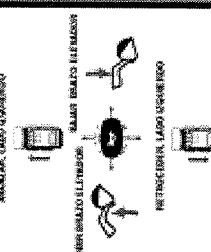
ELIJA LA MODALIDAD DE CONTROL

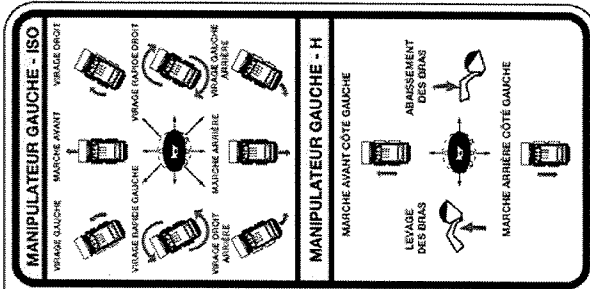


JOYSTICK IZQUIERDO - ISO



JOYSTICK IZQUIERDO - H





7131519B fr 7131519B

AVERTISSEMENT

UN MOUVEMENT ACCIDENTEL DE LA CHARGEUSE PEUT PROVOQUER DES BLESSURES GRAVES, VOIRE MORTELLES.

- Les fonctions de traction et de levage se commandent sur un manipulateur différent selon le mode.
- Vous devez connaître et comprendre le mode de commande sélectionné avant d'utiliser la chargeuse.

SÉLECTIONNEZ LE MODE DE COMMANDE

ISO H } Schéma

INSTRUCTIONS D'UTILISATION DES COMMANDES PAR MANIPULATEUR (SJC)

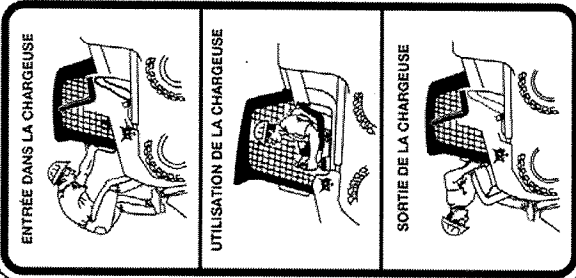
POUR UTILISER LA CHARGEUSE :

1. Attachez la ceinture de sécurité et abaissez l'arceau de siège.
2. Placez les commandes du manipulateur au point mort.
3. Démarrez le moteur.
4. Sélectionnez le mode de commande (ISO ou H) sur le tableau de bord central.
5. Appuyez sur le bouton "PRESS TO OPERATE LOADER" du tableau de bord gauche.

- Si les opérations hydrauliques ou de traction ne fonctionnent pas, arrêtez le moteur. Vérifiez que les deux manipulateurs sont bien au point mort. Redémarrez le moteur.

Remarque : actionnez de nouveau le bouton "PRESS TO OPERATE LOADER" si vous avez relevé puis abaissé l'arceau de siège ou si la clé est en position OFF.

Voir le Manuel et le Guide de l'Opérateur et d'Entretien pour des instructions supplémentaires.



WARNING

FAILURE OF THE LIFT ASSEMBLY CAN CAUSE SERIOUS INJURY OR DEATH

- BEFORE LIFTING LOADER:
 1. Check the hardware and fasteners at all lift points for proper torque.
 2. Inspect lift points for damage or cracked welds. Repair or replace components as necessary.
- No riders on loader during lifting. Keep 15 ft (5 m) away while lifting.
- See Operation & Maintenance Manual for more information.

70485 SW 6726423B enUS

ADVERTENCIA

LA FALLA DEL CONJUNTO ELEVADOR PUEDE PROVOCAR LESIONES GRAVES O FATALIDADES

- ANTES DE ELEVAREL CARGADOR:
 1. Revise que el armamento y los sujetadores en todos los puntos de elevación tengan el torque correcto.
 2. Inspeccione si los puntos de elevación están averiados o tienen soldaduras agrietadas. Repare o reponga los componentes, si es del caso.
- No transporte personas en el cargador mientras lo eleva. Manténgase a una distancia de 15 pies (5 metros) durante la elevación.
- Para mayor información, consulte el manual de operación y mantenimiento.

70485 SW 6726423B ar

AVERTISSEMENT

UNE DÉFAILLANCE DE L'ENSEMBLE DE LEVAGE PEUT ENTRAÎNER DES BLESSURES GRAVES, VOIRE MORTELLES.

- AVANT DE LEVER LA CHARGEUSE:
 1. Vérifiez que le couple de serrage de la visserie de fixation et des fixations est correct à tous les points de levage.
 2. Vérifiez que les points de levage ne sont pas endommagés et que leurs soudures ne sont pas fissurées. Réparez les composants endommagés ou remplacez-les si nécessaire.
- Personne ne doit se trouver sur la chargeuse durant son levage. Maintenez toute personne à une distance d'au moins 5 m pendant le levage.
- Voir le Manuel de l'Opérateur et d'Entretien pour plus d'informations.

70485 SW 6726423B fr

⚠ WARNING

FAILURE OF THE LIFT ASSEMBLY CAN CAUSE SERIOUS INJURY OR DEATH

- BEFORE LIFTING LOADER: 1. Check the hardware and fasteners of the Single Point Lift and Operator Cab (ROPS) for proper torque.
2. Inspect Single Point Lift for damage or cracked welds. Repair or replace components as necessary.
- No riders on loader during lifting. Keep 15 ft (5 m) away while lifting.
- See Operation & Maintenance Manual for more information.

70485 SW

6704786B enUS

⚠ ADVERTENCIA

UNA FALLO EN EL CONJUNTO DE ELEVACIÓN PUEDE PROVOCAR HERIDAS GRAVES O LA MUERTE

- ANTES DE LEVANTAR LA PALA MECÁNICA: 1. Verificar los herrajes y sujetadores del Punto único de elevación y la Cabina del operador (ROPS, Estructura protectora de vuelcos) para garantizar que la torsión sea la correcta.
2. Controlar que el Punto único de elevación no esté dañado ni haya grietas en la soldadura. Reparar o reemplazar los componentes según sea necesario.
- No debe haber ocupantes en la cargadora durante la elevación. Mantenerse a una distancia de 15 pies (5 m) durante la elevación.
- Consultar el Manual de utilización & mantenimiento para obtener más información.

70485 SW

6704786B ar

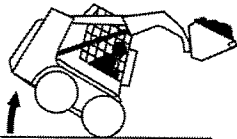
⚠ AVERTISSEMENT

UNE DÉFAILLANCE DE L'ENSEMBLE DE LEVAGE PEUT ENTRAÎNER DES BLESSURES GRAVES, VOIRE MORTELLES.

- AVANT DE LEVER LA CHARGEUSE : 1. Vérifiez que le couple de serrage de la visserie de fixation et des fixations du kit de levage à point unique et de la cabine de l'opérateur (ROPS) est correct.
2. Vérifiez que le kit de levage à point unique n'est pas endommagé et que ses soudures ne sont pas fissurées. Réparez les composants endommagés ou remplacez-les si nécessaire.
- Personne ne doit se trouver sur la chargeuse durant son levage. Maintenez toute personne à une distance d'au moins 15 ft (5 m) pendant le levage.
- Voir le Manuel de l'Opérateur et d'Entretien pour plus d'informations.

70485 SW

6704786B fr



⚠ WARNING

AVOID INJURY OR DEATH CARRY LOAD LOW

FAILURE TO OBEY CAN CAUSE TIPPING OR ROLLOVER OR LOSS OF LOAD OR VISIBILITY.

62702 SW

6579528C enUS



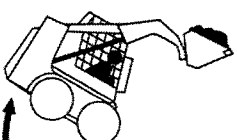
⚠ ADVERTENCIA

EVITE LESIONES O LA MUERTE LLEVE LA CARGA BAJA

EL INCUMPLIMIENTO PUEDE PROVOCAR TRASTORNOS, VUELCO, PERDIDA DE LA CARGA O DE LA VISIBILIDAD.

62702 SW

6579528C esAR



⚠ AVERTISSEMENT

RISQUE DE BLESSURE OU DE MORT GARDEZ LA CHARGE PRÈS DU SOL

LE NON RESPECT PEUT ENTRAÎNER UN BASCULEMENT, UN TONNEAU OU UNE PERTE DE VISIBILITÉ OU DE LA CHARGE.

62702 SW

6579528C frCA

SPECIFICATIONS

(S185) LOADER SPECIFICATIONS	SPEC-3
Capacities	SPEC-6
Controls	SPEC-5
Drive System	SPEC-4
Electrical	SPEC-6
Engine	SPEC-4
Hydraulic System	SPEC-5
Machine Dimensions	SPEC-3
Performance	SPEC-4
Tires	SPEC-6

**SPECIFICATIONS
(SPEC)**



Bobcat®

(S185) LOADER SPECIFICATIONS (CONT'D)**Performance**

Rated Operating Capacity (ISO)	839 kg (1850 lb)
with 200 Pound Frame Mounted Counterweight Kit	907 kg (2000 lb)
Tipping Load (ISO)	1849 kg (4076 lb)
Operating Weight	2821 kg (6220 lb)
Travel Speed	
- Single Speed Loader	11,8 km/h (7.3 mph)
- Two-Speed Loader (Opt.) Low/High	12,1 km/h (7.5 mph) / 17,9 km/h (11.1 mph)
SAE Breakout Force - Lift	1588 kg (3500 lb)
SAE Breakout Force - Tilt	1554 kg (3425 lb)
Push Force	1905 kg (4200 lb)

Engine

Make / Model	Kubota / V2607-DI-TE3B Interim Tier IV
Fuel / Cooling	Diesel / Liquid
Horsepower (SAE Net)	43,3 kW (58 hp) @ 2700 rpm
Torque (SAE Net)	193,9 N•m (143 ft-lb) @ 1425 rpm
Number of Cylinders	4
Displacement	2,6 L (158.7 in ³)
Bore / Stroke	87 mm / 110 mm (3.425 in / 4.33 in)
Lubrication	Gear Pump Pressure system with Filter
Crankcase Ventilation	Closed Breathing
Air Cleaner	Dry replaceable paper cartridge with separate safety element.
Ignition	Diesel Compression
Air Induction	Turbo-Charged
Starting Aid	Glow Plugs - Automatically activated as needed in RUN position.
Low Idle	1175 - 1325 rpm
High Idle	2760 - 2900 rpm

Drive System

Main Drive	Hydrostatic 4-wheel drive
Transmission	Infinitely variable tandem hydrostatic piston pumps, driving two fully reversing hydrostatic motors.
Final Drive Chains	Prestressed #80 HSOC endless roller chain (no master link) and sprockets in sealed chaincase with oil lubrication (No adjustment needed). Two chains per side with no idler sprocket.
Total Engine to Wheel Reduction	33:1
Axle Size	50,8 mm (2.00 in), heat treated
Wheel Bolts	Eight - 9/16 in. Wheel Bolts fixed to axle hubs

(S185) LOADER SPECIFICATIONS (CONT'D)

Controls

Vehicle Steering	Direction and speed controlled by two hand operated steering levers or optional joystick(s).
Loader Hydraulics - Lift and Tilt - Front Auxiliary - Rear Auxiliary (Option)	Controlled by separate foot pedals or optional Advanced Control System (ACS) or optional Selectable Joystick Control (SJC) Controlled by electrical switch on Right Hand steering lever or optional Right Hand Selectable Joystick Control (SJC) Controlled by electrical switch on Left Hand steering lever or optional Left Hand Selectable Joystick Control (SJC)
Auxiliary Pressure Release	Pressure relieved through front quick couplers. Push couplers in, hold for 5 seconds.
Engine	Hand lever speed control; key-type start switch or optional Deluxe Instrumentation Panel and function error shutdown.
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 (Standard on Single Speed and Two-Speed Loaders)	Mechanical disc, manually operated switch on front instrument panel.

Hydraulic System

Pump Type	Engine driven gear type
Pump Capacity - Standard - High-Flow Option	64 L/min (16.9 U.S. gpm) @ 2850 Engine rpm @ 91% efficiency 100 L/min (26.4 U.S. gpm) @ 2850 Engine rpm @ 91% efficiency
System Relief at Quick Couplers	22,4 - 23,1 MPa (224 - 231 bar) (3250 - 3350 psi)
Filters	Full flow replaceable, 3-micron synthetic media element
Hydraulic Cylinders Bore Diameter: Lift Cylinder (2) Tilt Cylinder (2) Rod Diameter: Lift Cylinder (2) Tilt Cylinder (2) Stroke: Lift Cylinder (2) Tilt Cylinder (2)	Double-acting; tilt cylinders have cushioning feature on dump and rollback 63,5 mm (2.5 in) 69,8 mm (2.75 in) 38,1 mm (1.50 in) 34,9 mm (1.375 in) 601 mm (23.67 in) 335 mm (13.19 in)
Control Valve	3 spool, open center type with float detent on lift and electrically controlled auxiliary spool.
Fluid Type	BOBCAT FLUID, Hydraulic/Hydrostatic 6903117 - (2.5 U.S. gal) 6903118 - (5 U.S. gal) 6903119 - (55 U.S. gal)
Fluid Lines	SAE Standard tubelines, hoses and fittings
Hydraulic Function Time: Raise Lift Arms Lower Lift Arms Bucket Dump Bucket Rollback	3.5 Seconds 2.4 Seconds 2.4 Seconds 1.9 Seconds

(S185) LOADER SPECIFICATIONS (CONT'D)

Electrical

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

Capacities

Fuel Tank	90,8 L (24 U.S. gal)
Engine Oil with filter	9,7 L (10.25 qt)
Engine Cooling System without heater with Heater	Propylene Glycol / water mixture (53% PG / 47% water) 12,6 L (13.3 qt) 13,7 L (14.5 qt)
Hydraulic/Hydrostatic Reservoir	18,2 L (4.8 U.S. gal)
Hydraulic/Hydrostatic System (including Reservoir)	34,1 L (9 U.S. gal)
Chaincase Reservoir	30,3 L (8 U.S. gal)

Tires

Bobcat Standard Duty	Bobcat Standard Duty 10 - 16.5 8 Ply Rating
Bobcat Severe Duty	Bobcat Severe Duty 10 - 16.5 10 Ply Rating
Bulky Hulk	Bobcat Super Float 31 x 12 - 16.5 10 Ply Rating
Recommended Pressure	Inflate tires to MAXIMUM pressure shown on the side wall of the tire. DO NOT mix brands of tires used on the same loader.

WARRANTY

WARRANTY WARRANTY-3

WARRANTY



Bobcat®

WARRANTY

Bobcat Loaders

Bobcat Company warrants to its authorized dealers and authorized dealers of Bobcat Equipment Ltd., who in turn warrant to the owner, that each new Bobcat loader will be free from proven defects in material and workmanship with respect to (i) all components of the product except as otherwise specified herein for twelve (12) months, (ii) the drive belt from the hydrostatic pump to the engine, for thirty six (36) months, provided that after the initial twelve month warranty period, such warranty shall be limited to parts only and does not include labor, (iii) tracks and Bobcat brand tires, for twelve (12) months on a prorated basis based on the remaining depth of the track or tire at the time any defect is discovered, and (iv) Bobcat brand batteries, for an additional twelve (12) months after the initial twelve month warranty period, provided that Bobcat Company shall only reimburse a fixed portion of the cost of replacing the battery during such additional twelve months. The foregoing time periods shall all commence after delivery by the authorized Bobcat dealer to the original buyer.

During the warranty period, the authorized Bobcat dealer shall repair or replace, at Bobcat Company's option, without charge for parts and labor, any part of the Bobcat product except as otherwise specified herein which fails because of defects in material or workmanship. The owner shall provide the authorized Bobcat dealer with prompt written notice of the defect and allow reasonable time for repair or replacement. Bobcat Company may, at its option, require failed parts to be returned to the factory. Travel time of mechanics and transportation of the Bobcat product to the authorized Bobcat dealer for warranty work are the responsibility of the owner. The remedies provided in this warranty are exclusive.

This warranty does not apply to diesel engine fuel injection pumps and injectors or tires (except Bobcat brand tires). The owner shall rely solely on the warranty, if any, of the respective manufacturers thereof. This warranty does not cover replacement of scheduled service items such as oil, filters, tune-up parts, and other high-wear items. This warranty does not cover damages resulting from abuse, accidents, alterations, use of the Bobcat product with any accessory or attachment not approved by Bobcat Company, air flow obstructions, or failure to maintain or use the Bobcat product according to the instructions applicable to it.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND CONDITIONS, EXCEPT THE WARRANTY OF TITLE. BOBCAT COMPANY DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL BOBCAT COMPANY OR THE AUTHORIZED BOBCAT DEALER BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, LOSS OR INTERRUPTION OF BUSINESS, LOST PROFITS, OR LOSS OF MACHINE USE, WHETHER BASED ON CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY, STATUTE OR OTHERWISE, EVEN IF BOBCAT COMPANY OR THE AUTHORIZED BOBCAT DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE TOTAL LIABILITY OF BOBCAT COMPANY AND THE AUTHORIZED BOBCAT DEALERS WITH RESPECT TO THE PRODUCT AND SERVICES FURNISHED HEREUNDER SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT UPON WHICH SUCH LIABILITY IS BASED.





Bobcat®

ALPHABETICAL INDEX

AIR CLEANER SERVICE	PM-19
AIR CONDITIONING BELT	PM-42
ALTERNATOR BELT	PM-41
ATTACHMENT CONTROL DEVICE (ACD)	OI-39
ATTACHMENTS	OI-56
BACK-UP ALARM SYSTEM	OI-19
BACK-UP ALARM SYSTEM	PM-13
BOBCAT COMPANY IS ISO 9001 CERTIFIED	V
BOBCAT INTERLOCK CONTROL SYSTEM (BICS)	OI-16
BOBCAT INTERLOCK CONTROL SYSTEM (BICS)	PM-8
BOB-TACH (HAND LEVER)	PM-49
BOB-TACH (POWER)	PM-50
CONTROL IDENTIFICATION	OI-12
CONTROL PANEL SETUP	SA-9
COUNTERWEIGHTS	OI-55
DAILY INSPECTION	OI-40
DELIVERY REPORT	VI
DIAGNOSTIC SERVICE CODES	SA-3
DRIVE BELT	PM-43
DRIVE RESPONSE	OI-27
DRIVING AND STEERING THE LOADER	OI-21
ELECTRICAL SYSTEM	PM-27
EMERGENCY EXIT	OI-18
ENGINE COOLING SYSTEM	PM-25
ENGINE LUBRICATION SYSTEM	PM-24
ENGINE SPEED CONTROL	OI-20
FEATURES, ACCESSORIES AND ATTACHMENTS	VIII
FINAL DRIVE TRANSMISSION (CHAINCASE)	PM-40
FIRE PREVENTION	XV
FUEL SYSTEM	PM-21
HEATING, VENTILATION AND AIR CONDITIONING (HVAC)	PM-18
HYDRAULIC CONTROLS	OI-31
HYDRAULIC / HYDROSTATIC SYSTEM	PM-31
INSTRUMENT PANEL IDENTIFICATION	OI-5

**ALPHABETICAL
INDEX**

Continued On Next Page

ALPHABETICAL INDEX (CONT'D)

LIFT ARM BYPASS CONTROL	OI-17
LIFT ARM SUPPORT DEVICE	PM-11
LIFTING THE LOADER	OI-72
LOADER IDENTIFICATION	VII
(S185) LOADER SPECIFICATIONS	SPEC-3
LOADER STORAGE AND RETURN TO SERVICE	PM-51
LUBRICATING THE LOADER	PM-46
MACHINE SIGNS (DECALS)	XVIII
MAINTENANCE CLOCK	SA-14
MAINTENANCE SAFETY	PM-5
MONITORING THE DISPLAY PANELS	OI-53
OPERATING PROCEDURE	OI-62
OPERATOR CAB	PM-14
PARKING BRAKE	OI-17
PASSWORD SETUP (DELUXE INSTRUMENTATION PANEL)	SA-12
PASSWORD SETUP (KEYLESS START PANEL)	SA-11
PIVOT PINS	PM-48
PRE-STARTING PROCEDURE	OI-42
PUBLICATIONS AND TRAINING RESOURCES	XX
REAR DOOR (TAILGATE)	PM-17
REAR GRILLE	PM-17
REGULAR MAINTENANCE ITEMS	V
SAFETY INSTRUCTIONS	XIII
SEAT BAR RESTRAINT SYSTEM	OI-15
SEAT BAR RESTRAINT SYSTEM	PM-9
SEAT BELT	PM-10
SERIAL NUMBER LOCATIONS	VI
SERVICE SCHEDULE	PM-7
SPARK ARRESTER MUFFLER	PM-38
SPEED MANAGEMENT	OI-25
STARTING THE ENGINE	OI-45
STEERING DRIFT COMPENSATION	OI-29
STOPPING THE ENGINE AND LEAVING THE LOADER	OI-54
STOPPING THE LOADER	OI-23

Continued On Next Page

ALPHABETICAL INDEX (CONT'D)

TIRE MAINTENANCE	PM-39
TOWING THE LOADER	OI-71
TRACTION LOCK OVERRIDE	OI-17
TRANSPORTING THE LOADER ON A TRAILER	OI-73
TWO-SPEED CONTROL	OI-24
WARRANTY	WARRANTY-3



Bobcat®

