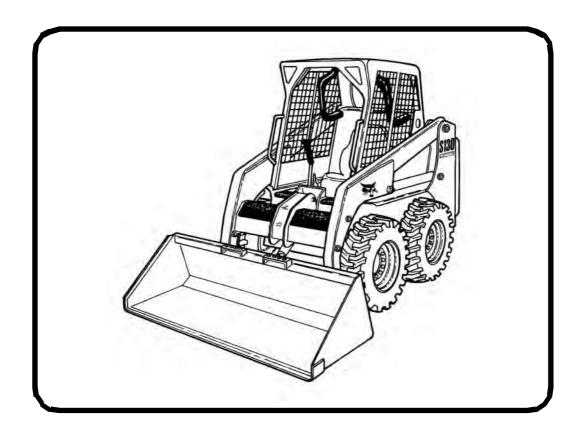




# Operation & Maintenance Manual S130 Skid-Steer Loader

## S/N A1Z760001 & Above



EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS™)



### **OPERATOR SAFETY WARNINGS**

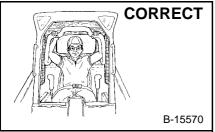


Operator must have instructions before operating the Untrained operators ca machine. can cause injury or death.

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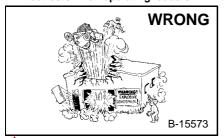


Safety Alert Symbol: This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.

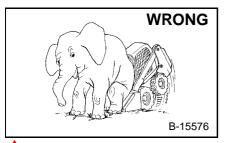


Always use the seat bar and fasten seat belt snugly.

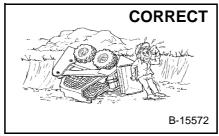
Always keep feet on the foot pedals or footrests when operating loaders.



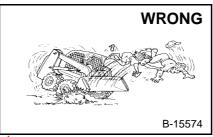
Do not use loaders in atmosphere with explosive dust, explosive gas, or where exhaust can contact flammable material.



Avoid exceeding Rated Operating Capacity.



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

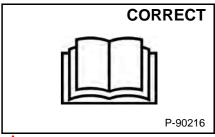


Never carry riders.

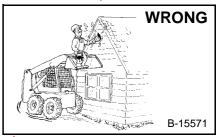
Keep bystanders away from work area.



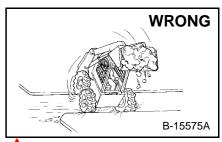
Never exit loaders with engine running or with lift arms up. To park, engage parking brake and put attachment flat on the ground.



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

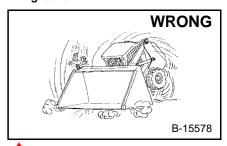


Never use loaders as man lift or elevating device for personnel.



Always carry bucket attachments as low as possible. Do not travel or turn with lift arms up.

Load, unload, and turn on flat level ground.



Never modify equipment.

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

#### SAFETY EQUIPMENT

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

- SEAT BELT: Check belt fasteners and check for damaged webbing or buckle.
- SEAT BAR: When up, it must lock the loader controls.

  OPERATOR CAB (ROPS and FOPS): It must be on the loader with all fasteners tight.
- OPERATOR'S HANDBOOK: Must be in the cab.
- SAFETY SIGNS (DECALS): Replace if damaged.
  SAFETY TREADS: Replace if damaged.
- GRAB HANDLES: Replace if damaged.
- LIFT ARM SUPPORT DEVICE: Replace if damaged.
- PARKING BRAKE
- 10. BOBCAT INTERLOCK CONTROL SYSTEM (BICS)

OSW09-0409



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SYSTEM SETUP AND ANALYSIS
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REFERENCE INFORMATION
Write the correct information for YOUR Bobcat loader in the spaces below. Always use these numbers when referring to your Bobcat loader.
Loader Serial Number
Engine Serial Number
NOTES:
VOLID DODGAT DEALED.
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**

This Operation & Maintenance Manual was written to give the owner / operator instructions on the safe operation & 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 can illustrate options and accessories not installed on your loader.

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#### **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.

#### **REGULAR MAINTENANCE ITEMS**

ENGINE OIL FILTER (6 Pack) 6675517		HYDROSTATIC FILTER 6661248
FUEL FILTER 6667352	<b>6</b>	HYDROSTATIC CASE DRAIN FILTERS 6661022
AIR FILTER, Outer 6598492	(A)	BATTERY 6674687
AIR FILTER, Inner 6598362		
HYDRAULIC CHARGE FILTER 6686926 (Earlier Models) 6692337 (Later Models)		HYDRAULIC FILL / BREATHER CAP 6727475

NOTE: Always verify Part Numbers with your Bobcat dealer.

#### **LUBRICANTS AND FLUIDS**

							Bobcat Equipment	uipment						Only for	Only for Wheeled EXC and AL	C and AL
			ENG	ENGINE / LOADER TRANSMISSION	R TRANSMIS	NOIS		HYDRAULIC/ HYDROSTATIC	VULIC/		ANTIFREEZ	ANTIFREEZE		AXLE / TRANSMISSION	NOISSIMSN	BRAKE
				ூ	ů			•			<b>(1)</b>			E	•0	<u> </u>
Packaging	Lineart	Bobcat Engine Power SAE 0W30	Bobcat Engine Power SAE 10W30	Bobcat Engine Power SAE 10W30 CJ4	Bobcat Engine Power SAE 15W40 CJ4	Bobcat Engine Power SAE 15W40	Bobcat Engine Power SAE 20W50	Bobcat Superior SH Hydraulic/Hydrostatic	Bobcat Bio Hydraulic Hydraulic/Hydrostatic	Bobcat PG Coolant Concentrated	Bobcat PG Coolant anosse2 p	Bobcat EG Coolant Concentrated	Bobcat EG Coolant Premixed	Bobcat Axle \ Transmission oil SAE 85W90 LS	Bobcat Axle / Transmission Oil ISO 100	Bobcat Brake Fluid LHM
		**************************************	<b>※</b> ※		<b>※※</b>		-15°C   +30°C	 	The state of the s		Protection -36°C	ction SC C		-12°C +50°C	<b>***</b>	
5 L Can		6987796A	6987789A	6987818A	6987819A	6987790A	6987797A	6987791A	6987792A		6987793A	6987803A	6987804A	6987805A	6987794A	6987795A
25 L Container		6987796B	6987789B	6987818B	6987819B	6987790B	6987797B	6987791B	6987792B	6987813B	6987793B	6987803B	6987804B	6987805B	6987794B	
209 L Drum		987796C	6987789C	6987818C	6987819C	987790C	6987797C	6987791C	6987792C	6987813C	6987793C	6987803C	6987804C	6987805C	6987794C	
1000 L Tank		G987796D	6987789D	6987818D	6987819D	G987790D	6987797D	6987791D	6987792D	6987813D	6987793D	6987803D	6987804D	6987805D		
			Bobcat	Bobcat Multi-Purpose Grease	Grease						6987888	888				
400 gr Grease			Bobcai	Bobcat Supreme HD Grease	Grease						6987889	7889				
			Bobca	Bobcat Extreme HP Grease	Grease						6987890	7890				
4700300-EN (06-13)	N (06-13)															

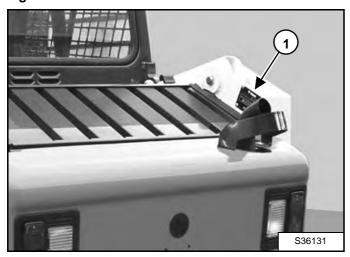
8

#### **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) can use different parts, or it can be necessary to use a different procedure in doing a specific service operation.

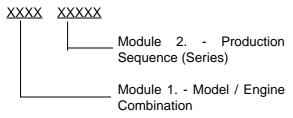
#### **Loader Serial Number**

Figure 1



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

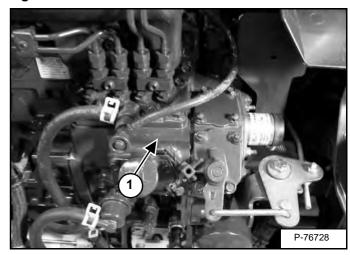
Explanation of loader Serial Number:



- 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**

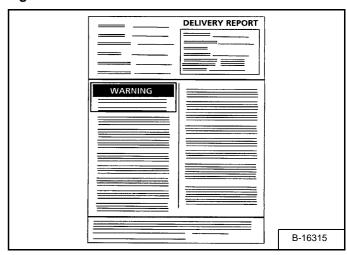
Figure 2



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

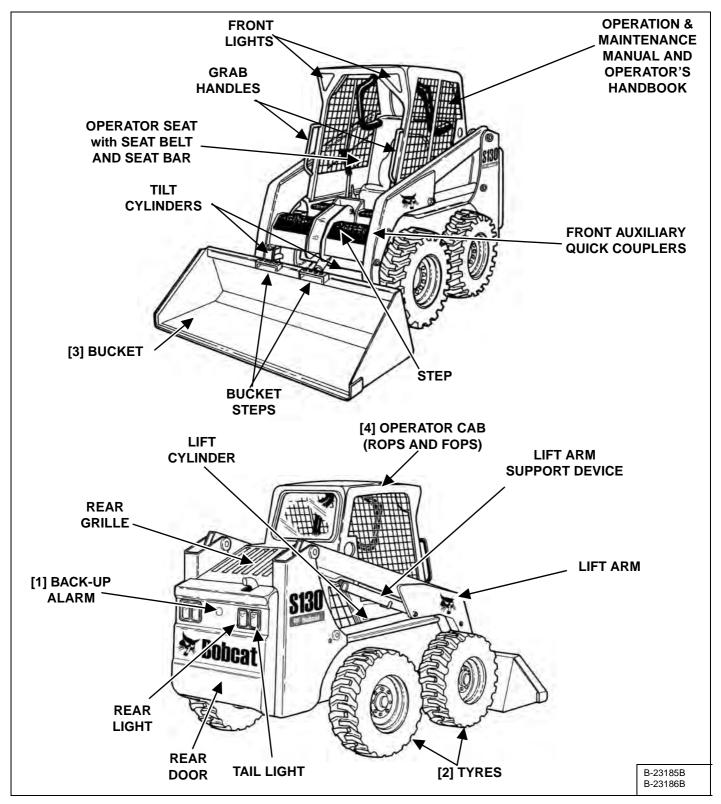
#### **DELIVERY REPORT**

Figure 3



The delivery report [Figure 3] contains a list of items that must be explained or shown to the owner or operator by the dealer when the Bobcat loader is delivered.

The delivery report must be reviewed and signed by the owner or operator and the dealer.



- [1] Optional or Field Accessory (Not Standard Equipment)
- [2] TYRES The Bobcat loader is factory equipped with standard tyres.
- [3] BUCKETS Several different buckets and other attachments are available for the Bobcat loader.
- [4] ROPS Roll-Over Protective Structure per ISO 3471 and FOPS Falling-Object Protective Structure per ISO 3449, Level I. Level II is available.

#### FEATURES, ACCESSORIES AND ATTACHMENTS

#### Standard Items

Model S130 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 (Level I) Approved
- Engine / Hydraulic Systems Shutdown
- Instrumentation: Hourmeter, Engine Temperature and Fuel Gauges and Warning Lights
- Lift Arm Support Device
- · Lights, Front and Rear
- Parking Brake
- Seat Bar
- Seat Belt
- Spark Arrester Muffler
- Tyres (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
- Attachment Control Device (ACD)
- Back-up Alarm
- Bucket Shield Kit
- 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)
- Front Horn
- · Fuel Sediment Bowl Kit
- Hose Guide
- Hydraulic Bucket Positioning (Includes On / Off Selection)
- Keyless Start
- Lift Kit (4-Point, Single Point)
- Locking Fuel Cap
- Power Bob-Tach
- Radiator Screen Kit
- Rear Window Wiper
- Ride Control
- Rotating Beacon
- Road Kit (manually controlled machines)
- Road Kit (SJC controlled machines)
- Road Option (manually controlled machines)
- Road Option (SJC controlled machines)
- Seat Belt with 3-Point Restraint
- Seat Belt 3 Inch Wide
- Seat Belt Retractable
- Sound Cab (Reduces noise at operator ear)
- Sound Reduction Kit (Reduces noise at operator ear)
- Special Applications Kit
- Steel Tracks
- Strobe Light
- Tailgate Lock
- Tool Container
- Tyres:

Bobcat Heavy Duty 10 - 16.5 10 Ply Rating

Bobcat Heavy Duty Offset Poly Fill 10 - 16.5 10 Ply

Rating

Bobcat Severe Duty 10 - 16.5 10 Ply Rating

Bobcat Severe Duty Poly-Fill 10 - 16.5 10 Ply Rating Bobcat Heavy Duty Flotation 31X12 - 16.5 10 Ply

Vinyl Cab Enclosure

 Warning Lights: Four-Way Flasher (Includes Direction Signals)

- 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 can vary.

#### FEATURES, ACCESSORIES AND ATTACHMENTS (CONT'D)

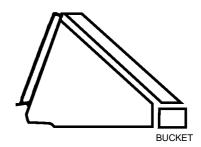
These and other attachments are approved for use on this model loader. Do not use unapproved attachments. Attachments not manufactured by Bobcat can not be approved.

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, Fertiliser 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

Dozer Blade

Snow Blade

V-Blade

- Brush Saw
- Breaker, Hydraulic
- Buckets
- Bucket Adapter
- · Chipper, Wood
- Combination Bucket
- Concrete Mixer
- Cutter Crusher
- Diager
- Dumping Hopper
- Flail Cutter
- Forks, Utility
- Grader
- Grapple, Farm / Utility
- Grapple, Industrial
- Grapple, Root
- Landplane
- Landscape Rake
- Mower
- Packer Wheel
- Pallet Forks
- Planer
- Rear Stabilisers
- Scarifier
- Scraper
- Seeder
- Snow Pusher
- Snowblower
- Sod Layer
- Soil Conditioner
- Spreader

- Steel Tracks
- Sweeper
- Three-Point Hitch Adapter
- Tiller
- Tilt-Tatch
- Trench Compactor
- Trencher
- Utility Frame
- Vibratory Roller
- Water Kit
- Whisker Broom
- X-Change™ Frame

#### **Special Applications Kit**

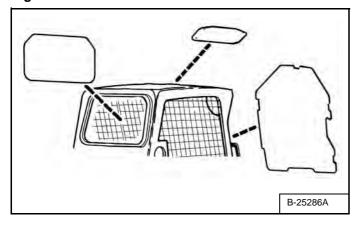


#### **AVOID INJURY OR DEATH**

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 AND TRAINING RESOURCES**

SAFETY INSTRUCTIONS
Before Operation
Safe Operation Is The Operator's Responsibility
Safe Operation Needs A Qualified Operator
Avoid Silica Dust
FIRE PREVENTION
Maintenance
Operation
Electrical
Hydraulic System
Fueling
Starting
Spark Arrester Exhaust System
Welding And Grinding
Fire Extinguishers
MACHINE SIGNS (DECALS)
No-Text Safety Signs
PUBLICATIONS AND TRAINING RESOURCES



#### **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 motorway, 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. Its brief instructions are convenient to the operator. See your Bobcat dealer for more information on translated versions.

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.

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#### 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 operating the machine. Untrained operators can cause injury or death.

W-2001-0502

## **IMPORTANT**

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

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# **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 and machine signs (decals).
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. For driving on public roads, the machine must be equipped as stipulated by the local regulations authorising operation on public roads in your specific country. 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.

#### 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.
- 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.

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