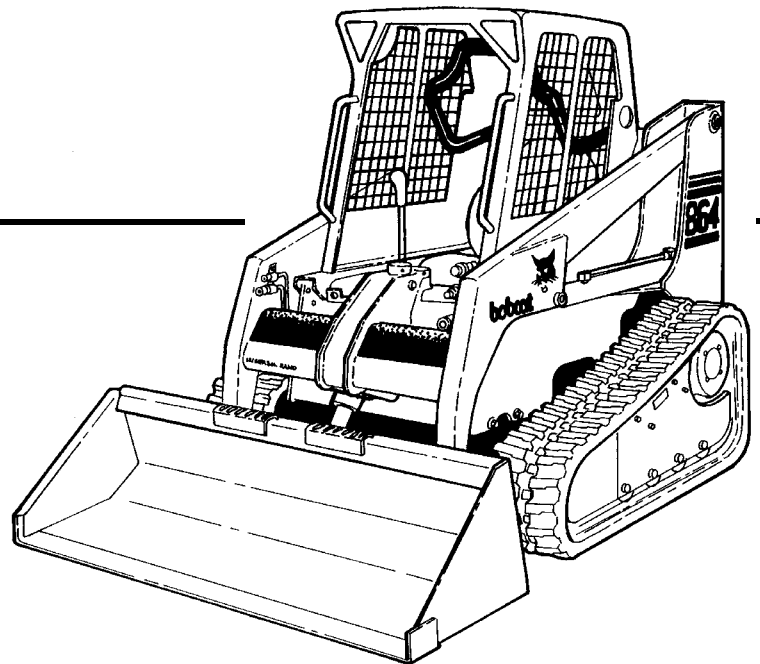


Bobcat® Operation & Maintenance Manual

S/N 518911001 thru 14999

S/N 516811001 thru 14999

S/N 517511001 thru 14999



Doosan purchased Bobcat Company from Ingersoll-Rand Company in 2007. Any reference to Ingersoll-Rand Company or use of trademarks, service marks, logos, or other proprietary identifying marks belonging to Ingersoll-Rand Company in this manual is historical or nominative in nature, and is not meant to suggest a current affiliation between Ingersoll-Rand Company and Bobcat Company or the products of either.

**EQUIPPED WITH
BOBCAT INTERLOCK
CONTROL SYSTEM (BICS)**

6900953 (12-06) Revised (6-12) (4)



Printed in U.S.A.

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OPERATOR SAFETY WARNINGS



WARNING

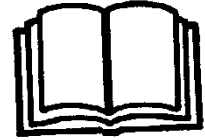
Operator must have instructions before running the machine. Untrained operators can cause injury or death.

W-2001-1285



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

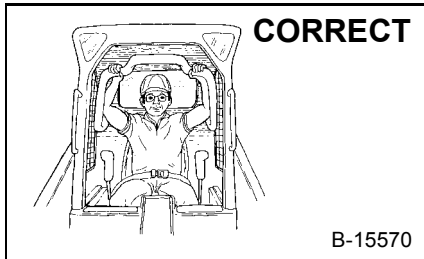
CORRECT



B-10731a



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



CORRECT

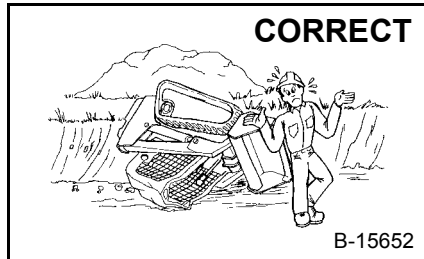
B-15570



Always use the seat bar and fasten seat belt snugly.



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

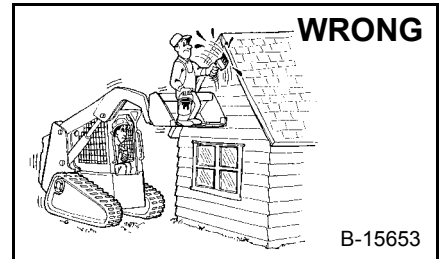


CORRECT

B-15652



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

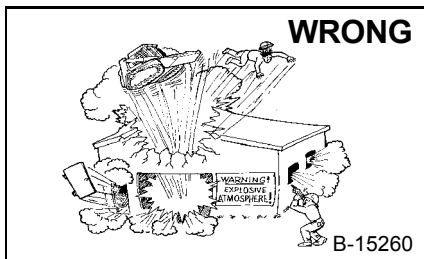


WRONG

B-15653



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

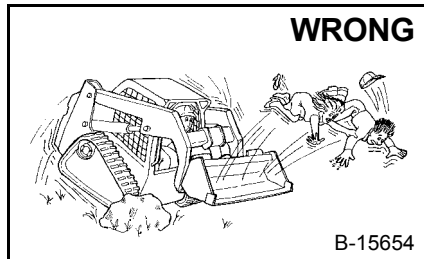


WRONG

B-15260



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



WRONG

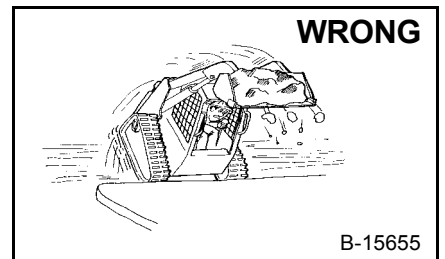
B-15654



Never carry riders.



Keep bystanders away from work area.



WRONG

B-15655



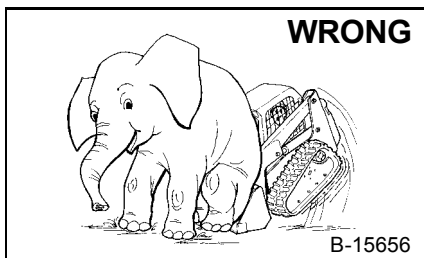
Always carry bucket or attachments as low as possible.



Do not travel or turn with lift arms up.



Load, unload, and turn on flat level ground.

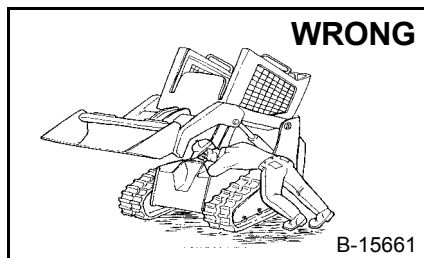


WRONG

B-15656



Never exceed Rated Operating Capacity.



WRONG

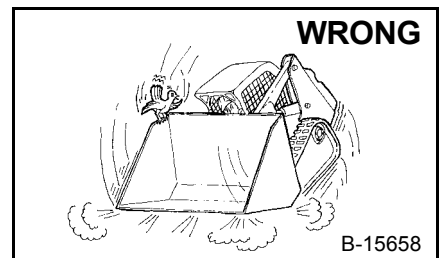
B-15661



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-15658



Never modify equipment.



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

SAFETY EQUIPMENT

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

1. SEAT BELT: Check belt fasteners and check for damaged webbing or buckle.
2. SEAT BAR: When up, it must lock the loader controls.
3. OPERATOR CAB (ROPS and FOPS): It must be on the loader with all fasteners tight.
4. 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)



Bobcat®

CONTENTS

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

Bobcat Company Europe
Drève Richelle 167
B-1410 WATERLOO
Belgium

FOREWORD

SAFETY

OPERATING INSTRUCTIONS

PREVENTIVE MAINTENANCE

SYSTEM SETUP & ANALYSIS

MACHINE SIGN TRANSLATIONS

SPECIFICATIONS



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 machine. If you have any questions, see your Bobcat dealer.

BOBCAT COMPANY IS ISO 9001:2000 CERTIFIED V

BOBCAT LOADER IDENTIFICATION. VIII

DELIVERY REPORT. VII

FEATURES AND ACCESSORIES IX

MOTOR OIL V

REGULAR MAINTENANCE ITEMS V

SERIAL NUMBER LOCATIONS VII

 Engine Serial Number VII

 Loader Serial Number VII



Bobcat®

BOBCAT COMPANY IS ISO 9001:2000 CERTIFIED



ISO 9001:2000 is a set of international standards that control the processes and procedures which we use to design, develop, manufacture, distribute, and service Bobcat products.





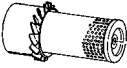
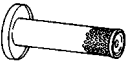
British Standards Institute (**BSI**) is the Certified Registrar Bobcat chose to assess the Company’s compliance with the ISO 9001:2000 set of standards. The BSI registration certifies that the two Bobcat manufacturing plants and the Bobcat corporate offices (Gwinner, Bismarck & West Fargo) in North Dakota are in compliance with ISO 9001:2000. Only certified assessors, like BSI, can grant registrations.

ISO 9001:2000 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) 6665603		BATTERY 6665427
	FUEL FILTER 6667352		FLUID, BLACK GOLD Hydraulic / Hydrostatic (2, 2-1/2 Gallon Containers) 6563328
	AIR FILTER, Outer 6666375		
	AIR FILTER, Inner 6666376		

NOTE: Always verify Part Numbers with your Bobcat dealer.

MOTOR OIL

6667299 - SAE 15W40 CE/SG (12 qt.)	6724558 - SAE 15W40 CE/SG (1 Gal.)	6674204 - SAE 15W40 CE/SG (2.5 Gal.)
6657301 - SAE 10W30 CE/SG (12 qt.)	6724557 - SAE 10W30 CE/SG (1 Gal.)	6674205 - SAE 10W30 CE/SG (2.5 Gal.)
6657303 - SAE 30W CE/SG (12 qt.)	6724559 - SAE 30W CS/SG (1 Gal.)	6674206 - SAE 30W CS/SG (2.5 Gal.)



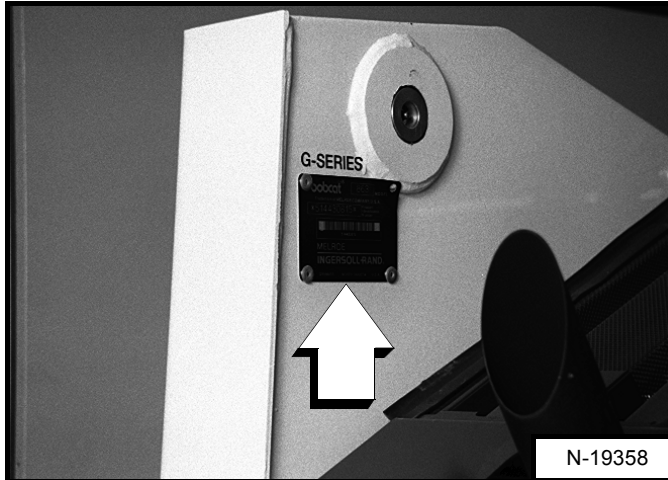
Bobcat®

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.

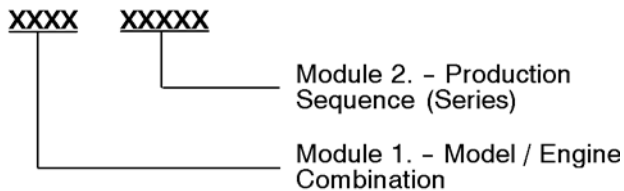
Loader Serial Number

Figure 1



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

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

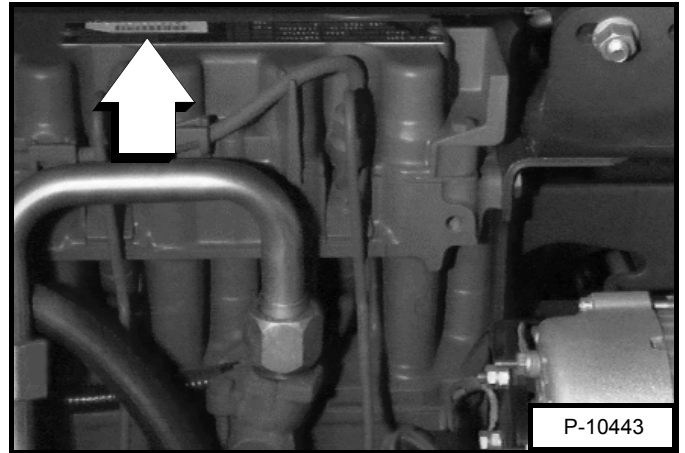
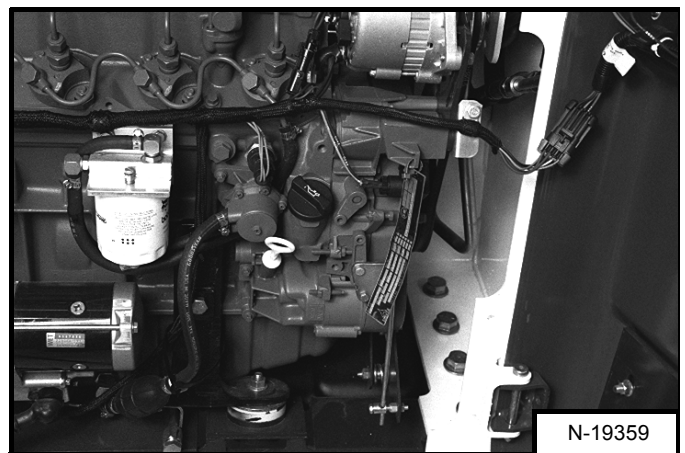


Figure 3



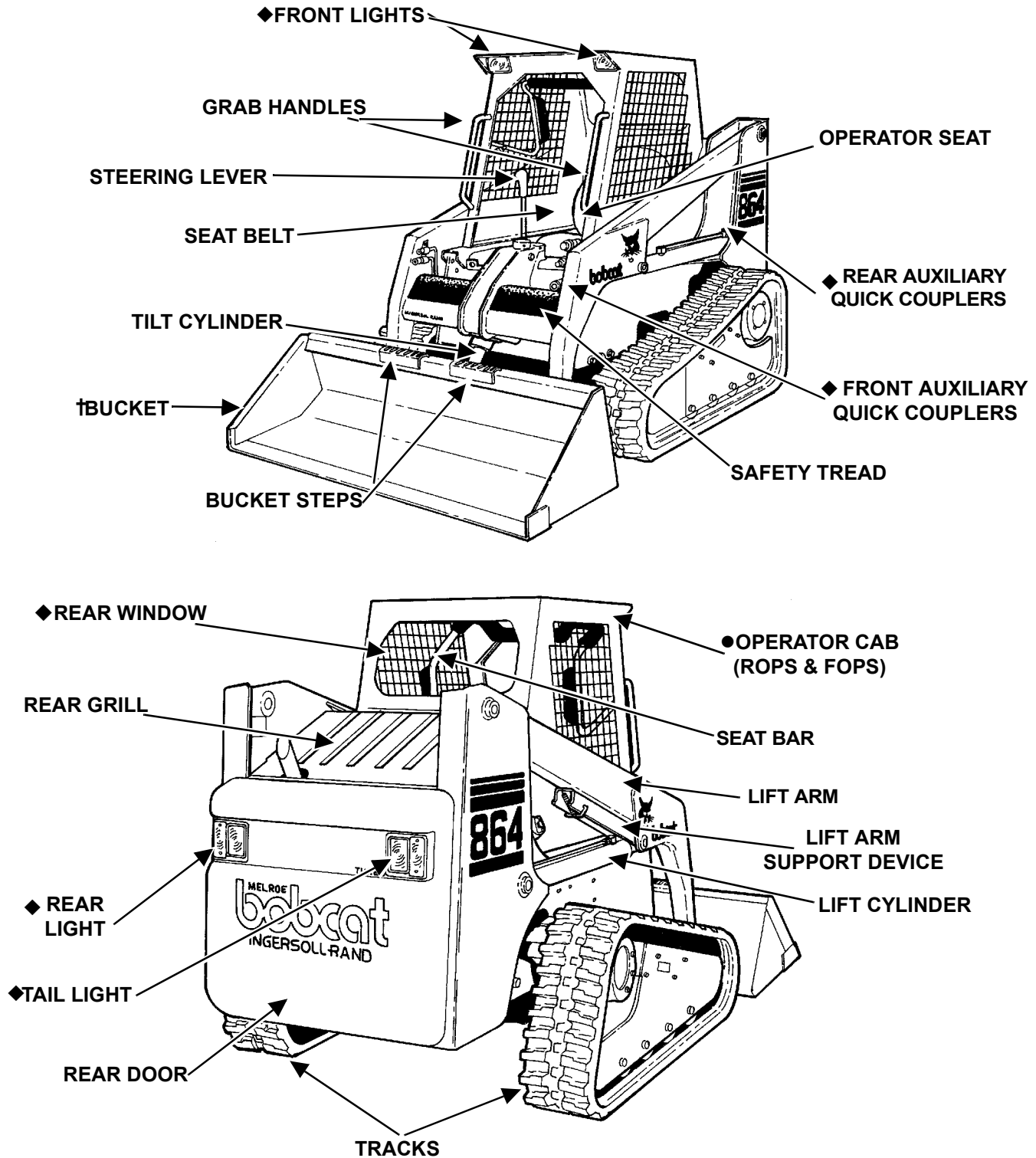
The engine serial number is located on the valve cover at the right side of the engine [Figure 2]. There is also an extra S/N tag attached to the engine [Figure 3].

DELIVERY REPORT

Figure 4

The Delivery Report must be filled out 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. Make sure it is filled out completely [Figure 4].

BOBCAT LOADER IDENTIFICATION



◆ OPTIONAL OR FIELD ACCESSORY (Not Standard Equipment)

† BUCKET - Several different buckets and other attachments are available for the Bobcat Loader.

● ROPS, FOPS - Roll Over Protective Structure, per SAE J1040 and ISO 3471, and Falling Object Protective Structure per SAE J1043 and ISO 3449, Level I. Level II is available. The Bobcat Loader is base-equipped with a standard operator cab as shown. Extra insulated cab is available as an option (Reduced noise level).

FEATURES AND ACCESSORIES

Model 864 Bobcat Loaders are equipped with the following Standard items:

- Bob-Tach
- Turbo Charger (Approved Spark Arrestor)
- Lift Arm Support Device
- Deluxe Operator Cab (with ROPS & FOPS Approval)
- Bobcat Interlock Control System (BICS)
- Seat Belt
- Seat Bar
- Parking Brake
- Gauges/Warning Lights
- Automatically Activated Glow Plugs
- Deluxe Suspension Seat (Vinyl)
- Dual Path Cooling System
- Front Auxiliary Hydraulics
- Front and Rear Lights
- Rubber Tracks - 12.6 inch (320 mm)

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

Operator Cab

- FOPS Kit (Level II)
- Rear Window Wiper
- Side Windows
- Cab Door
- Vinyl Cab Enclosure
- Heater Kit
- Deluxe Suspension Seat (Cloth)
- Horn
- Back-up Alarm
- Cover Kit (Pedals Area)
- Fire Extinguisher
- Strobe Light or Rotating Beacon
- Flasher Lights Kit
- 3 inch Wide Seat Belt
- Seat Belt with 3-Point Restraint
- Special Applications Kit*
- Air Conditioning

* Includes Lexan Front Door; Top & Rear Windows

Specifications subject to change without notice

Instrumentation

- Deluxe Instrumentation Panel (Includes Keyless Start)
- Automatic Shutdown Feature (For Standard Panel)

Hydraulics

- Rear Auxiliary Hydraulics
- Hydraulic Bucket Positioning (Includes On/Off Selection)
- Power Bob-Tach (Hydraulic Wedge Engagement)

Hydraulic Control Options

- Advanced Hand Controls (AHC)
- Advanced Control System (ACS)
(Selectable Foot Pedal or Hand Control)

Other

- Catalytic Exhaust Purifier
- Engine Heater
- Single Point Lift
- Four Point Lift
- Radiator Screen Kit
- Rear Door Lock
- Dual Attachment Control Kit
- G-Series 7-Pin Attachment Control Kit
- Weighlog Kit



Bobcat®

SAFETY

MACHINE SIGNS (DECALS)XVI
SAFETY INSTRUCTIONSXIII
Before OperationXIII
Fire PreventionXV
Safe Operation Is The Operator's ResponsibilityXIV
Safe Operation Needs A Qualified OperatorXIV

SAFETY



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 gasses 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 websites 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
1-888-258-0808

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

SI SSL-0206

SAFETY INSTRUCTIONS (CONT'D)

Safe Operation Is The Operator's Responsibility



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

W-2001-1285



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

I-2019-0284



Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.

W-2044-1285

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 (R.O.C.) 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, hearing protection or Special Applications Kits are required for some work. See your Bobcat dealer about Bobcat Safety Equipment for your model.

SI SSL-0206

SAFETY INSTRUCTIONS (CONT'D)

Fire Prevention

The machines 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.

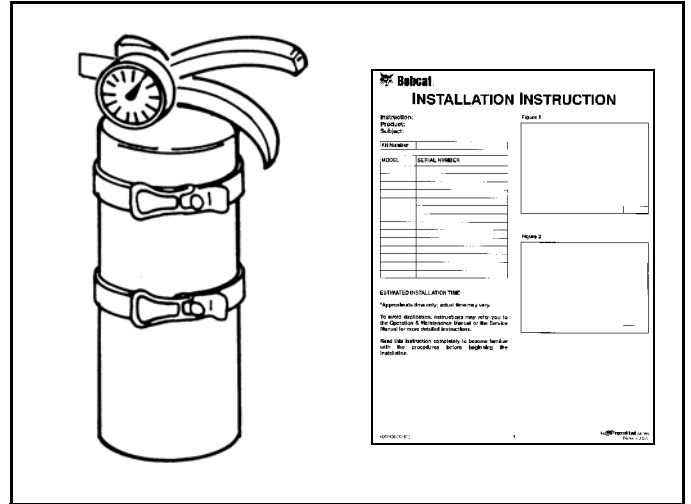
Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.

The 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.

- Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.
- The operator cab, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.
- Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part.
- Check fuel and hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. 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.
- Do not use ether or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or bystanders.
- Always clean the machine, 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.
- Stop the engine and let it cool before adding fuel. No smoking!

- Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.
- Use the procedure in the Operation & Maintenance Manual for cleaning the spark arrestor muffler (if equipped).

Figure 1



- Know where fire extinguishers and first aid kits are located and how to use them. Fire extinguishers are available from your Bobcat dealer [Figure 1].

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.

WARNING
AVOID INJURY OR DEATH

TO LEAVE THE LOADER!

1. Turn knob 1/4 turn clockwise
2. Pull & hold knob to lower lift arms

6718390 (Foot Control) 6711840

WARNING
AVOID INJURY OR DEATH

TO LEAVE THE LOADER!

1. Turn knob 1/4 turn clockwise
2. Pull & hold knob to lower lift arms

6718389 (Hand Control)

RATED OPERATING CAPACITY

905 kg 2000 lbs.

FAHRBARE NUTZLAST 2000 lbs.

CAPACIDAD DE OPERACION 2000 lbs.

CAPACITE MAXIMUM DE LEVAGE 2000 lbs.

6717799

FAST **SLOW**

SCHELL RAPID WIP LANGSAM LEWEN

6557565

OPERATION INSTRUCTIONS

TO OPERATE LOADER:

- Fasten seat belt and lower seat bar.
- Start engine.
- Make sure "PRESS TO OPERATE" label on lift control panel is visible.
- Push "PRESS TO OPERATE" button on lift control panel.

NOTE: "PRESS TO OPERATE" label is a symbol of the Operator's Maintenance Manual and located in rear section.

6717640 (Foot Pedal)

WARNING

6718397 (Hand Control)

OPERATION INSTRUCTIONS FOR LOADERS WITH ADVANCED HAND CONTROLS (AHC)

TO OPERATE LOADER:

- Fasten seat belt and lower seat bar.
- Start engine.
- Push "PRESS TO OPERATE" button on left side of seat.
- Push "PRESS TO OPERATE" button on right side of seat.

NOTE: "PRESS TO OPERATE" button is a symbol of the Operator's Maintenance Manual and located in rear section.

6718704 (Hand Control)

6728045

BOBCAT OPERATOR'S HANDBOOK

WARNING

6719951

BOBCAT HYDROSTATIC FLUID

6565990

WARNING

CYLINDER CONTAINS HIGH PRESSURE GAS. DO NOT OPEN. OPENING CYLINDER CAN RELEASE HO AND CAUSE INJURY OR DEATH.

6577754 (3)

DANGER

AVOID DEATH

- Encasement of hydraulic cylinders (cylinders, hoses, fittings, components) or a part failure can cause lift arms to drop.
- Keep out of the area when lift arms are raised unless supported by an approved lift arm support system.

6718399 (2) Under Cab

DANGER

AVOID DEATH

- Keep out of this area when lift arms are raised unless supported by lift arm stop.
- Moving lift arm control or failure of a part can cause lift arms to drop.

6718393

WARNING

AVOID INJURY OR DEATH

CARRY LOAD LOW

FAILURE TO CARRY LOW CAN CAUSE TIPPING OR COLLAPSE OR LOSS OF LOAD OR VISIBILITY.

6718391 Behind Lift Arm Crossmember

6718774 Inside Fuse Cover

6561383 Behind Bob-Tach

DANGER

AVOID DEATH

- Attachment not to be used against the ground and cause front wheels to rise. Never go under or reach under lift arms or lift cylinders without an approved lift arm support system.

6718392

B-15218

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