

EN



# Bobcat®

## Operation & Maintenance Manual

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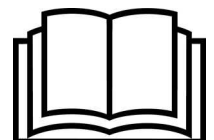


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# E37

## Compact Excavator

S/N B4S611001 & Above



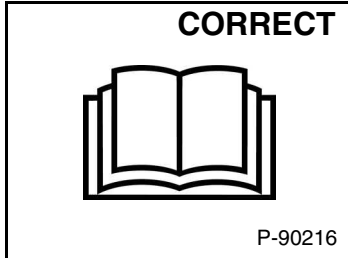
# OPERATOR SAFETY WARNING

## **WARNING**


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

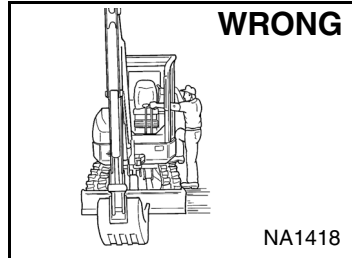
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 **Safety Alert Symbol:** This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.




 Never operate without instructions.

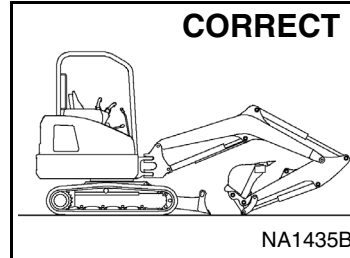
 Read machine signs, and Operation & Maintenance Manual, and Operator's Handbook.



 Do not grasp control handles when entering cab / canopy.


 Be sure controls are in neutral before starting.

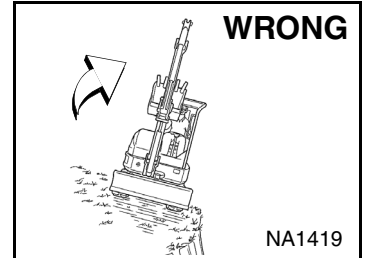
 Sound horn and check behind machine before starting.



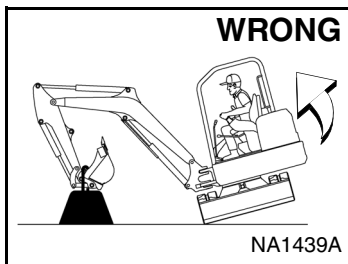
 Never operate without approved cab / canopy.


 Never modify equipment.


 Never use attachments not approved by Bobcat Company.

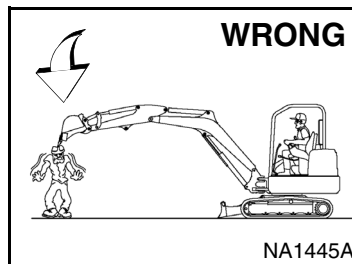


 Avoid steep areas or banks that could break away.



 Use caution to avoid tipping - do not swing heavy load over side of track.

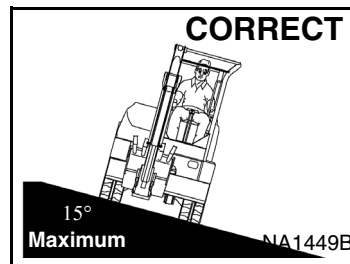
 Operate on flat, level ground.



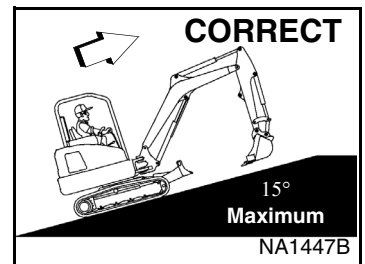
 Keep bystanders out of maximum reach area.

 Do not travel or turn with bucket extended.

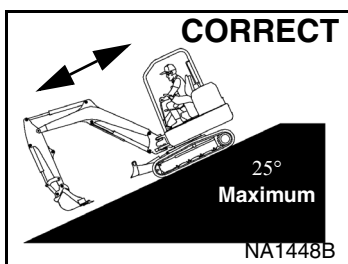
 Never carry riders.




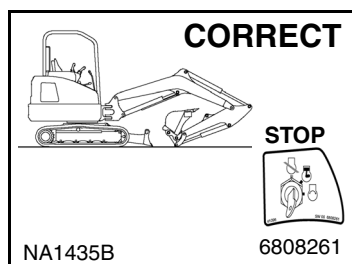
 Never exceed a 15° slope to the side.




 Never travel up a slope that exceeds 15°.

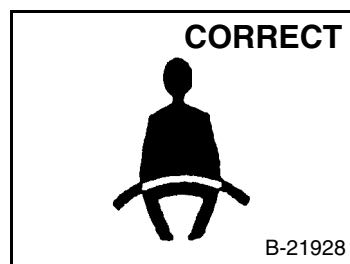


 Never exceed 25° when going down or backing up a slope.



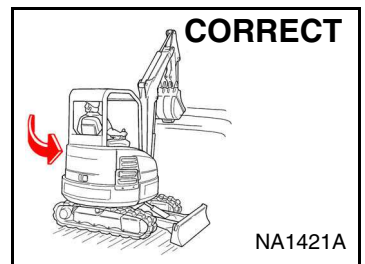
 To leave excavator, lower the work equipment and the blade to the ground.


 Stop the engine.



 Fasten seat belt securely.

 Operate controls only from operator's seat.



 Look in the direction of rotation and make sure no bystanders are in the work area.

## SAFETY EQUIPMENT

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

1. SEAT BELT: Check belt fasteners and check for damaged webbing or buckle.
2. OPERATOR CAB / CANOPY (ROPS and TOPS): Check condition and mounting hardware.
3. OPERATOR'S HANDBOOK: Must be in the cab / canopy.
4. LEFT HAND CONSOLE: When raised must deactivate the travel and hydraulic functions.
5. SAFETY SIGNS (DECALS): Replace if damaged.
6. GRAB HANDLES: Replace if damaged.
7. INTEGRATED SLEW LOCK BRAKE.
8. SAFETY TREAD.: Replace if damaged.

OSW66-EN-0117

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## REFERENCE INFORMATION

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

Excavator Serial  
Number

Engine Serial Number

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NOTES:

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YOUR BOBCAT DEALER:

ADDRESS:

PHONE:

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

Doosan Bobcat EMEA s.r.o.  
U Kodetky 1810  
263 12 Dobris  
CZECH REPUBLIC

## FOREWORD

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

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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, North Dakota (U.S.A.), Pontchâteau (France), and the Bobcat corporate offices (Gwinner, Bismarck, and West Fargo) in North Dakota. **TÜV Rheinland** is the Certified Registrar Bobcat Company chose to assess the company's compliance with the ISO 9001 at Bobcat's manufacturing facility in Dobris (Czech Republic). Only certified assessors, like BSI and TÜV Rheinland, 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**

 <p><b>ENGINE OIL FILTER (6 Pack)</b> 6675517</p>	 <p><b>BATTERY</b> 7269858</p>
 <p><b>FUEL FILTER</b> 6667352</p>	 <p><b>HYDRAULIC FILL / BREATHER CAP</b> 6692836</p>
 <p><b>FUEL PRE-FILTER</b> 7247169</p>	 <p><b>RADIATOR CAP</b> 6673313</p>
 <p><b>AIR FILTER, Outer</b> 6672467</p>  <p><b>AIR FILTER, Inner</b> 6672468</p>	 <p><b>PRIMARY HYDRAULIC FILTER</b> 6668819 <b>CASE DRAIN HYDRAULIC FILTER</b> 7009365</p>
 <p><b>HVAC AIR FILTER (IF EQUIPPED)</b> Fresh Air 7176099 Recirculation 7222791</p>	

**NOTE: Always verify Part Numbers with your Bobcat dealer.**

## REGULAR MAINTENANCE ITEMS (CONT'D)

### Fluids, Lubricants And Fuel

The fluids, lubricants and fuel described below are those used in the factory and apply to operating conditions in European temperate climate areas. Please see your Bobcat dealer for requirements in other climate areas.

Read and understand the preventive maintenance required before adding or replacing any fluids or lubricants.

ENGINE SYSTEMS				
Machine Components	Fluids And Lubricants	T° Range	Packaging**	Part Number
Engine	- Bobcat Engine Power SAE 10W30 CJ4 / ACEA E9	-25°C – +30°C	A, B, C, D	6987818*
	- Bobcat Engine Power SAE 15W40 CJ4 / ACEA E9	-20°C – +40°C	A, B, C, D	6987819
Cooling Circuit	- Bobcat PG Coolant Concentrated	-36°C	B, C, D	6987803*
	- Bobcat PG Coolant 4 Seasons	-36°C	A, B, C, D	6987793
Fuel Tank	- High-quality diesel fuel that meets EN590	-	-	*

HYDRAULIC / HYDROSTATIC SYSTEMS				
Machine Components	Fluids And Lubricants	T° Range	Packaging**	Part Number
Hydraulic Oil Tank	- Bobcat Superior SH Hydraulic / Hydrostatic	-35°C – +50°C	A, B, C, D	6987791*
	- Bobcat Biodegradable Hydraulic / Hydrostatic	-35°C – +50°C	A, B, C, D	6987792

MECHANICAL SYSTEMS				
Machine Components	Fluids And Lubricants	Drop Point	Packaging**	Part Number
All Mechanical Systems	- Bobcat Multipurpose Grease	From 260°C	E	6987888*
	- Bobcat Supreme HD Grease	From 280°C	E	6987889
	- Bobcat Extreme HP Grease	From 260°C	E	6987890

(\*) Factory Filled Fluids And Lubricants

(\*\*) Packaging Available:

A = 5 L Can

B = 25 L Container

C = 209 L Drum

D = 1000 L Tank

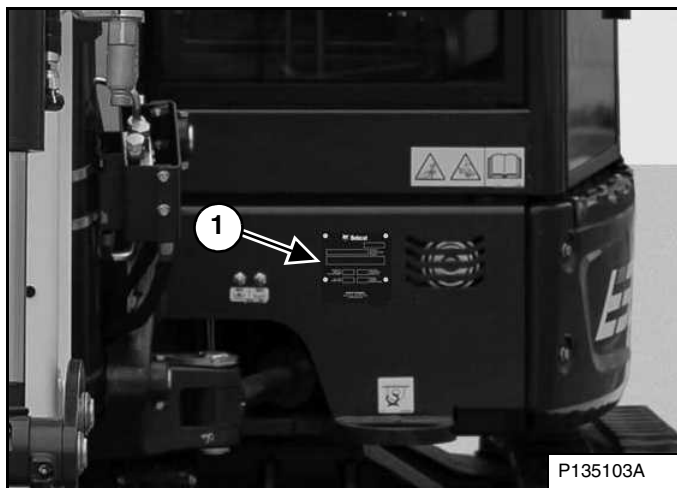
E = 400 g Tube

## SERIAL NUMBER LOCATIONS

Always use the serial number of the excavator when requesting service information or when ordering parts. Earlier 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

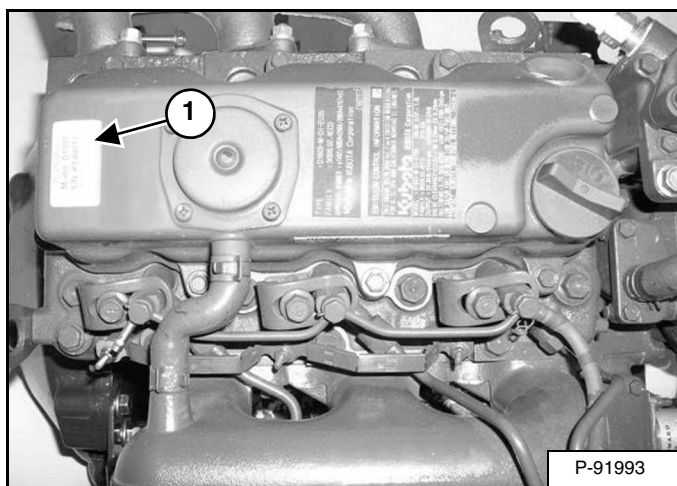
### Excavator Serial Number

Figure 1



The excavator serial number plate (Item 1) [Figure 1] is located on the frame of the machine in the location shown.

Figure 2



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

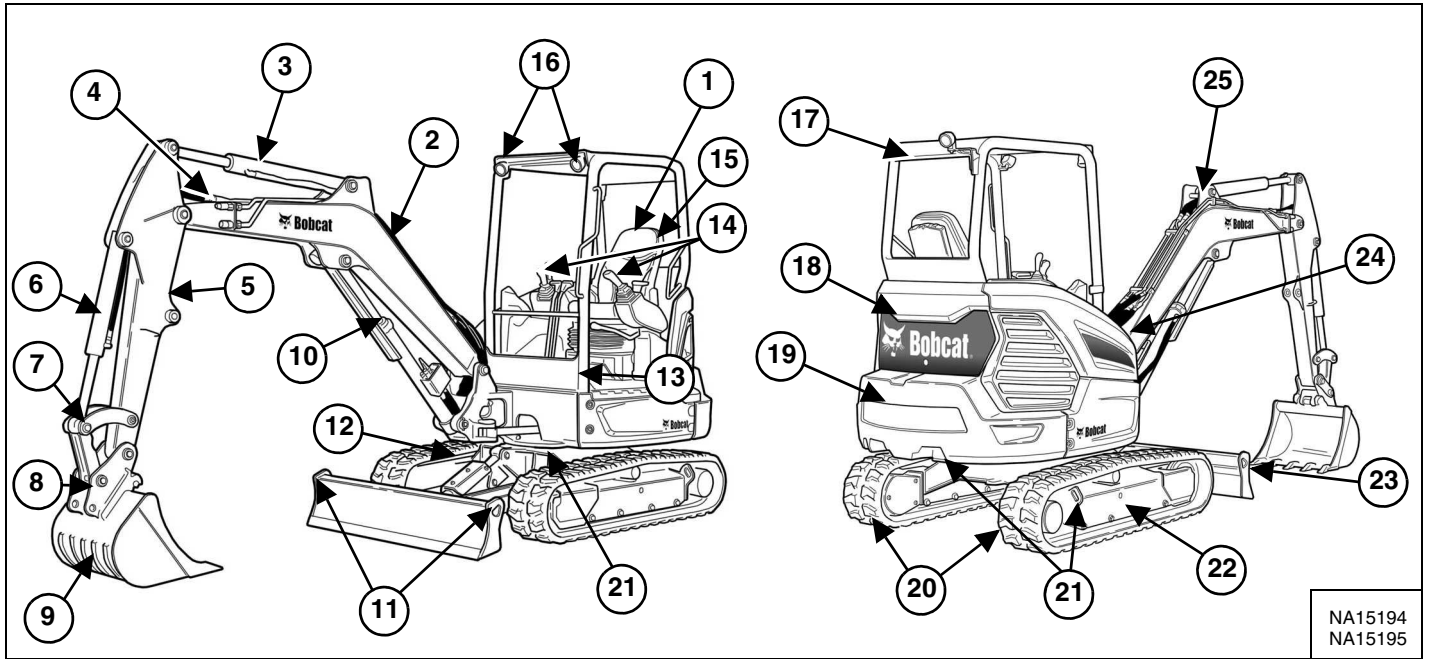
## DELIVERY REPORT

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 excavator is delivered.

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

## EXCAVATOR IDENTIFICATION



NA15194  
NA15195

ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	Operation & Maintenance Manual and Operator's Handbook	17	Canopy / Cab (ROPS / TOPS / FOPS) [3]
2	Boom	18	Rear Cover
3	Arm Cylinder	19	Counterweight
4	Auxiliary Quick Couplers	20	Tracks [4]
5	Arm	21	Tie-Downs (Both Sides)
6	Bucket Cylinder	22	Track Frames
7	Bucket Link	23	Blade
8	Attachment Quick Coupler (if equipped) [1]	24	Right Side Cover
9	Bucket [2]	25	Lift Point
10	Boom Cylinder		
11	Tie-Downs / Lift Points		
12	Blade Cylinder		
13	Upperstructure		
14	Joysticks		
15	Operator's Seat with Seat Belt		
16	Mirrors (If equipped)		

[1] Attachment Coupler - Optional attachment couplers are available.

[2] Bucket - Several different buckets and other attachments are available from the Bobcat Excavator.

[3] ROPS, TOPS - (Roll-Over Protective Structure / Tip-Over Protective Structure) per ISO 12117-2 and ISO 12117. FOPS (Falling Object Protective Structure) per ISO 10262 - Level 1.

[4] Tracks - Optional tracks are available.



## FEATURES, ACCESSORIES AND ATTACHMENTS

### Standard Items

Model E37 Bobcat excavators are equipped with the following standard items:

- 1550 mm (61.0 in) Dozer Blade
- Canopy with ROPS / TOPS / FOPS Approval
- 300 mm (11.8 in) Rubber Tracks
- Standard Instrument Panel
- Two-Speed Travel
- Auto Shift Drive Motors
- Auxiliary Hydraulics (With Selectable Auxiliary Hydraulic Flow)
- Hydraulic and Travel Control Lockouts
- Engine Speed Control Lever
- Blade Float
- Standard Arm
- Boom and Frame Mounted Work Lights
- Engine And Hydraulic System Monitor With Shut Down
- Horn
- Hydraulic Joystick Controls
- Basic Seat
- Retractable Seat Belt
- Advanced Diagnostics
- Counterweight

### Options And Accessories

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

- Enclosed Cab With Heater (ROPS / TOPS / FOPS)
- Enclosed Cab With Heater and A/C (ROPS / TOPS / FOPS)
- Cloth / Vinyl Suspension Seat
- Deluxe Instrument Panel
- Primary, Secondary, Third, and Fourth Auxiliary Hydraulics
- Radio
- Depth Check
- Travel Motion Alarm
- Keyless Start
- Canopy / Cab Mounted Lights
- Engine Speed Control Dial With Auto Idle Feature
- Attachment Quick Coupler, Klac™ System
- Attachment Quick Coupler, German Style Quick Coupler
- Attachment Quick Coupler, Bobcat Hydraulic Quick Coupler
- Attachment Quick Coupler, Mechanical Pin Grabber Quick Coupler
- Pin-On X-Change™
- Front Guard Kit
- Steel Tracks

- Long Arm
- Load Hold - Boom / Arm
- Lifting Device
- Direct to Tank Auxiliary Hydraulics
- Counterweight (Additional)
- Suspension Seat
- Coupler Block Kit
- Case Drain
- Arm Mounted Auxiliary Hydraulic Couplers
- HEPA HVAC Fresh Air Filter
- Fire Extinguisher
- Beacon
- Strobe Light
- Shoe Pad Kit
- Sediment Bowl Kit
- Engine Block Heater Kit
- Antenna And Speakers Kit
- Muffler Purifier Kit

### Attachments

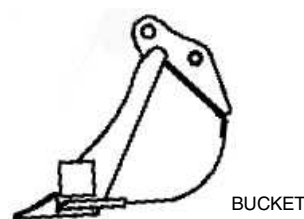
These and other attachments are approved for use on this model Bobcat excavator. Do not use unapproved attachments. Attachments not manufactured by Bobcat may not be approved.

The versatile Bobcat excavator quickly turns into a multi-job machine with a variety of attachments.

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

- Auger
- Breaker
- Flail Mower
- Hydraulic Clamp
- Pro Clamp™ System
- Rotary Grinder

### Buckets Available



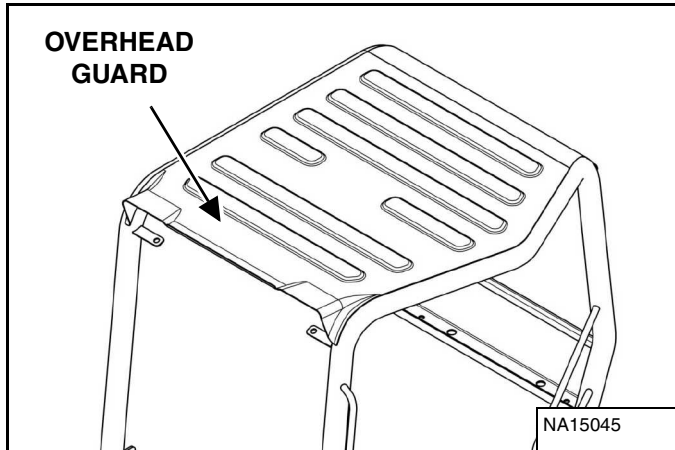
Many bucket styles, widths and different capacities are available for a variety of different applications. They include Trenching, Digging, Grading, and Tilt, to name a few. See your Bobcat dealer for the correct bucket for your Bobcat excavator and application.

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

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

### Falling-Object Protective Structure (FOPS) (Canopy Model)

Figure 4



The excavator canopy is qualified as a Falling Object Protective Structure (FOPS) that meets the top guard requirements in ISO 10262 - Level 1 [Figure 4].

### Falling-Object Protective Structure (FOPS) (Cab Model)

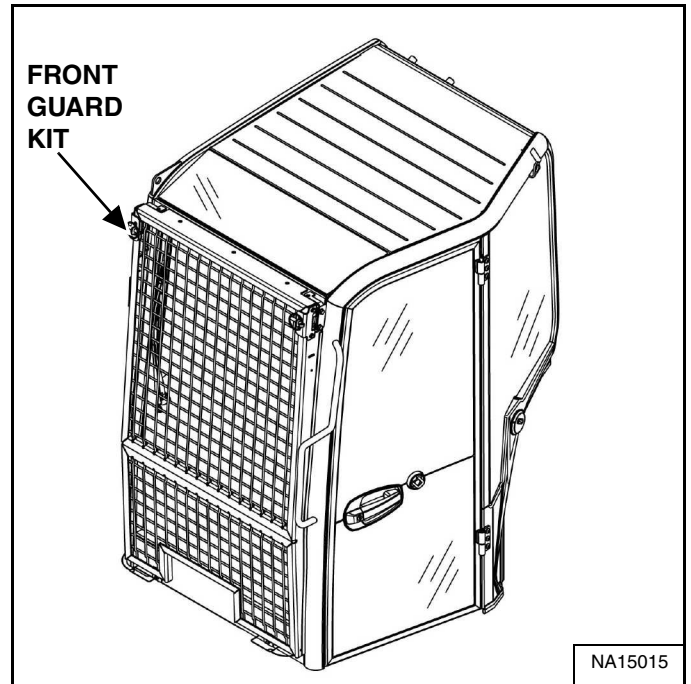
Figure 5



The excavator cab top window is qualified as a Falling-Object Protective Structure (FOPS) that meets the top guard requirements in ISO 10262 - Level 1 (Item 1) [Figure 5].

### Front Guard Kit

Figure 6



Available for applications that require protection from objects entering the front of the excavator.

The excavator must have the Front Guard Kit installed to meet the front guard requirements in ISO 10262 - Level 1.

Kit includes an upper and lower screen guard.

See your Bobcat dealer for more information.

### Front Guard Kit Inspection And Maintenance

The Front Guard Kit must be regularly inspected and maintained. Inspect the screen for damage. Replace parts as necessary.

## **SAFETY AND TRAINING RESOURCES**

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## SAFETY INSTRUCTIONS

### Before Operation

Carefully follow the operating and maintenance instructions in this manual.

The Bobcat excavator 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 excavator usage.

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

The dealer explains the capabilities and restrictions of the Bobcat excavator 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 Lift Capacity. They are designed for secure fastening to the Bobcat excavator. 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 excavator. 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.

## SAFETY INSTRUCTIONS (CONT'D)

### Safe Operation Is The Operator's Responsibility

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



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

W-2001-0502



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

I-2019-0284



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



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 excavator 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.

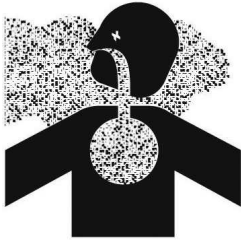
*Know the Work Conditions*

- Know the weight of the materials being handled. Avoid exceeding the Rated Lift Capacity of the machine. Material which is very dense will be heavier than the same volume of less dense material. Reduce the size of 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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## SAFETY INSTRUCTIONS (CONT'D)

### Avoid Silica Dust



Cutting or drilling concrete containing sand or rock containing quartz may result in exposure to silica dust. Use a respirator, water spray or other means to control dust.

### 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 EXC EMEA-0913

## 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 petrol or diesel fuel for cleaning parts. Use commercial non-flammable 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.

Ultra Low Sulfur Diesel (ULSD) poses a greater static ignition hazard than earlier diesel formulations with higher Sulfur content. Avoid death or serious injury from fire or explosion. Consult with your fuel or fuel system supplier to ensure the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

### Starting

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.

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

### Spark Arrester Exhaust System

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

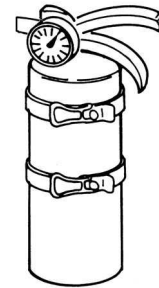
### Welding And Grinding

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 non-metallic 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

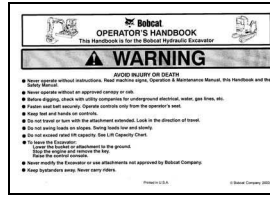


Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

## PUBLICATIONS AND TRAINING RESOURCES

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

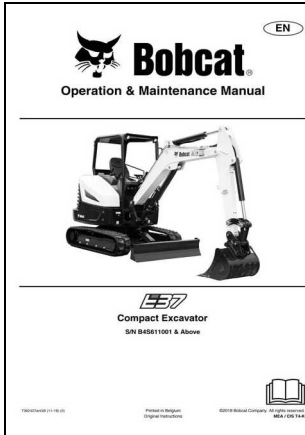
For the latest information on Bobcat products and the Bobcat Company, visit our Website at **Bobcat.com/training** or **Bobcat.com**.



## OPERATOR'S HANDBOOK

7350243enGB

Gives basic operation instructions and safety warnings.



## OPERATION & MAINTENANCE MANUAL

7362437enGB

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



## SERVICE MANUAL

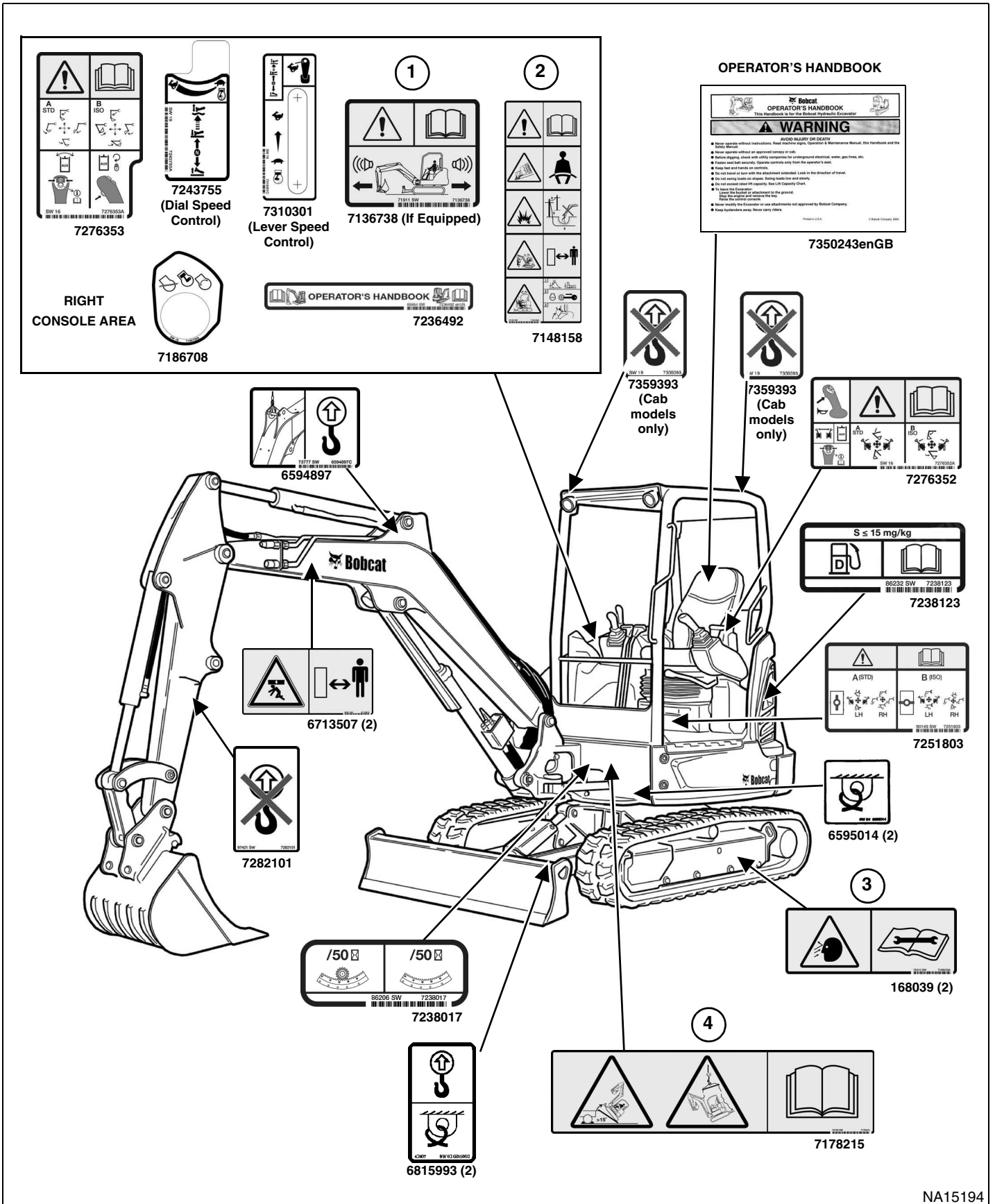
7362438enUS

Complete maintenance instructions for the Bobcat excavator.



# MACHINE SIGNS (DECALS)


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



**MACHINE SIGNS (DECALS) (CONT'D)**


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

5



72355 SW      6726145A and US


6732148



7169014  
(Cab Models Only)


**IN ENGINE COMPARTMENT**

7



7120573


7



7243563      7185935

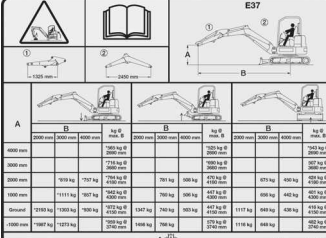
8

**WARNING**  
HIGH PRESSURE GAS CAN RELEASE FROM AND CAUSE SERIOUS INJURY OR DEATH. DO NOT OPEN CYLINDER.




7169291

6




E37

7354994 - Standard Arm, Heavy Counterweight, Canopy  
 7354995 - Standard Arm, Heavy Counterweight, Cab  
 7354996 - Long Arm, Heavy Counterweight, Canopy  
 7354997 - Long Arm, Heavy Counterweight, Cab  
 7408760 - Standard Arm, Medium Counterweight, Canopy  
 7408761 - Long Arm, Medium Counterweight, Canopy  
 7408762 - Standard Arm, Medium Counterweight, Cab  
 7408763 - Long Arm, Medium Counterweight, Cab




7313768 - Pin-On X-Change™  
 7240582 - Bobcat Hydraulic Pin Grabber Coupler HPG2  
 7139000 - Klac™ Style QC  
 7320471 - Bobcat Hyd. QC  
 7174312 - German Style QC  
 7428649 - Mechanical Pin Grabber QC




7342035 (If Equipped)

9




72341 SW      7189091

7169009

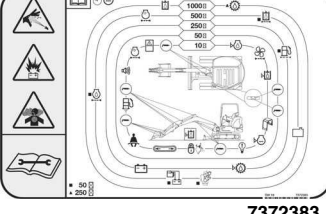


6595014 (5)


10



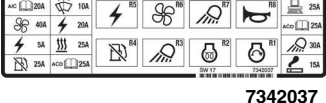
7120570



7372383



7172154



7342037

INSIDE RIGHT COVER

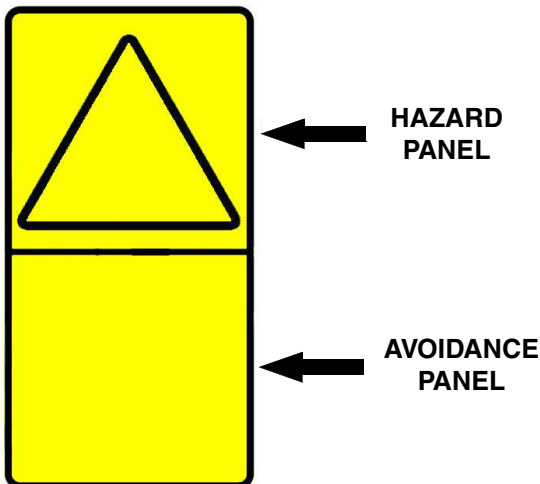
NA15195

## MACHINE SIGNS (DECALS) (CONT'D)

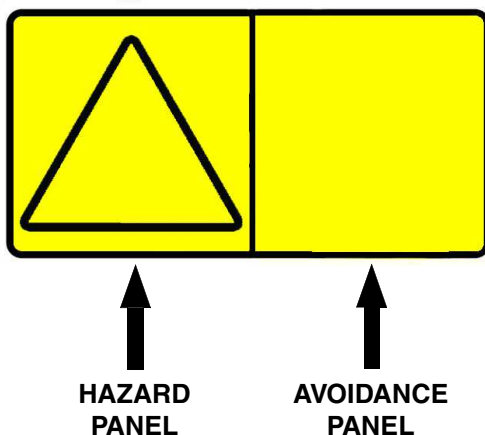
### Pictorial Only Safety Signs

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

*Vertical Configuration*



*Horizontal Configuration*



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

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

Avoidance panels depict actions required to avoid the hazards.

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

**NOTE: See the numbered MACHINE SIGNS (DECALS) on Page 15 and MACHINE SIGNS (DECALS) (Cont'd) on Page 16 for the machine location of each corresponding numbered pictorial only decals as shown below.**

#### 1. Motion Alarm (7136738) (If Equipped)

This safety sign is on the ceiling of canopy models and on the right window of cab models.



**This machine is equipped with a motion alarm.  
ALARM MUST SOUND!  
when operating forward or backward.**

**Failure to maintain a clear view in the direction of travel could result in serious injury or death.**

**The operator is responsible for the safe operation of this machine.**

W-2786-0309

## MACHINE SIGNS (DECALS) (CONT'D)

### Pictorial Only Safety Signs (Cont'd)

#### 2. General Hazard (7148158)

This safety sign is located inside the operator's area on the right side near the floor.



Failure to obey warning signs and instructions can cause serious injury or death. Never use excavator without instructions. Read and understand the Operation & Maintenance Manual and Handbook.

Keep away from dropoffs, steep areas or banks that could break away.

Explosion or electrocution can occur if machine contacts utility lines or pipes. Check for overhead or underground lines before operating.

Keep bystanders away. No riders. Check location of blade for direction of travel before moving steering controls.

Failure to operate machine from the operator's position can cause serious injury or death.

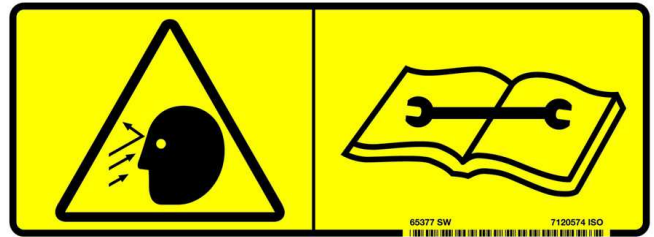
To Leave Excavator:

1. Lower attachment and blade to ground.
2. Stop engine and remove the key (if equipped).
3. Raise control console.

W-2518-0110

#### 3. Thrown or Flying Objects (7168039)

This safety sign is located on the outside of both tracks.



**HIGH PRESSURE GREASE CAN  
CAUSE SERIOUS INJURY**

- Do not loosen the track tension fitting more than 1 - 1/2 turns.

W-2994-0515

#### 4. Transporting And Lifting (7178215)

This safety sign is located on the front of the cab.



Improper loading, transporting and lifting procedures can cause serious injury or death. Read and understand the Operation & Maintenance Manual prior to transporting or lifting the machine.

W-2517-0110

**MACHINE SIGNS (DECALS) (CONT'D)**

**Pictorial Only Safety Signs (Cont'd)**

**5. Operation & Maintenance Manual (6732148)**

This safety sign is located on the back of the operator's seat.



**AVOID INJURY OR DEATH**

**Read and understand the Operation & Maintenance Manual before operating the machine.**

W-3021-0217

**6. Lift Capacity (7354994, 7354995, 7354996, 7354997, 7408760, 7408761, 7408762, 7408763)**

This safety sign is located on the ceiling of canopy models and on the right window of cab models.

A	B			kg @ max. B		kg @ max. B		kg @ max. B		kg @ max. B	
	2000 mm	3000 mm	4000 mm	2000 mm	3000 mm	4000 mm	2000 mm	3000 mm	4000 mm	2000 mm	3000 mm
4000 mm				1865 kg @ 2000 mm			1525 kg @ 2000 mm			1543 kg @ 2000 mm	
3000 mm				1716 kg @ 3600 mm			1590 kg @ 3600 mm			1527 kg @ 3600 mm	
2000 mm	1819 kg	1737 kg		1764 kg @ 4150 mm	781 kg	526 kg	4176 kg @ 4150 mm	656 kg	450 kg	426 kg @ 4150 mm	
1000 mm	1111 kg	1057 kg		1825 kg @ 4300 mm	760 kg	526 kg	442 kg @ 4300 mm	656 kg	442 kg	451 kg @ 4300 mm	
Ground	12193 kg	11303 kg	1030 kg	1347 kg	740 kg	523 kg	447 kg @ 4150 mm	1117 kg	649 kg	438 kg @ 4150 mm	
<1000 mm	11987 kg	11273 kg		1426 kg	728 kg		279 kg @ 3740 mm	1116 kg	640 kg	452 kg @ 3740 mm	



**Overload can tip the excavator and cause serious injury or death.**

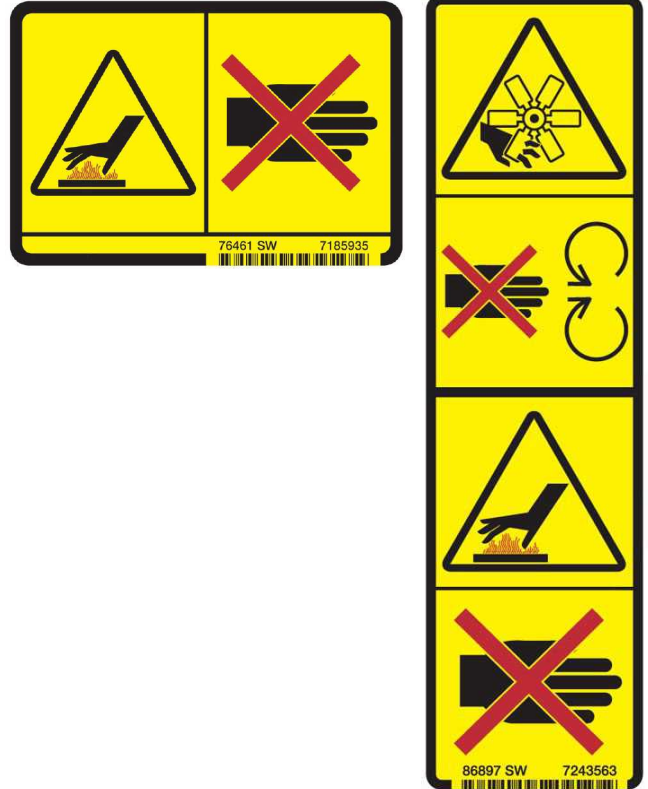
- Do not lift or hold any load that exceeds these ratings at their specific load radii and height.
- Total rated load is shown. The weight of all lifting devices must be deducted to determine the net load that can be lifted.

**Read and understand the Operation & Maintenance Manual for more information.**

W-2519-0110

**7. Hot Surfaces and Rotating Fan (7185935, 7243563)**

These safety signs are located inside the engine compartment.



**Rotating fan blade can cause serious injury or death. Keep away from fan and moving parts. Do not operate with guard removed.**

**Hot surfaces can cause injury. Do not touch. Allow to cool before servicing.**

W-2521-0106

**MACHINE SIGNS (DECALS) (CONT'D)**

**Pictorial Only Safety Signs (Cont'd)**

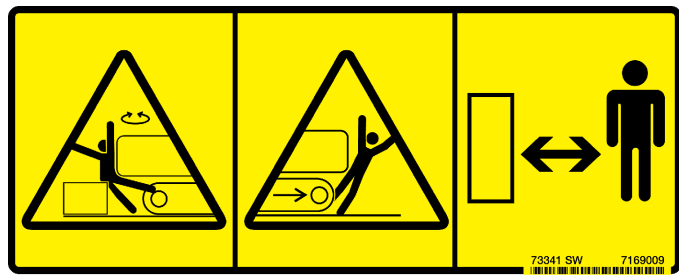
**8. Thrown or Flying Objects (7169291)**

This safety sign is located on the gas springs under the rear cover and inside the right cover.



**9. Stay Away (7169009)**

This safety sign is located on the rear of the upperstructure below the tailgate.



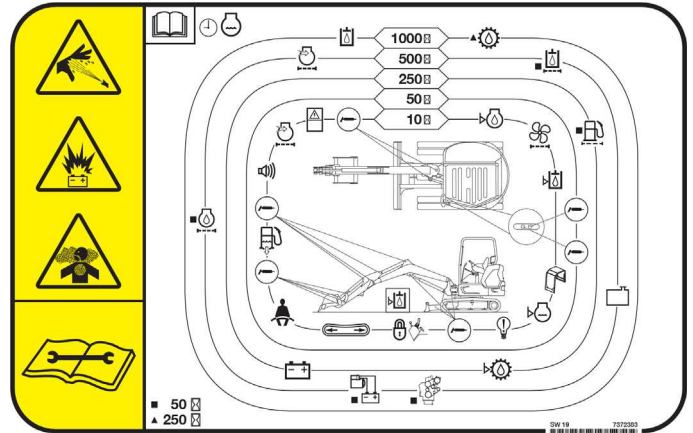
**AVOID INJURY OR DEATH**

- Keep out of swing area or travel path.
- Always look in the direction of travel.
- Make sure swing area is clear of bystanders and objects.

W-2775-1208

**10. High Pressure, Battery, Rotating Fan, Exhaust Gases and Service Schedule (7372383)**

This safety sign is located inside the right cover. (See SERVICE SCHEDULE on Page 150.)



Leaking fluids under pressure can enter the skin and cause serious injury or death. Immediate medical attention is required. Wear goggles. Use cardboard to check for leaks.

Battery makes flammable and explosive gas. Keep arcs, sparks, flames and lighted tobacco away. Keep away from electrical contacts

Rotating fan can cause serious injury. Keep away from fan and moving parts. Do not operate with guard removed.

All exhaust gases can kill. Always ventilate.

Read and understand the Operation & Maintenance Manual for more information.

W-2522-0110

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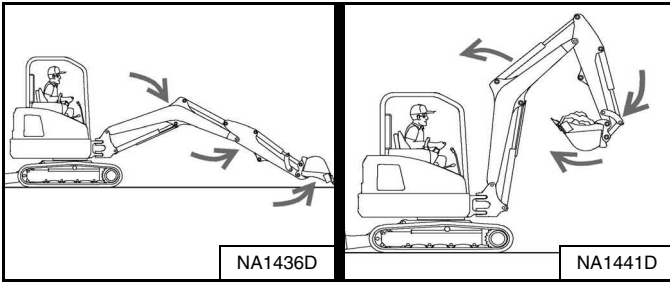
**INTENDED USE**

This machine is classified as a Compact Excavator as defined in ISO 6165. This machine has wheels or tracks and commonly a mounted bucket for the principle intended functions of excavating, loading and backfilling loose materials such as earth, gravel, or crushed rock.

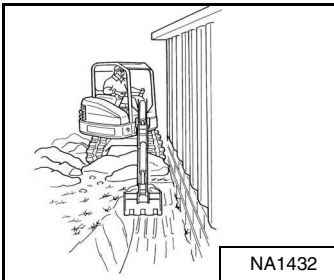
Additional Bobcat approved attachments allow this machine to perform other tasks described in the attachment Operation & Maintenance Manuals.

Examples of intended use include:

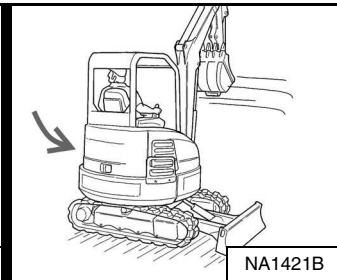
**Excavating**



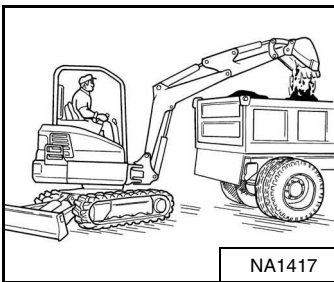
**Boom Swing**



**Rotating the Upperstructure**



**Loading Material**



**Backfilling**



**! WARNING**

**AVOID INJURY OR DEATH**

Do not exceed rated lift capacity. Excessive load can cause tipping or loss of control.

W-2374-0500

**! WARNING**

**AVOID INJURY OR DEATH**

Check area to be excavated for overhead or underground electrical power lines. Keep a safe distance from electrical power lines.

VOLTAGE	MINIMUM DISTANCE
up to 50 kV	3 m (10 ft)
beyond 50 kV	5 m (17 ft)

W-2757-EN-0513

**! WARNING**

Keep all bystanders 6 m (20 ft) away from equipment when operating. Contact with moving parts, a trench cave-in or flying objects can cause injury or death.

W-2119-0910

**IMPORTANT**

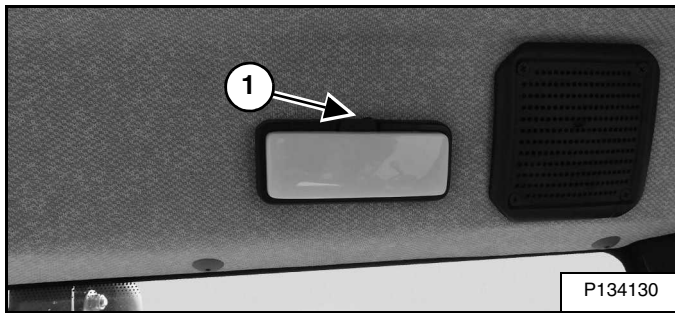
Avoid impacting objects with the blade. Damage to blade and undercarriage components may occur.

I-2256-0507

## INSTRUMENTS AND CONSOLES

### Cab Interior Light (If Equipped)

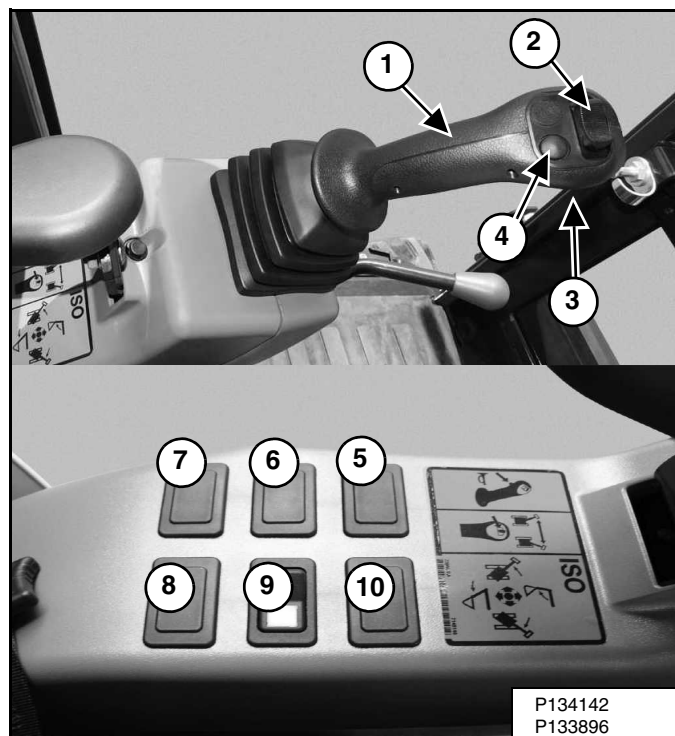
Figure 7



Press the rocker switch on top of the light (Item 1) [Figure 7] to turn the light ON and OFF.

### Left Console

Figure 8



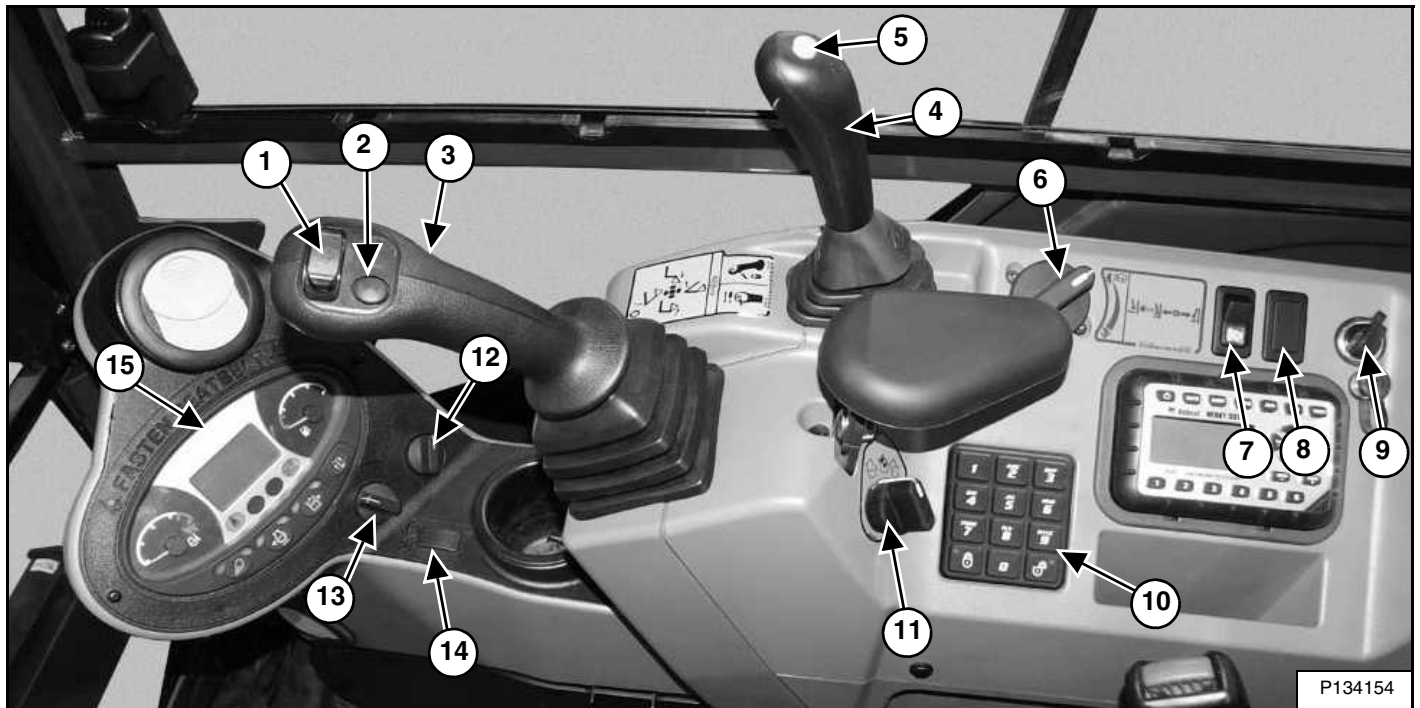
Left Console [Figure 8]

REF. NO	DESCRIPTION	FUNCTION / OPERATION
1	Left Joystick	(See HYDRAULIC CONTROLS on Page 46.)
2	Boom Swing / Secondary Auxiliary Hydraulic Switch	(See BOOM SWING on Page 62.) (See HYDRAULIC CONTROLS on Page 46.)
3	Horn	Press the switch on the bottom of the left joystick to sound the horn.
4	Left Joystick Button	Push the button to toggle between boom swing and optional auxiliary hydraulics (if equipped).
5	Wiper / Washer Switch (If Equipped)	Press the switch to the left to turn wiper ON. Press and hold switch to the left to activate window washer. Press the switch to the right to turn wiper OFF.
6	Hydraulic Quick Coupler ON / OFF Switch (if equipped)	Press switch to the left to turn the quick coupler ON. Press the switch to the right to turn OFF. (See Installing And Removing The Attachment (Bobcat Hydraulic Quick Coupler) on Page 90.)
7	Beacon / Strobe Light (If Equipped)	Press switch to the left to turn ON the beacon / Strobe light. Press the switch to the right to turn OFF.
8	Hydraulic Quick Coupler INTENT Switch (if equipped)	Press switch to the left to initiate the quick coupler install or remove mode. (See Installing And Removing The Attachment (Bobcat Hydraulic Quick Coupler) on Page 90.)
9	Overload Warning Device Switch (if equipped)	Press the switch to the left to activate the Overload Warning Device. Press the switch to the right to deactivate the system. (See OVERLOAD WARNING DEVICE on Page 60.)
10	Boom Swing Switch (if equipped)	Push to select boom swing offset for either the left or right joystick. (See Operating Attachments With Primary, Secondary, Or Fourth Auxiliary Hydraulics (Software Version 88.03 Or Above) on Page 56.)

## INSTRUMENTS AND CONSOLES (CONT'D)

### Right Console

Figure 9



REF	DESCRIPTION	FUNCTION / OPERATION
1	Auxiliary Hydraulic Switch (if equipped)	(See HYDRAULIC CONTROLS on Page 46.)
2	Right Joystick Button	Push the button to toggle between auxiliary hydraulics (if equipped).
3	Right Joystick	(See HYDRAULIC CONTROLS on Page 46.)
4	Blade Control Lever	Controls raising and lowering the blade. Push all the way forward to put blade in float position. (See BLADE CONTROL LEVER on Page 61.)
5	Two-Speed Button	Engages and disengages High Range Travel Speed. (See Two-Speed Travel on Page 35.)
6	Engine Speed Control Lever or Engine Speed Control Dial	Controls rpm of the engine. (See ENGINE SPEED CONTROL on Page 61.)
7	Motion Alarm Cancel Switch	Temporarily disables the motion alarm. (See MOTION ALARM SYSTEM on Page 43.)
8	Direct to Tank Switch (if equipped)	Press switch to direct auxiliary return flow to the hydraulic oil reservoir. (See Direct To Tank Switch on Page 60.)
9	Auxiliary Power Outlet	12 volt receptacle for accessories.
10	Keypad (if equipped)	Enter the password to start the engine (See Standard Instrument Panel - Keyless Start on Page 72.) (See Deluxe Instrument Panel - Keyless Start on Page 73.)
11	Key Switch or Keyless Start Switch	Always perform the PRE-STARTING PROCEDURE (See PRE-STARTING PROCEDURE on Page 69.) before starting the engine. (See STARTING THE ENGINE on Page 71.)
12	Temperature Control (if equipped)	Turn clockwise to increase temperature; anticlockwise to decrease.
13	Fan Motor Switch (if equipped)	Turn clockwise to increase fan speed; anticlockwise to decrease.
14	Air Conditioning Switch (if equipped)	Press top of switch to turn air conditioner ON (light in switch will be ON). Press bottom of switch to turn OFF.
15	Instrument Panel	(See Instrument Panel - Standard on Page 28.) (See Instrument Panel - Deluxe on Page 31.)

**NOTE:** Always turn key switch and all accessories to OFF position when the engine is stopped, the battery will discharge if the key is left ON.

# INSTRUMENTS AND CONSOLES (CONT'D)

## Instrument Panel - Standard

Figure 10



P-97989

REF. NO.	DESCRIPTION	FUNCTION / OPERATION
1	Lights	Press once for work lights. (Left green LED illuminates.) Press again to turn all lights off. (Left green LED off.) Press and hold 5 seconds to display software version in display screen.
2	Auto Idle Feature	Press once to turn Auto Idle Feature ON. (Left green LED illuminates.) Press a second time to turn OFF. (Left and right green LEDs off.) (See Auto Idle Feature on Page 36.)
3	Auxiliary Hydraulic Button	Press once to enable auxiliary hydraulic function. (Left green LED illuminates.) Continue to press and release to scroll through the selectable auxiliary hydraulic setting (3-2-1-OFF). Press and hold (minimum of one second) to enable the continuous flow auxiliary hydraulic feature. (Right green LED illuminates.) Continue to press and release to scroll through the continuous flow selectable auxiliary hydraulic settings (3-2-1-OFF). (See Activating Primary Auxiliary Hydraulics With Standard Instrument Panel on Page 49.)
4	Information	Cycles through (after each button press) (The following information is displayed in the Data Display Screen, Item 6): <ul style="list-style-type: none"> <li>• Hourmeter (On startup)</li> <li>• Job Clock (1 and 2) (Press and hold 7 seconds when displayed to reset the job clock.)</li> <li>• Engine rpm</li> <li>• Battery voltage</li> <li>• Maintenance clock (Press and hold 7 seconds when displayed to reset the maintenance clock.)</li> <li>• Service codes*</li> </ul>
5	Engine Temperature Gauge	Shows the engine coolant temperature.

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