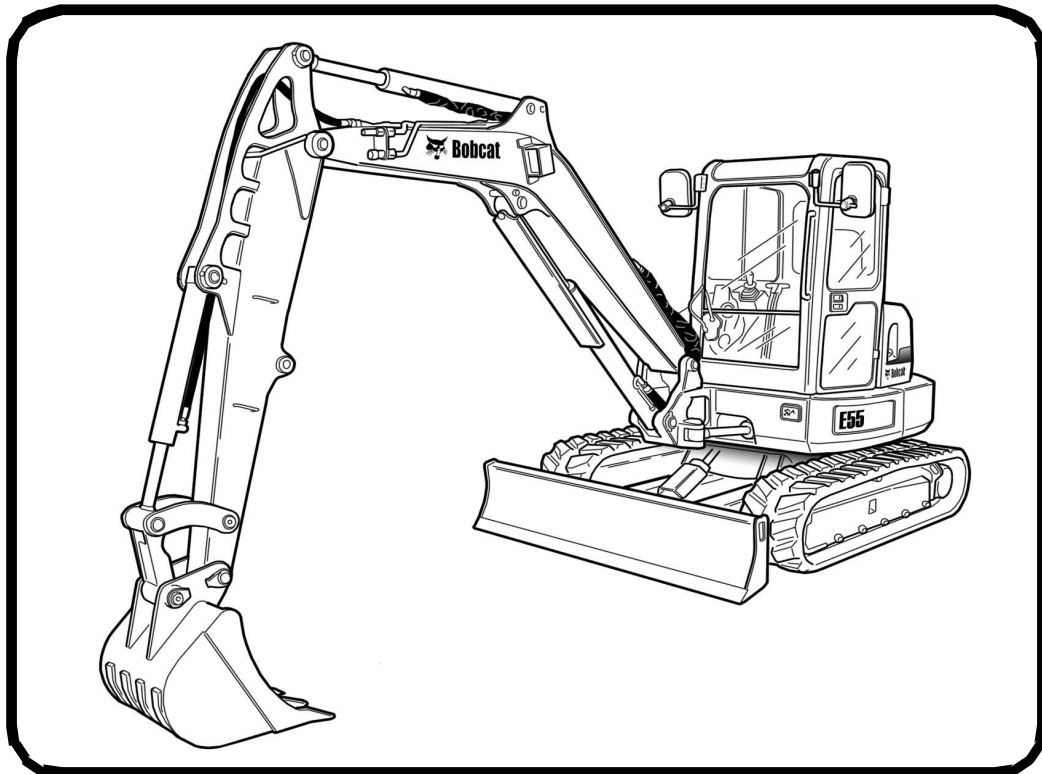




Bobcat®

Operation & Maintenance Manual E55 Compact Excavator

S/N B3NP11001 & Above



OPERATOR SAFETY WARNING



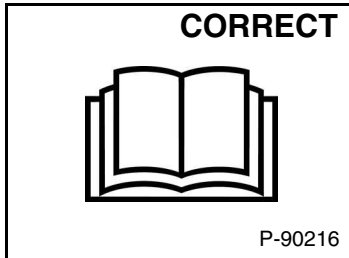
WARNING

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

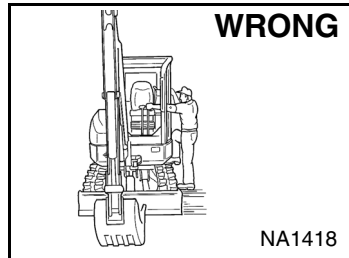
W-2001-0502



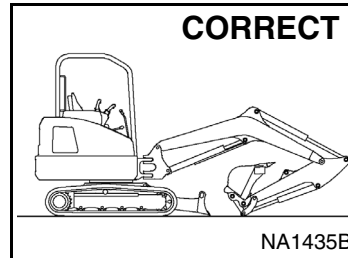
Safety Alert Symbol: This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



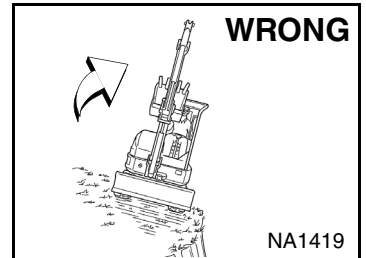
- ⚠ Never operate without instructions.
- ⚠ Read machine signs, and Operation & Maintenance Manual, and Operator's Handbook.



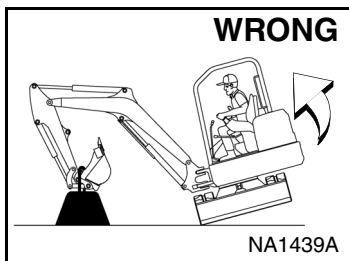
- ⚠ Do not grasp control handles when entering cab / canopy.
- ⚠ Be sure controls are in neutral before starting.
- ⚠ Sound horn and check behind machine before starting.



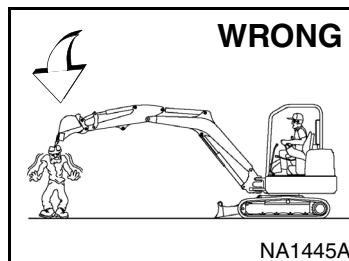
- ⚠ Never operate without approved cab / canopy.
- ⚠ Never modify equipment.
- ⚠ Never use attachments not approved by Bobcat Company.



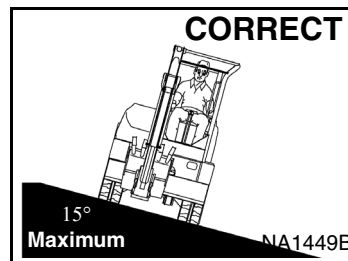
- ⚠ Avoid steep areas or banks that could break away.



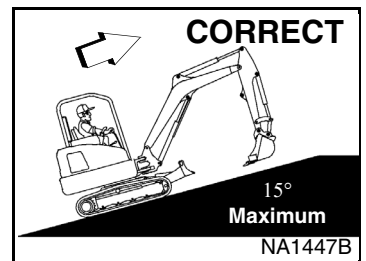
- ⚠ Use caution to avoid tipping - do not swing heavy load over side of track.
- ⚠ Operate on flat, level ground.



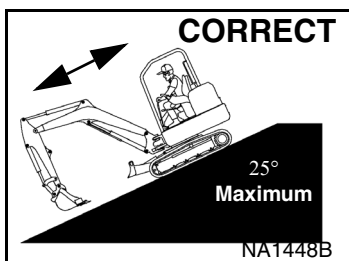
- ⚠ Keep bystanders out of maximum reach area.
- ⚠ Do not travel or turn with bucket extended.
- ⚠ Never carry riders.



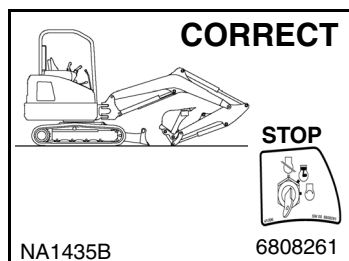
- ⚠ Never exceed a 15° slope to the side.



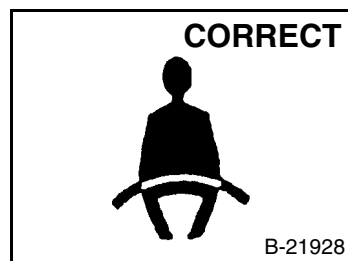
- ⚠ Never travel up a slope that exceeds 15°.



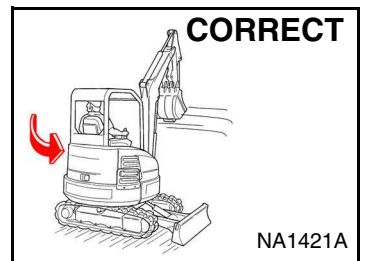
- ⚠ Never exceed 25° when going down or backing up a slope.



- ⚠ 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.

OSW66-0117



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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 _____

NOTES:

YOUR BOBCAT DEALER:

ADDRESS:

PHONE:

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

Doosan Benelux SA
Drève Richelle 167
B-1410 Waterloo
BELGIUM



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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

	ENGINE OIL FILTER (6 Pack) 6675517		BATTERY 6670251
	FUEL FILTER 6667352		HYDRAULIC FILL / BREATHER CAP 6692836
	AIR FILTER, Outer 6666375		FLUID, Hydraulic / Hydrostatic 6903117 - (2.5 U.S. gal) 6903118 - (5 U.S. gal) 6903119 - (55 U.S. gal)
	AIR FILTER, Inner 6666376		
	PRIMARY HYDRAULIC FILTER 6670207 CASE DRAIN HYDRAULIC FILTER 6516722		ANTI-FREEZE, Propylene Glycol 6983128 - Premixed 6983129 - Concentrate
	HVAC AIR FILTER (IF EQUIPPED) Fresh Air 7176099 Recirculation 7222791		RADIATOR CAP 6646678
ENGINE OIL 6903105 SAE 15W40 CE/SG (12 qt) 6903107 SAE 10W30 CE/SG (12 qt) 6903109 SAE 30W CE/SG (12 qt) 6903113 SAE 15W40 CE/SG (2.5 U.S. gal) 6903112 SAE 10W30 CE/SG (2.5 U.S. gal) 6903111 SAE 30W CE/SG (2.5 U.S. gal)		ENGINE OIL 6903106 SAE 15W40 CE/SG (1 U.S. gal) 6903108 SAE 10W30 CE/SG (1 U.S. gal) 6903110 SAE 30W CE/SG (1 U.S. gal)	

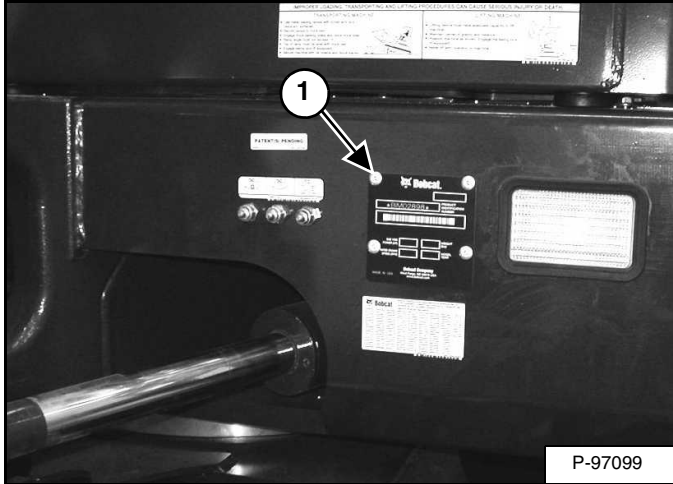
NOTE: Always verify Part Numbers with your Bobcat dealer.

SERIAL NUMBER LOCATIONS

Always use the serial number of the excavator 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.

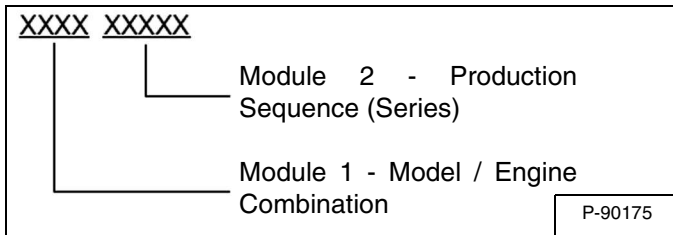
Excavator Serial Number

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

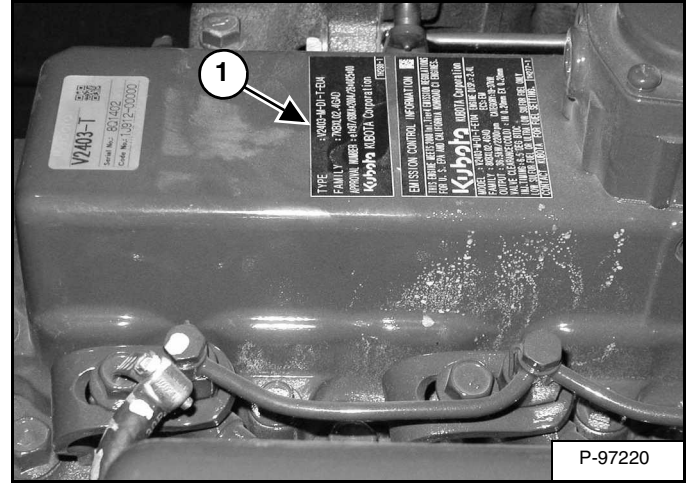


Explanation of excavator Serial Number [Figure 2]:

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 excavator is produced.

Engine Serial Number

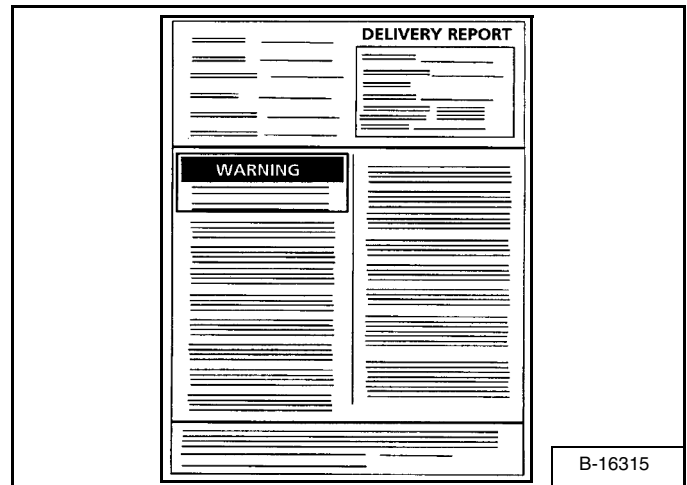
Figure 3



The engine serial number (Item 1) [Figure 3] is located on the top cover.

DELIVERY REPORT

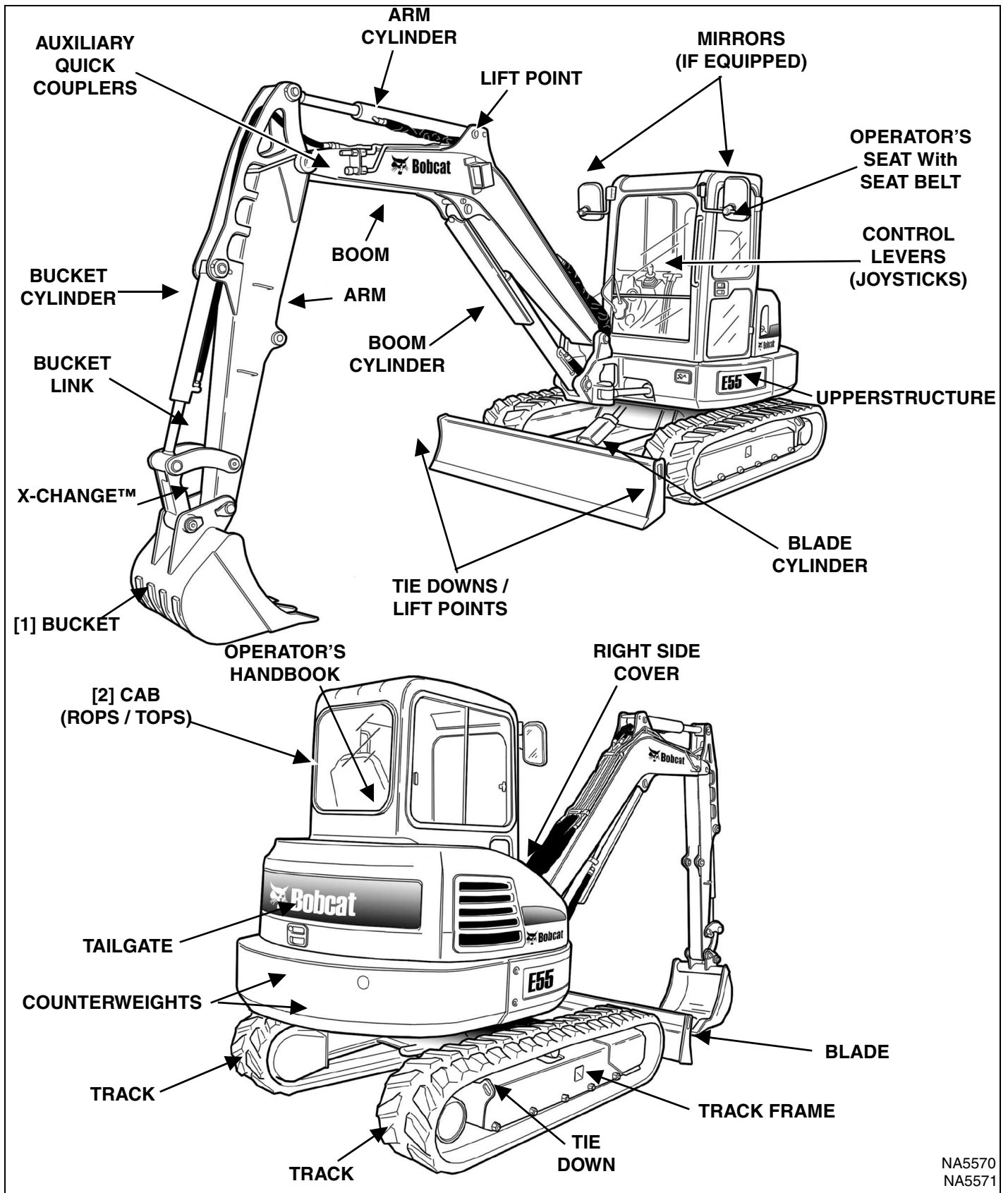
Figure 4



The delivery report [Figure 4] 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



- [1] BUCKET - Several different buckets and other attachments are available for the Bobcat excavator.
- [2] ROPS / TOPS - (Roll-Over Protective Structure / Tip-Over Protective Structure) as standard equipment. The ROPS / TOPS meets ISO 12117-2 and ISO 12117.

NA5570
NA5571

FEATURES, ACCESSORIES AND ATTACHMENTS

Standard Items

Model E55 Bobcat excavators are equipped with the following standard items:

- 1960 mm (77.2 in) Dozer Blade
- Canopy with ROPS / TOPS Approval
- 400 mm (15.7 in) Rubber Tracks
- Two-Speed Travel
- Auto-Shift Drive System
- Auxiliary Hydraulics (With Selectable Auxiliary Hydraulic Flow)
- Hydraulic and Travel Control Lockouts
- Engine Speed Control Dial With Auto Idle Feature
- Blade Float
- Work Lights - Boom and Frame Mounted
- Engine and Hydraulic system Monitor with Shut Down
- Horn
- Standard Arm
- Hydraulic Joystick Controls
- ISO / STD Control Pattern Selection Feature
- Suspension Seat
- Retractable Seat Belt
- Direct to Tank Auxiliary Hydraulics
- Spark Arrester Muffler
- Advanced Diagnostics
- X-Change™
- 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 and A/C
- Enclosed Cab With Heater
- Deluxe Instrument Panel
- Depth Check
- Travel Motion Alarm
- Keyless Start
- Canopy / Cab Mounted Lights
- Catalytic Exhaust Purifier
- Top Guard Kit (FOGS)
- Special Application Kit
- Steel Tracks - 400 mm (15.7 in)
- Long Arm
- Angle Blade
- Counterweight (Additional)
- Attachment Quick Coupler
 - Lehnhoff® System
 - Klac™ System
 - Pin Grabber Quick Coupler
- Extendable Arm
- Boom Load Holding Valve
- Arm Load Holding Valve
- Overload Warning Device
- Second Auxiliary Hydraulics
- Arm Mounted Auxiliary Hydraulic Couplers
- HEPA HVAC Fresh Air Filter

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

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
- Hydraulic Clamp
- 3-Tined Grapple
- Compactor
- Grading Blade
- Power Tilt
- Ripper
- Hydro Tilt
- Packer Wheel
- Trencher
- Laser Receiver

Buckets Available

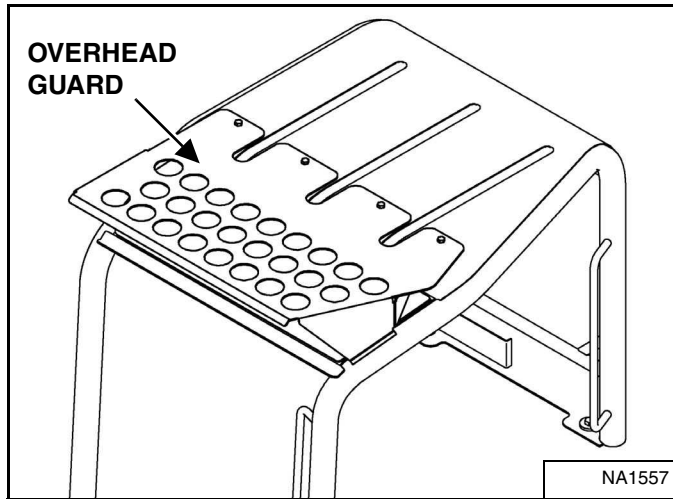
Increase the versatility of your Bobcat excavator with a variety of bucket sizes.

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

FEATURES, ACCESSORIES AND ATTACHMENTS (CONT'D)

Falling-Object Guards (FOGS)

Figure 5



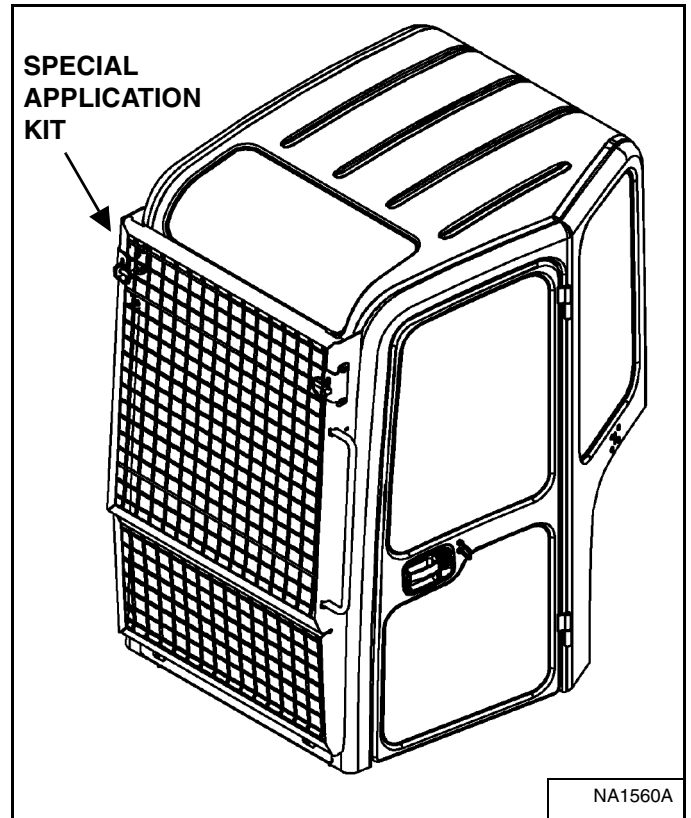
Available for special applications that require protection from smaller objects that can fall on the cab or restrict material from entering cab openings [Figure 5] and [Figure 6].

The excavator must have the overhead guard [Figure 5] installed to meet the top guard requirements in ISO 10262.

See your Bobcat Dealer for more information.

Special Applications Kit

Figure 6



The excavator must have the special applications kit [Figure 6] installed to meet the front guard requirements in FOGS ISO 10262 - level 1.

Kit includes an upper and lower screen guard.

See your Bobcat Dealer for more information.

Special Applications Kit Inspection And Maintenance

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



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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 highway, 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. 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 Compact Excavator Operating Training Course is available through your Bobcat dealer. This course is intended to provide rules and practices of correct operation of the Bobcat excavator. 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 **Bobcat.com/training** or **Bobcat.com**

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



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

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

SI EXC-1016

SAFETY INSTRUCTIONS (CONT'D)

Safe Operation Is The Operator's Responsibility



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, 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.

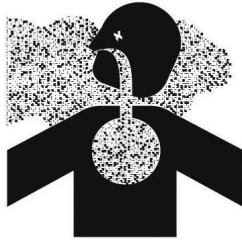
Know the Work Conditions

- Know the weight of the materials being handled. Avoid exceeding the Rated 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. Call local utilities or the TOLL FREE phone number found in the *Before Operation* section of this manual.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service. Safety glasses, respiratory equipment, hearing protection or Special Applications Kits are required for some work. See your Bobcat dealer about Bobcat safety equipment for your model.

SI EXC-1016

SAFETY INSTRUCTIONS (CONT'D)

Avoid Silica Dust



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

FIRE PREVENTION



Maintenance

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

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

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

All fuels, most lubricants and some coolant 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-1016

FIRE PREVENTION (CONT'D)

Hydraulic System

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

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

Fueling



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

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 or air intake heater. These starting aids can cause explosion and injure you or bystanders.

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

Spark 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).

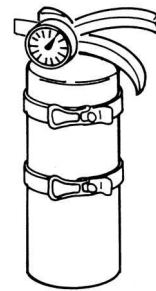
Welding And Grinding

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

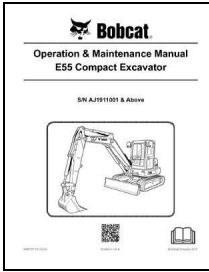
Fire Extinguishers



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

PUBLICATIONS AND TRAINING RESOURCES

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

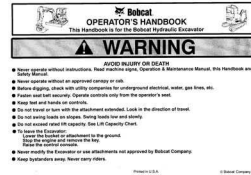


OPERATION & MAINTENANCE MANUAL

7300143enUS

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

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



OPERATOR'S HANDBOOK

6990434enUS

Gives basic operation instructions and safety warnings.



SAFETY MANUAL

6901951 (English and Spanish)

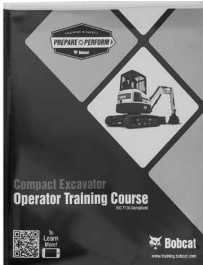
Gives basic safety procedures and warnings for your Bobcat excavator.



OPERATOR SAFETY DVD

6904762 (English and Spanish)

DVD gives basic safety instructions for many Bobcat products including excavators.



COMPACT EXCAVATOR OPERATOR TRAINING COURSE

7249283 (English)
7249286 (Spanish)

Introduces operator to step-by-step basics of skid-steer excavator operation.



EXCAVATOR SERVICE SAFETY TRAINING COURSE

6900916

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



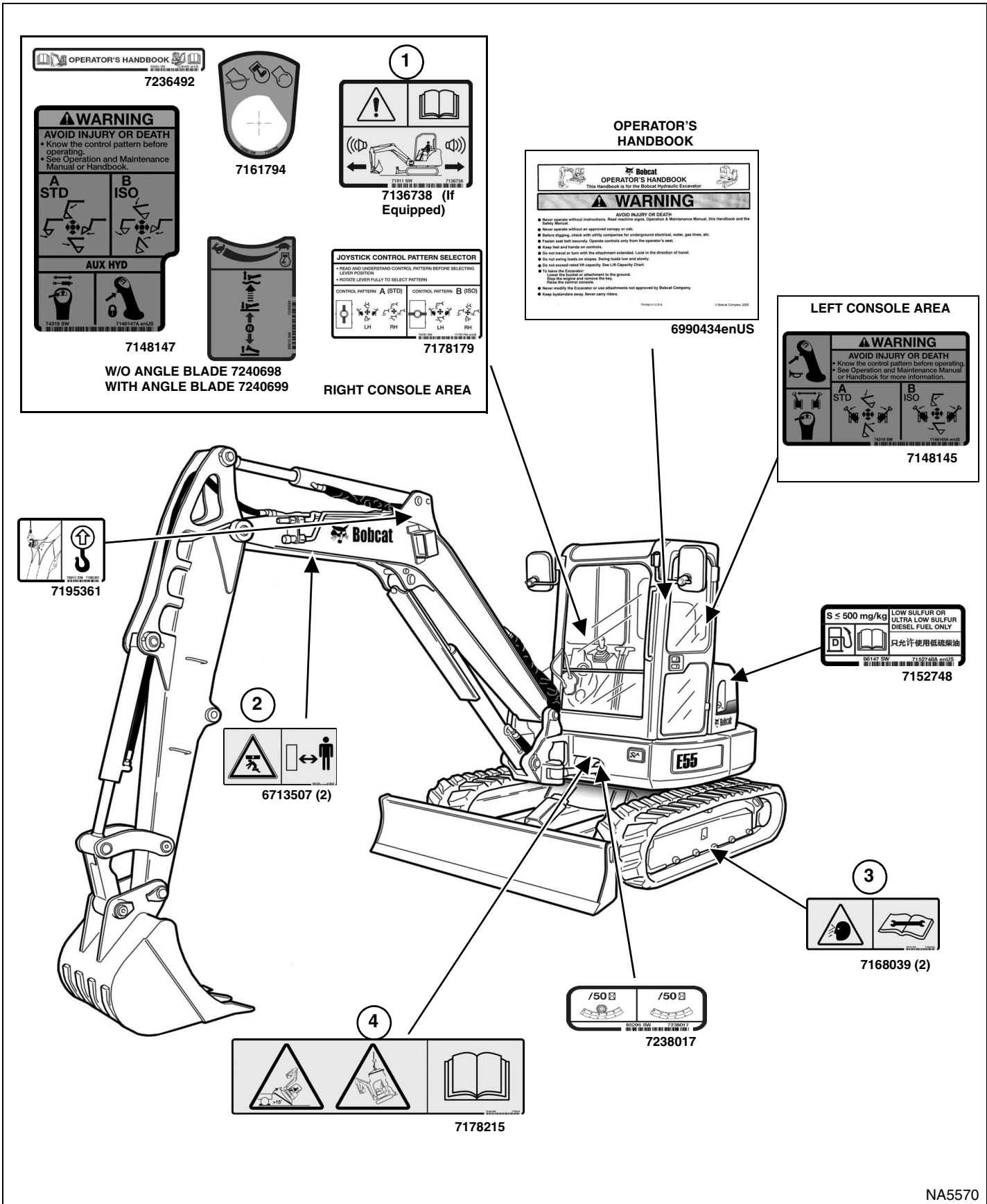
SERVICE MANUAL

6990093enUS

Complete maintenance instructions for your Bobcat excavator.

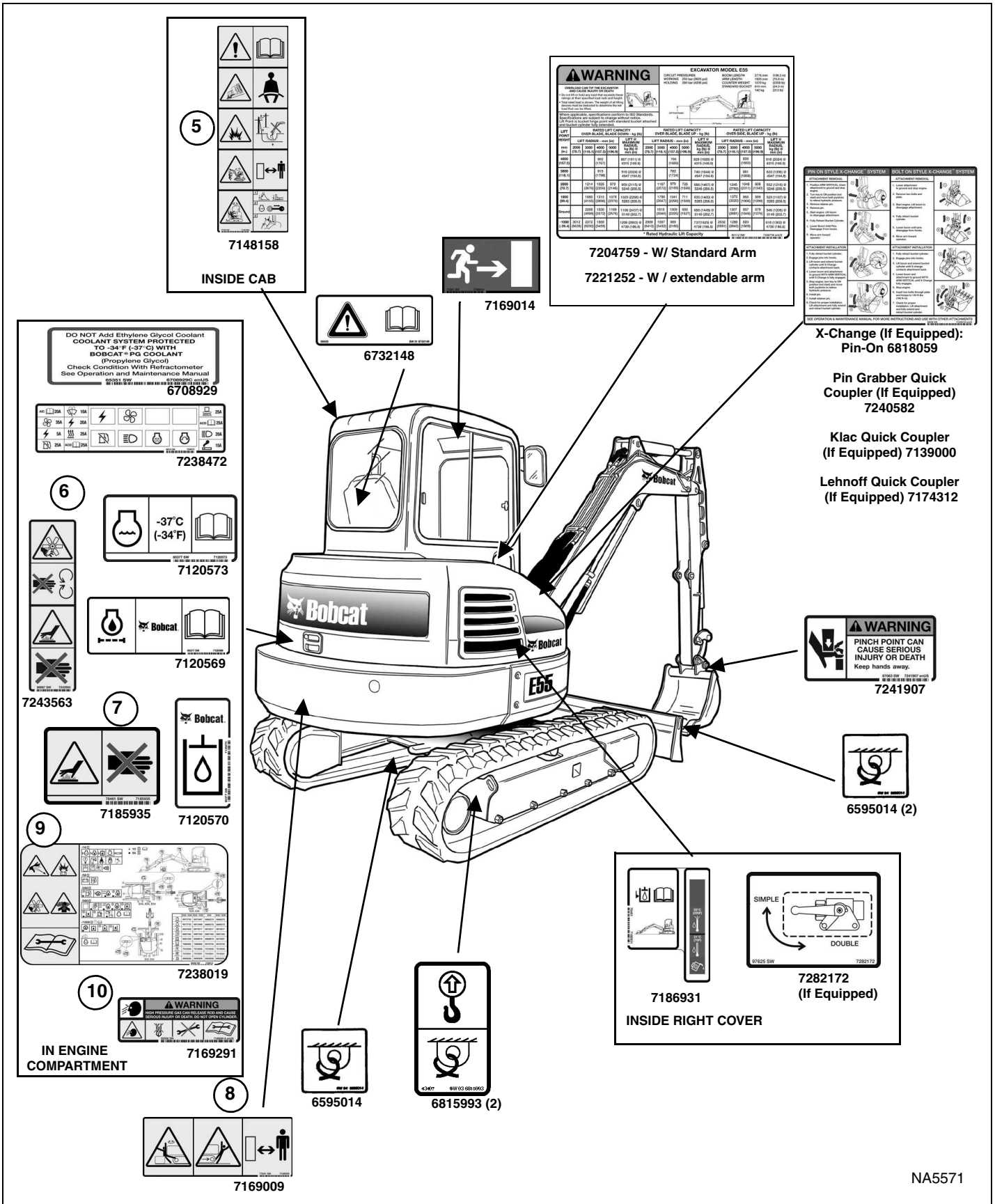
MACHINE SIGNS (DECALS)

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.

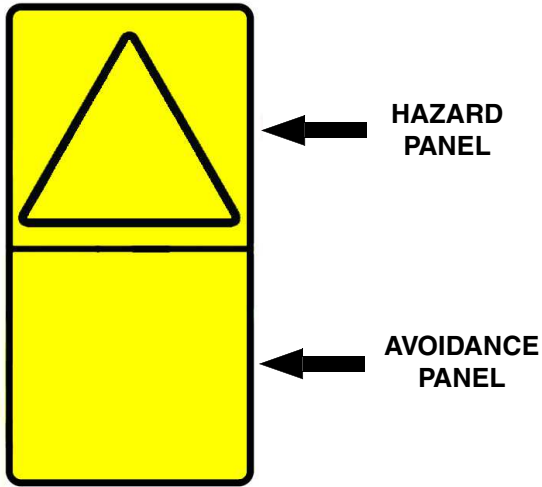


MACHINE SIGNS (DECALS) (CONT'D)

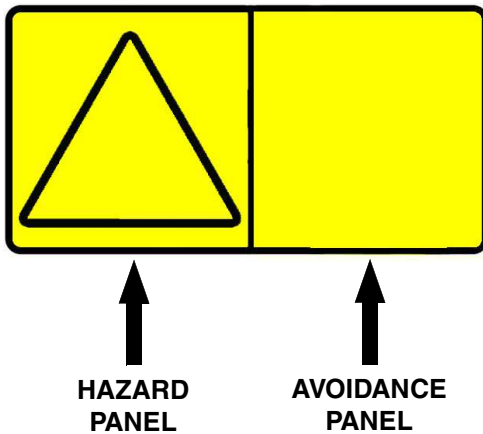
Pictorial Only Safety Signs

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 familiarized 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.

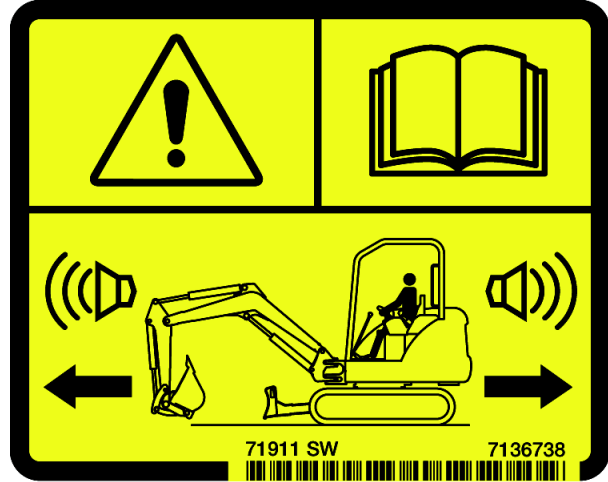
Avoidance panels depict actions required to avoid the hazards.

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 20 and MACHINE SIGNS (DECALS) on Page 20 for the machine location of each corresponding numbered pictorial only decals as shown below.

1. Motion Alarm (7136738)

This safety sign is located on the right rear console.



**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.

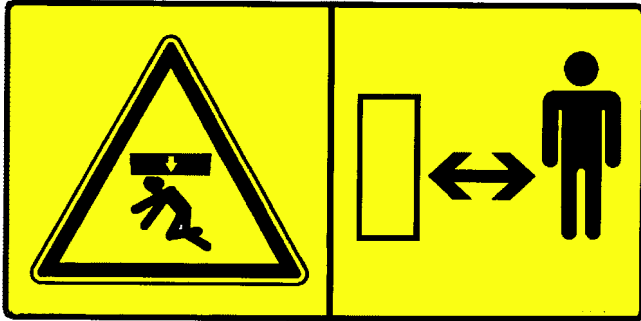
W-2786-0309

MACHINE SIGNS (DECALS) (CONT'D)

Pictorial Only Safety Signs (Cont'd)

2. Crush Hazard (6713507)

This safety sign is located on both sides of the boom.

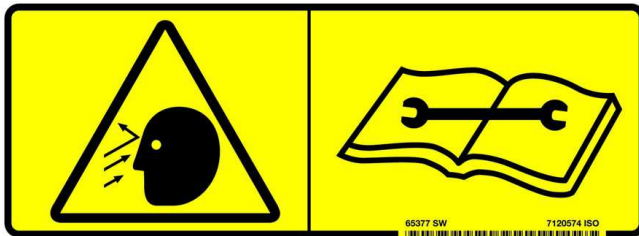


Keep away from the operating machine to avoid serious injury or death.

W-2520-0106

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 grease fitting. Do not loosen bleed fitting more than 1 - 1/2 turns.

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

W-2516-0110

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.

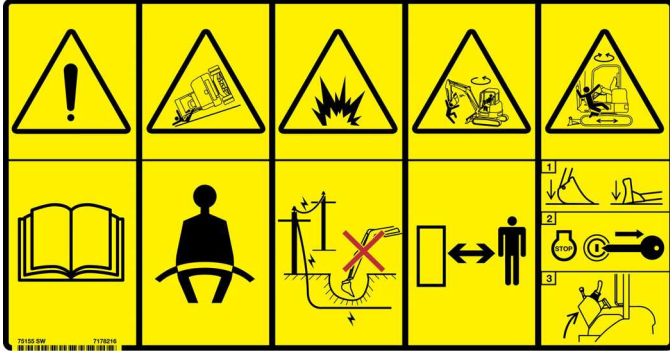
W-2517-0110

MACHINE SIGNS (DECALS) (CONT'D)

Pictorial Only Safety Signs (Cont'd)

5. General Hazard (7148158, 7178216)

This safety sign is located inside the operator's area on the right rear window.



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

6. Hot Surfaces and Rotating Fan (7243563)

This safety sign is 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)

7. Hot Surfaces (7185935)

This safety sign is located in the engine compartment.



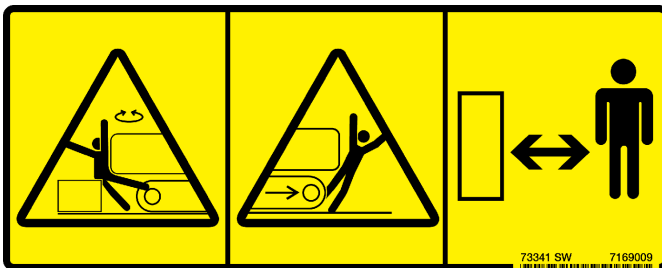
AVOID BURNS

Do not remove radiator cap when the engine is hot. You can be seriously burned.

W-2070-1203

8. Stay Away (7169009)

This safety sign is located on both upper rear corners of the upperstructure.



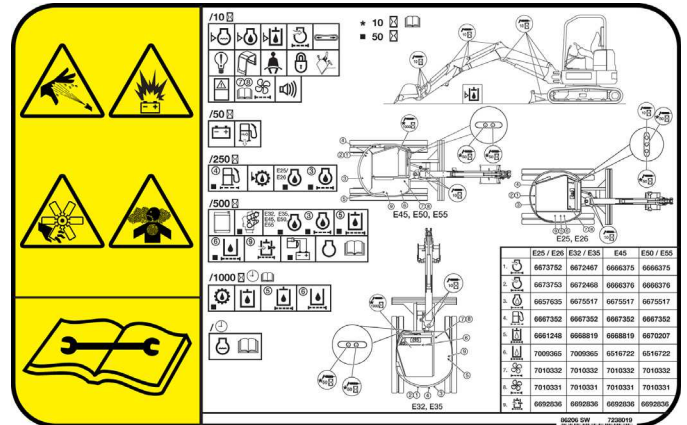
AVOID INJURY OR DEATH

- 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-NEW-1108

9. High Pressure, Battery, Rotating Fan, Exhaust Gases and Service Schedule (7238019)

This safety sign is located in the engine compartment. For Service Schedule Information, (See SERVICE SCHEDULE on Page 153.)



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

MACHINE SIGNS (DECALS) (CONT'D)

Pictorial Only Safety Signs (Cont'd)

10. Thrown or Flying Objects (7169291)

This safety sign is located on the gas spring in the engine compartment.



**High pressure gas can cause serious injury or death.
Do not open. Opening cylinder can release rod.**

W-2523-0106

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