

# Operation and Maintenance Manual

# **450E Backhoe Loader**

EBL 1-Up (Machine)





# **Important Safety Information**

Most accidents that involve product operation, maintenance and repair are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. A person must be alert to potential hazards. This person should also have the necessary training, skills and tools to perform these functions properly.

Improper operation, lubrication, maintenance or repair of this product can be dangerous and could result in injury or death.

Do not operate or perform any lubrication, maintenance or repair on this product, until you have read and understood the operation, lubrication, maintenance and repair information.

Safety precautions and warnings are provided in this manual and on the product. If these hazard warnings are not heeded, bodily injury or death could occur to you or to other persons.

The hazards are identified by the "Safety Alert Symbol" and followed by a "Signal Word" such as "DANGER", "WARNING" or "CAUTION". The Safety Alert "WARNING" label is shown below.



The meaning of this safety alert symbol is as follows:

## Attention! Become Alert! Your Safety is Involved.

The message that appears under the warning explains the hazard and can be either written or pictorially presented.

A non-exhaustive list of operations that may cause product damage are identified by "NOTICE" labels on the product and in this publication.

Caterpillar cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this publication and on the product are, therefore, not all inclusive. You must not use this product in any manner different from that considered by this manual without first satisfying yourself that you have considered all safety rules and precautions applicable to the operation of the product in the location of use, including site-specific rules and precautions applicable to the worksite. If a tool, procedure, work method or operating technique that is not specifically recommended by Caterpillar is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that the product will not be damaged or become unsafe by the operation, lubrication, maintenance or repair procedures that you intend to use.

The information, specifications, and illustrations in this publication are on the basis of information that was available at the time that the publication was written. The specifications, torques, pressures, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service that is given to the product. Obtain the complete and most current information before you start any job. Cat dealers have the most current information available.

### **A** WARNING

When replacement parts are required for this product Caterpillar recommends using Cat replacement parts or parts with equivalent specifications including, but not limited to, physical dimensions, type, strength and material.

Failure to heed this warning can lead to premature failures, product damage, personal injury or death.

In the United States, the maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual of the owner's choosing.

<b>Table of Contents</b>	<b>Product Information Section</b>	
Foreword 4	General Information	29
Safety Section	Identification Information	35
Safety Messages	Operation Section	
Additional Messages 12	Before Operation	36
General Hazard Information14	Machine Operation	38
Crushing Prevention and Cutting Prevention 16	Controls	61
Burn Prevention	Engine Starting	71
Fire Prevention and Explosion Prevention 17	Parking	74
Fire Safety	Transportation Information	78
Fire Extinguisher Location	Towing Information	81
Tire Information	Engine Starting (Alternate Methods)	83
Electrical Storm Injury Prevention	Maintenance Section	
Before Starting Engine	Tire Inflation Information	85
Engine Starting	Lubricant Viscosities and Refill Capacities	86
Visibility Information	Maintenance Support	91
Restricted Visibility	Maintenance Interval Schedule	93
Before Operation	Warranty Section	
Operation24	Warranty Information	. 138
Engine Stopping24	Reference Information Section	
Work Tools24	Reference Materials	. 139
Parking25	Index Section	
Slope Operation	Index	. 143
Equipment Lowering with Engine Stopped 26		
Sound Information and Vibration Information . 26		
Operator Station		