

Operator's Manual

EX1200-5D

Excavator

INTRODUCTION

Read this manual carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or machine damage.

This standard specification machine can be operated under the following conditions without being modified.

Atmospheric Temperature: -20°C to 50°C (-4°F to 122°F)

Altitude: 0 m to 2000 m (0 ft to 6600 ft)

In case the machine is used under conditions other than described above, consult your nearest Hitachi dealer.

This manual should be considered a permanent part of your machine and should remain with the machine when you sell it.

This machine is of metric design. Measurements in this manual are metric. Use only metric hardware and tools as specified.

Right-hand and left-hand sides are determined by facing in the direction of forward travel.

Write product identification numbers in the Machine Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. If this manual is kept on the machine, also file the identification numbers in a secure place off the machine.

Warranty is provided as a part of Hitachi's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that Hitachi will back its products where defects appear within the warranty period. In some circumstances, Hitachi also provides field improvements, often without charge to the customer, even if the product is out of warranty.

Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied.

Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

Only qualified, experienced operators officially licensed (according to local law) should be allowed to operate the machine. Moreover, only officially licensed personnel should be allowed to inspect and service the machine.

Prior to operating this machine in a country other than a country of its intended use, it may be necessary to make modifications to it so that it complies with the local standards (including safety standards) and requirements of that particular country. Please do not operate this machine outside of the country of its intended use until such compliance has been confirmed. Please contact Hitachi Construction Machinery Co., Ltd. or any of our authorized distributor or dealer if you have any questions concerning compliance.

INDEX

MACHINE NUMBERS

SAFETY

SAFETY SIGNS

COMPONENTS NAME

GETTING ON/OFF THE MACHINE

OPERATOR'S STATION

BREAK-IN

OPERATING THE ENGINE

DRIVING THE MACHINE

OPERATING THE MACHINE

TRANSPORTING

MAINTENANCE

MAINTENANCE UNDER SPECIAL ENVIRONMENTAL CONDITIONS

STORAGE

TROUBLESHOOTING

SPECIFICATIONS

INDEX

MACHINE NUMBERS

The manufacturing Nos. explained in this group is the individual number (serial No.) given to each machine and hydraulic components. These numbers are requested when inquiring any information on the machine and/or components. Fill these serial Nos. in the blank spaces in this group to immediately make them available upon request.

MACHINE

MODEL/TYPE: _____

PRODUCT
IDENTIFICATION
NUMBER: _____



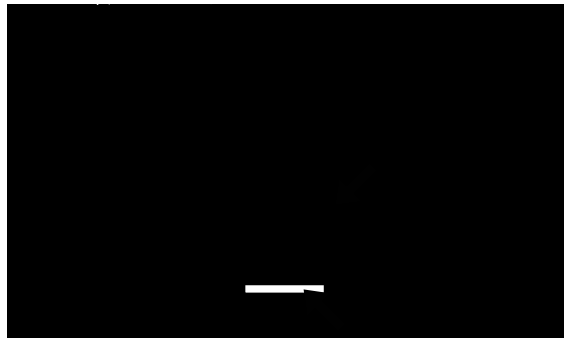
M142-12-001

PRODUCT IDENTIFICATION NUMBER

PRODUCT
IDENTIFICATION
NUMBER: _____

NOTE:

HCM18F00000003001 Marks to indicate the start and end of the PIN
PRODUCT IDENTIFICATION NUMBER (PIN)

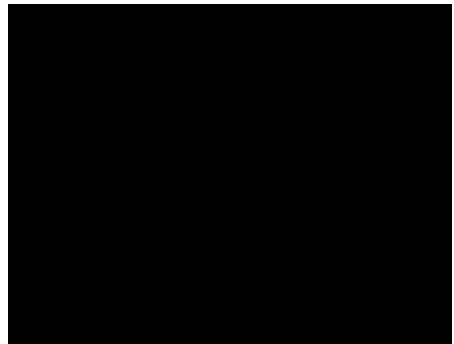


M142-12-001

ENGINE

TYPE: _____

MFG. NO.: _____



M18E-01-008

TRAVEL MOTOR

TYPE: _____

MFG. NO.: _____



M183-01-001

MACHINE NUMBERS

SWING MOTOR

TYPE: _____

MFG. NO.: _____

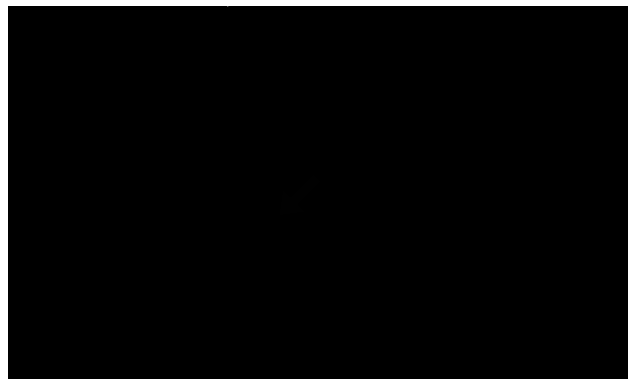


M142-12-003

HYDRAULIC PUMP

TYPE: _____

MFG. NO.: _____

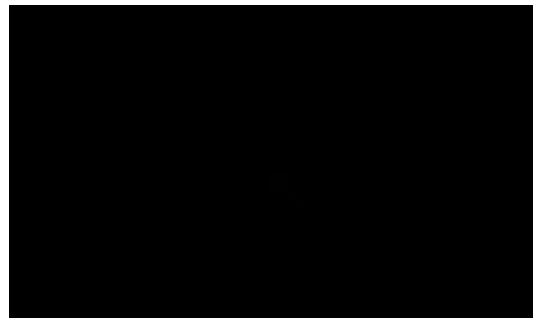


M142-12-004

BOOM

TYPE: _____

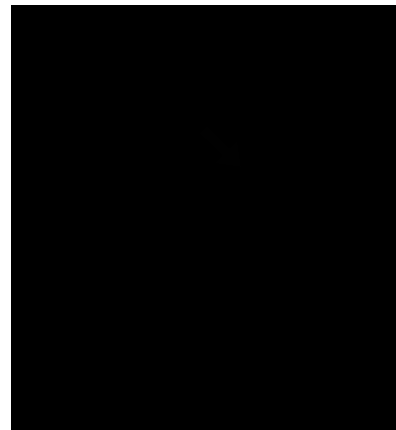
MFG. NO.: _____



ARM

TYPE: _____

MFG. NO.: _____



M111-12-005

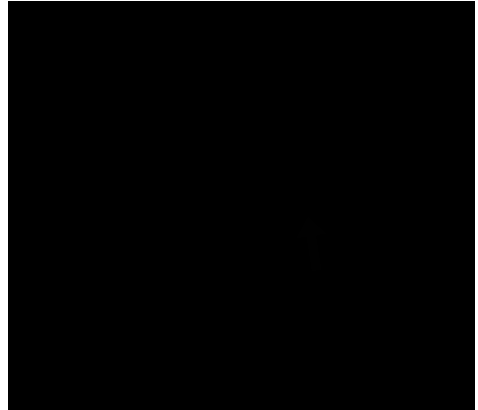
M17V-00-005

MACHINE NUMBERS

BUCKET

TYPE: _____

MFG. NO.: _____



M116-12-004

CONTENTS

MACHINE NUMBERS

SAFETY

Recognize Safety Information.....	S-1
Understand Signal Words.....	S-1
Follow Safety Instructions.....	S-2
Prepare for Emergencies.....	S-2
Wear Protective Clothing.....	S-3
Protect Against Noise.....	S-3
Inspect Machine.....	S-3
General Precautions for Cab.....	S-4
Use Handholds and Steps.....	S-5
Adjust the Operator's Seat.....	S-5
Fasten Your Seat Belt.....	S-6
Move and Operate Machine Safely.....	S-6
Operate Only from Operator's Seat.....	S-7
Jump Starting.....	S-7
Keep Riders Off Machine.....	S-7
Investigate Job Site Beforehand.....	S-8
Protect Against Falling Stones and Debris.....	S-8
Provide Signals for Jobs Involving Multiple Numbers of Machines.....	S-9
Confirm Direction of Machine to be Driven.....	S-9
Drive Machine Safely.....	S-10
Avoid Injury from Rollaway Accidents.....	S-11
Avoid Injury from Back-Over and Swing Accidents.....	S-12
Keep Person Clear from Working Area.....	S-13
Never Position Bucket Over Anyone.....	S-13
Avoid Undercutting.....	S-13
Avoid Tipping.....	S-14
Never Undercut a High Bank.....	S-14
Dig with Caution.....	S-15
Operate with Caution.....	S-15
Avoid Power Lines.....	S-15
Object Handling.....	S-16
Protect Against Flying Debris.....	S-16
Park Machine Safely.....	S-17
Handle Fluids Safely – Avoid Fires.....	S-17
Practice Safe Maintenance.....	S-18
Warn Others of Service Work.....	S-19
Support Machine Properly.....	S-19
Stay Clear of Moving Parts.....	S-19
Prevent Parts from Flying.....	S-20
Store Attachments Safely.....	S-20
Prevent Burns.....	S-21
Replace Rubber Hoses Periodically.....	S-21
Avoid High-Pressure Fluids.....	S-22
Prevent Fires.....	S-23
Evacuating in Case of Fire.....	S-24
Beware of Exhaust Fumes.....	S-24
Precautions for Welding and Grinding.....	S-25
Avoid Heating Near Pressurized Fluid Lines.....	S-26
Avoid Applying Heat to Lines Containing Flammable Fluids.....	S-26
Remove Paint Before Welding or Heating.....	S-26

Beware of Asbestos Dust.....	S-27
Prevent Battery Explosions.....	S-27
Service Air Conditioning System Safely.....	S-27
Handle Chemical Products Safely.....	S-28
Dispose of Waste Properly.....	S-28

SAFETY SIGNS..... S-29

COMPONENTS NAME..... 1-1

GETTING ON/OFF THE MACHINE 1-2

OPERATOR'S STATION

Emergency Rope (Elevated Cab).....	1-3
Cab Features.....	1-4
Monitor Panel.....	1-5
Coolant Temperature Gauge.....	1-5
Fuel Gauge.....	1-6
Fuel Level Indicator.....	1-6
Alternator Indicator.....	1-6
Engine Exhaust Temperature Indicator.....	1-6
Hydraulic Oil Level Indicator.....	1-7
Engine Warning Indicator.....	1-7
Coolant Level Indicator.....	1-7
Engine Stop Indicator.....	1-8
Auto-Lubrication Indicator.....	1-8
Engine Oil Level Indicator (Warning).....	1-8
Pump Transmission Oil Pressure Indicator (Warning).....	1-8
Engine Oil Pressure Indicator.....	1-9
Preheat Indicator.....	1-9
Download Indicator.....	1-9
Overheat Indicator.....	1-10
Air Filter Restriction Indicator.....	1-10
Lubrication Mode Indicator.....	1-10
Display.....	1-11
Auto-Idle Indicator.....	1-11
Quick Idle Indicator.....	1-11
Switch Panel 1.....	1-12
Display Selection Switch.....	1-12
Hour Meter.....	1-12
Trip Meter 1 And Trip Meter 2.....	1-13
Set Switch.....	1-14
Lubrication Mode Switch.....	1-15
Switch Panel 2.....	1-16
Engine Control Dial.....	1-16
Auto-Idle Switch.....	1-17
Power Mode Switch.....	1-17
Travel Mode Switch.....	1-18
Work Light Switch.....	1-19
Wiper/Washer Switch.....	1-20
Right Console.....	1-21
Key Switch.....	1-21
ALU Timer Switch (Auto-Lubrication Timer Switch).....	1-21
Heavy Lift Switch.....	1-22

CONTENTS

Boom Mode Switch	1-22
Auto Air Conditioner	1-23
Cab Heater Operation.....	1-27
Cooling Operation	1-27
Defroster Operation	1-28
Tips for Optimal Air Conditioner Usage	1-29
Left Console	1-31
Step Light Switch	1-32
AM/FM Radio Operation	1-33
Digital Clock Setting Procedure	1-34
Rear Console	1-35
Engine Diagnostic Switch.....	1-35
Buzzer and Buzzer Stop Switch	1-36
Travel Alarm Stop Switch (Optional).....	1-36
DLU Check Switch	1-36
Quick Idle Switch	1-37
Download Indicator	1-37
Horn Switch.....	1-37
Pilot Control Shut-Off Lever	1-38
Cab Light.....	1-38
Fuse Box (Left)	1-39
Fuse Box (Right).....	1-39
Cab Door Release Lever	1-40
Opening Cab Door Window	1-40
Emergency Exit.....	1-41
Hazard Warning Lamp --- Location.....	1-41
Extinguisher --- If Equipped	1-41
Emergency Exit (Elevated Cab).....	1-42
Adjusting The Seat.....	1-44
Adjusting Console Height.....	1-45
Seat Belt.....	1-46

BREAK-IN

Observe Engine Operation Closely.....	2-1
Every 10 Hours or Daily	2-1
After the First 50 Hours.....	2-1

OPERATING THE ENGINE

Inspect Machine Daily Before Starting	3-1
Before Starting Engine	3-2
Level Check	3-3
Starting the Engine in Ordinary Temperature	3-4
Starting the Engine in Cold Weather.....	3-5
Check Instruments After Starting.....	3-6
Using Booster Batteries	3-7
Stopping the Engine.....	3-9

DRIVING THE MACHINE

Drive the Machine Carefully	4-1
Steering the Machine Using Pedals.....	4-2
Steering the Machine Using Levers	4-3
Travel Mode Switch	4-4
Travel Alarm (Optional).....	4-4
Traveling	4-5
Operating on Soft Ground.....	4-6
Raise One Track Using Boom and Arm	4-6

Towing Machine a Short Distance.....	4-7
Operating in Water or Mud	4-8
Precautions for Traveling on Slopes	4-9
Parking the Machine on Slopes.....	4-10
Parking the Machine.....	4-10

OPERATING THE MACHINE

Control Lever (ISO Pattern Backhoe)	5-1
Control Lever (ISO Pattern Loading Shovel)	5-2
Bucket Open-Close Pedals (Loading Shovel)	5-3
Control Lever (HITACHI Pattern Backhoe)	5-4
Control Lever (HITACHI Pattern Loading Shovel)	5-5
Pilot Control Shut-Off Lever	5-6
Auto-Idle	5-8
Quick Idle	5-9
Engine Speed Control	5-10
Power Mode	5-11
E (Economy) Mode.....	5-12
P (Power) Mode.....	5-13
S/P (Super Power) Mode.....	5-14
Heavy Lift	5-15
Precautions for Operations.....	5-16
Operate the Machine Safely	5-17
Operating Backhoe.....	5-18
Grading Operation	5-18
Avoid Abusive Operation	5-19
Operating Tips.....	5-20
Select Correct Track Shoes	5-20
Loading Shovel Operation	5-21
Prohibited Operation.....	5-21
Object Handling --- If Equipped	5-24
Overnight Storage Instructions.....	5-25

TRANSPORTING

Packing Dimensions and Weights for Transportation	6-1
--	-----

MAINTENANCE

Correct Maintenance and Inspection Procedures	7-1
Check the Hour Meter Regularly	7-2
Use Correct Fuels and Lubricants.....	7-2
Prepare Machine for Maintenance	7-3
Hood and Access Covers.....	7-4
Use Electrical Outlet.....	7-4
Construction Outline	7-6
Hydraulic System.....	7-7
Loading Shovel.....	7-8
Backhoe	7-9
Electrical Circuit.....	7-11
Periodic Replacement of Parts.....	7-15
Maintenance Interval Guide.....	7-18
A. Greasing	7-21
Front Joint Pins	7-22
Swing Bearing	7-26

CONTENTS

Swing Internal Gear	7-29
Fan Pulley and Tension Pulley.....	7-30
B. Engine.....	7-30
Engine Oil Level.....	7-31
Change Engine Oil.....	7-31
Replace Engine Oil Filters	7-31
C. Transmission	7-33
Pump Transmission.....	7-34
Swing Reduction Gear.....	7-37
Travel Reduction Gear.....	7-39
D. Hydraulic System	7-41
Inspection and Maintenance of Hydraulic Equipment.....	7-42
Check Hydraulic Oil Level.....	7-44
Drain Hydraulic Tank Sump.....	7-45
Change Hydraulic Oil.....	7-46
Suction Filter Cleaning.....	7-49
Replace Drain Filter Element.....	7-50
Replace Full-Flow Filter	7-52
Replace Pilot Oil Filter Element	7-54
Check Hoses and Lines.....	7-56
Service Recommendations for Hydraulic Fittings	7-59
E. Fuel System.....	7-62
Drain Fuel Tank Sump.....	7-64
Drain Fuel Filter Sediment.....	7-65
Replace Fuel Filter.....	7-66
Check Fuel Hoses	7-67
Clean the Fuel Cooler Core	7-69
F. Air Cleaner	7-70
Clean the Air Cleaner Outer Element	7-70
Replace the Air Cleaner Outer and Inner Elements	7-70
G. Cooling System.....	7-72
Check Coolant Level.....	7-73
Check DCA4 Concentration in Coolant	7-74
Replace Coolant Filter	7-82
Check Fan Belt for Wear	7-83
Change Coolant.....	7-84
Clean Radiator Core and Oil Cooler Core ...	7-86
Clean Inter Cooler Front Screen.....	7-86
H. Air Conditioner	7-87
Recirculation Air Filter.....	7-87
Ventilation Air Filter.....	7-88
Check Refrigerant Quantity	7-89
Check Compressor Belt Tension.....	7-90
Clean Condenser Core	7-90
Check Tightening Torque	7-91
Seasonal Maintenance	7-92
I. Electrical System	7-93
Replace Batteries	7-96
Replacing Fuses	7-97
J. Miscellaneous	7-102
Check Bucket Teeth	7-103
Change Bucket (Backhoe).....	7-108
Check and Replace Seat Belt.....	7-109

Check Windshield Washer Fluid Level	7-109
Check Track Sag.....	7-110
Auto-Lubrication System	7-112
Check Tightening Torque of Bolts and Nuts.....	7-116
Check O-rings in Bucket Joints.....	7-130

MAINTENANCE UNDER SPECIAL ENVIRONMENTAL CONDITIONS

Maintenance Under Special Environmental Conditions	9-1
---	-----

STORAGE

Storing the Machine.....	10-1
Removing the Machine from Storage.....	10-2

TROUBLESHOOTING

Engine	11-1
Electrical System	11-6
Mode Selection.....	11-8
Control Levers	11-9
Hydraulic System.....	11-9

SPECIFICATIONS

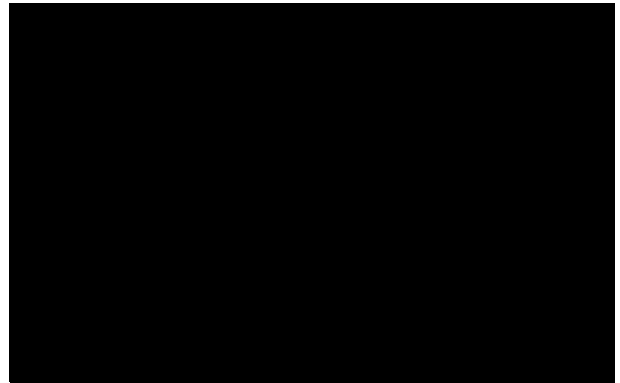
Specifications	12-1
Working Range (Backhoe).....	12-3
Working Range (BE Backhoe)	12-4
Working Range (Loading Shovel)	12-5
Backhoe Shoe Types and Applications	12-6
Sound Level Results (2000/14/EC)	12-7

INDEX	14-1
-------------	------

SAFETY

RECOGNIZE SAFETY INFORMATION

- These are the **SAFETY ALERT SYMBOLS**.
 - When you see these symbols on your machine or in this manual, be alert to the potential for personal injury.
 - Follow recommended precautions and safe operating practices.

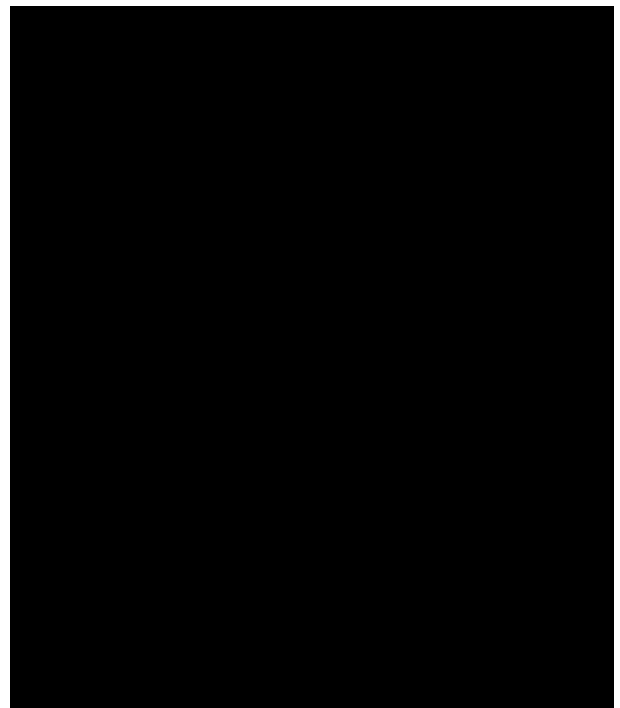


SA-688


001-E01A-0001

UNDERSTAND SIGNAL WORDS

- On machine safety signs, signal words designating the degree or level of hazard - **DANGER**, **WARNING**, or **CAUTION** - are used with the safety alert symbol.
 - **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 - **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 - **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
 - **DANGER** or **WARNING** safety signs are located near specific hazards. General precautions are listed on **CAUTION** safety signs.
 - Some safety signs don't use any of the designated signal words above after the safety alert symbol are occasionally used on this machine.



SA-1223

- **CAUTION** also calls attention to safety messages in this manual.
- To avoid confusing machine protection with personal safety messages, a signal word **IMPORTANT** indicates a situation which, if not avoided, could result in damage to the machine.
-  **NOTE** indicates an additional explanation for an element of information.

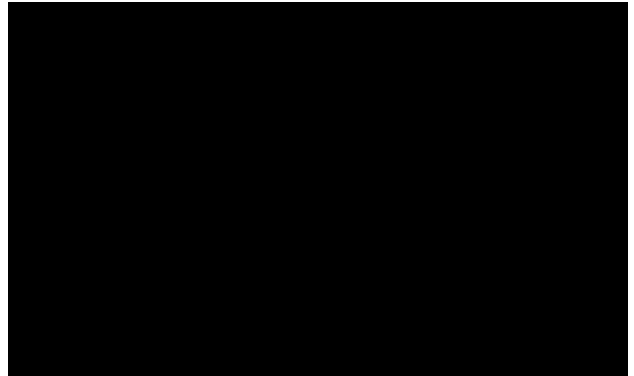
002-E01A-1223

SAFETY

FOLLOW SAFETY INSTRUCTIONS

- Carefully read and follow all safety signs on the machine and all safety messages in this manual.
- Safety signs should be installed, maintained and replaced when necessary.
 - If a safety sign or this manual is damaged or missing, order a replacement from your authorized dealer in the same way you order other replacement parts (be sure to state machine model and serial number when ordering).
- Learn how to operate the machine and its controls correctly and safely.
- Allow only trained, qualified, authorized personnel to operate the machine.
- Keep your machine in proper working condition.
 - Unauthorized modifications of the machine may impair its function and/or safety and affect machine life.
- The safety messages in this SAFETY chapter are intended to illustrate basic safety procedures of machines. However it is impossible for these safety messages to cover every hazardous situation you may encounter. If you have any questions, you should first consult your supervisor and/or your authorized dealer before operating or performing maintenance work on the machine.

003-E01B-0003

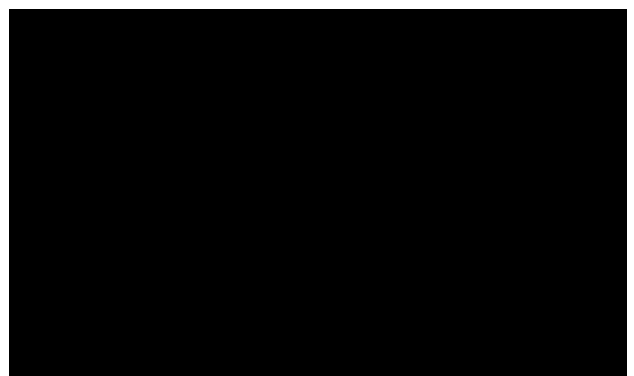


SA-003

PREPARE FOR EMERGENCIES

- Be prepared if a fire starts or if an accident occurs.
 - Keep a first aid kit and fire extinguisher on hand.
 - Thoroughly read and understand the label attached on the fire extinguisher to use it properly.
 - To ensure that a fire-extinguisher can be always used when necessary, check and service the fire-extinguisher at the recommended intervals as specified in the fire-extinguisher manual.
- Establish emergency procedure guidelines to cope with fires and accidents.
- Keep emergency numbers for doctors, ambulance service, hospital, and fire department posted near your telephone.

004-E01A-0437



SA-437

SAFETY

WEAR PROTECTIVE CLOTHING

- Wear close fitting clothing and safety equipment appropriate to the job.

You may need:

- A hard hat
- Safety shoes
- Safety glasses, goggles, or face shield
- Heavy gloves
- Hearing protection
- Reflective clothing
- Wet weather gear
- Respirator or filter mask.

Be sure to wear the correct equipment and clothing for the job. Do not take any chances.

- Avoid wearing loose clothing, jewelry, or other items that can catch on control levers or other parts of the machine.
- Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating the machine.

005-E01A-0438

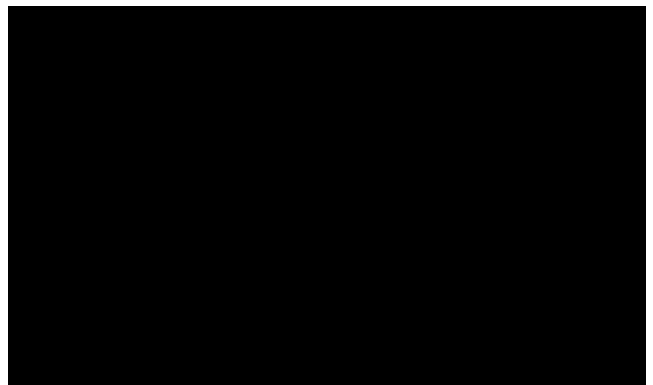


SA-438

PROTECT AGAINST NOISE

- Prolonged exposure to loud noise can cause impairment or loss of hearing.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortably loud noises.

006-E01A-0434

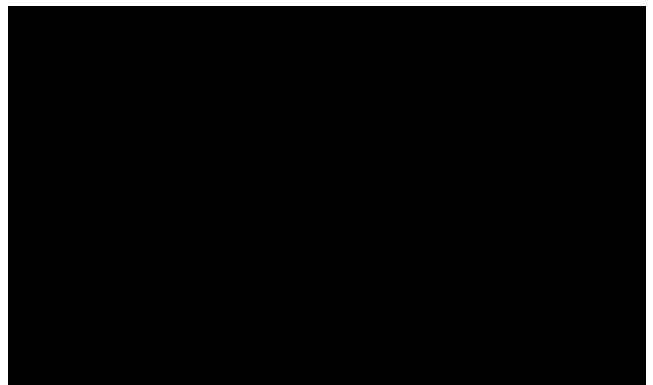


SA-434

INSPECT MACHINE

- Inspect your machine carefully each day or shift by walking around it before you start it to avoid personal injury.
- In the walk-around inspection, be sure to cover all points described in the “PRE-START INSPECTION” chapter in the operator’s manual.

007-E01A-0435



SA-435

SAFETY

GENERAL PRECAUTIONS FOR CAB

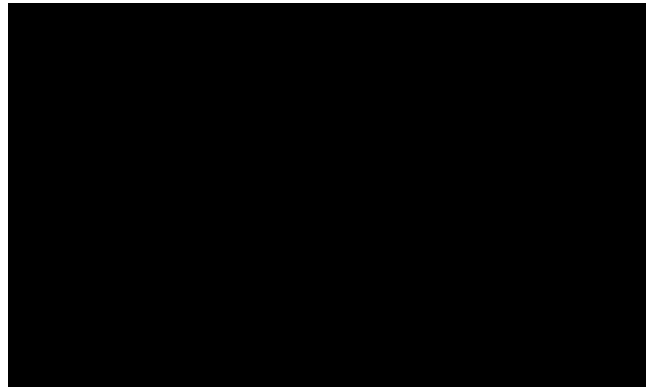
- Before entering the cab, thoroughly remove all dirt and/or oil from the soles of your work boots. If any controls such as a pedal is operated while with dirt and/or oil on the soles of the operator's work boots the operator's foot may slip off the pedal, possibly resulting in a personal accident.
- Do not leave parts and/or tools lying around the operator's seat. Store them in their specified locations.
- Avoid storing transparent bottles in the cab. Do not attach any transparent type window decorations on the windowpanes as they may focus sunlight, possibly starting a fire.
- Refrain from listening to the radio, or using music headphones or mobile telephones in the cab while operating the machine.
- Keep all flammable objects and/or explosives away from the machine.
- After using the ashtray, always cover it to extinguish the match and/or tobacco.
- Do not leave cigarette lighters in the cab. When the temperature in the cab increases, the lighter may explode.

524-E01A-0000

SAFETY

USE HANDHOLDS AND STEPS

- Falling is one of the major causes of personal injury.
 - When you get on and off the machine, always face the machine and maintain a three-point contact with the steps and handrails.
 - Do not use any controls as handholds.
 - Never jump on or off the machine. Never mount or dismount a moving machine.
 - Be careful of slippery conditions on platforms, steps, and handrails when leaving the machine.

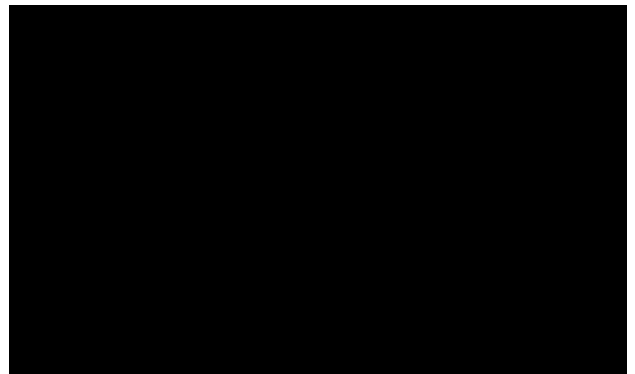


SA-439

008-E01A-0439

ADJUST THE OPERATOR'S SEAT

- A poorly adjusted seat for either the operator or for the work at hand may quickly fatigue the operator leading to misoperations.
 - The seat should be adjusted whenever changing the operator for the machine.
 - The operator should be able to fully depress the pedals and to correctly operate the control levers with his back against the seat back.
 - If not, move the seat forward or backward, and check again.



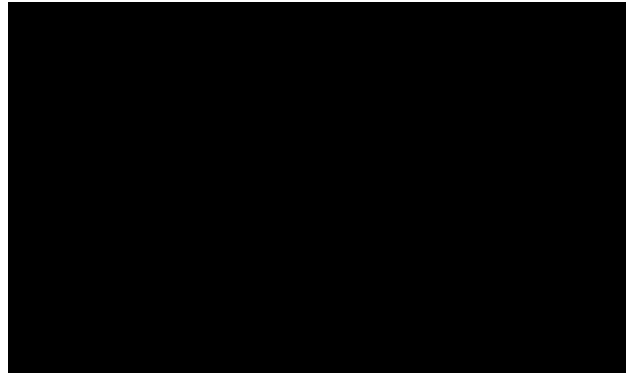
SA-378

009-E01A-0378

SAFETY

FASTEN YOUR SEAT BELT

- If the machine should overturn, the operator may become injured and/or thrown from the cab. Additionally the operator may be crushed by the overturning machine, resulting in serious injury or death.
- Prior to operating the machine, thoroughly examine webbing, buckle and attaching hardware. If any item is damaged or worn, replace the seat belt or component before operating the machine.
- Be sure to remain seated with the seat belt securely fastened at all times when the machine is in operation to minimize the chance of injury from an accident.
- We recommend that the seat belt be replaced every three years regardless of its apparent condition.

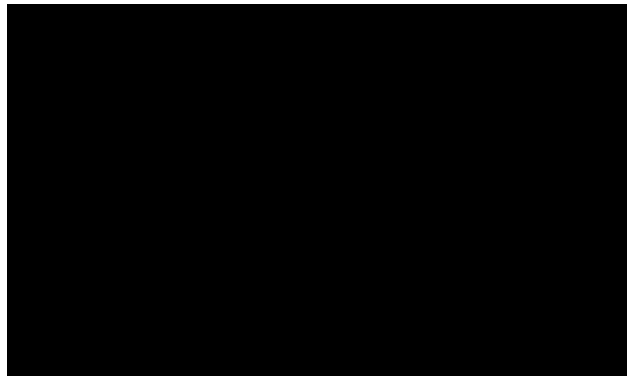


SA-237

010-E01A-0237

MOVE AND OPERATE MACHINE SAFELY

- Bystanders can be run over.
- Take extra care not to run over bystanders. Confirm the location of bystanders before moving, swinging, or operating the machine.
- Always keep the travel alarm and horn in working condition (if equipped). It warns people when the machine starts to move.
- Use a signal person when moving, swinging, or operating the machine in congested areas. Coordinate hand signals before starting the machine.



SA-426

011-E01A-0426

Thank you so much for reading.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com