

Operator's Manual

ZAXIS

210-5G · 210LC-5G

250LC-5G

290LC-5G

350LC-5G

Hydraulic Excavator

Serial No.

ZX210-5G, 210LC-5G

ZX250LC-5G

ZX290LC-5G

ZX350LC-5G

300001 and up

030001 and up

040001 and up

040001 and up

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

CONTENTS

MACHINE NUMBERS	1
SAFETY	S-1
Recognize Safety Information	S-1
Understand Signal Words.....	S-1
Follow Safety Instructions.....	S-2
Prepare for Emergencies.....	S-3
Wear Protective Clothing.....	S-3
Protect Against Noise	S-4
Inspect Machine	S-4
General Precautions for Cab.....	S-5
Use Handholds and Steps	S-6
Adjust the Operator's Seat	S-6
Ensure Safety Before Rising from or Leaving Operator's Seat.....	S-7
Fasten Your Seat Belt	S-7
Move and Operate Machine Safely.....	S-8
Operate Only from Operator's Seat	S-8
Jump Starting	S-9
Keep Riders off Machine	S-9
Precautions for Operations	S-10
Investigate Job Site Beforehand	S-11
Install OPG Guard	S-12
Provide Signals for Jobs Involving Multiple Machines.....	S-13
Confirm Direction of Machine to Be Driven.....	S-13
Drive Machine Safely.....	S-14
Avoid Injury from Rollaway Accidents.....	S-16
Avoid Injury from Back-Over and Swing Accidents	S-17
Keep Person Clear from Working Area.....	S-18
Never Position Bucket Over Anyone	S-18
Avoid Undercutting.....	S-19
Avoid Tipping.....	S-19
Never Undercut a High Bank.....	S-20
Dig with Caution.....	S-20
Operate with Caution	S-20
Avoid Power Lines.....	S-21
Precautions for Lightning.....	S-21
Object Handling	S-22
Protect Against Flying Debris	S-22
Park Machine Safely.....	S-23
Handle Fluids Safely—Avoid Fires.....	S-23
Transport Safely	S-24
Practice Safe Maintenance.....	S-25
Warn Others of Service Work	S-26
Support Machine Properly.....	S-26
Stay Clear of Moving Parts	S-27
Prevent Parts from Flying	S-27
Store Attachments Safely	S-28
Prevent Burns.....	S-28
Replace Rubber Hoses Periodically.....	S-29
Avoid High-Pressure Fluids	S-29
Prevent Fires.....	S-30
Evacuating in Case of Fire.....	S-32
Beware of Exhaust Fumes.....	S-32
Precautions for Welding and Grinding	S-33
Avoid Heating Near Pressurized Fluid Lines	S-34
Avoid Applying Heat to Lines Containing Flammable Fluids.....	S-34
Precautions for Handling Accumulator and Gas Damper	S-34
Remove Paint Before Welding or Heating	S-35
Beware of Asbestos and Silicon Dust and Other Contamination	S-35
Prevent Battery Explosions	S-36
Service Air Conditioning System Safely	S-36
Handle Chemical Products Safely.....	S-37
Dispose of Waste Properly.....	S-37
Never Ride Attachment.....	S-38
Precautions for Communication Terminal.....	S-38
Precaution for Communication Terminal Equipment	S-39
SAFETY SIGNS	S-41
COMPONENTS NAME	1-1
Components Name	1-1
GETTING ON/OFF THE MACHINE	1-2
OPERATOR'S STATION	1-3
Cab Features (Std. Model)	1-3
Multi Function Monitor	1-4
Default Setting	1-5
Basic Screen.....	1-6
How to Use Screens.....	1-7
Displaying Basic Screen	1-7
Hour Meter	1-10
Clock.....	1-10
Fuel Gauge	1-10
Coolant Temperature Gauge	1-10
Operating Status Icon Display.....	1-10
Security Functions	1-11
Input Password	1-11
Extending Password Duration Time	1-12
Alarm Occurrence Screen.....	1-13
Remedy	1-15
Main Menu.....	1-18
Air Conditioner.....	1-19
Circulation Air Mode	1-19
Air Conditioner Compressor ON/OFF	1-19
Radio	1-20
Work Mode	1-21
Attachment Selection	1-21
Mail (Optional).....	1-22
Setting Menu	1-24
Date and Time.....	1-25
Time Adjustment	1-25
Date Adjustment.....	1-27
Display Mode Setting	1-29
Attachment Adjust.....	1-31
Flow Rate Adjustment.....	1-31
Priority (arm roll-out)	1-33
Attachment Name Input.....	1-35
Password Change.....	1-37
Sub Meter.....	1-41

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CONTENTS

Rear View Camera Monitor	1-43	Defroster Operation.....	1-94
Rear View Camera ON/OFF.....	1-43	Cool Head/Warm Feet Operation.....	1-94
Brightness Adjustment.....	1-45	Tips for Optimal Air Conditioner Usage	1-95
Language Settings.....	1-47	For Rapid Cooling	1-95
Lists of Display Language.....	1-49	When Windows Become Clouded	1-95
Unit Selection	1-50	Off-Season Air Conditioner Maintenance	1-95
Display Item Selection (Rear View Camera OFF)	1-52	AM/FM Radio Operation.....	1-96
Main Menu Sequence Change	1-54	Controls on the Radio.....	1-96
Information Menu	1-56	Tuning Procedure	1-96
Operation	1-57	Station Presetting Procedure.....	1-97
Breaker Operation	1-57	Station Auto-Presetting Procedure	1-98
Attachment Operation.....	1-59	TONE Control.....	1-99
Travel Operation.....	1-61	Audio Input (Optional)	1-100
Actual Operation.....	1-63	Cab Door Release Lever	1-101
Maintenance	1-65	Opening/Closing and Removing Cab	
Time Remains and Maintenance Interval.....	1-67	Inside Window	1-102
Troubleshooting	1-69	Opening Upper Front Window	1-103
Monitoring.....	1-71	Opening Upper Front Window	1-103
Switch Panel.....	1-73	Removing and Storing Lower Front Window	1-104
Return to Previous Screen (Monitor)	1-74	Removing and Storing Lower Front Window	1-104
Return to Basic Screen (Monitor)	1-74	Opening Side Windows.....	1-105
Selector Knob (Monitor).....	1-74	Opening/Closing Overhead Window.....	1-106
Temperature Control Switch/Mode Switch		Opening/Closing Overhead Window (Clear Hatch:	
(Air Conditioner)	1-74	If Equipped).....	1-107
AUTO/OFF Switch/Fan Switch (Air Conditioner).....	1-74	Emergency Exit	1-108
AM/FM Selector/Tuning Switch (Radio).....	1-75	Adjusting the Seat.....	1-110
Power Switch/Volume Control Knob (Radio).....	1-75	Seat Height and Angle Adjustment	1-110
Engine Control Dial	1-75	Console and Seat Fore-aft Adjustment.....	1-110
Auto-Idle Switch.....	1-76	Seat Fore-Aft Adjustment	1-110
Travel Mode Switch	1-76	Backrest Adjustment	1-110
Mode Switch.....	1-77	Armrest Adjustment	1-111
Work Light Switch.....	1-77	Adjusting Operator's Seat (Optional)	1-112
Wiper/Washer Switch	1-78	Seat Height and Angle Adjustment	1-112
Numeric Keypad.....	1-79	Console and Seat Fore-aft Adjustment.....	1-112
Switch Panel (for Optional Equipments).....	1-80	Seat Fore-Aft Adjustment	1-112
Travel Alarm Deactivation Switch (Optional).....	1-81	Suspension Adjustment	1-112
Swing Alarm Deactivation Switch (Optional)	1-81	Backrest Adjustment	1-113
Rear Light Switch (Optional).....	1-81	Armrest Adjustment	1-113
Key Switch.....	1-82	Console Height Adjustment.....	1-114
Power Boost Switch	1-82	Adjusting Procedures	1-114
Horn Switch	1-82	Installation and Adjustment of Mirrors	1-115
Cigar Lighter.....	1-83	Seat Belt	1-116
Using Cigar Lighter.....	1-83	Seat Belt.....	1-116
Using Cigar Lighter Port as External Power Source	1-83	BREAK-IN	2-1
Cab Light Switch.....	1-84	Observe Engine Operation Closely	2-1
Installing Fire Extinguisher (Optional)	1-84	Every 8 Hours or Daily.....	2-1
Pilot Control Shut-Off Lever	1-85	After the First 50 Hours	2-1
Engine Stop Switch.....	1-86	After the First 100 Hours.....	2-1
Handle (Emergency engine stop).....	1-86	OPERATING THE ENGINE	3-1
Fuse Box.....	1-87	Inspect Machine Daily Before Starting	3-1
Auto Air Conditioner	1-88	Before Starting Engine	3-2
Features:.....	1-88	Starting the Engine.....	3-3
Components Name	1-89	Check Instruments After Starting.....	3-7
Controller Part Name and Function	1-90	Using Booster Batteries	3-8
Cab Heater Operation	1-92	Stopping the Engine	3-10
Cooling Operation.....	1-93		

CONTENTS

DRIVING THE MACHINE	4-1	Fastening Machine for Transporting	6-5
Drive the Machine Carefully	4-1	Unloading	6-5
Steering the Machine Using Pedals	4-2	Lifting Machine	6-7
Steering the Machine Using Levers	4-3	MAINTENANCE	7-1
Travel Mode Switch	4-4	Correct Maintenance and Inspection Procedures.....	7-1
Operating on Soft Ground	4-5	Check the Hour Meter Regularly.....	7-3
Raise One Track Using Boom and Arm	4-5	Maintenance Guide Table	7-4
Towing Machine a Short Distance.....	4-6	Preparations for Inspection and Maintenance	7-6
Operating in Water or Mud	4-7	Hood and Access Covers.....	7-7
Parking the Machine on Slopes.....	4-8	Maintenance Guide	7-9
Parking the Machine	4-8	Periodic Replacement of Parts.....	7-14
OPERATING THE MACHINE	5-1	Kind of Oils.....	7-15
Control Lever (ISO Pattern)	5-1	Brand Names of Recommended Engine Oil.....	7-15
Control Lever (HITACHI Pattern) (Optional).....	5-2	A. Greasing.....	7-18
Attachment Pedal (Hydraulic Breaker) (Optional)	5-3	Front Joint Pins	7-18
Attachment Pedal (Hydraulic Crusher) (Optional).....	5-4	Swing Bearing	7-20
Pilot Control Shut-Off Lever	5-5	Swing Internal Gear.....	7-21
Warming Up Operation.....	5-6	Electric Grease Gun (Only ZX350LC-5G).....	7-22
Engine Speed Control.....	5-7	Electric Grease Gun.....	7-24
Auto-Idle.....	5-8	Components Name	7-25
Auto-Idle ON/OFF	5-9	Battery Charger Operation	7-26
Work Mode	5-10	Charger Lamp.....	7-27
Power Boost Switch	5-13	B. Engine.....	7-33
Power Mode	5-14	Engine Oil Level.....	7-33
Operating Backhoe	5-15	Change Engine Oil, Replace Engine Oil Filter	7-34
Shovel	5-16	C. Transmission.....	7-36
Grading Operation.....	5-17	Pump Transmission	7-36
Do Not Strike the Ground with Bucket Teeth	5-18	Swing Device	7-37
Avoid Hammer Work	5-18	Travel Reduction Gear	7-38
Avoid Abusive Operation	5-19	D. Hydraulic System.....	7-40
Avoid Side Load the Bucket.....	5-19	Inspection and Maintenance of Hydraulic	
Do Not Use Wide Track Shoes on Rough Ground.	5-20	Equipment.....	7-40
Hydraulic Breaker, Hydraulic Crusher and		Check Hydraulic Oil Level	7-44
Quick Coupler.....	5-21	Change Hydraulic Oil.....	7-45
Piping for Breaker and Crusher (Optional for the Std.		Suction Filter Cleaning.....	7-47
Model).....	5-22	Replacement of Full-Flow Filter	7-48
Operational Procedures for Stop Valves and		Replace Pilot Oil Filter.....	7-51
Selection Valve.....	5-22	Replace Air Breather Element.....	7-52
Secondary Relief Pressure Adjustment	5-23	Check Hoses and Lines	7-53
Precautions for Breaker Operation.....	5-24	E. Fuel System	7-57
Change Hydraulic Oil and Replace Full-Flow		Recommended Fuel.....	7-57
Filter Element	5-28	Drain Fuel Tank Sump.....	7-58
Precautions for Crusher Operation	5-29	Check Water Separator	7-59
Attachment.....	5-32	Replace Fuel Cartridge Filter.....	7-61
Allowable Weight Limits of Installed Attachment	5-32	Clean Feed Pump Strainer	7-62
Attachment Connection Parts	5-36	Check Fuel Hoses	7-63
Precaution for Arm Roll-In/Bucket Roll-In Combined		F. Air Cleaner.....	7-64
Operation.....	5-38	Clean and Replace Air Cleaner Element	7-64
Shackle Hole Usage	5-38	G. Cooling System	7-66
How to Lower Boom in Case of Emergency and When		Check Coolant Level	7-67
Engine Stops.....	5-39	Check and Adjust Fan Belt Tension.....	7-68
Precautions for After Operations	5-40	Change Coolant.....	7-69
TRANSPORTING	6-1	Clean Radiator/Oil Cooler/Inter Cooler Core.....	7-70
Transporting by Road	6-1	Clean Oil Cooler, Radiator and Inter Cooler	
Loading/Unloading on a Trailer	6-2	Front Screen	7-71
		Clean Air Conditioner Condenser	7-71

CONTENTS

H. Electrical System.....	7-72	ZX290LC-5G	12-10
Battery.....	7-73	Shoe Types and Applications	12-11
Replacing Fuses	7-78	ZX290LC-5G	12-11
I. Miscellaneous.....	7-80	Bucket Types and Applications	12-12
Check and Replace Bucket Teeth	7-80	ZX290LC-5G	12-12
Change Bucket.....	7-86	Specifications.....	12-13
Convert Bucket Connection Into Face Shovel.....	7-87	ZX350LC-5G	12-13
Adjust Bucket Linkage	7-88	Working Ranges (Grouser shoe).....	12-14
Remove Travel Levers	7-89	ZX350LC-5G	12-14
Check and Replace Seat Belt.....	7-89	Shoe Types and Applications	12-15
Check Windshield Fluid Level.....	7-90	ZX350LC-5G	12-15
Check Track Sag	7-91	Bucket Types and Applications	12-16
Clean and Replace Air Conditioner Filter	7-94	ZX350LC-5G	12-16
Check Air Conditioner	7-96	INDEX.....	14-1
Clean Cab Floor.....	7-98		
Check Injection Nozzle	7-99		
Retighten Cylinder Head Bolt.....	7-99		
Inspect and Adjust Valve Clearance	7-99		
Check Injection Timing	7-99		
Measure Engine Compression Pressure.....	7-99		
Check Starter and Alternator	7-99		
Replace Water Pump Grease	7-99		
Check Gas Damper	7-100		
Tightening and Retightening Torque of Nuts and Bolts.....	7-100		
MAINTENANCE UNDER SPECIAL ENVIRONMENTAL CONDITIONS	9-1		
Maintenance Under Special Environmental Conditions	9-1		
STORAGE	10-1		
Storing the Machine.....	10-1		
TROUBLESHOOTING.....	11-1		
Troubleshooting	11-1		
SPECIFICATIONS	12-1		
Specifications.....	12-1		
ZX210-5G, 210LC-5G.....	12-1		
Working Ranges (Grouser shoe).....	12-2		
ZX210-5G, 210LC-5G.....	12-2		
Shoe Types and Applications	12-3		
ZX210-5G	12-3		
ZX210LC-5G	12-3		
Bucket Types and Applications	12-4		
ZX210-5G, 210LC-5G.....	12-4		
Specifications.....	12-5		
ZX250LC-5G	12-5		
Working Ranges (Grouser shoe).....	12-6		
ZX250LC-5G	12-6		
Shoe Types and Applications	12-7		
ZX250LC-5G	12-7		
Bucket Types and Applications	12-8		
ZX250LC-5G	12-8		
Specifications.....	12-9		
ZX290LC-5G	12-9		
Working Ranges (Grouser shoe).....	12-10		

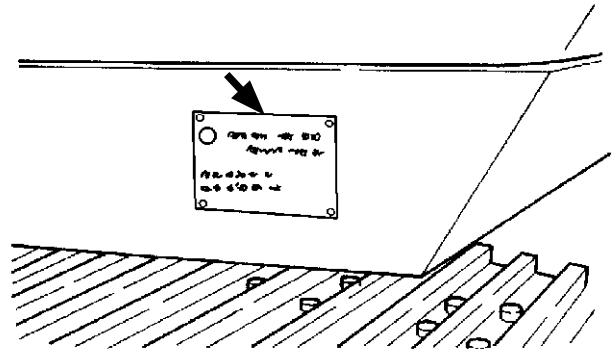
MACHINE NUMBERS

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.

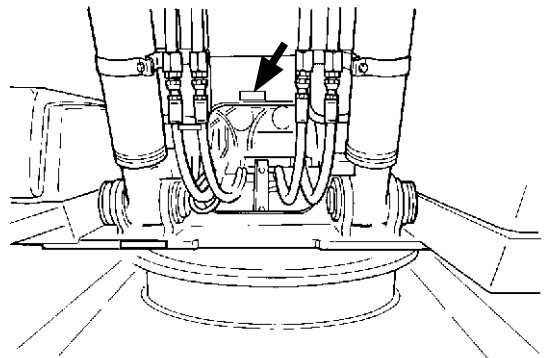
Machine

TYPE : _____

PRODUCT IDENTIFICATION NUMBER : _____



M157-00-001



M157-12-008

Product Identification Number

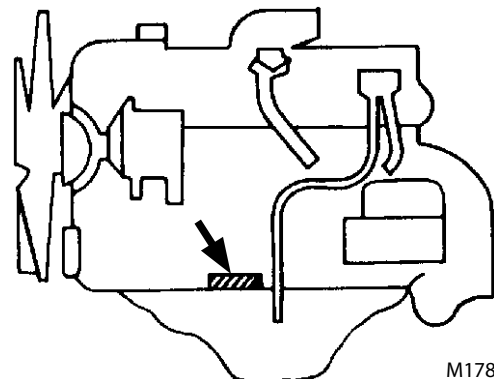
NOTE:

HCMDCA50000030001
 Marks to indicate the start and end of the PIN
 —————
 PRODUCT IDENTIFICATION NUMBER (PIN)

Engine

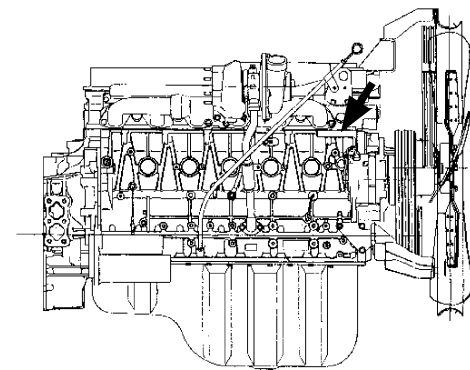
TYPE : _____

MFG. NO. : _____



M178-00-001

ZX210-5G, 210LC-5G, 250LC-5G, 290LC-5G



ZX350LC-5G

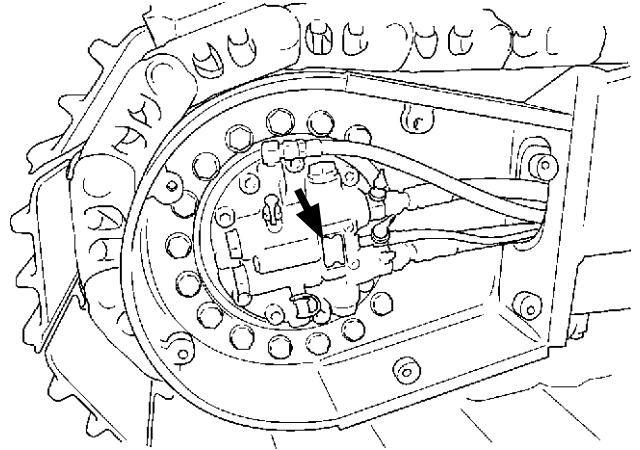
M1HH-07-001

MACHINE NUMBERS

Travel Motor

TYPE : _____

MFG. NO. : _____

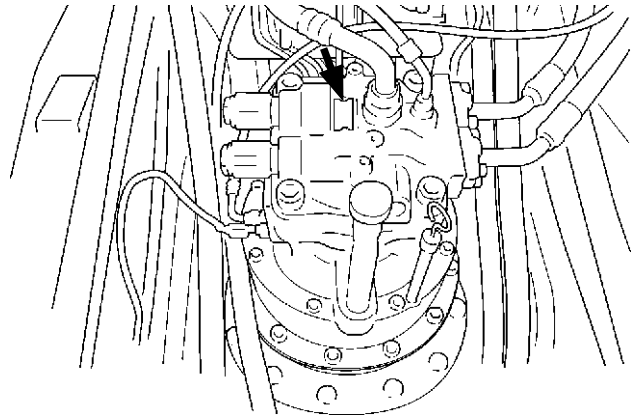


M178-07-047

Swing Motor

TYPE : _____

MFG. NO. : _____

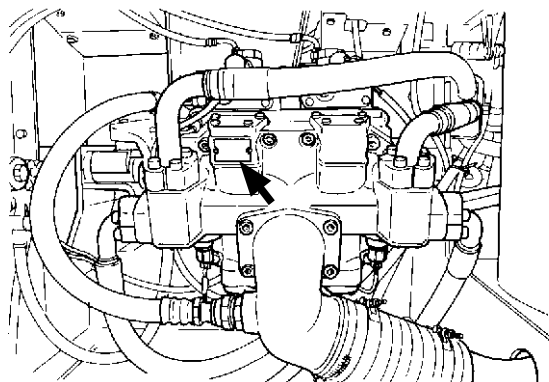


M178-07-086

Hydraulic Pump

TYPE : _____

MFG. NO. : _____

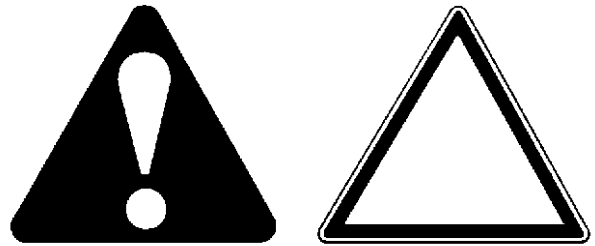


M157-00-004

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


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 do not use any of the designated signal words above after the safety alert symbol are occasionally used on this machine.



IMPORTANT



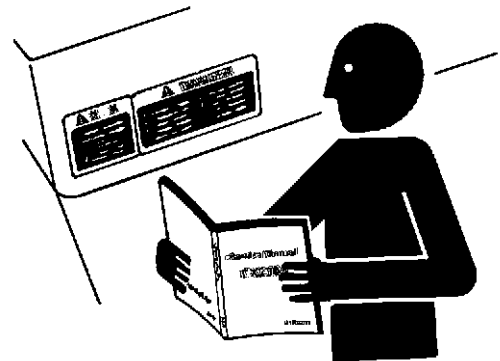
- To avoid confusing machine protection with personal safety messages, a signal word **IMPORTANT** indicates a situation which, if not avoided, could result in damage to the machine.
-  **NOTE**: indicates an additional explanation for an element of information.

SA-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.
 - Do not modify any machine parts without authorization. Failure to do so may deteriorate the part safety, function, and/or service life. In addition, personal accident, machine trouble, and/or damage to material caused by unauthorized modifications will void Hitachi Warranty Policy.
 - Never attempt to modify or disassemble the inlet/exhaust parts and the muffler filter. Avoid giving shocks on the muffler filter by striking elements with other objects or dropping the elements. Failure to do so may affect the exhaust gas purifying device, possibly damaging it or lowering its performance.
 - Do not use attachments and/or optional parts or equipment not authorized by Hitachi. Failure to do so may deteriorate the safety, function, and/or service life of the machine. In addition, personal accident, machine trouble, and/or damage to material caused by using unauthorized attachments and/or optional parts or equipment will void Hitachi Warranty Policy.
- 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.

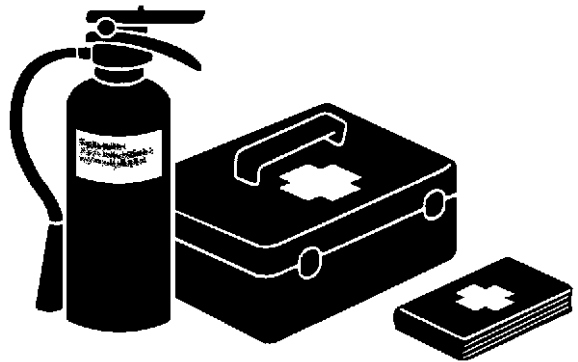


SA-003

SAFETY

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.



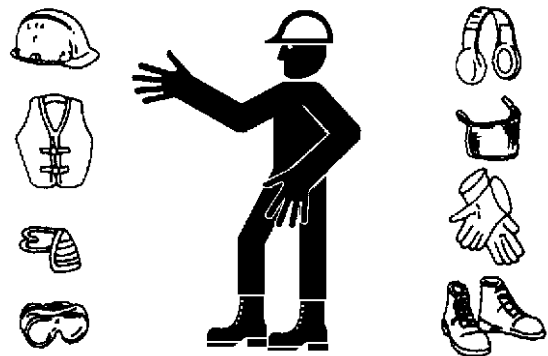
SA-437

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.



SA-438

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.

SAFETY

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.



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 "Inspect Machine Daily Before Starting" section in the operator's manual.



SA-435

SAFETY

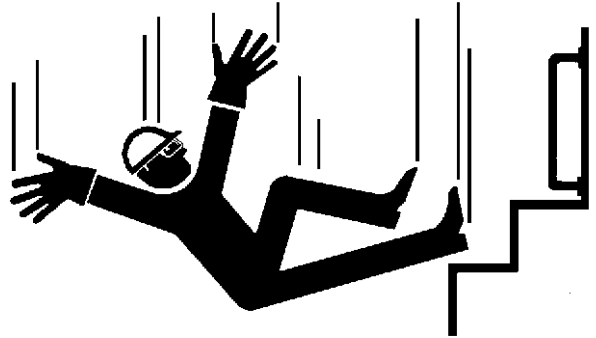
General Precautions for Cab

- 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.

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 hand-holds.
 - 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.
 - Never get on and off the machine with tools in your hands.



SA-439

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.
 - Adjust the rear view mirror position so that the best rear visibility is obtained from the operator's seat. If the mirror is broken, immediately replace it with a new one.



SA-378

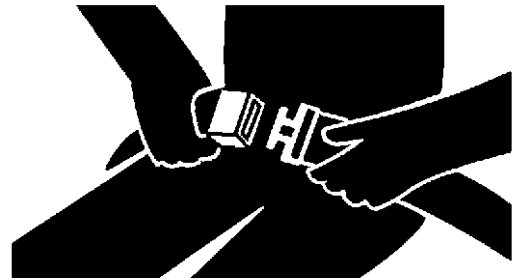
SAFETY

Ensure Safety Before Rising from or Leaving Operator's Seat

- Before rising from the operator's seat to open/close either side window or to adjust the seat position, be sure to first lower the front attachment to the ground and then move the pilot control shut-off lever to the LOCK position. Failure to do so may allow the machine to unexpectedly move when a body part unintentionally comes in contact with a control lever and/or pedal, possibly resulting in serious personal injury or death.
- Before leaving the machine, be sure to first lower the front attachment to the ground and then move the pilot control shut-off lever to the LOCK position. Turn the key switch OFF to stop the engine.
- Before leaving the machine, close all windows, doors, and access covers and lock them up.

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.

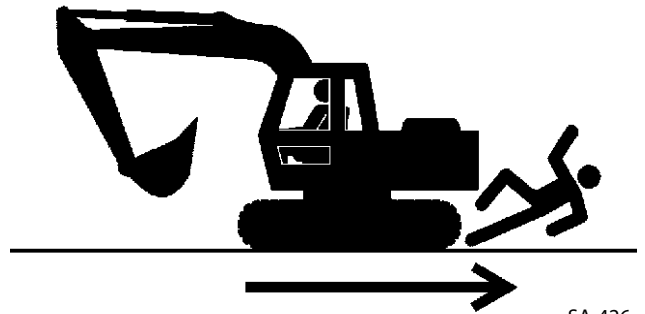


SA-237

SAFETY

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.
 - Use appropriate illumination. Check that all lights are operable before operating the machine. If any faulty illumination is present, immediately repair it.
 - Ensure the cab door, windows, doors and covers are securely locked.
 - Check the mirrors and the monitor in the CAB for problems.
If there is, replace the problem part(s) or clean the mirror, camera and the monitor.
Refer to Rear View Monitor section on the cleaning of the camera and the monitor.



SA-426

Operate Only from Operator's Seat

- Inappropriate engine starting procedures may cause the machine to runaway, possibly resulting in serious injury or death.
 - Start the engine only when seated in the operator's seat.
 - NEVER start the engine while standing on the track or on ground.
 - Do not start engine by shorting across starter terminals.
 - Before starting the engine, confirm that all control levers are in neutral.
 - Before starting the engine, confirm the safety around the machine and sound the horn to alert bystanders.



SA-444

SAFETY

Jump Starting

- Battery gas can explode, resulting in serious injury.
 - If the engine must be jump started, be sure to follow the instructions shown in the “OPERATING THE ENGINE” chapter in the operator’s manual.
 - The operator must be in the operator’s seat so that the machine will be under control when the engine starts. Jump starting is a two-person operation.
 - Never use a frozen battery.
 - Failure to follow correct jump starting procedures could result in a battery explosion or a runaway machine.



SA-032

Keep Riders off Machine

- Riders on machine are subject to injury such as being struck by foreign objects and being thrown off the machine.
 - Only the operator should be on the machine. Keep riders off.
 - Riders also obstruct the operator’s view, resulting in the machine being operated in an unsafe manner.



SA-379

SAFETY

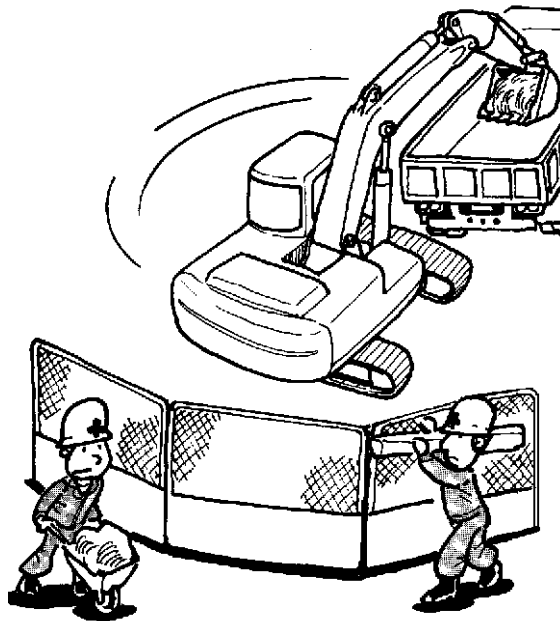
Precautions for Operations

- Investigate the work site before starting operations.
 - Be sure to wear close fitting clothing and safety equipment appropriate for the job, such as a hard hat, etc. when operating the machine.
 - Clear all persons and obstacles from area of operation and machine movement.

Always beware of the surroundings while operating.

When working in a small area surrounded by obstacles, take care not to hit the upperstructure against obstacles.

- When loading onto trucks, bring the bucket over the truck beds from the rear side. Take care not to swing the bucket over the cab or over any person.

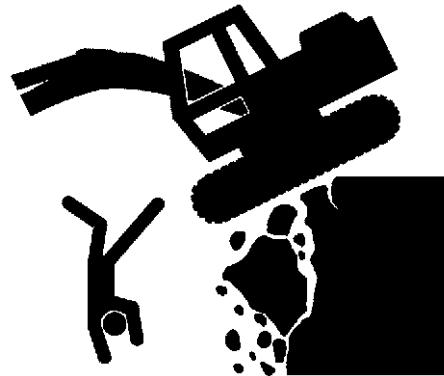


M178-05-007

SAFETY

Investigate Job Site Beforehand

- When working at the edge of an excavation or on a road shoulder, the machine could tip over, possibly resulting in serious injury or death.
 - Investigate the configuration and ground conditions of the job site beforehand to prevent the machine from falling and to prevent the ground, stockpiles or banks from collapsing.
 - Make a work plan. Use machines appropriate to the work and job site.
 - Reinforce ground, edges and road shoulders as necessary. Keep the machine well back from the edges of excavations and road shoulders.
 - When working on an incline or on a road shoulder, employ a signal person as required.
 - Confirm that your machine is equipped with a FOPS cab before working in areas where the possibility of falling stones or debris exist.
 - When the footing is weak, reinforce the ground before starting work.
 - When working on frozen ground, be extremely alert. As ambient temperatures rise, footing becomes loose and slippery.
 - Beware the possibility of fire when operating the machine near flammable objects such as dry grass.



SA-380



Suggest:

For more complete manuals. Please go to the home page.

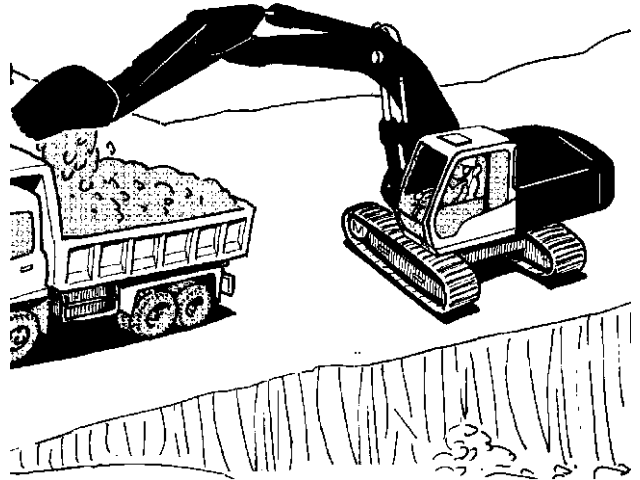
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SAFETY

- Make sure the worksite has sufficient strength to firmly support the machine.
When working close to an excavation or at road shoulders, operate the machine with the tracks positioned perpendicular to the cliff face with travel motors at the rear, so that the machine can more easily evacuate if the cliff face collapses.
- If working on the bottom of a cliff or a high bank is required, be sure to investigate the area first and confirm that no danger of the cliff or bank collapsing exists. If any possibility of cliff or bank collapsing exists, do not work on the area.
- Soft ground may collapse when operating the machine on it, possibly causing the machine to tip over. When working on soft ground is required, be sure to reinforce the ground first using large pieces of steel plates strong and firm enough to easily support the machine.
- Note that there is always a possibility of machine tipping over when working on rough terrain or on slopes. Prevent machine tipping over from occurring. When operating on rough terrain or on slopes:
 - Reduce the engine speed.
 - Select slow travel speed mode.
 - Operate the machine slowly and be cautious with machine movements.

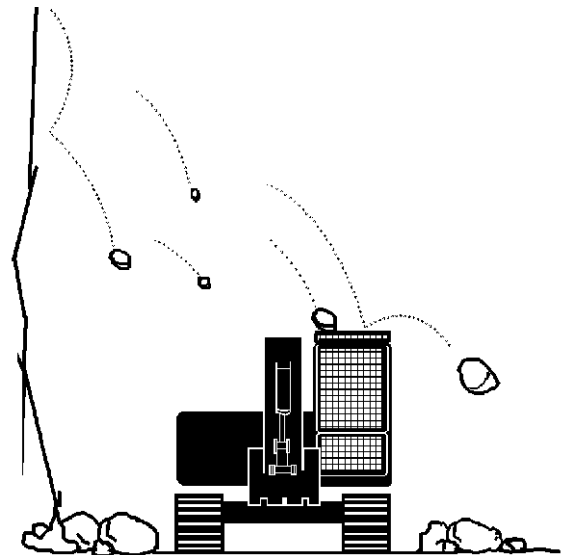


M104-05-016

Install OPG Guard

In case the machine is operated in areas where the possibilities of falling stones or debris exist, equip Hitachi OPG guard. Consult your authorized dealer for installing the OPG guard. The guard can be compliant with ROPS standards depending on the machine specifications.
In order not to impair operator protective structure:
Replace damaged ROPS or OPG guard. Never attempt to repair or modify the guard.

ROPS: Roll Over Protective Structure
OPG: Operator Protective Guard



SA-490

SAFETY

Provide Signals for Jobs Involving Multiple Machines

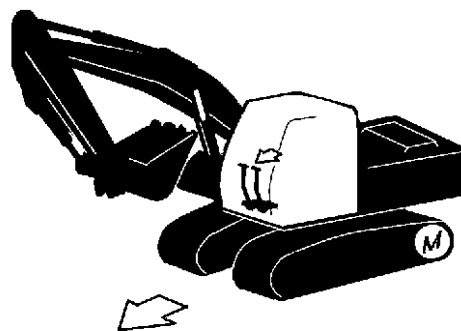
- For jobs involving multiple machines, provide signals commonly known by all personnel involved. Also, appoint a signal person to coordinate the job site. Make sure that all personnel obey the signal person's directions.



SA-481

Confirm Direction of Machine to Be Driven

- Incorrect travel pedal/lever operation may result in serious injury or death.
 - Before driving the machine, confirm the position of the undercarriage in relation to the operator's position. If the travel motors are located in front of the cab, the machine will move in reverse when travel pedals/levers are operated to the front.



SA-491

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