

Operation & Maintenance Manual

PC210-8

PC210LC, PC210NLC-8

PC230NHD-8

PC240LC, PC240NLC-8

HYDRAULIC EXCAVATOR

SERIAL NUMBER

PC210, PC210LC, PC210NLC-8

- K50001 and up

PC230NHD-8

- K50001 and up

PC240LC, PC240NLC-8

- K50001 and up

PC240LC, PC240NLC-8

- 10001 and up



WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept inside the cab for reference and periodically reviewed by all personnel who will come into contact with the machine.

KOMATSU

FOREWORD

FOREWORD

This manual provides rules and guidelines which will help you use this machine safely and effectively. The precautions in this manual must be followed at all times when performing operation and maintenance. Most accidents are caused by the failure to follow fundamental safety rules for the operation and maintenance of machines. Accidents can be prevented by knowing beforehand conditions that may cause a hazard when performing operation and maintenance.

WARNING

Before beginning operation or maintenance, operators and maintenance personnel must always observe the following points.

Read this manual thoroughly and understand its contents fully.

Read the safety messages and safety labels given in this manual carefully so that they should be understood fully.

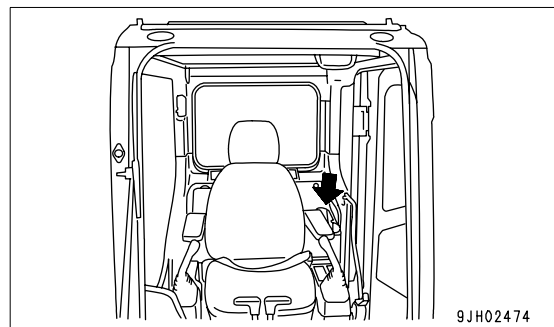
Keep this manual at the storage location for the Operation and Maintenance Manual given below so that all personnel involved in working on the machine can consult it periodically.

In case this manual should be lost or damaged, immediately contact Komatsu or your Komatsu distributor to obtain a new copy.

When you sell the machine, make sure that this manual should be provided to the new owner together with the machine.

In this manual, measurements are expressed in international standard units (SI). For the reference purpose, weight units used in the past are also displayed in ().

Storage location for the Operation and Maintenance Manual:
magazine box on the left side of the operator's seat.



SAFETY INFORMATION

To enable you to use this machine safely, safety precautions and labels are given in this manual and affixed to the machine to give explanations of situations involving potential hazards and of the methods of avoiding such situations.

Signal words

The following signal words are used to inform you that there is a potential hazardous situation that may lead to personal injury or damage.

In this manual and on machine labels, the following signal words are used to express the potential level of hazard.



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. This word is used also to alert against unsafe practices that may cause property damage.

Example of safety message using signal word



When standing up from the operator's seat, always place the lock lever in the LOCK position. If you accidentally touch the control levers when they are not locked, this may cause a serious injury or death.

Other signal words

In addition to the above, the following signal words are used to indicate precautions that should be followed to protect the machine or to give information that is useful to know.

NOTICE This word is used for precautions that must be taken to avoid actions which could shorten the life of the machine.

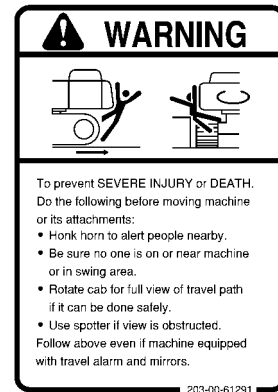
REMARKS This word is used for information that is useful to know.

- Safety labels

Safety labels are affixed to the machine to inform the operator or maintenance worker on the spot when carrying out operation or maintenance of the machine that may involve hazard.

This machine uses "Safety labels using words" and "Safety labels using pictograms" to indicate safety procedures.

Example of safety label using words



Part No.

Safety labels using pictogram

Safety pictograms use a picture to express a level of hazardous condition equivalent to the signal word. These safety pictograms use pictures in order to let the operator or maintenance worker understand the level and type of hazardous condition at all times. Safety pictograms show the type of hazardous condition at the top or left side, and the method of avoiding the hazardous condition at the bottom or right side. In addition, the type of hazardous condition is displayed inside a triangle and the method of avoiding the hazardous condition is shown inside a circle.



Part No.

Komatsu cannot predict every circumstance that might involve a potential hazard in operation and maintenance. Therefore, the safety messages in this manual and on the machine may not include all possible safety precautions.

If any procedures or actions not specifically recommended or allowed in this manual are used, it is your responsibility to take the necessary steps to ensure safety.

In no event should you engage in prohibited uses or actions described in this manual.

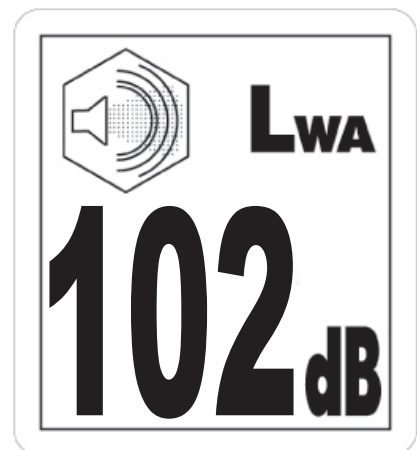
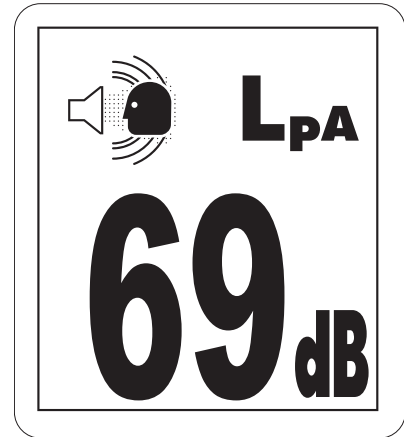
The explanations, values, and illustrations in this manual were prepared based on the latest information available at that time. Continuing improvements in the design of this machine can lead to changes in detail which may not be reflected in this manual. Consult Komatsu or your Komatsu distributor for the latest available information of your machine or for questions regarding information in this manual.

The numbers in circles in the illustrations correspond to the numbers in () in the text. (For example: ① -> (1))

NOISE (PC210,210LC,210NLC, PC230NHD)

Two labels indicating the machine noise level are affixed on the machine.

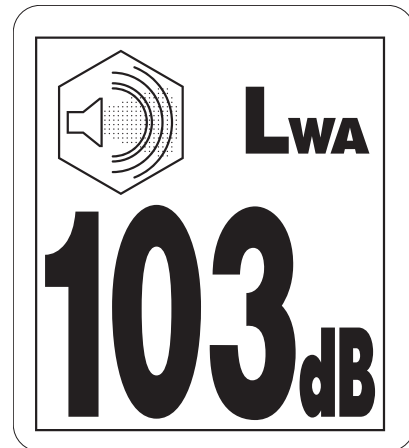
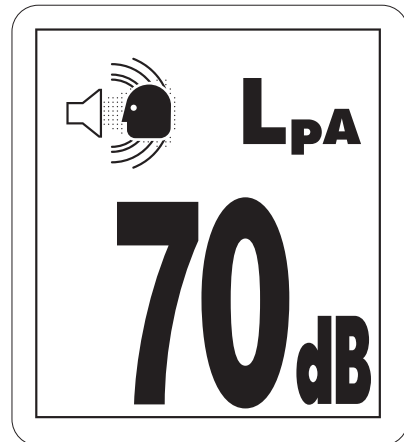
- Sound pressure level at the operator's station, measured according to ISO6396 (Dynamic test method, simulated working cycle).
- Sound power level emitted by the machine, measured according to ISO 6395 (Dynamic test method, simulated working cycle). This is the guaranteed value as specified in European directive 2000/14/EC.



NOISE (PC240LC,240NLC)

Two labels indicating the machine noise level are affixed on the machine.

- Sound pressure level at the operator's station, measured according to ISO6396 (Dynamic test method, simulated working cycle).
- Sound power level emitted by the machine, measured according to ISO 6395 (Dynamic test method, simulated working cycle). This is the guaranteed value as specified in European directive 2000/14/EC



Vibration levels

When used for its intended purpose, levels of vibration for the earth-moving machine transmitted from the operator's seat are lower than or equal to the tested vibrations for the relative machinery class in compliance with ISO 7096.

The actual acceleration value for the hands and arms is less than or equal to 2.5 m/s². The actual acceleration value for the body is less than or equal to 0.5 m/s².

These values were determined using a representative machine and measured during the typical operating condition indicated below according to the measurement procedures that are defined in the standards ISO 2631/1 and ISO 5349.

Operating condition:

Excavating (Digging-loading-rotating-unloading-rotating)

Guide to Reduce Vibration Levels on Machine

The following guides can help an operator of this machine to reduce the whole body vibration levels:

1. Use the correct equipment and attachments.
2. Maintain the machine according to this manual
 - Tension of crawler (for crawler machines)
 - Brake and steering systems
 - Controls, hydraulic system and linkages
3. Keep the terrain where the machine is working and traveling in good condition
 - Remove any large rocks or obstacles
 - Fill any ditches and holes
 - Site manager should provide machine operators with machine and schedule time to maintain terrain conditions
4. Use a seat that meets ISO 7096 and keep the seat maintained and adjusted
 - Adjust the seat and suspension for the weight and size of the operator
 - Wear seat belt
 - Inspect and maintain the seat suspension and adjustment mechanisms
5. Steer, brake, accelerate, and move the attachment levers and pedals slowly so that the machine moves smoothly
6. Adjust the machine speed and travel path to minimize the vibration level
 - When pushing with bucket or blade, avoid sudden loading; load gradually
 - Drive around obstacles and rough terrain conditions
 - Slow down when it is necessary to go over rough terrain
 - Make the curve radius of traveling path as large as possible
 - Travel at low speed when traveling around sharp curves

7. Minimize vibrations for long work cycle or long distance traveling
 - Reduce speed to prevent bounce
 - Transport machines long distances between worksites
8. The following guidelines can be effective to minimize risks of low back pain
 - Operate the machine only when you are in good health.
 - Provide breaks to reduce long periods of sitting in the same posture
 - Do not jump down from the cab or machine
 - Do not repeatedly handle and lift loads

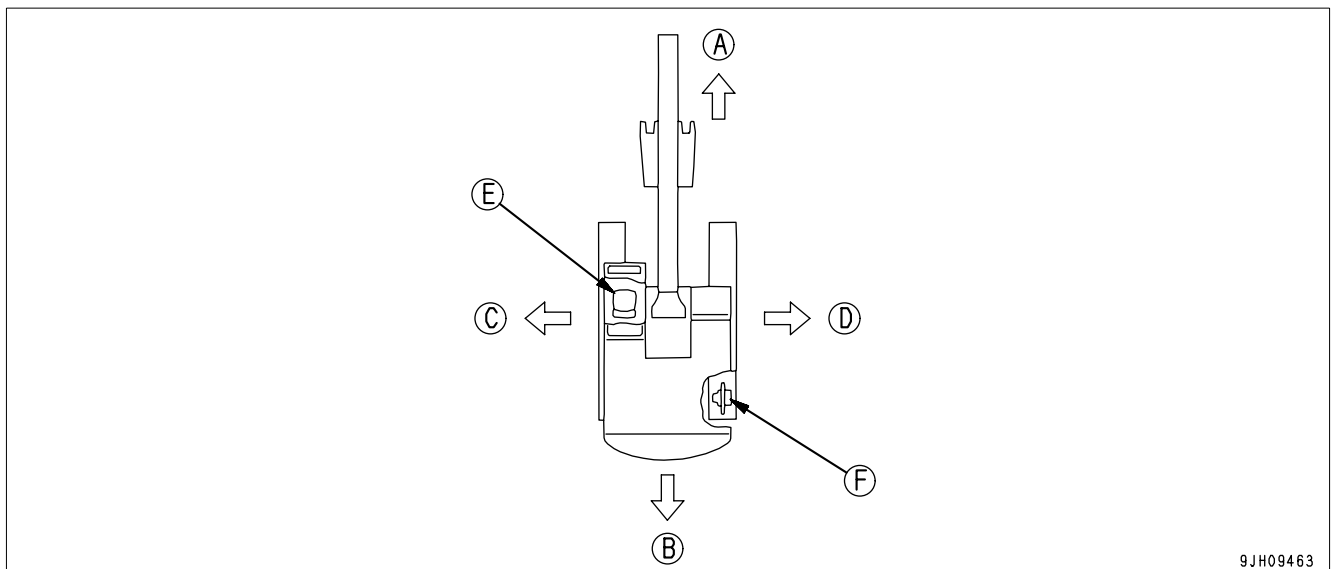
INTRODUCTION

This Komatsu machine is designed to be used mainly for the following work:

- Digging work
- Leveling work
- Ditching work
- Loading work
- Demolition work

See the section "RECOMMENDED APPLICATIONS (3-156)" for further details.

DIRECTIONS OF MACHINE



- (A) Front
- (B) Rear
- (C) Left
- (D) Right

- (E) Operator's seat
- (F) Sprocket

In this manual, the terms front, rear, left, and right refer to the travel direction as seen from the operator's seat when the operator's seat is facing the front and the sprocket is at the rear of the machine.

BREAKING-IN THE NEW MACHINE

NOTICE

Your Komatsu machine has been thoroughly adjusted and tested before shipment from the factory. However, operating the machine under full load before breaking the machine in can adversely affect the performance and shorten the machine life.

Be sure to break in the machine for the initial 100 hours (as indicated on the service meter).

Make sure that you fully understand the content of this manual, and pay careful attention to the following points when breaking in the machine.

- Run the engine at idle for 15 seconds after starting it. During this time, do not operate the control levers or fuel control dial.
- Idle the engine for 5 minutes after starting it up.
- Avoid operation with heavy loads or at high speeds.
- Immediately after starting the engine, avoid sudden starts, sudden acceleration, unnecessary sudden stops, and sudden changes in direction.

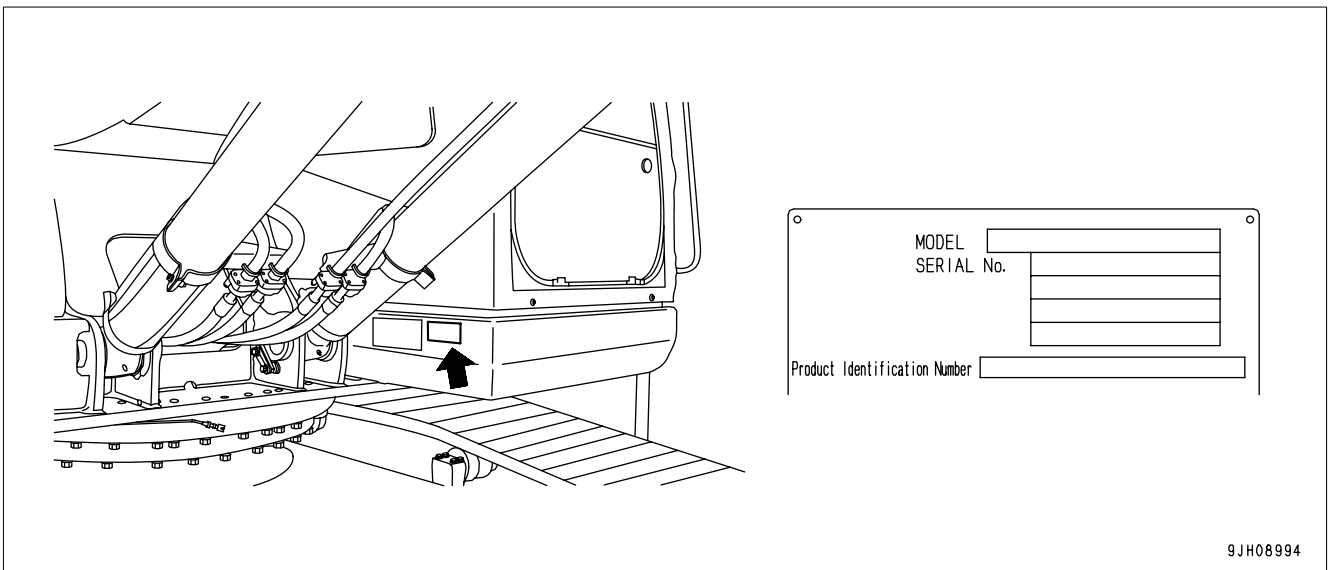
PRODUCT INFORMATION

When requesting service or ordering replacement parts, please inform your Komatsu distributor of the following items.

PRODUCT IDENTIFICATION NUMBER (PIN)/MACHINE SERIAL NO. PLATE

On the bottom right of the operator's cab

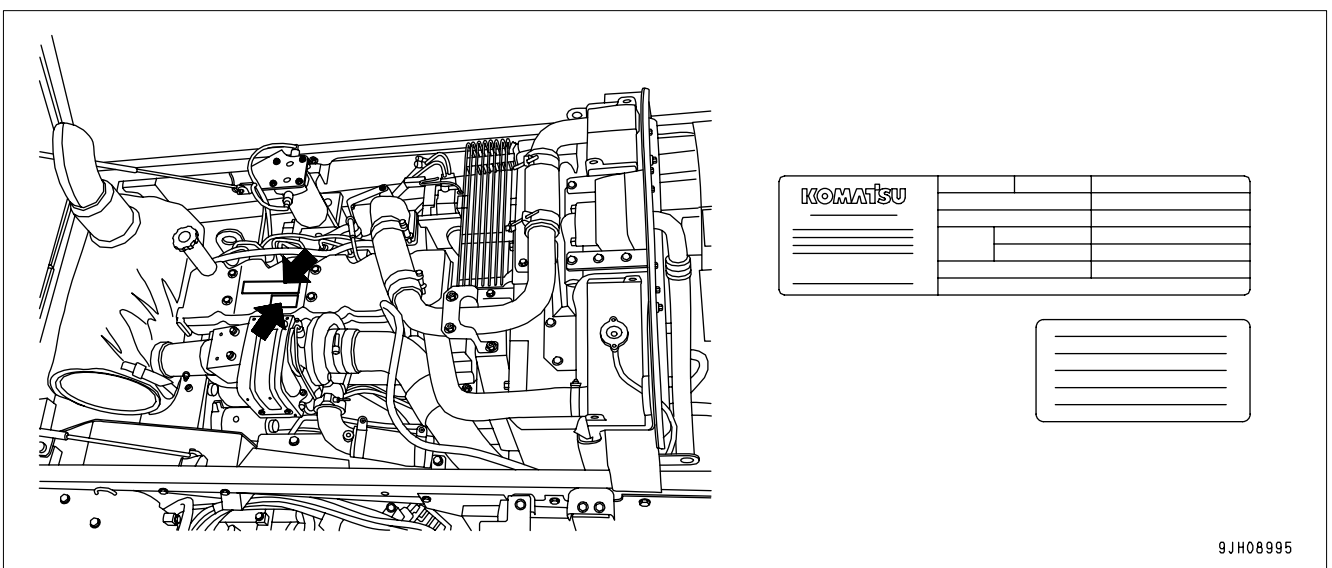
The design of the nameplate differs according to the territory.



ENGINE SERIAL NUMBER PLATE AND ITS LOCATION

On the top of the engine cylinder head cover.

(The EPA auxiliary nameplate is on the top of the engine cylinder head cover.)



EPA: Environmental Protection Agency, U.S.A.

SERVICE METER LOCATION

On top of the machine monitor

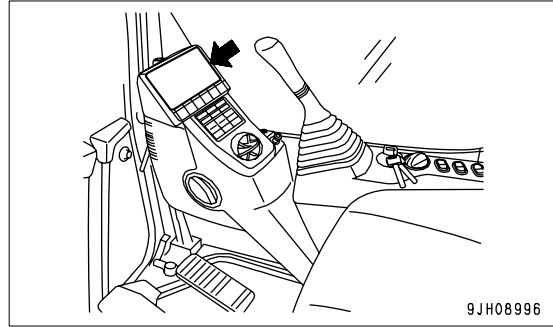


TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR

Machine serial No.

Engine serial No.

Product Identification Number

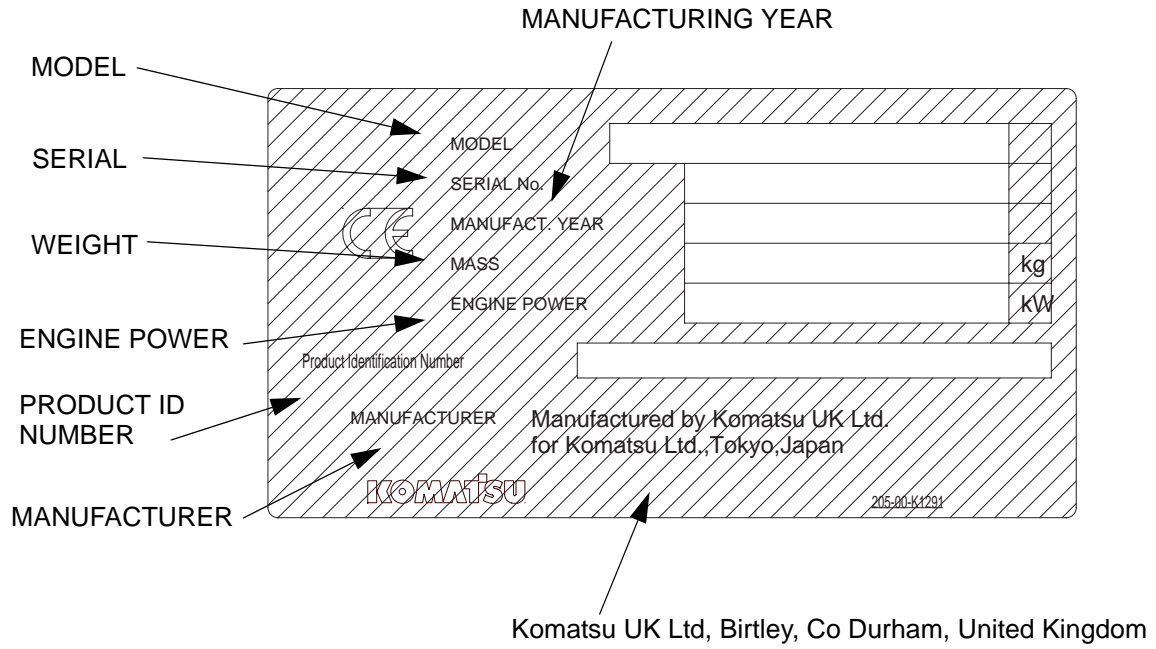
Manufacturers name:	KOMATSU UK Ltd.
Address:	Durham Road Birtley Chester-Le street County Durham DH32QX United Kingdom

Distributor
Address

Phone

MACHINE SERIAL PLATES

STANDARD SERIAL PLATE



CONTENTS

FOREWORD

FOREWORD 1-4

SAFETY INFORMATION..... 1-5

 NOISE (PC210,210LC,210NLC, PC230NHD) 1-7

 NOISE (PC240LC,240NLC)..... 1-8

 VIBRATION LEVELS 1-9

 GUIDE TO REDUCE VIBRATION LEVELS ON MACHINE 1-9

INTRODUCTION..... 1-11

 DIRECTIONS OF MACHINE 1-11

 BREAKING-IN THE NEW MACHINE 1-12

PRODUCT INFORMATION 1-13

 PRODUCT IDENTIFICATION NUMBER (PIN)/MACHINE SERIAL NO. PLATE..... 1-13

 ENGINE SERIAL NUMBER PLATE AND ITS LOCATION 1-13

 SERVICE METER LOCATION 1-14

 TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR 1-14

 MACHINE SERIAL PLATES..... 1-15

 STANDARD SERIAL PLATE 1-15

SAFETY

SAFETY INFORMATION..... 2-2

SAFETY LABELS..... 2-4

 LOCATION OF SAFETY LABELS 2-4

 SAFETY LABELS 2-5

SAFETY INFORMATION..... 2-12

 SAFETY RULES 2-12

 IF PROBLEMS ARE FOUND 2-12

 WORKING WEAR AND PERSONAL PROTECTIVE ITEMS 2-12

 FIRE EXTINGUISHER AND FIRST AID KIT 2-12

 SAFETY EQUIPMENT 2-13

 KEEP MACHINE CLEAN..... 2-13

 KEEP OPERATOR'S COMPARTMENT CLEAN..... 2-13

 LEAVING OPERATOR'S SEAT WITH LOCK..... 2-13

 HANDRAILS AND STEPS 2-14

 MOUNTING AND DISMOUNTING 2-15

 NO PERSONS ON ATTACHMENTS 2-15

 DO NOT GET CAUGHT IN ARTICULATED PORTION 2-15

 BURN PREVENTION 2-15

ACTION IF FIRE OCCURS	2-17
WINDSHIELD WASHER FLUID	2-17
FALLING OBJECTS, FLYING OBJECTS AND INTRUDING OBJECTS PREVENTION	2-17
ATTACHMENT INSTALLATION.....	2-17
ATTACHMENT COMBINATIONS	2-18
CAB WINDOW GLASSES.....	2-18
UNAUTHORIZED MODIFICATIONS.....	2-18
SAFETY AT JOBSITE	2-18
WORKING ON LOOSE GROUND	2-18
DISTANCE TO HIGH VOLTAGE CABLES	2-19
ENSURE GOOD VISIBILITY	2-19
VENTILATION FOR ENCLOSED AREA	2-20
SIGNALMAN'S SIGNAL AND SIGNS	2-20
EMERGENCY EXIT FROM OPERATOR'S CAB	2-20
ELECTROMAGNETIC INTERFERENCE.....	2-20
ASBESTOS DUST HAZARD PREVENTION	2-21
SAFETY MACHINE OPERATION.....	2-22
STARTING ENGINE	2-22
CHECKS BEFORE STARTING ENGINE	2-22
SAFETY RULES FOR STARTING ENGINE	2-23
STARTING ENGINE IN COLD WEATHER	2-23
OPERATION.....	2-24
CHECKS BEFORE OPERATION.....	2-24
SAFETY RULES FOR CHANGING MACHINE DIRECTIONS	2-24
SAFETY RULES FOR TRAVELLING.....	2-25
TRAVELLING ON SLOPES.....	2-26
OPERATIONS ON SLOPES	2-27
PROHIBITED OPERATIONS	2-27
OPERATIONS ON SNOW.....	2-29
PARKING MACHINE	2-29
TRANSPORTATION.....	2-30
LOADING AND UNLOADING.....	2-30
SHIPPING THE MACHINE.....	2-31
BATTERY	2-32
STARTING ENGINE WITH BOOSTER CABLES.....	2-33
TOWING	2-34
SAFETY RULES FOR TOWING	2-34
LIFTING OBJECTS WITH BUCKET.....	2-35
SAFETY RULES FOR LIFTING OBJECTS.....	2-35
SAFETY MAINTENANCE INFORMATION	2-36
WARNING TAG	2-36
KEEP WORK PLACE CLEAN AND TIDY	2-36
APPOINT LEADER WHEN WORKING WITH OTHERS.....	2-36
STOP ENGINE BEFORE CARRYING OUT MAINTENANCE.....	2-37
TWO WORKERS FOR MAINTENANCE WHEN ENGINE IS RUNNING	2-38
PROPER TOOLS	2-38

CONTENTS

ACCUMULATOR	2-39
HANDLING GAS SPRING	2-39
PERSONNEL.....	2-40
ATTACHMENTS.....	2-40
WORK UNDER THE MACHINE	2-40
NOISE.....	2-41
WHEN USING HAMMER	2-41
WELDING WORKS	2-41
REMOVING BATTERY TERMINALS	2-41
SAFETY FIRST WHEN USING HIGH-PRESSURE GREASE TO ADJUST TRACK TENSION	2-42
DO NOT DISASSEMBLE RECOIL SPRINGS.....	2-42
SAFETY RULES FOR HIGH-PRESSURE OIL	2-42

OPERATION

MACHINE VIEW ILLUSTRATIONS	3-2
OVERALL MACHINE VIEW.....	3-2
CONTROLS AND GAUGES.....	3-3
DETAILED CONTROLS AND GAUGES.....	3-4
MONITORING SYSTEM.....	3-4
BASIC OPERATION OF MACHINE MONITOR	3-5
BASIC CHECK MONITORS	3-9
CAUTION MONITORS	3-11
EMERGENCY MONITORS	3-14
METER DISPLAY PORTION.....	3-16
MONITOR SWITCHES PORTION	3-23
HANDLING FUNCTION SWITCHES.....	3-32
SWITCHES.....	3-68
CONTROL LEVERS AND PEDALS	3-73
CEILING WINDOW.....	3-76
WINDSHIELD	3-76
EMERGENCY ESCAPE HAMMER	3-82
DOOR LOCK	3-82
CAP WITH LOCK.....	3-83
DRINK BOX	3-85
MAGAZINE BOX.....	3-85
ASHTRAY	3-85
AIR CONDITIONER CONTROLS.....	3-86
AIR CONDITIONER CONTROL PANEL	3-86
METHOD OF OPERATION	3-91
USE AIR CONDITIONER WITH CARE	3-98
AIR CONDITIONER MAINTENANCE	3-98
RADIO.....	3-99
CONTROL PANEL	3-99
CONTROLS OF RADIO	3-101
USE RADIO WITH CARE.....	3-103

SPACE FOR RADIO CASSETTE.....	3-103
AUXILIARY ELECTRIC POWER.....	3-104
24V POWER SOURCE	3-104
12V POWER SOURCE	3-104
FUSE	3-105
FUSIBLE LINK.....	3-106
CONTROLLER	3-106
TOOL BOX.....	3-106
GREASE GUN HOLDER.....	3-106
MACHINE OPERATIONS AND CONTROLS.....	3-107
BEFORE STARTING ENGINE	3-107
WALK-AROUND CHECKS.....	3-107
REFUELLING PUMP	3-108
CHECKS BEFORE STARTING.....	3-109
ADJUSTMENT.....	3-116
SEAT BELT	3-120
OPERATIONS BEFORE STARTING ENGINE	3-121
STARTING ENGINE	3-123
AFTER STARTING ENGINE	3-126
WARMING UP ENGINE	3-127
WARMING UP HYDRAULIC EQUIPMENT.....	3-129
OPERATION AFTER COMPLETION OF WARMING-UP OPERATION.....	3-135
STOPPING THE ENGINE	3-137
MACHINE OPERATION	3-138
PREPARATIONS FOR MOVING THE MACHINE.....	3-138
MOVING MACHINE FORWARD.....	3-139
MOVING MACHINE BACKWARD.....	3-140
STOPPING MACHINE.....	3-141
STEERING THE MACHINE.....	3-142
STEERING	3-142
SWINGING	3-144
WORK EQUIPMENT CONTROLS AND OPERATIONS	3-145
WORKING MODE.....	3-147
PROHIBITED OPERATIONS	3-149
GENERAL OPERATION INFORMATION	3-151
TRAVELLING ON SLOPES.....	3-153
ESCAPE FROM MUD.....	3-155
TRACK ON ONE SIDE STUCK.....	3-155
TRACKS ON BOTH SIDES STUCK.....	3-155
RECOMMENDED APPLICATIONS.....	3-156
BACKHOE WORK.....	3-156
SHOVEL WORK.....	3-156
DITCHING WORK	3-156
LOADING WORK	3-157
BUCKET REPLACEMENT AND INVERSION.....	3-158
REPLACEMENT.....	3-158
INVERSION.....	3-160

CONTENTS

PARKING MACHINE	3-161
CHECK AFTER SHUT OFF ENGINE	3-163
MACHINE INSPECTION AFTER DAILY WORK	3-163
LOCKING	3-163
TRANSPORTATION	3-164
TRANSPORTATION PROCEDURE	3-164
SPECIAL TRANSPORTATION INSTRUCTIONS FOR PC210NLC-8 AND PC230NHD-8	3-164
LOADING AND UNLOADING WITH TRAILER	3-166
LOADING	3-167
SECURING MACHINE	3-170
UNLOADING	3-174
LIFTING MACHINE	3-176
COLD WEATHER OPERATION	3-178
COLD WEATHER OPERATION INFORMATION	3-178
FUEL AND LUBRICANTS	3-178
COOLING SYSTEM COOLANT	3-178
BATTERY	3-179
AFTER DAILY WORK COMPLETION	3-180
AFTER COLD WEATHER SEASON	3-180
LONG TERM STORAGE	3-181
BEFORE STORAGE	3-181
DURING STORAGE	3-181
AFTER STORAGE	3-182
STARTING MACHINE AFTER LONG-TERM STORAGE	3-182
TROUBLES AND ACTIONS	3-183
RUNNING OUT OF FUEL	3-183
PHENOMENA THAT ARE NOT FAILURES	3-183
TOWING THE MACHINE	3-184
LIGHTWEIGHT TOWING HOLE	3-185
SEVERE JOB CONDITION	3-185
DISCHARGED BATTERY	3-186
BATTERY REMOVAL AND INSTALLATION	3-186
BATTERY CHARGES	3-187
STARTING ENGINE WITH BOOSTER CABLES	3-188
OTHER TROUBLE	3-190
ELECTRICAL SYSTEM	3-190
CHASSIS	3-191
ENGINE	3-192
ELECTRONIC CONTROL SYSTEM	3-194
POINT OF CONTACT TO TELEPHONE WHEN ERROR OCCURS	3-194

MAINTENANCE

MAINTENANCE INFORMATION	4-2
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