



WARNING

CALIFORNIA PROPOSITION 65

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.

91K4-07310-EN

⚠ Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

※ For more information go to www.P65warnings.ca.gov/diesel.

CONTENTS

Foreword	0-1
Emission-related components warranty (USA and CANADA only)	0-2
Before servicing this machine	0-3
EC regulation approved	0-4
Table to enter S/No and distribution	0-6
Machine data plate	0-7
Guide (direction, S/No, symbol)	0-8

SAFETY HINTS

1. Safety instructions	1-2
2. Safety labels	1-33

OPERATION

1. Instruction for new machine	2-1
2. Check before starting the engine	2-2
3. Starting and stopping the engine	2-3
4. Mode selection system	2-7
5. Operation of the working device	2-12
6. Traveling of the machine	2-13
7. Efficient working method	2-16
8. Operation in the special work sites	2-20
9. Normal operation of excavator	2-22
10. Attachment lowering	2-23
11. Storage	2-24
12. RCV lever operating pattern	2-26
13. Exhaust system cleaning	2-28

CONTROL DEVICES

1. Cab devices	3-1
2. Cluster	3-2
3. Switches	3-40
4. Levers and pedals	3-45
5. Others	3-48

MAINTENANCE

1. Instruction	4-1
2. Tightening torque	4-6
3. Fuel, coolant and lubricants	4-9

4. Maintenance check list	4-10
5. Maintenance chart	4-16
6. Service instruction	4-19
7. Electrical system	4-50
8. Air conditioner and heater	4-53

TRANSPORTATION

1. Preparation for transportation	5-1
2. Dimension and weight	5-2
3. Loading the machine	5-6
4. Fixing the machine	5-8
5. Loading and unloading by crane	5-9

TROUBLESHOOTING GUIDE

1. Engine	6-1
2. Electrical system	6-2
3. Others	6-3

SPECIFICATIONS

1. Major components	7-1
2. Specifications	7-2
3. Working range	7-6
4. Weight	7-8
5. Lifting capacities	7-9
6. Bucket selection guide	7-24
7. Undercarriage	7-28
8. Specification for major components	7-30
9. Recommended oils	7-33

HYDRAULIC BREAKER AND QUICK COUPLER

1. Selecting hydraulic breaker	8-1
2. Circuit configuration	8-2
3. Maintenance	8-3
4. Precaution while operating the breaker	8-4
5. Quick coupler	8-6

INDEX	9-1
-------------	-----