



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
Before servicing this machine	0-2
Safety labels	0-3
Machine data plate	0-17
Guide (direction, S/No, symbol)	0-18

SAFETY HINTS

1. Before operating the machine	1-1
2. During operating the machine	1-15
3. During maintenance	1-22
4. Parking	1-25

SPECIFICATIONS

1. Major components	2-1
2. Specifications	2-2
3. Working range	2-4
4. Weight	2-5
5. Lifting capacities	2-7
6. Bucket selection guide	2-13
7. Undercarriage	2-14
8. Specification for major components	2-16
9. Recommended oils	2-19

CONTROL DEVICES

1. Cab devices	3-1
2. Cluster	3-2
3. Switches	3-33
4. Levers and pedals	3-36
5. Air conditioner and heater	3-38
6. Others	3-42

OPERATION

1. Suggestion for new machine	4-1
2. Check before starting the engine	4-2
3. Starting and stop the engine	4-3
4. Mode selection system	4-7
5. Operation of the working device	4-12

6. Traveling of the machine	4-13
7. Efficient working method	4-16
8. Operation in the special work sites	4-20
9. Normal operation of excavator	4-22
10. Attachment lowering	4-23
11. Storage	4-24
12. RCV lever operating pattern	4-26

TRANSPORTATION

1. Preparation for transportation	5-1
2. Dimension and weight	5-2
3. Loading the machine	5-4
4. Fixing the machine	5-6
5. Loading and unloading by crane	5-7

MAINTENANCE

1. Instruction	6-1
2. Tightening torque	6-6
3. Fuel, coolant and lubricants	6-9
4. Maintenance check list	6-11
5. Maintenance chart	6-16
6. Service instruction	6-18
7. Electrical system	6-44
8. Air conditioner and heater	6-47

TROUBLESHOOTING GUIDE

1. Engine	7-1
2. Electrical system	7-2
3. Others	7-3

HYDRAULIC BREAKER

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