

# CONTENTS

|                                            |      |                                              |      |
|--------------------------------------------|------|----------------------------------------------|------|
| Foreword .....                             | 0-1  | 6. Traveling of the machine .....            | 4-13 |
| Before servicing this machine .....        | 0-2  | 7. Efficient working method .....            | 4-16 |
| EC regulation approved .....               | 0-3  | 8. Operation in the special work sites ..... | 4-20 |
| Table to enter S/No and distribution ..... | 0-4  | 9. Normal operation of excavator .....       | 4-22 |
| Safety labels .....                        | 0-5  | 10. Attachment lowering .....                | 4-23 |
| Guide (direction, S/No, symbol) .....      | 0-19 | 11. Storage .....                            | 4-24 |
| Machine data plate .....                   | 0-20 | 12. RCV lever operating pattern .....        | 4-26 |

## 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 .....                      | 2-3  |
| 4. Weight .....                             | 2-4  |
| 5. Lifting capacities .....                 | 2-5  |
| 6. Bucket selection guide .....             | 2-6  |
| 7. Undercarriage .....                      | 2-7  |
| 8. Specification for major components ..... | 2-9  |
| 9. Recommended oils .....                   | 2-12 |

## CONTROL DEVICES

|                                     |      |
|-------------------------------------|------|
| 1. Cab devices .....                | 3-1  |
| 2. Cluster .....                    | 3-2  |
| 3. Switches .....                   | 3-19 |
| 4. Levers and pedals .....          | 3-23 |
| 5. Air conditioner and heater ..... | 3-25 |
| 6. Others .....                     | 3-28 |

## 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 |

## 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 .....            | 6-42 |
| 8. Air conditioner and heater .....   | 6-45 |

## TROUBLESHOOTING GUIDE

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

## HYDRAULIC BREAKER AND QUICK CLAMP

|                                                 |     |
|-------------------------------------------------|-----|
| 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 clamp .....                            | 8-6 |