

## SECTION 1 GENERAL

|                              |     |
|------------------------------|-----|
| Group 1 Safety Hints .....   | 1-1 |
| Group 2 Specifications ..... | 1-9 |

## SECTION 2 STRUCTURE AND FUNCTION

|                                  |      |
|----------------------------------|------|
| Group 1 Pump Device .....        | 2-1  |
| Group 2 Main Control Valve ..... | 2-9  |
| Group 3 Swing Device .....       | 2-28 |
| Group 4 Travel Device .....      | 2-38 |
| Group 5 RCV Lever .....          | 2-45 |
| Group 6 RCV Pedal .....          | 2-52 |

## SECTION 3 HYDRAULIC SYSTEM

|                                  |      |
|----------------------------------|------|
| Group 1 Hydraulic Circuit .....  | 3-1  |
| Group 2 Main Circuit .....       | 3-2  |
| Group 3 Pilot Circuit .....      | 3-5  |
| Group 4 Single Operation .....   | 3-10 |
| Group 5 Combined Operation ..... | 3-22 |

## SECTION 4 ELECTRICAL SYSTEM

|  |      |
|--|------|
| Group 1 Component Location .....                 | 4-1  |
| Group 2 Electrical Circuit .....                 | 4-3  |
| Group 3 Electrical Component Specification ..... | 4-23 |
| Group 4 Connectors .....                         | 4-31 |

## SECTION 5 MECHATRONICS SYSTEM

|   |      |
|---|------|
| Group 1 Outline .....                             | 5-1  |
| Group 2 Mode Selection System .....               | 5-3  |
| Group 3 Travel Speed Control System .....         | 5-4  |
| Group 4 Automatic Warming Up Function .....       | 5-5  |
| Group 5 Engine Overheat Prevention Function ..... | 5-6  |
| Group 6 Anti-Restart System .....                 | 5-7  |
| Group 7 Self-Diagnostic System .....              | 5-8  |
| Group 8 Engine Control System .....               | 5-10 |

|                                 |      |
|---------------------------------|------|
| Group 9 Monitoring system ..... | 5-16 |
|---------------------------------|------|

## **SECTION 6 TROUBLESHOOTING**

|   |      |
|---|------|
| Group 1 Before Troubleshooting .....          | 6-1  |
| Group 2 Hydraulic and Mechanical System ..... | 6-4  |
| Group 3 Electrical System .....               | 6-24 |
| Group 4 Mechatronics System .....             | 6-40 |

## **SECTION 7 MAINTENANCE STANDARD**

|  |      |
|--|------|
| Group 1 Operational Performance Test ..... | 7-1  |
| Group 2 Major Components .....             | 7-20 |
| Group 3 Track and Work Equipment .....     | 7-28 |

## **SECTION 8 DISASSEMBLY AND ASSEMBLY**

|   |       |
|---|-------|
| Group 1 Precaution .....                    | 8-1   |
| Group 2 Tightening Torque .....             | 8-4   |
| Group 3 Pump Device .....                   | 8-7   |
| Group 4 Main Control Valve .....            | 8-25  |
| Group 5 Swing Device .....                  | 8-37  |
| Group 6 Travel Device .....                 | 8-58  |
| Group 7 RCV Lever .....                     | 8-83  |
| Group 8 Turning Joint .....                 | 8-98  |
| Group 9 Boom, Arm and Bucket Cylinder ..... | 8-103 |
| Group 10 Undercarriage .....                | 8-121 |
| Group 11 Work Equipment .....               | 8-133 |

## **SECTION 9 COMPONENT MOUNTING TORQUE**

|                                  |      |
|----------------------------------|------|
| Group 1 Introduction Guide ..... | 9-1  |
| Group 2 Engine System .....      | 9-2  |
| Group 3 Electric System .....    | 9-4  |
| Group 4 Hydraulic System .....   | 9-6  |
| Group 5 Undercarriage .....      | 9-8  |
| Group 6 Structure .....          | 9-9  |
| Group 7 Work Equipment .....     | 9-13 |