

# CONTENTS

## SECTION 1 GENERAL

Group 1 Safety Hints .....	1-1
Group 2 Specifications(R450LC-7A) .....	1-9
Group 2 Specifications(R500LC-7A) .....	1-29

## SECTION 2 STRUCTURE AND FUNCTION

Group 1 Pump Device .....	2-1
Group 2 Main Control Valve .....	2-22
Group 3 Swing Device .....	2-47
Group 4 Travel Device .....	2-58
Group 5 RCV Lever .....	2-65
Group 6 RCV Pedal .....	2-72

## 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 .....	3-13
Group 5 Combined Operation .....	3-23

## SECTION 4 ELECTRICAL SYSTEM

Group 1 Component Location .....	4-1
Group 2 Electrical Circuit .....	4-3
Group 3 Electrical Component Specification .....	4-20
Group 4 Connectors .....	4-28

## SECTION 5 MECHATRONICS SYSTEM

Group 1 Outline .....	5-1
Group 2 Mode Selection System .....	5-3
Group 3 Automatic Deceleration System .....	5-6
Group 4 Power Boost System .....	5-7
Group 5 Travel Speed Control System .....	5-8
Group 6 Automatic Warming Up Function .....	5-9
Group 7 Engine Overheat Prevention Function .....	5-10
Group 8 Anti-Restart System .....	5-11

Group 9 Self-Diagnostic System .....	5-12
Group 10 Engine Control System .....	5-20
Group 11 EPPR(Electro Proportional Pressure Reducing) Valve .....	5-22
Group 12 Monitoring System .....	5-25

## **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 .....	7-21
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 .....	8-31
Group 5 Swing Device .....	8-44
Group 6 Travel Device .....	8-67
Group 7 RCV Lever .....	8-107
Group 8 Turning Joint .....	8-121
Group 9 Boom, Arm and Bucket Cylinder .....	8-126
Group 10 Undercarriage .....	8-146
Group 11 Work Equipment .....	8-158

## **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 .....	9-10
Group 6 Structure .....	9-11
Group 7 Work Equipment .....	9-15