

# CONTENTS

## SECTION 1 GENERAL

Group 1 Safety Hints .....	1-1
Group 2 Specifications .....	1-10

## SECTION 2 STRUCTURE AND FUNCTION

Group 1 Pump Device .....	2-1
Group 2 Main Control Valve .....	2-22
Group 3 Swing Device (machine serial no. : -#0025) .....	2-56
Swing Device (machine serial no. : #0026-) .....	2-67-1
Group 4 Travel Device (type 1) .....	2-68
Travel Device (type 2, machine serial no. : #0190-) .....	2-80-1
Group 5 RCV Lever .....	2-81
Group 6 RCV Pedal .....	2-88

## SECTION 3 HYDRAULIC SYSTEM (OLD VERSION)

Group 1 Hydraulic Circuit .....	3-1
Group 2 Main Circuit .....	3-3
Group 3 Pilot Circuit .....	3-6
Group 4 Single Operation .....	3-15
Group 5 Combined Operation .....	3-25

## HYDRAULIC SYSTEM (CURRENT VERSION)

Group 1 Hydraulic Circuit .....	3-33-1
Group 2 Main Circuit .....	3-33-7
Group 3 Pilot Circuit .....	3-33-10
Group 4 Single Operation .....	3-33-19
Group 5 Combined Operation .....	3-33-29

## SECTION 4 ELECTRICAL SYSTEM

Group 1 Component Location .....	4-1
Group 2 Electric Circuit .....	4-3
Group 3 Electrical Component Specification .....	4-23
Group 4 Connectors .....	4-36

## **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 System .....	5-9
Group 7 Engine Overheat Prevention System .....	5-10
Group 8 Variable Power Control System .....	5-11
Group 9 Attachment Flow Control System .....	5-12
Group 10 Boom Floating Control System .....	5-13
Group 11 Intelligent Power Control System .....	5-14
Group 12 Anti-Restart System .....	5-16
Group 13 Self-Diagnostic System .....	5-17
Group 14 Engine Control System .....	5-62
Group 15 EPPR (Electro Proportional Pressure Reducing) Valve .....	5-63
Group 16 Monitoring System .....	5-68
Group 17 Fuel Warmer System .....	5-108
Group 18 1 or 2-Way Optional Piping Pressure Removal System .....	5-110
Group 19 2DMG+ System .....	5-111

## **SECTION 6 TROUBLESHOOTING**

Group 1 Before Troubleshooting .....	6-1
Group 2 Hydraulic and Mechanical System .....	6-4
Group 3 Electrical System .....	6-25
Group 4 Mechatronics System .....	6-44
Group 5 Air con & Heater System .....	6-74

## **SECTION 7 MAINTENANCE STANDARD**

Group 1 Operational Performance Test .....	7-1
Group 2 Major Components .....	7-21
Group 3 Track and Work Equipment .....	7-36

## **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 .....	8-52
Group 6 Travel Device (type 1) .....	8-74
Travel Device (type 2, machine serial no. : #0190-) .....	8-105-1
Group 7 RCV Lever .....	8-106
Group 8 Turning Joint .....	8-120
Group 9 Boom, Arm and Bucket Cylinder .....	8-125
Group 10 Undercarriage .....	8-147
Group 11 Work Equipment .....	8-159