CRAWLER EXCAVATOR

SERVICE MANUAL

R330LC-9S

HYUNDAI

MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication R330...

Order the manual at mid-west-tech.com >

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 2-20
Group 3 Swing Device 2-46
Group 4 Travel Device 2-57
Group 5 RCV Lever 2-66
Group 6 RCV Pedal 2-73

SECTION 3 HYDRAULIC SYSTEM

Group 1 Hydraulic Circuit 3-1
Group 2 Main Circuit 3-3
Group 3 Pilot Circuit 3-6
Group 4 Single Operation 3-14
Group 5 Combined Operation 3-24

SECTION 4 ELECTRICAL SYSTEM

Group 1 Component Location 4-1
Group 2 Electric Circuit 4-3
Group 3 Electrical Component Specification 4-38
Group 4 Connectors 4-46

SECTION 5 MECHATRONICS SYSTEM

Group 1 Outline 5-1
Group 2 Mode selection System 5-5
Group 3 Automatic Deceleration System 5-11
Group 4 Power Boost System 5-13
Group 5 Travel Speed Control System 5-15
Group 6 Automatic Warming Up Function 5-17
Group 7 Engine Overheat Prevention Function 5-19
Group 8 Variable Power Control System 5-21

MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

Group 9 Attachment Flow Control System 5-22
Group 10 Anti-Restart System 5-23
Group 11 Self-Diagnostic System 5-24
Group 12 Engine Control System 5-31
Group 13 EPPR (Electro Proportional Pressure Reducing) Valve 5-33
Group 14 Monitoring System 5-39
Group 15 Fuel Warmer System 5-71

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 6-56

SECTION 7 MAINTENANCE STANDARD

Group 1 Operational Performance Test 7-1
Group 2 Major Components 7-23
Group 3 Track and Work Equipment 7-32

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 8-30
Group 5 Swing Device 8-51
Group 6 Travel Device 8-79
Group 7 RCV Lever 8-112
Group 8 Turning Joint 8-126
Group 9 Boom, Arm and Bucket Cylinder 8-131
Group 10 Undercarriage 8-148
Group 11 Work Equipment 8-160

MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

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 9-9
Group 6 Structure 9-11
Group 7 Work equipment 9-15

MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

7. UNDERCARRIAGE

1) TRACKS

X-leg type center frame is integrally welded with reinforced box-section track frames. The design includes dry tracks, lubricated rollers, idlers, sprockets, hydraulic track adjusters with shock absorbing springs and assembled track-type tractor shoes with triple grousers.

2) TYPES OF SHOES

Model	Shapes		Triple grouser			
						
R330LC-9S	Shoe width	mm (in)	600(24)	700(28)	800(32)	900(36)
	Operating weight	kg (lb)	32700(72090)	33280(73410)	33640(74300)	34040(75180)
	Ground pressure	kgf/cm² (psi)	0.63(8.96)	0.55(7.82)	0.48(6.83)	0.44(6.26)
	Overall width	mm (ft-in)	3280(10' 9")	3380(11' 1")	3480(11' 5")	3580(11' 9")
R330NLC-9S	Shoe width	mm (in)	600(24)	-	-	-
	Operating weight	kg (lb)	32500(71650)	-	-	-
	Ground pressure	kgf/cm² (psi)	0.62(8.82)	-	-	-
	Overall width	mm (ft-in)	2990(9' 10")	-	-	-
R330LC-9S HIGH WALKER	Shoe width	mm (in)	600(24)	700(28)	800(32)	Double Grouser 710(28)
	Operating weight	kg (lb)	35200(77600)	35800(78920)	36200(79810)	36680(80690)
	Ground pressure	kgf/cm² (psi)	0.68(9.67)	0.59(8.39)	0.52(7.39)	0.47(6.68)
	Overall width	mm (ft-in)	3470(11' 5")	3570(11' 9")	3670(12' 0")	3580(11' 9")

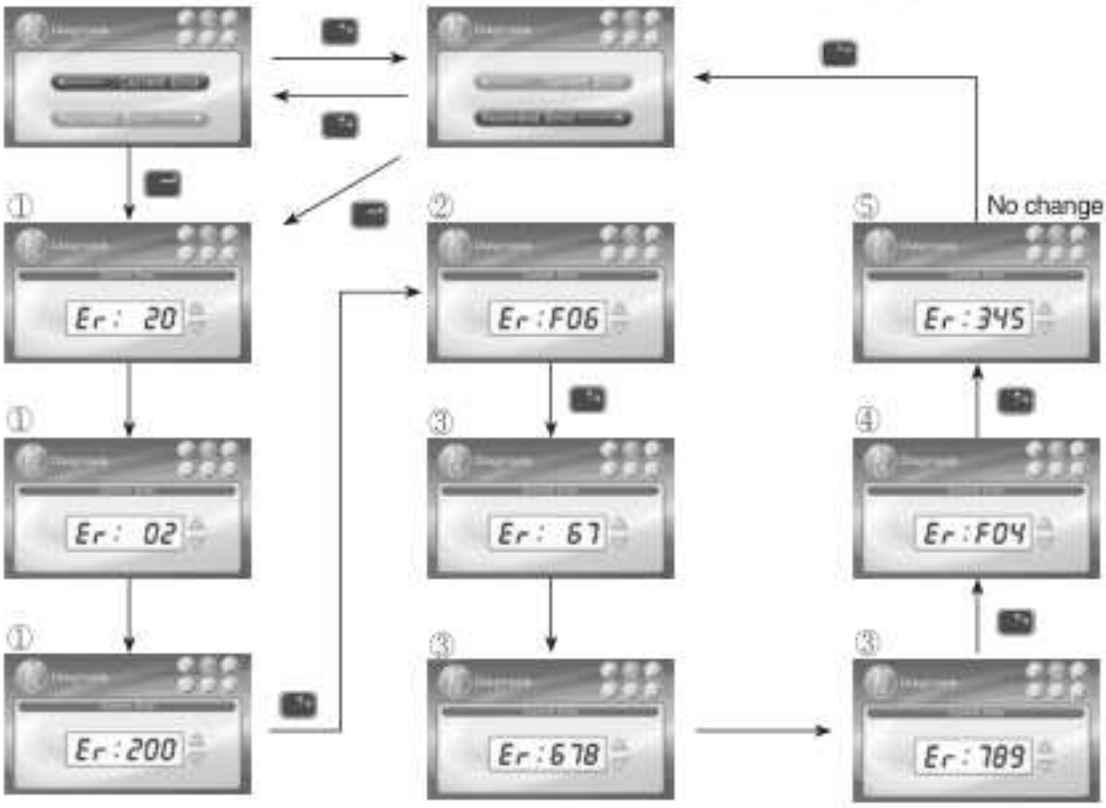
3) NUMBER OF ROLLERS AND SHOES ON EACH SIDE

Item	Quantity
Carrier rollers	2EA
Track rollers	9EA
Track shoes	48EA

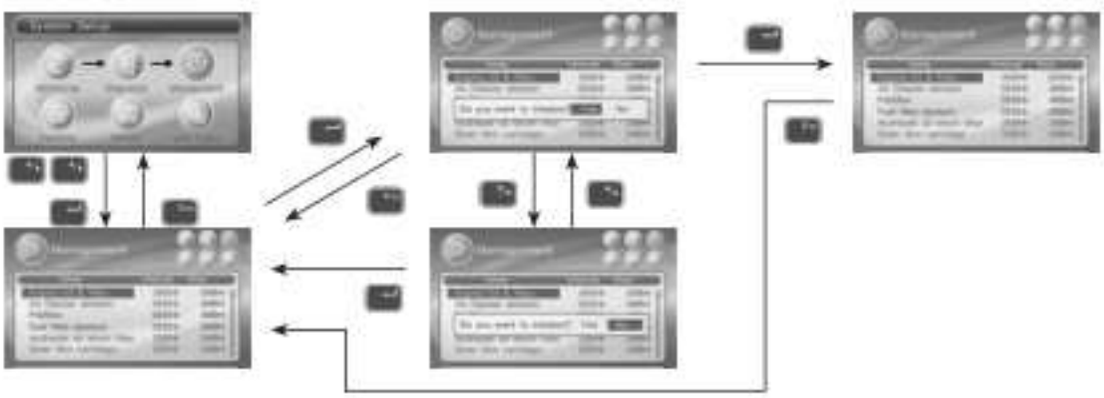
MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

b. Protocol type 2

- If there are more than 2 error codes, each one can be displayed by pressing or switch respectively.
- 3 error codes (①SPN200200, ②FMI06, ③SPN6789, ④FMI04, ⑤345) display.



③ Maintenance



④ Setting

a. Time set



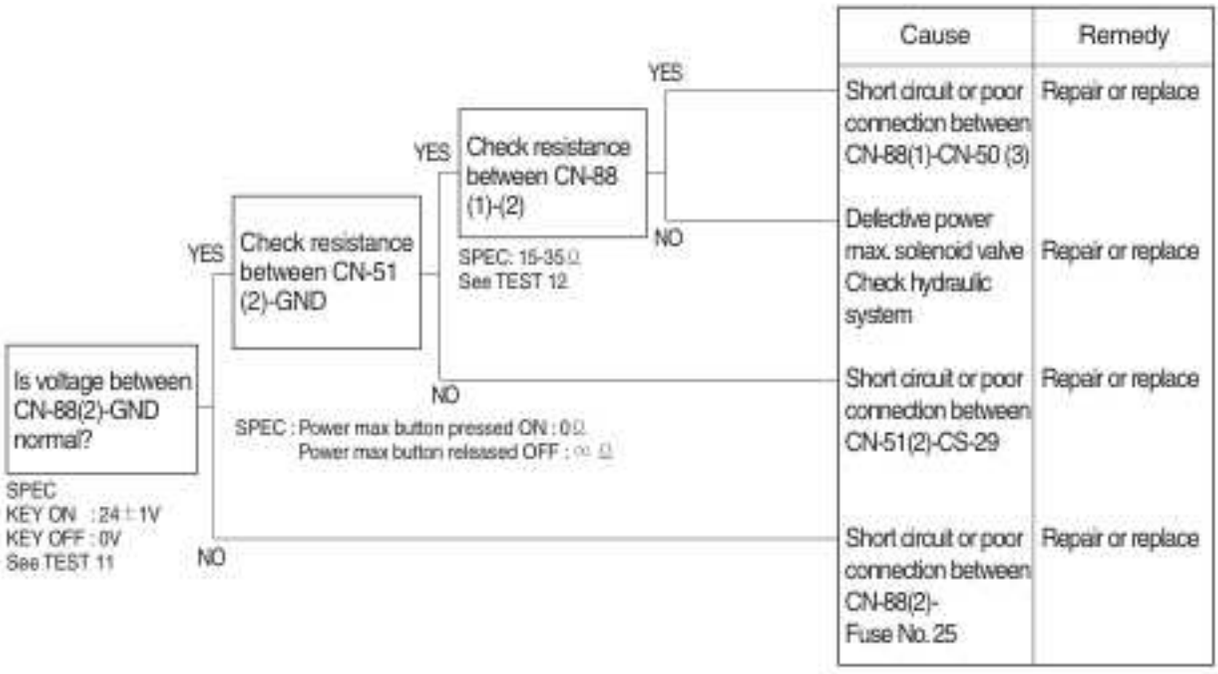
b. System lock - Reserved

MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

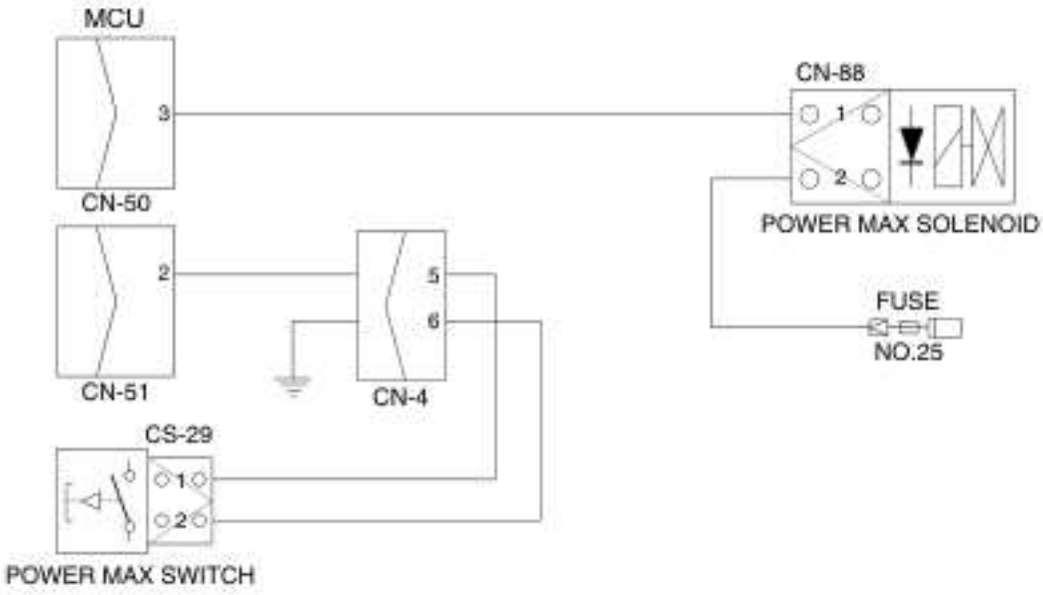
9. MALFUNCTION OF POWER MAX

※ Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



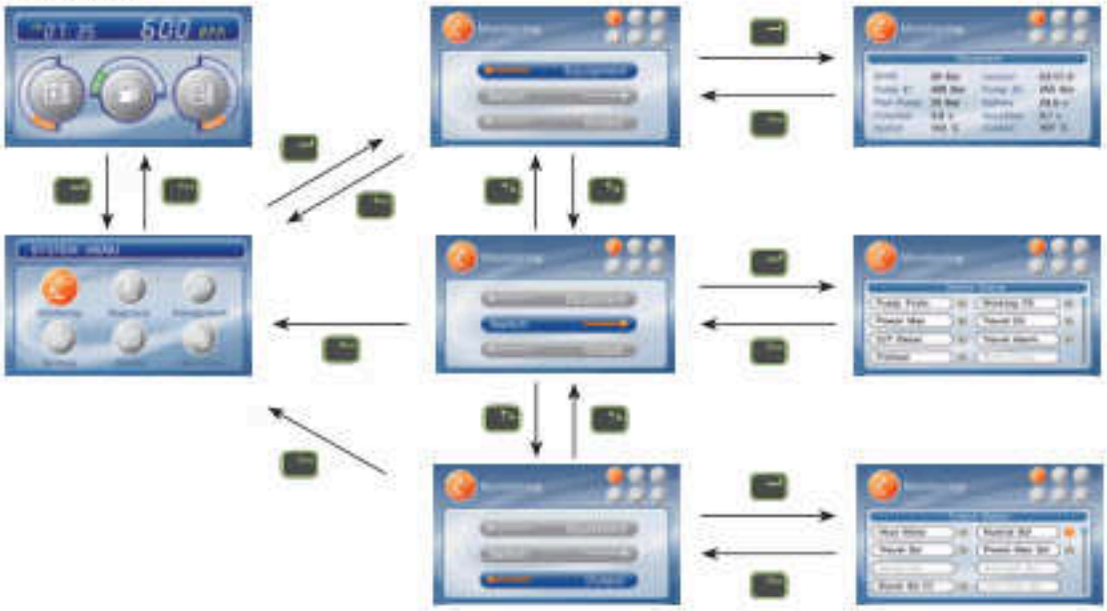
Wiring diagram



MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

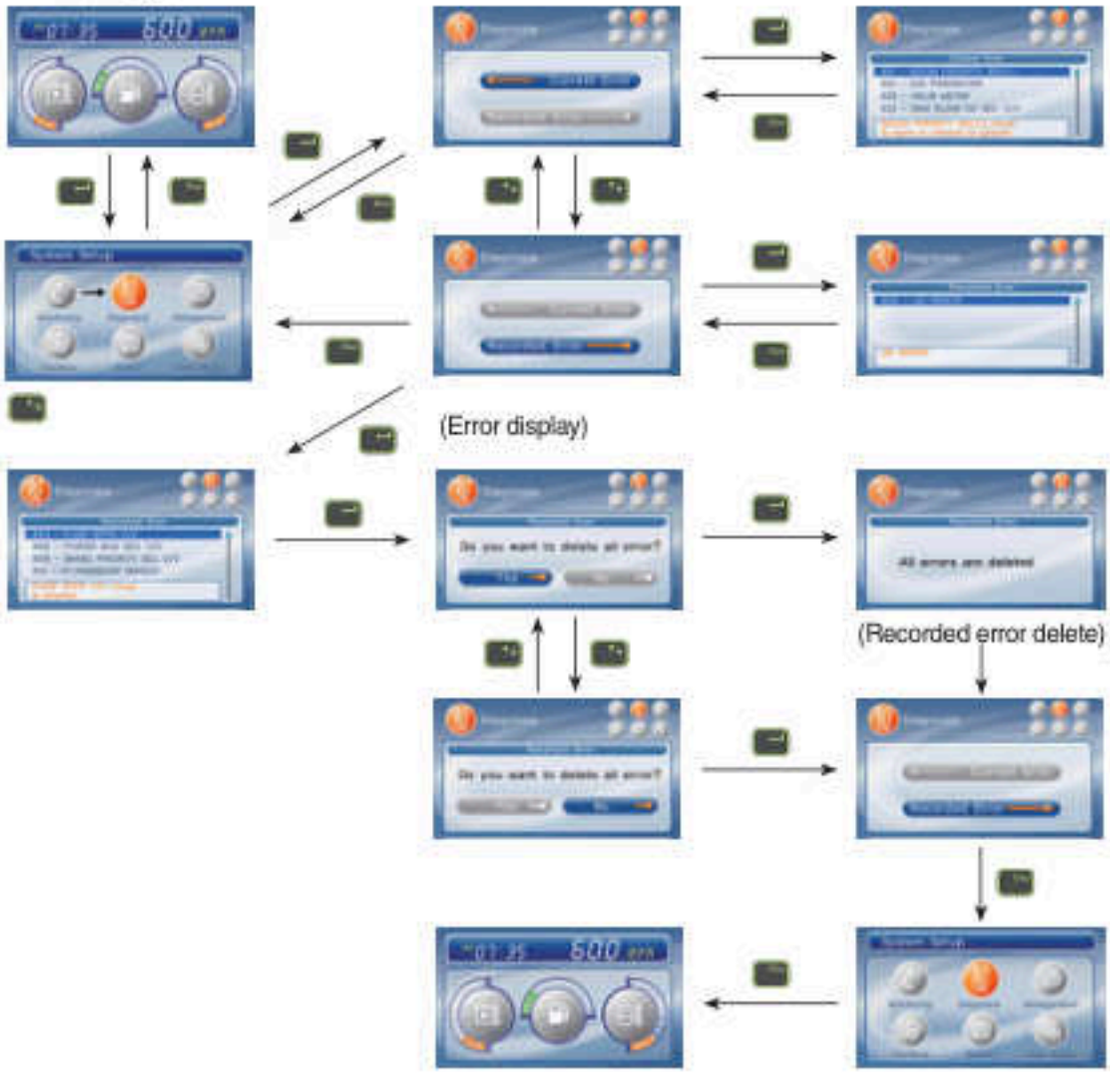
(2) Display map

① Monitoring



② Diagnosis

a. Protocol type 1



MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >

(28)Assemble piston ring (30), piston ring 252 (30) and 278 (31) into brake piston (29).



(29)Assemble brake piston into shaft casing.

* Be careful of the direction of assembling brake piston.



(30)Assemble brake spring (32).

* Quantity : Spring-10pieces, Holes-11pieces
* Do not assemble on the top of brake piston.

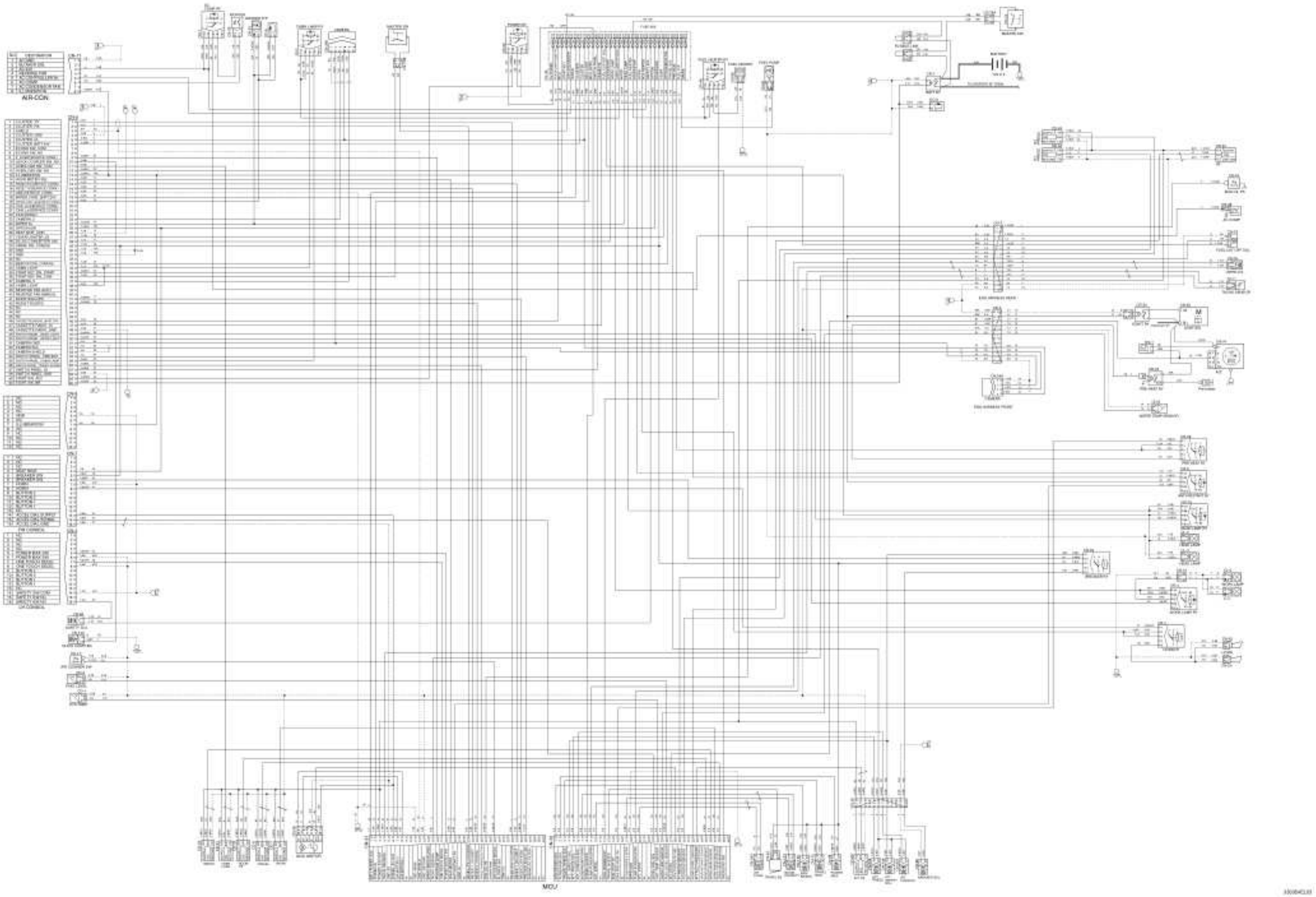


(31)Insert O-ring (69), after fastening orifice screw (4) with standard torque.

- Quantity and size : (4) 2 pieces- ø 1.0
  (56)1pieces- ø 1.5
- Tightening torque : 7 kgf · m (50.63 lbf · ft)



MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication... Order the manual at mid-west-tech.com >



MidWestTech | Hyundai R330LC-9S Crawler Excavator Service Manual | Publication R330LC-9S
Order the manual at mid-west-tech.com >