CRAWLER EXCAVATOR

SERVICE MANUAL

HX330SL

HYUNDAI

MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX330SL

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 2-22
Group 3 Swing Device 2-58
Group 4 Travel Device 2-69
Group 5 RCV Lever 2-83
Group 6 RCV Pedal 2-90

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 4-22
Group 4 Connectors 4-31

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 Variable Power Control System 5-11

MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX... Order the manual at mid-west-tech.com >

Group 9 Attachment Flow Control System 5-12
Group 10 Intelligent Power Control System 5-13
Group 11 Anti-Restart System 5-15
Group 12 Self-Diagnostic System 5-16
Group 13 Engine Control System 5-40
Group 14 EPPR (Electro Proportional Pressure Reducing) Valve 5-41
Group 15 Monitoring System 5-46
Group 16 Fuel Warmer System 5-80

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 7-30

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 8-45
Group 6 Travel Device 8-69
Group 7 RCV Lever 8-102
Group 8 Turning Joint 8-116
Group 9 Boom, Arm and Bucket Cylinder 8-121
Group 10 Undercarriage 8-138
Group 11 Work Equipment 8-150

MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX... Order the manual at mid-west-tech.com >

2) HEAVY DUTY AND ROCK-HEAVY DUTY BUCKET

		
◈ 1.44 m³ SAE heaped bucket	◆ 1.44 m³ SAE ◆ 1.60 m³ SAE ◆ 1.73 m³ SAE heaped bucket	◆ 1.83 m³ SAE heaped bucket

Capacity		Width		Weight	Recommendation				
					6.45 m (21' 2") boom				6.15 m (20' 2") boom
SAE heaped	CECE heaped	Without side cutter	With side cutter		2.2 m arm (7' 3")	2.5 m arm (8' 2")	3.2 m arm (10' 6")	4.05 m arm (13' 3")	2.2 m arm (7' 3")
◈ 1.44 m³ (1.88 yd³)	1.25 m³ (1.63 yd³)	1470 mm (58")	-	1410 kg (3110 lb)	●	●	◐	■	●
◆ 1.44 m³ (1.88 yd³)	1.25 m³ (1.63 yd³)	1470 mm (58")	-	1485 kg (3270 lb)	●	●	◐	X	●
◆ 1.60 m³ (2.09 yd³)	1.39 m³ (1.82 yd³)	1585 mm (62")	-	1650 kg (3640 lb)	●	◐	■	X	●
◆ 1.73 m³ (2.26 yd³)	1.5 m³ (1.96 yd³)	1710 mm (67")	-	1675 kg (3690 lb)	◐	◐	■	X	●
◆ 1.83 m³ (2.39 yd³)	1.59 m³ (2.08 yd³)	1765 mm (69")	-	1850 kg (4080 lb)	■	■	▲	X	◐

◈ : Heavy duty bucket

◆ : Rock-Heavy duty bucket

● Applicable for materials with density of 2100 kg/m³ (3500 lb/yd³) or less

◐ Applicable for materials with density of 1800 kg/m³ (3000 lb/yd³) or less

■ Applicable for materials with density of 1500 kg/m³ (2500 lb/yd³) or less

▲ Applicable for materials with density of 1200 kg/m³ (2000 lb/yd³) or less

X Not recommended

MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX... Order the manual at mid-west-tech.com >

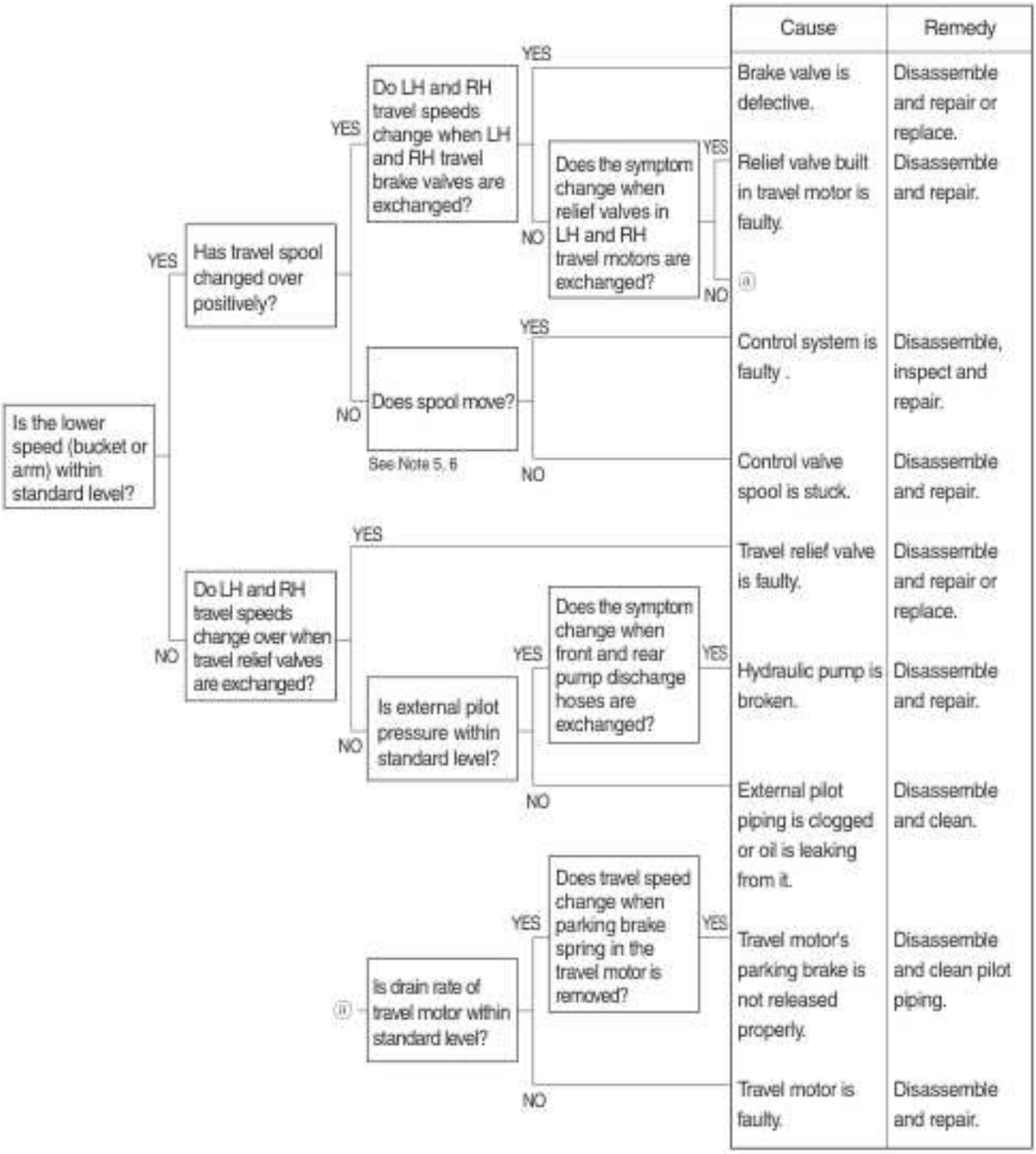
GROUP 4 CONNECTORS

1. CONNECTOR DESTINATION

Connector number	Type	No. of pin	Destination	Connector part No.	
				Female	Male
CN-1	TE/AMP	15	I/conn (Frame harness-Engine harness)	2-85262-1	368301-1
CN-2	TE/AMP	12	I/conn (Frame harness-Engine harness)	S816-01200	S368301-1
CN-3	TYCO	12	I/conn (Frame harness-Pro vlv harness)	174661-2	S816-112001
CN-4	AMP	10	I/conn (Console harness LH-Frame harness)	368047-1	368050-1
CN-5	DEUTSCH	60	I/conn (Side harness RH-Frame harness)	DRB16-60SAE-L018	DRB14-60PAE-L018
CN-6	AMP/TE	10	I/conn (Console harness RH-Frame harness)	S816-010002	174655-2
CN-7	AMP/TE	12	I/conn (Console harness RH-Frame harness)	S816-012002	S816-120002
CN-9	DEUTSCH	12	I/conn (Frame harness-AAVM harness)	DT06-12SA-P021	DT04-12PA-P021
CN-10	DEUTSCH	12	I/conn (Cab harness-Side harness RH)	DT06-12S-EP06	DT04-12PA-P021
CN-11	DEUTSCH	8	I/conn (Frame harness-Aircon harness)	DT06-8S-EP06	-
CN-12	DEUTSCH	2	I/conn (Frame harness-Boom wire harness)	DT06-2S-EP06	DT04-2P-E005
CN-13	-	4	Swing parking & fine control	-	174259-2
CN-15	TE	12	I/conn (Frame harness-Breaker sol)	S816-012002	S816-112002
CN-17	AMP	8	I/conn (Wiper harness-Side harness RH)	S816-008002	S816-108002
CN-20	MOLEX	2	Horn	36825-0211	-
CN-21	AMP	6	Wiper motor	S810-006202	-
CN-22	KET	2	Washer tank 1	MG640605	-
CN-23	KET	2	Speaker-LH	MG610070	-
CN-24	KET	2	Speaker-RH	MG610070	-
CN-25	MOLEX	2	Horn	35825-0211	-
CN-27A	KUM	16	Radio & USB player	PK145-16017	-
CN-27B	AMP	8	Radio & USB player	-	174984-2
CN-28	KET	2	Aircon compressor	S814-002100	-
CN-29	KET	2	Receiver dryer	MG640795	-
CN-36	-	-	Fuse & relay box	21Q7-10910	-
CN-45	RING-TERM	-	Starter motor B+	S820-108000	-
CN-48	KET	1	Hour meter	2-520193-2	-
CN-51	DEUTSCH	40	MCU	DRC26-40SA	-
CN-52	DEUTSCH	40	MCU	DRC26-40SB	-
CN-53	DEUTSCH	40	MCU	DRC26-40SC	-
CN-56A	AMP	12	Cluster	-	174663-2
CN-56B	AMP	8	Cluster	-	174984-2
CN-60	-	2	Circuit breaker	21K9-03270	21LM-03140
CN-61	DEUTSCH	2	Fuel filler pump	DT06-2S-EP06	-
CN-66	DEUTSCH	2	Breaker solenoid	DT06-2S-EP06	-
CN-68	DEUTSCH	2	Safety solenoid	DT06-2S-EP06	-

MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX... Order the manual at mid-west-tech.com >

2) SPEED ON ONE SIDE FALLS AND THE MACHINE CURVES



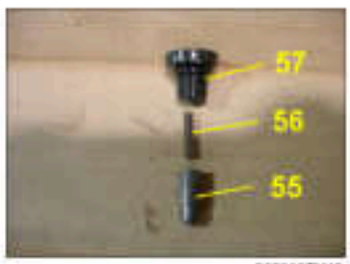
MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX... Order the manual at mid-west-tech.com >

4. REASSEMBLING

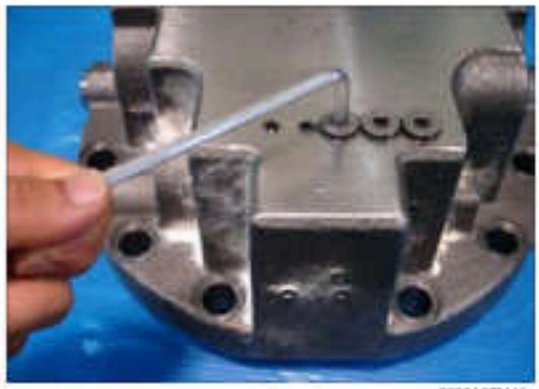
1) ASSEMBLING MOTOR

- REAR COVER ASSY

(1) Assemble check valve (55), spring (56) into rear cover (34) and then assemble plug (57) using L-wrench.



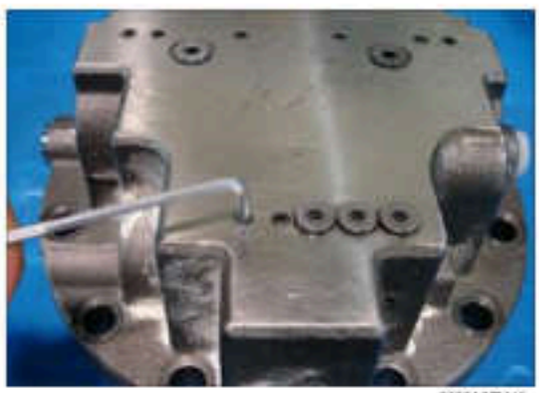
2609A8TM40


2609A8TM41

(2) Apply loctite #242 on the NPTF 1/16 plug (2) and then assemble 12-NPTF 1/16 Plug (2) into rear cover(34).



2609A8TM42


2609A8TM43

(3) Assemble spool (47), parallel pin (50), spring seat (49) and spring (51) into rear cover (34) in regular sequence and then assemble plug (48) and connector (52).



2609A8TM44


2609A8TM45


2609A8TM46

(4) Assemble relief valve (42, 2EA) into rear cover (34).



2609A8TM47


2609A8TM48


2609A8TM49

MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX... Order the manual at mid-west-tech.com >

③ Assemble 9 piston assy (12) into retainer plate (11).

- Piston assy × 9EA
- Retainer plate × 1EA



④ Assemble parts of procedure ② and ③.



(3) Assemble valve casing sub

① Assemble make up check valve sub

Assemble check valve (24), O-ring (27), plug (26) in that order and then screw it torque wrench.

- Make up check valve × 2EA
- Spring × 2EA
- Plug × 2EA
- O-ring × 2EA
- Tightening torque : 38 ± 3.8 kgf · m (275 ± 27.5 lbf · ft)



② Assemble reactionless valve assy

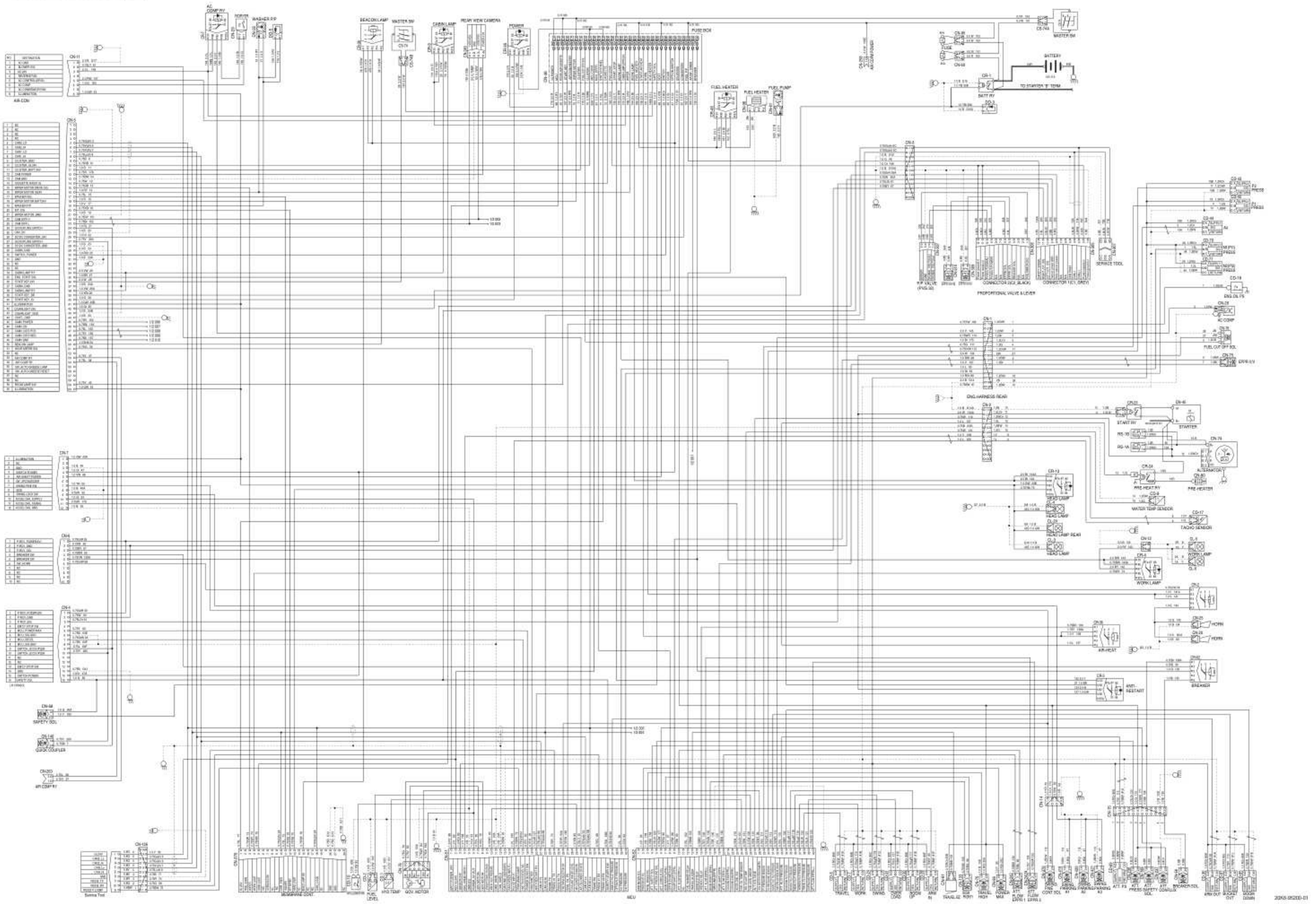
Assemble reactionless valve assy (31), plug (32), O-ring (33, 34) in that order and then screw it a torque wrench.

- Reactionless valve assy (31) × 2EA
- Plug (32) × 2EA
- O-ring (33, 34) × 2EA
- Tightening torque : 22 ± 1.5 kgf · m (159 ± 11 lbf · ft)



MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX... Order the manual at mid-west-tech.com >

ELECTRICAL CIRCUIT (1/2)



MidWestTech | Hyundai HX330SL Crawler Excavator Service Manual | Publication HX330SL

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