CRAWLER EXCAVATOR

SERVICE MANUAL

R330LC-9A

HYUNDAI

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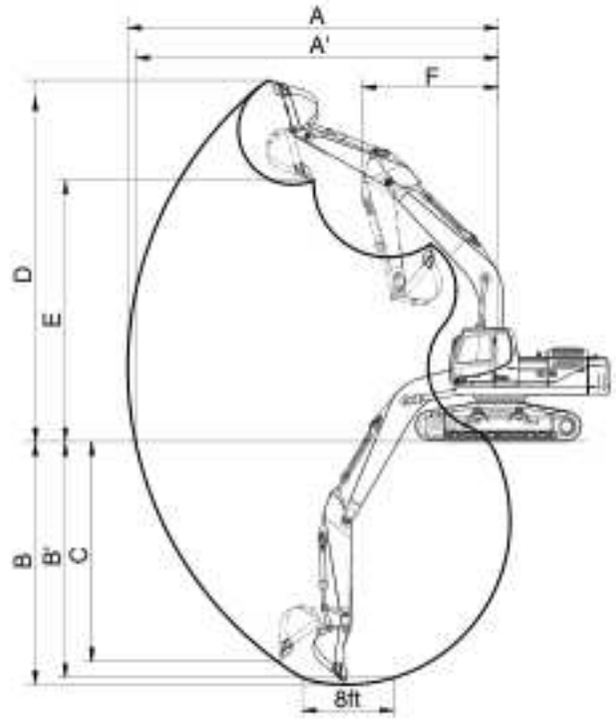
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2) R330LC-9A HIGH WALKER



3309A2SP04

Description		6.45 m (21' 2") Boom				6.15 m (20'2") Boom
		2.2 m (7' 3") Arm	2.5 m (8' 2") Arm	3.2 m (10' 6") Arm	4.05 m (13' 3") Arm	2.2 m (7' 3") Arm
Max digging reach	A	10330 mm (33'11")	10550 mm (34' 7")	11140 mm (36' 7")	11950 mm (39' 2")	10020 mm (32'10")
Max digging reach on ground	A'	10040 mm (32'11")	10270 mm (33' 8")	10880 mm (35' 8")	11710 mm (38' 5")	9730 mm (31'11")
Max digging depth	B	6100 mm (20' 0")	6400 mm (20'12")	7100 mm (23' 4")	7950 mm (26' 1")	5880 mm (19' 3")
Max digging depth (8ft level)	B'	5890 mm (19' 4")	6200 mm (20' 4")	6940 mm (22' 9")	7800 mm (25' 7")	5680 mm (18' 8")
Max vertical wall digging depth	C	5700 mm (18' 8")	5650 mm (18' 6")	6080 mm (19'11")	6980 mm (22'11")	5440 mm (17'10")
Max digging height	D	10500 mm (34' 5")	10450 mm (34' 3")	10690 mm (34' 9")	10990 mm (36' 1")	10220 mm (33' 6")
Max dumping height	E	7330 mm (24' 1")	7330 mm (24' 1")	7520 mm (24' 8")	7910 mm (25'11")	7060 mm (23' 2")
Min swing radius	F	4700 mm (15' 5")	4500 mm (14' 9")	4470 mm (14' 8")	4470 mm (14' 8")	4520 mm (14'10")
Bucket digging force	SAE	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN	189.3 [205.5] kN
		19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf	19300 [20950] kgf
		42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf	42550 [46200] lbf
	ISO	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN	211.8 [230.0] kN
		21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf	21600 [23450] kgf
		47620 [51700] lbf	47620 [51700] lbf	47620 [51700] lbf	47620 [51700] lbf	47620 [51700] lbf
Arm crowd force	SAE	196.6 [213.4] kN	178.9 [194.2] kN	143.2 [155.5] kN	119.6 [129.9] kN	196.6 [213.4] kN
		20000 [21760] kgf	18200 [19810] kgf	14600 [15850] kgf	12200 [13240] kgf	20000 [21760] kgf
		44190 [47980] lbf	40220 [43670] lbf	32190 [34950] lbf	26890 [29190] lbf	44190 [47980] lbf
	ISO	202.8 [220.2] kN	185.1 [201.0] kN	147.1 [159.7] kN	122.7 [133.3] kN	202.8 [220.2] kN
		20700 [22450] kgf	18900 [20500] kgf	15000 [16290] kgf	12515 [13590] kgf	20700 [22450] kgf
		45600 [49510] lbf	41620 [45190] lbf	33070 [35900] lbf	27590 [29960] lbf	45600 [49510] lbf

[ ] : Power boost

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Fault code J1939 SPN J1939 FMI	Reason	Effect (only when fault code is active)
3213 1623 19	Tachograph Output Shaft Speed - Received Network Data In Error. The J1939 multiplexing controller has indicated a malfunction of the tachograph output shaft speed sensor.	None on performance.
3245 3936 7	Aftertreatment Diesel Particulate Filter System - Mechanical System Not Responding or Out of Adjustment. The aftertreatment diesel particulate filter has been damaged.	Active aftertreatment diesel particulate filter regeneration will be disabled.
3251 475 16	Aftertreatment Diesel Oxidation Catalyst Intake Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level. The diesel oxidation catalyst intake temperature sensor reading has exceeded the maximum temperature limit.	Active aftertreatment diesel particulate filter regeneration will be disabled.
3253 3242 16	Aftertreatment Diesel Particulate Filter Intake Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level. The aftertreatment diesel particulate filter intake temperature sensor reading has exceeded the maximum engine protection temperature limit.	Active and stationary aftertreatment diesel particulate filter regeneration will be disabled.
3254 3242 15	Aftertreatment Diesel Particulate Filter Intake Temperature - Data Valid But Above Normal Operating Range - Least Severe Level. The aftertreatment diesel particulate filter intake temperature sensor reading has exceeded the maximum engine protection temperature limit.	Active and stationary aftertreatment diesel particulate filter regeneration will be disabled.
3255 3246 16	Aftertreatment Diesel Particulate Filter Outlet Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level. The aftertreatment diesel particulate filter outlet temperature sensor reading has exceeded the maximum engine protection temperature limit.	Active and stationary aftertreatment diesel particulate filter regeneration will be disabled.
3256 3246 15	Aftertreatment Diesel Particulate Filter Outlet Temperature - Data Valid But Above Normal Operating Range - Least Severe Level. The aftertreatment diesel particulate filter outlet temperature sensor reading has exceeded the maximum engine protection temperature limit.	Active and stationary aftertreatment diesel particulate filter regeneration will be disabled.
3311 3242 0	Aftertreatment Diesel Particulate Filter Intake Temperature - Data Valid But Above Normal Operating Range - Most Severe Level. The aftertreatment diesel particulate filter intake temperature sensor reading has exceeded the maximum engine protection temperature limit.	Active aftertreatment diesel particulate filter regeneration will be disabled.
3312 3246 0	Aftertreatment Diesel Particulate Filter Outlet Temperature - Data Valid but Above Normal Operating Range - Most Severe Level. The aftertreatment diesel particulate filter outlet temperature sensor reading has exceeded the maximum engine protection temperature limit.	The exhaust gas recirculation (EGR) valve operation will be disabled. Active aftertreatment diesel particulate filter regeneration will be disabled.

※ Some fault codes are not applied to this machine.

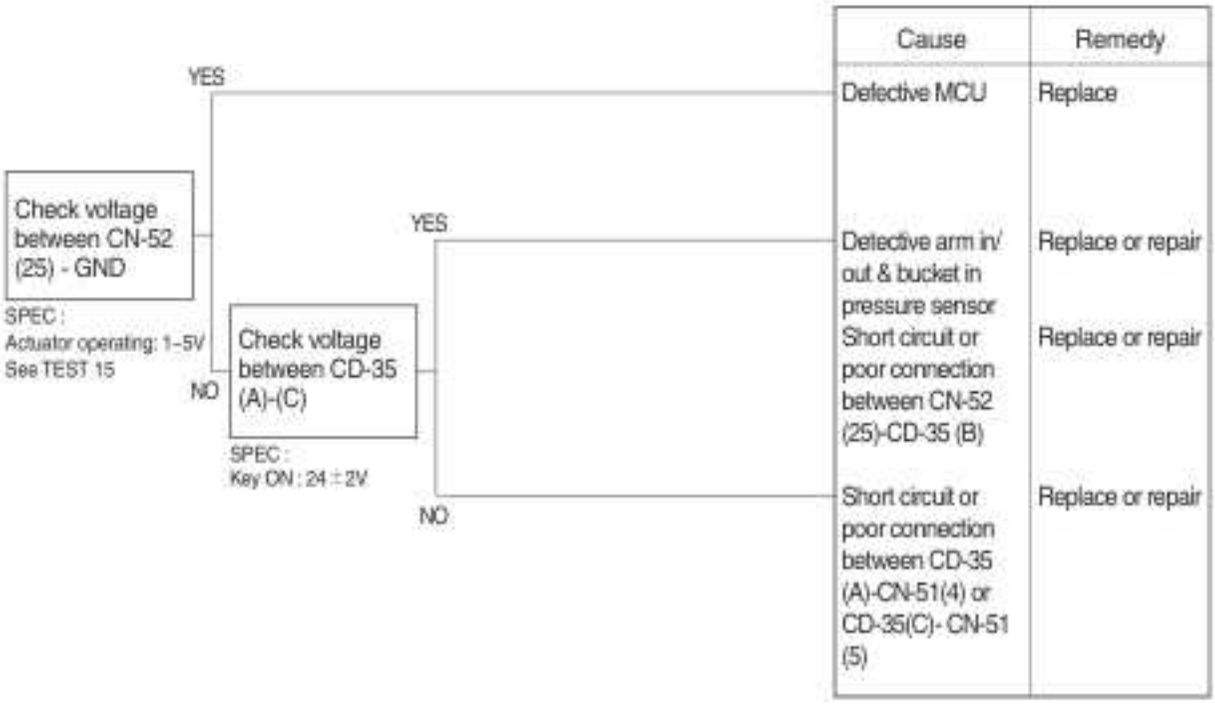
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12. MALFUNCTION OF ARM IN/OUT & BUCKET IN PRESSURE SENSOR

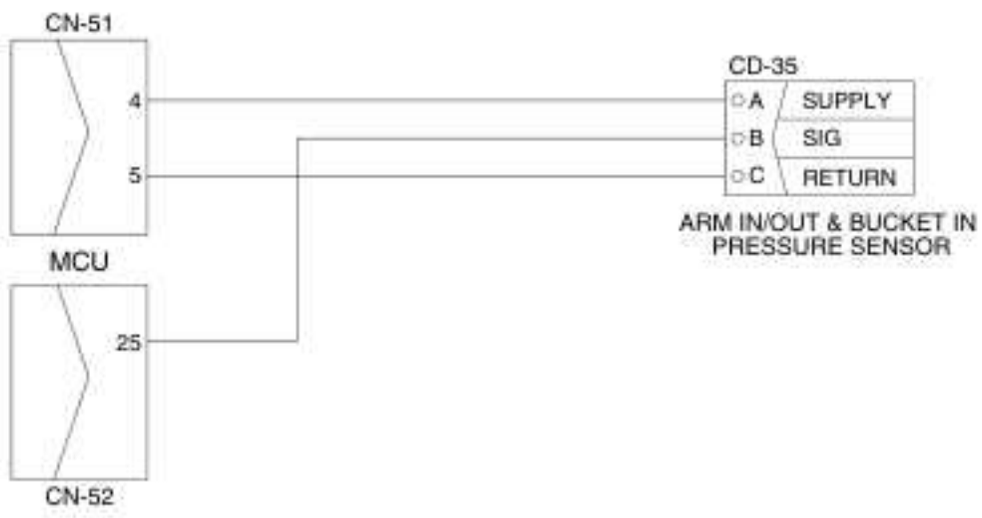
· Fault code : HCESPN 133, FMI 0~4

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

1) INSPECTION PROCEDURE



Wiring diagram



21090MS12

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(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)



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⑧ Assemble the piston assy (18) in the set plate (17).



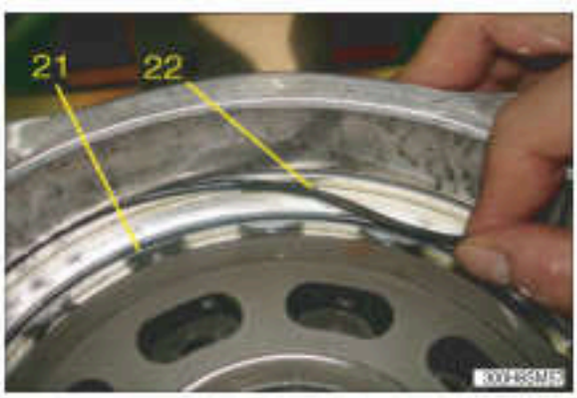
⑨ Assemble the piston assy (18) in the cylinder block (11).
Apply the clean hydraulic oil in the piston assy and hole of cylinder block (11) before assemble the piston assy (18)



⑩ The workbench horizontally, assemble the cylinder block assy in the body (1) and insert the O-ring (21, 22).

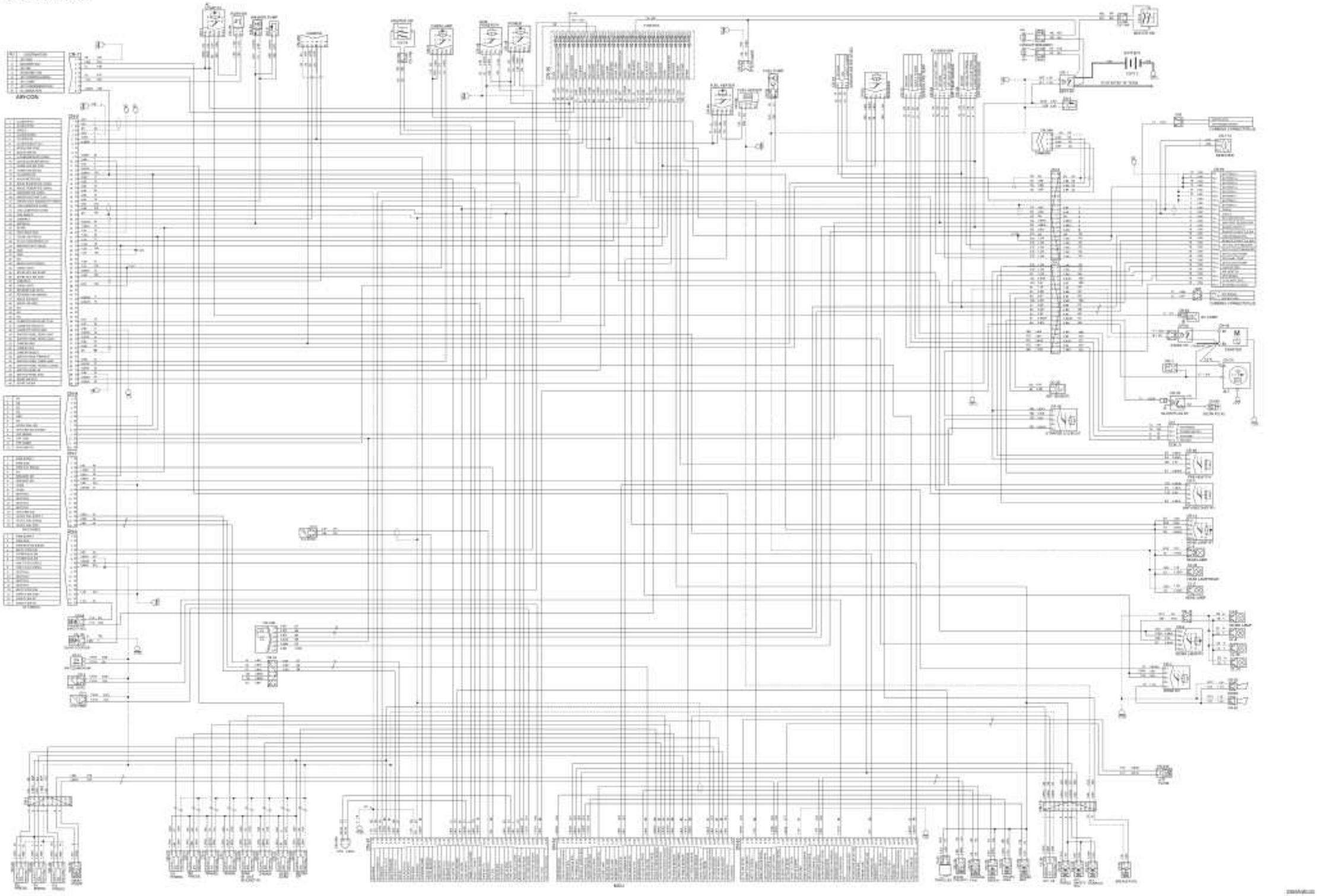


⑪ Insert the O-ring (21, 22) in the body (1).



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- ELECTRICAL CIRCUIT (1/2)



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