CEBM028602

Shop Manual

KOMATSU®

PC240LC-11

HYDRAULIC EXCAVATOR

SERIAL NUMBERS **PC240LC-11 A22001 and up**

ENGINE **6D107E-3**

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FAILURE CODE [CA4461] AdBlue/DEF Line Heater Relay 2 Voltage Low Error

Action level	Failure code	Failure	AdBlue/DEF line heater relay 2 voltage low error
L01	CA4461		(Engine controller system)
Detail of failure	A low voltage error occurs in AdBlue/DEF line heater relay 2 circuit.		
Action of controller	Advances to Inducement strategy.		
Phenomenon on machine	• AdBlue/DEF line stops thawing. • NOx emission increases. • Engine output is reduced based on inducement strategy.		
Related information	• AdBlue/DEF line heater relay 2 is driven at AdBlue/DEF supply system thawing/thermal insulation or "AdBlue/DEF line heater relay 2 test". • AdBlue/DEF line heater relay 2 is integrated in the AdBlue/DEF heater relay. • Troubleshooting of this failure code covers circuits from engine controller through AdBlue/DEF heater relay to power supply. • This failure code is detected only when the AdBlue/DEF line heater relay 2 is turned OFF. • This failure code is displayed if connector R53A is removed when AdBlue/DEF line heater 2 is turned OFF. • After repairing, check if the failure code is cleared by the following procedure. Procedure: Turn starting switch to ON position.		

No.	Cause	Procedure, measuring location, criteria and remarks		
1	Defective wiring harness connector	1. See descriptions of wiring harness and connectors in "c: Electrical equipment" in "CHECKS BEFORE TROUBLESHOOTING" of "RELATED INFORMATION ON TROUBLESHOOTING", and check it. 2. Perform the "AdBlue/DEF Line Heater Relay 2 Test" by staring the engine in low ambient temperature (12 °C or below), or by referring "SERVICE MODE" of setting and operating machine monitor, "METHOD FOR OPERATING TESTING MENU (SCR SERVICE TEST)".		
		If this failure code is displayed, wiring harness connector is defective.		
2	Defective fuse No. 4 in fuse box F02	Check if fuse No. 4 in fuse box F02 is blown. **REMARK** If blown, perform troubleshooting for ground fault in wiring harness.		
3	Open circuit in wiring harness (sensor relay power supply side)	1. Turn starting switch to OFF position. 2. Turn the battery disconnect switch to OFF position. 3. Disconnect connector R53B, and connect T-adapter to female side. 4. Turn the battery disconnect switch ON. 5. Turn starting switch to ON position		
		Voltage	Between ground and R53B (female) (1) or (2)	Min. 22 V

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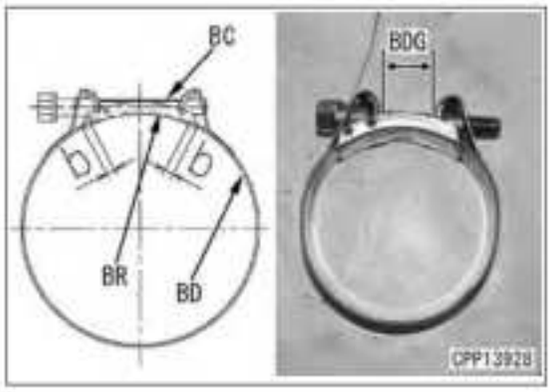
2) Set bridge (BR) under clamp fastening bolt, and adjust overlap dimension (b) between bridge (BR) and band to the following.

Dimension (b): Min.5 mm

Clamp fastening bolt threaded part (BC):
Lubricating oil (ThreeBond PANDO18B)

- Impact wrench is not allowed to use.
- When reusing the hose
  Align the clamp position to the trace of clamp left on hose.

  Clamp fastening bolt:
  Min.6 Nm {0.6 kgm}
- When using a new hose
  Tighten it until dimension BDG becomes as shown below.
  BDG: 7 to 10 mm



Fan guard

6. Install fan guards (1) and (2).

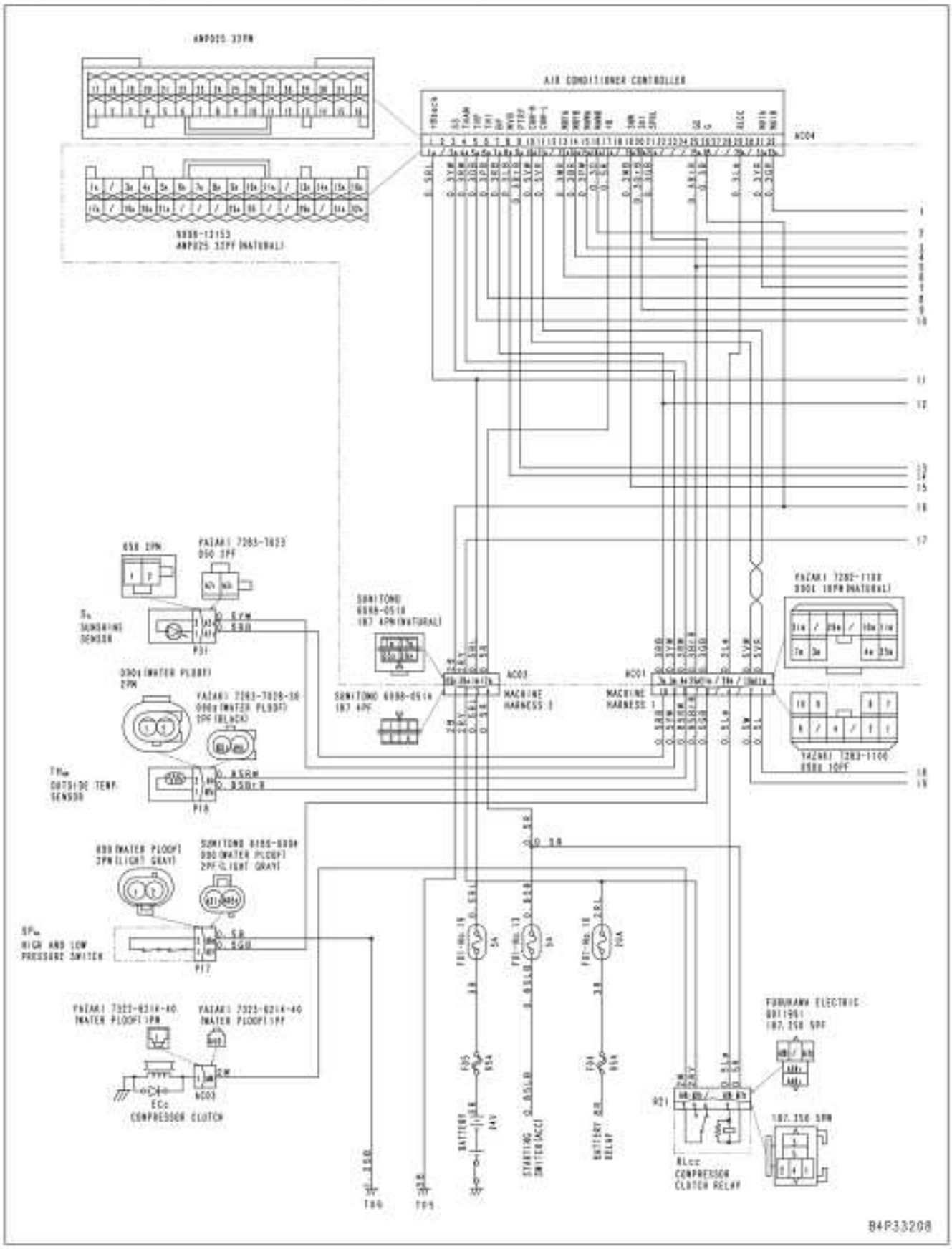


Air conditioner gas, Oil

7. Refill the air conditioner circuit with refrigerant (air conditioner gas: R134a).
   Filling quantity: 930±50 g
8. Refilling with air conditioner compressor oil
   See Others, "REFEILLING WITH COMPRESSOR OIL".

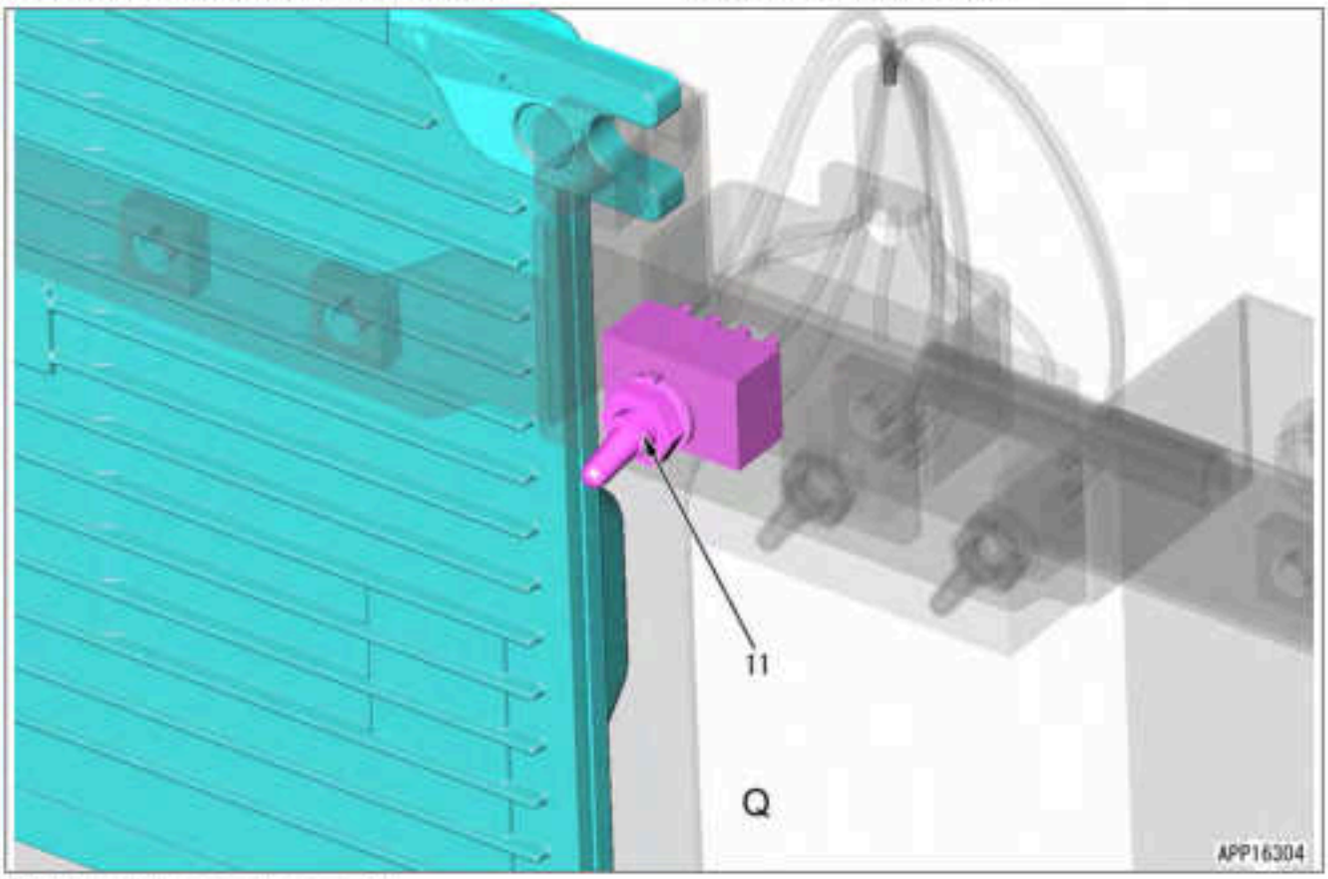
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CIRCUIT DIAGRAM AND ARRANGEMENT OF CONNECTOR PINS FOR AIR CONDITIONER



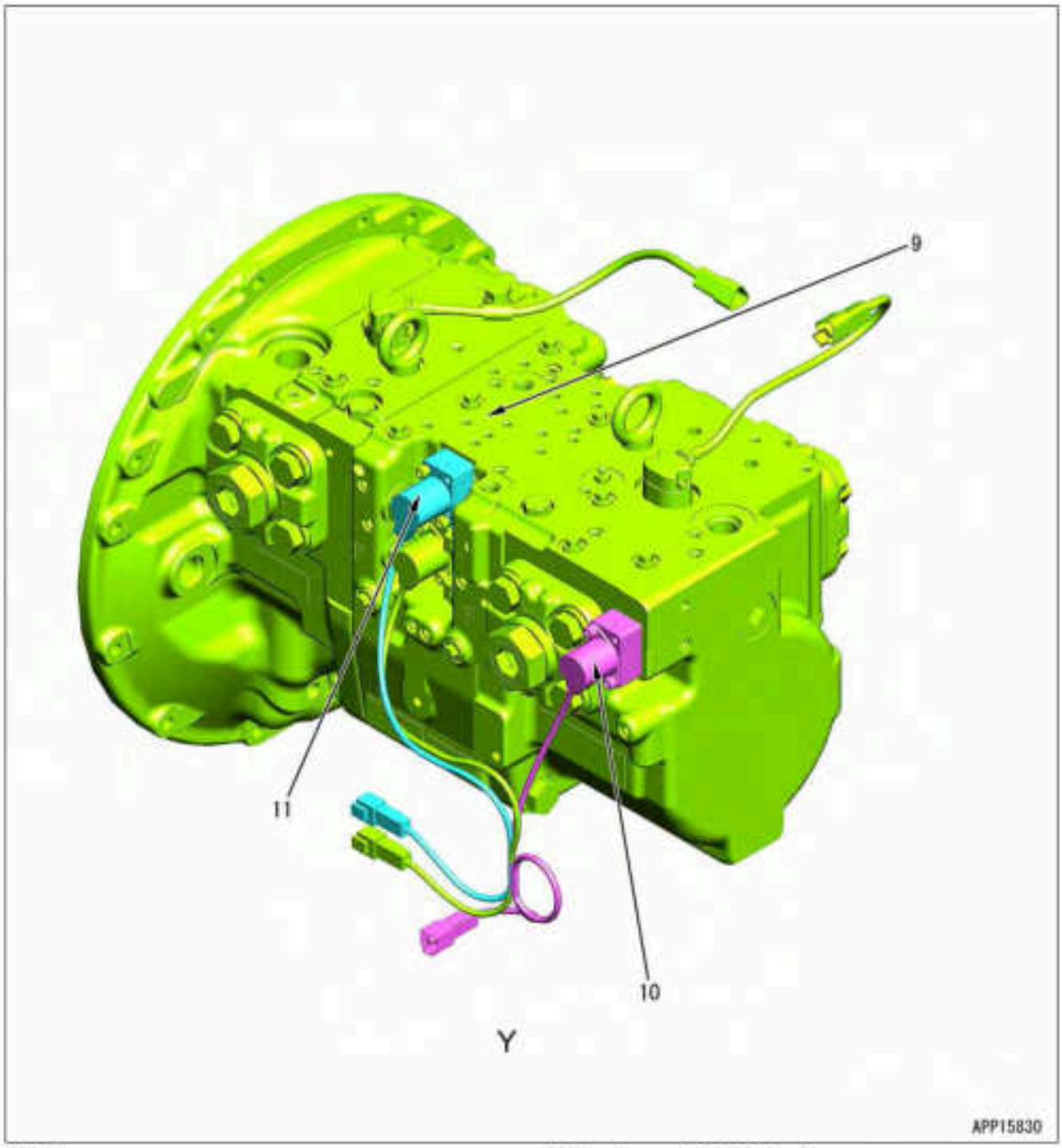
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3: Pump controller
4: Resistor for PC-EPC valve
5: One-touch power maximizing switch
6: R.H. travel FORWARD pressure sensor
7: L.H. travel FORWARD pressure sensor
8: L.H. travel REVERSE pressure sensor
9: R.H. travel REVERSE pressure sensor
10: Service pressure switch



11: Pump drive secondary switch

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9: Main pump
10: Rear pump PC-EPC valve
11: Front pump PC-EPC valve

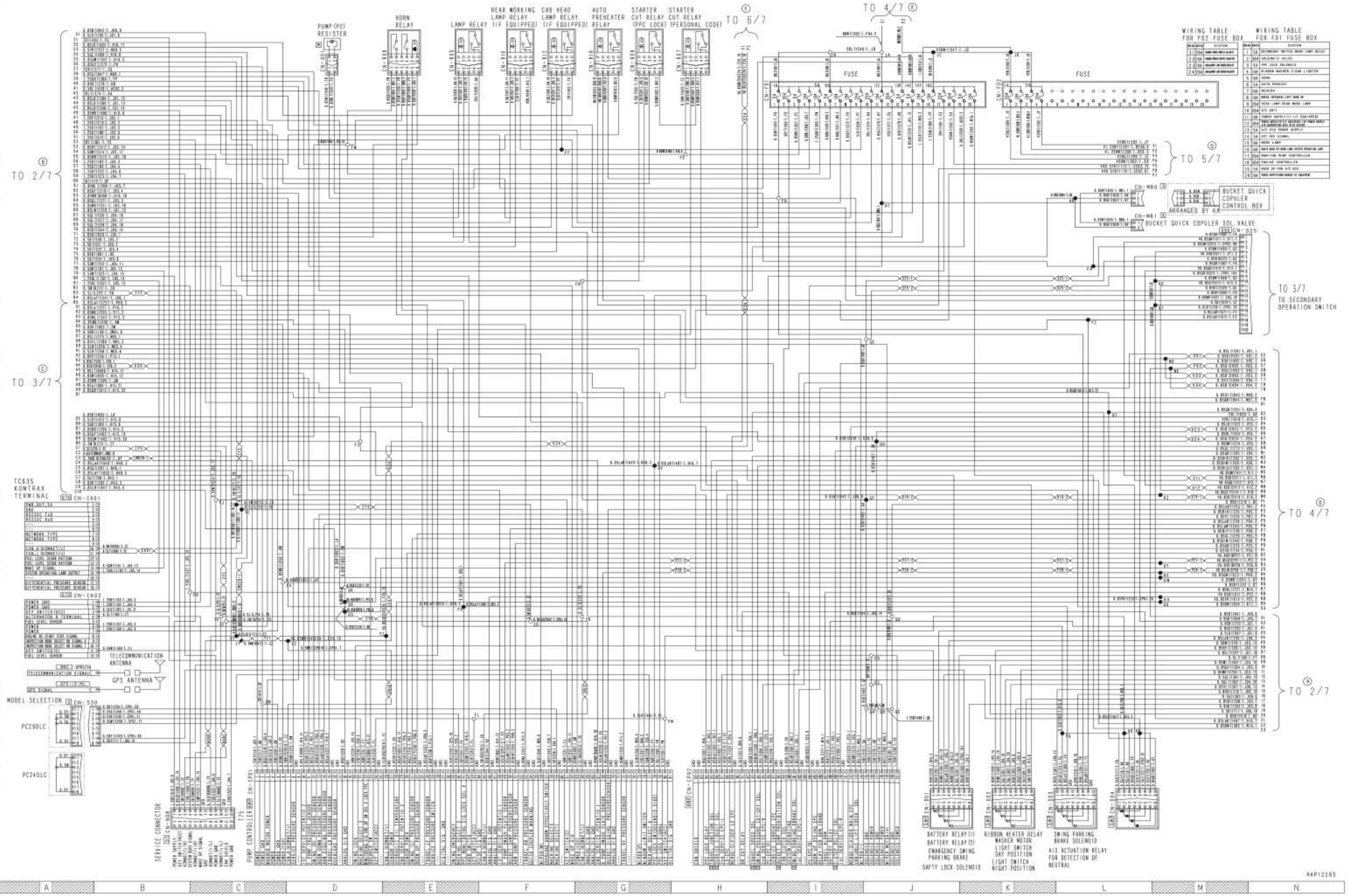
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ELECTRICAL CIRCUIT DIAGRAM (1/7)

PC240LC-11

REMARK

This figure covers the equipment and devices that are unavailable as optional items in some areas.



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