CEBM029400

Shop Manual

KOMATSU®

PC210LC-11

HYDRAULIC EXCAVATOR

SERIAL NUMBERS **PC210LC-11 A12001 and up**

ENGINE **6D107E-3**

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FAILURE CODE [CA2637] KDOC Face Plugging

Action level	Failure code	Failure	KDOC Face Plugging (Engine controller system)
L01	CA2637		
Details of failure	KDOC face is plugged. 1. The KDOC surface is contaminated due to the operating conditions, and the catalytic efficiency has dropped (clean the DOC). 2. Deteriorated KDOC due to high temperature, dropped efficiency due to deposit, or dropped efficiency due to damage (Replace KDOC with a new or used one.)		
Action of controller	• EGR valve closed. • Fuel dosing stops.		
Phenomenon on machine	None		
Related information	**Since temperature of the turbocharger exhaust connector, KDOC and KDPF exceeds 500°C, be careful not to get burned.** When KDOC in KDPF is changed, perform reset procedure for KDOC change and then finish repair. Procedure of performing the manual stationary regeneration from the "active regeneration for service". When soot accumulation is at level 3 or lower, manual stationary regeneration can be performed only from Active Regeneration for Service. 1. Start engine. 2. Make sure that machine is in safe condition. 3. From service menu of machine monitor, display Diagnostic Tests screen, open Active Regeneration for Service, and then perform "Manual Stationary Regeneration". When operation efficiency of KDOC is decreasing, failure code [AQ10N3] may appear after failure code [CA2637] is displayed repeatedly. If operation efficiency of KDOC is low, failure code [CA1691] of regeneration ineffective may appear. For check of the exhaust gas color, see "30 TESTING AND ADJUSTING", "TEST EXHAUST GAS COLOR". [Method of clearing failure code] Start the engine, perform warm-up operation, and operate the machine in normal work for approximately 3 hours. (The time required for clearing codes will be reduced by high exhaust temperature conditions.) **NOTICE** **Operate the machine approximately 3 hours and check that this failure code is cleared.**		

No.	Cause	Procedure, measuring location, criteria and remarks
1	Defective KVGT	If failure code [CA238*] is displayed, perform troubleshooting for the code first.
2	Defective EGR valve	If failure code [CA227*] or [CA23**] is displayed, perform troubleshooting for those codes first.
3	Defective turbocharger exhaust connector	1. Remove turbocharger exhaust connector 2. Check inside of turbocharger exhaust connector for adhesion of oil and fuel. If there is any, perform troubleshooting for failure codes [CA227*], [CA23**], etc. which are related to EGR valve and KVGT.
4	Defective exhaust connector or duct to KDPF	Check the exhaust system between the turbocharger and KDPF for damages in connectors or ducts or loose connections.

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H-16 MACHINE DOES NOT TRAVEL STRAIGHT

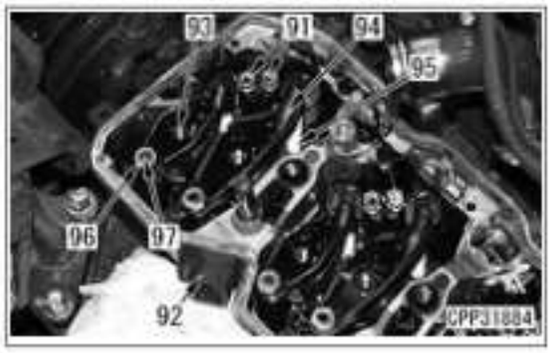
Failure	Machine does not travel straight.
Related information	• Perform all troubleshooting with working mode set in power mode (P). • If failure codes are displayed, perform troubleshooting for them first. (DW91KA, DW91KB, DXE5KA, DXE5KB, DXE6KA, DXE6KB) • Travel forward left PPC pressure can be checked with monitoring function.(Code: 07102) • Travel forward right PPC pressure can be checked with monitoring function.(Code: 07103) • Travel reverse left PPC pressure can be checked with monitoring function.(Code: 07104) • Travel reverse right PPC pressure can be checked with monitoring function.(Code: 07105) • Merge-divider (main) solenoid current can be checked with monitoring function.(Code: 08000) • Merge-divider (LS) solenoid current can be checked with monitoring function.(Code: 08001)

No.	Cause	Procedure, measuring location, criteria and remarks			
1	Malfunction of travel PPC valve (L.H., R.H.)	Be ready with engine stopped, then perform troubleshooting with engine at high idle.			
		PPC valve output pressure	Hydraulic oil temperature: 45 to 55 °C	Travel lever: NEUTRAL	0 MPa {0 kg/cm^2}
			Hydraulic oil temperature: 45 to 55 °C	Travel lever: Forward and reverse	2.75 to 3.43 MPa {28 to 35 kg/cm^2}
			Hydraulic oil temperature: 45 to 55 °C	Right and left output difference	0.4 MPa {4 kg/cm^2}
2	Malfunction of self-pressure reducing valve	Be ready with engine stopped, then perform troubleshooting with engine at high idle.			
		Control circuit source pressure	Hydraulic oil temperature: 45 to 55 °C	Control level: All levers NEUTRAL	2.75 to 3.43 MPa {28 to 35 kg/cm^2}
3	Defective adjustment and malfunction of LS valve (front, rear)	Be ready with engine stopped, then perform troubleshooting with engine at high idle.			
		Oil pressure ratio	Control level: All levers NEUTRAL	Measurement oil pressure: Pump discharged pressure	1
				Measurement oil pressure: LS valve output pressure	Approx. 1
			Control lever: Run engine at high idle and running track idle off the ground	Measurement oil pressure: Pump discharged pressure	1
				Measurement oil pressure: LS valve output pressure	Approx. 0.6 (Approx. 3/5)
		When pressure cannot be adjusted to normal level, main relief valve may malfunction. Check for malfunction of the LS valve (fatigue of spring), internal defect (seized LS spool, stick), etc.			

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69. Remove wiring harness nut (91) from the injector assembly.

Color of wiring harness	Cylinder No.
White	1, 3, 5
Black	2, 4, 6

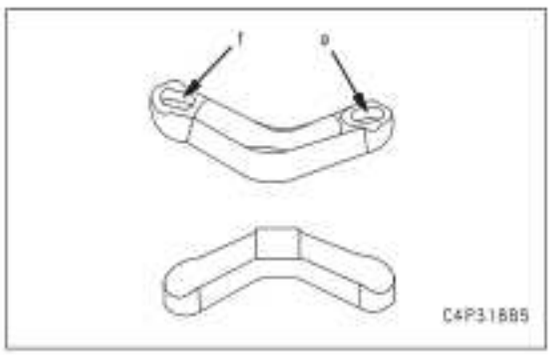


REMARK

Do not remove injector wiring harness connector (92) from the rocker housing unless it is required.

Rocker arm and crosshead assembly

70. Remove mounting bolts (93) (12 pieces), then remove rocker arm assembly (94), crosshead (95), and the rocker arm support.



REMARK

- Loosen locknut (96) and loosen adjustment screw (97) several turns so that an excessive force is not applied to the push rod when the rocker arm is installed.
- Make a record of the locations and directions of the crossheads (shapes of holes of positions f and g). (Install them in the recorded directions when reassembling.)

71. Remove retainer (98), and remove inlet connectors (99) (6 pieces).

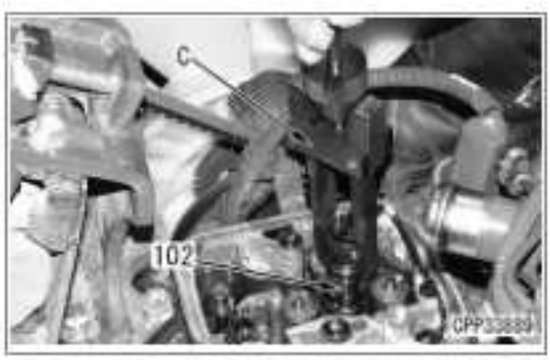


REMARK

- Clean the surrounding area of connector hole to remove mud and other contamination in advance to prevent them from entering the connector hole.
- Use tool C to remove inlet connector (99).

Injector assembly

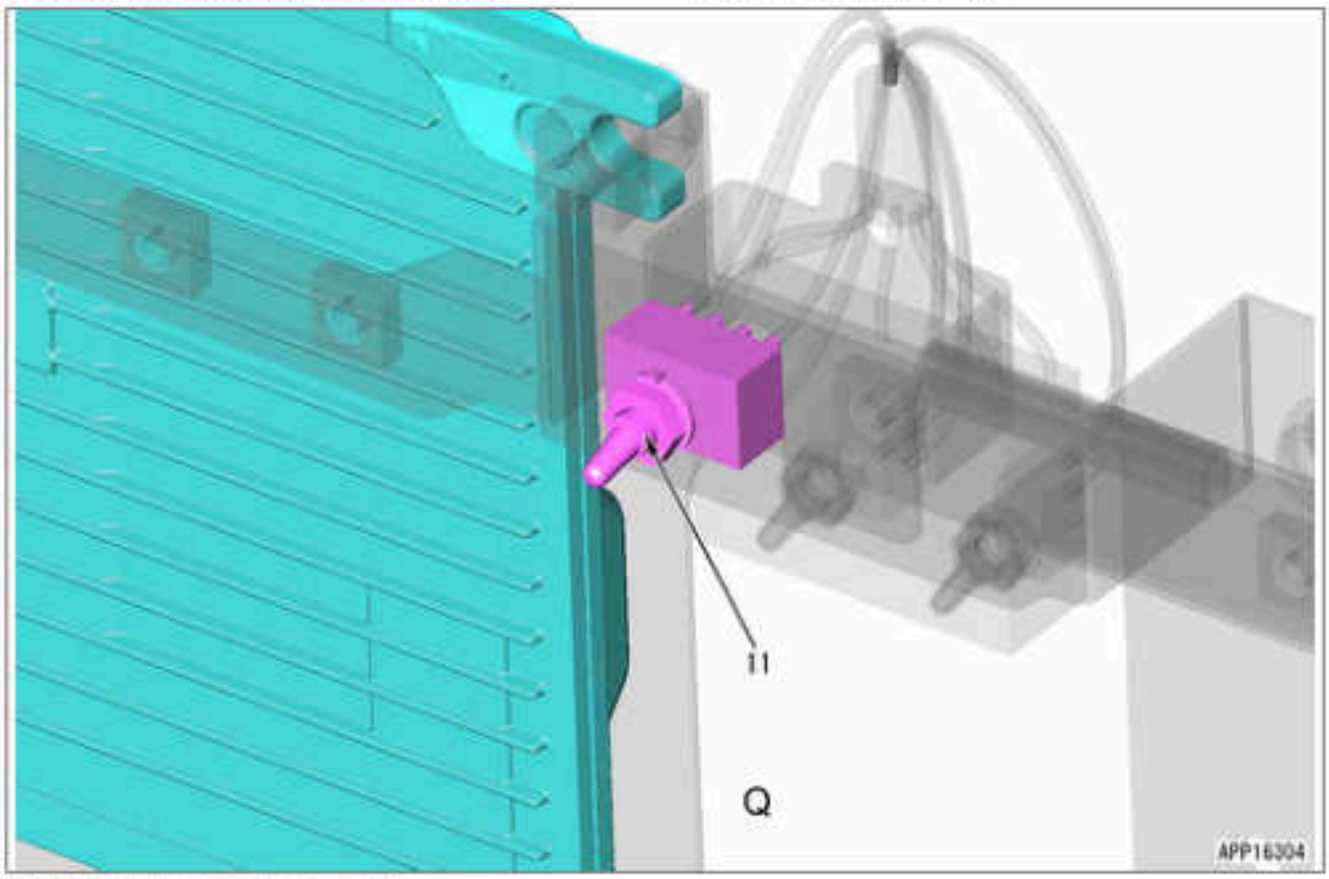
72. Remove mounting bolts (100) of injector assembly (102), and remove holder (101).
73. Remove injector assembly (102) by using tool C.



Be careful not to allow dirt and foreign matter to enter the mounting portion of the injector assembly.

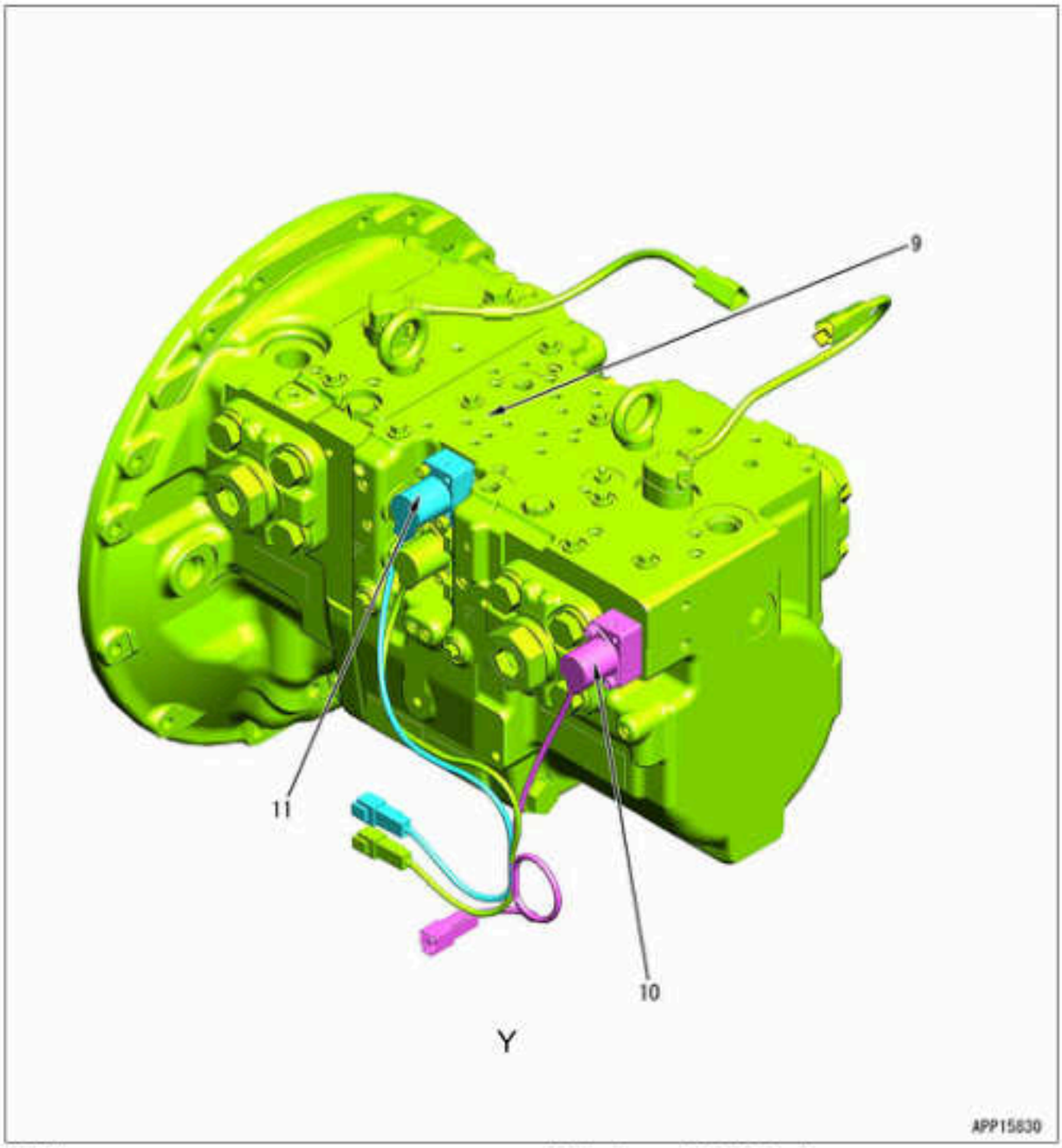
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3: Pump controller
4: Resistor for PC-EPC valve
5: One-touch power maximizing switch
6: R.H. travel FORWARD pressure sensor
7: L.H. travel FORWARD pressure sensor
8: L.H. travel REVERSE pressure sensor
9: R.H. travel REVERSE pressure sensor
10: Service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

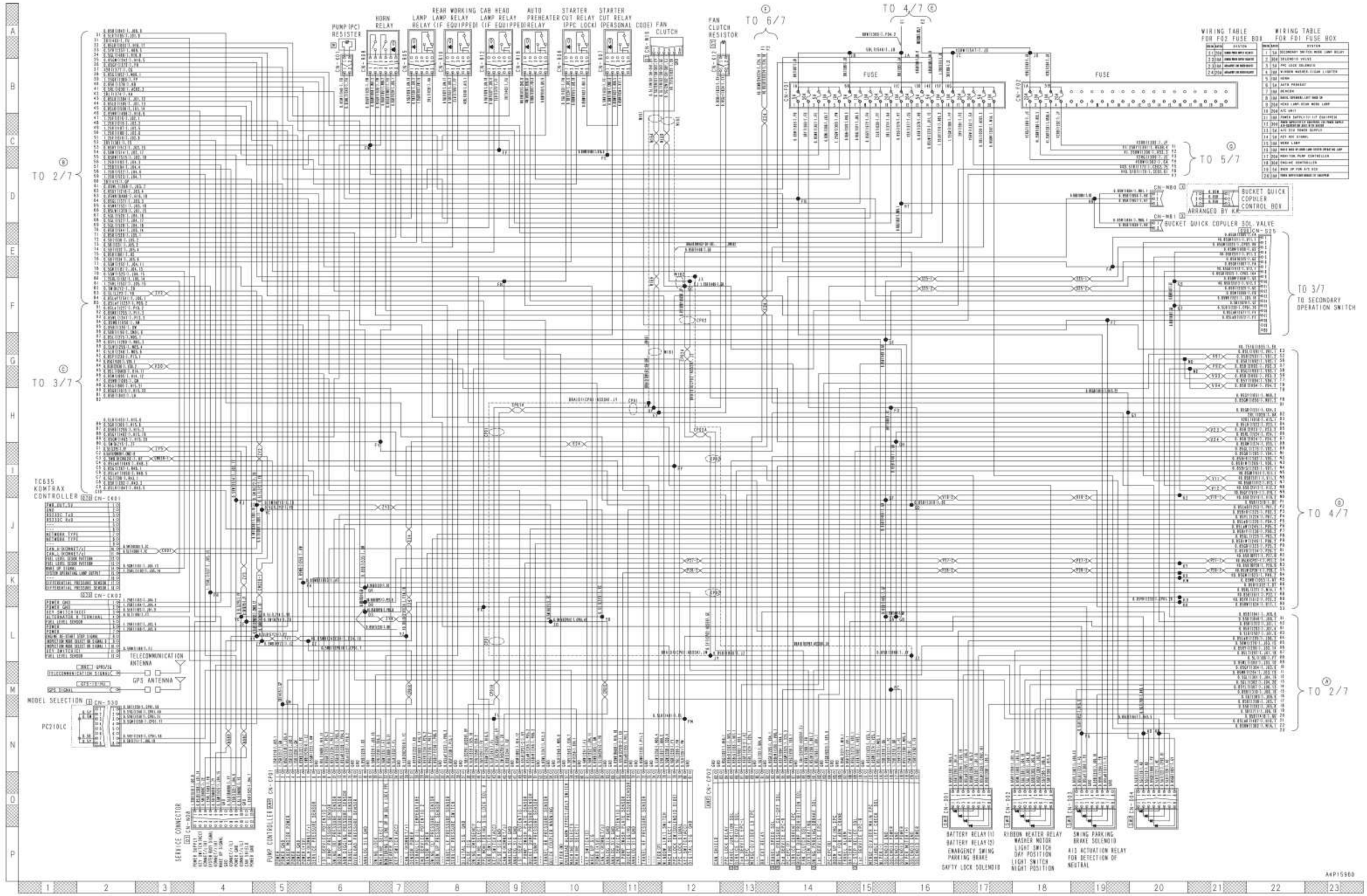
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ELECTRICAL CIRCUIT DIAGRAM (1/7)

PC210LC-11

REMARK

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



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