CEBM028303

Shop Manual

KOMATSU®

PC490LC-11

HYDRAULIC EXCAVATOR

SERIAL NUMBERS **PC490LC-11 A41001 and up**

ENGINE **6D125E-7**

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November 2017

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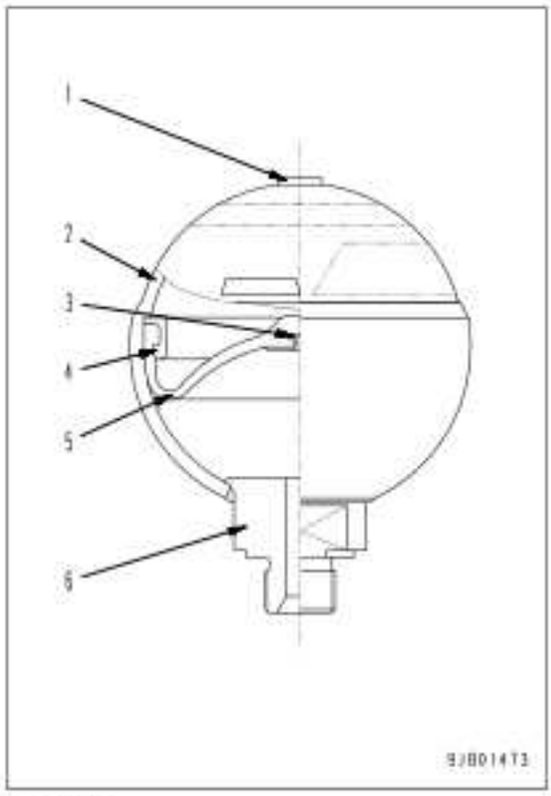
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PILOT CIRCUIT ACCUMULATOR

STRUCTURE OF PILOT CIRCUIT ACCUMULATOR

General view and sectional view

1: Gas plug
2: Shell
3: Poppet
4: Holder
5: Bladder
6: Oil port



SPECIFICATIONS OF PILOT CIRCUIT ACCUMULATOR

Gas used: Nitrogen gas

Volume of gas: 300 cc

Charged gas pressure: 1.18 MPa {12 kg/cm^2} (at 80 °C)

Max. using pressure: 4.91 MPa {50 kg/cm^2}

FUNCTION OF PILOT CIRCUIT ACCUMULATOR

This accumulator (for Pilot circuit) is installed to the solenoid valve. Even if the engine is stopped while the work equipment is raised, pilot oil pressure can be supplied to the work equipment control valve with the pressure of the compressed nitrogen gas in the accumulator to operate the spool and lower the work equipment by its own weight.

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FAILURE CODE [CA4768]

Action level	Failure code	Failure	Fuel in AdBlue/DEF Tank Error (Engine controller system)
L03	CA4768		
Detail of failure	AdBlue/DEF tank is contaminated with diesel fuel.		
Action of controller	• Stops AdBlue/DEF injection. • Stops AdBlue/DEF pump. • Engine power deration		
Phenomenon on machine	• NOx emission increases because AdBlue/DEF injection is disabled. • Engine power deration.		
Related information	• If AdBlue/DEF tank temperature is 0 °C or below, the engine controller does not troubleshoot this failure code ("Loaded Diagnostics Operation To Clear Failure Code" does not clear this failure code). • Make sure that AdBlue/DEF tank temperature is 0 °C or above on the Pre-defined Monitoring screen before troubleshooting this failure code. • When AdBlue/DEF tank level is 0 %, the engine controller does not troubleshoot this failure code ("Loaded Diagnostics Operation To Clear Failure Code" does not clear this failure code). • Make sure that AdBlue/DEF tank temperature is 20 % or above on the Pre-defined Monitoring screen before troubleshooting this failure code. • For draining and cleaning procedures of AdBlue/DEF tank, see Testing and adjusting, "AdBlue/DEF Tank Washing". • For the replacement procedure of AdBlue/DEF tank sensor, see Disassembly and assembly, "Disassembly and assembly of AdBlue/DEF tank sensor". • Engine power deration is canceled by turning starting switch to OFF position after this failure code is cleared (note that the engine power deration is not canceled only by the failure code is cleared). **NOTICE** **This failure code requires "Loaded Diagnostics Operation To Clear Failure Code". After investigating the cause of the problem and completing the repair, perform "Loaded Diagnostics Operation To Clear Failure Code" to make sure the failure code is cleared.**		

No.	Cause	Procedure, measuring location, criteria and remarks
1	Defective AdBlue/DEF tank sensor system	1. If failure code [CA1677] or [CA1678] or [CA1686] or [CA1714] or [CA1715] or [CA3868] or [CA4731] or [CA4732] or [CA4768] is displayed, perform troubleshooting these first. 2. If troubleshooting has been performed, carry out "Loaded Diagnostics Operation To Clear Failure Code" topics.
2	AdBlue/DEF tank is contaminated with diesel fuel.	1. Drain total amount of the AdBlue/DEF to check that it is not contaminated with diesel fuel. (Drain total amount of the AdBlue/DEF, since diesel fuel is lighter than urea solution.) 2. If it is contaminated with diesel fuel, clean AdBlue/DEF tank. 3. After refill with the new AdBlue/DEF, perform "Loaded Diagnostics Operation To Clear Failure Code". 4. If this failure code is displayed, proceed to the next troubleshooting.

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INFORMATION DESCRIBED IN TROUBLESHOOTING TABLE

The following types of information are described in the troubleshooting table and related circuit diagram. Fully understand the description and perform troubleshooting.

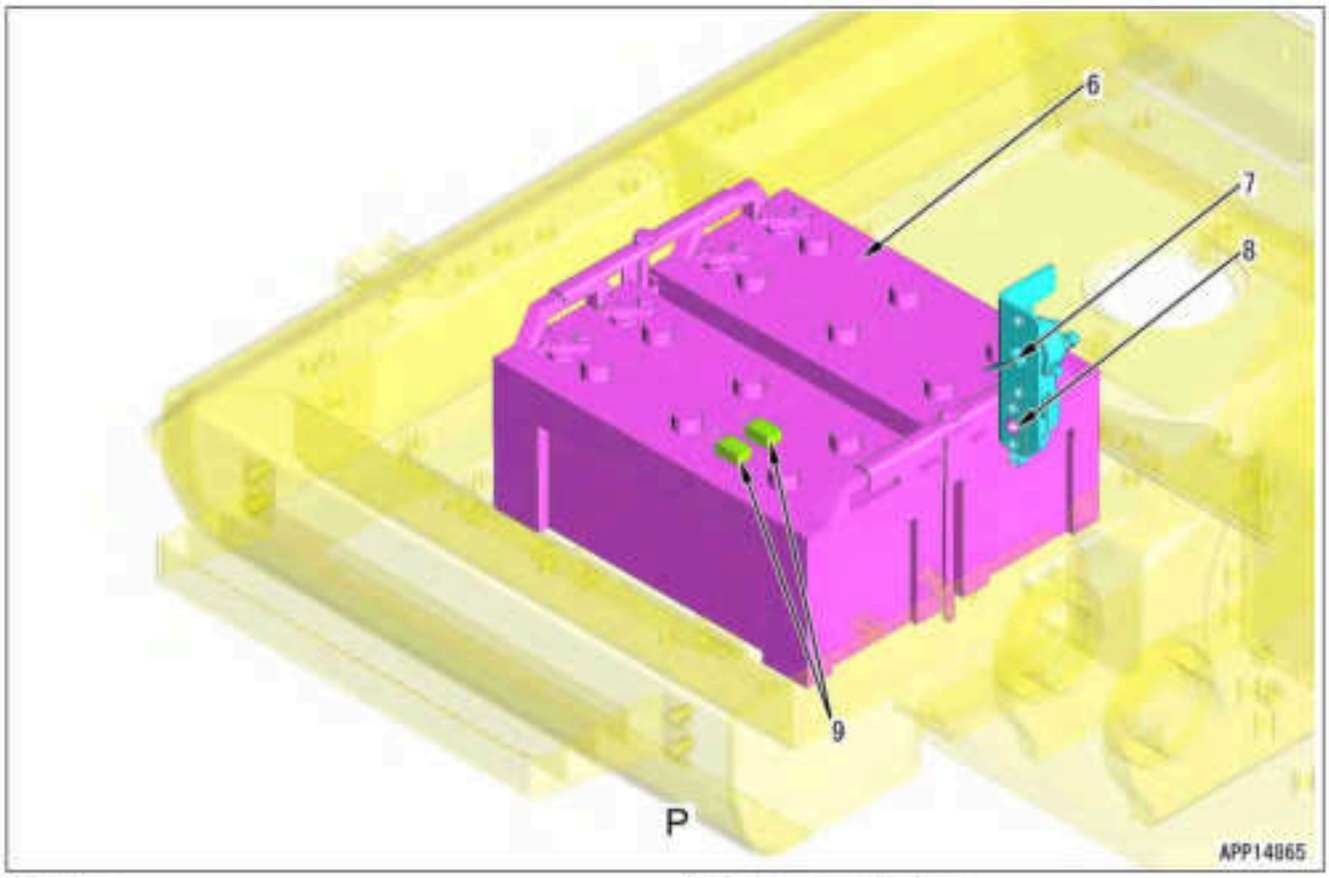
Failure	Problem on machine
Related information	Information related to the occurred failure and its troubleshooting

No.	Cause	Procedure, measuring location, criteria, and remarks
1	Probable causes for trouble	[Details] • Procedure • Measuring point "Between A and B" denotes measuring values such as voltage and resistance, etc. between A and B. • Criteria to judge probable causes (standard value), remarks [Precautions for troubleshooting] (1) Connector number description sequence and tester lead handling For troubleshooting, connect the positive (+) and negative (-) leads of a multimeter as shown below unless otherwise specified. • Connect the positive (+) lead to pin or wiring harness indicated in the front. • Connect the negative (-) lead to a pin or wiring harness indicated in the rear. (2) Example of troubleshooting by check of multiple items • Normal in 1 but abnormal in 2 At that time, the description is made as "Defective ---" as shown on the left.
2		
3	Defective ---	

[Failures in wiring harness]

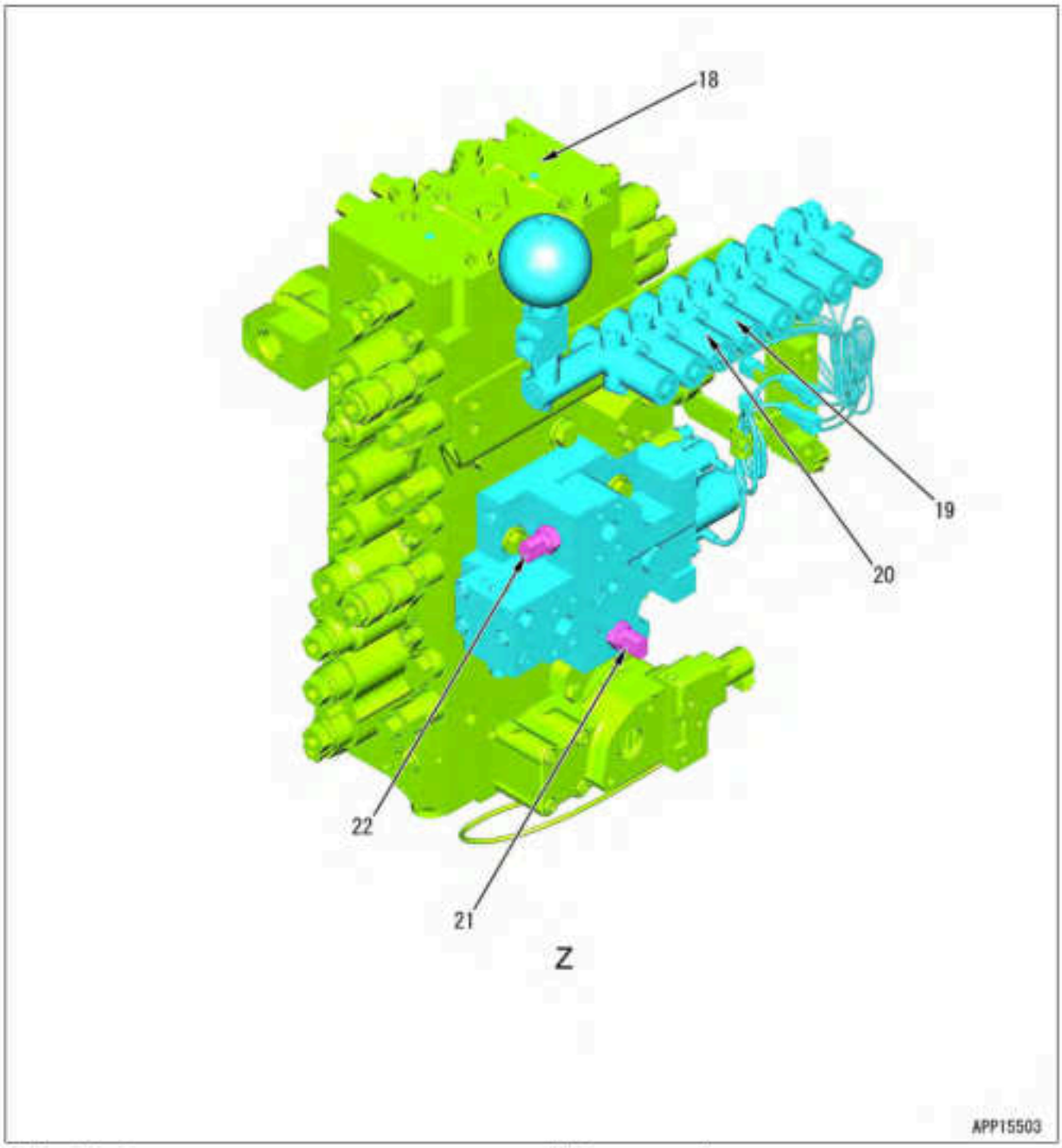
- Open circuit
  Connection of connector is defective or wiring harness is broken.
- Ground fault
  A wiring harness not to be connected to the GND (ground) circuit comes to contact with the GND (ground) circuit or chassis.
- Hot short circuit
  A wiring harness not to be connected to the power supply circuit comes to contact with the power supply circuit.
- Short circuit
  An independent wire in the wiring harness abnormally comes into contact with one of other wires. (Defective insulation in connector, etc.)

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6: Battery
7: Battery disconnect switch
8: System operating lamp
9: Fusible link

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18:Control valve
19:Travel speed increase solenoid valve
20:Travel junction solenoid valve
21:Rear pump oil pressure sensor
22:Front pump oil pressure sensor

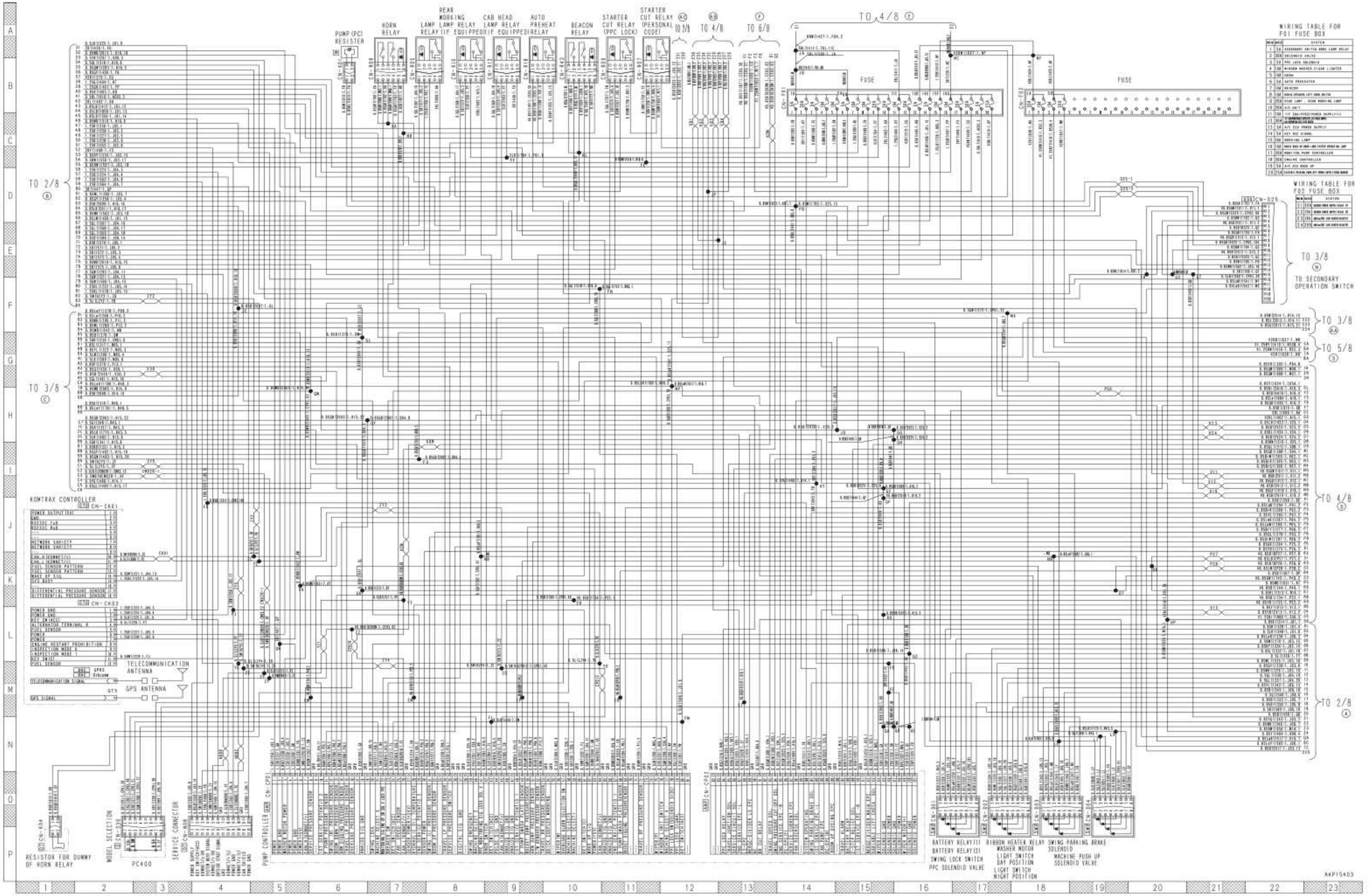
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ELECTRICAL CIRCUIT DIAGRAM (1/8)

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REMARK

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



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