CX210D
CX210D Long Reach
LC Version
Tier 4B (final)
Crawler Excavator

SERVICE MANUAL

Part number 47961273
3nd edition English
January 2016
Replaces part number 47891797

CASE CONSTRUCTION

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Manual | Publication 47961273
Order the manual at mid-west-tech.com >

Contents

INTRODUCTION

Engine 10

[10.001] Engine and crankcase 10.1
[10.102] Pan and covers 10.2
[10.106] Valve drive and gears 10.3
[10.101] Cylinder heads 10.4
[10.105] Connecting rods and pistons 10.5
[10.103] Crankshaft and flywheel 10.6
[10.216] Fuel tanks 10.7
[10.206] Fuel filters 10.8
[10.218] Fuel injection system 10.9
[10.202] Air cleaners and lines 10.10
[10.250] Turbocharger and lines 10.11
[10.254] Intake and exhaust manifolds and muffler 10.12
[10.500] Selective Catalytic Reduction (SCR) exhaust treatment 10.13
[10.501] Exhaust Gas Recirculation (EGR) exhaust treatment 10.14
[10.400] Engine cooling system 10.15
[10.414] Fan and drive 10.16
[10.310] Aftercooler 10.17
[10.304] Engine lubrication system 10.18

Hydraulic systems 35

[35.000] Hydraulic systems 35.1
[35.300] Reservoir, cooler, and filters 35.2
[35.106] Variable displacement pump 35.3
[35.102] Pump control valves 35.4
[35.359] Main control valve 35.5
[35.357] Pilot system 35.6

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Man... Order the manual at mid-west-tech.com >

[35.355] Hydraulic hand control 35.7
[35.356] Hydraulic foot control 35.8
[35.352] Hydraulic swing system 35.9
[35.353] Hydraulic travel system 35.10
[35.354] Hydraulic central joint 35.11
[35.736] Boom hydraulic system 35.12
[35.737] Dipper hydraulic system 35.13
[35.738] Excavator and backhoe bucket hydraulic system 35.14
[35.360] Hammer and rotating bucket hydraulic system 35.15

Frames and ballasting 39

[39.140] Ballasts and supports 39.1

Tracks and track suspension 48

[48.130] Track frame and driving wheels 48.1
[48.100] Tracks 48.2
[48.134] Track tension units 48.3
[48.138] Track rollers 48.4

Cab climate control 50

[50.100] Heating 50.1
[50.200] Air conditioning 50.2

Electrical systems 55

[55.000] Electrical system 55.1
[55.100] Harnesses and connectors 55.2
[55.525] Cab engine controls 55.3
[55.015] Engine control system 55.4
[55.201] Engine starting system 55.5
[55.301] Alternator 55.6
[55.302] Battery 55.7
[55.202] Cold start aid 55.8

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Man... Order the manual at mid-west-tech.com >

[55.011] Fuel tank system 55.9
[55.010] Fuel injection system 55.10
[55.014] Engine intake and exhaust system 55.11
[55.988] Selective Catalytic Reduction (SCR) electrical system 55.12
[55.989] Exhaust Gas Recirculation (EGR) electrical system 55.13
[55.012] Engine cooling system 55.14
[55.013] Engine oil system 55.15
[55.640] Electronic modules 55.16
[55.512] Cab controls 55.17
[55.036] Hydraulic system control 55.18
[55.051] Cab Heating, Ventilation, and Air-Conditioning (HVAC) controls 55.19
[55.050] Heating, Ventilation, and Air-Conditioning (HVAC) control system 55.20
[55.416] Swing control system 55.21
[55.417] Travel control system 55.22
[55.530] Camera 55.23
[55.518] Wiper and washer system 55.24
[55.404] External lighting 55.25
[55.514] Cab lighting 55.26
[55.408] Warning indicators, alarms, and instruments 55.27
[55.992] Anti-theft system 55.28
[55.DTC] FAULT CODES 55.29

Booms, dippers, and buckets 84

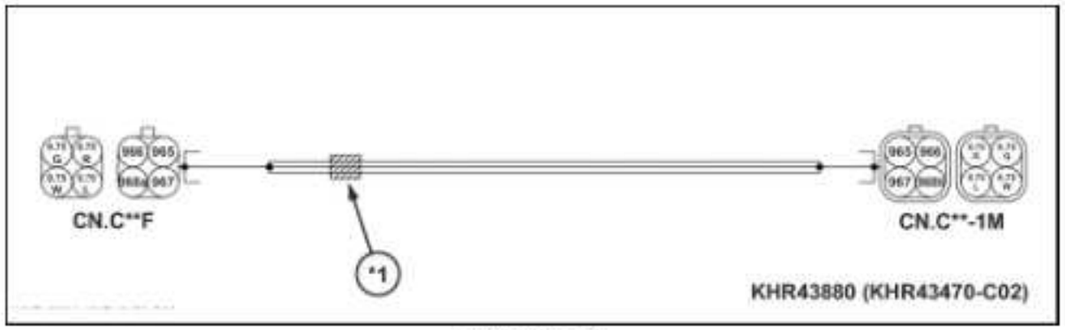
[84.910] Boom 84.1
[84.912] Dipper arm 84.2
[84.100] Bucket 84.3

Platform, cab, bodywork, and decals 90

[90.150] Cab 90.1
[90.156] Cab glazing 90.2

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Man... Order the manual at mid-west-tech.com >

Camera intermediate harness [8000 mm (314.961 in)]

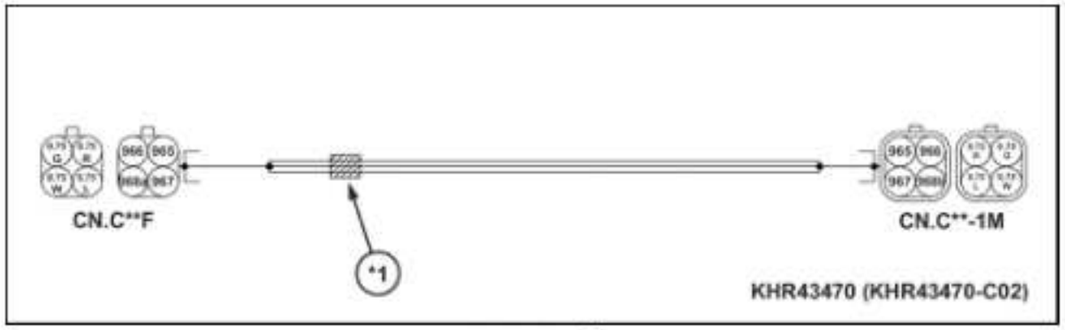


16

*1. Plate

CN.C**F	Cab harness: CCD
CN.C**-1M	CCD harness

Camera intermediate harness [7000 mm (275.591 in)]



17

*1. Plate

CN.C**F	Cab harness: CCD
CN.C**-1M	CCD harness

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Manual | Publication 47961273
Order the manual at mid-west-tech.com >

P0404-EGR control circuit range/performance

Control Module : ECM

Solution:

1. Check and diagnose the below fault codes before you proceed with the diagnostics code P0404.

   Diagnostic trouble code P0409

2. Remove the EGR valve assembly from the engine. (Refer to " **Exhaust Gas Recirculation (EGR) valve - Remove (10.501)**")

   Inspect the EGR valve.

   • Make sure that there is no limit flow inside the EGR valve.

   • Make sure that there is no excessive accumulates inside the EGR valve.

   • Make sure that there is no bending with the valve shaft or valve itself inside the EGR valve.

   Turn OFF the ignition switch.

   Disconnect the harness connector **CN.E12** from the EGR valve.

   Inspect the EGR valve harness connector **CN.E12** for a poor connection.

   A. If a problem is found, repair the harness connector **CN.E12**.

   B. If there are no problems, proceed to Step **3**

3. Disconnect the harness connector **CN.D4** from the ECM.

   Inspect the ECM harness connector **CN.D4** for a poor connection.

   A. If a problem is found, repair the harness connector **CN.D4**.

   B. If there are no problems, proceed to Step **4**

4. Inspect to see if there is an open circuit or high resistance in the EGR control circuit.

   A. If a problem is found, repair the EGR control circuit.

   B. If there are no problems, proceed to Step **5**

5. Inspect the EGR motor circuit between the ECM and EGR valve.

   • Make sure that there is no short to GND.

   • Make sure that there is no short to the battery or ignition power supply circuit.

   • Make sure that there is no short between the circuits.

   • Make sure that there is no short to EGR position sensor circuit.

   A. If a problem is found, repair the EGR motor circuit.

   B. If the EGR motor circuit is normal, replace the EGR valve. (Refer to " **Exhaust Gas Recirculation (EGR) valve - Remove (10.501)** and **Exhaust Gas Recirculation (EGR) valve - Install (10.501)**")

   C. If there are no problems, proceed to Step **6**

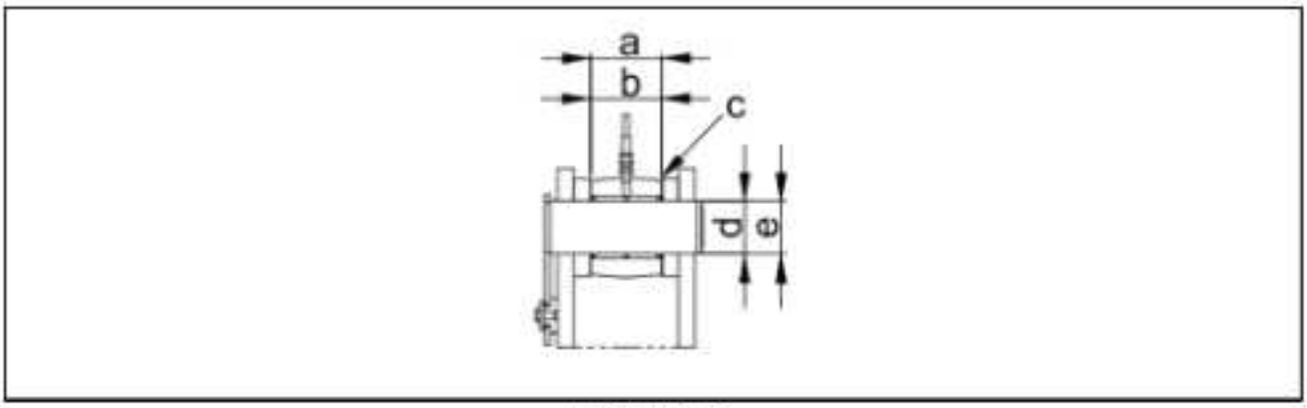
6. Restore the machine.

   Turn ON the ignition switch.

   Clear the diagnostic trouble code using the trouble diagnosis scan tool.

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Man... Order the manual at mid-west-tech.com >

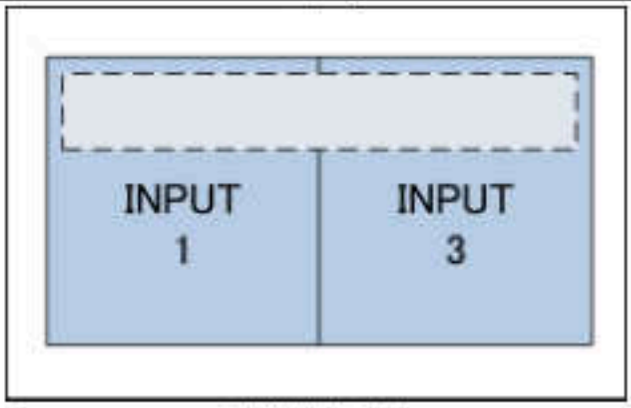
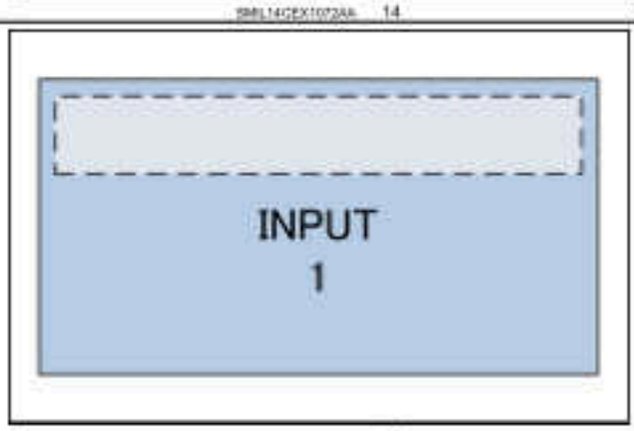
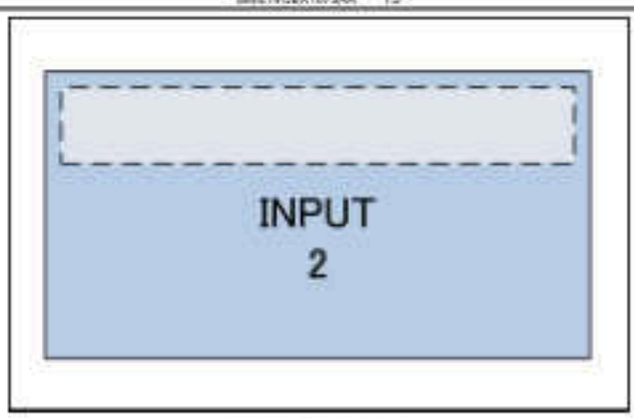
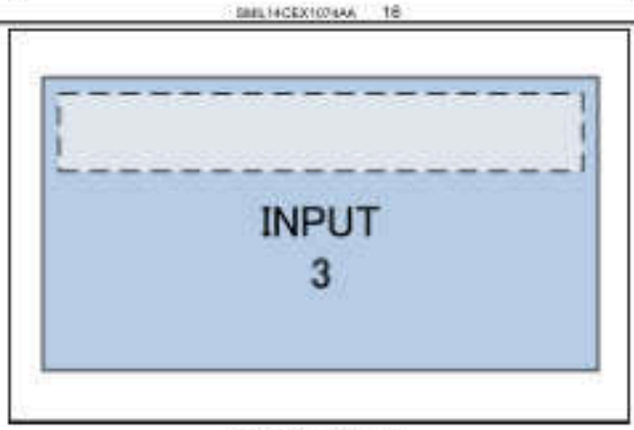
4. Boom and arm cylinder installation section



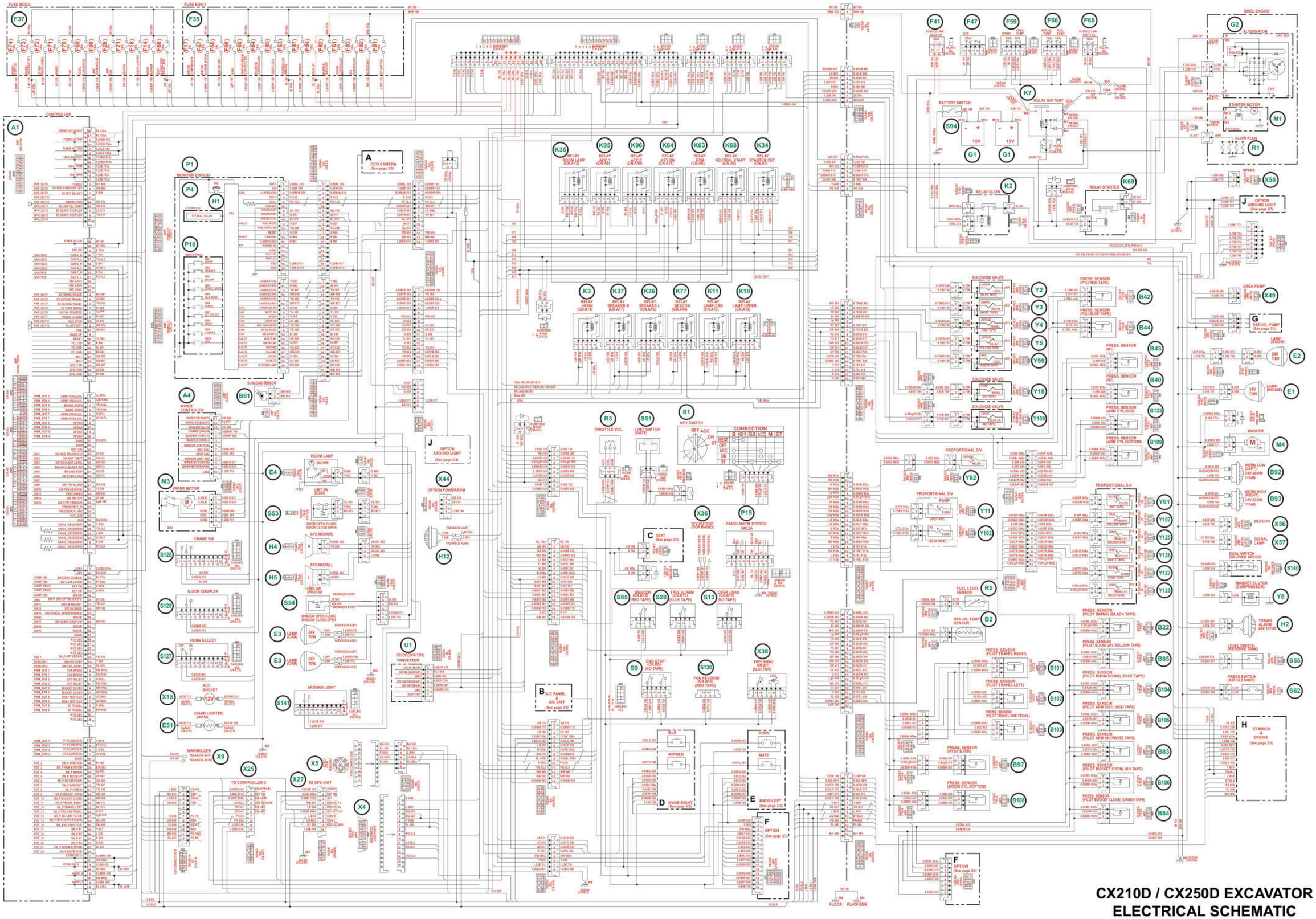
LPL12CX003EA 5

Part name	Code	Standard value	Usage limits	Judgment	Solution
Boom	a	**121 mm (4.76 in)**	**127 mm (5.00 in)**	Good/Bad	Replacement
Arm cylinder (foot section)	b	**120 mm (4.72 in)**	**118 mm (4.65 in)**	Good/Bad	Replacement
Clearance	c	**0.5 - 1.8 mm (0.02 - 0.07 in)**	Shim adjustment	Good/Bad	Adjustment with shims
Pin	d	**Ø 90 mm (3.54 in)**	**Ø 89 mm (3.50 in)**	Good/Bad	Replacement
Bushing (arm cylinder)	e	**Ø 90 mm (3.54 in)**	**Ø 91.5 mm (3.60 in)**	Good/Bad	Replacement

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Man... Order the manual at mid-west-tech.com >

Type	Meter position	Camera input	Display
G	TOP	INPUT 1+3	
H	TOP	INPUT 1	
I	TOP	INPUT 2	
J	TOP	INPUT 3	

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Man... Order the manual at mid-west-tech.com >



CX210D / CX250D EXCAVATOR ELECTRICAL SCHEMATIC

47961289EN - 1/3

75902878-1

MidWestTech | Case CX210D Long Reach, LC Tier 4B Crawler Excavator Service Manual | Publication 47961273

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