PART NO. TTDDA-EN-01

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
290LC-5B
290LCN-5B
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODDA-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDDA-EN
Workshop Manual	: Vol. No.WDDA-EN
Engine Manual	: Vol. No.ETDCA-EN, EWDCA-EN

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SECTION 4

OPERATIONAL PERFORMANCE TEST

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Monitor Controller (Monitor) Fault Code List

Fault Code	Trouble	Cause	Remedy
13002-2	ECM Communication Error	Faulty monitor controller Faulty CAN0 harness	Check the CAN0 harness. Replace monitor controller.
13003-2	MC Communication Error 1	Faulty monitor controller Faulty CAN0 harness	Check the CAN0 harness. Replace monitor controller.
13004-2	MC Communication Error 2	Faulty monitor controller Faulty CAN1 harness	Check the CAN1 harness. Replace monitor controller.
13005-2	Monitor Controller (Information) Communication Error 1	Faulty monitor controller Faulty CAN0 harness	Check the CAN0 harness. Replace monitor controller.
13006-2	Monitor Controller (Information) Communication Error 2	Faulty monitor controller Faulty CAN1 harness	Check the CAN1 harness. Replace monitor controller.
13007-2	Wiper / Light Controller Communication Error	Faulty monitor controller Faulty CAN1 harness	Check the CAN1 harness. Replace monitor controller.
20113-2	System Failure Alarm	Faulty CAN communication bus line.	Check the CAN harness.

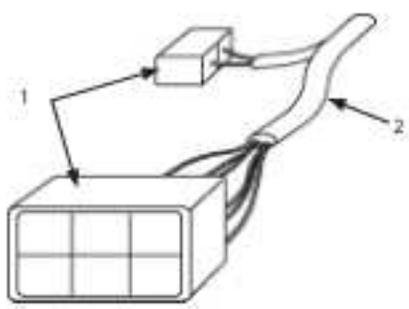
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Troubleshooting B (Machine Diagnosis by Using Troubleshooting Symptom) Procedure

Refer to troubleshooting B procedures for diagnosis by using trouble symptom when no fault codes are displayed.

- Diagnosis Procedure
  - The diagnosis procedures for the displayed fault codes are explained in this group.
  - Perform diagnosis by using MPDr. or the service menu of monitor first.
  - In case any fault code has not been displayed by diagnosis, perform inspection according to the procedures when diagnosing.
  - When the fault code is displayed, refer to the troubleshooting A group and diagnose.
  - On the front section pages of this group, there are the tables indicating the relationship between machine trouble symptoms and related parts which may cause such trouble if failed. Start the troubleshooting with more probable causes selected by referring to these tables.

NOTE: Harness end connector viewed from the open end side by the all connectors image shown in this section.



T6L4-05-03-001

1- Harness End Connector 2- Harness

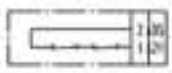
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• Frost Sensor (CN12)
Monitors the fin temperature which is cooled by the evaporator. When the temperature is higher than 3°C (approx. 4.2 kΩ), the controller turns the compressor relay ON. When the temperature is lower than 2 °C (approx. 4.5 kΩ), the controller turns the compressor relay OFF. Therefore, the evaporator in the air conditioner unit is prevented from freezing. The electrical resistance in the frost sensor is 100 Ω to 115 kΩ.

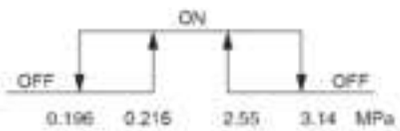


TDAA-05-07-006

• High/Low Pressure Switch (CN14)
Controls the compressor clutch solenoid while monitoring the compressor circuit pressure. The high/low pressure switch consists of a pressure gauge and a switch. The pressure gauge detects the lower pressure range (0.196 MPa to 0.216 MPa) and the surge pressure range (2.55 MPa to 3.14 MPa). When the circuit pressure is reduced to the lower pressure range or increases to the surge pressure range, the pressure gauge turns the switch OFF so that the compressor operation stops.
If the pressure is reduced to the lower range, a lack of refrigerant is suspected. Therefore, damage to the compressor due to a lack of refrigerant is prevented. In case the pressure increases to the surge range, damage to the air conditioner circuit parts due to excessively high circuit pressure is prevented.



TDAA-05-07-007

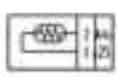


TDAA-05-07-014

• Air Circulation Sensor (CN11)
Monitors the temperatures (0 to 25 C) around the re-circulated air inlet as the interior air temperatures and converts them to the electrical resistance values. The temperatures 0 °C to 25 °C corresponds to a resistance of 1.645 kΩ (0 °C) to 5 kΩ (25 °C) respectively.
The electrical resistance in the air circulation sensor is 300 Ω to 430 kΩ.



TDAA-05-07-008



TDAA-05-07-009

• Fresh Air Sensor (CN15)
Monitors the temperature around the front side of the machine as the fresh air temperature, and converts the temperature to the electrical resistance value. The electrical resistance in the fresh air sensor is 100 Ω to 210 kΩ.

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Rewrite of Muffler Filter Serial No.

When the muffler filter has been replaced, rewrite the serial No. of muffler filter and upload the data to e-Service.

1. Connect MPDr..
2. Set the key switch to the ON position.
3. Select Functions-Engine/Muffler Filter-Muffler Filter NO. with MPDr..
4. Input the following items of Oxidation Catalyst (DOC) and Filter (CSF).

- ASM
- SUB
- Serial No.

5. After inputting, select Setting.

IMPORTANT: After inputting Muffler Filter Serial No. is completed, upload the data to e-Service.

NOTE: When the input data is uploaded to e-Service, the M-Find product specification and history will be updated.



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