PART NO. TTDDF-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
280-5G
280LC-5G
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODDF-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDDF-EN
Workshop Manual	: Vol. No.WDDF-EN
Engine Manual	: Vol. No.EDCD-EN

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SECTION 4

OPERATIONAL PERFORMANCE TEST

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List of Frequency Distribution Data

Item	Details
Pump Load	Frequency distribution of average pump delivery pressure of pumps 1 and 2
Average Pump Delivery Pressure in Digging Operation	Frequency distribution of average delivery pressure from pumps during digging operation
Average Pump Delivery Pressure in Travel Operation	Frequency distribution of average delivery pressure from pumps during travel operation
Radiator Coolant Temperature (79 °C or less)	Total hours when coolant temperature is less than 80 °C during a day.
Radiator Coolant Temperature (80 to 93 °C)	Total hours when coolant temperature is 80 °C or more and less than 94 °C during a day.
Radiator Coolant Temperature (94 to 104 °C)	Total hours when coolant temperature is 94 °C or more and less than 105 °C during a day.
Radiator Coolant Temperature (105 °C or more)	Total hours when coolant temperature is 105 °C or more during a day.
Hydraulic Oil Temperature (49 °C or less)	Total hours when hydraulic oil temperature is less than 50 °C during a day.
Hydraulic Oil Temperature (50 to 89 °C)	Total hours when hydraulic oil temperature is 50 °C or more and less than 90 °C during a day.
Hydraulic Oil Temperature (90 to 99 °C)	Total hours when hydraulic oil temperature is 90 °C or more and less than 100 °C during a day.
Hydraulic Oil Temperature (100 °C or more)	Total hours when hydraulic oil temperature is 100 °C or more during a day.

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Monitor Controller (Monitor) Fault Code List

Fault Code	Trouble	Cause	Remedy
13002-2	ECF 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.

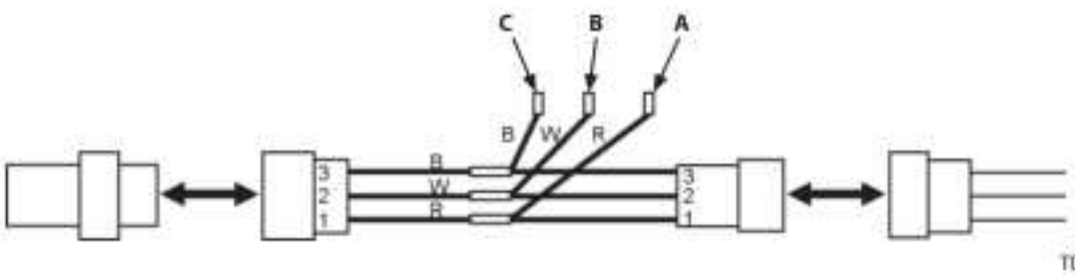
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MC Fault Codes 11304, 11307

Preparation

- Check the wiring connections first.
- Connect the test harness (ST 6703) and dummy sensor equivalent to #4436535.
- Before inspection, set the key switch to the ON position.

Fault Code	Trouble	Inspection Method	Evaluation	Cause
11304-3	Travel Pilot Pressure Sensor Circuit High Input	Retry by using MPDr.	Un-displayed fault code	Faulty sensor.
		Measurement of voltage between B and body	Voltage: more than 4.5 V	Shorted circuit in harness #1 and #2.
11304-4	Travel Pilot Pressure Sensor Circuit Low Input	Retry by using MPDr.	Un-displayed fault code	Faulty sensor.
		Measurement of voltage between A and body	0 V	Open circuit in harness #1.
		Measurement of voltage between A and C (GND)	0 V	Open circuit in harness #3.
		-	Normal in above check.	Open circuit in harness #2.
11307-3	Front Pilot Pressure Sensor Circuit High Input	Retry by using MPDr.	Un-displayed fault code	Faulty sensor.
		Measurement of voltage between B and body	Voltage: more than 4.5 V	Shorted circuit in harness #1 and #2.
11307-4	Front Pilot Pressure Sensor Circuit Low Input	Retry by using MPDr.	Un-displayed fault code	Faulty sensor.
		Measurement of voltage between A and body	0 V	Open circuit in harness #1.
		Measurement of voltage between A and C (GND)	0 V	Open circuit in harness #3.
			Normal in above check.	Open circuit in harness #2.



TDAA-05-06-003

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