PART NO. TTLBJE0-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX170W-5A
Wheeled Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOLBJE0-EN
Technical Manual (Troubleshooting)	: Vol. No.TTLBJE0-EN
Workshop Manual	: Vol. No.WLBJE0-EN
Engine Manual	: Vol. No.ETDCY-EN, EWDCY-EN

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SECTION 4

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Contents of Diagnosis

Fault Code

Preparation

Tools for a diagnosis and contents needing inspection beforehand are explained.

How to Read Table

Fault Code	Trouble	Procedure	Inspection Method	Evaluation	Cause
(A)	(B)	1	(C)	(D)	YES: (E)
					NO: (F)
		2	(G)	(H)	YES: (I)
					NO: (J)

- A: Fault code
- B: Trouble details
- Procedures 1, 2: Inspection order for the fault code
- C, G: Inspection method for trouble cause
- D, H: Evaluation specification of check results
- E, F, I, J: Trouble cause for the fault code

Procedure:

1. Check an applicable line depending on displayed fault code (A).
2. After checking or measuring of inspection method (C) of procedure (1), refer to evaluation (D) and judge the results.
3. When the results are satisfied (YES) with evaluation (D), the trouble cause is cause (E).
   If the results are not satisfied (NO) with evaluation (D), the trouble cause is cause (F) or check inspection method (G) of procedure 2.

Circuit Diagram of Test Harness

A connection point of the test harness and a point to check are explained.
(Only Pressure Sensor System Troubleshooting)

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Air Conditioner Controller Fault Code List

Fault Code	Trouble	Cause	Symptoms in Machine Operation When Trouble Occurs.	Remedy
11	Open circuit in re-circulated air temperature sensor	Voltage: more than 4.95 V	Operation is controlled under such circumstance as no re-circulated air temperature sensor is provided.	Check the wire harness. Replace the re-circulated air temperature sensor.
12	Short circuit in re-circulated air temperature sensor	Voltage: less than 0.3 V	Operation is controlled under such circumstance as no re-circulated air temperature sensor is provided.	Check the wire harness. Replace the re-circulated air temperature sensor.
13	Open circuit in ambient temperature sensor	Voltage: more than 4.88 V	Operation is controlled under such circumstance as no ambient temperature sensor is provided.	Check the wire harness. Replace the ambient temperature sensor.
14	Short circuit in ambient temperature sensor	Voltage: less than 0.096 V	Operation is controlled under such circumstance as no ambient temperature sensor is provided.	Check the wire harness. Replace the ambient temperature sensor.
18	Short circuit in solar radiation sensor	Voltage: more than 5.04 V	Operation is controlled under such circumstance as no solar radiation sensor is provided.	Check the wire harness. Replace the solar radiation sensor.
21	Open circuit in frost sensor	Voltage: more than 4.79 V	The compressor clutch is disengaged. (The compressor stops.)	Check the wire harness. Replace the frost sensor.
22	Short circuit in frost sensor	Voltage: less than 0.096 V	The compressor clutch is disengaged. (The compressor stops.)	Check the wire harness. Replace the frost sensor.
43	Abnormal air vent damper servo motor	Short circuit: Voltage: 0 V Open circuit: Voltage: more than 5 V	Air vent damper servo motor becomes inoperable.	Check the wire harness. Replace the air vent damper servo motor.
44	Abnormal air mix damper servo motor	Short circuit: Voltage: less than 0.2 V Open circuit: Voltage: more than 4.8 V	Air mix damper servo motor becomes inoperable.	Check the wire harness. Replace the air mix damper servo motor.
51	Abnormal high/low refrigerant pressure	Voltage: 0 V	The compressor clutch is disengaged. (The compressor stops.)	Check the wire harness. Replace the high/low pressure switch.
91	CAN communication error	Faulty CAN1 harness between monitor controller and air conditioner controller.	Air conditioner stops.	Check the CAN1 harness. Replace the air conditioner controller.
92	CAN bus off error	Faulty air conditioner controller. Faulty CAN1 harness.	Air conditioner stops.	Check the CAN1 harness. Replace the air conditioner controller.

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Front Attachment System Troubleshooting

F-1 All front attachment actuator power are weak.

Main Relief Valve Set Pressure	Specification (MPa)	Remark
Boom Lower, Arm, Bucket (Relief operation for each)	$34.3^{+1.2}_{-0.8}$	
Boom Raise (Relief operation), Power Digging	$36.3^{+2.0}_{-1.0}$	

Preparation

- If operating speeds are extremely slow, pump control may be faulty (A-3, A-4). Faulty pilot system may also cause this trouble.

Procedure	Inspection Method	Condition	Evaluation	Cause
1	Monitor Pump 1 Delivery Pressure and Pump 2 Delivery Pressure.	Arm relief operation	The measured values are out of the specification. (Specification: 33.5-35.5 MPa)	YES: Faulty main relief valve (readjust)
				NO: Find out cause of trouble by tracing other trouble symptoms.

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