PART NO. TTDFB50-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
225USLC-6
225USRLC-6
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODFB50-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDFB50-EN
Workshop Manual	: Vol. No.WDFB50-EN
Engine Manual	: Vol. No.ETDC150-EN, EWDC150-EN

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Electrical Lever System Fault Code List

CAN Data Reception Failure

Fault Code	Trouble	Cause	Symptoms in Machine Operation When Trouble Occurs	Remedy
15002-2	(Optional Controller) Main Controller Communication Error 2	Faulty controller. Faulty CAN1 harness.	-	Check the CAN1 harness. Replace the controller.

Pilot Failure

Fault Code	Trouble	Cause	Symptoms in Machine Operation When Trouble Occurs	Remedy
15016-3	Right Analog Stroke Signal Sensor Circuit High Input	Voltage: more than 4.75 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.
15016-4	Right Analog Stroke Signal Sensor Circuit Low Input	Voltage: less than 0.25 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.
15017-3	Left Analog Stroke Signal Sensor Circuit High Input	Voltage: more than 4.75 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.
15017-4	Left Analog Stroke Signal Sensor Circuit Low Input	Voltage: less than 0.25 V	The corresponding actuator stops.	Check the wire harness. Replace the sensor.
11810-3	Abnormal Electric Lever Control Pressure 1 Sensor High Voltage	Voltage: more than 4.60 V	All solenoid valves stop output due to pilot cut-off.	Check the wire harness. Replace the sensor.
11810-4	Abnormal Electric Lever Control Pressure 1 Sensor Low Voltage	Voltage: less than 0.10 V	All solenoid valves stop output due to pilot cut-off.	Check the wire harness. Replace the sensor.
11811-3	Abnormal Electric Lever Control Pressure 2 Sensor High Voltage	Voltage: more than 4.60 V	All solenoid valves stop output due to pilot cut-off.	Check the wire harness. Replace the sensor.
11811-4	Abnormal Electric Lever Control Pressure 2 Sensor Low Voltage	Voltage: less than 0.10 V	All solenoid valves stop output due to pilot cut-off.	Check the wire harness. Replace the sensor.
15011-3	(Pilot) Hydraulic Oil Temperature Sensor Circuit High Input	Voltage: more than 4.25 V	-	Check the wire harness. Replace the sensor.
15011-4	(Pilot) Hydraulic Oil Temperature Sensor Circuit Low Input	Voltage: less than 0.10 V	-	Check the wire harness. Replace the sensor.

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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 (Relief operation) (P1, P2)	$38.0^{+2.0}_{-1.5}$	
Boom (Relief operation) (P3)	$38.5^{+2.0}_{-0.5}$	
Arm (Relief operation) (P1, P2)	$34.3^{+2.0}_{-0.5}$	
Bucket (Relief operation) (P1)	$35.5^{+2.0}_{-0.5}$	

Preparation

- If operating speeds are extremely slow, pump control may be faulty (A-3 to A-5). Faulty pilot system may also cause this trouble.

Procedure	Inspection Method	Condition	Evaluation	Cause
1	Monitor Pump 1 Delivery Pressure, Pump 2 Delivery Pressure, and Pump 3 Delivery Pressure.	Arm relief operation	The measured values are out of the specification.	YES: Faulty main relief valve (readjust)
				NO: Find out cause of trouble by tracing other trouble symptoms.

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Air Conditioner Controller Fault Codes 43 to 92

Preparation

- Check the wiring connections first.
- Before inspection, set the key switch to the ON position.

Fault Code	Trouble	Procedure	Inspection Method	Evaluation	Cause
43	Abnormal air vent damper servo motor	1	Measure voltage between air vent damper servo motor harness end 7_C and the body. (AUTO/OFF switch / blower switch: ON)	0 V	YES: Faulty controller or open circuit in wire harness between controller and air vent damper servo motor
					NO: To Procedure No. 2
		2	Measure voltage between air vent damper servo motor harness end 7_C and 25_D. (AUTO/OFF switch / blower switch: ON)	0 V	YES: Faulty controller or open circuit in wire harness between controller and air vent damper servo motor
					NO: Faulty air vent damper servo motor
44	Abnormal air mix damper servo motor	1	Measure voltage between air mix damper servo motor harness end 7_D and the body. (AUTO/OFF switch / blower switch: ON)	0 V	YES: Faulty controller or open circuit in wire harness between controller and air mix damper servo motor
					NO: To Procedure No. 2
		2	Measure voltage between air mix damper servo motor harness end 7_D and 25_E. (AUTO/OFF switch / blower switch: ON)	0 V	YES: Faulty controller or open circuit in wire harness between controller and air mix damper servo motor
					NO: Faulty air mix damper servo motor
51	Abnormal high/low refrigerant pressure	1	Measure voltage between high/low pressure switch harness end $A21_1$ and $A05_2$. (AUTO/OFF switch / blower switch: ON)	0 V	YES: Faulty controller or open circuit in harness between controller and high/low pressure switch
					NO: Faulty high/low pressure switch
91	CAN communication error	1	Check continuity in CAN1 harness.	Normal	YES: Faulty controller
					NO: Faulty CAN1 harness
92	CAN bus off error	1	Check continuity in CAN1 harness.	Normal	YES: Faulty controller
					NO: Faulty CAN1 harness

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Rewrite of Aftertreatment Device Serial No.

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

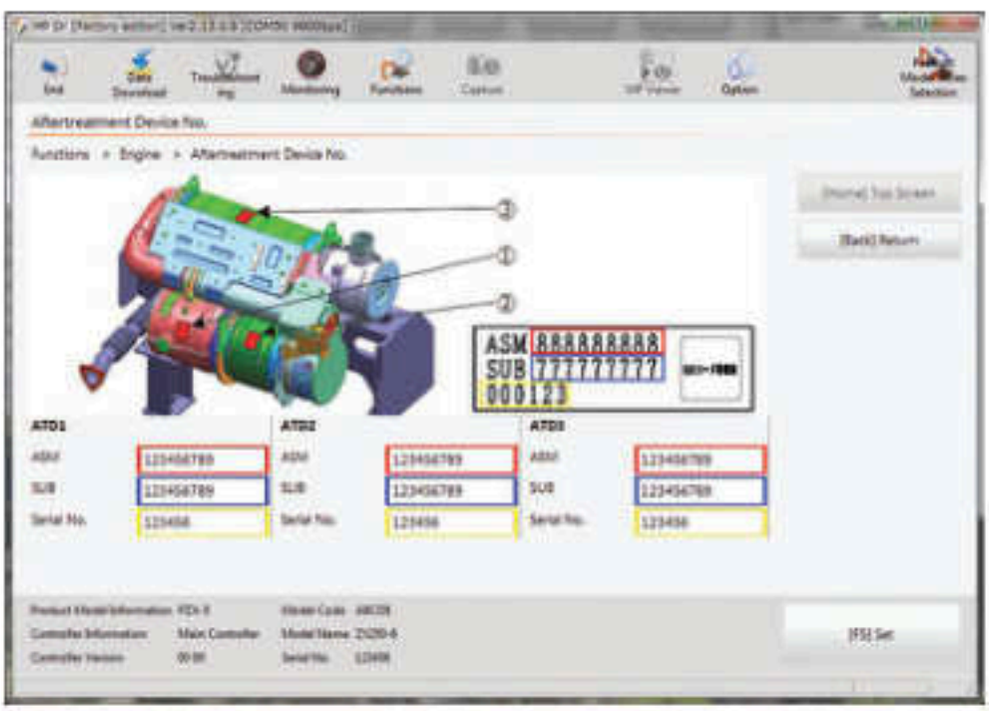
Procedure

1. Connect MPDr..
2. Set the key switch to the ON position.
3. Select Functions-Engine-Aftertreatment Device No. with MPDr..
4. Input the serial No. after the replacement to the following items of Diesel Oxidation Catalyst (DOC) and SCR Catalyst.

- ASM
- SUB
- Serial No.

5. After inputting, select Set.
6. Upload the input 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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