PART NO. TTDC150-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
250LC-6
250LCN-6
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODC150-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDC150-EN
Workshop Manual	: Vol. No.WDC150-EN
Engine Manual	: Vol. No.ETDC150-EN, EWDC150-EN

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Fault Code	Trouble	Cause	Symptoms in Machine Operation When Trouble Occurs	Remedy
11403-2	Arm Regenerative P/S Valve Abnormal FB	Solenoid valve output: 140 mA or more, feedback current: more than 920 mA or less than 70 mA; both are detected.	Arm operation speed becomes fast.	Check the wire harness.
11403-3	Arm Regenerative P/S Valve FB High Input	Current: more than 920 mA	Arm operation speed becomes slow. Combinated operation: Cylinder hesitation easily occurs.	Check the wire harness.
11403-4	Arm Regenerative P/S Valve FB Low Input	Current: less than 70 mA	Arm operation speed becomes fast.	Check the wire harness.
11406-2	Pump 3 Torque P/S Valve Abnormal FB	Solenoid valve output: 140 mA or more, feedback current: more than 920 mA or less than 70 mA; both are detected.	Swing speed acceleration becomes bad. Arm revel crowding operation: Boom cannot be raised.	Check the wire harness.
11406-3	Pump 3 Torque P/S Valve FB High Current	Current: more than 920 mA	The engine lug-down is remarkable at high load.	Check the wire harness.
11406-4	Pump 3 Torque P/S Valve FB Low Current	Current: less than 70 mA	Swing speed acceleration becomes bad. Arm revel crowding operation: Boom cannot be raised.	Check the wire harness.
11407-2	Booster (Power Digging & Fast Travel Mode) P/S Valve Abnormal FB	Solenoid valve output: 140 mA or more, feedback current: more than 920 mA or less than 70 mA; both are detected.	Pressure increasing is impossible. Machine is kept to travel at slow speed.	Check the wire harness.
11407-3	Booster (Power Digging & Fast Travel Mode) P/S Valve FB High Current	Current: more than 920 mA	Pressure always increases. Machine is kept to travel at fast speed.	Check the wire harness.
11407-4	Booster (Power Digging & Fast Travel Mode) P/S Valve FB Low Current	Current: less than 70 mA	Pressure increasing is impossible. Machine is kept to travel at slow speed.	Check the wire harness.

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Fault Code		Trouble	Cause	Symptoms in Machine Operation When Trouble Occurs	Operating Rank					
SPN-FMI	DTC				A	B	C	D	E	F
412-3	P040D	EGR Cooler 2 Outlet Temperature Sensor High Input	Voltage: more than 4.9 V.	Nothing special.	○					
412-4	P040C	EGR Cooler 2 Outlet Temperature Sensor Low Input	Voltage : less than 0.1 V. (Exhaust temperature is equivalent to 250 °C.)	Nothing special.	○					
2791-2	P0401	EGR Flow Failure	When changing the opening amount of EGR VALVE from 0 % (5 sec.) to 30 % (5 sec.), the MAF flow rate does not change.	Engine power decreases. Engine speed decreases.						○
5285-1	P1236	Decrease in Inter Cooler Performance	Temperature difference between intercooler outlet and inlet is less than the specification. (Boost temperature exceeds 80 °C.)	Nothing special.	○					
10054-17	P2457	Degradation of EGR Cooler 1	Temperature difference between EGR outlet and inlet is less than the specification. (EGR temperature exceeds 200 °C.)	Nothing special.	○					
5260-1	P2457	Degradation of EGR Cooler 2	Temperature difference between EGR 2 outlet and inlet is less than the specification. (EGR temperature exceeds 200 °C.)	Nothing special.	○					
4332-12	P207F	Abnormal DEF/AdBlue Quality	The error message from DCU has been received.	The output power decreases.						○
10044-1	P20C9	Abnormal Urea SCR System (With Engine Output Restriction)	The error message from DCU has been received.	The output power decreases.						○
10043-2	P204F	Abnormal Urea SCR System (Without Engine Output Restriction)	The error message from DCU has been received.	Nothing special.	○					
10042-12	P2BAA	Abnormal Urea SCR System (With Engine Output Restriction/Regeneration Inhibition)	The error message from DCU has been received.	The output power decreases.						○

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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.

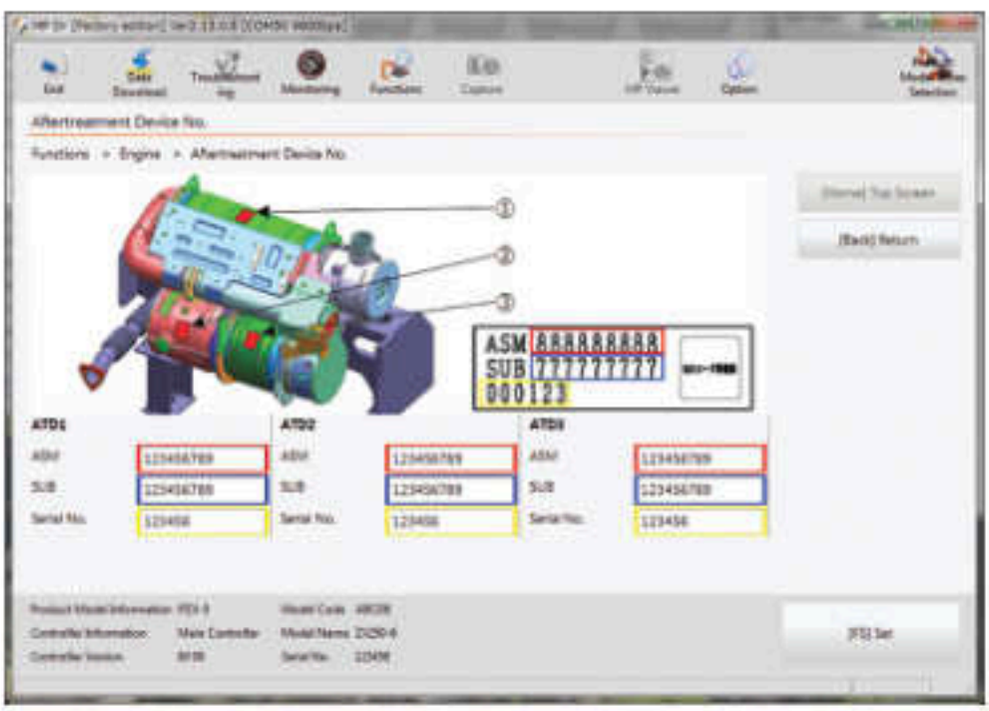
Procedure

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 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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