PART NO. TTDCN-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
225USLC-5B
225USRLC-5B
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODCN-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDCN-EN
Workshop Manual	: Vol. No.WDCN-EN
Engine Manual	: Vol. No.ETDCA-EN, EWDCA-EN

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SECTION 4

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Sensor Activating Range

1. Checking Method

- Hydraulic Oil Temperature: 50±5 °C (122±9 °F)
- Unless specified:

Engine Control Dial	Power Mode	Work Mode	Auto-Idle Switch
Fast Idle	PWR	Digging Mode	OFF

- Monitor each sensor by using MPDr.

2. Sensor Activating Range

Item	Operation	Specification
Engine Control Dial	Slow Idle	0.3 to 1.0 V
	Fast Idle	4.0 to 4.7 V
Pressure Sensor	Control lever: Neutral Pilot Shut-Off Lever: LOCK	0 to 0.1 MPa (0 to 1.0 kgf/cm^2, 0 to 14.5 psi)
	Control lever: Full Stroke Pilot Shut-Off Lever: UNLOCK	3.3 to 3.9 MPa (34 to 40 kgf/cm^2, 479 to 566 psi)
Pump Control Pressure Sensor	Control lever: Neutral	0 to 1 MPa (0 to 10 kgf/cm^2, 0 to 145 psi)
	Control lever: Full Stroke	2.9 to 3.9 MPa (30 to 40 kgf/cm^2, 421 to 566 psi)

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Test Harness

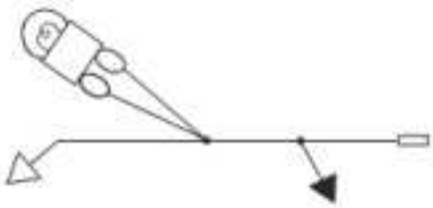
Parts Number 4283594 (ST 7126)

Install a test harness between connectors. Check the circuit condition depending on whether the test harness lamp lights or extinguishes during operation.

- Parts Number 4283594 (ST 7126)

Use in order to check a single-line (discontinuity and/or voltage).

- During Operation: Light is ON.



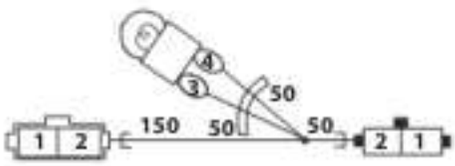
T107-07-05-012

Parts Number (ST 7226)

- Parts Number (ST 7226)

Use in order to check the solenoid valve unit circuits.

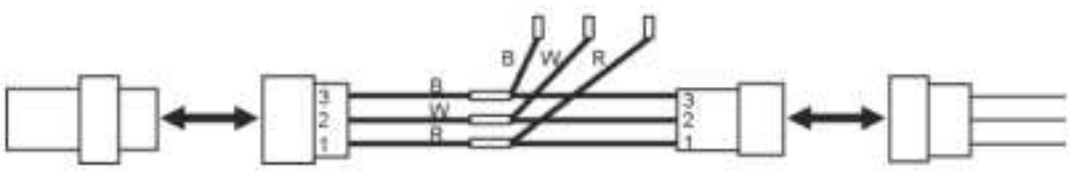
- When the corresponding control lever or switch is operated: Light is ON.



T107-07-06-015

Connect a test harness to the harness end connector of pressure sensor. Check the state of pressure sensor circuit.

- ST 6701 for high-pressure sensor
- ST 6703 for low-pressure sensor



TDAA-05-06-003

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Monitor Controller (Information) Fault Codes 20109 to 20149

Fault Code	Trouble	Inspection Method	Evaluation	Cause
20109-2	Pilot Control Shut-Off Lever Alarm	Check of the pilot shut-off switch	Correct	Faulty harness.
			Incorrect	Faulty pilot shut-off switch.
20110-2	Fuel Filter Restriction Alarm	Diagnose on fault codes of ECM.	-	-
20113-2	System Failure Alarm	Check of CAN Harness	-	Faulty CAN harness.
20133-2	Crane Function Alarm			
20137-2	Muffler Filter Alarm (blinking)(red)	Diagnose on fault codes of ECM.	-	-
20141-2	Exhaust Temperature Alarm	Diagnose on fault codes of ECM.	-	-
20142-2	Intake Air Temperature Alarm	Diagnose on fault codes of ECM.	-	-
20145-2	Boost Temperature Alarm	Diagnose on fault codes of ECM.	-	-
20146-2	Fuel Temperature Alarm	Diagnose on fault codes of ECM.	-	-
20149-2	EGR Temperature Alarm	Diagnose on fault codes of ECM.	-	-

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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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