PART NO. TTDAE-EN-00

HITACHI

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Technical Manual
Troubleshooting

ZX
135US-5B
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODAE-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDAE-EN
Workshop Manual	: Vol. No.WDAE-EN
Engine Manual	: Vol. No.EDBE-EN

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SECTION 4

OPERATIONAL PERFORMANCE TEST

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Symptoms in Machine Operation When Trouble Occurs.	Assumptive Conditions at Backup
The output power decreases.	Regenerative control is impossible.
The output power decreases.	Regenerative control is impossible.
The output power decreases.	Muffler filter pressure difference is 0 kPa.
The output power decreases.	Muffler filter pressure difference is 0 kPa.
The output power decreases.	Muffler filter pressure difference is 0 kPa.
Abnormal system 1: No backup Abnormal system 2: The engine runs at idle speed.	The accelerator opening amount signal cannot be used. (The limited value is changed according to the quantity of faulty systems.)
Abnormal system 1: No backup Abnormal system 2: The engine runs at idle speed.	The accelerator opening amount signal cannot be used. (The limited value is changed according to the quantity of faulty systems.)
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Abnormal system 1: No backup Abnormal system 2: The engine runs at idle speed.	The accelerator opening amount signal cannot be used. (The limited value is changed according to the quantity of faulty systems.)
Abnormal system 1: No backup Abnormal system 2: The engine runs at idle speed.	The accelerator opening amount signal cannot be used. (The limited value is changed according to the quantity of faulty systems.)
Nothing special.	Engine oil pressure is 120 kPa. Hydraulic oil pressure alarm stop.
Nothing special.	Engine oil pressure is 120 kPa. Hydraulic oil pressure alarm stop.
The output power decreases.	Malfunction of VGS turbo
Nothing special.	Boost pressure is 100 kPa.
Nothing special.	Boost pressure is 100 kPa.
The rotation speed does not increase.	Boost temperature is 50 °C. Boost temperature alarm stop.
The rotation speed does not increase.	Boost temperature is 50 °C. Boost temperature alarm stop.
The output power decreases.	Atmospheric pressure is 95 kPa.
The output power decreases.	Atmospheric pressure is 95 kPa.
The output power decreases.	Injection amount is regulated by overheat protection.

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Communication Terminal Fault Code List

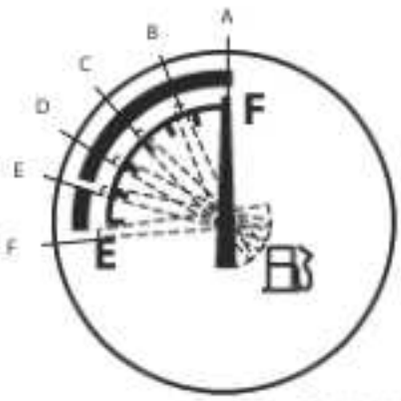
Fault Code	Trouble	Cause	Remedy
14100-2	Communication Terminal: Abnormal EEPROM	The internal memory of satellite communication terminal (optional) is abnormal.	Replace the controller (satellite communication terminal).
14101-2	Communication Terminal: Abnormal IB/OB Queue	The internal memory of satellite communication terminal (optional) is abnormal.	Replace the controller (satellite communication terminal).
14102-2	Communication Terminal: Abnormal Local Loop Back	Abnormality is detected on communication test with the satellite.	Check the communication antenna for satellite.
14103-2	Communication Terminal: No Satellite Found	Satellite can not be caught.	Check the communication antenna for satellite.
14104-2	Communication Terminal: Remote Loop Back Error 1	Abnormality is detected on communication test with the satellite and base station.	Replace the controller (satellite communication terminal).
14105-2	Communication Terminal: Remote Loop Back Error 2	Abnormality is detected on communication test with the satellite and base station.	Replace the controller (satellite communication terminal).
14106-2	Communication Terminal: Transmission/Receiving Data Unmatched	Transmission/receiving data with the satellite is unmatched.	Replace the controller (satellite communication terminal).
14107-2	Communication Terminal: Abnormal GSM Module	Abnormal mobile communication equipment	Replace the controller (mobile communication terminal).

NOTE: Fault codes 14100-2 to 14106-2 are satellite communication terminal. Fault code 14107-2 is mobile communication terminal.

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Monitor Controller (Information) Fault Code 13311

Fault Code	Trouble	Inspection Method	Evaluation	Cause
13311-3	Open circuit in fuel sensor	Measure resistance between sensor #1 and #2	Refer to the table	Faulty sensor.
		Measure voltage between sensor harness end #1 and body	0 V	Open circuit in harness #1.
		-	Normal in above check	Open circuit in harness #2.
13311-4	Shorted circuit in fuel sensor	Measure resistance between sensor #1 and #2	Refer to the table	Faulty sensor.
		-	Normal in above check	Shorted circuit in harness #1 and #2.

Fuel Gauge	No.	Fuel Level (%)	Fuel Sensor (Ω)
 TDAA-05-02-082	A	100 (FULL)	10^{0}_{-4}
	B	75	26
	C	50	38±5
	D	25	53
	E	6	-
	F	0 (EMPTY)	90^{+10}_{0}

Connector (Harness end)

- Fuel Sensor



TDCD-05-06-010

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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.

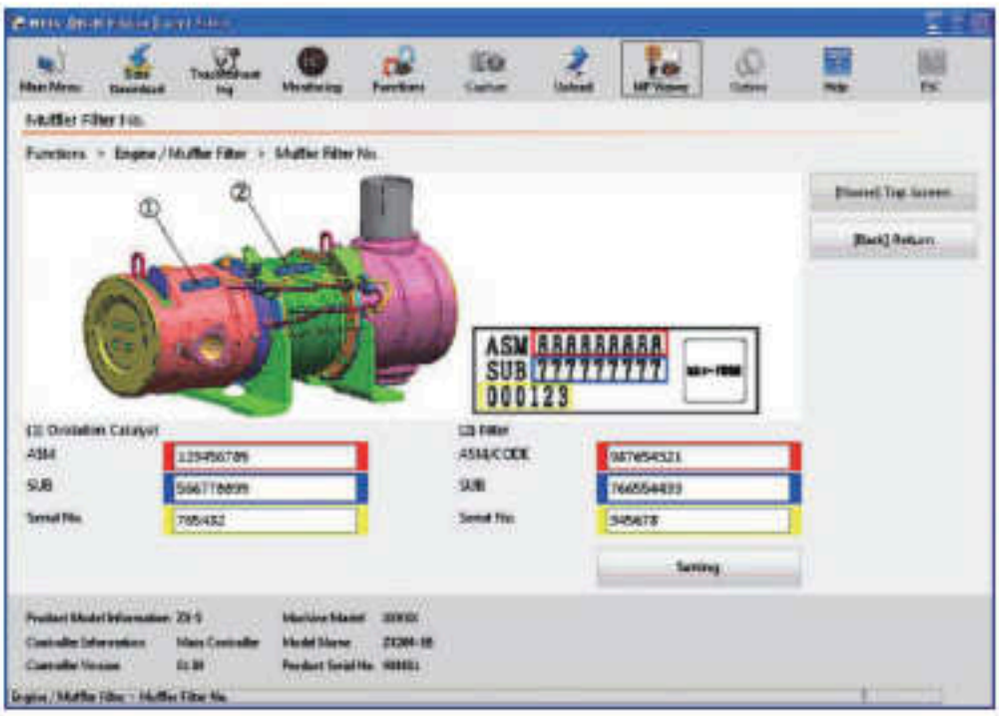
1. Connect MPDr..
2. Set the key switch to the ON position.
3. Select Functions-Engine/Muffler Filter-Muffler Filter NO. with MPDr..
4. Input the following items of Oxidation Catalyst (DOC) and Filter (CSF).

- 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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