PART NO. TTLAA-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZX
140W-5B
Wheeled Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOLAA-EN
Technical Manual (Troubleshooting)	: Vol. No.TTLAA-EN
Workshop Manual	: Vol. No.WLAA-EN
Engine Manual	: Vol. No.EDBE-EN

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SECTION 4

OPERATIONAL PERFORMANCE TEST

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Measurement:

1. Measure the items as shown in the table below.
2. When measuring, set the switch and test condition as shown in the table below in response to the engine speed to be measured.

Evaluation:

Refer to Operational Performance Standard.

Remedy:

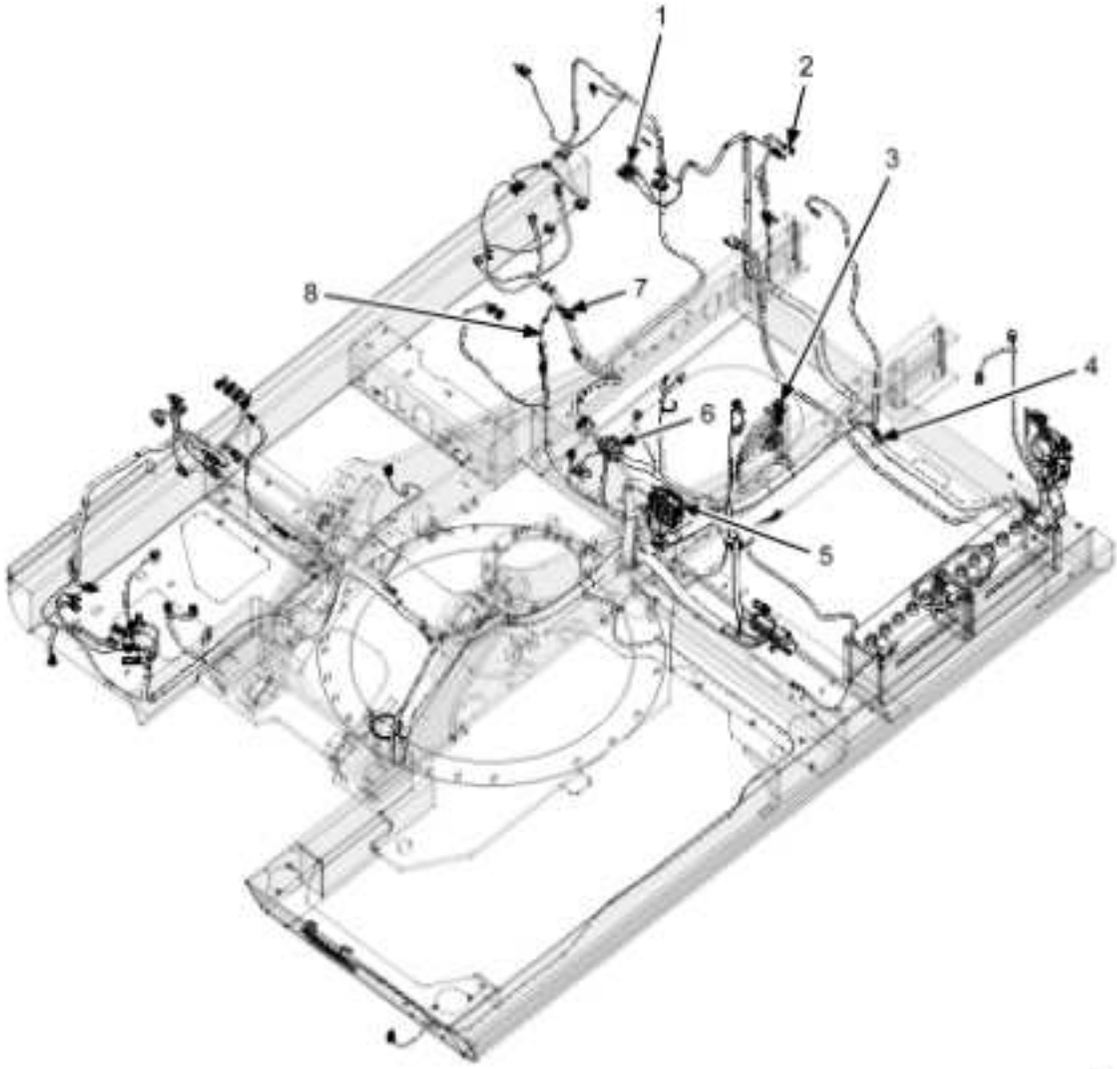
Refer to Troubleshooting B.

- Engine Speed Control Mode Selection Switch: Dial mode

Item	Engine Control Dial	Power Mode	Auto-Idle Switch	Work Mode	Test Conditions
Slow Idle	Min. Speed	PWR	OFF	Digging Mode	Measure engine speed when coolant temperature is 50 °C (122 °F) or more and hydraulic oil temperature is 0 °C (32 °F) or more or when auto-warming up control is deactivated by MPDr..
Fast Idle(With ECO deactivated)	Max. Speed	PWR	OFF	Digging Mode	Deactivate ECO by MPDr.. Measure engine speed.
Fast Idle(Heater control: OFF)	Max. Speed	PWR	OFF	Digging Mode	Turn the pilot shut-off lever to the UNLOCK position. Measure engine speed with the control lever in neutral.
Fast Idle(Heater control: ON)	Max. Speed	PWR	OFF	Digging Mode	Turn the pilot shut-off lever to the LOCK position. Engine speed can be measured only when coolant temperature is less than 5 °C (41 °F).
Fast Idle(Relief operation)	Max. Speed	PWR	OFF	Digging Mode	Measure engine speed while relieving the boom raise circuit.
Fast Idle(ECO mode)	Max. Speed	ECO	OFF	Digging Mode	Measure engine speed with the control lever in neutral.
Fast Idle(Travel HP mode)	Max. Speed	ECO/PWR	OFF	Digging Mode	Turn the travel mode switch to the fast speed position. Measure engine speed while relieving the travel circuit.
Auto-Idle Speed	Max. Speed	PWR	ON	Digging Mode	Check engine speed in 3.5 seconds after returning all control levers to neutral.
Manual Regenerative Speed	Max. Speed	PWR	OFF	Digging Mode	Operate by MPDr.. Turn the brake switch to the Parking brake position. Engine speed can be measured only when coolant temperature is 70 °C (158 °F) or lower with the control lever in neutral.
Manual Regenerative Speed	Min. Speed	PWR	OFF	Digging Mode	Operate by MPDr.. Turn the brake switch to the Parking brake position. Turn the pilot shut-off lever to the LOCK position. Engine speed can be measured only when the control lever is in neutral.

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Layout of Connector



TLAA-05-01-101

1- To Muffler Filter Sub Harness
2- To Rear View Camera Sub Harness
3- To Engine Harness
4- To License Plate Light Sub Harness
5- To Cab Harness
6- To Pump Harness
7- To Breaker Relief Solenoid Valve, Selector Valve Control Solenoid Valve Sub Harness
8- To Hydraulic Oil Filter Restriction Switch Sub Harness

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MC2 Fault Code List

Controller Hardware Failure

Fault Code	Trouble	Cause	Symptoms in Machine Operation When Trouble Occurs.	Remedy
15501-2	Initial Setting Value (EEPROM) Data Read Error	Faulty MC2	-	Replace MC2.
15502-2	Abnormal EEPROM	Faulty MC2	-	Replace MC2.
15503-2	Abnormal RAM	Faulty MC2	-	Replace MC2.
15504-2	Abnormal A/D Converter	Faulty MC2	-	Replace MC2.
15505-2	CAN Communication Failure	Faulty MC2 Faulty harness	-	Check the harness. Replace MC2.
15506-3	Abnormal Sensor Voltage	Faulty MC2 Faulty sensor Faulty harness	-	Check the sensor connected to MC2. Check the harness. Replace MC2.

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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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