PART NO. TTNSA60-EN-00

HITACHI

Reliable solutions

Technical Manual
Troubleshooting

ZW

120-6
Wheel Loader

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TONSA60-EN
Technical Manual (Troubleshooting)	: Vol. No.TTNSA60-EN
Workshop Manual	: Vol. No.WNSA60-EN
Engine Manual	: Vol. No.ETLADA0-EN

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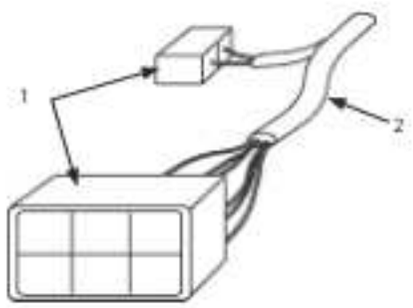
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TROUBLESHOOTING B (MACHINE DIAGNOSIS BY USING TROUBLE SYMPTOM) Procedure

Refer to troubleshooting B procedures for diagnosis by using trouble symptom when no fault codes are displayed.

- Diagnosis Procedure
  - The diagnosis procedures for the displayed fault codes are explained in this group.
  - Perform diagnosis by using MPDr. or the service menu of monitor first.
  - In case any fault code has not been displayed by diagnosis, perform inspection according to the procedures.
  - When the fault code is displayed, refer to the troubleshooting A group and diagnose.
  - On the front section pages of this group, there are the tables indicating the relationship between machine trouble symptoms and related parts which may cause such trouble if failed. Start the troubleshooting with more probable causes selected by referring to these tables.

NOTE: All connector images in this section are viewed from the open end side of wire harness end.



T6L4-05-03-001

1- Harness End Connector 2- Harness

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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
Lift arm and bucket relief operation	$20.6^{+0.5}_{0}$	

Preparation

- If operating speeds are extremely slow, pump control may be faulty. Faulty pilot system may also cause this trouble.

Procedure	Inspection Method	Condition	Evaluation	Cause
1	Monitor operating machine pressure.	Lift arm relief operation	The measured value is out of the specification.	YES: Faulty main relief valve (Front Attachment) (readjust)
				NO: Find out cause of trouble by tracing other trouble symptoms

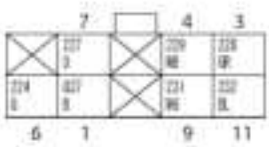
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• Front Wiper (High-Speed)

Procedure	Inspection Method	Condition	Evaluation	Cause
8	Check continuity between front wiper (1) relay wire harness end terminal #5 and the body.	-	∞ Ω	YES: Open circuit in wire harness between front wiper (1) relay and ground
				NO: Go to Procedure No. 9.
9	Measure voltage between front wiper (2) relay wire harness end terminal #1 and the body.	Key Switch: ON	0 V	YES: Open circuit in wire harness between fuse box B and front wiper (2) relay
				NO: Go to Procedure No. 10.
10	Check continuity between front wiper (2) relay wire harness end terminal #2 and the body.	Key Switch: ON Wiper Switch: Fast	∞ Ω	YES: Open circuit in wire harness between front wiper (2) relay and monitor controller
				NO: Go to Procedure No. 11.
11	Check continuity between front wiper (2) relay wire harness end terminal #3 and the body.	Key Switch: ON Wiper Switch: Fast	∞ Ω	YES: Open circuit in wire harness between front wiper (2) relay and wiper relay (F) 1
				NO: Go to Procedure No. 12.
12	Check continuity between front wiper motor wire harness end terminal #3 and the body.	Key Switch: ON Wiper Switch: Fast	∞ Ω	YES: Open circuit in wire harness between front wiper motor and wiper relay (F) 2
				NO: Go to Procedure No. 13.
13	Measure voltage between front wiper motor wire harness end terminal #5 and the body.	Key Switch: ON	0 V	YES: Open circuit in wire harness between fuse box B and front wiper motor
				NO: Faulty front wiper motor

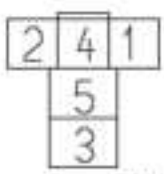
Connector (Wire harness end)

• Wiper Switch:



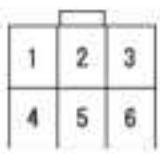
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• Front Wiper (1) Relay
• Front Wiper (2) Relay



T183-05-04-003

• Front Wiper Motor



T2BC-05-04-001

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REWRITE OF AFTERTREATMENT DEVICE SERIAL NO.

After replacing the aftertreatment device (DOC/SCR), rewrite their serial Nos. and upload the data to e-Service.

Procedure

1. Connect MPDr.
2. Set the key switch to the ON position.
3. Select Functions, Engine/Muffler Filter, and Aftertreatment Device No. by using MPDr.
4. Input the serial No. after the replacement to the following items of Oxidation Catalyst (DOC) and SCR Catalyst.

- 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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