SEN00291-14

Shop Manual

ENGINE

12V140E -3 SERIES

KOMATSU®

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Dimensions table

Unit: mm

Engine	Machine model	Dimensions of each part						
		A	B	C	D	E	F	G
SAA12V140E-3	D475A-5E0	287	1,582	1,772	2,171.5	726	507	507
	HD785-7	230	1,585.8	2,046.5	1,745.3	715	210	210
	PC2000-8	353	1,574.8	1,807.7	1,734.3	726	600	600
	WA800-3E0, WA900-3E0	230	1,585.8	2,123	1,940	715.2	210	210

★ These dimensions are given for reference when the engine is set on a test bench.

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Information in troubleshooting table

★ The following information is summarized in the troubleshooting table and the related electrical circuit diagram. Before carrying out troubleshooting, understand that information fully.

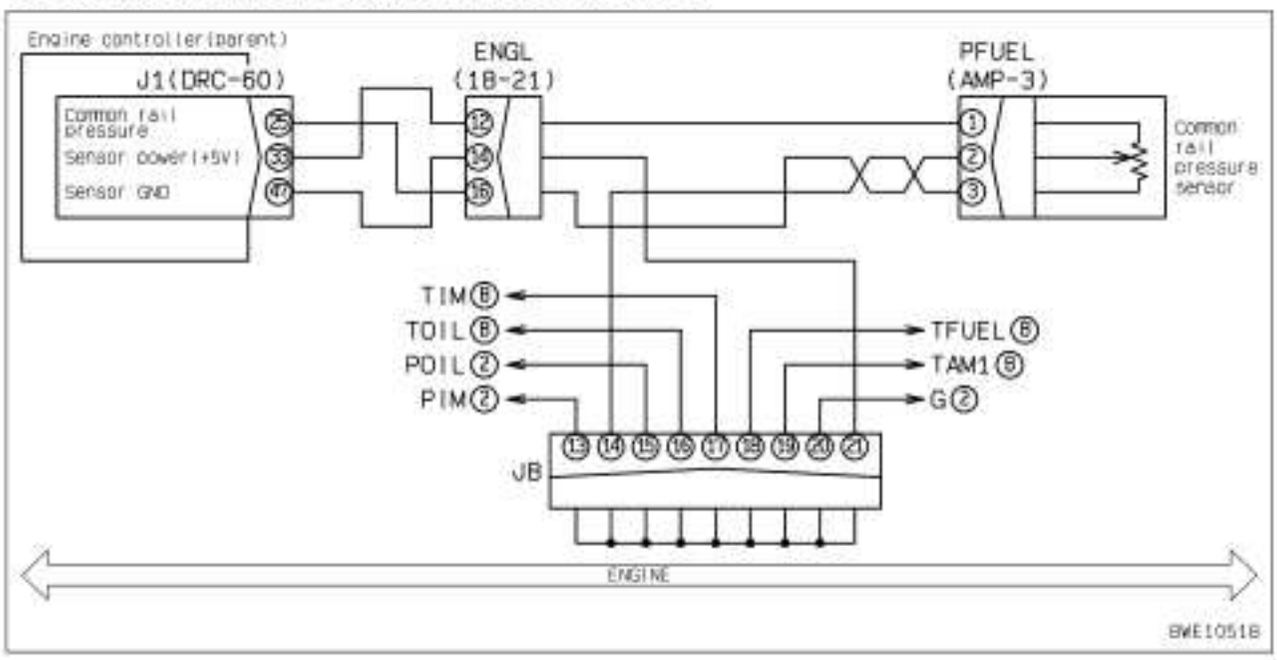
Error code	Failure code	Trouble	**Problem that appears on engine**
Display on INSITE	**Display on applicable machine**		
Contents of trouble	**Contents of trouble detected by engine controller**		
Action of controller	**Action taken by engine controller to protect system or devices when engine controller detects trouble**		
Problem that appears on machine	**Phenomenon that appears on engine as trouble as result of action taken by engine controller (shown above)**		
Related information	**Information related to detected trouble or troubleshooting**		

	Causes		Standard value in normal state/Remarks on troubleshooting
Possible causes and standard value in normal state	1 2 3 4	Possible causes of trouble (Given numbers are reference numbers, which do not indicate priority)	**<Contents of description>** • **Standard value in normal state to judge possible causes** • **Remarks on judgment** **<Troubles in wiring harness>** • **Disconnection** **Connector is connected imperfectly or wiring harness is broken.** • **Ground fault** **Wiring harness which is not connected to chassis ground circuit is in contact with chassis ground circuit.** • **Hot short** **Wiring harness which is not connected to power source (24 V) circuit is in contact with power source (24 V) circuit.** • **Short circuit** **Independent wiring harnesses are in contact with each other abnormally.** **<Precautions for troubleshooting>** **(1) Method of indicating connector No. and handling of Tadapter** **Insert or connect T-adapter as explained below for troubleshooting, unless otherwise specified.** • **If connector No. has no marks of "male" and "female", disconnect connector and insert T-adapters in both male side and female side.** • **If connector No. has marks of "male" and "female", disconnect connector and connect T-adapter to only male side or female side.** **(2) Entry order of pin Nos. and handling of tester leads** **Connect positive (+) lead and negative (-) lead of tester as explained below for troubleshooting, unless otherwise specified.** • **Connect positive (+) lead to pin No. or wiring harness entered on front side.** • **Connect negative (-) lead to pin No. or wiring harness entered on rear side.**

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<table>
<tr><td rowspan="6">Possible causes and standard value in normal state</td><td colspan="2">Causes</td><td colspan="3">Standard value in normal state/Remarks on troubleshooting</td></tr>
<tr><td rowspan="3">5</td><td rowspan="3">Short circuit in wiring harness
(With another wiring harness)</td><td colspan="3">★ Prepare with starting switch OFF, then carry out troubleshooting without turning starting switch ON.</td></tr>
<tr><td>Wiring harness between LH J1 (female) (33) – LH PFUEL (female) (1) and LH J1 (female) (25) – LH PFUEL (female) (2)</td><td>Resistance</td><td>Min. 1 MΩ</td></tr>
<tr><td>Wiring harness between LH J1 (female) (33) – LH PFUEL (female) (1) and LH J1 (female) (47) – LH PFUEL (female) (3)</td><td>Resistance</td><td>Min. 1 MΩ</td></tr>
<tr><td rowspan="3">6</td><td rowspan="3">Defective engine controller</td><td>Wiring harness between LH J1 (female) (25) – LH PFUEL (female) (2) and LH J1 (female) (47) – LH PFUEL (female) (3)</td><td>Resistance</td><td>Min. 1 MΩ</td></tr>
<tr><td colspan="3">★ Prepare with starting switch OFF, then turn starting switch ON or start engine and carry out troubleshooting.</td></tr>
<tr><td colspan="2">LH J1</td><td colspan="2">Voltage</td></tr>
<tr><td colspan="2">Between (33) – (47)</td><td colspan="2">4.75 – 5.25 V</td></tr>
<tr><td colspan="2">Between (25) – (47)</td><td colspan="2">0.25 – 4.6 V</td></tr>
</table>

Circuit diagram related to common rail pressure sensor



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