SEN06010-03

Shop Manual

BULLDOZER

D61EX -23
D61PX -23

SERIAL NUMBERS D61EX-30001 and up
D61PX-30001

KOMATSU®

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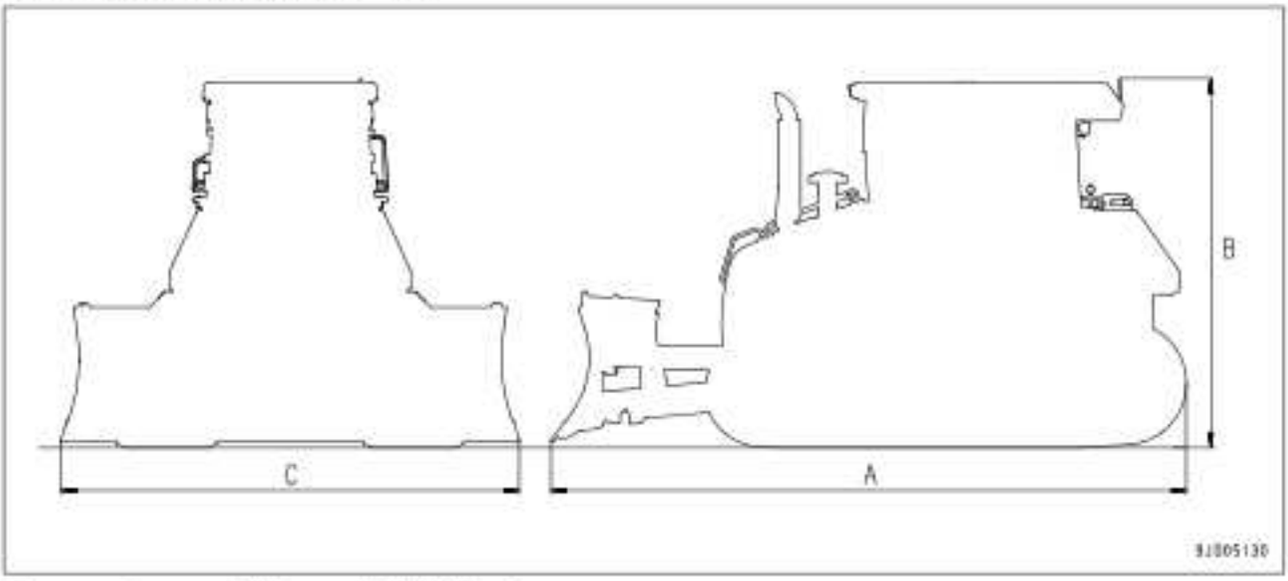
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Specifications (ALL-2111-001-A-00-A)

Specification drawing (ALL-2110-001-A-00-A)

D61EX-23 (D61EX_23-2110-931-A-00-A)



Power angle power tilt dozer with ROPS cab

	Item		Unit	D61EX-23 600 mm single grouser shoe
	Machine weight		kg	17,700
	Engine model		—	Komatsu SAA6D107E-2 diesel engine
	Engine rated horsepower • SAE J1995 (gross) (*1) • ISO 14396 • ISO 9249/SAE J1349 (net) (*2)		kW {HP}/ min^{-1} {rpm}	127 {170} / 2,200 {2,200} 126 {169} / 2,200 {2,200} 125 {168} / 2,200 {2,200}
A	Overall length		mm	5,480
B	Overall height (including KOMTRAX antenna)		mm	3,180
C	Overall width		mm	3,250
	Travel speed (Quick shift mode)	Forward (1st/2nd/3rd)	km/h	3.4 / 5.6 / 9.0
		Reverse (1st/2nd/3rd)	km/h	4.1 / 6.5 / 9.0
	Travel speed (Variable shift mode)	Forward	km/h	0.8 to 9.0
		Reverse	km/h	0.8 to 9.0

*1: Indicates the value of the basic engine (without cooling fan).

*2: Indicates the value at the minimum cooling fan speed.

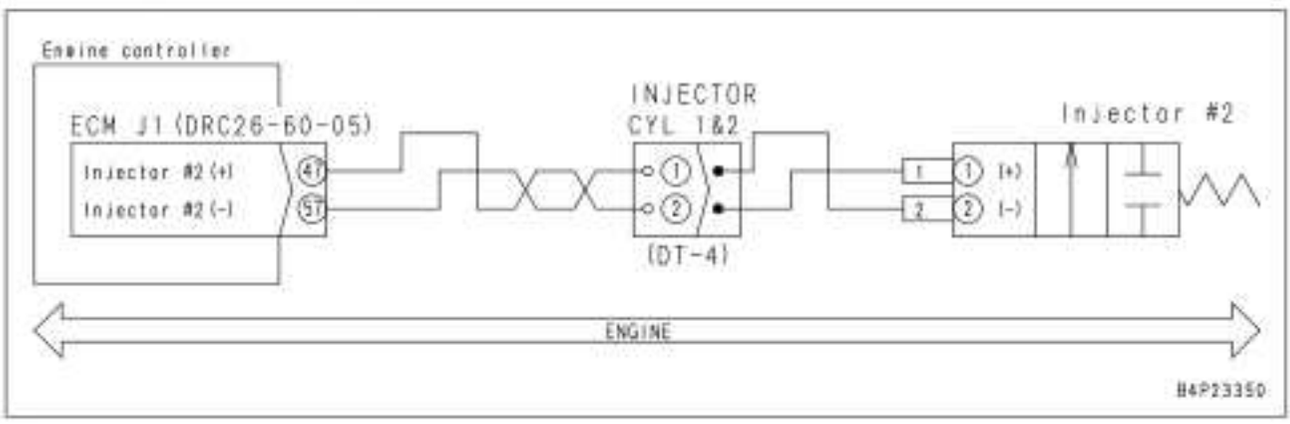
★ The engine rated horsepower is indicated in the net value and gross value. The gross denotes the flywheel horsepower measured on the basic engine unit, while the net denotes the value measured of an engine under the condition essentially the same as that when it is installed on a machine.

★ Following shows the rated horsepower (net) at the maximum cooling fan speed.
113 kW {152 HP}/2,200 min^{-1} {2,200 rpm}

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No.	Cause	Procedure, measuring location, criteria and remarks		
6	Short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connectors ECM J1 and INJECTOR CYL1 & 2, and connect T-adapters to female side of ECM J1. ★ Check by using multimeter in continuity mode.		
		Continuity	Between ECM J1 (female) (47) and each pin other than pin (47)	No continuity (No sound is heard)
			Between ECM J1 (female) (57) and each pin other than pin (57)	No continuity (No sound is heard)
7	Defective injector of other cylinder	If failure codes of other injectors are displayed, perform troubleshooting for them first.		
8	Defective injector harness of other cylinder	If failure codes of other injectors are displayed, perform troubleshooting for them first.		
9	Defective engine controller	If no failure is found by above checks, engine controller is defective. (Since this is an internal defect, troubleshooting cannot be performed.)		

Circuit diagram related to injector #2



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Failure code [DFA8KB] Blade tilt lever1: Hot Short (D61-DFA8KB-400-A-Z0-A)

Action level	Failure code	Failure	Blade tilt lever 1: Hot Short (HST controller system)
L01	DFA8KB		
Detail of failure	• Signal voltage of blade tilt lever potentiometer system 1 is 4.5 V or above.		
Action of controller	• Continues blade control with signal from blade tilt lever potentiometer system 2.		
Problem on machine	• None		
Related information	• Signal voltage of blade tilt lever potentiometer 1 can be checked with monitoring function. (Code: 73500 "Blade Tilt Lever 1 Potentio") • Method of reproducing failure code: Turn starting switch to ON position.		

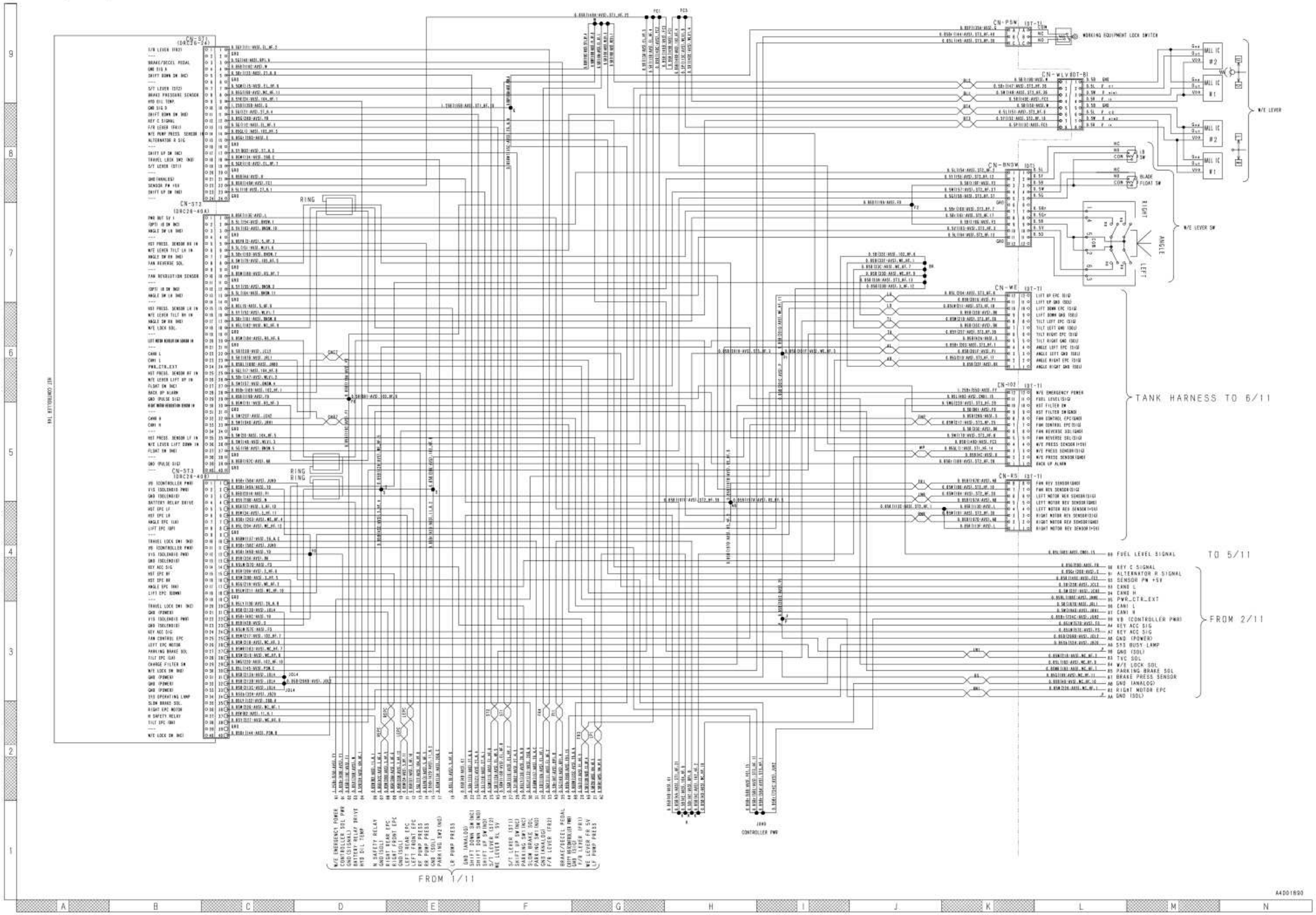
No.	Cause	Procedure, measuring location, criteria and remarks		
1	Defective 5 V sensor power supply system	If failure code [DAJ6KK] is also displayed, perform troubleshooting for it first.		
2	Defective blade tilt lever potentiometer 1 (internal short circuit or ground fault)	1. Turn starting switch to OFF position. 2. Disconnect connector WLV1. 3. Turn starting switch to ON position.		
		If failure code [DFA8KB] disappears, blade tilt lever potentiometer is defective. (If failure code is still displayed, wiring harness or work equipment controller is defective.) ★ Since connector WLV1 is disconnected, many failure codes appear. Ignore all of displayed failure codes other than [DFA8KB]]		
3	Hot short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connector WLV1 and connect T-adapter to female side. 3. Turn starting switch to ON position.		
		Voltage	Between WLV1 (female) (7) and (8) or ground	7 to 11 V
4	Short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connectors ST2 and WLV1, and connect T-adapter to female side of ST2. ★ Check by using multimeter in continuity mode.		
		Continuity	Between ST2 (female) (16) and each pin other than pin (16)	No continuity (no sound is heard)
5	Defective HST controller	If no failure is found by above checks, HST controller is defective. • Reference 1. Turn starting switch to OFF position. 2. Insert T-adapters into connectors ST1 and ST2. 3. Turn starting switch to ON position. 4. Operate blade control lever (in TILT direction) to perform troubleshooting.		
		Voltage	Between ST2 (16) and ST1 (4)	0.96 to 4.04 V

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Electrical circuit diagram (3/11)

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★ This diagram covers optional components that are unavailable in some areas.



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