KEBM028602

Shop Manual

BULLDOZER

D51EXi-22
D51PXi-22

SERIAL NUMBERS B13500 and up

ecot3

KOMATSU®

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Machine model				D51EXi-22	D51PXi-22
				560 mm Single shoe	710 mm Single shoe
Serial No.				B13500 and up	
Work equipment	Type		---	Hydraulic type angle tilt dozer	
	Blade support method		---	Hydraulic cylinder type	
	Performance	Max. lifting height (from ground)	mm	1010	1010
		Max. lowering depth (from ground)	mm	459	459
		Max. tilt	mm	425	425
		Max. angle	deg	27	27
	Dimensions	Blade width	mm	3045 (3350)	3350
		Blade height	mm	1110	1110
		Blade cutting angle	deg	57	57
Ripper	Type			Parallelogram	
	Beam length		mm	700	
	Number of shanks			3	
	Performance	Digging angle (at on the ground/at max. digging depth)	deg	53.5/53.5	
		Adjustment of digging depth		Changeable for 2 level	
		Max. digging depth	mm	430	
		Max. lift	mm	375	
		Shank interval	mm	700	

Values in ( ) are for the machines equipped with wide blade.

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ERROR CODE [CA435]

ABNORMAL ENGINE OIL PRESSURE SWITCH

Action code	Error code	Trouble	Abnormal engine oil pressure switch: Abnormal signal circuit (Engine controller system)
E02	CA435		
Contents of trouble	• A problem has occurred in the engine oil pressure switch signal circuit		
Action of controller	• No particular action		
Problem that appears on machine	• Protection function by engine oil pressure does not operate. • Engine oil pressure monitor does not display normally.		
Related information	• Duplication of failure code: turn ON the starting switch or start the engine.		

	Cause		Standard value in normal state/Remarks on troubleshooting			
Possible causes and standard value in normal state	1	Defective engine oil switch	H Prepare with starting switch OFF and diagnose with starting switch still OFF.			
			C13 (male)	Resistance		
			Between (1) - body	Max. 10 Ω		
	2	Disconnection in wiring harness (Disconnection or defective contact of connectors)	H Prepare with starting switch OFF and diagnose with starting switch still OFF.			
			Wiring harness between C1 (female) (17) - C13 (female) (1)	Resistance	Max. 10 Ω	
	3	Harness short (Harness internal short)	H Prepare with starting switch OFF and diagnose with starting switch still OFF.			
			Between C1 (female) (17) – C1 (female) all pins (All connectors in the harness disconnected)	Resistance	Min. 100 kΩ	
	4	Defective wiring harness connector	Since the problem is possibly at the connections between engine oil pressure switch – engine harness – engine controller, check for a defective connection. • Connector is loose, lock is broken, seal is broken • Pin is corroded, bent, broken, pushed in, expanded. • Moisture in connector, entry of dirt or sand, etc., and insufficient insulation			
	5	Defect in other locations than engine controller	H Prepare with starting switch OFF and diagnose with starting switch still OFF.			
			C1 (female)	Resistance		
			Between (17) - ground	Max. 10 Ω		
	6	Defective engine controller	Engine controller is possibly defective if no problem is found in causes 1 – 5. (Since this is an internal defect, it cannot be diagnosed.)			

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ERROR CODE [DKS6KB]

BLADE TILT STROKE SENSOR B: HOT SHORT

Action code	Error code	Trouble	Blade tilt Stroke sensor B: Hot Short (ICT controller system)
E01	DKS6KB		
Contents of trouble	• Input voltage from blade lift cylinder reset sensor is above 4.5 V.		
Action of controller	• Automatic control of blade is inhibited.		
Problem that appears on machine	• Automatic control of blade is turned OFF. • Automatic control of blade does not turn ON even when auto/manual switch is pressed.		
Related information	• Method of reproducing failure code: Turn starting switch to ON position. • "Cylinder Stroke Reading Abnormal" is displayed on iB monitor at Slope control key.		

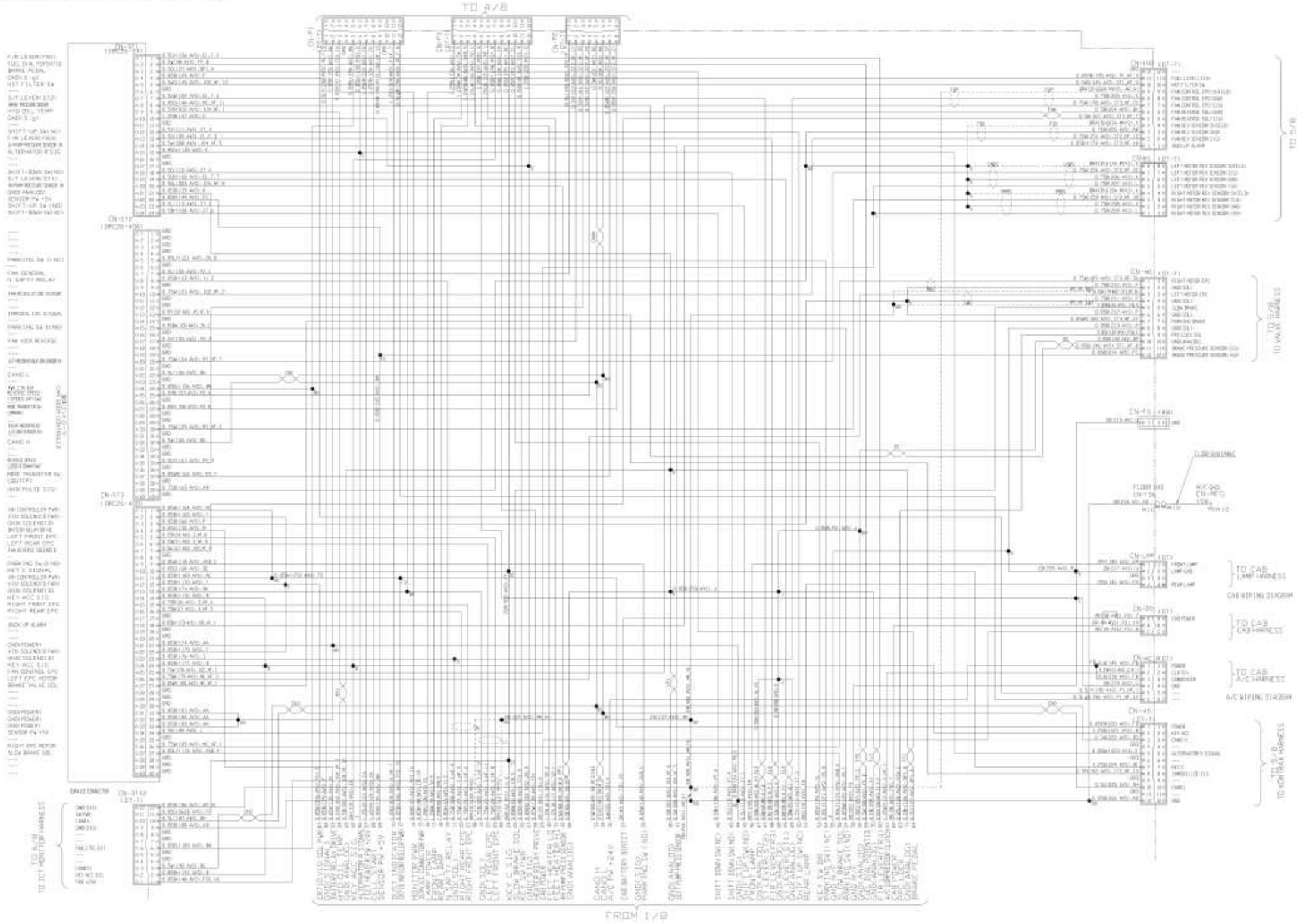
	Cause		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	1	Defective 5 V sensor power supply system	If failure code [DBR5KK] is also displayed, perform troubleshooting for it first.		
	2	Defective blade tilt cylinder stroke sensor phase B (internal open circuit or ground fault)	1. Turn starting switch to OFF position. 2. Connect T-adapter into connector CY24. 3. Turn starting switch to ON position.		
			If failure code [DKS6KB] disappears, blade tilt cylinder stroke sensor is defective. (If this failure code is still displayed, wiring harness or ICT controller is defective.) H Since connector CY24 is disconnected, many failure codes appear. Ignore failure codes other than [DKS6KB].		
	3	Hot short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connectors IB1 and CY24, and connect T-adapters to each female side.		
			Voltage	Between CY24 (female) (2) and (4) or ground	Max. 1 V
	4	Short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connectors IB1 and CY24, and connect T-adapter to female side of IB1. H Check by using multimeter in continuity mode.		
			Continuity	Between IB1 (female) (7) and each pin other than pin (7)	No continuity (no sound is heard)
	5	ICT controller error	If no failure is found by preceding checks, ICT controller is defective. • Reference 1. Turn starting switch to OFF position. 2. Insert T-adapter into connector IB1. 3. Turn starting switch to ON position.		
			Voltage	Between IB1 (7) and (21)	0.5 – 4.5 V

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Electrical Circuit Diagram (2/8)

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



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