SEN06061-03

Shop Manual

BULLDOZER

D37EX -23
D37PX -23
D39EX -23
D39PX -23

SERIAL NUMBERS

D37EX-80001
D37PX-80001
D39EX-90001
D39PX-90001

and up

KOMATSU®

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D39PX-23 (D39PX_23-2111-931-A-00-A)

Machine model	Unit	D39PX-23	
		635 mm single grouser shoe	700 mm swamp shoe
Serial No.		80001 and up	
Weight			
Machine weight			
Bare tractor with ROPS cab	kg	8,610 [8,470]	8,450
Power angle power tilt dozer with ROPS cab	kg	9,830 [9,690]	9,670
Values in [ ] are for machines equipped with conventional type track shoes.			
Performance			
Min. turning radius	—	(Counter-rotation turn)	(Counter-rotation turn)
Gradeability	deg.	30	30
Stability (front, rear, right, left)	deg.	35	35
Travel speed			
• Quick shift mode			
Forward (1st / 2nd / 3rd)	km/h	3.4 / 5.6 / 8.5	3.4 / 5.6 / 8.5
Reverse (1st / 2nd / 3rd)	km/h	4.1 / 6.5 / 8.5	4.1 / 6.5 / 8.5
• Variable shift mode			
Forward	km/h	0.8 to 8.5	0.8 to 8.5
Reverse	km/h	0.8 to 8.5	0.8 to 8.5
Ground pressure			
Bare tractor with ROPS cab	kPa {kg/cm²}	28.3 {0.29} [27.7 {0.28}]	25.1 {0.26}
Power angle power tilt dozer with ROPS cab	kPa {kg/cm²}	32.3 {0.33} [31.7 {0.32}]	28.7 {0.29}
Values in [ ] are for machines equipped with conventional type track shoes.			

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Symptom and troubleshooting numbers (D37-5540-441-A-00-A)

No.	Symptom of failure	Troubleshooting Index
	User code, failure code	
1	Action level is displayed on the machine monitor. Press function switch [F5] to display the "Occurred error list".	Perform troubleshooting for failure code.
2	Failure code is displayed on mechanical system abnormality record.	
3	Failure code is displayed on electrical system abnormality record.	

No.	Symptom of failure	Troubleshooting Index
	Symptom related to engine	
4	Engine does not start	E-1, S-1
5	Engine does not crank when starting switch is turned to "START" position.	E-1, S-1
6	Engine cranks but no exhaust smoke comes out.	S-2
7	Fuel is being injected but engine does not start (engine cranks but does not start due to incomplete combustion).	S-3
8	Engine startability is poor.	S-4
9	Engine does not pick up smoothly.	S-5
10	Engine stops during operation.	S-6, H-2
11	Engine runs rough or is unstable.	S-7
12	Engine lacks power.	S-8
13	Exhaust smoke is black (KDPF gets clogged in a short time).	S-9
14	Engine oil consumption is excessive.	S-10
15	Oil becomes contaminated quickly.	S-11
16	Fuel consumption is excessive.	S-12
17	Oil is in coolant (or coolant spurts back or coolant level goes down).	S-13
18	Engine oil pressure drops.	S-14
19	Fuel mixes into engine oil.	S-15
20	Water mixes into engine oil (milky).	S-16
21	Coolant temperature rises too high (overheating).	S-17
22	Unusual noise is heard.	S-18
23	Vibration is excessive.	S-19
24	Air cannot be bled from fuel circuit.	S-20
25	Manual preheating system does not work.	E-2
26	Automatic preheating system does not work.	E-3
27	While preheating is working, preheating monitor does not light up.	E-4
	Symptom related to HST	
28	Neither RH nor LH of tracks does not travel forward nor reverse (None of the travel system operates).	H-1
29	Either RH or LH of track does not travel forward nor reverse (Only RH or LH of travel system operates).	H-2
30	Either RH or LH of track travel only forward or reverse (Only forward or reverse of RH or LH of travel system does not operate).	H-3
31	Travel speed or power is low.	H-4
32	Travel speed range does not change.	H-5
33	Shock is large when machine starts or stops.	H-6
34	Machine deviates largely	H-7
35	Machine drift on a slope is large.	H-8
36	Engine stalls during travel or engine speed drops significantly.	H-9
37	Unusual noise is heard from around HST pump or motor.	H-10
38	HST oil temperature (hydraulic oil temperature) rises too high.	H-20
	Symptom related to work equipment	
39	All work equipment do not operate.	H-11, E-22
40	All work equipment operates slowly or lacks power.	H-12

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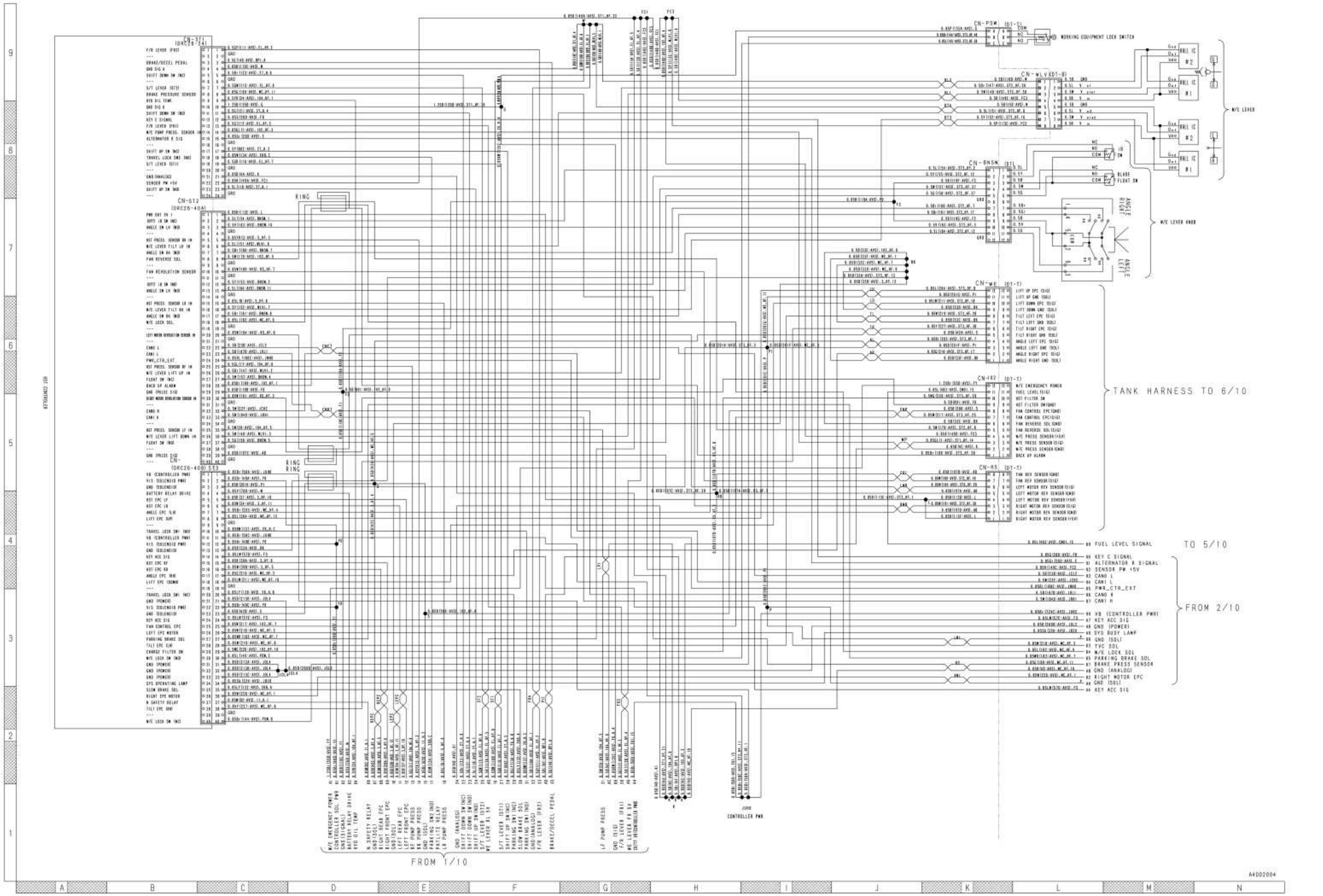
<table>
<tr><th>No.</th><th>Cause</th><th colspan="3">Procedure, measuring location, criteria and remarks</th></tr>
<tr><td rowspan="11">6</td><td rowspan="11">Open circuit in wiring harness (wire breakage or defective contact of connector)</td><td colspan="3">★ If no failure is found by check on cause 2, this check is not required.
1. Turn starting switch to OFF position.
2. Disconnect connector AC6 and connect T-adpater to female side.
3. Turn starting switch to ON position.
4. Turn fan switch to any position other than OFF (1 to 4).</td></tr>
<tr><td>Voltage</td><td>Between AC6 (female) (4) and (8)</td><td>20 to 30 V</td></tr>
<tr><td colspan="3">★ If no failure is found by above checks, this check is not required.
1. Turn starting switch to OFF position.
2. Remove fuse 30 A in fuse box F01-4.
3. Disconnect connectors AC4 and AC6, and connect T-adapters to each female side.</td></tr>
<tr><td rowspan="4">Resis-tance</td><td>Between F01-4 and AC4 (female) (4)</td><td>Max. 1Ω</td></tr>
<tr><td>Between F01-4 and AC4 (female) (7)</td><td>Max. 1Ω</td></tr>
<tr><td>Between AC6 (female) (8) and ground</td><td>Max. 1Ω</td></tr>
<tr><td>Between AC4 (female) (5) and AC6 (4)</td><td>Max. 1Ω</td></tr>
<tr><td colspan="3">★ If no failure is found by check on cause 2, this check is not required.
1. Turn starting switch to OFF position.
2. Disconnect connector AC6 and connect T-adapter to male side.
3. Disconnect connector ACR3.
4. Disconnect connector [3] and connect T-adapter to female side.</td></tr>
<tr><td rowspan="5">Resis-tance</td><td>Between AC6 (male) (4) and ACR3 (female) (30) (red)</td><td>Max. 1Ω</td></tr>
<tr><td>Between AC6 (male) (4) and ACR3 (female) (86) (a white line on black background)</td><td>Max. 1Ω</td></tr>
<tr><td>Between ACR3 (female) (87) (orange) and [3] (female) (1)</td><td>Max. 1Ω</td></tr>
<tr><td>Between ACR3 (female) (87) (orange) and [3] (female) (4)</td><td>Max. 1Ω</td></tr>
<tr><td>Between AC6 (male) (8) and [3] (female) (3)</td><td>Max. 1Ω</td></tr>
</table>

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Electrical circuit diagram (3/10)

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



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