KEBM657800

Shop Manual

KOMATSU®

D61EXi-24

D61PXi-24

CRAWLER DOZER

SERIAL NUMBERS **D61EXi-24 B60001 and up**
D61PXi-24 B60001 and up

ENGINE **6D107E-3**

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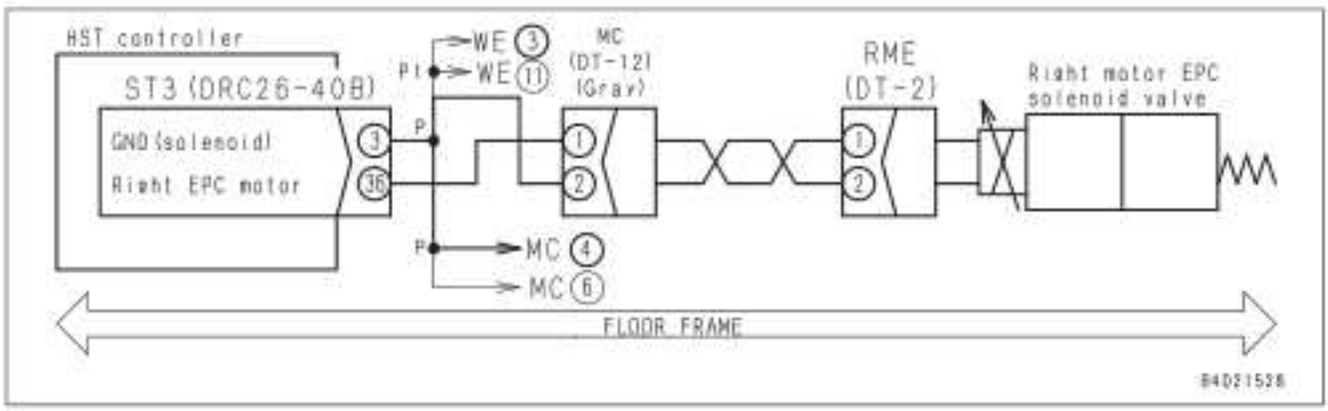
FAILURE CODE [CA3151] SCR Catalyst Efficiency Low Error 2

Action level	Failure code	Failure	SCR Catalyst Efficiency Low Error 2 (Engine controller system)
L01	CA3151		
Detail of failure	The SCR catalyst efficiency has been low (20 % or less).		
Action of controller	• AdBlue/DEF injection stops. • Advances to Inducement strategy.		
Phenomenon on machine	• NOx emission increases because AdBlue/DEF injection is disabled. • Engine power deration according to inducement strategy.		
Related information	⚠ **The turbocharger outlet, KDPF, sensor fitting piping, and sensor probe become hot (Min. 500 °C). Be careful not to get burned.** ⚠ **The AdBlue/DEF mixing piping, SCR assembly, sensor fitting piping, and sensor probe become hot (Min. 400 °C). Be careful not to get burned.** ⚠ **Be careful not to get burned by the sensor probe as it is heated by itself even if the ambient temperature is not high.** ⚠ **Be careful that AdBlue/DEF leaks when removing AdBlue/DEF mixing piping or AdBlue/DEF injector.** • Due to Engine controller is shut down, the AdBlue/DEF injection activates once. However If another error is detected, injection stops again. • This failure code [CA3151] is displayed approximately one hour later after the engine controller performs the Automatic Regeneration. The Automatic Regeneration is activated when the failure code [CA3582] (catalytic efficiency is lower than 70%) is displayed. • Make sure the failure code [CA3582] is not displayed when confirming the completion of repair. • If the ambient pressure is 80 kPa or less and the ambient temperature is -7 °C or less, the engine controller does not troubleshoot this failure code (Under this condition, performimg "Loaded Diagnostics Operation To Clear Failure Code" does not clear this failure code). Confirm on the "Pre-defined Monitoring" screen. • Even if loaded diagnostics operation to clear failure code is performed, it cannot be canceled when it is under the following condition. 1. When active regeneration is performed 2. AdBlue/DEF injection is stopped by other failure code. 3. When the engine controller does not shut down after this failure code is displayed • For the procedure to remove and change the AdBlue/DEF injector, see "Disassembly and assembly of AdBlue/DEF injector".		

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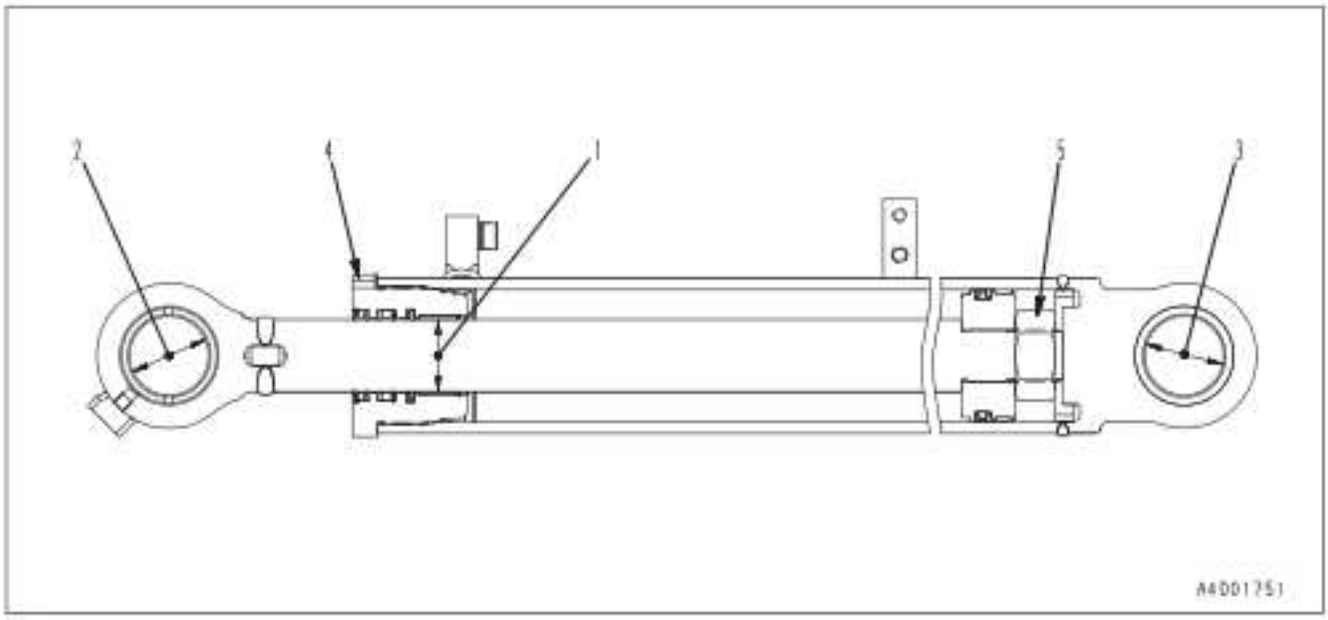
No.	Cause	Procedure, measuring location, criteria and remarks		
3	Open circuit or short circuit in wiring harness	1. Turn the starting switch to OFF position. 2. Disconnect connector ST3, and connect T-adapter to female side.		
		Resistance	Between ST3 (female) (36) and (3)	5 to 15 Ω
4	Defective HST controller	If no failure is found by preceding checks, HST controller is defective. (Since this is an internal defect, troubleshooting cannot be performed.)		

Circuit diagram related to R.H. HST motor EPC



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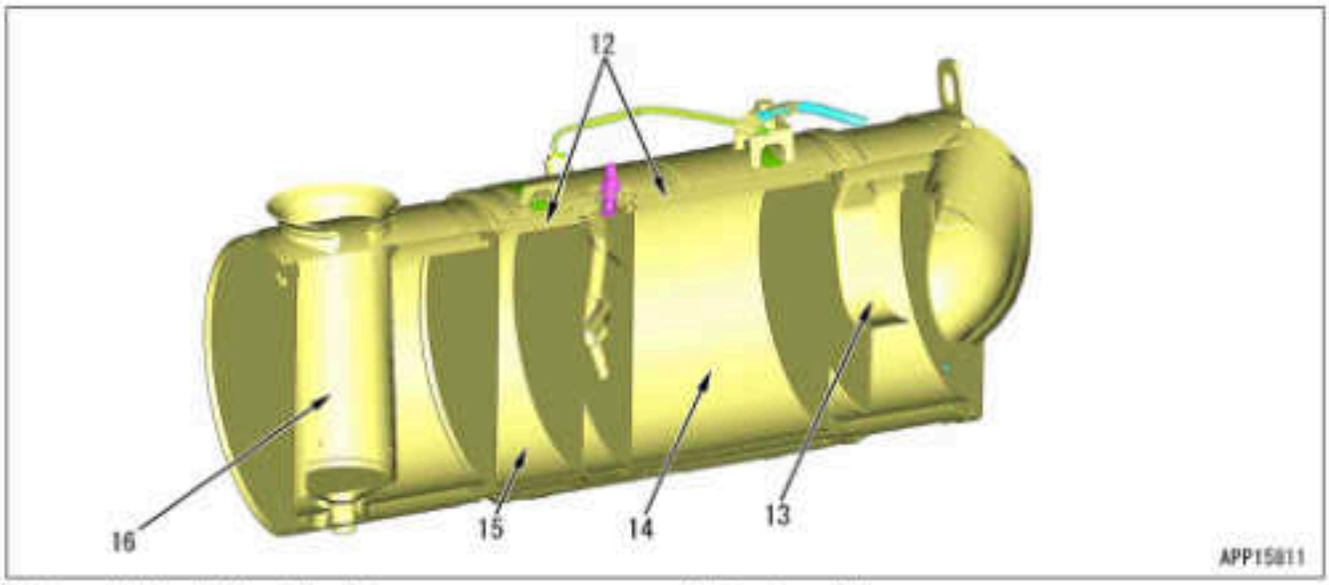
MAINTENANCE STANDARD OF BLADE LIFT CYLINDER



Unit: mm

No.	Item	Judgment criteria					Remedy
		Standard dimension	Tolerance		Standard clearance	Allowable clearance	
			Shaft	Hole			
1	Clearance between piston rod and bushing	55	-0.030 -0.076	+0.151 -0.006	0.036 to 0.227	0.527	Replace the bushing
2	Clearance between piston rod support shaft and bushing	60	-0.030 -0.076	+0.174 +0.100	0.130 to 0.250	1.0	
3	Clearance between cylinder bottom support shaft and bushing	60	-0.030 -0.076	+0.174 +0.100	0.130 to 0.250	1.0	
4	Tightening torque of cylinder head	785±78.5 Nm {80±8.0 kgm}					Retighten
5	Tightening torque of cylinder piston fixing nut	1770±177 Nm {180±18 kgm} (Width across flats: 60 mm)					

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A: From AdBlue/DEF mixing tube
1: SCR body
2: SCR temperature sensor
3: SCR outlet NOx sensor
4: SCR outlet temperature sensor
5: Temperature sensor controller
6: Ammonia sensor
7: Hanger plate
8: water baffle
9: Water drain port
B: To exhaust pipe
10: Sensor table
11: Sensor table band
12: Catalyzer hold mat
13: Water dam
14: Downstream SCR catalyst and ammonia oxidation catalyst (integrated type)
15: Upstream SCR catalyst
16: Rectifier tube

- SCR assembly consists of rectifier tube (16) equalizing the distribution of flow speed by leading exhaust gas, upstream SCR catalyst (15), downstream SCR catalyst, ammonia oxidation catalyst (14), and water dam which prevents rain water from entering into downstream SCR catalyst and ammonia oxidation catalyst (14) while exhausting gas.
- Ammonia oxidation catalyst (a part of 14) oxidizes ammonia to water and nitrogen with ammonia oxidation catalyst (a part of 14) to prevent ammonia which is supplied to SCR assembly from being released out because SCR catalyst (a part of 14, 15)cannot completely consume it.
- Each 1 piece of SCR temperature sensor (2), SCR outlet temperature sensor (4), ammonia sensor (6), and SCR outlet NOx sensor (3) are installed. These sensors are usable for various troubleshooting, such as they are used to control the feedback of denitration efficiency or they monitor that SCR catalyst properly functions or not.
- Rectifying tube (16) equalizes the distribution of exhaust gas flow speed.
- SCR catalyst (15, a part of 14) uses the ceramic honeycomb.
- The catalyzer holding mat (12) is made of a specific fiber and protects the ceramic catalyst against vibrations by the engine and the machine body. It also protects the outer periphery of SCR assembly against a heat transfer of the ceramics during operation.
- Water dam (13) is located at the upstream side of the outlet and prevents rainwater from entering into downstream SCR catalyst unit and ammonia oxidation catalyst (14).
- Water baffle (8) is located at the downstream side of the outlet and prevents rainwater at outlet from splashing over the detection part of NOx sensor.

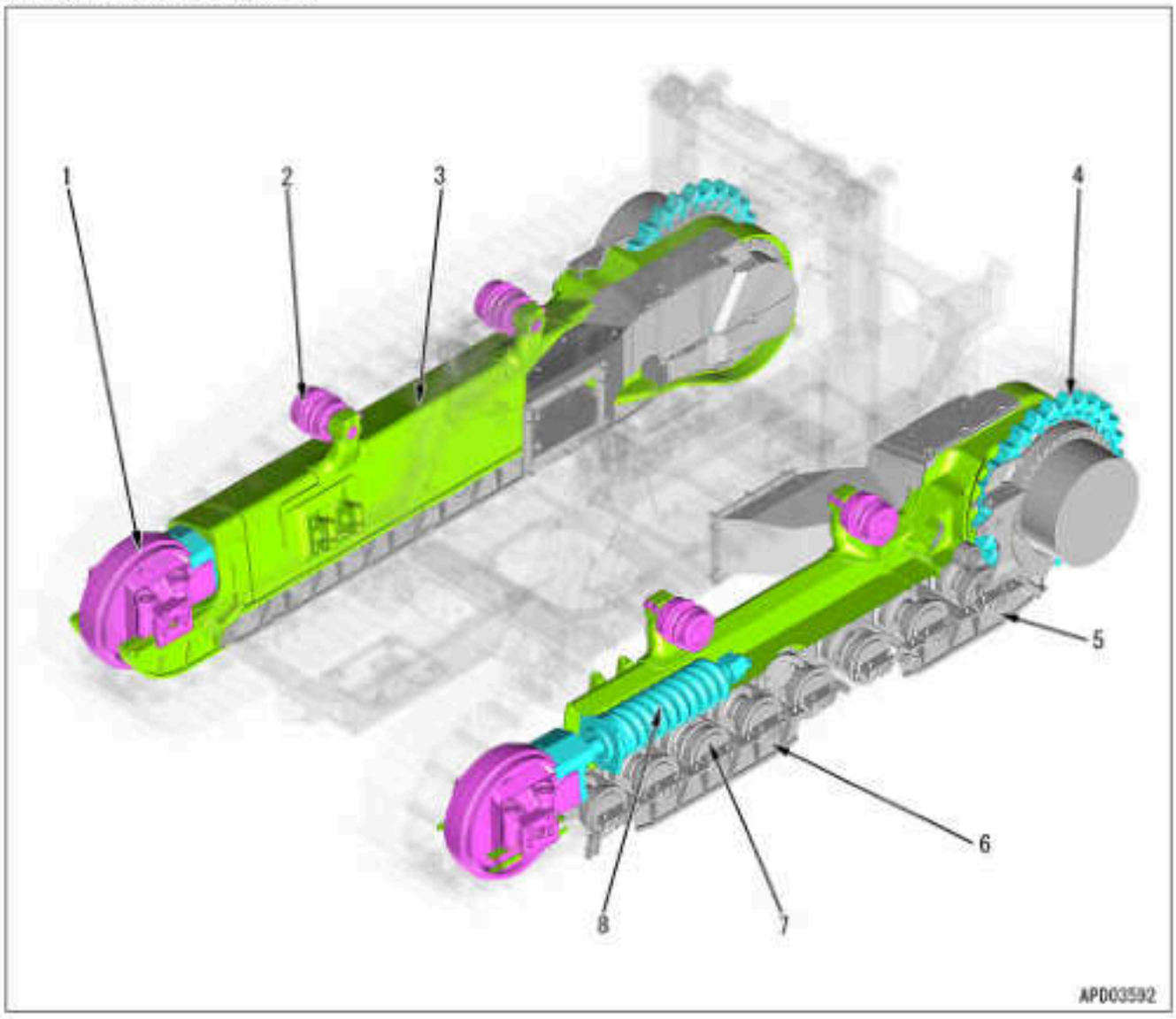
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TRACK FRAME AND IDLER CUSHION

STRUCTURE OF TRACK FRAME AND IDLER CUSHION

General view and sectional view

The figure shows D61EXI-24.



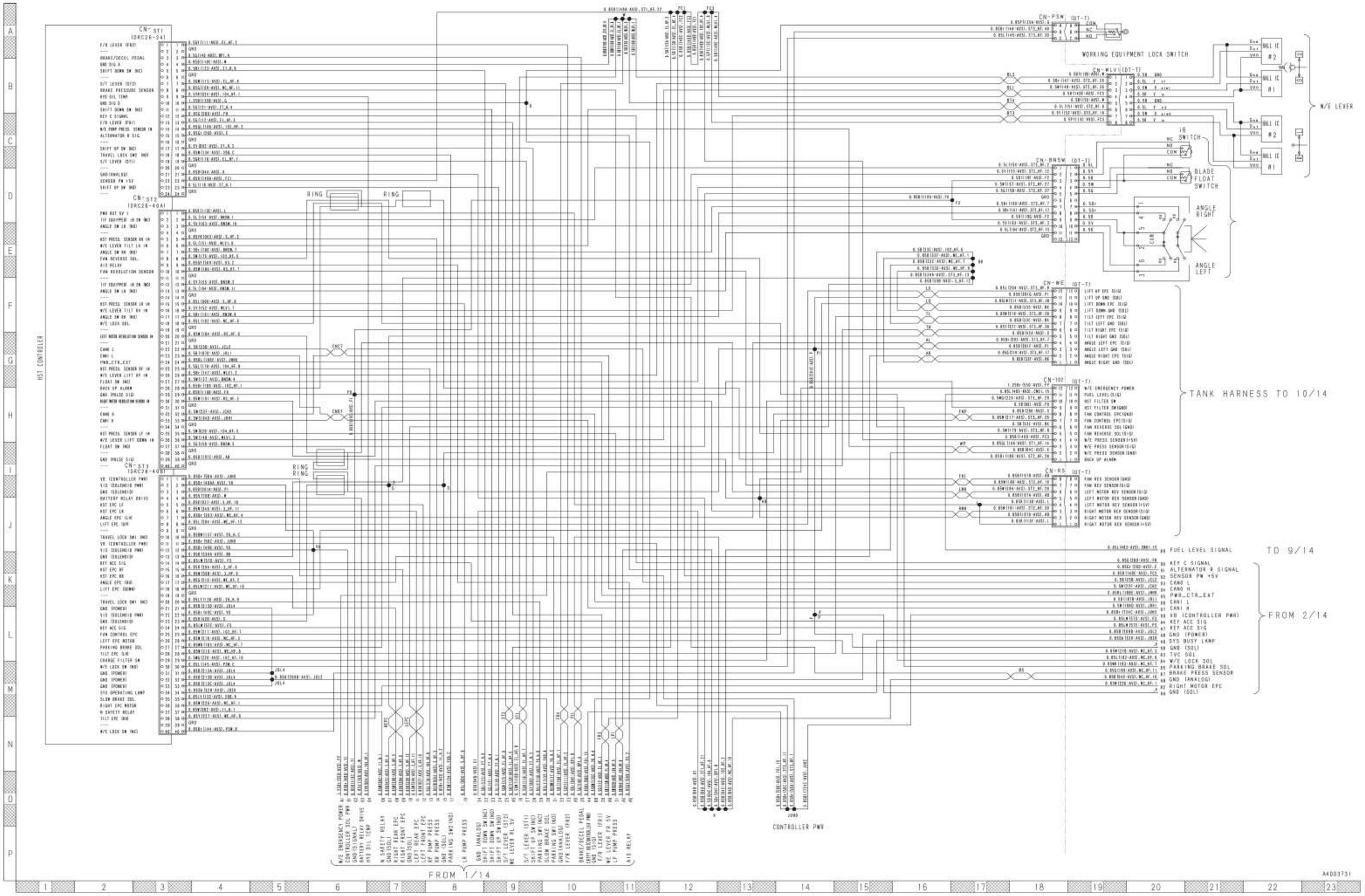
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ELECTRICAL CIRCUIT DIAGRAM (3/14)

D61EXI-24, D61PXI-24

REMARK

This figure includes the equipment and device that are unavailable as optional items in some areas.



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