SEN06621-02

Shop Manual

BULLDOZER

D51EXi-24
D51PXi-24

SERIAL NUMBERS D51EXi-10001 and up
D51PXi-10001

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Pm CLINIC

Pm CLINIC SERVICE

Machine model	Serial number	Service meter
□ D51EXI-24 □ D51PXI-24		h
User name	**Date of inspection**	**Inspector**

Specifications			
Front attachment	**Rear attachment**	**Shoe width**	
□ Wide blade □ Narrow blade □ Large capacity blade	□ Pitch drawbar □ Long drawbar □ Variable multi-shank ripper	□560 mm □710 mm	

Operating condition			
Quarry, Mining	**Construction**	**Type of soil (gravity)**	**Details of work**
□ Coal □ Gold □ Limestone □	□ Construction, civil engineering □ Road □ Tunnel □	□ Rock □ Gravel □ Sand □ Clay	□ Dozing, digging % □ Side cutting % □ Leveling % □ Travel %

Check of oil and coolant levels	
□ Engine coolant level	When necessary
□ Engine oil level	□ Final drive oil level
□ Hydraulic oil level	

Ambient temperature	Altitude
°C	m

Operator's comment
Result of visual inspection

Mechanic system error record				Electric system error record			
6091NX	Times/First time	h/Latest	h		Times/First time	h/Latest	h
A900FR	Times/First time	h/Latest	h		Times/First time	h/Latest	h
A900N6	Times/First time	h/Latest	h		Times/First time	h/Latest	h
A900NY	Times/First time	h/Latest	h		Times/First time	h/Latest	h
AA10NX	Times/First time	h/Latest	h		Times/First time	h/Latest	h
AB00KE	Times/First time	h/Latest	h		Times/First time	h/Latest	h

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FAILURE CODE [DAJRKR]

Action level	Failure code	Failure	Controller Area Network 1 Defective Communication (Hydrostatic Transmission Controller) (Machine monitor system)
L03	DAJRKR		
Detail of failure	Machine monitor does not recognize HST controller through CAN communication 1 line (KOMNET/r).		
Action of controller	• Does not update communication information of CAN1. • Restricts operations of engine and HST. • If cause of failure disappears, machine becomes normal by itself.		
Phenomenon on machine	• Information to be obtained from HST controller is not displayed and special functions that need information do not work. Or update of received data is stopped. • Hydraulic oil temperature gauge pointer disappears on machine monitor screen. • Engine speed is restricted to medium (half) speed. • Once machine stops, speed range is restricted to F2.		
Related information	• After completion of repair, check that the failure code is cleared by the following procedure. Procedure: Turn the starting switch to ON position. • Start of CAN communication is recognized by each controller when ACC signal of starting switch is received. • Monitor controller uses failure codes [DB2RKR], [DAJRKR], and [DBRRKR] to indicate failure in CAN communication through CAN 1 line. • CAN1 terminating resistor is located in the machine monitor for cab side. • Since each controller and machine monitor are connected directly to battery, they are supplied with power even after starting switch is turned to OFF position. • Since signal of active CAN communication line is pulse voltage, it cannot be measured by using multimeter.		

No.	Cause	Procedure, measuring location, criteria and remarks
1	Defective power supply to HST controller	Perform troubleshooting for failure code [DAJ1KK].
2	Defective CAN communication 1 system	Perform checks on causes 2 to 8 in troubleshooting for failure code [DB2RKR].
3	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.)
4	Defective machine monitor	If failure code is still displayed after above checks, machine monitor is defective. (Because this is an internal defect, troubleshooting cannot be performed.)

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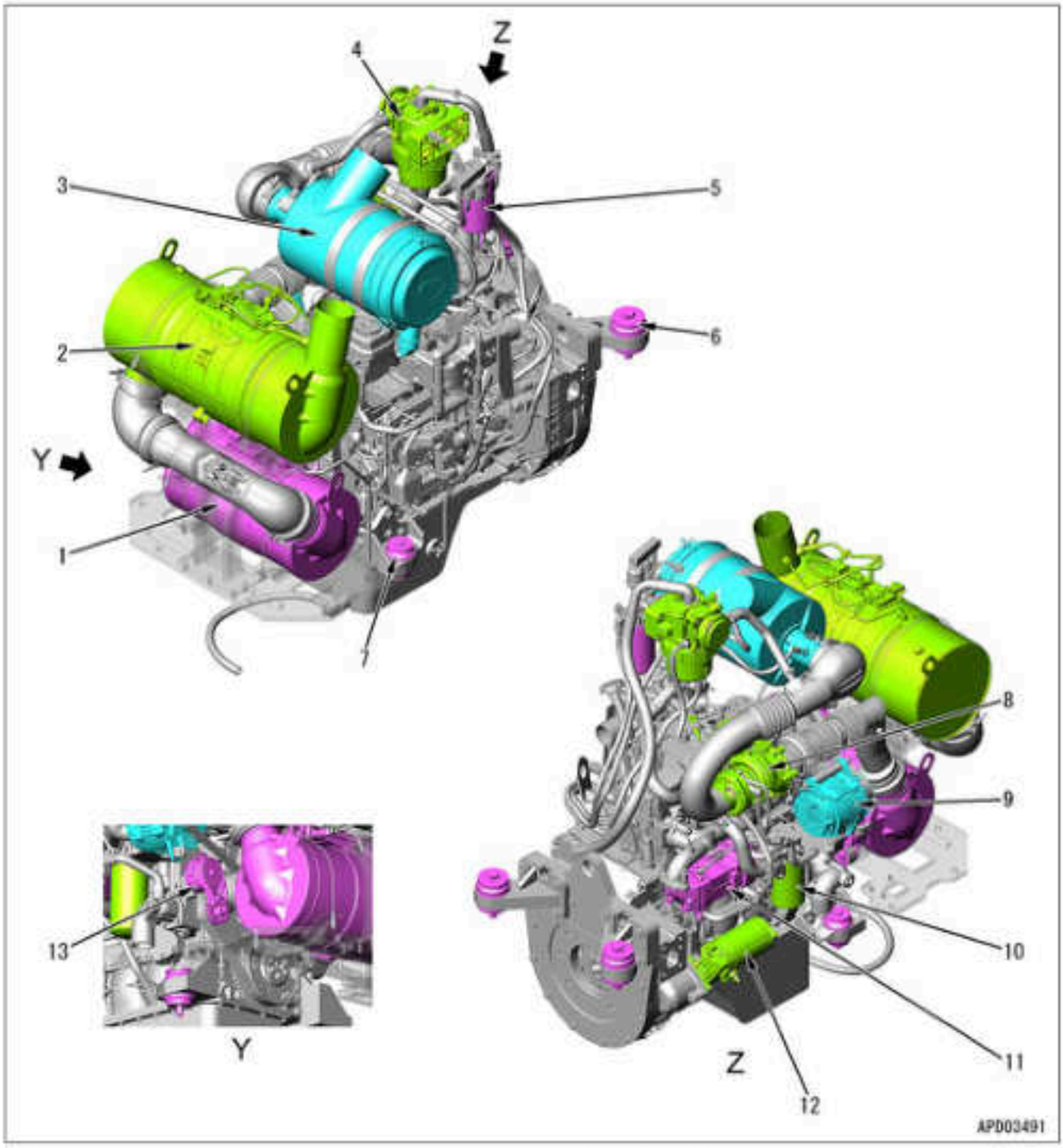
No.	Cause	Procedure, measuring location, criteria and remarks		
g	Open circuit 1 in wiring harness (wire breakage or defective contact of connector)	If no failure is found by check on cause 6, this check is not required. 1. Turn the starting switch to OFF position. 2. Remove fuse No.3 (15 A) in fuse box F01. 3. Disconnect connectors HET, HRH, HRL, and 92, and connect T-adapter to each female side.		
		Resistance	Between F01-3 and HET (female) (5)	Max. 1 Ω
			Between F01-3 and 92 (female) (3)	Max. 1 Ω
			Between ground (T35) and each of HRH (female) (2) and (5)	Max. 1 Ω
			Between HRH (female) (1) and HET (female) (6)	Max. 1 Ω
			Between HRH (female) (3) and 92 (female) (1)	Max. 1 Ω
			Between ground (T35) and each of HRL (female) (2) and (5)	Max. 1 Ω
			Between HRL (female) (1) and HET (female) (4)	Max. 1 Ω
			Between HRL (female) (3) and 92 (female) (2)	Max. 1 Ω
		If no failure is found by check on cause 5, this check is not required. 1. Turn the starting switch to OFF position. 2. Disconnect connector 92, and connect T-adapter to male side. 3. Disconnect connectors HEAT1 and HEAT2.		
		Resistance	Between 92 (male) (1) and HEAT1 (female) (A)	Max. 1 Ω
			Between 92 (male) (1) and HEAT2 (female) (A)	Max. 1 Ω
			Between 92 (male) (2) and HEAT1 (female) (B)	Max. 1 Ω
			Between 92 (male) (2) and HEAT2 (female) (B)	Max. 1 Ω
			Between 92 (male) (3) and HEAT1 (female) (C)	Max. 1 Ω
			Between 92 (male) (3) and HEAT2 (female) (C)	Max. 1 Ω

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ENGINE SYSTEM

LAYOUT DRAWING OF ENGINE SYSTEM

General view



1:KDOC
2: SCR assembly
3: Air cleaner
4: KCCV ventilator
5: Fuel main filter
6: Rear engine mount
7: Front engine mount
8:VGT
9: Alternator
10: Engine oil filter
11: EGR cooler
12: Starting motor

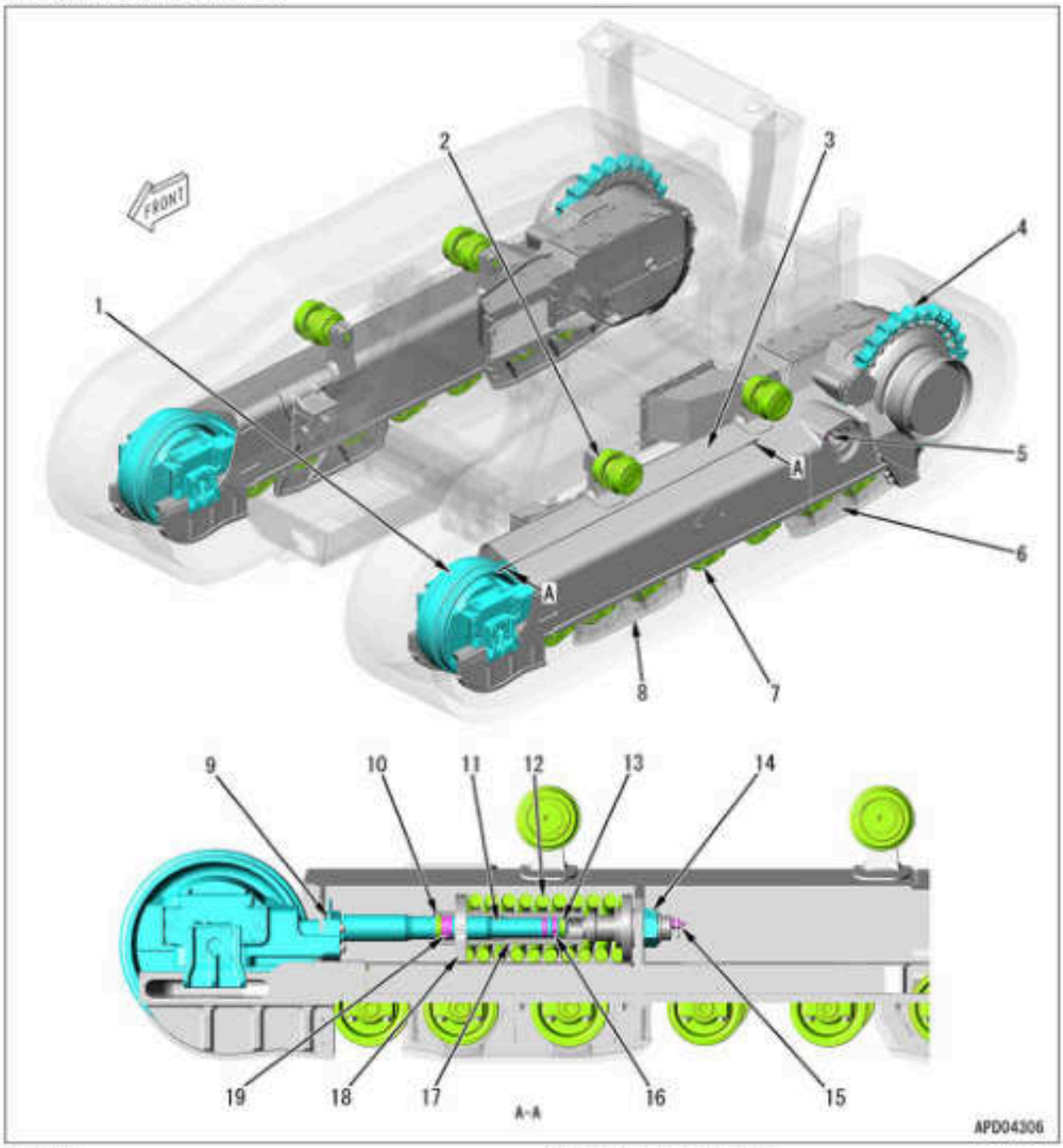
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TRACK FRAME AND IDLER CUSHION

STRUCTURE OF TRACK FRAME AND IDLER CUSHION

General view and sectional view

The figure shows D51PXI-24.



1: Idler
2: Carrier roller
3: Track frame
4: Sprocket
5: Plug (oil filler port)
6: Track roller end guard
7: Track roller
8: Track roller center guard
9: Yoke
10: Seal

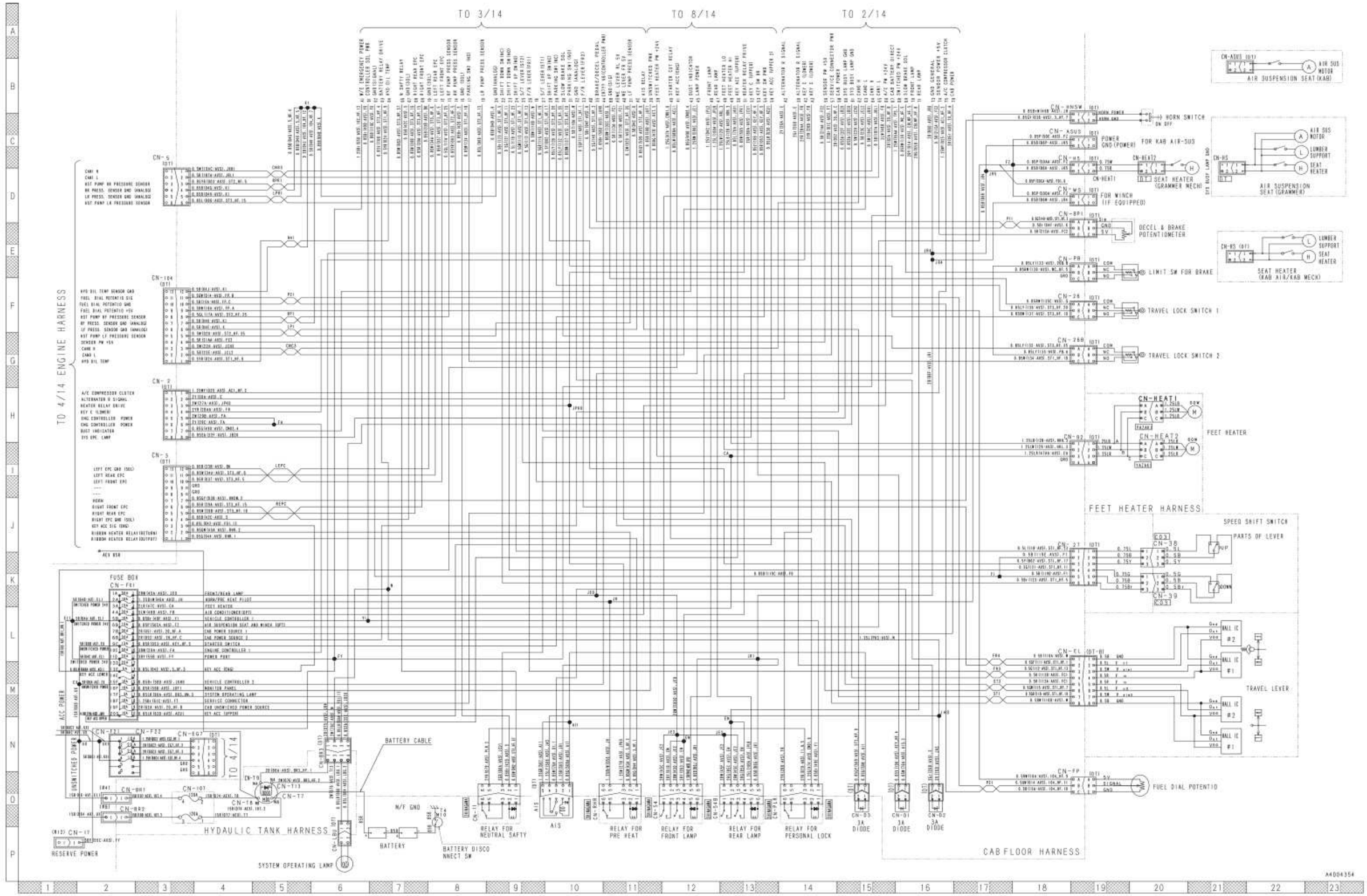
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ELECTRICAL CIRCUIT DIAGRAM (1/14)

D51EXI-24, D51PXI-24

REMARK

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



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