SEN06586-03

Shop Manual

BULLDOZER

D37EX -24
D37PX -24
D39EX -24
D39PX -24

SERIAL NUMBERS

D37EX- 85001
D37PX- 85001
D39EX- 95001
D39PX- 95001

and up

KOMATSU®

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Item	Unit	D37EX-24
		400 mm
		Single shoe

*1: Indicates the machine with the conventional type track shoes.

*2: Indicates the value of the bare engine (without cooling fan).

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

*4: The battery capacity (Ah) is indicated in the 5-hour rate.

*5: North America specification only

REMARK

- The engine rated horsepower is indicated in the net value and gross value. Gross denotes the rated horsepower measured on the basic engine unit. Net denotes the value of an engine which is measured under the condition almost the same as that of the time when it would be installed on a machine.
  - The rated horsepower (net) at the maximum cooling fan speed is the following value.
    62.3 kW/83.5 HP{2200 min^{-1}/2200 rpm}

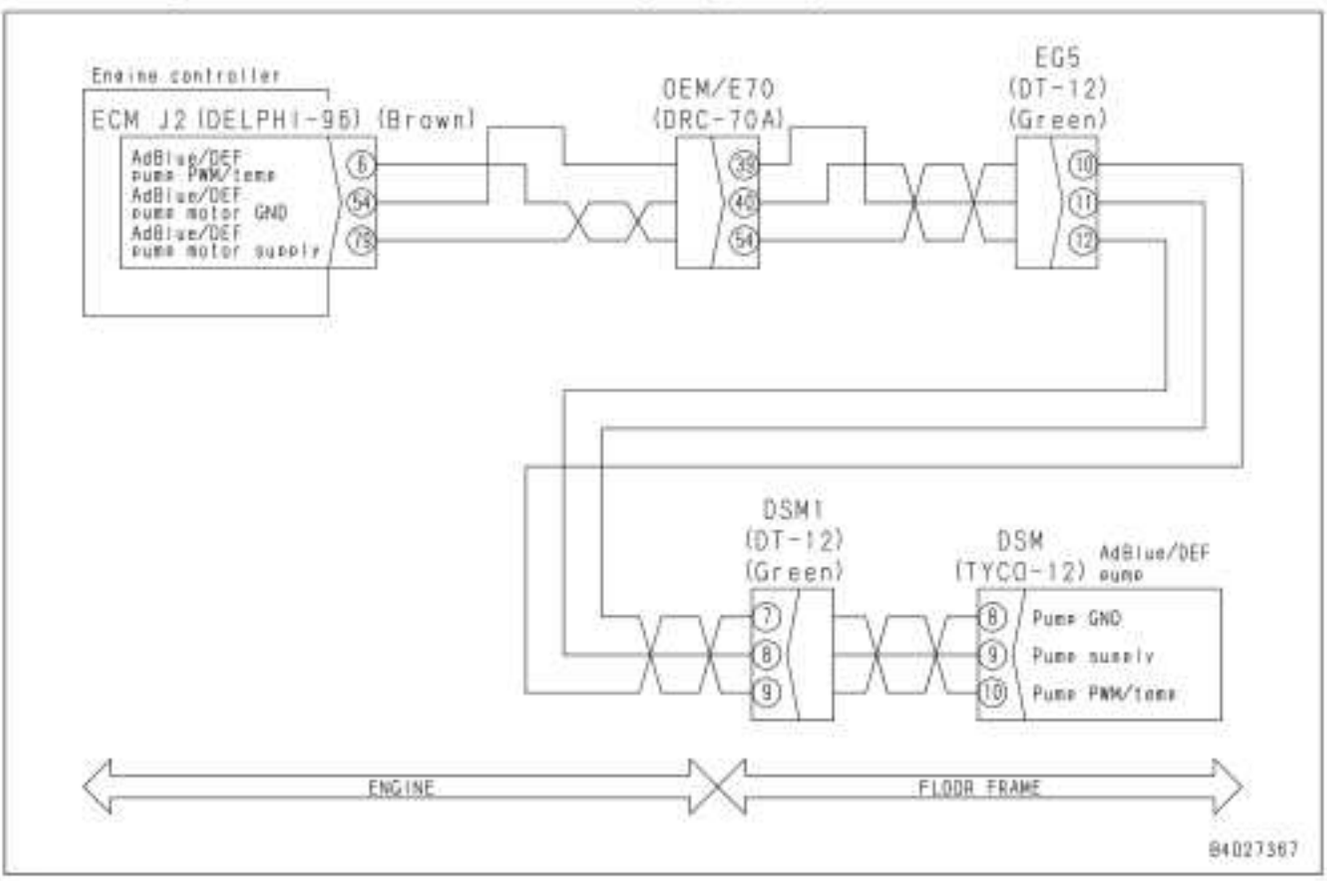
62.3 kW/83.5 HP{2200 min^{-1}/2200 rpm}

Power train		
HST pump		
Main pump		
Type x quantity	-	Variable displacement swash plate piston type x 2
Discharged volume	cm^3/rev	75 x 2
Set pressure	MPa{kg/cm^2}	41.2 {420}
Charge pump		
Type x quantity	-	Fixed displacement gear type x 1
Discharged volume	cm^3/rev	36.1
Set pressure	MPa{kg/cm^2}	3.23 {33}
HST motor		
Type x quantity	-	Variable displacement bent axis piston type (with parking brake) x 2
Discharged volume	cm^3/rev	105
Final drive	-	Planetary gear, double reduction, splash oil lubrication type
Undercarriage		
Suspension	-	Hard type
Carrier roller	-	1 piece on one side
Track roller	-	6 pieces on one side
Track shoe	-	
Assembling type single grouser	-	Width : 400 mm, 41 pieces on one side, pitch: 154 mm
Work equipment hydraulic system		
Work equipment and cooling fan pump		
Type x quantity	-	Variable displacement swash plate piston type x 1
Discharged volume	cm^3/rev	45

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No.	Cause	Procedure, measuring location, criteria and remarks		
5	Ground fault in wiring harness (contact with GND circuit)	1. Turn the starting switch to OFF position. 2. Disconnect the connectors ECM J2 and DSM , and connect the T-adapter to either female side.		
		Resistance	Between ground and ECM J2 (female) (6) or DSM (female) (10)	Min. 1 MΩ
			Between ground and ECM J2 (female) (79) or DSM (female) (9)	Min. 1 MΩ
6	Hot short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connector DSM, and connect T-adapter to female side. 3. Turn starting switch to ON position.		
		Voltage	Between DSM (female) (10) and (8)	Max. 4.5 V
7	Defective AdBlue/DEF pump temperature sensor (internal defect)	If no failure is found by preceding checks, AdBlue/DEF pump temperature sensor may be defective. (In case of an internal defect, troubleshooting is impossible as an assembly. Replace whole assembly.)		
8	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 AdBlue/DEF pump temperature sensor



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FAILURE CODE [CA5277]

Action level	Failure code	Failure	Exhaust Throttle Valve Auto Zero Error (Engine controller system)
L03	CA5277		
Detail of failure	The position zero learned value of the exhaust throttle valve exceeds the specified range.		
Action of controller	• Closes EGR valve and fully opens the flow control valve and exhaust throttle valve of the variable flow turbocharger. • Derates engine power for operation.		
Phenomenon on machine	Engine output lowers.		
Related information	• This failure code is detected during engine operation. • After completion of repair, check that the failure code is cleared by the following procedure. Procedure: Turn the starting switch to ON position.		

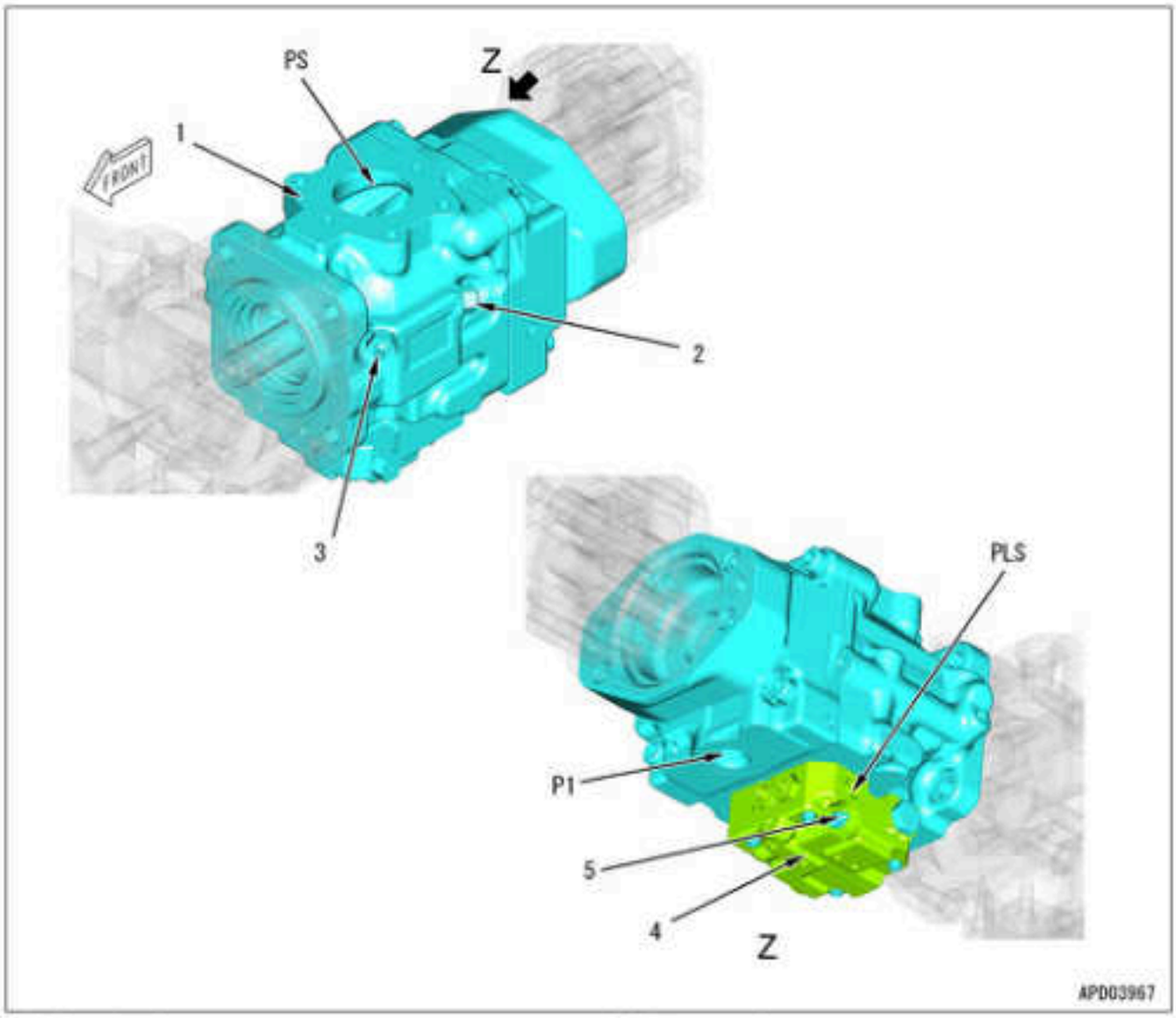
No.	Cause	Procedure, measuring location, criteria and remarks
1	Defective exhaust throttle valve internal bearing	First, check the description in failure code [AU10QA]. Even when there is no occurrence of failure code [AU10QA], check the clearance of the exhaust throttle valve.
2	Defective wiring harness connector	1. See descriptions of wiring harness and connectors in "Electrical equipment" in "CHECKS BEFORE TROUBLESHOOTING" of "RELATED INFORMATION ON TROUBLESHOOTING", and check them. 2. Turn the starting switch to ON position.
		If this failure code is not displayed, the wiring harness connector is defective.
3	Foreign material caught in the exhaust throttle valve	Remove the exhaust throttle valve and check if foreign materials, etc. are caught in the valve.
4	Defective function of the exhaust throttle valve	Remove and check the exhaust throttle valve since it may be mechanically defective. • Check if the valve and the flange contact each other. • Check if the spring is broken.
5	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.)

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WORK EQUIPMENT AND COOLING FAN PUMP

STRUCTURE OF WORK EQUIPMENT AND COOLING FAN PUMP

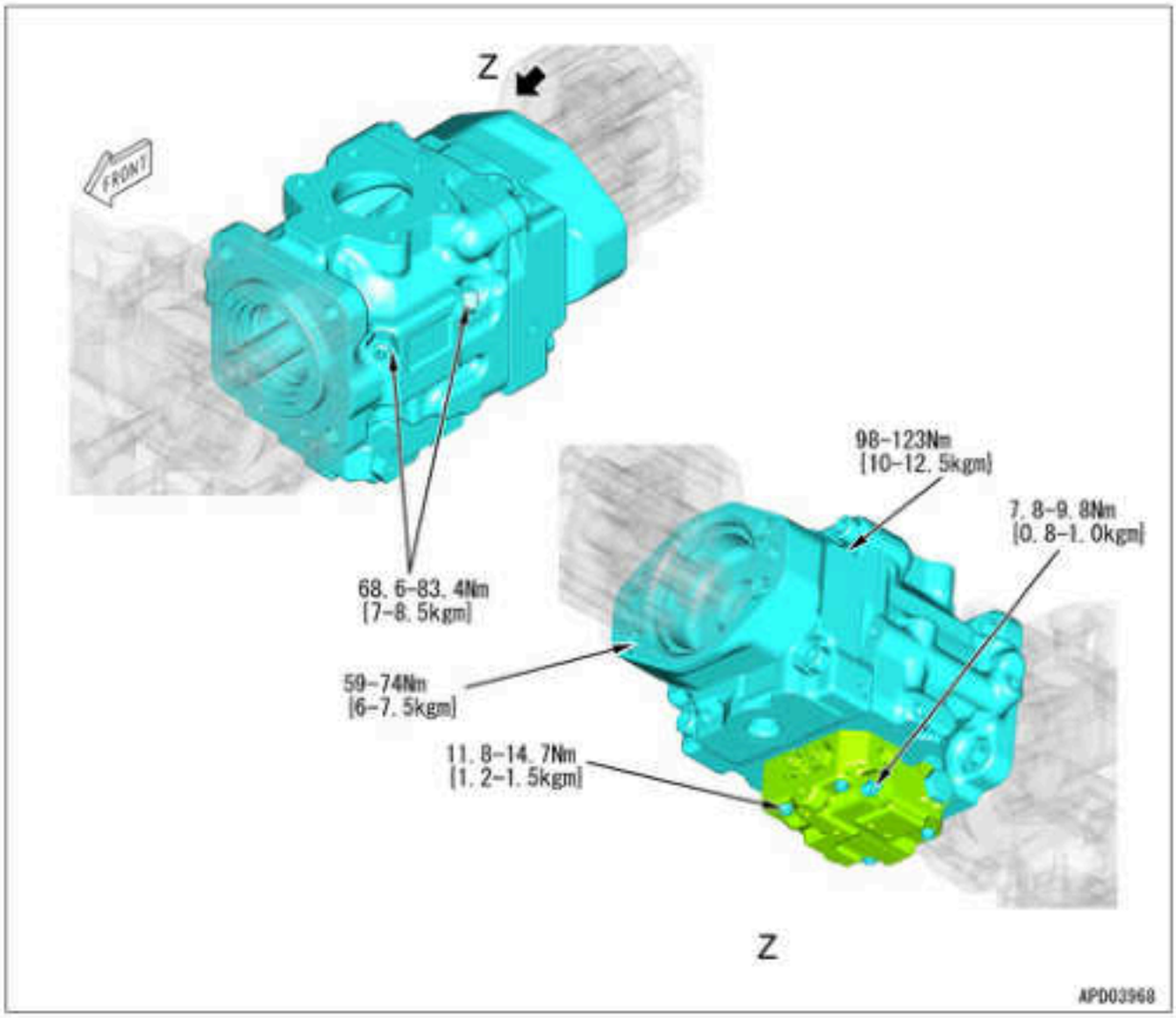
General view



P1: Pump discharge port
PS: Pump suction port
PLS: Load pressure input port
1: Pump body
4: Servo valve
2: Min. swash plate adjustment plug
5: Bleeder
3: Max. swash plate adjustment plug

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MAINTENANCE STANDARD OF WORK EQUIPMENT AND COOLING FAN PUMP



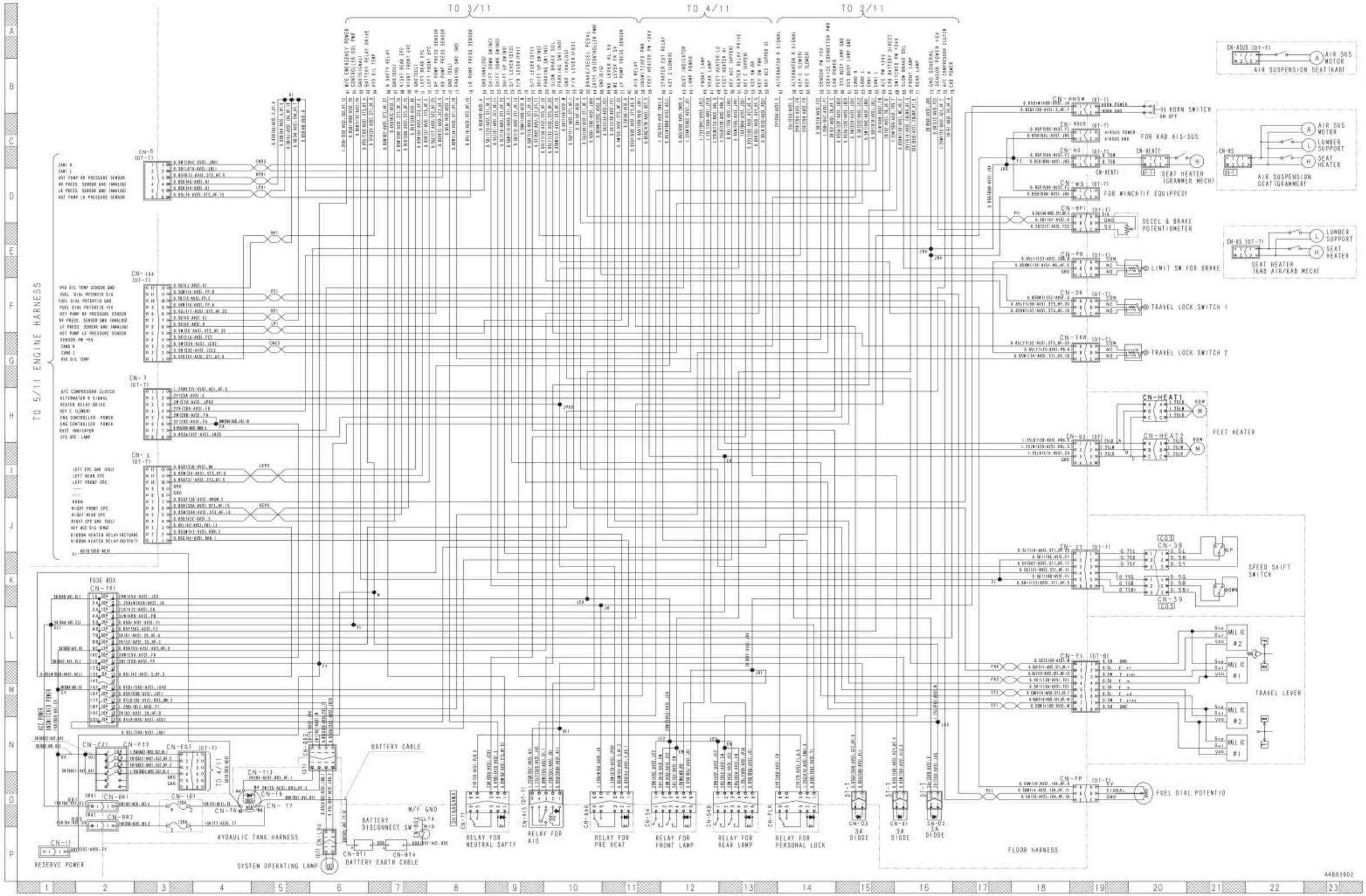
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ELECTRICAL CIRCUIT DIAGRAM (1/11)

D37EX-24,D37PX-24,D39EX-24,D39PX-24

REMARK

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



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