CEBM026301

Shop Manual

960E-2K

DUMP TRUCK

SERIAL NUMBERS **A50011 & UP**

KOMATSU®

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Support capacitors



80947

FIGURE 10-27. SUPPORT CAPACITORS, FRONT VIEW

1. Capacitor 2. Support

The capacitor buffers and filters the SiBASØ supply voltage (+24 V). It is labeled C107 and is located in the far right top compartment. The capacitor SiBASØ has enough time in the event of a sudden loss of 24V to immediately trigger the protection thyristor.

Technical Data

33k µF, 63V

3-Phase capacitor bank (for ST module output voltage)



80950

FIGURE 10-28. 3-PHASE CAPACITOR BANK, SIDE VIEW

Technical Data

3 x 22.5 µF, 690 VAC

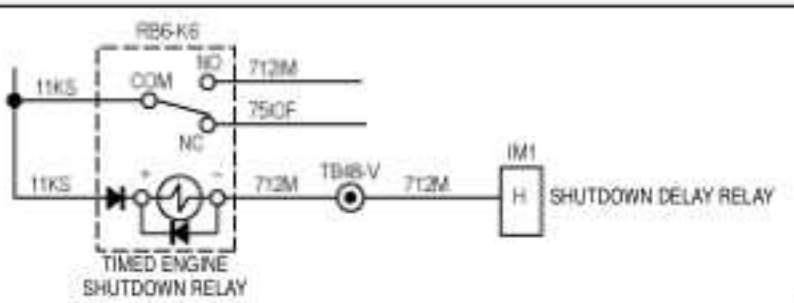
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Fault Code A352: Overload on output 1H

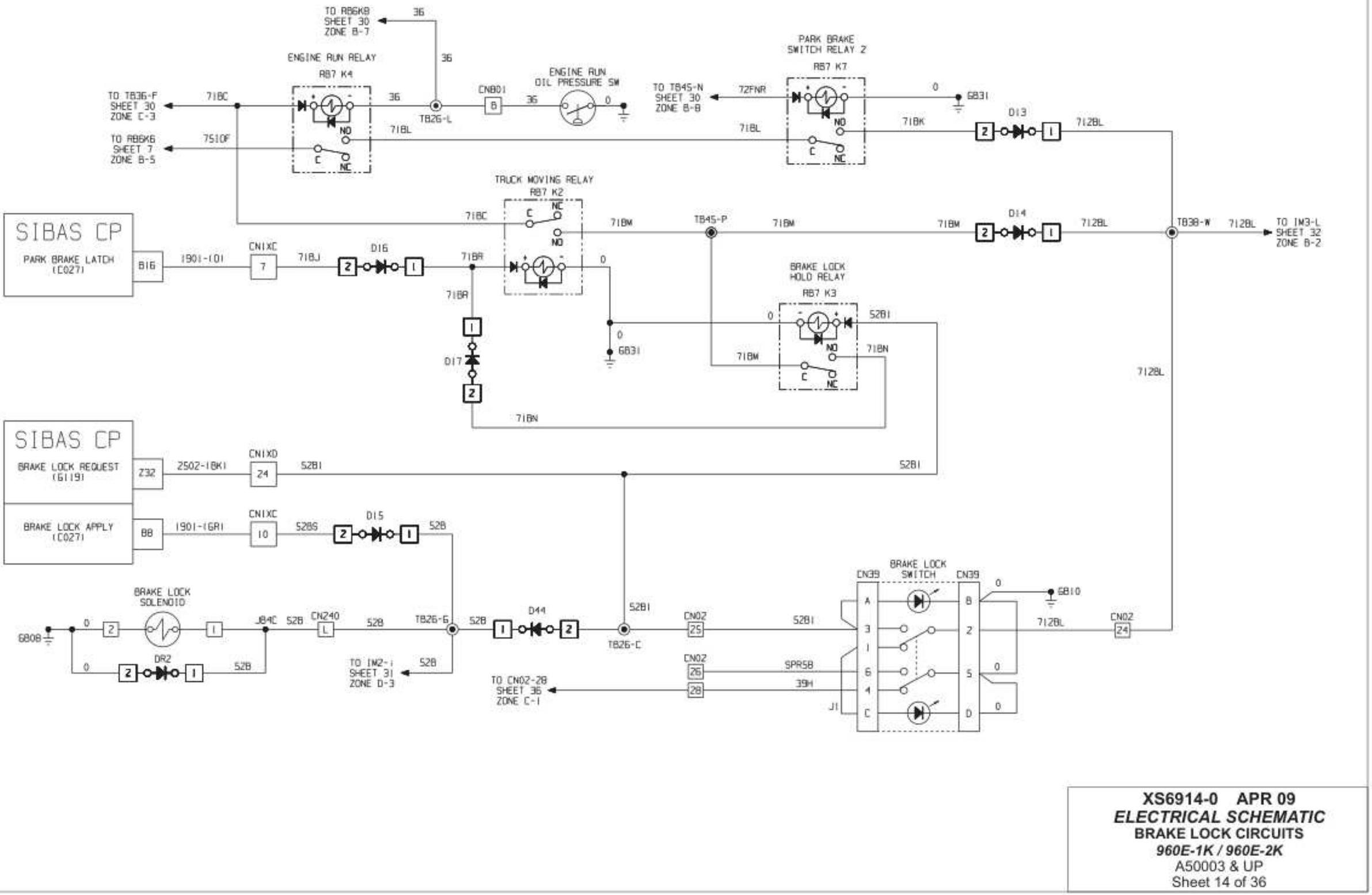
Operator Action	None
Fault Code	A352
Description	Overload on output 1H.
Fault Conditions	Sets if driver chip detects overcurrent or over temp on output 1H. Output is turned off when overload is detected. Resets at power down.
Operator Alerting System Response	Repair Lamp Display Fault Description: SHUTDOWN DELAY CKT Display Fault Code: A352
Resulting Problem(s)	Shutdown delay (5 Minute Idle Latch or Shutdown Delay Relay) circuit is disabled.
Related Information	A laptop running "IM Realtime Data Monitor" software may be required to resolve this fault.

Table	
1. This fault's logic contains just one parameter, which may have additional fault code(s). This fault may be resolved by resolving the parameter(s) active fault code(s). Refer to the Troubleshooting Instructions for the active parameter fault(s). 2. If there are no active parameter fault codes, then based on the truck's setup while this fault is active, determine which of the parameters in the Table is not shown in its expected state on the IM Realtime Data Monitor program. Refer to the schematic to identify which item(s) may be causing the parameter(s) to be in the unexpected state. Troubleshoot these items. 3. If this fault is not currently active or if no parameters are currently in the unexpected state and the malfunction is still unresolved, then check each of the parameters in the Table for proper functionality. Troubleshoot all item(s) related to the parameter(s) which are found to be malfunctioning.	
Parameter	**Expected State and/or Related Fault(s)**
Shutdown Delay Relay (IM 1H)	Status - Open Load: Unexpected. Troubleshoot. Status - Normal: Expected. No problem. Status - Shorted to Ground: Unexpected. Troubleshoot. Status - Overload: Unexpected. Troubleshoot. 0. Turns off when conditions clear or engine speed drops to zero. 1: Turns on when Keyswitch, Direct is off, Cummins Shutdown Delay is on, Park brake is set, Selector Switch is in park,but not J1939 Not Connected, not High Batt Charge Voltage, not Starter Stuck On, not Active Engine Red Light, and engine speed above 300. Fault(s): A286, A292

Related circuit diagram



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ELECTRICAL SCHEMATIC
BRAKE LOCK CIRCUITS
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A50003 & UP
Sheet 14 of 36

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10. Install both halves of collar (8) over the coupling grid. Ensure that both O-rings are properly seated in the collar grooves. Install and tighten four screws (9) to the standard torque.

NOTE: There is an alignment tab on the inner race of both collar halves to ensure proper positioning over the coupling grid.

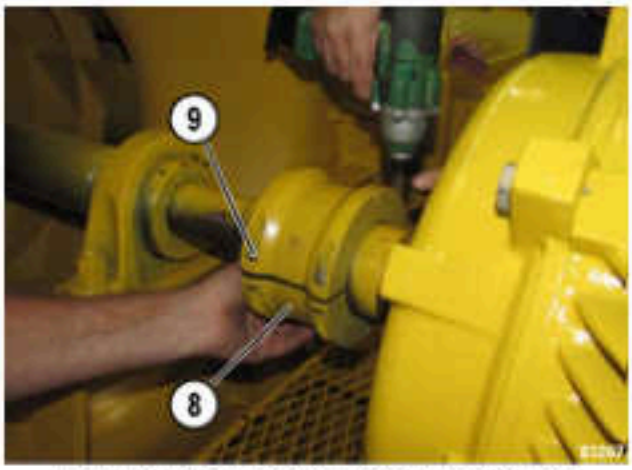


FIGURE 50-34. INSTALLING THE COLLAR

8. Collar 9. Screws

11. Install shaft guard (10). Install four capscrews, washers and nuts (11) that secure the shaft guard to the frame.

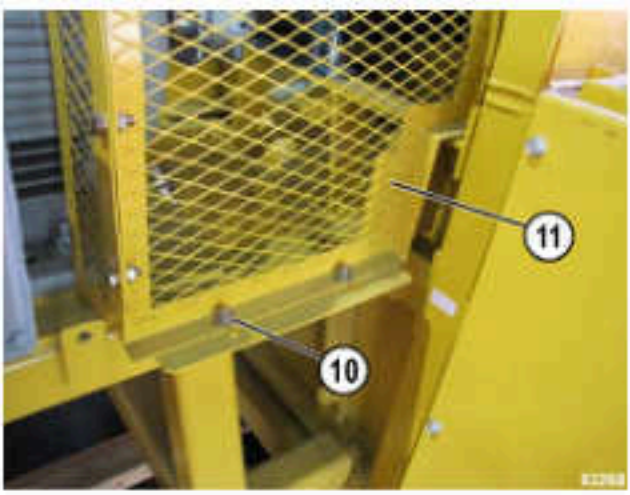


FIGURE 50-35. INSTALLING THE SHAFT GUARD

10. Shaft Guard 11. Capscrew, Washer and Nut

Removing a grid element

NOTE: There are two banks of elements in the grid box. One bank can be accessed from each side of the grid box. Only remove the covers on the appropriate side.

1. Remove 14 capscrews (1) and side cover (2).

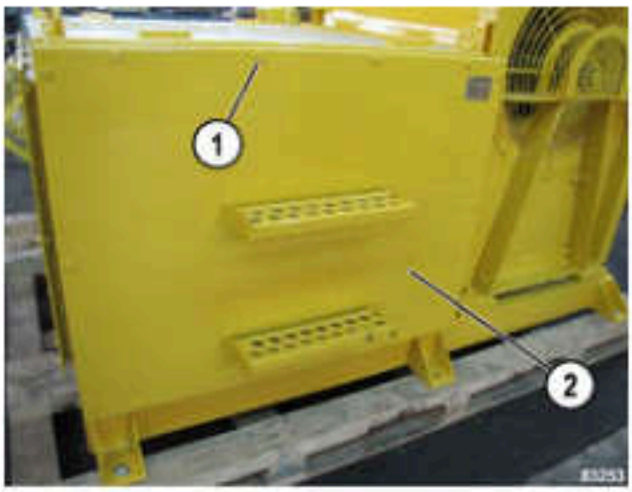


FIGURE 50-36. REMOVING THE SIDE COVER

1. Capscrew 2. Side Cover

2. Remove 12 capscrews (3) and top cover (4).

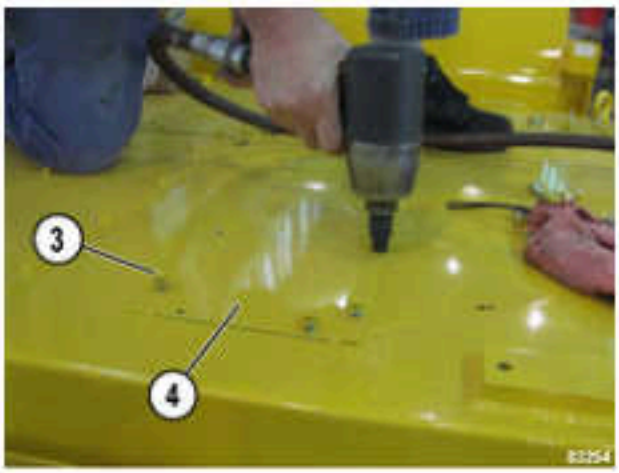


FIGURE 50-37. REMOVING THE TOP COVER

3. Capscrew 4. Top Cover

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Grid box

Device name: M04

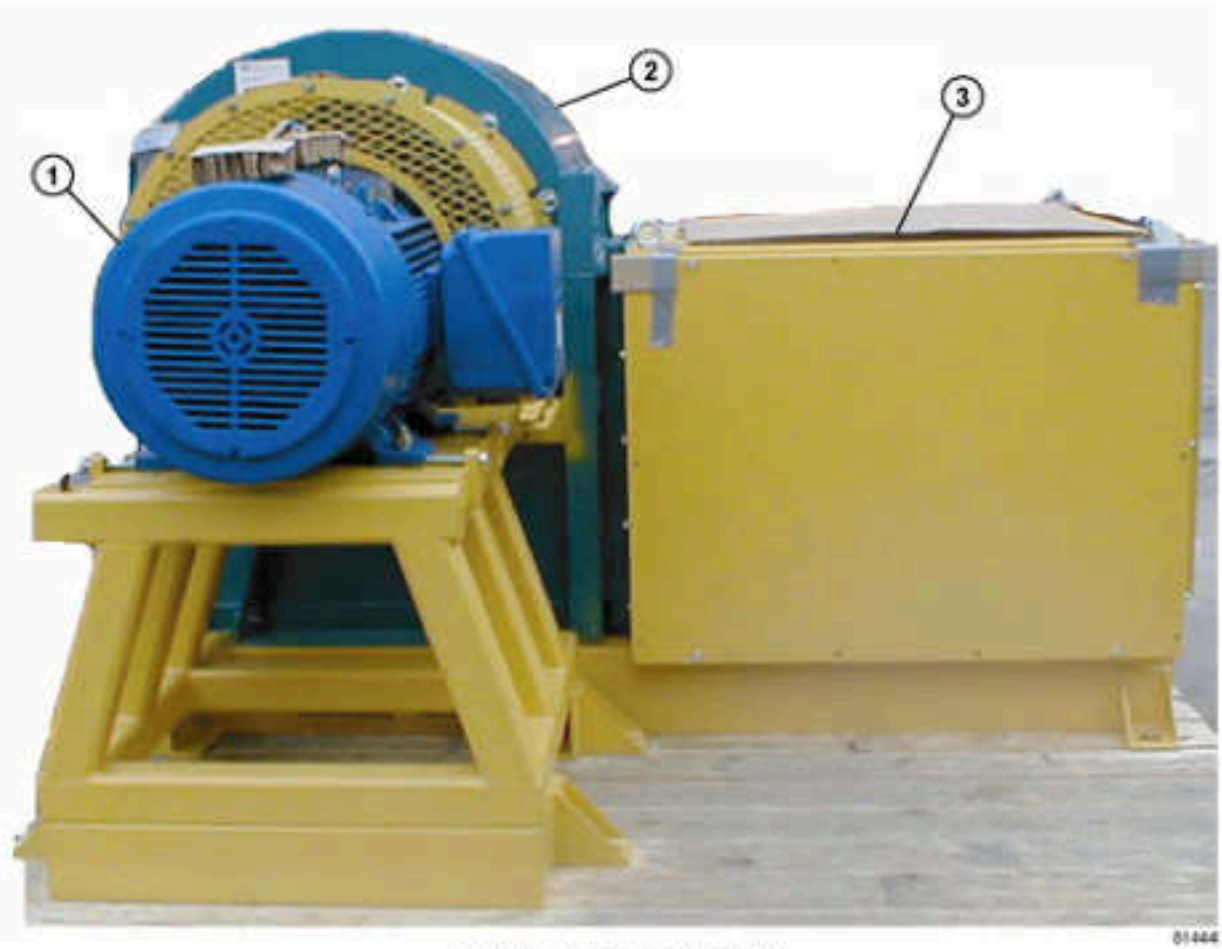


FIGURE 10-90. GRID BOX

1. Motor 2. Blower 3. Resistor Housing

Technical Data

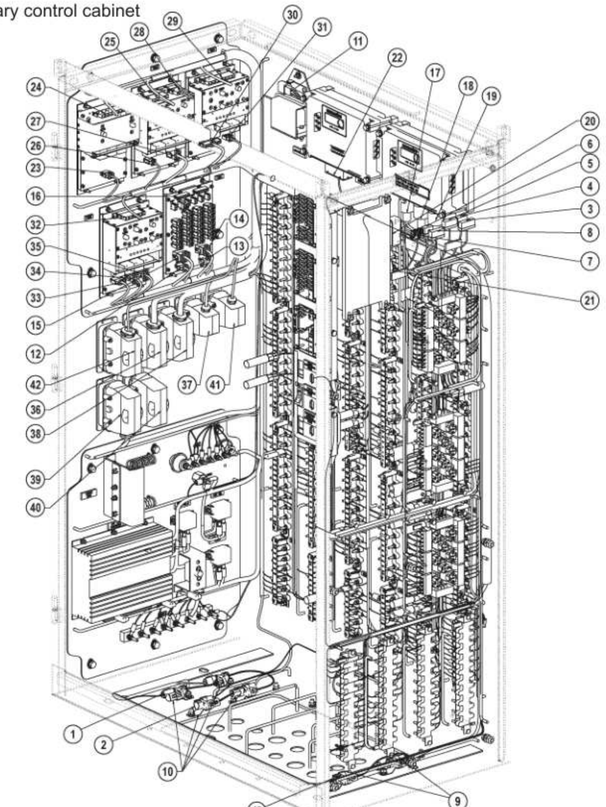
Nominal speed: 1500 rpm

Maximum speed: 1800 rpm

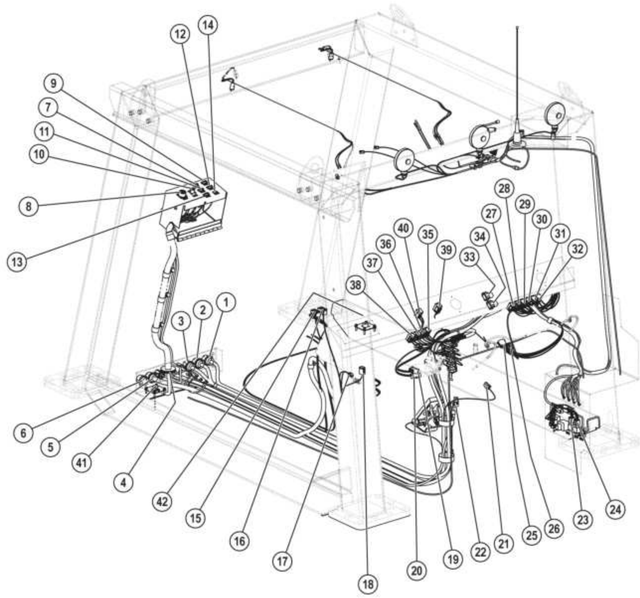
Approx. weight: 7,000 lbs. (entire grid box with blower, motor, and resistors)

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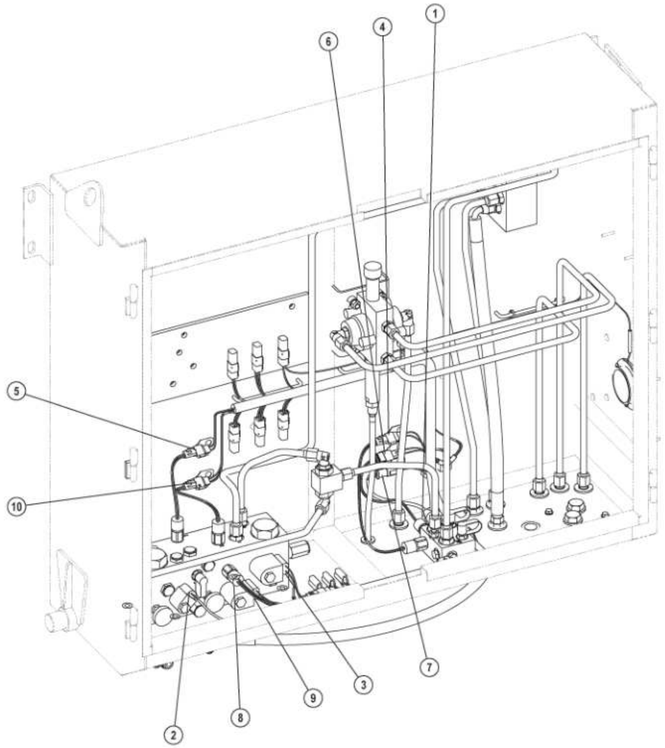
Auxilliary control cabinet



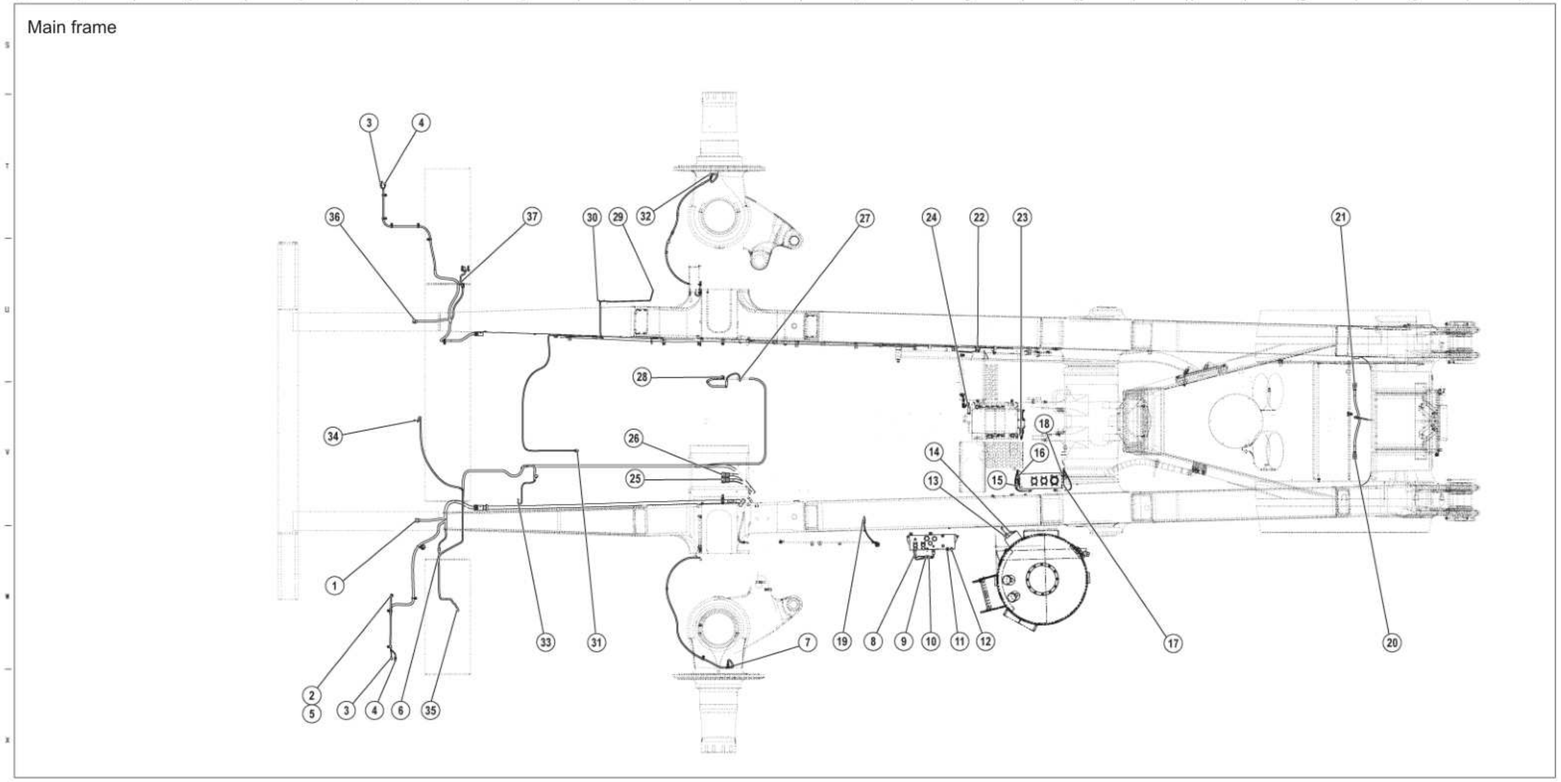
Operator cab



Hydraulic brake cabinet



Main frame



Connector No.	Number of pins	Description	Location	Item No.
AAT	2	Ambient air temperature sensor connector	W8	19
ABA	2	Auto brake apply solenoid connector	R3	2
BLS	2	Brake lock solenoid connector	R4	3
BPS	2	Brake pressure sensor connector	M5	4
CAN1A	3	CAN 1939 - network	F3	10
CN008	5	Wiper relay - high speed	K7	24
CN009	5	Wiper relay - low speed	K6	23
CN01	31	Cab interface - operator controls	J3	1
CN02	31	Cab interface - cab dash	J3	2
CN021	12	Steering column connector	K6	25
CN022	4	Speed control module	K6	26
CN03	31	Cab interface - cab dash	J3	3
CN04	23	Cab interface - cab overhead	K3	4
CN05	3	CAN link connector - dash	K5	22
CN06	18	Cab interface - cab center console	K1	5
CN07	31	Cab interface - cab diagnostic center	J1	6
CN08	8	Shifter connector	K4	18
CN13	3	Retand pedal connector	K5	21
CN14	4	Heater module connector	K5	20
CN16	8	Wiper motor connector	K5	19
CN1XA	24	Drive system interface connector - 1XA	D2	36
CN1XB	10	Drive system interface connector - 1XB	C3	37
CN1XC	10	Drive system interface connector - 1XC	D2	38
CN1XD	46	Drive system interface connector - 1XD	D2	39
CN1XE	46	Drive system interface connector - 1XE	D2	40
CN1XK	10	Drive system interface connector - 1XK	C3	41
CN1XM	46	Drive system interface connector - 1XM	C2	42
CN20	10	Display mode - 1 switch connector	I5	27
CN21	10	Display mode - 2 switch connector	I6	28
CN22	10	Fog light switch connector	I6	29
CN23	10	Backup light switch connector	I6	30
CN24	10	Ladder light switch connector	I6	31
CN240	23	Brake cabinet wiring connector	M5	1
CN246	3	Inclinometer connector - 246	A5	11
CN250	2	Shifter current limit resistor	K3	17
CN250	10	Headlight switch connector	I6	32
CN32	10	Speed control switch connector	I5	35
CN33	10	Traction control switch connector	I4	36
CN34	10	Grid dry control switch connector	I4	37
CN35	10	HI vold DC power switch connector	I4	38
CN36	10	Hazard light switch connector	I5	40
CN39	10	Brake lock switch connector	I5	39
CN501	4	Left wheel speed sensor connector	W8	7
CN502	8	Left frame / hood light connector	W3	1
CN503	5	Left engine service lights connector	X4	6
CN504	5	Right engine service lights connector	T5	37
CN507	4	Right wheel speed connector	T6	32
CN511	5	Auto lube pump connector	X3	2
CN512	3	Auto lube level connector	X3	5
CN515	8	Right frame / hood lights connector	T3	38
CN535	3	Ladder light switch connector	X3, T4	3
CN536	3	Engine shutdown switch connector	X4, T4	4
CN58	10	Right door window motor	K2	41
CN59	10	Left door window motor	K2	42
CN707	2	Left front brake temperature sensor connector	V9	15
CN708	2	Right front brake temperature sensor connector	V10	16
CN709	2	Left rear brake temperature sensor connector	W11	17
CN71	10	Right window switch	K3	15
CN710	2	Right rear brake temperature sensor connector	V10	18
CN711	2	Hydraulic tank temperature sensor connector	V9	14
CN712	3	Hydraulic tank level sensor connector	V9	13
CN72	10	Left window switch	K3	16
CN721	10	Left rear speed sensor connector	W13	20
CN722	10	Right rear speed sensor connector	T12	21
CN730	6	Fuel tank connector	T9	22

Connector No.	Number of pins	Description	Location	Item No.
CN801	16	Engine sub module connector	V6	25
CN802	3	Engine coolant level switch connector	V3	34
CN803	2	Engine temperature sensor connector	W5	33
CN807	5	Pre-lube relay connector	U6	28
CN808	9	Engine ECM / sub module connector	V6	26
CN810	2	Pre-lube pressure switch connector	T8	27
CN812	4	A/C receiver drier switch connector	X4	35
CN825	3	CAN 1939 - CAB	F4	43
CN826	4	Fuel pre-filter engine harness	W6	31
CN850	3	CAN RPC - VHMS	F2	1
CNP1	8	Dash panel - 1 connector	I5	33
CNP2	8	Dash panel - 2 connector	I5	34
DB1P1	3	Diode board 1 connector - P1	C2	12
DB1P2	6	Diode board 1 connector - P2	C3	13
DB1P3	12	Diode board 1 connector - P3	B3	14
DB1P4	15	Diode board 1 connector - P4	C2	15
DB1P5	6	Diode board 1 connector - P5	B3	16
DIAG 1	9	Diagnostic plug - 1 - drive system	H1	7
DIAG 2	6	Diagnostic plug - 2 - quantum	I1	8
DIAG 3	9	Diagnostic plug - 3 - drive system	H1	9
DIAG 4	3	Diagnostic plug - 4 - cense	I1	10
DIAG 5	9	Diagnostic plug - 5 - interface module	H1	11
DIAG 6	9	Diagnostic plug - 6 - VHMS	H3	12
DIAG 7	9	Diagnostic plug - 7 - payload	I1	13
DIAG 8	9	Diagnostic plug - 8 - dispatch	H3	14
EM3	41	Interface module connector 3	A6	19
FPF-LP	2	Fuel pre-filter low pressure connector	T6	29
FPF-WIF	2	Fuel pre-filter water in fuel connector	T6	30
HLS	2	Hoist limit solenoid connector	W9	11
HPS1	2	Hoist pressure sensor - 1	T9	24
HPS2	2	Hoist pressure sensor - 2	T9	23
IM1	41	Interface module connector 1	A5	17
IM2	41	Interface module connector 2	A6	18
LBPS	3	Low brake pressure switch connector	P1	5
LSPSW	3	Low steering pressure switch connector	W9	10
ORBCOMMCNA	14	Orbcomm connector CN-A	B7	20
ORBCOMMCNB	10	Orbcomm connector CN-B	C7	21
P04	3	CAN RPC - CAB	F2	2
PBAPS	3	Parking brake apply pressure switch connector	R3	8
PBRPS	3	Parking brake release pressure switch connector	Q1	10
PBS	2	Parking brake solenoid connector	R4	9
PLMCN264	10	Payload meter connector 264	A5	22
RB1P1	6	Relay board 1 connector - P1	B2	23
RB1P3	10	Relay board 1 connector - P3	A2	24
RB3P1	5	Relay board 3 connector - P1	A2	25
RB3P2	2	Relay board 3 connector - P2	B2	26
RB3P4	9	Relay board 3 connector - P4	A2	27
RB3P5	2	Relay board 3 connector - P4	A2	28
RB4P1	8	Relay board 4 connector - P1	A3	29
RB4P3	8	Relay board 4 connector - P3	A4	30
RB4P4	2	Relay board 4 connector - P4	A4	31
RB5P1	6	Relay board 5 connector - P1	B2	32
RB5P3	4	Relay board 5 connector - P3	C2	33
RB5P4	6	Relay board 5 connector - P4	C2	34
RB5P5	6	Relay board 5 connector - P5	B2	35
SBDPS	2	Service brake degrade pressure switch connector	M4	6
SBDPSW	3	Steering bleed down pressure switch connector	W8	8
SBDS	2	Steering bleed down solenoid connector	W8	9
SBPS	2	Service brake pressure switch connector	R5	7
SPS	2	Steering pressure sensor connector	W9	12
VHMSCN1	20	VHMS connector - CN1	B7	3
VHMSCN2A	18	VHMS connector - CN2A	B7	4
VHMSCN2B	12	VHMS connector - CN2B	B7	5
VHMSCN3A	18	VHMS connector - CN3A	B7	6
VHMSCN3B	12	VHMS connector - CN3B	C7	7
VHMSCN4A	14	VHMS connector - CN4A	B7	8
VHMSCN4B	10	VHMS connector - CN4B	F8	9

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CONNECTOR TABLE & ARRANGEMENT
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