CEBM021102

Shop Manual

830E-1AC

DUMP TRUCK

SERIAL NUMBERS **A30210 - A30239**

KOMATSU®

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FAILURE OF DISCHARGE SYSTEM

If the capacitor charge lights remain illuminated, a failure of the normal (fast) capacitor discharge system (RP discharge path) has likely occurred. The slow discharge resistors that are hard wired across the DC link should then discharge the capacitors. The slow discharge resistors will discharge the DC link to less than 1 VDC in under 7.5 minutes. If after 7.5 minutes, the capacitor charge lights are still illuminated, it must be assumed that the automatic discharge system is not working and that high voltage is present in the high voltage area.

Measuring Dc Voltage On Capacitors

1. Open the high voltage area doors.
2. With a suitable high voltage meter rated for at least 2000 VDC, such as PC3186 or equivalent, plus suitable protective equipment, measure the voltage across each of the DC link capacitors. Place one meter lead on the positive (+) capacitor terminal, and the other meter lead on the negative (-) capacitor terminal, and observe the voltage. See Figure 3-9 and Figure 3-10. If the voltage is less than 1.0 V the capacitor is sufficiently discharged. Repeat on all DC Link capacitors. If the voltage of any capacitor is above 1.0 V, manually discharge the capacitor as described in MANUAL DISCHARGE OF CAPICTORS.

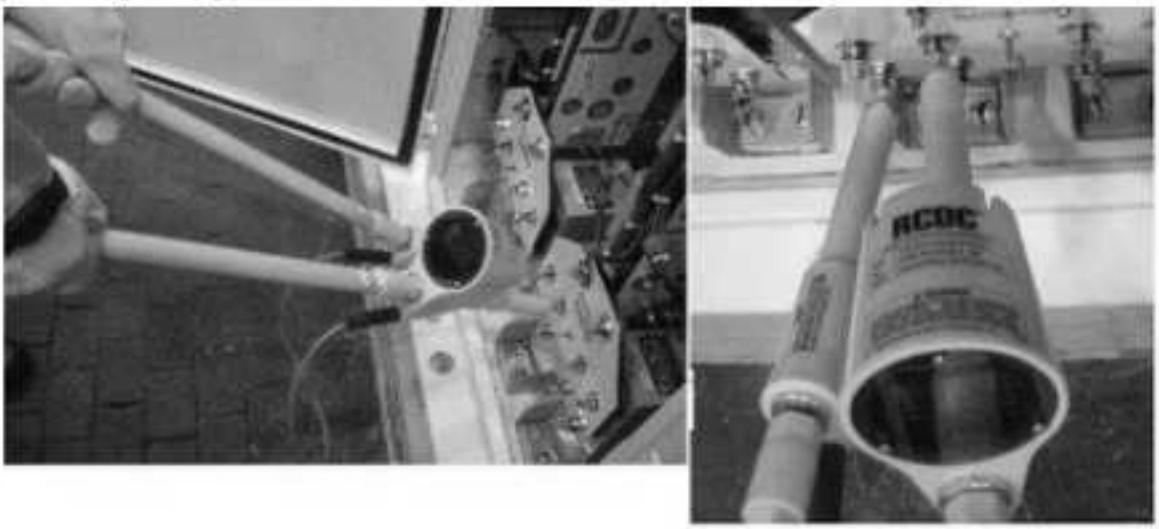


FIGURE 3-9. DC METER ON CAPACITOR

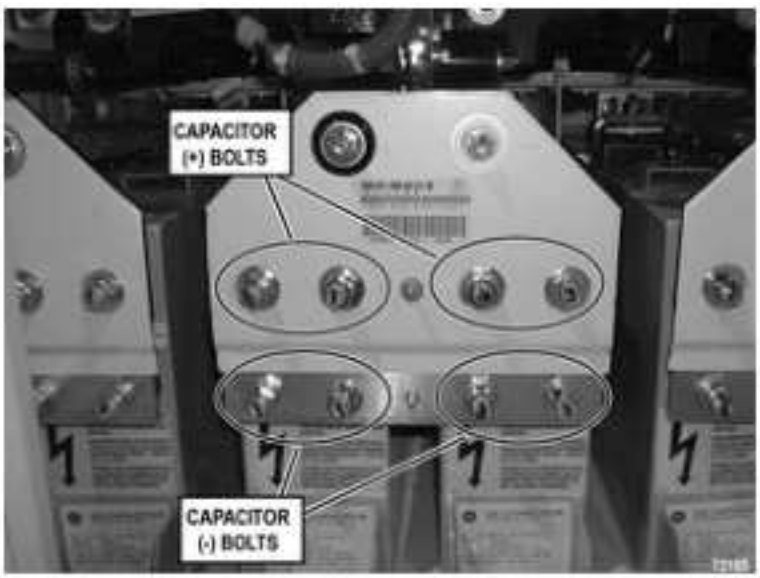


FIGURE 3-10. CAPACITOR TERMINAL POLARITY

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Engine Fault Codes

Table 4: Engine Fault Codes					
KOMTRAX Plus Fault Code	KOMTRAX Plus Fault Description	Source	Sent via ORBCOMM	Snapshot Trigger	Model Notes
C112	Timing Fueling Flow Mismatch	Engine			All
C113	Timing Actuator Circuit Shorted	Engine			All
C115	Speed Signal Lost	Engine	X	X	All
C116	Timing Rail Pressure Ckt Failed High	Engine			All
C117	Timing Rail Pressure Ckt Failed Low	Engine			All
C118	Fuel Pump Pressure Ckt Failed High	Engine			All
C119	Fuel Pump Pressure Ckt Failed Low	Engine			All
C121	One Engine Speed Signal Lost	Engine			All
C122	LB Boost Ckt Failed High	Engine			All
C123	LB Boost Ckt Failed Low	Engine			All
C124	High Boost LB	Engine			All
C125	Low Boost LB	Engine			All
C126	High Boost RB	Engine			All
C127	Low Boost RB	Engine			All
C128	RB Boost Ckt Failed High	Engine			All
C129	RB Boost Ckt Failed Low	Engine			All
C131	Throttle Ckt Failed High	Engine			All
C132	Throttle Ckt Failed Low	Engine			All
C133	PTO Circuit Shorted High	Engine			All
C134	PTO Circuit Shorted Low	Engine			All
C135	Oil Pressure Circuit Failed High	Engine	X	X	All
C136	Pre Filter Oil Press Ckt Failed High	Engine			All
C137	Pre Filter Oil Press Ckt Failed Low	Engine			All
C141	Oil Press Ckt Failed Low	Engine			All
C143	Low Oil Pressure	Engine	X	X	All
C144	Coolant Temp Ckt Failed High	Engine			All
C145	Coolant Temp Ckt Failed Low	Engine			All
C147	Freq Throttle OOR High	Engine			All
C151	High Coolant Temperature	Engine	X	X	All
C153	LBF IMT Ckt Failed High	Engine			All
C154	LBF IMT Ckt Failed Low	Engine			All
C155	High IMT LBF	Engine	X	X	All
C156	LBR IMT Ckt Failed High	Engine			All
C157	LBR IMT Ckt Failed Low	Engine			All
C158	High IMT LBR	Engine	X	X	All
C159	RBF IMT Ckt Failed High	Engine			All
C161	RBF IMT Ckt Failed Low	Engine			All

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42. Remove the EJ3057 harness from the left front suspension junction box, TB42-A and TB42-B.
43. Wait at least 1 minute, then remove the EJ3057 harness from the left rear connections in the rear junction box, TB61-B and TB61-C.
44. Wait at least 1 minute, then remove the EJ3057 harness from the right-rear connections in the rear junction box, TB61-A and TB61-C.
45. Wait at least 1 minute, then remove the EJ3057 harness from the right front connections in the right-front junction box, TB61-B and TB61-C.
46. Wait at least 1 minute.
47. From the main menu of the PC software, press the "Connect to Payload Meter" button.
48. From the Connection Menu select "Display Active Alarms". Confirm that the four alarms displayed occurred in the proper order:

    Left-front suspension low

    Left-rear suspension low

    Right-rear suspension low

    Right-front suspension low

49. Close all screens and disconnect the laptop from the PLMIII system.

PLMIII CHECKOUT PROCEDURE CONFIRMATION

Flashburn Programming

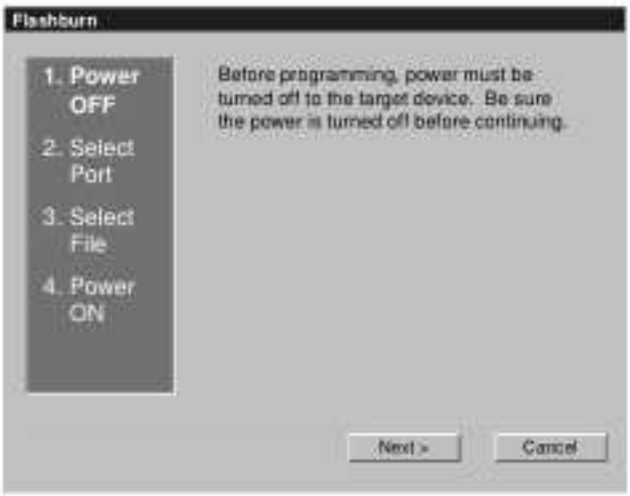
Before beginning, make sure that you have the .kms file required to program the product and you know where to find it on your computer.

Programming will reset all the truck configuration information.

NOTE: Before starting this procedure, record the Payload Meter configuration information.

This information can be found using the Payload Data Manager software. After programming, it will be necessary to restore this information in the payload meter configuration.

1. Turn off power to the payload meter by turning the key switch OFF.
2. Start the Flashburn software installed on the laptop.



3. Confirm that the payload meter power is OFF and press "NEXT".

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CAPACITOR CHARGE LIGHTS

Observe both capacitor charge lights (CCL1, CCL2). CCL1 is on the outside of the contactor box. CCL2 is on the switch panel inside the low voltage area. The lights will stay illuminated as long as the voltage on the DC link is greater than 50 VDC. Refer to Figure 3-8.

⚠WARNING

Hazardous voltages may be present in this equipment even if the engine and capacitor charge lights are off.

Use measurement and protective equipment rated for 2000 VDC minimum to verify that no voltage is present before touching any terminal.

⚠WARNING

Verify functionality of the measurement equipment using site-approved procedures both before and after performing control group measurements.

Failure to observe these precautions may result in death or serious personal injury.

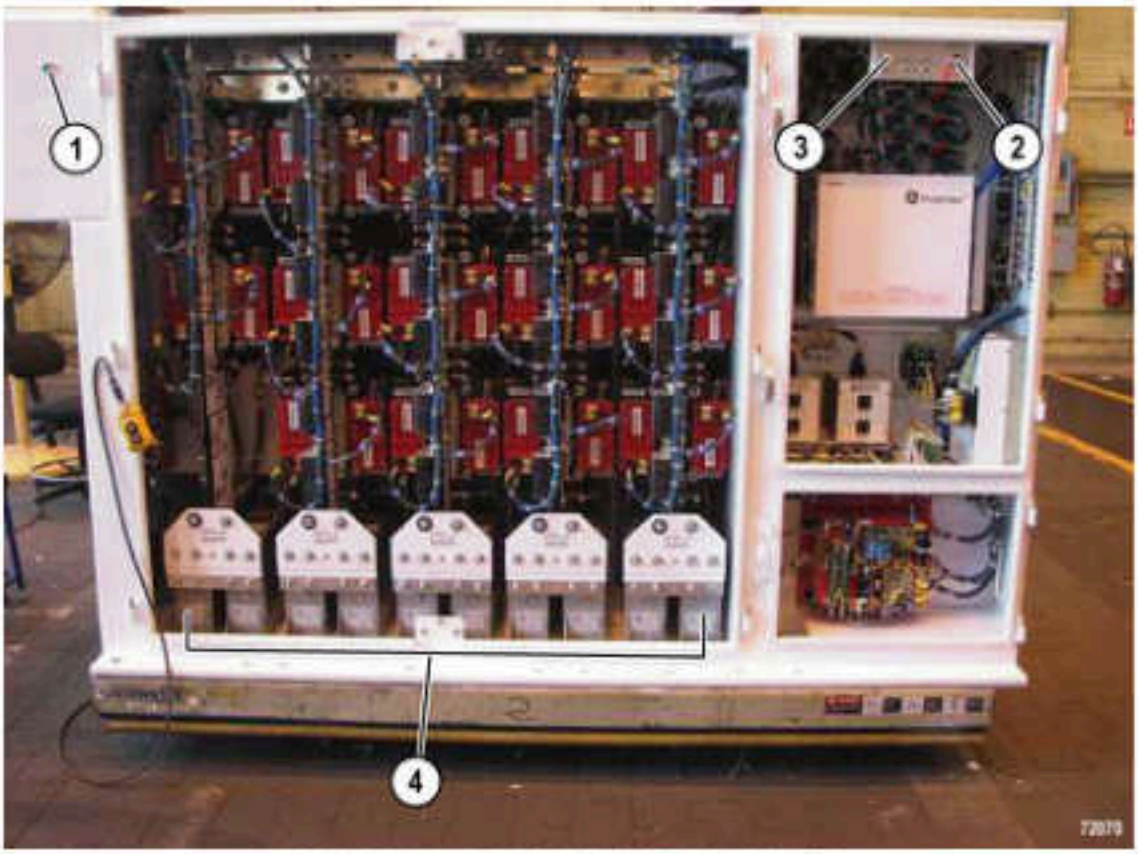
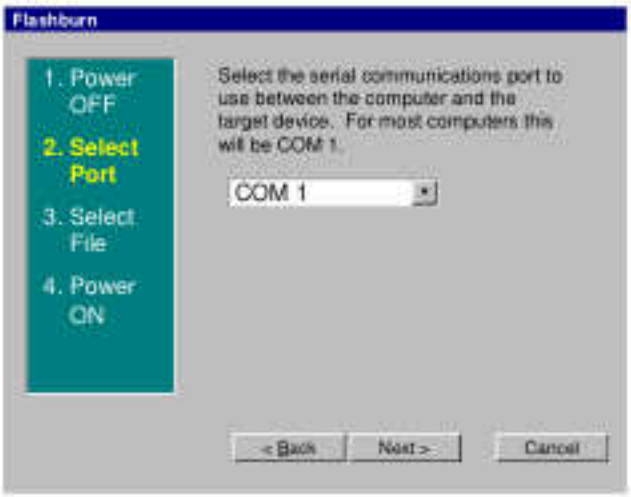


FIGURE 3-8. CAPACITOR CHARGE LIGHTS

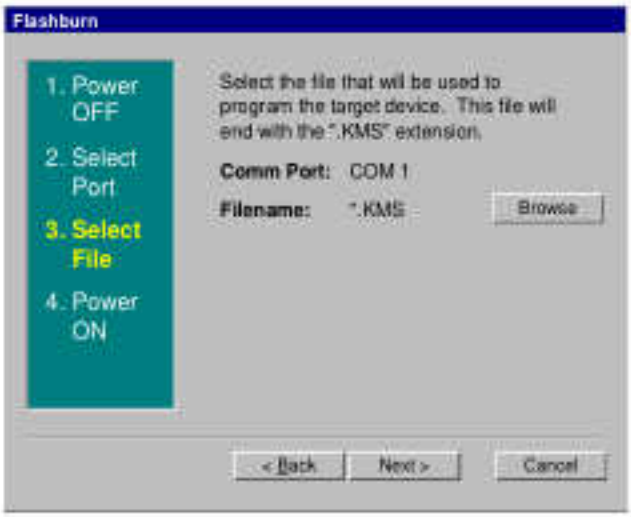
1. Exterior Capacitor Charge Light (CCL2)
2. Interior Capacitor Charge Light (CCL1)
3. Information Display Panel
4. DC Link Capacitors

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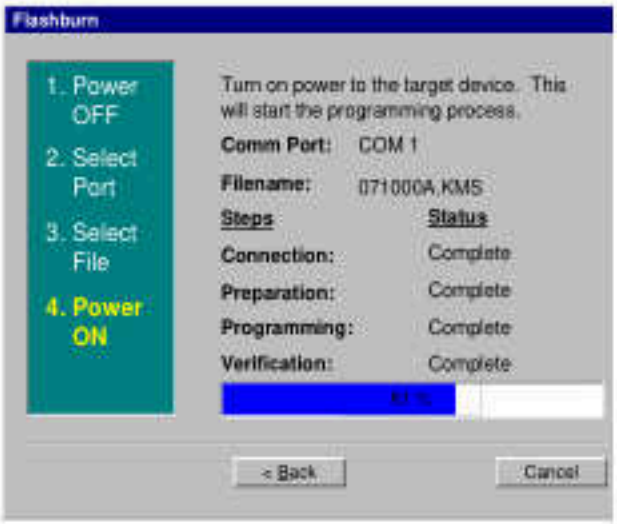
4. Confirm the proper communications port for the programming laptop. This is usually COM 1. Press "NEXT".



5. Press "BROWSE" and select the ".kms" file to program into the payload meter. Press "NEXT".

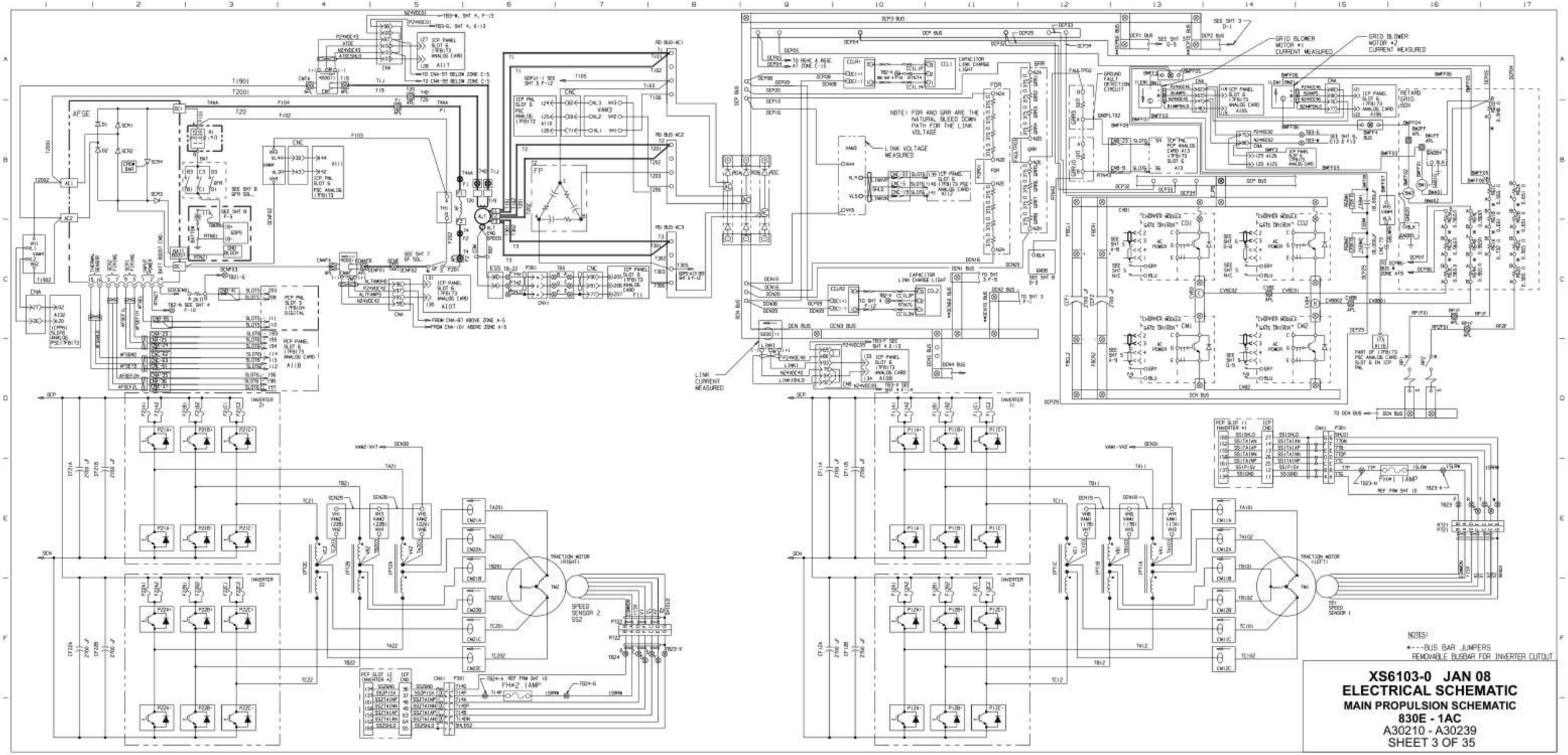


6. When instructed, turn the key switch ON in order to power-up the payload meter. The PC will begin to reprogram the payload meter. This process takes approximately 5 minutes.



7. After successful programming, turn the key witch OFF.
8. Wait 20 seconds and turn the key switch ON.
9. The payload meter will need to be configured as instructed in the manual using the Payload Data Manager software on the laptop computer.

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