CEBM020102

Shop Manual

830E-1AC

DUMP TRUCK

SERIAL NUMBERS **A30141 - A30173**

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MANUAL DISCHARGE OF CAPACITORS

If the voltage is greater than 1V on any of the capacitors, the capacitor must be manually discharged. With a suitable capacitor discharge device, such as ground stick pair (PC3299), discharge the capacitors where needed per the following instructions:

1. With the control cabinet high voltage compartment doors closed, connect the ground stick pair ground lead to ground. The most convenient location is the middle top bolt that attaches the door center post to the control cabinet frame.
2. Verify the ground connection and ground stick resistance levels. Measure the resistance between each individual ground stick tip to either the GND1 or GND2 ground block in the low voltage compartment of the control cabinet using a multimeter (Figure 3-9). Ensure that the resistance is within the manufacturer's specifications for the ground sticks.

   For PC3299 grounding sticks, the valid range is 80 to 125 ohms per stick.

⚠WARNING

Hazardous voltages are present in this equipment. Avoid touching any energized equipment when the door to the low voltage area is open. Failure to do so may result in personal injury and equipment damage.

3. Discharge the relevant capacitors. Open the door(s) and place one grounding stick on one of the positive (+) capacitor terminals and the other on the diagonally located negative (-) terminal. Refer to Figure 3-8 and Figure 3-10. Attempt to minimize the time between application of the positive stick and the negative stick so that the current flow will be positive to negative rather than either to ground. Leave sticks in place until capacitors are discharged. Refer to Figure 3-10.

NOTE: On the capacitors located behind the door post, it is difficult to access diagonal terminals on the same capacitor. If using adjacent terminals, use care to keep the tips separated while discharging or else use a positive terminal on one capacitor and negative terminal of the adjacent capacitor on the same bus bar.

For PC3299 grounding sticks, the discharge times from 2000 volts are:

- 15 seconds (maximum) for 2 capacitors
- 75 seconds (maximum) for 10 capacitors

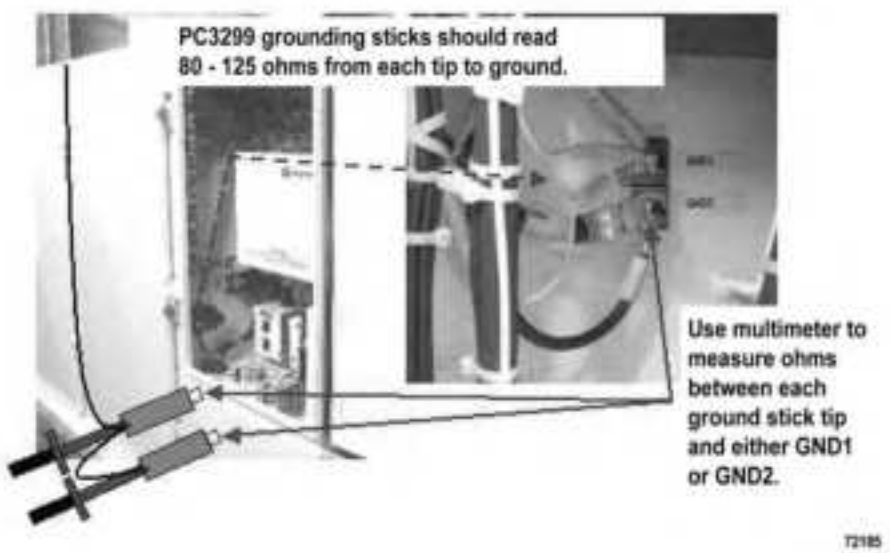
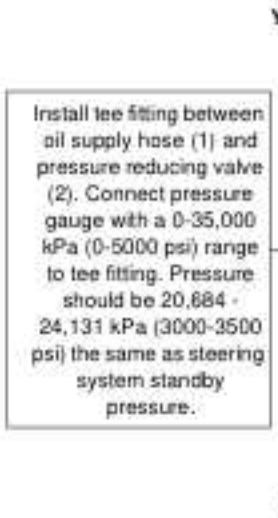


FIGURE 3-9. GROUNDING STICK LEAD CONNECTION AND CHECK

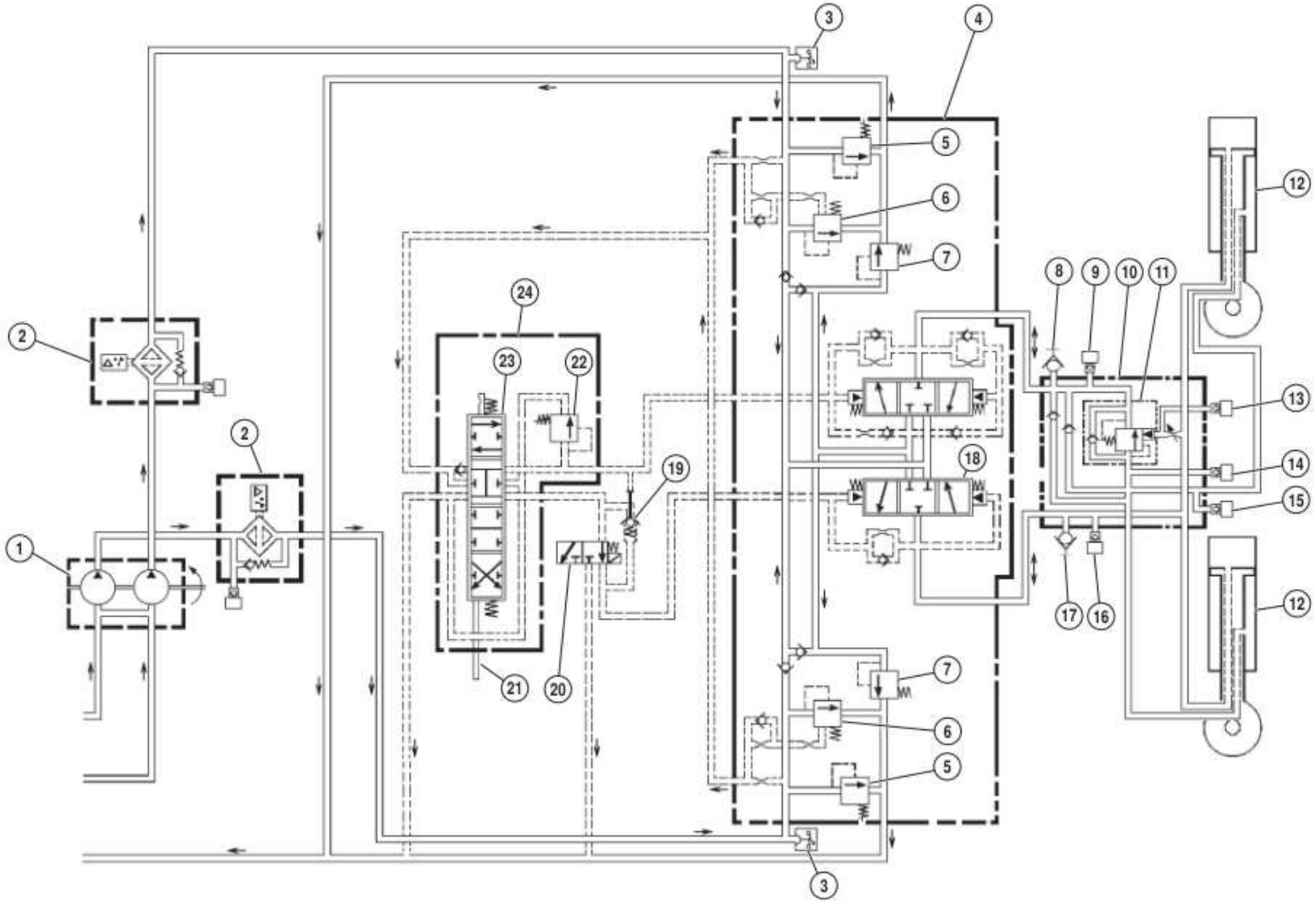
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Cause	Remedy
Pressure reducing valve (2) is defective	Replace pressure reducing valve (2)
Hydraulic Supply to shutters is incorrect	Perform trouble-shooting procedures in appropriate shop manual to correct truck hydraulic system

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1. Hoist Pump (120 gpm each section)
2. High Pressure Filters (Hoist)
3. Pressure Sensor (VHMS)
4. Hoist Valve
5. Hoist Relief Valve 17 240 kPa (2500 psi)
6. Flow Control Valve
7. Low Pressure Relief Valve 517 kPa (75 psi)
8. Q.D. Power Down
9. Test Port (TPD)
10. Overcenter Manifold
11. Counterbalance Valve
12. Hoist Cylinders
13. Test Port (TCBVP)
14. Test Port (TCBV)
15. Test Port (TR)
16. Test Port (TPU)
17. Q.D. Power Up
18. Spool Valve
19. Pilot Operated Check Valve
20. Hoist Limit Solenoid
21. Hoist Pilot Valve Lever Cable
22. Power Down Relief Valve 10 342 kPa (1500 psi)
23. Hoist Pilot Valve Spool
24. Hoist Pilot Valve



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STEERING AND BRAKES
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SHEET 2 OF 2

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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 3-6.

⚠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.

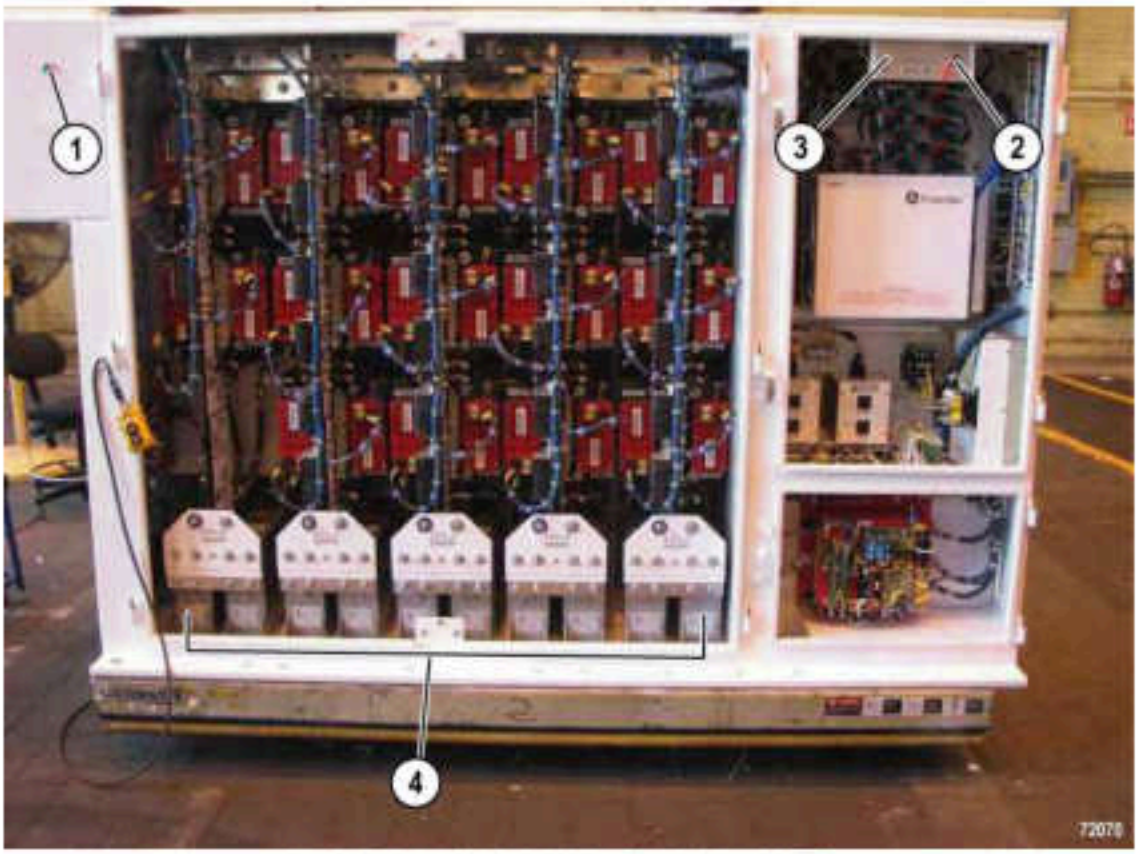
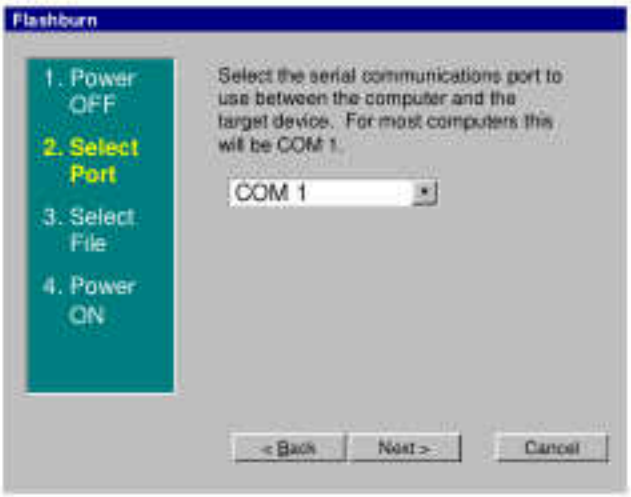


FIGURE 3-6. CAPACITOR CHARGE LIGHTS

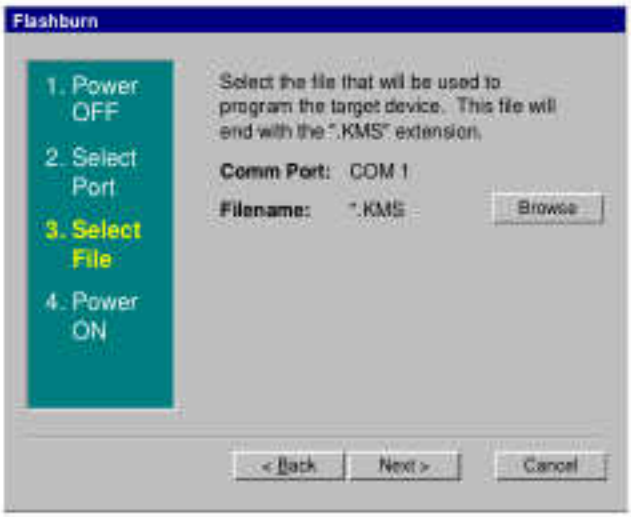
1. Exterior Capacitor Charge Light (CCL2)
2. Interior Capacitor Charge Light (CCL1)
3. Information Display Panel
4. DC Link Capacitors

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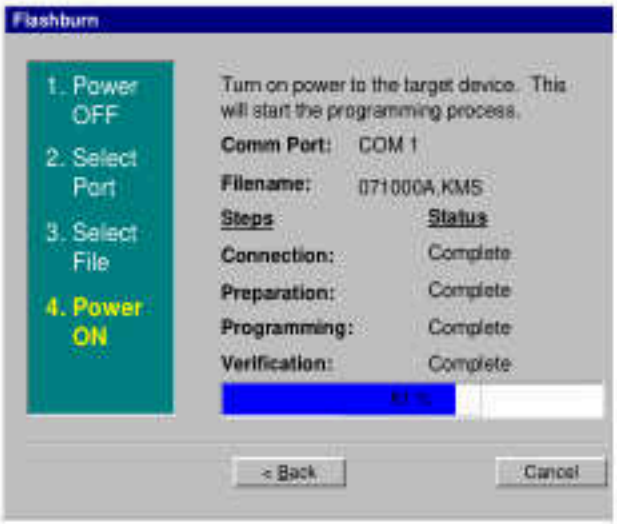
4. Confirm the proper communications port for the programming laptop. This is usually COM 1. Press "NEXT".



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

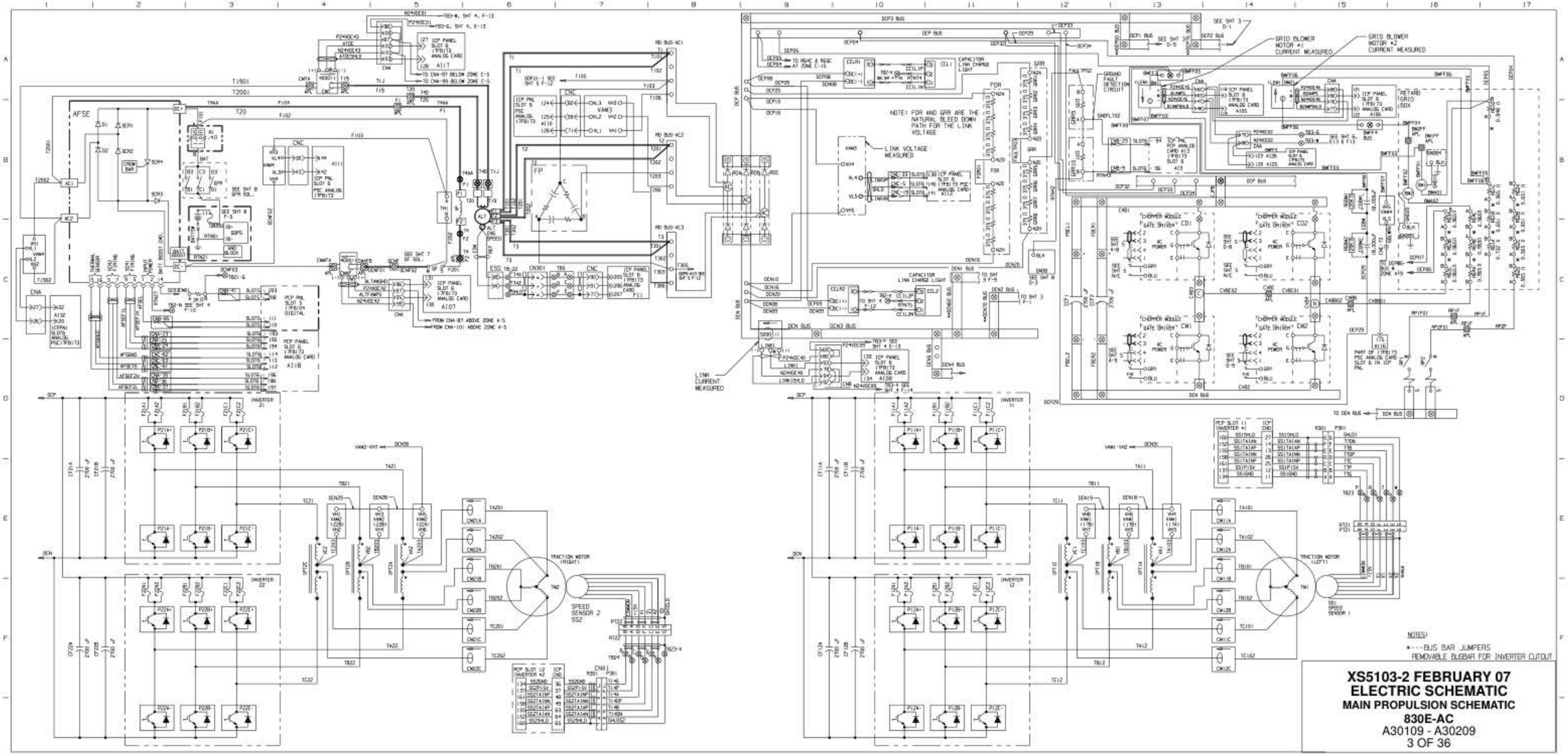


6. When instructed, turn the key switch ON in order to power-up the payload meter. The PC will begin to reprogram the payload meter. This process takes approximately 5 minutes.



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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