CEBM020403

Shop Manual

830E-1AC

DUMP TRUCK

SERIAL NUMBERS **A30174 - A30209**

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 3-7 and Figure 3-8. 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.

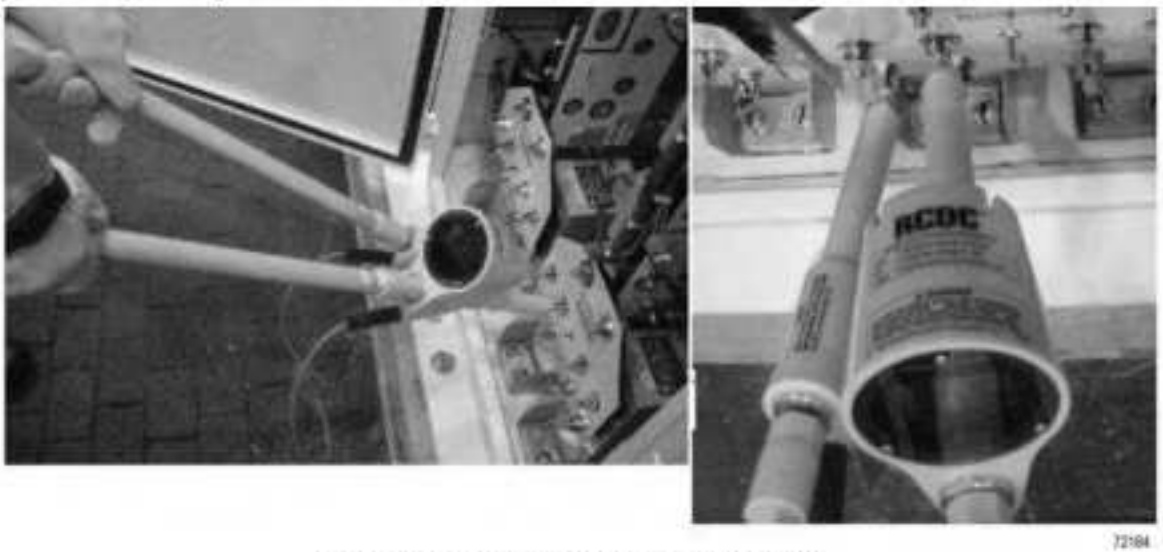


FIGURE 3-7. DC METER ON CAPACITOR

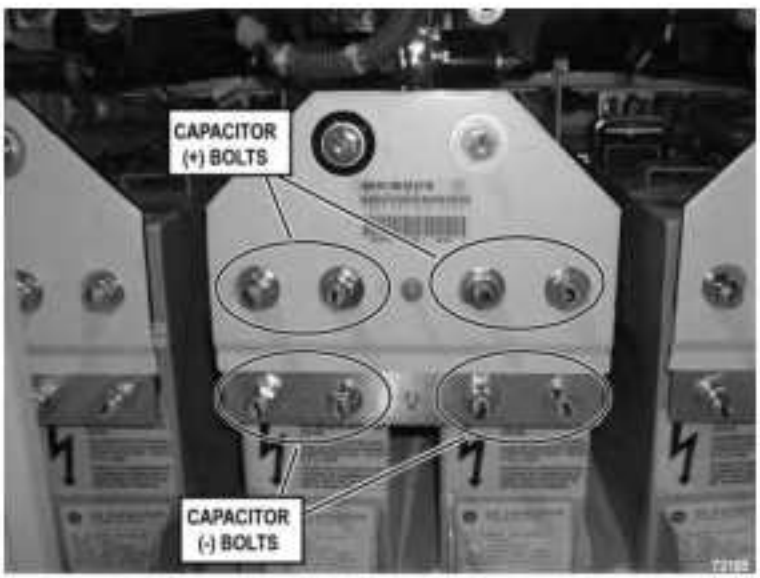


FIGURE 3-8. CAPACITOR TERMINAL POLARITY

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Table 3: Chassis Fault Codes (continued)				
KOMTRAX Plus Fault Code	KOMTRAX Plus Fault Description	Source	Sent via ORBCOMM	Snapshot Trigger
#A286	Shutdown Delay Relay Circuit Fault	IM		
#A292	Shutdown Delay Relay Fault	IM		
#A303	Shifter Defective	IM		
#A306	Red Lamp Circuit Fault	IM		
#A309	No Brakes Applied When Expected	IM		
#A310	Low Fuel Warning Driver	IM		
#A311	Brake Lock Switch On When It Should Not Be	IM		
#A312	DCDC Converter Voltage, 12V Sensing Low	IM		
#A313	DCDC Converter Voltage, 12V Sensing High	IM		
#A315	DCDC Converter 12V Low	IM		
#A316	Starter Engagement Fault	IM		
#A318	Unexpected Power Loss	IM		
#A328	Drive System Not Powered Up	IM		
#A350	Output Overload 1B	IM		
#A351	Output Overload 1E	IM		
#A352	Output Overload 1H			
#A353	Output Overload 1J	IM		
#A354	Output Overload 1K	IM		
#A356	Output Overload 1M	IM		
#A357	Output Overload 1N			
#A358	Output Overload 1P			
#A360	Output Overload 1S	IM		
#A361	Output Overload 1T			
#A362	Output Overload 1U	IM		
#A363	Output Overload 1X	IM		
#A364	Output Overload 1Y	IM		
#A365	Output Overload 1Z	IM		

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The steering circuit can be isolated from the brake circuit by removing the brake supply line from the bottom side of the bleeddown manifold (refer to **WARNING** below). Plug the brake supply line and cap the port in the bleeddown manifold.

⚠WARNING

Before disconnecting pressure lines, replacing components in the hydraulic circuits, or installing test gauges, ALWAYS bleed down hydraulic steering and brake accumulators.
Hydraulic fluid escaping under pressure can have sufficient force to enter a person's body by penetrating the skin and cause serious injury, and possibly death, if proper medical treatment by a physician familiar with this type of injury is not received immediately.

The steering accumulator can be bled down with engine shut down, turning key switch OFF, and waiting 90 seconds. Confirm the steering pressure is released by turning the steering wheel - No front wheel movement should occur. Fully open both bleed down valves on brake manifold to bleed down brake accumulators.

⚠WARNING

Before disabling brake circuit, be sure truck wheels are blocked to prevent possible roll away.

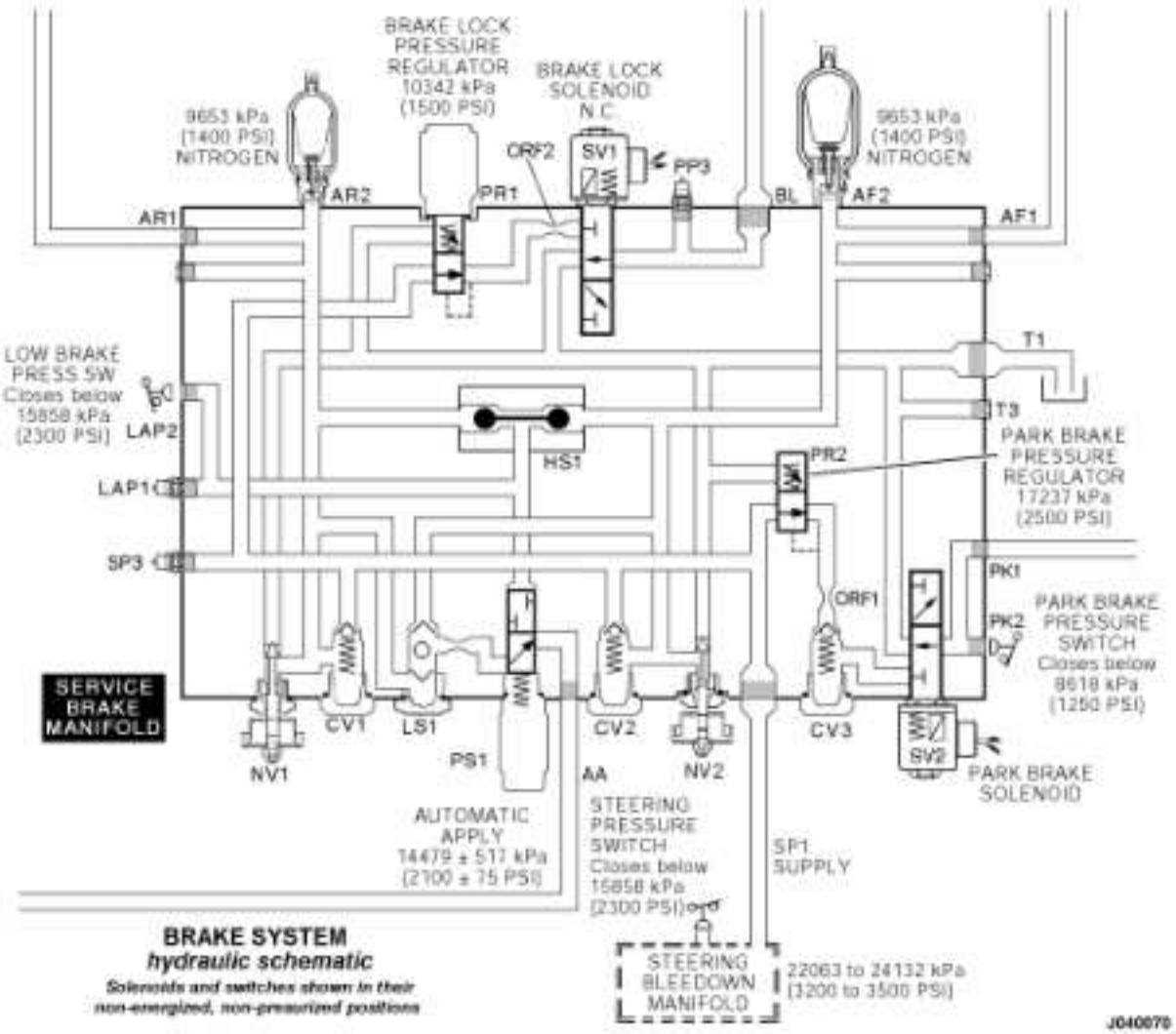


FIGURE 3-2. BRAKE MANIFOLD

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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.

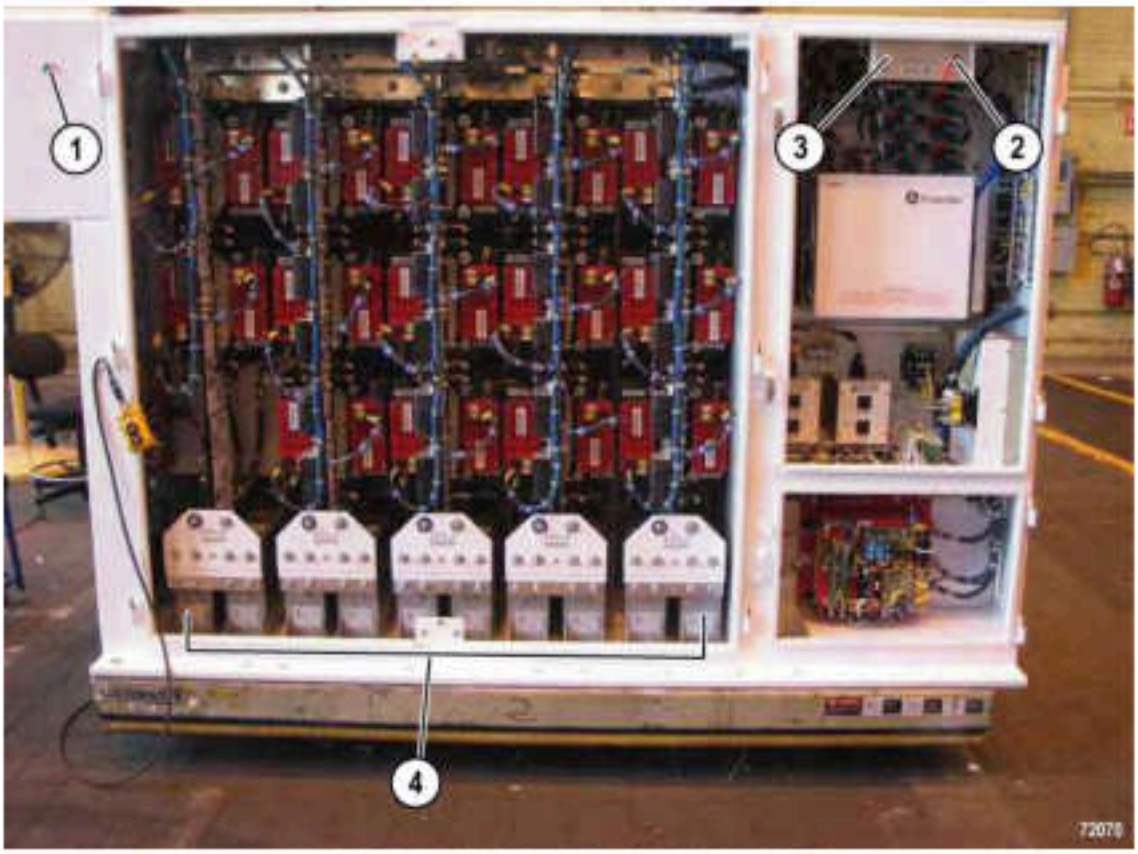
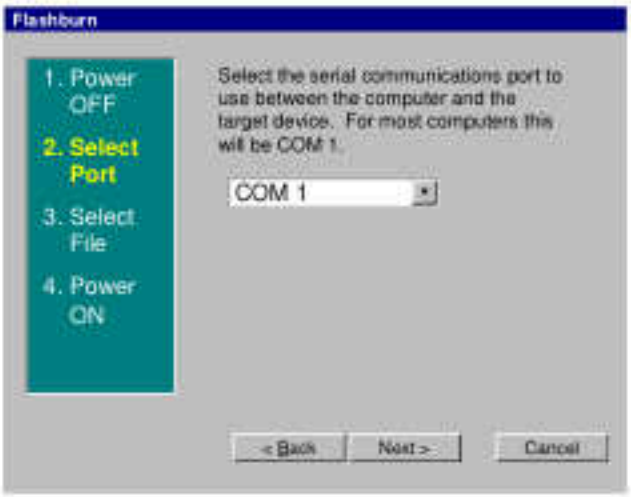


FIGURE 3-6. CAPACITOR CHARGE LIGHTS

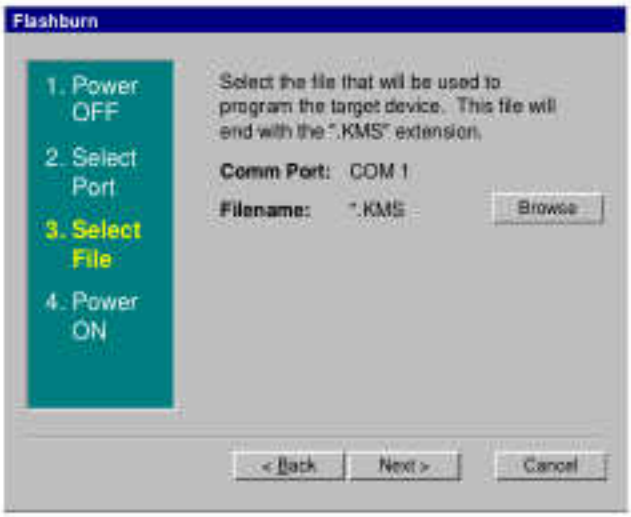
1. Exterior Capacitor Charge Light (CCL2)
2. Interior Capacitor Charge Light (CCL1)
3. Information Display Panel
4. DC Link Capacitors

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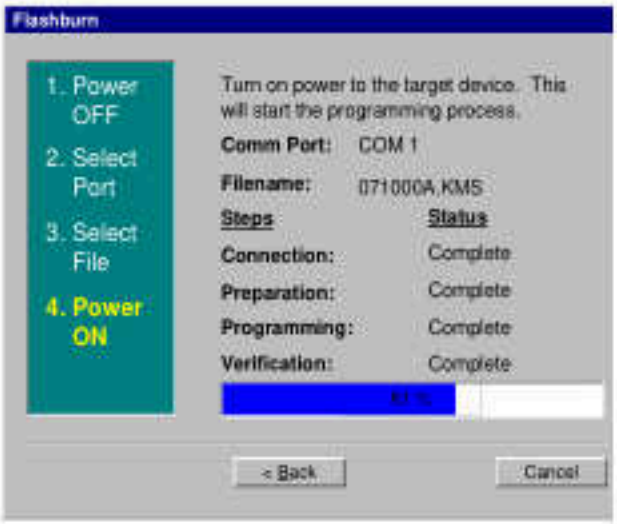
4. Confirm the proper communications port for the programming laptop. This is usually COM 1. Press "NEXT".



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

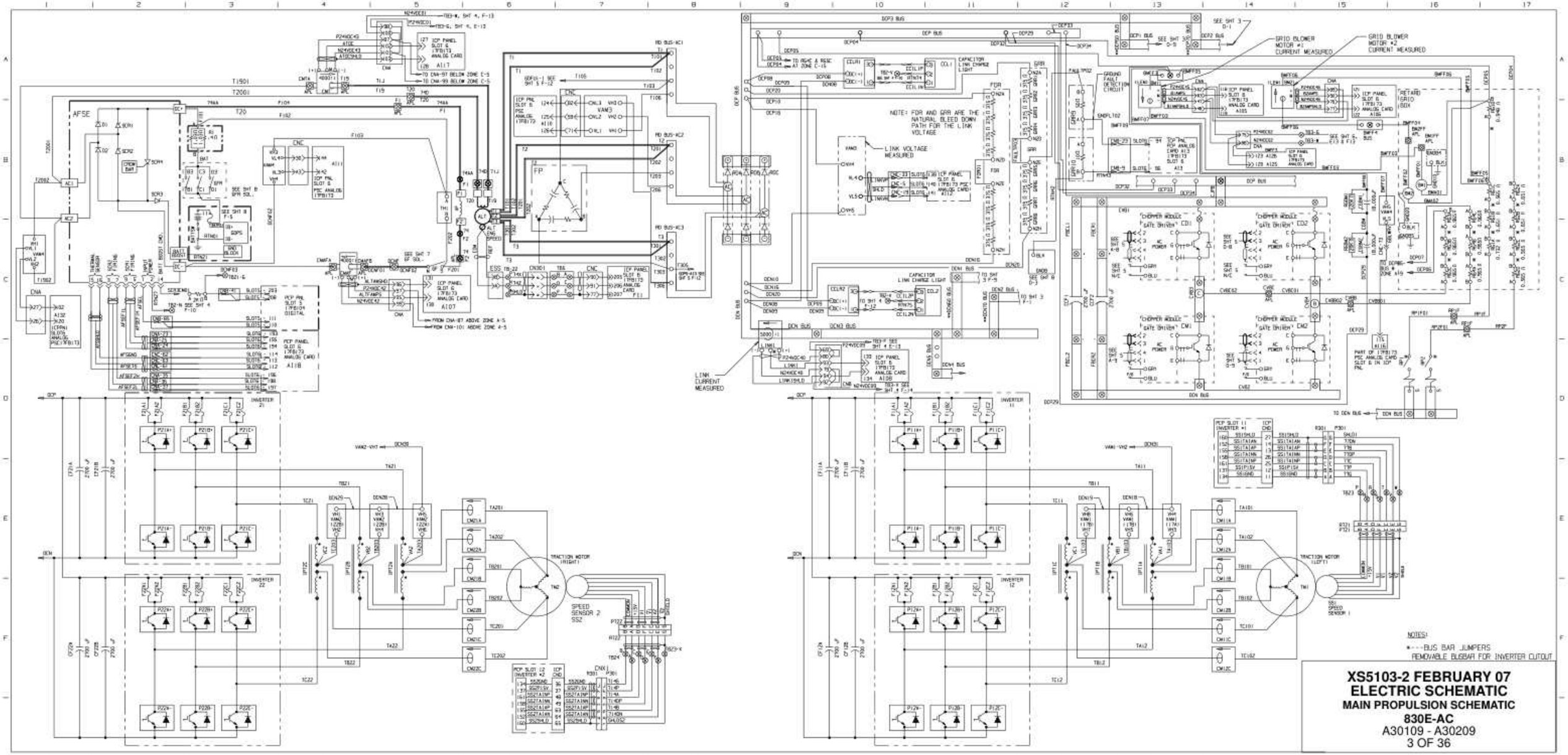


6. When instructed, turn the key switch ON in order to power-up the payload meter. The PC will begin to reprogram the payload meter. This process takes approximately 5 minutes.



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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