CEBM018400

Shop Manual

730E TROLLEY

DUMP TRUCK

SERIAL NUMBERS **A30392 & A30393**

KOMATSU®

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NOTE: The above procedure results in a shim pack which will provide a 0.178 mm (0.007 in.) preload for the bearings.

18. Assemble a shim pack equal to the dimension in Step 17 within 0.025 mm (0.001 in.).

NOTE: The shim pack must be compressed when measuring.

19. Reinstall chain and binders (2 and 3, Figure 3-10).
20. Remove cap screws and hardened flat washers (9, Figure 3-3) and bearing retainer plate (7). Install the shim pack (from Step 18) and reinstall the retainer, cap screws, and hardened flat washers.
21. Remove chain and binders (2 and 3, Figure 3-10).
22. Tighten the cap screws alternately to **1017 ± 100 N·m (750 ± 75 ft lbs)** in several successive increments while rotating the wheel hub.
23. Install new O-ring (3, Figure 3-3) onto cover (11). Install cover. Install cap screws and lock washers (2) and tighten to standard torque.
24. Fill the wheel hub with oil. Refer to Section P, Lubrication and Service.
25. Remove any remaining chains and cribbing.

STEERING CYLINDERS AND TIE ROD

The steering cylinders and tie rod are mounted in the same manner. The removal and installation instructions are applicable to both.

Spherical Bearing Wear Limits

It is necessary to determine the condition of the spherical bearings on the steering linkage components for optimum steering performance. Ball diameter new dimensions and maximum allowable wear specifications are listed in Table 1. Bearings that exceed the maximum wear limits must be replaced.

If premature wear of the bearings is evident, check the automatic lubrication system to ensure the proper amount of lubrication is being received at the joint(s).

It is also important to ensure that steering linkage components are tightened to the proper torque. Use the proper torque specifications listed in this section for steering linkage components.

⚠WARNING

Use extreme caution when performing maintenance on any vehicle with an active steering system. Serious injury or death can result from contact with moving parts. Keep a safe distance from crush points.

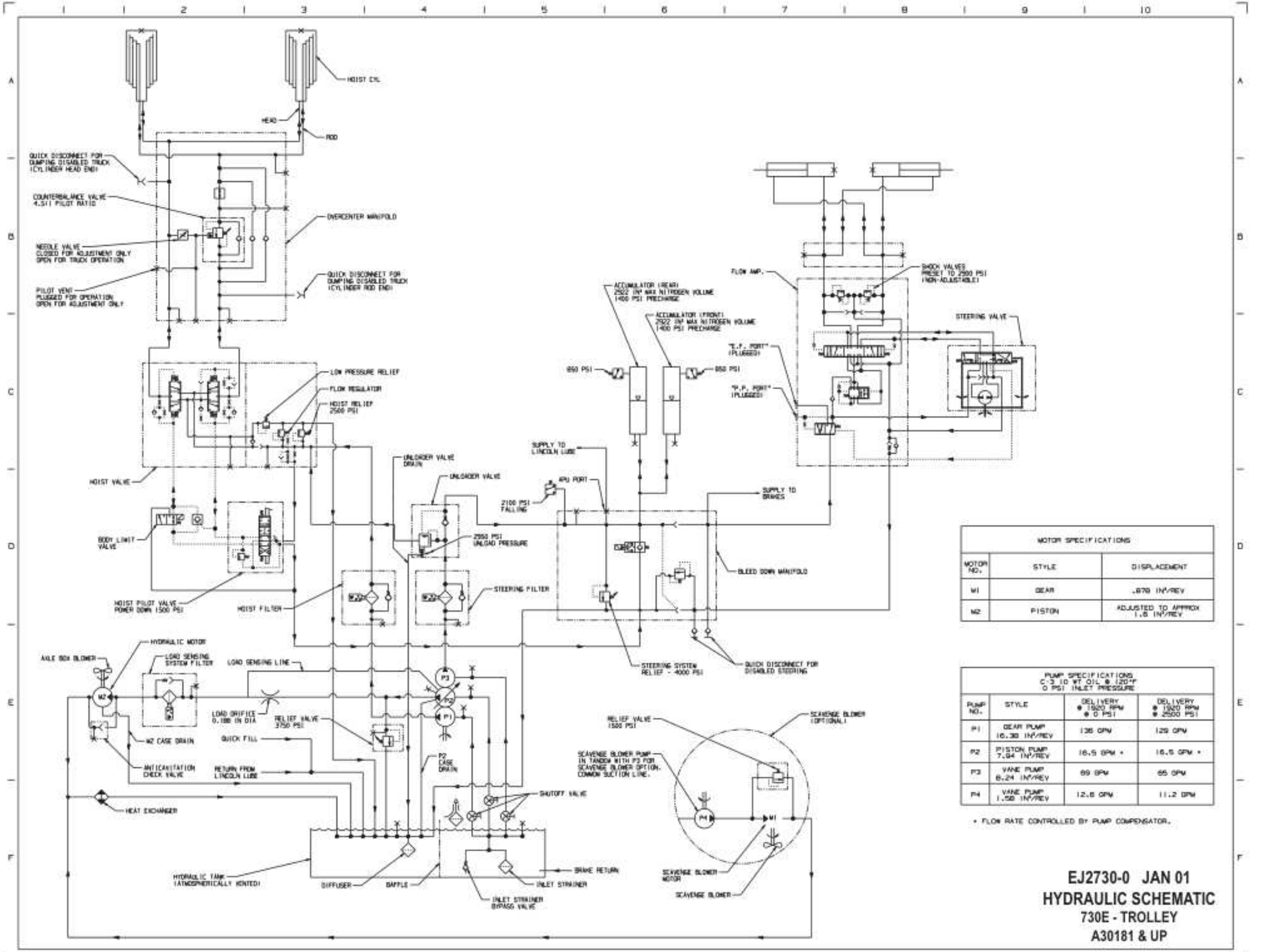
TABLE 1. STEERING SPHERICAL BEARING WEAR SPECIFICATIONS

Spherical Bearing Ball Diameter (New)	82.30 mm (3.24 in.)
Maximum Allowable Wear	0.81 mm (0.032 in.)

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TROUBLESHOOTING CHART (Steering Circuit)		
Trouble	**Possible Cause**	**Suggested Corrective Action**
Slow steering, hard steering or loss of power assist	Overloaded steering axle.	Reduce axle loading.
	Malfunctioning relief valve. System pressure lower than specified.	Replace relief valve.
	Worn or malfunctioning pump.	Replace pump. See brake/steering pump troubleshooting chart.
Drift - Truck veers slowly in one direction	Rod end of cylinder slowly extends without turning the steering wheel.	A small rate of extension may be normal on a closed center system.
	Worn or damaged steering linkage.	Replace linkage and check alignment or toe-in of the front wheels.
Wander - Truck will not stay in straight line	Air in system due to low oil level, pump cavitation, leaking fittings, pinched hoses, etc.	Correct oil supply problem and/or oil leakage.
	Loose cylinder piston.	Repair or replace defective components.
	Broken neutral position springs in steering control unit.	Replace neutral position springs.
	Improper toe-in setting.	Adjust.
	Bent linkage or cylinder rod.	Repair or replace defective components.
	Severe wear in steering control valve.	Repair steering control valve.
Slip - A Slow movement of steering wheel fails to cause any movement of the steered wheels	Leakage of cylinder piston seals.	Replace seals.
	Worn steering control valve.	Replace steering control valve.
Spongy or soft steering	Low oil level.	Service hydraulic tank and check for leakage.
	Air in hydraulic system. Most likely air trapped in cylinders or lines.	Bleed air from system. Positioning ports on top of cylinder will help avoid trapping air.
Erratic steering	Air in system due to low oil level, cavitating pump, leaky fittings, pinched hose, etc.	Correct condition and add oil as necessary.
	Loose cylinder piston.	Repair or replace cylinder.
Free Wheeling - Steering wheel turns freely with no back pressure or no action of the front wheels	Lower splines of column may be disengaged or damaged.	Repair or replace steering column.
	No flow to steering valve can be caused by: 1. Low oil level 2. Ruptured hose 3. Broken cardan shaft pin (steering unit)	 1. Add oil and check for leakage 2. Replace hose 3. Replace pin

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MOTOR SPECIFICATIONS		
MOTOR NO.	STYLE	DISPLACEMENT
M1	GEAR	.870 IN³/REV
M2	PISTON	ADJUSTED TO APPROX 1.6 IN³/REV

PUMP SPECIFICATIONS C-3 10 WT OIL @ 120°F 0 PSI INLET PRESSURE			
PUMP NO.	STYLE	DELIVERY @ 1920 RPM @ 0 PSI	DELIVERY @ 1920 RPM @ 2500 PSI
P1	GEAR PUMP 16.38 IN³/REV	136 GPM	129 GPM
P2	PISTON PUMP 7.84 IN³/REV	16.5 GPM *	16.5 GPM *
P3	VANE PUMP 8.24 IN³/REV	69 GPM	65 GPM
P4	VANE PUMP 1.58 IN³/REV	12.6 GPM	11.2 GPM

* FLOW RATE CONTROLLED BY PUMP COMPENSATOR.

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5. Remove the rotor from the rotor shaft.

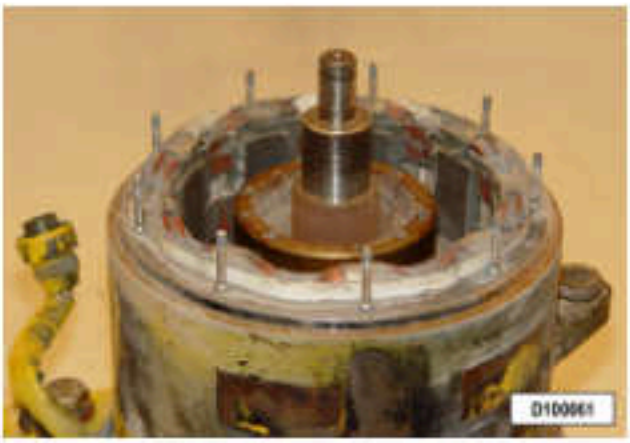


FIGURE 10-50.

Drive End Housing Removal

⚠ IMPORTANT ⚠

Ensure the single mark has been scribed between drive end housing (20) and shell (58). This mark will be used during the assembly process to correctly align the two parts.

1. Position the support stand so the large diameter hole is facing up.



FIGURE 10-51.

2. Place the alternator in the support stand with the drive end facing up.



FIGURE 10-52.

3. Remove cover plate (7) by removing six Torx screws (6) using a number T20 Torx bit.

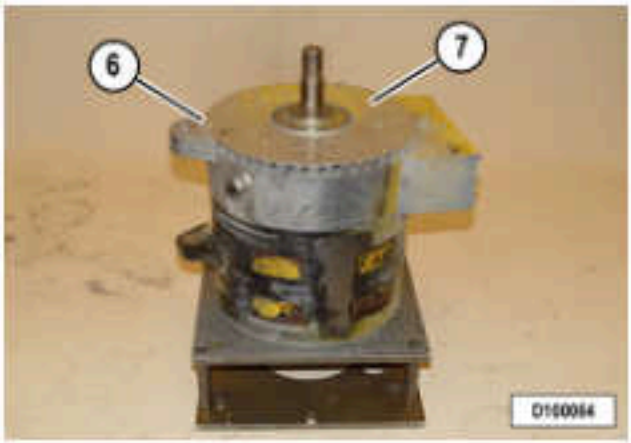
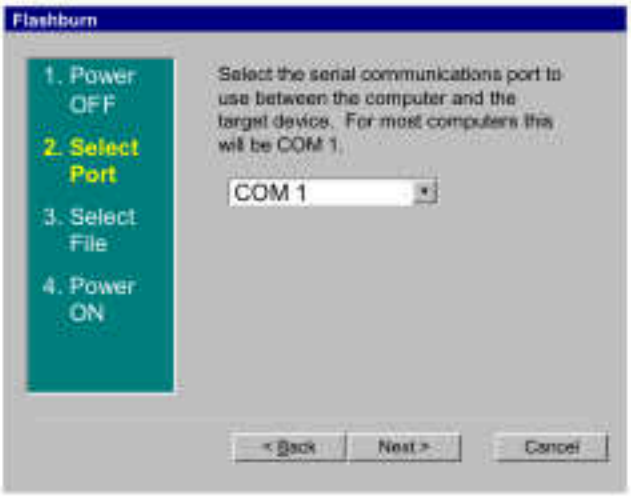


FIGURE 10-53.

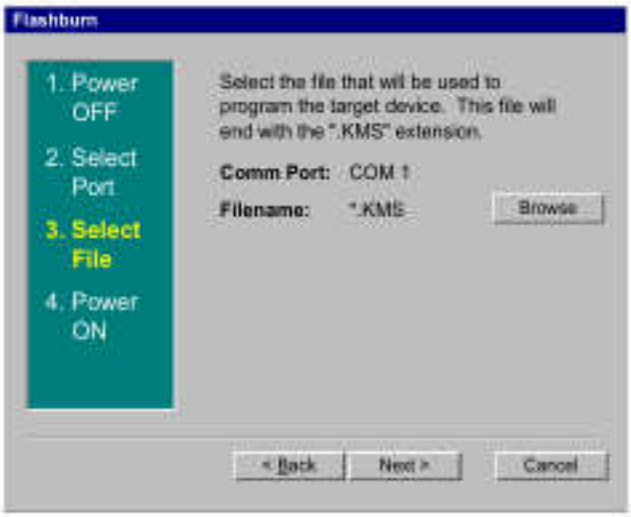
6. Screw 7. Cover Plate

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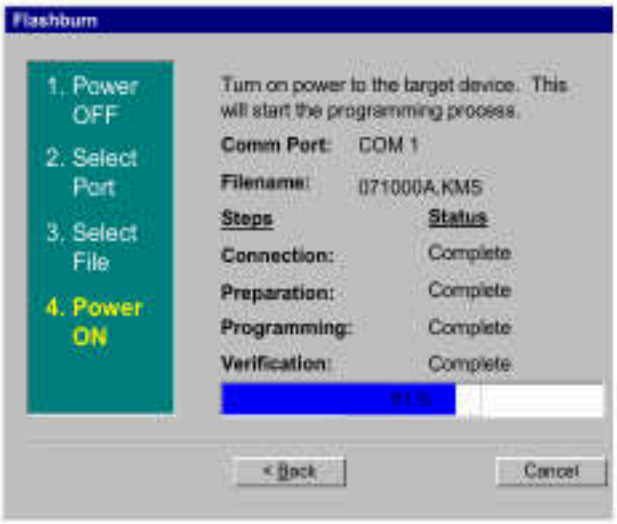
4. Confirm the proper communications port for the programming laptop. This is usually COM 1. Press "NEXT".



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

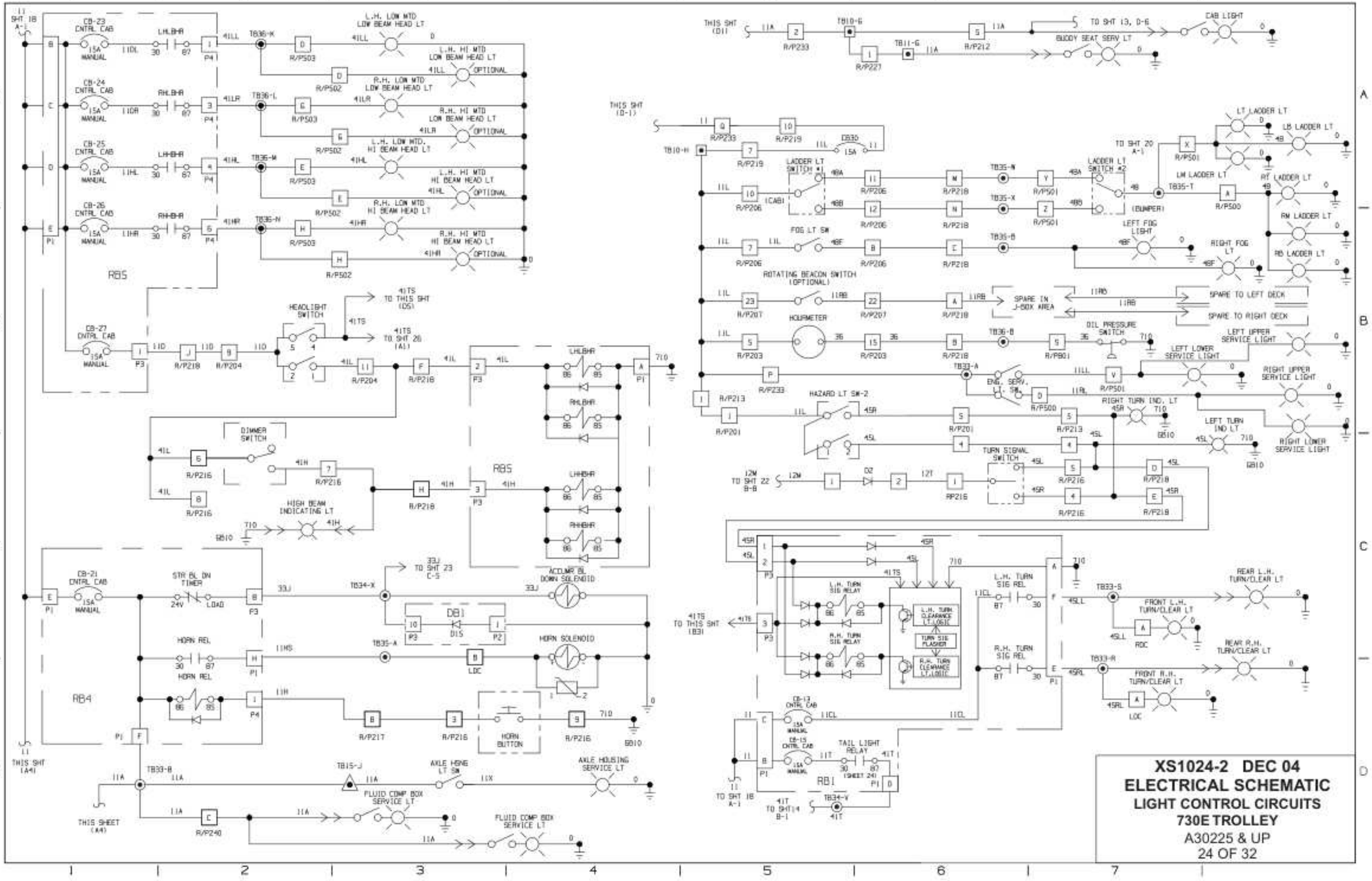


6. When instructed, turn the key switch on in order to power-up the payload meter. The PC will begin to reprogram the payload meter. This process takes approximately five minutes.



7. After successful programming, turn the key switch 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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