CEBM026500

Shop Manual

730E

DUMP TRUCK

SERIAL NUMBERS **A30633 & UP**

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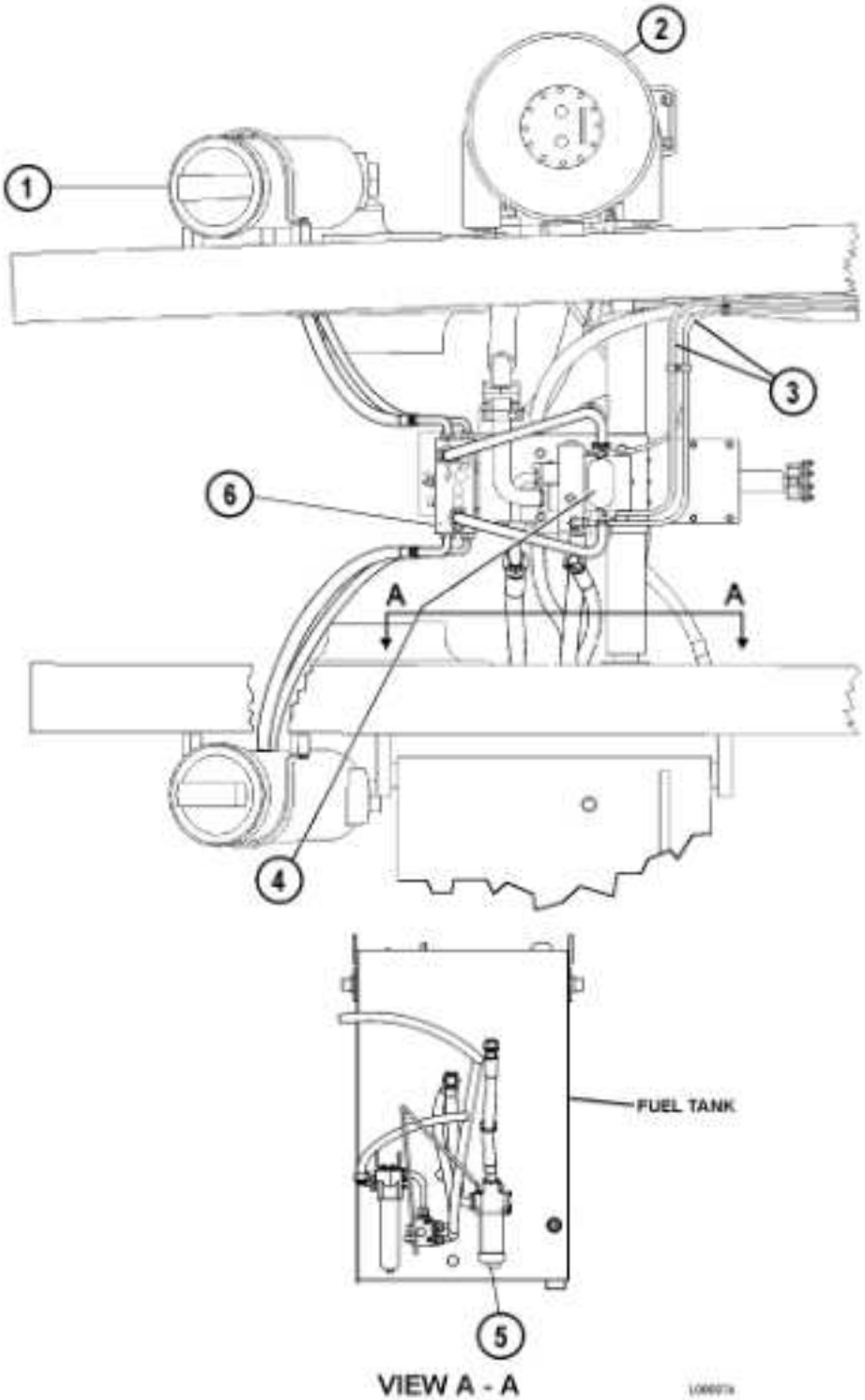


FIGURE 8-1. HYDRAULIC COMPONENT LOCATION

1. Hoist Cylinder
2. Hydraulic Tank
3. To Hoist Pilot Valve
4. Hoist Valve
5. Hoist Circuit Filter
6. Overcenter Manifold

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TROUBLESHOOTING CHART Flow Amplifier - Refer to Figure 10-9		
Trouble	**Possible Cause**	**Suggested Corrective Action**
Slow or hard steer	Stuck piston (position 2, Figure 10-9).	Disassemble and check piston movement.
Excessive steering wheel movement with a simultaneous opening of the relief valve	Dirty throttle-check valve (position 3) or dirty orifice screw (position 4).	Disassemble and clean the throttle check valve and/or the orifice screw.
Free Wheeling (no end stop)	Leaky shock valve or suction valve (position 6). Setting pressure of shock valve too low (position 6).	Disassemble, clean, and check shock and suction valves. Adjust the shock valve pressure setting.
Inability to Steer (No Pressure Build-up)	Leaky relief valve in the priority valve (position 1). Defective steering control unit.	Clean and perhaps replace the relief valve. Replace the steering control unit.
Hard point when beginning to turn the steering wheel	Air in LS line. Spring compression in the priority valve too low. Clogged orifice in the LS or PP port (positions 7 and 8).	Bleed the LS line. Replace priority valve spring. Clean the orifice.

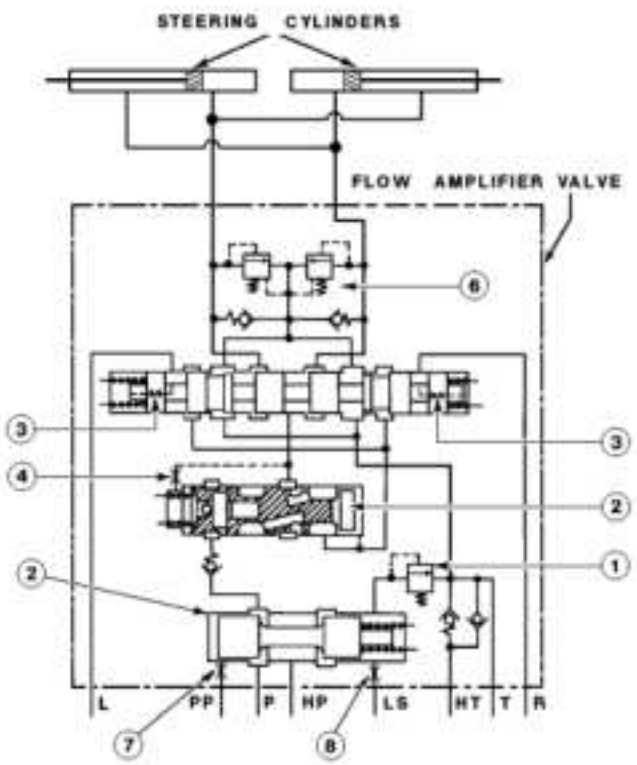


FIGURE 10-9. FLOW AMPLIFIER

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FIGURE 3-13. LUBE PUMP ASSEMBLY

1. Screw
2. Counterweight
3. Lock Washer
4. Retaining Ring
5. Crankrod
6. Retaining Ring
7. Crank Eccentric
8. Ball Bearing
9. Outlet Pin
10. O-Ring
11. Plunger Tube
12. Screw
13. Wrist Pin Bushing
14. Wrist Pin Anchor
15. Back-Up Washer
16. Cup Seal
17. Plunger Link Rod
18. Spring
19. Steel Ball
20. Pump Plunger
21. Reciprocating Tube
22. Cup Seal
23. O-Ring
24. Pump Cylinder
25. Ball Cage
26. Steel Ball
27. O-Ring
28. Check Seat Housing
29. Screw
30. Housing Cover
31. Cover Gasket
32. Washer
33. Screw
34. Valve Cartridge
35. Solenoid Valve
36. Inlet Strainer
37. Manifold
38. Pressure Reducing Valve
39. Flow Control Valve
40. Hydraulic Motor
41. Gasket
42. O-Ring
43. Washer
44. Screw
45. Pipe Plug
46. Pump Housing
47. Back-Up Ring
48. O-Ring
49. O-Ring
50. Nut
51. Bronze Bearing
52. O-Ring
53. Back-Up Washer
54. O-Ring
55. Housing Tube
56. Shovel Plug
57. Retaining Ring
58. Orifice Fitting
59. Dipstick

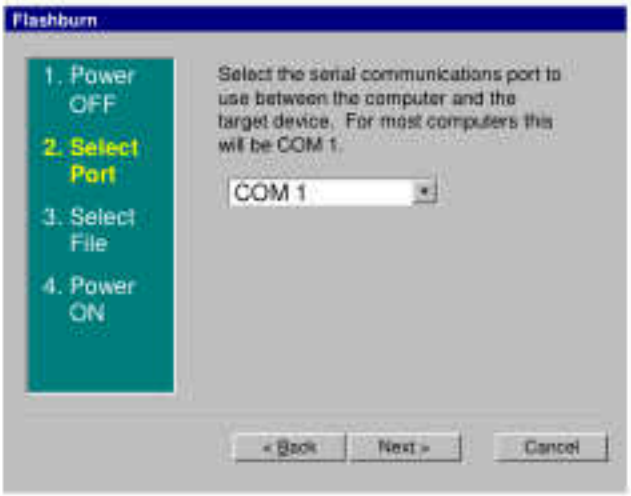
Assembly

NOTE: Use Loctite® 242 (or equivalent) thread locker on all torqued, threaded connections. Use extreme care to prevent thread locker from flowing into adjacent areas such as clearance fits and ball check. Allow a minimum of 30 minutes cure time before operating the pump.

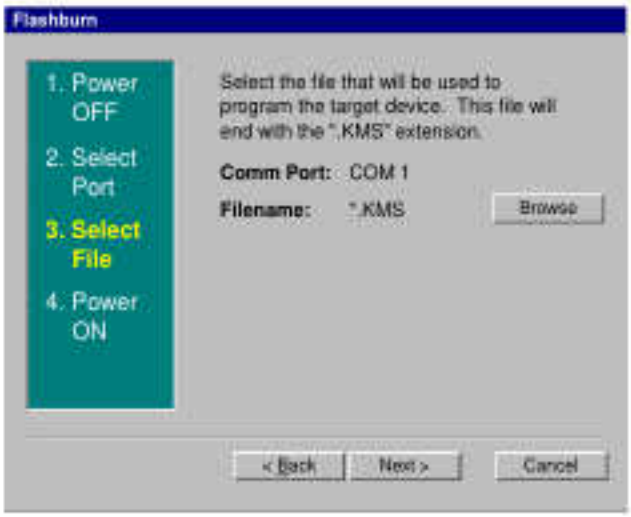
1. Support ball bearing (8, Figure 3-13) inner race and press eccentric (7) into bore. Install small retaining rings (6).
2. Assemble crankrod assembly parts; large retaining rings (4), outer weights (2), and install flat head screws (1). Tighten to **11 - 12 N·m (100 - 110 in. lbs)**.
3. Using a new O-ring (10), install plunger tube (11) on outlet pin (9). Tighten to **11 - 12 N·m (100 - 110 in. lbs)**.
4. Assemble wrist pin anchor (14), back-up washer (15), cup seal (16), and plunger link rod (17) onto plunger tube (11). Tighten to **11 - 12 N·m (100 - 110 in. lbs)**.
5. Assemble spring (18), ball (19), and plunger (20) on plunger link rod (17). Tighten plunger to **11 - 12 N·m (100 - 110 in. lbs)**.
6. Install reciprocating tube (21) onto wrist pin anchor (14). Tighten to **27 - 34 N·m (20 - 25 ft. lbs)**.
7. Install cup seal (22), O-ring (23), cylinder (24), ball cage (25), ball (26), O-ring (27), and check seat housing (28) into reciprocating tube (21). Tighten check seat housing to **27 - 34 N·m (20 - 25 ft. lbs)**.
8. Assemble crank rod assembly, to pump with bushings (13) and button head screws (12). Tighten screws to **11 - 12 N·m (100 - 110 in. lbs)**.
9. Place pump subassembly (parts 1 through 28) into pump housing (46).
10. Install new O-ring (54), back-up washer (53), O-ring (52), and bronze bearing (51) into housing tube (55).
11. Install housing tube assembly onto pump housing (46). Ensure reciprocating tube (21) is inserted through both bushings. Using a 19 mm (0.75 in.) diameter rod through the inlet holes at the bottom of the tube, tighten to **27 - 34 N·m (20 - 25 ft lbs)**.
12. Install shovel plug (56) and retaining ring (57).

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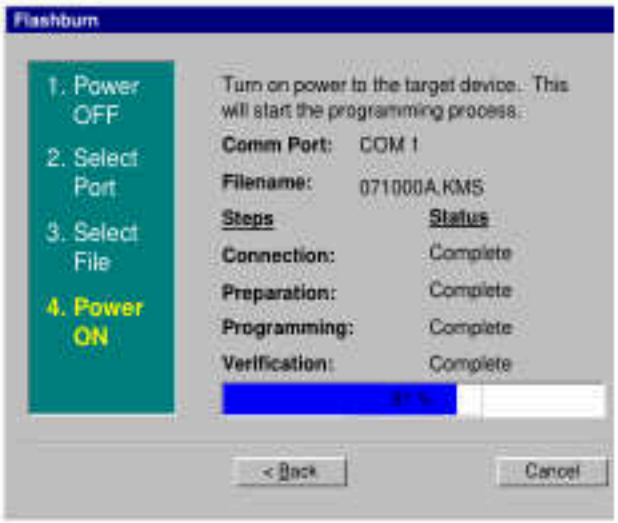
4. Confirm the proper communications port for the programming laptop. This is usually COM 1. Press "NEXT".



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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A/C DRIVE BELT CHECKOUT PROCEDURE

This procedure must be performed each time any component in the accessory drive is serviced, such as replacing a belt or removing the compressor. In addition, a 250 hour inspection of the AC drive belt is mandatory. The belts must be inspected for indications of wear and damage that may hinder performance. Replace as necessary and perform the following procedure.

Pulley Alignment

1. Install alignment tool (EL8868) onto the pulleys to check the alignment. Refer to Figure 4-15. If misalignment of the pulleys exceeds 3 mm (0.13 in.), the position of the compressor must be adjusted.

Belt Tension Check

NOTE: This procedure has been written for use with belt tension tool (XA3379), shown in Figure 4-13. Other tension tools may differ in functionality.



FIGURE 4-13. BELT TENSION TOOL - XA3379

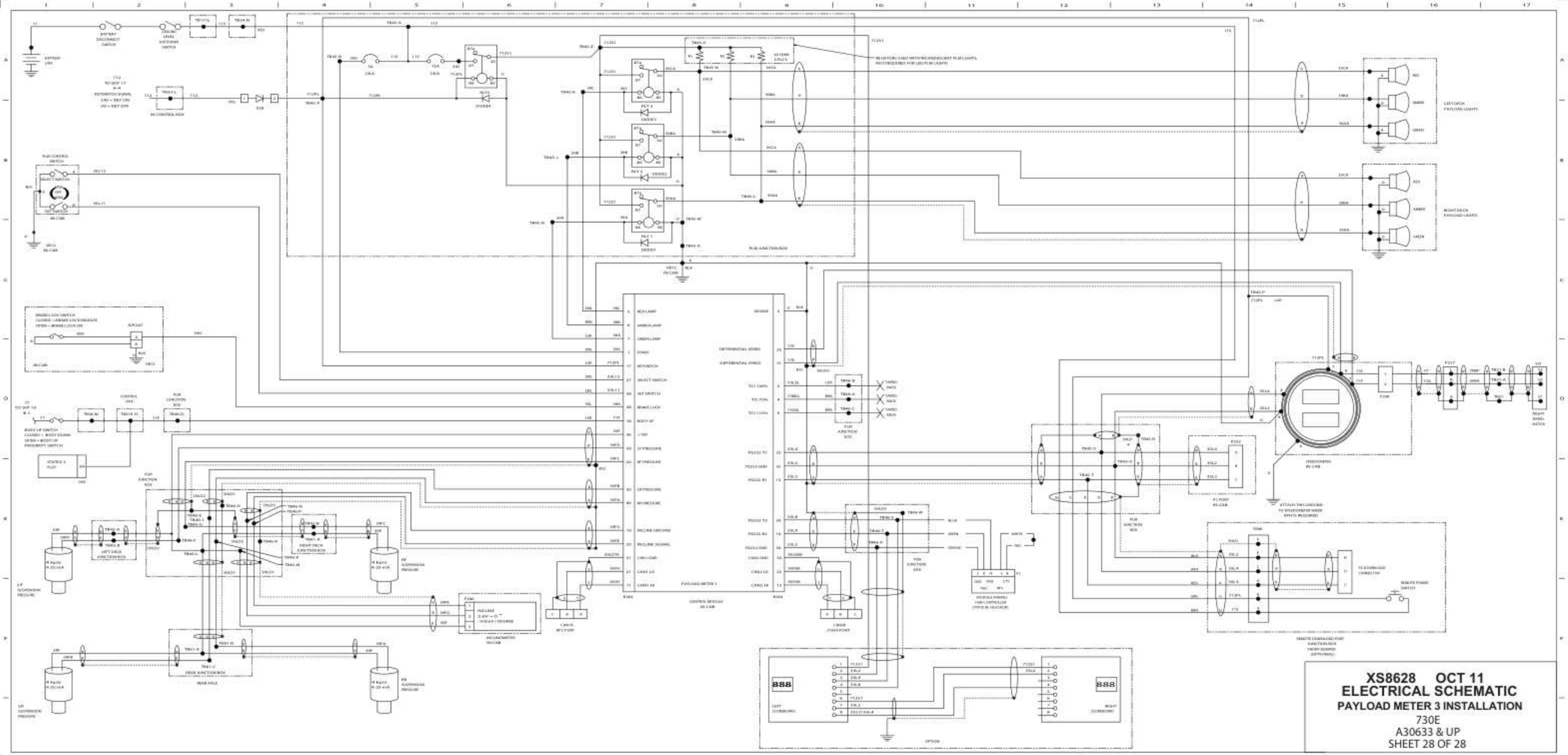
2. Refer to Figure 4-16 for the proper distance from the centerline of the drive pulley to the centerline of the compressor pulley. Set the tension tool accordingly on the deflection scale by moving the deflection O-Ring to the corresponding distance on the scale.
3. Slide the O-Ring for the "force" scale to zero.



FIGURE 4-14. DEFLECTION MEASUREMENT

4. Find the approximate center of the belt between the two pulleys. Place the tip of the tool onto the outer face of the belt and apply pressure, as shown in Figure 4-14. The tool must be perpendicular to the belt. Push on the tool until the bottom edge of the deflection scale O-Ring is even with the outer face of the adjacent drive belt. If only one belt is used, rest a straight edge across both pulleys to serve as the indicating plane.
5. The O-Ring on the force scale indicates the force used to deflect the belt. The belt must deflect 5.3 mm (0.21 in.) under a force of 1.6 ± 0.1 kg f (3.44 ± 0.11 lbf). If not, adjust the belt accordingly and recheck the tension.

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