CAT Lift Trucks

Service Manual

Chassis & Mast

DP70NH	**30E-00001-09999**
DP80NH	**30F-00001-09999**
DP100NH	**30G-00001-09999**

For use with A-6BG1QC02, A-6BG1QC09 Engine Service Manuals.

99709-41100

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Charging generator	
Type	A.C. generator, diode rectification
Voltage	24 V
Output	25 A
Drive	Belt drive
Voltage/current regulator	IC type (built in charging generator)
Reference data	
Oil sump capacity	13 L max. - 10 L min. (3.4 U.S. gal max. - 2.6 U.S. gal min.)
Quantity of cooling water	12 L (3.2 U.S. gal [engine only]
Valve clearance	
Suction valve (in cold)	0.4 mm (0.016 in)
Exhaust valve (in cold)	0.4 mm (0.016 in)
Valve operation	
Suction valve (open)	19° BTDC
(close)	47° ABDC
Exhaust valve (open)	57° BBDC
(close)	15° ATDC
Injection timing	14° BTDC
Injection start pressure	14.7 MPa {150 kgf/cm^2 (2133 psi)}
Compression pressure at 200 rpm	3 MPa {31 kgf/cm^2 (441 psi)}

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2.1.5 TROUBLESHOOTING GUIDE

(1) Low output

	Cause	Inspection method	Remedy
Torque Converter	1. Insufficient oil pressure (1) Low oil level (2) Air from the suction side (3) Clogged strainer (4) Low discharge from charging pump (5) Defective spring of inlet relief valve (6) Worn or damaged seal ring or "O"-ring 2. Broken wheel vanes or the interference of vanes with other parts	 Check oil level. Check all joints and pipes. Disassemble and check. Disassemble and check. Check spring tension. Disassemble, check and measure. Extract a small amount of oil and check the oil for foreign matter.	 Add oil. Retighten and replace gaskets. Clean and replace. Replace. Replace. Replace. Replace.
Transmission	1. Improper oil or bubbles in oil (1) Air from suction side (2) Low oil pressure inside torque converter causes bubbles. 2. Clutch slipping (1) Low oil pressure (2) Worn seal ring (3) Worn clutch piston ring (4) Burned clutch disk or deformed plate	Check. Check all joints and pipes. Check inlet oil pressure. Check oil pressure. Disassemble, check and measure. Disassemble and check. Check if the truck starts in forward/reverse or moves in neutral.	 Retighten and replace. Replace inlet relief valve. Replace regulator valve. Replace. Replace. Replace.
Engine	1. Low output of engine	Check stall rpm. Check engine operation sound. Check the maximum speed of engine in neutral.	Adjust or repair engine.

(2) High oil temperature

	Cause	Inspection method	Remedy
Torque Converter	1. Low oil level 2. Clogged strainer 3. Interference of wheel vanes with other parts 4. Mixed air 5. Water is mixed in oil. 6. Large piping resistance. 7. Worn or seized bearings	Check oil level. Disassemble and check. Extract a small amount of oil and check the oil for foreign matter. Check joints and pipes at suction side. Extract oil and check. Check piping for cracks or bends. Disassemble and check.	Add oil. Clean or replace. Replace torque converter assembly. Retighten or replace gaskets. Change oil. Repair or replace. Repair or replace.
Transmission	1. Clutch dragging 2. Worn or seized bearings.	Check if the truck moves in neutral. Disassemble and check.	Replace clutch plates. Replace.

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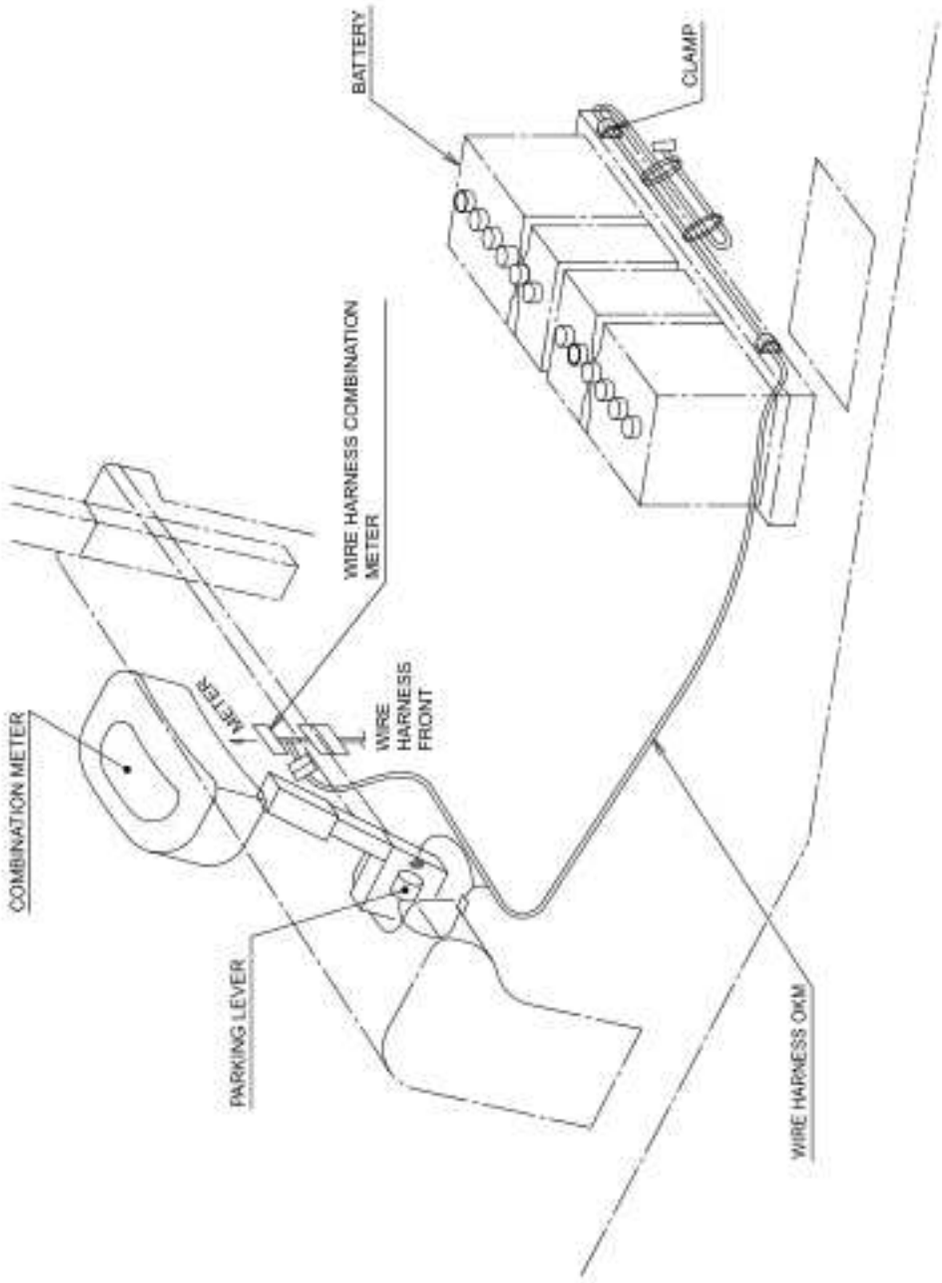


Fig. 9.4 Locations of Electrical Parts, Combination Meter

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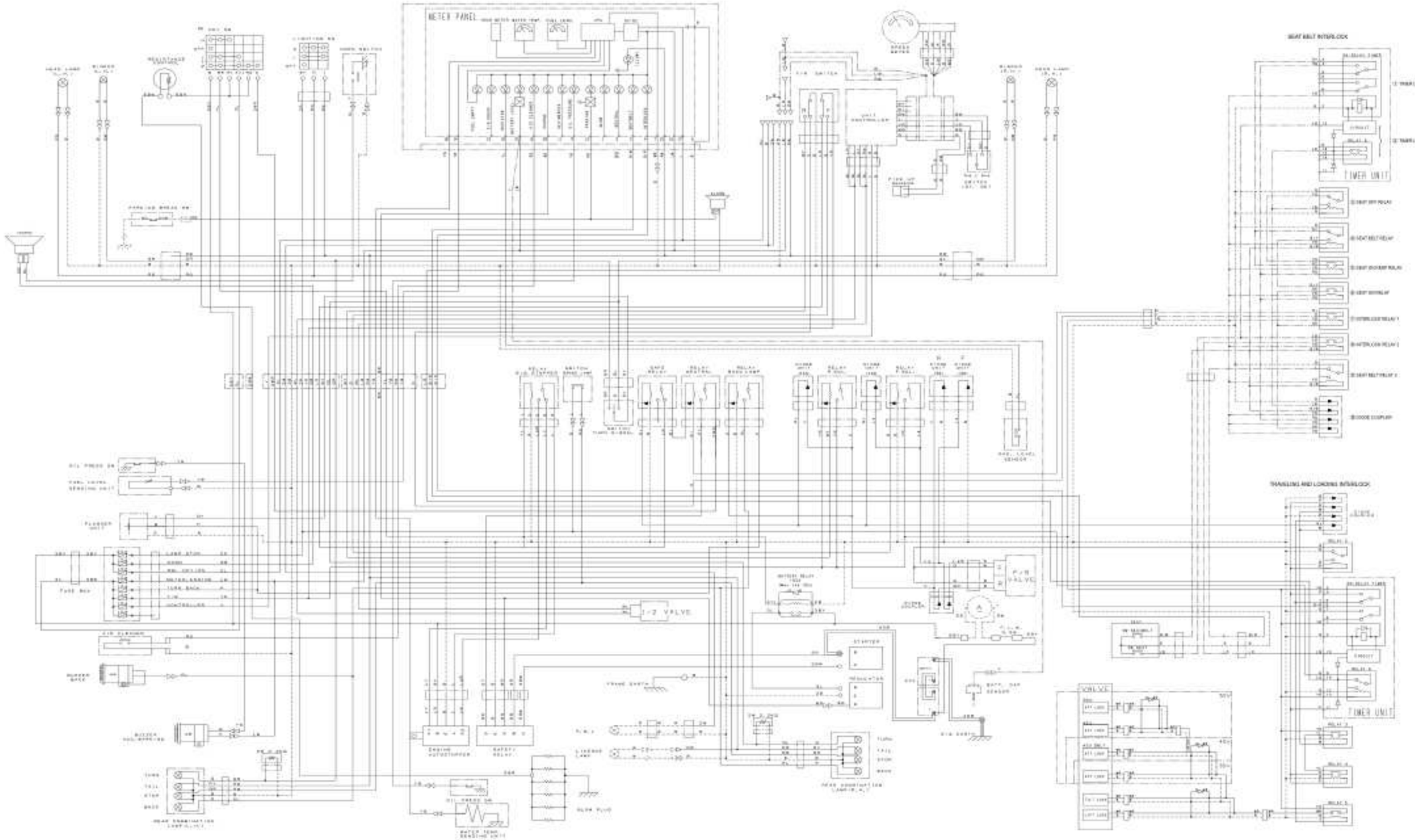


Fig. 9.14 Circuit Diagram

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