CEBM011604

Shop Manual

KOMATSU®

WA250-5L
WA250PT-5L

WHEEL LOADER – WASTE HANDLER

SERIAL NUMBERS

WA250-5L	A73001 and UP
WA250PT-5L	A79001

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1. Forward/reverse solenoid valve
2. High-pressure cut-off valve
3. Speed-related valve (DA valve)
4. Charge pump
5. Low-pressure relief valve
6. Servo cylinder
7. High-pressure relief valve
8. Control plate
9. Cylinder block
10. Piston
11. Swash plate

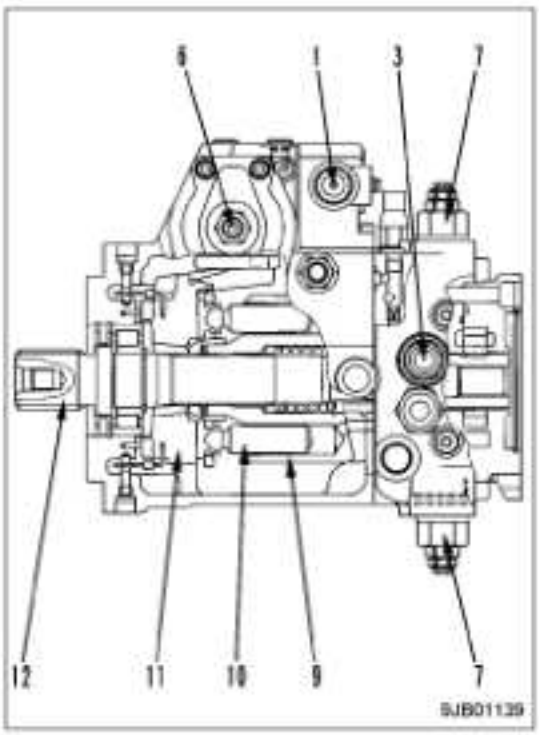
Specifications

Model	A4VG90DA
Type	Variable displacement swash plate-type piston pump
Theoretical capacity cc / rev (cubic in / rev)	0 – 90 (5.1)
Set pressure of high-pressure relief valve [kg/cm^2 (psi)]	450 (6401)
Set pressure of high-pressure cut-off valve [kg/cm^2 (psi)]	Effective differential pressure 420 (5974)
Set pressure of low-pressure relief valve [kg/cm^2 (psi)]	25 (356)

Operation

Power Flow

- The HST pump is installed to the coupling which is installed to the engine flywheel.
- The power of the engine is transmitted from the flywheel through the coupling to the HST pump.
- The HST pump is equipped with forward-reverse shifting solenoid valve (1) and servo cylinder (6). If the operator operates for forward or reverse travel, forward-reverse shifting solenoid valve (1) operates and swash plate (11) in the HST pump slants to reverse the oil flow.
- Cylinder block (9) and pistons (10) in it rotate together with drive shaft (12) and the tips of pistons (10) slide on swash plate (11) which does not rotate. The pump has nine pistons (10) in it.



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RELEASING REMAINING PRESSURE IN HYDRAULIC CIRCUIT

1. Releasing remaining pressure between each hydraulic cylinder and control valve.
   - ★ If the piping between the hydraulic cylinder and the control valve is to be disconnected, release the remaining pressure from the circuit as follows.

   A. Stop the engine.

   B. Loosen the oil filler cap slowly to release the pressure inside the tank.

   C. Operate the control levers.
      - ★ When the levers are operated 2 - 3 times, the pressure stored in the PPC accumulator is removed. Start the engine, run at low idling for approx. 5 seconds to charge the accumulator, then stop the engine and operate the control levers.
      - ★ Repeat the above operation 2 - 3 times to release all the remaining pressure.

2. Releasing remaining pressure in brake accumulator circuit
   - ★ If the piping between the ACC charge valve and brake accumulator, between the ACC charge valve and parking brake valve, and between the accumulator and brake valve is to be disconnected, release the remaining pressure from the circuit as follows.

   A. Stop the engine.

   B. Depress the brake pedal at least 100 times to release the pressure inside the brake accumulator circuit.

3. Releasing remaining pressure in PPC accumulator circuit
   - ★ If the piping between the PPC accumulator and PPC valve is to be disconnected, release the remaining pressure from the circuit as follows.

   A. Operate the control lever 2 - 3 times to release all the remaining pressure from the circuit.

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ERROR CODE: [DW26KZ]

MOTOR 2 SOLENOID SYSTEM OPEN OR SHORTED

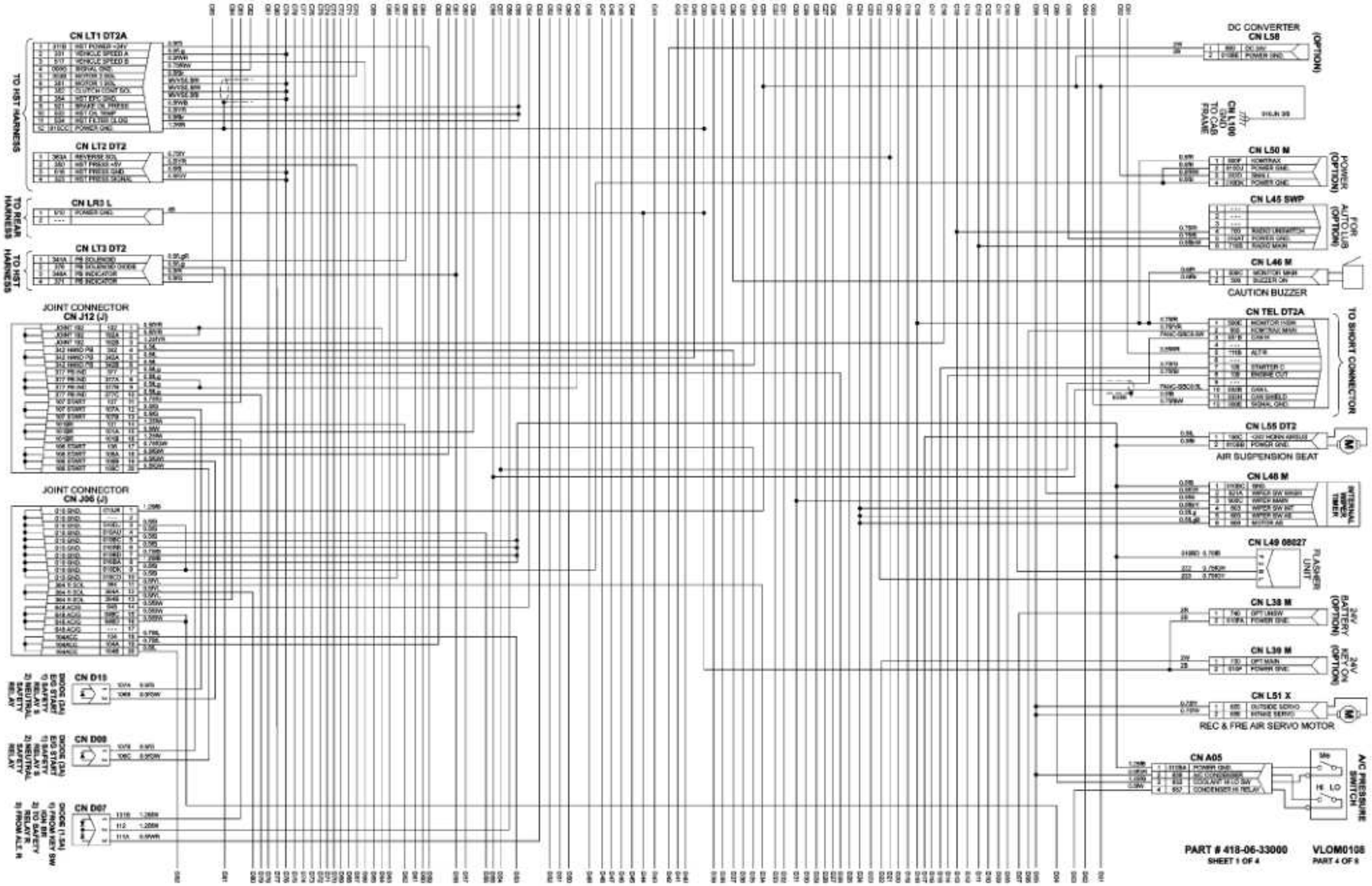
Contents Of Trouble	• Action Code E03 displayed. • Travel speed does not increase. • Travel speed indicator on machine monitor stays at zero and does not move. See List: (**KZ**).

Tools and Procedures	• Digital Volt Ohm Meter. T-adapter kit. • Do not mark on original page of service manual. Remove this page from the service manual and make a copy for recording information while performing these tests. • If you are unable to copy this page, record readings on a separate paper referring to the (**No.**) numbers listed on the right of the procedure. • Follow each step throughout this procedure, do not skip steps, jump ahead or stop when a fault is found unless otherwise instructed to in the procedure. It is important to complete all steps and record information for final analyzing.

Steps	Circuit Diagnostic Procedures For Error Code [DW26KZ]		Specifications	No.	Readings
1. Motor 2 Solenoid • With ignition switch in the "OFF" position. • Disconnect (T07) connector from solenoid and isolate solenoid. • Zero meter leads for proper Ω readings					
A. Solenoid test	Resistance Ω	At solenoid T07, between (1) and (2)	10 to 30Ω	1	
		At solenoid T07, between (3) and (4)	10 to 30Ω	2	
		At solenoid T07, between (1) and chassis ground.	(OL) open	3	
		At solenoid T07, between (2) and chassis ground.	(OL) open	4	
		At solenoid T07, between (3) and chassis ground.	(OL) open	5	
		At solenoid T07, between (4) and chassis ground.	(OL) open	6	
2. Defective Reverse Relay • With ignition switch in the "OFF" position. • Replace the relay with another relay of the same type. • Turn ignition switch to the "ON" position.					
A. (L107) relay check	—	Error code [DW26KZ] is displayed, system still does not work properly?	Relay (L107) good	7	
	—	Error code [DW26KZ] is not displayed, system works properly now?	Relay (L107) defective	8	
3. Defective FNR Switch • With ignition switch in the "OFF" position. • Disconnect switch (L15) and isolate FNR switch. • Zero meter leads for proper Ω readings					
FNR switch	Resistance Ω	At FNR switch L15, between (1) and (2), lever in the "F" position.	0.0 to 1.0Ω	9	
		At FNR switch L15, between (1) and (3), lever in the "N" position.	0.0 to 1.0Ω	10	
		At FNR switch L15, between (1) and (4), lever in the "R" position.	0.0 to 1.0Ω	11	
		At FNR switch L15, between (1) and chassis ground.	(OL) open	12	

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