CEBM000800

Shop Manual

KOMATSU®

WA600-1

WHEEL LOADER

SERIAL NUMBERS **WA600-1LE - A51001** and up

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CONTENTS

01 GENERAL 01-1

10 STRUCTURE AND FUNCTION 10-1

20 TESTING AND ADJUSTMENT 20-1

30 DISASSEMBLY AND ASSEMBLY 30-1

40 MAINTENANCE STANDARD 40-1

90 OTHER 90-1

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M-9 (Radiator water level) flashes when engine is running 20-234
M-10 (Drop in air pressure) flashes when engine is running 20-236
M-11 (Engine water temperature) flashes when engine is running 20-236
M-12 (Torque converter oil temperature) flashes when engine is running 20-236
M-13 (Parking brake) lights up abnormally, or does not light up 20-238
M-14 (Working lamp) lights up abnormally, or does not light up 20-240
M-15 (Transmission cut-off) lights up, or does not light up 20-242
M-16 Turn signal Hi beam lights up, or does not light up 20-244
M-17 Turn signal does not flash even when hazard switch is turned on 20-249
M-18 Speedometer display does not work normally 20-250
M-19 Hourmeter display does not work normally 20-251
M-20 When starting switch is turned on, monitor panel does not work, or only part works 20-252
M-21 When starting switch is turned on, all monitor panel lights light up, but do not go out 20-253
M-22 (Battery charge or engine oil pressure) flashes when engine is stopped 20-254
M-23 None of the machine monitor panel lighting lights up, or parts of it does not light up 20-256
M-24 When the starting switch is turned to the on position (engine stopped), and the buzzer does not sound for 1 second with the caution item flashing 20-260
M-25 No abnormality is shown on the monitor display, but the alarm buzzer sounds 20-260
M-26 When the starting switch is turned to the on position (Engine stopped), and the warning lamp does not light up for 2 seconds, the caution item is flashing but the warning lamp does not flash 20-262
M-27 No abnormality is shown on the monitor display, but the warning lamp lights up 20-263
M-28 Abnormality in the fuel gauge system 20-264
M-29 Abnormality in the air pressure gauge system 20-266
M-30 Abnormality in the engine water temperature gauge system 20-268
M-31 Abnormality in the torque converter oil temperature gauge system 20-270
Eagle heater/air conditioner 20-272
Troubleshooting 20-272
Wiring diagram 20-276
Connector detail 20-276

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10. Bucket movement becomes slow during tilt back.

Checks before troubleshooting
- External deformation of dump cylinder

Cause
- Swollen or internally damaged dump cylinder tube.
- Regarding other faults which occur when the bucket operates, refer to item 9 "Bucket moves slowly or has insufficient roll back power".

11. Bucket cannot be held down by the bucket cylinder.

Refer to item 9 "Bucket moves slowly or has insufficient tilt back power".

Check before troubleshooting
- Is oil level in the hydraulic tank satisfactory?
- Is the stroke of the main control valve dump spool correct?

Cause
- Faulty seat of safety with suction valve of control valve for the bottom side of dump cylinder.
- Oil leakage from seal of dump cylinder piston.

12. Bucket has large hydraulic drift.

Ask the operator the following questions.
- Did the hydraulic drift suddenly become large? → Dirt lodged in valve or damaged parts.
- Did the hydraulic drift gradually become large? → Worn parts.

Check before troubleshooting
- Is the type and temperature of the oil in the hydraulic tank correct?
- Is the dump spool in the neutral position? → Seized link bushing, faulty spool detent.

Fault check
- Use the judgement criterion table to check whether or not the hydraulic drift of the bucket is actually large.
- If hydraulic drift is large.
  Cause: Oil leakage in dump cylinder.
- If hydraulic drift returns to normal.

Cause: Faulty seating of overload relief valve or suction valve on rod side. Faulty oil sealing on spool of dump control valve.

13. Bucket moves unsteadily when machine travels under load. (Main control valve in "Hold").

Checks before troubleshooting
- Is oil level in hydraulic tank and type of oil correct?
- Excessive play in pin and bushing of work equipment linkage.
- Was an unusual noise produced?

Cause
- Faulty piston seal of dump cylinder.
- Faulty safety valve with suction valve for the bottom side of dump cylinder.

If the above symptoms, refer to the problems items corresponding to each fault.

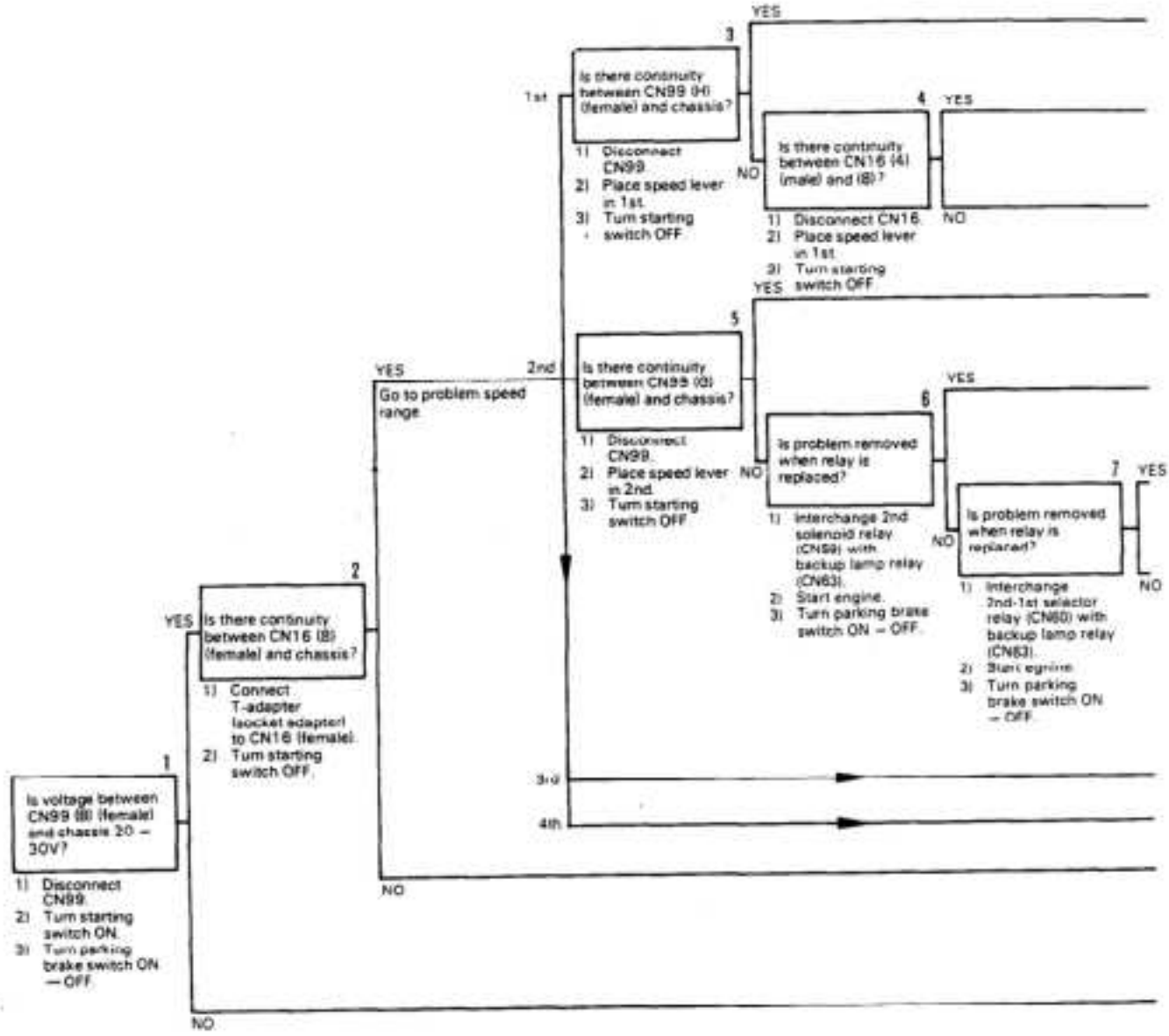
14. Bucket dumps momentarily when control lever is shifted from "Hold" to "Tilt back".

The bucket dumps momentarily under its own weight when the dump control lever is gradually shifted from the "Hold" position to the "Tilt back" position while the engine is at low idling. When the control lever is put completely into the "Tilt back" position, the bucket behaves normally.

Cause
- Faulty seating of main control valve dump spool check valve.

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e. Problem in speed solenoid circuit (1/2)



Trouble shooting tools	T-adapter or socket adapter (for Engine)	

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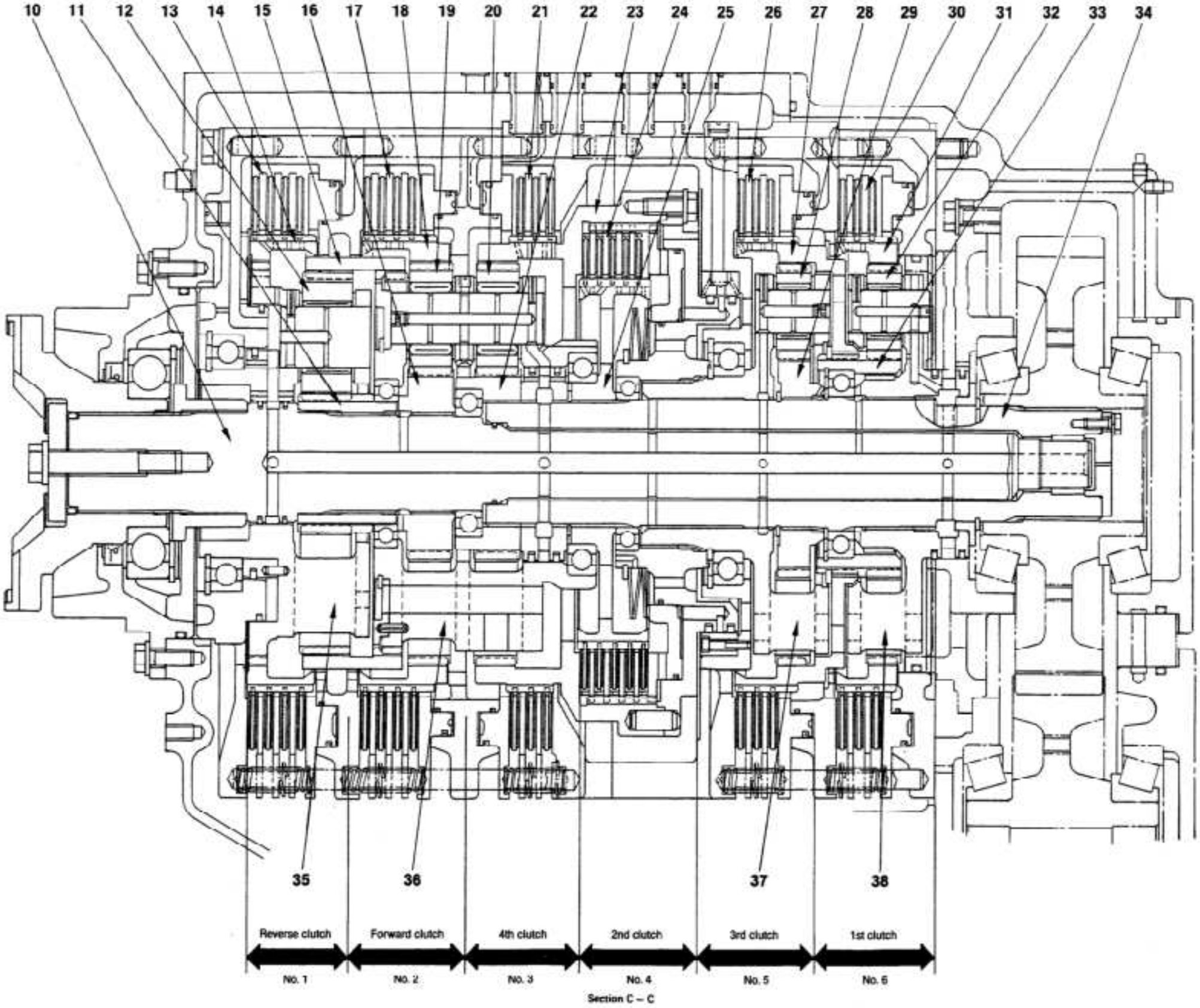
Unit: mm

No	Check item	Criteria					Remedy
		Standard size	Tolerance		Standard clearance	Clearance limit	
			Shaft	Hole			
1	Clearance between reducing valve and body	25	-.035 -.045	+0.012 0	0.035 0.058	0.08	
2	Clearance between torque converter relief valve spool and body	25	-0.035 -0.045	+0.013 0	0.035 0.058	0.08	
3	Clearance between priority valve spool and body	25	-0.035 -0.045	+0.013 0	0.035 0.058	0.08	
4	Clearance between quick valve spool and body	12	-0.035 -0.045	+0.013 0	0.035 0.058	0.08	
5	Clearance between modulating valve spool and body	25	-0.035 -0.045	+0.013 0	0.035 0.058	0.08	
6	Clearance between main relief valve spool and body	28	-0.035 -0.045	+0.013 0	0.035 0.058	0.08	
		Standard size			Repair limit		
		Free length	Install length	Install load	Free length	Install load	
7	Priority valve spring	62	37.7	22.1 kg	60.1	21.0 kg	
8	Torque converter relief valve spring	62	48	12.8 kg	60.1	12.2 kg	
9	Modulating valve spring (inner)	118	110	5.55 kg	114.5	5.27 kg	
10	Modulating valve spring (outer)	145.7	144	1.69 kg	141.3	1.60 kg	
11	Main relief valve spring (inner)	106	83.5	30.8 kg	104.8	33.1 kg	
12	Main relief valve spring (outer)	122	83.5	37.9 kg	118.3	39.0 kg	
13	Thickness of shim for reducing valve	2.5 mm (pressure per 1 piece: 0.65 kg/cm²)					Adjust
14	Thickness of shim for modulating valve	3.0 mm (pressure per 1 piece: 0.33 kg/cm²)					
15	Thickness of shim for priority valve	2.0 mm (pressure per 1 piece: 0.26 kg/cm²)					
16	Thickness of shim for torque converter relief valve	2.0 mm (pressure per 1 piece: 0.26 kg/cm²)					

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FOLDOUT 10-20

TRANSMISSION



Section C – C

10. Input shaft
11. Sun gear (Teeth 32)
12. Planetary gear (Teeth 29)
13. Reverse clutch
14. Ring gear (Teeth 112)
15. Ring gear (Teeth 90)
16. Sun gear (Teeth 45)
17. Forward clutch
18. Ring gear (Teeth 95)
19. Planetary gear (Teeth 25)
20. Planetary gear (Teeth 23)
21. 4th clutch
22. Sun gear (Teeth 45)
23. Ring gear (Teeth 117)
24. 2nd clutch
25. Hub
26. 3rd clutch
27. Ring gear (Teeth 90)
28. Planetary gear (Teeth 21)
29. Sun gear (Teeth 53)
30. 1st clutch
31. Ring gear (Teeth 95)
32. Planetary gear (Teeth 21)
33. Sun gear (Teeth 53)
34. Output shaft
35. Carrier
36. Carrier
37. Carrier
38. Carrier

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