CEBM022703

Shop Manual

KOMATSU®

WA380-6

WHEEL LOADER

SERIAL NUMBERS **WA380-6 A54001 and up**

ENGINE **6D107E-1**

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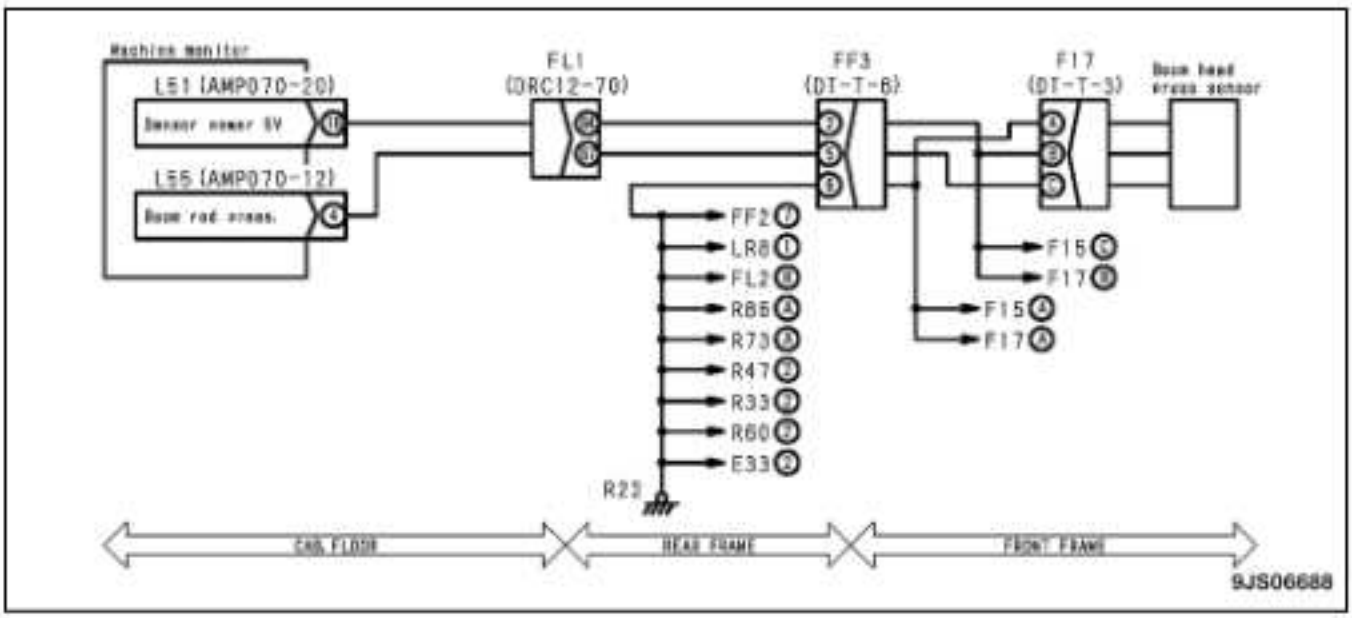
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	WRK [Work Equipment Controller System]		
No.	Display Contents in Normal State	Unit (*4)	Remarks (*5)
1	Depends on software part No.	—	
2	Depends on application version No.	Status display	
3	Depends on data version No.	Status display	
4	Work equipment neutral: 2.0 ±2.0 MPa (290.1 ±290.1 psi) Work equipment relieved: 34.0 ±2.0 MPa (4931.3 ±290.1 psi)	MPa (psi)	
5	Work equipment neutral: 0.70 ±0.2 V Work equipment relieved: 3.22 ±0.2 V	V	
6	Low idle (800 rpm): 700 ±30 mA High idle (Min. 1,420 rpm): 200 ±10 mA Work equipment relieved: 700 ±10 mA Engine stop (below 500 rpm): 900 ±10 mA	mA	
7	Work equipment neutral: 90 +0/-10 cc/rev Work equipment relieved: 9 ±10 CC/rev	cc/r	
8	STD lift arm Highest lift arm: 45.8 ±2.0 deg Lowest lift arm: -40.7 ±5.0 deg Hi lift arm Highest lift arm: 50.4 ±2.0 deg Lowest lift arm: -35.0 ±5.0 deg	Degree (°)	
9	STD lift arm Highest lift arm: 3.77 ±0.3 V Lowest lift arm: 1.31 ±0.5 V Hi lift arm Highest lift arm: 3.90 ±0.3 V Lowest lift arm: 1.53 ±0.5 V	V	
10	No relevant function in WA380-6	Degree (°)	
11	Depends on lever operation frequency.	—	
12	Neutral 2.50 V ±0.10 V RAISE (Before detent) 3.89 V ±0.25 V RAISE (Detent position) 4.15 V ±0.25 V LOWER (Before detent) 1.11 V ±0.25 V FLOAT (Detent position) 0.85 V ±0.25 V	V	
13	Neutral 2.50 V ±0.10 V RAISE (Before detent) 1.11 V ±0.25 V RAISE (Detent position) 0.85 V ±0.25 V LOWER (Before detent) 3.89 V ±0.25 V FLOAT (Detent position) 4.15 V ±0.25 V	V	

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	Cause		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state			★ Prepare with starting switch OFF, then turn starting switch ON and carry out troubleshooting.		
	4	Hot short in wiring harness (Contact with 24 V circuit)	Wiring harness between L51 (female) (16) – F17 (female) (B), – circuit branch end and chassis ground	Voltage	Max. 1 V
			Wiring harness between L55 (female) (4) – F17 (female) (C), – circuit branch end and chassis ground	Voltage	Max. 1 V
	5	Defective machine monitor	★ Prepare with starting switch OFF, then start engine, raise the lift arm and carry out troubleshooting.		
			L51, L55	Lift arm	Voltage
			Between L51 (16) and chassis ground	Constant	4.85 – 5.15 V
			Between L55 (4) and chassis ground	Constant	0.50 – 4.50 V
				Neutral	0.50 – 0.90 V
				Lift arm head relief	3.02 – 3.42 V

Related Circuit Diagram



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TROUBLESHOOTING: H-MODE

Troubleshooting Hydraulic and Mechanical Systems

Using Troubleshooting Chart

This troubleshooting chart, like the other troubleshooting charts (YES/NO type), determines the location of the problem occurring on the machine and categorizes the problem under one of the main components, such as the steering system or work equipment hydraulic system. Use the following procedure to carry out accurate troubleshooting swiftly.

Step 1. Ask operator questions

The questions to ask the operator are given under the problem.

If the answer to the question matches the content given, the cause given after the arrow is the probable cause. Keeping the content of the questions in mind, read the matrix and proceed with Steps 2 and 3 to pinpoint the correct cause.

Example: Steering wheel does not turn

★ Ask the operator and check the following points.
- Did the problem suddenly start?
- → Related equipment broken
- Was the steering wheel heavy before the problem started?
- → Wear of related parts, defective seal

Step 2. Checks before troubleshooting

Before measuring the oil pressure or starting the troubleshooting, confirm the checks before starting items, check for leakage of oil, or for loose bolts. This will prevent wasting time when troubleshooting.

Before starting the actual troubleshooting, it is very important to determine the condition of the machine by checking the items given in *Checks Before Troubleshooting*.

Example: Checks before starting troubleshooting

- Is oil level and type of oil in hydraulic tank correct?
- Is there any oil leakage from steering valve or demand valve?
- Is steering linkage adjusted properly?

Step 3. Method of reading matrix

1. Operate the machine when carrying out troubleshooting of the items in the **Diagnosis** column. If any problems occur as the result of the troubleshooting, put a check against the items.
   - ★ When carrying out the troubleshooting, check the easier items first.
   - ★ It is not necessary to follow the numerical order.
   - ★ Marks and Remedies in Remedy line
     - X: Replace
     - Δ: Repair
     - A: Adjust
     - C: Clean

No.	Remedy / Diagnosis
1	Steering does not turn in both directions (left and right)
2	Steering turns only in one direction (left or right)
3	Steering is heavy when turned in both directions (left and right)
4	Steering wheel is heavy in one direction (left or right)
5	Work equipment moves

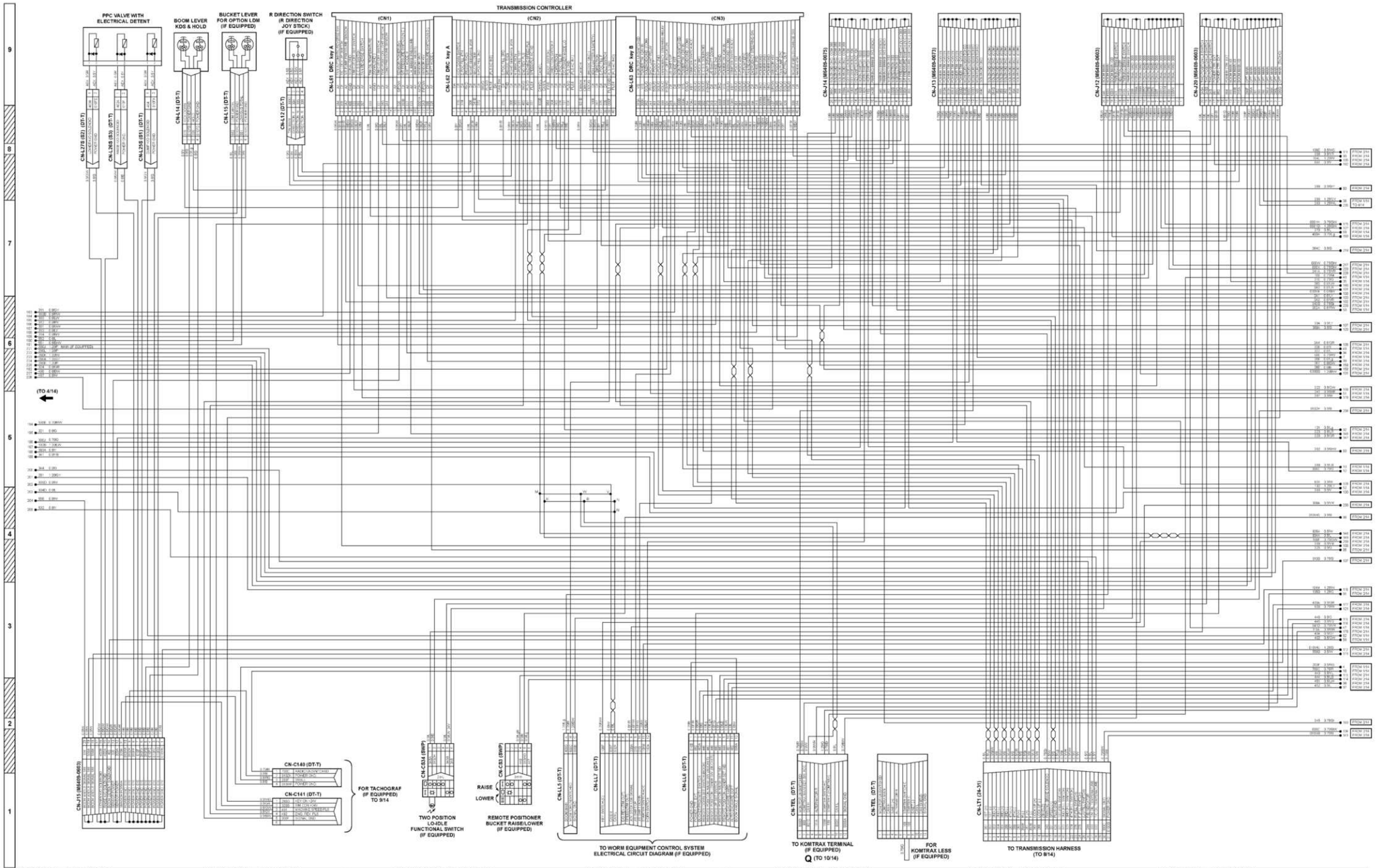
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ELECTRICAL SYSTEM

Electrical Circuit Diagram (3/14)

Common to WA380-6, WA430-6, WA470-6 and WA480-6

*** This circuit diagram covers equipment and devices that are unavailable as options in some areas.**



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