CEBM030400

# Shop Manual

KOMATSU®

# WA380-8

## WHEEL LOADER

**SERIAL NUMBERS** **WA380-8 A74001 and up**

**ENGINE** **6D107E-3**

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<table>
<tr><th>No.</th><th>Cause</th><th colspan="4">Procedure, measuring location, criteria and remarks</th></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Ground fault in wiring harness (contact with ground circuit)</td><td colspan="4">1. Turn the starting switch to OFF position.<br>2. Disconnect connectors L72 and F13, and connect T-adapter to either female side.</td></tr>
<tr><td>Resistance</td><td colspan="2">Between ground and L72 (female) (16) or F13 (female) (C)</td><td>Min. 1 MΩ</td></tr>
<tr><td rowspan="2">5</td><td rowspan="2">Short circuit in wiring harness</td><td colspan="4">1. Turn the starting switch to OFF position.<br>2. Disconnect connectors L71, L72, and F13, and connect T-adapter to any female side.</td></tr>
<tr><td>Resistance</td><td colspan="2">Between L72 (female) (16) and L71 (female) (4) or between F13 (female) (A) and (C)</td><td>Min. 1 MΩ</td></tr>
<tr><td rowspan="2">6</td><td rowspan="2">Hot short circuit in wiring harness</td><td colspan="4">1. Turn the starting switch to OFF position.<br>2. Disconnect connector F13, and connect T-adapter to female side.<br>3. Turn the starting switch to ON position.</td></tr>
<tr><td>Voltage</td><td colspan="2">Between F13 (female) (C) and ground</td><td>Max. 1 V</td></tr>
<tr><td rowspan="5">7</td><td rowspan="5">Defective work equipment controller</td><td colspan="4">If no failure is found by above checks, work equipment controller is defective.<br>• Reference<br>1. Turn the starting switch to OFF position.<br>2. Insert T-adapter into connectors L71 and 72.<br>3. 3. Start the engine, and perform boom RAISE operation.</td></tr>
<tr><td rowspan="4">Voltage</td><td colspan="2">Between L71 (22) and ground</td><td>4.8 to 5.2 V</td></tr>
<tr><td rowspan="3">Between L72 (16) and ground</td><td>Continuous</td><td>0.50 to 4.40 V</td></tr>
<tr><td>Boom: NEUTRAL</td><td>0.50 to 0.90 V</td></tr>
<tr><td>Boom cylinder bottom: Relieving</td><td>2.80 to 3.20 V</td></tr>
</table>



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# TROUBLESHOOTING FOR HYDRAULIC AND MECHANICAL SYSTEMS (H MODE)

## INFORMATION MENTIONED IN TROUBLESHOOTING TABLE (H MODE)

(Rev. 2014/04)

The following information is summarized in the troubleshooting table. Before performing troubleshooting, understand that information fully.

| | |
|---|---|
| Failure | Failure symptom that appears on machine |
| Related information | Information on occurred failure or troubleshooting |

| No. | Cause | Procedure, measuring location, criteria, and remarks |
|---|---|---|
| 1 | Probable cause of failure (Each number is serial number, not priority sequence.) | <Contents of description><br>• Criteria to determine probable causes<br>• Remarks for determination of probable cause |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |



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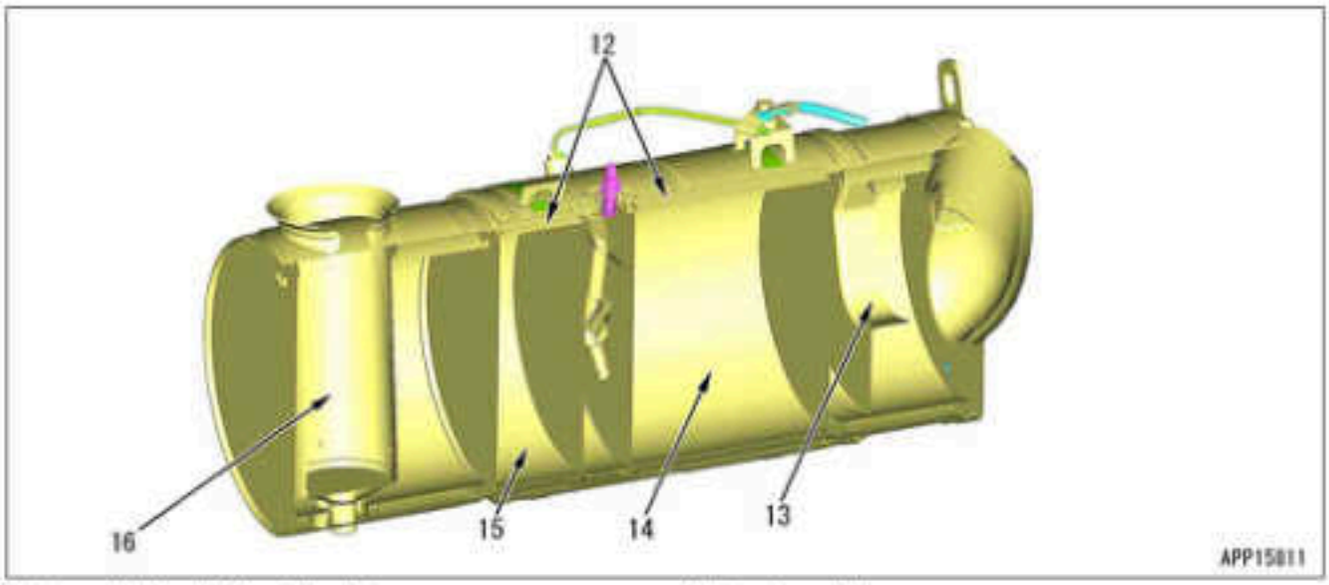
# SPECIFICATIONS OF AIR CONDITIONER

Refrigerant: R134a

Refrigerant quantity: 1100±50 g



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A: From AdBlue/DEF mixing tube
1: SCR body
2: SCR temperature sensor
3: SCR outlet NOx sensor
4: SCR outlet temperature sensor
5: Temperature sensor controller
6: Ammonia sensor
7: Hanger plate
8: water baffle
9: Water drain port
B: To exhaust pipe
10: Sensor table
11: Sensor table band
12: Catalyzer hold mat
13: Water dam
14: Downstream SCR catalyst and ammonia oxidation catalyst (integrated type)
15: Upstream SCR catalyst
16: Rectifier tube

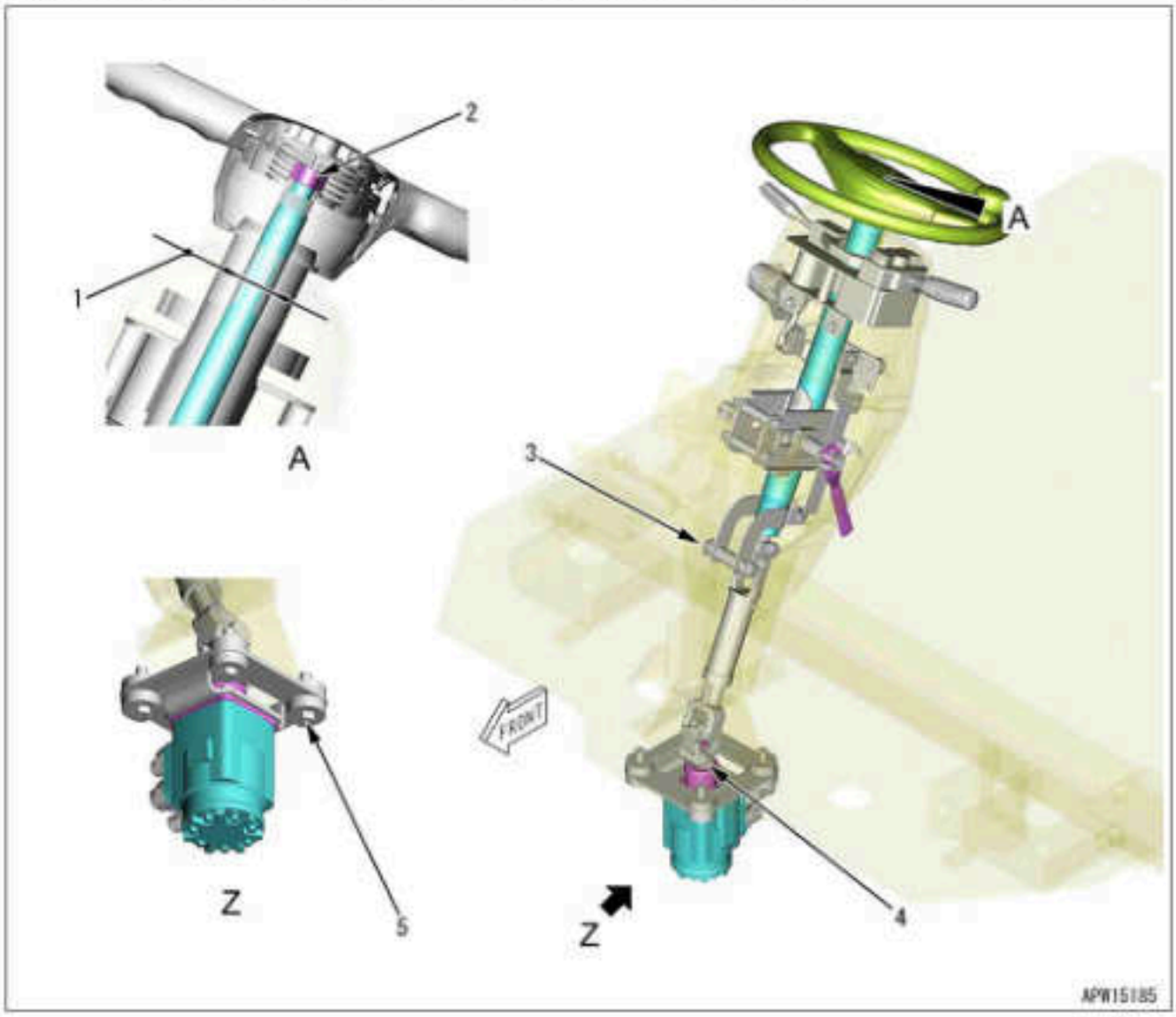
- SCR assembly consists of rectifier tube (16) equalizing the distribution of flow speed by leading exhaust gas, upstream SCR catalyst (15), downstream SCR catalyst, ammonia oxidation catalyst (14), and water dam which prevents rain water from entering into downstream SCR catalyst and ammonia oxidation catalyst (14) while exhausting gas.
- Ammonia oxidation catalyst (a part of 14) oxidizes ammonia to water and nitrogen with ammonia oxidation catalyst (a part of 14) to prevent ammonia which is supplied to SCR assembly from being released out because SCR catalyst (a part of 14, 15)cannot completely consume it.
- Each 1 piece of SCR temperature sensor (2), SCR outlet temperature sensor (4), ammonia sensor (6), and SCR outlet NOx sensor (3) are installed. These sensors are usable for various troubleshooting, such as they are used to control the feedback of denitration efficiency or they monitor that SCR catalyst properly functions or not.
- Rectifying tube (16) equalizes the distribution of exhaust gas flow speed.
- SCR catalyst (15, a part of 14) uses the ceramic honeycomb.
- The catalyzer holding mat (12) is made of a specific fiber and protects the ceramic catalyst against vibrations by the engine and the machine body. It also protects the outer periphery of SCR assembly against a heat transfer of the ceramics during operation.
- Water dam (13) is located at the upstream side of the outlet and prevents rainwater from entering into downstream SCR catalyst unit and ammonia oxidation catalyst (14).
- Water baffle (8) is located at the downstream side of the outlet and prevents rainwater at outlet from splashing over the detection part of NOx sensor.



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# STEERING SYSTEM

## MAINTENANCE STANDARD OF STEERING COLUMN




Unit: mm

| No. | Item | Judgment criteria | | | | | Remedy |
|---|---|---|---|---|---|---|---|
| | | Standard dimension | Tolerance | | Standard clearance | Allowable clearance | |
| | | | Shaft | Hole | | | |
| 1 | Clearance between steering shaft and column bushing | 19 | 0<br>-0.08 | +0.15<br>+0.05 | 0.05 to 0.23 | 0.4 | Replace |
| 2 | Tightening torque of nut | 29.4±2.94 Nm {3.0±0.3 kgm} | | | | | Retighten |
| 3 | Tightening torque of bolt | 11.8 to 24.5 Nm {1.2 to 2.5 kgm} | | | | | |
| 4 | Tightening torque of bolt | 48.1 to 62.8 Nm {4.9 to 6.4 kgm} | | | | | |
| 5 | Tightening torque of bolt | 98 to 123 Nm {10 to 12.5 kgm} | | | | | |



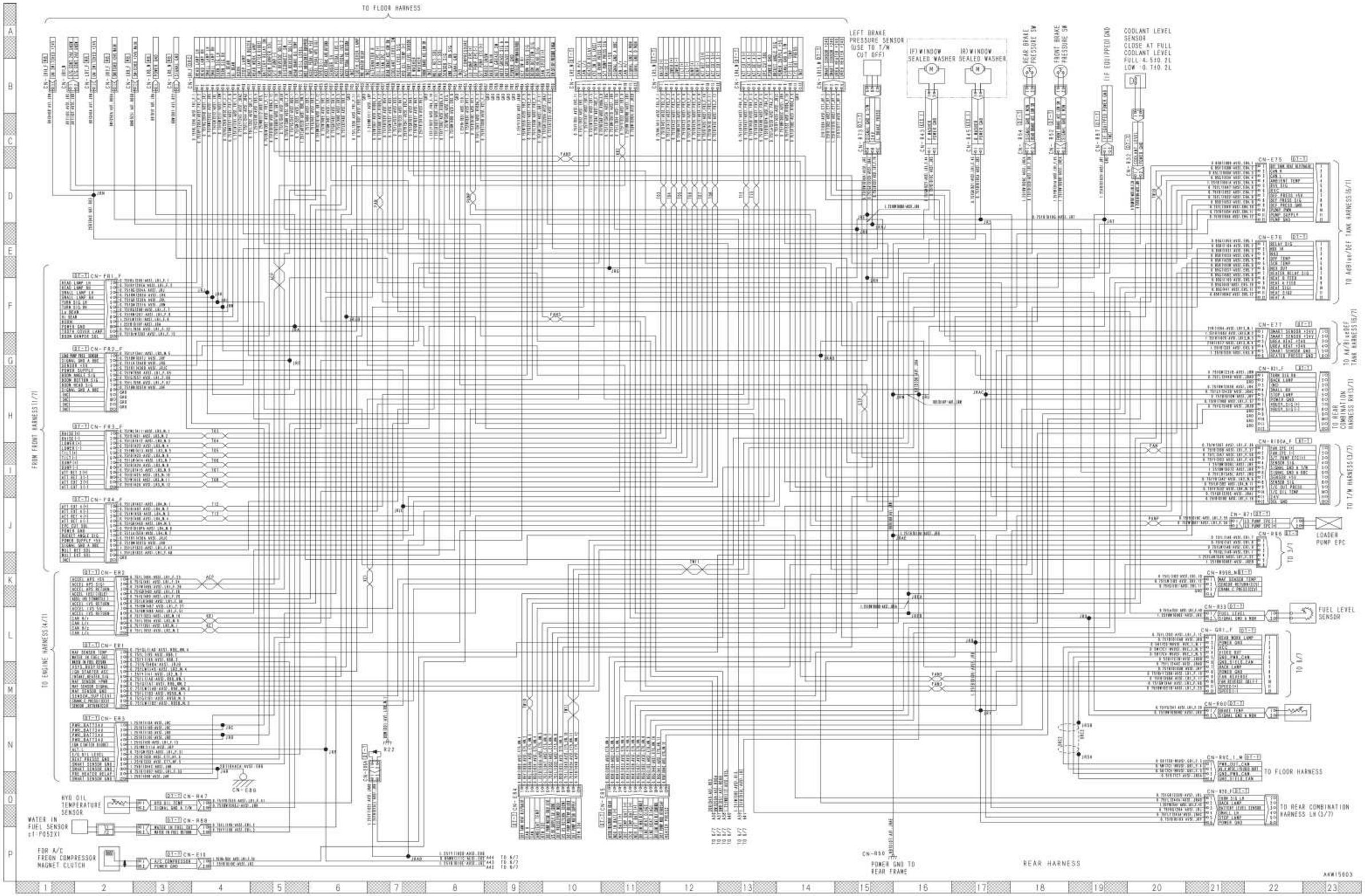
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## ELECTRICAL CIRCUIT DIAGRAM OF MACHINE (2/7)

WA380-8

**REMARK**

This figure covers the equipment and devices that are unavailable as optional items in some areas.






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