Shop Manual

VEBM460104

WA380-3

Wheel Loader

Serial Number

WA380H20051 and up

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AIR-CONDITIONER

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3. Using troubleshooting chart for engine-related failure

This troubleshooting chart is divided into three sections: questions, check items, and troubleshooting. The questions and check items are used to pinpoint high probability causes that can be located from the failure symptoms or simple inspeciton without using troubleshooting tools.

Next, troubleshooting tools or direct inspection are used to check the high probability causes to make final confirmation.

[Questions]

Sections Ⓐ + Ⓑ in the chart on the right corresponds to the items where answers can be obtained from the user. The items in Ⓑ are items that can be obtained from the user, depending on the user's level.

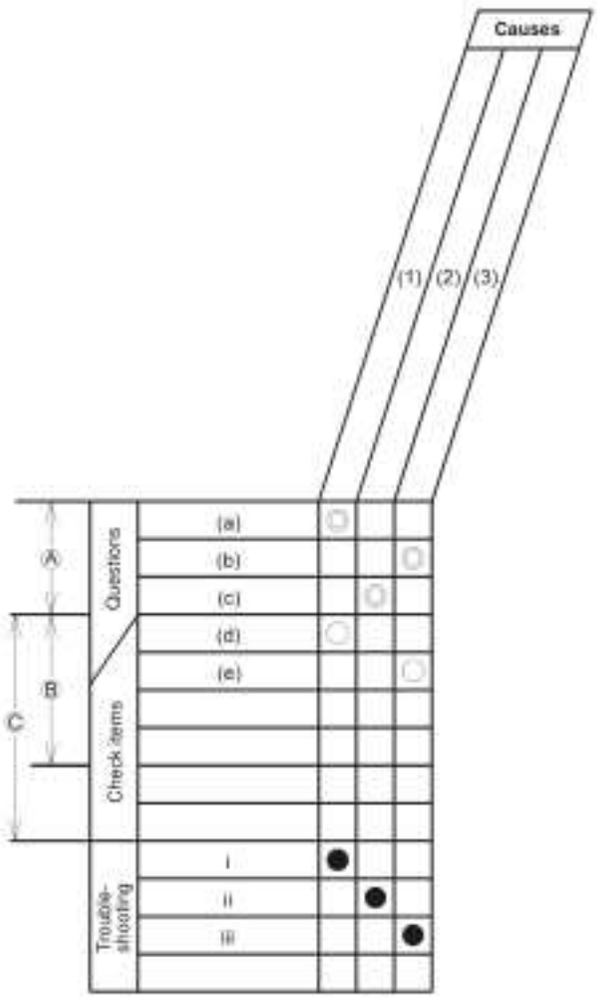
[Check items]

The serviceman carries out simple inspection to narrow down the causes. The items under Ⓒ in the chart on the right correspond to this.

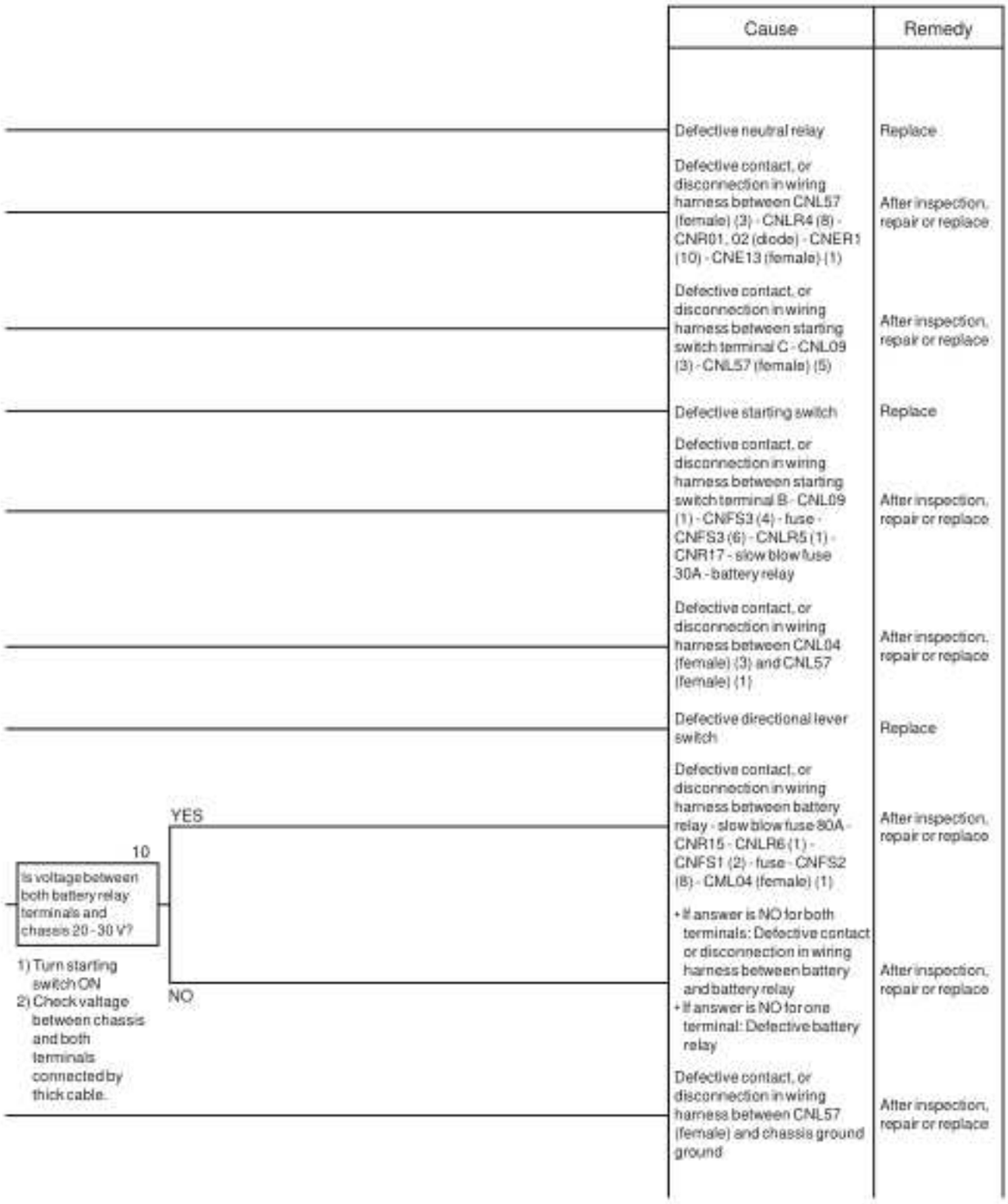
The serviceman narrows down the causes from information Ⓐ that he has obtained from the user and the results of Ⓒ that he has obtained from his own inspection.

[Troubleshooting]

Troubleshooting is carried out in the order of probability, starting with the causes that have been marked as having the highest probability from information gained from [Questions] and [Check items].



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Cause	Remedy
Defective neutral relay	Replace
Defective contact, or disconnection in wiring harness between CNL57 (female) (3) - CNLR4 (8) - CNR01, 02 (diode) - CNER1 (10) - CNE13 (female) (1)	After inspection, repair or replace
Defective contact, or disconnection in wiring harness between starting switch terminal C - CNL09 (3) - CNL57 (female) (5)	After inspection, repair or replace
Defective starting switch	Replace
Defective contact, or disconnection in wiring harness between starting switch terminal B - CNL09 (1) - CNFS3 (4) - fuse - CNFS3 (6) - CNLR5 (1) - CNR17 - slow blow fuse 30A - battery relay	After inspection, repair or replace
Defective contact, or disconnection in wiring harness between CNL04 (female) (3) and CNL57 (female) (1)	After inspection, repair or replace
Defective directional lever switch	Replace
Defective contact, or disconnection in wiring harness between battery relay - slow blow fuse 80A - CNR15 - CNLR6 (1) - CNFS1 (2) - fuse - CNFS2 (8) - CML04 (female) (1)	After inspection, repair or replace
• If answer is NO for both terminals: Defective contact or disconnection in wiring harness between battery and battery relay • If answer is NO for one terminal: Defective battery relay	After inspection, repair or replace
Defective contact, or disconnection in wiring harness between CNL57 (female) and chassis ground ground	After inspection, repair or replace

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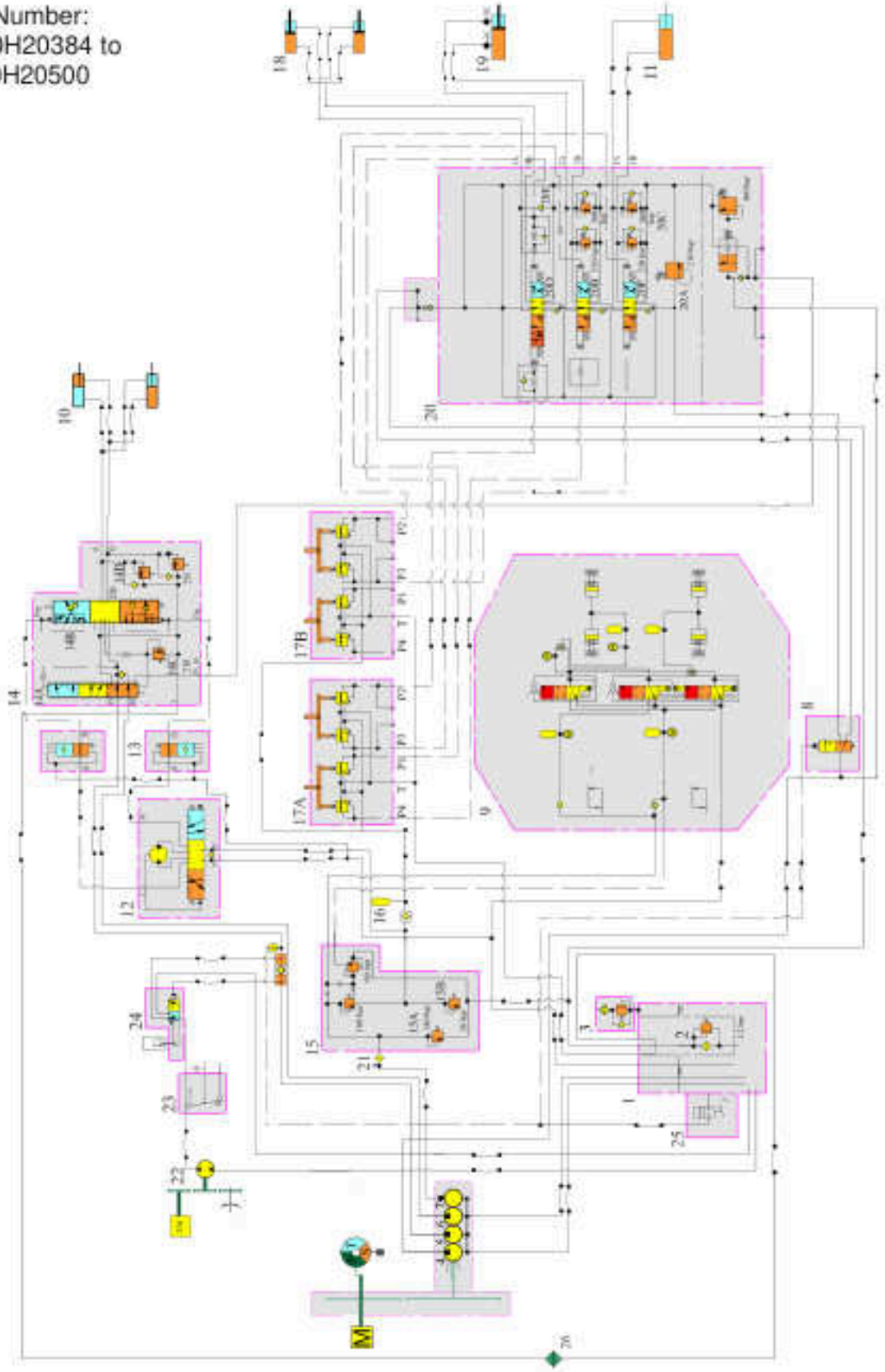
Unit: mm

No.	Check item	Criteria					Remedy
		Standard size			Repair limit		
		Free length	Installed length	Installed load	Free length	Installed load	
1	Spool return spring (for bucket and attachment)	54.8	53.5	125N (12.7kg)	—	—	Replace
2	Spool return spring (for bucket and boom)	54.8	52.2	235N (24kg)	—	—	
3	Spool return spring (for bucket and boom)	30.7	26.8	235N (24kg)	—	—	
4	Spool return spring (for boom)	55.3	40	233N (23.8kg)	—	—	
5	Spool return spring (for boom)	86.8	83.5	208N (21.2kg)	—	—	
6	Main relief valve main valve spring	39.5	23.2	33.3N (3.4kg)	—	—	
7	Relief valve poppet spring	49.3	41.9	259N (26.4kg)	47.8	208N (21.2kg)	
8	Check valve spring	32.6	24.5	44.1N (4.5kg)	—	—	
9	Suction valve spring	27.9	19	6.9N (0.7kg)	—	—	

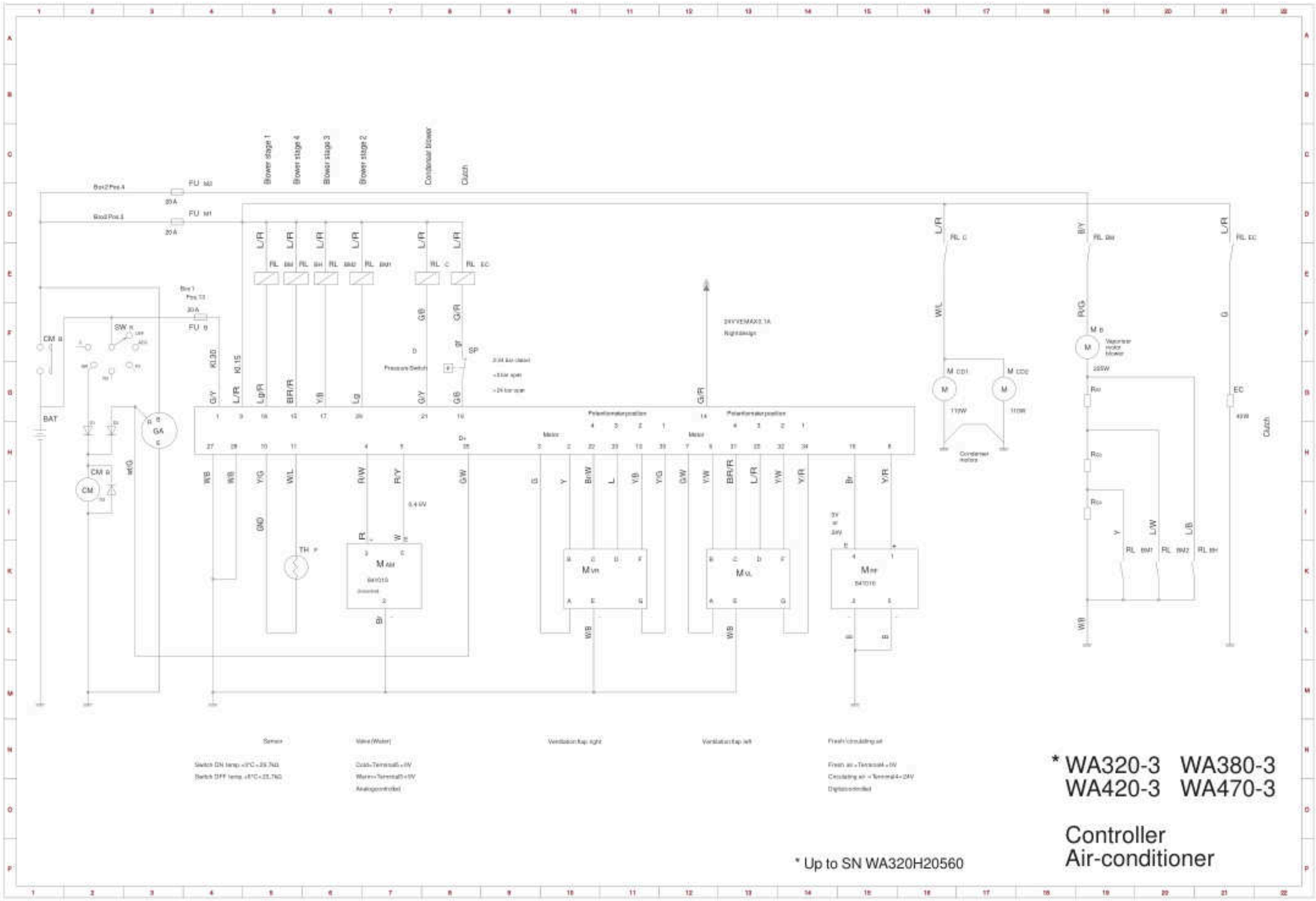
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WORK EQUIPMENT HYDRAULIC SYSTEM DIAGRAM

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WA380H20384 to
WA380H20500



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