SEN06514-08

Shop Manual

WHEEL LOADER **WA470-8**

SERIAL NUMBERS 100001 and up

KOMATSU®

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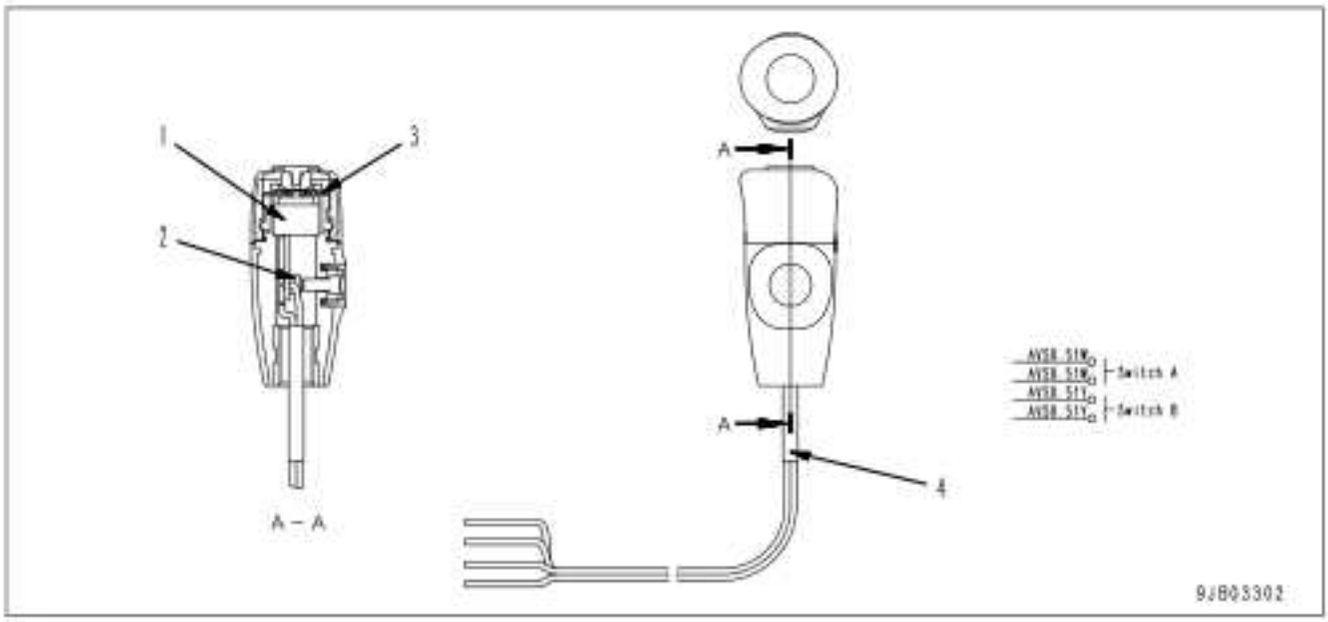
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SHIFT HOLD SWITCH

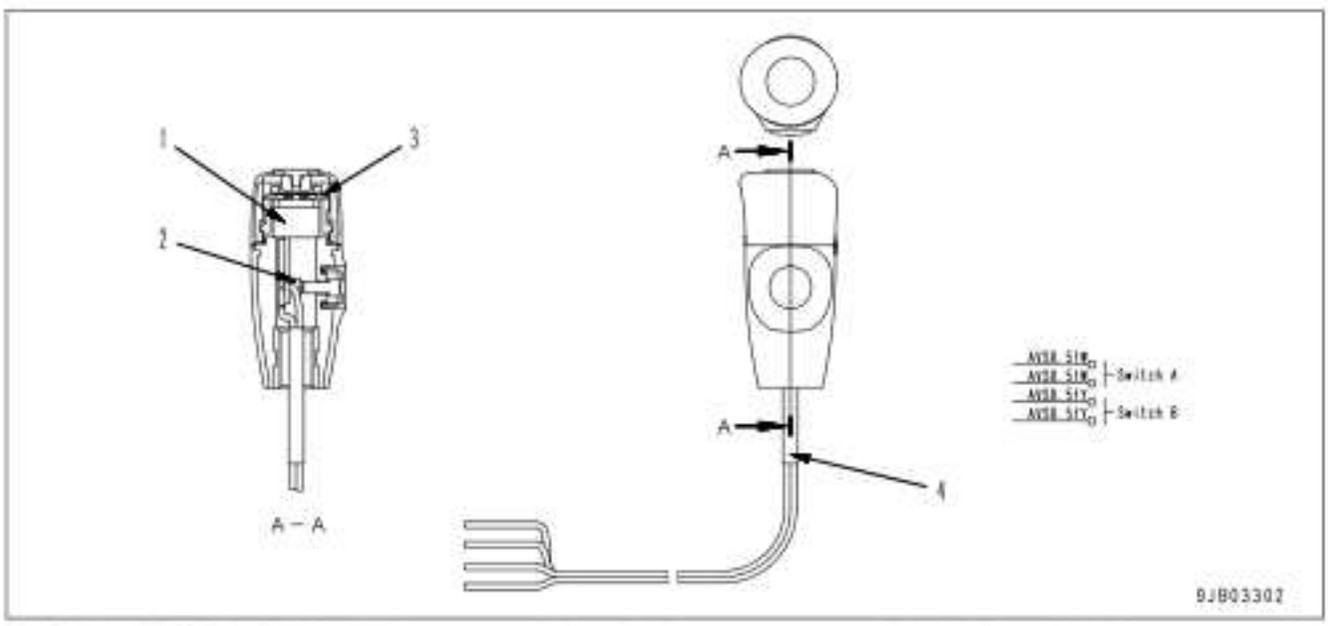
STRUCTURE OF SHIFT HOLD SWITCH (2-LEVER TYPE)

General view and sectional view



1: Switch A (white harness)
2: Switch B (yellow harness)
3: Spring
4: Wiring harness

FUNCTION OF SHIFT HOLD SWITCH (2-LEVER TYPE)



- Switch B (2) installed to the boom control lever knob operates as a hold switch to hold the gear speed in auto shift mode.
- Switch B (2) is a momentary type switch whose contacts are closed only while it is pressed.

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No.	Cause	Procedure, measuring location, criteria and remarks
1	Defective KDOC inlet temperature sensor	If failure code [CA3313] or [CA3314] is displayed, perform troubleshooting for those codes.
2	Defective dosing fuel solenoid valve 1	If failure code [CA1925] or [CA1963] is displayed, perform troubleshooting for [CA1925] or [CA1963] first.
3	Defective intake air system	Check intake air system hoses, clamps, and tubes for damage and loosening. Repair as necessary.
4	Defective injector	Perform cylinder cutout mode operation to identify disabled cylinder (see "TESTING AND ADJUSTING", "HANDLING CYLINDER CUTOUT MODE OPERATION").
5	Oil leakage to turbocharger exhaust connector	1. Remove turbocharger exhaust connector. 2. Check inside of turbocharger exhaust connector for adhesion of oil and fuel. **NOTICE** • **If oil or fuel is found, visually check for oil leaks from EGR valve and turbocharger. Repair abnormality, if any.** • **Wipe off oil or fuel sticking to piping.**
6	Oil leakage into exhaust connector or duct to KDPF	Check the exhaust system between the turbocharger and KDPF to check for oil or fuel flow into KDPF. • Wipe stained oil or fuel off clean, if any. • If there is a trace of oil or fuel flowing into KDPF, check for KDPF and clean or replace it as necessary.
7	KDOC inlet temperature sensor installation error	For details, see "Chapter 50 DISASSEMBLY AND ASSEMBLY", "REMOVE AND INSTALL KDPF ASSEMBLY" and "DISASSEMBLE AND ASSEMBLE OF KDPF ASSEMBLY". Repair as necessary. For details, see "REMOVE AND INSTALL KDPF ASSEMBLY", and "DISASSEMBLE AND ASSEMBLE OF KDPF ASSEMBLY" in Chapter 50 DISASSEMBLY AND ASSEMBLY. Repair as necessary.
8	Defective KDPF temperature sensor	1. Perform "Loaded Diagnostics Operation To Confirm Failure Correction". 2. If the failure code displays after performing the preceding troubleshooting, replace the KDPF temperature sensor. 3. Perform "Loaded Diagnostics Operation To Confirm Failure Correction".
9	Defective engine controller	If this failure code is kept displayed, or is displayed again after above checks are performed, engine controller is defective. (In case of an internal defect, troubleshooting is impossible as an assembly. Replace whole assembly.)

Loaded Diagnostics Operation To Confirm Failure Correction

Perform the procedure below to check that the repair is completed.

(Make sure that this failure code is cleared after this procedure.)

REMARK

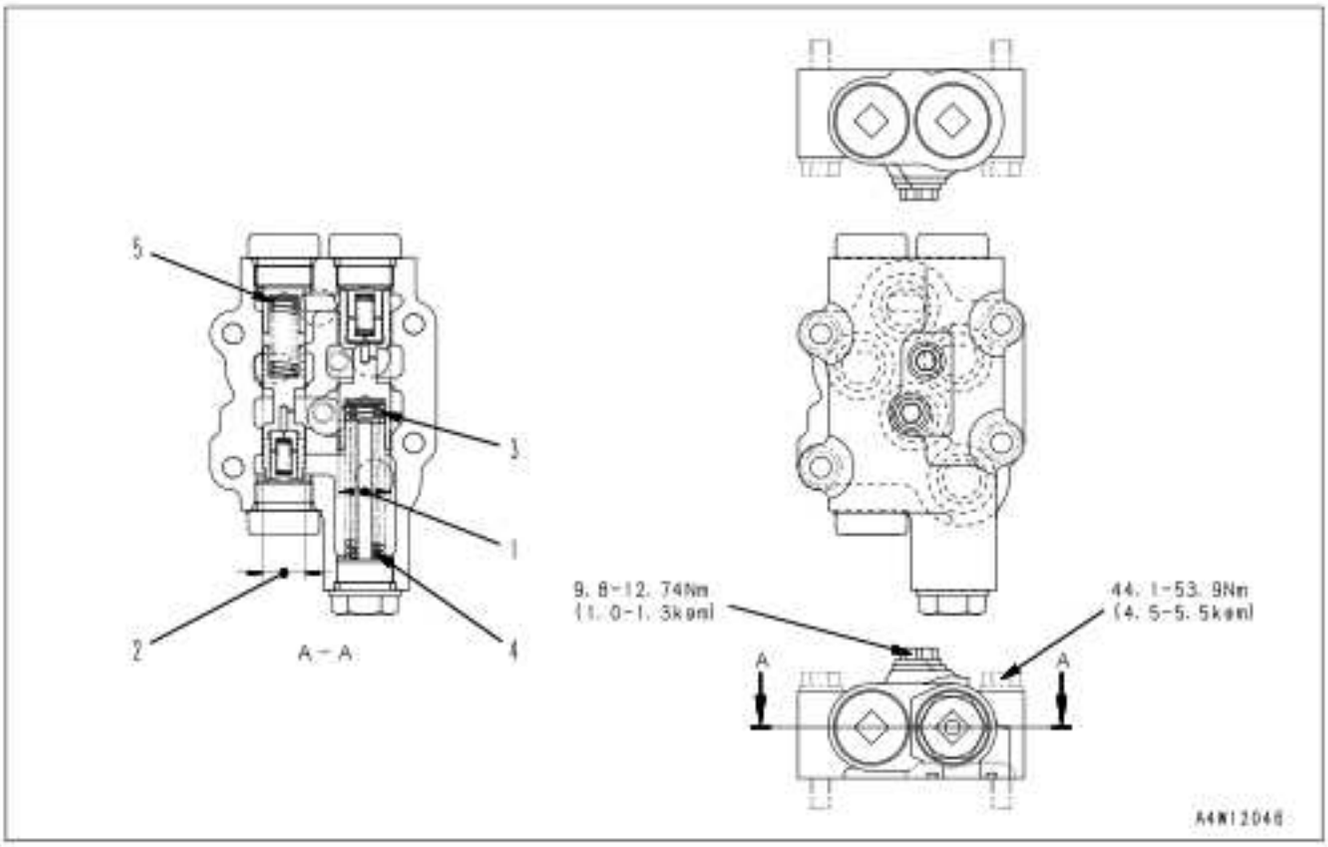
If this failure code is displayed during "Loaded Diagnostics Operation To Confirm Failure Correction", return to troubleshooting.

⚠ **Place the machine on a level ground, set the parking brake switch to "ON" position, and chock the tires.**

1. Turn the starting switch to ON position.
2. Clear this failure code by "Engine Controller Active Fault Clear" from "SERVICE MODE" of the machine monitor.
3. Turn the starting switch to OFF position, and shut down the engine controller.
4. Turn the starting switch to ON position, and start the engine.

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MAINTENANCE STANDARD OF MAIN RELIEF VALVE AND TORQUE CONVERTER RELIEF VALVE



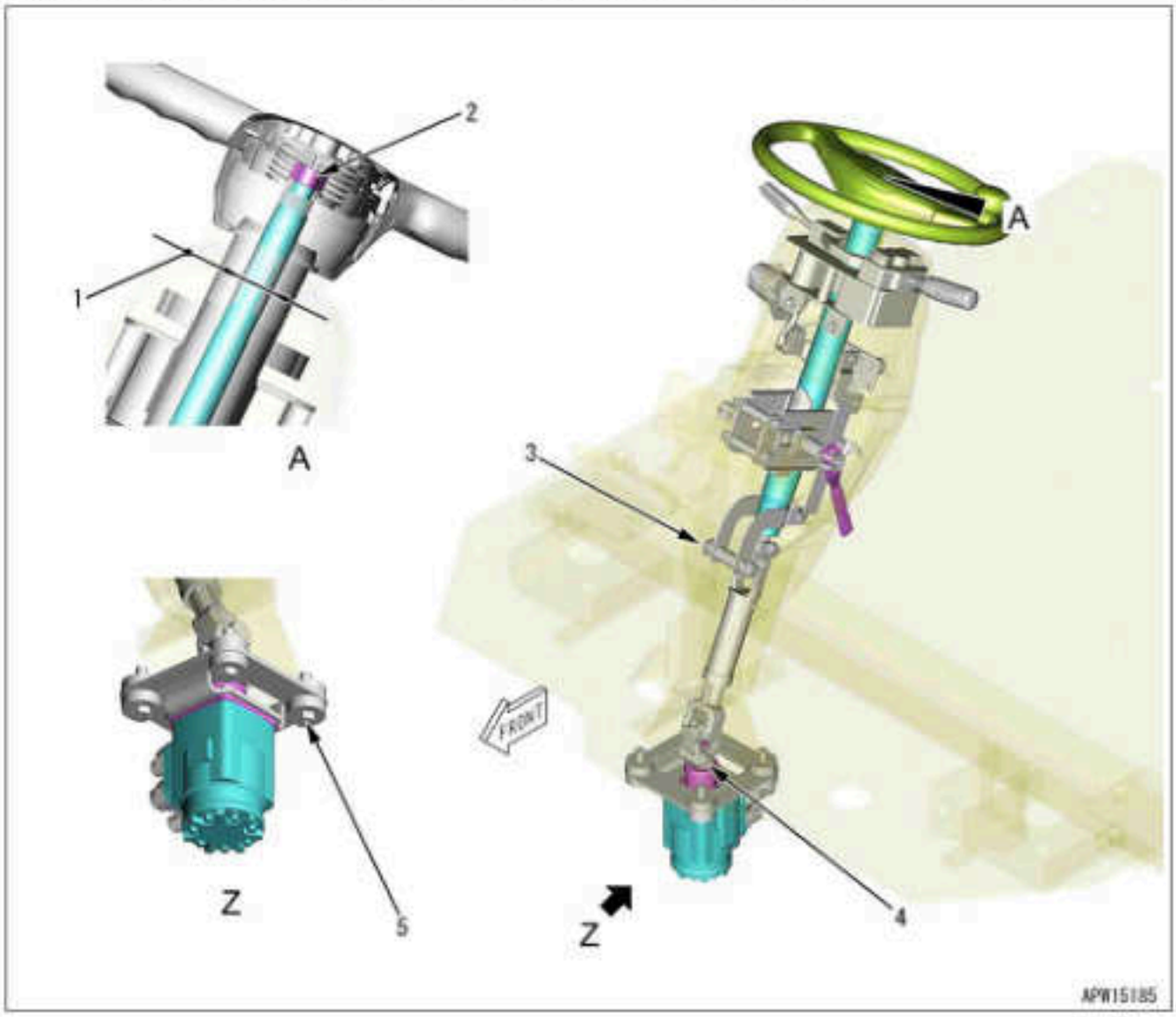
Unit: mm

No.	Item	Judgment criteria					Remedy
1	Clearance between main relief valve and valve body	Standard dimension	Tolerance		Standard clearance	Allowable clearance	Replace
			Shaft	Hole			
		28	-0.035 -0.045	+0.013 0	0.035 to 0.058	0.078	
2	Clearance between torque converter relief valve and valve body	22	-0.035 -0.045	+0.013 0	0.035 to 0.058	0.078	
3	Main relief valve spring (outside)	Standard dimension			Repair limit		
		Free height	Installed height	Load at installed height	Free height	Load at installed height	
		108	79.5	274 N {28 kg}	104.8	261 N {26.6 kg}	
4	Main relief valve spring (inside)	108	79.5	325 N {33.2 kg}	104.8	309 N {31.5 kg}	
5	Torque converter relief valve spring	50	41.5	163 N {16.5 kg}	48.5	154 N {15.7 kg}	

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STEERING SYSTEM

MAINTENANCE STANDARD OF STEERING COLUMN

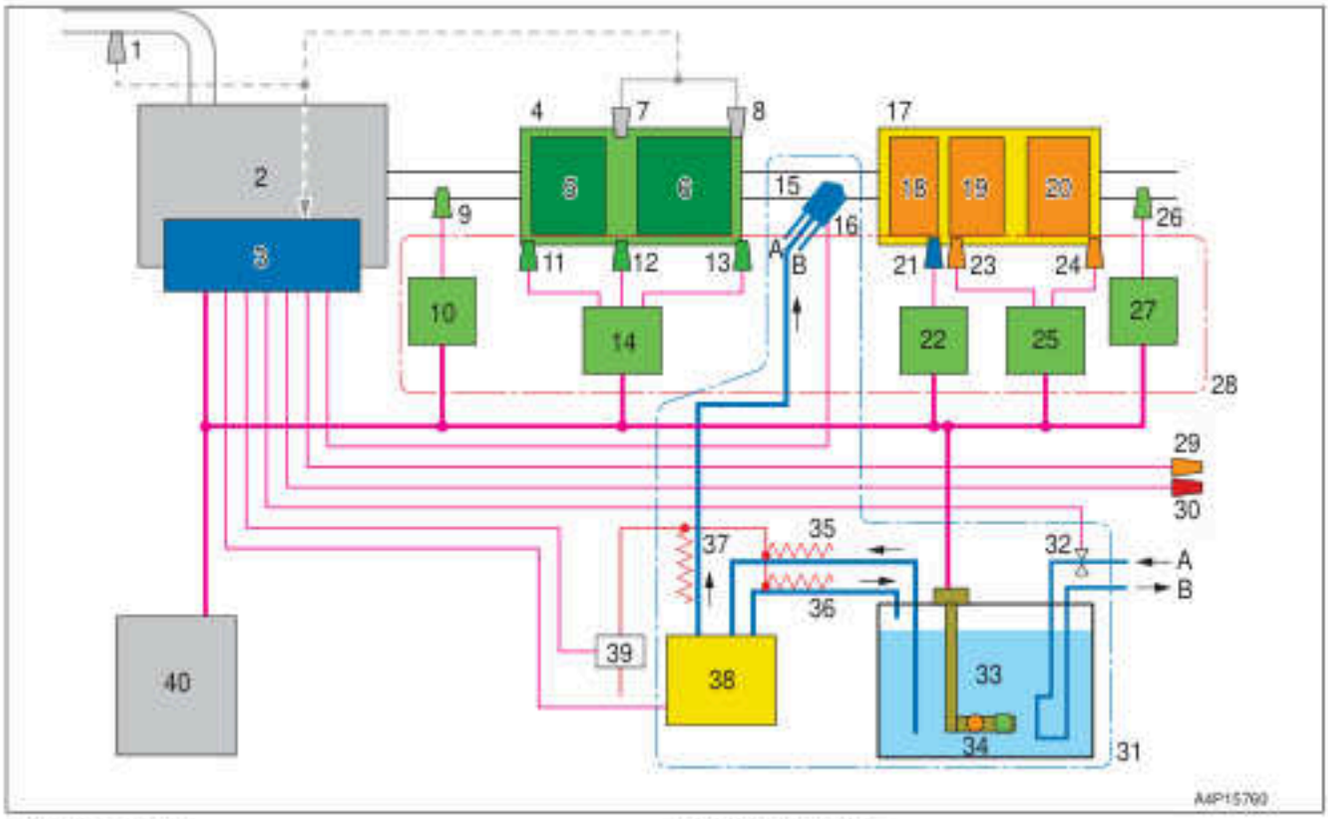


Unit: mm

No.	Item	Judgment criteria					Remedy
		Standard dimension	Tolerance		Standard clearance	Allowable clearance	
			Shaft	Hole			
1	Clearance between steering shaft and column bushing	19	0 -0.08	+0.15 +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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UREA SCR SYSTEM DIAGRAM



A: Coolant inlet
B: Coolant outlet
1: Mass air flow and temperature sensor
2: Engine
3: Engine controller
4: KDPF
5: KDOC unit
6: KCSF unit
7: KDPF differential pressure sensor
8: KDPF outlet pressure sensor
9: Turbocharger outlet NOx sensor
10: Turbocharger outlet NOx sensor controller
11: KDOC inlet temperature sensor
12: KDOC outlet temperature sensor
13: KDPF outlet temperature sensor
14: KDPF temperature sensor controller
15: AdBlue/DEF mixing tube
16: AdBlue/DEF injector
17: SCR assembly
18: Upstream SCR catalyst
19: Downstream SCR catalyst
20: Ammonia oxidation catalyst
21: Ammonia sensor
22: Ammonia sensor controller
23: SCR temperature sensor
24: SCR outlet temperature sensor
25: SCR temperature sensor controller
26: SCR outlet NOx sensor
27: SCR outlet NOx sensor controller
28: Smart sensor
29: Ambient temperature sensor
30: Engine room temperature sensor
31: AdBlue/DEF system
32: AdBlue/DEF tank heating valve
33: AdBlue/DEF tank
34: AdBlue/DEF tank sensor
35: AdBlue/DEF suction line
36: AdBlue/DEF return line
37: AdBlue/DEF pressure line
38: AdBlue/DEF pump
39: AdBlue/DEF line heater relay
40: Machine monitor

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ELECTRICAL CIRCUIT DIAGRAM OF FLOOR (FOR EUROPEAN UNION AND JAPAN) (1/9)

WA470-8

REMARK

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



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