SEN06062-04

Shop Manual

HYDRAULIC
EXCAVATOR

PC138USLC-10

SERIAL NUMBERS 40001 and up

KOMATSU®

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Index (ALL-0310-001-A-00-A)

00 Index and foreword 00-1
Index 00-2
Foreword, safety and general information 00-13
Important safety notice 00-13
How to read the shop manual 00-20
Explanation of terms for maintenance standard 00-22
Handling equipment of fuel system devices 00-24
Handling of intake system parts 00-25
Handling of hydraulic equipment 00-26
Method of disconnecting and connecting of push-pull type coupler 00-28
Handling of electrical equipment 00-31
How to read electric wire code 00-39
Precautions when performing operation 00-42
Practical use of KOMTRAX 00-47
Standard tightening torque table 00-48
List of abbreviation 00-54
Conversion table 00-59
01 Specification 01-1
Table of contents 01-2
Specifications 01-3
Specification drawing 01-3
Working range drawings 01-4
Specifications 01-5
Weight table 01-9
Table of fuel, coolant, and lubricants 01-11
10 Structure and function 10-1
Table of contents 10-2
Engine and cooling system 10-3
Engine related parts 10-3
PTO 10-5
Variable flow turbocharger 10-6
EGR system piping drawing 10-10
EGR system circuit diagram 10-12
EGR valve 10-13
EGR cooler 10-15
KCCV layout drawing 10-17
KCCV ventilator 10-19
KDOC muffler 10-21
Cooling system 10-23
Power train 10-25
Power train system 10-25
Swing circle 10-27
Swing machinery 10-28
Undercarriage and frame 10-30
Track frame 10-30
Idler cushion 10-31
Hydraulic system 10-32
Hydraulic component layout 10-32
Valve control 10-34
Hydraulic tank 10-35
CLSS 10-37
Main pump 10-41
Control valve 10-68
Swing motor 10-113
Travel motor 10-125
Work equipment and swing PPC valve 10-136
Travel PPC valve 10-143
Blade PPC valve 10-149

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1st-line attachment PPC valve (with EPC valve) 10-151
Solenoid valve 10-159
Attachment circuit selector valve (for low pressure circuit) 10-165
Attachment circuit selector valve (for high pressure circuit) 10-168
Multi-control valve 10-170
Anti-drop valve for boom 10-171
Anti-drop valve for arm 10-175
Center swivel joint 10-179
PPC circuit accumulator 10-181
Attachment circuit accumulator (for low pressure circuit) 10-182
Attachment circuit accumulator (for high pressure circuit) 10-183
Work equipment 10-184
Work equipment 10-184
Work equipment shim 10-185
Bucket play adjustment shim 10-186
Cab and its attachments 10-187
Cab mount and cab tipping stopper 10-187
ROPS cab 10-188
Electrical system 10-190
Electrical control system 10-190
Machine monitor system 10-222
KOMTRAX system 10-243
Sensor 10-260
20 Standard value tables 20-1
Table of contents 20-2
Standard service value table 20-3
Standard value table for engine 20-3
Standard value table for machine 20-4
Standard value table for electrical system 20-17
30 Testing and adjusting 30-1
Table of contents 30-2
Related information on testing and adjusting 30-3
Tools for testing and adjusting 30-3
Sketch of tools for testing and adjusting 30-6
Engine and cooling system 30-8
Testing engine speed 30-8
Testing exhaust gas color 30-9
Testing and adjusting valve clearance 30-10
Testing compression pressure 30-12
Testing blowby pressure 30-15
Testing engine oil pressure 30-16
Testing fuel pressure 30-17
Testing fuel return rate and leakage 30-18
Bleeding air from fuel system 30-21
Testing fuel circuit for leakage 30-23
Handling cylinder cutout mode operation 30-24
Handling no-injection cranking operation 30-25
Testing and adjusting air conditioner compressor belt tension 30-26
Check fan belt, replace 30-27
Check auto-tensioner, replace 30-29
Writing compensation values at replacement of injector and engine controller 30-32
Power train 30-36
Testing swing circle bearing clearance 30-36
Undercarriage and frame 30-37
Testing and adjusting track tension 30-37
Hydraulic system 30-38
Releasing remaining pressure from hydraulic circuit 30-38
Testing and adjusting oil pressure in work equipment, swing, and travel circuits 30-43
Testing oil pressure of control circuit 30-46

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Testing and adjusting oil pressure in pump PC control circuit 30-47
Testing and adjusting oil pressure in pump LS control circuit 30-50
Testing outlet pressure of solenoid valve 30-55
Testing PPC valve output pressure 30-56
Adjusting play of work equipment and swing PPC valves 30-58
Isolating the parts causing hydraulic drift in work equipment 30-59
Testing and adjusting travel deviation 30-61
Testing oil leakage 30-63
Bleeding air from hydraulic circuit 30-65
Cab and its attachments 30-68
Testing cab tipping stopper 30-68
Testing, cleaning and lubricating slide door rail and roller 30-69
Adjusting mirrors 30-70
Electrical system 30-72
Special functions of machine monitor 30-72
Adjusting rearview camera angle 30-123
Handling voltage circuit of engine controller 30-125
Handling battery disconnect switch 30-126
Testing diodes 30-127
Pm clinic 30-128
Pm Clinic service 30-128
40 Troubleshooting 40-1
Table of contents 40-2
Related information on troubleshooting 40-8
Troubleshooting points 40-8
Sequence of events in troubleshooting 40-10
Checks before troubleshooting 40-12
Inspection procedure before troubleshooting 40-14
Preparation for troubleshooting of electrical system 40-31
Classification and procedure for troubleshooting 40-35
Symptom and troubleshooting numbers 40-38
Information in troubleshooting table 40-41
Troubleshooting method for open circuit in wiring harness of pressure sensor system 40-43
Connector list and layout 40-45
Connector contact identification 40-55
T-branch box and T-branch adapter table 40-94
Fuse location table 40-99
Failure codes table 40-101
Troubleshooting by failure code (Display of code) 40-107
Failure code [879AKA] A/C Inner Sensor Open Circuit 40-107
Failure code [879AKB] A/C Inner Sensor Short Circuit 40-108
Failure code [879BKA] A/C Outer Sensor Open Circuit 40-109
Failure code [879BKB] A/C Outer Sensor Short Circuit 40-110
Failure code [879CKA] Ventilating Sensor Open Circuit 40-111
Failure code [879CKB] Ventilating Sensor Short Circuit 40-112
Failure code [879DKZ] Sunlight Sensor Open Or Short Circuit 40-113
Failure code [879EMC] Ventilation Damper Abnormality 40-114
Failure code [879FMC] Air Mix Damper Abnormality 40-115
Failure code [879GKX] Refrigerant Abnormality 40-116
Failure code [989L00] Engine Controller Lock Caution 1 40-117
Failure code [989M00] Engine Controller Lock Caution 2 40-118
Failure code [989N00] Engine Controller Lock Caution 3 40-119
Failure code [AB00KE] Charge Voltage Low 40-120
Failure code [B@BAZG] Eng Oil Press Low 40-122
Failure code [B@BAZK] Eng Oil Level Low 40-123
Failure code [B@BCNS] Eng Water Overheat 40-124
Failure code [B@HANS] Hyd Oil Overheat 40-125
Failure code [CA115] Eng Ne and Bkup Speed Sens Error 40-127
Failure code [CA122] Chg Air Press Sensor High Error 40-128

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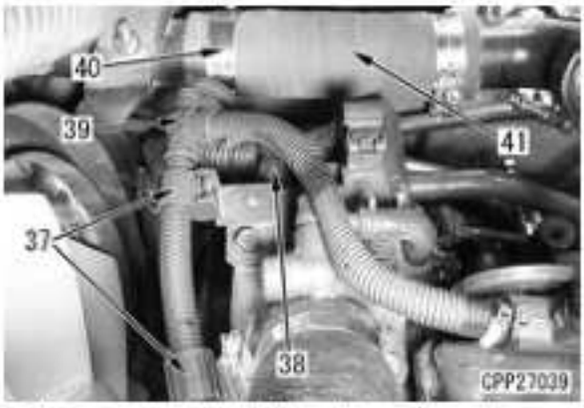
Failure code [CA3421] Mass Air Flow Sensor Sup Volt Low Error (PC138-CA3421-400-A-Z0-A)

Action level	Failure code	Failure	Mass Air Flow Sensor Supply Voltage Low Error (Engine controller system)
L03	CA3421		
Detail of failure	• High voltage occurs in power supply (12 V) circuit of mass air flow sensor.		
Action of controller	★ If signal voltage of mass air flow sensor becomes abnormal, controller takes following measures for failure codes same as [CA356] and [CA357]. • Sets mass air flow to fixed value (10 kg/min) and runs engine. • Closes EGR valve and opens VFT fully. • Limits engine output and allows engine to run.		
Problem on machine	• Engine output reduces.		
Related information	• Method of reproducing failure code: Turn starting switch to ON position.		

No.	Cause	Procedure, measuring location, criteria and remarks		
1	Defective wiring harness connector	1. See descriptions of wiring harness and connectors in "c: Electrical equipment" in "Checks before troubleshooting" of "Related information on troubleshooting", and check it. 2. Turn starting switch to ON position.		
		If this failure code is not displayed, wiring harness connector is defective. ★ If this failure code is displayed, perform following checks.		
2	Defective mass air flow sensor (internal defect)	1. Turn starting switch to OFF position. 2. Disconnect connector P55. 3. Turn starting switch to ON position.		
		If this failure code does not appear, MAF sensor is defective. ★ Other failure codes (many codes) are also displayed. They are generated because of disconnection of connector. Ignore failure codes other than this code.		
3	Defective wiring harness or connector	1. Turn starting switch to OFF position. 2. Disconnect connector J1. 3. Turn starting switch to ON position.		
		If this failure code does not appear, wiring harness is defective. ★ Other failure codes (many codes) are also displayed. They are generated because of disconnection of connector. Ignore failure codes other than this code.		
4	Ground fault in wiring harness (contact with ground circuit)	1. Turn starting switch to OFF position. 2. Disconnect connectors J1 and P55, and connect T-adapter to either female side.		
		Resis-tance	Between ground and J1 (female) (21) or P55 (female) (2)	Min. 1 MΩ
5	Short circuit in wiring harness	1. Turn starting switch to OFF position. 2. Disconnect connectors J1 and P55, and connect T-adapter to either female side.		
		Resis-tance	Between J1 (female) (21) and (22), or between P55 (female) (2) and (3)	Min. 1 MΩ
6	Defective engine controller	1. Turn starting switch to OFF position. 2. Disconnect connector J1 and connect T-adapter to male side. 3. Turn starting switch to ON position.		
		Voltage	Between J1 (male) (21) and (22)	Approx. 12 V
		If no failure is found by above checks, engine controller is defective. (Since this is an internal defect, troubleshooting cannot be performed.)		

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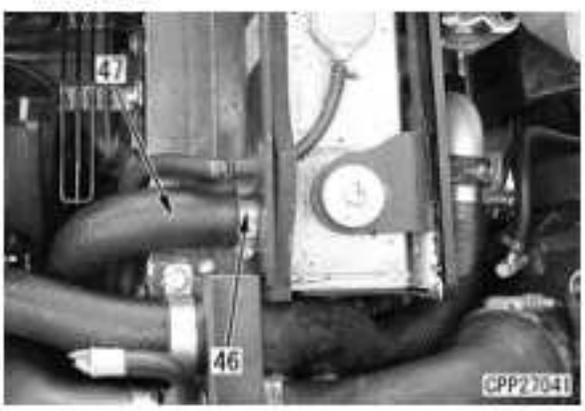
24. Disconnect clamp (37) of the wiring harness.
25. Disconnect connector TWTR (38). Move wiring harness (39) away to a position where it is not an obstacle.
26. Loosen clamp (40) to remove hose (41).



27. Remove fan belt (42) from the pulleys. For details, see "Removal and installation of fan belt".
28. Remove mounting bolt (44), and loosen bolt (45) to move alternator (43) to the machine side.

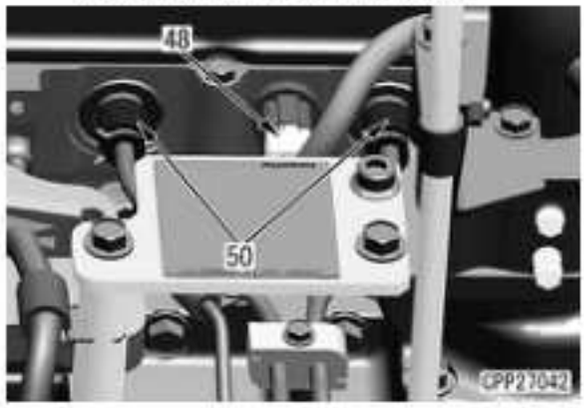


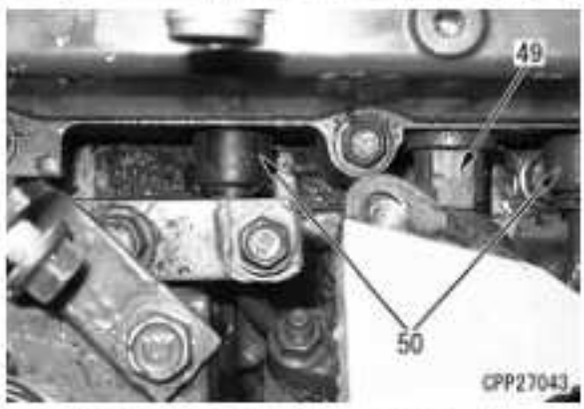
29. Loosen clamp (46) to disconnect radiator hose (47). [*10]



30. Disconnect connectors CN1 (48) and CN2 (49) on the intake side.
31. Remove fuel spray prevention cap (50) on the injector side.
32. Disconnect ribbon heater wiring E01 (51) on the intake side.
33. Disconnect connector EGR/V (52). Move wiring harness (53) to the counterweight side.

★ When disconnecting the wiring harness, check the positions of each clamp.





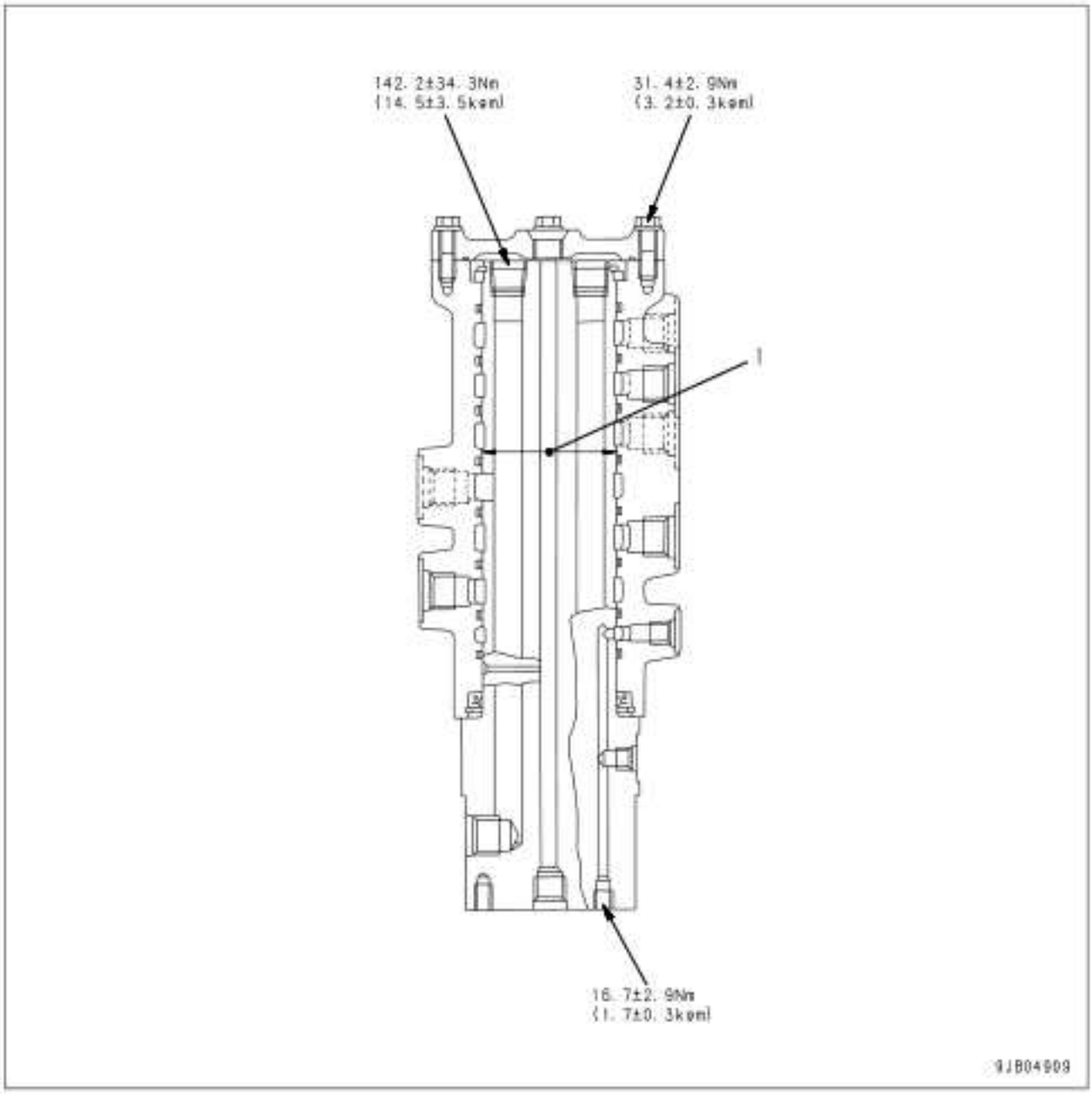


34. Remove clamp (54).
35. Remove fuel spray prevention caps (55) (4 pieces) on the common rail side.
36. Loosen the sleeve nuts on the injector side and common rail side to remove fuel high-pressure pipe (56).
37. Loosen clamp (57) and remove fuel tube (58).

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Center swivel joint (PC138-J8E0-034-K-00-A)

Blade specifications (PC138-J8E0-034-K-02-A)



Unit: mm

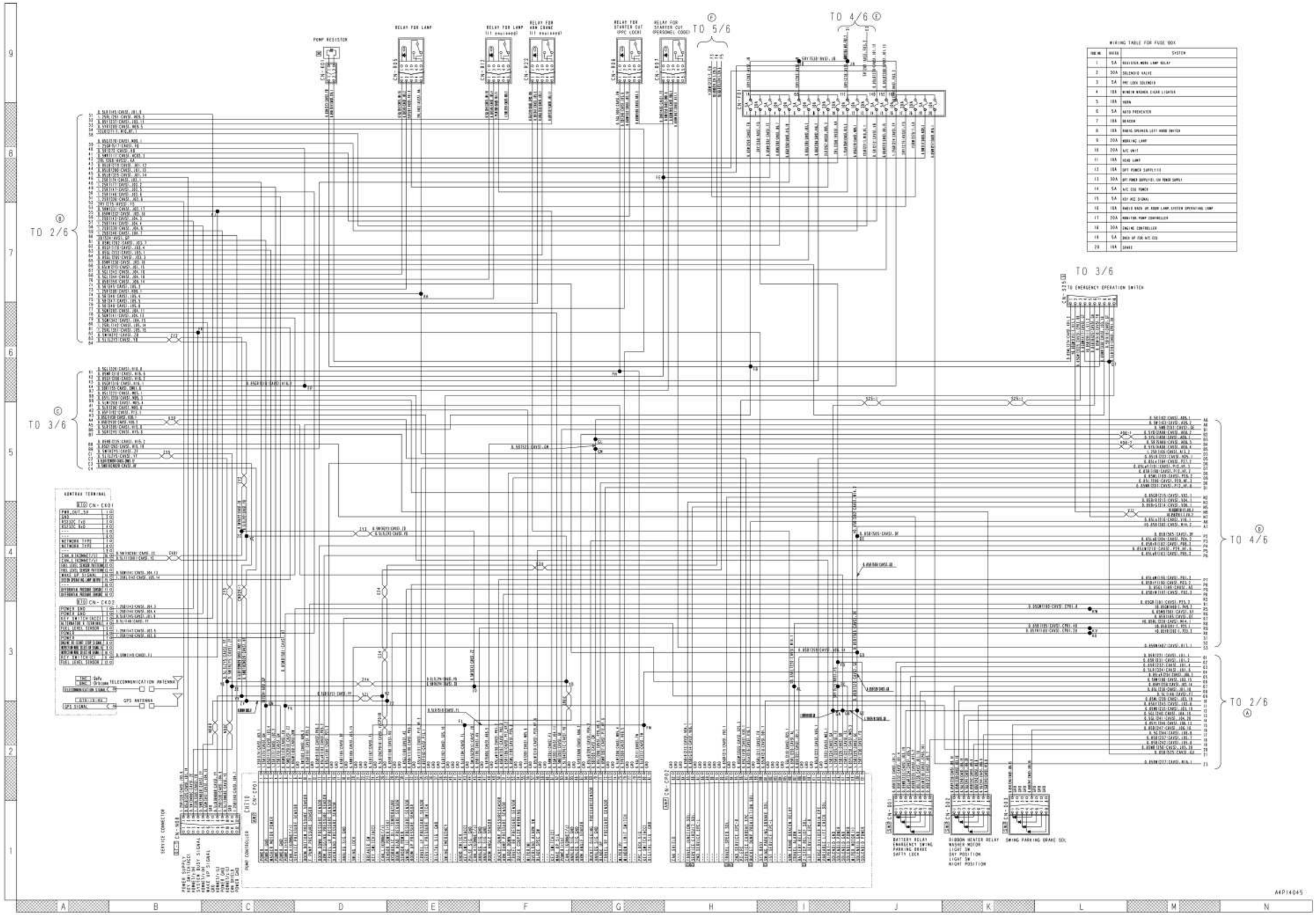
No.	Item	Criteria			Remedy
		Standard dimension	Standard clearance	Allowable clearance	
1	Clearance between rotor and shaft	90	0.056 to 0.105	0.111	Replace

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Electrical circuit diagram (1/6)

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



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