SEN03911-03

Shop Manual

WHEEL LOADER

WA320 -6
WA320PZ-6

SERIAL NUMBERS

WA320- 70001 and up
WA320PZ- 70001

ecot3

KOMATSU®

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Composition of shop manual

The contents of this shop manual are shown together with Form No. in a list.

Note 1: Always keep the latest version of this manual in accordance with this list and utilize accordingly.
The marks shown to the right of Form No. denote the following:
○: New issue (to be filed additionally) ●: Revision (to be replaced for each Form No.)

Note 2: This shop manual can be supplied for each Form No.

Note 3: To file this shop manual in the special binder for management, handle it as follows:
- Place a divider on the top of each section in the file after matching the Tub No. with No. indicated next to each Section Name shown in the table below:
- File overview and other materials in sections in the order shown below and utilize them accordingly.

Section Title	Form Number	
Shop Manual, contents binder, binder label and tabs	SEN03911-03	
00 Index and foreword	SEN03912-03	
100 Index	SEN03920-03	●
200 Foreword and general information	SEN03921-01	
01 Specification	SEN03913-01	
100 Specification and technical data	SEN03922-01	
10 Structure, function and maintenance standard	SEN03914-02	
100 Engine and cooling system	SEN03923-01	
200 Power train	SEN03924-01	
300 Steering system	SEN03925-01	
400 Brake system	SEN03926-00	
500 Undercarriage and frame	SEN03927-00	
600 Hydraulic system	SEN03928-00	
700 Work equipment	SEN03929-01	
800 Cab and its attachments	SEN03930-00	
910 Electrical system, Part 1	SEN03931-01	
920 Electrical system, Part 2	SEN03932-02	
20 Standard value table	SEN03915-00	
100 Standard service value table	SEN03933-00	
30 Testing and adjusting	SEN03916-03	
110 Testing and adjusting, Part 1	SEN03934-02	
120 Testing and adjusting, Part 2	SEN03935-03	●
130 Testing and adjusting, Part 3	SEN03936-01	
40 Troubleshooting	SEN03917-02	
100 Failure code table and fuse locations	SEN03937-01	
200 General information on troubleshooting	SEN03938-02	
310 Troubleshooting by failure code (Display of code), Part 1	SEN03939-00	
320 Troubleshooting by failure code (Display of code), Part 2	SEN03940-00	
330 Troubleshooting by failure code (Display of code), Part 3	SEN03941-01	
340 Troubleshooting by failure code (Display of code), Part 4	SEN03942-01	

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350 Troubleshooting by failure code (Display of code), Part 5 ..... SEN03943-01
360 Troubleshooting by failure code (Display of code), Part 6 ..... SEN03944-01
370 Troubleshooting by failure code (Display of code), Part 7 ..... SEN03945-00
400 Troubleshooting of electrical system (E-mode) SEN03946-01
500 Troubleshooting of hydraulic and mechanical system (H-mode) SEN03947-01
600 Troubleshooting of engine (S-mode) SEN03948-01

50 Disassembly and assembly SEN03918-02
100 General information on disassembly and assembly SEN03949-01
200 Engine and cooling system SEN03950-02
310 Power train, Part 1 ..... SEN03951-00
320 Power train, Part 2 ..... SEN03952-00
400 Undercarriage and frame SEN03953-00
500 Hydraulic system SEN03954-00
600 Work equipment SEN03955-00
700 Cab and its attachments SEN03956-00
800 Electrical system SEN03957-00

90 Diagrams and drawings SEN03919-01
100 Hydraulic diagrams and drawings SEN03958-01
200 Electrical diagrams and drawings SEN03959-01

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Table of contents

00 Index and foreword
100 Index SEN03920-03
Composition of shop manual ... 2
Table of contents ... 4
200 Foreword and general information SEN03921-01
Safety notice ... 2
How to read the shop manual ... 7
Explanation of terms for maintenance standard ... 9
Handling of electric equipment and hydraulic component ... 11
Handling of connectors newly used for engines ... 20
How to read electric wire code ... 23
Precautions when carrying out operation ... 26
Method of disassembling and connecting push-pull type coupler ... 29
Standard tightening torque table ... 32
Conversion table ... 36

01 Specification
100 Specification and technical data SEN03922-01
Specification dimension drawing ... 3
Specifications ... 4
Weight table ... 8
Table of fuel, coolant and lubricants ... 10

10 Structure, function and maintenance standard
100 Engine and cooling system SEN03923-01
Engine mount and transfer mount ... 2
Damper ... 3
Cooling system ... 4
Cooling system hydraulic piping diagram ... 5
Cooling fan motor ... 7
200 Power train SEN03924-01
Power train ... 3
Power train system diagram ... 4
Drive shaft ... 6
HST hydraulic piping diagram ... 7
HST pump ... 8
HST motor ... 16
Transfer ... 22
Clutch solenoid valve ... 33
Axle ... 34
Differential ... 36
Torque proportioning differential ... 41
Limited slip differential ... 44
Final drive ... 48
300 Steering system SEN03925-01
Steering piping diagram ... 3
Steering column ... 4
Priority valve ... 5
Orbit-roll valve ... 8
Cushion valve ... 16
Steering cylinder ... 17
Emergency steering piping diagram ... 19
Emergency steering valve ... 20
Steering relief valve ... 23

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1. Attachment spool
2. Bucket spool
3. Lift arm spool
4. Suction valve
5. Safety-suction valve
6. Check valve
7. Main relief valve

Unit: mm

No.	Item	Criteria					Remedy
		Standard size			Repair limit		
8	Spool return spring (for bucket and attachment)	Free length x Outside diameter	Installed length	Installed load	Free length	Installed load	If damaged or deformed, replace spring
		54.8 x 34	53.5	125 N {12.7 kg}	—	100 N {10.2 kg}	
9	Spool return spring (for bucket and lift arm)	54.8 x 33.7	52.5	207.9 N {21.2 kg}	—	167 N {17 kg}	
10	Spool return spring (for bucket and lift arm)	30.7 x 32.5	26.5	255 N {26 kg}	—	204 N {20.8 kg}	
11	Spool return spring (for lift arm)	51.9 x 16.9	40	182.4 N {18.6 kg}	—	146 N {14.9 kg}	
12	Spool return spring (for lift arm)	87.6 x 34.7	83.5	229.5 N {23.4 kg}	—	183 N {18.7 kg}	
13	Check valve spring	32.6 x 10.9	24.5	44.1 N {4.5 kg}	—	35.3 N {3.6 kg}	
14	Suction valve spring	64.9 x 12.5	56	6.4 N {0.65 kg}	—	5.1 N {0.52 kg}	

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Failure code [CA111] Abnormality in engine controller

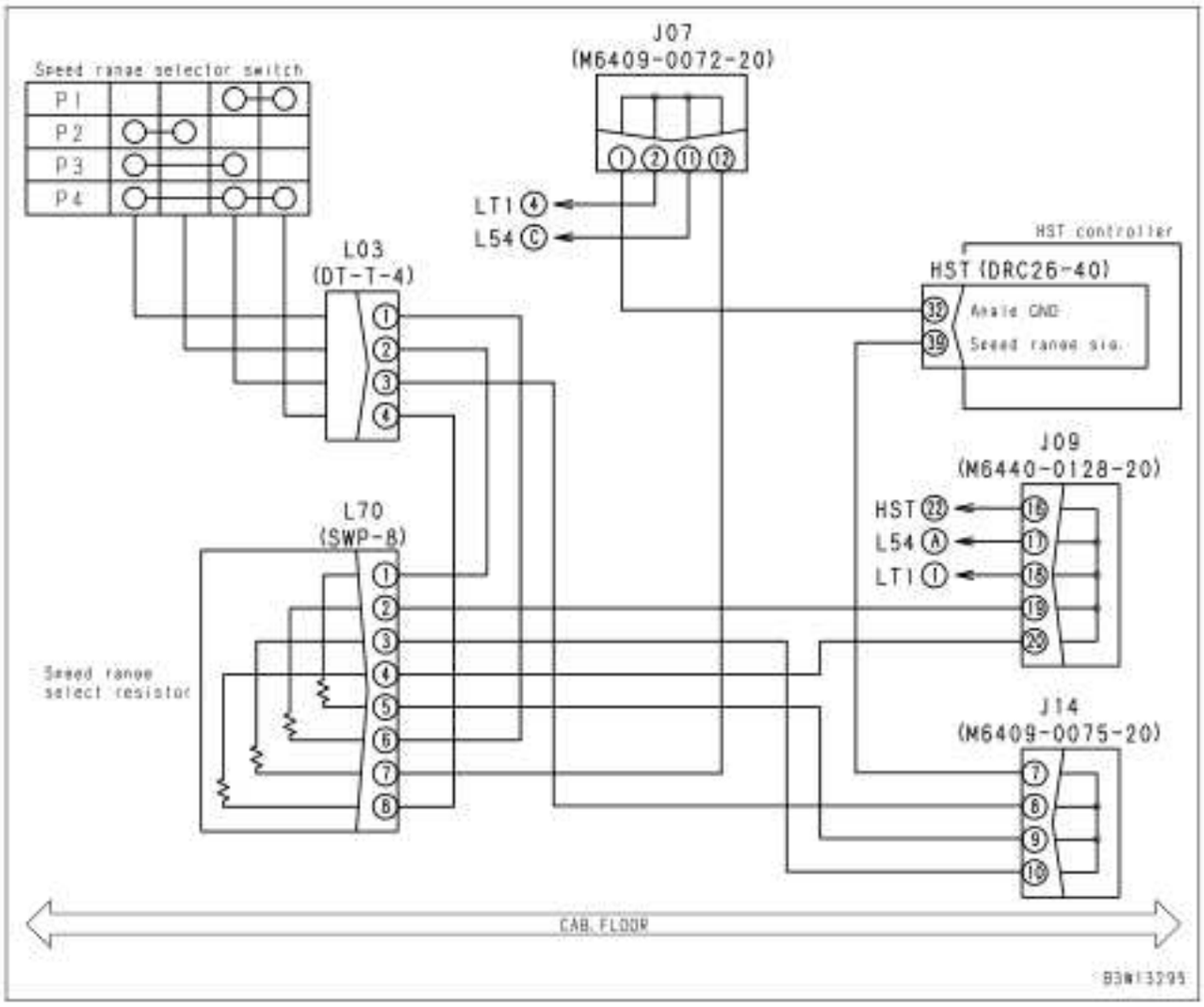
Action code	Failure code	Trouble	Abnormality in engine controller (Engine controller system)
E03	**CA111**		
Contents of trouble	• Abnormality occurred in memory of engine controller or power supply circuit.		
Action of controller	• Turns the centralized warning lamp and alarm buzzer ON.		
Problem that appears on machine	• The engine does not start.		
Related information	• Method of reproducing failure code: Start engine		

Possible causes and standard value in normal state	Causes		Standard value in normal state/Remarks on troubleshooting
	1	Defective engine controller	Possible defect in engine controller (Troubleshooting cannot be carried out.)

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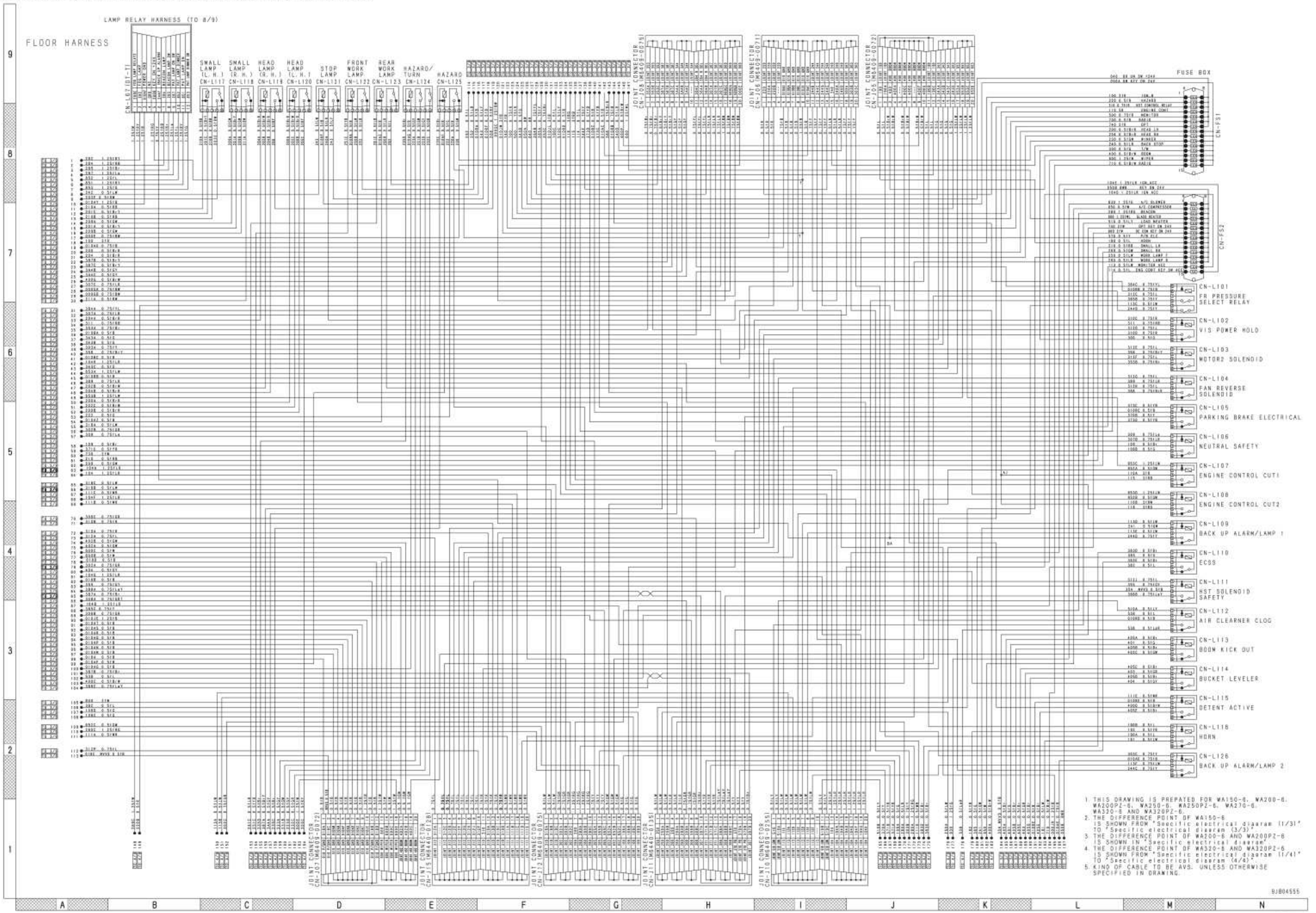
	Causes		Standard value in normal state/Remarks on troubleshooting		
Possible causes and standard value in normal state	3	Hot short (Contact with 24V circuit) in wiring harness	Between wiring harness L03 (female) (2) – L70 (female) (1) and ground	Voltage	Max. 1 V
			Between wiring harness L03 (female) (4) – L70 (female) (8) and ground	Voltage	Max. 1 V
			Wiring harness between HST (female) (22) – L70 (female) (2) (4) and ground	Voltage	Max. 1 V
	4	Defective HST controller	HST	Switch position	Voltage
			Between (39) – (32)	1st	1.9 – 2.3 V
				2nd	2.4 – 2.7 V
				3rd	2.9 – 3.2 V
				4th	3.3 – 3.7 V

Related circuit diagram



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



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